AP - 110

FACILITY-WIDE GW MONITORING REPORT

2019

HOLLYFRONTIER.

April 15, 2020

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: 2019 Annual Facility-Wide Groundwater Monitoring Report, HollyFrontier Navajo Refining LLC, Lovington, New Mexico, AP-110.

Dear Mr. Chavez:

Please find enclosed the original and one electronic copy of the *2019 Annual Facility-Wide Groundwater Monitoring Report* (Report) for the HollyFrontier Navajo Refining LLC (HFNR) refinery located in Lovington, New Mexico. The Report summarizes the results of groundwater monitoring and remediation activities conducted at the refinery under AP-110 during calendar year 2019.

If you should have any questions or comments regarding this Report, please feel free to contact me at (575) 746-5487 or Robert Combs at (575) 746-5382.

Sincerely,

Scott M. Denton
Environmental Manager
HollyFrontier Navajo Refining LLC

cc: OCD: J. Griswold, G. Wade
HF: R. Combs, J. Leik
TRC: J. Speer, A. Eljuri, C. Smith

2019 Annual Facility-Wide Groundwater Monitoring Report

April 2020

HollyFrontier Navajo Refining LLC
AP-110
Lovington, New Mexico

Prepared For:

HollyFrontier Navajo Refining LLC

Prepared By:

TRC
Austin, Texas



HOLLYFRONTIER®

2019 Annual Facility-Wide Groundwater Monitoring Report

HollyFrontier Navajo Refining LLC
AP-110
Lovington, New Mexico

Prepared for:

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TRC Project No. 330769

April 2020

Project Manager Julie Speer

EXECUTIVE SUMMARY

This *2019 Annual Facility-Wide Groundwater Monitoring Report* documents groundwater monitoring activities conducted at the HollyFrontier Navajo Refining LLC (HFNR) facility (refinery) located in Lovington, New Mexico, during calendar year 2019. The refinery is currently regulated by New Mexico Oil Conservation Division (OCD) under Abatement Plan AP-110.

The groundwater monitoring program consists of semi-annual groundwater gauging of monitoring wells, semi-annual groundwater sampling of monitoring wells, quarterly sampling of refinery water supply wells, and annual reporting. The monitoring objectives are to (1) determine groundwater elevations, flow direction, and gradient; (2) determine the presence, extent, and apparent thickness of light non-aqueous phase liquid (LNAPL); and (3) obtain dissolved-phase concentration data. Monitoring activities were conducted in general accordance with the November 2017 *Revised Facility-Wide Groundwater Monitoring Work Plan* (Revised FWGWMWP) that was approved by OCD on February 1, 2018.

The 2019 groundwater monitoring results indicate physical and chemical groundwater conditions are generally consistent with historical data. Groundwater flows radially (southeast, south, and north/northwest) towards a cone of depression near the three refinery water supply wells located within the central portion of the refinery. This cone of depression is induced by groundwater pumping from the three on-site refinery water supply wells for refinery process use and non-potable restroom and safety shower use. The presence of select anions (chloride and fluoride), total dissolved solids (TDS), and manganese in select wells at concentrations above the New Mexico Water Quality Control Commission (WQCC) Standards is due to off-site sources, background concentrations, and/or non-HFNR sources at the refinery.

LNAPL is present in monitoring well MW-31, which was installed in December 2016 to investigate the historical release at the asphalt loading rack. Routine LNAPL recovery was conducted at MW-31 using manual bailing and passive skimming techniques through March 2019. A pneumatic skimmer recovery system (skimmer system) was installed in April 2019 to improve LNAPL recovery and was utilized throughout the rest of 2019. Approximately 108 gallons of LNAPL were recovered from MW-31 using manual bailing and passive skimming techniques during 2019 and approximately 430 gallons of LNAPL were recovered using the skimmer system in 2019.

Two reportable releases occurred at the refinery in 2019: (1) the floor leak from Tank 1204 discovered on November 8, 2019, and (2) the floor leak from Tank 1207 discovered on November 8, 2019. Additional inspections of the two tanks are ongoing and the extent of the releases is still under evaluation.

HFNR will implement groundwater monitoring activities at the refinery in 2020 under the November 2017 Revised FWGWMWP. HFNR will also continue LNAPL recovery activities at well MW-31 in accordance with the November 17, 2017, letter report that was approved with comments by the OCD on December 22, 2017.

TABLE OF CONTENTS

Page

EXECUTIVE SUMMARY ii
1.0 INTRODUCTION 1-1
1.1 Refinery Description 1-1
2.0 SEMI-ANNUAL GROUNDWATER MONITORING ACTIVITIES 2-1
2.1 Fluid Level Gauging 2-1
2.2 Groundwater Sample Collection 2-2
3.0 SEMI-ANNUAL GROUNDWATER MONITORING RESULTS 3-1
3.1 Fluid Gauging Results 3-1
3.1.1 Light Non-Aqueous Phase Liquid (LNAPL) 3-1
3.1.2 Groundwater 3-1
3.2 Groundwater Sampling Results 3-2
3.2.1 Organic Constituent Results 3-2
3.2.2 Inorganic Constituent Results 3-4
4.0 QUARTERLY REFINERY WATER SUPPLY WELL MONITORING 4-1
5.0 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) 5-1
6.0 2019 RELEASES AND REMEDIATION ACTIVITIES 6-1
6.1 November 2019 Tank 1204 and Tank 1207 Releases 6-1
6.2 Asphalt Loading Rack (LNAPL Recovery at MW-31) 6-1
7.0 CONCLUSIONS 7-1
8.0 WORK PLANNED FOR 2020 8-1

LIST OF FIGURES

Figure 1 Refinery Vicinity Map
Figure 2 Refinery Site Plan
Figure 3 Groundwater Potentiometric Surface Map – April 2019
Figure 4 Groundwater Potentiometric Surface Map – October 2019
Figure 5 Anions Concentration Map – April 2019
Figure 6 Anions Concentration Map – October 2019
Figure 7 Total Dissolved Solids Concentration Map – April 2019
Figure 8 Total Dissolved Solids Concentration Map – October 2019
Figure 9 Metals Concentration Map – April 2019
Figure 10 Metals Concentration Map – October 2019

LIST OF TABLES

Table 1 Water Elevation Measurements
Table 2 Organic Constituent Concentrations in Groundwater
Table 3 Inorganic Constituent Concentrations in Groundwater

LIST OF APPENDICES

Appendix A Plot of Groundwater Elevations over Time
Appendix B Laboratory Analytical Reports
Appendix C Plots of Groundwater Concentrations over Time
Appendix D Quality Assurance/Quality Control Data Summary
Appendix E LNAPL Gauging and Recovery Results, Monitoring Well MW-31

LIST OF ACRONYMS AND ABBREVIATIONS

DO	Dissolved Oxygen
DRO	Diesel Range Organics
FWGMWP	Facility-Wide Groundwater Monitoring Work Plan
GRO	Gasoline Range Organics
HEP	Holly Energy Partners – Operating, L.P.
HFNR	HollyFrontier Navajo Refining LLC
HMI	Hydrologic Monitoring
LNAPL	Light Non-Aqueous Phase Liquid
mg/L	Milligrams per liter
MQL	Method Quantitation Limit
O&M	Operation and Maintenance
OCD	New Mexico Oil Conservation Division
ORC®	Oxygen-Releasing Compound
ORP	Oxidation-Reduction Potential
Pace National	Pace Analytical National Center for Testing & Innovation
QA/QC	Quality Assurance/Quality Control
RPD	Relative Percent Difference
SM	Standard Method
SVOCs	Semi-Volatile Organic Compounds
TRC	TRC Environmental Corporation
TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbons
VOCs	Volatile Organic Compounds
WQCC	New Mexico Water Quality Control Commission

1.0 INTRODUCTION

On behalf of HollyFrontier Navajo Refining LLC (HFNR), TRC Environmental Corporation (TRC) prepared this *2019 Annual Facility-Wide Groundwater Monitoring Report* to summarize the results of groundwater monitoring activities conducted at the facility (refinery) located in Lovington, New Mexico, during calendar year 2019. Groundwater monitoring reports prior to 2012 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, the OCD rescinded the Groundwater Discharge Permit on February 9, 2012. The refinery is currently regulated by the OCD under Abatement Plan AP-110. This report is prepared in accordance with HFNR's February 22, 2013, Memorandum to the OCD and OCD's response on February 28, 2013.

1.1 Refinery Description

The refinery is located approximately five miles south of Lovington in Lea County, New Mexico. The facility is operated by HFNR and consists of refining operations, as well as Holly Energy Partners – Operating, L.P. (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 refinery in April 2019 and October 2019 in accordance with the November 2017 *Revised Facility-Wide Groundwater Monitoring Work Plan* (Revised FWGWMWP) that was approved by the OCD on February 1, 2018. Hydrologic Monitoring (HMI) conducted the first semi-annual groundwater monitoring event on April 4, 2019, and the second semi-annual event on October 24, 2019. Groundwater monitoring activities consisted of (1) gauging existing refinery monitoring wells (MW-1 through MW-33) and one recovery well (RW-1) and (2) collecting groundwater samples for laboratory analysis from select refinery monitoring wells and three refinery water supply wells (WW-North, WW-South, and WW-East). The locations of the monitoring wells, recovery well, and refinery water supply wells are presented on Figure 2.

The following deviations to the November 2017 Revised FWGWMWP occurred during the April 2019 monitoring event:

- Well MW-31 was not sampled due to the presence of light non-aqueous phase liquid (LNAPL).
- Wells MW-12R, MW-16, MW-19, MW-26, and MW-27 were not gauged because the top of the dedicated bladder pump was above the static water level in each well.

The following deviations to the November 2017 Revised FWGWMWP occurred during the October 2019 monitoring event:

- Well MW-31 was not sampled due to the presence of LNAPL.
- Well MW-12R could not be sampled due to insufficient water volume.
- Well MW-23 could not be sampled for total dissolved solids (TDS), nitrate-nitrite, chloride, fluoride, and sulfate due to poor recharge resulting in insufficient water volume.

2.1 Fluid Level Gauging

Existing refinery monitoring and recovery wells were gauged during the April 2019 and October 2019 semi-annual monitoring events to determine the groundwater elevation, flow direction and gradient, the presence or absence of LNAPL, and apparent LNAPL thickness. A decontaminated oil-water interface probe was used to measure depths to water and LNAPL, if present. Depths to water and LNAPL 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 the following wells during each semi-annual monitoring event:

- April 2019: 18 refinery monitoring wells (MW-1 through MW-3, MW-6, MW-8, MW-11R, MW-12R, MW-13R, MW-15, MW-17R, MW-19, MW-25, MW-27 through MW-30, MW-32, MW-33) and three refinery water supply wells (WW-North, WW-East, and WW-South).
- October 2019: 31 refinery monitoring wells (MW-1 through MW-33, except MW-7, MW-12R, and MW-31) and three refinery water supply wells (WW-North, WW-East, and WW-South).

Except as identified as deviations in Section 3.0, each monitoring and recovery well was purged and sampled using low-flow sampling procedures. Dedicated bladder pumps installed in each monitoring well were used to purge and sample monitoring wells during the April and October 2019 events. 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 and turbidity meter were used to measure pH, temperature, specific conductivity, oxidation-reduction potential (ORP), dissolved oxygen (DO), and turbidity 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 three of the six water quality parameters achieved stabilization.

The refinery water supply wells were 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 to remove any standing water from the well casing and surface piping. Grab readings of geochemical parameters including pH, temperature, conductivity, ORP, DO, and turbidity were also collected during the purging process.

After the purging process was complete, groundwater samples were collected directly from the dedicated or disposable tubing (for the monitoring wells) or from the refinery water supply well sampling point into method-specific containers provided by the laboratory. All groundwater samples were submitted to Pace Analytical National Center for Testing & Innovation (Pace National), formerly known as ESC Lab Sciences, before the second semi-annual event in Mount Juliet, Tennessee, under appropriate chain-of-custody documentation for one or more of the following analyses in accordance with the November 2017 Revised FWGWMWP:

- Volatile organic compounds (VOCs) by SW-846 Method 8260B;
- Semi-volatile organic compounds (SVOCs) by SW-846 Method 8270C;

- Total petroleum hydrocarbons (TPH) gasoline range organics (GRO) by SW-846 Method 8015D
- TPH diesel range organics (DRO) by SW-846 Method 8015;
- Dissolved metals (aluminum, arsenic, barium, boron, cadmium, chromium, cobalt, copper, iron, lead, magnesium, molybdenum, nickel, selenium, silver, uranium, zinc) by SW-846 Method 6010B or 6020;
- Total mercury by SW-846 Method 7470A;
- Anions (chloride, fluoride, nitrate-nitrite, and sulfate) by EPA Method 353.2 or SW-846 Method 9056A;
- Alkalinity by Standard Method (SM) 2320 B; and/or
- TDS by SM M2540C.

3.0 SEMI-ANNUAL GROUNDWATER MONITORING RESULTS

The results of the semi-annual groundwater monitoring activities conducted in April 2019 and October 2019 are discussed below.

3.1 Fluid Gauging Results

Fluid level gauging was performed on April 4, 2019 (except for MW-31 which was gauged on April 1, 2019), and on October 24, 2019, and the results are presented in Table 1. Potentiometric groundwater surface maps for the April 2019 and October 2019 gauging events are presented as Figures 3 and 4, respectively.

3.1.1 Light Non-Aqueous Phase Liquid (LNAPL)

LNAPL was detected in one well (MW-31) during both semi-annual gauging events. The presence of LNAPL in MW-31 is associated with the historical release discovered at the asphalt loading rack during construction activities in November 2015. Monitoring well MW-31 was installed in December 2016 and no measurable LNAPL was detected in this well during installation and development activities. Measurable LNAPL was first detected in this well in February 2017 during semi-annual gauging activities. Measured apparent LNAPL thicknesses in MW-31 during the April and October 2019 gauging events were 5.65 and 0.65 feet, respectively. HFNR implemented routine LNAPL recovery at MW-31 throughout 2019. From January through March 2019, both manual bailing and passive skimming techniques were used until a pneumatic skimmer system was installed in April 2019, as discussed in Section 7.0. Additional fluid gauging results obtained at MW-31 during recovery activities are provided in Appendix E.

3.1.2 Groundwater

Groundwater elevations measured during both semi-annual gauging events indicate groundwater elevations are decreasing and groundwater flows radially (southeast, south, and north/northwest) towards a cone of depression near the three refinery water supply wells located within the central portion of the refinery. This cone of depression is consistent with previous events, though the gradient within the cone overall decreased during 2019, and is induced by groundwater pumping from the three on-site refinery water supply wells for refinery process use and non-potable restroom and safety shower use. The natural groundwater flow direction at the refinery (i.e., not influenced by pumping) is to the southeast, as observed in the northern portion of the refinery.

Groundwater elevations measured during the April 2019 event decreased an average 0.58 feet from those measured in April 2018 (first semi-annual event of 2018) approaching the current total depth in certain wells. The April 2019 groundwater elevation data indicates groundwater northwest of the cone of depression flows southeast at a hydraulic gradient ranging from 0.004 to

0.012 feet per foot. South/southeast of the cone of depression, groundwater flows north/northwest at a hydraulic gradient ranging from 0.001 to 0.007 feet per foot.

Groundwater elevations measured during the October 2019 event decreased an average 1.69 feet from those measured in October 2018 (second semi-annual event of 2018). The October 2019 groundwater elevation data indicates groundwater northwest of the cone of depression flows southeast at a hydraulic gradient ranging from of 0.003 to 0.008 feet per foot. South/southeast of the cone of depression, groundwater flows north/northwest at a hydraulic gradient ranging from 0.002 to 0.005 feet per foot.

A graph of groundwater elevations versus time for representative wells MW-4 and MW-6 is provided in Appendix A. As shown on the graph, groundwater elevations in wells MW-4 and MW-6 have decreased 12.75 feet and 12.74 feet, respectively, from June 2009 to October 2019. These reductions in groundwater levels are consistent across the refinery and are likely caused by (1) limited recharge due to low rainfall levels and (2) regional groundwater pumping including active pumping from three on-site refinery 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 2019 sampling events are summarized in Tables 2 and 3, respectively. Analytical results are compared to the New Mexico Water Quality Control Commission (WQCC) Standards for groundwater and any results that exceeded these standards are shaded gray. Groundwater concentration maps are provided as Figures 5 through 10 for constituents that exceeded WQCC Standards. Laboratory analytical reports are provided in Appendix B. Plots of groundwater concentrations over time for constituents detected above the method quantitation limit (MQL) more than once in each well are provided in Appendix C. Constituents that were never detected above the MQL, including those only detected at estimated J-flagged concentrations (i.e., detected above the sample detection limit but below the MQL), are not included on the concentration plots in Appendix C.

3.2.1 Organic Constituent Results

Analytical results for VOCs, SVOCs, and TPH (i.e., organic constituents) that have historically been detected in groundwater are presented in Table 2. Naphthalene results are included in both the VOC (Method 8260) and SVOC (Method 8270) sections of Table 2 as it is reported by both analytical methods.

3.2.1.1 Volatile Organic Compounds

VOCs were not detected above their respective WQCC Standards in any of the wells sampled in April 2019 and October 2019. Reported concentrations of VOCs during the 2019

sampling events were generally consistent with or less than previous sampling results, with notable increases in the following well:

- MW-30: Chloroform concentrations exhibited an increasing trend from February 2015 (0.00072 J milligrams per liter [mg/L]) to April 2019 (0.0148 mg/L) to October 2019 (0.0110 mg/L [duplicate]). The April 2019 concentration was the historical maximum, but chloroform concentrations in this well remain one order of magnitude below the WQCC Standard of 0.1 mg/L. Chloroform concentrations in this well will be reviewed again in 2020.

As discussed in the *2018 Annual Facility-Wide Groundwater Monitoring Report*, toluene was detected in well MW-14R at a concentration of 0.00186 mg/L in October 2018, when it previously had not been detected in this well. Toluene was not detected in MW-14R in October 2019 (<0.000412 mg/L).

Concentration maps of VOCs in groundwater for the April 2019 and October 2019 monitoring events are not provided because none of the reported concentrations exceeded the WQCC Standards.

Benzene historically fluctuated above and below the WQCC Standard in well MW-11, but remained below the WQCC Standard from February 2015 until the well went dry in August 2016. From March 2015 to August 2016, HFNR installed and maintained oxygen-releasing compound (ORC®) socks in MW-11 to promote enhanced aerobic biodegradation of benzene historically detected in this well. In December 2016, monitoring well MW-11 was plugged and abandoned and a deeper replacement well (MW-11R) was installed at a location adjacent to the former well. Benzene has not been detected in MW-11R, and was not detected in April 2019 or October 2019.

3.2.1.2 Semi-Volatile Organic Compounds

SVOCs were not detected above their respective WQCC Standards in any of the wells sampled in April 2019 and October 2019. Analytical results for SVOCs during the 2019 semi-annual monitoring events were generally consistent with previous sampling results.

As discussed in the *2018 Annual Facility-Wide Groundwater Monitoring Report*, naphthalene was detected in wells MW-2, MW-17R, MW-25 (duplicate sample), MW-33, and WW-North (J-flagged) for the first time in April 2018 (previously all non-detect) at a maximum concentration of 0.00228 mg/L in MW-2. All detected concentrations were at least one order of magnitude lower than the WQCC Standard of 0.03 mg/L. The April 2018 naphthalene results in MW-17R and MW-25 are considered estimated as the relative percent difference (RPD) between the parent and duplicate sample results did not meet control limits. Naphthalene has been intermittently detected in other refinery wells over time but was not detected in any of the wells sampled in October 2018, April 2019, and October 2019.

Concentration maps of SVOCs in groundwater for the April 2019 and October 2019 sampling events are not provided because none of the reported concentrations exceeded the WQCC Standards.

3.2.1.3 Total Petroleum Hydrocarbons

During the April 2019 sampling event, TPH GRO was detected above the MQL in well MW-33 at a concentration of 0.144 mg/L. Of the other four wells sampled and analyzed for TPH GRO in April 2019, TPH GRO was detected at an estimated J-flagged concentration below the MQL in well MW-32, but was not detected in WW-South, WW-North, and WW-East. TPH DRO was detected at concentrations above the MQL in well MW-32 at a concentration of 0.209 mg/L. Of the four other wells sampled and analyzed for TPH DRO in April 2019, TPH DRO was detected at estimated J-flagged concentrations below the MQL in wells MW-33 and WW-South, but was not detected in MW-30, WW-North, and WW-East.

During the October 2019 monitoring event, TPH GRO was detected above the MQL in MW-33 at a concentration of 0.244 B mg/L, with the "B" qualifier (or B-flagged) indicating it was detected within five times the associated laboratory method blank detection and therefore the reported concentration may include laboratory contributions. TPH GRO was detected at estimated J-flagged concentrations below the MQL in the other seven wells sampled and analyzed for TPH GRO and were detected within five times the related method blank detection (MW-5, MW-21, MW-22, MW-32, WW-South, WW-North, and WW-East). TPH DRO was detected at concentrations above the MQL in three of the eight wells (MW-21, MW-32, and MW-33) sampled during the October 2019 monitoring event with a maximum detected concentration of 0.272 mg/L in MW-32. Of the five other wells sampled and analyzed for TPH DRO in October 2019, TPH DRO was detected at estimated J-flagged concentrations below the MQL in wells MW-5 and MW-22, but was not detected in wells WW-South, WW-North, and WW-East.

There is no WQCC Standard for TPH DRO or TPH GRO. No indicator VOCs or SVOCs associated with TPH mixtures were detected above their respective WQCC Standard in samples collected from any of these wells.

There is limited historical TPH data available for comparison of the 2019 TPH results. Reported TPH concentrations for the 2019 monitoring events were generally consistent with 2017 and 2018 monitoring results (i.e., stable trends).

3.2.2 Inorganic Constituent Results

Analytical results for anions, TDS, and metals (i.e., inorganic constituents) in groundwater are presented in Table 3. A discussion of the inorganic constituent results is provided below.

3.2.2.1 Anions

The April 2019 analytical results indicate that chloride and fluoride are present in groundwater at concentrations above their respective WQCC Standards. Chloride was detected at concentrations above the WQCC Standard of 250 mg/L in 4 of the 17 wells sampled for anions (MW-13R, MW-15, MW-19, and WW-South) with a maximum concentration of 537 mg/L in MW-15. Fluoride was detected at a concentration above the WQCC Standard of 1.6 mg/L in 1 of the 17 wells sampled for anions at a concentration of 1.76 mg/L in MW-28.

The October 2019 analytical results indicate that chloride and fluoride are present at concentrations above their respective WQCC Standards. Chloride was detected at concentrations above the WQCC Standard of 250 mg/L in 7 of the 30 wells sampled for anions (MW-11R, MW-13R, MW-14R, MW-15, MW-19, MW-29, and WW-South) with a maximum detected concentration of 518 mg/L in MW-14R. Fluoride was detected at concentrations above the WQCC Standard of 1.6 mg/L in 2 of the 30 wells sampled for anions at concentrations of 2.93 mg/L in MW-24 and 2.04 mg/L in MW-28.

Concentration maps of anions that exceeded WQCC Standards in groundwater for the April 2019 and October 2019 sampling events are provided as Figures 5 and 6, respectively.

Reported anion concentrations for the 2019 sampling events were generally consistent with previous sampling results. Notable increases of chloride concentrations in the following wells were observed that may be associated with continually reducing groundwater elevations and will be reviewed again in the 2020 report:

- MW-4: Chloride concentrations exhibited an increasing trend from August 2016 (25.1 mg/L) to October 2019 (75.6 mg/L), but remained significantly below the WQCC Standard of 250 mg/L. The October 2019 chloride result was the historical maximum reported concentration at this well.
- MW-14R: Chloride concentrations increased from October 2018 (216 mg/L) to October 2019 (518 mg/L), which is the first exceedance of the WQCC Standard of 250 mg/L in this replacement well. Chloride did not exceed the WQCC Standard in former well MW-14, but chloride concentrations exhibited an increasing trend in former well MW-14 from July 2011 (48.4 mg/L) to August 2016 (118 mg/L), which was the last event in which MW-14 was sampled for anions. The October 2018 and October 2019 results continued an increasing concentration trend at well pair MW-14/MW-14R. Concentrations of other anions in this replacement well were generally consistent with historical results in MW-14.
- MW-15: Chloride concentrations increased from 222 mg/L in April 2018 to 348 mg/L in October 2018 to 537 mg/L in April 2019, which is the historical maximum in this

well. Chloride concentrations in October 2019 decreased to 437 mg/L. The chloride concentrations in this well have historically fluctuated.

As discussed in the *2018 Annual Facility-Wide Groundwater Monitoring Report*, increasing trends of chloride and nitrate-nitrite concentrations in well MW-9 and elevated nitrate-nitrite concentrations in MW-22 were reported during 2018. In 2019, chloride and nitrate-nitrite concentrations in MW-9 decreased from historical maximum concentrations reported in 2018. Nitrate-nitrite concentrations in MW-22 decreased from a historical maximum of 48.6 mg/L in August 2017 (which was considered to be an anomalous result) to 12.9 mg/L in October 2018 to 6.54 mg/L in October 2019, which is below the WQCC Standard of 10 mg/L.

As discussed in the December 2013 *Refinery Investigation Report*, the presence of anions at concentrations above WQCC Standards in select wells, including chloride (wells MW-11R, MW-13R, MW-14R, MW-15, MW-19, MW-29, and WW-South) and fluoride (wells MW-24 and MW-28) is due to off-site sources, background concentrations, and/or non-HFNR sources at the refinery.

3.2.2.2 Total Dissolved Solids

During the April 2019 sampling event, TDS was detected at concentrations above the WQCC Standard of 1,000 mg/L in 7 of the 14 wells sampled for TDS (MW-11R, MW-13R, MW-15, MW-19, MW-25, MW-33, and WW-South) with a maximum detected concentration of 1,980 mg/L in MW-13R. During the October 2019 sampling event, TDS was detected at concentrations above the WQCC Standard of 1,000 mg/L in 8 of the 26 wells sampled for TDS (MW-11R, MW-13R, MW-14R, MW-15, MW-19, MW-25, MW-29, and MW-33) with a maximum detected concentration of 1,840 mg/L in MW-14R. Concentration maps of TDS in groundwater for the April 2019 and October 2019 sampling events are provided as Figures 7 and 8, respectively. Reported TDS concentrations for both 2019 sampling events were generally consistent with previous sampling results, with notable increases in the following wells:

- MW-11R: TDS concentrations exhibited an increasing trend from February 2017 (980 mg/L [duplicate]) to April 2019 (1,480 mg/L), which is the historical maximum reported concentration in this replacement well. However, the historical maximum reported concentration in former well MW-11 is 1,510 mg/L in February 2011. TDS concentrations decreased in October 2019 (1,330 mg/L).

- MW-14R: TDS concentrations exhibited an increasing trend from February 2013 (428 mg/L) in former well MW-14 to October 2019 (1,840 mg/L) in the replacement well, which is the historical maximum reported concentration and is the first exceedance of the WQCC Standard in well pair MW-14/MW-14R.

As discussed in the December 2013 *Refinery Investigation Report*, the presence of TDS at concentrations above WQCC Standards in select wells (including wells MW-11R, MW-13R, MW-14R, MW-15, MW-19, MW-25, MW-33, and WW-South) is due to off-site sources, background concentrations, and/or non-HFNR sources at the refinery.

3.2.2.3 Metals

During the April 2019 sampling event, manganese was detected at a concentration above the WQCC Standard of 0.2 mg/L in 2 of the 15 wells sampled at concentrations of 0.349 mg/L in MW-32 and 1.39 mg/L in MW-33. During the October 2019 sampling event, manganese was detected at a concentration above the WQCC Standard of 0.2 mg/L in 2 of the 26 wells sampled, at a concentration of 0.278 mg/L (duplicate) in MW-32 and 1.02 mg/L in MW-33. Chromium was detected at a concentration above the WQCC Standard of 0.05 mg/L in 1 of the 26 wells sampled at a concentration of 0.0560 mg/L (duplicate) in MW-29 during the October 2019 sampling event.

Concentration maps of metals that exceeded WQCC Standards in groundwater for the April and October 2019 sampling events are provided as Figures 9 and 10, respectively. Metal concentrations in groundwater across the refinery were generally consistent with or less than previous sampling events. The presence of manganese above WQCC Standards in new wells MW-32 and MW-33, located along the southern refinery boundary, is potentially attributed to nearby produced-water injection wells LPU-38 and LSAU-23 and oil production wells LA-9 and LPU-96 (Figure 2) based on the distribution of manganese in groundwater and the lack of potential sources for metals identified in this portion of the refinery as discussed in the December 2013 *Refinery Investigation Report*. Chromium historically exceeded the WQCC Standard of 0.05 mg/L at MW-29 from February 2011 to August 2015 at greater concentrations than the October 2019 exceedance.

Reported metal concentrations for the 2019 sampling events were generally consistent with or less than previous sampling results, with notable increases in the following wells:

- In wells MW-1, MW-4, MW-5, MW-6, MW-8, MW-11R, MW-13R, MW-14R, MW-15, MW-16, MW-17R, MW-18, MW-24, MW-25, MW-28, MW-29, MW-30, MW-32, WW-North, and WW-East, total mercury was detected in October 2019 for the first or second time in the history of the well. However, all the October 2019 detections were J-flagged and B-flagged and are therefore likely attributed to laboratory contributions.
- MW-11R: Concentrations of lead exhibited an increasing trend from April 2018 (0.000668 JB mg/L) to October 2019 (0.00131 J mg/L) in this replacement well. Lead was not detected in this well prior to April 2018. Concentrations of copper exhibited increasing trends from August 2017 (0.00242 J mg/L) to October 2019 (0.0435 mg/L). The lead and copper October 2019 results are the historical maximum concentrations

reported in this well but remain at least one order of magnitude below their respective WQCC Standards of 0.05 mg/L (lead) and 1.0 mg/L (copper). Regardless, concentrations in MW-11R will be reviewed again in the 2020 report. In October 2019, chromium was detected for the first time in this well, but the result was J-flagged and B-flagged and is therefore likely attributed to laboratory contributions.

- MW-15: In October 2019, molybdenum, nickel, and zinc concentrations increased by an order of magnitude to historical maximums of 0.00567 mg/L, 0.0322 mg/L, and 0.128 mg/L, respectively. However, the concentrations remain significantly below their respective WQCC Standards of 1.0 mg/L (molybdenum), 0.2 mg/L (nickel), and 10.0 mg/L (zinc).

- In wells MW-17R, MW-18, MW-22, zinc concentrations exhibited an increasing trend over at least the four most recent sampling events. However, the concentrations remain significantly below the WQCC Standard of 10.0 mg/L. Zinc concentrations have historically fluctuated across the refinery.

- MW-19: In October 2019, cobalt, manganese, and nickel concentrations increased to historical maximums of 0.00261 mg/L, 0.0406 mg/L, and 0.181 mg/L, respectively. However, the concentrations remain below their respective WQCC Standards of 0.05 mg/L (cobalt) and 0.20 mg/L (manganese and nickel). There have been historical intermittent detections of each of these metals across the refinery.

- MW-22: Copper concentrations increased from August 2017 (0.000730 J) to October 2019 (0.0144 mg/L), which is the historical maximum in this well. However, copper concentrations remain significantly below the WQCC Standard of 1.0 mg/L.

- MW-25: In October 2019, cobalt, copper, lead, manganese, and zinc concentrations increased to historical maximums 0.0124 mg/L, 0.0867 mg/L, 0.00509 mg/L, 0.0758 mg/L, and 0.234 mg/L, respectively, in the original or duplicate sample. However, the concentrations remain below their respective WQCC Standards of 0.05 mg/L (cobalt and lead), 1.0 mg/L (copper), 0.20 mg/L (manganese), and 10.0 mg/L (zinc). These analyte concentrations at MW-25 will be reviewed again in the 2020 report.

- MW-29: Chromium concentrations increased from April 2019 (0.0171 mg/L) to October 2019 (0.0560 mg/L [duplicate]). The historical maximum reported chromium concentration in this well is 0.261 mg/L in July 2012 and February 2014.

- MW-33: Uranium exhibited an increasing trend from April 2018 (0.00269 J mg/L) to October 2019 (0.0167 mg/L),which is the historical maximum in this well. There is

limited historical data available for this well since it was installed in 2017 and concentrations remain below the WQCC Standard of 0.03 mg/L.

- WW-North: In October 2019, manganese concentrations increased to a historical maximum of 0.0172 mg/L, but remained below its WQCC Standard of 0.20 mg/L. Manganese concentrations in this well have fluctuated over time.

As discussed in the *2018 Annual Facility-Wide Groundwater Monitoring Report*, historical maximum concentrations were reported at MW-20 for cobalt, manganese, molybdenum, and nickel and at MW-24 for zinc in October 2018, however, reported concentrations in October 2019 were consistent with historical results.

As discussed in the December 2013 *Refinery Investigation Report*, the presence of metals at concentrations above WQCC Standards in select wells is due to off-site sources, background concentrations, and/or non-HFNR sources at the refinery.

4.0 QUARTERLY REFINERY WATER SUPPLY WELL MONITORING

Groundwater samples were collected from refinery water supply wells WW-North, WW-East, and WW-South on a quarterly basis in 2019 in accordance with the November 2017 Revised FWGWMWP. The objective of the quarterly sampling is 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).

Groundwater samples were collected from refinery water supply wells WW-North, WW-South, and WW-East on January 23, 2019; April 4, 2019; July 11, 2019; and October 24, 2019. Groundwater samples collected from the refinery water supply wells were submitted to Pace National in Mount Juliet, Tennessee, under appropriate chain-of-custody documentation for the same analyses as the semi-annual monitoring events. Organic and inorganic analytical results of the quarterly refinery water supply well samples are summarized and compared to WQCC Standards in Tables 2 and 3, respectively.

Consistent with historical results, chloride was detected in WW-South at concentrations above the WQCC Standard of 250 mg/L in each of the quarterly sampling events with results ranging from 335 mg/L in October 2019 to 396 mg/L in January 2019. Also consistent with historical results, TDS was detected in WW-South at concentrations above the WQCC Standard of 1,000 mg/L in all the quarterly sampling events except October 2019 with results ranging from 992 mg/L in October 2019 to 1,280 mg/L in April 2019. None of the remaining inorganic analytes were detected at concentrations above their respective WQCC Standards in any of the samples.

Total phenols was detected at J-flagged estimated concentrations in each of the refinery water supply wells during one or more of the quarterly sampling events in 2019. None of the reported concentrations of total phenols exceeded the WQCC Standard of 0.005 mg/L.

TPH GRO was detected at estimated J-flagged and B-flagged concentrations during October 2019 in refinery water supply wells WW-North (0.0381 JB mg/L), WW-South (0.0381 JB mg/L), and WW-East (0.0386 JB mg/L) and therefore the detected concentrations are likely attributed to laboratory contributions. TPH DRO was detected in WW-South during the April 2019 event (0.0593 J mg/L) and July 2019 event (0.0258 JB mg/L). There is no WQCC Standard for TPH GRO or TPH DRO. No indicator VOCs or SVOCs associated with TPH mixtures were detected above their respective WQCC Standard in samples collected from any of the refinery water supply wells.

Water from the refinery water supply wells poses no risk associated with continued use in refinery restrooms and safety showers based on these results.

5.0 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

Three water samples, one field duplicate, and one trip blank were collected on January 23, 2019. Twenty-one water samples, three field duplicates, two equipment blanks, and one trip blank were collected on April 4, 2019. Three water samples and one trip blank were collected on July 11, 2019. Thirty-three water samples, four field duplicates, two equipment blanks, and two trip blanks were collected on October 24, 2019. These samples were submitted to Pace National in Mount Juliet, Tennessee, for analysis.

TRC Quality Assurance (QA) staff reviewed resultant data. Four data packages identified as L1064582, L1086362, L1118148, and L1153940 were reviewed. Data were reviewed for compliance with the analytical protocols used for sample analysis and laboratory-defined quality control (QC) limits. Items reviewed during the data validation process included the following:

- Sample integrity, preservation, and holding times
- Blank analyses
- Spike recoveries
- Duplicate recoveries
- Sample documentation

Complete QA/QC data review results are provided in Appendix D.

6.0 2019 RELEASES AND REMEDIATION ACTIVITIES

Two reportable releases occurred at the refinery in 2019: (1) the floor leak from Tank 1204 discovered on November 8, 2019, and (2) the floor leak from Tank 1207 discovered on November 8, 2019. Additionally, throughout 2019, HFNR continued to recover LNAPL associated with the historical release discovered at the asphalt loading rack in November 2015.

6.1 November 2019 Tank 1204 and Tank 1207 Releases

During Praxair leak detection testing, leaks were discovered from Tanks 1204 and 1207 on November 8, 2019. Form C-141 (Release Notification) was submitted to the OCD for each of these two releases on November 22, 2019. These tanks were removed from service and are undergoing repairs at the time of this report. There has not been a groundwater monitoring event since the date of the reported releases. Future groundwater monitoring events will be used to determine if there are any impacts to groundwater from these releases. The extent of the releases is still under evaluation and final reports will be provided to OCD under separate cover.

6.2 Asphalt Loading Rack (LNAPL Recovery at MW-31)

Prior to 2019, HNFR conducted routine LNAPL recovery at monitoring well MW-31 since LNAPL was discovered in February 2017 and completed appropriate investigations and reporting. In 2019, HFNR continued routine LNAPL recovery at monitoring well MW-31. A passive skimmer (Petro-Bailer^{TM}) was installed and maintained in MW-31 through March 2019 and the skimmer was emptied on a daily to weekly basis. The depth to LNAPL and groundwater was gauged in MW-31 after removing the passive skimmer from the well. In addition to emptying the passive skimmer on a daily to weekly basis, LNAPL was manually bailed from MW-31 on a primarily weekly basis from February 2, 2018, through March 27, 2019, but was occasionally conducted on a daily basis during this timeframe. The depth to LNAPL and groundwater was gauged in MW-31 before and after manual bailing.

On April 1, 2019, HFNR installed a pneumatic skimmer pump system (Geotech SpOILer System) in MW-31 that was programmed to operate at regular intervals to continuously recover LNAPL and reduce in-well apparent LNAPL thickness. HFNR conducted initial recovery system efficiency testing and optimization as part of system installation and startup activities from April 1 through 4, 2019. Operation and maintenance (O&M) of the recovery system was conducted at least on a weekly basis, but gauging of the well was only conducted when the skimmer pump was removed for more intensive O&M and optimization events conducted on a monthly basis from May through October 2019.

Fluid gauging and LNAPL recovery results to date are summarized in Appendix E. Approximately 108 gallons of LNAPL were manually recovered from MW-31 from January 2019 through March 2019. Approximately 430 gallons of LNAPL were recovered by the pneumatic

skimmer pump system from MW-31 from April 2019 through December 2019. An approximate total of 837 gallons of LNAPL have been manually recovered or recovered by the pneumatic skimmer pump system from MW-31 since February 2017. Apparent LNAPL thickness in MW-31 decreased over time with operation of the skimmer system from a maximum of 5.65 feet in April 2019 to 0.65 feet in October 2019.

HFNR will continue to monitor and evaluate recovery system data and adjust system operation parameters as necessary in order to optimize recovery. Recovery data collected thus far indicates the skimmer system has increased LNAPL recovery rates and reduced the in-well apparent LNAPL thickness. O&M activities will be conducted on at least a weekly basis with more intensive maintenance activities (including optimization) conducted on at least a quarterly basis.

7.0 CONCLUSIONS

Conclusions based on data collected during groundwater monitoring activities conducted during calendar year 2019 are discussed below.

Groundwater flow directions were consistent with previous groundwater monitoring events. Groundwater elevations decreased an average of 0.58 feet from April 2018 to April 2019 and an average of 1.69 feet from October 2018 to October 2019. Groundwater elevations have continually decreased from June 2009 to October 2019 and groundwater elevations in a few wells are approaching their current total depth. These reductions in groundwater elevation are likely caused by limited recharge and active regional pumping. The groundwater elevations in these wells will be closely monitored during future events. Consistent with 2017 and 2018 results, LNAPL was detected in monitoring well MW-31. The apparent LNAPL thickness in MW-31 ranged from a maximum of 5.65 feet in April 2019 to a minimum of 0.65 feet in October 2019, as a result of the routine LNAPL recovery activities.

Analytical results of groundwater samples collected during semi-annual groundwater monitoring events conducted in April 2019 and October 2019 indicated the following:

- No VOCs were reported at concentrations above WQCC Standards in any well during the reporting period.
- No SVOCs were reported at concentrations above WQCC Standards in any well during the reporting period.
- TPH GRO was detected above the MQL in well MW-33 in April and October 2019. TPH DRO was detected above the MQL in well MW-32 in April and October 2019 and wells MW-21 and MW-33 in October 2019. There is no WQCC Standard for TPH GRO and TPH DRO; no indicator VOCs or SVOCs associated with TPH mixtures were detected above their respective WQCC Standard in samples collected from any of these wells.
- Anions were reported at concentrations above the WQCC Standard for chloride (wells MW-13R, MW-15, MW-19, and WW-South) and fluoride (well MW-28) in April 2019; and chloride (wells MW-11R, MW-13R, MW-14R, MW-15, MW-19, MW-29, and WW-South) and fluoride (wells MW-24 and MW-28) in October 2019.
- TDS was reported at concentrations above its WQCC Standard in wells MW-11R, MW-13R, MW-15, MW-19, MW-25, MW-33, and WW-South in April 2019; and in wells MW-11R, MW-13R, MW-14R, MW-15, MW-19, MW-25, MW-29, and MW-33 in October.

- Manganese was reported at concentrations above its WQCC Standard in wells MW-32 and MW-33 in April 2019 and October 2019. Chromium was reported at a concentration above its WQCC Standard in well MW-29 in October 2019.

The presence of select anions, TDS, and select metals at concentrations above WQCC Standards in select wells is due to off-site sources, background concentrations, and/or non- HFNR sources at the refinery. No constituents attributable to refinery sources or operations, as discussed in the December 2013 *Refinery Investigation Report*, exceeded WQCC Standards in wells located along the southeastern refinery boundary (wells MW-5, MW-12R, MW-14R, MW-22, MW-32 and MW-33), which is the natural downgradient portion of the facility (i.e., if active pumping from the refinery water supply wells ceased). Groundwater pumping from refinery water supply wells WW-East, WW-North, and WW-South for industrial use causes radial groundwater flow towards a cone of depression at the central portion of the refinery preventing migration of constituents off-site, but also enables on-site migration of constituents from potential off-site sources (e.g., active oil production and injection wells).

WQCC Standards were not exceeded in any of the quarterly samples collected from refinery water supply wells WW-North, WW-South, and WW-East with the exception of chloride and TDS in WW-South. Based on these results, the water poses no risk associated with continued use in refinery restrooms and safety showers.

LNAPL was recovered from MW-31 using manual bailing, passive skimming techniques, or recovered by the pneumatic skimmer pump system. A total of 538 gallons of LNAPL was recovered from MW-31 during 2019.

8.0 WORK PLANNED FOR 2020

The following summarizes the scope of work planned for 2020 at the refinery:

- Implement semi-annual groundwater monitoring and annual reporting activities in accordance with the sampling and analysis plan presented in the November 2017 Revised FWGWMWP that was submitted to the OCD on November 17, 2017 and approved by OCD on February 1, 2018. HFNR will continue to evaluate the sampling plan and recommend revisions based on historical analytical trends in groundwater.
- Continue to implement quarterly refinery water supply well monitoring in accordance with OCD's May 16, 2014, letter, HFNR's response letter on June 20, 2014, and the November 2017 Revised FWGWMWP.
- Conduct routine LNAPL recovery at well MW-31 using the pneumatic skimmer pump system. O&M activities will continue to be conducted on at least a weekly basis with more intensive maintenance activities (including optimization) to be conducted on at least a quarterly basis.
- Evaluate and replace monitor wells that are screened at depths too shallow for optimal monitoring of the current groundwater elevation, which has continually decreased since June 2009.
- Evaluate results from the 2020 groundwater monitoring events to determine if there are impacts to groundwater from the releases from Tanks 1204 and 1207. Final reports will be provided to OCD under separate cover.

FIGURES



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LEGEND

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

BASEMAP: WORLD IMAGERY (CLARITY) - ESRI AND THEIR DATA PARTNERS, 2018.

N

1 inch = 700 feet

0 345 690 1,380

Feet

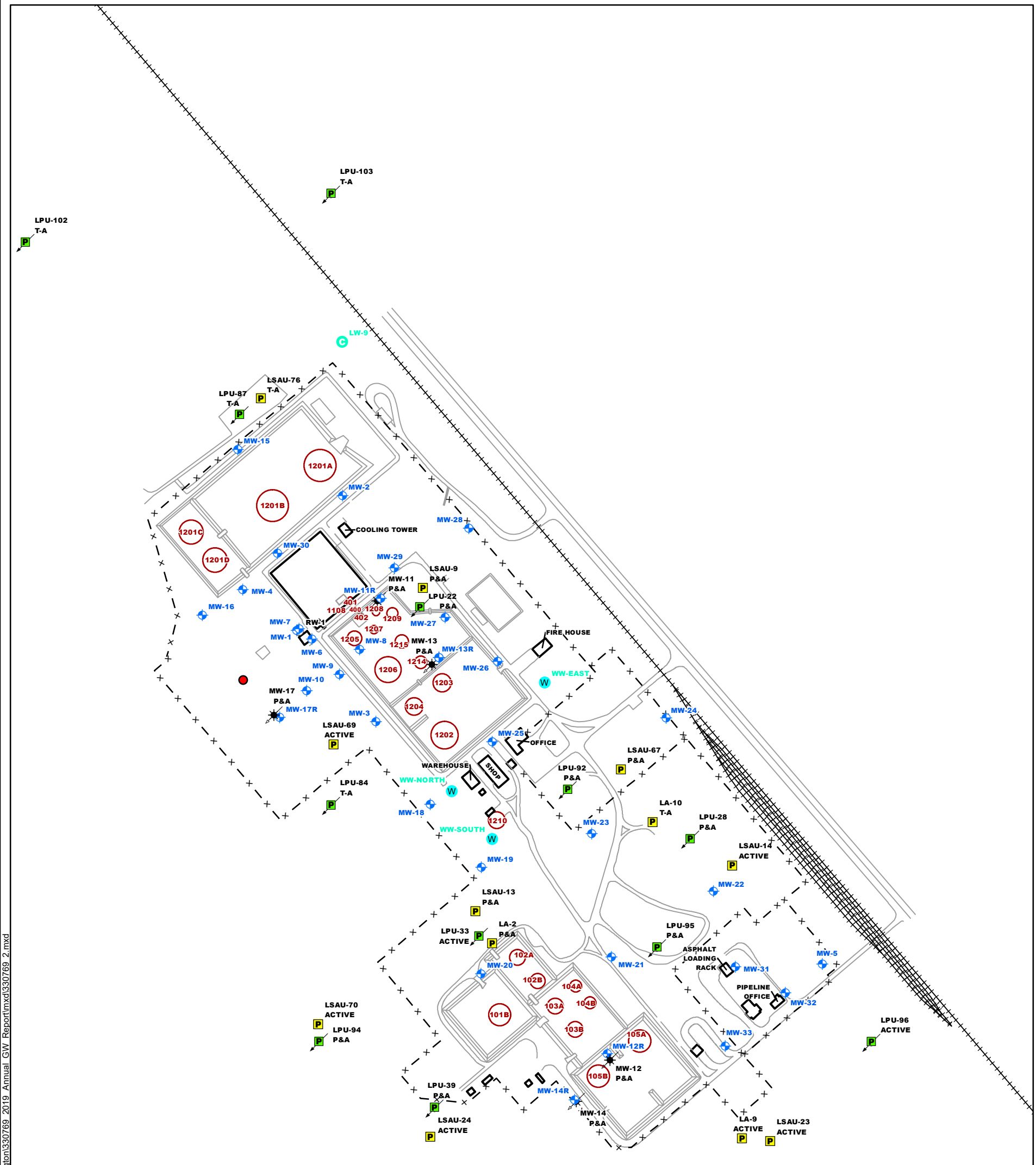
REFINERY VICINITY MAP

HOLLYFRONTIER NAVAJO REFINING LLC
AP-110, LOVINGTON REFINERY, LOVINGTON, NM

PROJECT NO: 330769	MXD: 330769_1
AUTHOR: S. RAY	DATE: 3/12/2020

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(512) 329-6080

FIGURE 1



Document Path: S:\1-PROJECTS\HOLLY ENERGY PARTNERS\Navajo Lovington\330769 2019 Annual GW Report\mxd\330769 2.mxd

LEGEND

- MONITORING WELL
- MONITORING WELL - PLUGGED AND ABANDONED
- OIL PRODUCTION WELL
- OIL PRODUCTION - CONVERTED TO INJECTION WELL
- RECOVERY WELL
- WATER WELL
- CITY OF LOVINGTON WATER WELL
- FLARE
- RAIL
- FENCE
- BUILDINGS
- TANKS

N

0 250 500 1,000

FEET

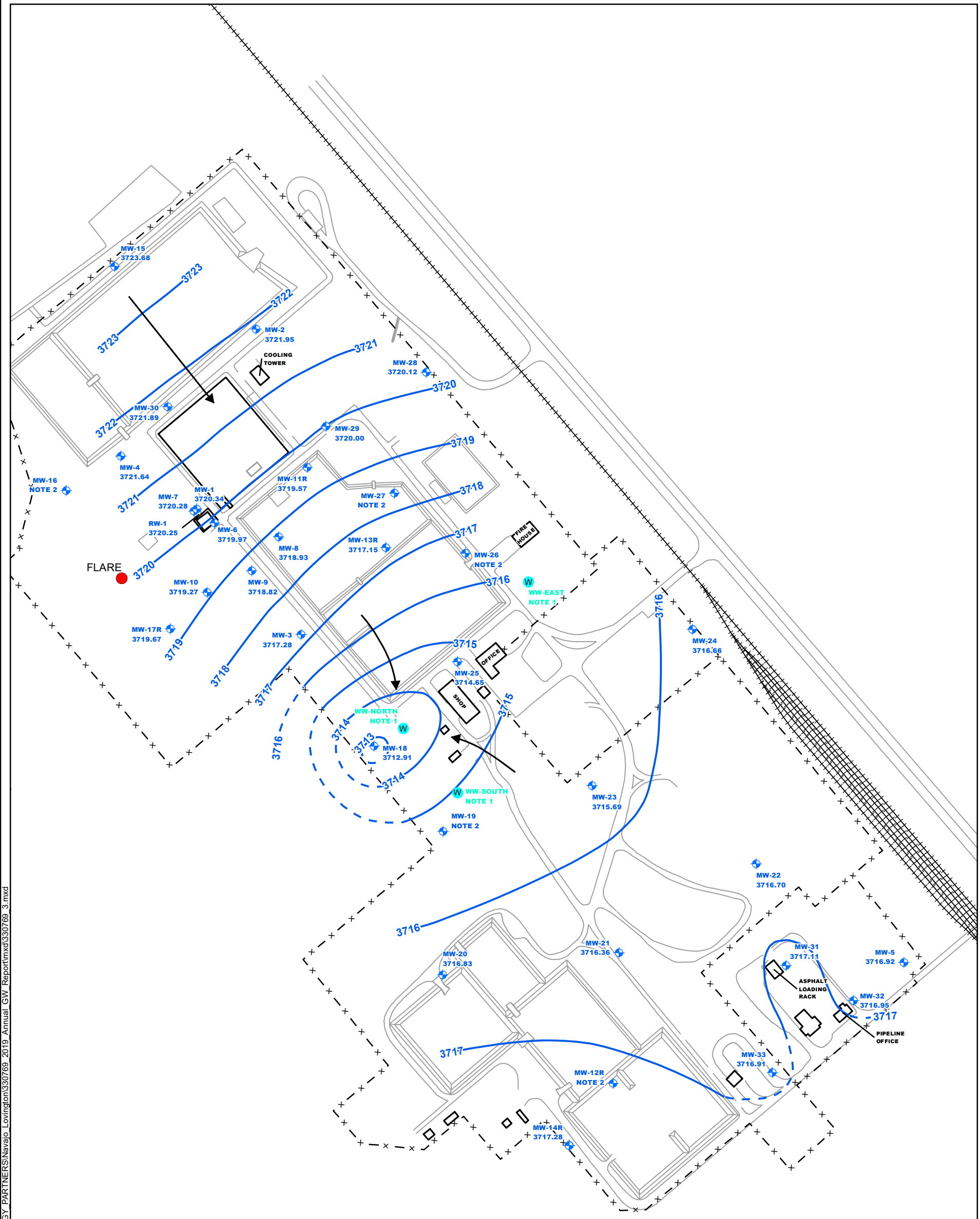
REFINERY SITE PLAN

HOLLYFRONTIER NAVAJO REFINING LLC
AP-110, LOVINGTON REFINERY, LOVINGTON, NM

PROJECT NO: 330769	MXD: 330769_2
AUTHOR: SRAY	DATE: 12/19/2019

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FIGURE
2



Document Path: S:\1-PROJECTS\HOLLY_ENERGY_PARTNERS\Navajo_Lovington\330769_2019_Annual_GW_Report\mxd\330769_3.mxd

NOTE:
1. WATER WELLS NOT ACCESSIBLE FOR GAUGING.
2. WATER LEVEL COULD NOT BE MEASURED DUE TO INTERFERENCE FROM DEDICATED PUMP.
3. WELLS GAUGED ON APRIL 4, 2019, EXCEPT MW-31 WAS GAUGED ON APRIL 1, 2019, BEFORE SKIMMER SYSTEM WAS INSTALLED.

LEGEND

- GROUNDWATER CONTOURS (DASHED WHERE INFERRED)
- MONITORING WELL
- RECOVERY WELL
- WATER WELL
- FLARE
- FENCE
- RAIL
- GROUNDWATER FLOW DIRECTION
- 3723.68 GROUNDWATER ELEVATION (FEET)
- BUILDINGS

N

0 170 340 680
FEET

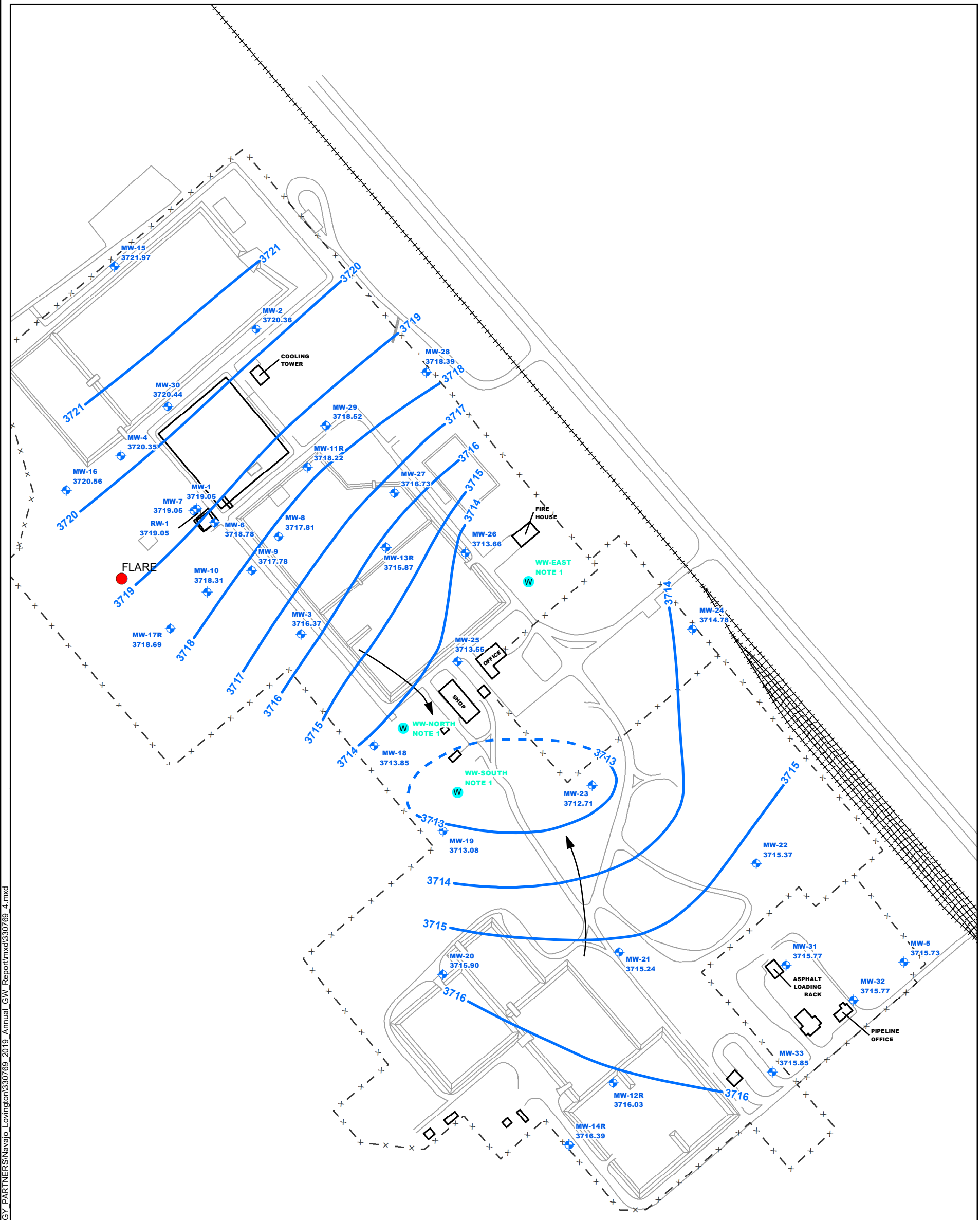
GROUNDWATER POTENTIOMETRIC SURFACE MAP - APRIL 2019

HOLLYFRONTIER NAVAJO REFINING LLC
AP-110, LOVINGTON REFINERY, LOVINGTON, NM

PROJECT NO: 330769	MXD: 330769_3
AUTHOR: SRAY	DATE: 3/12/2020

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FIGURE 3



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NOTE:
1. WATER WELL NOT ACCESSIBLE FOR GAUGING.
2. WELLS GAUGED ON OCTOBER 24, 2019.

LEGEND

- GROUNDWATER CONTOURS (DASHED WHERE INFERRED)
- MONITORING WELL
- RECOVERY WELL
- WATER WELL
- FLARE
- FENCE
- RAIL
- GROUNDWATER FLOW DIRECTION
- 3721.97 GROUNDWATER ELEVATION (FEET)
- BUILDINGS

N

0 175 350 700
FEET

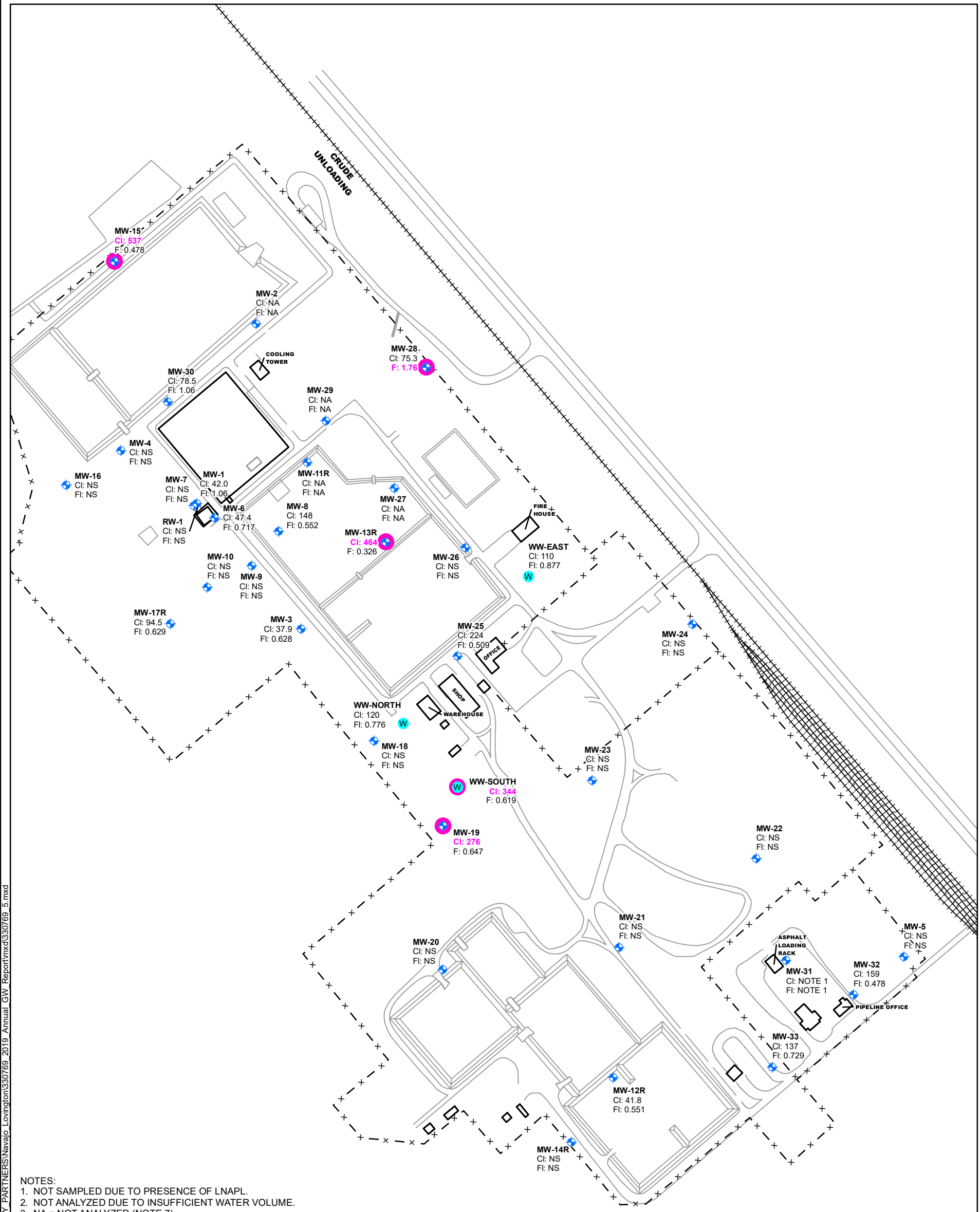
GROUNDWATER POTENTIOMETRIC SURFACE MAP - OCTOBER 2019

HOLLYFRONTIER NAVAJO REFINING LLC
AP-110, LOVINGTON REFINERY, LOVINGTON, NM

PROJECT NO: 330769	MXD: 330769_4
AUTHOR: SRAY	DATE: 3/12/2020

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FIGURE
4



NOTES:
1. NOT SAMPLED DUE TO PRESENCE OF LNAPL.
2. NOT ANALYZED DUE TO INSUFFICIENT WATER VOLUME.
3. NA = NOT ANALYZED (NOTE 7).
4. NS = NOT SAMPLED (NOTE 7).
5. ALL CONCENTRATIONS IN MILLIGRAMS PER LITER (mg/L).
6. CHLORIDE AND FLUORIDE CONCENTRATIONS SHOWN FOR ALL WELLS BECAUSE THEY ARE THE ONLY ANIONS THAT EXCEEDED THEIR RESPECTIVE WQCC STANDARDS.
7. IN ACCORDANCE WITH DECEMBER 2017 REVISED FACILITY-WIDE GROUNDWATER MONITORING WORK PLAN.

LABEL KEY:
Cl: 78.5 - CHLORIDE CONCENTRATION (WQCC STANDARD = 250 mg/L)
F: 1.06 - FLUORIDE CONCENTRATION (WQCC STANDARD = 1.6 mg/L)

PINK HIGHLIGHTED VALUES IN EXCEEDANCE OF WATER QUALITY CONTROL COMMISSION (WQCC) STANDARD.

LEGEND

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

N

0 175 350 700
FEET

ANIONS CONCENTRATION MAP - APRIL 2019

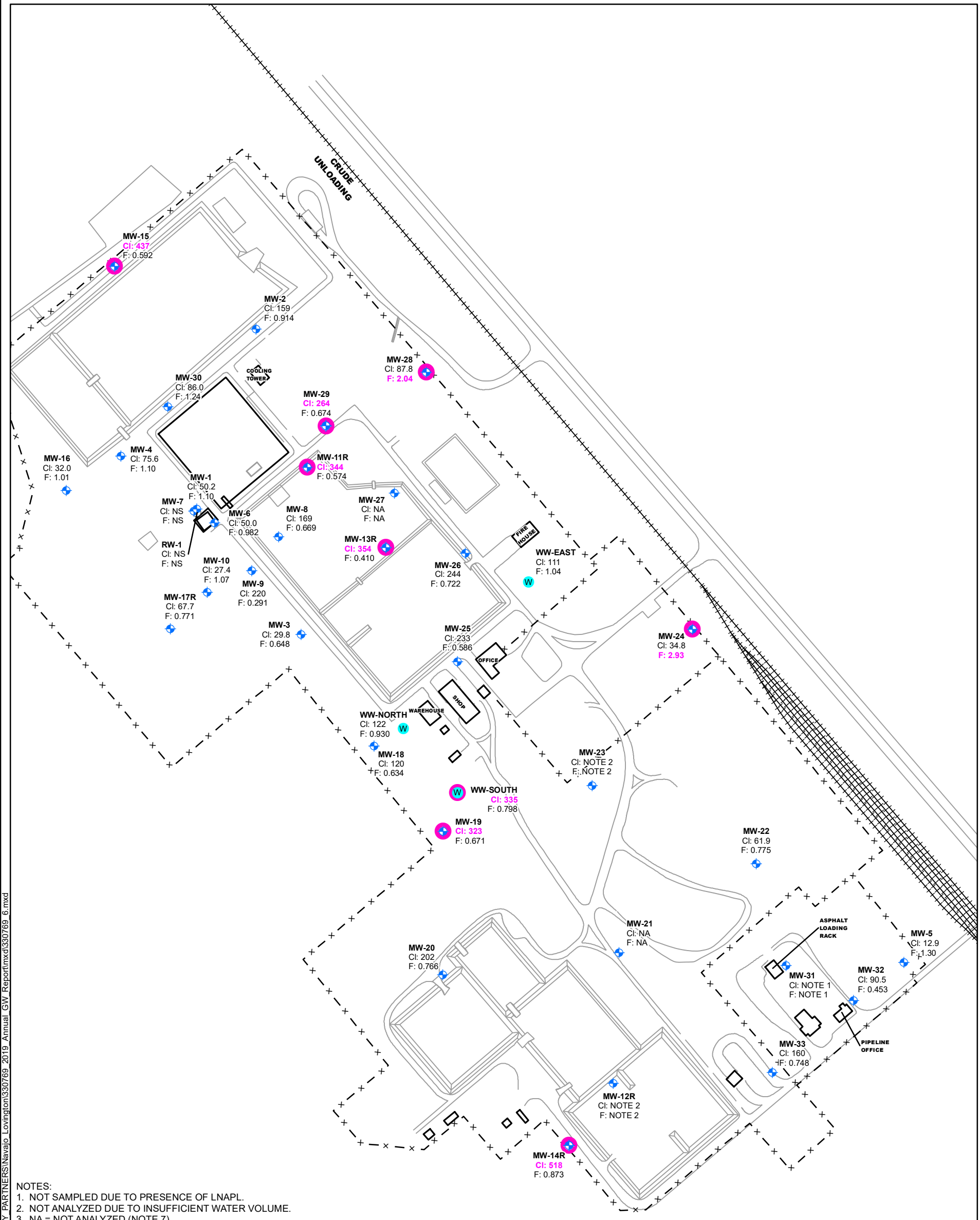
HOLLYFRONTIER NAVAJO REFINING LLC
AP-110, LOVINGTON REFINERY, LOVINGTON, NM

PROJECT NO: 330769	MXD: 330769_5
AUTHOR: SRAY	DATE: 3/12/2020

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FIGURE 5

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NOTES:
1. NOT SAMPLED DUE TO PRESENCE OF LNAPL.
2. NOT ANALYZED DUE TO INSUFFICIENT WATER VOLUME.
3. NA = NOT ANALYZED (NOTE 7).
4. NS = NOT SAMPLED (NOTE 7).
5. ALL CONCENTRATIONS IN MILLIGRAMS PER LITER (mg/L).
6. CHLORIDE AND FLUORIDE CONCENTRATIONS SHOWN FOR ALL WELLS BECAUSE THEY ARE THE ONLY ANIONS THAT EXCEEDED THEIR RESPECTIVE WQCC STANDARDS.
7. IN ACCORDANCE WITH DECEMBER 2017 REVISED FACILITY-WIDE GROUNDWATER MONITORING WORK PLAN.

LABEL KEY:
Cl: 86 - CHLORIDE CONCENTRATION (WQCC STANDARD = 250 mg/L)
F: 1.24 - FLUORIDE CONCENTRATION (WQCC STANDARD = 1.6 mg/L)

PINK HIGHLIGHTED VALUES IN EXCEEDANCE OF WATER QUALITY CONTROL COMMISSION (WQCC) STANDARD.

LEGEND

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

N

0 175 350 700
FEET

ANIONS
CONCENTRATION MAP - OCTOBER 2019

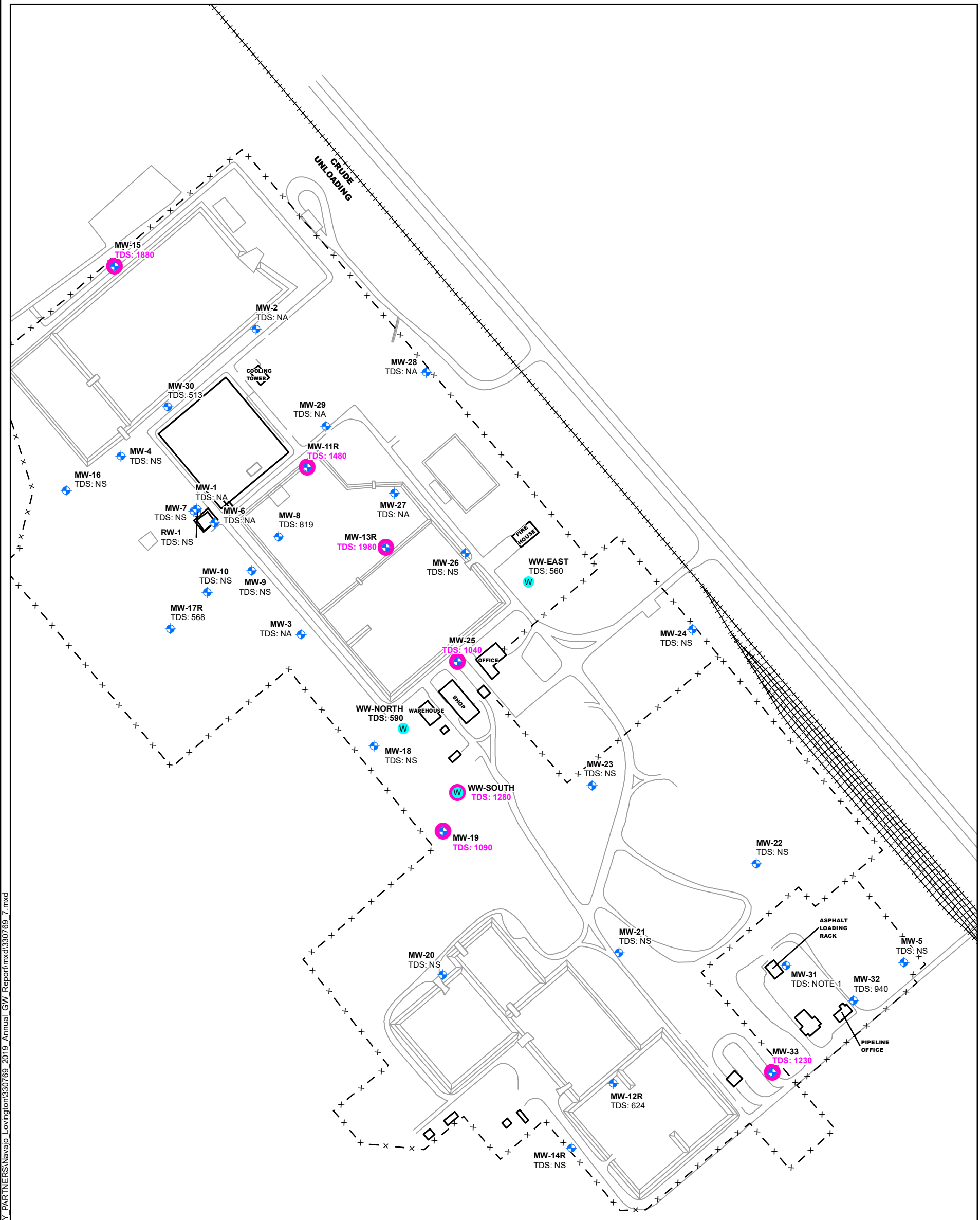
HOLLYFRONTIER NAVAJO REFINING LLC
AP-110, LOVINGTON REFINERY, LOVINGTON, NM

PROJECT NO: 330769	MXD: 330769_6
AUTHOR: SRAY	DATE: 3/12/2020

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FIGURE 6

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NOTES:
1. NOT SAMPLED DUE TO PRESENCE OF LNAPL.
2. NA = NOT ANALYZED (NOTE 5).
3. NS = NOT SAMPLED (NOTE 5).
4. ALL CONCENTRATIONS IN MILLIGRAMS PER LITER (mg/L).
5. IN ACCORDANCE WITH DECEMBER 2017 REVISED FACILITY-WIDE GROUNDWATER MONITORING WORK PLAN.

LABEL KEY:
TDS: 513 - TOTAL DISSOLVED SOLIDS CONCENTRATION (WQCC STANDARD = 1,000 mg/L)

PINK HIGHLIGHTED VALUES IN EXCEEDANCE OF WATER QUALITY CONTROL COMMISSION (WQCC) STANDARD.

LEGEND

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

N

0 175 350 700
FEET

TOTAL DISSOLVED SOLIDS CONCENTRATION MAP - APRIL 2019

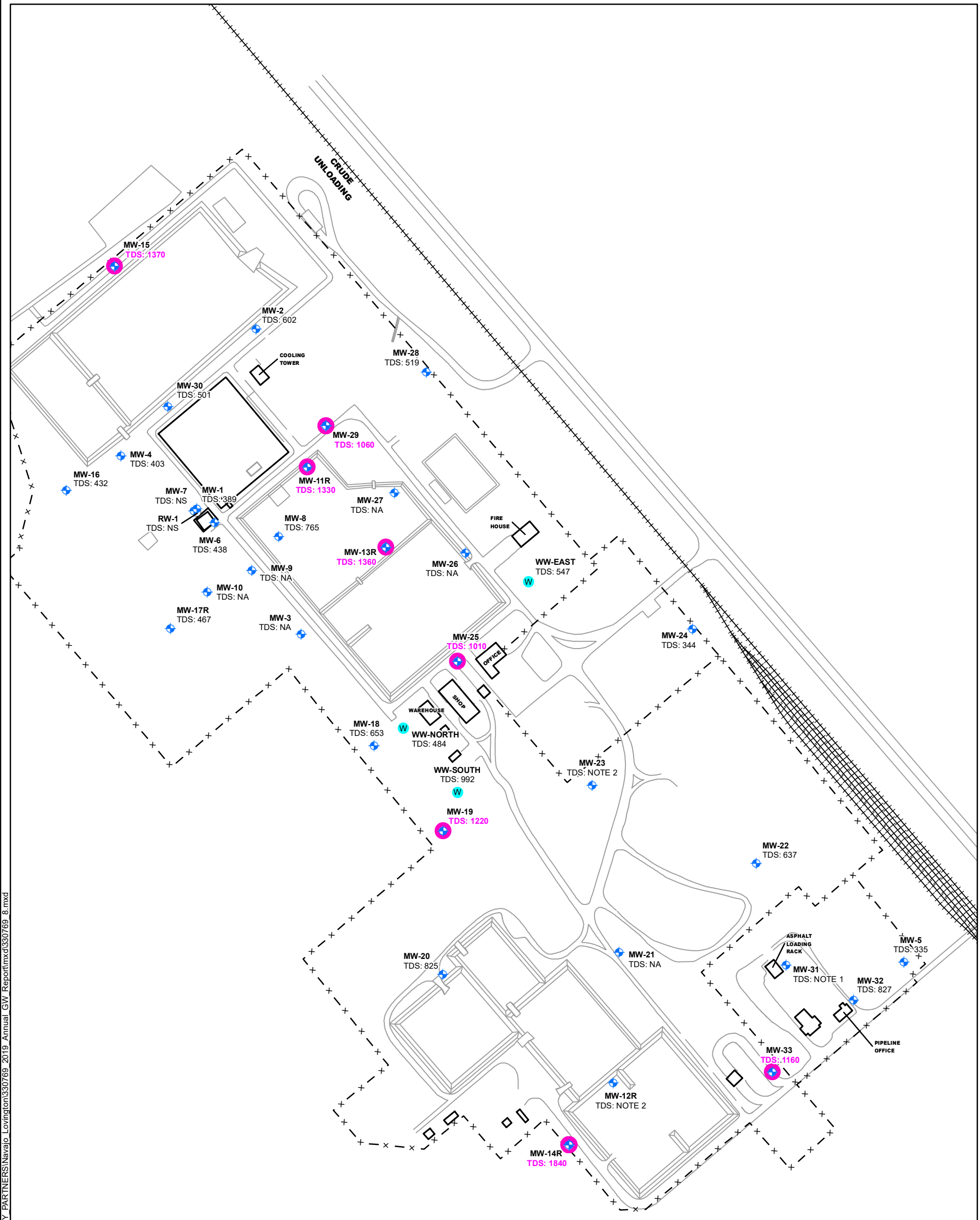
HOLLYFRONTIER NAVAJO REFINING LLC
AP-110, LOVINGTON REFINERY, LOVINGTON, NM

PROJECT NO: 330769	MXD: 330769_7
AUTHOR: SRAY	DATE: 3/16/2020

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FIGURE 7

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NOTES:
1. NOT SAMPLED DUE TO PRESENCE OF LNAPL.
2. NOT ANALYZED DUE TO INSUFFICIENT WATER VOLUME.
3. NA = NOT ANALYZED (NOTE 6).
4. NS = NOT SAMPLED (NOTE 6).
5. ALL CONCENTRATIONS IN MILLIGRAMS PER LITER (mg/L).
6. IN ACCORDANCE WITH DECEMBER 2017 REVISED FACILITY-WIDE GROUNDWATER MONITORING WORK PLAN.

LABEL KEY:
TDS: 501 - TOTAL DISSOLVED SOLIDS CONCENTRATION (WQCC STANDARD = 1,000 mg/L)

PINK HIGHLIGHTED VALUES IN EXCEEDANCE OF WATER QUALITY CONTROL COMMISSION (WQCC) STANDARD.

LEGEND

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

N

0 175 350 700
FEET

TOTAL DISSOLVED SOLIDS CONCENTRATION MAP - OCTOBER 2019

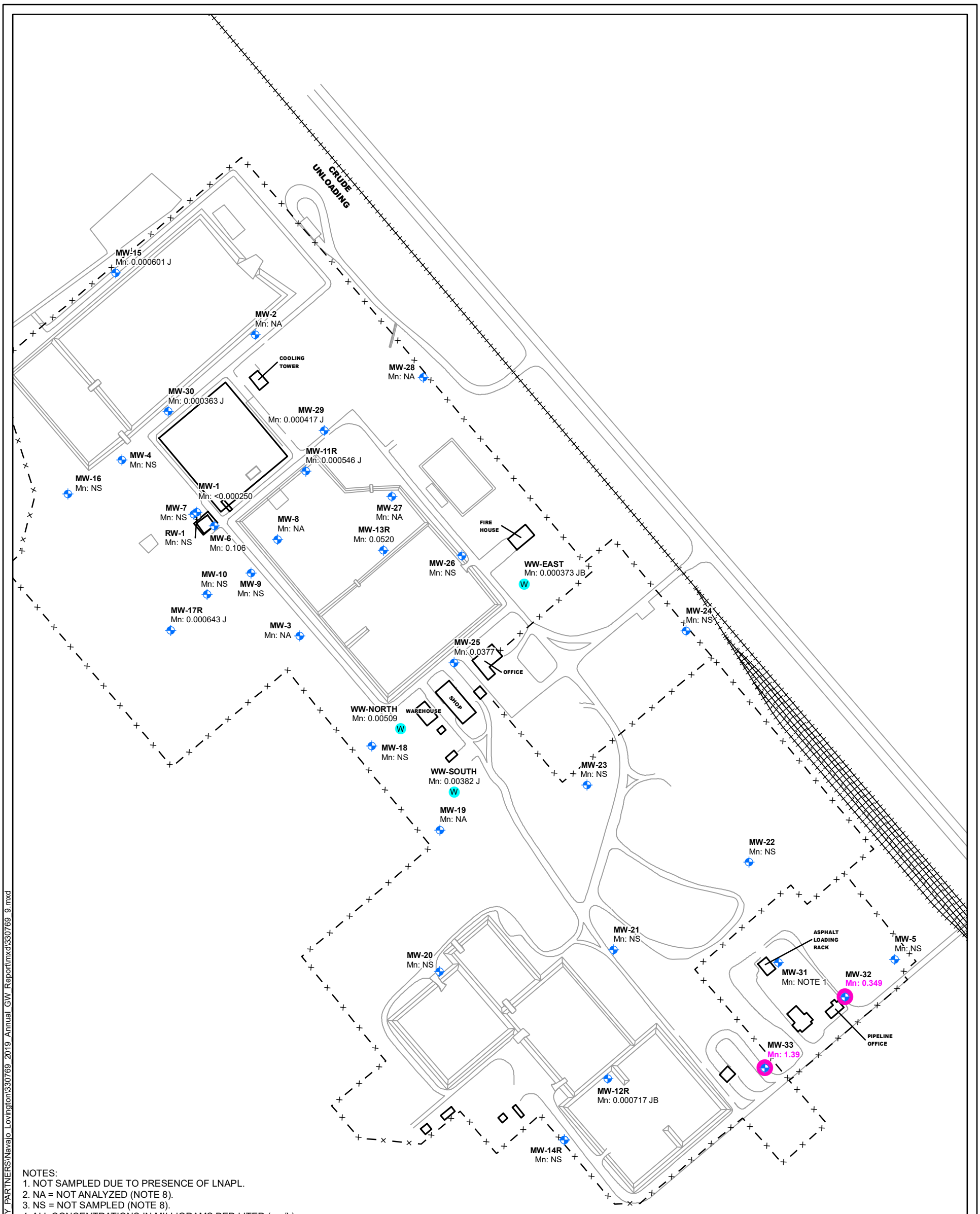
HOLLYFRONTIER NAVAJO REFINING LLC
AP-110, LOVINGTON REFINERY, LOVINGTON, NM

PROJECT NO: 330769	MXD: 330769_8
AUTHOR: SRAY	DATE: 3/12/2020

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

FIGURE 8

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NOTES:
1. NOT SAMPLED DUE TO PRESENCE OF LNAPL.
2. NA = NOT ANALYZED (NOTE 8).
3. NS = NOT SAMPLED (NOTE 8).
4. ALL CONCENTRATIONS IN MILLIGRAMS PER LITER (mg/L).
5. MANGANESE CONCENTRATIONS SHOWN FOR ALL WELLS BECAUSE IT IS THE ONLY METAL THAT EXCEEDED ITS RESPECTIVE WQCC STANDARD.
6. J = ANALYTE DETECTED BELOW REPORTING LIMIT, ESTIMATED VALUE.
7. B = ANALYTE DETECTED IN ASSOCIATED LABORATORY METHOD BLANK; SAMPLE CONCENTRATION IS WITHIN 5 TIMES THE BLANK CONCENTRATION.
8. IN ACCORDANCE WITH DECEMBER 2017 REVISED FACILITY-WIDE GROUNDWATER MONITORING WORK PLAN.

LABEL KEY:
Mn: 0.106 - MANGANESE CONCENTRATION (WQCC STANDARD = 0.2 mg/L)

PINK HIGHLIGHTED VALUES IN EXCEEDANCE OF WATER QUALITY CONTROL COMMISSION (WQCC) STANDARD.

LEGEND

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

N

0 175 350 700
FEET

METALS CONCENTRATION MAP - APRIL 2019

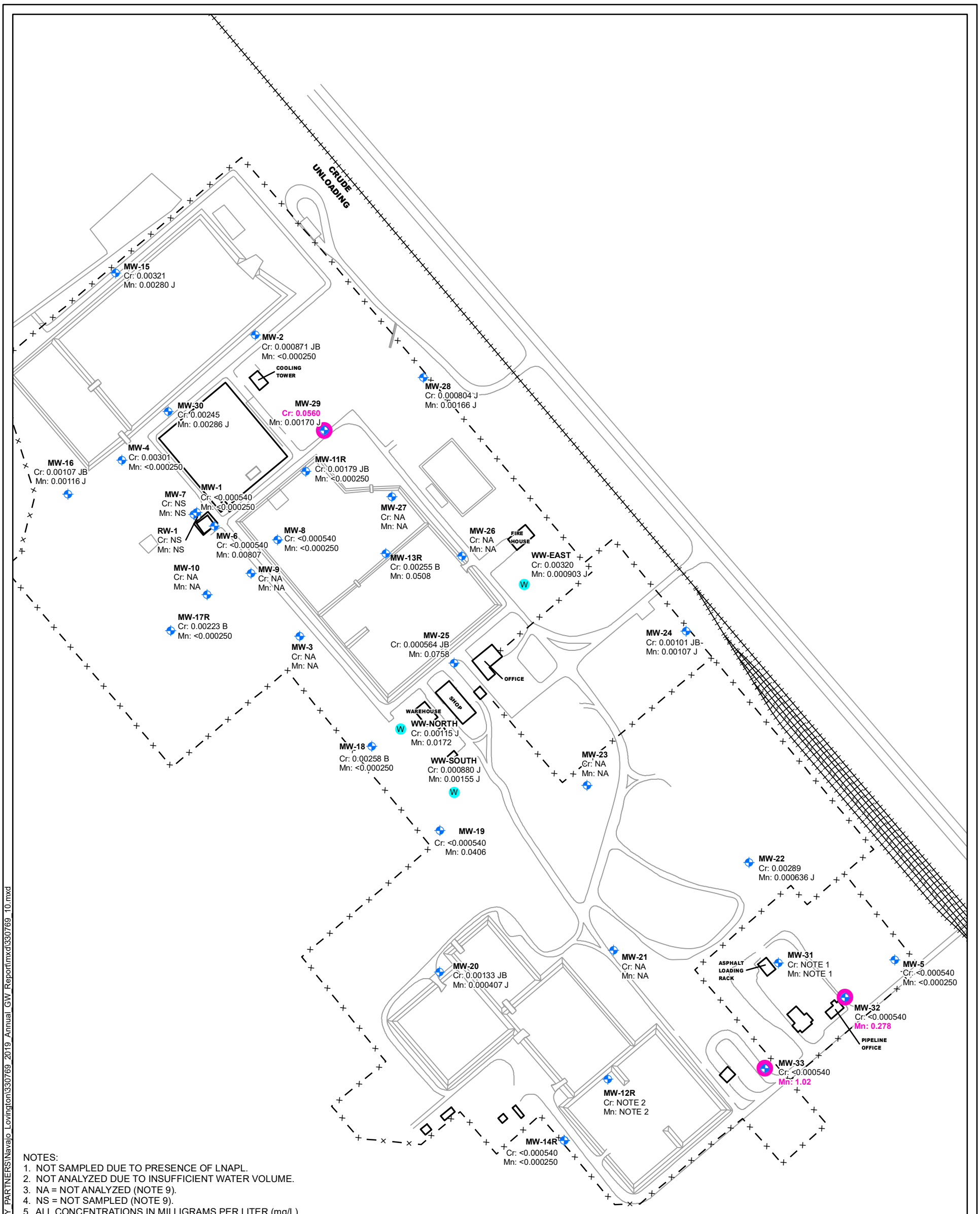
HOLLYFRONTIER NAVAJO REFINING LLC
AP-110, LOVINGTON REFINERY, LOVINGTON, NM

PROJECT NO: 330769	MXD: 330769_9
AUTHOR: SRAY	DATE: 3/16/2020

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

FIGURE 9

Document Path: S:\1-PROJECTS\HOLLY_ENERGY_PARTNERS\Navajo_Lovington\330769_2019_Annual_GW_Report\mxd\330769_9.mxd



NOTES:
1. NOT SAMPLED DUE TO PRESENCE OF LNAPL.
2. NOT ANALYZED DUE TO INSUFFICIENT WATER VOLUME.
3. NA = NOT ANALYZED (NOTE 9).
4. NS = NOT SAMPLED (NOTE 9).
5. ALL CONCENTRATIONS IN MILLIGRAMS PER LITER (mg/L).
6. DISSOLVED MANGANESE CONCENTRATIONS SHOWN FOR ALL WELLS BECAUSE IT IS THE ONLY METAL THAT EXCEEDED ITS RESPECTIVE WQCC STANDARD.
7. J = ANALYTE DETECTED BELOW REPORTING LIMIT, ESTIMATED VALUE.
8. B = SAMPLE CONCENTRATION WITHIN 5 TIMES THE METHOD BLANK CONCENTRATION.
9. IN ACCORDANCE WITH DECEMBER 2017 REVISED FACILITY-WIDE GROUNDWATER MONITORING WORK PLAN.

LABEL KEY:
Cr: 0.00320 - CHROMIUM CONCENTRATION (WQCC STANDARD = 0.05 mg/L)
Mn: 0.0172 - MANGANESE CONCENTRATION (WQCC STANDARD = 0.2 mg/L)

PINK HIGHLIGHTED VALUES IN EXCEEDANCE OF WATER QUALITY CONTROL COMMISSION (WQCC) STANDARD.

LEGEND

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

N

0 175 350 700
FEET

METALS CONCENTRATION MAP - OCTOBER 2019

HOLLYFRONTIER NAVAJO REFINING LLC
AP-110, LOVINGTON REFINERY, LOVINGTON, NM

PROJECT NO: 330769	MXD: 330769_10
AUTHOR: SRAY	DATE: 3/12/2020

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

FIGURE 10

Document Path: S:\1-PROJECTS\HOLLY_ENERGY_PARTNERS\Navajo_Lovington\330769_2019_Annual_GW_Report\mxd\330769_10.mxd

TABLES

Table 1. Water Elevation Measurements

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

Monitor Well	Top of Casing Elevation (feet)	Ground Level 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[(1)] (feet)	Corrected Water Level Elev.[(1)] (feet)	Change from previous measurement (feet)
MW-1 [(2,6)]	3,838.40	3,838.19	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
				02/18/13	- -	110.51	129.22	0.00	110.51	3,727.89	0.37
				08/19/13	- -	111.55	130.60	0.00	111.55	3,726.85	-1.04
				02/24/14	- -	112.49	129.35	0.00	112.49	3,725.91	-0.94
				08/18/14	- -	113.37	129.09	0.00	113.37	3,725.03	-0.88
				02/23/15	- -	113.82	129.20	0.00	113.82	3,724.58	-0.45
				08/24/15	- -	114.56	129.19	0.00	114.56	3,723.84	-0.74
				03/07/16	- -	114.81	129.19	0.00	114.81	3,723.59	-0.25
				08/15/16	- -	115.42	129.19	0.00	115.42	3,722.98	-0.61
				02/06/17	- -	115.81	129.19	0.00	115.81	3,722.59	-0.39
				06/22/17	- -	115.88	129.22	0.00	115.88	3,722.52	-0.07
				08/17/17	- -	116.34	129.22	0.00	116.34	3,722.06	-0.46
				04/05/18	- -	116.63	129.22	0.00	116.63	3,721.77	-0.29
				10/01/18	- -	116.67	129.22	0.00	116.67	3,721.73	-0.04
				04/04/19	- -	118.06	129.22	0.00	118.06	3,720.34	-1.39
				10/24/19	- -	119.35	129.22	0.00	119.35	3,719.05	-1.29
MW-2 [(2,6)]	3,837.35	3,837.27	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
				02/18/13	- -	108.15	126.69	0.00	108.15	3,729.20	0.57
				08/19/13	- -	109.43	126.75	0.00	109.43	3,727.92	-1.28
				02/24/14	- -	110.59	127.70	0.00	110.59	3,726.76	-1.16
				08/18/14	- -	111.25	126.58	0.00	111.25	3,726.10	-0.66
				02/23/15	- -	111.45	126.77	0.00	111.45	3,725.90	-0.20
				08/24/15	- -	112.13	126.75	0.00	112.13	3,725.22	-0.68
				03/07/16	- -	112.02	126.71	0.00	112.02	3,725.33	0.11
				08/15/16	- -	113.01	126.70	0.00	113.01	3,724.34	-0.99
				02/06/17	- -	112.96	126.70	0.00	112.96	3,724.39	0.05
				06/22/17	- -	113.44	126.69	0.00	113.44	3,723.91	-0.48
				08/16/17	- -	113.73	126.69	0.00	113.73	3,723.62	-0.29
				04/05/18	- -	114.15	126.69	0.00	114.15	3,723.20	-0.42
				10/01/18	- -	114.93	126.69	0.00	114.93	3,722.42	-1.20
				04/04/19	- -	115.40	126.69	0.00	115.40	3,721.95	-1.25
				10/24/19	- -	116.99	126.69	0.00	116.99	3,720.36	-1.59

Table 1. Water Elevation Measurements

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

Monitor Well	Top of Casing Elevation (feet)	Ground Level 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[(1)] (feet)	Corrected Water Level Elev.[(1)] (feet)	Change from previous measurement (feet)
MW-3 [(2,6)]	3,831.65	3,831.73	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
				02/18/13	- -	106.21	130.63	0.00	106.21	3,725.44	1.38
				08/19/13	- -	108.11	130.88	0.00	108.11	3,723.54	-1.90
				02/24/14	- -	108.45	130.75	0.00	108.45	3,723.20	-0.34
				08/18/14	- -	110.33	130.71	0.00	110.33	3,721.32	-1.88
				02/23/15	- -	110.35	130.60	0.00	110.35	3,721.30	-0.02
				08/24/15	- -	111.14	130.57	0.00	111.14	3,720.51	-0.79
				03/07/16	- -	112.20	130.51	0.00	112.20	3,719.45	-1.06
				08/15/16	- -	112.68	130.68	0.00	112.68	3,718.97	-0.48
				02/06/17	- -	112.74	130.61	0.00	112.74	3,718.91	-0.06
				06/22/17	- -	112.76	130.59	0.00	112.76	3,718.89	-0.02
				08/16/17	- -	112.94	130.59	0.00	112.94	3,718.71	-0.18
				04/05/18	- -	113.40	130.59	0.00	113.40	3,718.25	-0.46
				10/01/18	- -	114.50	130.59	0.00	114.50	3,717.15	-1.56
				04/04/19	- -	114.37	130.59	0.00	114.37	3,717.28	-0.97
				10/24/19	- -	115.28	130.59	0.00	115.28	3,716.37	-0.91
MW-4 [(2,6)]	3,839.89	3,839.76	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
				02/18/13	- -	110.70	127.95	0.00	110.70	3,729.19	0.30
				08/19/13	- -	111.60	128.01	0.00	111.60	3,728.29	-0.90
				02/24/14	- -	112.78	127.80	0.00	112.78	3,727.11	-1.18
				08/18/14	- -	113.42	127.63	0.00	113.42	3,726.47	-0.64
				02/23/15	- -	113.89	127.68	0.00	113.89	3,726.00	-0.47
				08/24/15	- -	114.47	127.99	0.00	114.47	3,725.42	-0.58
				03/07/16	- -	114.66	127.78	0.00	114.66	3,725.23	-0.19
				08/15/16	- -	115.38	128.10	0.00	115.38	3,724.51	-0.72
				02/06/17	- -	115.71	128.04	0.00	115.71	3,724.18	-0.33
				06/22/17	- -	115.88	127.73	0.00	115.88	3,724.01	-0.17
				08/17/17	- -	116.12	127.73	0.00	116.12	3,723.77	-0.24
				04/05/18	- -	116.73	127.73	0.00	116.73	3,723.16	-0.61
				10/01/18	- -	117.74	127.73	0.00	117.74	3,722.15	-1.62
				04/04/19	- -	118.25	127.73	0.00	118.25	3,721.64	-1.52
				10/24/19	- -	119.54	127.73	0.00	119.54	3,720.35	-1.29

Table 1. Water Elevation Measurements

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

Monitor Well	Top of Casing Elevation (feet)	Ground Level 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[(1)] (feet)	Corrected Water Level Elev.[(1)] (feet)	Change from previous measurement (feet)
MW-5 [(2,6)]	3,819.15	3,816.13	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
				02/18/13	- -	95.95	118.85	0.00	95.95	3,723.20	-0.73
				08/19/13	- -	96.65	117.90	0.00	96.65	3,722.50	-0.70
				02/24/14	- -	97.06	117.45	0.00	97.06	3,722.09	-0.41
				08/18/14	- -	97.57	117.22	0.00	97.57	3,721.58	-0.51
				02/23/15	- -	98.01	117.19	0.00	98.01	3,721.14	-0.44
				08/24/15	- -	98.46	117.22	0.00	98.46	3,720.69	-0.45
				03/07/16	- -	98.62	117.12	0.00	98.62	3,720.53	-0.16
				08/15/16	- -	99.40	117.70	0.00	99.40	3,719.75	-0.78
				02/06/17	- -	100.00	117.29	0.00	100.00	3,719.15	-0.60
				06/22/17	- -	100.11	117.82	0.00	100.11	3,719.04	-0.11
				08/16/17	- -	100.51	117.82	0.00	100.51	3,718.64	-0.40
				04/05/18	- -	100.85	117.82	0.00	100.85	3,718.30	-0.34
				10/01/18	- -	102.01	117.82	0.00	102.01	3,717.14	-1.50
				04/04/19	- -	102.23	117.82	0.00	102.23	3,716.92	-1.38
				10/24/19	- -	103.42	117.82	0.00	103.42	3,715.73	-1.19
MW-6 [(2,6)]	3,838.16	3,838.17	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
				02/18/13	- -	110.60	133.32	0.00	110.60	3,727.56	0.40
				08/19/13	- -	111.70	130.84	0.00	111.70	3,726.46	-1.10
				02/24/14	- -	112.57	130.00	0.00	112.57	3,725.59	-0.87
				08/18/14	- -	113.50	129.71	0.00	113.50	3,724.66	-0.93
				02/23/15	- -	114.00	129.90	0.00	114.00	3,724.16	-0.50
				08/24/15	- -	114.63	129.69	0.00	114.63	3,723.53	-0.63
				03/07/16	- -	115.02	129.69	0.00	115.02	3,723.14	-0.39
				08/15/16	- -	115.62	129.69	0.00	115.62	3,722.54	-0.60
				02/06/17	- -	115.99	129.69	0.00	115.99	3,722.17	-0.37
				06/22/17	- -	116.05	129.76	0.00	116.05	3,722.11	-0.06
				08/17/17	- -	116.31	129.76	0.00	116.31	3,721.85	-0.26
				04/05/18	- -	116.78	129.76	0.00	116.78	3,721.38	-0.47
				10/01/18	- -	117.81	129.76	0.00	117.81	3,720.35	-1.50
				04/04/19	- -	118.19	129.76	0.00	118.19	3,719.97	-1.41
				10/24/19	- -	119.38	129.76	0.00	119.38	3,718.78	-1.19

Table 1. Water Elevation Measurements

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

Monitor Well	Top of Casing Elevation (feet)	Ground Level 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[(1)] (feet)	Corrected Water Level Elev.[(1)] (feet)	Change from previous measurement (feet)
MW-7 [(2,6)]	3,838.42	3,838.19	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
				02/18/13	- -	110.52	129.55	0.00	110.52	3,727.90	-0.64
				08/19/13	- -	111.57	129.17	0.00	111.57	3,726.85	-1.05
				02/24/14	- -	112.50	129.90	0.00	112.50	3,725.92	-0.93
				08/18/14	- -	113.40	129.58	0.00	113.40	3,725.02	-0.90
				02/23/15	- -	113.86	129.62	0.00	113.86	3,724.56	-0.46
				08/24/15	- -	114.47	129.64	0.00	114.47	3,723.95	-0.61
				03/07/16	- -	114.84	129.64	0.00	114.84	3,723.58	-0.37
				08/15/16	- -	115.43	129.64	0.00	115.43	3,722.99	-0.59
				02/06/17	- -	115.80	129.64	0.00	115.80	3,722.62	-0.37
				06/22/17	- -	115.89	129.64	0.00	115.89	3,722.53	-0.09
				08/17/17	- -	116.32	129.64	0.00	116.32	3,722.10	-0.43
				04/05/18	- -	116.71	129.64	0.00	116.71	3,721.71	-0.39
				10/01/18	- -	117.67	129.64	0.00	117.67	3,720.75	-1.35
				04/04/19	- -	118.14	129.64	0.00	118.14	3,720.28	-1.43
				10/24/19	- -	119.37	129.64	0.00	119.37	3,719.05	-1.23
MW-8 [(3,6)]	3,839.98	3,836.44	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
				02/18/13	- -	113.27	132.32	0.00	113.27	3,726.71	0.67
				08/19/13	- -	114.69	132.39	0.00	114.69	3,725.29	-1.42
				02/24/14	- -	115.44	132.60	0.00	115.44	3,724.54	-0.75
				08/19/13	- -	116.56	132.16	0.00	116.56	3,723.42	-1.12
				02/23/15	- -	116.91	132.10	0.00	116.91	3,723.07	-0.35
				08/24/15	- -	117.61	132.20	0.00	117.61	3,722.37	-0.70
				03/07/16	- -	118.05	132.04	0.00	118.05	3,721.93	-0.44
				08/15/16	- -	118.73	132.15	0.00	118.73	3,721.25	-0.68
				02/06/17	- -	119.02	132.15	0.00	119.02	3,720.96	-0.29
				06/22/17	- -	119.05	132.15	0.00	119.05	3,720.93	-0.03
				08/17/17	- -	119.40	132.15	0.00	119.40	3,720.58	-0.35
				04/05/18	- -	119.81	132.15	0.00	119.81	3,720.17	-0.41
				10/01/18	- -	120.82	132.15	0.00	120.82	3,719.16	-1.42
				04/04/19	- -	121.05	132.15	0.00	121.05	3,718.93	-1.24
				10/24/19	- -	122.17	132.15	0.00	122.17	3,717.81	-1.12

Table 1. Water Elevation Measurements

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

Monitor Well	Top of Casing Elevation (feet)	Ground Level 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[(1)] (feet)	Corrected Water Level Elev.[(1)] (feet)	Change from previous measurement (feet)
MW-9 [(3,6)]	3,835.22	3,835.13	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
				02/18/13	- -	108.47	129.41	0.00	108.47	3,726.75	0.73
				08/19/13	- -	109.91	129.38	0.00	109.91	3,725.31	-1.44
				02/24/14	- -	110.63	129.35	0.00	110.63	3,724.59	-0.72
				08/18/14	- -	111.81	129.01	0.00	111.81	3,723.41	-1.18
				02/23/15	- -	112.20	124.08	0.00	112.20	3,723.02	-0.39
				08/24/15	- -	112.89	129.06	0.00	112.89	3,722.33	-0.69
				03/07/16	- -	113.47	129.07	0.00	113.47	3,721.75	-0.58
				08/15/16	- -	114.02	129.15	0.00	114.02	3,721.20	-0.55
				02/06/17	- -	114.37	129.24	0.00	114.37	3,720.85	-0.35
				06/22/17	- -	114.38	129.18	0.00	114.38	3,720.84	-0.01
				08/16/17	- -	114.67	129.18	0.00	114.67	3,720.55	-0.29
				04/05/18	- -	115.12	129.18	0.00	115.12	3,720.10	-0.45
				10/01/18	- -	116.18	129.18	0.00	116.18	3,719.04	-1.51
				04/04/19	- -	116.40	129.18	0.00	116.40	3,718.82	-1.28
				10/24/19	- -	117.44	129.18	0.00	117.44	3,717.78	-1.04
MW-10 [(3,6)]	3,833.66	3,833.49	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
				02/18/13	- -	106.63	128.59	0.00	106.63	3,727.03	0.42
				08/19/13	- -	107.78	128.56	0.00	107.78	3,725.88	-1.15
				02/24/14	- -	108.53	128.40	0.00	108.53	3,725.13	-0.75
				08/18/14	- -	109.62	128.15	0.00	109.62	3,724.04	-1.09
				02/23/15	- -	110.08	128.35	0.00	110.08	3,723.58	-0.46
				08/24/15	- -	110.73	128.42	0.00	110.73	3,722.93	-0.65
				03/07/16	- -	111.32	128.20	0.00	111.32	3,722.34	-0.59
				08/15/16	- -	111.87	128.20	0.00	111.87	3,721.79	-0.55
				02/06/17	- -	112.22	128.26	0.00	112.22	3,721.44	-0.35
				06/22/17	- -	112.27	128.45	0.00	112.27	3,721.39	-0.05
				08/16/17	- -	112.53	128.45	0.00	112.53	3,721.13	-0.26
				04/05/18	- -	113.03	128.45	0.00	113.03	3,720.63	-0.50
				10/01/18	- -	114.06	128.45	0.00	114.06	3,719.60	-1.53
				04/04/19	- -	114.39	128.45	0.00	114.39	3,719.27	-1.36
				10/24/19	- -	115.35	128.45	0.00	115.35	3,718.31	-0.96

Table 1. Water Elevation Measurements

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

Monitor Well	Top of Casing Elevation (feet)	Ground Level 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[(1)] (feet)	Corrected Water Level Elev.[(1)] (feet)	Change from previous measurement (feet)
MW-11 [(4,6,10)]	3,839.56	3,836.14	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
				02/18/13	- -	112.53	117.75	0.00	112.53	3,727.03	0.57
				08/19/13	- -	113.89	117.64	0.00	113.89	3,725.67	-1.36
				02/24/14	- -	114.75	117.90	0.00	114.75	3,724.81	-0.86
				08/18/14	- -	115.71	117.60	0.00	115.71	3,723.85	-0.96
				02/23/15	- -	116.10	117.81	0.00	116.10	3,723.46	-0.39
				08/24/15	- -	116.75	117.86	0.00	116.75	3,722.81	-0.65
				03/07/16	- -	117.07	118.00	0.00	117.07	3,722.49	-0.32
				08/15/16	WELL DRY						
				12/07/16	WELL PLUGGED AND ABANDONED						
MW-11R [(10)]	3,838.51	3,820.29		02/06/17	- -	116.82	133.79	0.00	116.82	3,721.69	NA
				06/22/17	- -	116.93	133.84	0.00	116.93	3,721.58	-0.11
				08/17/17	- -	117.33	133.84	0.00	117.33	3,721.18	-0.40
				04/05/18	- -	117.73	133.84	0.00	117.73	3,720.78	-0.40
				10/01/18	- -	118.67	133.84	0.00	118.67	3,719.84	-1.34
				04/04/19	- -	118.94	133.84	0.00	118.94	3,719.57	-1.21
				10/24/19	- -	120.29	133.84	0.00	120.29	3,718.22	-1.35

Table 1. Water Elevation Measurements

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

Monitor Well	Top of Casing Elevation (feet)	Ground Level 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[(1)] (feet)	Corrected Water Level Elev.[(1)] (feet)	Change from previous measurement (feet)
MW-12 [(4,6,9)]	3,822.73	3,820.29	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
				02/18/13	- -	98.95	100.50	0.00	98.95	3,723.78	-0.85
				- -	DAMAGED WELL - PLUGGED AND ABANDONED JUNE 2013						
MW-12R [(9)]	3,823.29	3,820.29	3,734.95 to 3,714.95	08/19/13	- -	100.25	108.34	0.00	100.25	3,723.04	NA
				02/24/14	- -	100.92	108.50	0.00	100.92	3,722.37	-0.67
				08/18/14	- -	101.33	108.22	0.00	101.33	3,721.96	-0.41
				02/23/15	- -	101.73	107.50	0.00	101.73	3,721.56	-0.40
				08/24/15	- -	102.25	107.72	0.00	102.25	3,721.04	-0.52
				03/07/16	- -	102.52	107.61	0.00	102.52	3,720.77	-0.27
				08/15/16	- -	103.28	107.52	0.00	103.28	3,720.01	-0.76
				02/06/17	- -	103.79	107.50	0.00	103.79	3,719.50	-0.51
				06/22/17	- -	103.95	107.39	0.00	103.95	3,719.34	-0.16
				08/16/17	- -	104.31	107.39	0.00	104.31	3,718.98	-0.36
				04/05/18	- -	>103.63	NA	NA	NA	NA	NA
				10/01/18	- -	>103.60	NA	NA	NA	NA	NA
				04/04/19	- -	>103.60	NA	NA	NA	NA	NA
				10/24/19	- -	107.26	107.39	0.00	107.26	3,716.03	-2.95

Table 1. Water Elevation Measurements

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

Monitor Well	Top of Casing Elevation (feet)	Ground Level 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[(1)] (feet)	Corrected Water Level Elev.[(1)] (feet)	Change from previous measurement (feet)
MW-13 [(5,6,12)]	3,837.06	3,834.75	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
				02/18/13	- -	111.84	119.87	0.00	111.84	3,725.22	1.27
				08/19/13	- -	113.81	119.95	0.00	113.81	3,723.25	-1.97
				02/24/14	- -	114.47	121.50	0.00	114.47	3,722.59	-0.66
				08/18/14	- -	115.89	119.89	0.00	115.89	3,721.17	-1.42
				02/23/15	- -	116.05	119.88	0.00	116.05	3,721.01	-0.16
				08/24/15	- -	116.79	119.83	0.00	116.79	3,720.27	-0.74
				03/07/16	- -	117.30	119.76	0.00	117.30	3,719.76	-0.51
				08/15/16	- -	117.98	119.70	0.00	117.98	3,719.08	-0.68
				02/06/17	- -	118.28	119.79	0.00	118.28	3,718.78	-0.30
				06/22/17	- -	118.23	119.81	0.00	118.23	3,718.83	0.05
				08/17/17	- -	118.72	119.81	0.00	118.72	3,718.34	-0.49
				04/05/18	- -	119.02	119.81	0.00	119.02	3,718.04	-0.30
				09/26/18	WELL PLUGGED AND ABANDONED SEPTEMBER 2018						
MW-13R [(12)]	3,838.12	3,835.02	3,704.38 to 3,684.38	10/01/18	- -	121.00	139.48	0.00	121.00	3717.12	NA
				04/04/19	- -	120.97	139.48	0.00	120.97	3717.15	0.03
				10/24/19	- -	122.25	139.48	0.00	122.25	3,715.87	-1.28

Table 1. Water Elevation Measurements

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

Monitor Well	Top of Casing Elevation (feet)	Ground Level 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[(1)] (feet)	Corrected Water Level Elev.[(1)] (feet)	Change from previous measurement (feet)
MW-14 [(5,6,12)]	3,823.03	3,820.38	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
				02/18/13	- -	99.07	105.38	0.00	99.07	3,723.96	-0.87
				08/19/13	- -	99.82	105.30	0.00	99.82	3,723.21	-0.75
				02/24/14	- -	100.55	105.60	0.00	100.55	3,722.48	-0.73
				08/18/14	- -	100.94	105.35	0.00	100.94	3,722.09	-0.39
				02/23/15	- -	101.42	105.35	0.00	101.42	3,721.61	-0.48
				08/24/15	- -	101.86	105.37	0.00	101.86	3,721.17	-0.44
				03/07/16	- -	102.21	105.27	0.00	102.21	3,720.82	-0.35
				08/15/16	- -	102.84	105.30	0.00	102.84	3,720.19	-0.63
				02/06/17	- -	103.44	105.29	0.00	103.44	3,719.59	-0.60
				06/22/17	- -	103.59	105.25	0.00	103.59	3,719.44	-0.15
				08/16/17	- -	103.97	105.25	0.00	103.97	3,719.06	-0.38
				04/05/18	- -	104.47	105.25	0.00	104.47	3,718.56	-0.50
				09/27/18	WELL PLUGGED AND ABANDONED SEPTEMBER 2018						
MW-14R [(12)]	3,823.88	3,821.05	3,711.05 to 3,691.05	10/01/18	- -	106.19	129.28	0.00	106.19	3717.69	NA
				04/04/19	- -	106.60	129.28	0.00	106.60	3717.28	-0.41
				10/24/19	- -	107.49	129.28	0.00	107.49	3,716.39	-0.89
MW-15 [(7,8)]	3,840.19	3,840.54	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
				02/18/13	- -	109.22	121.82	0.00	109.22	3,730.97	0.55
				08/19/13	- -	110.34	121.83	0.00	110.34	3,729.85	-1.12
				02/24/14	- -	111.72	122.05	0.00	111.72	3,728.47	-1.38
				08/18/14	- -	112.16	121.70	0.00	112.16	3,728.03	-0.44
				02/23/15	- -	112.42	121.80	0.00	112.42	3,727.77	-0.26
				08/24/15	- -	113.09	121.78	0.00	113.09	3,727.10	-0.67
				03/07/16	- -	112.85	121.67	0.00	112.85	3,727.34	0.24
				08/15/16	- -	113.92	121.70	0.00	113.92	3,726.27	-1.07
				02/06/17	- -	113.84	121.68	0.00	113.84	3,726.35	0.08
				06/22/17	- -	114.40	121.70	0.00	114.40	3,725.79	-0.56
				08/16/17	- -	114.57	121.70	0.00	114.57	3,725.62	-0.17
				04/05/18	- -	115.19	121.70	0.00	115.19	3,725.00	-0.62
				10/01/18	- -	115.93	121.70	0.00	115.93	3,724.26	-1.36
				04/04/19	- -	116.51	121.70	0.00	116.51	3,723.68	-1.32
				10/24/19	- -	118.22	121.70	0.00	118.22	3,721.97	-1.71

Table 1. Water Elevation Measurements

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

Monitor Well	Top of Casing Elevation (feet)	Ground Level 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[(1)] (feet)	Corrected Water Level Elev.[(1)] (feet)	Change from previous measurement (feet)
MW-16 [(7,8)]	3,838.20	3,838.50	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
				02/18/13	- -	108.69	119.63	0.00	108.69	3,729.51	0.29
				08/19/13	- -	109.51	119.50	0.00	109.51	3,728.69	-0.82
				02/24/14	- -	110.73	119.65	0.00	110.73	3,727.47	-1.22
				08/18/14	- -	111.35	119.25	0.00	111.35	3,726.85	-0.62
				02/23/15	- -	111.90	119.48	0.00	111.90	3,726.30	-0.55
				08/24/15	- -	112.42	119.22	0.00	112.42	3,725.78	-0.52
				03/07/16	- -	112.64	119.22	0.00	112.64	3,725.56	-0.22
				08/15/16	- -	113.31	119.20	0.00	113.31	3,724.89	-0.67
				02/06/17	- -	113.78	119.00	0.00	113.78	3,724.42	-0.47
				06/22/17	- -	113.93	119.07	0.00	113.93	3,724.27	-0.15
				08/17/17	- -	114.08	119.07	0.00	114.08	3,724.12	-0.15
				04/05/18	- -	114.79	119.07	0.00	114.79	3,723.41	-0.71
				10/01/18	- -	>115.87	NA	NA	NA	NA	NA
				04/04/19	- -	>115.05	NA	NA	NA	NA	NA
				10/24/19	- -	117.64	119.07	0.00	117.64	3,720.56	-2.85
MW-17 [(7,8,9)]	3,831.43	3,831.79	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
				- -	DAMAGED WELL - PLUGGED AND ABANDONED JUNE 2013						
MW-17R [(9)]	3,831.14	3,831.79	3,731.19 to 3,711.19	08/19/13	- -	104.79	119.95	0.00	104.79	3,726.35	NA
				02/24/14	- -	105.59	119.00	0.00	105.59	3,725.55	-0.80
				08/18/14	- -	106.58	117.80	0.00	106.58	3,724.56	-0.99
				02/23/15	- -	107.11	117.30	0.00	107.11	3,724.03	-0.53
				08/24/15	- -	107.73	117.53	0.00	107.73	3,723.41	-0.62
				03/07/16	- -	108.35	117.30	0.00	108.35	3,722.79	-0.62
				08/15/16	- -	108.90	117.28	0.00	108.90	3,722.24	-0.55
				02/06/17	- -	109.28	117.12	0.00	109.28	3,721.86	-0.38
				06/22/17	- -	109.31	116.88	0.00	109.31	3,721.83	-0.03
				08/16/17	- -	109.61	116.88	0.00	109.61	3,721.53	-0.30
				04/05/18	- -	110.04	116.88	0.00	110.04	3,721.10	-0.43
				10/01/18	- -	111.15	116.88	0.00	111.15	3,719.99	-1.54
				04/04/19	- -	111.47	116.88	0.00	111.47	3,719.67	-1.43
				10/24/19	- -	112.45	116.88	0.00	112.45	3,718.69	-0.98
MW-18 [(7,8)]	3,825.05	3,825.52	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
				02/18/13	- -	102.51	119.59	0.00	102.51	3,722.54	7.67
				08/19/13	- -	109.79	119.68	0.00	109.79	3,715.26	-7.28
				02/24/14	- -	105.20	119.85	0.00	105.20	3,719.85	4.59
				08/18/14	- -	115.51	119.67	0.00	115.51	3,709.54	-10.31
				02/23/15	- -	109.82	119.60	0.00	109.82	3,715.23	5.69
				08/24/15	- -	110.97	119.55	0.00	110.97	3,714.08	-1.15
				03/07/16	- -	117.00	119.61	0.00	117.00	3,708.05	-6.03
				08/15/16	- -	116.06	119.60	0.00	116.06	3,708.99	0.94
				02/06/17	- -	114.27	120.90	0.00	114.27	3,710.78	1.79
				06/22/17	- -	113.83	119.61	0.00	113.83	3,711.22	0.44
				08/16/17	- -	114.69	119.61	0.00	114.69	3,710.36	-0.86
				04/05/18	- -	114.58	119.61	0.00	114.58	3,710.47	0.11
				10/01/18	- -	115.61	119.61	0.00	115.61	3,709.44	-0.92
				04/04/19	- -	112.14	119.61	0.00	112.14	3,712.91	2.44
				10/24/19	- -	111.20	119.61	0.00	111.2	3,713.85	0.94

Table 1. Water Elevation Measurements

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

Monitor Well	Top of Casing Elevation (feet)	Ground Level 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[(1)] (feet)	Corrected Water Level Elev.[(1)] (feet)	Change from previous measurement (feet)
MW-19 [(7,8)]	3,823.97	3,824.48	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
				02/18/13	- -	103.45	113.76	0.00	103.45	3,720.52	-2.47
				08/19/13	- -	104.87	113.81	0.00	104.87	3,719.10	-1.42
				02/24/14	- -	105.76	114.00	0.00	105.76	3,718.21	-0.89
				08/18/14	- -	104.60	113.79	0.00	104.60	3,719.37	1.16
				02/23/15	- -	105.22	113.72	0.00	105.22	3,718.75	-0.62
				08/24/15	- -	105.94	113.71	0.00	105.94	3,718.03	-0.72
				03/07/16	- -	106.75	113.64	0.00	106.75	3,717.22	-0.81
				08/15/16	- -	108.23	133.77	0.00	108.23	3,715.74	-1.48
				02/06/17	- -	108.27	113.72	0.00	108.27	3,715.70	-0.04
				06/22/17	- -	108.31	113.60	0.00	108.31	3,715.66	-0.04
				08/16/17	- -	107.88	113.60	0.00	107.88	3,716.09	0.43
				04/05/18	- -	109.32	113.60	0.00	109.32	3,714.65	-1.44
				10/01/18	- -	>111.40	NA	NA	NA	NA	NA
				04/04/19	- -	>111.40	NA	NA	NA	NA	NA
				10/24/19	- -	110.89	113.60	0.00	110.89	3,713.08	-1.57
MW-20 [(7,8)]	3,824.58	3,825.03	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
				02/18/13	- -	100.50	111.78	0.00	100.50	3,724.08	-0.75
				08/19/13	- -	101.60	111.98	0.00	101.60	3,722.98	-1.10
				02/24/14	- -	102.37	112.15	0.00	102.37	3,722.21	-0.77
				08/18/14	- -	102.81	111.87	0.00	102.81	3,721.77	-0.44
				02/23/15	- -	103.25	111.82	0.00	103.25	3,721.33	-0.44
				08/24/15	- -	103.80	112.89	0.00	103.80	3,720.78	-0.55
				03/07/16	- -	104.28	111.78	0.00	104.28	3,720.30	-0.48
				08/15/16	- -	105.18	111.88	0.00	105.18	3,719.40	-0.90
				02/06/17	- -	105.57	111.70	0.00	105.57	3,719.01	-0.39
				06/22/17	- -	105.63	111.70	0.00	105.63	3,718.95	-0.06
				08/17/17	- -	105.89	111.70	0.00	105.89	3,718.69	-0.26
				04/05/18	- -	106.49	111.70	0.00	106.49	3,718.09	-0.60
				10/01/18	- -	107.45	111.70	0.00	107.45	3,717.13	-1.56
				04/04/19	- -	107.75	111.70	0.00	107.75	3,716.83	-1.26
				10/24/19	- -	108.68	111.70	0.00	108.68	3,715.90	-0.93
MW-21 [(7,8)]	3,820.26	3,820.59	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
				02/18/13	- -	96.92	108.48	0.00	96.92	3,723.34	-0.70
				08/19/13	- -	98.04	108.52	0.00	98.04	3,722.22	-1.12
				02/24/14	- -	98.65	108.55	0.00	98.65	3,721.61	-0.61
				08/18/14	- -	99.07	108.32	0.00	99.07	3,721.19	-0.42
				02/23/15	- -	99.48	108.19	0.00	99.48	3,720.78	-0.41
				08/24/15	- -	100.05	108.32	0.00	100.05	3,720.21	-0.57
				03/07/16	- -	100.30	108.15	0.00	100.30	3,719.96	-0.25
				08/15/16	- -	101.18	108.15	0.00	101.18	3,719.08	-0.88
				02/06/17	- -	101.59	110.20	0.00	101.59	3,718.67	-0.41
				06/22/17	- -	101.72	108.10	0.00	101.72	3,718.54	-0.13
				08/17/17	- -	102.10	108.10	0.00	102.10	3,718.16	-0.38
				04/05/18	- -	102.54	108.10	0.00	102.54	3,717.72	-0.44
				10/01/18	- -	103.58	108.10	0.00	103.58	3,716.68	-1.48
				04/04/19	- -	103.90	108.10	0.00	103.90	3,716.36	-1.36
				10/24/19	- -	105.02	108.10	0.00	105.02	3,715.24	-1.12

Table 1. Water Elevation Measurements

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

Monitor Well	Top of Casing Elevation (feet)	Ground Level 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[(1)] (feet)	Corrected Water Level Elev.[(1)] (feet)	Change from previous measurement (feet)
MW-22 [(7,8)]	3,821.82	3,819.27	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
				02/18/13	- -	98.45	110.92	0.00	98.45	3,723.37	-0.55
				08/19/13	- -	99.54	110.85	0.00	99.54	3,722.28	-1.09
				02/24/14	- -	99.97	111.00	0.00	99.97	3,721.85	-0.43
				08/18/14	- -	100.52	110.26	0.00	100.52	3,721.30	-0.55
				02/23/15	- -	100.85	109.10	0.00	100.85	3,720.97	-0.33
				08/24/15	- -	101.42	109.05	0.00	101.42	3,720.40	-0.57
				03/07/16	- -	101.56	109.19	0.00	101.56	3,720.26	-0.14
				08/15/16	- -	102.45	109.50	0.00	102.45	3,719.37	-0.89
				02/06/17	- -	102.99	109.58	0.00	102.99	3,718.83	-0.54
				06/22/17	- -	103.04	109.60	0.00	103.04	3,718.78	-0.05
				08/17/17	- -	103.51	109.60	0.00	103.51	3,718.31	-0.47
				04/05/18	- -	103.85	109.60	0.00	103.85	3,717.97	-0.34
				10/01/18	- -	104.96	109.60	0.00	104.96	3,716.86	-1.45
				04/04/19	- -	105.12	109.60	0.00	105.12	3,716.70	-1.27
				10/24/19	- -	106.45	109.60	0.00	106.45	3,715.37	-1.33
MW-23 [(7,8)]	3,825.58	3,822.91	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
				02/18/13	- -	102.69	115.25	0.00	102.69	3,722.89	-0.30
				08/19/13	- -	104.23	115.00	0.00	104.23	3,721.35	-1.54
				02/24/14	- -	104.93	115.35	0.00	104.93	3,720.65	-0.70
				08/18/14	- -	105.36	119.14	0.00	105.36	3,720.22	-0.43
				02/23/15	- -	105.74	114.85	0.00	105.74	3,719.84	-0.38
				08/24/15	- -	106.33	114.84	0.00	106.33	3,719.25	-0.59
				03/07/16	- -	106.72	114.66	0.00	106.72	3,718.86	-0.39
				08/15/16	- -	107.69	114.80	0.00	107.69	3,717.89	-0.97
				02/06/17	- -	108.05	114.70	0.00	108.05	3,717.53	-0.36
				06/22/17	- -	108.04	114.60	0.00	108.04	3,717.54	0.01
				08/17/17	- -	108.41	114.60	0.00	108.41	3,717.17	-0.37
				04/05/18	- -	108.86	114.60	0.00	108.86	3,716.72	-0.45
				10/01/18	- -	109.90	114.60	0.00	109.90	3,715.68	-1.49
				04/04/19	- -	109.89	114.60	0.00	109.89	3,715.69	-1.03
				10/24/19	- -	112.87	114.60	0.00	112.87	3,712.71	-2.98
MW-24 [(7,8)]	3,830.50	3,830.81	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
				02/18/13	- -	106.77	118.35	0.00	106.77	3,723.73	0.19
				08/19/13	- -	108.30	118.21	0.00	108.30	3,722.20	-1.53
				02/24/14	- -	108.66	118.45	0.00	108.66	3,721.84	-0.36
				08/18/14	- -	109.61	118.91	0.00	109.61	3,720.89	-0.95
				02/23/15	- -	109.92	118.12	0.00	109.92	3,720.58	-0.31
				08/24/15	- -	110.47	118.11	0.00	110.47	3,720.03	-0.55
				03/07/16	- -	110.59	118.15	0.00	110.59	3,719.91	-0.12
				08/15/16	- -	111.52	118.05	0.00	111.52	3,718.98	-0.93
				02/06/17	- -	112.01	118.08	0.00	112.01	3,718.49	-0.49
				06/22/17	- -	111.96	117.90	0.00	111.96	3,718.54	0.05
				08/17/17	- -	112.55	117.90	0.00	112.55	3,717.95	-0.59
				04/05/18	- -	112.85	117.90	0.00	112.85	3,717.65	-0.30
				10/01/18	- -	113.89	117.90	0.00	113.89	3,716.61	-1.04
				04/04/19	- -	113.84	117.90	0.00	113.84	3,716.66	0.05
				10/24/19	- -	115.72	117.90	0.00	115.72	3,714.78	-1.88

Table 1. Water Elevation Measurements

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

Monitor Well	Top of Casing Elevation (feet)	Ground Level 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[(1)] (feet)	Corrected Water Level Elev.[(1)] (feet)	Change from previous measurement (feet)
MW-25 [(7,8)]	3,830.77	3,831.00	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
				02/18/13	- -	107.65	121.45	0.00	107.65	3,723.12	1.48
				08/19/13	- -	110.15	121.49	0.00	110.15	3,720.62	-2.50
				02/24/14	- -	110.62	121.60	0.00	110.62	3,720.15	-0.47
				08/18/14	- -	112.14	121.46	0.00	112.14	3,718.63	-1.52
				02/23/15	- -	112.11	121.71	0.00	112.11	3,718.66	0.03
				08/24/15	- -	112.89	121.23	0.00	112.89	3,717.88	-0.78
				03/07/16	- -	113.76	121.10	0.00	113.76	3,717.01	-0.87
				08/15/16	- -	114.52	121.10	0.00	114.52	3,716.25	-0.76
				02/06/17	- -	114.68	121.03	0.00	114.68	3,716.09	-0.16
				06/22/17	- -	114.64	120.99	0.00	114.64	3,716.13	0.04
				08/16/17	- -	114.91	120.99	0.00	114.91	3,715.86	-0.27
				04/05/18	- -	115.38	120.99	0.00	115.38	3,715.39	-0.47
				10/01/18	- -	116.42	120.99	0.00	116.42	3,714.35	-1.04
				04/04/19	- -	116.12	120.99	0.00	116.12	3,714.65	0.30
				10/24/19	- -	117.22	120.99	0.00	117.22	3,713.55	-1.10
MW-26 [(7,8)]	3,833.18	3,833.39	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
				02/18/13	- -	109.00	121.43	0.00	109.00	3,724.18	2.28
				08/19/13	- -	111.46	121.43	0.00	111.46	3,721.72	-2.46
				02/24/14	- -	112.28	122.30	0.00	112.28	3,720.90	-0.82
				08/18/14	- -	113.98	121.31	0.00	113.98	3,719.20	-1.70
				02/23/15	- -	114.20	121.20	0.00	114.20	3,718.98	-0.22
				08/24/15	- -	114.86	121.15	0.00	114.86	3,718.32	-0.66
				03/07/16	- -	115.22	121.12	0.00	115.22	3,717.96	-0.36
				08/15/16	- -	115.98	121.18	0.00	115.98	3,717.20	-0.76
				02/06/17	- -	116.38	121.07	0.00	116.38	3,716.80	-0.40
				06/22/17	- -	116.24	121.21	0.00	116.24	3,716.94	0.14
				08/17/17	- -	116.79	121.21	0.00	116.79	3,716.39	-0.55
				04/05/18	- -	>118.00	NA	NA	NA	NA	NA
				10/01/18	- -	>118.86	NA	NA	NA	NA	NA
				04/04/19	- -	>117.09	NA	NA	NA	NA	NA
				10/24/19	- -	119.52	121.21	0.00	119.52	3,713.66	-2.73
MW-27 [(7,8)]	3,837.27	3,834.53	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
				02/18/13	- -	111.19	123.89	0.00	111.19	3,726.08	1.13
				08/19/13	- -	113.06	123.60	0.00	113.06	3,724.21	-1.87
				02/24/14	- -	113.81	122.60	0.00	113.81	3,723.46	-0.75
				08/18/14	- -	114.96	123.68	0.00	114.96	3,722.31	-1.15
				02/23/15	- -	115.32	120.95	0.00	115.32	3,721.95	-0.36
				08/24/15	- -	115.99	122.37	0.00	115.99	3,721.28	-0.67
				03/07/16	- -	116.26	122.87	0.00	116.26	3,721.01	-0.27
				08/15/16	- -	116.94	123.78	0.00	116.94	3,720.33	-0.68
				02/06/17	- -	117.32	123.25	0.00	117.32	3,719.95	-0.38
				06/22/17	- -	117.30	123.56	0.00	117.30	3,719.97	0.02
				08/17/17	- -	117.78	123.56	0.00	117.78	3,719.49	-0.48
				04/05/18	- -	118.11	123.56	0.00	118.11	3,719.16	-0.33
				10/01/18	- -	>119.15	NA	NA	NA	NA	NA
				04/04/19	- -	>119.15	NA	NA	NA	NA	NA
				10/24/19	- -	120.54	123.56	0.00	120.54	3,716.73	-2.43

Table 1. Water Elevation Measurements

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

Monitor Well	Top of Casing Elevation (feet)	Ground Level 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[(1)] (feet)	Corrected Water Level Elev.[(1)] (feet)	Change from previous measurement (feet)
MW-28 [(7,8)]	3,833.44	3,833.73	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
				02/18/13	- -	106.17	118.47	0.00	106.17	3,727.27	0.48
				08/19/13	- -	107.53	118.50	0.00	107.53	3,725.91	-1.36
				02/24/14	- -	108.39	118.70	0.00	108.39	3,725.05	-0.86
				08/18/14	- -	109.29	118.30	0.00	109.29	3,724.15	-0.90
				02/23/15	- -	109.60	118.47	0.00	109.60	3,723.84	-0.31
				08/24/15	- -	110.16	118.44	0.00	110.16	3,723.28	-0.56
				03/07/16	- -	110.25	118.40	0.00	110.25	3,723.19	-0.09
				08/15/16	- -	111.03	118.31	0.00	111.03	3,722.41	-0.78
				02/06/17	- -	111.33	118.20	0.00	111.33	3,722.11	-0.30
				06/22/17	- -	111.49	118.26	0.00	111.49	3,721.95	-0.16
				08/17/17	- -	112.14	118.26	0.00	112.14	3,721.30	-0.65
				04/05/18	- -	112.17	118.26	0.00	112.17	3,721.27	-0.03
				10/01/18	- -	113.16	118.26	0.00	113.16	3,720.28	-0.99
				04/04/19	- -	113.32	118.26	0.00	113.32	3,720.12	-0.16
				10/24/19	- -	115.05	118.26	0.00	115.05	3,718.39	-1.73
MW-29 [(7,8)]	3,835.55	3,836.02	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
				02/18/13	- -	108.12	120.47	0.00	108.12	3,727.43	0.62
				08/19/13	- -	109.49	120.68	0.00	109.49	3,726.06	-1.37
				02/24/14	- -	110.43	120.70	0.00	110.43	3,725.12	-0.94
				08/18/14	- -	111.35	120.30	0.00	111.35	3,724.20	-0.92
				02/23/15	- -	111.65	120.30	0.00	111.65	3,723.90	-0.30
				08/24/15	- -	112.29	120.35	0.00	112.29	3,723.26	-0.64
				03/07/16	- -	112.47	120.48	0.00	112.47	3,723.08	-0.18
				08/15/16	- -	113.21	120.30	0.00	113.21	3,722.34	-0.74
				02/06/17	- -	113.46	120.19	0.00	113.46	3,722.09	-0.25
				06/22/17	- -	113.62	120.30	0.00	113.62	3,721.93	-0.16
				08/17/17	- -	114.05	120.30	0.00	114.05	3,721.50	-0.43
				04/05/18	- -	114.39	120.30	0.00	114.39	3,721.16	-0.34
				10/01/18	- -	115.35	120.30	0.00	115.35	3,720.20	-0.96
				04/04/19	- -	115.55	120.30	0.00	115.55	3,720.00	-0.20
				10/24/19	- -	117.03	120.30	0.00	117.03	3,718.52	-1.48
MW-30 [(9)]	3,839.25	3,836.02	3,732.28 to 3,712.28	08/19/13	- -	110.94	126.97	0.00	110.94	3,728.31	NA
				02/24/14	- -	112.14	126.60	0.00	112.14	3,727.11	-1.20
				08/18/14	- -	112.79	126.36	0.00	112.79	3,726.46	-0.65
				02/23/15	- -	113.18	126.68	0.00	113.18	3,726.07	-0.39
				08/24/15	- -	113.75	125.03	0.00	113.75	3,725.50	-0.57
				03/07/16	- -	113.90	124.75	0.00	113.90	3,725.35	-0.15
				08/15/16	- -	114.65	124.40	0.00	114.65	3,724.60	-0.75
				02/06/17	- -	114.91	123.95	0.00	114.91	3,724.34	-0.26
				06/22/17	- -	115.12	123.64	0.00	115.12	3,724.13	-0.21
				08/16/17	- -	115.37	123.64	0.00	115.37	3,723.88	-0.25
				04/05/18	- -	115.94	123.64	0.00	115.94	3,723.31	-0.57
				10/01/18	- -	116.93	123.64	0.00	116.93	3,722.32	-0.99
				04/04/19	- -	117.36	123.64	0.00	117.36	3,721.89	-0.43
				10/24/19	- -	118.81	123.64	0.00	118.81	3,720.44	-1.45

Table 1. Water Elevation Measurements

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

Monitor Well	Top of Casing Elevation (feet)	Ground Level 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[(1)] (feet)	Corrected Water Level Elev.[(1)] (feet)	Change from previous measurement (feet)
MW-31 [(10,13)]	3,819.17	3,836.02		02/06/17	98.95	105.11	NM	6.16	99.75	3,719.42	NA
				06/22/17	- -	99.84	NM	0.00	99.84	3,719.33	-0.09
				08/17/17	100.24	101.22	NM	0.98	100.37	3,718.80	-0.53
				04/05/18	100.05	105.55	NM	5.50	100.77	3,718.41	-0.40
				10/01/18	101.07	106.82	NM	5.75	101.82	3,717.35	-1.05
	3,820.17			04/01/19	102.33	107.98	NM	5.65	103.06	3,717.11	-0.25
				10/24/19	104.32	104.97	NM	0.65	104.40	3,715.77	-1.34
MW-32 [(11)]	3,817.69	3,836.02		06/22/17	- -	98.62	115.73	0.00	98.62	3,719.07	NA
				08/17/17	- -	98.91	115.73	0.00	98.91	3,718.78	-0.29
				04/05/18	- -	99.34	115.73	0.00	99.34	3,718.35	-0.43
				10/01/18	- -	100.44	115.73	0.00	100.44	3,717.25	-1.10
				04/04/19	- -	100.74	115.73	0.00	100.74	3,716.95	-0.30
				10/24/19	- -	101.92	115.73	0.00	101.92	3,715.77	-1.18
MW-33 [(11)]	3,819.68	3,836.02		06/22/17	- -	100.55	119.90	0.00	100.55	3,719.13	NA
				08/17/17	- -	100.99	119.90	0.00	100.99	3,718.69	-0.44
				04/05/18	- -	101.26	119.90	0.00	101.26	3,718.42	-0.27
				10/01/18	- -	102.37	119.90	0.00	102.37	3,717.31	-1.11
				04/04/19	- -	102.77	119.90	0.00	102.77	3,716.91	-0.40
				10/24/19	- -	103.83	119.90	0.00	103.83	3,715.85	-1.06
RW-1	3,838.48	3,838.19	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
				02/18/13	- -	110.61	135.79	0.00	110.61	3,727.87	0.37
				08/19/13	- -	111.67	129.64	0.00	111.67	3,726.81	-1.06
				02/24/14	- -	112.59	129.60	0.00	112.59	3,725.89	-0.92
				08/18/14	- -	113.50	129.28	0.00	113.50	3,724.98	-0.91
				02/23/15	- -	113.95	129.26	0.00	113.95	3,724.53	-0.45
				08/24/15	- -	114.56	129.25	0.00	114.56	3,723.92	-0.61
				03/07/16	- -	114.92	129.25	0.00	114.92	3,723.56	-0.36
				08/15/16	- -	115.52	129.25	0.00	115.52	3,722.96	-0.60
				02/06/17	- -	115.92	129.25	0.00	115.92	3,722.56	-0.40
				06/22/17	- -	116.00	129.42	0.00	116.00	3,722.48	-0.08
				08/17/17	- -	116.44	129.42	0.00	116.44	3,722.04	-0.44
				04/05/18	- -	116.82	129.42	0.00	116.82	3,721.66	-0.38
				10/01/18	- -	117.77	129.42	0.00	117.77	3,720.71	-0.95
				04/04/19	- -	118.23	129.42	0.00	118.23	3,720.25	-0.46
				10/24/19	- -	119.43	129.42	0.00	119.43	3,719.05	-1.20

Table 1. Water Elevation Measurements

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

Monitor Well	Top of Casing Elevation (feet)	Ground Level 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[(1)] (feet)	Corrected Water Level Elev.[(1)] (feet)	Change from previous measurement (feet)

Notes:

1. Depth to water corrected for presence of product using a specific gravity of 0.87.
2. Monitoring wells MW-1 through MW-7 installed September 1995; plugged and redrilled April 2009.
3. Monitoring wells MW-8 through MW-10 installed March and April 1996; plugged and redrilled April 2009.
4. Monitoring wells MW-11 and MW-12 installed April and May 2002.
5. Monitoring wells MW-13 and MW-14 installed January 2004.
6. Elevation survey of new and existing wells August 7, 2009. Earlier water level information corrected to current survey.
7. Monitoring wells MW-15 through MW-29 installed May-June 2010.
8. Elevation survey of wells MW-15 through MW-29 July 13, 2010.
9. Monitoring wells MW-12R, MW-17R, and MW-30 installed and elevations surveyed June 2013; MW-12 and MW-17 plugged and abandoned June 2013.
10. Monitoring wells MW-11R and MW-31 installed December 2016 and elevations surveyed February 2017; MW-11 plugged and abaondoned June 2013
11. Monitoring wells MW-32 and MW-33 installed and elevations surveyed June 2017.
12. Monitoring wells MW-13R and MW-14R installed and elevations surveyed September 2018; MW-13 and MW-14 plugged and abandoned September 2018.

13. Top of casing elevation was calculated by adding 1 foot to the original surveyed top of casing elevation because a 1 foot additional piece of PVC was added due to the skimmer system.

btoc = below top of casing

-- = Not Detected

NM = Not Measured

NA = Not Applicable

>Value = Water level could not be measured due to interference from dedicated pump.

Table 2. Organic Constituent Concentrations in Groundwater

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

Monitor Well	Sample Date	WQCC Volatiles (Method 8260, mg/L)						WQCC Semi-Volatiles (Method 8270, mg/L)					TPH (Method 8015, mg/L)	
		Benzene	Ethylbenzene	Toluene	Total Xylenes	Total Naphthalene	Chloroform	Total Naphthalenes	Naphthalene	1-Methyl naphthalene	2-Methyl naphthalene	Total Phenols	TPH GRO (Low Fraction)	TPH DRO (High Fraction)
New Mexico WQCC Groundwater Standard:		**0.010**	**0.75**	**1**	**0.62**	**0.03**	**0.1**	**0.03**	N/A	N/A	N/A	**0.005**	N/A	N/A
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	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	02/02/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/27/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/24/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/25/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/27/15	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	03/09/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	08/17/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	2/7/2017	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	08/17/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	04/05/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	10/01/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	04/04/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	10/24/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
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	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/30/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/24/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/19/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	0.00022	- -	- -
	08/20/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/25/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/24/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	0.00084 J	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/28/15	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.000696 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	03/07/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.000942 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/18/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00293 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	02/07/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00719	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/16/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00812	<0.000372	<0.000372	<0.000332	<0.000311	0.00403 JB	- -	- -
	04/05/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00385 J	0.00228	0.00228	<0.000332	<0.000311	0.00721 JB	- -	- -
	10/01/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00214 J	<0.000372	<0.000372	<0.000332	<0.000311	0.000912 JB	- -	- -
	04/04/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00260 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00260 J	- -	- -
	10/24/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000728 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
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	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/30/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/25/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/26/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
(duplicate)	02/26/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/26/15	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	03/08/16	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/18/16	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	02/07/17	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/15/17	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	04/05/18	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/18	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	04/04/19	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/19	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
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	<0.0050	0.00044	0.00044	- -	<0.00020	<0.00020	- -	- -
	01/30/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/24/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/21/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/25/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/24/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/28/15	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.0003723	<0.000332	<0.000311	<0.000334	- -	- -
	08/15/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/17/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00267 JB	- -	- -
	10/01/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00302 JB	- -	- -
	10/24/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000574 J	<0.000372	<0.000372	<0.000332	<0.000311	0.000493 J	- -	- -

Table 2. Organic Constituent Concentrations in Groundwater

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

Monitor Well	Sample Date	WQCC Volatiles (Method 8260, mg/L)						WQCC Semi-Volatiles (Method 8270, mg/L)					TPH (Method 8015, mg/L)	
		Benzene	Ethylbenzene	Toluene	Total Xylenes	Total Naphthalene	Chloroform	Total Naphthalenes	Naphthalene	1-Methyl naphthalene	2-Methyl naphthalene	Total Phenols	TPH GRO (Low Fraction)	TPH DRO (High Fraction)
New Mexico WQCC Groundwater Standard:		**0.010**	**0.75**	**1**	**0.62**	**0.03**	**0.1**	**0.03**	N/A	N/A	N/A	**0.005**	N/A	N/A
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	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/31/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
(duplicate)	01/31/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/25/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/21/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020		- -
	08/20/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/25/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/19/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/24/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/24/15	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000382 J	- -	- -
	08/17/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.100	0.366
	08/16/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00154 JB	0.0899 JB	0.0397 J
	10/01/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00240 JB	<0.0314	<0.0247
	10/24/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000880 J	0.0494 JB	0.0620 J
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	<0.0050	0.0008	0.0008	- -	<0.00020	<0.00020	- -	- -
	02/02/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/24/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
(duplicate)	02/27/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	0.00116	0.00052	0.00064	<0.00020	<0.00020	- -	- -
	08/21/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	0.00292	0.00092	0.0020	<0.00010	<0.00020	- -	- -
	02/25/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/27/15	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	03/10/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	08/17/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	02/07/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	08/16/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00123 JB	- -	- -
	04/05/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	10/01/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000859 JB	- -	- -
	04/04/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	10/24/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
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	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	02/02/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/27/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/25/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/27/15	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000507 J	- -	- -
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	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	02/01/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/27/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/26/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/27/15	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000990 J	- -	- -
	03/08/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	08/18/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	02/08/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	08/17/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	04/05/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	10/01/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	04/04/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	10/24/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -

Table 2. Organic Constituent Concentrations in Groundwater

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

Monitor Well	Sample Date	WQCC Volatiles (Method 8260, mg/L)						WQCC Semi-Volatiles (Method 8270, mg/L)					TPH (Method 8015, mg/L)	
		Benzene	Ethylbenzene	Toluene	Total Xylenes	Total Naphthalene	Chloroform	Total Naphthalenes	Naphthalene	1-Methyl naphthalene	2-Methyl naphthalene	Total Phenols	TPH GRO (Low Fraction)	TPH DRO (High Fraction)
New Mexico WQCC Groundwater Standard:		**0.010**	**0.75**	**1**	**0.62**	**0.03**	**0.1**	**0.03**	N/A	N/A	N/A	**0.005**	N/A	N/A
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	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/31/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/25/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/25/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/26/15	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/17/16	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/16/17	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/18	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/19	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
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	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/31/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/25/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	0.00032	- -	- -
	02/26/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/26/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/26/15	<0.000331	<0.000384	<0.00078	<0.00106	<0.0010	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/17/16	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/16/17	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/18	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/19	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
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	<0.0050	0.00036	0.00036	- -	<0.00020	0.00089	- -	- -
	02/01/12	7.8	0.051	<0.0050	0.200	0.096	<0.0050	0.0435	0.039	- -	0.0045	0.0035	- -	- -
	07/27/12	0.049	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	0.00022	0.00022	<0.00020	<0.00020	0.00023	- -	- -
	02/27/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
(duplicate)	02/27/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
(duplicate)	08/21/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/28/14	0.9600	0.250	<0.0050	0.200	0.0064	<0.0050	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -
	08/20/14	0.1100	0.011	<0.0050	0.030	<0.0050	<0.0050	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -
	02/27/15	0.0026	0.00099 J	<0.00078	0.0036	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	0.0010 J	- -	- -
	08/28/15	0.00856	0.00194	0.00283 J	0.0158	<0.00100	0.000420 J	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -
(duplicate)	08/28/15	0.00922	0.00216	0.00305 J	0.0180	<0.00100	0.000467 J	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -
	03/09/16	0.000627 J	0.000778 J	<0.000780	<0.00106	<0.00100	<0.000324	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -
(duplicate)	03/09/16	0.000772 J	0.000908 J	<0.000780	<0.00106	<0.00100	<0.000324	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -
	08/15/16	DRY WELL - PLUGGED AND ABANDONED DECEMBER 2016												
MW-11R	02/08/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
(duplicate)	02/08/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/17/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000392 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00167 JB	- -	- -
	04/05/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000350 J	<0.000413	<0.000413	<0.000368	<0.000345	0.000744 JB	- -	- -
	10/01/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	04/04/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000971 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00284 J	- -	- -
	10/24/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000614 J	<0.000372	<0.000372	<0.000332	<0.000311	0.000390 J	- -	- -
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	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	--	DAMAGED WELL - PLUGGED AND ABANDONED JUNE 2013												
MW-12R	08/21/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/24/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/25/15	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000362 J	- -	- -
	03/09/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/18/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000439	<0.000439	<0.000392	<0.000367	<0.000394	- -	- -
	02/08/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/16/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00273 JB	- -	- -
	04/05/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00237 JB	- -	- -
(duplicate)	04/05/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00230 JB	- -	- -
	10/01/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00262 JB	- -	- -
(duplicate)	10/01/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00441 JB	- -	- -
	04/04/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00257 J	- -	- -
(duplicate)	04/04/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000708 J	- -	- -
	10/24/19	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -

Table 2. Organic Constituent Concentrations in Groundwater

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

Monitor Well	Sample Date	WQCC Volatiles (Method 8260, mg/L)						WQCC Semi-Volatiles (Method 8270, mg/L)					TPH (Method 8015, mg/L)	
		Benzene	Ethylbenzene	Toluene	Total Xylenes	Total Naphthalene	Chloroform	Total Naphthalenes	Naphthalene	1-Methyl naphthalene	2-Methyl naphthalene	Total Phenols	TPH GRO (Low Fraction)	TPH DRO (High Fraction)
New Mexico WQCC Groundwater Standard:		**0.010**	**0.75**	**1**	**0.62**	**0.03**	**0.1**	**0.03**	N/A	N/A	N/A	**0.005**	N/A	N/A
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	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	02/01/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/26/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/19/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/27/15	0.00034 J	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/26/15	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000379 J	- -	- -
	03/08/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/17/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	02/08/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	08/17/17	0.000397 J	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00270 JB	- -	- -
	04/05/18	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -	- -	- -	- -	- -	- -
	09/26/18	DRY WELL - PLUGGED AND ABANDONED SEPTEMBER 2018												
MW-13R	10/01/18	<0.000331	<0.000384	0.000506 J	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00134 JB	- -	- -
	04/04/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	10/24/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00164 J	- -	- -
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	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/31/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/25/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/22/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.000205	<0.00020	<0.000205	<0.000205	<0.000205	- -	- -
	08/22/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -
	02/28/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -
	08/20/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -
	02/27/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/27/15	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000530 J	- -	- -
	08/19/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000413	<0.000413	<0.000368	<0.000345	0.000642 J	- -	- -
	08/16/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00318 JB	- -	- -
	09/27/18	DRY WELL - PLUGGED AND ABANDONED SEPTEMBER 2018												
MW-14R	10/01/18	<0.000331	<0.000384	0.00186	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00278 JB	- -	- -
	10/24/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
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	0.017	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/30/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	0.0095	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/24/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	0.017	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/19/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	0.030	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	0.006	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
(duplicate)	08/20/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	0.0056	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/24/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	0.013	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
(duplicate)	02/24/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	0.011	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	0.011	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
(duplicate)	08/21/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	0.011	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/24/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	0.0081	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/27/15	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00447 J	<0.000372	<0.000372	<0.000332	<0.000311	0.000997 J	- -	- -
(duplicate)	08/27/15	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00574	<0.000372	<0.000372	<0.000332	<0.000311	0.000595 J	- -	- -
	03/07/16	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/15/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00570	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
(duplicate)	08/15/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00539	<0.000372	<0.000372	<0.000332	<0.000311	0.000534 J	- -	- -
	02/06/17	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/06/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00474 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00209 JB	- -	- -
	04/05/18	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00217 J	<0.000372	<0.000372	<0.000332	<0.000311	0.000915 JB	- -	- -
	04/04/19	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00226 J	<0.000372	<0.000372	<0.000332	<0.000311	0.000561 J	- -	- -
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	<0.0050	0.00030	0.00030	- -	<0.00020	<0.00020	- -	- -
(duplicate)	07/15/11	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/30/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/24/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/20/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/25/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/19/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/24/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	0.00037	0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/27/15	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000397 J	- -	- -
	08/15/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/17/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00429 JB	- -	- -
	10/01/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000817 JB	- -	- -
	10/24/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000913 J	- -	- -
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	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	--	DAMAGED WELL - PLUGGED AND ABANDONED JUNE 2013												

Table 2. Organic Constituent Concentrations in Groundwater

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

Monitor Well	Sample Date	WQCC Volatiles (Method 8260, mg/L)						WQCC Semi-Volatiles (Method 8270, mg/L)					TPH (Method 8015, mg/L)	
		Benzene	Ethylbenzene	Toluene	Total Xylenes	Total Naphthalene	Chloroform	Total Naphthalenes	Naphthalene	1-Methyl naphthalene	2-Methyl naphthalene	Total Phenols	TPH GRO (Low Fraction)	TPH DRO (High Fraction)
New Mexico WQCC Groundwater Standard:		**0.010**	**0.75**	**1**	**0.62**	**0.03**	**0.1**	**0.03**	N/A	N/A	N/A	**0.005**	N/A	N/A
MW-17R	08/22/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/26/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/27/15	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000465 J	- -	- -
	03/08/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/17/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	02/09/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/16/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00208 JB	- -	- -
	04/05/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	0.00133	0.00133	<0.000332	<0.000311	0.00488 JB	- -	- -
(duplicate)	04/05/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00290 JB	- -	- -
	10/01/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00259 JB	- -	- -
	04/04/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00242 J	- -	- -
(duplicate)	04/04/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000493 J	- -	- -
	10/24/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000373 J	- -	- -
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	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/31/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	0.00021	0.00021	- -	<0.00020	<0.00020	- -	- -
	07/25/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/22/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/14	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	0.00056	- -	- -
	08/20/14	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/26/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/25/15	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000507 J	- -	- -
	08/17/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000439	<0.000439	<0.000392	<0.000367	0.000507 J	- -	- -
	08/16/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000439	<0.000439	<0.000392	<0.000367	0.00205 JB	- -	- -
	10/01/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00283 JB	- -	- -
	10/24/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000389 J	- -	- -
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	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/31/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/25/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
(duplicate)	08/22/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
(duplicate)	02/26/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	0.00034	- -	- -
	08/19/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
(duplicate)	08/19/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/26/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
(duplicate)	02/26/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/26/15	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000610 J	- -	- -
	03/08/16	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/17/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.00186	<0.00186	<0.00166	<0.00156	0.00818 J	- -	- -
	02/08/17	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/16/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00310 JB	- -	- -
(duplicate)	08/16/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00320 JB	- -	- -
	04/05/18	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00216 JB	- -	- -
	04/04/19	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
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	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/31/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/25/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/22/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/19/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/24/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/15/15	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000508 J	- -	- -
	08/16/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/17/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00262 JB	- -	- -
	10/01/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00309 JB	- -	- -
	10/24/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00161 J	- -	- -
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	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/31/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/26/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/22/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	0.00031	<0.00020	<0.00020	0.00031	<0.00020	- -	- -
	08/20/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/25/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/19/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/24/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/25/15	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000497 J	- -	- -
	08/16/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.100	0.624
	08/17/17	- -	- -	- -	- -	- -	- -	<0.000372	<0.000372	<0.000332	<0.000311	0.00375 JB	0.0889 JB	0.124
	10/01/18	- -	- -	- -	- -	- -	- -	<0.000372	<0.000372	<0.000332	<0.000311	0.000383 JB	<0.0314	0.120
	10/24/19	- -	- -	- -	- -	- -	- -	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	0.0524 JB	0.196

Table 2. Organic Constituent Concentrations in Groundwater

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

Monitor Well	Sample Date	WQCC Volatiles (Method 8260, mg/L)						WQCC Semi-Volatiles (Method 8270, mg/L)					TPH (Method 8015, mg/L)	
		Benzene	Ethylbenzene	Toluene	Total Xylenes	Total Naphthalene	Chloroform	Total Naphthalenes	Naphthalene	1-Methyl naphthalene	2-Methyl naphthalene	Total Phenols	TPH GRO (Low Fraction)	TPH DRO (High Fraction)
New Mexico WQCC Groundwater Standard:		**0.010**	**0.75**	**1**	**0.62**	**0.03**	**0.1**	**0.03**	N/A	N/A	N/A	**0.005**	N/A	N/A
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	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/31/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/26/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/21/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/25/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/24/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/25/15	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/16/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.100	0.819
	08/17/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00363 JB	0.0786 JB	0.113
	10/01/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00119 JB	<0.0314	0.104 J
	10/24/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000635 J	0.0606 JB	0.0674 J
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	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	02/01/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/26/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/25/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/25/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/25/15	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/16/16	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/17/17	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/18	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/19	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
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	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	02/01/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/30/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<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	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/25/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/25/15	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000405 J	- -	- -
	08/16/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/17/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00301 JB	- -	- -
	10/01/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00178 JB	- -	- -
	10/24/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
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	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	02/01/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/26/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
(duplicate)	08/22/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
(duplicate)	02/26/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/19/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
(duplicate)	08/19/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
(duplicate)	02/25/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.000324	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	02/25/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.000324	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/25/15	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000728 J	- -	- -
(duplicate)	08/25/15	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000581 J	- -	- -
	03/09/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/16/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
(duplicate)	08/16/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	02/07/17	0.000424 J	<0.000384	<0.000412	0.00207 J	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/16/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00347 JB	- -	- -
(duplicate)	08/16/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00233 JB	- -	- -
	04/05/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	0.00159	0.00159	<0.000349	<0.000326	0.000731 JB	- -	- -
(duplicate)	04/05/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	10/01/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00118 JB	- -	- -
(duplicate)	10/01/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00274 JB	- -	- -
	04/04/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00201 J	- -	- -
(duplicate)	04/04/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000526 J	- -	- -
	10/24/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00240 J	- -	- -
(duplicate)	10/24/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000637 J	- -	- -

Table 2. Organic Constituent Concentrations in Groundwater

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

Monitor Well	Sample Date	WQCC Volatiles (Method 8260, mg/L)						WQCC Semi-Volatiles (Method 8270, mg/L)					TPH (Method 8015, mg/L)	
		Benzene	Ethylbenzene	Toluene	Total Xylenes	Total Naphthalene	Chloroform	Total Naphthalenes	Naphthalene	1-Methyl naphthalene	2-Methyl naphthalene	Total Phenols	TPH GRO (Low Fraction)	TPH DRO (High Fraction)
New Mexico WQCC Groundwater Standard:		**0.010**	**0.75**	**1**	**0.62**	**0.03**	**0.1**	**0.03**	N/A	N/A	N/A	**0.005**	N/A	N/A
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	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	02/01/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/26/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	0.00061	- -	- -
	02/26/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/25/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/25/15	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/16/16	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/17/17	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/18	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/19	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
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	<0.0050	<0.00020	<0.00020	- -	<0.00020	0.00034	- -	- -
	02/01/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/26/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/27/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/26/15	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	03/08/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	08/18/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	02/08/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	08/17/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00241 JB	- -	- -
	04/05/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	10/01/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000380	<0.000380	<0.000339	<0.000317	0.00451 JB	- -	- -
	04/04/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	10/24/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000917 J	- -	- -
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	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/30/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/24/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/19/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	0.00086	- -	- -
	08/20/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	0.00022	- -	- -
	02/24/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/19/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/23/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	0.00033 J	- -	- -
	08/27/15	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000774 J	- -	- -
	03/07/16	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/15/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000391	<0.000391	<0.000349	<0.000326	0.000459 J	- -	- -
	02/06/17	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/17/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00236 JB	- -	- -
	04/05/18	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00119 JB	- -	- -
	04/04/19	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334		
MW-29	08/24/10	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
(duplicate)	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	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/30/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	0.00050	0.00050	- -	<0.00020	<0.00020	- -	- -
	07/24/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
(duplicate)	02/27/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/25/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	0.00039 J	- -	- -
	08/27/15	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.000329 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	03/08/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00224 J	- -	- -	- -	- -	- -	- -	- -
	08/17/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00197 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	02/09/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00246 J	- -	- -	- -	- -	- -	- -	- -
	08/17/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00175 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00419 JB	- -	- -
	04/05/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00142 J	- -	- -	- -	- -	- -	- -	- -
	10/01/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000903 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00164 JB	- -	- -
	04/04/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00133 J	- -	- -	- -	- -	- -	- -	- -
	10/24/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000578 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
(duplicate)	10/24/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000686 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -

Table 2. Organic Constituent Concentrations in Groundwater

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

Monitor Well	Sample Date	WQCC Volatiles (Method 8260, mg/L)						WQCC Semi-Volatiles (Method 8270, mg/L)					TPH (Method 8015, mg/L)	
		Benzene	Ethylbenzene	Toluene	Total Xylenes	Total Naphthalene	Chloroform	Total Naphthalenes	Naphthalene	1-Methyl naphthalene	2-Methyl naphthalene	Total Phenols	TPH GRO (Low Fraction)	TPH DRO (High Fraction)
New Mexico WQCC Groundwater Standard:		**0.010**	**0.75**	**1**	**0.62**	**0.03**	**0.1**	**0.03**	N/A	N/A	N/A	**0.005**	N/A	N/A
MW-30	06/21/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/25/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	0.00072 J	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/28/15	<0.000331	<0.000384	<0.000780	0.00142 J	<0.00100	0.000887 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	03/08/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.000964 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
(duplicate)	03/08/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.000911 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/16/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00107 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
(duplicate)	08/16/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00111 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	02/09/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00190 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/16/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00376 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00799 JB	- -	- -
(duplicate)	08/16/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00336 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00141 JB	- -	- -
	04/05/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00468 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00900 JB	- -	- -
	10/01/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00549	<0.000372	<0.000372	<0.000332	<0.000311	0.00181 JB	- -	- -
(duplicate)	10/01/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00846	<0.000372	<0.000372	<0.000332	<0.000311	0.00484 JB	<0.0314	0.0391 J
	04/04/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.0148	<0.000372	<0.000372	<0.000332	<0.000311	0.00110 J	- -	<0.0247
	10/24/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00916	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
(duplicate)	10/24/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.0110	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
MW-32	06/15/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	- -	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	0.0511 JB	0.507
	08/17/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00126 JB	0.0740 JB	0.167
	04/05/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000662 JB	<0.0314	0.204
	10/01/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00459 JB	<0.0314	0.360
(duplicate)	10/01/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00380 JB	<0.0314	0.350
	04/04/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000633 J	0.0332 JB	0.209
	10/24/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00114 J	0.0510 JB	0.272
(duplicate)	10/24/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000413	<0.000413	<0.000369	<0.000345	<0.000371	0.0316 JB	0.228
MW-33	06/15/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	- -	<0.000372	<0.000372	<0.000332	<0.000311	0.00118 J	0.105 B	3.14
	08/17/17	0.000884 J J2	0.000627 J J2	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00306 JB	0.335 B	0.250
	04/05/18	0.000363 J	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	0.00107	0.00107	<0.000332	<0.000311	0.00596 JB	0.205	0.175
	10/01/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00271 JB	0.215	0.133
	04/04/19	0.000401 J	<0.000384	<0.000412	<0.00106	<0.00100	0.000545 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00221 J	0.144	0.0707 J
	10/24/19	0.000352 J	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00315 J	0.244 B	0.167
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	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	02/02/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/30/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/19/13	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/11/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	12/17/14	<0.0010	<0.0010	<0.0010	<0.0015	<0.0020	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	- -	- -
	03/09/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	05/19/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00033	<0.00031	<0.00033	- -	- -
	08/28/15	<0.000331	<0.000384	<0.00078	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	12/17/15	<0.000331	<0.000384	<0.00078	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	03/10/16	<0.000331	<0.000384	<0.00078	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	05/25/16	<0.000331	<0.000384	<0.00078	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/18/16	0.000425 J	<0.000384	<0.00078	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.100	<0.100
	12/08/16	<0.000331	<0.000384	<0.00078	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	02/07/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.0531 J
	05/13/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000543 J	0.0448 JB	0.0359 J
	08/17/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00295 JB	0.0888 JB	0.189
	12/14/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	0.0375 J	0.0391 J
	02/23/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00187 JB	<0.0314	0.0821 JB
	04/05/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	0.000455 J	0.000455 J	<0.000332	<0.000311	0.00110 JB	<0.0314	0.0385 J
	07/31/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00138 JB	<0.0314	0.0303 J
	10/01/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00357 JB	<0.0314	0.0354 J
	01/23/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	<0.0247
	04/04/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00136 J	<0.0314	<0.0247
	07/11/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	<0.0247
	10/24/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	0.0381 JB	<0.0247

Table 2. Organic Constituent Concentrations in Groundwater

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

Monitor Well	Sample Date	WQCC Volatiles (Method 8260, mg/L)						WQCC Semi-Volatiles (Method 8270, mg/L)					TPH (Method 8015, mg/L)	
		Benzene	Ethylbenzene	Toluene	Total Xylenes	Total Naphthalene	Chloroform	Total Naphthalenes	Naphthalene	1-Methyl naphthalene	2-Methyl naphthalene	Total Phenols	TPH GRO (Low Fraction)	TPH DRO (High Fraction)
New Mexico WQCC Groundwater Standard:		**0.010**	**0.75**	**1**	**0.62**	**0.03**	**0.1**	**0.03**	N/A	N/A	N/A	**0.005**	N/A	N/A
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	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	02/02/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/30/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/19/13	0.0052	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/28/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
(duplicate)	08/22/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	12/17/14	0.0023	<0.0010	<0.0010	<0.0015	<0.0020	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	- -	- -
(duplicate)	12/17/14	0.0023	<0.0010	<0.0010	<0.0015	<0.0020	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	- -	- -
	03/09/15	0.0014	<0.00038	<0.00078	<0.0011	<0.0010	0.000390 J	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
(duplicate)	03/09/15	0.0016	<0.00038	<0.00078	<0.0011	<0.0010	0.000370 J	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	05/19/15	0.0010 J	<0.00038	<0.00078	<0.0011	<0.0010	0.00052 J	<0.00037	<0.00037	<0.00033	<0.00031	<0.00033	- -	- -
(duplicate)	05/19/15	0.00091 J	<0.00038	<0.00078	<0.0011	<0.0010	0.00054 J	<0.00037	<0.00037	<0.00033	<0.00031	<0.00033	- -	- -
	08/28/15	0.00113	<0.000384	<0.00078	<0.00106	<0.00100	0.000518 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
(duplicate)	08/28/15	0.000921 J	<0.000384	<0.00078	<0.00106	<0.00100	0.000527 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	12/17/15	<0.000331	<0.000384	<0.00078	<0.00106	<0.00100	0.000815 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
(duplicate)	12/17/15	0.00119	<0.000384	<0.00078	<0.00106	<0.00100	0.000861 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	03/10/16	<0.000331	<0.000384	<0.00078	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	05/25/16	<0.000331	<0.000384	<0.00078	<0.00106	<0.00100	0.00114 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
(duplicate)	05/25/16	<0.000331	<0.000384	<0.00078	<0.00106	<0.00100	0.00118 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/18/16	0.000451 J	<0.000384	<0.00078	<0.00106	<0.00100	0.00135 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	0.0343 J	0.0303 J
(duplicate)	08/18/16	0.000509 J	<0.000384	<0.00078	<0.00106	<0.00100	0.00138 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.100	0.0482 J
	12/08/16	<0.000331	<0.000384	<0.00078	<0.00106	<0.00100	0.00228 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
(duplicate)	12/08/16	<0.000331	<0.000384	<0.00078	<0.00106	<0.00100	0.00190 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	02/07/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00199 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.101
(duplicate)	02/07/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00190 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.178 B
	05/31/17	0.000503 J	<0.000384	<0.000412	<0.00106	<0.00100	0.00169 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	0.0600 JB	0.0554 J
(duplicate)	05/31/17	0.000557 J	<0.000384	<0.000412	<0.00106	<0.00100	0.00168 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00329 J	0.0591 JB	0.0509 J
	08/17/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00102 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00301 JB	0.0968 JB	0.0568 J
(duplicate)	08/17/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00112 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00550 JB	0.0891 JB	0.0536 J
	12/14/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00105 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.0641 J
(duplicate)	12/14/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00105 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00153 J	<0.0314	0.0629 J
	02/23/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00113 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00267 J	<0.0314	0.107 B
(duplicate)	02/23/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00118 J	<0.000372	<0.000372	<0.000332	<0.000311	0.000428 J	<0.0314	0.117 B
	04/05/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000874 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00579 JB	<0.0314	0.0740 J
	07/31/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00124 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00269 J	<0.0314	0.0969 J
(duplicate)	07/31/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00126 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00207 J	<0.0314	0.0662 J
	10/01/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000929 J	<0.000372	<0.000372	<0.000332	<0.000311	0.000598 JB	<0.0314	0.0534 J
	01/23/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000966 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	0.0485 J	<0.0247
(duplicate)	01/23/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00110 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	<0.0247
	04/04/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000943 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00188 J	<0.0314	0.0593 J
	07/11/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00104 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.0258 JB
	10/24/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000903 J	<0.000372	<0.000372	<0.000332	<0.000311	0.000746 J	0.0381 JB	<0.0247

Table 2. Organic Constituent Concentrations in Groundwater

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

Monitor Well	Sample Date	WQCC Volatiles (Method 8260, mg/L)						WQCC Semi-Volatiles (Method 8270, mg/L)					TPH (Method 8015, mg/L)	
		Benzene	Ethylbenzene	Toluene	Total Xylenes	Total Naphthalene	Chloroform	Total Naphthalenes	Naphthalene	1-Methyl naphthalene	2-Methyl naphthalene	Total Phenols	TPH GRO (Low Fraction)	TPH DRO (High Fraction)
New Mexico WQCC Groundwater Standard:		**0.010**	**0.75**	**1**	**0.62**	**0.03**	**0.1**	**0.03**	N/A	N/A	N/A	**0.005**	N/A	N/A
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	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	02/02/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/30/12	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/27/12	<0.0050	<0.0050	<0.0050	<0.015	--	<0.0050	<0.00020	<0.00020	<0.00020	--	<0.00020	- -	- -
	09/26/12	<0.0050	<0.0050	<0.0050	<0.015	--	<0.0050	<0.00020	<0.00020	<0.00020	--	<0.00020	- -	- -
	10/22/12	<0.0050	<0.0050	<0.0050	<0.015	--	<0.0050	<0.00020	<0.00020	<0.00020	--	<0.00020	- -	- -
	12/27/12	<0.0050	<0.0050	<0.0050	<0.015	--	<0.0050	<0.00020	<0.00020	<0.00020	--	<0.00020	- -	- -
	02/28/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/14	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	12/17/14	<0.0010	<0.0010	<0.0010	<0.0015	<0.0020	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	- -	- -
	03/09/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	05/19/15	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00033	<0.00031	<0.00033	- -	- -
	08/28/15	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	12/17/15	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	03/10/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	05/25/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/18/16	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.100	0.0357 J
	12/08/16	<0.000331	<0.000384	<0.00078	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	02/07/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.0552 J
	05/31/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000544 J	0.0590 JB	<0.0247
	08/17/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00403 JB	0.0847 JB	0.0335 J
	12/14/17	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00192 J	0.0394 J	<0.0247
	02/23/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00330 J	<0.0314	0.0849 JB
	04/05/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00418 JB	<0.0314	<0.0282
	07/31/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00193 J	0.0327 JB	<0.0247
	10/01/18	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00502 JB	<0.0314	<0.0247
	01/23/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00218 J	<0.0314	<0.0247
	04/04/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000431 J	<0.0314	<0.0247
	07/11/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	<0.0247
	10/24/19	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000657 J	0.0386 JB	<0.0247

Notes:

N/A = Not Applicable, no New Mexico WQCC Standard established for constituent

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

mg/L = milligrams per liter

< = Not reported above laboratory reporting limit

-- = Not Analyzed

(1)= Not analyzed due to insufficient water volume

J = analyte was detected below the laboratory reporting limit (June 2009 to December 2014) or the method quantitation limit (February 2015 to October 2019), reported value is estimated

B = same analyte was detected in the associated laboratory blank or equipment blank; sample concentration is within 5 times the blank concentration

June 2009 to August 2014 analyses completed by ALS Laboratory Group in Houston, Texas

December 2014 anlyses completed by Hall Environmental Analysis Laboratory in Albuquerque, New Mexico

February 2015 to October 2019 analyses completed by Pace Analytical National Center for Testing & Innovation (formerly ESC Lab Sciences) in Mount Juliet, Tennessee

Table 3. Inorganic Constituent Concentrations in Groundwater

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

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)
New Mexico WQCC Groundwater Standard:		**250**	**1.6**	**10.0**	**600**	**1,000**	**5.0**	**0.1**	**2.0**	**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	0.1470	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	- -	0.01240
	01/19/10	266	0.249	5.84	145	1,240	0.0202	0.00634	0.1640	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	0.1170	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
	02/27/13	30.0	0.872	<2.00	67.2	400	<0.0100	0.00857	0.0974	0.184	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.662	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.01070
	08/21/13	33.2	1.03	<1.00	70.5	406	0.0158	0.00589	0.1020	0.187	<0.00200	0.01600	<0.00500	<0.00500	<0.200	<0.00500	1.32	<0.000200	<0.00500	0.01640	<0.00500	<0.00500	<0.00500	0.00641
	02/27/14	30.0	0.758	0.710	63.2	418	<0.0100	0.00750	0.1110	0.169	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.690	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00874
	08/21/14	26.6	1.10	1.23	68.0	395	0.0135	0.01020	0.1380	0.109	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0172	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.02420
	02/25/15	26.0	1.10	1.50	66.0	390	<0.0350	0.01200	0.1300	0.180 J	<0.00070	<0.00140	<0.00230	<0.00530	<0.014	0.00048 J	<0.0012	<0.000049	0.00250	<0.00490	<0.00740	<0.00280	0.00220 J	0.00670 J
	08/27/15	27.3	0.961	1.70	72.2	441	<0.0350	0.01200	0.1220	0.170	<0.00016	<0.00054	<0.00026	<0.00052	<0.0141	<0.00024	0.00191 J	<0.000049	0.00236 J	<0.00035	0.00268	<0.00031	0.00187 J	<0.00256
	03/09/16	28.9	1.09	1.76	68.1	- -	0.00841 JB	0.00292	0.121	0.155	<0.00016	0.0276	<0.00026	0.00141 JB	<0.0150	<0.00024	0.00102 JB	<0.000049	0.00170 JB	0.000910 JB	0.00150 J	<0.000310	0.00246 J	0.00436 JB
	08/17/16	38.4	1.04	1.93	69.3	436	0.00284 JB	0.0117	0.138	0.189	<0.00100	0.00112 JB	<0.00026	0.000802 JB	0.0529 JB	<0.00024	0.00295 JB	<0.000049	0.0026 J	<0.00350	0.00278	<0.000310	0.00261 J	0.00377 J
	02/07/17	54.6	0.978	2.91	78.9	- -	<0.0258	0.00618 J	0.163	0.190	<0.00080	<0.00270	<0.00130	<0.00260	<0.0750	<0.00120	0.0124 J	<0.000049	0.00549 J	0.0137	0.00237	<0.00155	0.00276 J	0.0160 J
	08/17/17	61.5	1.07	2.58	68.1	453	0.0110 JB	0.00809	0.146	0.157	<0.00016	<0.00054	<0.00026	<0.00052	<0.0150	<0.00024	0.00371 J	0.000258	0.00229 J	0.0237	0.00228	<0.000310	0.00230 J	0.00494 J
	04/05/18	48.3	1.04	2.14	63.4	- -	<0.00515	0.00762	0.152	0.176 J	<0.000160	<0.000540	<0.000260	0.000883 JB	<0.0150	<0.000240	0.00128 JB	<0.0000490	0.00252 JB	<0.000350	0.00250 B	<0.000310	0.00179 JB	0.0110 J
	10/01/18	42.0	1.03	2.59	65.7	402	0.0143 JB	0.00687	0.141	0.143 J	<0.000160	<0.000540	<0.000260	<0.000520	<0.0150	<0.000240	0.000642 JB	<0.0000490	0.00242 J	<0.000350	0.00255	<0.000310	0.00163 J	0.00331 JB
	04/04/19	42.0	1.06	2.80	59.8	- -	<0.00515	0.00585	0.155	0.160 J	<0.000160	<0.000540	<0.000260	0.000902 J	<0.0150	<0.000240	<0.000250	<0.0000490	0.00282 J	<0.000350	0.00246	<0.000310	0.00159 J	0.00554 J
	10/24/19	50.2	1.10	2.72	61.2	389	<0.00515	0.00605	0.137	0.152 J	<0.000160	<0.000540	<0.000260	<0.000520	<0.0150	<0.000240	<0.000250	0.0000684 JB	0.00331 J	<0.000350	0.00291	<0.000310	0.00163 J	0.00451 J
MW-2	06/22/09	252	0.765	2.69	66.8	988	0.0657	0.03860	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	- -	0.1100
	01/19/10	246	0.672	3.39	55.1	966	<0.0100	<0.00500	0.005	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
	02/19/13	213	0.810	3.90	86.6	834	0.0102	<0.00500	0.141	0.197	<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	0.0436
	08/20/13	178	0.920	5.33	88.9	682	0.0346	<0.00500	0.118	0.216	<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	0.00721
	02/25/14	139	0.693	5.25	79.4	616	0.0133	<0.00500	0.125	0.203	<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	0.0130
	08/21/14	122	0.812	6.17	82.3	588	0.0143	<0.00500	0.112	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	0.0214
	02/24/15	130	0.920	7.90	94.0	710	<0.035	0.00370	0.090	0.210	<0.00070	<0.00140	<0.00230	<0.00530	<0.014	<0.00024	<0.00120	<0.000049	0.0034 J	<0.00490	<0.00740	<0.00280	0.00260 J	<0.0059
	08/28/15	343	1.41	8.33	152	1,000	<0.0350	0.00355	0.111	0.213	<0.00016	0.000625 J	<0.00026	0.000548 J	<0.0141	<0.00024	0.000533 J	<0.000049	0.00254 J	0.00115 J	0.00147 J	<0.000310	0.00340 J	0.00382 J
	03/07/16	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/18/16	123	0.864	6.84	71.8	640	0.00451 JB	0.00304	0.105	0.235	<0.00016	0.000981 JB	<0.000260	0.000952 JB	<0.0150	<0.00024	0.000769 JB	0.0000534 JB	0.00282 J	0.00129 JB	0.00166 J	<0.000310	0.00297 J	0.00316 JB
	02/0717	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/16/17	126	0.977	4.83	70.7	596	0.0175 JB	0.00351	0.100	0.180	<0.00016	0.00333	<0.000260	0.00159 J	<0.0150	<0.00024	0.000347 J	0.0000703 J	0.00288 J	0.00713	0.00161 J	<0.000310	0.00268 J	0.0179 J
	04/05/18	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/18	142	0.839	4.46	83.4	693	0.0168 JB	0.00357	0.100	0.183 J	<0.000160	0.00201 B	<0.000260	0.00136 JB	<0.0150	<0.000240	0.000750 JB	<0.0000490	0.00278 J	0.00641	0.00116 J	<0.000310	0.00317 J	0.0316 B
	04/04/19	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/19	159	0.914	3.46	75.0	602	<0.00515	0.00361	0.108	0.189 J	<0.000160	0.000871 JB	<0.000260	0.00277 JB	<0.0150	0.000263 J	<0.000250	0.0000719 JB	0.00268 J	0.00412	0.00172 JB	<0.000310	0.00346 J	0.0420

Table 3. Inorganic Constituent Concentrations in Groundwater

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

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)
New Mexico WQCC Groundwater Standard:		**250**	**1.6**	**10.0**	**600**	**1,000**	**5.0**	**0.1**	**2.0**	**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-3	06/16/09	29.1	3.38	2.19	64.6	504	0.3080	0.00815	0.1150	0.160	<0.00200	0.00709	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	0.01510	<0.00500	<0.00500	<0.00500	- -	<0.0100
	01/14/10	49.9	3.18	2.11	76.5	540	0.1440	0.00703	0.1190	0.148	<0.00200	0.00977	<0.00500	0.12100	<0.200	<0.00500	0.00597	<0.000200	0.02000	0.00842	<0.00500	<0.00500	0.000625	0.01950
(duplicate)	01/14/10	49.8	3.18	2.11	75.0	552	0.1420	0.00798	0.1250	0.167	<0.00200	0.01050	<0.00500	0.14800	<0.200	<0.00500	0.00699	<0.000200	0.02160	0.00960	<0.00500	<0.00500	0.000721	0.02300
	08/19/10	72.7	2.99	1.52	77.7	518	0.0767	0.00935	0.1270	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	0.1240	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	0.05240
	07/15/11	67.3	2.37	2.59	74.7	568	<0.0100	0.01250	0.1130	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	0.01560
	01/30/12	65.6	2.94	2.37	86.3	472	<0.0100	0.01170	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	0.01520	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
	02/27/13	54.2	2.47	2.30	89.5	478	<0.0100	0.01560	0.1010	0.186	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	0.00546	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	08/22/13	46.1	2.4	2.06	81.9	456	0.0185	0.01690	0.0782	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	<0.00500
	02/26/14	36.9	1.84	2.08	79.1	430	<0.0100	0.01790	0.0655	0.164	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	0.00560	<0.00500	<0.00500	<0.00500	0.00527
	08/21/14	30.0	1.84	1.53	78.0	420	0.0128	0.01830	0.0545	0.104	<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
	02/26/15	31.0	1.50	1.90	74.0	420	<0.0350	0.01900	0.0610	0.160	<0.00070	<0.00140	<0.00230	<0.00530	<0.014	<0.00024	<0.00120	<0.000049	0.00094	<0.00490	<0.00740	<0.00280	0.000570	<0.00590
(duplicate)	02/26/15	32.0	1.60	2.00	74.0	420	<0.0350	0.02000	0.0620	0.160 J	<0.00070	<0.00140	<0.00230	<0.00530	<0.014	<0.00024	<0.00120	<0.000049	0.00110 J	<0.00490	0.00850 J	<0.00280	0.000560 J	0.00880 J
	08/26/15	27.3	1.55	1.88	77.6	520	<0.0350	0.01950	0.0529	0.166 J	<0.00016	0.000912 J	<0.00026	0.00101 J	<0.0141	<0.00024	0.000572 J	<0.000049	<0.00160	0.000483 J	0.00269	<0.00031	0.000567 J	0.00296 J
	03/08/16	23.9	1.32	1.84	65.4	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/18/16	24.4	1.16	1.81	66.3	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	02/07/17	25.4	1.25	1.83	77.3	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/16/17	29.9	1.15	1.88	71.6	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	04/05/18	26.9	0.896	1.75	73.1	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/18	30.9	0.783	1.79	74.5	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	04/04/19	37.9	0.628	1.73	73.4	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/19	29.8	0.648	1.49	75.4	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
MW-4	06/16/09	28.9	0.841	1.84	61.5	422	0.1800	<0.00500	0.1740	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	- -	0.01200
	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	0.1440	<0.00500	0.1410	0.172	<0.00200	0.00619	<0.00500	<0.00500	<0.200	<0.00500	0.01140	<0.000200	<0.00500	0.01030	<0.00500	<0.00500	<0.00500	0.02110
	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	0.01470
	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	0.01020
	02/21/13	26.6	1.05	<2.00	75.5	360	<0.0100	0.00525	0.0841	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	0.01160
	08/20/13	26.4	1.20	1.72	71.6	382	< 0.0100	0.00500	0.0902	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	0.00506
	02/25/14	26.9	0.877	2.02	75.5	390	<0.0100	<0.00500	0.0897	0.148	<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	0.00801
	08/20/14	24.1	1.15	1.64	70.2	372	0.6030	0.00501	0.2130	0.111	<0.00200	<0.00500	<0.00500	<0.00500	0.241	<0.00500	0.00595	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.02210
	02/24/15	24.0	1.10	2.10	66.00	390	<0.0350	0.00460	0.0900	0.150 J	<0.00070	<0.00140	<0.00230	<0.00530	<0.014	0.00025 J	<0.00120	0.00011 J	0.00340 J	<0.00490	<0.00740	<0.00280	0.00160 J	<0.00590
	08/28/15	28.8	1.26	2.32	63.8	479	<0.0350	0.00526	0.0930	0.157	<0.00016	<0.00054	<0.00026	<0.00052	<0.0141	<0.00024	0.00114 J	<0.000049	0.00319 J	0.000482 J	0.00228	<0.00031	0.00168 J	0.00269 J
	08/15/16	25.1	1.02	2.24	60.3	411	0.00568 JB	0.00564	0.0894	0.155	<0.00016	0.00117 JB	<0.00026	0.000614 JB	0.064 JB	<0.00024	0.000588 JB	<0.000049	0.00358 J	0.000488 JB	0.00272	<0.00031	0.0017 J	0.00298 J
	08/17/17	34.0	1.17	2.39	57.5	384	0.0196 JB	0.00480	0.0871	0.139	<0.00016	0.000569 J	<0.00026	0.000818 J	<0.0150	<0.00024	<0.00025	<0.000049	0.00313 J	0.00317 B	0.00220	<0.00031	0.00141 J	0.00637 J
	10/01/18	62.6	1.04	2.60	53.6	574	0.0149 JB	0.00482	0.0965	0.135 J	<0.000160	<0.000540	<0.000260	<0.000520	<0.0150	<0.000240	0.000539 J	<0.0000490	0.00271 J	0.00139 J	0.00231	<0.000310	0.00139 J	0.00473 J
	10/24/19	75.6	1.10	2.62	55.0	403	<0.00515	0.00478	0.107	0.145 J	<0.000160	0.00301	<0.000260	0.00323 JB	<0.0150	0.000333 J	<0.000250	0.0000637 JB	0.00302 J	0.00172 J	0.00272	<0.000310	0.00167 J	0.00736 J

Table 3. Inorganic Constituent Concentrations in Groundwater

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

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)
New Mexico WQCC Groundwater Standard:		**250**	**1.6**	**10.0**	**600**	**1,000**	**5.0**	**0.1**	**2.0**	**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-5	06/16/09	186	1.39	3.31	131	952	0.7960	0.02330	0.0639	0.1160	<0.00200	<0.00500	<0.00500	<0.00500	0.399	<0.00500	0.00670	<0.000200	0.01030	<0.00500	<0.00500	<0.00500	- -	<0.01000
	01/18/10	26.4	0.781	4.91	80.6	508	<0.0100	<0.00500	0.0966	0.1350	<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	0.1230	<0.00500	0.1000	0.0854	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.01420	<0.000200	<0.00500	0.01120	<0.00500	<0.00500	<0.00500	0.03680
	07/19/11	20.9	0.858	2.72	59.0	524	<0.0100	<0.00500	0.0968	0.0871	<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	0.03090
	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	0.01190
	07/25/12	15.9	1.10	2.22	50.1	434	0.0205	<0.00500	0.0931	0.1340	<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	0.05620
	02/21/13	10.9	1.04	2.01	40.8	412	0.0487	<0.00500	0.1040	0.0997	<0.00200	<0.00500	<0.00500	0.04340	<0.200	<0.00500	0.01580	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00582	0.02890
	08/20/13	13.9	1.16	2.05	44.2	448	< 0.0100	<0.00500	0.1050	0.1000	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00507	0.02080
	02/25/14	11.8	0.877	2.52	48.4	436	< 0.0100	<0.00500	0.1160	0.0893	<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	0.01140
	08/19/14	8.71	1.16	1.68	44.6	478	0.1480	<0.00500	0.1230	<0.0200	<0.00200	0.00744	<0.00500	<0.00500	<0.200	<0.00500	0.00532	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00535	0.00626
	02/24/15	21.0	1.40	2.20	43.0	520	0.038 J	0.00290	0.1200	0.0910 J	<0.00070	<0.00140	<0.00230	<0.00530	<0.014	<0.00024	<0.00120	<0.000049	0.00450 J	<0.00490	<0.00740	<0.00280	0.00400 J	0.00890 J
	08/25/15	19.9	1.52	1.97	39.9	586	<0.0350	0.00410	0.1210	0.0899 J	<0.00016	0.00111 J	<0.00026	0.00102 J	<0.0141	<0.00024	<0.00025	<0.000049	0.00476 J	0.000814 J	<0.00038	<0.00031	0.00410 J	0.00539 J
	08/17/16	18.4	1.62	2.15	38.1	449	0.0155 JB	0.00425	0.119	0.1080	<0.00016	0.00217 B	<0.00026	0.00122 JB	0.0974 JB	<0.00024	0.000764 JB	<0.000049	0.00876	0.00054 JB	0.000502 J	<0.00031	0.00553 J	0.0059 J
	08/16/17	16.0	1.85	2.26	34.2	479	0.0209 JB	0.00382	0.118	0.0893	<0.00016	0.00128 J	<0.00026	0.00261 J	<0.0150	<0.00024	0.000398 J	<0.000049	0.00616	0.00070 JB	0.000574 J	<0.00031	0.00432 J	0.00391 J
	10/01/18	23.8	1.31	2.57	26.8	440	<0.00515	0.00412	0.125	0.0529 J	<0.000160	<0.000540	<0.000260	0.00128 JB	<0.0150	<0.000240	<0.000250	<0.0000490	0.00259 J	0.000937 J	0.000695 J	<0.000310	0.00262 J	<0.00256
	10/24/19	12.9	1.30	2.04	25.6	335	<0.00515	0.00370	0.110	0.0517 J	<0.000160	<0.000540	<0.000260	0.00242 JB	<0.0150	<0.000240	<0.000250	0.0000584 JB	0.00260 J	0.00131 J	0.000554 JB	<0.000310	0.00152 J	0.00812 J
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	- -	0.01410
	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	0.01130	<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	0.01760
	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	0.01020	0.01940
	02/27/13	65.4	0.368	<2.00	77.1	542	<0.0100	0.0126	0.154	0.214	<0.00200	<0.00500	<0.00500	<0.00500	1.31	<0.00500	1.97	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00789	0.01230
(duplicate)	02/27/13	65.7	0.370	<2.00	77.6	556	<0.0100	0.0124	0.158	0.216	<0.00200	<0.00500	<0.00500	<0.00500	1.33	<0.00500	2.02	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00833	0.01060
	08/21/13	43.3	0.441	<0.200	76.6	502	0.0244	<0.00500	0.129	0.198	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	1.68	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00606	<0.00500
	02/27/14	124	0.309	<0.500	51.0	814	<0.0100	0.0458	0.263	0.220	<0.00200	<0.00500	<0.00500	<0.00500	3.42	<0.00500	2.71	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00882	0.00622
	08/21/14	132	0.230	<1.00	34.4	832	0.0330	0.0185	0.363	0.167	<0.00200	<0.00500	<0.00500	<0.00500	0.268	<0.00500	3.06	<0.000200	<0.00500	0.00651	<0.00500	<0.00500	0.00744	0.01510
	02/25/15	42.0	0.580	0.170	67.0	500	0.0920 J	0.0061	0.190	0.190 J	<0.00070	<0.0014	<0.00230	<0.00530	0.015 J	0.00072 J	1.00	<0.000049	0.00260 J	<0.00490	<0.00740	<0.00280	0.00660 J	0.02000
	08/27/15	32.4	0.505	0.835	66.5	473	<0.0350	0.00539	0.152	0.181	<0.00016	<0.000540	<0.00026	0.00054 J	<0.0141	<0.00024	0.411	<0.000049	0.00192 J	0.00134 J	0.00242	<0.00031	0.00463 J	0.00347 J
	03/10/16	34.5	0.621	0.688	71.8	- -	0.00858 JB	0.00529	0.149	0.174	<0.000160	<0.000540	<0.00026	0.000554 JB	<0.0150	<0.00024	0.138 B	<0.000049	0.00202 JB	0.000974 JB	0.00298	<0.00031	0.00573 J	0.00327 JB
	08/17/16	27.0	0.642	1.06	68.5	1,000	0.00297 JB	0.00654	0.131	0.196	<0.000160	0.000782 JB	<0.00026	0.00132 JB	<0.0150	<0.00024	0.0144	<0.000049	0.00215 J	0.00121 JB	0.00316	<0.00031	0.00726 J	0.00362 JB
	02/07/17	31.3	0.665	1.20	79.9	- -	<0.0258	0.00762 J	0.168	0.181	<0.000800	<0.00270	<0.00130	<0.00260	<0.0750	<0.00120	0.0323	<0.000049	0.00260 J	0.00285 J	0.00409	<0.00155	0.00537 J	<0.0128
	08/16/17	46.8	0.761	1.52	73.8	463	0.0121 JB	0.00653	0.179	0.156	<0.000160	<0.000540	<0.00026	0.00294 J	<0.0150	<0.00024	0.7370	<0.000049	0.00380 J	0.0163	0.00417	<0.00031	0.00406 J	0.0262
	04/05/18	55.8	0.719	2.04	76.7	- -	<0.00515	0.00668	0.161	0.173 J	<0.000160	<0.000540	<0.000260	0.00153 JB	<0.0150	<0.000240	0.0304	<0.0000490	0.00224 JB	0.00197 JB	0.00426	<0.000310	0.00345 J	0.0111 J
	10/01/18	55.9	0.691	2.02	79.0	485	<0.00515	0.00716	0.148	0.154 J	<0.000160	0.000718 JB	<0.000260	0.000629 JB	<0.0150	<0.000240	0.0763	<0.0000490	0.00198 J	0.00116 J	0.00343	<0.000310	0.00340 J	0.0126 JB
	04/04/19	47.4	0.717	2.04	72.9	- -	<0.00515	0.00793	0.150	0.173 J	<0.000160	0.000797 J	<0.000260	0.00112 J	<0.0150	<0.000240	0.106	<0.0000490	0.00266 J	0.000612 JB	0.00395	<0.000310	0.00358 J	0.0123 J
	10/24/19	50.0	0.982	2.48	73.1	438	<0.00515	0.00739	0.143	0.156 J	<0.000160	<0.000540	<0.000260	<0.000520	<0.0150	<0.000240	0.00807	0.0000653 JB	0.00276 J	0.000391 J	0.00394	<0.000310	0.00335 J	0.00752 J

Table 3. Inorganic Constituent Concentrations in Groundwater

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

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)
New Mexico WQCC Groundwater Standard:		**250**	**1.6**	**10.0**	**600**	**1,000**	**5.0**	**0.1**	**2.0**	**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	- -	0.01370
	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	0.01140
	02/27/13	25.8	0.709	<2.00	67.3	286	<0.0100	<0.00500	0.227	0.178	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.300	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00844
	08/21/13	26.9	0.748	1.62	60.8	290	< 0.0100	<0.00500	0.220	0.178	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.365	<0.000200	<0.00500	<0.00500	0.00600	<0.00500	<0.00500	<0.00500
	02/27/14	31.0	0.501	1.50	62.1	408	0.0159	<0.00500	0.208	0.168	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.781	<0.000200	<0.00500	<0.00500	0.00540	<0.00500	<0.00500	0.00818
	08/21/14	30.8	0.642	1.72	62.2	380	< 0.0100	<0.00500	0.207	0.110	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.470	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00566
	02/25/15	35.0	0.710	2.00	60.0	420	<0.0350	0.00550	0.240	0.180 J	<0.00070	<0.00140	<0.00230	<0.00530	<0.014	0.00041 J	0.011	<0.000049	0.00110 J	<0.00490	<0.00740	<0.00280	0.00330 J	0.00830 J
	08/27/15	38.4	0.866	2.28	66.9	471	<0.0350	0.00650	0.215	0.180	<0.00016	<0.00054	<0.00026	<0.00052	<0.0141	<0.000240	0.0184	<0.000049	0.00175 J	<0.00035	0.00334	<0.00031	0.00236 J	<0.00256
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	- -	0.04580
	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	0.28100	<0.000200	<0.00500	0.00620	<0.00500	<0.00500	<0.00500	0.03160
	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	0.02130
	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	0.01190	<0.00500	<0.00500	0.00745	0.03390
	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
	02/26/13	246	0.371	11.1	118	1,080	<0.0100	0.00627	0.170	0.380	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00592	<0.000200	<0.00500	0.00999	<0.00500	<0.00500	0.00690	0.01880
	08/21/13	101	0.513	9.49	129	788	< 0.0100	<0.00500	0.119	0.266	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.02080	<0.000200	<0.00500	0.01350	<0.00500	<0.00500	<0.00500	0.01070
	02/27/14	368	0.417	1.43	88.1	1,440	0.7470	<0.00500	0.233	0.284	<0.00200	0.04170	<0.00500	<0.00500	0.541	<0.00500	0.02400	<0.000200	<0.00500	0.03390	<0.00500	<0.00500	0.00916	0.01020
	08/21/14	360	0.268	4.42	76.6	1,310	0.3140	<0.00500	0.212	0.230	<0.00200	0.04040	<0.00500	<0.00500	0.274	<0.00500	0.01280	<0.000200	<0.00500	0.02580	<0.00500	<0.00500	0.00639	0.01810
	02/26/15	220	0.490	7.00	86.0	960	0.1100	0.00550	0.200	0.230	<0.00070	<0.00140	<0.00230	<0.00530	<0.014	<0.00024	<0.00120	<0.000049	0.000830 J	<0.00490	<0.00740	<0.00280	0.00730 J	0.00590 J
	08/27/15	258	0.368 J	8.80	88.5	1,260	<0.0350	0.00537	0.232	0.245	<0.00016	0.000562 J	0.000346 J	0.000544 J	<0.0141	<0.00024	0.00141 J	<0.000049	0.000854 J	0.00204	0.00224	<0.00031	0.00891 J	0.00316 J
	03/08/16	291	0.357	7.84	78.2	1,290	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/18/16	94.1	0.537	3.67	71.4	593	0.0111 JB	0.00686	0.121	0.187	<0.00016	0.000982 JB	<0.000260	0.00175 JB	0.0152 J	0.000247 J	0.00123 JB	0.0000537 JB	0.00137 J	0.00243 B	0.00254	<0.00031	0.00245 J	0.00318 JB
	02/08/17	50.7	0.760	3.02	78.6	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/17/17	29.4	0.798	4.02	76.1	699	0.0129 JB	0.00790	0.126	0.151	<0.00016	<0.000540	<0.000260	0.00265 J	<0.0150	<0.00024	<0.000250	<0.000049	0.00207 J	0.00679	0.00278	<0.00031	0.00347 J	0.0133 J
	04/05/18	170	0.599	5.61	77.1	877	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/18	159	0.653	6.49	85.8	807	0.00771 JB	0.00744	0.182	0.175 J	<0.000160	0.000757 JB	<0.000260	0.00160 JB	<0.0150	0.000279 JB	0.000389 JB	<0.0000490	0.00169 J	0.00867	0.00248	<0.000310	0.00486 J	0.0157 JB
	04/04/19	148	0.552	6.29	76.0	819	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/19	169	0.669	5.98	87.2	765	<0.00515	0.00700	0.190	0.204	<0.000160	<0.000540	<0.000260	0.00143 JB	<0.0150	<0.000240	<0.000250	0.0000632 JB	0.00108 J	0.00560	0.00214 B	<0.000310	0.00473 J	0.0210 J
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	0.1150	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
	02/27/13	31.3	1.11	2.82	79.1	440	<0.0100	0.0171	0.0766	0.154	<0.00200	<0.00500	<0.00500	<0.00500	0.702	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.01670
	08/22/13	35.7	1.80	3.01	74.0	466	0.0467	0.0246	0.0736	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
	02/26/14	54.0	1.48	3.17	71.5	452	0.0161	0.0224	0.0737	0.152	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00588	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	08/21/14	197	0.655	2.35	111	932	2.47	<0.00500	0.1740	0.124	<0.00200	0.205	<0.00500	0.00644	2.22	<0.00500	0.09030	<0.000200	0.00662	0.11100	<0.00500	<0.00500	<0.00500	0.03340
	02/25/15	49.0	0.690	3.50	69.0	440	<0.0350	0.0087	0.1000	0.180 J	<0.00070	<0.0014	<0.00230	<0.00530	<0.014	<0.00024	<0.00120	<0.000049	0.00140 J	<0.00490	<0.00740	<0.00280	0.00310 J	<0.00590
	08/26/15	46.6	0.527	4.17	67.5	495	<0.0350	0.00744	0.1080	0.163 J	<0.00016	<0.000540	<0.00026	0.000626 J	<0.0141	<0.00024	<0.00025	<0.000049	<0.00160	0.000566 J	<0.00297	<0.00031	0.00285 J	0.00258 J
	08/17/16	81.8	0.544	3.11	73.8	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/16/17	100	0.441	3.73	73.9	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/18	232	0.489	9.00	110	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/19	220	0.291	5.70	108	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -

Table 3. Inorganic Constituent Concentrations in Groundwater

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

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)
New Mexico WQCC Groundwater Standard:		**250**	**1.6**	**10.0**	**600**	**1,000**	**5.0**	**0.1**	**2.0**	**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-10	06/16/09	32.2	0.878	1.83	76.5	378	<0.0200	<0.00500	0.1130	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	- -	0.01270
	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	0.01330
	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	0.01330
	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	0.02520
	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
	02/27/13	48.0	0.960	<2.00	83.5	416	<0.0100	0.00546	0.0972	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	0.00633
	08/22/13	95.0	0.994	2.12	72.2	516	< 0.0100	<0.00500	0.1040	0.168	<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	0.00671
	02/26/14	112	0.674	2.43	70.9	568	< 0.0100	<0.00500	0.1060	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	0.00979
	08/21/14	156	0.856	2.08	68.5	750	< 0.0100	<0.00500	0.1340	0.0998	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00939	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.01140
	02/26/15	120	0.710	2.10	68.0	540	<0.0350	0.00430	0.1200	0.170 J	<0.00070	0.00160 J	<0.00230	<0.0053	<0.014	0.00030 J	<0.00120	<0.000049	0.00260 J	<0.00490	<0.0074	<0.00280	0.00190 J	0.00600 J
	08/26/15	115	1.19	1.92	102	551	<0.0350	0.00466	0.0982	0.154	<0.00016	0.000709 J	<0.00026	0.000803 J	<0.0141	<0.00024	<0.00025	<0.000049	0.00258 J	<0.00035	0.00283	<0.00031	0.00158 J	<0.00256
	08/17/16	57.5	0.954	1.61	75.0	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/16/17	94.0	0.966	2.15	74.5	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/18	33.3	0.955	1.69	76.3	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/19	27.4	1.07	1.55	67.6	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
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	0.3870	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	0.02120
	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	0.01260	<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	0.5710	<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	0.09820
	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	0.02650
	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	0.01690	<0.00500	<0.00500	0.01380	0.01890
	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	0.03510	<0.00500	<0.00500	0.03300	<0.00500
	02/27/13	140	0.576	3.11	32.6	908	<0.0100	0.00802	0.561	0.349	<0.00200	<0.00500	0.00604	<0.00500	<0.200	<0.00500	5.24	<0.000200	0.00631	0.08610	<0.00500	<0.00500	0.01270	0.02260
(duplicate)	02/27/13	143	0.585	3.23	32.0	908	<0.0100	0.00787	0.574	0.349	<0.00200	<0.00500	0.00574	<0.00500	<0.200	<0.00500	5.47	<0.000200	0.00619	0.08110	<0.00500	<0.00500	0.01250	0.01990
	08/21/13	182	0.668	4.04	75.3	854	< 0.0100	<0.00500	0.195	0.283	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	2.62	<0.000200	<0.00500	0.00869	<0.00500	<0.00500	0.00723	0.00547
(duplicate)	08/21/13	172	0.673	4.19	76.2	868	< 0.0100	<0.00500	0.198	0.29	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	2.92	<0.000200	<0.00500	0.00906	<0.00500	<0.00500	0.00714	0.00592
	02/28/14	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)
	08/20/14	--(1)	--(1)	<1.0	--(1)	--(1)	0.0129	<0.00500	0.820	0.361	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	1.10	<0.000200	<0.00500	0.02170	<0.00500	<0.00500	0.02690	0.01040
	02/27/15	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)
	08/28/15	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)
	03/09/16	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)
(duplicate)	03/09/16	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)
	08/15/16	DRY WELL - PLUGGED AND ABANDONED DECEMBER 2016																						
MW-11R	02/08/17	- -	- -	- -	- -	972	<0.0258	0.00165 J	0.208	0.194	<0.000800	<0.00270	0.00157 J	0.0118 J	<0.0750	<0.00120	0.141	<0.0000490	0.00372 J	0.0115	0.00115 J	<0.00155	0.00580 J	<0.0128
(duplicate)	02/08/17	- -	- -	- -	- -	980	<0.0258	0.00181 J	0.198	0.186	<0.000800	<0.00270	0.00147 J	0.0105 J	<0.0750	<0.00120	0.133	<0.0000490	0.00316 J	0.00979 J	0.00135 J	<0.00155	0.00551 J	<0.0128
	08/17/17	- -	- -	- -	- -	1,170	0.00988 JB	0.00225	0.156	0.162	<0.000160	<0.00054	<0.00026	0.00242 J	<0.0150	<0.00024	0.00888	<0.0000490	0.00115 J	0.0275	0.00123 J	<0.00031	0.00349 J	0.0152 J
	04/05/18	- -	- -	- -	- -	1,080	<0.00515	0.0025	0.153	0.192 J	<0.000160	<0.000540	<0.000260	0.0151	0.0561 J	0.000668 JB	0.00304 J	<0.0000490	0.00146 JB	0.0849	0.00219 B	<0.000310	0.00298 J	0.168
	10/01/18	293	0.587	3.94	116	1,220	0.00726 JB	0.00258	0.162	0.160 J	<0.000160	<0.000540	<0.000260	0.0248	<0.0150	0.000797 JB	0.00123 JB	<0.0000490	0.00119 J	0.00546	0.00206	<0.000310	0.00299 J	0.111
	04/04/19	- -	- -	- -	- -	1,480	<0.00515	0.00284	0.180	0.203	<0.000160	<0.000540	<0.000260	0.0386	<0.0150	0.000793 J	0.000546 J	<0.0000490	0.00143 J	0.00305	0.00182 J	<0.000310	0.00396 J	0.132
	10/24/19	344	0.574	6.23	130	1,330	<0.00515	0.00249	0.187	0.218	<0.000160	0.00179 JB	<0.000260	0.0435	<0.0150	0.00131 J	<0.000250	0.0000675 JB	0.000953 J	0.00148 J	0.00289	<0.000310	0.00537 J	0.126

Table 3. Inorganic Constituent Concentrations in Groundwater

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

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)
New Mexico WQCC Groundwater Standard:		**250**	**1.6**	**10.0**	**600**	**1,000**	**5.0**	**0.1**	**2.0**	**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-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	0.02190	<0.000200	<0.00500	0.01820	<0.00500	<0.00500	<0.00500	<0.00500
	08/20/10	25.8	1.22	2.00	50.3	340	0.1150	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	0.0760	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	0.01850
	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 - PLUGGED AND ABANDONED JUNE 2013																						
MW-12R	08/21/13	31.2	1.40	8.14	71.1	404	< 0.0100	<0.00500	0.0937	0.194	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.01290	<0.000200	0.00647	0.01030	<0.00500	<0.00500	<0.00500	0.00956
	02/27/14	28.3	0.886	7.38	63.4	432	< 0.0100	<0.00500	0.0767	0.193	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	0.00992	<0.00500	<0.00500	<0.00500	<0.00500
	08/20/14	24.5	1.05	6.98	67.2	410	1.31	<0.00500	0.1450	0.223	<0.00200	0.0516	<0.00500	<0.00500	0.867	<0.00500	0.04830	<0.000200	0.00554	0.03500	<0.00500	<0.00500	<0.00500	0.00962
	02/24/15	29.0	1.10	7.00	63.0	500	0.0370 J	0.00380	0.0950	0.200	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	<0.00024	<0.0012	<0.000049	0.0042 J	<0.00490	<0.00740	<0.00280	0.00190 J	0.00810 J
	08/25/15	19.8	1.02	7.36	71.1	527	<0.0350	0.00413	0.1020	0.233	<0.00016	<0.000540	<0.000260	<0.000520	<0.0141	<0.00024	0.00203 J	<0.000049	0.00294 J	0.00191 J	0.000707 J	<0.00031	0.00270 J	0.00291 J
	03/09/16	21.6	0.985	6.35	68.2	503	0.00398 J	0.00340	0.0972	0.214	<0.000160	0.000653 J	<0.000260	0.00331 J	<0.0150	<0.00024	0.00314 JB	<0.000049	0.00348 J	0.00349 B	0.00121 J	<0.000310	0.00291 J	<0.00256
	08/18/16	25.1	0.810	6.14	75.9	394	0.00468 JB	0.00294	0.111	0.274	<0.000160	0.00128 JB	<0.00200	0.00176 JB	<0.0150	0.000332 J	0.0025 J	0.0000689 JB	0.00267 J	0.00238 B	0.00151 J	<0.000310	0.004 J	<0.00256
	02/08/17	28.4	0.890	5.25	75.0	509	<0.0258	0.00348 J	0.133	0.273	<0.000800	<0.00270	<0.00130	<0.00260	<0.0750	<0.00120	0.0377	<0.000049	0.00446 J	0.00769 J	0.00185 J	<0.00155	0.00430 J	0.0192 J
	08/16/17	31.0	0.813	5.34	68.8	528	0.0102 JB	0.00270	0.118	0.229	<0.000160	0.000749 J	<0.000260	0.000969 J	<0.0150	<0.00024	<0.000250	<0.000049	0.00285 J	0.00185 JB	0.00147 J	<0.000310	0.00422 J	0.00320 J
	04/05/18	33.2	0.699	4.77	71.1	520	<0.00515	0.00275	0.128	0.281	<0.000160	<0.000540	<0.000260	0.00164 JB	<0.0150	<0.000240	0.000316 JB	<0.0000490	0.00206 JB	0.00187 JB	0.00169 JB	<0.000310	0.00464 J	0.00477 J
(duplicate)	04/05/18	31.3	0.730	4.78	71.7	535	<0.00515	0.00291	0.130	0.279	<0.000160	0.000595 JB	<0.000260	0.00170 JB	<0.0150	<0.000240	0.000435 JB	<0.0000490	0.00217 JB	0.00167 JB	0.00150 JB	<0.000310	0.00476 J	0.00779 J
	10/01/18	32.9	0.685	4.88	82.9	503	<0.00515	0.00251	0.141	0.262	<0.000160	<0.000540	<0.000260	0.000867 JB	<0.0150	<0.000240	0.000932 JB	<0.0000490	0.00195 J	0.00181 J	0.00175 J	<0.000310	0.00458 J	0.00781 JB
(duplicate)	10/01/18	32.1	0.645	4.90	87.4	588	<0.00515	0.00292	0.154	0.249	<0.000160	0.000720 J	<0.000260	0.00150 J	<0.0150	0.000318 JB	0.000610 J	<0.0000490	0.00218 J	0.00205	0.00185 J	<0.000310	0.00502 J	0.00956 J
	04/04/19	41.2	0.551	5.09	77.1	623	<0.00515	0.00250	0.167	0.295	<0.000160	0.000768 J	<0.000260	0.00330 J	<0.0150	<0.000240	0.000558 J	<0.0000490	0.00190 J	0.00530	0.00163 J	<0.000310	0.00582 J	0.0172 J
(duplicate)	04/04/19	41.8	0.534	5.61	76.1	624	<0.00515	0.00232	0.168	0.153 J	<0.000160	0.000775 JB	<0.000260	0.0100	<0.0150	<0.000240	0.000717 JB	<0.0000490	0.00168 J	0.00407	0.00206	<0.000310	0.00555 J	0.0148 J
	10/24/19	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]
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	- -	0.02690
	01/18/10	604	0.170	1.08	79.8	2,210	<0.0100	<0.00500	0.1110	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	0.1060	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	0.07440
	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	0.05530
	07/26/12	462	0.422	<2.00	123	2,150	<0.0100	<0.00500	0.1120	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	0.03610
	02/26/13	430	0.366	<2.00	135	1,610	0.0139	<0.00500	0.1290	0.270	<0.00200	<0.00500	0.00657	<0.00500	<0.200	<0.00500	0.571	<0.000200	0.00568	0.0820	<0.00500	<0.00500	0.0123	0.03590
	08/21/13	548	0.389	<1.00	108	2,000	< 0.0100	0.00590	0.1590	0.265	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.705	<0.000200	<0.00500	0.0209	<0.00500	<0.00500	0.0153	0.00931
	02/27/14	588	0.282	<0.500	106	2,380	0.0110	<0.00500	0.1910	0.258	<0.00200	0.01400	0.00541	<0.00500	0.321	<0.00500	1.01	<0.000200	<0.00500	0.0300	<0.00500	<0.00500	0.0173	0.02910
	08/19/14	485	<1.00	<1.00	87.2	1,900	0.0737	<0.00500	0.2070	0.287	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.940	<0.000200	<0.00500	0.0065	<0.00500	<0.00500	0.0151	0.01150
	02/27/15	550	0.380	0.056 J	59.0	1,600	<0.0350	0.00340	0.2300	0.240	<0.00070	<0.00140	0.00470 J	<0.00530	<0.014	<0.00024	0.820	<0.000049	0.00100 J	<0.00490	<0.00740	<0.00280	0.0140	0.01900 J
	08/26/15	396	0.505	0.956	107	1,890	<0.0350	0.00301	0.1970	0.231	<0.00016	<0.00054	0.00163 J	0.00208 J	<0.0141	<0.00024	0.383	--[1]	0.00143 J	0.00276	0.000710 J	<0.00031	0.0112	0.00592 J
	03/08/16	217	0.552	2.53	75.7	972	0.00530 JB	0.00365	0.0976	0.196	<0.000160	<0.000540	<0.000260	0.00100 JB	0.0238 JB	0.000241 JB	0.000620 J	<0.000049	0.00288 J	0.000721 JB	0.00144 J	<0.00031	0.00303 J	0.00418 JB
	08/17/16	336	0.396	1.81	97.5	1,340	0.00748 JB	0.00398	0.1490	0.223	<0.000160	0.0013 JB	0.00218	0.00287 JB	0.022 JB	<0.00024	0.241	<0.000049	0.00111 J	0.00409 B	0.000998 J	<0.00031	0.0119	0.0159 J
	02/08/17	307	0.428	1.28	102	1,140	<0.0258	0.00409 J	0.1500	0.217	<0.000800	<0.00270	0.00296 J	<0.00260	<0.0750	<0.00120	0.157	<0.000049	0.00132 J	0.00726 J	0.000432 J	<0.00155	0.0123 J	0.0382 J
	08/17/17	--[1]	--[1]	--[1]	--[1]	--[1]	0.00785 JB	0.00687	0.1420	0.187	<0.000160	0.00128 J	<0.000260	0.00517	<0.0150	<0.00024	0.0258	<0.000049	0.00193 J	0.0231	0.000828 J	<0.00031	0.0141	0.2400
	04/05/18	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]
	09/26/18	DRY WELL - PLUGGED AND ABANDONED SEPTEMBER 2018																						
MW-13R	10/01/18	407	0.629	3.50	90.2	1,410	0.00533 JB	0.00260	0.194	0.169 J	<0.000160	0.00234 B	0.00460	0.0243	<0.0150	<0.000240	0.223	<0.0000490	0.0360	0.162	0.00161 J	<0.000310	0.00743 J	0.0775
	04/04/19	464	0.326	3.66	94.8	1,980	<0.00515	0.00188 J	0.199	0.239	<0.000160	0.00802	0.00148 J	0.0162	<0.0150	<0.000240	0.0520	0.0000564 J	0.000861 J	0.0234	0.000961 J	<0.000310	0.0106	0.0335
	10/24/19	354	0.410	4.02	74.5	1,360	<0.00515	0.00205	0.225	0.262	<0.000160	0.00255 B	0.000874 J	0.0104 B	<0.0150	<0.000240	0.0508	0.000152 JB	0.000608 J	0.0127	0.000645 JB	<0.000310	0.0102	0.0184 J

Table 3. Inorganic Constituent Concentrations in Groundwater

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

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)
New Mexico WQCC Groundwater Standard:		**250**	**1.6**	**10.0**	**600**	**1,000**	**5.0**	**0.1**	**2.0**	**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-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	0.01990	<0.000200	0.02150	<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	<0.020	<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	0.1030	<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	0.02340	<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	0.1760	0.00615	0.110	0.156	<0.00200	12.5	0.122	0.21800	54.9	<0.00500	1.45	<0.000200	0.08600	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	0.02760	<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	0.03210	<0.000200	<0.00500	0.0240	<0.00500	<0.00500	<0.00500	0.0448
	02/22/13	71.9	0.795	<2.00	52.9	428	<0.0100	<0.00500	0.0900	0.174	<0.00200	<0.00500	<0.00500	0.07050	<0.200	<0.00500	0.03490	<0.000200	0.01210	0.0106	<0.00500	<0.00500	0.00591	0.1480
	02/28/14	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)
	08/20/14	--(1)	--(1)	1.10	--(1)	534	0.5730	<0.00500	0.125	0.203	<0.00200	0.02470	<0.00500	<0.00500	0.314	<0.00500	0.00919	<0.000200	0.00533	0.0178	<0.00500	<0.00500	0.00502	0.0134
	02/27/15	--(1)	--(1)	--(1)	--(1)	--(1)	<0.0350	0.0023	0.100	0.200 J	<0.00070	0.00260 J	<0.00230	<0.00530	<0.014	<0.00024	<0.00120	--(1)	0.00400 J	<0.00490	<0.00740	<0.0028	0.00470 J	0.0070 J
	08/27/15	104	0.940	1.96	44.6	611	<0.0350	0.00271	0.0998	0.188	<0.00016	0.00261	0.000326 J	0.00122 J	<0.0141	<0.00024	<0.000250	--(1)	0.00429 J	0.00190 J	0.00123 J	<0.00031	0.00485 J	0.00334 J
	08/19/16	118	0.796	4.13	39.3	674	0.00385 JB	0.00244	0.124	0.216	<0.000160	0.00335 B	0.000476 J	0.0023 JB	<0.0150	<0.000240	0.00431 J	<0.0000490	0.00412 J	0.00253 B	0.00165 J	<0.000310	0.00554 J	0.00497 JB
	08/16/17	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	<0.0000490	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)
	09/27/18	DRY WELL - PLUGGED AND ABANDONED SEPTEMBER 2018																						
MW-14R	10/01/18	216	1.15	2.81	54.3	867	0.0120 JB	0.00317	0.159	0.160 J	<0.000160	<0.000540	<0.000260	0.00200 JB	<0.0150	<0.000240	0.0107	<0.0000490	0.00700	0.00515	0.00178 J	<0.000310	0.00339 J	0.00479 JB
	10/24/19	518	0.873	4.96	61.1	1,840	<0.00515	0.00248	0.332	0.181 J	<0.000160	<0.000540	<0.000260	<0.000520	<0.0150	<0.000240	<0.000250	0.0000617 JB	0.00242 J	<0.000350	0.00219 B	<0.000310	0.00509 J	<0.00256
MW-15	08/20/10	221	0.921	3.22	77.6	776	0.0790	<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	0.01980
	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	0.03850
	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	0.01220
	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
	02/19/13	254	0.819	5.12	76.0	882	0.0682	<0.00500	0.178	0.191	<0.00200	0.129	<0.00500	<0.00500	0.610	<0.00500	0.01980	<0.000200	<0.00500	0.07040	<0.00500	<0.00500	<0.00500	0.01600
	08/20/13	379	0.910	6.82	71.3	1,280	< 0.0100	<0.00500	0.232	0.194	<0.00200	0.00594	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00854
(duplicate)	08/20/13	381	0.931	6.83	72.7	1,230	< 0.0100	<0.00500	0.232	0.188	<0.00200	0.00582	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00619
	02/24/14	256	0.715	7.86	83.0	858	< 0.0100	<0.00500	0.178	0.175	<0.00200	0.00910	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
(duplicate)	02/24/14	263	0.832	8.07	82.5	810	< 0.0100	<0.00500	0.178	0.174	<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	<0.00500
	08/21/14	148	1.02	8.52	97.5	690	0.0102	<0.00500	0.146	0.117	<0.00200	0.00513	<0.00500	<0.00500	<0.200	<0.00500	0.00509	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.01490
(duplicate)	08/21/14	150	1.01	8.53	95.6	706	0.0136	<0.00500	0.153	0.119	<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	0.02130
	02/24/15	150	0.900	8.40	94.0	650	0.0520 J	0.00400	0.150	0.170 J	<0.00070	0.0034 J	<0.0023	<0.0053	<0.014	<0.00024	<0.00120	<0.000049	0.00240 J	<0.00490	<0.00740	<0.00280	0.0021 J	0.01200 J
	08/27/15	181	1.13	8.48	123	728	<0.0350	0.00424	0.146	0.167	<0.00016	0.00285	<0.00026	0.00109 J	<0.0141	0.000373 J	0.000492 J	<0.000049	0.00249 J	0.000825 J	0.00232	<0.00031	0.00220 J	<0.00256
(duplicate)	08/27/15	234	1.46	8.47	158	729	<0.0350	0.00443	0.146	0.174	<0.00016	0.00272	<0.00026	<0.000520	0.0144 J	<0.00024	0.000276 J	<0.000049	0.00254 J	0.000688 J	0.00253	<0.00031	0.00200 J	<0.00256
	03/07/16	160	0.877	6.53	85.9	727	0.00537 JB	0.00420	0.140	0.156	<0.000160	0.00281	<0.00026	0.000956 JB	<0.0150	0.000309 JB	0.000837 JB	<0.000049	0.00240 J	0.00173 B	0.00234	<0.00031	0.00248 J	0.00275 JB
	08/15/16	169	0.685	5.19	93.2	721	0.00418 JB	0.00353	0.140	0.176	<0.000160	0.00128 JB	0.000281 J	0.00193 JB	<0.100	<0.00024	0.00394 J	<0.000049	0.00326 J	0.00597 B	0.00245	<0.00031	0.00275 J	0.00409 J
(duplicate)	08/15/16	165	0.738	5.09	93.3	723	0.00531 JB	0.00353	0.145	0.183	<0.000160	0.0013 JB	0.000293 J	0.000569 JB	0.0441 JB	<0.00024	0.00413 J	<0.000049	0.0034 J	0.00598 B	0.00259	<0.00031	0.00281 J	0.00403 J
	02/06/17	177	0.781	5.80	105	800	<0.0258	0.00342 J	0.160	0.198	<0.000800	<0.00270	<0.00130	<0.00260	<0.0750	<0.00120	0.00764 J	<0.000049	0.00419 J	0.0145	0.00213	<0.00155	0.00275 J	0.0140 J
	08/16/17	219	0.772	5.02	90.2	808	0.00788 JB	0.00362	0.161	0.161	<0.000160	0.00242	<0.00026	0.00189 J	<0.0150	<0.00024	<0.00025	<0.000049	0.00183 J	0.00373 B	0.00191 J	<0.00031	0.00257 J	0.0104 J
	04/05/18	222	0.644	4.28	111	808	<0.00515	0.00339	0.148	0.189 J	<0.000160	0.00201 B	<0.000260	0.00420 J	0.0281 J	0.000269 JB	0.00172 JB	<0.0000490	0.00433 J	0.00561	0.00170 JB	<0.000310	0.00290 J	0.0250 J
	10/01/18	348	0.549	4.26	105	2,230	<0.00515	0.00329	0.162	0.157 J	<0.000160	0.00118 JB	<0.000260	0.00144 JB	<0.0150	<0.000240	0.00189 JB	<0.0000490	0.00136 J	0.00277	0.00215	<0.000310	0.00288 J	0.0199 JB
	04/04/19	537	0.478	3.85	100	1,880	0.00581 JB	0.00294	0.189	0.180 J	<0.000160	0.00181 J	<0.000260	0.00800	<0.0150	0.000487 J	0.000601 J	<0.0000490	0.00170 J	0.00656	0.00134 J	<0.000310	0.00265 J	0.0714
	10/24/19	437	0.592	3.29	111	1,370	<0.00515	0.00246	0.160	0.172 J	<0.000160	0.00321	<0.000260	0.00177 JB	<0.0150	<0.000240	0.00280 J	0.0000657 JB	0.00567	0.0322	0.00252	<0.000310	0.00273 J	0.128

Table 3. Inorganic Constituent Concentrations in Groundwater

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

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)
New Mexico WQCC Groundwater Standard:		**250**	**1.6**	**10.0**	**600**	**1,000**	**5.0**	**0.1**	**2.0**	**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-16	08/20/10	25.3	0.930	1.13	73.7	406	0.0746	<0.00500	0.1090	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	0.01450
	02/24/11	28.1	0.928	2.36	73.7	412	<0.0100	<0.00500	0.1070	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	0.02480
	07/15/11	25.5	1.04	1.82	72.0	484	0.188	<0.00500	0.1290	0.181	<0.00200	0.11500	<0.00500	<0.00500	0.613	<0.00500	0.01640	<0.000200	<0.00500	0.05910	<0.00500	<0.00500	<0.00500	0.01760
(duplicate)	07/15/11	21.0	0.733	1.98	54.1	476	0.0374	<0.00500	0.1180	0.185	<0.00200	0.02510	<0.00500	<0.00500	0.241	<0.00500	0.00820	<0.000200	<0.00500	0.02340	<0.00500	<0.00500	<0.00500	0.01660
	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	<2.00	72.6	404	0.0102	<0.00500	0.0966	0.202	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.01620	<0.000200	<0.00500	0.01120	<0.00500	<0.00500	<0.00500	0.01670
	02/20/13	24.0	0.966	<2.00	68.1	316	<0.0100	0.00547	0.0968	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	<0.00500	0.00693
	08/20/13	24.7	1.02	1.75	64.0	392	0.026	<0.00500	0.1050	0.192	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.02190	<0.000200	<0.00500	0.01770	<0.00500	<0.00500	<0.00500	<0.00500
	02/25/14	23.9	0.766	1.83	62.3	362	<0.0100	<0.00500	0.0938	0.172	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.02250	<0.000200	0.00516	0.02950	<0.00500	<0.00500	<0.00500	0.00786
	08/19/14	21.7	0.975	1.41	64.9	362	0.335	<0.00500	0.1040	0.209	<0.00200	0.00751	<0.00500	<0.00500	<0.200	<0.00500	0.00544	<0.000200	<0.00500	0.00667	<0.00500	<0.00500	<0.00500	0.00897
	02/24/15	20.0	1.00	1.90	61.0	360	0.042 J	0.00510	0.0980	0.170 J	<0.00070	<0.00140	<0.00230	<0.0053	<0.014	<0.00024	0.00420 J	<0.000049	0.00350 J	<0.00490	<0.00740	<0.00280	0.00160 J	0.01400 J
	08/27/15	21.3	1.07	2.34	66.0	408	<0.0350	0.00528	0.0936	0.176	<0.00016	<0.00054	<0.00026	0.000638 J	<0.0141	<0.00024	0.000312 J	<0.000049	0.00293 J	<0.00035	0.00228	<0.00031	0.00156 J	0.00343 J
	08/15/16	22.3	0.859	1.69	63.5	418	0.00512 JB	0.00434	0.0973	0.181	<0.00016	0.00122 JB	<0.00026	0.000659 JB	0.0571 JB	<0.00024	0.00916	<0.000049	0.00631	0.0117	0.00246	<0.00031	0.00206 J	0.00454 J
	08/17/17	25.5	0.940	1.94	66.4	392	0.0178 JB	0.00488	0.106	0.162	<0.00016	0.000796 J	<0.00026	0.00279 J	<0.0150	<0.00024	0.000295 J	<0.000049	0.00256 J	0.00343 B	0.00257	<0.00031	0.00198 J	0.0285
	10/01/18	28.1	0.900	2.16	67.8	386	<0.00515	0.00492	0.114	0.155 J	<0.000160	<0.000540	<0.000260	0.00200 JB	<0.0150	<0.000240	0.000783 JB	<0.0000490	0.00243 J	0.000934 J	0.00322	<0.000310	0.00228 J	0.00805 JB
	10/24/19	32.0	1.01	2.10	69.8	432	<0.00515	0.00557	0.109	0.157 J	<0.000160	0.00107 JB	<0.000260	0.00290 JB	<0.0150	0.000400 J	0.00116 J	0.0000606 JB	0.00251 J	0.00120 J	0.00358	<0.000310	0.00226 J	0.0369
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 - PLUGGED AND ABANDONED JUNE 2013																						
MW-17R	08/22/13	246	0.602	3.44	81.7	1,190	0.0302	<0.00500	0.154	0.188	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0819	<0.000200	0.00531	0.0189	<0.00500	<0.00500	<0.00500	<0.00500
	02/27/14	184	0.425	0.629	92.5	904	0.2540	<0.00500	0.121	0.193	<0.00200	0.0121	<0.00500	<0.00500	<0.200	<0.00500	0.0342	<0.000200	<0.00500	0.0273	<0.00500	<0.00500	<0.00500	<0.00500
	08/22/14	170	0.602	2.70	94.8	860	0.0459	<0.00500	0.153	0.120	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0989	<0.000200	<0.00500	0.0378	<0.00500	<0.00500	<0.00500	0.02430
	02/26/15	150	0.650	2.60	75.0	670	0.0460 J	0.00280	0.120	--	<0.00070	0.0022 J	<0.00230	<0.0053	<0.014	0.00030 J	<0.0012	<0.000049	0.00130 J	<0.0049	<0.00740	<0.00280	0.00300 J	0.02300 J
	08/27/15	110	0.859	2.86	87.4	658	<0.0350	0.00320	0.0972	0.171	<0.00016	0.000967 J	<0.00026	0.000632 J	0.0218 J	<0.000240	0.00123 J	<0.000049	0.00163 J	0.000779 J	0.00203	<0.00031	0.00267 J	<0.00256
	03/08/16	65.3	0.722	2.55	76.0	465	0.0150 JB	0.00259	0.0739	0.161	<0.00016	<0.000540	0.000315 J	0.000717 JB	<0.0150	<0.000240	0.0544	<0.000049	0.000749 J	0.00103 JB	0.00185 J	<0.00031	0.00666 J	0.00412 JB
	08/17/16	219	0.578	4.37	79.8	526	0.00299 JB	0.00251	0.143	0.199	<0.00016	0.0011 JB	<0.00026	0.00145 JB	<0.0150	<0.000240	0.00281 J	<0.000049	0.0014 J	0.00147 JB	0.00143 J	<0.00031	0.00285 J	<0.00256
	02/09/17	150	0.654	3.01	86.3	715	<0.0258	0.00292 J	0.0993	0.183	<0.00080	<0.00270	<0.00130	0.00839 J	<0.0750	<0.00120	0.0450	<0.000049	0.00415 J	0.0112	0.00227	<0.00155	0.00227 J	<0.0128
	08/16/17	60.0	0.770	2.21	85.9	502	0.00847 JB	0.00367	0.0723	0.154	<0.00016	0.00244	<0.00026	0.00105 J	<0.0150	<0.000240	<0.000250	<0.000049	0.00161 J	0.00196 JB	0.00274	<0.00031	0.00179 J	0.00448 J
	04/05/18	124	0.664	2.46	68.2	587	<0.00515	0.00353	0.107	0.166 J	<0.000160	0.00143 JB	<0.000260	0.00180 JB	<0.0150	<0.000240	<0.000250	<0.0000490	0.00161 JB	0.00233 B	0.00261 B	<0.000310	0.00165 JB	0.00823 J
(duplicate)	04/05/18	124	0.679	2.48	69.7	589	<0.00515	0.00350	0.109	0.172 J	<0.000160	0.00118 JB	<0.000260	0.00166 JB	<0.0150	<0.000240	0.000388 JB	<0.0000490	0.00161 JB	0.00229 B	0.00227 B	<0.000310	0.00163 JB	0.0116 J
	10/01/18	136	0.631	2.88	79.7	682	0.00927 JB	0.00327	0.120	0.145 J	<0.000160	0.000817 JB	<0.000260	0.00143 JB	<0.0150	<0.000240	0.000555 JB	<0.0000490	0.00157 J	0.00309	0.00290	<0.000310	0.00189 J	0.0203 JB
	04/04/19	94.5	0.627	2.21	78.5	568	<0.00515	0.00384	0.0984	0.150 J	<0.000160	0.00167 J	<0.000260	0.00167 J	<0.0150	<0.000240	0.000643 J	<0.0000490	0.00180 J	0.0335	0.00294	<0.000310	0.00168 J	0.0260
(duplicate)	04/04/19	94.3	0.629	2.53	78.5	562	<0.00515	0.00346	0.0972	0.185 J	<0.000160	0.00138 JB	<0.000260	0.00105 J	<0.0150	<0.000240	0.000563 JB	<0.0000490	0.00147 J	0.00314	0.00305	<0.000310	0.00162 J	0.0192 J
	10/24/19	67.7	0.771	1.94	89.9	467	<0.00515	0.00378	0.0915	0.116 J	<0.000160	0.00223 B	<0.000260	0.000686 JB	<0.0150	0.000244 J	<0.000250	0.0000572 JB	0.00167 J	0.00478	0.00218 B	<0.000310	0.00166 J	0.0365
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	0.31400	<0.000200	0.00561	0.0298	0.00548	<0.00500	0.0123	0.07720
	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	0.04390
	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	0.06610
	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	0.01910
	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
	02/22/13	181	0.564	4.02	116	782	0.0742	<0.00500	0.1050	0.249	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.01290	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.0138	0.01870
	08/22/13	197	0.531	5.59	130	1,100	< 0.0100	<0.00500	0.1100	0.243	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	0.00509	<0.00500	<0.00500	<0.00500	<0.00500
	02/26/14	145	0.514	4.36	89.1	680	0.0213	<0.00500	0.0766	0.244	<0.00200	<0.00500	<0.00500	0.0215	<0.200	<0.00500	0.01770	<0.000200	<0.00500	0.00681	<0.00500	<0.00500	0.00701	0.04650
	08/20/14	143	0.590	1.97	123	678	1.31	<0.00500	0.1450	0.242	<0.00200	0.00506	<0.00500	<0.00500	0.637	<0.00500	0.03780	<0.000200	<0.00500	0.00634	<0.00500	<0.00500	<0.00500	0.03630
	02/26/15	130	0.680	3.50	97.0	670	0.069 J	0.0026	0.1000	0.260	<0.00070	<0.0014	<0.00230	0.0061 J	0.022 J	0.00026 J	<0.00120	<0.000049	0.00200 J	<0.00490	<0.00740	<0.00280	0.00390 J	0.01700 J
	08/25/15	136	0.703	2.73	65.8	844	<0.0350	0.00288	0.1160	0.188 J	<0.00016	0.00118 J	<0.00026	0.000646 J	<0.0141	<0.00024	0.00120 J	<0.000049	0.00612	0.00151 J	0.00178 J	<0.00031	0.00434 J	0.00669 J
	08/17/16	162	0.557	3.71	53.4	799	<0.00200	0.00194 J	0.108	0.223	<0.000160	0.00195 JB	<0.00026	0.00214 JB	0.0201 J	<0.00024	0.00261 J	0.0000593 JB	0.00217 J	0.00139 JB	0.00173 J	<0.000310	0.00423 J	0.00992 JB
	08/16/17	234	0.648	6.10	93.5	1,030	<0.0515	0.00174 J	0.135	0.169	<0.000160	0.00176 J	<0.00026	0.000766 J	<0.0150	<0.00024	<0.00025	<0.000049	0.00174 J	0.00106 JB	0.00299	<0.000310	0.00434 J	0.00897 J
	10/01/18	99.6	0.599	2.48	73.8	659	<0.00515	0.00225	0.0916	0.240	<0.000160	0.00185 JB	<0.000260	0.00231 JB	<0.0150	0.000351 JB	0.000538 JB	<0.0000490	0.00166 J	0.0101	0.00252	<0.000310	0.00428 J	0.0334 B
	10/24/19	120	0.634	3.82	113	653	<0.00515	0.00232	0.0826	0.168 J	<0.000160	0.00258 B	<0.000260	0.00302 JB	<0.0150	<0.000240	<0.000250	0.0000660 JB	0.00193 J	0.00878	0.00190 JB	<0.000310	0.00354 J	0.0682

Table 3. Inorganic Constituent Concentrations in Groundwater

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

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)
New Mexico WQCC Groundwater Standard:		**250**	**1.6**	**10.0**	**600**	**1,000**	**5.0**	**0.1**	**2.0**	**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-19	08/23/10	469	0.536	2.94	178	1,650	0.1010	0.04760	0.2290	<0.020	<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	0.02270
	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	0.03180
	07/18/11	688	0.734	3.66	142	2,880	<0.0100	<0.00500	0.0920	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	0.05530
	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	0.03450
	07/25/12	1,130	0.450	5.11	117	3,570	0.0114	<0.00500	0.1060	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	0.07140
	02/26/13	540	0.519	4.21	115	1,650	<0.0100	<0.00500	0.0870	0.300	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	0.00566	<0.00500	<0.00500	<0.00500	0.06290
	08/22/13	487	0.645	3.43	92.6	1,430	<0.0100	<0.00500	0.0857	0.241	<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	0.00512
(duplicate)	08/22/13	475	0.672	3.38	95.7	1,670	0.0182	<0.00500	0.0864	0.237	<0.00200	0.0143	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	0.00900	<0.00500	<0.00500	<0.00500	<0.00500
	02/26/14	264	0.576	2.34	72.3	850	0.0120	<0.00500	0.0793	0.227	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.01570	<0.000200	<0.00500	0.01220	<0.00500	<0.00500	<0.00500	0.03330
(duplicate)	02/26/14	288	0.555	2.51	76.0	950	0.0435	<0.00500	0.0753	0.204	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.01650	<0.000200	<0.00500	0.01230	<0.00500	<0.00500	<0.00500	0.03500
	08/19/14	233	0.592	2.48	84.5	774	0.0461	<0.00500	0.2690	0.279	<0.00200	0.0352	<0.00500	<0.00500	0.263	<0.00500	0.02040	<0.000200	<0.00500	0.02610	<0.00500	<0.00500	<0.00500	0.00854
(duplicate)	08/19/14	241	0.627	2.59	84.7	820	0.0208	<0.00500	0.0846	0.236	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.01060	<0.000200	<0.00500	0.00943	<0.00500	<0.00500	<0.00500	0.00640
	02/26/15	140	0.870	2.30	82.0	630	<0.0350	0.00460	0.0700	0.220	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	<0.00024	<0.00120	<0.000049	0.00320 J	<0.00490	<0.00740	<0.00280	0.00250 J	0.01400 J
(duplicate)	02/26/15	130	0.860	2.40	85.0	660	0.089 J	0.00460	0.0690	0.210	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	<0.00024	<0.00120	<0.000049	0.00320 J	<0.00490	<0.00740	<0.00280	0.00250 J	0.01300 J
	08/26/15	236	0.789	2.86	70.9	888	<0.0350	0.00422	0.0875	0.185 J	<0.00016	0.00105 J	<0.00026	0.000732 J	<0.0141	<0.00024	<0.00025	<0.000049	0.01070	0.00168 J	0.00138 J	<0.00031	0.00179 J	0.00486 J
	03/08/16	297	0.749	2.81	63.2	1,170	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/17/16	470	0.749	2.93	90.3	1,660	0.00479 JB	0.00383	0.0919	0.191	<0.00016	0.00129 JB	<0.00026	0.000646 JB	0.0268 JB	<0.00024	0.00104 JB	<0.000049	0.00287 J	0.000547 JB	0.00148 J	<0.00031	0.00312 J	0.00397 J
	02/08/17	302	0.735	2.39	57.6	864	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/16/17	236	0.832	2.02	57.8	907	0.00686 JB	0.00365	0.104	0.148	<0.00016	0.000704 J	<0.00026	0.00395 J	<0.0150	<0.00024	0.000510 J	<0.000049	0.00328 J	0.0123	0.00143 J	<0.00031	0.00208 J	0.0241 J
(duplicate)	08/16/17	257	0.626	2.08	61.8	944	<0.00515	0.00351	0.103	0.151	<0.00016	0.000627 J	<0.00026	0.00304 J	<0.0150	<0.00024	0.000995 JB	<0.000049	0.00317 J	0.00919	0.00138 J	<0.00031	0.00220 J	0.0207 J
	04/05/18	176	0.797	1.48	61.3	722	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/18	292	0.706	2.96	85.6	1,270	0.00731 JB	0.00196 J	0.0939	0.145 J	<0.000160	0.000756 JB	0.00133 J	0.00446 JB	<0.0150	<0.000240	0.0179	<0.0000490	0.00480 J	0.0726	0.00109 J	<0.000310	0.00250 J	0.0926
	04/04/19	276	0.647	2.32	81.8	1,090	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/19	323	0.671	3.76	126	1,220	<0.00515	0.00135 J	0.0639	0.162 J	<0.000160	<0.000540	0.00261	0.00138 JB	<0.0150	<0.000240	0.0406	<0.0000490	0.00358 J	0.181	0.00146 JB	<0.000310	0.00274 J	0.0196 J
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	0.06430
	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	0.02780
	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	0.01710
	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	0.01870
	02/22/13	155	0.570	2.26	55.8	600	0.0294	<0.00500	0.102	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	0.01650
	08/20/13	180	0.755	2.40	60.4	736	0.0104	<0.00500	0.102	0.172	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00966	<0.000200	<0.00500	0.0112	<0.00500	<0.00500	<0.00500	0.02420
	02/26/14	159	0.664	2.70	53.4	696	<0.0100	<0.00500	0.112	0.173	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.01070	<0.000200	<0.00500	0.0080	<0.00500	<0.00500	<0.00500	0.00954
	08/19/14	138	0.574	2.09	58.5	672	0.2900	<0.00500	0.108	0.194	<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	0.01160
	02/24/15	120	0.650	2.60	56.0	690	0.0380 J	0.00310	0.110	0.170 J	<0.00070	0.00200 J	<0.00230	<0.00530	<0.014	<0.00024	<0.00120	<0.000049	0.0024 J	<0.00490	<0.00740	<0.00280	0.00260 J	0.02300 J
	08/25/15	130	0.822	2.61	65.7	750	<0.0350	0.00396	0.108	0.180 J	<0.00016	0.000955 J	<0.00026	0.00109 J	<0.0141	<0.00024	<0.00025	<0.000049	0.00167 J	0.000669 J	0.00141 J	<0.00031	0.00254 J	0.00578 J
	08/16/16	137	0.663	2.50	59.9	652	0.0047 JB	0.00389	0.108	0.177	<0.00016	0.00177 JB	<0.00026	0.00552	0.0167 JB	0.000352 JB	0.000461 JB	<0.000049	0.00236 J	0.000656 JB	0.00145 J	<0.00031	0.00275 J	0.00757 J
	08/17/17	164	0.802	3.12	53.8	757	0.00779 JB	0.00353	0.112	0.152	<0.00016	0.000878 J	<0.00026	0.00200 J	<0.0150	<0.00024	0.00030 J	<0.000049	0.00241 J	0.00383	0.00130 J	<0.00031	0.00222 J	0.0218 J
	10/01/18	180	0.713	3.86	49.3	785	0.0130 JB	0.00195 J	0.119	0.156 J	<0.000160	0.00145 JB	0.00462	0.000825 JB	<0.0150	<0.000240	0.0259	<0.0000490	0.0270	0.142	0.00114 J	<0.000310	0.00196 J	0.0702
	10/24/19	202	0.766	3.97	42.4	825	<0.00515	0.00342	0.139	0.164 J	<0.000160	0.00133 JB	<0.000260	<0.000520	<0.0150	<0.000240	0.000407 J	<0.0000490	0.0144	0.0135	0.00136 JB	<0.000310	0.00208 J	0.0260

Table 3. Inorganic Constituent Concentrations in Groundwater

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

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)
New Mexico WQCC Groundwater Standard:		**250**	**1.6**	**10.0**	**600**	**1,000**	**5.0**	**0.1**	**2.0**	**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	0.1950	<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	0.1020	<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	0.1010	<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	0.0380	<0.000200	<0.00500	0.00827	<0.00500	<0.00500	0.00862	0.0163
	02/22/13	160	0.246	2.86	78.3	968	0.0818	<0.00500	0.224	0.286	<0.00200	0.03640	<0.00500	<0.00500	0.403	<0.00500	0.0467	<0.000200	<0.00500	0.04090	<0.00500	<0.00500	0.00962	0.0319
	08/20/13	156	0.268	3.96	82.5	972	< 0.0100	<0.00500	0.179	0.308	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0668	<0.000200	<0.00500	0.02190	<0.00500	<0.00500	0.00936	0.0195
	02/25/14	134	0.213	3.78	75.9	918	< 0.0100	<0.00500	0.187	0.335	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0709	<0.000200	<0.00500	0.01710	<0.00500	<0.00500	0.00939	0.0531
	08/19/14	156	0.250	3.35	72.7	938	0.0299	<0.00500	0.180	0.350	<0.00200	<0.00500	<0.00500	<0.00500	0.344	<0.00500	0.0439	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00844	0.0208
	02/24/15	160	0.320	3.70	70.0	1,100	<0.0350	0.00170 J	0.210	0.360	<0.00070	<0.00140	<0.00230	<0.00530	<0.014	0.00032 J	0.0280	<0.000049	0.00074 J	<0.00490	<0.00740	<0.00280	0.0089 J	0.02500 J
	08/25/15	197	0.341	3.06	77.0	1,430	<0.0350	0.00221	0.224	0.369	<0.00016	0.000810 J	<0.00026	0.000702 J	<0.0141	0.000854 J	0.0110	<0.000049	<0.00160	0.00180 J	0.000525 J	<0.00031	0.00837 J	0.00615 J
	08/16/16	131	0.253	4.05	71.7	--	0.0021 JB	0.00147 J	0.171	0.460	<0.000160	0.00115 JB	<0.00026	0.000881 JB	<0.0150	<0.000240	0.00793	--	0.000639 J	0.00167 JB	0.000702 J	<0.00031	0.0092 J	0.00432 J
	08/17/17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/01/18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/24/19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-22	08/23/10	115	0.552	1.76	62.3	726	0.1210	<0.00500	0.165	0.174	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.03060	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00604	0.09160
	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	0.01080	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00616	0.04870
	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	0.02030
	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	0.01030	<0.000200	<0.00500	0.00762	<0.00500	<0.00500	0.00501	0.01830
	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	0.00680
	02/21/13	178	0.500	2.30	80.4	798	0.0231	<0.00500	0.145	0.180	<0.00200	0.0305	<0.00500	<0.00500	0.269	<0.00500	0.03860	<0.000200	<0.00500	0.05200	<0.00500	<0.00500	0.00590	0.02080
	08/21/13	176	0.606	2.94	83.0	890	< 0.0100	<0.00500	0.137	0.210	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.02330	<0.000200	<0.00500	0.02090	<0.00500	<0.00500	0.00658	0.00566
	02/25/14	172	0.416	3.53	85.2	842	< 0.0100	<0.00500	0.143	0.204	<0.00200	0.0133	<0.00500	<0.00500	<0.200	<0.00500	0.02380	<0.000200	<0.00500	0.02660	<0.00500	<0.00500	0.00632	0.01500
	08/20/14	120	1.00	2.36	127	738	40.3	0.00642	0.141	0.239	<0.00200	0.1840	<0.00500	0.00983	4.32	0.00743	0.07150	<0.000200	0.00881	0.09990	<0.00500	<0.00500	0.0336	0.03700
	02/24/15	110	0.570	3.30	81.0	820	0.0370 J	0.00250	0.180	0.210	<0.00070	<0.00140	<0.0023	<0.0053	<0.014	0.00077 J	0.00260 J	<0.000049	0.00140 J	<0.00490	<0.00740	<0.00280	0.01200	0.01900 J
	08/25/15	118	0.618	4.85	81.1	928	0.0452 J	0.00279	0.167	0.208	<0.00016	0.00139 J	0.000337 J	0.000760 J	<0.0141	<0.00024	0.00253 J	<0.000049	<0.00160	0.00240	<0.00038	<0.00031	0.00934 J	0.00438 J
	08/16/16	128	0.577	5.86	57.6	827	0.00281 JB	0.00241	0.150	0.190	<0.00016	0.00199 JB	<0.00026	0.000854 JB	<0.0150	<0.00024	0.00134 JB	<0.000049	0.00142	0.00143 JB	0.000387 J	<0.00031	0.00865 J	0.0038 J
	08/17/17	87.4	0.644	48.6	53.6	700	0.00751 JB	0.00196 J	0.130	0.159	<0.00016	0.00103 J	<0.00026	0.000730 J	<0.0150	<0.00024	0.000893 J	<0.000049	0.00161 J	0.0670	0.000652 J	<0.00031	0.00690 J	0.00439 J
	10/01/18	34.3	0.652	12.9	46.7	883	0.00765 JB	0.00219	0.121	0.190 J	<0.000160	0.00267 B	<0.000260	0.00812	<0.0150	0.000354 JB	0.000828 JB	<0.0000490	0.00183 J	0.0219	0.000795 J	<0.000310	0.00585 J	0.0566
	10/24/19	61.9	0.775	6.54	42.7	637	<0.00515	0.00238	0.122	0.184 J	<0.000160	0.00289	<0.000260	0.0144	<0.0150	0.000482 J	0.000636 J	<0.0000490	0.00214 J	0.0150	0.000956 JB	<0.000310	0.00609 J	0.130
MW-23	08/23/10	645	0.782	2.92	121	2,260	0.2370	<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	0.05700
	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	0.04630
	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	0.02130
	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	0.02070
	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	0.01010
	02/26/13	662	0.690	3.46	93.9	2,040	<0.0100	<0.00500	0.170	0.196	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00944	<0.000200	<0.00500	0.01550	<0.00500	<0.00500	<0.00500	0.01790
	08/21/13	530	0.808	3.29	115	1,910	< 0.0100	<0.00500	0.141	0.207	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.03150	<0.000200	<0.00500	0.02860	<0.00500	<0.00500	0.00533	0.00919
	02/25/14	574	0.605	3.41	89.0	1,860	< 0.0100	<0.00500	0.162	0.198	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.04860	<0.000200	<0.00500	0.04100	<0.00500	<0.00500	<0.00500	0.02240
	08/21/14	443	0.792	2.89	98.1	1,680	0.0606	<0.00500	0.147	0.138	<0.00200	0.0129	<0.00500	<0.00500	<0.200	<0.00500	0.15700	<0.000200	0.00522	0.07190	<0.00500	<0.00500	<0.00500	0.01040
	02/25/15	57.0	0.630	3.10	92.0	1,000	0.0420 J	0.00240	0.110	0.210	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	0.00031 J	<0.00120	<0.000049	0.00170 J	<0.00490	<0.00740	<0.00280	0.00520 J	0.04600 J
	08/25/15	431	0.874	4.39	91.9	2,190	<0.0350	0.00255	0.152	0.195 J	<0.00016	0.00188 J	<0.00026	0.00198 J	<0.0141	0.000316 J	0.00167 J	<0.000049	<0.00160	0.00187 J	0.00147 J	<0.00031	0.00508 J	0.00494 J
	08/16/16	411	0.792	3.02	88.5	1,400	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/17/17	237	0.917	2.45	97.4	1,050	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/01/18	27.0	0.825	1.93	47.0	720	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/24/19	--[1]	--[1]	--[1]	--[1]	--[1]	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 3. Inorganic Constituent Concentrations in Groundwater

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

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)
New Mexico WQCC Groundwater Standard:		**250**	**1.6**	**10.0**	**600**	**1,000**	**5.0**	**0.1**	**2.0**	**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-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	0.02450
	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	0.02490
	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	0.01010
	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	0.01270
(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	0.01550
	02/26/13	46.6	2.39	2.05	68.6	442	<0.0100	<0.00500	0.0913	0.187	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.01060	<0.000200	<0.00500	0.01650	<0.00500	<0.00500	<0.00500	0.01510
	08/21/13	56.5	2.77	2.04	55.6	426	< 0.0100	<0.00500	0.0856	0.183	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.01460	<0.000200	<0.00500	0.01570	<0.00500	<0.00500	<0.00500	0.00684
	02/27/14	37.3	2.28	2.11	51.3	396	0.0247	<0.00500	0.0803	0.197	<0.00200	0.0128	<0.00500	<0.00500	<0.200	<0.00500	0.01390	<0.000200	<0.00500	0.02130	<0.00500	<0.00500	<0.00500	0.02070
	08/21/14	29.2	2.76	2.39	44.0	368	0.2700	<0.00500	0.0901	0.117	<0.00200	0.2580	<0.00500	0.00634	1.28	<0.00500	0.03830	<0.000200	0.00911	0.13500	<0.00500	<0.00500	<0.00500	0.01140
	02/25/15	24.0	2.70	2.80	42.0	360	0.0400 J	0.00550	0.0780	0.190 J	<0.00070	<0.0014	<0.00230	<0.00530	<0.014	<0.00024	<0.00120	<0.000049	0.00250 J	<0.00490	<0.00740	<0.00280	0.00260 J	0.01300 J
	08/25/15	25.5	2.75	2.95	43.2	494	<0.0350	0.00600	0.0765	0.177 J	<0.00016	<0.000540	<0.00026	0.000742 J	<0.0141	<0.00024	0.000287 J	<0.000049	0.00185 J	0.00058 J	0.00102 J	<0.00031	0.00239 J	0.00575 J
	08/16/16	26.0	2.78	2.83	42.9	407	0.00364 JB	0.00606	0.0725	0.168	<0.00016	0.00155 JB	<0.00026	0.00302 JB	0.0247 JB	<0.000240	0.000485 JB	<0.0000490	0.0029 J	0.000402 JB	0.0014 J	<0.00031	0.00237 J	0.00752 J
	08/17/17	40.5	2.96	2.86	45.2	388	0.0133 JB	0.00539	0.0724	0.137	<0.00016	0.00205	<0.00026	0.00136 J	<0.0150	<0.00024	0.000648 J	<0.0000490	0.00245 J	0.00205 B	0.00140 J	<0.00031	0.00209 J	0.00720 J
	10/01/18	35.8	2.65	3.80	35.3	397	0.0128 JB	0.00565	0.0801	0.136 J	<0.000160	0.00110 JB	<0.000260	0.00636 B	<0.0150	0.000379 JB	0.00140 JB	<0.0000490	0.00228 J	0.0114	0.000648 J	<0.000310	0.00283 J	0.150
	10/24/19	34.8	2.93	3.69	41.7	344	<0.00515	0.00556	0.0794	0.152 J	<0.000160	0.00101 JB	<0.000260	0.00158 JB	<0.0150	0.000342 J	0.00107 J	0.0000560 JB	0.00279 J	0.00167 J	0.000408 JB	<0.000310	0.00298 J	0.0285
MW-25	08/23/10	178	0.871	2.42	182	946	0.2440	<0.00500	0.246	0.174	<0.00200	0.0476	<0.00500	<0.00500	<0.200	<0.00500	0.01090	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.01940
	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	0.04240
	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	0.01020
	02/26/13	109	0.710	19.4	113	788	<0.0100	<0.00500	0.149	0.241	<0.00200	0.00822	<0.00500	<0.00500	<0.200	<0.00500	0.01040	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00807	0.01480
	08/22/13	314	0.696	3.36	74.7	1,350	< 0.0100	<0.00500	0.224	0.262	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.01220	<0.000200	<0.00500	0.02100	<0.00500	<0.00500	0.00862	<0.00500
(duplicate)	08/22/13	310	0.684	3.42	74.3	1,350	< 0.0100	<0.00500	0.226	0.263	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.01270	<0.000200	<0.00500	0.02100	<0.00500	<0.00500	0.00860	0.00607
	02/26/14	293	0.476	2.98	69.3	1,100	< 0.0100	<0.00500	0.220	0.231	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00881	<0.000200	<0.00500	0.00775	<0.00500	<0.00500	0.00724	0.02100
(duplicate)	02/26/14	289	0.546	2.98	68.6	1,090	< 0.0100	<0.00500	0.213	0.218	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00882	<0.000200	<0.00500	0.00701	<0.00500	<0.00500	0.00645	0.02050
	08/19/14	302	<0.500	3.06	79.5	1,230	0.2850	<0.00500	0.198	0.265	<0.00200	0.154	<0.00500	<0.00500	0.814	<0.00500	0.04560	<0.000200	0.00573	0.10000	<0.00500	<0.00500	0.00749	0.01060
(duplicate)	08/19/14	319	<0.500	2.76	83.5	1,200	0.2910	<0.00500	0.201	0.263	<0.00200	0.185	<0.00500	0.00504	0.968	<0.00500	0.05110	<0.000200	0.00638	0.11300	<0.00500	<0.00500	0.00764	0.01200
	02/25/15	38.0	0.730	3.10	69	870	0.1300	0.00230	0.200	0.230	<0.00070	0.0016 J	<0.0023	<0.0053	<0.014	0.00050 J	<0.00120	<0.000049	0.00290 J	0.00560 J	<0.00740	<0.00280	0.00780 J	0.00860 J
(duplicate)	02/25/15	180	0.710	3.10	69	840	<0.0350	0.00230	0.200	0.220	<0.00070	0.0017 J	<0.0023	<0.0053	<0.014	0.00026 J	<0.00120	<0.000049	0.00110 J	0.00540 J	<0.00740	<0.00280	0.00800 J	0.01400 J
	08/25/15	211	0.693	2.96	72.6	1,110	<0.0350	0.00287	0.227	0.216	<0.00016	0.00160 J	0.00119 J	<0.000520	<0.0141	<0.00024	0.00279 J	<0.000049	<0.00160	0.00514	0.00109 J	<0.00031	0.00732 J	0.00472 J
(duplicate)	08/25/15	207	0.631	2.90	71.1	1,140	<0.0350	0.00296	0.231	0.214	<0.00016	0.00170 J	0.00113 J	0.00103 J	<0.0141	<0.00024	0.00287 J	<0.000049	<0.00160	0.00528	0.00102 J	<0.00031	0.00748 J	0.00497 J
	03/09/16	345	0.618	2.65	68.5	1,140	0.00206 JB	0.00229	0.301	0.214	<0.00016	0.000609 J	0.00141 J	0.000781 JB	0.0403 J	<0.00024	0.0386	<0.000049	0.00171 JB	0.00572 B	0.000540 J	<0.00031	0.00852 J	0.00590 JB
	08/16/16	292	0.637	1.44	73.9	976	0.0085 JB	0.00248	0.285	0.228	<0.00016	0.00166 JB	0.00171 J	0.00107 JB	0.0293 JB	<0.00024	0.0314	<0.000049	0.00139 J	0.00617	0.000689 J	<0.00031	0.00928 J	0.00584 J
(duplicate)	08/16/16	287	0.638	1.50	73.5	1,010	0.00458 JB	0.00262	0.284	0.223	<0.00016	0.00155 JB	0.00179 J	0.00079 JB	0.0474 JB	<0.00024	0.0326	<0.000049	0.00131 J	0.0057	0.000791 J	<0.00031	0.00939 J	0.00627 J
	02/07/17	298	0.567	1.64	93.4	1,000	<0.0258	0.00261 J	0.322	0.227	<0.00080	<0.00270	0.00382 J	0.00406 J	<0.0750	<0.00120	0.0478	<0.000049	0.00306 J	0.0165	0.000505 J	<0.00155	0.0104 J	<0.0128
	08/16/17	280	0.791	1.52	68.4	996	0.00773 JB	0.00227	0.206	0.171	<0.00016	0.00158 J	0.00522	0.00310 J	<0.0150	<0.00024	<0.00025	0.0000544 J	0.00113 J	0.0556	0.00162 J	<0.00031	0.00588 J	0.0276
(duplicate)	08/16/17	287	0.600	1.57	71.2	1,050	0.00864 JB	0.00242	0.210	0.181	<0.00016	0.00153 J	0.00520	0.00289 J	<0.0150	<0.00024	<0.00025	<0.000049	0.00124 J	0.0551	0.00128 J	<0.00031	0.00606 J	0.0262
	04/05/18	82.6	0.568	2.16	76.4	1,380	<0.00515	0.00232 B	0.293	0.234	<0.000160	0.00101 JB	0.0114	0.00712	<0.0150	<0.000240	0.00523	<0.0000490	0.00158 JB	0.0125	0.00112 JB	<0.000310	0.00814 J	0.0133 J
(duplicate)	04/05/18	401	0.605	2.17	79.5	1,360	0.102	0.00226 B	0.299	0.229	<0.000160	0.000990 JB	0.0117	0.00671	0.0304 J	0.000307 JB	0.00709	<0.0000490	0.00121 JB	0.0120	0.00107 JB	<0.000310	0.00828 J	0.0153 J
	10/01/18	284	0.518	3.89	105	1,090	0.0144 JB	0.00260	0.177	0.210	<0.000160	0.00110 JB	0.00874	0.00398 JB	<0.0150	0.000733 JB	0.0225	<0.0000490	0.00111 J	0.0123	0.000987 J	<0.000310	0.00919 J	0.00965 JB
(duplicate)	10/01/18	288	0.508	3.86	110	1,180	<0.00515	0.00246	0.192	0.209	<0.000160	0.000896 J	0.00925	0.00468 J	<0.0150	0.000421 J	0.0221	<0.0000490	0.00111 J	0.0122	0.000917 J	<0.000310	0.0101	0.00804 J
	04/04/19	224	0.509	3.84	103	1,040	0.00661 JB	0.00262	0.195	0.225	<0.000160	<0.000540	0.00634	0.00495 J	<0.0150	0.000358 J	0.0317	<0.0000490	0.00163 J	0.0120	0.000430 J	<0.000310	0.00984 J	0.00846 J
(duplicate)	04/04/19	224	0.500	4.57	104	1,030	<0.00515	0.00243	0.184	0.139 J	<0.000160	<0.000540	0.00605	0.00384 J	<0.0150	0.000480 J	0.0377	<0.0000490	0.00118 J	0.0106	0.000395 J	<0.000310	0.00927 J	0.00656 J
	10/24/19	232	0.586	3.89	112	986	<0.00515	0.00264	0.223	0.230	<0.000160	0.000564 JB	0.0124	0.0791	<0.0150	0.00292	0.0597	0.0000625 JB	0.00130 J	0.0149	0.00122 JB	<0.000310	0.0102	0.234
(duplicate)	10/24/19	223	0.572	3.91	107	1,010	<0.00515	0.00261	0.235	0.242	<0.000160	0.000541 J	0.0121	0.0867	<0.0150	0.00509	0.0758	0.0000660 JB	0.00137 J	0.0162	0.000627 J	<0.000310	0.00970 J	0.212

Table 3. Inorganic Constituent Concentrations in Groundwater

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

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)
New Mexico WQCC Groundwater Standard:		**250**	**1.6**	**10.0**	**600**	**1,000**	**5.0**	**0.1**	**2.0**	**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-26	08/24/10	217	0.484	2.88	98.5	958	0.115	<0.00500	0.1310	0.169	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.01560	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.02540
	02/28/11	202	0.517	3.86	125	940	<0.0100	<0.00500	0.1100	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	0.03280
	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	0.00949
	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	0.01220	<0.000200	<0.00500	0.01330	<0.00500	<0.00500	<0.00500	0.01170
	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	0.02330
	02/26/13	144	0.640	4.78	138	760	0.0134	<0.00500	0.1030	0.189	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.06350	<0.000200	<0.00500	0.05580	<0.00500	<0.00500	<0.00500	0.00877
	08/22/13	222	0.611	5.55	133	1,170	0.0319	<0.00500	0.0910	0.209	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.01740	<0.000200	<0.00500	0.00539	<0.00500	<0.00500	0.00577	<0.00500
	02/26/14	187	0.470	3.11	146	944	0.0236	<0.00500	0.0739	0.198	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00979	<0.000200	<0.00500	0.01280	<0.00500	<0.00500	0.00583	0.00770
	08/21/14	67.8	0.511	3.18	78.9	644	0.132	0.00816	0.1380	0.167	<0.00200	0.0152	<0.00500	<0.00500	<0.200	<0.00500	0.00938	<0.000200	<0.00500	0.00900	<0.00500	<0.00500	0.00548	0.01500
	02/25/15	190	0.710	2.30	110	790	0.051 J	0.00240	0.0990	0.18 J	<0.00070	<0.0014	<0.0023	<0.0053	0.058 J	<0.00024	0.00220 J	<0.000049	0.00110 J	<0.00490	<0.00740	<0.00280	0.00410 J	0.01500 J
	08/25/15	220	0.670	2.93	143	1,160	<0.0350	0.00263	0.0990	0.181 J	<0.00016	0.000822 J	0.000366 J	0.000593 J	<0.0141	<0.00024	0.00175 J	<0.000049	<0.00160	0.00104 J	<0.000380	<0.00031	0.00440 J	0.00418 J
	08/16/16	223	0.645	2.28	122	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/17/17	301	0.162	4.06	92.1	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/18	235	0.466	- -	126	1,020	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/19	244	0.722	4.11	132	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
MW-27	08/18/10	115	0.644	5.10	118	752	0.218	<0.00500	0.1000	0.152	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.05340	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00544	0.04530
	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	0.03360	<0.000200	<0.00500	0.00769	<0.00500	<0.00500	0.00625	0.02940
	07/20/11	150	0.510	1.69	73.2	812	0.0378	<0.00500	0.1120	0.165	<0.00200	0.0353	<0.00500	<0.00500	0.393	<0.00500	0.01790	<0.000200	<0.00500	0.04150	<0.00500	<0.00500	0.00571	0.01210
	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	0.01170
	07/26/12	164	0.680	2.95	65.3	754	0.0155	<0.00500	0.1180	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	0.01040
	02/26/13	199	0.647	2.77	70.7	756	<0.0100	<0.00500	0.1200	0.184	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.05860	<0.000200	0.00513	0.05930	<0.00500	<0.00500	<0.00500	<0.00500
	08/20/13	315	0.562	7.12	75.5	1,180	0.0440	<0.00500	0.1620	0.222	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.02390	<0.000200	<0.00500	0.01890	<0.00500	<0.00500	0.00899	0.00624
	02/27/14	298	0.415	8.00	89.3	1,150	<0.0100	<0.00500	0.1390	0.232	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.01340	<0.000200	<0.00500	0.02860	<0.00500	<0.00500	0.00680	0.01820
	08/21/14	256	0.540	4.99	85.1	1,100	0.210	<0.00500	0.1260	0.160	<0.00200	0.0447	<0.00500	<0.00500	0.278	<0.00500	0.06360	<0.000200	<0.00500	0.05920	<0.00500	<0.00500	0.00648	<0.00590
	02/27/15	170	1.00	3.8	96	790	<0.035	0.00330	0.0840	0.30	<0.00070	0.0038 J	<0.0023	<0.0053	<0.014	<0.00024	<0.00120	<0.000049	0.00290 J	<0.00490	0.00800 J	<0.00280	0.00980 J	<0.00590
	08/26/15	139	2.27	2.94	95.2	690	<0.0350	0.00353	0.0571	0.264	<0.00016	0.00256	<0.000260	0.000627 J	<0.0141	<0.00024	0.00206 J	<0.000049	0.01390	0.00405	0.00318	<0.00031	0.00550 J	<0.00256
	08/18/16	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	02/08/17	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/17/17	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	04/05/18	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/18	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	04/04/19	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/19	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -

Table 3. Inorganic Constituent Concentrations in Groundwater

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

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)
New Mexico WQCC Groundwater Standard:		**250**	**1.6**	**10.0**	**600**	**1,000**	**5.0**	**0.1**	**2.0**	**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-28	08/24/10	71.2	1.66	1.70	60.3	440	0.1290	<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	0.01900
	07/14/11	106	1.28	2.40	67.8	732	<0.0100	<0.00500	0.1030	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	0.01130
	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	0.00812
	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	0.04660
	02/19/13	65.5	1.61	2.57	88.4	468	<0.0100	<0.00500	0.0883	0.174	<0.00200	<0.00500	<0.00500	0.20300	<0.200	<0.00500	0.02750	<0.000200	0.01000	<0.00500	<0.00500	<0.00500	<0.00500	0.01680
	08/20/13	70.4	1.77	2.42	77.4	480	< 0.0100	<0.00500	0.0790	0.168	<0.00200	<0.00500	<0.00500	0.01010	<0.200	<0.00500	0.00874	<0.000200	<0.00500	0.00561	<0.00500	<0.00500	<0.00500	0.00674
	02/24/14	71.7	1.30	2.60	74.2	480	< 0.0100	<0.00500	0.0836	0.180	<0.00200	<0.00500	<0.00500	0.00514	<0.200	<0.00500	0.00509	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.03350
	08/19/14	70.0	1.65	2.31	78.2	512	0.9470	<0.00500	0.1060	0.205	<0.00200	0.02380	<0.00500	0.03960	0.760	<0.00500	0.01280	<0.000200	<0.00500	0.01290	<0.00500	<0.00500	<0.00500	0.01700
	02/23/15	70.0	1.60	2.80	72.00	500	<0.035	0.00400	0.0900	0.170 J	<0.00070	<0.00140	<0.00230	0.00550 J	<0.014	<0.00024	<0.0012	<0.000049	0.00180 J	<0.00490	<0.00740	<0.00280	0.00250 J	0.01700 J
	08/27/15	142	3.07	3.08	143	549	<0.0350	0.00433	0.0849	0.171	<0.00016	<0.00054	<0.00026	0.00598	0.0385 J	<0.00024	0.000680 J	<0.000049	0.00186 J	<0.00035	0.00220	<0.00031	0.00238 J	0.00393 J
	03/07/16	73.1	1.62	3.31	70.8	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/15/16	73.2	1.37	3.08	70.6	612	0.00413 JB	0.00448	0.0819	0.167	<0.00016	0.00104 JB	<0.00026	0.0086	0.0226 JB	<0.00024	0.000376 JB	<0.000049	0.00221 J	0.000525 JB	0.00268	<0.00031	0.00266 J	0.0054 J
	02/06/17	79.1	1.63	3.92	98.4	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/17/17	66.3	1.82	4.02	97.5	524	0.0112 JB	0.00383	0.0715	0.136	<0.00016	<0.00054	<0.00026	0.00523	<0.0150	<0.00024	<0.00025	<0.000049	0.00227 J	0.00178 JB	0.00158 J	<0.00031	0.00252 J	0.00955 J
	04/05/18	63.1	1.74	4.11	99.7	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/18	63.6	1.76	3.91	92.2	490	0.0229 JB	0.00430	0.0754	0.135 J	<0.000160	0.000809 JB	<0.000260	0.00409 JB	<0.0150	<0.000240	0.000260 JB	<0.0000490	0.00187 J	0.00286	0.00237	<0.000310	0.00250 J	0.0226 JB
	04/04/19	75.3	1.76	3.69	80.1	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/19	87.8	2.04	3.40	79.9	519	<0.00515	0.00394	0.0920	0.144 J	<0.000160	0.000804 J	<0.000260	0.00468 J	<0.0150	0.000284 J	0.00166 J	0.0000569 JB	0.00182 J	0.00149 J	0.00177 J	<0.000310	0.00242 J	0.0290
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	0.03750
(duplicate)	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	0.03010
	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	0.02670
	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	0.02400
	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	0.01620
	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	0.01320
	02/26/13	159	0.788	2.90	82.4	722	<0.0100	<0.00500	0.0857	0.182	<0.00200	0.069	<0.00500	<0.00500	<0.200	<0.00500	0.04710	<0.000200	<0.00500	0.03340	<0.00500	<0.00500	<0.00500	<0.00500
	08/20/13	152	0.934	2.95	96.2	654	< 0.0100	<0.00500	0.0738	0.187	<0.00200	0.117	<0.00500	<0.00500	<0.200	<0.00500	0.01590	<0.000200	<0.00500	0.00667	<0.00500	<0.00500	<0.00500	0.01150
	02/27/14	141	0.811	3.22	74.4	660	< 0.0100	<0.00500	0.0725	0.171	<0.00200	0.250	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00739
(duplicate)	02/27/14	141	0.819	3.37	74.3	690	< 0.0100	<0.00500	0.0764	0.183	<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	0.00902
	08/20/14	177	0.809	3.44	72.9	826	0.1880	<0.00500	0.1060	0.134	<0.00200	0.331	<0.00500	<0.00500	0.697	<0.00500	0.07540	<0.000200	0.00594	0.07770	<0.00500	<0.00500	<0.00500	0.01300
	02/25/15	250	0.950	5.60	90.0	1,000	<0.0350	0.00200	0.1300	0.260	<0.00070	0.240	<0.00230	<0.00530	<0.014	<0.00024	<0.00120	<0.000049	0.00120 J	<0.00490	<0.00740	<0.00280	0.00620 J	0.01300 J
	08/27/15	247	0.573	6.77	81.8	1,220	<0.0350	0.00246	0.0884	0.238	<0.00016	0.130	<0.00026	0.000784 J	<0.0141	<0.00024	0.00153 J	<0.000049	0.00111 J	0.000629 J	0.00169 J	<0.00031	0.00641 J	0.00333 J
	03/08/16	- -	- -	- -	- -	- -	0.00829 JB	0.00465	0.0757	0.165	<0.00016	0.00111 J	<0.00026	0.000558 JB	<0.0150	<0.00024	0.000652 JB	<0.000049	0.00482 J	0.000690 JB	0.00190 J	<0.00031	0.00213 J	<0.00256
	08/17/16	171	0.693	4.61	81.5	349	<0.00200	0.00253	0.0851	0.204	<0.00016	0.00897	<0.00026	0.000863 JB	<0.0150	<0.00024	0.00135 JB	<0.000049	0.00204 J	0.00119 JB	0.0014 J	<0.00031	0.0038 J	0.0033 JB
	02/09/17	- -	- -	- -	- -	- -	<0.0258	0.00263 J	0.0932	0.203	<0.00080	0.00552 J	<0.0013	0.00328 J	<0.0750	<0.00120	0.0150 J	<0.000049	0.00291 J	0.00524 J	0.00148 J	<0.00155	0.00391 J	<0.0128
	08/17/17	201	0.723	4.76	86.4	920	0.00798 JB	0.00242	0.0870	0.172	<0.00016	0.0178	<0.00026	0.00489 J	<0.0150	<0.00024	0.000305 J	<0.000049	0.00200 J	0.00567	0.00181 J	<0.00031	0.00451 J	0.0308
	04/05/18	- -	- -	- -	- -	- -	<0.00515	0.00299	0.174	0.215	<0.000160	0.0268	<0.000260	0.00876	<0.0150	0.000398 JB	0.000735 JB	<0.0000490	0.00174 JB	0.0427	0.00163 JB	<0.000310	0.00571 J	0.162
	10/01/18	175	0.490	5.62	113	1,010	<0.00515	0.00307	0.256	0.193 J	<0.000160	0.0293	<0.000260	0.00362 J	<0.0150	<0.000240	0.00110 J	<0.0000490	0.00122 J	0.00607	0.00193 J	<0.000310	0.00618 J	0.0644
	04/04/19	- -	- -	- -	- -	- -	0.0106 JB	0.00252	0.109	0.203	<0.000160	0.0171	<0.000260	0.00635	<0.0150	<0.000240	0.000417 J	<0.0000490	0.00157 J	0.00320	0.00116 J	<0.000310	0.00448 J	0.0829
	10/24/19	264	0.674	5.33	87.7	1,000	<0.00515	0.00227	0.117	0.193 J	<0.000160	0.0528	<0.000260	0.00457 J	<0.0150	<0.000240	0.00139 J	0.0000693 JB	0.00144 J	0.00230	0.00168 J	<0.000310	0.00539 J	0.0628
(duplicate)	10/24/19	258	0.649	5.32	87.9	1,060	<0.00515	0.00230	0.113	0.207	<0.000160	0.0560	<0.000260	0.00949	<0.0150	0.000462 J	0.00170 J	0.0000681 JB	0.00145 J	0.00382	0.00161 J	<0.000310	0.00535 J	0.0811

Table 3. Inorganic Constituent Concentrations in Groundwater

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

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)
New Mexico WQCC Groundwater Standard:		**250**	**1.6**	**10.0**	**600**	**1,000**	**5.0**	**0.1**	**2.0**	**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-30	06/21/13	51.2	1.87	3.51	96.7	426	0.0436	0.00588	0.0424	0.164	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	0.00913	<0.00500	0.00554	<0.00500	<0.00500	<0.00500
	08/20/13	63.7	1.59	2.85	87.0	438	< 0.0100	<0.00500	0.0761	0.159	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.05890	<0.000200	<0.00500	0.02630	<0.00500	<0.00500	<0.00500	<0.00500
	02/27/14	64.0	1.07	2.96	90.0	476	0.0201	<0.00500	0.0672	0.180	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.06440	<0.000200	0.00588	0.05160	<0.00500	<0.00500	<0.00500	<0.00500
	08/22/14	61.1	1.45	2.75	84.5	444	0.1320	<0.00500	0.0736	<0.0200	<0.00200	0.0137	<0.00500	<0.00500	<0.200	<0.00500	0.14800	<0.000200	0.00597	0.04850	<0.00500	<0.00500	<0.00500	<0.00590
	02/25/15	75.0	1.40	3.10	81.0	460	0.0770 J	0.00430	0.0730	0.16 J	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	<0.00024	0.00660 J	<0.000049	0.00270 J	<0.00490	<0.00740	<0.00280	0.0018 J	<0.00590
	08/28/15	83.6	1.61	3.97	86.2	525	<0.0350	0.00478	0.0757	0.163	<0.00016	<0.000540	<0.000260	0.000922 J	<0.0141	<0.00024	0.00315 J	<0.000049	0.00248 J	0.00109 J	0.00177 J	<0.00031	0.00203 J	<0.00256
	03/08/16	70.6	1.30	3.53	83.0	450	0.00402 JB	0.00375	0.0711	0.152	<0.00016	0.00320	<0.000260	0.000933 JB	<0.0150	<0.00024	0.000911 JB	<0.000049	0.00219 J	0.000955 JB	0.00253	<0.00031	0.00187 J	<0.00256
(duplicate)	03/08/16	70.4	1.30	3.54	83.0	464	0.00986 JB	0.00457	0.071	0.154	<0.00016	0.00148 J	<0.000260	0.00123 JB	<0.0150	0.000299 JB	0.000664 JB	<0.000049	0.00479 J	0.000797 JB	0.00175 J	0.000842 J	0.00197 J	0.00268 JB
	08/16/16	71.6	1.29	3.24	87.5	534	0.00299 JB	0.00476	0.0734	0.175	<0.00016	0.0011 JB	<0.000260	<0.000520	<0.0150	<0.00024	0.00222 JB	<0.000049	0.00263 J	0.00047 JB	0.00198 J	<0.00031	0.00223 J	<0.00256
(duplicate)	08/16/16	75.5	1.29	3.22	87.7	491	0.0189 JB	0.00479	0.0733	0.175	<0.00016	0.0011 JB	<0.000260	0.00371 JB	<0.0150	<0.00024	0.00228 JB	<0.000049	0.00252 J	0.000495 JB	0.0021	<0.00031	0.00224 J	<0.00256
	02/09/17	71.7	1.26	3.52	87.3	497	<0.0258	0.00428 J	0.0852	0.182	<0.00080	<0.00270	<0.00130	0.00675 J	<0.0750	<0.00120	0.0332	<0.000049	0.00302 J	0.00266 J	0.00191 J	<0.00155	0.00227 J	<0.0128
	08/16/17	68.3	1.31	3.38	78.9	468	0.0259 JB	0.00436	0.0735	0.159	<0.00016	0.00104 J	<0.000260	0.000947 J	<0.0150	<0.00024	0.000987 J	<0.000049	0.00229 J	0.00289	0.00205	<0.00031	0.00216 J	0.00591 J
(duplicate)	08/16/17	68.4	1.05	3.50	82.2	479	0.0132 JB	0.00431	0.0727	0.158	<0.00016	0.00103 J	<0.000260	0.000862 J	<0.0150	<0.00024	0.000551 JB	<0.000049	0.00218 J	0.00280	0.00196 J	<0.00031	0.00213 J	0.00628 J
	04/05/18	70.8	1.19	3.35	77.2	474	<0.00515	0.00457	0.0723	0.184 J	<0.000160	0.000946 JB	<0.000260	0.00170 JB	<0.0150	<0.000240	0.000941 JB	<0.0000490	0.00218 JB	0.00870	0.00199 JB	<0.000310	0.00217 JB	0.0335
	10/01/18	76.7	1.11	3.52	81.2	517	0.00689 J	0.00486	0.0819	0.154 J	<0.000160	0.000984 J	<0.000260	0.00169 J	<0.0150	<0.000240	0.000769 J	<0.0000490	0.00231 J	0.00755	0.00205	<0.000310	0.00223 J	0.0432
(duplicate)	10/01/18	76.3	1.09	3.70	80.6	509	0.00560 J	0.00421	0.0843	0.145 J	<0.000160	0.00111 J	<0.000260	0.00121 J	<0.0150	<0.000240	0.000398 J	<0.0000490	0.00243 J	0.00804	0.00218	<0.000310	0.00234 J	0.0449
	04/04/19	78.5	1.06	3.61	69.4	513	<0.00515	0.00424	0.0850	0.181 J	<0.000160	0.00225	<0.000260	0.00232 J	<0.0150	<0.000240	0.000363 J	<0.0000490	0.00240 J	0.00473	0.00215	<0.000310	0.00223 J	0.0511
	10/24/19	85.0	1.24	3.29	71.7	479	0.00831 J	0.00381	0.0903	0.171 J	<0.000160	0.00162 J	<0.000260	0.00273 J	<0.0150	<0.000240	0.00286 J	0.0000605 JB	0.00199 J	0.00417	0.00174 J	<0.000310	0.00208 J	0.0682
(duplicate)	10/24/19	86.0	1.23	3.18	72.6	501	<0.00515	0.00414	0.0871	0.174 J	<0.000160	0.00245	<0.000260	0.00275 J	<0.0150	<0.000240	0.000416 J	0.0000596 JB	0.00198 J	0.00409	0.00179 J	<0.000310	0.00206 J	0.0528
MW-32	08/17/17	109	2.77	<0.0197	99.4	683	0.0212 JB	0.00332	0.188	0.564	<0.00016	<0.00054	0.00108 J	0.000684 J	<0.0150	<0.00024	0.536	<0.000049	0.0141	0.00430	<0.00038	<0.00031	0.00888 J	0.00320 J
	04/05/18	165	1.12	1.74	143	939	0.00732 JB	0.00281	0.244	0.253	<0.000160	0.000888 JB	0.000847 JB	0.00193 JB	<0.0150	<0.000240	0.772	<0.0000490	0.00489 J	0.0195	0.000443 JB	<0.000310	0.0166	0.0122 J
	10/01/18	34.7	0.357 B	<0.0197	47.4	383	0.00589 J	0.00652	0.176	0.0321 J	<0.000160	<0.000540	<0.000260	0.000794 J	<0.0150	0.000283 J	0.0499	<0.0000490	0.00348 J	0.00357	<0.000380	<0.000310	0.00146 J	<0.00256
(duplicate)	10/01/18	34.9	0.360 B	<0.0197	47.7	451	0.0111 J	0.00619	0.179	0.0332 J	<0.000160	<0.000540	0.000302 J	0.00105 J	<0.0150	0.000273 J	0.0561	<0.0000490	0.00350 J	0.00382	<0.000380	<0.000310	0.00148 J	<0.00256
	04/04/19	159	0.478	1.10	146	940	0.00526 JB	0.00198 J	0.384	0.184 J	<0.000160	<0.000540	0.00109 J	0.00918	<0.0150	<0.000240	0.349	<0.0000490	0.00259 J	0.00792	<0.000380	<0.000310	0.00751 J	0.0128 J
	10/24/19	90.5	0.453	7.15	173	745	<0.00515	0.00353	0.341	0.188 J	<0.000160	<0.000540	0.000415 J	0.00397 J	<0.0150	<0.000240	0.278	0.0000640 JB	0.00197 J	0.0150	0.000492 J	<0.000310	0.00884 J	0.0379
(duplicate)	10/24/19	89.1	0.422	7.08	172	827	<0.00515	0.00342	0.345	0.213	<0.000160	<0.000540	0.000372 J	0.00418 J	<0.0150	<0.000240	0.262	0.0000644 JB	0.00209 J	0.0130	<0.000380	<0.000310	0.00883 J	0.0405
MW-33	08/17/17	74.7	2.26	<0.0197	57.1	792	0.0123 JB	0.00377	0.218	0.447	<0.00016	<0.00054	0.000834 J	0.00129 J	0.0373 J	<0.00024	0.985	<0.000049	0.00531	0.000613 J	<0.00038	<0.00031	0.00325 J	0.00358 J
	04/05/18	84.1	1.15	<0.0197	15.4	902	<0.00515	0.0104	0.380	0.304	<0.000160	0.00155 JB	<0.000260	0.00292 JB	0.0351 J	<0.000240	1.77	<0.0000490	0.000146 JB	0.00170 JB	<0.000380	<0.000310	0.00269 J	0.00546 J
	10/01/18	118	0.859	<0.0197	13.8	1,170	0.00613 J	0.00411	0.481	0.194 J	<0.000160	<0.000540	<0.000260	<0.000520	0.0186 J	<0.000240	1.79	<0.0000490	0.000602 J	0.00312	<0.000380	<0.000310	0.00829 J	<0.00256
	04/04/19	137	0.729	<0.0197	12.4	1,230	0.00865 JB	0.00179 J	0.476	0.150 J	<0.000160	<0.000540	<0.000260	0.00411 J	0.0299 J	<0.000240	1.39	<0.0000490	0.00158 J	0.00157 JB	<0.000380	<0.000310	0.0131	0.00566 J
	10/24/19	160	0.748	<0.0197	7.98	1,160	<0.00515	0.00228	0.496	0.158 J	<0.000160	<0.000540	<0.000260	<0.000520	0.0209 J	<0.000240	1.02	<0.0000490	0.00183 J	0.00323	<0.000380	<0.000310	0.0167	0.00581 J

Table 3. Inorganic Constituent Concentrations in Groundwater

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

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)
New Mexico WQCC Groundwater Standard:		**250**	**1.6**	**10.0**	**600**	**1,000**	**5.0**	**0.1**	**2.0**	**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**
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	0.1070	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	0.00920
	08/24/10	127	0.932	1.81	80.4	594	<0.0100	0.00552	0.1000	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	<0.00500
	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	0.06950
	07/20/11	124	0.803	2.07	76.5	628	<0.0100	<0.00500	0.1060	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	<0.00500
	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	0.01780
	07/30/12	121	0.986	2.63	72.7	528	<0.0100	0.00523	0.1060	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	0.00873
	02/19/13	105	1.020	2.54	83.3	496	<0.0100	0.00693	0.0998	0.162	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	0.00537	<0.00500	<0.00500	<0.00500	0.01190
	08/22/14	57.3	0.462	2.73	37.6	532	0.0170	0.00530	0.1060	<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	0.00315
	12/17/14	110	0.910	3.00	69.0	--	<0.0100	0.00579	0.0985	0.121	<0.00100	0.00101	<0.00100	0.00108	0.0180	<0.00100	<0.00100	<0.000200	0.00346	<0.00100	0.00359	<0.00100	0.00179	0.01500
	03/09/15	11.0	0.098	2.70	7.30	520	<0.0350	0.00550	0.1100	0.150	<0.00070	<0.0014	<0.0023	0.012 J	<0.014	0.00062 J	<0.00120	<0.000049	0.00320 J	<0.00490	0.00970 J	<0.00280	0.00160 J	0.01700 J
	05/19/15	110	0.880	3.20	73.0	550	<0.0350	0.00600	0.1100	0.14 J	<0.00070	0.0018 J	<0.0023	0.015 J	<0.014	0.00074 J	<0.00120	<0.000049	0.00420 J	<0.00490	0.00330	<0.00280	0.00180 J	0.01700 J
	08/28/15	193	1.55	4.34	127	593	<0.0350	0.00551	0.1030	0.155	<0.00016	0.000676 J	<0.00026	0.00121 J	<0.0141	<0.00024	0.000878 J	<0.000049	0.00306 J	<0.00035	0.00332	<0.00031	0.00156 J	<0.00256
	12/17/15	121	0.982	3.46	76.7	588	<0.0350	0.00572	0.1040	0.155 J	<0.00016	0.00103 J	<0.00026	0.00216 J	0.0158 J	<0.00024	0.000476 J	<0.000049	<0.00160	0.000388 J	0.00342	<0.00031	0.00160 J	0.00427 J
	03/10/16	136	0.939	3.34	74.1	575	0.00383 J	0.00557	0.108	0.138	<0.00016	0.00106 J	<0.00026	0.00183 JB	0.0200 J	<0.00024	0.000748 J	<0.000049	0.00307 JB	0.000364 JB	0.00342	<0.00031	0.00161 J	0.00420 JB
	05/25/16	128	0.941	3.03	75.1	634	<0.00200	0.00451	0.104	0.166	<0.00016	<0.000540	<0.00026	0.0141	<0.0150	<0.00024	0.00281 J	<0.000049	0.00272 J	0.000909 J	0.00365	<0.00031	0.000159 J	0.0101 J
	08/18/16	129	0.872	5.76	70.9	626	0.00295 JB	0.00548	0.111	0.157	<0.00016	0.00139 JB	<0.00026	0.00146 JB	<0.0150	<0.00024	0.00101 JB	0.0000503 JB	0.00293 J	0.00103 JB	0.00367	<0.00031	0.00176 J	0.00285 JB
	12/08/16	156	0.942	3.23	74.3	676	0.00412 JB	0.00544	0.122	0.127	<0.00016	0.00108 J	<0.00026	0.00236 J	<0.0150	<0.00024	0.000506 JB	<0.000049	0.00281 J	<0.00035	0.00333	<0.00031	0.00177 J	0.00374 J
	02/07/17	148	0.893	3.55	82.9	613	<0.0258	0.00615 J	0.143	0.163	<0.00080	<0.00270	<0.00130	0.00320 J	<0.0750	<0.00120	<0.00125	<0.000049	0.00293 J	<0.00175	0.00336	<0.00155	0.00188 J	<0.0128
	05/31/17	150	0.836	3.27	75.9	597	<0.00515	0.00559	0.127	0.149	<0.00016	0.00101 J	<0.00026	0.00435 J	<0.0150	<0.00024	0.000388 JB	<0.000049	0.00280 J	0.000572 J	0.00322	<0.00031	0.00183 J	0.00513 JB
	08/17/17	135	0.740	3.19	76.5	662	0.0185 JB	0.00569	0.113	0.142	<0.00016	0.00110 J	<0.00026	0.00355 J	<0.0150	0.000261 J	0.00121 JB	<0.000049	0.00282 J	0.000633 J	0.00347	<0.00031	0.00177 J	0.00834 J
	12/14/17	133	0.816	3.13	77.3	616	0.00620 JB	0.00598	0.109	0.135	<0.00016	0.00142 J	<0.00026	0.00253 JB	0.0491 J	0.000679 J	0.00115 J	<0.000049	0.00282 J	0.0000606 J	0.00355	<0.00031	0.00183 J	0.00679 J
	02/23/18	133	0.948	3.46	76.5	603	0.00601 JB	0.00621	0.109	0.189 J	<0.00016	0.00134 JB	<0.000260	0.00292 J	<0.0150	<0.000240	0.000796 JB	< 0.000049	0.00304 J	0.000612 JB	0.00371	<0.00031	0.00176 J	0.00383 J
	04/05/18	131	0.878	3.09	75.6	584	0.0183 JB	0.00657	0.118	0.156 J	0.000910 JB	0.000849 JB	0.000894 JB	0.0135	0.0237 J	0.00120 JB	0.00467 J	<0.0000490	0.00380 J	0.00244 B	0.00397	<0.000310	0.00270 J	0.0298
	07/31/18	121	0.881	3.03	74.7	584	0.00795 JB	0.00596	0.104	0.169 J	0.000172 JB	0.00117 J	<0.000260	0.00470 J	<0.0150	0.000793 J	0.000983 J	<0.0000490	0.00283 J	0.000634 J	0.00362	<0.000310	0.00173 J	0.00798 J
	10/01/18	121	0.797	3.11	79.9	573	0.00570 J	0.00632	0.112	0.128 J	<0.000160	0.00116 J	<0.000260	0.00233 J	<0.0150	0.000674 J	0.00161 J	<0.0000490	0.00302 J	0.000651 J	0.00409	<0.000310	0.00177 J	0.00386 J
	01/23/19	120	0.775	2.86	75.6	550	0.0108 J	0.00621	0.110	0.152	<0.000160	0.00139 J	<0.000260	0.00259 JB	<0.0150	0.000378 J	0.00193 J	<0.0000490	0.00293 J	0.00114 JB	0.00393	<0.000310	0.00184 J	0.00809 J
	04/04/19	120	0.776	3.17	74.9	590	0.00882 JB	0.00599	0.118	0.169 J	<0.000160	0.00137 J	<0.000260	0.0129	0.0185 J	0.000607 J	0.00509	<0.0000490	0.00295 J	0.00101 JB	0.00375	<0.000310	0.00194 J	0.0199 J
	07/11/19	121	0.931	3.29	77.5	571	<0.00515	0.00582	0.111	0.146 J	<0.000160	0.00162 JB	<0.000260	0.00322 JB	<0.0150	0.000313 JB	0.000420 J	<0.0000490	0.00303 J	0.000416 J	0.00414	<0.000310	0.00173 J	0.00600 J
	10/24/19	122	0.930	2.57	76.8	484	<0.00515	0.00483	0.106	0.149 J	<0.000160	0.00115 J	<0.000260	0.00265 J	<0.0150	<0.000240	0.0172	0.0000637 JB	0.00279 J	0.000441 J	0.00306	<0.000310	0.00148 J	0.0105 J

Table 3. Inorganic Constituent Concentrations in Groundwater

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

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)
New Mexico WQCC Groundwater Standard:		**250**	**1.6**	**10.0**	**600**	**1,000**	**5.0**	**0.1**	**2.0**	**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**
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	- -	<0.00500
	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	0.02240	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00236	0.02070
	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	0.03290
	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	0.02260	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	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	0.00777
	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	0.04010
	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	0.01720
	02/19/13	359	0.743	2.88	99.2	1,170	--	0.00576	0.149	0.197	<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	0.01550
	02/28/14	352	0.575	0.66	99.2	1,210	<0.0100	<0.00500	0.131	0.195	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00571	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.01590
	08/22/14	435	0.720	3.00	100	1,480	<0.0100	<0.00500	0.136	0.144	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00670	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.02140
(duplicate)	08/22/14	437	0.724	3.00	107	1,480	0.0689	<0.00500	0.145	<0.020	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.01030	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.01630
	12/17/14	390	0.63	3.20	91	--	<0.0100	0.00431	0.125	0.159	<0.00100	0.00178	<0.00100	0.00128	0.0277	<0.00100	0.00422	<0.000200	0.00242	<0.00100	0.00387	<0.00100	0.00227	0.01510
(duplicate)	12/17/14	390	0.63	3.20	90	--	<0.0100	0.00422	0.126	0.162	<0.00100	0.00179	<0.00100	0.00136	0.0226	<0.00100	0.00409	<0.000200	0.00203	<0.00100	0.00359	<0.00100	0.00217	0.04900
	03/09/15	340	0.82	2.70	99	1,100	<0.035	0.00400	0.140	0.200	<0.00070	0.0015 J	<0.00230	0.032	<0.014	0.00310	0.00460 J	<0.000049	0.00200 J	<0.00490	0.01200 J	<0.00280	0.00210 J	0.04900 J
(duplicate)	03/09/15	340	0.82	650	98	1,100	0.0370 J	0.00420	0.140	0.200	<0.00070	<0.0014	<0.00230	0.019 J	<0.014	0.00260	0.00300 J	<0.000049	0.00210 J	<0.00490	0.01500 J	<0.00280	0.00210 J	0.02500 J
	05/19/15	330	0.76	3.20	92	1,100	<0.0350	0.00230	0.140	0.18 J	<0.00070	<0.0014	<0.00230	<0.0053	<0.014	<0.00024	0.00880 J	<0.000049	0.00220 J	<0.00490	<0.0028	<0.00280	0.00210 J	<0.00590
(duplicate)	05/19/15	340	0.76	3.10	95	1,000	<0.035	0.00240	0.140	0.18 J	<0.00070	<0.0014	<0.00230	<0.0053	<0.014	<0.00024	0.00810 J	<0.000049	0.00230 J	<0.00490	0.00320	<0.00280	0.00210 J	<0.00590
	08/28/15	426	0.810	3.48	107	1,440	<0.0350	0.00436	0.137	0.194	<0.00070	0.00156 J	<0.00230	<0.00530	0.0168 J	0.000477 J	0.00776 J	<0.000049	0.00204 J	<0.00490	0.00360	<0.00280	0.00214 J	0.00662 J
(duplicate)	08/28/15	382	0.734	3.50	95.9	1,320	<0.0350	0.00430	0.133	0.197	<0.00016	0.00127 J	<0.00026	0.00376 J	<0.0141	<0.00024	0.00654	0.0000599 J	0.00199 J	<0.000350	<0.00328	<0.00031	0.00205 J	0.00638 J
	12/17/15	400	0.751	3.35	115	1,400	<0.0350	0.00426	0.138	0.235	<0.00016	0.00205	<0.00026	0.00257 J	<0.0141	<0.00024	0.00564	<0.000049	<0.00160	0.000645 J	0.00334	<0.00031	0.00238 J	0.00388 J
(duplicate)	12/17/15	402	0.752	3.47	114	1,360	<0.0350	0.00425	0.136	0.193 J	<0.00016	0.00160	<0.00026	0.00250 J	<0.0141	<0.00024	0.00546	<0.000049	<0.00160	0.000442 J	0.00343	<0.00031	0.00238 J	0.00430 J
	03/10/16	354	0.760	3.53	103	1,100	0.00624 J	0.00425	0.118	0.211	<0.00016	0.00135 J	<0.00026	0.00864	<0.0150	0.000256 J	0.00332 JB	<0.000049	0.00204 B	0.000524 JB	0.00354	<0.00031	0.00230 J	0.0119 JB
	05/25/16	361	0.743	3.11	101	1,620	<0.00200	0.00433	0.124	0.214	<0.00016	0.00139 J	<0.00026	0.00384 J	<0.0150	<0.00024	0.00551	<0.000049	0.00196 J	<0.000350	0.00374	<0.00031	0.00249 J	0.00351 J
(duplicate)	05/25/16	377	0.741	3.11	102	1,440	<0.00200	0.00459	0.125	0.224	<0.00016	0.00196 J	<0.00026	0.00445 J	<0.0150	<0.00024	0.00535	<0.000049	0.00194 J	<0.000350	0.00343	<0.00031	0.00247 J	0.00394 J
	08/18/16	381	0.692	3.18	98.2	1,420	<0.1	0.00419	0.134	0.224	<0.00016	0.00138 J	<0.00026	0.00444 JB	<0.0150	<0.00024	0.0025 J	0.0000764 JB	0.00188 J	0.00106 JB	0.00326	<0.00031	0.00257 J	0.00833 JB
(duplicate)	08/18/16	385	0.695	3.18	97.6	1,390	0.00377 JB	0.00370	0.137	0.233	<0.00016	0.00165 J	<0.00026	0.00485 JB	<0.0150	<0.00024	0.0027 J	0.0000788 JB	0.00201 J	0.00128 JB	0.00318	<0.00031	0.00262 J	0.00936 JB
	12/08/16	419	0.772	3.27	105	1,300	0.00439 JB	0.00310	0.120	0.188	<0.00016	0.00059 J	<0.00026	0.00192 J	<0.0150	<0.00024	0.00796	<0.000049	0.00181 J	<0.000350	0.00373	<0.00031	0.00257 J	0.00418 J
(duplicate)	12/08/16	425	0.777	3.27	106	1,310	0.00364 JB	0.00313	0.120	0.194	<0.00016	0.000601 J	<0.00026	0.00215 J	<0.0150	0.000317	0.00673	<0.000049	0.00184 J	<0.000350	0.00307	<0.00031	0.00253 J	0.00420 J
	02/07/17	379	0.712	3.41	115	1,110	0.00532 J	0.00343	0.117	0.223	<0.00016	0.000753 J	<0.00026	0.00340 J	<0.0150	0.000385 JB	0.00227 J	<0.000049	0.00190 J	<0.000350	0.00337	<0.00031	0.00229 J	0.00405 J
(duplicate)	02/07/17	375	0.723	3.77	114	1,170	<0.0258	0.00424 J	0.140	0.228	<0.00080	<0.00270	<0.00130	0.00352 J	<0.0750	<0.00120	0.00308 J	<0.000049	0.00217 J	<0.00175	0.00338	<0.00155	0.00266 J	<0.0128
	05/31/17	433	0.636	3.20	101	1,350	<0.00515	0.00327	0.144	0.209	<0.00016	0.000988 J	<0.00026	0.00419 J	<0.0150	<0.00024	0.00311 J	0.0000506 J	0.00174 J	<0.000350	0.00303	<0.00031	0.00235 J	0.00458 JB
(duplicate)	05/31/17	426	0.619	3.16	101	1,330	0.00778 JB	0.00326	0.139	0.197	<0.00016	0.00106 J	<0.00026	0.00419 J	<0.0150	<0.00024	0.00315 J	0.0000515 J	0.00163 J	0.000376 J	0.00338	<0.00031	0.00236 J	0.00426 JB
	08/17/17	406	0.579	2.96	97.7	1,260	0.00883 JB	0.00392	0.125	0.191	<0.00016	0.00187 J	<0.00026	0.00229 J	<0.0150	<0.00024	0.00253 JB	<0.000049	0.00183 J	<0.000350	0.00353	<0.00031	0.00230 J	0.00365 J
(duplicate)	08/17/17	400	0.577	2.94	92.4	1,460	0.00607 JB	0.00413	0.127	0.191	<0.00016	0.00204	<0.00026	0.00364 J	<0.0150	<0.00024	0.00182 JB	<0.000049	0.00185 J	<0.000350	0.00338	<0.00031	0.00232 J	0.00339 J
	12/14/17	383	0.625	2.97	92.4	1,290	<0.00515	0.00417	0.125	0.176	<0.00016	0.00221	<0.00026	0.00500 B	<0.0150	<0.00024	0.00223 J	<0.000049	0.00180 J	0.000406 J	0.00357	<0.00031	0.00237 J	0.00659 J
(duplicate)	12/14/17	405	0.625	3.03	94.4	1,410	<0.00515	0.00417	0.129	0.184	<0.00016	0.00223	<0.00026	0.00526 B	<0.0150	0.000263 J	0.00259 J	<0.000049	0.00185 J	0.000357 J	0.00356	<0.00031	0.00244 J	0.00474 J
	02/23/18	429	0.746	3.28	103	1,410	0.0090 JB	0.00419	0.143	0.258	<0.00016	0.00265 B	<0.00026	0.00656	<0.0150	0.000278 JB	0.00225 J	<0.000049	0.00191 J	0.000488 JB	0.00453	<0.00031	0.00245 J	0.00958 J
(duplicate)	02/23/18	432	0.735	3.27	104	1,270	0.0243 JB	0.00603	0.145	0.222	0.00194	0.00432 B	0.00187 J	0.00829	0.0231 J	0.00195 J	0.00373 J	0.0000945 J	0.00411 J	0.00243	0.00571	0.000372 J	0.00424 J	0.0115 J
	04/05/18	406	0.676	2.98	99.9	1,300	0.0142 JB	0.00434	0.140	0.202	<0.000160	0.00311 B	<0.000260	0.00598	<0.0150	<0.000240	0.00245 JB	<0.0000490	0.00184 JB	<0.000350	0.00335 B	<0.000310	0.00252 J	0.00408 J
	07/31/18	409	0.752	3.14	103	1,420	0.0109 JB	0.00377	0.130	0.239	0.000179 JB	0.00186 J	<0.000260	0.00235 JB	<0.0150	0.000264 J	0.00101 J	<0.0000490	0.00208 J	0.000389 J	0.00413	<0.000310	0.00220 J	0.0461
(duplicate)	07/31/18	396	0.685	3.20	97.5	1,230	<0.00515	0.00401	0.133	0.203	0.000172 JB	0.00180 J	<0.000260	0.00179 JB	<0.0150	<0.000240	0.00143 J	<0.0000490	0.00197 J	0.000463 J	0.00326	<0.000310	0.00219 J	0.0262
	10/01/18	368	0.625	3.00	97.0	1,360	<0.00515	0.00431	0.138	0.177 J	<0.000160	0.00169 J	<0.000260	0.00177 J	<0.0150	<0.000240	0.00219 J	0.0000509 J	0.00219 J	0.00308	0.00386	<0.000310	0.00238 J	0.148
	01/23/19	396	0.601	2.67	90.1	1,100	0.0343 J	0.00407	0.140	0.204	<0.000160	0.00230	<0.000260	0.00274 JB	<0.0150	<0.000240	0.00228 J	<0.0000490	0.00209 J	0.00157 JB	0.00348	<0.000310	0.00241 J	0.230
(duplicate)	01/23/19	382	0.606	2.64	88.3	1,100	0.00963 J	0.00424	0.136	0.197	<0.000160	0.00199 J	<0.000260	0.00225 JB	<0.0150	<0.000240	0.00187 J	<0.0000490	0.00202 J	0.00131 JB	0.00396	<0.000310	0.00234 J	0.0889
	04/04/19	344	0.619	3.18	97.3	1,280	<0.00515	0.00421	0.140	0.612	<0.000160	0.00110 J	<0.000260	0.00172 J	<0.0150	<0.000240	0.00382 J	<0.0000490	0.00226 J	0.000640 JB	0.00325	<0.000310	0.00238 J	0.0510
	07/11/19	360	0.741	3.48	97.3	1,190	<0.00515	0.00375	0.126	0.198 J	<0.000160	0.00178 JB	<0.000260	0.00191 JB	<0.0150	0.000540 JB	0.00269 J	<0.0000490	0.00229 J	0.000881 J	0.00384	<0.000310	0.00223 J	0.101
	10/24/19	335	0.798	2.80	86.8	992	<0.00515	0.00405	0.119	0.190 J	<0.000160	0.000880 J	<0.000260	0.000922 J	<0.0150	<0.000240	0.00155 J	0.0000822 JB	0.00212 J	0.00157 J	0.00343	<0.000310	0.00188 J	0.0189 J

Table 3. Inorganic Constituent Concentrations in Groundwater

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

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)
New Mexico WQCC Groundwater Standard:		**250**	**1.6**	**10.0**	**600**	**1,000**	**5.0**	**0.1**	**2.0**	**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**
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	- -	0.02910
	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	0.01460
	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	0.03470
	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	0.00936
	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	0.01160	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.09370
	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	0.01660
	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	0.01660
	02/28/14	138	0.899	0.564	80.6	658	0.0104	<0.00500	0.1160	0.158	<0.00200	0.0139	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.03170
	08/22/14	124	0.914	2.71	78.5	614	<0.0100	<0.00500	0.1030	<0.0200	<0.00200	0.0119	<0.00500	<0.00500	<0.200	<0.00500	0.008120	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.01560
	12/17/14	120	0.900	2.70	73.0	--	<0.0100	0.00436	0.0905	0.120	<0.00100	0.0112	<0.00100	<0.00100	0.143	<0.00100	0.004300	<0.000200	0.00241	<0.00100	0.00395	<0.00100	0.00181	0.01470
	03/09/15	120	1.10	2.60	81.0	570	<0.0350	0.00460	0.1000	0.150	<0.00070	0.0120	<0.00230	0.06800	<0.014	0.00120 J	0.00210 J	<0.000049	0.00230 J	<0.00490	0.01000 J	<0.00280	0.00180 J	0.08600
	05/19/15	120	0.900	2.80	78.0	560	<0.0350	0.00500	0.1000	0.140 J	<0.00070	0.0120	<0.00230	<0.00530	<0.014	<0.00024	0.00160 J	<0.000049	0.00280 J	<0.00490	0.00370	<0.00280	0.00190 J	0.01300 J
	08/28/15	206	1.75	3.00	145	603	<0.0350	0.00445	0.0981	0.149	<0.00070	0.00866 J	<0.00230	<0.00530	0.0248 J	0.000241 J	0.012900	<0.000049	0.00236 J	<0.00490	0.00388	<0.00280	0.00174 J	0.02840 J
	12/17/15	114	1.03	3.01	80.9	621	0.0668 J	0.00507	0.0997	0.167 J	<0.00016	0.00866	<0.00260	0.00143 J	<0.0141	<0.00024	0.00217 J	<0.000049	<0.00160	0.000365	0.00387	<0.00031	0.00188 J	0.01010 J
	03/10/16	112	1.01	3.01	78.9	562	0.00534 J	0.00454	0.0926	0.143	<0.00016	0.00835	<0.00260	0.000987 JB	<0.0150	<0.00024	0.00274 JB	<0.000049	0.00246 JB	0.000662 JB	0.00384	<0.00031	0.00166 J	0.026 B
	05/25/16	114	1.01	2.70	80.0	608	<0.00200	0.00483	0.0906	0.154	<0.00016	0.00902	<0.00260	0.0315	<0.0150	0.00141 J	0.00181 JB	<0.000049	0.00217 J	<0.00035	0.00376	<0.00031	0.00181 J	0.0399
	08/18/16	104	0.915	3.12	74.4	555	0.00258 JB	0.00454	0.0939	0.162	<0.00016	0.00451 B	<0.00260	0.00196 JB	0.0337 J	<0.00024	0.00346 J	<0.000049	0.00288 J	0.00121 JB	0.00386	<0.00031	0.00194 J	0.0291 B
	12/08/16	104	1.02	2.88	79.9	582	0.00471 JB	0.00464	0.0858	0.122	<0.00016	0.00702	<0.00260	0.00390 J	<0.0150	<0.00024	0.00178 J	<0.000049	0.00254 J	<0.00035	0.00384	<0.00031	0.00172 J	0.0269
	02/07/17	112	0.975	3.26	88.7	498	<0.0258	0.00523 J	0.105	0.158	<0.00080	0.00749 J	<0.0013	<0.00260	<0.0750	<0.00120	0.00214 J	<0.000049	0.00260 J	<0.00175	0.00358	<0.00155	0.00201 J	0.0141 J
	05/31/17	110	0.926	2.91	81.5	532	<0.00515	0.00462	0.0928	0.144	<0.00016	0.00662	<0.00026	0.0259	<0.0150	0.00115 J	0.00132 J	<0.000049	0.00228 J	0.000529 J	0.00351	<0.00031	0.00184 J	0.0297
	08/17/17	109	0.812	3.02	83.0	547	0.0583 J	0.00476	0.0903	0.134	<0.00016	0.00699	<0.00026	0.000968 J	<0.0150	<0.00024	0.000802 JB	<0.000049	0.00237 J	<0.000350	0.00396	<0.00031	0.00181 J	0.00556 J
	12/14/17	108	0.883	2.88	83.3	560	0.0284 JB	0.00527	0.0881	0.128	0.000195 J	0.00619	0.000334	0.00244 JB	0.0331 J	0.000575 J	0.00129 J	<0.000049	0.00286 J	0.000638 J	0.00386	<0.00031	0.00221 J	0.00987 J
	02/23/18	110	1.04	3.06	82.7	564	0.0326 JB	0.00531	0.0893	0.150 J	0.000266 J	0.0073	0.000381 J	0.00559	0.0313 J	0.00188 J	0.000591 JB	<0.000049	0.00303 J	0.000904 JB	0.00491	<0.00031	0.00212 J	0.034
	04/05/18	110	0.968	2.81	81.3	543	0.00660 JB	0.00515	0.0947	0.148 J	<0.000160	0.00555	<0.000260	0.00183 JB	<0.0150	0.000365 JB	0.000358 JB	<0.0000490	0.00243 JB	0.000394 JB	0.00402	<0.000310	0.00195 JB	0.0666
	07/31/18	110	1.03	2.93	84.8	578	0.0113 JB	0.00384	0.0902	0.132 J	0.000193 JB	0.00369	<0.000260	0.00911	<0.0150	0.000287 J	0.00145 J	<0.0000490	0.00244 J	0.000789 J	0.00374	<0.000310	0.00182 J	0.210
	10/01/18	109	0.871	2.92	88.2	583	0.00755 J	0.00534	0.0961	0.114 J	<0.000160	0.00537	<0.000260	0.00189 J	<0.0150	0.000589 J	0.000543 J	<0.0000490	0.00277 J	<0.000350	0.00472	<0.000310	0.00189 J	0.0536
	01/23/19	103	0.861	2.66	80.8	525	0.0301 J	0.00520	0.0908	0.137	0.000279 J	0.00585	0.000346 J	0.00249 JB	0.0297 J	0.000666 J	0.000402 J	<0.0000490	0.00287 J	0.00104 JB	0.00382	<0.000310	0.00231 J	0.0208 J
	04/04/19	110	0.877	2.93	81.8	560	<0.00515	0.00472	0.0919	0.195 J	<0.000160	0.00504	<0.000260	0.0109	<0.0150	0.000844 J	0.000373 JB	<0.0000490	0.00243 J	<0.000350	0.00341	<0.000310	0.00193 J	0.0476
	07/11/19	112	1.02	3.09	84.7	557	<0.00515	0.00495	0.0952	0.142 J	<0.000160	0.00647	<0.000260	0.00995 B	<0.0150	0.000637 JB	<0.000250	<0.0000490	0.00266 J	0.000563 J	0.00341	<0.000310	0.00186 J	0.0128 J
	10/24/19	111	1.04	2.71	79.2	547	<0.00515	0.00454	0.0937	0.138 J	<0.000160	0.00320	<0.000260	<0.000520	<0.0150	<0.000240	0.000903 J	0.0000613 JB	0.00260 J	0.000377 J	0.00393	<0.000310	0.00168 J	0.00418 J

Notes:

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

mg/L = milligrams per liter

< = Not reported above laboratory reporting limit

-- = Not Analyzed

(1)= Not analyzed due to insufficient water volume

J = analyte was detected below the laboratory reporting limit (June 2009 to December 2014) or the method quantitation limit (February 2015 to October 2019), reported value is estimated

B = same analyte was detected in the associated laboratory blank or equipment blank; sample concentration is within 5 times the blank concentration

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

June 2009 to August 2014 analyses completed by ALS Laboratory Group, Houston, Texas

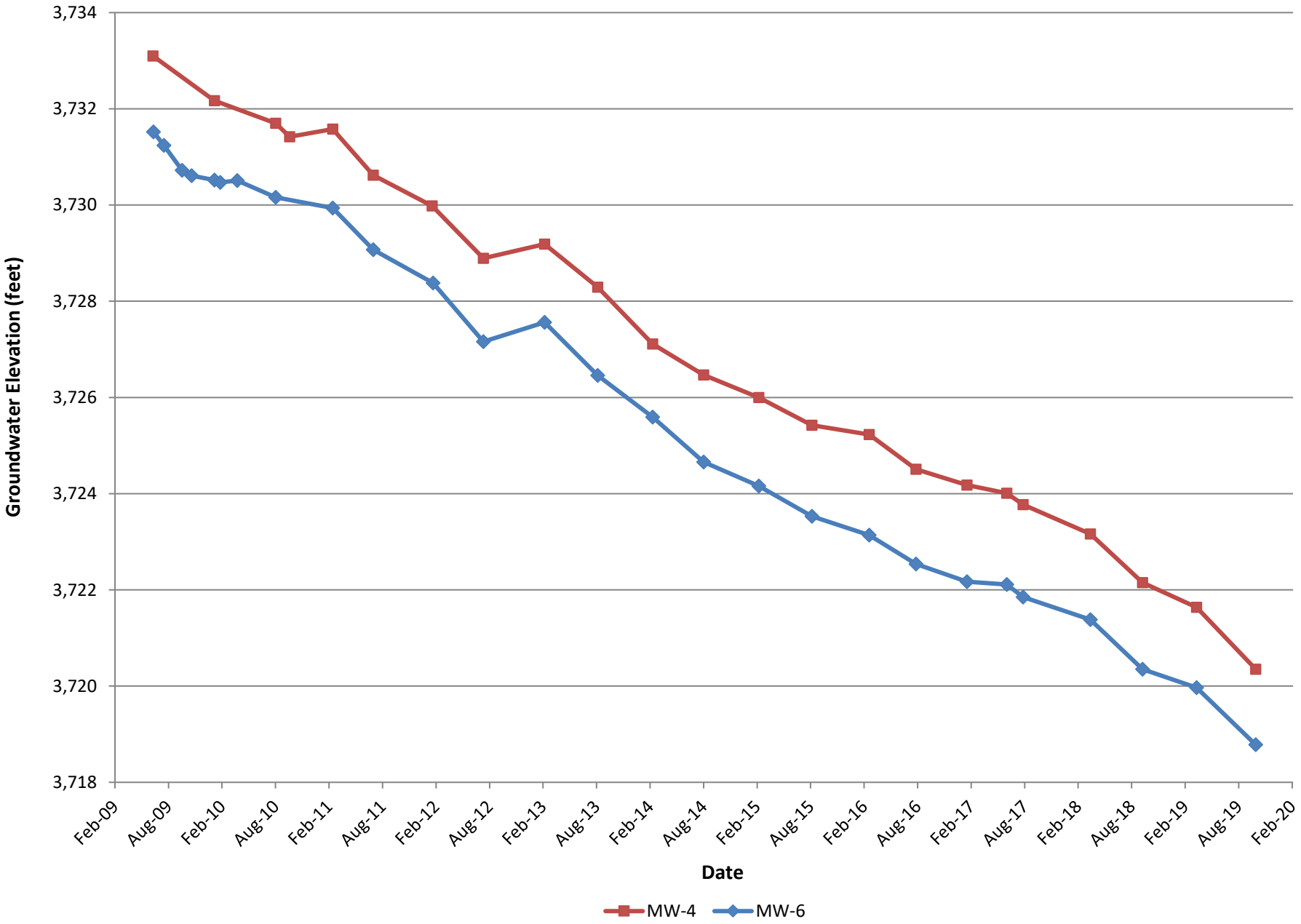
December 2014 analyses completed by Hall Environmental Analysis Laboratory in Albuquerque, New Mexico

February 2015 to October 2019 analyses completed by Pace Analytical National Center for Testing & Innovation (formerly ESC Lab Sciences) in Mount Juliet, Tennessee

APPENDIX A

PLOT OF GROUNDWATER ELEVATIONS OVER TIME

APPENDIX A - GROUNDWATER ELEVATIONS OVER TIME
HollyFrontier Navajo Refining LLC
AP-110, Lovington, New Mexico



APPENDIX B

LABORATORY ANALYTICAL REPORTS
(COMPACT DISC)

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

February 04, 2019

TRC Solutions - Austin, TX

Sample Delivery Group:	L1064582
Samples Received:	01/26/2019
Project Number:	294319.0000
Description:	Lovington Lea Refinery

Report To: Julie Speer
505 E. Huntland Drive, Suite 250
Austin, TX 78752

Entire Report Reviewed By:

Chris McCord
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



TABLE OF CONTENTS

Cp: Cover Page 1

Tc: Table of Contents 2

Ss: Sample Summary 3

Cn: Case Narrative 5

Sr: Sample Results 6

WW-EAST L1064582-01 6

WW-SOUTH L1064582-02 10

WW-NORTH L1064582-03 14

DUP-01 L1064582-04 18

TB-20190123 L1064582-05 22

Qc: Quality Control Summary 23

Gravimetric Analysis by Method 2540 C-2011 23

Wet Chemistry by Method 2320 B-2011 24

Wet Chemistry by Method 353.2 25

Wet Chemistry by Method 9056A 26

Mercury by Method 7470A 28

Metals (ICPMS) by Method 6020 29

Volatile Organic Compounds (GC) by Method 8015D/GRO 32

Volatile Organic Compounds (GC/MS) by Method 8260B 33

Semi-Volatile Organic Compounds (GC) by Method 3511/8015 38

Semi Volatile Organic Compounds (GC/MS) by Method 8270 C 39

Gl: Glossary of Terms 45

Al: Accreditations & Locations 46

Sc: Sample Chain of Custody 47

WW-EAST L1064582-01 GW

Collected by	Collected date/time	Received date/time
Jared Stoffel	01/23/19 10:15	01/26/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1229523	1	01/30/19 10:59	01/30/19 11:45	AEC
Wet Chemistry by Method 2320 B-2011	WG1230371	1	01/31/19 15:55	01/31/19 15:55	GB
Wet Chemistry by Method 353.2	WG1229383	1	02/04/19 11:01	02/04/19 11:01	BRJ
Wet Chemistry by Method 9056A	WG1230135	1	01/31/19 20:56	01/31/19 20:56	ST
Wet Chemistry by Method 9056A	WG1230135	5	01/31/19 22:13	01/31/19 22:13	ST
Mercury by Method 7470A	WG1229447	1	01/28/19 22:34	01/29/19 09:03	ABL
Metals (ICPMS) by Method 6020	WG1229136	1	01/27/19 20:07	01/29/19 10:29	JPD
Metals (ICPMS) by Method 6020	WG1229136	1	01/27/19 20:07	01/29/19 20:39	RDS
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1229464	1	01/29/19 19:20	01/29/19 19:20	JHH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1228944	1	01/27/19 03:54	01/27/19 03:54	JBE
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG1229059	1	01/29/19 06:38	01/29/19 15:06	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270 C	WG1229409	1	01/30/19 06:33	01/31/19 05:40	SNR

WW-SOUTH L1064582-02 GW

Collected by	Collected date/time	Received date/time
Jared Stoffel	01/23/19 13:30	01/26/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1229523	1	01/30/19 10:59	01/30/19 11:45	AEC
Wet Chemistry by Method 2320 B-2011	WG1230371	1	01/31/19 16:02	01/31/19 16:02	GB
Wet Chemistry by Method 353.2	WG1229383	1	02/04/19 11:05	02/04/19 11:05	BRJ
Wet Chemistry by Method 9056A	WG1230135	1	01/31/19 22:28	01/31/19 22:28	ST
Wet Chemistry by Method 9056A	WG1230135	10	01/31/19 22:44	01/31/19 22:44	ST
Mercury by Method 7470A	WG1229447	1	01/28/19 22:34	01/29/19 09:15	ABL
Metals (ICPMS) by Method 6020	WG1229136	1	01/27/19 20:07	01/29/19 11:16	JPD
Metals (ICPMS) by Method 6020	WG1229136	1	01/27/19 20:07	01/29/19 20:57	LD
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1229464	1	01/29/19 17:51	01/29/19 17:51	JHH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1228944	1	01/27/19 04:14	01/27/19 04:14	JBE
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG1229059	1	01/29/19 06:38	01/29/19 15:59	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270 C	WG1229409	1	01/30/19 06:33	01/31/19 08:52	SNR

WW-NORTH L1064582-03 GW

Collected by	Collected date/time	Received date/time
Jared Stoffel	01/23/19 15:00	01/26/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1229523	1	01/30/19 10:59	01/30/19 11:45	AEC
Wet Chemistry by Method 2320 B-2011	WG1230371	1	01/31/19 16:09	01/31/19 16:09	GB
Wet Chemistry by Method 353.2	WG1229383	1	02/04/19 11:07	02/04/19 11:07	BRJ
Wet Chemistry by Method 9056A	WG1230135	1	01/31/19 22:59	01/31/19 22:59	ST
Wet Chemistry by Method 9056A	WG1230135	5	01/31/19 23:15	01/31/19 23:15	ST
Mercury by Method 7470A	WG1229447	1	01/28/19 22:34	01/29/19 09:17	ABL
Metals (ICPMS) by Method 6020	WG1229136	1	01/27/19 20:07	01/29/19 11:20	JPD
Metals (ICPMS) by Method 6020	WG1229136	1	01/27/19 20:07	01/29/19 21:02	LD
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1229464	1	01/29/19 18:14	01/29/19 18:14	JHH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1228944	1	01/27/19 04:33	01/27/19 04:33	JBE
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG1229059	1	01/29/19 06:38	01/29/19 16:16	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270 C	WG1229409	1	01/30/19 06:33	01/31/19 09:16	SNR

DUP-01 L1064582-04 GW

Collected by: Jared Stoffel
Collected date/time: 01/23/19 00:00
Received date/time: 01/26/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Gravimetric Analysis by Method 2540 C-2011	WG1229523	1	01/30/19 10:59	01/30/19 11:45	AEC
Wet Chemistry by Method 2320 B-2011	WG1230371	1	01/31/19 16:16	01/31/19 16:16	GB
Wet Chemistry by Method 353.2	WG1229383	2	02/04/19 11:08	02/04/19 11:08	BRJ
Wet Chemistry by Method 9056A	WG1230135	1	01/31/19 23:30	01/31/19 23:30	ST
Wet Chemistry by Method 9056A	WG1230135	10	01/31/19 23:45	01/31/19 23:45	ST
Mercury by Method 7470A	WG1229447	1	01/28/19 22:34	01/29/19 09:24	ABL
Metals (ICPMS) by Method 6020	WG1229136	1	01/27/19 20:07	01/29/19 11:25	JPD
Metals (ICPMS) by Method 6020	WG1229136	1	01/27/19 20:07	01/29/19 21:06	LD
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1229464	1	01/29/19 18:36	01/29/19 18:36	JHH
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1228944	1	01/27/19 04:53	01/27/19 04:53	JBE
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG1229059	1	01/29/19 06:38	01/29/19 16:33	SHG
Semi Volatile Organic Compounds (GC/MS) by Method 8270 C	WG1229409	1	01/30/19 06:33	01/31/19 09:41	SNR

TB-20190123 L1064582-05 GW

Collected by: Jared Stoffel
Collected date/time: 01/23/19 00:00
Received date/time: 01/26/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1228944	1	01/26/19 23:21	01/26/19 23:21	JBE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Chris McCord
Project Manager

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	525		2.82	10.0	10.0	1	01/30/2019 11:45	WG1229523

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	165		2.71	20.0	20.0	1	01/31/2019 15:55	WG1230371

Sample Narrative:

L1064582-01 WG1230371: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	2.66	J6	0.0197	0.100	0.100	1	02/04/2019 11:01	WG1229383

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	103		0.260	1.00	5.00	5	01/31/2019 22:13	WG1230135
Fluoride	0.861		0.00990	0.100	0.100	1	01/31/2019 20:56	WG1230135
Sulfate	80.8		0.0774	5.00	5.00	1	01/31/2019 20:56	WG1230135

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	0.000200	1	01/29/2019 09:03	WG1229447

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	0.0301	J	0.00515	0.100	0.100	1	01/29/2019 10:29	WG1229136
Arsenic,Dissolved	0.00520		0.000250	0.00200	0.00200	1	01/29/2019 10:29	WG1229136
Barium,Dissolved	0.0908		0.000360	0.00500	0.00500	1	01/29/2019 10:29	WG1229136
Boron,Dissolved	0.137	O1	0.00150	0.0200	0.0200	1	01/29/2019 20:39	WG1229136
Cadmium,Dissolved	0.000279	J	0.000160	0.00100	0.00100	1	01/29/2019 10:29	WG1229136
Calcium,Dissolved	100		0.0460	1.00	1.00	1	01/29/2019 10:29	WG1229136
Chromium,Dissolved	0.00585		0.000540	0.00200	0.00200	1	01/29/2019 10:29	WG1229136
Copper,Dissolved	0.00249	B J	0.000520	0.00500	0.00500	1	01/29/2019 10:29	WG1229136
Cobalt,Dissolved	0.000346	J	0.000260	0.00200	0.00200	1	01/29/2019 10:29	WG1229136
Iron,Dissolved	0.0297	J	0.0150	0.100	0.100	1	01/29/2019 10:29	WG1229136
Lead,Dissolved	0.000666	J	0.000240	0.00200	0.00200	1	01/29/2019 10:29	WG1229136
Magnesium,Dissolved	15.0		0.100	1.00	1.00	1	01/29/2019 10:29	WG1229136
Manganese,Dissolved	0.000402	J	0.000250	0.00500	0.00500	1	01/29/2019 10:29	WG1229136
Molybdenum,Dissolved	0.00287	J	0.000140	0.00500	0.00500	1	01/29/2019 10:29	WG1229136
Nickel,Dissolved	0.00104	B J	0.000350	0.00200	0.00200	1	01/29/2019 10:29	WG1229136
Potassium,Dissolved	2.06		0.0370	1.00	1.00	1	01/29/2019 10:29	WG1229136
Selenium,Dissolved	0.00382		0.000380	0.00200	0.00200	1	01/29/2019 10:29	WG1229136
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	01/29/2019 10:29	WG1229136
Sodium,Dissolved	54.6		0.110	1.00	1.00	1	01/29/2019 10:29	WG1229136
Uranium,Dissolved	0.00231	J	0.000330	0.0100	0.0100	1	01/29/2019 10:29	WG1229136
Zinc,Dissolved	0.0208	J	0.00256	0.0250	0.0250	1	01/29/2019 10:29	WG1229136

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	0.100	1	01/29/2019 19:20	WG1229464
(S) a,a,a-Trifluorotoluene(FID)	*104*				*78.0-120*		*01/29/2019 19:20*	WG1229464

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0100	1.00	1.00	1	01/27/2019 03:54	WG1228944
Benzene	U		0.000331	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	01/27/2019 03:54	WG1228944
Bromoform	U		0.000469	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
Bromomethane	U		0.000866	0.00500	0.00500	1	01/27/2019 03:54	WG1228944
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
Carbon disulfide	U	J3	0.000275	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
Carbon tetrachloride	U	J3	0.000379	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
Chlorobenzene	U		0.000348	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
Chloroethane	U		0.000453	0.00500	0.00500	1	01/27/2019 03:54	WG1228944
Chloroform	U		0.000324	0.00500	0.00500	1	01/27/2019 03:54	WG1228944
Chloromethane	U		0.000276	0.00250	0.00250	1	01/27/2019 03:54	WG1228944
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
1,1-Dichloroethene	U	J3	0.000398	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
trans-1,2-Dichloroethene	U	J3	0.000396	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
Ethylbenzene	U		0.000384	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
2-Hexanone	U		0.00382	0.0100	0.0100	1	01/27/2019 03:54	WG1228944
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	01/27/2019 03:54	WG1228944
Methylene Chloride	U		0.00100	0.00500	0.00500	1	01/27/2019 03:54	WG1228944
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	01/27/2019 03:54	WG1228944
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
Naphthalene	U		0.00100	0.00500	0.00500	1	01/27/2019 03:54	WG1228944
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
Styrene	U		0.000307	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
Tetrachloroethene	U	J3	0.000372	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
Toluene	U		0.000412	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
1,1,1-Trichloroethane	U	J3	0.000319	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
Trichloroethene	U	J3	0.000398	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
Vinyl chloride	U	J3	0.000259	0.00100	0.00100	1	01/27/2019 03:54	WG1228944
Xylenes, Total	U		0.00106	0.00300	0.00300	1	01/27/2019 03:54	WG1228944
(S) Toluene-d8	*114*				*80.0-120*		*01/27/2019 03:54*	WG1228944
(S) Dibromofluoromethane	*98.7*				*75.0-120*		*01/27/2019 03:54*	WG1228944
(S) 4-Bromofluorobenzene	*103*				*77.0-126*		*01/27/2019 03:54*	WG1228944

Semi-Volatile Organic Compounds (GC) by Method 3511/8015

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
TPH (GC/FID) High Fraction	U		0.0247	0.100	0.100	1	01/29/2019 15:06	WG1229059
(S) o-Terphenyl	*76.3*				*31.0-160*		*01/29/2019 15:06*	WG1229059

Semi Volatile Organic Compounds (GC/MS) by Method 8270 C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acenaphthene	U		0.000316	0.00100	0.00100	1	01/31/2019 05:40	WG1229409
Acenaphthylene	U		0.000309	0.00100	0.00100	1	01/31/2019 05:40	WG1229409
Acetophenone	U		0.00247	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
Anthracene	U		0.000291	0.00100	0.00100	1	01/31/2019 05:40	WG1229409
Atrazine	U		0.000260	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
Benzo(a)anthracene	0.0000768	B J	0.0000510	0.00100	0.00100	1	01/31/2019 05:40	WG1229409
Benzaldehyde	U		0.00140	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	01/31/2019 05:40	WG1229409
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	01/31/2019 05:40	WG1229409
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	01/31/2019 05:40	WG1229409
Benzo(a)pyrene	0.000115	B J	0.0000381	0.000200	0.000200	1	01/31/2019 05:40	WG1229409
Biphenyl	U		0.000325	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	01/31/2019 05:40	WG1229409
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
Caprolactam	U		0.00259	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
Carbazole	U		0.000260	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
Chrysene	U		0.000332	0.00100	0.00100	1	01/31/2019 05:40	WG1229409
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	01/31/2019 05:40	WG1229409
Dibenzofuran	U		0.000338	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
Fluoranthene	U		0.000310	0.00100	0.00100	1	01/31/2019 05:40	WG1229409
Fluorene	U		0.000323	0.00100	0.00100	1	01/31/2019 05:40	WG1229409
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	01/31/2019 05:40	WG1229409
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
Hexachloroethane	U		0.000365	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	01/31/2019 05:40	WG1229409
Isophorone	U		0.000272	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	01/31/2019 05:40	WG1229409
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	01/31/2019 05:40	WG1229409
Naphthalene	U		0.000372	0.00100	0.00100	1	01/31/2019 05:40	WG1229409
Nitrobenzene	U		0.000367	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
Phenanthrene	U		0.000366	0.00100	0.00100	1	01/31/2019 05:40	WG1229409
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	01/31/2019 05:40	WG1229409
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	01/31/2019 05:40	WG1229409
Di-n-butyl phthalate	U		0.000266	0.00300	0.00300	1	01/31/2019 05:40	WG1229409
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	01/31/2019 05:40	WG1229409
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	01/31/2019 05:40	WG1229409
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	01/31/2019 05:40	WG1229409
Pyrene	U		0.000330	0.00100	0.00100	1	01/31/2019 05:40	WG1229409
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	01/31/2019 05:40	WG1229409

Semi Volatile Organic Compounds (GC/MS) by Method 8270 C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
2-Methylphenol	U		0.000312	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
4-Chloroaniline	U	J3 J4	0.000382	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
Phenol	0.00218	J	0.000334	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	01/31/2019 05:40	WG1229409
(S) 2-Fluorophenol	*54.0*				*10.0-120*		*01/31/2019 05:40*	WG1229409
(S) Phenol-d5	*31.3*				*10.0-120*		*01/31/2019 05:40*	WG1229409
(S) Nitrobenzene-d5	*57.5*				*10.0-127*		*01/31/2019 05:40*	WG1229409
(S) 2-Fluorobiphenyl	*68.3*				*10.0-130*		*01/31/2019 05:40*	WG1229409
(S) 2,4,6-Tribromophenol	*57.5*				*10.0-155*		*01/31/2019 05:40*	WG1229409
(S) p-Terphenyl-d14	*76.1*				*10.0-128*		*01/31/2019 05:40*	WG1229409

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	1100		5.64	20.0	20.0	1	01/30/2019 11:45	WG1229523

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	174		2.71	20.0	20.0	1	01/31/2019 16:02	WG1230371

Sample Narrative:

L1064582-02 WG1230371: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	2.67		0.0197	0.100	0.100	1	02/04/2019 11:05	WG1229383

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	396		0.519	1.00	10.0	10	01/31/2019 22:44	WG1230135
Fluoride	0.601		0.00990	0.100	0.100	1	01/31/2019 22:28	WG1230135
Sulfate	90.1		0.774	5.00	50.0	10	01/31/2019 22:44	WG1230135

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	0.000200	1	01/29/2019 09:15	WG1229447

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	0.0343	J	0.00515	0.100	0.100	1	01/29/2019 11:16	WG1229136
Arsenic,Dissolved	0.00407		0.000250	0.00200	0.00200	1	01/29/2019 11:16	WG1229136
Barium,Dissolved	0.140		0.000360	0.00500	0.00500	1	01/29/2019 11:16	WG1229136
Boron,Dissolved	0.204		0.00150	0.0200	0.0200	1	01/29/2019 20:57	WG1229136
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	01/29/2019 11:16	WG1229136
Calcium,Dissolved	189		0.0460	1.00	1.00	1	01/29/2019 11:16	WG1229136
Chromium,Dissolved	0.00230		0.000540	0.00200	0.00200	1	01/29/2019 11:16	WG1229136
Copper,Dissolved	0.00274	B J	0.000520	0.00500	0.00500	1	01/29/2019 11:16	WG1229136
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	01/29/2019 11:16	WG1229136
Iron,Dissolved	U		0.0150	0.100	0.100	1	01/29/2019 11:16	WG1229136
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	01/29/2019 11:16	WG1229136
Magnesium,Dissolved	26.2		0.100	1.00	1.00	1	01/29/2019 11:16	WG1229136
Manganese,Dissolved	0.00228	J	0.000250	0.00500	0.00500	1	01/29/2019 11:16	WG1229136
Molybdenum,Dissolved	0.00209	J	0.000140	0.00500	0.00500	1	01/29/2019 11:16	WG1229136
Nickel,Dissolved	0.00157	B J	0.000350	0.00200	0.00200	1	01/29/2019 11:16	WG1229136
Potassium,Dissolved	3.53		0.0370	1.00	1.00	1	01/29/2019 11:16	WG1229136
Selenium,Dissolved	0.00348		0.000380	0.00200	0.00200	1	01/29/2019 11:16	WG1229136
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	01/29/2019 11:16	WG1229136
Sodium,Dissolved	138		0.110	1.00	1.00	1	01/29/2019 11:16	WG1229136
Uranium,Dissolved	0.00241	J	0.000330	0.0100	0.0100	1	01/29/2019 11:16	WG1229136
Zinc,Dissolved	0.230		0.00256	0.0250	0.0250	1	01/29/2019 11:16	WG1229136

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0485	J	0.0314	0.100	0.100	1	01/29/2019 17:51	WG1229464
(S) a,a,a-Trifluorotoluene(FID)	*104*				*78.0-120*		*01/29/2019 17:51*	WG1229464

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0100	1.00	1.00	1	01/27/2019 04:14	WG1228944
Benzene	U		0.000331	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	01/27/2019 04:14	WG1228944
Bromoform	U		0.000469	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
Bromomethane	U		0.000866	0.00500	0.00500	1	01/27/2019 04:14	WG1228944
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
Carbon disulfide	U	J3	0.000275	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
Chlorobenzene	U		0.000348	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
Chloroethane	U		0.000453	0.00500	0.00500	1	01/27/2019 04:14	WG1228944
Chloroform	0.000966	J	0.000324	0.00500	0.00500	1	01/27/2019 04:14	WG1228944
Chloromethane	U		0.000276	0.00250	0.00250	1	01/27/2019 04:14	WG1228944
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
Ethylbenzene	U		0.000384	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
2-Hexanone	U		0.00382	0.0100	0.0100	1	01/27/2019 04:14	WG1228944
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	01/27/2019 04:14	WG1228944
Methylene Chloride	U		0.00100	0.00500	0.00500	1	01/27/2019 04:14	WG1228944
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	01/27/2019 04:14	WG1228944
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
Naphthalene	U		0.00100	0.00500	0.00500	1	01/27/2019 04:14	WG1228944
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
Styrene	U		0.000307	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
Toluene	U		0.000412	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
Trichloroethene	U		0.000398	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
Vinyl chloride	U		0.000259	0.00100	0.00100	1	01/27/2019 04:14	WG1228944
Xylenes, Total	U		0.00106	0.00300	0.00300	1	01/27/2019 04:14	WG1228944
(S) Toluene-d8	*112*				*80.0-120*		*01/27/2019 04:14*	WG1228944
(S) Dibromofluoromethane	*96.8*				*75.0-120*		*01/27/2019 04:14*	WG1228944
(S) 4-Bromofluorobenzene	*104*				*77.0-126*		*01/27/2019 04:14*	WG1228944

Semi-Volatile Organic Compounds (GC) by Method 3511/8015

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
TPH (GC/FID) High Fraction	U		0.0247	0.100	0.100	1	01/29/2019 15:59	WG1229059
(S) o-Terphenyl	*72.6*				*31.0-160*		*01/29/2019 15:59*	WG1229059

Semi Volatile Organic Compounds (GC/MS) by Method 8270 C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acenaphthene	U		0.000316	0.00100	0.00100	1	01/31/2019 08:52	WG1229409
Acenaphthylene	U		0.000309	0.00100	0.00100	1	01/31/2019 08:52	WG1229409
Acetophenone	U		0.00247	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
Anthracene	U		0.000291	0.00100	0.00100	1	01/31/2019 08:52	WG1229409
Atrazine	U		0.000260	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
Benzo(a)anthracene	0.0000889	B J	0.0000510	0.00100	0.00100	1	01/31/2019 08:52	WG1229409
Benzaldehyde	U		0.00140	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	01/31/2019 08:52	WG1229409
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	01/31/2019 08:52	WG1229409
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	01/31/2019 08:52	WG1229409
Benzo(a)pyrene	0.000126	B J	0.0000381	0.000200	0.000200	1	01/31/2019 08:52	WG1229409
Biphenyl	U		0.000325	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	01/31/2019 08:52	WG1229409
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
Caprolactam	U		0.00259	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
Carbazole	U		0.000260	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
Chrysene	U		0.000332	0.00100	0.00100	1	01/31/2019 08:52	WG1229409
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	01/31/2019 08:52	WG1229409
Dibenzofuran	U		0.000338	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
Fluoranthene	U		0.000310	0.00100	0.00100	1	01/31/2019 08:52	WG1229409
Fluorene	U		0.000323	0.00100	0.00100	1	01/31/2019 08:52	WG1229409
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	01/31/2019 08:52	WG1229409
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
Hexachloroethane	U		0.000365	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	01/31/2019 08:52	WG1229409
Isophorone	U		0.000272	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	01/31/2019 08:52	WG1229409
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	01/31/2019 08:52	WG1229409
Naphthalene	U		0.000372	0.00100	0.00100	1	01/31/2019 08:52	WG1229409
Nitrobenzene	U		0.000367	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
Phenanthrene	U		0.000366	0.00100	0.00100	1	01/31/2019 08:52	WG1229409
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	01/31/2019 08:52	WG1229409
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	01/31/2019 08:52	WG1229409
Di-n-butyl phthalate	U		0.000266	0.00300	0.00300	1	01/31/2019 08:52	WG1229409
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	01/31/2019 08:52	WG1229409
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	01/31/2019 08:52	WG1229409
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	01/31/2019 08:52	WG1229409
Pyrene	U		0.000330	0.00100	0.00100	1	01/31/2019 08:52	WG1229409
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	01/31/2019 08:52	WG1229409

Semi Volatile Organic Compounds (GC/MS) by Method 8270 C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
2-Methylphenol	U		0.000312	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
4-Chloroaniline	U	J3 J4	0.000382	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
Phenol	U		0.000334	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	01/31/2019 08:52	WG1229409
(S) 2-Fluorophenol	*55.5*				*10.0-120*		*01/31/2019 08:52*	WG1229409
(S) Phenol-d5	*32.2*				*10.0-120*		*01/31/2019 08:52*	WG1229409
(S) Nitrobenzene-d5	*60.2*				*10.0-127*		*01/31/2019 08:52*	WG1229409
(S) 2-Fluorobiphenyl	*68.6*				*10.0-130*		*01/31/2019 08:52*	WG1229409
(S) 2,4,6-Tribromophenol	*58.0*				*10.0-155*		*01/31/2019 08:52*	WG1229409
(S) p-Terphenyl-d14	*73.1*				*10.0-128*		*01/31/2019 08:52*	WG1229409

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	550		2.82	10.0	10.0	1	01/30/2019 11:45	WG1229523

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	172		2.71	20.0	20.0	1	01/31/2019 16:09	WG1230371

Sample Narrative:

L1064582-03 WG1230371: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	2.86		0.0197	0.100	0.100	1	02/04/2019 11:07	WG1229383

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	120		0.260	1.00	5.00	5	01/31/2019 23:15	WG1230135
Fluoride	0.775		0.00990	0.100	0.100	1	01/31/2019 22:59	WG1230135
Sulfate	75.6		0.0774	5.00	5.00	1	01/31/2019 22:59	WG1230135

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	0.000200	1	01/29/2019 09:17	WG1229447

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	0.0108	J	0.00515	0.100	0.100	1	01/29/2019 11:20	WG1229136
Arsenic,Dissolved	0.00621		0.000250	0.00200	0.00200	1	01/29/2019 11:20	WG1229136
Barium,Dissolved	0.110		0.000360	0.00500	0.00500	1	01/29/2019 11:20	WG1229136
Boron,Dissolved	0.152		0.00150	0.0200	0.0200	1	01/29/2019 21:02	WG1229136
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	01/29/2019 11:20	WG1229136
Calcium,Dissolved	106		0.0460	1.00	1.00	1	01/29/2019 11:20	WG1229136
Chromium,Dissolved	0.00139	J	0.000540	0.00200	0.00200	1	01/29/2019 11:20	WG1229136
Copper,Dissolved	0.00259	B J	0.000520	0.00500	0.00500	1	01/29/2019 11:20	WG1229136
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	01/29/2019 11:20	WG1229136
Iron,Dissolved	U		0.0150	0.100	0.100	1	01/29/2019 11:20	WG1229136
Lead,Dissolved	0.000378	J	0.000240	0.00200	0.00200	1	01/29/2019 11:20	WG1229136
Magnesium,Dissolved	12.9		0.100	1.00	1.00	1	01/29/2019 11:20	WG1229136
Manganese,Dissolved	0.00193	J	0.000250	0.00500	0.00500	1	01/29/2019 11:20	WG1229136
Molybdenum,Dissolved	0.00293	J	0.000140	0.00500	0.00500	1	01/29/2019 11:20	WG1229136
Nickel,Dissolved	0.00114	B J	0.000350	0.00200	0.00200	1	01/29/2019 11:20	WG1229136
Potassium,Dissolved	2.49		0.0370	1.00	1.00	1	01/29/2019 11:20	WG1229136
Selenium,Dissolved	0.00393		0.000380	0.00200	0.00200	1	01/29/2019 11:20	WG1229136
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	01/29/2019 11:20	WG1229136
Sodium,Dissolved	68.6		0.110	1.00	1.00	1	01/29/2019 11:20	WG1229136
Uranium,Dissolved	0.00184	J	0.000330	0.0100	0.0100	1	01/29/2019 11:20	WG1229136
Zinc,Dissolved	0.00809	J	0.00256	0.0250	0.0250	1	01/29/2019 11:20	WG1229136

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	0.100	1	01/29/2019 18:14	WG1229464
(S) a,a,a-Trifluorotoluene(FID)	*105*				*78.0-120*		*01/29/2019 18:14*	WG1229464

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0100	1.00	1.00	1	01/27/2019 04:33	WG1228944
Benzene	U		0.000331	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	01/27/2019 04:33	WG1228944
Bromoform	U		0.000469	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
Bromomethane	U		0.000866	0.00500	0.00500	1	01/27/2019 04:33	WG1228944
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
Carbon disulfide	U	J3	0.000275	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
Chlorobenzene	U		0.000348	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
Chloroethane	U		0.000453	0.00500	0.00500	1	01/27/2019 04:33	WG1228944
Chloroform	U		0.000324	0.00500	0.00500	1	01/27/2019 04:33	WG1228944
Chloromethane	U		0.000276	0.00250	0.00250	1	01/27/2019 04:33	WG1228944
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
Ethylbenzene	U		0.000384	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
2-Hexanone	U		0.00382	0.0100	0.0100	1	01/27/2019 04:33	WG1228944
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	01/27/2019 04:33	WG1228944
Methylene Chloride	U		0.00100	0.00500	0.00500	1	01/27/2019 04:33	WG1228944
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	01/27/2019 04:33	WG1228944
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
Naphthalene	U		0.00100	0.00500	0.00500	1	01/27/2019 04:33	WG1228944
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
Styrene	U		0.000307	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
Toluene	U		0.000412	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
Trichloroethene	U		0.000398	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
Vinyl chloride	U		0.000259	0.00100	0.00100	1	01/27/2019 04:33	WG1228944
Xylenes, Total	U		0.00106	0.00300	0.00300	1	01/27/2019 04:33	WG1228944
(S) Toluene-d8	*111*				*80.0-120*		*01/27/2019 04:33*	WG1228944
(S) Dibromofluoromethane	*99.6*				*75.0-120*		*01/27/2019 04:33*	WG1228944
(S) 4-Bromofluorobenzene	*104*				*77.0-126*		*01/27/2019 04:33*	WG1228944

Semi-Volatile Organic Compounds (GC) by Method 3511/8015

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
TPH (GC/FID) High Fraction	U		0.0247	0.100	0.100	1	01/29/2019 16:16	WG1229059
(S) o-Terphenyl	*74.2*				*31.0-160*		*01/29/2019 16:16*	WG1229059

Semi Volatile Organic Compounds (GC/MS) by Method 8270 C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acenaphthene	U		0.000316	0.00100	0.00100	1	01/31/2019 09:16	WG1229409
Acenaphthylene	U		0.000309	0.00100	0.00100	1	01/31/2019 09:16	WG1229409
Acetophenone	U		0.00247	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
Anthracene	U		0.000291	0.00100	0.00100	1	01/31/2019 09:16	WG1229409
Atrazine	U		0.000260	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
Benzo(a)anthracene	0.0000761	B J	0.0000510	0.00100	0.00100	1	01/31/2019 09:16	WG1229409
Benzaldehyde	U		0.00140	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	01/31/2019 09:16	WG1229409
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	01/31/2019 09:16	WG1229409
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	01/31/2019 09:16	WG1229409
Benzo(a)pyrene	0.000128	B J	0.0000381	0.000200	0.000200	1	01/31/2019 09:16	WG1229409
Biphenyl	U		0.000325	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	01/31/2019 09:16	WG1229409
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
Caprolactam	U		0.00259	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
Carbazole	U		0.000260	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
Chrysene	U		0.000332	0.00100	0.00100	1	01/31/2019 09:16	WG1229409
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	01/31/2019 09:16	WG1229409
Dibenzofuran	U		0.000338	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
Fluoranthene	U		0.000310	0.00100	0.00100	1	01/31/2019 09:16	WG1229409
Fluorene	U		0.000323	0.00100	0.00100	1	01/31/2019 09:16	WG1229409
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	01/31/2019 09:16	WG1229409
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
Hexachloroethane	U		0.000365	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	01/31/2019 09:16	WG1229409
Isophorone	U		0.000272	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	01/31/2019 09:16	WG1229409
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	01/31/2019 09:16	WG1229409
Naphthalene	U		0.000372	0.00100	0.00100	1	01/31/2019 09:16	WG1229409
Nitrobenzene	U		0.000367	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
Phenanthrene	U		0.000366	0.00100	0.00100	1	01/31/2019 09:16	WG1229409
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	01/31/2019 09:16	WG1229409
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	01/31/2019 09:16	WG1229409
Di-n-butyl phthalate	U		0.000266	0.00300	0.00300	1	01/31/2019 09:16	WG1229409
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	01/31/2019 09:16	WG1229409
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	01/31/2019 09:16	WG1229409
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	01/31/2019 09:16	WG1229409
Pyrene	U		0.000330	0.00100	0.00100	1	01/31/2019 09:16	WG1229409
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	01/31/2019 09:16	WG1229409

Semi Volatile Organic Compounds (GC/MS) by Method 8270 C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
2-Methylphenol	U		0.000312	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
4-Chloroaniline	U	J3 J4	0.000382	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
Phenol	U		0.000334	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	01/31/2019 09:16	WG1229409
(S) 2-Fluorophenol	*50.5*				*10.0-120*		*01/31/2019 09:16*	WG1229409
(S) Phenol-d5	*29.1*				*10.0-120*		*01/31/2019 09:16*	WG1229409
(S) Nitrobenzene-d5	*58.3*				*10.0-127*		*01/31/2019 09:16*	WG1229409
(S) 2-Fluorobiphenyl	*68.3*				*10.0-130*		*01/31/2019 09:16*	WG1229409
(S) 2,4,6-Tribromophenol	*59.5*				*10.0-155*		*01/31/2019 09:16*	WG1229409
(S) p-Terphenyl-d14	*71.2*				*10.0-128*		*01/31/2019 09:16*	WG1229409

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	1100		5.64	20.0	20.0	1	01/30/2019 11:45	WG1229523

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	176		2.71	20.0	20.0	1	01/31/2019 16:16	WG1230371

Sample Narrative:

L1064582-04 WG1230371: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	2.64		0.0394	0.100	0.200	2	02/04/2019 11:08	WG1229383

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	382		0.519	1.00	10.0	10	01/31/2019 23:45	WG1230135
Fluoride	0.606		0.00990	0.100	0.100	1	01/31/2019 23:30	WG1230135
Sulfate	88.3		0.774	5.00	50.0	10	01/31/2019 23:45	WG1230135

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	0.000200	1	01/29/2019 09:24	WG1229447

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	0.00963	J	0.00515	0.100	0.100	1	01/29/2019 11:25	WG1229136
Arsenic,Dissolved	0.00424		0.000250	0.00200	0.00200	1	01/29/2019 11:25	WG1229136
Barium,Dissolved	0.136		0.000360	0.00500	0.00500	1	01/29/2019 11:25	WG1229136
Boron,Dissolved	0.197		0.00150	0.0200	0.0200	1	01/29/2019 21:06	WG1229136
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	01/29/2019 11:25	WG1229136
Calcium,Dissolved	187		0.0460	1.00	1.00	1	01/29/2019 11:25	WG1229136
Chromium,Dissolved	0.00199	J	0.000540	0.00200	0.00200	1	01/29/2019 11:25	WG1229136
Copper,Dissolved	0.00225	B J	0.000520	0.00500	0.00500	1	01/29/2019 11:25	WG1229136
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	01/29/2019 11:25	WG1229136
Iron,Dissolved	U		0.0150	0.100	0.100	1	01/29/2019 11:25	WG1229136
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	01/29/2019 11:25	WG1229136
Magnesium,Dissolved	25.8		0.100	1.00	1.00	1	01/29/2019 11:25	WG1229136
Manganese,Dissolved	0.00187	J	0.000250	0.00500	0.00500	1	01/29/2019 11:25	WG1229136
Molybdenum,Dissolved	0.00202	J	0.000140	0.00500	0.00500	1	01/29/2019 11:25	WG1229136
Nickel,Dissolved	0.00131	B J	0.000350	0.00200	0.00200	1	01/29/2019 11:25	WG1229136
Potassium,Dissolved	3.45		0.0370	1.00	1.00	1	01/29/2019 11:25	WG1229136
Selenium,Dissolved	0.00396		0.000380	0.00200	0.00200	1	01/29/2019 11:25	WG1229136
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	01/29/2019 11:25	WG1229136
Sodium,Dissolved	137		0.110	1.00	1.00	1	01/29/2019 11:25	WG1229136
Uranium,Dissolved	0.00234	J	0.000330	0.0100	0.0100	1	01/29/2019 11:25	WG1229136
Zinc,Dissolved	0.0889		0.00256	0.0250	0.0250	1	01/29/2019 11:25	WG1229136

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
TPH (GC/FID) Low Fraction	U		0.0314	0.100	0.100	1	01/29/2019 18:36	WG1229464
(S) a,a,a-Trifluorotoluene(FID)	*104*				*78.0-120*		*01/29/2019 18:36*	WG1229464

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	01/27/2019 04:53	WG1228944
Benzene	U		0.000331	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	01/27/2019 04:53	WG1228944
Bromoform	U		0.000469	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
Bromomethane	U		0.000866	0.00500	0.00500	1	01/27/2019 04:53	WG1228944
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
Carbon disulfide	U	J3	0.000275	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
Chlorobenzene	U		0.000348	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
Chloroethane	U		0.000453	0.00500	0.00500	1	01/27/2019 04:53	WG1228944
Chloroform	0.00110	J	0.000324	0.00500	0.00500	1	01/27/2019 04:53	WG1228944
Chloromethane	U		0.000276	0.00250	0.00250	1	01/27/2019 04:53	WG1228944
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
Ethylbenzene	U		0.000384	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
2-Hexanone	U		0.00382	0.0100	0.0100	1	01/27/2019 04:53	WG1228944
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	01/27/2019 04:53	WG1228944
Methylene Chloride	U		0.00100	0.00500	0.00500	1	01/27/2019 04:53	WG1228944
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	01/27/2019 04:53	WG1228944
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
Naphthalene	U		0.00100	0.00500	0.00500	1	01/27/2019 04:53	WG1228944
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
Styrene	U		0.000307	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
Toluene	U		0.000412	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
Trichloroethene	U		0.000398	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
Vinyl chloride	U		0.000259	0.00100	0.00100	1	01/27/2019 04:53	WG1228944
Xylenes, Total	U		0.00106	0.00300	0.00300	1	01/27/2019 04:53	WG1228944
(S) Toluene-d8	*112*				*80.0-120*		*01/27/2019 04:53*	WG1228944
(S) Dibromofluoromethane	*100*				*75.0-120*		*01/27/2019 04:53*	WG1228944
(S) 4-Bromofluorobenzene	*104*				*77.0-126*		*01/27/2019 04:53*	WG1228944

Semi-Volatile Organic Compounds (GC) by Method 3511/8015

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
TPH (GC/FID) High Fraction	U		0.0247	0.100	0.100	1	01/29/2019 16:33	WG1229059
(S) o-Terphenyl	*73.2*				*31.0-160*		*01/29/2019 16:33*	WG1229059

Semi Volatile Organic Compounds (GC/MS) by Method 8270 C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acenaphthene	U		0.000316	0.00100	0.00100	1	01/31/2019 09:41	WG1229409
Acenaphthylene	U		0.000309	0.00100	0.00100	1	01/31/2019 09:41	WG1229409
Acetophenone	U		0.00247	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
Anthracene	U		0.000291	0.00100	0.00100	1	01/31/2019 09:41	WG1229409
Atrazine	U		0.000260	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
Benzo(a)anthracene	0.0000701	B J	0.0000510	0.00100	0.00100	1	01/31/2019 09:41	WG1229409
Benzaldehyde	U		0.00140	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	01/31/2019 09:41	WG1229409
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	01/31/2019 09:41	WG1229409
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	01/31/2019 09:41	WG1229409
Benzo(a)pyrene	0.000125	B J	0.0000381	0.000200	0.000200	1	01/31/2019 09:41	WG1229409
Biphenyl	U		0.000325	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	01/31/2019 09:41	WG1229409
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
Caprolactam	U		0.00259	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
Carbazole	U		0.000260	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
Chrysene	U		0.000332	0.00100	0.00100	1	01/31/2019 09:41	WG1229409
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	01/31/2019 09:41	WG1229409
Dibenzofuran	U		0.000338	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
Fluoranthene	U		0.000310	0.00100	0.00100	1	01/31/2019 09:41	WG1229409
Fluorene	U		0.000323	0.00100	0.00100	1	01/31/2019 09:41	WG1229409
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	01/31/2019 09:41	WG1229409
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
Hexachloroethane	U		0.000365	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	01/31/2019 09:41	WG1229409
Isophorone	U		0.000272	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	01/31/2019 09:41	WG1229409
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	01/31/2019 09:41	WG1229409
Naphthalene	U		0.000372	0.00100	0.00100	1	01/31/2019 09:41	WG1229409
Nitrobenzene	U		0.000367	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
Phenanthrene	U		0.000366	0.00100	0.00100	1	01/31/2019 09:41	WG1229409
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	01/31/2019 09:41	WG1229409
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	01/31/2019 09:41	WG1229409
Di-n-butyl phthalate	U		0.000266	0.00300	0.00300	1	01/31/2019 09:41	WG1229409
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	01/31/2019 09:41	WG1229409
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	01/31/2019 09:41	WG1229409
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	01/31/2019 09:41	WG1229409
Pyrene	U		0.000330	0.00100	0.00100	1	01/31/2019 09:41	WG1229409
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	01/31/2019 09:41	WG1229409

Semi Volatile Organic Compounds (GC/MS) by Method 8270 C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
2-Methylphenol	U		0.000312	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
4-Chloroaniline	U	J3 J4	0.000382	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
Phenol	U		0.000334	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	01/31/2019 09:41	WG1229409
(S) 2-Fluorophenol	*56.0*				*10.0-120*		*01/31/2019 09:41*	WG1229409
(S) Phenol-d5	*33.2*				*10.0-120*		*01/31/2019 09:41*	WG1229409
(S) Nitrobenzene-d5	*62.5*				*10.0-127*		*01/31/2019 09:41*	WG1229409
(S) 2-Fluorobiphenyl	*70.3*				*10.0-130*		*01/31/2019 09:41*	WG1229409
(S) 2,4,6-Tribromophenol	*62.0*				*10.0-155*		*01/31/2019 09:41*	WG1229409
(S) p-Terphenyl-d14	*75.7*				*10.0-128*		*01/31/2019 09:41*	WG1229409

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	01/26/2019 23:21	WG1228944
Benzene	U		0.000331	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	01/26/2019 23:21	WG1228944
Bromoform	U		0.000469	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
Bromomethane	U		0.000866	0.00500	0.00500	1	01/26/2019 23:21	WG1228944
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
Carbon disulfide	U	J3	0.000275	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
Chlorobenzene	U		0.000348	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
Chloroethane	U		0.000453	0.00500	0.00500	1	01/26/2019 23:21	WG1228944
Chloroform	U		0.000324	0.00500	0.00500	1	01/26/2019 23:21	WG1228944
Chloromethane	U		0.000276	0.00250	0.00250	1	01/26/2019 23:21	WG1228944
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
Ethylbenzene	U		0.000384	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
2-Hexanone	U		0.00382	0.0100	0.0100	1	01/26/2019 23:21	WG1228944
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	01/26/2019 23:21	WG1228944
Methylene Chloride	U		0.00100	0.00500	0.00500	1	01/26/2019 23:21	WG1228944
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	01/26/2019 23:21	WG1228944
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
Naphthalene	U		0.00100	0.00500	0.00500	1	01/26/2019 23:21	WG1228944
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
Styrene	U		0.000307	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
Toluene	U		0.000412	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
Trichloroethene	U		0.000398	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
Vinyl chloride	U		0.000259	0.00100	0.00100	1	01/26/2019 23:21	WG1228944
Xylenes, Total	U		0.00106	0.00300	0.00300	1	01/26/2019 23:21	WG1228944
(S) Toluene-d8	*112*				*80.0-120*		*01/26/2019 23:21*	WG1228944
(S) Dibromofluoromethane	*98.1*				*75.0-120*		*01/26/2019 23:21*	WG1228944
(S) 4-Bromofluorobenzene	*104*				*77.0-126*		*01/26/2019 23:21*	WG1228944

Method Blank (MB)

(MB) R3380364-1 01/30/19 11:45

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		2.82	10.0

L1064582-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1064582-04 01/30/19 11:45 • (DUP) R3380364-3 01/30/19 11:45

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1100	1100	1	0.727		5

Laboratory Control Sample (LCS)

(LCS) R3380364-2 01/30/19 11:45

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8380	95.2	85.0-115	

Method Blank (MB)

(MB) R3380361-1 01/31/19 13:37

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	4.27	J	2.71	20.0

Sample Narrative:

BLANK: Endpoint pH 4.5

L1064247-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1064247-01 01/31/19 13:46 • (DUP) R3380361-3 01/31/19 13:53

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	57.1	57.5	1	0.684		20

Sample Narrative:

OS: Endpoint pH 4.5 HEADSPACE

DUP: Endpoint pH 4.5

L1064582-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1064582-04 01/31/19 16:16 • (DUP) R3380361-5 01/31/19 16:23

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	176	176	1	0.167		20

Sample Narrative:

OS: Endpoint pH 4.5 HEADSPACE

DUP: Endpoint pH 4.5

Laboratory Control Sample (LCS)

(LCS) R3380361-4 01/31/19 15:01

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100	98.9	98.9	85.0-115	

Sample Narrative:

LCS: Endpoint pH 4.5

Method Blank (MB)

(MB) R3380986-1 02/04/19 09:50

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Nitrate-Nitrite	U		0.0197	0.100

L1064713-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1064713-02 02/04/19 11:11 • (DUP) R3380986-6 02/04/19 11:13

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Nitrate-Nitrite	0.638	0.661	1	3.54		20

Laboratory Control Sample (LCS)

(LCS) R3380986-2 02/04/19 09:52

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Nitrate-Nitrite	4.00	4.05	101	90.0-110	

L1064582-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1064582-01 02/04/19 11:01 • (MS) R3380986-4 02/04/19 11:02 • (MSD) R3380986-5 02/04/19 11:04

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Nitrate-Nitrite	2.50	2.66	3.86	4.56	48.3	76.0	1	90.0-110	J6	J6	16.5	20

L1064744-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1064744-02 02/04/19 11:28 • (MS) R3380986-7 02/04/19 11:29

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
	mg/l	mg/l	mg/l	%		%	
Nitrate-Nitrite	2.50	ND	1.40	53.2	1	90.0-110	J6

Method Blank (MB)

(MB) R3380433-1 01/31/19 15:31

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.0519	1.00
Fluoride	U		0.00990	0.100
Sulfate	U		0.0774	5.00

L1064432-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1064432-01 01/31/19 16:19 • (DUP) R3380433-3 01/31/19 16:34

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	47.2	47.3	1	0.305		15
Fluoride	0.242	0.240	1	0.623		15
Sulfate	28.9	29.0	1	0.388		15

L1064526-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1064526-03 01/31/19 20:25 • (DUP) R3380433-5 01/31/19 20:40

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	22.3	22.1	1	0.726		15
Fluoride	0.175	0.174	1	0.804		15
Sulfate	56.9	56.5	1	0.754		15

Laboratory Control Sample (LCS)

(LCS) R3380433-2 01/31/19 15:46

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	39.2	97.9	80.0-120	
Fluoride	8.00	8.00	100	80.0-120	
Sulfate	40.0	40.1	100	80.0-120	

L1064432-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1064432-01 01/31/19 16:19 • (MS) R3380433-4 01/31/19 16:49

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	47.2	96.4	98.5	1	80.0-120	
Fluoride	5.00	0.242	5.06	96.3	1	80.0-120	
Sulfate	50.0	28.9	79.1	101	1	80.0-120	

L1064582-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1064582-01 01/31/19 20:56 • (MS) R3380433-6 01/31/19 21:42 • (MSD) R3380433-7 01/31/19 21:57

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	109	155	157	92.3	95.2	1	80.0-120	E	E	0.947	15
Fluoride	5.00	0.861	5.66	5.73	96.0	97.5	1	80.0-120			1.30	15
Sulfate	50.0	80.8	128	129	94.8	96.5	1	80.0-120	E	E	0.640	15

Method Blank (MB)

(MB) R3379366-1 01/29/19 08:55

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Mercury	U		0.0000490	0.000200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3379366-2 01/29/19 08:58 • (LCSD) R3379366-3 01/29/19 09:00

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Mercury	0.00300	0.00252	0.00293	83.9	97.7	80.0-120			15.1	20

L1064582-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1064582-01 01/29/19 09:03 • (MS) R3379366-4 01/29/19 09:05 • (MSD) R3379366-5 01/29/19 09:07

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Mercury	0.00300	U	0.00292	0.00283	97.4	94.4	1	75.0-125			3.10	20

Method Blank (MB)

(MB) R3379422-1 01/29/19 10:15

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Aluminum,Dissolved	U		0.00515	0.100
Arsenic,Dissolved	U		0.000250	0.00200
Barium,Dissolved	U		0.000360	0.00500
Cadmium,Dissolved	U		0.000160	0.00100
Calcium,Dissolved	U		0.0460	1.00
Chromium,Dissolved	U		0.000540	0.00200
Copper,Dissolved	0.000571	J	0.000520	0.00500
Cobalt,Dissolved	U		0.000260	0.00200
Iron,Dissolved	U		0.0150	0.100
Lead,Dissolved	U		0.000240	0.00200
Magnesium,Dissolved	U		0.100	1.00
Manganese,Dissolved	U		0.000250	0.00500
Molybdenum,Dissolved	U		0.000140	0.00500
Nickel,Dissolved	0.000580	J	0.000350	0.00200
Potassium,Dissolved	U		0.0370	1.00
Selenium,Dissolved	U		0.000380	0.00200
Silver,Dissolved	U		0.000310	0.00200
Sodium,Dissolved	U		0.110	1.00
Uranium,Dissolved	U		0.000330	0.0100
Zinc,Dissolved	U		0.00256	0.0250

Method Blank (MB)

(MB) R3379680-1 01/29/19 20:25

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Boron,Dissolved	0.00189	J	0.00150	0.0200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3379422-2 01/29/19 10:20 • (LCSD) R3379422-3 01/29/19 10:25

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Aluminum,Dissolved	5.00	5.03	4.99	101	99.7	80.0-120			0.824	20
Arsenic,Dissolved	0.0500	0.0509	0.0504	102	101	80.0-120			0.983	20
Barium,Dissolved	0.0500	0.0487	0.0499	97.4	99.7	80.0-120			2.39	20
Cadmium,Dissolved	0.0500	0.0505	0.0492	101	98.3	80.0-120			2.65	20
Calcium,Dissolved	5.00	5.09	5.05	102	101	80.0-120			0.842	20
Chromium,Dissolved	0.0500	0.0515	0.0516	103	103	80.0-120			0.364	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3379422-2 01/29/19 10:20 • (LCSD) R3379422-3 01/29/19 10:25

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Copper,Dissolved	0.0500	0.0522	0.0532	104	106	80.0-120			1.89	20
Cobalt,Dissolved	0.0500	0.0531	0.0529	106	106	80.0-120			0.410	20
Iron,Dissolved	5.00	5.11	5.10	102	102	80.0-120			0.176	20
Lead,Dissolved	0.0500	0.0502	0.0509	100	102	80.0-120			1.40	20
Magnesium,Dissolved	5.00	5.12	5.09	102	102	80.0-120			0.659	20
Manganese,Dissolved	0.0500	0.0511	0.0512	102	102	80.0-120			0.240	20
Molybdenum,Dissolved	0.0500	0.0506	0.0498	101	99.5	80.0-120			1.63	20
Nickel,Dissolved	0.0500	0.0528	0.0541	106	108	80.0-120			2.51	20
Potassium,Dissolved	5.00	5.00	4.97	100	99.4	80.0-120			0.533	20
Selenium,Dissolved	0.0500	0.0521	0.0528	104	106	80.0-120			1.38	20
Silver,Dissolved	0.0500	0.0521	0.0519	104	104	80.0-120			0.260	20
Sodium,Dissolved	5.00	5.30	5.25	106	105	80.0-120			0.881	20
Uranium,Dissolved	0.0500	0.0495	0.0500	98.9	100	80.0-120			1.07	20
Zinc,Dissolved	0.0500	0.0554	0.0536	111	107	80.0-120			3.43	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3379680-2 01/29/19 20:29 • (LCSD) R3379680-3 01/29/19 20:34

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Boron,Dissolved	0.0500	0.0456	0.0509	91.2	102	80.0-120			11.0	20

L1064582-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1064582-01 01/29/19 10:29 • (MS) R3379422-5 01/29/19 10:38 • (MSD) R3379422-6 01/29/19 10:43

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aluminum,Dissolved	5.00	0.0301	4.88	4.94	97.0	98.2	1	75.0-125			1.15	20
Arsenic,Dissolved	0.0500	0.00520	0.0544	0.0546	98.4	98.9	1	75.0-125			0.429	20
Barium,Dissolved	0.0500	0.0908	0.140	0.138	97.4	94.5	1	75.0-125			1.04	20
Cadmium,Dissolved	0.0500	0.000279	0.0483	0.0500	96.0	99.5	1	75.0-125			3.56	20
Calcium,Dissolved	5.00	100	105	104	98.9	81.1	1	75.0-125			0.847	20
Chromium,Dissolved	0.0500	0.00585	0.0551	0.0552	98.4	98.7	1	75.0-125			0.268	20
Copper,Dissolved	0.0500	0.00249	0.0514	0.0517	97.8	98.4	1	75.0-125			0.614	20
Cobalt,Dissolved	0.0500	0.000346	0.0510	0.0514	101	102	1	75.0-125			0.791	20
Potassium,Dissolved	5.00	2.06	6.98	6.97	98.3	98.2	1	75.0-125			0.0841	20
Iron,Dissolved	5.00	0.0297	4.89	4.93	97.2	98.1	1	75.0-125			0.893	20
Lead,Dissolved	0.0500	0.000666	0.0500	0.0509	98.7	100	1	75.0-125			1.74	20
Magnesium,Dissolved	5.00	15.0	19.7	19.6	94.6	92.9	1	75.0-125			0.426	20

L1064582-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1064582-01 01/29/19 10:29 • (MS) R3379422-5 01/29/19 10:38 • (MSD) R3379422-6 01/29/19 10:43

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Manganese,Dissolved	0.0500	0.000402	0.0491	0.0480	97.4	95.3	1	75.0-125			2.24	20
Molybdenum,Dissolved	0.0500	0.00287	0.0517	0.0528	97.6	99.8	1	75.0-125			2.08	20
Nickel,Dissolved	0.0500	0.00104	0.0515	0.0512	101	100	1	75.0-125			0.715	20
Selenium,Dissolved	0.0500	0.00382	0.0559	0.0548	104	102	1	75.0-125			1.83	20
Silver,Dissolved	0.0500	U	0.0513	0.0512	103	102	1	75.0-125			0.147	20
Sodium,Dissolved	5.00	54.6	58.4	58.3	77.2	75.7	1	75.0-125			0.126	20
Uranium,Dissolved	0.0500	0.00231	0.0518	0.0526	98.9	101	1	75.0-125			1.53	20
Zinc,Dissolved	0.0500	0.0208	0.0717	0.0709	102	100	1	75.0-125			1.19	20

L1064582-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1064582-01 01/29/19 20:39 • (MS) R3379680-5 01/29/19 20:48 • (MSD) R3379680-6 01/29/19 20:52

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Boron,Dissolved	0.0500	0.137	0.188	0.192	101	109	1	75.0-125			2.15	20

Method Blank (MB)

(MB) R3379956-3 01/29/19 12:46

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TPH (GC/FID) Low Fraction	U		0.0314	0.100
(S) a,a,a-Trifluorotoluene(FID)	*104*			*78.0-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3379956-1 01/29/19 11:22 • (LCSD) R3379956-2 01/29/19 12:02

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	5.54	5.66	101	103	72.0-127			2.14	20
(S) a,a,a-Trifluorotoluene(FID)				*107*	*107*	*78.0-120*				

L1064582-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1064582-01 01/29/19 19:20 • (MS) R3379956-4 01/29/19 20:27 • (MSD) R3379956-5 01/29/19 20:49

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	U	4.17	4.03	75.8	73.3	1	10.0-160			3.27	22
(S) a,a,a-Trifluorotoluene(FID)					*106*	*106*		*78.0-120*				

Method Blank (MB)

(MB) R3379100-5 01/26/19 22:04

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0100	1.00
Benzene	U		0.000331	0.00100
Bromodichloromethane	U		0.000380	0.00125
Bromoform	U		0.000469	0.00100
Bromomethane	U		0.000866	0.00500
n-Butylbenzene	U		0.000361	0.00100
sec-Butylbenzene	U		0.000365	0.00100
tert-Butylbenzene	U		0.000399	0.00100
Carbon tetrachloride	U		0.000379	0.00100
Carbon disulfide	U		0.000275	0.00100
Chlorobenzene	U		0.000348	0.00100
Chlorodibromomethane	U		0.000327	0.00100
Chloroethane	U		0.000453	0.00500
Chloroform	U		0.000324	0.00500
Chloromethane	U		0.000276	0.00250
1,2-Dibromoethane	U		0.000381	0.00100
1,1-Dichloroethane	U		0.000259	0.00100
1,2-Dichloroethane	U		0.000361	0.00100
1,1-Dichloroethene	U		0.000398	0.00100
cis-1,2-Dichloroethene	U		0.000260	0.00100
trans-1,2-Dichloroethene	U		0.000396	0.00100
1,2-Dichloropropane	U		0.000306	0.00100
cis-1,3-Dichloropropene	U		0.000418	0.00100
trans-1,3-Dichloropropene	U		0.000419	0.00100
Ethylbenzene	U		0.000384	0.00100
Hexachloro-1,3-butadiene	U		0.000256	0.00100
2-Hexanone	U		0.00382	0.0100
Isopropylbenzene	U		0.000326	0.00100
p-Isopropyltoluene	U		0.000350	0.00100
2-Butanone (MEK)	U		0.00393	0.0100
Methylene Chloride	U		0.00100	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100
Methyl tert-butyl ether	U		0.000367	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.000349	0.00100
Styrene	U		0.000307	0.00100
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100
Tetrachloroethene	U		0.000372	0.00100
Toluene	U		0.000412	0.00100
1,1,1-Trichloroethane	U		0.000319	0.00100

Method Blank (MB)

(MB) R3379100-5 01/26/19 22:04

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,1,2-Trichloroethane	U		0.000383	0.00100
Trichloroethene	U		0.000398	0.00100
1,2,4-Trimethylbenzene	U		0.000373	0.00100
1,3,5-Trimethylbenzene	U		0.000387	0.00100
Vinyl chloride	U		0.000259	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	*114*			*80.0-120*
(S) Dibromofluoromethane	*99.7*			*75.0-120*
(S) 4-Bromofluorobenzene	*105*			*77.0-126*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3379100-1 01/26/19 20:27 • (LCSD) R3379100-2 01/26/19 20:46

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	0.167	0.162	133	129	19.0-160			3.04	27
Benzene	0.0250	0.0237	0.0257	95.0	103	70.0-123			7.93	20
Bromodichloromethane	0.0250	0.0225	0.0244	90.1	97.6	75.0-120			8.07	20
Bromoform	0.0250	0.0221	0.0250	88.5	99.9	68.0-132			12.1	20
Bromomethane	0.0250	0.0127	0.0142	50.8	56.9	10.0-160			11.2	25
n-Butylbenzene	0.0250	0.0245	0.0284	97.9	114	73.0-125			14.9	20
sec-Butylbenzene	0.0250	0.0241	0.0273	96.5	109	75.0-125			12.3	20
tert-Butylbenzene	0.0250	0.0255	0.0289	102	116	76.0-124			12.3	20
Carbon tetrachloride	0.0250	0.0231	0.0249	92.3	99.5	68.0-126			7.49	20
Chlorobenzene	0.0250	0.0274	0.0300	109	120	80.0-121			9.27	20
Chlorodibromomethane	0.0250	0.0240	0.0256	95.9	102	77.0-125			6.53	20
Chloroethane	0.0250	0.0201	0.0197	80.6	78.9	47.0-150			2.14	20
Chloroform	0.0250	0.0235	0.0244	94.0	97.6	73.0-120			3.74	20
Chloromethane	0.0250	0.0131	0.0122	52.5	48.7	41.0-142			7.53	20
1,2-Dibromoethane	0.0250	0.0262	0.0282	105	113	80.0-122			7.56	20
Carbon disulfide	0.0250	0.0200	0.0248	80.2	99.2	61.0-128		J3	21.2	20
1,1-Dichloroethane	0.0250	0.0249	0.0267	99.7	107	70.0-126			6.80	20
1,2-Dichloroethane	0.0250	0.0238	0.0252	95.2	101	70.0-128			5.53	20
1,1-Dichloroethene	0.0250	0.0225	0.0252	90.0	101	71.0-124			11.4	20
cis-1,2-Dichloroethene	0.0250	0.0237	0.0253	94.8	101	73.0-120			6.56	20
trans-1,2-Dichloroethene	0.0250	0.0221	0.0247	88.5	98.7	73.0-120			10.9	20
1,2-Dichloropropane	0.0250	0.0244	0.0269	97.4	108	77.0-125			10.0	20
cis-1,3-Dichloropropene	0.0250	0.0260	0.0280	104	112	80.0-123			7.62	20
trans-1,3-Dichloropropene	0.0250	0.0272	0.0296	109	119	78.0-124			8.57	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3379100-1 01/26/19 20:27 • (LCSD) R3379100-2 01/26/19 20:46

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	0.0250	0.0264	0.0292	106	117	79.0-123			9.81	20
Hexachloro-1,3-butadiene	0.0250	0.0278	0.0322	111	129	54.0-138			14.5	20
Isopropylbenzene	0.0250	0.0245	0.0276	98.0	111	76.0-127			12.0	20
p-Isopropyltoluene	0.0250	0.0255	0.0291	102	117	76.0-125			13.2	20
2-Butanone (MEK)	0.125	0.182	0.181	145	145	44.0-160			0.365	20
Methylene Chloride	0.0250	0.0219	0.0244	87.7	97.7	67.0-120			10.8	20
4-Methyl-2-pentanone (MIBK)	0.125	0.167	0.172	134	137	68.0-142			2.65	20
Methyl tert-butyl ether	0.0250	0.0237	0.0246	95.0	98.3	68.0-125			3.39	20
Naphthalene	0.0250	0.0216	0.0251	86.5	101	54.0-135			15.0	20
2-Hexanone	0.125	0.167	0.172	134	137	67.0-149			2.71	20
n-Propylbenzene	0.0250	0.0248	0.0282	99.3	113	77.0-124			12.9	20
Styrene	0.0250	0.0259	0.0302	104	121	73.0-130			15.0	20
1,1,2,2-Tetrachloroethane	0.0250	0.0237	0.0262	94.9	105	65.0-130			9.94	20
Tetrachloroethene	0.0250	0.0285	0.0308	114	123	72.0-132			7.68	20
Toluene	0.0250	0.0260	0.0282	104	113	79.0-120			8.29	20
1,1,1-Trichloroethane	0.0250	0.0233	0.0257	93.3	103	73.0-124			9.65	20
1,1,2-Trichloroethane	0.0250	0.0254	0.0276	101	110	80.0-120			8.34	20
Trichloroethene	0.0250	0.0250	0.0273	100	109	78.0-124			8.89	20
1,2,4-Trimethylbenzene	0.0250	0.0241	0.0273	96.6	109	76.0-121			12.2	20
1,3,5-Trimethylbenzene	0.0250	0.0238	0.0269	95.3	108	76.0-122			12.2	20
Vinyl chloride	0.0250	0.0250	0.0235	100	94.0	67.0-131			6.18	20
Xylenes, Total	0.0750	0.0794	0.0877	106	117	79.0-123			9.93	20
(S) Toluene-d8				*111*	*110*	*80.0-120*				
(S) Dibromofluoromethane				*99.3*	*98.5*	*75.0-120*				
(S) 4-Bromofluorobenzene				*101*	*105*	*77.0-126*				

L1064582-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1064582-01 01/27/19 03:54 • (MS) R3379100-6 01/27/19 05:13 • (MSD) R3379100-7 01/27/19 05:33

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	U	0.143	0.136	115	109	1	10.0-160			5.15	35
Benzene	0.0250	U	0.0258	0.0203	103	81.2	1	17.0-158			23.9	27
Bromodichloromethane	0.0250	U	0.0238	0.0193	95.1	77.3	1	31.0-150			20.7	27
Bromoform	0.0250	U	0.0233	0.0202	93.1	80.6	1	29.0-150			14.3	29
Bromomethane	0.0250	U	0.0150	0.0125	60.0	50.1	1	10.0-160			18.0	38
n-Butylbenzene	0.0250	U	0.0262	0.0212	105	84.7	1	31.0-150			21.4	30
sec-Butylbenzene	0.0250	U	0.0261	0.0204	104	81.5	1	33.0-155			24.7	29
tert-Butylbenzene	0.0250	U	0.0268	0.0212	107	84.7	1	34.0-153			23.6	28

L1064582-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1064582-01 01/27/19 03:54 • (MS) R3379100-6 01/27/19 05:13 • (MSD) R3379100-7 01/27/19 05:33

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Carbon tetrachloride	0.0250	U	0.0253	0.0189	101	75.4	1	23.0-159		J3	29.2	28
Chlorobenzene	0.0250	U	0.0298	0.0241	119	96.3	1	33.0-152			21.1	27
Chlorodibromomethane	0.0250	U	0.0246	0.0219	98.5	87.7	1	37.0-149			11.7	27
Chloroethane	0.0250	U	0.0176	0.0138	70.3	55.1	1	10.0-160			24.3	30
Chloroform	0.0250	U	0.0240	0.0189	95.8	75.7	1	29.0-154			23.4	28
Chloromethane	0.0250	U	0.0114	0.00906	45.6	36.3	1	10.0-160			22.9	29
1,2-Dibromoethane	0.0250	U	0.0275	0.0250	110	99.9	1	34.0-147			9.78	27
Carbon disulfide	0.0250	U	0.0248	0.0186	99.1	74.3	1	10.0-156		J3	28.6	28
1,1-Dichloroethane	0.0250	U	0.0268	0.0214	107	85.6	1	25.0-158			22.5	27
1,2-Dichloroethane	0.0250	U	0.0249	0.0211	99.6	84.4	1	29.0-151			16.5	27
1,1-Dichloroethene	0.0250	U	0.0263	0.0194	105	77.5	1	11.0-160		J3	30.5	29
cis-1,2-Dichloroethene	0.0250	U	0.0257	0.0204	103	81.6	1	10.0-160			23.0	27
trans-1,2-Dichloroethene	0.0250	U	0.0254	0.0187	102	74.7	1	17.0-153		J3	30.5	27
1,2-Dichloropropane	0.0250	U	0.0270	0.0214	108	85.6	1	30.0-156			23.3	27
cis-1,3-Dichloropropene	0.0250	U	0.0271	0.0228	108	91.3	1	34.0-149			16.9	28
trans-1,3-Dichloropropene	0.0250	U	0.0276	0.0237	110	94.7	1	32.0-149			15.3	28
Ethylbenzene	0.0250	U	0.0285	0.0225	114	89.9	1	30.0-155			23.5	27
Hexachloro-1,3-butadiene	0.0250	U	0.0291	0.0246	116	98.2	1	20.0-154			17.0	34
Isopropylbenzene	0.0250	U	0.0257	0.0200	103	80.1	1	28.0-157			24.9	27
p-Isopropyltoluene	0.0250	U	0.0268	0.0212	107	85.0	1	30.0-154			23.1	29
2-Butanone (MEK)	0.125	U	0.179	0.166	143	133	1	10.0-160			7.81	32
Methylene Chloride	0.0250	U	0.0242	0.0197	96.8	78.9	1	23.0-144			20.5	28
4-Methyl-2-pentanone (MIBK)	0.125	U	0.172	0.162	138	129	1	29.0-160			6.44	29
Methyl tert-butyl ether	0.0250	U	0.0244	0.0216	97.5	86.6	1	28.0-150			11.9	29
Naphthalene	0.0250	U	0.0235	0.0222	93.9	88.7	1	12.0-156			5.68	35
n-Propylbenzene	0.0250	U	0.0262	0.0206	105	82.4	1	31.0-154			23.7	28
Styrene	0.0250	U	0.0284	0.0239	114	95.5	1	33.0-155			17.4	28
1,1,2,2-Tetrachloroethane	0.0250	U	0.0262	0.0239	105	95.7	1	33.0-150			9.08	28
Tetrachloroethene	0.0250	U	0.0304	0.0231	122	92.5	1	10.0-160		J3	27.2	27
2-Hexanone	0.125	U	0.173	0.163	138	131	1	21.0-160			5.69	29
Toluene	0.0250	U	0.0284	0.0224	114	89.7	1	26.0-154			23.6	28
1,1,1-Trichloroethane	0.0250	U	0.0259	0.0193	104	77.4	1	23.0-160		J3	29.2	28
1,1,2-Trichloroethane	0.0250	U	0.0273	0.0242	109	96.8	1	35.0-147			12.1	27
Trichloroethene	0.0250	U	0.0271	0.0209	108	83.7	1	10.0-160		J3	25.7	25
1,2,4-Trimethylbenzene	0.0250	U	0.0250	0.0201	100	80.5	1	26.0-154			21.6	27
1,3,5-Trimethylbenzene	0.0250	U	0.0245	0.0195	98.0	78.0	1	28.0-153			22.7	27
Vinyl chloride	0.0250	U	0.0230	0.0173	92.1	69.1	1	10.0-160		J3	28.6	27
Xylenes, Total	0.0750	U	0.0849	0.0674	113	89.9	1	29.0-154			23.0	28
(S) Toluene-d8					*109*	*113*		*80.0-120*				
(S) Dibromofluoromethane					*99.1*	*99.6*		*75.0-120*				

L1064582-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1064582-01 01/27/19 03:54 • (MS) R3379100-6 01/27/19 05:13 • (MSD) R3379100-7 01/27/19 05:33

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
(S) 4-Bromofluorobenzene					*101*	*103*		*77.0-126*				

Method Blank (MB)

(MB) R3379691-1 01/29/19 13:23

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TPH (GC/FID) High Fraction	U		0.0247	0.100
(S) o-Terphenyl	*78.0*			*31.0-160*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3379691-2 01/29/19 13:40 • (LCSD) R3379691-3 01/29/19 13:57

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) High Fraction	1.50	1.38	1.41	92.0	94.0	50.0-150			2.15	20
(S) o-Terphenyl				*78.0*	*79.5*	*31.0-160*				

L1064582-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1064582-01 01/29/19 15:06 • (MS) R3379691-4 01/29/19 15:24 • (MSD) R3379691-5 01/29/19 15:41

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) High Fraction	1.43	U	1.25	1.40	87.4	97.9	1	50.0-150			11.3	20
(S) o-Terphenyl					*72.1*	*82.1*		*31.0-160*				

Method Blank (MB)

(MB) R3380237-3 01/31/19 02:04

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acenaphthene	U		0.000316	0.00100
Acenaphthylene	U		0.000309	0.00100
Acetophenone	U		0.00247	0.0100
Anthracene	U		0.000291	0.00100
Benzo(a)anthracene	0.0000836	J	0.0000510	0.00100
Atrazine	U		0.000260	0.0100
Benzo(b)fluoranthene	U		0.0000896	0.00100
Benzaldehyde	U		0.00140	0.0100
Benzo(k)fluoranthene	U		0.000355	0.00100
Benzo(g,h,i)perylene	U		0.00000227	0.00100
Benzo(a)pyrene	0.000112	J	0.0000381	0.000200
Bis(2-chlorethoxy)methane	U		0.000329	0.0100
Bis(2-chloroethyl)ether	U		0.00162	0.0100
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100
4-Bromophenyl-phenylether	U		0.000335	0.0100
Biphenyl	U		0.000325	0.0100
2-Chloronaphthalene	U		0.000330	0.00100
4-Chlorophenyl-phenylether	U		0.000303	0.0100
Chrysene	U		0.000332	0.00100
Dibenz(a,h)anthracene	U		0.0000644	0.000200
Caprolactam	U		0.00259	0.0100
Carbazole	U		0.000260	0.0100
4-Chloroaniline	U		0.000382	0.0100
3,3-Dichlorobenzidine	U		0.00202	0.0100
2,4-Dinitrotoluene	U		0.00165	0.0100
2,6-Dinitrotoluene	U		0.000279	0.0100
Fluoranthene	U		0.000310	0.00100
Dibenzofuran	U		0.000338	0.0100
Fluorene	U		0.000323	0.00100
Hexachlorobenzene	U		0.000341	0.00100
Hexachloro-1,3-butadiene	U		0.000329	0.0100
Hexachlorocyclopentadiene	U		0.00233	0.0100
Hexachloroethane	U		0.000365	0.0100
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100
Isophorone	U		0.000272	0.0100
Naphthalene	U		0.000372	0.00100
Nitrobenzene	U		0.000367	0.0100
n-Nitrosodiphenylamine	U		0.00119	0.0100
n-Nitrosodi-n-propylamine	U		0.000403	0.0100
Phenanthrene	U		0.000366	0.00100

Method Blank (MB)

(MB) R3380237-3 01/31/19 02:04

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzylbutyl phthalate	U		0.000275	0.00300
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300
Di-n-butyl phthalate	U		0.000266	0.00300
1-Methylnaphthalene	U		0.000332	0.00100
Diethyl phthalate	U		0.000282	0.00300
2-Methylnaphthalene	U		0.000311	0.00100
Dimethyl phthalate	U		0.000283	0.00300
Di-n-octyl phthalate	U		0.000278	0.00300
2-Nitroaniline	U		0.00190	0.0100
Pyrene	U		0.000330	0.00100
1,2,4-Trichlorobenzene	U		0.000355	0.0100
3-Nitroaniline	U		0.000308	0.0100
4-Nitroaniline	U		0.000349	0.0100
4-Chloro-3-methylphenol	U		0.000263	0.0100
2-Chlorophenol	U		0.000283	0.0100
2-Nitrophenol	U		0.000320	0.0100
4-Nitrophenol	U		0.00201	0.0100
Pentachlorophenol	U		0.000313	0.0100
Phenol	U		0.000334	0.0100
2,4,6-Trichlorophenol	U		0.000297	0.0100
2,4-Dichlorophenol	U		0.000284	0.0100
2,4-Dimethylphenol	U		0.000624	0.0100
2-Methylphenol	U		0.000312	0.0100
3&4-Methyl Phenol	U		0.000266	0.0100
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100
2,4-Dinitrophenol	U		0.00325	0.0100
2,4,5-Trichlorophenol	U		0.000236	0.0100
(S) Nitrobenzene-d5	*43.2*			*10.0-127*
(S) 2-Fluorobiphenyl	*51.0*			*10.0-130*
(S) p-Terphenyl-d14	*58.1*			*10.0-128*
(S) Phenol-d5	*23.4*			*10.0-120*
(S) 2-Fluorophenol	*39.7*			*10.0-120*
(S) 2,4,6-Tribromophenol	*39.2*			*10.0-155*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3380237-1 01/31/19 01:15 • (LCSD) R3380237-2 01/31/19 01:40

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.0500	0.0340	0.0308	68.0	61.6	41.0-120			9.88	22
Acenaphthylene	0.0500	0.0323	0.0292	64.6	58.4	43.0-120			10.1	22
Anthracene	0.0500	0.0349	0.0328	69.8	65.6	45.0-120			6.20	20
Benzo(a)anthracene	0.0500	0.0356	0.0325	71.2	65.0	47.0-120			9.10	20
Benzo(b)fluoranthene	0.0500	0.0361	0.0336	72.2	67.2	46.0-120			7.17	20
Benzo(k)fluoranthene	0.0500	0.0367	0.0337	73.4	67.4	46.0-120			8.52	21
Benzo(g,h,i)perylene	0.0500	0.0371	0.0338	74.2	67.6	48.0-121			9.31	20
Benzo(a)pyrene	0.0500	0.0355	0.0326	71.0	65.2	47.0-120			8.52	20
Bis(2-chlorethoxy)methane	0.0500	0.0295	0.0271	59.0	54.2	33.0-120			8.48	24
Bis(2-chloroethyl)ether	0.0500	0.0356	0.0317	71.2	63.4	23.0-120			11.6	33
Bis(2-chloroisopropyl)ether	0.0500	0.0343	0.0311	68.6	62.2	28.0-120			9.79	31
4-Bromophenyl-phenylether	0.0500	0.0363	0.0334	72.6	66.8	45.0-120			8.32	20
2-Chloronaphthalene	0.0500	0.0333	0.0302	66.6	60.4	37.0-120			9.76	25
4-Chlorophenyl-phenylether	0.0500	0.0342	0.0310	68.4	62.0	44.0-120			9.82	20
Chrysene	0.0500	0.0363	0.0334	72.6	66.8	48.0-120			8.32	20
Dibenz(a,h)anthracene	0.0500	0.0363	0.0338	72.6	67.6	47.0-120			7.13	20
3,3-Dichlorobenzidine	0.100	0.0709	0.0656	70.9	65.6	44.0-120			7.77	20
2,4-Dinitrotoluene	0.0500	0.0397	0.0374	79.4	74.8	49.0-124			5.97	20
2,6-Dinitrotoluene	0.0500	0.0355	0.0333	71.0	66.6	46.0-120			6.40	21
Acetophenone	0.0500	0.0348	0.0312	69.6	62.4	29.0-120			10.9	28
Fluoranthene	0.0500	0.0362	0.0331	72.4	66.2	51.0-120			8.95	20
Fluorene	0.0500	0.0350	0.0320	70.0	64.0	47.0-120			8.96	20
Hexachlorobenzene	0.0500	0.0357	0.0335	71.4	67.0	44.0-120			6.36	20
Atrazine	0.0500	0.0341	0.0326	68.2	65.2	39.0-141			4.50	20
Hexachloro-1,3-butadiene	0.0500	0.0282	0.0253	56.4	50.6	19.0-120			10.8	32
Benzaldehyde	0.0500	0.0540	0.0479	108	95.8	10.0-160			12.0	40
Hexachlorocyclopentadiene	0.0500	0.0221	0.0190	44.2	38.0	15.0-120			15.1	31
Hexachloroethane	0.0500	0.0320	0.0285	64.0	57.0	15.0-120			11.6	37
Indeno(1,2,3-cd)pyrene	0.0500	0.0362	0.0329	72.4	65.8	49.0-122			9.55	20
Isophorone	0.0500	0.0289	0.0267	57.8	53.4	36.0-120			7.91	23
Naphthalene	0.0500	0.0295	0.0269	59.0	53.8	27.0-120			9.22	27
Nitrobenzene	0.0500	0.0297	0.0273	59.4	54.6	27.0-120			8.42	29
Biphenyl	0.0500	0.0328	0.0292	65.6	58.4	38.0-120			11.6	27
n-Nitrosodiphenylamine	0.0500	0.0365	0.0338	73.0	67.6	47.0-120			7.68	20
n-Nitrosodi-n-propylamine	0.0500	0.0317	0.0284	63.4	56.8	31.0-120			11.0	28
Phenanthrene	0.0500	0.0368	0.0333	73.6	66.6	46.0-120			9.99	20
Benzylbutyl phthalate	0.0500	0.0338	0.0317	67.6	63.4	43.0-121			6.41	20
Bis(2-ethylhexyl)phthalate	0.0500	0.0347	0.0320	69.4	64.0	43.0-122			8.10	20
Caprolactam	0.0500	0.00797	0.00782	15.9	15.6	10.0-120			1.90	26
Di-n-butyl phthalate	0.0500	0.0373	0.0350	74.6	70.0	49.0-121			6.36	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3380237-1 01/31/19 01:15 • (LCSD) R3380237-2 01/31/19 01:40

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Carbazole	0.0500	0.0391	0.0363	78.2	72.6	51.0-122			7.43	20
Diethyl phthalate	0.0500	0.0353	0.0326	70.6	65.2	48.0-122			7.95	20
4-Chloroaniline	0.0500	0.00339	0.00503	6.78	10.1	25.0-120	J4	J3 J4	39.0	25
Dimethyl phthalate	0.0500	0.0377	0.0336	75.4	67.2	48.0-120			11.5	20
Di-n-octyl phthalate	0.0500	0.0362	0.0338	72.4	67.6	42.0-125			6.86	20
Pyrene	0.0500	0.0347	0.0321	69.4	64.2	47.0-120			7.78	20
1,2,4-Trichlorobenzene	0.0500	0.0291	0.0261	58.2	52.2	24.0-120			10.9	29
Dibenzofuran	0.0500	0.0346	0.0309	69.2	61.8	44.0-120			11.3	22
4-Chloro-3-methylphenol	0.0500	0.0326	0.0292	65.2	58.4	40.0-120			11.0	21
2-Chlorophenol	0.0500	0.0344	0.0304	68.8	60.8	25.0-120			12.3	35
2,4-Dichlorophenol	0.0500	0.0333	0.0307	66.6	61.4	36.0-120			8.13	26
2,4-Dimethylphenol	0.0500	0.0307	0.0277	61.4	55.4	33.0-120			10.3	26
4,6-Dinitro-2-methylphenol	0.0500	0.0471	0.0438	94.2	87.6	38.0-138			7.26	25
2,4-Dinitrophenol	0.0500	0.0438	0.0408	87.6	81.6	10.0-120			7.09	39
1-Methylnaphthalene	0.0500	0.0303	0.0278	60.6	55.6	33.0-120			8.61	24
2-Methylnaphthalene	0.0500	0.0294	0.0273	58.8	54.6	33.0-120			7.41	25
2-Nitrophenol	0.0500	0.0353	0.0323	70.6	64.6	31.0-120			8.88	29
4-Nitrophenol	0.0500	0.0182	0.0159	36.4	31.8	10.0-120			13.5	33
2-Nitroaniline	0.0500	0.0372	0.0341	74.4	68.2	43.0-120			8.70	22
Pentachlorophenol	0.0500	0.0312	0.0286	62.4	57.2	23.0-120			8.70	25
3-Nitroaniline	0.0500	0.0307	0.0269	61.4	53.8	38.0-120			13.2	21
Phenol	0.0500	0.0161	0.0137	32.2	27.4	10.0-120			16.1	36
4-Nitroaniline	0.0500	0.0395	0.0370	79.0	74.0	18.0-160			6.54	21
2,4,6-Trichlorophenol	0.0500	0.0357	0.0328	71.4	65.6	42.0-120			8.47	23
3&4-Methyl Phenol	0.0500	0.0335	0.0303	67.0	60.6	31.0-120			10.0	30
2-Methylphenol	0.0500	0.0315	0.0286	63.0	57.2	28.0-120			9.65	29
2,4,5-Trichlorophenol	0.0500	0.0372	0.0344	74.4	68.8	44.0-120			7.82	22
(S) Nitrobenzene-d5				*50.8*	*48.2*	*10.0-127*				
(S) 2-Fluorobiphenyl				*67.3*	*59.9*	*10.0-130*				
(S) p-Terphenyl-d14				*69.8*	*65.1*	*10.0-128*				
(S) Phenol-d5				*31.8*	*27.3*	*10.0-120*				
(S) 2-Fluorophenol				*52.0*	*46.4*	*10.0-120*				
(S) 2,4,6-Tribromophenol				*71.0*	*66.0*	*10.0-155*				

L1064582-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1064582-01 01/31/19 05:40 • (MS) R3380237-4 01/31/19 06:04 • (MSD) R3380237-5 01/31/19 06:28

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetophenone	0.0500	U	0.0332	0.0356	66.4	71.2	1	20.0-120			6.98	35
Atrazine	0.0500	U	0.0320	0.0354	64.0	70.8	1	39.0-130			10.1	23
Benzaldehyde	0.0500	U	0.0483	0.0550	96.6	110	1	10.0-160			13.0	40
Biphenyl	0.0500	U	0.0310	0.0329	62.0	65.8	1	29.0-120			5.95	33
Caprolactam	0.0500	U	0.00839	0.00896	16.8	17.9	1	10.0-120			6.57	40
Carbazole	0.0500	U	0.0370	0.0397	74.0	79.4	1	38.0-127			7.04	21
4-Chloroaniline	0.0500	U	0.00943	0.00609	18.9	12.2	1	10.0-120		J3	43.0	31
Dibenzofuran	0.0500	U	0.0331	0.0353	66.2	70.6	1	32.0-120			6.43	26
Acenaphthene	0.0500	U	0.0328	0.0349	65.6	69.8	1	28.0-120			6.20	25
Acenaphthylene	0.0500	U	0.0314	0.0332	62.8	66.4	1	31.0-121			5.57	25
Anthracene	0.0500	U	0.0339	0.0359	67.8	71.8	1	36.0-120			5.73	23
Benzo(a)anthracene	0.0500	0.0000768	0.0333	0.0364	66.6	72.8	1	39.0-120			8.90	23
Benzo(b)fluoranthene	0.0500	U	0.0339	0.0367	67.8	73.4	1	37.0-120			7.93	23
Benzo(k)fluoranthene	0.0500	U	0.0342	0.0377	68.4	75.4	1	37.0-120			9.74	26
Benzo(g,h,i)perylene	0.0500	U	0.0345	0.0373	69.0	74.6	1	37.0-123			7.80	25
Benzo(a)pyrene	0.0500	0.000115	0.0336	0.0365	67.2	73.0	1	37.0-120			8.27	24
Bis(2-chlorethoxy)methane	0.0500	U	0.0284	0.0300	56.8	60.0	1	17.0-120			5.48	31
Bis(2-chloroethyl)ether	0.0500	U	0.0335	0.0356	67.0	71.2	1	14.0-120			6.08	33
Bis(2-chloroisopropyl)ether	0.0500	U	0.0334	0.0350	66.8	70.0	1	18.0-120			4.68	34
4-Bromophenyl-phenylether	0.0500	U	0.0351	0.0371	70.2	74.2	1	37.0-120			5.54	24
1-Methylnaphthalene	0.0500	U	0.0292	0.0315	58.4	63.0	1	11.0-120			7.58	27
2-Chloronaphthalene	0.0500	U	0.0320	0.0337	64.0	67.4	1	29.0-120			5.18	28
2-Methylnaphthalene	0.0500	U	0.0288	0.0305	57.6	61.0	1	17.0-120			5.73	28
4-Chlorophenyl-phenylether	0.0500	U	0.0335	0.0350	67.0	70.0	1	36.0-120			4.38	23
2-Nitroaniline	0.0500	U	0.0354	0.0389	70.8	77.8	1	33.0-120			9.42	27
Chrysene	0.0500	U	0.0345	0.0365	69.0	73.0	1	38.0-120			5.63	23
3-Nitroaniline	0.0500	U	0.0282	0.0320	56.4	64.0	1	20.0-120			12.6	27
4-Nitroaniline	0.0500	U	0.0360	0.0394	72.0	78.8	1	10.0-160			9.02	26
Dibenz(a,h)anthracene	0.0500	U	0.0342	0.0367	68.4	73.4	1	36.0-121			7.05	24
3,3-Dichlorobenzidine	0.100	U	0.0665	0.0731	66.5	73.1	1	10.0-134			9.46	30
2,4-Dinitrotoluene	0.0500	U	0.0371	0.0409	74.2	81.8	1	39.0-125			9.74	25
2,6-Dinitrotoluene	0.0500	U	0.0339	0.0368	67.8	73.6	1	36.0-120			8.20	27
Fluoranthene	0.0500	U	0.0336	0.0363	67.2	72.6	1	41.0-121			7.73	22
Fluorene	0.0500	U	0.0336	0.0357	67.2	71.4	1	37.0-120			6.06	24
Hexachlorobenzene	0.0500	U	0.0342	0.0367	68.4	73.4	1	35.0-122			7.05	24
Hexachloro-1,3-butadiene	0.0500	U	0.0273	0.0290	54.6	58.0	1	12.0-120			6.04	34
Hexachlorocyclopentadiene	0.0500	U	0.0207	0.0229	41.4	45.8	1	10.0-120			10.1	33
Hexachloroethane	0.0500	U	0.0304	0.0330	60.8	66.0	1	10.0-120			8.20	40
Indeno(1,2,3-cd)pyrene	0.0500	U	0.0337	0.0363	67.4	72.6	1	38.0-125			7.43	24
Isophorone	0.0500	U	0.0276	0.0301	55.2	60.2	1	21.0-120			8.67	27

L1064582-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1064582-01 01/31/19 05:40 • (MS) R3380237-4 01/31/19 06:04 • (MSD) R3380237-5 01/31/19 06:28

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Naphthalene	0.0500	U	0.0289	0.0300	57.8	60.0	1	10.0-120			3.74	31
Nitrobenzene	0.0500	U	0.0285	0.0302	57.0	60.4	1	12.0-120			5.79	30
n-Nitrosodiphenylamine	0.0500	U	0.0352	0.0372	70.4	74.4	1	37.0-120			5.52	24
n-Nitrosodi-n-propylamine	0.0500	U	0.0309	0.0332	61.8	66.4	1	16.0-120			7.18	30
Phenanthrene	0.0500	U	0.0351	0.0378	70.2	75.6	1	33.0-120			7.41	22
Benzylbutyl phthalate	0.0500	U	0.0327	0.0355	65.4	71.0	1	34.0-126			8.21	24
3&4-Methyl Phenol	0.0500	U	0.0303	0.0336	60.6	67.2	1	10.0-120			10.3	36
Bis(2-ethylhexyl)phthalate	0.0500	U	0.0330	0.0386	66.0	77.2	1	33.0-126			15.6	25
Di-n-butyl phthalate	0.0500	U	0.0355	0.0386	71.0	77.2	1	35.0-128			8.37	23
Diethyl phthalate	0.0500	U	0.0334	0.0359	66.8	71.8	1	39.0-125			7.22	24
Dimethyl phthalate	0.0500	U	0.0359	0.0374	71.8	74.8	1	37.0-120			4.09	24
Di-n-octyl phthalate	0.0500	U	0.0348	0.0383	69.6	76.6	1	25.0-135			9.58	26
Pyrene	0.0500	U	0.0331	0.0351	66.2	70.2	1	39.0-120			5.87	22
1,2,4-Trichlorobenzene	0.0500	U	0.0282	0.0299	56.4	59.8	1	15.0-120			5.85	31
2,4,5-Trichlorophenol	0.0500	U	0.0356	0.0385	71.2	77.0	1	33.0-120			7.83	31
4-Chloro-3-methylphenol	0.0500	U	0.0315	0.0338	63.0	67.6	1	26.0-120			7.04	27
2-Chlorophenol	0.0500	U	0.0319	0.0345	63.8	69.0	1	18.0-120			7.83	34
2,4-Dichlorophenol	0.0500	U	0.0319	0.0341	63.8	68.2	1	19.0-120			6.67	27
2,4-Dimethylphenol	0.0500	U	0.0292	0.0309	58.4	61.8	1	15.0-120			5.66	28
4,6-Dinitro-2-methylphenol	0.0500	U	0.0441	0.0488	88.2	97.6	1	10.0-144			10.1	39
2,4-Dinitrophenol	0.0500	U	0.0421	0.0467	84.2	93.4	1	10.0-120			10.4	40
2-Nitrophenol	0.0500	U	0.0343	0.0361	68.6	72.2	1	20.0-120			5.11	30
4-Nitrophenol	0.0500	U	0.0158	0.0178	31.6	35.6	1	10.0-120			11.9	40
Pentachlorophenol	0.0500	U	0.0303	0.0325	60.6	65.0	1	10.0-128			7.01	37
Phenol	0.0500	0.00218	0.0137	0.0152	23.0	26.0	1	10.0-120			10.4	40
2,4,6-Trichlorophenol	0.0500	U	0.0343	0.0364	68.6	72.8	1	26.0-120			5.94	31
2-Methylphenol	0.0500	U	0.0291	0.0317	58.2	63.4	1	10.0-120			8.55	30
(S) Nitrobenzene-d5					*49.5*	*52.5*		*10.0-127*				
(S) 2-Fluorobiphenyl					*64.3*	*67.7*		*10.0-130*				
(S) p-Terphenyl-d14					*66.0*	*72.1*		*10.0-128*				
(S) Phenol-d5					*26.8*	*29.3*		*10.0-120*				
(S) 2-Fluorophenol					*43.8*	*49.2*		*10.0-120*				
(S) 2,4,6-Tribromophenol					*65.0*	*70.0*		*10.0-155*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
MQL	Method Quantitation Limit.
ND	Not detected at the Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T 104704245-17-14
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

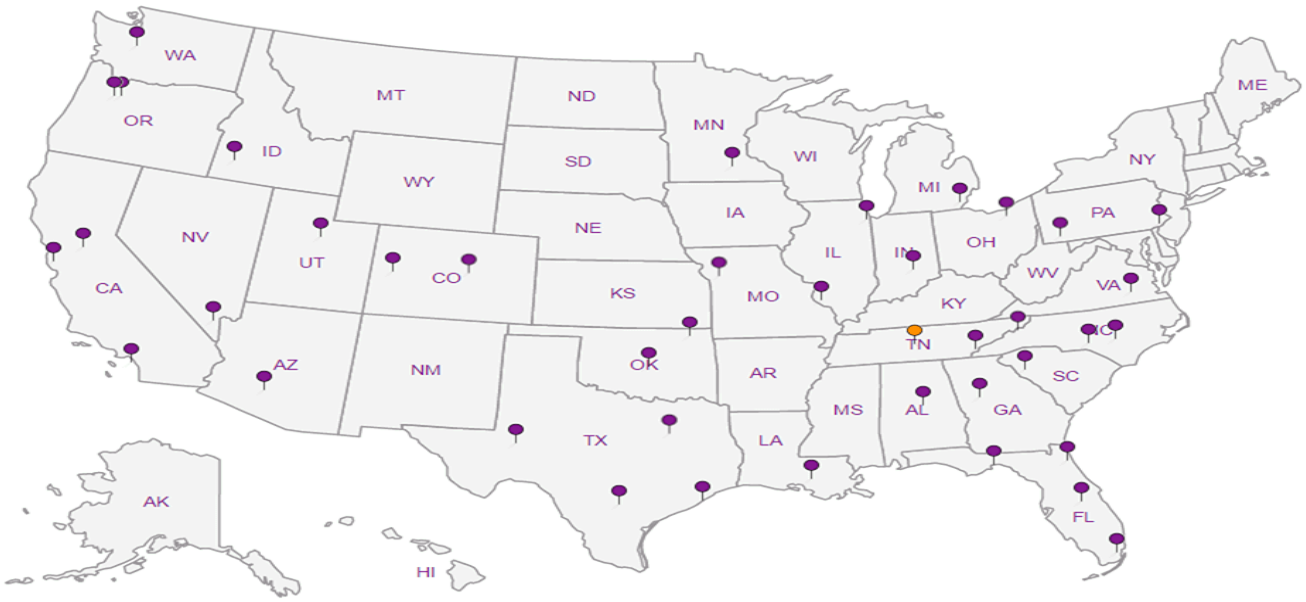
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



TRC Solutions - Austin, TX

505 E. Huntland Drive, Suite 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095

Pres Chk

Report to: Julie Speer

Email To: jspeer@trcsolutions.com

Project Description: Lovington Lea Refinery

City/State Collected:

Phone: 512-684-3176
Fax:

Client Project # ~~294318.0000.~~ JS 294319.0000

Lab Project # TRCATX-LOVINGTON NAV

Collected by (print): Jared Stoffel

Site/Facility ID #

P.O. #

Collected by (signature): Jared Stoffel

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	8270TX 100ml Amb NoPres	DROLVI 40mlAmb-HCl-BT	GRO 40mlAmb HCl	HG 250mlHDPE-HNO3	NAVAJOMETALSDISS 250mlHDPE-NoPres	NO2NO3 250mlHDPE-H2SO4	V8260 40mlAmb-HCl	WetChem 500mlHDPE-NoPres			Remarks	Sample # (lab only)
WW-East	Grab	GW		1/23/19	1015	13	X	X	X	X	X	X	X	X				-01
WW-East MS		GW			1015	13	X	X	X	X	X	X	X	X				-01
WW-East MSD		GW			1015	13	X	X	X	X	X	X	X	X				-02
WW-South		GW			1330	13	X	X	X	X	X	X	X	X				-03
WW-North		GW			1500	13	X	X	X	X	X	X	X	X				-04
Dup-01	↓	GW		↓	-	13	X	X	X	X	X	X	X	X				-05
TB-20190123	↓	GW		↓	-	2							X					

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other _____

Remarks: WetChem = ALK,CHLORIDE,FLUORIDE,SULFATE,TDS.
Lab filter NAVAJOMETALSDISS.

RAD SCREEN: <0.5 mR/Hr

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # SW

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Jared Stoffel	1/25/19	13:15	Kathleen Cl
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)
			Kwillis

Trip Blank Received: (Yes) No
HCl / MeoH
TBR

Temp: A3 °C Bottles Received: 78
0.5+.1=1.6

Date: 1/26/19 Time: 815

If preservation required by Login: Date/Time

Hold:

Condition: NCF / (OK)

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Chain of Custody Page ___ of ___

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 1064582
B203

Acctnum: TRCATX
Template: T118335
Prelogin: P690666
TSR: 526 - Chris McCord
PB:
Shipped Via:

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

April 24, 2019

TRC Solutions - Austin, TX

Sample Delivery Group:	L1086362
Samples Received:	04/05/2019
Project Number:	330769.0000.0000
Description:	Lovington Lea Refinery

Report To: Julie Speer
505 E. Huntland Drive, Suite 250
Austin, TX 78752

Entire Report Reviewed By:

Chris McCord
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



Cp: Cover Page 1

Tc: Table of Contents 2

Ss: Sample Summary 4

Cn: Case Narrative 11

Sr: Sample Results 12

MW-1 L1086362-01 12

MW-2 L1086362-02 14

MW-3 L1086362-03 17

MW-6 L1086362-04 18

MW-8 L1086362-05 20

MW-11R L1086362-06 22

MW-12R L1086362-07 26

MW-13R L1086362-08 30

MW-15 L1086362-09 32

MW-17R L1086362-10 34

MW-19 L1086362-11 38

MW-25 L1086362-12 39

MW-27 L1086362-13 43

MW-28 L1086362-14 44

MW-29 L1086362-15 45

MW-30 L1086362-16 47

MW-32 L1086362-17 51

MW-33 L1086362-18 55

WW-NORTH L1086362-19 59

WW-SOUTH L1086362-20 63

WW-EAST L1086362-21 67

DUP-01 L1086362-22 71

DUP-02 L1086362-23 75

DUP-03 L1086362-24 79

EB-01 L1086362-25 83

EB-02 L1086362-26 87

TRIP BLANK-01 L1086362-27 91

Qc: Quality Control Summary 92

Gravimetric Analysis by Method 2540 C-2011 92

Wet Chemistry by Method 2320 B-2011 95

Wet Chemistry by Method 353.2 97

Wet Chemistry by Method 9056A 99

Mercury by Method 7470A 105

Metals (ICP) by Method 6010B 108

Metals (ICPMS) by Method 6020 110

Volatile Organic Compounds (GC) by Method 8015D/GRO 116
Volatile Organic Compounds (GC/MS) by Method 8260B 118
Semi-Volatile Organic Compounds (GC) by Method 3511/8015 126
Semi Volatile Organic Compounds (GC/MS) by Method 8270C 128
Gl: Glossary of Terms 138
Al: Accreditations & Locations 140
Sc: Sample Chain of Custody 141

MW-1 L1086362-01 GW

Collected by: Scott Ude | Collected date/time: 04/04/19 11:15 | Received date/time: 04/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 353.2	WG1263602	2	04/12/19 12:36	04/12/19 12:36	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265410	1	04/14/19 00:45	04/14/19 00:45	ST	Mt. Juliet, TN
Mercury by Method 7470A	WG1262269	1	04/07/19 17:14	04/08/19 11:51	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1262060	1	04/13/19 11:23	04/13/19 14:52	WBD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1262074	1	04/13/19 06:36	04/16/19 13:03	JDG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1262803	1	04/08/19 21:34	04/08/19 21:34	ADM	Mt. Juliet, TN

MW-2 L1086362-02 GW

Collected by: Scott Ude | Collected date/time: 04/04/19 10:25 | Received date/time: 04/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1262803	1	04/08/19 21:54	04/08/19 21:54	ADM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1262825	1	04/09/19 16:32	04/12/19 21:58	AO	Mt. Juliet, TN

MW-3 L1086362-03 GW

Collected by: Scott Ude | Collected date/time: 04/04/19 11:25 | Received date/time: 04/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 353.2	WG1263602	2	04/12/19 12:39	04/12/19 12:39	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265412	1	04/16/19 01:57	04/16/19 01:57	ELN	Mt. Juliet, TN

MW-6 L1086362-04 GW

Collected by: Scott Ude | Collected date/time: 04/04/19 10:25 | Received date/time: 04/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 353.2	WG1263602	1	04/12/19 12:40	04/12/19 12:40	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265412	1	04/16/19 02:52	04/16/19 02:52	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1262269	1	04/07/19 17:14	04/08/19 11:54	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1262060	1	04/13/19 11:23	04/13/19 14:55	WBD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1262074	1	04/13/19 06:36	04/16/19 13:07	JDG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1262803	1	04/08/19 22:15	04/08/19 22:15	ADM	Mt. Juliet, TN

MW-8 L1086362-05 GW

Collected by: Scott Ude | Collected date/time: 04/04/19 10:10 | Received date/time: 04/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1264089	1	04/11/19 18:19	04/11/19 20:00	MMF	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1263602	5	04/12/19 12:42	04/12/19 12:42	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265412	1	04/16/19 03:05	04/16/19 03:05	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265412	5	04/16/19 03:19	04/16/19 03:19	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1262803	1	04/08/19 22:35	04/08/19 22:35	ADM	Mt. Juliet, TN

MW-11R L1086362-06 GW

Collected by: Scott Ude | Collected date/time: 04/04/19 10:55 | Received date/time: 04/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1264089	1	04/11/19 18:19	04/11/19 20:00	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1262436	1	04/09/19 19:08	04/09/19 19:08	GB	Mt. Juliet, TN
Mercury by Method 7470A	WG1262269	1	04/07/19 17:14	04/08/19 12:01	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1262060	1	04/13/19 11:23	04/13/19 14:58	WBD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1262074	1	04/13/19 06:36	04/16/19 13:12	JDG	Mt. Juliet, TN

MW-11R L1086362-06 GW

Collected by: Scott Ude | Collected date/time: 04/04/19 10:55 | Received date/time: 04/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1262803	1	04/08/19 22:55	04/08/19 22:55	ADM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1262825	1	04/09/19 16:32	04/12/19 22:19	AO	Mt. Juliet, TN

MW-12R L1086362-07 GW

Collected by: Scott Ude | Collected date/time: 04/04/19 09:55 | Received date/time: 04/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1264089	1	04/11/19 18:19	04/11/19 20:00	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1262436	1	04/09/19 19:23	04/09/19 19:23	GB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1263602	2	04/12/19 12:49	04/12/19 12:49	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265412	1	04/16/19 03:33	04/16/19 03:33	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1262269	1	04/07/19 17:14	04/08/19 12:04	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1262060	1	04/13/19 11:23	04/13/19 15:00	WBD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1262074	1	04/13/19 06:36	04/16/19 13:16	JDG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1262803	1	04/08/19 23:15	04/08/19 23:15	ADM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1262825	1	04/09/19 16:32	04/12/19 22:39	AO	Mt. Juliet, TN

MW-13R L1086362-08 GW

Collected by: Scott Ude | Collected date/time: 04/04/19 10:15 | Received date/time: 04/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1264089	1	04/11/19 18:19	04/11/19 20:00	MMF	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1263602	1	04/12/19 12:51	04/12/19 12:51	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265412	1	04/16/19 04:15	04/16/19 04:15	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265412	10	04/16/19 04:29	04/16/19 04:29	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1262269	1	04/07/19 17:14	04/08/19 12:06	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1262060	1	04/13/19 11:23	04/13/19 15:09	WBD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1262074	1	04/13/19 06:36	04/16/19 13:21	JDG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1262803	1	04/08/19 23:35	04/08/19 23:35	ADM	Mt. Juliet, TN

MW-15 L1086362-09 GW

Collected by: Scott Ude | Collected date/time: 04/04/19 09:25 | Received date/time: 04/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1264089	1	04/11/19 18:19	04/11/19 20:00	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1262436	1	04/09/19 19:30	04/09/19 19:30	GB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1263602	2	04/12/19 12:52	04/12/19 12:52	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265412	1	04/16/19 04:43	04/16/19 04:43	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265412	10	04/16/19 04:57	04/16/19 04:57	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1262269	1	04/07/19 17:14	04/08/19 12:09	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1262060	1	04/13/19 11:23	04/13/19 15:11	WBD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1262074	1	04/13/19 06:36	04/16/19 13:40	JDG	Mt. Juliet, TN

MW-17R L1086362-10 GW

Collected by: Scott Ude | Collected date/time: 04/04/19 12:10 | Received date/time: 04/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1264090	1	04/11/19 19:27	04/11/19 20:32	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1262436	1	04/09/19 19:35	04/09/19 19:35	GB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1263602	2	04/12/19 12:54	04/12/19 12:54	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265412	1	04/16/19 05:11	04/16/19 05:11	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1262269	1	04/07/19 17:14	04/08/19 12:11	ABL	Mt. Juliet, TN

MW-17R L1086362-10 GW

Collected by: Scott Ude | Collected date/time: 04/04/19 12:10 | Received date/time: 04/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010B	WG1262060	1	04/13/19 11:23	04/13/19 15:14	WBD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1262074	1	04/13/19 06:36	04/16/19 13:45	JDG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1262803	1	04/08/19 23:56	04/08/19 23:56	ADM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1262825	1	04/09/19 16:32	04/12/19 23:00	AO	Mt. Juliet, TN

MW-19 L1086362-11 GW

Collected by: Scott Ude | Collected date/time: 04/04/19 10:45 | Received date/time: 04/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1264090	1	04/11/19 19:27	04/11/19 20:32	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1262436	1	04/09/19 19:42	04/09/19 19:42	GB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1263602	1	04/12/19 12:55	04/12/19 12:55	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265412	1	04/16/19 05:39	04/16/19 05:39	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265412	10	04/16/19 05:52	04/16/19 05:52	ELN	Mt. Juliet, TN

MW-25 L1086362-12 GW

Collected by: Scott Ude | Collected date/time: 04/04/19 11:55 | Received date/time: 04/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1264090	1	04/11/19 19:27	04/11/19 20:32	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1262436	1	04/09/19 19:49	04/09/19 19:49	GB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1263602	1	04/12/19 12:57	04/12/19 12:57	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265412	1	04/16/19 06:06	04/16/19 06:06	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265412	10	04/16/19 06:20	04/16/19 06:20	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1262269	1	04/07/19 17:14	04/08/19 12:13	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1262060	1	04/13/19 11:23	04/13/19 15:17	WBD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1262074	1	04/13/19 06:36	04/16/19 13:49	JDG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1262803	1	04/09/19 00:16	04/09/19 00:16	ADM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1262825	1	04/09/19 16:32	04/12/19 23:20	AO	Mt. Juliet, TN

MW-27 L1086362-13 GW

Collected by: Scott Ude | Collected date/time: 04/04/19 11:40 | Received date/time: 04/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1262803	1	04/09/19 00:36	04/09/19 00:36	ADM	Mt. Juliet, TN

MW-28 L1086362-14 GW

Collected by: Scott Ude | Collected date/time: 04/04/19 11:55 | Received date/time: 04/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG1262436	1	04/09/19 19:55	04/09/19 19:55	GB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1263603	1	04/15/19 12:07	04/15/19 12:07	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265412	1	04/16/19 07:02	04/16/19 07:02	ELN	Mt. Juliet, TN

MW-29 L1086362-15 GW

Collected by: Scott Ude | Collected date/time: 04/04/19 11:10 | Received date/time: 04/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Mercury by Method 7470A	WG1262269	1	04/07/19 17:14	04/08/19 12:16	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1262060	1	04/13/19 11:23	04/13/19 15:20	WBD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1262074	1	04/13/19 06:36	04/16/19 13:54	JDG	Mt. Juliet, TN

MW-29 L1086362-15 GW

Collected by: Scott Ude | Collected date/time: 04/04/19 11:10 | Received date/time: 04/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1262803	1	04/09/19 00:56	04/09/19 00:56	ADM	Mt. Juliet, TN

MW-30 L1086362-16 GW

Collected by: Scott Ude | Collected date/time: 04/04/19 11:25 | Received date/time: 04/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1264090	1	04/11/19 19:27	04/11/19 20:32	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1262436	1	04/09/19 20:02	04/09/19 20:02	GB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1263603	1	04/15/19 12:09	04/15/19 12:09	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265412	1	04/16/19 07:16	04/16/19 07:16	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1262269	1	04/07/19 17:14	04/08/19 11:12	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1262060	1	04/13/19 11:23	04/13/19 14:09	WBD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1262074	1	04/13/19 06:36	04/16/19 11:40	JDG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1262803	1	04/09/19 01:17	04/09/19 01:17	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG1262668	1	04/09/19 10:32	04/11/19 01:38	SHG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1263260	1	04/11/19 07:35	04/11/19 23:57	SNR	Mt. Juliet, TN

MW-32 L1086362-17 GW

Collected by: Scott Ude | Collected date/time: 04/04/19 12:00 | Received date/time: 04/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1264090	1	04/11/19 19:27	04/11/19 20:32	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1262436	1	04/09/19 20:09	04/09/19 20:09	GB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1263603	1	04/15/19 12:10	04/15/19 12:10	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265412	1	04/16/19 08:12	04/16/19 08:12	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265412	5	04/16/19 12:57	04/16/19 12:57	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1262270	1	04/08/19 19:00	04/09/19 09:54	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1262060	1	04/13/19 11:23	04/13/19 15:22	WBD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1262074	1	04/13/19 06:36	04/16/19 13:58	JDG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1264226	1	04/12/19 08:46	04/12/19 08:46	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1262803	1	04/09/19 01:37	04/09/19 01:37	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG1262668	1	04/09/19 10:32	04/11/19 02:44	SHG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1263260	1	04/11/19 07:35	04/12/19 00:21	SNR	Mt. Juliet, TN

MW-33 L1086362-18 GW

Collected by: Scott Ude | Collected date/time: 04/04/19 12:25 | Received date/time: 04/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1264090	1	04/11/19 19:27	04/11/19 20:32	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1262436	1	04/09/19 20:16	04/09/19 20:16	GB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1263603	1	04/15/19 12:18	04/15/19 12:18	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265412	1	04/16/19 08:25	04/16/19 08:25	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265412	10	04/16/19 08:39	04/16/19 08:39	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1262270	1	04/08/19 19:00	04/09/19 09:42	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1262062	1	04/12/19 10:46	04/12/19 18:25	TRB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1262074	1	04/13/19 06:36	04/16/19 14:03	JDG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1264913	1	04/12/19 13:04	04/12/19 13:04	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1262803	1	04/09/19 01:57	04/09/19 01:57	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG1263232	1	04/09/19 23:01	04/10/19 17:49	SHG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1263260	1	04/11/19 07:35	04/12/19 00:44	SNR	Mt. Juliet, TN

WW-NORTH L1086362-19 GW

Collected by: Scott Ude | Collected date/time: 04/04/19 12:30 | Received date/time: 04/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1264090	1	04/11/19 19:27	04/11/19 20:32	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1262436	1	04/09/19 20:22	04/09/19 20:22	GB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1263603	1	04/15/19 12:19	04/15/19 12:19	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265412	1	04/16/19 08:53	04/16/19 08:53	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265412	5	04/16/19 09:07	04/16/19 09:07	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1262270	1	04/08/19 19:00	04/09/19 09:57	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1262062	1	04/12/19 10:46	04/12/19 18:28	TRB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1262074	1	04/13/19 06:36	04/16/19 14:08	JDG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1264913	1	04/12/19 13:28	04/12/19 13:28	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1262803	1	04/09/19 02:18	04/09/19 02:18	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG1263232	1	04/09/19 23:01	04/10/19 18:06	SHG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1263260	1	04/11/19 07:35	04/12/19 01:08	SNR	Mt. Juliet, TN

WW-SOUTH L1086362-20 GW

Collected by: Scott Ude | Collected date/time: 04/04/19 13:05 | Received date/time: 04/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1264090	1	04/11/19 19:27	04/11/19 20:32	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1262436	1	04/09/19 20:36	04/09/19 20:36	GB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1263603	1	04/15/19 12:21	04/15/19 12:21	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265412	1	04/16/19 09:49	04/16/19 09:49	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265412	10	04/16/19 10:03	04/16/19 10:03	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1262270	1	04/08/19 19:00	04/09/19 09:59	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1262062	1	04/12/19 10:46	04/12/19 18:31	TRB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1262074	1	04/13/19 06:36	04/16/19 14:12	JDG	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1264913	1	04/12/19 13:52	04/12/19 13:52	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1262803	1	04/09/19 02:38	04/09/19 02:38	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG1263232	1	04/09/19 23:01	04/10/19 18:24	SHG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1263260	1	04/11/19 07:35	04/12/19 01:32	SNR	Mt. Juliet, TN

WW-EAST L1086362-21 GW

Collected by: Scott Ude | Collected date/time: 04/04/19 13:30 | Received date/time: 04/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1264090	1	04/11/19 19:27	04/11/19 20:32	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1262436	1	04/09/19 20:43	04/09/19 20:43	GB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1263603	2	04/15/19 12:22	04/15/19 12:22	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265412	1	04/16/19 10:17	04/16/19 10:17	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265412	10	04/16/19 10:31	04/16/19 10:31	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1262270	1	04/08/19 19:00	04/09/19 10:02	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1262062	1	04/12/19 10:46	04/12/19 18:34	TRB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1262065	1	04/09/19 11:34	04/10/19 23:30	JDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1262065	1	04/09/19 11:34	04/11/19 09:50	LAT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1264794	1	04/13/19 06:41	04/14/19 19:14	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1264913	1	04/12/19 14:15	04/12/19 14:15	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1262803	1	04/09/19 02:58	04/09/19 02:58	ADM	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG1263232	1	04/09/19 23:01	04/10/19 18:41	SHG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1263260	1	04/11/19 07:35	04/12/19 01:55	SNR	Mt. Juliet, TN

DUP-01 L1086362-22 GW

Collected by: Scott Ude | Collected date/time: 04/04/19 09:00 | Received date/time: 04/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1264090	1	04/11/19 19:27	04/11/19 20:32	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1262438	1	04/10/19 20:42	04/10/19 20:42	GB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1263603	2	04/15/19 12:24	04/15/19 12:24	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265412	1	04/16/19 10:45	04/16/19 10:45	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1262270	1	04/08/19 19:00	04/09/19 10:04	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1262062	1	04/12/19 10:46	04/12/19 18:36	TRB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1262065	1	04/09/19 11:34	04/10/19 23:35	JDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1262065	1	04/09/19 11:34	04/11/19 09:55	LAT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1264794	1	04/13/19 06:41	04/14/19 19:19	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1262803	1	04/09/19 03:18	04/09/19 03:18	ADM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1263260	1	04/11/19 07:35	04/12/19 02:19	SNR	Mt. Juliet, TN

DUP-02 L1086362-23 GW

Collected by: Scott Ude | Collected date/time: 04/04/19 11:00 | Received date/time: 04/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1264128	1	04/11/19 20:09	04/11/19 20:59	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1262438	1	04/10/19 20:55	04/10/19 20:55	GB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1263603	2	04/15/19 12:25	04/15/19 12:25	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265412	1	04/16/19 11:12	04/16/19 11:12	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1262270	1	04/08/19 19:00	04/09/19 10:06	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1262062	1	04/12/19 10:46	04/12/19 18:39	TRB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1262065	1	04/09/19 11:34	04/10/19 23:39	JDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1262065	1	04/09/19 11:34	04/11/19 10:00	LAT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1264794	1	04/13/19 06:41	04/14/19 19:23	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1262803	1	04/09/19 03:39	04/09/19 03:39	ADM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1263260	1	04/11/19 07:35	04/12/19 02:43	SNR	Mt. Juliet, TN

DUP-03 L1086362-24 GW

Collected by: Scott Ude | Collected date/time: 04/04/19 10:00 | Received date/time: 04/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1264128	1	04/11/19 20:09	04/11/19 20:59	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1262438	1	04/10/19 21:02	04/10/19 21:02	GB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1263603	2	04/15/19 12:27	04/15/19 12:27	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265412	1	04/16/19 11:40	04/16/19 11:40	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265412	5	04/16/19 14:34	04/16/19 14:34	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1262270	1	04/08/19 19:00	04/09/19 10:09	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1262062	1	04/12/19 10:46	04/12/19 18:42	TRB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1262065	1	04/09/19 11:34	04/10/19 23:44	JDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1262065	1	04/09/19 11:34	04/11/19 10:04	LAT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1264794	1	04/13/19 06:41	04/14/19 19:46	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1262803	1	04/09/19 03:59	04/09/19 03:59	ADM	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1263260	1	04/11/19 07:35	04/12/19 03:06	SNR	Mt. Juliet, TN

EB-01 L1086362-25 GW

Collected by: Scott Ude | Collected date/time: 04/04/19 10:30 | Received date/time: 04/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1264128	1	04/11/19 20:09	04/11/19 20:59	MMF	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1263603	1	04/15/19 12:28	04/15/19 12:28	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265412	1	04/16/19 11:54	04/16/19 11:54	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1262270	1	04/08/19 19:00	04/09/19 10:11	ABL	Mt. Juliet, TN

EB-01 L1086362-25 GW

Collected by: Scott Ude | Collected date/time: 04/04/19 10:30 | Received date/time: 04/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010B	WG1262062	1	04/12/19 10:46	04/12/19 18:50	TRB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1262065	1	04/09/19 11:34	04/10/19 23:49	JDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1262065	1	04/09/19 11:34	04/11/19 10:09	LAT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1264794	1	04/13/19 06:41	04/14/19 19:51	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1262806	1	04/09/19 13:16	04/09/19 13:16	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1263260	1	04/11/19 07:35	04/12/19 03:30	SNR	Mt. Juliet, TN

EB-02 L1086362-26 GW

Collected by: Scott Ude | Collected date/time: 04/04/19 12:20 | Received date/time: 04/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1264128	1	04/11/19 20:09	04/11/19 20:59	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1262438	1	04/10/19 22:54	04/10/19 22:54	GB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1263603	1	04/15/19 12:30	04/15/19 12:30	BRJ	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1265413	1	04/16/19 23:08	04/16/19 23:08	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1262270	1	04/08/19 19:00	04/09/19 10:14	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1262062	1	04/12/19 10:46	04/12/19 18:52	TRB	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1262065	1	04/09/19 11:34	04/10/19 23:53	JDG	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1262065	1	04/09/19 11:34	04/11/19 10:14	LAT	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1264794	1	04/13/19 06:41	04/14/19 19:55	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1264913	1	04/12/19 14:39	04/12/19 14:39	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1262806	1	04/09/19 13:36	04/09/19 13:36	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG1263232	1	04/09/19 23:01	04/10/19 18:58	SHG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1263260	1	04/11/19 07:35	04/12/19 03:54	AO	Mt. Juliet, TN

TRIP BLANK-01 L1086362-27 GW

Collected by: Scott Ude | Collected date/time: 04/04/19 00:00 | Received date/time: 04/05/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1262806	1	04/09/19 10:53	04/09/19 10:53	JAH	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Chris McCord
Project Manager

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	2.80		0.0394	0.100	0.200	2	04/12/2019 12:36	WG1263602

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	42.0		0.0519	1.00	1.00	1	04/14/2019 00:45	WG1265410
Fluoride	1.06		0.00990	0.100	0.100	1	04/14/2019 00:45	WG1265410
Sulfate	59.8		0.0774	5.00	5.00	1	04/14/2019 00:45	WG1265410

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	0.000200	1	04/08/2019 11:51	WG1262269

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.160	J	0.0126	0.200	0.200	1	04/13/2019 14:52	WG1262060

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	04/16/2019 13:03	WG1262074
Arsenic,Dissolved	0.00585		0.000250	0.00200	0.00200	1	04/16/2019 13:03	WG1262074
Barium,Dissolved	0.155		0.000360	0.00500	0.00500	1	04/16/2019 13:03	WG1262074
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	04/16/2019 13:03	WG1262074
Calcium,Dissolved	82.3		0.0460	1.00	1.00	1	04/16/2019 13:03	WG1262074
Chromium,Dissolved	U		0.000540	0.00200	0.00200	1	04/16/2019 13:03	WG1262074
Copper,Dissolved	0.000902	J	0.000520	0.00500	0.00500	1	04/16/2019 13:03	WG1262074
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	04/16/2019 13:03	WG1262074
Iron,Dissolved	U		0.0150	0.100	0.100	1	04/16/2019 13:03	WG1262074
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	04/16/2019 13:03	WG1262074
Magnesium,Dissolved	9.23		0.100	1.00	1.00	1	04/16/2019 13:03	WG1262074
Manganese,Dissolved	U		0.000250	0.00500	0.00500	1	04/16/2019 13:03	WG1262074
Molybdenum,Dissolved	0.00282	J	0.000140	0.00500	0.00500	1	04/16/2019 13:03	WG1262074
Nickel,Dissolved	U		0.000350	0.00200	0.00200	1	04/16/2019 13:03	WG1262074
Potassium,Dissolved	2.77		0.0370	1.00	1.00	1	04/16/2019 13:03	WG1262074
Selenium,Dissolved	0.00246		0.000380	0.00200	0.00200	1	04/16/2019 13:03	WG1262074
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	04/16/2019 13:03	WG1262074
Sodium,Dissolved	41.5		0.110	1.00	1.00	1	04/16/2019 13:03	WG1262074
Uranium,Dissolved	0.00159	J	0.000330	0.0100	0.0100	1	04/16/2019 13:03	WG1262074
Zinc,Dissolved	0.00554	J	0.00256	0.0250	0.0250	1	04/16/2019 13:03	WG1262074

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	04/08/2019 21:34	WG1262803
Benzene	U		0.000331	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	04/08/2019 21:34	WG1262803
Bromoform	U		0.000469	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
Bromomethane	U		0.000866	0.00500	0.00500	1	04/08/2019 21:34	WG1262803
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	04/08/2019 21:34	WG1262803

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
Carbon disulfide	U		0.000275	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
Chlorobenzene	U		0.000348	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
Chloroethane	U		0.000453	0.00500	0.00500	1	04/08/2019 21:34	WG1262803
Chloroform	U		0.000324	0.00500	0.00500	1	04/08/2019 21:34	WG1262803
Chloromethane	U		0.000276	0.00250	0.00250	1	04/08/2019 21:34	WG1262803
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
Ethylbenzene	U		0.000384	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
2-Hexanone	U		0.00382	0.0100	0.0100	1	04/08/2019 21:34	WG1262803
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	04/08/2019 21:34	WG1262803
Methylene Chloride	U		0.00100	0.00500	0.00500	1	04/08/2019 21:34	WG1262803
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	04/08/2019 21:34	WG1262803
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
Naphthalene	U		0.00100	0.00500	0.00500	1	04/08/2019 21:34	WG1262803
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
Styrene	U		0.000307	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
Toluene	U		0.000412	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
Trichloroethene	U		0.000398	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
Vinyl chloride	U		0.000259	0.00100	0.00100	1	04/08/2019 21:34	WG1262803
Xylenes, Total	U		0.00106	0.00300	0.00300	1	04/08/2019 21:34	WG1262803
(S) Toluene-d8	*101*				*80.0-120*		*04/08/2019 21:34*	WG1262803
(S) 4-Bromofluorobenzene	*95.0*				*77.0-126*		*04/08/2019 21:34*	WG1262803
(S) 1,2-Dichloroethane-d4	*124*				*70.0-130*		*04/08/2019 21:34*	WG1262803

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0100	1.00	1.00	1	04/08/2019 21:54	WG1262803
Benzene	U		0.000331	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
Bromodichloromethane	0.000729	J	0.000380	0.00125	0.00125	1	04/08/2019 21:54	WG1262803
Bromoform	U		0.000469	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
Bromomethane	U		0.000866	0.00500	0.00500	1	04/08/2019 21:54	WG1262803
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
Carbon disulfide	U		0.000275	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
Chlorobenzene	U		0.000348	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
Chloroethane	U		0.000453	0.00500	0.00500	1	04/08/2019 21:54	WG1262803
Chloroform	0.00260	J	0.000324	0.00500	0.00500	1	04/08/2019 21:54	WG1262803
Chloromethane	U		0.000276	0.00250	0.00250	1	04/08/2019 21:54	WG1262803
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
1,2-Dichloroethane	0.000991	J	0.000361	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
Ethylbenzene	U		0.000384	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
2-Hexanone	U		0.00382	0.0100	0.0100	1	04/08/2019 21:54	WG1262803
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	04/08/2019 21:54	WG1262803
Methylene Chloride	U		0.00100	0.00500	0.00500	1	04/08/2019 21:54	WG1262803
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	04/08/2019 21:54	WG1262803
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
Naphthalene	U		0.00100	0.00500	0.00500	1	04/08/2019 21:54	WG1262803
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
Styrene	U		0.000307	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
Toluene	U		0.000412	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
Trichloroethene	U		0.000398	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
Vinyl chloride	U		0.000259	0.00100	0.00100	1	04/08/2019 21:54	WG1262803
Xylenes, Total	U		0.00106	0.00300	0.00300	1	04/08/2019 21:54	WG1262803
(S) Toluene-d8	*104*				*80.0-120*		*04/08/2019 21:54*	WG1262803
(S) 4-Bromofluorobenzene	*97.6*				*77.0-126*		*04/08/2019 21:54*	WG1262803
(S) 1,2-Dichloroethane-d4	*120*				*70.0-130*		*04/08/2019 21:54*	WG1262803

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acenaphthene	U	J3	0.000316	0.00100	0.00100	1	04/12/2019 21:58	WG1262825
Acenaphthylene	U	J3	0.000309	0.00100	0.00100	1	04/12/2019 21:58	WG1262825
Acetophenone	U	J3	0.00247	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
Anthracene	U	J3	0.000291	0.00100	0.00100	1	04/12/2019 21:58	WG1262825
Atrazine	U	J3	0.000260	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
Benzo(a)anthracene	U	J3 J4	0.0000510	0.00100	0.00100	1	04/12/2019 21:58	WG1262825
Benzaldehyde	U		0.00140	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
Benzo(b)fluoranthene	U	J3 J4	0.0000896	0.00100	0.00100	1	04/12/2019 21:58	WG1262825
Benzo(k)fluoranthene	U	J3 J4	0.000355	0.00100	0.00100	1	04/12/2019 21:58	WG1262825
Benzo(g,h,i)perylene	U	J3 J4	0.00000227	0.00100	0.00100	1	04/12/2019 21:58	WG1262825
Benzo(a)pyrene	U	J3 J4	0.0000381	0.000200	0.000200	1	04/12/2019 21:58	WG1262825
Biphenyl	U	J3	0.000325	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
Bis(2-chlorethoxy)methane	U	J3	0.000329	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
Bis(2-chloroethyl)ether	U	J3	0.00162	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
Bis(2-chloroisopropyl)ether	U	J3	0.000445	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
4-Bromophenyl-phenylether	U	J3 J4	0.000335	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
2-Chloronaphthalene	U	J3	0.000330	0.00100	0.00100	1	04/12/2019 21:58	WG1262825
4-Chlorophenyl-phenylether	U	J3	0.000303	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
Caprolactam	U		0.00259	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
Carbazole	U	J3 J4	0.000260	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
Chrysene	U	J3 J4	0.000332	0.00100	0.00100	1	04/12/2019 21:58	WG1262825
Dibenz(a,h)anthracene	U	J3 J4	0.0000644	0.000200	0.000200	1	04/12/2019 21:58	WG1262825
Dibenzofuran	U	J3	0.000338	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
3,3-Dichlorobenzidine	U	J3	0.00202	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
2,4-Dinitrotoluene	U	J3	0.00165	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
2,6-Dinitrotoluene	U	J3	0.000279	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
Fluoranthene	U	J3 J4	0.000310	0.00100	0.00100	1	04/12/2019 21:58	WG1262825
Fluorene	U	J3	0.000323	0.00100	0.00100	1	04/12/2019 21:58	WG1262825
Hexachlorobenzene	U	J3 J4	0.000341	0.00100	0.00100	1	04/12/2019 21:58	WG1262825
Hexachloro-1,3-butadiene	U	J3	0.000329	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
Hexachlorocyclopentadiene	U	J3	0.00233	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
Hexachloroethane	U		0.000365	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
Indeno(1,2,3-cd)pyrene	U	J3 J4	0.000279	0.00100	0.00100	1	04/12/2019 21:58	WG1262825
Isophorone	U	J3	0.000272	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
1-Methylnaphthalene	U	J3	0.000332	0.00100	0.00100	1	04/12/2019 21:58	WG1262825
2-Methylnaphthalene	U	J3	0.000311	0.00100	0.00100	1	04/12/2019 21:58	WG1262825
Naphthalene	U	J3	0.000372	0.00100	0.00100	1	04/12/2019 21:58	WG1262825
Nitrobenzene	U	J3	0.000367	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
n-Nitrosodiphenylamine	U	J3	0.00119	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
n-Nitrosodi-n-propylamine	U	J3	0.000403	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
Phenanthrene	U	J3	0.000366	0.00100	0.00100	1	04/12/2019 21:58	WG1262825
Benzylbutyl phthalate	U	J3	0.000275	0.00300	0.00300	1	04/12/2019 21:58	WG1262825
Bis(2-ethylhexyl)phthalate	0.000861	B J J3	0.000709	0.00300	0.00300	1	04/12/2019 21:58	WG1262825
Di-n-butyl phthalate	U	J3 J4	0.000266	0.00300	0.00300	1	04/12/2019 21:58	WG1262825
Diethyl phthalate	U	J3	0.000282	0.00300	0.00300	1	04/12/2019 21:58	WG1262825
Dimethyl phthalate	U	J3	0.000283	0.00300	0.00300	1	04/12/2019 21:58	WG1262825
Di-n-octyl phthalate	U	J3	0.000278	0.00300	0.00300	1	04/12/2019 21:58	WG1262825
Pyrene	U	J3 J4	0.000330	0.00100	0.00100	1	04/12/2019 21:58	WG1262825
1,2,4-Trichlorobenzene	U	J3	0.000355	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
4-Chloro-3-methylphenol	U	J3	0.000263	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
2,4-Dichlorophenol	U	J3	0.000284	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
2,4-Dimethylphenol	U	J3	0.000624	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	04/12/2019 21:58	WG1262825

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
2-Nitroaniline	U	J3 J4	0.00190	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
2-Methylphenol	U	J3	0.000312	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
3-Nitroaniline	U	J3	0.000308	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
4-Chloroaniline	U	J3	0.000382	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
4-Nitroaniline	U	J3	0.000349	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
Pentachlorophenol	0.000680	J	0.000313	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
Phenol	0.00260	J	0.000334	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
2,4,5-Trichlorophenol	U	J3	0.000236	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
2,4,6-Trichlorophenol	U	J3	0.000297	0.0100	0.0100	1	04/12/2019 21:58	WG1262825
(S) 2-Fluorophenol	*29.7*				*10.0-120*		*04/12/2019 21:58*	WG1262825
(S) Phenol-d5	*18.0*				*10.0-120*		*04/12/2019 21:58*	WG1262825
(S) Nitrobenzene-d5	*52.4*				*10.0-127*		*04/12/2019 21:58*	WG1262825
(S) 2-Fluorobiphenyl	*58.1*				*10.0-130*		*04/12/2019 21:58*	WG1262825
(S) 2,4,6-Tribromophenol	*50.8*				*10.0-155*		*04/12/2019 21:58*	WG1262825
(S) p-Terphenyl-d14	*78.1*				*10.0-128*		*04/12/2019 21:58*	WG1262825

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	1.73		0.0394	0.100	0.200	2	04/12/2019 12:39	WG1263602

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	37.9		0.0519	1.00	1.00	1	04/16/2019 01:57	WG1265412
Fluoride	0.628		0.00990	0.100	0.100	1	04/16/2019 01:57	WG1265412
Sulfate	73.4		0.0774	5.00	5.00	1	04/16/2019 01:57	WG1265412

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	2.04		0.0197	0.100	0.100	1	04/12/2019 12:40	WG1263602

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	47.4		0.0519	1.00	1.00	1	04/16/2019 02:52	WG1265412
Fluoride	0.717		0.00990	0.100	0.100	1	04/16/2019 02:52	WG1265412
Sulfate	72.9		0.0774	5.00	5.00	1	04/16/2019 02:52	WG1265412

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	0.000200	1	04/08/2019 11:54	WG1262269

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.173	J	0.0126	0.200	0.200	1	04/13/2019 14:55	WG1262060

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	04/16/2019 13:07	WG1262074
Arsenic,Dissolved	0.00793		0.000250	0.00200	0.00200	1	04/16/2019 13:07	WG1262074
Barium,Dissolved	0.150		0.000360	0.00500	0.00500	1	04/16/2019 13:07	WG1262074
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	04/16/2019 13:07	WG1262074
Calcium,Dissolved	97.8		0.0460	1.00	1.00	1	04/16/2019 13:07	WG1262074
Chromium,Dissolved	0.000797	J	0.000540	0.00200	0.00200	1	04/16/2019 13:07	WG1262074
Copper,Dissolved	0.00112	J	0.000520	0.00500	0.00500	1	04/16/2019 13:07	WG1262074
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	04/16/2019 13:07	WG1262074
Iron,Dissolved	U		0.0150	0.100	0.100	1	04/16/2019 13:07	WG1262074
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	04/16/2019 13:07	WG1262074
Magnesium,Dissolved	11.6		0.100	1.00	1.00	1	04/16/2019 13:07	WG1262074
Manganese,Dissolved	0.106		0.000250	0.00500	0.00500	1	04/16/2019 13:07	WG1262074
Molybdenum,Dissolved	0.00266	J	0.000140	0.00500	0.00500	1	04/16/2019 13:07	WG1262074
Nickel,Dissolved	0.000612	B J	0.000350	0.00200	0.00200	1	04/16/2019 13:07	WG1262074
Potassium,Dissolved	3.51		0.0370	1.00	1.00	1	04/16/2019 13:07	WG1262074
Selenium,Dissolved	0.00395		0.000380	0.00200	0.00200	1	04/16/2019 13:07	WG1262074
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	04/16/2019 13:07	WG1262074
Sodium,Dissolved	44.4		0.110	1.00	1.00	1	04/16/2019 13:07	WG1262074
Uranium,Dissolved	0.00358	J	0.000330	0.0100	0.0100	1	04/16/2019 13:07	WG1262074
Zinc,Dissolved	0.0123	J	0.00256	0.0250	0.0250	1	04/16/2019 13:07	WG1262074

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	04/08/2019 22:15	WG1262803
Benzene	U		0.000331	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	04/08/2019 22:15	WG1262803
Bromoform	U		0.000469	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
Bromomethane	U		0.000866	0.00500	0.00500	1	04/08/2019 22:15	WG1262803
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	04/08/2019 22:15	WG1262803

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
Carbon disulfide	U		0.000275	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
Chlorobenzene	U		0.000348	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
Chloroethane	U		0.000453	0.00500	0.00500	1	04/08/2019 22:15	WG1262803
Chloroform	U		0.000324	0.00500	0.00500	1	04/08/2019 22:15	WG1262803
Chloromethane	U		0.000276	0.00250	0.00250	1	04/08/2019 22:15	WG1262803
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
Ethylbenzene	U		0.000384	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
2-Hexanone	U		0.00382	0.0100	0.0100	1	04/08/2019 22:15	WG1262803
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	04/08/2019 22:15	WG1262803
Methylene Chloride	U		0.00100	0.00500	0.00500	1	04/08/2019 22:15	WG1262803
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	04/08/2019 22:15	WG1262803
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
Naphthalene	U		0.00100	0.00500	0.00500	1	04/08/2019 22:15	WG1262803
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
Styrene	U		0.000307	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
Toluene	U		0.000412	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
Trichloroethene	U		0.000398	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
Vinyl chloride	U		0.000259	0.00100	0.00100	1	04/08/2019 22:15	WG1262803
Xylenes, Total	U		0.00106	0.00300	0.00300	1	04/08/2019 22:15	WG1262803
(S) Toluene-d8	*103*				*80.0-120*		*04/08/2019 22:15*	WG1262803
(S) 4-Bromofluorobenzene	*97.5*				*77.0-126*		*04/08/2019 22:15*	WG1262803
(S) 1,2-Dichloroethane-d4	*116*				*70.0-130*		*04/08/2019 22:15*	WG1262803

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	819		3.75	13.3	13.3	1	04/11/2019 20:00	WG1264089

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	6.29		0.0985	0.100	0.500	5	04/12/2019 12:42	WG1263602

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	148		0.260	1.00	5.00	5	04/16/2019 03:19	WG1265412
Fluoride	0.552		0.00990	0.100	0.100	1	04/16/2019 03:05	WG1265412
Sulfate	76.0		0.0774	5.00	5.00	1	04/16/2019 03:05	WG1265412

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	04/08/2019 22:35	WG1262803
Benzene	U		0.000331	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	04/08/2019 22:35	WG1262803
Bromoform	U		0.000469	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
Bromomethane	U		0.000866	0.00500	0.00500	1	04/08/2019 22:35	WG1262803
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
Carbon disulfide	U		0.000275	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
Chlorobenzene	U		0.000348	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
Chloroethane	U		0.000453	0.00500	0.00500	1	04/08/2019 22:35	WG1262803
Chloroform	U		0.000324	0.00500	0.00500	1	04/08/2019 22:35	WG1262803
Chloromethane	U		0.000276	0.00250	0.00250	1	04/08/2019 22:35	WG1262803
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
Ethylbenzene	U		0.000384	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
2-Hexanone	U		0.00382	0.0100	0.0100	1	04/08/2019 22:35	WG1262803
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	04/08/2019 22:35	WG1262803
Methylene Chloride	U		0.00100	0.00500	0.00500	1	04/08/2019 22:35	WG1262803
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	04/08/2019 22:35	WG1262803
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
Naphthalene	U		0.00100	0.00500	0.00500	1	04/08/2019 22:35	WG1262803
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
Styrene	U		0.000307	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	04/08/2019 22:35	WG1262803

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
Toluene	U		0.000412	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
Trichloroethene	U		0.000398	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
Vinyl chloride	U		0.000259	0.00100	0.00100	1	04/08/2019 22:35	WG1262803
Xylenes, Total	U		0.00106	0.00300	0.00300	1	04/08/2019 22:35	WG1262803
(S) Toluene-d8	*107*				*80.0-120*		*04/08/2019 22:35*	WG1262803
(S) 4-Bromofluorobenzene	*102*				*77.0-126*		*04/08/2019 22:35*	WG1262803
(S) 1,2-Dichloroethane-d4	*117*				*70.0-130*		*04/08/2019 22:35*	WG1262803

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	1480		5.64	20.0	20.0	1	04/11/2019 20:00	WG1264089

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	220		2.71	20.0	20.0	1	04/09/2019 19:08	WG1262436

Sample Narrative:

L1086362-06 WG1262436: Endpoint pH 4.5

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	0.000200	1	04/08/2019 12:01	WG1262269

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.203		0.0126	0.200	0.200	1	04/13/2019 14:58	WG1262060

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	04/16/2019 13:12	WG1262074
Arsenic,Dissolved	0.00284		0.000250	0.00200	0.00200	1	04/16/2019 13:12	WG1262074
Barium,Dissolved	0.180		0.000360	0.00500	0.00500	1	04/16/2019 13:12	WG1262074
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	04/16/2019 13:12	WG1262074
Calcium,Dissolved	233		0.0460	1.00	1.00	1	04/16/2019 13:12	WG1262074
Chromium,Dissolved	U		0.000540	0.00200	0.00200	1	04/16/2019 13:12	WG1262074
Copper,Dissolved	0.0386		0.000520	0.00500	0.00500	1	04/16/2019 13:12	WG1262074
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	04/16/2019 13:12	WG1262074
Iron,Dissolved	U		0.0150	0.100	0.100	1	04/16/2019 13:12	WG1262074
Lead,Dissolved	0.000793	J	0.000240	0.00200	0.00200	1	04/16/2019 13:12	WG1262074
Magnesium,Dissolved	33.4		0.100	1.00	1.00	1	04/16/2019 13:12	WG1262074
Manganese,Dissolved	0.000546	J	0.000250	0.00500	0.00500	1	04/16/2019 13:12	WG1262074
Molybdenum,Dissolved	0.00143	J	0.000140	0.00500	0.00500	1	04/16/2019 13:12	WG1262074
Nickel,Dissolved	0.00305	B	0.000350	0.00200	0.00200	1	04/16/2019 13:12	WG1262074
Potassium,Dissolved	3.10		0.0370	1.00	1.00	1	04/16/2019 13:12	WG1262074
Selenium,Dissolved	0.00182	J	0.000380	0.00200	0.00200	1	04/16/2019 13:12	WG1262074
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	04/16/2019 13:12	WG1262074
Sodium,Dissolved	63.0		0.110	1.00	1.00	1	04/16/2019 13:12	WG1262074
Uranium,Dissolved	0.00396	J	0.000330	0.0100	0.0100	1	04/16/2019 13:12	WG1262074
Zinc,Dissolved	0.132		0.00256	0.0250	0.0250	1	04/16/2019 13:12	WG1262074

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	04/08/2019 22:55	WG1262803
Benzene	U		0.000331	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	04/08/2019 22:55	WG1262803
Bromoform	U		0.000469	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
Bromomethane	U		0.000866	0.00500	0.00500	1	04/08/2019 22:55	WG1262803
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	04/08/2019 22:55	WG1262803

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
Carbon disulfide	U		0.000275	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
Chlorobenzene	U		0.000348	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
Chloroethane	U		0.000453	0.00500	0.00500	1	04/08/2019 22:55	WG1262803
Chloroform	0.000971	J	0.000324	0.00500	0.00500	1	04/08/2019 22:55	WG1262803
Chloromethane	U		0.000276	0.00250	0.00250	1	04/08/2019 22:55	WG1262803
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
Ethylbenzene	U		0.000384	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
2-Hexanone	U		0.00382	0.0100	0.0100	1	04/08/2019 22:55	WG1262803
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	04/08/2019 22:55	WG1262803
Methylene Chloride	U		0.00100	0.00500	0.00500	1	04/08/2019 22:55	WG1262803
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	04/08/2019 22:55	WG1262803
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
Naphthalene	U		0.00100	0.00500	0.00500	1	04/08/2019 22:55	WG1262803
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
Styrene	U		0.000307	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
Toluene	U		0.000412	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
Trichloroethene	U		0.000398	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
Vinyl chloride	U		0.000259	0.00100	0.00100	1	04/08/2019 22:55	WG1262803
Xylenes, Total	U		0.00106	0.00300	0.00300	1	04/08/2019 22:55	WG1262803
(S) Toluene-d8	*99.9*				*80.0-120*		*04/08/2019 22:55*	WG1262803
(S) 4-Bromofluorobenzene	*99.8*				*77.0-126*		*04/08/2019 22:55*	WG1262803
(S) 1,2-Dichloroethane-d4	*125*				*70.0-130*		*04/08/2019 22:55*	WG1262803

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U	J3	0.000316	0.00100	0.00100	1	04/12/2019 22:19	WG1262825
Acenaphthylene	U	J3	0.000309	0.00100	0.00100	1	04/12/2019 22:19	WG1262825
Acetophenone	U	J3	0.00247	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
Anthracene	U	J3	0.000291	0.00100	0.00100	1	04/12/2019 22:19	WG1262825
Atrazine	U	J3	0.000260	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
Benzo(a)anthracene	U	J3 J4	0.0000510	0.00100	0.00100	1	04/12/2019 22:19	WG1262825
Benzaldehyde	U		0.00140	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
Benzo(b)fluoranthene	U	J3 J4	0.0000896	0.00100	0.00100	1	04/12/2019 22:19	WG1262825
Benzo(k)fluoranthene	U	J3 J4	0.000355	0.00100	0.00100	1	04/12/2019 22:19	WG1262825

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzo(g,h,i)perylene	U	J3 J4	0.00000227	0.00100	0.00100	1	04/12/2019 22:19	WG1262825
Benzo(a)pyrene	U	J3 J4	0.0000381	0.000200	0.000200	1	04/12/2019 22:19	WG1262825
Biphenyl	U	J3	0.000325	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
Bis(2-chlorethoxy)methane	U	J3	0.000329	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
Bis(2-chloroethyl)ether	U	J3	0.00162	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
Bis(2-chloroisopropyl)ether	U	J3	0.000445	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
4-Bromophenyl-phenylether	U	J3 J4	0.000335	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
2-Chloronaphthalene	U	J3	0.000330	0.00100	0.00100	1	04/12/2019 22:19	WG1262825
4-Chlorophenyl-phenylether	U	J3	0.000303	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
Caprolactam	U		0.00259	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
Carbazole	U	J3 J4	0.000260	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
Chrysene	U	J3 J4	0.000332	0.00100	0.00100	1	04/12/2019 22:19	WG1262825
Dibenz(a,h)anthracene	U	J3 J4	0.0000644	0.000200	0.000200	1	04/12/2019 22:19	WG1262825
Dibenzofuran	U	J3	0.000338	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
3,3-Dichlorobenzidine	U	J3	0.00202	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
2,4-Dinitrotoluene	U	J3	0.00165	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
2,6-Dinitrotoluene	U	J3	0.000279	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
Fluoranthene	U	J3 J4	0.000310	0.00100	0.00100	1	04/12/2019 22:19	WG1262825
Fluorene	U	J3	0.000323	0.00100	0.00100	1	04/12/2019 22:19	WG1262825
Hexachlorobenzene	U	J3 J4	0.000341	0.00100	0.00100	1	04/12/2019 22:19	WG1262825
Hexachloro-1,3-butadiene	U	J3	0.000329	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
Hexachlorocyclopentadiene	U	J3	0.00233	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
Hexachloroethane	U		0.000365	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
Indeno(1,2,3-cd)pyrene	U	J3 J4	0.000279	0.00100	0.00100	1	04/12/2019 22:19	WG1262825
Isophorone	U	J3	0.000272	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
1-Methylnaphthalene	U	J3	0.000332	0.00100	0.00100	1	04/12/2019 22:19	WG1262825
2-Methylnaphthalene	U	J3	0.000311	0.00100	0.00100	1	04/12/2019 22:19	WG1262825
Naphthalene	U	J3	0.000372	0.00100	0.00100	1	04/12/2019 22:19	WG1262825
Nitrobenzene	U	J3	0.000367	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
n-Nitrosodiphenylamine	U	J3	0.00119	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
n-Nitrosodi-n-propylamine	U	J3	0.000403	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
Phenanthrene	U	J3	0.000366	0.00100	0.00100	1	04/12/2019 22:19	WG1262825
Benzylbutyl phthalate	U	J3	0.000275	0.00300	0.00300	1	04/12/2019 22:19	WG1262825
Bis(2-ethylhexyl)phthalate	0.000790	B J J3	0.000709	0.00300	0.00300	1	04/12/2019 22:19	WG1262825
Di-n-butyl phthalate	U	J3 J4	0.000266	0.00300	0.00300	1	04/12/2019 22:19	WG1262825
Diethyl phthalate	U	J3	0.000282	0.00300	0.00300	1	04/12/2019 22:19	WG1262825
Dimethyl phthalate	U	J3	0.000283	0.00300	0.00300	1	04/12/2019 22:19	WG1262825
Di-n-octyl phthalate	U	J3	0.000278	0.00300	0.00300	1	04/12/2019 22:19	WG1262825
Pyrene	U	J3 J4	0.000330	0.00100	0.00100	1	04/12/2019 22:19	WG1262825
1,2,4-Trichlorobenzene	U	J3	0.000355	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
4-Chloro-3-methylphenol	U	J3	0.000263	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
2,4-Dichlorophenol	U	J3	0.000284	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
2,4-Dimethylphenol	U	J3	0.000624	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
2-Nitroaniline	U	J3 J4	0.00190	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
2-Methylphenol	U	J3	0.000312	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
3-Nitroaniline	U	J3	0.000308	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
4-Chloroaniline	U	J3	0.000382	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
4-Nitroaniline	U	J3	0.000349	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
Phenol	0.00284	J	0.000334	0.0100	0.0100	1	04/12/2019 22:19	WG1262825

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
2,4,5-Trichlorophenol	U	J3	0.000236	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
2,4,6-Trichlorophenol	U	J3	0.000297	0.0100	0.0100	1	04/12/2019 22:19	WG1262825
(S) 2-Fluorophenol	*41.0*				*10.0-120*		*04/12/2019 22:19*	WG1262825
(S) Phenol-d5	*25.2*				*10.0-120*		*04/12/2019 22:19*	WG1262825
(S) Nitrobenzene-d5	*56.7*				*10.0-127*		*04/12/2019 22:19*	WG1262825
(S) 2-Fluorobiphenyl	*58.6*				*10.0-130*		*04/12/2019 22:19*	WG1262825
(S) 2,4,6-Tribromophenol	*59.9*				*10.0-155*		*04/12/2019 22:19*	WG1262825
(S) p-Terphenyl-d14	*78.8*				*10.0-128*		*04/12/2019 22:19*	WG1262825

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	623		2.82	10.0	10.0	1	04/11/2019 20:00	WG1264089

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	341		2.71	20.0	20.0	1	04/09/2019 19:23	WG1262436

Sample Narrative:

L1086362-07 WG1262436: Endpoint pH 4.5

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	5.09		0.0394	0.100	0.200	2	04/12/2019 12:49	WG1263602

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	41.2		0.0519	1.00	1.00	1	04/16/2019 03:33	WG1265412
Fluoride	0.551		0.00990	0.100	0.100	1	04/16/2019 03:33	WG1265412
Sulfate	77.1		0.0774	5.00	5.00	1	04/16/2019 03:33	WG1265412

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	0.000200	1	04/08/2019 12:04	WG1262269

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.295		0.0126	0.200	0.200	1	04/13/2019 15:00	WG1262060

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	04/16/2019 13:16	WG1262074
Arsenic,Dissolved	0.00250		0.000250	0.00200	0.00200	1	04/16/2019 13:16	WG1262074
Barium,Dissolved	0.167		0.000360	0.00500	0.00500	1	04/16/2019 13:16	WG1262074
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	04/16/2019 13:16	WG1262074
Calcium,Dissolved	127		0.0460	1.00	1.00	1	04/16/2019 13:16	WG1262074
Chromium,Dissolved	0.000768	J	0.000540	0.00200	0.00200	1	04/16/2019 13:16	WG1262074
Copper,Dissolved	0.00330	J	0.000520	0.00500	0.00500	1	04/16/2019 13:16	WG1262074
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	04/16/2019 13:16	WG1262074
Iron,Dissolved	U		0.0150	0.100	0.100	1	04/16/2019 13:16	WG1262074
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	04/16/2019 13:16	WG1262074
Magnesium,Dissolved	13.8		0.100	1.00	1.00	1	04/16/2019 13:16	WG1262074
Manganese,Dissolved	0.000558	J	0.000250	0.00500	0.00500	1	04/16/2019 13:16	WG1262074
Molybdenum,Dissolved	0.00190	J	0.000140	0.00500	0.00500	1	04/16/2019 13:16	WG1262074
Nickel,Dissolved	0.00530		0.000350	0.00200	0.00200	1	04/16/2019 13:16	WG1262074
Potassium,Dissolved	2.86		0.0370	1.00	1.00	1	04/16/2019 13:16	WG1262074
Selenium,Dissolved	0.00163	J	0.000380	0.00200	0.00200	1	04/16/2019 13:16	WG1262074
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	04/16/2019 13:16	WG1262074
Sodium,Dissolved	69.2		0.110	1.00	1.00	1	04/16/2019 13:16	WG1262074

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Uranium,Dissolved	0.00582	J	0.000330	0.0100	0.0100	1	04/16/2019 13:16	WG1262074
Zinc,Dissolved	0.0172	J	0.00256	0.0250	0.0250	1	04/16/2019 13:16	WG1262074

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	04/08/2019 23:15	WG1262803
Benzene	U		0.000331	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	04/08/2019 23:15	WG1262803
Bromoform	U		0.000469	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
Bromomethane	U		0.000866	0.00500	0.00500	1	04/08/2019 23:15	WG1262803
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
Carbon disulfide	U		0.000275	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
Chlorobenzene	U		0.000348	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
Chloroethane	U		0.000453	0.00500	0.00500	1	04/08/2019 23:15	WG1262803
Chloroform	U		0.000324	0.00500	0.00500	1	04/08/2019 23:15	WG1262803
Chloromethane	U		0.000276	0.00250	0.00250	1	04/08/2019 23:15	WG1262803
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
Ethylbenzene	U		0.000384	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
2-Hexanone	U		0.00382	0.0100	0.0100	1	04/08/2019 23:15	WG1262803
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	04/08/2019 23:15	WG1262803
Methylene Chloride	U		0.00100	0.00500	0.00500	1	04/08/2019 23:15	WG1262803
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	04/08/2019 23:15	WG1262803
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
Naphthalene	U		0.00100	0.00500	0.00500	1	04/08/2019 23:15	WG1262803
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
Styrene	U		0.000307	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
Toluene	U		0.000412	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
Trichloroethene	U		0.000398	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
Vinyl chloride	U		0.000259	0.00100	0.00100	1	04/08/2019 23:15	WG1262803
Xylenes, Total	U		0.00106	0.00300	0.00300	1	04/08/2019 23:15	WG1262803
(S) Toluene-d8	*107*				*80.0-120*		*04/08/2019 23:15*	WG1262803
(S) 4-Bromofluorobenzene	*100*				*77.0-126*		*04/08/2019 23:15*	WG1262803
(S) 1,2-Dichloroethane-d4	*122*				*70.0-130*		*04/08/2019 23:15*	WG1262803

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acenaphthene	U	J3	0.000316	0.00100	0.00100	1	04/12/2019 22:39	WG1262825
Acenaphthylene	U	J3	0.000309	0.00100	0.00100	1	04/12/2019 22:39	WG1262825
Acetophenone	U	J3	0.00247	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
Anthracene	U	J3	0.000291	0.00100	0.00100	1	04/12/2019 22:39	WG1262825
Atrazine	U	J3	0.000260	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
Benzo(a)anthracene	U	J3 J4	0.0000510	0.00100	0.00100	1	04/12/2019 22:39	WG1262825
Benzaldehyde	U		0.00140	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
Benzo(b)fluoranthene	U	J3 J4	0.0000896	0.00100	0.00100	1	04/12/2019 22:39	WG1262825
Benzo(k)fluoranthene	U	J3 J4	0.000355	0.00100	0.00100	1	04/12/2019 22:39	WG1262825
Benzo(g,h,i)perylene	U	J3 J4	0.00000227	0.00100	0.00100	1	04/12/2019 22:39	WG1262825
Benzo(a)pyrene	U	J3 J4	0.0000381	0.000200	0.000200	1	04/12/2019 22:39	WG1262825
Biphenyl	U	J3	0.000325	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
Bis(2-chlorethoxy)methane	U	J3	0.000329	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
Bis(2-chloroethyl)ether	U	J3	0.00162	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
Bis(2-chloroisopropyl)ether	U	J3	0.000445	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
4-Bromophenyl-phenylether	U	J3 J4	0.000335	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
2-Chloronaphthalene	U	J3	0.000330	0.00100	0.00100	1	04/12/2019 22:39	WG1262825
4-Chlorophenyl-phenylether	U	J3	0.000303	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
Caprolactam	U		0.00259	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
Carbazole	U	J3 J4	0.000260	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
Chrysene	U	J3 J4	0.000332	0.00100	0.00100	1	04/12/2019 22:39	WG1262825
Dibenz(a,h)anthracene	U	J3 J4	0.0000644	0.000200	0.000200	1	04/12/2019 22:39	WG1262825
Dibenzofuran	U	J3	0.000338	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
3,3-Dichlorobenzidine	U	J3	0.00202	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
2,4-Dinitrotoluene	U	J3	0.00165	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
2,6-Dinitrotoluene	U	J3	0.000279	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
Fluoranthene	U	J3 J4	0.000310	0.00100	0.00100	1	04/12/2019 22:39	WG1262825
Fluorene	U	J3	0.000323	0.00100	0.00100	1	04/12/2019 22:39	WG1262825
Hexachlorobenzene	U	J3 J4	0.000341	0.00100	0.00100	1	04/12/2019 22:39	WG1262825
Hexachloro-1,3-butadiene	U	J3	0.000329	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
Hexachlorocyclopentadiene	U	J3	0.00233	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
Hexachloroethane	U		0.000365	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
Indeno(1,2,3-cd)pyrene	U	J3 J4	0.000279	0.00100	0.00100	1	04/12/2019 22:39	WG1262825
Isophorone	U	J3	0.000272	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
1-Methylnaphthalene	U	J3	0.000332	0.00100	0.00100	1	04/12/2019 22:39	WG1262825
2-Methylnaphthalene	U	J3	0.000311	0.00100	0.00100	1	04/12/2019 22:39	WG1262825
Naphthalene	U	J3	0.000372	0.00100	0.00100	1	04/12/2019 22:39	WG1262825
Nitrobenzene	U	J3	0.000367	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
n-Nitrosodiphenylamine	U	J3	0.00119	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
n-Nitrosodi-n-propylamine	U	J3	0.000403	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
Phenanthrene	U	J3	0.000366	0.00100	0.00100	1	04/12/2019 22:39	WG1262825
Benzylbutyl phthalate	U	J3	0.000275	0.00300	0.00300	1	04/12/2019 22:39	WG1262825
Bis(2-ethylhexyl)phthalate	0.000828	B J J3	0.000709	0.00300	0.00300	1	04/12/2019 22:39	WG1262825
Di-n-butyl phthalate	U	J3 J4	0.000266	0.00300	0.00300	1	04/12/2019 22:39	WG1262825
Diethyl phthalate	0.000342	J J3	0.000282	0.00300	0.00300	1	04/12/2019 22:39	WG1262825
Dimethyl phthalate	U	J3	0.000283	0.00300	0.00300	1	04/12/2019 22:39	WG1262825
Di-n-octyl phthalate	U	J3	0.000278	0.00300	0.00300	1	04/12/2019 22:39	WG1262825
Pyrene	U	J3 J4	0.000330	0.00100	0.00100	1	04/12/2019 22:39	WG1262825
1,2,4-Trichlorobenzene	U	J3	0.000355	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
4-Chloro-3-methylphenol	U	J3	0.000263	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
2,4-Dichlorophenol	U	J3	0.000284	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
2,4-Dimethylphenol	U	J3	0.000624	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	04/12/2019 22:39	WG1262825

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
2-Nitroaniline	U	J3 J4	0.00190	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
2-Methylphenol	U	J3	0.000312	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
3-Nitroaniline	U	J3	0.000308	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
4-Chloroaniline	U	J3	0.000382	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
4-Nitroaniline	U	J3	0.000349	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
Phenol	0.00257	J	0.000334	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
2,4,5-Trichlorophenol	U	J3	0.000236	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
2,4,6-Trichlorophenol	U	J3	0.000297	0.0100	0.0100	1	04/12/2019 22:39	WG1262825
(S) 2-Fluorophenol	*32.5*				*10.0-120*		*04/12/2019 22:39*	WG1262825
(S) Phenol-d5	*20.5*				*10.0-120*		*04/12/2019 22:39*	WG1262825
(S) Nitrobenzene-d5	*43.9*				*10.0-127*		*04/12/2019 22:39*	WG1262825
(S) 2-Fluorobiphenyl	*48.0*				*10.0-130*		*04/12/2019 22:39*	WG1262825
(S) 2,4,6-Tribromophenol	*47.6*				*10.0-155*		*04/12/2019 22:39*	WG1262825
(S) p-Terphenyl-d14	*72.9*				*10.0-128*		*04/12/2019 22:39*	WG1262825

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	1980		7.05	25.0	25.0	1	04/11/2019 20:00	WG1264089

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	3.66		0.0197	0.100	0.100	1	04/12/2019 12:51	WG1263602

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	464		0.519	1.00	10.0	10	04/16/2019 04:29	WG1265412
Fluoride	0.326		0.00990	0.100	0.100	1	04/16/2019 04:15	WG1265412
Sulfate	94.8		0.0774	5.00	5.00	1	04/16/2019 04:15	WG1265412

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	0.0000564	J	0.0000490	0.000200	0.000200	1	04/08/2019 12:06	WG1262269

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.239		0.0126	0.200	0.200	1	04/13/2019 15:09	WG1262060

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	04/16/2019 13:21	WG1262074
Arsenic,Dissolved	0.00188	J	0.000250	0.00200	0.00200	1	04/16/2019 13:21	WG1262074
Barium,Dissolved	0.199		0.000360	0.00500	0.00500	1	04/16/2019 13:21	WG1262074
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	04/16/2019 13:21	WG1262074
Calcium,Dissolved	314		0.0460	1.00	1.00	1	04/16/2019 13:21	WG1262074
Chromium,Dissolved	0.00802		0.000540	0.00200	0.00200	1	04/16/2019 13:21	WG1262074
Copper,Dissolved	0.0162		0.000520	0.00500	0.00500	1	04/16/2019 13:21	WG1262074
Cobalt,Dissolved	0.00148	J	0.000260	0.00200	0.00200	1	04/16/2019 13:21	WG1262074
Iron,Dissolved	U		0.0150	0.100	0.100	1	04/16/2019 13:21	WG1262074
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	04/16/2019 13:21	WG1262074
Magnesium,Dissolved	42.6		0.100	1.00	1.00	1	04/16/2019 13:21	WG1262074
Manganese,Dissolved	0.0520		0.000250	0.00500	0.00500	1	04/16/2019 13:21	WG1262074
Molybdenum,Dissolved	0.000861	J	0.000140	0.00500	0.00500	1	04/16/2019 13:21	WG1262074
Nickel,Dissolved	0.0234		0.000350	0.00200	0.00200	1	04/16/2019 13:21	WG1262074
Potassium,Dissolved	4.22		0.0370	1.00	1.00	1	04/16/2019 13:21	WG1262074
Selenium,Dissolved	0.000961	J	0.000380	0.00200	0.00200	1	04/16/2019 13:21	WG1262074
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	04/16/2019 13:21	WG1262074
Sodium,Dissolved	108		0.110	1.00	1.00	1	04/16/2019 13:21	WG1262074
Uranium,Dissolved	0.0106		0.000330	0.0100	0.0100	1	04/16/2019 13:21	WG1262074
Zinc,Dissolved	0.0335		0.00256	0.0250	0.0250	1	04/16/2019 13:21	WG1262074

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	04/08/2019 23:35	WG1262803
Benzene	U		0.000331	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	04/08/2019 23:35	WG1262803
Bromoform	U		0.000469	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
Bromomethane	U		0.000866	0.00500	0.00500	1	04/08/2019 23:35	WG1262803
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
Carbon disulfide	U		0.000275	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
Chlorobenzene	U		0.000348	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
Chloroethane	U		0.000453	0.00500	0.00500	1	04/08/2019 23:35	WG1262803
Chloroform	U		0.000324	0.00500	0.00500	1	04/08/2019 23:35	WG1262803
Chloromethane	U		0.000276	0.00250	0.00250	1	04/08/2019 23:35	WG1262803
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
Ethylbenzene	U		0.000384	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
2-Hexanone	U		0.00382	0.0100	0.0100	1	04/08/2019 23:35	WG1262803
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	04/08/2019 23:35	WG1262803
Methylene Chloride	U		0.00100	0.00500	0.00500	1	04/08/2019 23:35	WG1262803
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	04/08/2019 23:35	WG1262803
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
Naphthalene	U		0.00100	0.00500	0.00500	1	04/08/2019 23:35	WG1262803
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
Styrene	U		0.000307	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
Toluene	U		0.000412	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
Trichloroethene	U		0.000398	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
Vinyl chloride	U		0.000259	0.00100	0.00100	1	04/08/2019 23:35	WG1262803
Xylenes, Total	U		0.00106	0.00300	0.00300	1	04/08/2019 23:35	WG1262803
(S) Toluene-d8	*103*				*80.0-120*		*04/08/2019 23:35*	WG1262803
(S) 4-Bromofluorobenzene	*98.8*				*77.0-126*		*04/08/2019 23:35*	WG1262803
(S) 1,2-Dichloroethane-d4	*120*				*70.0-130*		*04/08/2019 23:35*	WG1262803

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	1880		7.05	25.0	25.0	1	04/11/2019 20:00	WG1264089

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	156		2.71	20.0	20.0	1	04/09/2019 19:30	WG1262436

Sample Narrative:

L1086362-09 WG1262436: Endpoint pH 4.5

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	3.85		0.0394	0.100	0.200	2	04/12/2019 12:52	WG1263602

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	537		0.519	1.00	10.0	10	04/16/2019 04:57	WG1265412
Fluoride	0.478		0.00990	0.100	0.100	1	04/16/2019 04:43	WG1265412
Sulfate	100		0.774	5.00	50.0	10	04/16/2019 04:57	WG1265412

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	0.000200	1	04/08/2019 12:09	WG1262269

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.180	J	0.0126	0.200	0.200	1	04/13/2019 15:11	WG1262060

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	0.00581	B J	0.00515	0.100	0.100	1	04/16/2019 13:40	WG1262074
Arsenic,Dissolved	0.00294		0.000250	0.00200	0.00200	1	04/16/2019 13:40	WG1262074
Barium,Dissolved	0.189		0.000360	0.00500	0.00500	1	04/16/2019 13:40	WG1262074
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	04/16/2019 13:40	WG1262074
Calcium,Dissolved	229		0.0460	1.00	1.00	1	04/16/2019 13:40	WG1262074
Chromium,Dissolved	0.00181	J	0.000540	0.00200	0.00200	1	04/16/2019 13:40	WG1262074
Copper,Dissolved	0.00800		0.000520	0.00500	0.00500	1	04/16/2019 13:40	WG1262074
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	04/16/2019 13:40	WG1262074
Iron,Dissolved	U		0.0150	0.100	0.100	1	04/16/2019 13:40	WG1262074
Lead,Dissolved	0.000487	J	0.000240	0.00200	0.00200	1	04/16/2019 13:40	WG1262074
Magnesium,Dissolved	32.8		0.100	1.00	1.00	1	04/16/2019 13:40	WG1262074
Manganese,Dissolved	0.000601	J	0.000250	0.00500	0.00500	1	04/16/2019 13:40	WG1262074
Molybdenum,Dissolved	0.00170	J	0.000140	0.00500	0.00500	1	04/16/2019 13:40	WG1262074
Nickel,Dissolved	0.00656		0.000350	0.00200	0.00200	1	04/16/2019 13:40	WG1262074
Potassium,Dissolved	4.40		0.0370	1.00	1.00	1	04/16/2019 13:40	WG1262074
Selenium,Dissolved	0.00134	J	0.000380	0.00200	0.00200	1	04/16/2019 13:40	WG1262074
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	04/16/2019 13:40	WG1262074
Sodium,Dissolved	167		0.110	1.00	1.00	1	04/16/2019 13:40	WG1262074

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Uranium,Dissolved	0.00265	J	0.000330	0.0100	0.0100	1	04/16/2019 13:40	WG1262074
Zinc,Dissolved	0.0714		0.00256	0.0250	0.0250	1	04/16/2019 13:40	WG1262074

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	568		2.82	10.0	10.0	1	04/11/2019 20:32	WG1264090

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	185		2.71	20.0	20.0	1	04/09/2019 19:35	WG1262436

Sample Narrative:

L1086362-10 WG1262436: Endpoint pH 4.5

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	2.21		0.0394	0.100	0.200	2	04/12/2019 12:54	WG1263602

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	94.5		0.0519	1.00	1.00	1	04/16/2019 05:11	WG1265412
Fluoride	0.627		0.00990	0.100	0.100	1	04/16/2019 05:11	WG1265412
Sulfate	78.5		0.0774	5.00	5.00	1	04/16/2019 05:11	WG1265412

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	0.000200	1	04/08/2019 12:11	WG1262269

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.150	J	0.0126	0.200	0.200	1	04/13/2019 15:14	WG1262060

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	04/16/2019 13:45	WG1262074
Arsenic,Dissolved	0.00384		0.000250	0.00200	0.00200	1	04/16/2019 13:45	WG1262074
Barium,Dissolved	0.0984		0.000360	0.00500	0.00500	1	04/16/2019 13:45	WG1262074
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	04/16/2019 13:45	WG1262074
Calcium,Dissolved	113		0.0460	1.00	1.00	1	04/16/2019 13:45	WG1262074
Chromium,Dissolved	0.00167	J	0.000540	0.00200	0.00200	1	04/16/2019 13:45	WG1262074
Copper,Dissolved	0.00167	J	0.000520	0.00500	0.00500	1	04/16/2019 13:45	WG1262074
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	04/16/2019 13:45	WG1262074
Iron,Dissolved	U		0.0150	0.100	0.100	1	04/16/2019 13:45	WG1262074
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	04/16/2019 13:45	WG1262074
Magnesium,Dissolved	13.2		0.100	1.00	1.00	1	04/16/2019 13:45	WG1262074
Manganese,Dissolved	0.000643	J	0.000250	0.00500	0.00500	1	04/16/2019 13:45	WG1262074
Molybdenum,Dissolved	0.00180	J	0.000140	0.00500	0.00500	1	04/16/2019 13:45	WG1262074
Nickel,Dissolved	0.0335		0.000350	0.00200	0.00200	1	04/16/2019 13:45	WG1262074
Potassium,Dissolved	2.23		0.0370	1.00	1.00	1	04/16/2019 13:45	WG1262074
Selenium,Dissolved	0.00294		0.000380	0.00200	0.00200	1	04/16/2019 13:45	WG1262074
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	04/16/2019 13:45	WG1262074
Sodium,Dissolved	44.5		0.110	1.00	1.00	1	04/16/2019 13:45	WG1262074

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Uranium,Dissolved	0.00168	J	0.000330	0.0100	0.0100	1	04/16/2019 13:45	WG1262074
Zinc,Dissolved	0.0260		0.00256	0.0250	0.0250	1	04/16/2019 13:45	WG1262074

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0100	1.00	1.00	1	04/08/2019 23:56	WG1262803
Benzene	U		0.000331	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	04/08/2019 23:56	WG1262803
Bromoform	U		0.000469	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
Bromomethane	U		0.000866	0.00500	0.00500	1	04/08/2019 23:56	WG1262803
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
Carbon disulfide	U		0.000275	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
Chlorobenzene	U		0.000348	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
Chloroethane	U		0.000453	0.00500	0.00500	1	04/08/2019 23:56	WG1262803
Chloroform	U		0.000324	0.00500	0.00500	1	04/08/2019 23:56	WG1262803
Chloromethane	U		0.000276	0.00250	0.00250	1	04/08/2019 23:56	WG1262803
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
Ethylbenzene	U		0.000384	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
2-Hexanone	U		0.00382	0.0100	0.0100	1	04/08/2019 23:56	WG1262803
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	04/08/2019 23:56	WG1262803
Methylene Chloride	U		0.00100	0.00500	0.00500	1	04/08/2019 23:56	WG1262803
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	04/08/2019 23:56	WG1262803
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
Naphthalene	U		0.00100	0.00500	0.00500	1	04/08/2019 23:56	WG1262803
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
Styrene	U		0.000307	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
Toluene	U		0.000412	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
Trichloroethene	U		0.000398	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
Vinyl chloride	U		0.000259	0.00100	0.00100	1	04/08/2019 23:56	WG1262803
Xylenes, Total	U		0.00106	0.00300	0.00300	1	04/08/2019 23:56	WG1262803
(S) Toluene-d8	*102*				*80.0-120*		*04/08/2019 23:56*	WG1262803
(S) 4-Bromofluorobenzene	*99.2*				*77.0-126*		*04/08/2019 23:56*	WG1262803
(S) 1,2-Dichloroethane-d4	*125*				*70.0-130*		*04/08/2019 23:56*	WG1262803

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acenaphthene	U	J3	0.000316	0.00100	0.00100	1	04/12/2019 23:00	WG1262825
Acenaphthylene	U	J3	0.000309	0.00100	0.00100	1	04/12/2019 23:00	WG1262825
Acetophenone	U	J3	0.00247	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
Anthracene	U	J3	0.000291	0.00100	0.00100	1	04/12/2019 23:00	WG1262825
Atrazine	U	J3	0.000260	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
Benzo(a)anthracene	U	J3 J4	0.0000510	0.00100	0.00100	1	04/12/2019 23:00	WG1262825
Benzaldehyde	U		0.00140	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
Benzo(b)fluoranthene	U	J3 J4	0.0000896	0.00100	0.00100	1	04/12/2019 23:00	WG1262825
Benzo(k)fluoranthene	U	J3 J4	0.000355	0.00100	0.00100	1	04/12/2019 23:00	WG1262825
Benzo(g,h,i)perylene	U	J3 J4	0.00000227	0.00100	0.00100	1	04/12/2019 23:00	WG1262825
Benzo(a)pyrene	U	J3 J4	0.0000381	0.000200	0.000200	1	04/12/2019 23:00	WG1262825
Biphenyl	U	J3	0.000325	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
Bis(2-chlorethoxy)methane	U	J3	0.000329	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
Bis(2-chloroethyl)ether	U	J3	0.00162	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
Bis(2-chloroisopropyl)ether	U	J3	0.000445	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
4-Bromophenyl-phenylether	U	J3 J4	0.000335	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
2-Chloronaphthalene	U	J3	0.000330	0.00100	0.00100	1	04/12/2019 23:00	WG1262825
4-Chlorophenyl-phenylether	U	J3	0.000303	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
Caprolactam	U		0.00259	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
Carbazole	U	J3 J4	0.000260	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
Chrysene	U	J3 J4	0.000332	0.00100	0.00100	1	04/12/2019 23:00	WG1262825
Dibenz(a,h)anthracene	U	J3 J4	0.0000644	0.000200	0.000200	1	04/12/2019 23:00	WG1262825
Dibenzofuran	U	J3	0.000338	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
3,3-Dichlorobenzidine	U	J3	0.00202	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
2,4-Dinitrotoluene	U	J3	0.00165	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
2,6-Dinitrotoluene	U	J3	0.000279	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
Fluoranthene	U	J3 J4	0.000310	0.00100	0.00100	1	04/12/2019 23:00	WG1262825
Fluorene	U	J3	0.000323	0.00100	0.00100	1	04/12/2019 23:00	WG1262825
Hexachlorobenzene	U	J3 J4	0.000341	0.00100	0.00100	1	04/12/2019 23:00	WG1262825
Hexachloro-1,3-butadiene	U	J3	0.000329	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
Hexachlorocyclopentadiene	U	J3	0.00233	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
Hexachloroethane	U		0.000365	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
Indeno(1,2,3-cd)pyrene	U	J3 J4	0.000279	0.00100	0.00100	1	04/12/2019 23:00	WG1262825
Isophorone	U	J3	0.000272	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
1-Methylnaphthalene	U	J3	0.000332	0.00100	0.00100	1	04/12/2019 23:00	WG1262825
2-Methylnaphthalene	U	J3	0.000311	0.00100	0.00100	1	04/12/2019 23:00	WG1262825
Naphthalene	U	J3	0.000372	0.00100	0.00100	1	04/12/2019 23:00	WG1262825
Nitrobenzene	U	J3	0.000367	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
n-Nitrosodiphenylamine	U	J3	0.00119	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
n-Nitrosodi-n-propylamine	U	J3	0.000403	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
Phenanthrene	U	J3	0.000366	0.00100	0.00100	1	04/12/2019 23:00	WG1262825
Benzylbutyl phthalate	U	J3	0.000275	0.00300	0.00300	1	04/12/2019 23:00	WG1262825
Bis(2-ethylhexyl)phthalate	0.000817	B J J3	0.000709	0.00300	0.00300	1	04/12/2019 23:00	WG1262825
Di-n-butyl phthalate	U	J3 J4	0.000266	0.00300	0.00300	1	04/12/2019 23:00	WG1262825
Diethyl phthalate	U	J3	0.000282	0.00300	0.00300	1	04/12/2019 23:00	WG1262825
Dimethyl phthalate	U	J3	0.000283	0.00300	0.00300	1	04/12/2019 23:00	WG1262825
Di-n-octyl phthalate	U	J3	0.000278	0.00300	0.00300	1	04/12/2019 23:00	WG1262825
Pyrene	U	J3 J4	0.000330	0.00100	0.00100	1	04/12/2019 23:00	WG1262825
1,2,4-Trichlorobenzene	U	J3	0.000355	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
4-Chloro-3-methylphenol	U	J3	0.000263	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
2,4-Dichlorophenol	U	J3	0.000284	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
2,4-Dimethylphenol	U	J3	0.000624	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	04/12/2019 23:00	WG1262825

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
2-Nitroaniline	U	J3 J4	0.00190	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
2-Methylphenol	U	J3	0.000312	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
3-Nitroaniline	U	J3	0.000308	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
4-Chloroaniline	U	J3	0.000382	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
4-Nitroaniline	U	J3	0.000349	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
Phenol	0.00242	J	0.000334	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
2,4,5-Trichlorophenol	U	J3	0.000236	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
2,4,6-Trichlorophenol	U	J3	0.000297	0.0100	0.0100	1	04/12/2019 23:00	WG1262825
(S) 2-Fluorophenol	*37.5*				*10.0-120*		*04/12/2019 23:00*	WG1262825
(S) Phenol-d5	*22.5*				*10.0-120*		*04/12/2019 23:00*	WG1262825
(S) Nitrobenzene-d5	*48.1*				*10.0-127*		*04/12/2019 23:00*	WG1262825
(S) 2-Fluorobiphenyl	*53.4*				*10.0-130*		*04/12/2019 23:00*	WG1262825
(S) 2,4,6-Tribromophenol	*46.6*				*10.0-155*		*04/12/2019 23:00*	WG1262825
(S) p-Terphenyl-d14	*71.2*				*10.0-128*		*04/12/2019 23:00*	WG1262825

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	1090		3.75	13.3	13.3	1	04/11/2019 20:32	WG1264090

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	164		2.71	20.0	20.0	1	04/09/2019 19:42	WG1262436

Sample Narrative:

L1086362-11 WG1262436: Endpoint pH 4.5

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	2.32		0.0197	0.100	0.100	1	04/12/2019 12:55	WG1263602

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	276		0.519	1.00	10.0	10	04/16/2019 05:52	WG1265412
Fluoride	0.647		0.00990	0.100	0.100	1	04/16/2019 05:39	WG1265412
Sulfate	81.8		0.0774	5.00	5.00	1	04/16/2019 05:39	WG1265412

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	1040		5.64	20.0	20.0	1	04/11/2019 20:32	WG1264090

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	368		2.71	20.0	20.0	1	04/09/2019 19:49	WG1262436

Sample Narrative:

L1086362-12 WG1262436: Endpoint pH 4.5

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	3.84	J6	0.0197	0.100	0.100	1	04/12/2019 12:57	WG1263602

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	224		0.519	1.00	10.0	10	04/16/2019 06:20	WG1265412
Fluoride	0.509		0.00990	0.100	0.100	1	04/16/2019 06:06	WG1265412
Sulfate	103		0.774	5.00	50.0	10	04/16/2019 06:20	WG1265412

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	0.000200	1	04/08/2019 12:13	WG1262269

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.225		0.0126	0.200	0.200	1	04/13/2019 15:17	WG1262060

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	0.00661	B J	0.00515	0.100	0.100	1	04/16/2019 13:49	WG1262074
Arsenic,Dissolved	0.00262		0.000250	0.00200	0.00200	1	04/16/2019 13:49	WG1262074
Barium,Dissolved	0.195		0.000360	0.00500	0.00500	1	04/16/2019 13:49	WG1262074
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	04/16/2019 13:49	WG1262074
Calcium,Dissolved	192		0.0460	1.00	1.00	1	04/16/2019 13:49	WG1262074
Chromium,Dissolved	U		0.000540	0.00200	0.00200	1	04/16/2019 13:49	WG1262074
Copper,Dissolved	0.00495	J	0.000520	0.00500	0.00500	1	04/16/2019 13:49	WG1262074
Cobalt,Dissolved	0.00634		0.000260	0.00200	0.00200	1	04/16/2019 13:49	WG1262074
Iron,Dissolved	U		0.0150	0.100	0.100	1	04/16/2019 13:49	WG1262074
Lead,Dissolved	0.000358	J	0.000240	0.00200	0.00200	1	04/16/2019 13:49	WG1262074
Magnesium,Dissolved	25.3		0.100	1.00	1.00	1	04/16/2019 13:49	WG1262074
Manganese,Dissolved	0.0317		0.000250	0.00500	0.00500	1	04/16/2019 13:49	WG1262074
Molybdenum,Dissolved	0.00163	J	0.000140	0.00500	0.00500	1	04/16/2019 13:49	WG1262074
Nickel,Dissolved	0.0120		0.000350	0.00200	0.00200	1	04/16/2019 13:49	WG1262074
Potassium,Dissolved	4.82		0.0370	1.00	1.00	1	04/16/2019 13:49	WG1262074
Selenium,Dissolved	0.000430	J	0.000380	0.00200	0.00200	1	04/16/2019 13:49	WG1262074
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	04/16/2019 13:49	WG1262074
Sodium,Dissolved	138		0.110	1.00	1.00	1	04/16/2019 13:49	WG1262074

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Uranium,Dissolved	0.00984	J	0.000330	0.0100	0.0100	1	04/16/2019 13:49	WG1262074
Zinc,Dissolved	0.00846	J	0.00256	0.0250	0.0250	1	04/16/2019 13:49	WG1262074

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0100	1.00	1.00	1	04/09/2019 00:16	WG1262803
Benzene	U		0.000331	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	04/09/2019 00:16	WG1262803
Bromoform	U		0.000469	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
Bromomethane	U		0.000866	0.00500	0.00500	1	04/09/2019 00:16	WG1262803
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
Carbon disulfide	U		0.000275	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
Chlorobenzene	U		0.000348	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
Chloroethane	U		0.000453	0.00500	0.00500	1	04/09/2019 00:16	WG1262803
Chloroform	U		0.000324	0.00500	0.00500	1	04/09/2019 00:16	WG1262803
Chloromethane	U		0.000276	0.00250	0.00250	1	04/09/2019 00:16	WG1262803
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
Ethylbenzene	U		0.000384	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
2-Hexanone	U		0.00382	0.0100	0.0100	1	04/09/2019 00:16	WG1262803
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	04/09/2019 00:16	WG1262803
Methylene Chloride	U		0.00100	0.00500	0.00500	1	04/09/2019 00:16	WG1262803
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	04/09/2019 00:16	WG1262803
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
Naphthalene	U		0.00100	0.00500	0.00500	1	04/09/2019 00:16	WG1262803
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
Styrene	U		0.000307	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
Toluene	U		0.000412	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
Trichloroethene	U		0.000398	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
Vinyl chloride	U		0.000259	0.00100	0.00100	1	04/09/2019 00:16	WG1262803
Xylenes, Total	U		0.00106	0.00300	0.00300	1	04/09/2019 00:16	WG1262803
(S) Toluene-d8	*105*				*80.0-120*		*04/09/2019 00:16*	WG1262803
(S) 4-Bromofluorobenzene	*100*				*77.0-126*		*04/09/2019 00:16*	WG1262803
(S) 1,2-Dichloroethane-d4	*123*				*70.0-130*		*04/09/2019 00:16*	WG1262803

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U	J3	0.000316	0.00100	0.00100	1	04/12/2019 23:20	WG1262825
Acenaphthylene	U	J3	0.000309	0.00100	0.00100	1	04/12/2019 23:20	WG1262825
Acetophenone	U	J3	0.00247	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
Anthracene	U	J3	0.000291	0.00100	0.00100	1	04/12/2019 23:20	WG1262825
Atrazine	U	J3	0.000260	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
Benzo(a)anthracene	U	J3 J4	0.0000510	0.00100	0.00100	1	04/12/2019 23:20	WG1262825
Benzaldehyde	U		0.00140	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
Benzo(b)fluoranthene	U	J3 J4	0.0000896	0.00100	0.00100	1	04/12/2019 23:20	WG1262825
Benzo(k)fluoranthene	U	J3 J4	0.000355	0.00100	0.00100	1	04/12/2019 23:20	WG1262825
Benzo(g,h,i)perylene	U	J3 J4	0.00000227	0.00100	0.00100	1	04/12/2019 23:20	WG1262825
Benzo(a)pyrene	U	J3 J4	0.0000381	0.000200	0.000200	1	04/12/2019 23:20	WG1262825
Biphenyl	U	J3	0.000325	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
Bis(2-chlorethoxy)methane	U	J3	0.000329	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
Bis(2-chloroethyl)ether	U	J3	0.00162	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
Bis(2-chloroisopropyl)ether	U	J3	0.000445	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
4-Bromophenyl-phenylether	U	J3 J4	0.000335	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
2-Chloronaphthalene	U	J3	0.000330	0.00100	0.00100	1	04/12/2019 23:20	WG1262825
4-Chlorophenyl-phenylether	U	J3	0.000303	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
Caprolactam	U		0.00259	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
Carbazole	U	J3 J4	0.000260	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
Chrysene	U	J3 J4	0.000332	0.00100	0.00100	1	04/12/2019 23:20	WG1262825
Dibenz(a,h)anthracene	U	J3 J4	0.0000644	0.000200	0.000200	1	04/12/2019 23:20	WG1262825
Dibenzofuran	U	J3	0.000338	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
3,3-Dichlorobenzidine	U	J3	0.00202	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
2,4-Dinitrotoluene	U	J3	0.00165	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
2,6-Dinitrotoluene	U	J3	0.000279	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
Fluoranthene	U	J3 J4	0.000310	0.00100	0.00100	1	04/12/2019 23:20	WG1262825
Fluorene	U	J3	0.000323	0.00100	0.00100	1	04/12/2019 23:20	WG1262825
Hexachlorobenzene	U	J3 J4	0.000341	0.00100	0.00100	1	04/12/2019 23:20	WG1262825
Hexachloro-1,3-butadiene	U	J3	0.000329	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
Hexachlorocyclopentadiene	U	J3	0.00233	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
Hexachloroethane	U		0.000365	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
Indeno(1,2,3-cd)pyrene	U	J3 J4	0.000279	0.00100	0.00100	1	04/12/2019 23:20	WG1262825
Isophorone	U	J3	0.000272	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
1-Methylnaphthalene	U	J3	0.000332	0.00100	0.00100	1	04/12/2019 23:20	WG1262825
2-Methylnaphthalene	U	J3	0.000311	0.00100	0.00100	1	04/12/2019 23:20	WG1262825
Naphthalene	U	J3	0.000372	0.00100	0.00100	1	04/12/2019 23:20	WG1262825
Nitrobenzene	U	J3	0.000367	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
n-Nitrosodiphenylamine	U	J3	0.00119	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
n-Nitrosodi-n-propylamine	U	J3	0.000403	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
Phenanthrene	U	J3	0.000366	0.00100	0.00100	1	04/12/2019 23:20	WG1262825
Benzylbutyl phthalate	U	J3	0.000275	0.00300	0.00300	1	04/12/2019 23:20	WG1262825
Bis(2-ethylhexyl)phthalate	0.000864	B J J3	0.000709	0.00300	0.00300	1	04/12/2019 23:20	WG1262825
Di-n-butyl phthalate	U	J3 J4	0.000266	0.00300	0.00300	1	04/12/2019 23:20	WG1262825
Diethyl phthalate	U	J3	0.000282	0.00300	0.00300	1	04/12/2019 23:20	WG1262825
Dimethyl phthalate	U	J3	0.000283	0.00300	0.00300	1	04/12/2019 23:20	WG1262825
Di-n-octyl phthalate	U	J3	0.000278	0.00300	0.00300	1	04/12/2019 23:20	WG1262825
Pyrene	U	J3 J4	0.000330	0.00100	0.00100	1	04/12/2019 23:20	WG1262825
1,2,4-Trichlorobenzene	U	J3	0.000355	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
4-Chloro-3-methylphenol	U	J3	0.000263	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
2,4-Dichlorophenol	U	J3	0.000284	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
2,4-Dimethylphenol	U	J3	0.000624	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	04/12/2019 23:20	WG1262825

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
2-Nitroaniline	U	J3 J4	0.00190	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
2-Methylphenol	U	J3	0.000312	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
3-Nitroaniline	U	J3	0.000308	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
4-Chloroaniline	U	J3	0.000382	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
4-Nitroaniline	U	J3	0.000349	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
Phenol	0.00201	J	0.000334	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
2,4,5-Trichlorophenol	U	J3	0.000236	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
2,4,6-Trichlorophenol	U	J3	0.000297	0.0100	0.0100	1	04/12/2019 23:20	WG1262825
(S) 2-Fluorophenol	*40.4*				*10.0-120*		*04/12/2019 23:20*	WG1262825
(S) Phenol-d5	*23.0*				*10.0-120*		*04/12/2019 23:20*	WG1262825
(S) Nitrobenzene-d5	*60.8*				*10.0-127*		*04/12/2019 23:20*	WG1262825
(S) 2-Fluorobiphenyl	*64.4*				*10.0-130*		*04/12/2019 23:20*	WG1262825
(S) 2,4,6-Tribromophenol	*64.5*				*10.0-155*		*04/12/2019 23:20*	WG1262825
(S) p-Terphenyl-d14	*84.1*				*10.0-128*		*04/12/2019 23:20*	WG1262825

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	04/09/2019 00:36	WG1262803
Benzene	U		0.000331	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	04/09/2019 00:36	WG1262803
Bromoform	U		0.000469	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
Bromomethane	U		0.000866	0.00500	0.00500	1	04/09/2019 00:36	WG1262803
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
Carbon disulfide	U		0.000275	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
Chlorobenzene	U		0.000348	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
Chloroethane	U		0.000453	0.00500	0.00500	1	04/09/2019 00:36	WG1262803
Chloroform	U		0.000324	0.00500	0.00500	1	04/09/2019 00:36	WG1262803
Chloromethane	U		0.000276	0.00250	0.00250	1	04/09/2019 00:36	WG1262803
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
Ethylbenzene	U		0.000384	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
2-Hexanone	U		0.00382	0.0100	0.0100	1	04/09/2019 00:36	WG1262803
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	04/09/2019 00:36	WG1262803
Methylene Chloride	U		0.00100	0.00500	0.00500	1	04/09/2019 00:36	WG1262803
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	04/09/2019 00:36	WG1262803
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
Naphthalene	U		0.00100	0.00500	0.00500	1	04/09/2019 00:36	WG1262803
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
Styrene	U		0.000307	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
Toluene	U		0.000412	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
Trichloroethene	U		0.000398	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
Vinyl chloride	U		0.000259	0.00100	0.00100	1	04/09/2019 00:36	WG1262803
Xylenes, Total	U		0.00106	0.00300	0.00300	1	04/09/2019 00:36	WG1262803
(S) Toluene-d8	*104*				*80.0-120*		*04/09/2019 00:36*	WG1262803
(S) 4-Bromofluorobenzene	*99.3*				*77.0-126*		*04/09/2019 00:36*	WG1262803
(S) 1,2-Dichloroethane-d4	*125*				*70.0-130*		*04/09/2019 00:36*	WG1262803

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	183		2.71	20.0	20.0	1	04/09/2019 19:55	WG1262436

Sample Narrative:

L1086362-14 WG1262436: Endpoint pH 4.5

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	3.69		0.0197	0.100	0.100	1	04/15/2019 12:07	WG1263603

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	75.3		0.0519	1.00	1.00	1	04/16/2019 07:02	WG1265412
Fluoride	1.76		0.00990	0.100	0.100	1	04/16/2019 07:02	WG1265412
Sulfate	80.1		0.0774	5.00	5.00	1	04/16/2019 07:02	WG1265412

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.0000490	0.000200	0.000200	1	04/08/2019 12:16	WG1262269

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.203		0.0126	0.200	0.200	1	04/13/2019 15:20	WG1262060

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	0.0106	B J	0.00515	0.100	0.100	1	04/16/2019 13:54	WG1262074
Arsenic,Dissolved	0.00252		0.000250	0.00200	0.00200	1	04/16/2019 13:54	WG1262074
Barium,Dissolved	0.109		0.000360	0.00500	0.00500	1	04/16/2019 13:54	WG1262074
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	04/16/2019 13:54	WG1262074
Calcium,Dissolved	163		0.0460	1.00	1.00	1	04/16/2019 13:54	WG1262074
Chromium,Dissolved	0.0171		0.000540	0.00200	0.00200	1	04/16/2019 13:54	WG1262074
Copper,Dissolved	0.00635		0.000520	0.00500	0.00500	1	04/16/2019 13:54	WG1262074
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	04/16/2019 13:54	WG1262074
Iron,Dissolved	U		0.0150	0.100	0.100	1	04/16/2019 13:54	WG1262074
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	04/16/2019 13:54	WG1262074
Magnesium,Dissolved	22.6		0.100	1.00	1.00	1	04/16/2019 13:54	WG1262074
Manganese,Dissolved	0.000417	J	0.000250	0.00500	0.00500	1	04/16/2019 13:54	WG1262074
Molybdenum,Dissolved	0.00157	J	0.000140	0.00500	0.00500	1	04/16/2019 13:54	WG1262074
Nickel,Dissolved	0.00320	B	0.000350	0.00200	0.00200	1	04/16/2019 13:54	WG1262074
Potassium,Dissolved	2.89		0.0370	1.00	1.00	1	04/16/2019 13:54	WG1262074
Selenium,Dissolved	0.00116	J	0.000380	0.00200	0.00200	1	04/16/2019 13:54	WG1262074
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	04/16/2019 13:54	WG1262074
Sodium,Dissolved	65.8		0.110	1.00	1.00	1	04/16/2019 13:54	WG1262074
Uranium,Dissolved	0.00448	J	0.000330	0.0100	0.0100	1	04/16/2019 13:54	WG1262074
Zinc,Dissolved	0.0829		0.00256	0.0250	0.0250	1	04/16/2019 13:54	WG1262074

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0100	1.00	1.00	1	04/09/2019 00:56	WG1262803
Benzene	U		0.000331	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	04/09/2019 00:56	WG1262803
Bromoform	U		0.000469	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
Bromomethane	U		0.000866	0.00500	0.00500	1	04/09/2019 00:56	WG1262803
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
Carbon disulfide	U		0.000275	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
Chlorobenzene	U		0.000348	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
Chloroethane	U		0.000453	0.00500	0.00500	1	04/09/2019 00:56	WG1262803
Chloroform	0.00133	J	0.000324	0.00500	0.00500	1	04/09/2019 00:56	WG1262803
Chloromethane	U		0.000276	0.00250	0.00250	1	04/09/2019 00:56	WG1262803
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	04/09/2019 00:56	WG1262803

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
Ethylbenzene	U		0.000384	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
2-Hexanone	U		0.00382	0.0100	0.0100	1	04/09/2019 00:56	WG1262803
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	04/09/2019 00:56	WG1262803
Methylene Chloride	U		0.00100	0.00500	0.00500	1	04/09/2019 00:56	WG1262803
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	04/09/2019 00:56	WG1262803
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
Naphthalene	U		0.00100	0.00500	0.00500	1	04/09/2019 00:56	WG1262803
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
Styrene	U		0.000307	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
Toluene	U		0.000412	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
Trichloroethene	U		0.000398	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
Vinyl chloride	U		0.000259	0.00100	0.00100	1	04/09/2019 00:56	WG1262803
Xylenes, Total	U		0.00106	0.00300	0.00300	1	04/09/2019 00:56	WG1262803
(S) Toluene-d8	*108*				*80.0-120*		*04/09/2019 00:56*	WG1262803
(S) 4-Bromofluorobenzene	*103*				*77.0-126*		*04/09/2019 00:56*	WG1262803
(S) 1,2-Dichloroethane-d4	*122*				*70.0-130*		*04/09/2019 00:56*	WG1262803

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	513		2.82	10.0	10.0	1	04/11/2019 20:32	WG1264090

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	180		2.71	20.0	20.0	1	04/09/2019 20:02	WG1262436

Sample Narrative:

L1086362-16 WG1262436: Endpoint pH 4.5

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	3.61		0.0197	0.100	0.100	1	04/15/2019 12:09	WG1263603

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	78.5		0.0519	1.00	1.00	1	04/16/2019 07:16	WG1265412
Fluoride	1.06		0.00990	0.100	0.100	1	04/16/2019 07:16	WG1265412
Sulfate	69.4		0.0774	5.00	5.00	1	04/16/2019 07:16	WG1265412

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	0.000200	1	04/08/2019 11:12	WG1262269

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.181	J	0.0126	0.200	0.200	1	04/13/2019 14:09	WG1262060

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	04/16/2019 11:40	WG1262074
Arsenic,Dissolved	0.00424		0.000250	0.00200	0.00200	1	04/16/2019 11:40	WG1262074
Barium,Dissolved	0.0850		0.000360	0.00500	0.00500	1	04/16/2019 11:40	WG1262074
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	04/16/2019 11:40	WG1262074
Calcium,Dissolved	100	V	0.0460	1.00	1.00	1	04/16/2019 11:40	WG1262074
Chromium,Dissolved	0.00225		0.000540	0.00200	0.00200	1	04/16/2019 11:40	WG1262074
Copper,Dissolved	0.00232	J	0.000520	0.00500	0.00500	1	04/16/2019 11:40	WG1262074
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	04/16/2019 11:40	WG1262074
Iron,Dissolved	U		0.0150	0.100	0.100	1	04/16/2019 11:40	WG1262074
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	04/16/2019 11:40	WG1262074
Magnesium,Dissolved	13.8		0.100	1.00	1.00	1	04/16/2019 11:40	WG1262074
Manganese,Dissolved	0.000363	J	0.000250	0.00500	0.00500	1	04/16/2019 11:40	WG1262074
Molybdenum,Dissolved	0.00240	J	0.000140	0.00500	0.00500	1	04/16/2019 11:40	WG1262074
Nickel,Dissolved	0.00473		0.000350	0.00200	0.00200	1	04/16/2019 11:40	WG1262074
Potassium,Dissolved	2.22	O1	0.0370	1.00	1.00	1	04/16/2019 11:40	WG1262074
Selenium,Dissolved	0.00215		0.000380	0.00200	0.00200	1	04/16/2019 11:40	WG1262074
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	04/16/2019 11:40	WG1262074
Sodium,Dissolved	39.9		0.110	1.00	1.00	1	04/16/2019 11:40	WG1262074

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Uranium,Dissolved	0.00223	J	0.000330	0.0100	0.0100	1	04/16/2019 11:40	WG1262074
Zinc,Dissolved	0.0511		0.00256	0.0250	0.0250	1	04/16/2019 11:40	WG1262074

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	04/09/2019 01:17	WG1262803
Benzene	U		0.000331	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
Bromodichloromethane	0.00405		0.000380	0.00125	0.00125	1	04/09/2019 01:17	WG1262803
Bromoform	U		0.000469	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
Bromomethane	U		0.000866	0.00500	0.00500	1	04/09/2019 01:17	WG1262803
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
Carbon disulfide	U		0.000275	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
Chlorobenzene	U		0.000348	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
Chlorodibromomethane	0.000547	J	0.000327	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
Chloroethane	U		0.000453	0.00500	0.00500	1	04/09/2019 01:17	WG1262803
Chloroform	0.0148		0.000324	0.00500	0.00500	1	04/09/2019 01:17	WG1262803
Chloromethane	U		0.000276	0.00250	0.00250	1	04/09/2019 01:17	WG1262803
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
Ethylbenzene	U		0.000384	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
2-Hexanone	U		0.00382	0.0100	0.0100	1	04/09/2019 01:17	WG1262803
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	04/09/2019 01:17	WG1262803
Methylene Chloride	U		0.00100	0.00500	0.00500	1	04/09/2019 01:17	WG1262803
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	04/09/2019 01:17	WG1262803
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
Naphthalene	U		0.00100	0.00500	0.00500	1	04/09/2019 01:17	WG1262803
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
Styrene	U		0.000307	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
Toluene	U		0.000412	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
Trichloroethene	U		0.000398	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
Vinyl chloride	U		0.000259	0.00100	0.00100	1	04/09/2019 01:17	WG1262803
Xylenes, Total	U		0.00106	0.00300	0.00300	1	04/09/2019 01:17	WG1262803
(S) Toluene-d8	*103*				*80.0-120*		*04/09/2019 01:17*	WG1262803
(S) 4-Bromofluorobenzene	*95.6*				*77.0-126*		*04/09/2019 01:17*	WG1262803
(S) 1,2-Dichloroethane-d4	*117*				*70.0-130*		*04/09/2019 01:17*	WG1262803

Semi-Volatile Organic Compounds (GC) by Method 3511/8015

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
TPH (GC/FID) High Fraction	U		0.0247	0.100	0.100	1	04/11/2019 01:38	WG1262668
(S) o-Terphenyl	*64.2*				*31.0-160*		*04/11/2019 01:38*	WG1262668

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acenaphthene	U		0.000316	0.00100	0.00100	1	04/11/2019 23:57	WG1263260
Acenaphthylene	U		0.000309	0.00100	0.00100	1	04/11/2019 23:57	WG1263260
Acetophenone	U		0.00247	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
Anthracene	U		0.000291	0.00100	0.00100	1	04/11/2019 23:57	WG1263260
Atrazine	U		0.000260	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	04/11/2019 23:57	WG1263260
Benzaldehyde	U		0.00140	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	04/11/2019 23:57	WG1263260
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	04/11/2019 23:57	WG1263260
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	04/11/2019 23:57	WG1263260
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	04/11/2019 23:57	WG1263260
Biphenyl	U		0.000325	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	04/11/2019 23:57	WG1263260
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
Caprolactam	U		0.00259	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
Carbazole	U		0.000260	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
Chrysene	U		0.000332	0.00100	0.00100	1	04/11/2019 23:57	WG1263260
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	04/11/2019 23:57	WG1263260
Dibenzofuran	U		0.000338	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
Fluoranthene	U		0.000310	0.00100	0.00100	1	04/11/2019 23:57	WG1263260
Fluorene	U		0.000323	0.00100	0.00100	1	04/11/2019 23:57	WG1263260
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	04/11/2019 23:57	WG1263260
Hexachloro-1,3-butadiene	U	J3	0.000329	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
Hexachlorocyclopentadiene	U	J3	0.00233	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
Hexachloroethane	U	J3	0.000365	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	04/11/2019 23:57	WG1263260
Isophorone	U		0.000272	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	04/11/2019 23:57	WG1263260
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	04/11/2019 23:57	WG1263260
Naphthalene	U		0.000372	0.00100	0.00100	1	04/11/2019 23:57	WG1263260
Nitrobenzene	U		0.000367	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
Phenanthrene	U		0.000366	0.00100	0.00100	1	04/11/2019 23:57	WG1263260
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	04/11/2019 23:57	WG1263260
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	04/11/2019 23:57	WG1263260
Di-n-butyl phthalate	U		0.000266	0.00300	0.00300	1	04/11/2019 23:57	WG1263260
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	04/11/2019 23:57	WG1263260
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	04/11/2019 23:57	WG1263260
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	04/11/2019 23:57	WG1263260
Pyrene	U		0.000330	0.00100	0.00100	1	04/11/2019 23:57	WG1263260
1,2,4-Trichlorobenzene	U	J3	0.000355	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	04/11/2019 23:57	WG1263260

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
2-Methylphenol	U		0.000312	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
Phenol	0.00110	J	0.000334	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	04/11/2019 23:57	WG1263260
(S) 2-Fluorophenol	*24.7*				*10.0-120*		*04/11/2019 23:57*	WG1263260
(S) Phenol-d5	*14.9*				*10.0-120*		*04/11/2019 23:57*	WG1263260
(S) Nitrobenzene-d5	*39.2*				*10.0-127*		*04/11/2019 23:57*	WG1263260
(S) 2-Fluorobiphenyl	*36.6*				*10.0-130*		*04/11/2019 23:57*	WG1263260
(S) 2,4,6-Tribromophenol	*35.5*				*10.0-155*		*04/11/2019 23:57*	WG1263260
(S) p-Terphenyl-d14	*66.3*				*10.0-128*		*04/11/2019 23:57*	WG1263260

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	940		5.64	20.0	20.0	1	04/11/2019 20:32	WG1264090

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	326		2.71	20.0	20.0	1	04/09/2019 20:09	WG1262436

Sample Narrative:

L1086362-17 WG1262436: Endpoint pH 4.5

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	1.10		0.0197	0.100	0.100	1	04/15/2019 12:10	WG1263603

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	159		0.260	1.00	5.00	5	04/16/2019 12:57	WG1265412
Fluoride	0.478		0.00990	0.100	0.100	1	04/16/2019 08:12	WG1265412
Sulfate	146		0.387	5.00	25.0	5	04/16/2019 12:57	WG1265412

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	0.000200	1	04/09/2019 09:54	WG1262270

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.184	J	0.0126	0.200	0.200	1	04/13/2019 15:22	WG1262060

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	0.00526	B J	0.00515	0.100	0.100	1	04/16/2019 13:58	WG1262074
Arsenic,Dissolved	0.00198	J	0.000250	0.00200	0.00200	1	04/16/2019 13:58	WG1262074
Barium,Dissolved	0.384		0.000360	0.00500	0.00500	1	04/16/2019 13:58	WG1262074
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	04/16/2019 13:58	WG1262074
Calcium,Dissolved	201		0.0460	1.00	1.00	1	04/16/2019 13:58	WG1262074
Chromium,Dissolved	U		0.000540	0.00200	0.00200	1	04/16/2019 13:58	WG1262074
Copper,Dissolved	0.00918		0.000520	0.00500	0.00500	1	04/16/2019 13:58	WG1262074
Cobalt,Dissolved	0.00109	J	0.000260	0.00200	0.00200	1	04/16/2019 13:58	WG1262074
Iron,Dissolved	U		0.0150	0.100	0.100	1	04/16/2019 13:58	WG1262074
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	04/16/2019 13:58	WG1262074
Magnesium,Dissolved	25.7		0.100	1.00	1.00	1	04/16/2019 13:58	WG1262074
Manganese,Dissolved	0.349		0.000250	0.00500	0.00500	1	04/16/2019 13:58	WG1262074
Molybdenum,Dissolved	0.00259	J	0.000140	0.00500	0.00500	1	04/16/2019 13:58	WG1262074
Nickel,Dissolved	0.00792		0.000350	0.00200	0.00200	1	04/16/2019 13:58	WG1262074
Potassium,Dissolved	4.48		0.0370	1.00	1.00	1	04/16/2019 13:58	WG1262074
Selenium,Dissolved	U		0.000380	0.00200	0.00200	1	04/16/2019 13:58	WG1262074
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	04/16/2019 13:58	WG1262074
Sodium,Dissolved	65.5		0.110	1.00	1.00	1	04/16/2019 13:58	WG1262074

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Uranium,Dissolved	0.00751	J	0.000330	0.0100	0.0100	1	04/16/2019 13:58	WG1262074
Zinc,Dissolved	0.0128	J	0.00256	0.0250	0.0250	1	04/16/2019 13:58	WG1262074

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
TPH (GC/FID) Low Fraction	0.0332	B J	0.0314	0.100	0.100	1	04/12/2019 08:46	WG1264226
(S) a,a,a-Trifluorotoluene(FID)	*112*				*78.0-120*		*04/12/2019 08:46*	WG1264226

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	04/09/2019 01:37	WG1262803
Benzene	U		0.000331	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	04/09/2019 01:37	WG1262803
Bromoform	U		0.000469	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
Bromomethane	U		0.000866	0.00500	0.00500	1	04/09/2019 01:37	WG1262803
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
Carbon disulfide	U		0.000275	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
Chlorobenzene	U		0.000348	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
Chloroethane	U		0.000453	0.00500	0.00500	1	04/09/2019 01:37	WG1262803
Chloroform	U		0.000324	0.00500	0.00500	1	04/09/2019 01:37	WG1262803
Chloromethane	U		0.000276	0.00250	0.00250	1	04/09/2019 01:37	WG1262803
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
Ethylbenzene	U		0.000384	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
2-Hexanone	U		0.00382	0.0100	0.0100	1	04/09/2019 01:37	WG1262803
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	04/09/2019 01:37	WG1262803
Methylene Chloride	U		0.00100	0.00500	0.00500	1	04/09/2019 01:37	WG1262803
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	04/09/2019 01:37	WG1262803
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
Naphthalene	U		0.00100	0.00500	0.00500	1	04/09/2019 01:37	WG1262803
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
Styrene	U		0.000307	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
Toluene	U		0.000412	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
Trichloroethene	U		0.000398	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	04/09/2019 01:37	WG1262803

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
Vinyl chloride	U		0.000259	0.00100	0.00100	1	04/09/2019 01:37	WG1262803
Xylenes, Total	U		0.00106	0.00300	0.00300	1	04/09/2019 01:37	WG1262803
(S) Toluene-d8	*103*				*80.0-120*		*04/09/2019 01:37*	WG1262803
(S) 4-Bromofluorobenzene	*99.1*				*77.0-126*		*04/09/2019 01:37*	WG1262803
(S) 1,2-Dichloroethane-d4	*127*				*70.0-130*		*04/09/2019 01:37*	WG1262803

Semi-Volatile Organic Compounds (GC) by Method 3511/8015

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	0.209		0.0247	0.100	0.100	1	04/11/2019 02:44	WG1262668
(S) o-Terphenyl	*69.5*				*31.0-160*		*04/11/2019 02:44*	WG1262668

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.000316	0.00100	0.00100	1	04/12/2019 00:21	WG1263260
Acenaphthylene	U		0.000309	0.00100	0.00100	1	04/12/2019 00:21	WG1263260
Acetophenone	U		0.00247	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
Anthracene	U		0.000291	0.00100	0.00100	1	04/12/2019 00:21	WG1263260
Atrazine	U		0.000260	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	04/12/2019 00:21	WG1263260
Benzaldehyde	U		0.00140	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	04/12/2019 00:21	WG1263260
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	04/12/2019 00:21	WG1263260
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	04/12/2019 00:21	WG1263260
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	04/12/2019 00:21	WG1263260
Biphenyl	U		0.000325	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	04/12/2019 00:21	WG1263260
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
Caprolactam	U		0.00259	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
Carbazole	U		0.000260	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
Chrysene	U		0.000332	0.00100	0.00100	1	04/12/2019 00:21	WG1263260
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	04/12/2019 00:21	WG1263260
Dibenzofuran	U		0.000338	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
Fluoranthene	U		0.000310	0.00100	0.00100	1	04/12/2019 00:21	WG1263260
Fluorene	U		0.000323	0.00100	0.00100	1	04/12/2019 00:21	WG1263260
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	04/12/2019 00:21	WG1263260
Hexachloro-1,3-butadiene	U	J3	0.000329	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
Hexachlorocyclopentadiene	U	J3	0.00233	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
Hexachloroethane	U	J3	0.000365	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	04/12/2019 00:21	WG1263260
Isophorone	U		0.000272	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	04/12/2019 00:21	WG1263260
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	04/12/2019 00:21	WG1263260
Naphthalene	U		0.000372	0.00100	0.00100	1	04/12/2019 00:21	WG1263260
Nitrobenzene	U		0.000367	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	04/12/2019 00:21	WG1263260

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
Phenanthrene	U		0.000366	0.00100	0.00100	1	04/12/2019 00:21	WG1263260
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	04/12/2019 00:21	WG1263260
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	04/12/2019 00:21	WG1263260
Di-n-butyl phthalate	U		0.000266	0.00300	0.00300	1	04/12/2019 00:21	WG1263260
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	04/12/2019 00:21	WG1263260
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	04/12/2019 00:21	WG1263260
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	04/12/2019 00:21	WG1263260
Pyrene	U		0.000330	0.00100	0.00100	1	04/12/2019 00:21	WG1263260
1,2,4-Trichlorobenzene	U	J3	0.000355	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
2-Methylphenol	U		0.000312	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
Phenol	0.000633	J	0.000334	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	04/12/2019 00:21	WG1263260
(S) 2-Fluorophenol	*22.3*				*10.0-120*		*04/12/2019 00:21*	WG1263260
(S) Phenol-d5	*13.4*				*10.0-120*		*04/12/2019 00:21*	WG1263260
(S) Nitrobenzene-d5	*28.5*				*10.0-127*		*04/12/2019 00:21*	WG1263260
(S) 2-Fluorobiphenyl	*32.4*				*10.0-130*		*04/12/2019 00:21*	WG1263260
(S) 2,4,6-Tribromophenol	*38.9*				*10.0-155*		*04/12/2019 00:21*	WG1263260
(S) p-Terphenyl-d14	*69.6*				*10.0-128*		*04/12/2019 00:21*	WG1263260

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	1230		5.64	20.0	20.0	1	04/11/2019 20:32	WG1264090

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	840		2.71	20.0	20.0	1	04/09/2019 20:16	WG1262436

Sample Narrative:

L1086362-18 WG1262436: Endpoint pH 4.5

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	U		0.0197	0.100	0.100	1	04/15/2019 12:18	WG1263603

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	137		0.519	1.00	10.0	10	04/16/2019 08:39	WG1265412
Fluoride	0.729		0.00990	0.100	0.100	1	04/16/2019 08:25	WG1265412
Sulfate	12.4		0.0774	5.00	5.00	1	04/16/2019 08:25	WG1265412

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	0.000200	1	04/09/2019 09:42	WG1262270

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.150	J	0.0126	0.200	0.200	1	04/12/2019 18:25	WG1262062

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	0.00865	B J	0.00515	0.100	0.100	1	04/16/2019 14:03	WG1262074
Arsenic,Dissolved	0.00179	J	0.000250	0.00200	0.00200	1	04/16/2019 14:03	WG1262074
Barium,Dissolved	0.476		0.000360	0.00500	0.00500	1	04/16/2019 14:03	WG1262074
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	04/16/2019 14:03	WG1262074
Calcium,Dissolved	111		0.0460	1.00	1.00	1	04/16/2019 14:03	WG1262074
Chromium,Dissolved	U		0.000540	0.00200	0.00200	1	04/16/2019 14:03	WG1262074
Copper,Dissolved	0.00411	J	0.000520	0.00500	0.00500	1	04/16/2019 14:03	WG1262074
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	04/16/2019 14:03	WG1262074
Iron,Dissolved	0.0299	J	0.0150	0.100	0.100	1	04/16/2019 14:03	WG1262074
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	04/16/2019 14:03	WG1262074
Magnesium,Dissolved	13.6		0.100	1.00	1.00	1	04/16/2019 14:03	WG1262074
Manganese,Dissolved	1.39		0.000250	0.00500	0.00500	1	04/16/2019 14:03	WG1262074
Molybdenum,Dissolved	0.00158	J	0.000140	0.00500	0.00500	1	04/16/2019 14:03	WG1262074
Nickel,Dissolved	0.00157	B J	0.000350	0.00200	0.00200	1	04/16/2019 14:03	WG1262074
Potassium,Dissolved	6.50		0.0370	1.00	1.00	1	04/16/2019 14:03	WG1262074
Selenium,Dissolved	U		0.000380	0.00200	0.00200	1	04/16/2019 14:03	WG1262074
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	04/16/2019 14:03	WG1262074
Sodium,Dissolved	359		0.110	1.00	1.00	1	04/16/2019 14:03	WG1262074

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Uranium,Dissolved	0.0131		0.000330	0.0100	0.0100	1	04/16/2019 14:03	WG1262074
Zinc,Dissolved	0.00566	J	0.00256	0.0250	0.0250	1	04/16/2019 14:03	WG1262074

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.144		0.0314	0.100	0.100	1	04/12/2019 13:04	WG1264913
(S) a,a,a-Trifluorotoluene(FID)	*83.0*				*78.0-120*		*04/12/2019 13:04*	WG1264913

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0100	1.00	1.00	1	04/09/2019 01:57	WG1262803
Benzene	0.000401	J	0.000331	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	04/09/2019 01:57	WG1262803
Bromoform	U		0.000469	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
Bromomethane	U		0.000866	0.00500	0.00500	1	04/09/2019 01:57	WG1262803
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
sec-Butylbenzene	0.00228		0.000365	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
Carbon disulfide	U		0.000275	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
Chlorobenzene	U		0.000348	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
Chloroethane	U		0.000453	0.00500	0.00500	1	04/09/2019 01:57	WG1262803
Chloroform	0.000545	J	0.000324	0.00500	0.00500	1	04/09/2019 01:57	WG1262803
Chloromethane	U		0.000276	0.00250	0.00250	1	04/09/2019 01:57	WG1262803
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
Ethylbenzene	U		0.000384	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
2-Hexanone	U		0.00382	0.0100	0.0100	1	04/09/2019 01:57	WG1262803
Isopropylbenzene	0.0198		0.000326	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
p-Isopropyltoluene	0.00120		0.000350	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	04/09/2019 01:57	WG1262803
Methylene Chloride	U		0.00100	0.00500	0.00500	1	04/09/2019 01:57	WG1262803
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	04/09/2019 01:57	WG1262803
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
Naphthalene	U		0.00100	0.00500	0.00500	1	04/09/2019 01:57	WG1262803
n-Propylbenzene	0.00104		0.000349	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
Styrene	U		0.000307	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
Toluene	U		0.000412	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
Trichloroethene	U		0.000398	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	04/09/2019 01:57	WG1262803

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
Vinyl chloride	U		0.000259	0.00100	0.00100	1	04/09/2019 01:57	WG1262803
Xylenes, Total	U		0.00106	0.00300	0.00300	1	04/09/2019 01:57	WG1262803
(S) Toluene-d8	*99.2*				*80.0-120*		*04/09/2019 01:57*	WG1262803
(S) 4-Bromofluorobenzene	*98.8*				*77.0-126*		*04/09/2019 01:57*	WG1262803
(S) 1,2-Dichloroethane-d4	*129*				*70.0-130*		*04/09/2019 01:57*	WG1262803

Semi-Volatile Organic Compounds (GC) by Method 3511/8015

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	0.0707	J	0.0247	0.100	0.100	1	04/10/2019 17:49	WG1263232
(S) o-Terphenyl	*82.3*				*31.0-160*		*04/10/2019 17:49*	WG1263232

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.000316	0.00100	0.00100	1	04/12/2019 00:44	WG1263260
Acenaphthylene	U		0.000309	0.00100	0.00100	1	04/12/2019 00:44	WG1263260
Acetophenone	U		0.00247	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
Anthracene	U		0.000291	0.00100	0.00100	1	04/12/2019 00:44	WG1263260
Atrazine	U		0.000260	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	04/12/2019 00:44	WG1263260
Benzaldehyde	U		0.00140	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	04/12/2019 00:44	WG1263260
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	04/12/2019 00:44	WG1263260
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	04/12/2019 00:44	WG1263260
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	04/12/2019 00:44	WG1263260
Biphenyl	U		0.000325	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	04/12/2019 00:44	WG1263260
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
Caprolactam	U		0.00259	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
Carbazole	U		0.000260	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
Chrysene	U		0.000332	0.00100	0.00100	1	04/12/2019 00:44	WG1263260
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	04/12/2019 00:44	WG1263260
Dibenzofuran	U		0.000338	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
Fluoranthene	U		0.000310	0.00100	0.00100	1	04/12/2019 00:44	WG1263260
Fluorene	U		0.000323	0.00100	0.00100	1	04/12/2019 00:44	WG1263260
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	04/12/2019 00:44	WG1263260
Hexachloro-1,3-butadiene	U	J3	0.000329	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
Hexachlorocyclopentadiene	U	J3	0.00233	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
Hexachloroethane	U	J3	0.000365	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	04/12/2019 00:44	WG1263260
Isophorone	U		0.000272	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	04/12/2019 00:44	WG1263260
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	04/12/2019 00:44	WG1263260
Naphthalene	U		0.000372	0.00100	0.00100	1	04/12/2019 00:44	WG1263260
Nitrobenzene	U		0.000367	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	04/12/2019 00:44	WG1263260

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
Phenanthrene	U		0.000366	0.00100	0.00100	1	04/12/2019 00:44	WG1263260
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	04/12/2019 00:44	WG1263260
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	04/12/2019 00:44	WG1263260
Di-n-butyl phthalate	U		0.000266	0.00300	0.00300	1	04/12/2019 00:44	WG1263260
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	04/12/2019 00:44	WG1263260
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	04/12/2019 00:44	WG1263260
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	04/12/2019 00:44	WG1263260
Pyrene	U		0.000330	0.00100	0.00100	1	04/12/2019 00:44	WG1263260
1,2,4-Trichlorobenzene	U	J3	0.000355	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
2-Methylphenol	U		0.000312	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
Phenol	0.00221	J	0.000334	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	04/12/2019 00:44	WG1263260
(S) 2-Fluorophenol	*20.2*				*10.0-120*		*04/12/2019 00:44*	WG1263260
(S) Phenol-d5	*11.5*				*10.0-120*		*04/12/2019 00:44*	WG1263260
(S) Nitrobenzene-d5	*27.7*				*10.0-127*		*04/12/2019 00:44*	WG1263260
(S) 2-Fluorobiphenyl	*27.6*				*10.0-130*		*04/12/2019 00:44*	WG1263260
(S) 2,4,6-Tribromophenol	*38.1*				*10.0-155*		*04/12/2019 00:44*	WG1263260
(S) p-Terphenyl-d14	*67.4*				*10.0-128*		*04/12/2019 00:44*	WG1263260

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	590		2.82	10.0	10.0	1	04/11/2019 20:32	WG1264090

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	170		2.71	20.0	20.0	1	04/09/2019 20:22	WG1262436

Sample Narrative:

L1086362-19 WG1262436: Endpoint pH 4.5

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	3.17		0.0197	0.100	0.100	1	04/15/2019 12:19	WG1263603

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	120		0.260	1.00	5.00	5	04/16/2019 09:07	WG1265412
Fluoride	0.776		0.00990	0.100	0.100	1	04/16/2019 08:53	WG1265412
Sulfate	74.9		0.0774	5.00	5.00	1	04/16/2019 08:53	WG1265412

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	0.000200	1	04/09/2019 09:57	WG1262270

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.169	J	0.0126	0.200	0.200	1	04/12/2019 18:28	WG1262062

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	0.00882	B J	0.00515	0.100	0.100	1	04/16/2019 14:08	WG1262074
Arsenic,Dissolved	0.00599		0.000250	0.00200	0.00200	1	04/16/2019 14:08	WG1262074
Barium,Dissolved	0.118		0.000360	0.00500	0.00500	1	04/16/2019 14:08	WG1262074
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	04/16/2019 14:08	WG1262074
Calcium,Dissolved	105		0.0460	1.00	1.00	1	04/16/2019 14:08	WG1262074
Chromium,Dissolved	0.00137	J	0.000540	0.00200	0.00200	1	04/16/2019 14:08	WG1262074
Copper,Dissolved	0.0129		0.000520	0.00500	0.00500	1	04/16/2019 14:08	WG1262074
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	04/16/2019 14:08	WG1262074
Iron,Dissolved	0.0185	J	0.0150	0.100	0.100	1	04/16/2019 14:08	WG1262074
Lead,Dissolved	0.000607	J	0.000240	0.00200	0.00200	1	04/16/2019 14:08	WG1262074
Magnesium,Dissolved	12.9		0.100	1.00	1.00	1	04/16/2019 14:08	WG1262074
Manganese,Dissolved	0.00509		0.000250	0.00500	0.00500	1	04/16/2019 14:08	WG1262074
Molybdenum,Dissolved	0.00295	J	0.000140	0.00500	0.00500	1	04/16/2019 14:08	WG1262074
Nickel,Dissolved	0.00101	B J	0.000350	0.00200	0.00200	1	04/16/2019 14:08	WG1262074
Potassium,Dissolved	2.43		0.0370	1.00	1.00	1	04/16/2019 14:08	WG1262074
Selenium,Dissolved	0.00375		0.000380	0.00200	0.00200	1	04/16/2019 14:08	WG1262074
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	04/16/2019 14:08	WG1262074
Sodium,Dissolved	66.5		0.110	1.00	1.00	1	04/16/2019 14:08	WG1262074

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Uranium,Dissolved	0.00194	J	0.000330	0.0100	0.0100	1	04/16/2019 14:08	WG1262074
Zinc,Dissolved	0.0199	J	0.00256	0.0250	0.0250	1	04/16/2019 14:08	WG1262074

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	0.100	1	04/12/2019 13:28	WG1264913
(S) a,a,a-Trifluorotoluene(FID)	*83.8*				*78.0-120*		*04/12/2019 13:28*	WG1264913

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0100	1.00	1.00	1	04/09/2019 02:18	WG1262803
Benzene	U		0.000331	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	04/09/2019 02:18	WG1262803
Bromoform	U		0.000469	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
Bromomethane	U		0.000866	0.00500	0.00500	1	04/09/2019 02:18	WG1262803
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
Carbon disulfide	U		0.000275	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
Chlorobenzene	U		0.000348	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
Chloroethane	U		0.000453	0.00500	0.00500	1	04/09/2019 02:18	WG1262803
Chloroform	U		0.000324	0.00500	0.00500	1	04/09/2019 02:18	WG1262803
Chloromethane	U		0.000276	0.00250	0.00250	1	04/09/2019 02:18	WG1262803
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
Ethylbenzene	U		0.000384	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
2-Hexanone	U		0.00382	0.0100	0.0100	1	04/09/2019 02:18	WG1262803
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	04/09/2019 02:18	WG1262803
Methylene Chloride	U		0.00100	0.00500	0.00500	1	04/09/2019 02:18	WG1262803
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	04/09/2019 02:18	WG1262803
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
Naphthalene	U		0.00100	0.00500	0.00500	1	04/09/2019 02:18	WG1262803
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
Styrene	U		0.000307	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
Toluene	U		0.000412	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
Trichloroethene	U		0.000398	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	04/09/2019 02:18	WG1262803

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
Vinyl chloride	U		0.000259	0.00100	0.00100	1	04/09/2019 02:18	WG1262803
Xylenes, Total	U		0.00106	0.00300	0.00300	1	04/09/2019 02:18	WG1262803
(S) Toluene-d8	*110*				*80.0-120*		*04/09/2019 02:18*	WG1262803
(S) 4-Bromofluorobenzene	*103*				*77.0-126*		*04/09/2019 02:18*	WG1262803
(S) 1,2-Dichloroethane-d4	*130*				*70.0-130*		*04/09/2019 02:18*	WG1262803

Semi-Volatile Organic Compounds (GC) by Method 3511/8015

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	U		0.0247	0.100	0.100	1	04/10/2019 18:06	WG1263232
(S) o-Terphenyl	*84.4*				*31.0-160*		*04/10/2019 18:06*	WG1263232

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.000316	0.00100	0.00100	1	04/12/2019 01:08	WG1263260
Acenaphthylene	U		0.000309	0.00100	0.00100	1	04/12/2019 01:08	WG1263260
Acetophenone	U		0.00247	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
Anthracene	U		0.000291	0.00100	0.00100	1	04/12/2019 01:08	WG1263260
Atrazine	U		0.000260	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	04/12/2019 01:08	WG1263260
Benzaldehyde	U		0.00140	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	04/12/2019 01:08	WG1263260
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	04/12/2019 01:08	WG1263260
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	04/12/2019 01:08	WG1263260
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	04/12/2019 01:08	WG1263260
Biphenyl	U		0.000325	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	04/12/2019 01:08	WG1263260
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
Caprolactam	U		0.00259	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
Carbazole	U		0.000260	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
Chrysene	U		0.000332	0.00100	0.00100	1	04/12/2019 01:08	WG1263260
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	04/12/2019 01:08	WG1263260
Dibenzofuran	U		0.000338	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
Fluoranthene	U		0.000310	0.00100	0.00100	1	04/12/2019 01:08	WG1263260
Fluorene	U		0.000323	0.00100	0.00100	1	04/12/2019 01:08	WG1263260
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	04/12/2019 01:08	WG1263260
Hexachloro-1,3-butadiene	U	J3	0.000329	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
Hexachlorocyclopentadiene	U	J3	0.00233	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
Hexachloroethane	U	J3	0.000365	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	04/12/2019 01:08	WG1263260
Isophorone	U		0.000272	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	04/12/2019 01:08	WG1263260
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	04/12/2019 01:08	WG1263260
Naphthalene	U		0.000372	0.00100	0.00100	1	04/12/2019 01:08	WG1263260
Nitrobenzene	U		0.000367	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	04/12/2019 01:08	WG1263260

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
Phenanthrene	U		0.000366	0.00100	0.00100	1	04/12/2019 01:08	WG1263260
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	04/12/2019 01:08	WG1263260
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	04/12/2019 01:08	WG1263260
Di-n-butyl phthalate	U		0.000266	0.00300	0.00300	1	04/12/2019 01:08	WG1263260
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	04/12/2019 01:08	WG1263260
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	04/12/2019 01:08	WG1263260
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	04/12/2019 01:08	WG1263260
Pyrene	U		0.000330	0.00100	0.00100	1	04/12/2019 01:08	WG1263260
1,2,4-Trichlorobenzene	U	J3	0.000355	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
2-Methylphenol	U		0.000312	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
Phenol	0.00136	J	0.000334	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	04/12/2019 01:08	WG1263260
(S) 2-Fluorophenol	*23.3*				*10.0-120*		*04/12/2019 01:08*	WG1263260
(S) Phenol-d5	*13.5*				*10.0-120*		*04/12/2019 01:08*	WG1263260
(S) Nitrobenzene-d5	*31.4*				*10.0-127*		*04/12/2019 01:08*	WG1263260
(S) 2-Fluorobiphenyl	*30.8*				*10.0-130*		*04/12/2019 01:08*	WG1263260
(S) 2,4,6-Tribromophenol	*32.5*				*10.0-155*		*04/12/2019 01:08*	WG1263260
(S) p-Terphenyl-d14	*68.2*				*10.0-128*		*04/12/2019 01:08*	WG1263260

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	1280		5.64	20.0	20.0	1	04/11/2019 20:32	WG1264090

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	179		2.71	20.0	20.0	1	04/09/2019 20:36	WG1262436

Sample Narrative:

L1086362-20 WG1262436: Endpoint pH 4.5

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	3.18		0.0197	0.100	0.100	1	04/15/2019 12:21	WG1263603

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	344		0.519	1.00	10.0	10	04/16/2019 10:03	WG1265412
Fluoride	0.619		0.00990	0.100	0.100	1	04/16/2019 09:49	WG1265412
Sulfate	97.3		0.0774	5.00	5.00	1	04/16/2019 09:49	WG1265412

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	0.000200	1	04/09/2019 09:59	WG1262270

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.612		0.0126	0.200	0.200	1	04/12/2019 18:31	WG1262062

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	04/16/2019 14:12	WG1262074
Arsenic,Dissolved	0.00421		0.000250	0.00200	0.00200	1	04/16/2019 14:12	WG1262074
Barium,Dissolved	0.140		0.000360	0.00500	0.00500	1	04/16/2019 14:12	WG1262074
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	04/16/2019 14:12	WG1262074
Calcium,Dissolved	186		0.0460	1.00	1.00	1	04/16/2019 14:12	WG1262074
Chromium,Dissolved	0.00110	J	0.000540	0.00200	0.00200	1	04/16/2019 14:12	WG1262074
Copper,Dissolved	0.00172	J	0.000520	0.00500	0.00500	1	04/16/2019 14:12	WG1262074
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	04/16/2019 14:12	WG1262074
Iron,Dissolved	U		0.0150	0.100	0.100	1	04/16/2019 14:12	WG1262074
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	04/16/2019 14:12	WG1262074
Magnesium,Dissolved	24.6		0.100	1.00	1.00	1	04/16/2019 14:12	WG1262074
Manganese,Dissolved	0.00382	J	0.000250	0.00500	0.00500	1	04/16/2019 14:12	WG1262074
Molybdenum,Dissolved	0.00226	J	0.000140	0.00500	0.00500	1	04/16/2019 14:12	WG1262074
Nickel,Dissolved	0.000640	B J	0.000350	0.00200	0.00200	1	04/16/2019 14:12	WG1262074
Potassium,Dissolved	3.42		0.0370	1.00	1.00	1	04/16/2019 14:12	WG1262074
Selenium,Dissolved	0.00325		0.000380	0.00200	0.00200	1	04/16/2019 14:12	WG1262074
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	04/16/2019 14:12	WG1262074
Sodium,Dissolved	119		0.110	1.00	1.00	1	04/16/2019 14:12	WG1262074

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Uranium,Dissolved	0.00238	J	0.000330	0.0100	0.0100	1	04/16/2019 14:12	WG1262074
Zinc,Dissolved	0.0510		0.00256	0.0250	0.0250	1	04/16/2019 14:12	WG1262074

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	0.100	1	04/12/2019 13:52	WG1264913
(S) a,a,a-Trifluorotoluene(FID)	*83.7*				*78.0-120*		*04/12/2019 13:52*	WG1264913

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0100	1.00	1.00	1	04/09/2019 02:38	WG1262803
Benzene	U		0.000331	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	04/09/2019 02:38	WG1262803
Bromoform	U		0.000469	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
Bromomethane	U		0.000866	0.00500	0.00500	1	04/09/2019 02:38	WG1262803
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
Carbon disulfide	U		0.000275	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
Chlorobenzene	U		0.000348	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
Chloroethane	U		0.000453	0.00500	0.00500	1	04/09/2019 02:38	WG1262803
Chloroform	0.000943	J	0.000324	0.00500	0.00500	1	04/09/2019 02:38	WG1262803
Chloromethane	U		0.000276	0.00250	0.00250	1	04/09/2019 02:38	WG1262803
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
Ethylbenzene	U		0.000384	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
2-Hexanone	U		0.00382	0.0100	0.0100	1	04/09/2019 02:38	WG1262803
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	04/09/2019 02:38	WG1262803
Methylene Chloride	U		0.00100	0.00500	0.00500	1	04/09/2019 02:38	WG1262803
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	04/09/2019 02:38	WG1262803
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
Naphthalene	U		0.00100	0.00500	0.00500	1	04/09/2019 02:38	WG1262803
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
Styrene	U		0.000307	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
Toluene	U		0.000412	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
Trichloroethene	U		0.000398	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	04/09/2019 02:38	WG1262803

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
Vinyl chloride	U		0.000259	0.00100	0.00100	1	04/09/2019 02:38	WG1262803
Xylenes, Total	U		0.00106	0.00300	0.00300	1	04/09/2019 02:38	WG1262803
(S) Toluene-d8	*102*				*80.0-120*		*04/09/2019 02:38*	WG1262803
(S) 4-Bromofluorobenzene	*96.4*				*77.0-126*		*04/09/2019 02:38*	WG1262803
(S) 1,2-Dichloroethane-d4	*125*				*70.0-130*		*04/09/2019 02:38*	WG1262803

Semi-Volatile Organic Compounds (GC) by Method 3511/8015

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	0.0593	J	0.0247	0.100	0.100	1	04/10/2019 18:24	WG1263232
(S) o-Terphenyl	*84.9*				*31.0-160*		*04/10/2019 18:24*	WG1263232

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.000316	0.00100	0.00100	1	04/12/2019 01:32	WG1263260
Acenaphthylene	U		0.000309	0.00100	0.00100	1	04/12/2019 01:32	WG1263260
Acetophenone	U		0.00247	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
Anthracene	U		0.000291	0.00100	0.00100	1	04/12/2019 01:32	WG1263260
Atrazine	U		0.000260	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	04/12/2019 01:32	WG1263260
Benzaldehyde	U		0.00140	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	04/12/2019 01:32	WG1263260
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	04/12/2019 01:32	WG1263260
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	04/12/2019 01:32	WG1263260
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	04/12/2019 01:32	WG1263260
Biphenyl	U		0.000325	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	04/12/2019 01:32	WG1263260
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
Caprolactam	U		0.00259	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
Carbazole	U		0.000260	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
Chrysene	U		0.000332	0.00100	0.00100	1	04/12/2019 01:32	WG1263260
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	04/12/2019 01:32	WG1263260
Dibenzofuran	U		0.000338	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
Fluoranthene	U		0.000310	0.00100	0.00100	1	04/12/2019 01:32	WG1263260
Fluorene	U		0.000323	0.00100	0.00100	1	04/12/2019 01:32	WG1263260
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	04/12/2019 01:32	WG1263260
Hexachloro-1,3-butadiene	U	J3	0.000329	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
Hexachlorocyclopentadiene	U	J3	0.00233	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
Hexachloroethane	U	J3	0.000365	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	04/12/2019 01:32	WG1263260
Isophorone	U		0.000272	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	04/12/2019 01:32	WG1263260
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	04/12/2019 01:32	WG1263260
Naphthalene	U		0.000372	0.00100	0.00100	1	04/12/2019 01:32	WG1263260
Nitrobenzene	U		0.000367	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	04/12/2019 01:32	WG1263260

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
Phenanthrene	U		0.000366	0.00100	0.00100	1	04/12/2019 01:32	WG1263260
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	04/12/2019 01:32	WG1263260
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	04/12/2019 01:32	WG1263260
Di-n-butyl phthalate	U		0.000266	0.00300	0.00300	1	04/12/2019 01:32	WG1263260
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	04/12/2019 01:32	WG1263260
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	04/12/2019 01:32	WG1263260
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	04/12/2019 01:32	WG1263260
Pyrene	U		0.000330	0.00100	0.00100	1	04/12/2019 01:32	WG1263260
1,2,4-Trichlorobenzene	U	J3	0.000355	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
2-Methylphenol	U		0.000312	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
Phenol	0.00188	J	0.000334	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	04/12/2019 01:32	WG1263260
(S) 2-Fluorophenol	*16.5*				*10.0-120*		*04/12/2019 01:32*	WG1263260
(S) Phenol-d5	*10.1*				*10.0-120*		*04/12/2019 01:32*	WG1263260
(S) Nitrobenzene-d5	*23.2*				*10.0-127*		*04/12/2019 01:32*	WG1263260
(S) 2-Fluorobiphenyl	*23.5*				*10.0-130*		*04/12/2019 01:32*	WG1263260
(S) 2,4,6-Tribromophenol	*31.0*				*10.0-155*		*04/12/2019 01:32*	WG1263260
(S) p-Terphenyl-d14	*63.1*				*10.0-128*		*04/12/2019 01:32*	WG1263260

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	560		2.82	10.0	10.0	1	04/11/2019 20:32	WG1264090

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	164		2.71	20.0	20.0	1	04/09/2019 20:43	WG1262436

Sample Narrative:

L1086362-21 WG1262436: Endpoint pH 4.5

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	2.93		0.0394	0.100	0.200	2	04/15/2019 12:22	WG1263603

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	110		0.519	1.00	10.0	10	04/16/2019 10:31	WG1265412
Fluoride	0.877		0.00990	0.100	0.100	1	04/16/2019 10:17	WG1265412
Sulfate	81.8		0.0774	5.00	5.00	1	04/16/2019 10:17	WG1265412

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	0.000200	1	04/09/2019 10:02	WG1262270

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.195	J	0.0126	0.200	0.200	1	04/12/2019 18:34	WG1262062

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	04/10/2019 23:30	WG1262065
Arsenic,Dissolved	0.00472		0.000250	0.00200	0.00200	1	04/10/2019 23:30	WG1262065
Barium,Dissolved	0.0919		0.000360	0.00500	0.00500	1	04/10/2019 23:30	WG1262065
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	04/10/2019 23:30	WG1262065
Calcium,Dissolved	96.7		0.0460	1.00	1.00	1	04/10/2019 23:30	WG1262065
Chromium,Dissolved	0.00504	B	0.000540	0.00200	0.00200	1	04/10/2019 23:30	WG1262065
Copper,Dissolved	0.0109		0.000520	0.00500	0.00500	1	04/11/2019 09:50	WG1262065
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	04/10/2019 23:30	WG1262065
Iron,Dissolved	U		0.0150	0.100	0.100	1	04/10/2019 23:30	WG1262065
Lead,Dissolved	0.000844	J	0.000240	0.00200	0.00200	1	04/10/2019 23:30	WG1262065
Magnesium,Dissolved	14.3		0.100	1.00	1.00	1	04/10/2019 23:30	WG1262065
Manganese,Dissolved	0.000373	B J	0.000250	0.00500	0.00500	1	04/10/2019 23:30	WG1262065
Molybdenum,Dissolved	0.00243	J	0.000140	0.00500	0.00500	1	04/10/2019 23:30	WG1262065
Nickel,Dissolved	U		0.000350	0.00200	0.00200	1	04/10/2019 23:30	WG1262065
Potassium,Dissolved	1.98		0.0370	1.00	1.00	1	04/10/2019 23:30	WG1262065
Selenium,Dissolved	0.00341		0.000380	0.00200	0.00200	1	04/10/2019 23:30	WG1262065
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	04/10/2019 23:30	WG1262065
Sodium,Dissolved	49.9		0.110	1.00	1.00	1	04/14/2019 19:14	WG1264794

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Uranium,Dissolved	0.00193	J	0.000330	0.0100	0.0100	1	04/10/2019 23:30	WG1262065
Zinc,Dissolved	0.0476		0.00256	0.0250	0.0250	1	04/10/2019 23:30	WG1262065

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	0.100	1	04/12/2019 14:15	WG1264913
(S) a,a,a-Trifluorotoluene(FID)	*83.6*				*78.0-120*		*04/12/2019 14:15*	WG1264913

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0100	1.00	1.00	1	04/09/2019 02:58	WG1262803
Benzene	U		0.000331	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	04/09/2019 02:58	WG1262803
Bromoform	U		0.000469	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
Bromomethane	U		0.000866	0.00500	0.00500	1	04/09/2019 02:58	WG1262803
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
Carbon disulfide	U		0.000275	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
Chlorobenzene	U		0.000348	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
Chloroethane	U		0.000453	0.00500	0.00500	1	04/09/2019 02:58	WG1262803
Chloroform	U		0.000324	0.00500	0.00500	1	04/09/2019 02:58	WG1262803
Chloromethane	U		0.000276	0.00250	0.00250	1	04/09/2019 02:58	WG1262803
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
Ethylbenzene	U		0.000384	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
2-Hexanone	U		0.00382	0.0100	0.0100	1	04/09/2019 02:58	WG1262803
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	04/09/2019 02:58	WG1262803
Methylene Chloride	U		0.00100	0.00500	0.00500	1	04/09/2019 02:58	WG1262803
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	04/09/2019 02:58	WG1262803
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
Naphthalene	U		0.00100	0.00500	0.00500	1	04/09/2019 02:58	WG1262803
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
Styrene	U		0.000307	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
Toluene	U		0.000412	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
Trichloroethene	U		0.000398	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	04/09/2019 02:58	WG1262803

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
Vinyl chloride	U		0.000259	0.00100	0.00100	1	04/09/2019 02:58	WG1262803
Xylenes, Total	U		0.00106	0.00300	0.00300	1	04/09/2019 02:58	WG1262803
(S) Toluene-d8	*106*				*80.0-120*		*04/09/2019 02:58*	WG1262803
(S) 4-Bromofluorobenzene	*99.4*				*77.0-126*		*04/09/2019 02:58*	WG1262803
(S) 1,2-Dichloroethane-d4	*120*				*70.0-130*		*04/09/2019 02:58*	WG1262803

Semi-Volatile Organic Compounds (GC) by Method 3511/8015

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	U		0.0247	0.100	0.100	1	04/10/2019 18:41	WG1263232
(S) o-Terphenyl	*80.6*				*31.0-160*		*04/10/2019 18:41*	WG1263232

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.000316	0.00100	0.00100	1	04/12/2019 01:55	WG1263260
Acenaphthylene	U		0.000309	0.00100	0.00100	1	04/12/2019 01:55	WG1263260
Acetophenone	U		0.00247	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
Anthracene	U		0.000291	0.00100	0.00100	1	04/12/2019 01:55	WG1263260
Atrazine	U		0.000260	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	04/12/2019 01:55	WG1263260
Benzaldehyde	U		0.00140	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	04/12/2019 01:55	WG1263260
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	04/12/2019 01:55	WG1263260
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	04/12/2019 01:55	WG1263260
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	04/12/2019 01:55	WG1263260
Biphenyl	U		0.000325	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	04/12/2019 01:55	WG1263260
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
Caprolactam	U		0.00259	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
Carbazole	U		0.000260	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
Chrysene	U		0.000332	0.00100	0.00100	1	04/12/2019 01:55	WG1263260
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	04/12/2019 01:55	WG1263260
Dibenzofuran	U		0.000338	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
Fluoranthene	U		0.000310	0.00100	0.00100	1	04/12/2019 01:55	WG1263260
Fluorene	U		0.000323	0.00100	0.00100	1	04/12/2019 01:55	WG1263260
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	04/12/2019 01:55	WG1263260
Hexachloro-1,3-butadiene	U	J3	0.000329	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
Hexachlorocyclopentadiene	U	J3	0.00233	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
Hexachloroethane	U	J3	0.000365	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	04/12/2019 01:55	WG1263260
Isophorone	U		0.000272	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	04/12/2019 01:55	WG1263260
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	04/12/2019 01:55	WG1263260
Naphthalene	U		0.000372	0.00100	0.00100	1	04/12/2019 01:55	WG1263260
Nitrobenzene	U		0.000367	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	04/12/2019 01:55	WG1263260

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
Phenanthrene	U		0.000366	0.00100	0.00100	1	04/12/2019 01:55	WG1263260
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	04/12/2019 01:55	WG1263260
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	04/12/2019 01:55	WG1263260
Di-n-butyl phthalate	U		0.000266	0.00300	0.00300	1	04/12/2019 01:55	WG1263260
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	04/12/2019 01:55	WG1263260
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	04/12/2019 01:55	WG1263260
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	04/12/2019 01:55	WG1263260
Pyrene	U		0.000330	0.00100	0.00100	1	04/12/2019 01:55	WG1263260
1,2,4-Trichlorobenzene	U	J3	0.000355	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
2-Methylphenol	U		0.000312	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
Phenol	0.000431	J	0.000334	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	04/12/2019 01:55	WG1263260
(S) 2-Fluorophenol	*18.9*				*10.0-120*		*04/12/2019 01:55*	WG1263260
(S) Phenol-d5	*10.9*				*10.0-120*		*04/12/2019 01:55*	WG1263260
(S) Nitrobenzene-d5	*27.8*				*10.0-127*		*04/12/2019 01:55*	WG1263260
(S) 2-Fluorobiphenyl	*31.0*				*10.0-130*		*04/12/2019 01:55*	WG1263260
(S) 2,4,6-Tribromophenol	*26.8*				*10.0-155*		*04/12/2019 01:55*	WG1263260
(S) p-Terphenyl-d14	*63.8*				*10.0-128*		*04/12/2019 01:55*	WG1263260

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	624		3.75	13.3	13.3	1	04/11/2019 20:32	WG1264090

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	360		2.71	20.0	20.0	1	04/10/2019 20:42	WG1262438

Sample Narrative:

L1086362-22 WG1262438: Endpoint pH 4.5

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	5.61		0.0394	0.100	0.200	2	04/15/2019 12:24	WG1263603

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	41.8		0.0519	1.00	1.00	1	04/16/2019 10:45	WG1265412
Fluoride	0.534		0.00990	0.100	0.100	1	04/16/2019 10:45	WG1265412
Sulfate	76.1		0.0774	5.00	5.00	1	04/16/2019 10:45	WG1265412

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	0.000200	1	04/09/2019 10:04	WG1262270

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.153	J	0.0126	0.200	0.200	1	04/12/2019 18:36	WG1262062

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	04/10/2019 23:35	WG1262065
Arsenic,Dissolved	0.00232		0.000250	0.00200	0.00200	1	04/10/2019 23:35	WG1262065
Barium,Dissolved	0.168		0.000360	0.00500	0.00500	1	04/10/2019 23:35	WG1262065
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	04/10/2019 23:35	WG1262065
Calcium,Dissolved	122		0.0460	1.00	1.00	1	04/10/2019 23:35	WG1262065
Chromium,Dissolved	0.000775	B J	0.000540	0.00200	0.00200	1	04/10/2019 23:35	WG1262065
Copper,Dissolved	0.0100		0.000520	0.00500	0.00500	1	04/11/2019 09:55	WG1262065
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	04/10/2019 23:35	WG1262065
Iron,Dissolved	U		0.0150	0.100	0.100	1	04/10/2019 23:35	WG1262065
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	04/10/2019 23:35	WG1262065
Magnesium,Dissolved	13.7		0.100	1.00	1.00	1	04/10/2019 23:35	WG1262065
Manganese,Dissolved	0.000717	B J	0.000250	0.00500	0.00500	1	04/10/2019 23:35	WG1262065
Molybdenum,Dissolved	0.00168	J	0.000140	0.00500	0.00500	1	04/10/2019 23:35	WG1262065
Nickel,Dissolved	0.00407		0.000350	0.00200	0.00200	1	04/10/2019 23:35	WG1262065
Potassium,Dissolved	2.98		0.0370	1.00	1.00	1	04/10/2019 23:35	WG1262065
Selenium,Dissolved	0.00206		0.000380	0.00200	0.00200	1	04/10/2019 23:35	WG1262065
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	04/10/2019 23:35	WG1262065
Sodium,Dissolved	65.9		0.110	1.00	1.00	1	04/14/2019 19:19	WG1264794

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Uranium,Dissolved	0.00555	J	0.000330	0.0100	0.0100	1	04/10/2019 23:35	WG1262065
Zinc,Dissolved	0.0148	J	0.00256	0.0250	0.0250	1	04/10/2019 23:35	WG1262065

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0100	1.00	1.00	1	04/09/2019 03:18	WG1262803
Benzene	U		0.000331	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	04/09/2019 03:18	WG1262803
Bromoform	U		0.000469	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
Bromomethane	U		0.000866	0.00500	0.00500	1	04/09/2019 03:18	WG1262803
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
Carbon disulfide	U		0.000275	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
Chlorobenzene	U		0.000348	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
Chloroethane	U		0.000453	0.00500	0.00500	1	04/09/2019 03:18	WG1262803
Chloroform	U		0.000324	0.00500	0.00500	1	04/09/2019 03:18	WG1262803
Chloromethane	U		0.000276	0.00250	0.00250	1	04/09/2019 03:18	WG1262803
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
Ethylbenzene	U		0.000384	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
2-Hexanone	U		0.00382	0.0100	0.0100	1	04/09/2019 03:18	WG1262803
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	04/09/2019 03:18	WG1262803
Methylene Chloride	U		0.00100	0.00500	0.00500	1	04/09/2019 03:18	WG1262803
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	04/09/2019 03:18	WG1262803
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
Naphthalene	U		0.00100	0.00500	0.00500	1	04/09/2019 03:18	WG1262803
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
Styrene	U		0.000307	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
Toluene	U		0.000412	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
Trichloroethene	U		0.000398	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
Vinyl chloride	U		0.000259	0.00100	0.00100	1	04/09/2019 03:18	WG1262803
Xylenes, Total	U		0.00106	0.00300	0.00300	1	04/09/2019 03:18	WG1262803
(S) Toluene-d8	*104*				*80.0-120*		*04/09/2019 03:18*	WG1262803
(S) 4-Bromofluorobenzene	*92.4*				*77.0-126*		*04/09/2019 03:18*	WG1262803
(S) 1,2-Dichloroethane-d4	*122*				*70.0-130*		*04/09/2019 03:18*	WG1262803

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.000316	0.00100	0.00100	1	04/12/2019 02:19	WG1263260
Acenaphthylene	U		0.000309	0.00100	0.00100	1	04/12/2019 02:19	WG1263260
Acetophenone	U		0.00247	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
Anthracene	U		0.000291	0.00100	0.00100	1	04/12/2019 02:19	WG1263260
Atrazine	U		0.000260	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	04/12/2019 02:19	WG1263260
Benzaldehyde	U		0.00140	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	04/12/2019 02:19	WG1263260
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	04/12/2019 02:19	WG1263260
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	04/12/2019 02:19	WG1263260
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	04/12/2019 02:19	WG1263260
Biphenyl	U		0.000325	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	04/12/2019 02:19	WG1263260
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
Caprolactam	U		0.00259	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
Carbazole	U		0.000260	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
Chrysene	U		0.000332	0.00100	0.00100	1	04/12/2019 02:19	WG1263260
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	04/12/2019 02:19	WG1263260
Dibenzofuran	U		0.000338	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
Fluoranthene	U		0.000310	0.00100	0.00100	1	04/12/2019 02:19	WG1263260
Fluorene	U		0.000323	0.00100	0.00100	1	04/12/2019 02:19	WG1263260
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	04/12/2019 02:19	WG1263260
Hexachloro-1,3-butadiene	U	J3	0.000329	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
Hexachlorocyclopentadiene	U	J3	0.00233	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
Hexachloroethane	U	J3	0.000365	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	04/12/2019 02:19	WG1263260
Isophorone	U		0.000272	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	04/12/2019 02:19	WG1263260
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	04/12/2019 02:19	WG1263260
Naphthalene	U		0.000372	0.00100	0.00100	1	04/12/2019 02:19	WG1263260
Nitrobenzene	U		0.000367	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
Phenanthrene	U		0.000366	0.00100	0.00100	1	04/12/2019 02:19	WG1263260
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	04/12/2019 02:19	WG1263260
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	04/12/2019 02:19	WG1263260
Di-n-butyl phthalate	U		0.000266	0.00300	0.00300	1	04/12/2019 02:19	WG1263260
Diethyl phthalate	0.000323	J	0.000282	0.00300	0.00300	1	04/12/2019 02:19	WG1263260
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	04/12/2019 02:19	WG1263260
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	04/12/2019 02:19	WG1263260
Pyrene	U		0.000330	0.00100	0.00100	1	04/12/2019 02:19	WG1263260
1,2,4-Trichlorobenzene	U	J3	0.000355	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	04/12/2019 02:19	WG1263260

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
2-Methylphenol	U		0.000312	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
Phenol	0.000708	J	0.000334	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	04/12/2019 02:19	WG1263260
(S) 2-Fluorophenol	*25.4*				*10.0-120*		*04/12/2019 02:19*	WG1263260
(S) Phenol-d5	*15.3*				*10.0-120*		*04/12/2019 02:19*	WG1263260
(S) Nitrobenzene-d5	*30.5*				*10.0-127*		*04/12/2019 02:19*	WG1263260
(S) 2-Fluorobiphenyl	*30.2*				*10.0-130*		*04/12/2019 02:19*	WG1263260
(S) 2,4,6-Tribromophenol	*36.3*				*10.0-155*		*04/12/2019 02:19*	WG1263260
(S) p-Terphenyl-d14	*66.5*				*10.0-128*		*04/12/2019 02:19*	WG1263260

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	562		2.82	10.0	10.0	1	04/11/2019 20:59	WG1264128

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	193		2.71	20.0	20.0	1	04/10/2019 20:55	WG1262438

Sample Narrative:

L1086362-23 WG1262438: Endpoint pH 4.5

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	2.53		0.0394	0.100	0.200	2	04/15/2019 12:25	WG1263603

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	94.3		0.0519	1.00	1.00	1	04/16/2019 11:12	WG1265412
Fluoride	0.629		0.00990	0.100	0.100	1	04/16/2019 11:12	WG1265412
Sulfate	78.5		0.0774	5.00	5.00	1	04/16/2019 11:12	WG1265412

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	0.000200	1	04/09/2019 10:06	WG1262270

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.185	J	0.0126	0.200	0.200	1	04/12/2019 18:39	WG1262062

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	04/10/2019 23:39	WG1262065
Arsenic,Dissolved	0.00346		0.000250	0.00200	0.00200	1	04/10/2019 23:39	WG1262065
Barium,Dissolved	0.0972		0.000360	0.00500	0.00500	1	04/10/2019 23:39	WG1262065
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	04/10/2019 23:39	WG1262065
Calcium,Dissolved	105		0.0460	1.00	1.00	1	04/10/2019 23:39	WG1262065
Chromium,Dissolved	0.00138	B J	0.000540	0.00200	0.00200	1	04/10/2019 23:39	WG1262065
Copper,Dissolved	0.00105	J	0.000520	0.00500	0.00500	1	04/11/2019 10:00	WG1262065
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	04/10/2019 23:39	WG1262065
Iron,Dissolved	U		0.0150	0.100	0.100	1	04/10/2019 23:39	WG1262065
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	04/10/2019 23:39	WG1262065
Magnesium,Dissolved	12.7		0.100	1.00	1.00	1	04/10/2019 23:39	WG1262065
Manganese,Dissolved	0.000563	B J	0.000250	0.00500	0.00500	1	04/10/2019 23:39	WG1262065
Molybdenum,Dissolved	0.00147	J	0.000140	0.00500	0.00500	1	04/10/2019 23:39	WG1262065
Nickel,Dissolved	0.00314		0.000350	0.00200	0.00200	1	04/10/2019 23:39	WG1262065
Potassium,Dissolved	2.03		0.0370	1.00	1.00	1	04/10/2019 23:39	WG1262065
Selenium,Dissolved	0.00305		0.000380	0.00200	0.00200	1	04/10/2019 23:39	WG1262065
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	04/10/2019 23:39	WG1262065
Sodium,Dissolved	41.1		0.110	1.00	1.00	1	04/14/2019 19:23	WG1264794

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Uranium,Dissolved	0.00162	J	0.000330	0.0100	0.0100	1	04/10/2019 23:39	WG1262065
Zinc,Dissolved	0.0192	J	0.00256	0.0250	0.0250	1	04/10/2019 23:39	WG1262065

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0100	1.00	1.00	1	04/09/2019 03:39	WG1262803
Benzene	U		0.000331	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	04/09/2019 03:39	WG1262803
Bromoform	U		0.000469	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
Bromomethane	U		0.000866	0.00500	0.00500	1	04/09/2019 03:39	WG1262803
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
Carbon disulfide	U		0.000275	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
Chlorobenzene	U		0.000348	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
Chloroethane	U		0.000453	0.00500	0.00500	1	04/09/2019 03:39	WG1262803
Chloroform	U		0.000324	0.00500	0.00500	1	04/09/2019 03:39	WG1262803
Chloromethane	U		0.000276	0.00250	0.00250	1	04/09/2019 03:39	WG1262803
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
Ethylbenzene	U		0.000384	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
2-Hexanone	U		0.00382	0.0100	0.0100	1	04/09/2019 03:39	WG1262803
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	04/09/2019 03:39	WG1262803
Methylene Chloride	U		0.00100	0.00500	0.00500	1	04/09/2019 03:39	WG1262803
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	04/09/2019 03:39	WG1262803
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
Naphthalene	U		0.00100	0.00500	0.00500	1	04/09/2019 03:39	WG1262803
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
Styrene	U		0.000307	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
Toluene	U		0.000412	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
Trichloroethene	U		0.000398	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
Vinyl chloride	U		0.000259	0.00100	0.00100	1	04/09/2019 03:39	WG1262803
Xylenes, Total	U		0.00106	0.00300	0.00300	1	04/09/2019 03:39	WG1262803
(S) Toluene-d8	*107*				*80.0-120*		*04/09/2019 03:39*	WG1262803
(S) 4-Bromofluorobenzene	*99.8*				*77.0-126*		*04/09/2019 03:39*	WG1262803
(S) 1,2-Dichloroethane-d4	*121*				*70.0-130*		*04/09/2019 03:39*	WG1262803

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.000316	0.00100	0.00100	1	04/12/2019 02:43	WG1263260
Acenaphthylene	U		0.000309	0.00100	0.00100	1	04/12/2019 02:43	WG1263260
Acetophenone	U		0.00247	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
Anthracene	U		0.000291	0.00100	0.00100	1	04/12/2019 02:43	WG1263260
Atrazine	U		0.000260	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	04/12/2019 02:43	WG1263260
Benzaldehyde	U		0.00140	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	04/12/2019 02:43	WG1263260
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	04/12/2019 02:43	WG1263260
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	04/12/2019 02:43	WG1263260
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	04/12/2019 02:43	WG1263260
Biphenyl	U		0.000325	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	04/12/2019 02:43	WG1263260
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
Caprolactam	U		0.00259	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
Carbazole	U		0.000260	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
Chrysene	U		0.000332	0.00100	0.00100	1	04/12/2019 02:43	WG1263260
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	04/12/2019 02:43	WG1263260
Dibenzofuran	U		0.000338	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
Fluoranthene	U		0.000310	0.00100	0.00100	1	04/12/2019 02:43	WG1263260
Fluorene	U		0.000323	0.00100	0.00100	1	04/12/2019 02:43	WG1263260
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	04/12/2019 02:43	WG1263260
Hexachloro-1,3-butadiene	U	J3	0.000329	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
Hexachlorocyclopentadiene	U	J3	0.00233	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
Hexachloroethane	U	J3	0.000365	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	04/12/2019 02:43	WG1263260
Isophorone	U		0.000272	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	04/12/2019 02:43	WG1263260
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	04/12/2019 02:43	WG1263260
Naphthalene	U		0.000372	0.00100	0.00100	1	04/12/2019 02:43	WG1263260
Nitrobenzene	U		0.000367	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
Phenanthrene	U		0.000366	0.00100	0.00100	1	04/12/2019 02:43	WG1263260
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	04/12/2019 02:43	WG1263260
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	04/12/2019 02:43	WG1263260
Di-n-butyl phthalate	U		0.000266	0.00300	0.00300	1	04/12/2019 02:43	WG1263260
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	04/12/2019 02:43	WG1263260
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	04/12/2019 02:43	WG1263260
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	04/12/2019 02:43	WG1263260
Pyrene	U		0.000330	0.00100	0.00100	1	04/12/2019 02:43	WG1263260
1,2,4-Trichlorobenzene	U	J3	0.000355	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	04/12/2019 02:43	WG1263260

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
2-Methylphenol	U		0.000312	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
Phenol	0.000493	J	0.000334	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	04/12/2019 02:43	WG1263260
(S) 2-Fluorophenol	*18.0*				*10.0-120*		*04/12/2019 02:43*	WG1263260
(S) Phenol-d5	*10.5*				*10.0-120*		*04/12/2019 02:43*	WG1263260
(S) Nitrobenzene-d5	*28.4*				*10.0-127*		*04/12/2019 02:43*	WG1263260
(S) 2-Fluorobiphenyl	*26.4*				*10.0-130*		*04/12/2019 02:43*	WG1263260
(S) 2,4,6-Tribromophenol	*25.3*				*10.0-155*		*04/12/2019 02:43*	WG1263260
(S) p-Terphenyl-d14	*68.8*				*10.0-128*		*04/12/2019 02:43*	WG1263260

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	1030		5.64	20.0	20.0	1	04/11/2019 20:59	WG1264128

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	382		2.71	20.0	20.0	1	04/10/2019 21:02	WG1262438

Sample Narrative:

L1086362-24 WG1262438: Endpoint pH 4.5

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	4.57		0.0394	0.100	0.200	2	04/15/2019 12:27	WG1263603

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	224		0.260	1.00	5.00	5	04/16/2019 14:34	WG1265412
Fluoride	0.500		0.00990	0.100	0.100	1	04/16/2019 11:40	WG1265412
Sulfate	104		0.387	5.00	25.0	5	04/16/2019 14:34	WG1265412

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	0.000200	1	04/09/2019 10:09	WG1262270

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.139	J	0.0126	0.200	0.200	1	04/12/2019 18:42	WG1262062

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	04/10/2019 23:44	WG1262065
Arsenic,Dissolved	0.00243		0.000250	0.00200	0.00200	1	04/10/2019 23:44	WG1262065
Barium,Dissolved	0.184		0.000360	0.00500	0.00500	1	04/10/2019 23:44	WG1262065
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	04/10/2019 23:44	WG1262065
Calcium,Dissolved	174		0.0460	1.00	1.00	1	04/10/2019 23:44	WG1262065
Chromium,Dissolved	U		0.000540	0.00200	0.00200	1	04/10/2019 23:44	WG1262065
Copper,Dissolved	0.00384	J	0.000520	0.00500	0.00500	1	04/11/2019 10:04	WG1262065
Cobalt,Dissolved	0.00605		0.000260	0.00200	0.00200	1	04/10/2019 23:44	WG1262065
Iron,Dissolved	U		0.0150	0.100	0.100	1	04/10/2019 23:44	WG1262065
Lead,Dissolved	0.000480	J	0.000240	0.00200	0.00200	1	04/10/2019 23:44	WG1262065
Magnesium,Dissolved	23.4		0.100	1.00	1.00	1	04/10/2019 23:44	WG1262065
Manganese,Dissolved	0.0377		0.000250	0.00500	0.00500	1	04/10/2019 23:44	WG1262065
Molybdenum,Dissolved	0.00118	J	0.000140	0.00500	0.00500	1	04/10/2019 23:44	WG1262065
Nickel,Dissolved	0.0106		0.000350	0.00200	0.00200	1	04/10/2019 23:44	WG1262065
Potassium,Dissolved	4.38		0.0370	1.00	1.00	1	04/10/2019 23:44	WG1262065
Selenium,Dissolved	0.000395	J	0.000380	0.00200	0.00200	1	04/10/2019 23:44	WG1262065
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	04/10/2019 23:44	WG1262065
Sodium,Dissolved	123		0.110	1.00	1.00	1	04/14/2019 19:46	WG1264794

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Uranium,Dissolved	0.00927	J	0.000330	0.0100	0.0100	1	04/10/2019 23:44	WG1262065
Zinc,Dissolved	0.00656	J	0.00256	0.0250	0.0250	1	04/10/2019 23:44	WG1262065

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0100	1.00	1.00	1	04/09/2019 03:59	WG1262803
Benzene	U		0.000331	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	04/09/2019 03:59	WG1262803
Bromoform	U		0.000469	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
Bromomethane	U		0.000866	0.00500	0.00500	1	04/09/2019 03:59	WG1262803
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
Carbon disulfide	U		0.000275	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
Chlorobenzene	U		0.000348	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
Chloroethane	U		0.000453	0.00500	0.00500	1	04/09/2019 03:59	WG1262803
Chloroform	U		0.000324	0.00500	0.00500	1	04/09/2019 03:59	WG1262803
Chloromethane	U		0.000276	0.00250	0.00250	1	04/09/2019 03:59	WG1262803
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
Ethylbenzene	U		0.000384	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
2-Hexanone	U		0.00382	0.0100	0.0100	1	04/09/2019 03:59	WG1262803
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	04/09/2019 03:59	WG1262803
Methylene Chloride	U		0.00100	0.00500	0.00500	1	04/09/2019 03:59	WG1262803
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	04/09/2019 03:59	WG1262803
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
Naphthalene	U		0.00100	0.00500	0.00500	1	04/09/2019 03:59	WG1262803
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
Styrene	U		0.000307	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
Toluene	U		0.000412	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
Trichloroethene	U		0.000398	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
Vinyl chloride	U		0.000259	0.00100	0.00100	1	04/09/2019 03:59	WG1262803
Xylenes, Total	U		0.00106	0.00300	0.00300	1	04/09/2019 03:59	WG1262803
(S) Toluene-d8	*105*				*80.0-120*		*04/09/2019 03:59*	WG1262803
(S) 4-Bromofluorobenzene	*95.1*				*77.0-126*		*04/09/2019 03:59*	WG1262803
(S) 1,2-Dichloroethane-d4	*128*				*70.0-130*		*04/09/2019 03:59*	WG1262803

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.000316	0.00100	0.00100	1	04/12/2019 03:06	WG1263260
Acenaphthylene	U		0.000309	0.00100	0.00100	1	04/12/2019 03:06	WG1263260
Acetophenone	U		0.00247	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
Anthracene	U		0.000291	0.00100	0.00100	1	04/12/2019 03:06	WG1263260
Atrazine	U		0.000260	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	04/12/2019 03:06	WG1263260
Benzaldehyde	U		0.00140	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	04/12/2019 03:06	WG1263260
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	04/12/2019 03:06	WG1263260
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	04/12/2019 03:06	WG1263260
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	04/12/2019 03:06	WG1263260
Biphenyl	U		0.000325	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	04/12/2019 03:06	WG1263260
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
Caprolactam	U		0.00259	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
Carbazole	U		0.000260	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
Chrysene	U		0.000332	0.00100	0.00100	1	04/12/2019 03:06	WG1263260
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	04/12/2019 03:06	WG1263260
Dibenzofuran	U		0.000338	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
Fluoranthene	U		0.000310	0.00100	0.00100	1	04/12/2019 03:06	WG1263260
Fluorene	U		0.000323	0.00100	0.00100	1	04/12/2019 03:06	WG1263260
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	04/12/2019 03:06	WG1263260
Hexachloro-1,3-butadiene	U	J3	0.000329	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
Hexachlorocyclopentadiene	U	J3	0.00233	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
Hexachloroethane	U	J3	0.000365	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	04/12/2019 03:06	WG1263260
Isophorone	U		0.000272	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	04/12/2019 03:06	WG1263260
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	04/12/2019 03:06	WG1263260
Naphthalene	U		0.000372	0.00100	0.00100	1	04/12/2019 03:06	WG1263260
Nitrobenzene	U		0.000367	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
Phenanthrene	U		0.000366	0.00100	0.00100	1	04/12/2019 03:06	WG1263260
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	04/12/2019 03:06	WG1263260
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	04/12/2019 03:06	WG1263260
Di-n-butyl phthalate	U		0.000266	0.00300	0.00300	1	04/12/2019 03:06	WG1263260
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	04/12/2019 03:06	WG1263260
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	04/12/2019 03:06	WG1263260
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	04/12/2019 03:06	WG1263260
Pyrene	U		0.000330	0.00100	0.00100	1	04/12/2019 03:06	WG1263260
1,2,4-Trichlorobenzene	U	J3	0.000355	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	04/12/2019 03:06	WG1263260

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
2-Methylphenol	U		0.000312	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
Phenol	0.000526	J	0.000334	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	04/12/2019 03:06	WG1263260
(S) 2-Fluorophenol	*24.1*				*10.0-120*		*04/12/2019 03:06*	WG1263260
(S) Phenol-d5	*15.0*				*10.0-120*		*04/12/2019 03:06*	WG1263260
(S) Nitrobenzene-d5	*28.9*				*10.0-127*		*04/12/2019 03:06*	WG1263260
(S) 2-Fluorobiphenyl	*30.2*				*10.0-130*		*04/12/2019 03:06*	WG1263260
(S) 2,4,6-Tribromophenol	*45.0*				*10.0-155*		*04/12/2019 03:06*	WG1263260
(S) p-Terphenyl-d14	*68.8*				*10.0-128*		*04/12/2019 03:06*	WG1263260

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	U		2.82	10.0	10.0	1	04/11/2019 20:59	WG1264128

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	U		0.0197	0.100	0.100	1	04/15/2019 12:28	WG1263603

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	U		0.0519	1.00	1.00	1	04/16/2019 11:54	WG1265412
Fluoride	U		0.00990	0.100	0.100	1	04/16/2019 11:54	WG1265412
Sulfate	0.421	J	0.0774	5.00	5.00	1	04/16/2019 11:54	WG1265412

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	0.000200	1	04/09/2019 10:11	WG1262270

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.283		0.0126	0.200	0.200	1	04/12/2019 18:50	WG1262062

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	0.0101	J	0.00515	0.100	0.100	1	04/10/2019 23:49	WG1262065
Arsenic,Dissolved	U		0.000250	0.00200	0.00200	1	04/10/2019 23:49	WG1262065
Barium,Dissolved	0.00139	J	0.000360	0.00500	0.00500	1	04/10/2019 23:49	WG1262065
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	04/10/2019 23:49	WG1262065
Calcium,Dissolved	U		0.0460	1.00	1.00	1	04/10/2019 23:49	WG1262065
Chromium,Dissolved	U		0.000540	0.00200	0.00200	1	04/10/2019 23:49	WG1262065
Copper,Dissolved	U		0.000520	0.00500	0.00500	1	04/11/2019 10:09	WG1262065
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	04/10/2019 23:49	WG1262065
Iron,Dissolved	U		0.0150	0.100	0.100	1	04/10/2019 23:49	WG1262065
Lead,Dissolved	0.000905	J	0.000240	0.00200	0.00200	1	04/10/2019 23:49	WG1262065
Magnesium,Dissolved	U		0.100	1.00	1.00	1	04/10/2019 23:49	WG1262065
Manganese,Dissolved	U		0.000250	0.00500	0.00500	1	04/10/2019 23:49	WG1262065
Molybdenum,Dissolved	U		0.000140	0.00500	0.00500	1	04/10/2019 23:49	WG1262065
Nickel,Dissolved	U		0.000350	0.00200	0.00200	1	04/10/2019 23:49	WG1262065
Potassium,Dissolved	U		0.0370	1.00	1.00	1	04/10/2019 23:49	WG1262065
Selenium,Dissolved	U		0.000380	0.00200	0.00200	1	04/10/2019 23:49	WG1262065
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	04/10/2019 23:49	WG1262065
Sodium,Dissolved	0.167	J	0.110	1.00	1.00	1	04/14/2019 19:51	WG1264794
Uranium,Dissolved	U		0.000330	0.0100	0.0100	1	04/10/2019 23:49	WG1262065
Zinc,Dissolved	U		0.00256	0.0250	0.0250	1	04/10/2019 23:49	WG1262065

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	04/09/2019 13:16	WG1262806
Benzene	U		0.000331	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	04/09/2019 13:16	WG1262806
Bromoform	U		0.000469	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
Bromomethane	U		0.000866	0.00500	0.00500	1	04/09/2019 13:16	WG1262806
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
Carbon disulfide	U		0.000275	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
Chlorobenzene	U		0.000348	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
Chloroethane	U		0.000453	0.00500	0.00500	1	04/09/2019 13:16	WG1262806
Chloroform	U		0.000324	0.00500	0.00500	1	04/09/2019 13:16	WG1262806
Chloromethane	U		0.000276	0.00250	0.00250	1	04/09/2019 13:16	WG1262806
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
Ethylbenzene	U		0.000384	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
2-Hexanone	U		0.00382	0.0100	0.0100	1	04/09/2019 13:16	WG1262806
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	04/09/2019 13:16	WG1262806
Methylene Chloride	U		0.00100	0.00500	0.00500	1	04/09/2019 13:16	WG1262806
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	04/09/2019 13:16	WG1262806
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
Naphthalene	U		0.00100	0.00500	0.00500	1	04/09/2019 13:16	WG1262806
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
Styrene	U		0.000307	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
Toluene	U		0.000412	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
Trichloroethene	U		0.000398	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
Vinyl chloride	U		0.000259	0.00100	0.00100	1	04/09/2019 13:16	WG1262806
Xylenes, Total	U		0.00106	0.00300	0.00300	1	04/09/2019 13:16	WG1262806
(S) Toluene-d8	*111*				*80.0-120*		*04/09/2019 13:16*	WG1262806
(S) 4-Bromofluorobenzene	*100*				*77.0-126*		*04/09/2019 13:16*	WG1262806
(S) 1,2-Dichloroethane-d4	*105*				*70.0-130*		*04/09/2019 13:16*	WG1262806

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.000316	0.00100	0.00100	1	04/12/2019 03:30	WG1263260
Acenaphthylene	U		0.000309	0.00100	0.00100	1	04/12/2019 03:30	WG1263260
Acetophenone	U		0.00247	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
Anthracene	U		0.000291	0.00100	0.00100	1	04/12/2019 03:30	WG1263260
Atrazine	U		0.000260	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	04/12/2019 03:30	WG1263260
Benzaldehyde	U		0.00140	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	04/12/2019 03:30	WG1263260
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	04/12/2019 03:30	WG1263260
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	04/12/2019 03:30	WG1263260
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	04/12/2019 03:30	WG1263260
Biphenyl	U		0.000325	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	04/12/2019 03:30	WG1263260
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
Caprolactam	U		0.00259	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
Carbazole	U		0.000260	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
Chrysene	U		0.000332	0.00100	0.00100	1	04/12/2019 03:30	WG1263260
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	04/12/2019 03:30	WG1263260
Dibenzofuran	U		0.000338	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
Fluoranthene	U		0.000310	0.00100	0.00100	1	04/12/2019 03:30	WG1263260
Fluorene	U		0.000323	0.00100	0.00100	1	04/12/2019 03:30	WG1263260
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	04/12/2019 03:30	WG1263260
Hexachloro-1,3-butadiene	U	J3	0.000329	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
Hexachlorocyclopentadiene	U	J3	0.00233	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
Hexachloroethane	U	J3	0.000365	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	04/12/2019 03:30	WG1263260
Isophorone	U		0.000272	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	04/12/2019 03:30	WG1263260
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	04/12/2019 03:30	WG1263260
Naphthalene	U		0.000372	0.00100	0.00100	1	04/12/2019 03:30	WG1263260
Nitrobenzene	U		0.000367	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
Phenanthrene	U		0.000366	0.00100	0.00100	1	04/12/2019 03:30	WG1263260
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	04/12/2019 03:30	WG1263260
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	04/12/2019 03:30	WG1263260
Di-n-butyl phthalate	U		0.000266	0.00300	0.00300	1	04/12/2019 03:30	WG1263260
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	04/12/2019 03:30	WG1263260
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	04/12/2019 03:30	WG1263260
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	04/12/2019 03:30	WG1263260
Pyrene	U		0.000330	0.00100	0.00100	1	04/12/2019 03:30	WG1263260
1,2,4-Trichlorobenzene	U	J3	0.000355	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	04/12/2019 03:30	WG1263260

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
2-Methylphenol	U		0.000312	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
Phenol	0.00282	J	0.000334	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	04/12/2019 03:30	WG1263260
(S) 2-Fluorophenol	*23.0*				*10.0-120*		*04/12/2019 03:30*	WG1263260
(S) Phenol-d5	*13.2*				*10.0-120*		*04/12/2019 03:30*	WG1263260
(S) Nitrobenzene-d5	*32.0*				*10.0-127*		*04/12/2019 03:30*	WG1263260
(S) 2-Fluorobiphenyl	*32.4*				*10.0-130*		*04/12/2019 03:30*	WG1263260
(S) 2,4,6-Tribromophenol	*29.6*				*10.0-155*		*04/12/2019 03:30*	WG1263260
(S) p-Terphenyl-d14	*66.8*				*10.0-128*		*04/12/2019 03:30*	WG1263260

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	U		2.82	10.0	10.0	1	04/11/2019 20:59	WG1264128

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	U		2.71	20.0	20.0	1	04/10/2019 22:54	WG1262438

Sample Narrative:

L1086362-26 WG1262438: Endpoint pH 4.5

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	0.167		0.0197	0.100	0.100	1	04/15/2019 12:30	WG1263603

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	U		0.0519	1.00	1.00	1	04/16/2019 23:08	WG1265413
Fluoride	U		0.00990	0.100	0.100	1	04/16/2019 23:08	WG1265413
Sulfate	U		0.0774	5.00	5.00	1	04/16/2019 23:08	WG1265413

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	0.000200	1	04/09/2019 10:14	WG1262270

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.146	J	0.0126	0.200	0.200	1	04/12/2019 18:52	WG1262062

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	04/10/2019 23:53	WG1262065
Arsenic,Dissolved	U		0.000250	0.00200	0.00200	1	04/10/2019 23:53	WG1262065
Barium,Dissolved	0.000374	J	0.000360	0.00500	0.00500	1	04/10/2019 23:53	WG1262065
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	04/10/2019 23:53	WG1262065
Calcium,Dissolved	U		0.0460	1.00	1.00	1	04/10/2019 23:53	WG1262065
Chromium,Dissolved	U		0.000540	0.00200	0.00200	1	04/10/2019 23:53	WG1262065
Copper,Dissolved	U		0.000520	0.00500	0.00500	1	04/11/2019 10:14	WG1262065
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	04/10/2019 23:53	WG1262065
Iron,Dissolved	U		0.0150	0.100	0.100	1	04/10/2019 23:53	WG1262065
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	04/10/2019 23:53	WG1262065
Magnesium,Dissolved	U		0.100	1.00	1.00	1	04/10/2019 23:53	WG1262065
Manganese,Dissolved	0.000548	B J	0.000250	0.00500	0.00500	1	04/10/2019 23:53	WG1262065
Molybdenum,Dissolved	U		0.000140	0.00500	0.00500	1	04/10/2019 23:53	WG1262065
Nickel,Dissolved	0.000529	J	0.000350	0.00200	0.00200	1	04/10/2019 23:53	WG1262065
Potassium,Dissolved	U		0.0370	1.00	1.00	1	04/10/2019 23:53	WG1262065
Selenium,Dissolved	U		0.000380	0.00200	0.00200	1	04/10/2019 23:53	WG1262065
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	04/10/2019 23:53	WG1262065
Sodium,Dissolved	0.158	J	0.110	1.00	1.00	1	04/14/2019 19:55	WG1264794

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Uranium,Dissolved	U		0.000330	0.0100	0.0100	1	04/10/2019 23:53	WG1262065
Zinc,Dissolved	U		0.00256	0.0250	0.0250	1	04/10/2019 23:53	WG1262065

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
TPH (GC/FID) Low Fraction	U		0.0314	0.100	0.100	1	04/12/2019 14:39	WG1264913
(S) a,a,a-Trifluorotoluene(FID)	*83.8*				*78.0-120*		*04/12/2019 14:39*	WG1264913

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	04/09/2019 13:36	WG1262806
Benzene	U		0.000331	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	04/09/2019 13:36	WG1262806
Bromoform	U		0.000469	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
Bromomethane	U		0.000866	0.00500	0.00500	1	04/09/2019 13:36	WG1262806
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
Carbon disulfide	U		0.000275	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
Chlorobenzene	U		0.000348	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
Chloroethane	U		0.000453	0.00500	0.00500	1	04/09/2019 13:36	WG1262806
Chloroform	U		0.000324	0.00500	0.00500	1	04/09/2019 13:36	WG1262806
Chloromethane	U		0.000276	0.00250	0.00250	1	04/09/2019 13:36	WG1262806
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
Ethylbenzene	U		0.000384	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
2-Hexanone	U		0.00382	0.0100	0.0100	1	04/09/2019 13:36	WG1262806
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	04/09/2019 13:36	WG1262806
Methylene Chloride	U		0.00100	0.00500	0.00500	1	04/09/2019 13:36	WG1262806
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	04/09/2019 13:36	WG1262806
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
Naphthalene	U		0.00100	0.00500	0.00500	1	04/09/2019 13:36	WG1262806
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
Styrene	U		0.000307	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
Toluene	U		0.000412	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
Trichloroethene	U		0.000398	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	04/09/2019 13:36	WG1262806

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
Vinyl chloride	U		0.000259	0.00100	0.00100	1	04/09/2019 13:36	WG1262806
Xylenes, Total	U		0.00106	0.00300	0.00300	1	04/09/2019 13:36	WG1262806
(S) Toluene-d8	*106*				*80.0-120*		*04/09/2019 13:36*	WG1262806
(S) 4-Bromofluorobenzene	*91.3*				*77.0-126*		*04/09/2019 13:36*	WG1262806
(S) 1,2-Dichloroethane-d4	*96.8*				*70.0-130*		*04/09/2019 13:36*	WG1262806

Semi-Volatile Organic Compounds (GC) by Method 3511/8015

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	U		0.0247	0.100	0.100	1	04/10/2019 18:58	WG1263232
(S) o-Terphenyl	*84.9*				*31.0-160*		*04/10/2019 18:58*	WG1263232

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.000316	0.00100	0.00100	1	04/12/2019 03:54	WG1263260
Acenaphthylene	U		0.000309	0.00100	0.00100	1	04/12/2019 03:54	WG1263260
Acetophenone	U		0.00247	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
Anthracene	U		0.000291	0.00100	0.00100	1	04/12/2019 03:54	WG1263260
Atrazine	U		0.000260	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	04/12/2019 03:54	WG1263260
Benzaldehyde	U		0.00140	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	04/12/2019 03:54	WG1263260
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	04/12/2019 03:54	WG1263260
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	04/12/2019 03:54	WG1263260
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	04/12/2019 03:54	WG1263260
Biphenyl	U		0.000325	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	04/12/2019 03:54	WG1263260
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
Caprolactam	U		0.00259	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
Carbazole	U		0.000260	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
Chrysene	U		0.000332	0.00100	0.00100	1	04/12/2019 03:54	WG1263260
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	04/12/2019 03:54	WG1263260
Dibenzofuran	U		0.000338	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
Fluoranthene	U		0.000310	0.00100	0.00100	1	04/12/2019 03:54	WG1263260
Fluorene	U		0.000323	0.00100	0.00100	1	04/12/2019 03:54	WG1263260
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	04/12/2019 03:54	WG1263260
Hexachloro-1,3-butadiene	U	J3	0.000329	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
Hexachlorocyclopentadiene	U	J3	0.00233	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
Hexachloroethane	U	J3	0.000365	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	04/12/2019 03:54	WG1263260
Isophorone	U		0.000272	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	04/12/2019 03:54	WG1263260
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	04/12/2019 03:54	WG1263260
Naphthalene	U		0.000372	0.00100	0.00100	1	04/12/2019 03:54	WG1263260
Nitrobenzene	U		0.000367	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	04/12/2019 03:54	WG1263260

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
Phenanthrene	U		0.000366	0.00100	0.00100	1	04/12/2019 03:54	WG1263260
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	04/12/2019 03:54	WG1263260
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	04/12/2019 03:54	WG1263260
Di-n-butyl phthalate	U		0.000266	0.00300	0.00300	1	04/12/2019 03:54	WG1263260
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	04/12/2019 03:54	WG1263260
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	04/12/2019 03:54	WG1263260
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	04/12/2019 03:54	WG1263260
Pyrene	U		0.000330	0.00100	0.00100	1	04/12/2019 03:54	WG1263260
1,2,4-Trichlorobenzene	U	J3	0.000355	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
2-Methylphenol	U		0.000312	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
Phenol	U		0.000334	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	04/12/2019 03:54	WG1263260
(S) 2-Fluorophenol	*0.000*	J2			*10.0-120*		*04/12/2019 03:54*	WG1263260
(S) Phenol-d5	*0.000*	J2			*10.0-120*		*04/12/2019 03:54*	WG1263260
(S) Nitrobenzene-d5	*0.000*	J2			*10.0-127*		*04/12/2019 03:54*	WG1263260
(S) 2-Fluorobiphenyl	*0.000*	J2			*10.0-130*		*04/12/2019 03:54*	WG1263260
(S) 2,4,6-Tribromophenol	*0.000*	J2			*10.0-155*		*04/12/2019 03:54*	WG1263260
(S) p-Terphenyl-d14	*0.000*	J2			*10.0-128*		*04/12/2019 03:54*	WG1263260

Sample Narrative:

L1086362-26 WG1263260: Duplicate analysis was performed.

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	04/09/2019 10:53	WG1262806
Benzene	U		0.000331	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	04/09/2019 10:53	WG1262806
Bromoform	U		0.000469	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
Bromomethane	U		0.000866	0.00500	0.00500	1	04/09/2019 10:53	WG1262806
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
Carbon disulfide	U		0.000275	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
Chlorobenzene	U		0.000348	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
Chloroethane	U		0.000453	0.00500	0.00500	1	04/09/2019 10:53	WG1262806
Chloroform	U		0.000324	0.00500	0.00500	1	04/09/2019 10:53	WG1262806
Chloromethane	U		0.000276	0.00250	0.00250	1	04/09/2019 10:53	WG1262806
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
Ethylbenzene	U		0.000384	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
2-Hexanone	U		0.00382	0.0100	0.0100	1	04/09/2019 10:53	WG1262806
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	04/09/2019 10:53	WG1262806
Methylene Chloride	U		0.00100	0.00500	0.00500	1	04/09/2019 10:53	WG1262806
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	04/09/2019 10:53	WG1262806
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
Naphthalene	U		0.00100	0.00500	0.00500	1	04/09/2019 10:53	WG1262806
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
Styrene	U		0.000307	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
Toluene	U		0.000412	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
Trichloroethene	U		0.000398	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
Vinyl chloride	U		0.000259	0.00100	0.00100	1	04/09/2019 10:53	WG1262806
Xylenes, Total	U		0.00106	0.00300	0.00300	1	04/09/2019 10:53	WG1262806
(S) Toluene-d8	*111*				*80.0-120*		*04/09/2019 10:53*	WG1262806
(S) 4-Bromofluorobenzene	*102*				*77.0-126*		*04/09/2019 10:53*	WG1262806
(S) 1,2-Dichloroethane-d4	*106*				*70.0-130*		*04/09/2019 10:53*	WG1262806

Method Blank (MB)

(MB) R3401375-1 04/11/19 20:00

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		2.82	10.0

L1086362-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1086362-06 04/11/19 20:00 • (DUP) R3401375-3 04/11/19 20:00

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1480	1450	1	1.77		5

Laboratory Control Sample (LCS)

(LCS) R3401375-2 04/11/19 20:00

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8470	96.3	85.0-115	

Method Blank (MB)

(MB) R3401372-1 04/11/19 20:32

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		2.82	10.0

L1086362-20 Original Sample (OS) • Duplicate (DUP)

(OS) L1086362-20 04/11/19 20:32 • (DUP) R3401372-3 04/11/19 20:32

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1280	1280	1	0.000		5

Laboratory Control Sample (LCS)

(LCS) R3401372-2 04/11/19 20:32

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8780	99.8	85.0-115	

Method Blank (MB)

(MB) R3401371-1 04/11/19 20:59

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		2.82	10.0

L1086362-24 Original Sample (OS) • Duplicate (DUP)

(OS) L1086362-24 04/11/19 20:59 • (DUP) R3401371-3 04/11/19 20:59

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1030	1050	1	1.34		5

Laboratory Control Sample (LCS)

(LCS) R3401371-2 04/11/19 20:59

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8760	99.5	85.0-115	

Method Blank (MB)

(MB) R3400275-1 04/09/19 18:09

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	U		2.71	20.0

Sample Narrative:

BLANK: Endpoint pH 4.5

L1086352-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1086352-02 04/09/19 18:16 • (DUP) R3400275-2 04/09/19 18:23

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	655	650	1	0.738		20

Sample Narrative:

OS: Endpoint pH 4.5

DUP: Endpoint pH 4.5

L1086362-21 Original Sample (OS) • Duplicate (DUP)

(OS) L1086362-21 04/09/19 20:43 • (DUP) R3400275-4 04/09/19 20:50

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	164	165	1	0.322		20

Sample Narrative:

OS: Endpoint pH 4.5

DUP: Endpoint pH 4.5

Laboratory Control Sample (LCS)

(LCS) R3400275-3 04/09/19 19:15

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100	99.7	99.7	85.0-115	

Sample Narrative:

LCS: Endpoint pH 4.5

Method Blank (MB)

(MB) R3400704-1 04/10/19 20:17

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	U		2.71	20.0

Sample Narrative:
BLANK: Endpoint pH 4.5

L1086362-22 Original Sample (OS) • Duplicate (DUP)

(OS) L1086362-22 04/10/19 20:42 • (DUP) R3400704-2 04/10/19 20:49

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	360	361	1	0.425		20

Sample Narrative:
OS: Endpoint pH 4.5
DUP: Endpoint pH 4.5

L1086362-26 Original Sample (OS) • Duplicate (DUP)

(OS) L1086362-26 04/10/19 22:54 • (DUP) R3400704-5 04/10/19 23:00

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	U	0.000	1	0.000		20

Sample Narrative:
OS: Endpoint pH 4.5
DUP: Endpoint pH 4.5

Laboratory Control Sample (LCS)

(LCS) R3400704-3 04/10/19 21:24

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100	104	104	85.0-115	

Sample Narrative:
LCS: Endpoint pH 4.5

Method Blank (MB)

(MB) R3401174-1 04/12/19 12:07

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Nitrate-Nitrite	U		0.0197	0.100

L1086279-19 Original Sample (OS) • Duplicate (DUP)

(OS) L1086279-19 04/12/19 12:10 • (DUP) R3401174-3 04/12/19 12:12

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Nitrate-Nitrite	0.0700	0.000	1	7.41	J	20

L1086362-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1086362-01 04/12/19 12:36 • (DUP) R3401174-6 04/12/19 12:37

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Nitrate-Nitrite	2.80	2.80	2	0.0713		20

Laboratory Control Sample (LCS)

(LCS) R3401174-2 04/12/19 12:08

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Nitrate-Nitrite	4.00	3.70	92.5	90.0-110	

L1086279-20 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1086279-20 04/12/19 12:13 • (MS) R3401174-4 04/12/19 12:15 • (MSD) R3401174-5 04/12/19 12:16

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Nitrate-Nitrite	2.50	0.0360	2.26	2.54	88.9	100	1	90.0-110	J6		11.9	20

L1086362-12 Original Sample (OS) • Matrix Spike (MS)

(OS) L1086362-12 04/12/19 12:57 • (MS) R3401174-7 04/12/19 12:58

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Nitrate-Nitrite	2.50	3.84	5.77	77.1	1	90.0-110	E J6

Method Blank (MB)

(MB) R3401819-5 04/15/19 11:57

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Nitrate-Nitrite	U		0.0197	0.100

L1085533-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1085533-01 04/15/19 12:00 • (DUP) R3401819-7 04/15/19 12:01

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Nitrate-Nitrite	0.745	0.704	1	5.66		20

L1086384-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1086384-10 04/15/19 13:17 • (DUP) R3401819-12 04/15/19 13:18

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Nitrate-Nitrite	13.4	13.6	5	0.911		20

Laboratory Control Sample (LCS)

(LCS) R3401819-6 04/15/19 11:58

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Nitrate-Nitrite	4.00	4.19	105	90.0-110	

L1085756-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1085756-01 04/15/19 12:03 • (MS) R3401819-8 04/15/19 12:04 • (MSD) R3401819-9 04/15/19 12:06

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Nitrate-Nitrite	2.50	0.478	3.10	3.28	105	112	1	90.0-110		J5	5.49	20

L1086403-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1086403-01 04/15/19 12:46 • (MS) R3401819-11 04/15/19 13:03

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Nitrate-Nitrite	2.50	0.206	3.00	112	1	90.0-110	J5

Method Blank (MB)

(MB) R3401563-1 04/13/19 12:36

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.0519	1.00
Fluoride	U		0.00990	0.100
Sulfate	U		0.0774	5.00

L1086330-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1086330-01 04/13/19 15:34 • (DUP) R3401563-3 04/13/19 15:49

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	51.5	52.0	1	1.11		15
Fluoride	0.609	0.619	1	1.66		15
Sulfate	1020	1030	1	0.536	E	15

L1086279-26 Original Sample (OS) • Duplicate (DUP)

(OS) L1086279-26 04/13/19 21:17 • (DUP) R3401563-6 04/13/19 21:32

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	0.412	0.282	1	37.7	J P1	15
Fluoride	0.0380	0.0394	1	3.62	J	15
Sulfate	0.481	0.323	1	39.2	J P1	15

Laboratory Control Sample (LCS)

(LCS) R3401563-2 04/13/19 12:51

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	39.6	99.0	80.0-120	
Fluoride	8.00	7.78	97.2	80.0-120	
Sulfate	40.0	40.4	101	80.0-120	

L1086330-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1086330-01 04/13/19 15:34 • (MS) R3401563-4 04/13/19 16:04 • (MSD) R3401563-5 04/13/19 16:18

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	51.5	98.4	99.0	93.8	95.1	1	80.0-120			0.664	15
Fluoride	5.00	0.609	5.35	5.39	94.8	95.7	1	80.0-120			0.760	15
Sulfate	50.0	1020	1040	1050	36.2	40.8	1	80.0-120	E V	E V	0.222	15

L1086279-26 Original Sample (OS) • Matrix Spike (MS)

(OS) L1086279-26 04/13/19 21:17 • (MS) R3401563-7 04/13/19 21:47

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	0.412	57.4	114	1	80.0-120	
Fluoride	5.00	0.0380	5.81	115	1	80.0-120	
Sulfate	50.0	0.481	57.3	114	1	80.0-120	



Method Blank (MB)

(MB) R3402197-1 04/16/19 00:14

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	0.389	J	0.0519	1.00
Fluoride	U		0.00990	0.100
Sulfate	U		0.0774	5.00

L1086362-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1086362-03 04/16/19 01:57 • (DUP) R3402197-3 04/16/19 02:10

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	37.9	37.8	1	0.113		15
Fluoride	0.628	0.629	1	0.191		15
Sulfate	73.4	73.4	1	0.100		15

L1086362-16 Original Sample (OS) • Duplicate (DUP)

(OS) L1086362-16 04/16/19 07:16 • (DUP) R3402197-6 04/16/19 07:30

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	78.5	78.5	1	0.0450		15
Fluoride	1.06	1.07	1	0.403		15
Sulfate	69.4	69.4	1	0.0669		15

Laboratory Control Sample (LCS)

(LCS) R3402197-2 04/16/19 00:28

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	39.9	99.7	80.0-120	
Fluoride	8.00	8.25	103	80.0-120	
Sulfate	40.0	40.5	101	80.0-120	

L1086362-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1086362-03 04/16/19 01:57 • (MS) R3402197-4 04/16/19 02:24 • (MSD) R3402197-5 04/16/19 02:38

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	37.9	86.0	86.1	96.3	96.4	1	80.0-120			0.0571	15
Fluoride	5.00	0.628	5.70	5.72	102	102	1	80.0-120			0.243	15
Sulfate	50.0	73.4	120	120	93.2	93.5	1	80.0-120	E	E	0.122	15

L1086362-16 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1086362-16 04/16/19 07:16 • (MS) R3402197-7 04/16/19 07:44 • (MSD) R3402197-8 04/16/19 07:58

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	78.5	124	124	91.6	91.5	1	80.0-120	E	E	0.0428	15
Fluoride	5.00	1.06	6.16	6.16	102	102	1	80.0-120			0.00325	15
Sulfate	50.0	69.4	117	117	95.1	94.6	1	80.0-120	E	E	0.236	15

Method Blank (MB)

(MB) R3402411-1 04/16/19 21:54

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.0519	1.00
Fluoride	U		0.00990	0.100
Sulfate	U		0.0774	5.00

L1086362-26 Original Sample (OS) • Duplicate (DUP)

(OS) L1086362-26 04/16/19 23:08 • (DUP) R3402411-3 04/16/19 23:22

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	U	0.000	1	0.000		15
Fluoride	U	0.000	1	0.000		15
Sulfate	U	0.000	1	0.000		15

L1086504-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1086504-01 04/17/19 05:37 • (DUP) R3402411-6 04/17/19 05:52

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	6.67	6.63	1	0.462		15
Fluoride	ND	0.0313	1	0.319	J	15
Sulfate	25.4	25.5	1	0.141		15

Laboratory Control Sample (LCS)

(LCS) R3402411-2 04/16/19 22:08

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	39.6	99.0	80.0-120	
Fluoride	8.00	8.06	101	80.0-120	
Sulfate	40.0	40.0	100	80.0-120	

L1086362-26 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1086362-26 04/16/19 23:08 • (MS) R3402411-4 04/16/19 23:37 • (MSD) R3402411-5 04/16/19 23:51

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	U	48.0	47.9	96.1	95.9	1	80.0-120			0.218	15
Fluoride	5.00	U	4.93	4.92	98.6	98.3	1	80.0-120			0.303	15
Sulfate	50.0	U	48.1	48.0	96.2	96.1	1	80.0-120			0.144	15

L1086504-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1086504-01 04/17/19 05:37 • (MS) R3402411-7 04/17/19 06:06

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	6.67	54.3	95.3	1	80.0-120	
Fluoride	5.00	ND	5.00	99.4	1	80.0-120	
Sulfate	50.0	25.4	72.6	94.4	1	80.0-120	

Method Blank (MB)

(MB) R3399496-1 04/08/19 11:05

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	U		0.0000490	0.000200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3399496-2 04/08/19 11:08 • (LCSD) R3399496-3 04/08/19 11:10

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Mercury	0.00300	0.00300	0.00316	99.8	105	80.0-120			5.23	20

L1086362-16 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1086362-16 04/08/19 11:12 • (MS) R3399496-4 04/08/19 11:15 • (MSD) R3399496-5 04/08/19 11:17

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.00300	U	0.00332	0.00303	111	101	1	75.0-125			8.94	20

Method Blank (MB)

(MB) R3399807-1 04/09/19 09:13

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	U		0.0000490	0.000200

L1086260-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1086260-01 04/09/19 09:27 • (DUP) R3399807-4 04/09/19 09:35

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Mercury	0.000630	0.000643	1	2.14		20

L1086260-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1086260-04 04/09/19 09:30 • (DUP) R3399807-5 04/09/19 09:37

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Mercury	U	0.000	1	0.000		20

L1086260-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1086260-07 04/09/19 09:32 • (DUP) R3399807-6 04/09/19 09:40

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Mercury	U	0.000	1	0.000		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3399807-2 04/09/19 09:15 • (LCSD) R3399807-3 04/09/19 09:25

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Mercury	0.00300	0.00290	0.00330	96.7	110	80.0-120			13.1	20

L1086362-18 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1086362-18 04/09/19 09:42 • (MS) R3399807-7 04/09/19 09:45 • (MSD) R3399807-8 04/09/19 09:47

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.00300	U	0.00279	0.00237	93.0	79.0	1	75.0-125			16.3	20

Method Blank (MB)

(MB) R3401605-1 04/13/19 14:01

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Boron,Dissolved	U		0.0126	0.200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3401605-2 04/13/19 14:04 • (LCSD) R3401605-3 04/13/19 14:07

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Boron,Dissolved	1.00	0.982	1.00	98.2	100	80.0-120			2.11	20

L1086362-16 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1086362-16 04/13/19 14:09 • (MS) R3401605-5 04/13/19 14:15 • (MSD) R3401605-6 04/13/19 14:17

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Boron,Dissolved	1.00	0.181	1.18	1.17	99.7	99.0	1	75.0-125			0.598	20

Method Blank (MB)

(MB) R3401239-1 04/12/19 13:33

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Boron,Dissolved	U		0.0126	0.200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3401239-2 04/12/19 13:36 • (LCSD) R3401239-3 04/12/19 13:38

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Boron,Dissolved	1.00	0.984	1.00	98.4	100	80.0-120			1.60	20

L1086121-17 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1086121-17 04/12/19 13:41 • (MS) R3401239-5 04/12/19 13:46 • (MSD) R3401239-6 04/12/19 13:48

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Boron,Dissolved	1.00	0.192	1.16	1.16	96.4	97.3	1	75.0-125			0.714	20

Method Blank (MB)

(MB) R3400066-1 04/10/19 01:41

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Aluminum,Dissolved	U		0.00515	0.100
Arsenic,Dissolved	U		0.000250	0.00200
Barium,Dissolved	U		0.000360	0.00500
Cadmium,Dissolved	U		0.000160	0.00100
Calcium,Dissolved	U		0.0460	1.00
Copper,Dissolved	U		0.000520	0.00500
Cobalt,Dissolved	U		0.000260	0.00200
Iron,Dissolved	U		0.0150	0.100
Lead,Dissolved	U		0.000240	0.00200
Magnesium,Dissolved	U		0.100	1.00
Manganese,Dissolved	0.000301	J	0.000250	0.00500
Molybdenum,Dissolved	U		0.000140	0.00500
Nickel,Dissolved	U		0.000350	0.00200
Potassium,Dissolved	0.0610	J	0.0370	1.00
Selenium,Dissolved	U		0.000380	0.00200
Silver,Dissolved	U		0.000310	0.00200
Uranium,Dissolved	U		0.000330	0.0100
Zinc,Dissolved	U		0.00256	0.0250

Method Blank (MB)

(MB) R3400498-1 04/10/19 22:16

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chromium,Dissolved	0.000956	J	0.000540	0.00200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3400066-2 04/10/19 01:45 • (LCSD) R3400066-7 04/10/19 02:45

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Aluminum,Dissolved	0.500	0.457	0.443	91.4	88.7	80.0-120			3.07	20
Arsenic,Dissolved	0.0500	0.0500	0.0480	100	96.1	80.0-120			3.96	20
Barium,Dissolved	0.0500	0.0514	0.0463	103	92.7	80.0-120			10.3	20
Cadmium,Dissolved	0.0500	0.0507	0.0488	101	97.6	80.0-120			3.83	20
Calcium,Dissolved	5.00	4.86	4.82	97.2	96.4	80.0-120			0.785	20
Copper,Dissolved	0.0500	0.0481	0.0476	96.2	95.1	80.0-120			1.10	20
Cobalt,Dissolved	0.0500	0.0490	0.0488	97.9	97.6	80.0-120			0.284	20
Iron,Dissolved	0.500	0.482	0.489	96.3	97.8	80.0-120			1.55	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3400066-2 04/10/19 01:45 • (LCSD) R3400066-7 04/10/19 02:45

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Lead,Dissolved	0.0500	0.0485	0.0474	97.1	94.8	80.0-120			2.44	20
Magnesium,Dissolved	5.00	4.82	4.72	96.4	94.4	80.0-120			2.09	20
Manganese,Dissolved	0.0500	0.0508	0.0486	102	97.2	80.0-120			4.31	20
Molybdenum,Dissolved	0.0500	0.0492	0.0472	98.3	94.5	80.0-120			4.03	20
Nickel,Dissolved	0.0500	0.0493	0.0485	98.6	97.1	80.0-120			1.56	20
Potassium,Dissolved	5.00	5.11	4.85	102	97.0	80.0-120			5.18	20
Selenium,Dissolved	0.0500	0.0503	0.0482	101	96.4	80.0-120			4.26	20
Silver,Dissolved	0.0500	0.0503	0.0493	101	98.6	80.0-120			2.03	20
Uranium,Dissolved	0.0500	0.0478	0.0480	95.6	95.9	80.0-120			0.390	20
Zinc,Dissolved	0.0500	0.0509	0.0457	102	91.4	80.0-120			10.8	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3400498-2 04/10/19 22:20 • (LCSD) R3400498-3 04/10/19 22:25

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Chromium,Dissolved	0.0500	0.0480	0.0478	95.9	95.7	80.0-120			0.235	20

L1085321-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1085321-01 04/10/19 01:55 • (MS) R3400066-5 04/10/19 02:04 • (MSD) R3400066-6 04/10/19 02:09

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aluminum,Dissolved	0.500	5.98	6.59	6.56	122	115	1	75.0-125			0.533	20
Arsenic,Dissolved	0.0500	0.00642	0.0520	0.0530	91.1	93.1	1	75.0-125			1.96	20
Barium,Dissolved	0.0500	0.0210	0.0688	0.0700	95.7	98.1	1	75.0-125			1.77	20
Cadmium,Dissolved	0.0500	0.00392	0.0571	0.0566	106	105	1	75.0-125			0.865	20
Calcium,Dissolved	5.00	261	269	267	150	107	1	75.0-125	V		0.806	20
Cobalt,Dissolved	0.0500	0.0915	0.139	0.141	95.5	98.2	1	75.0-125			0.961	20
Potassium,Dissolved	5.00	30.7	34.4	35.4	73.9	93.7	1	75.0-125	V		2.84	20
Iron,Dissolved	0.500	230	232	232	464	465	1	75.0-125	V	V	0.00284	20
Lead,Dissolved	0.0500	0.00319	0.0510	0.0520	95.6	97.6	1	75.0-125			1.93	20
Magnesium,Dissolved	5.00	124	136	128	234	81.6	1	75.0-125	V		5.79	20
Molybdenum,Dissolved	0.0500	U	0.0495	0.0480	99.0	96.0	1	75.0-125			3.09	20
Nickel,Dissolved	0.0500	0.0243	0.0717	0.0698	94.8	91.1	1	75.0-125			2.62	20
Selenium,Dissolved	0.0500	0.0207	0.0741	0.0732	107	105	1	75.0-125			1.14	20
Silver,Dissolved	0.0500	U	0.0500	0.0490	100	98.0	1	75.0-125			2.03	20
Uranium,Dissolved	0.0500	0.00158	0.0504	0.0507	97.6	98.3	1	75.0-125			0.682	20
Zinc,Dissolved	0.0500	3.37	3.40	3.36	61.6	0.000	1	75.0-125	V	V	1.06	20

L1085321-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1085321-01 04/10/19 22:30 • (MS) R3400498-5 04/10/19 22:39 • (MSD) R3400498-6 04/10/19 22:44

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chromium,Dissolved	0.0500	0.000590	0.0459	0.0450	90.5	88.8	1	75.0-125			1.90	20

Method Blank (MB)

(MB) R3402137-1 04/16/19 11:26

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Aluminum,Dissolved	0.00703	J	0.00515	0.100
Arsenic,Dissolved	U		0.000250	0.00200
Barium,Dissolved	U		0.000360	0.00500
Cadmium,Dissolved	U		0.000160	0.00100
Calcium,Dissolved	U		0.0460	1.00
Chromium,Dissolved	U		0.000540	0.00200
Copper,Dissolved	U		0.000520	0.00500
Cobalt,Dissolved	U		0.000260	0.00200
Iron,Dissolved	U		0.0150	0.100
Lead,Dissolved	U		0.000240	0.00200
Magnesium,Dissolved	U		0.100	1.00
Manganese,Dissolved	U		0.000250	0.00500
Molybdenum,Dissolved	U		0.000140	0.00500
Nickel,Dissolved	0.000406	J	0.000350	0.00200
Potassium,Dissolved	U		0.0370	1.00
Selenium,Dissolved	U		0.000380	0.00200
Silver,Dissolved	U		0.000310	0.00200
Sodium,Dissolved	U		0.110	1.00
Uranium,Dissolved	U		0.000330	0.0100
Zinc,Dissolved	U		0.00256	0.0250

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3402137-2 04/16/19 11:31 • (LCSD) R3402137-3 04/16/19 11:35

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Aluminum,Dissolved	0.500	0.500	0.499	99.9	99.9	80.0-120			0.0521	20
Arsenic,Dissolved	0.0500	0.0512	0.0525	102	105	80.0-120			2.51	20
Barium,Dissolved	0.0500	0.0484	0.0497	96.7	99.4	80.0-120			2.72	20
Cadmium,Dissolved	0.0500	0.0503	0.0515	101	103	80.0-120			2.35	20
Calcium,Dissolved	5.00	5.09	5.12	102	102	80.0-120			0.547	20
Chromium,Dissolved	0.0500	0.0508	0.0514	102	103	80.0-120			1.20	20
Copper,Dissolved	0.0500	0.0497	0.0501	99.4	100	80.0-120			0.715	20
Cobalt,Dissolved	0.0500	0.0508	0.0529	102	106	80.0-120			3.91	20
Iron,Dissolved	0.500	0.510	0.529	102	106	80.0-120			3.65	20
Lead,Dissolved	0.0500	0.0502	0.0515	100	103	80.0-120			2.58	20
Magnesium,Dissolved	5.00	4.95	5.05	99.0	101	80.0-120			2.11	20
Manganese,Dissolved	0.0500	0.0484	0.0497	96.7	99.3	80.0-120			2.63	20
Molybdenum,Dissolved	0.0500	0.0456	0.0490	91.3	98.0	80.0-120			7.14	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3402137-2 04/16/19 11:31 • (LCSD) R3402137-3 04/16/19 11:35

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Nickel,Dissolved	0.0500	0.0514	0.0525	103	105	80.0-120			2.27	20
Potassium,Dissolved	5.00	4.83	5.07	96.6	101	80.0-120			4.78	20
Selenium,Dissolved	0.0500	0.0505	0.0524	101	105	80.0-120			3.58	20
Silver,Dissolved	0.0500	0.0466	0.0488	93.2	97.6	80.0-120			4.68	20
Sodium,Dissolved	5.00	5.00	5.16	100	103	80.0-120			3.09	20
Uranium,Dissolved	0.0500	0.0502	0.0507	100	101	80.0-120			0.985	20
Zinc,Dissolved	0.0500	0.0526	0.0512	105	102	80.0-120			2.85	20

L1086362-16 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1086362-16 04/16/19 11:40 • (MS) R3402137-5 04/16/19 11:49 • (MSD) R3402137-6 04/16/19 11:54

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aluminum,Dissolved	0.500	U	0.502	0.500	100	100	1	75.0-125			0.299	20
Arsenic,Dissolved	0.0500	0.00424	0.0551	0.0551	102	102	1	75.0-125			0.0799	20
Barium,Dissolved	0.0500	0.0850	0.138	0.137	107	104	1	75.0-125			1.16	20
Cadmium,Dissolved	0.0500	U	0.0525	0.0538	105	108	1	75.0-125			2.56	20
Calcium,Dissolved	5.00	100	107	107	140	132	1	75.0-125	V	V	0.407	20
Chromium,Dissolved	0.0500	0.00225	0.0527	0.0513	101	98.2	1	75.0-125			2.52	20
Copper,Dissolved	0.0500	0.00232	0.0532	0.0515	102	98.3	1	75.0-125			3.23	20
Cobalt,Dissolved	0.0500	U	0.0507	0.0504	101	101	1	75.0-125			0.507	20
Potassium,Dissolved	5.00	2.22	7.49	7.33	105	102	1	75.0-125			2.13	20
Iron,Dissolved	0.500	U	0.512	0.500	102	99.9	1	75.0-125			2.34	20
Lead,Dissolved	0.0500	U	0.0519	0.0505	104	101	1	75.0-125			2.71	20
Magnesium,Dissolved	5.00	13.8	19.3	18.9	109	100	1	75.0-125			2.36	20
Manganese,Dissolved	0.0500	0.000363	0.0490	0.0500	97.3	99.3	1	75.0-125			2.00	20
Molybdenum,Dissolved	0.0500	0.00240	0.0488	0.0491	92.8	93.4	1	75.0-125			0.646	20
Nickel,Dissolved	0.0500	0.00473	0.0558	0.0539	102	98.3	1	75.0-125			3.45	20
Selenium,Dissolved	0.0500	0.00215	0.0588	0.0518	113	99.3	1	75.0-125			12.6	20
Silver,Dissolved	0.0500	U	0.0470	0.0469	94.0	93.7	1	75.0-125			0.305	20
Sodium,Dissolved	5.00	39.9	45.5	46.1	112	124	1	75.0-125			1.27	20
Uranium,Dissolved	0.0500	0.00223	0.0533	0.0521	102	99.7	1	75.0-125			2.26	20
Zinc,Dissolved	0.0500	0.0511	0.102	0.102	102	102	1	75.0-125			0.162	20

Method Blank (MB)

(MB) R3401644-1 04/14/19 18:41

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Sodium,Dissolved	U		0.110	1.00

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3401644-2 04/14/19 18:46 • (LCSD) R3401644-3 04/14/19 18:51

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Sodium,Dissolved	5.00	4.96	4.99	99.2	99.8	80.0-120			0.600	20

L1088066-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1088066-02 04/14/19 18:56 • (MS) R3401644-5 04/14/19 19:05 • (MSD) R3401644-6 04/14/19 19:09

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sodium,Dissolved	5.00	14.9	19.7	19.6	95.9	94.6	1	75.0-125			0.344	20

Method Blank (MB)

(MB) R3401156-1 04/11/19 22:06

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TPH (GC/FID) Low Fraction	0.0333	J	0.0314	0.100
(S) a,a,a-Trifluorotoluene(FID)	*112*			*78.0-120*

Laboratory Control Sample (LCS)

(LCS) R3401156-2 04/12/19 09:09

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.14	93.4	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*98.6*	*78.0-120*	

Method Blank (MB)

(MB) R3401282-3 04/12/19 12:20

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TPH (GC/FID) Low Fraction	U		0.0314	0.100
(S) a,a,a-Trifluorotoluene(FID)	*83.6*			*78.0-120*

Laboratory Control Sample (LCS)

(LCS) R3401282-2 04/12/19 11:33

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.16	93.9	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*87.9*	*78.0-120*	

Method Blank (MB)

(MB) R3400861-2 04/08/19 20:35

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0100	1.00
Benzene	U		0.000331	0.00100
Bromodichloromethane	U		0.000380	0.00125
Bromoform	U		0.000469	0.00100
Bromomethane	U		0.000866	0.00500
n-Butylbenzene	U		0.000361	0.00100
sec-Butylbenzene	U		0.000365	0.00100
tert-Butylbenzene	U		0.000399	0.00100
Carbon disulfide	U		0.000275	0.00100
Carbon tetrachloride	U		0.000379	0.00100
Chlorobenzene	U		0.000348	0.00100
Chlorodibromomethane	U		0.000327	0.00100
Chloroethane	U		0.000453	0.00500
Chloroform	U		0.000324	0.00500
Chloromethane	U		0.000276	0.00250
1,2-Dibromoethane	U		0.000381	0.00100
1,1-Dichloroethane	U		0.000259	0.00100
1,2-Dichloroethane	U		0.000361	0.00100
1,1-Dichloroethene	U		0.000398	0.00100
cis-1,2-Dichloroethene	U		0.000260	0.00100
trans-1,2-Dichloroethene	U		0.000396	0.00100
1,2-Dichloropropane	U		0.000306	0.00100
cis-1,3-Dichloropropene	U		0.000418	0.00100
trans-1,3-Dichloropropene	U		0.000419	0.00100
Ethylbenzene	U		0.000384	0.00100
Hexachloro-1,3-butadiene	U		0.000256	0.00100
2-Hexanone	U		0.00382	0.0100
Isopropylbenzene	U		0.000326	0.00100
p-Isopropyltoluene	U		0.000350	0.00100
2-Butanone (MEK)	U		0.00393	0.0100
Methylene Chloride	U		0.00100	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100
Methyl tert-butyl ether	U		0.000367	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.000349	0.00100
Styrene	U		0.000307	0.00100
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100
Tetrachloroethene	U		0.000372	0.00100
Toluene	U		0.000412	0.00100
1,1,1-Trichloroethane	U		0.000319	0.00100

Method Blank (MB)

(MB) R3400861-2 04/08/19 20:35

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,1,2-Trichloroethane	U		0.000383	0.00100
Trichloroethene	U		0.000398	0.00100
1,2,4-Trimethylbenzene	U		0.000373	0.00100
1,3,5-Trimethylbenzene	U		0.000387	0.00100
Vinyl chloride	U		0.000259	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	*104*			*80.0-120*
(S) 4-Bromofluorobenzene	*95.6*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*115*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3400861-1 04/08/19 19:35

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.125	0.128	103	19.0-160	
Benzene	0.0250	0.0266	106	70.0-123	
Bromodichloromethane	0.0250	0.0290	116	75.0-120	
Bromoform	0.0250	0.0250	100	68.0-132	
Bromomethane	0.0250	0.0216	86.5	10.0-160	
n-Butylbenzene	0.0250	0.0256	102	73.0-125	
sec-Butylbenzene	0.0250	0.0253	101	75.0-125	
tert-Butylbenzene	0.0250	0.0247	98.7	76.0-124	
Carbon disulfide	0.0250	0.0263	105	61.0-128	
Carbon tetrachloride	0.0250	0.0314	126	68.0-126	
Chlorobenzene	0.0250	0.0236	94.4	80.0-121	
Chlorodibromomethane	0.0250	0.0240	96.0	77.0-125	
Chloroethane	0.0250	0.0259	103	47.0-150	
Chloroform	0.0250	0.0291	117	73.0-120	
Chloromethane	0.0250	0.0220	88.1	41.0-142	
1,2-Dibromoethane	0.0250	0.0236	94.5	80.0-122	
1,1-Dichloroethane	0.0250	0.0279	111	70.0-126	
1,2-Dichloroethane	0.0250	0.0289	116	70.0-128	
1,1-Dichloroethene	0.0250	0.0263	105	71.0-124	
cis-1,2-Dichloroethene	0.0250	0.0268	107	73.0-120	
trans-1,2-Dichloroethene	0.0250	0.0271	108	73.0-120	
1,2-Dichloropropane	0.0250	0.0274	110	77.0-125	
cis-1,3-Dichloropropene	0.0250	0.0274	110	80.0-123	
trans-1,3-Dichloropropene	0.0250	0.0254	102	78.0-124	

Laboratory Control Sample (LCS)

(LCS) R3400861-1 04/08/19 19:35

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Ethylbenzene	0.0250	0.0229	91.6	79.0-123	
Hexachloro-1,3-butadiene	0.0250	0.0289	115	54.0-138	
2-Hexanone	0.125	0.116	92.4	67.0-149	
Isopropylbenzene	0.0250	0.0238	95.2	76.0-127	
p-Isopropyltoluene	0.0250	0.0263	105	76.0-125	
2-Butanone (MEK)	0.125	0.130	104	44.0-160	
Methylene Chloride	0.0250	0.0254	101	67.0-120	
4-Methyl-2-pentanone (MIBK)	0.125	0.117	93.7	68.0-142	
Methyl tert-butyl ether	0.0250	0.0280	112	68.0-125	
Naphthalene	0.0250	0.0237	94.6	54.0-135	
n-Propylbenzene	0.0250	0.0273	109	77.0-124	
Styrene	0.0250	0.0242	97.0	73.0-130	
1,1,2,2-Tetrachloroethane	0.0250	0.0261	104	65.0-130	
Tetrachloroethene	0.0250	0.0248	99.4	72.0-132	
Toluene	0.0250	0.0226	90.4	79.0-120	
1,1,1-Trichloroethane	0.0250	0.0311	124	73.0-124	
1,1,2-Trichloroethane	0.0250	0.0228	91.4	80.0-120	
Trichloroethene	0.0250	0.0272	109	78.0-124	
1,2,4-Trimethylbenzene	0.0250	0.0263	105	76.0-121	
1,3,5-Trimethylbenzene	0.0250	0.0257	103	76.0-122	
Vinyl chloride	0.0250	0.0268	107	67.0-131	
Xylenes, Total	0.0750	0.0703	93.7	79.0-123	
(S) Toluene-d8			*92.1*	*80.0-120*	
(S) 4-Bromofluorobenzene			*96.2*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*124*	*70.0-130*	

L1086362-16 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1086362-16 04/09/19 01:17 • (MS) R3400861-3 04/09/19 04:19 • (MSD) R3400861-4 04/09/19 04:39

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	0.125	U	0.131	0.121	105	96.9	1	10.0-160			8.08	35
Benzene	0.0250	U	0.0242	0.0200	96.6	79.9	1	17.0-158			18.9	27
Bromodichloromethane	0.0250	0.00405	0.0321	0.0289	112	99.3	1	31.0-150			10.7	27
Bromoform	0.0250	U	0.0255	0.0228	102	91.1	1	29.0-150			11.3	29
Bromomethane	0.0250	U	0.0159	0.0116	63.5	46.4	1	10.0-160			31.1	38
n-Butylbenzene	0.0250	U	0.0251	0.0211	100	84.5	1	31.0-150			17.2	30
sec-Butylbenzene	0.0250	U	0.0254	0.0201	102	80.3	1	33.0-155			23.4	29
tert-Butylbenzene	0.0250	U	0.0253	0.0209	101	83.7	1	34.0-153			19.1	28

L1086362-16 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1086362-16 04/09/19 01:17 • (MS) R3400861-3 04/09/19 04:19 • (MSD) R3400861-4 04/09/19 04:39

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Carbon disulfide	0.0250	U	0.0146	0.0119	58.5	47.5	1	10.0-156			20.8	28
Carbon tetrachloride	0.0250	U	0.0307	0.0267	123	107	1	23.0-159			14.3	28
Chlorobenzene	0.0250	U	0.0239	0.0195	95.5	77.9	1	33.0-152			20.3	27
Chlorodibromomethane	0.0250	0.000547	0.0258	0.0226	101	88.1	1	37.0-149			13.3	27
Chloroethane	0.0250	U	0.0198	0.0174	79.3	69.7	1	10.0-160			13.0	30
Chloroform	0.0250	0.0148	0.0412	0.0379	106	92.1	1	29.0-154			8.51	28
Chloromethane	0.0250	U	0.0176	0.0152	70.3	60.7	1	10.0-160			14.8	29
1,2-Dibromoethane	0.0250	U	0.0222	0.0202	88.7	81.0	1	34.0-147			9.05	27
1,1-Dichloroethane	0.0250	U	0.0263	0.0211	105	84.2	1	25.0-158			22.1	27
1,2-Dichloroethane	0.0250	U	0.0284	0.0250	114	99.9	1	29.0-151			13.0	27
1,1-Dichloroethene	0.0250	U	0.0225	0.0187	90.2	74.8	1	11.0-160			18.7	29
cis-1,2-Dichloroethene	0.0250	U	0.0244	0.0205	97.5	81.9	1	10.0-160			17.4	27
trans-1,2-Dichloroethene	0.0250	U	0.0217	0.0175	86.7	69.9	1	17.0-153			21.5	27
1,2-Dichloropropane	0.0250	U	0.0254	0.0208	102	83.0	1	30.0-156			20.3	27
cis-1,3-Dichloropropene	0.0250	U	0.0250	0.0217	100	87.0	1	34.0-149			14.1	28
trans-1,3-Dichloropropene	0.0250	U	0.0249	0.0222	99.7	88.9	1	32.0-149			11.4	28
Ethylbenzene	0.0250	U	0.0232	0.0193	93.0	77.1	1	30.0-155			18.7	27
Hexachloro-1,3-butadiene	0.0250	U	0.0282	0.0237	113	95.0	1	20.0-154			17.2	34
2-Hexanone	0.125	U	0.117	0.108	93.7	86.0	1	21.0-160			8.60	29
Isopropylbenzene	0.0250	U	0.0250	0.0205	99.8	82.1	1	28.0-157			19.5	27
p-Isopropyltoluene	0.0250	U	0.0260	0.0212	104	84.9	1	30.0-154			20.2	29
2-Butanone (MEK)	0.125	U	0.141	0.126	113	101	1	10.0-160			10.9	32
Methylene Chloride	0.0250	U	0.0227	0.0196	90.8	78.3	1	23.0-144			14.8	28
4-Methyl-2-pentanone (MIBK)	0.125	U	0.124	0.112	99.5	89.3	1	29.0-160			10.8	29
Methyl tert-butyl ether	0.0250	U	0.0261	0.0234	104	93.6	1	28.0-150			10.9	29
Naphthalene	0.0250	U	0.0243	0.0192	97.1	76.7	1	12.0-156			23.5	35
n-Propylbenzene	0.0250	U	0.0279	0.0213	112	85.2	1	31.0-154			26.9	28
Styrene	0.0250	U	0.0242	0.0205	96.7	82.0	1	33.0-155			16.4	28
1,1,2,2-Tetrachloroethane	0.0250	U	0.0252	0.0216	101	86.2	1	33.0-150			15.5	28
Tetrachloroethene	0.0250	U	0.0238	0.0181	95.1	72.5	1	10.0-160			27.0	27
Toluene	0.0250	U	0.0213	0.0181	85.1	72.3	1	26.0-154			16.1	28
1,1,1-Trichloroethane	0.0250	U	0.0328	0.0267	131	107	1	23.0-160			20.7	28
1,1,2-Trichloroethane	0.0250	U	0.0232	0.0207	92.9	82.9	1	35.0-147			11.3	27
Trichloroethene	0.0250	U	0.0247	0.0205	98.6	81.8	1	10.0-160			18.6	25
1,2,4-Trimethylbenzene	0.0250	U	0.0267	0.0214	107	85.5	1	26.0-154			22.0	27
1,3,5-Trimethylbenzene	0.0250	U	0.0259	0.0203	104	81.1	1	28.0-153			24.4	27
Vinyl chloride	0.0250	U	0.0222	0.0183	88.6	73.1	1	10.0-160			19.3	27
Xylenes, Total	0.0750	U	0.0709	0.0586	94.5	78.1	1	29.0-154			19.0	28
(S) Toluene-d8					*95.8*	*97.4*		*80.0-120*				
(S) 4-Bromofluorobenzene					*102*	*101*		*77.0-126*				

L1086362-16 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1086362-16 04/09/19 01:17 • (MS) R3400861-3 04/09/19 04:19 • (MSD) R3400861-4 04/09/19 04:39

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
(S) 1,2-Dichloroethane-d4					*134*	*133*		*70.0-130*	J1	J1		

Method Blank (MB)

(MB) R3400833-2 04/09/19 08:36

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0100	1.00
Benzene	U		0.000331	0.00100
Bromodichloromethane	U		0.000380	0.00125
Bromoform	U		0.000469	0.00100
Bromomethane	U		0.000866	0.00500
n-Butylbenzene	U		0.000361	0.00100
sec-Butylbenzene	U		0.000365	0.00100
tert-Butylbenzene	U		0.000399	0.00100
Carbon disulfide	U		0.000275	0.00100
Carbon tetrachloride	U		0.000379	0.00100
Chlorobenzene	U		0.000348	0.00100
Chlorodibromomethane	U		0.000327	0.00100
Chloroethane	U		0.000453	0.00500
Chloroform	U		0.000324	0.00500
Chloromethane	U		0.000276	0.00250
1,2-Dibromoethane	U		0.000381	0.00100
1,1-Dichloroethane	U		0.000259	0.00100
1,2-Dichloroethane	U		0.000361	0.00100
1,1-Dichloroethene	U		0.000398	0.00100
cis-1,2-Dichloroethene	U		0.000260	0.00100
trans-1,2-Dichloroethene	U		0.000396	0.00100
1,2-Dichloropropane	U		0.000306	0.00100
cis-1,3-Dichloropropene	U		0.000418	0.00100
trans-1,3-Dichloropropene	U		0.000419	0.00100
Ethylbenzene	U		0.000384	0.00100
Hexachloro-1,3-butadiene	U		0.000256	0.00100
2-Hexanone	U		0.00382	0.0100
Isopropylbenzene	U		0.000326	0.00100
p-Isopropyltoluene	U		0.000350	0.00100
2-Butanone (MEK)	U		0.00393	0.0100
Methylene Chloride	U		0.00100	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100
Methyl tert-butyl ether	U		0.000367	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.000349	0.00100
Styrene	U		0.000307	0.00100
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100
Tetrachloroethene	U		0.000372	0.00100
Toluene	U		0.000412	0.00100
1,1,1-Trichloroethane	U		0.000319	0.00100

Method Blank (MB)

(MB) R3400833-2 04/09/19 08:36

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,1,2-Trichloroethane	U		0.000383	0.00100
Trichloroethene	U		0.000398	0.00100
1,2,4-Trimethylbenzene	U		0.000373	0.00100
1,3,5-Trimethylbenzene	U		0.000387	0.00100
Vinyl chloride	U		0.000259	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	*108*			*80.0-120*
(S) 4-Bromofluorobenzene	*98.4*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*100*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3400833-1 04/09/19 07:55

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.125	0.128	102	19.0-160	
Benzene	0.0250	0.0221	88.5	70.0-123	
Bromodichloromethane	0.0250	0.0220	87.9	75.0-120	
Bromoform	0.0250	0.0228	91.1	68.0-132	
Bromomethane	0.0250	0.0123	49.3	10.0-160	
n-Butylbenzene	0.0250	0.0262	105	73.0-125	
sec-Butylbenzene	0.0250	0.0267	107	75.0-125	
tert-Butylbenzene	0.0250	0.0276	110	76.0-124	
Carbon disulfide	0.0250	0.0222	88.9	61.0-128	
Carbon tetrachloride	0.0250	0.0232	92.9	68.0-126	
Chlorobenzene	0.0250	0.0246	98.2	80.0-121	
Chlorodibromomethane	0.0250	0.0239	95.4	77.0-125	
Chloroethane	0.0250	0.0205	81.9	47.0-150	
Chloroform	0.0250	0.0219	87.8	73.0-120	
Chloromethane	0.0250	0.0134	53.6	41.0-142	
1,2-Dibromoethane	0.0250	0.0257	103	80.0-122	
1,1-Dichloroethane	0.0250	0.0204	81.4	70.0-126	
1,2-Dichloroethane	0.0250	0.0215	85.9	70.0-128	
1,1-Dichloroethene	0.0250	0.0231	92.5	71.0-124	
cis-1,2-Dichloroethene	0.0250	0.0220	88.0	73.0-120	
trans-1,2-Dichloroethene	0.0250	0.0216	86.3	73.0-120	
1,2-Dichloropropane	0.0250	0.0220	88.0	77.0-125	
cis-1,3-Dichloropropene	0.0250	0.0222	89.0	80.0-123	
trans-1,3-Dichloropropene	0.0250	0.0249	99.6	78.0-124	

Laboratory Control Sample (LCS)

(LCS) R3400833-1 04/09/19 07:55

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Ethylbenzene	0.0250	0.0239	95.6	79.0-123	
Hexachloro-1,3-butadiene	0.0250	0.0175	69.9	54.0-138	
2-Hexanone	0.125	0.136	109	67.0-149	
Isopropylbenzene	0.0250	0.0253	101	76.0-127	
p-Isopropyltoluene	0.0250	0.0261	105	76.0-125	
2-Butanone (MEK)	0.125	0.122	97.8	44.0-160	
Methylene Chloride	0.0250	0.0209	83.7	67.0-120	
4-Methyl-2-pentanone (MIBK)	0.125	0.129	104	68.0-142	
Methyl tert-butyl ether	0.0250	0.0236	94.6	68.0-125	
Naphthalene	0.0250	0.0136	54.4	54.0-135	
n-Propylbenzene	0.0250	0.0260	104	77.0-124	
Styrene	0.0250	0.0231	92.5	73.0-130	
1,1,2,2-Tetrachloroethane	0.0250	0.0260	104	65.0-130	
Tetrachloroethene	0.0250	0.0268	107	72.0-132	
Toluene	0.0250	0.0242	96.7	79.0-120	
1,1,1-Trichloroethane	0.0250	0.0229	91.5	73.0-124	
1,1,2-Trichloroethane	0.0250	0.0249	99.6	80.0-120	
Trichloroethene	0.0250	0.0233	93.3	78.0-124	
1,2,4-Trimethylbenzene	0.0250	0.0269	107	76.0-121	
1,3,5-Trimethylbenzene	0.0250	0.0252	101	76.0-122	
Vinyl chloride	0.0250	0.0198	79.0	67.0-131	
Xylenes, Total	0.0750	0.0784	105	79.0-123	
(S) Toluene-d8			*106*	*80.0-120*	
(S) 4-Bromofluorobenzene			*100*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*113*	*70.0-130*	

Method Blank (MB)

(MB) R3400212-1 04/10/19 10:11

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TPH (GC/FID) High Fraction	U		0.0247	0.100
(S) o-Terphenyl	*57.5*			*31.0-160*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3400212-2 04/10/19 10:33 • (LCSD) R3400212-3 04/10/19 10:55

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) High Fraction	1.50	1.33	1.37	88.7	91.3	50.0-150			2.96	20
(S) o-Terphenyl				*87.5*	*91.0*	*31.0-160*				

L1086362-16 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1086362-16 04/11/19 01:38 • (MS) R3400212-4 04/11/19 02:00 • (MSD) R3400212-5 04/11/19 02:22

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) High Fraction	1.50	U	1.36	1.39	90.7	92.7	1	50.0-150			2.18	20
(S) o-Terphenyl					*89.0*	*89.0*		*31.0-160*				

Method Blank (MB)

(MB) R3400619-1 04/10/19 14:22

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TPH (GC/FID) High Fraction	U		0.0247	0.100
(S) o-Terphenyl	*75.5*			*31.0-160*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3400619-2 04/10/19 14:39 • (LCSD) R3400619-3 04/10/19 14:56

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) High Fraction	1.50	1.68	1.71	112	114	50.0-150			1.77	20
(S) o-Terphenyl				*97.0*	*97.0*	*31.0-160*				

L1086121-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1086121-12 04/10/19 16:40 • (MS) R3400619-4 04/10/19 16:57 • (MSD) R3400619-5 04/10/19 17:15

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) High Fraction	1.40	0.651	2.29	2.28	117	116	1	50.0-150			0.438	20
(S) o-Terphenyl					*103*	*102*		*31.0-160*				

Method Blank (MB)

(MB) R3400852-4 04/11/19 12:10

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acenaphthene	U		0.000316	0.00100
Acenaphthylene	U		0.000309	0.00100
Acetophenone	U		0.00247	0.0100
Anthracene	U		0.000291	0.00100
Benzo(a)anthracene	0.0000946	J	0.0000510	0.00100
Atrazine	U		0.000260	0.0100
Benzo(b)fluoranthene	U		0.0000896	0.00100
Benzaldehyde	U		0.00140	0.0100
Benzo(k)fluoranthene	U		0.000355	0.00100
Benzo(g,h,i)perylene	0.00000635	J	0.00000227	0.00100
Benzo(a)pyrene	U		0.0000381	0.000200
Bis(2-chlorethoxy)methane	U		0.000329	0.0100
Bis(2-chloroethyl)ether	U		0.00162	0.0100
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100
4-Bromophenyl-phenylether	U		0.000335	0.0100
Biphenyl	U		0.000325	0.0100
2-Chloronaphthalene	U		0.000330	0.00100
4-Chlorophenyl-phenylether	U		0.000303	0.0100
Chrysene	U		0.000332	0.00100
Dibenz(a,h)anthracene	0.000150	J	0.0000644	0.000200
Caprolactam	U		0.00259	0.0100
Carbazole	U		0.000260	0.0100
4-Chloroaniline	U		0.000382	0.0100
3,3-Dichlorobenzidine	U		0.00202	0.0100
2,4-Dinitrotoluene	U		0.00165	0.0100
2,6-Dinitrotoluene	U		0.000279	0.0100
Fluoranthene	U		0.000310	0.00100
Dibenzofuran	U		0.000338	0.0100
Fluorene	U		0.000323	0.00100
Hexachlorobenzene	U		0.000341	0.00100
Hexachloro-1,3-butadiene	U		0.000329	0.0100
Hexachlorocyclopentadiene	U		0.00233	0.0100
Hexachloroethane	U		0.000365	0.0100
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100
Isophorone	U		0.000272	0.0100
Naphthalene	U		0.000372	0.00100
Nitrobenzene	U		0.000367	0.0100
n-Nitrosodiphenylamine	U		0.00119	0.0100
n-Nitrosodi-n-propylamine	U		0.000403	0.0100
Phenanthrene	U		0.000366	0.00100

Method Blank (MB)

(MB) R3400852-4 04/11/19 12:10

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzylbutyl phthalate	U		0.000275	0.00300
Bis(2-ethylhexyl)phthalate	0.000776	J	0.000709	0.00300
Di-n-butyl phthalate	U		0.000266	0.00300
1-Methylnaphthalene	U		0.000332	0.00100
Diethyl phthalate	U		0.000282	0.00300
2-Methylnaphthalene	U		0.000311	0.00100
Dimethyl phthalate	U		0.000283	0.00300
Di-n-octyl phthalate	U		0.000278	0.00300
2-Nitroaniline	U		0.00190	0.0100
Pyrene	U		0.000330	0.00100
1,2,4-Trichlorobenzene	U		0.000355	0.0100
3-Nitroaniline	U		0.000308	0.0100
4-Nitroaniline	U		0.000349	0.0100
4-Chloro-3-methylphenol	U		0.000263	0.0100
2-Chlorophenol	U		0.000283	0.0100
2-Nitrophenol	U		0.000320	0.0100
4-Nitrophenol	U		0.00201	0.0100
Pentachlorophenol	U		0.000313	0.0100
Phenol	U		0.000334	0.0100
2,4,6-Trichlorophenol	U		0.000297	0.0100
2,4-Dichlorophenol	U		0.000284	0.0100
2,4-Dimethylphenol	U		0.000624	0.0100
2-Methylphenol	U		0.000312	0.0100
3&4-Methyl Phenol	U		0.000266	0.0100
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100
2,4-Dinitrophenol	U		0.00325	0.0100
2,4,5-Trichlorophenol	U		0.000236	0.0100
(S) Nitrobenzene-d5	*44.7*			*10.0-127*
(S) 2-Fluorobiphenyl	*58.9*			*10.0-130*
(S) p-Terphenyl-d14	*80.6*			*10.0-128*
(S) Phenol-d5	*11.2*			*10.0-120*
(S) 2-Fluorophenol	*22.2*			*10.0-120*
(S) 2,4,6-Tribromophenol	*28.4*			*10.0-155*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3400852-1 04/11/19 11:09 • (LCSD) R3400852-2 04/11/19 11:29

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.0500	0.0518	0.0384	104	76.8	41.0-120		J3	29.7	22
Acenaphthylene	0.0500	0.0573	0.0420	115	84.0	43.0-120		J3	30.8	22
Anthracene	0.0500	0.0589	0.0418	118	83.6	45.0-120		J3	34.0	20
Benzo(a)anthracene	0.0500	0.0675	0.0504	135	101	47.0-120	J4	J3	29.0	20
Benzo(b)fluoranthene	0.0500	0.0650	0.0487	130	97.4	46.0-120	J4	J3	28.7	20
Benzo(k)fluoranthene	0.0500	0.0635	0.0472	127	94.4	46.0-120	J4	J3	29.4	21
Benzo(g,h,i)perylene	0.0500	0.0677	0.0505	135	101	48.0-121	J4	J3	29.1	20
Benzo(a)pyrene	0.0500	0.0640	0.0479	128	95.8	47.0-120	J4	J3	28.8	20
Bis(2-chlorethoxy)methane	0.0500	0.0428	0.0325	85.6	65.0	33.0-120		J3	27.4	24
Bis(2-chloroethyl)ether	0.0500	0.0482	0.0341	96.4	68.2	23.0-120		J3	34.3	33
Bis(2-chloroisopropyl)ether	0.0500	0.0478	0.0334	95.6	66.8	28.0-120		J3	35.5	31
4-Bromophenyl-phenylether	0.0500	0.0617	0.0443	123	88.6	45.0-120	J4	J3	32.8	20
2-Chloronaphthalene	0.0500	0.0496	0.0354	99.2	70.8	37.0-120		J3	33.4	25
4-Chlorophenyl-phenylether	0.0500	0.0558	0.0421	112	84.2	44.0-120		J3	28.0	20
Chrysene	0.0500	0.0609	0.0463	122	92.6	48.0-120	J4	J3	27.2	20
Dibenz(a,h)anthracene	0.0500	0.0625	0.0471	125	94.2	47.0-120	J4	J3	28.1	20
3,3-Dichlorobenzidine	0.100	0.116	0.0758	116	75.8	44.0-120		J3	41.9	20
2,4-Dinitrotoluene	0.0500	0.0538	0.0402	108	80.4	49.0-124		J3	28.9	20
2,6-Dinitrotoluene	0.0500	0.0542	0.0420	108	84.0	46.0-120		J3	25.4	21
Acetophenone	0.0500	0.0516	0.0367	103	73.4	29.0-120		J3	33.7	28
Fluoranthene	0.0500	0.0630	0.0460	126	92.0	51.0-120	J4	J3	31.2	20
Fluorene	0.0500	0.0552	0.0415	110	83.0	47.0-120		J3	28.3	20
Hexachlorobenzene	0.0500	0.0609	0.0441	122	88.2	44.0-120	J4	J3	32.0	20
Atrazine	0.0500	0.0539	0.0423	108	84.6	39.0-141		J3	24.1	20
Hexachloro-1,3-butadiene	0.0500	0.0320	0.0208	64.0	41.6	19.0-120		J3	42.4	32
Benzaldehyde	0.0500	0.0636	0.0439	127	87.8	10.0-160			36.7	40
Hexachlorocyclopentadiene	0.0500	0.0450	0.0303	90.0	60.6	15.0-120		J3	39.0	31
Indeno(1,2,3-cd)pyrene	0.0500	0.0617	0.0451	123	90.2	49.0-122	J4	J3	31.1	20
Isophorone	0.0500	0.0436	0.0337	87.2	67.4	36.0-120		J3	25.6	23
Naphthalene	0.0500	0.0397	0.0279	79.4	55.8	27.0-120		J3	34.9	27
Nitrobenzene	0.0500	0.0396	0.0295	79.2	59.0	27.0-120		J3	29.2	29
Biphenyl	0.0500	0.0534	0.0386	107	77.2	38.0-120		J3	32.2	27
n-Nitrosodiphenylamine	0.0500	0.0577	0.0374	115	74.8	47.0-120		J3	42.7	20
n-Nitrosodi-n-propylamine	0.0500	0.0500	0.0359	100	71.8	31.0-120		J3	32.8	28
Phenanthrene	0.0500	0.0569	0.0403	114	80.6	46.0-120		J3	34.2	20
Benzylbutyl phthalate	0.0500	0.0580	0.0447	116	89.4	43.0-121		J3	25.9	20
Bis(2-ethylhexyl)phthalate	0.0500	0.0571	0.0442	114	88.4	43.0-122		J3	25.5	20
Caprolactam	0.0500	0.0182	0.0150	36.4	30.0	10.0-120			19.3	26
Di-n-butyl phthalate	0.0500	0.0635	0.0471	127	94.2	49.0-121	J4	J3	29.7	20
Carbazole	0.0500	0.0621	0.0458	124	91.6	51.0-122	J4	J3	30.2	20

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3400852-1 04/11/19 11:09 • (LCSD) R3400852-2 04/11/19 11:29

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diethyl phthalate	0.0500	0.0577	0.0430	115	86.0	48.0-122		J3	29.2	20
4-Chloroaniline	0.0500	0.0338	0.0262	67.6	52.4	25.0-120		J3	25.3	25
Dimethyl phthalate	0.0500	0.0551	0.0398	110	79.6	48.0-120		J3	32.2	20
Di-n-octyl phthalate	0.0500	0.0538	0.0410	108	82.0	42.0-125		J3	27.0	20
Pyrene	0.0500	0.0679	0.0520	136	104	47.0-120	J4	J3	26.5	20
1,2,4-Trichlorobenzene	0.0500	0.0331	0.0232	66.2	46.4	24.0-120		J3	35.2	29
Dibenzofuran	0.0500	0.0540	0.0404	108	80.8	44.0-120		J3	28.8	22
4-Chloro-3-methylphenol	0.0500	0.0459	0.0354	91.8	70.8	40.0-120		J3	25.8	21
2-Chlorophenol	0.0500	0.0479	0.0340	95.8	68.0	25.0-120			33.9	35
2,4-Dichlorophenol	0.0500	0.0433	0.0326	86.6	65.2	36.0-120		J3	28.2	26
2,4-Dimethylphenol	0.0500	0.0394	0.0300	78.8	60.0	33.0-120		J3	27.1	26
4,6-Dinitro-2-methylphenol	0.0500	0.0516	0.0404	103	80.8	38.0-138			24.3	25
2,4-Dinitrophenol	0.0500	0.0252	0.0254	50.4	50.8	10.0-120			0.791	39
1-Methylnaphthalene	0.0500	0.0421	0.0306	84.2	61.2	33.0-120		J3	31.6	24
2-Methylnaphthalene	0.0500	0.0411	0.0294	82.2	58.8	33.0-120		J3	33.2	25
2-Nitrophenol	0.0500	0.0491	0.0375	98.2	75.0	31.0-120			26.8	29
4-Nitrophenol	0.0500	0.0185	0.0146	37.0	29.2	10.0-120			23.6	33
2-Nitroaniline	0.0500	0.0607	0.0458	121	91.6	43.0-120	J4	J3	28.0	22
Pentachlorophenol	0.0500	0.0321	0.0256	64.2	51.2	23.0-120			22.5	25
3-Nitroaniline	0.0500	0.0538	0.0416	108	83.2	38.0-120		J3	25.6	21
Phenol	0.0500	0.0174	0.0129	34.8	25.8	10.0-120			29.7	36
4-Nitroaniline	0.0500	0.0556	0.0417	111	83.4	18.0-160		J3	28.6	21
2,4,6-Trichlorophenol	0.0500	0.0564	0.0408	113	81.6	42.0-120		J3	32.1	23
2-Methylphenol	0.0500	0.0388	0.0280	77.6	56.0	28.0-120		J3	32.3	29
3&4-Methyl Phenol	0.0500	0.0396	0.0303	79.2	60.6	31.0-120			26.6	30
2,4,5-Trichlorophenol	0.0500	0.0528	0.0395	106	79.0	44.0-120		J3	28.8	22
(S) Nitrobenzene-d5				*73.0*	*52.3*	*10.0-127*				
(S) 2-Fluorobiphenyl				*113*	*81.5*	*10.0-130*				
(S) p-Terphenyl-d14				*120*	*94.1*	*10.0-128*				
(S) Phenol-d5				*33.0*	*23.9*	*10.0-120*				
(S) 2-Fluorophenol				*57.5*	*41.6*	*10.0-120*				
(S) 2,4,6-Tribromophenol				*121*	*86.0*	*10.0-155*				

L1086352-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1086352-07 04/11/19 14:13 • (MS) R3400852-6 04/11/19 14:33 • (MSD) R3400852-7 04/11/19 14:54

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetophenone	0.0500	ND	0.0335	0.0360	67.0	72.0	1	20.0-120			7.19	35
Atrazine	0.0500	ND	0.0370	0.0377	74.0	75.4	1	39.0-130			1.87	23
Benzaldehyde	0.0500	ND	0.0400	0.0459	80.0	91.8	1	10.0-160			13.7	40
Biphenyl	0.0500	ND	0.0345	0.0364	69.0	72.8	1	29.0-120			5.36	33
Caprolactam	0.0500	ND	0.0142	0.0131	28.4	26.2	1	10.0-120			8.06	40
Carbazole	0.0500	ND	0.0390	0.0409	78.0	81.8	1	38.0-127			4.76	21
4-Chloroaniline	0.0500	ND	0.0256	0.0257	51.2	51.4	1	10.0-120			0.390	31
Dibenzofuran	0.0500	ND	0.0358	0.0376	71.6	75.2	1	32.0-120			4.90	26
Acenaphthene	0.0500	ND	0.0344	0.0355	68.8	71.0	1	28.0-120			3.15	25
Acenaphthylene	0.0500	ND	0.0365	0.0391	73.0	78.2	1	31.0-121			6.88	25
Anthracene	0.0500	ND	0.0353	0.0380	70.6	76.0	1	36.0-120			7.37	23
Benzo(a)anthracene	0.0500	ND	0.0417	0.0430	83.4	86.0	1	39.0-120			3.07	23
Benzo(b)fluoranthene	0.0500	ND	0.0405	0.0431	81.0	86.2	1	37.0-120			6.22	23
Benzo(k)fluoranthene	0.0500	ND	0.0402	0.0415	80.4	83.0	1	37.0-120			3.18	26
Benzo(g,h,i)perylene	0.0500	ND	0.0421	0.0446	84.2	89.2	1	37.0-123			5.77	25
Benzo(a)pyrene	0.0500	ND	0.0402	0.0427	80.4	85.4	1	37.0-120			6.03	24
Bis(2-chlorethoxy)methane	0.0500	ND	0.0289	0.0303	57.8	60.6	1	17.0-120			4.73	31
Bis(2-chloroethyl)ether	0.0500	ND	0.0311	0.0344	62.2	68.8	1	14.0-120			10.1	33
Bis(2-chloroisopropyl)ether	0.0500	ND	0.0304	0.0332	60.8	66.4	1	18.0-120			8.81	34
4-Bromophenyl-phenylether	0.0500	ND	0.0382	0.0405	76.4	81.0	1	37.0-120			5.84	24
1-Methylnaphthalene	0.0500	ND	0.0292	0.0310	58.4	62.0	1	11.0-120			5.98	27
2-Chloronaphthalene	0.0500	ND	0.0319	0.0341	63.8	68.2	1	29.0-120			6.67	28
2-Methylnaphthalene	0.0500	ND	0.0284	0.0303	56.8	60.6	1	17.0-120			6.47	28
4-Chlorophenyl-phenylether	0.0500	ND	0.0374	0.0381	74.8	76.2	1	36.0-120			1.85	23
2-Nitroaniline	0.0500	ND	0.0404	0.0412	80.8	82.4	1	33.0-120			1.96	27
Chrysene	0.0500	ND	0.0383	0.0393	76.6	78.6	1	38.0-120			2.58	23
3-Nitroaniline	0.0500	ND	0.0371	0.0383	74.2	76.6	1	20.0-120			3.18	27
4-Nitroaniline	0.0500	ND	0.0381	0.0394	76.2	78.8	1	10.0-160			3.35	26
Dibenz(a,h)anthracene	0.0500	ND	0.0386	0.0411	77.2	82.2	1	36.0-121			6.27	24
3,3-Dichlorobenzidine	0.100	ND	0.0781	0.0804	78.1	80.4	1	10.0-134			2.90	30
2,4-Dinitrotoluene	0.0500	ND	0.0368	0.0377	73.6	75.4	1	39.0-125			2.42	25
2,6-Dinitrotoluene	0.0500	ND	0.0365	0.0377	73.0	75.4	1	36.0-120			3.23	27
Fluoranthene	0.0500	ND	0.0395	0.0419	79.0	83.8	1	41.0-121			5.90	22
Fluorene	0.0500	ND	0.0370	0.0382	74.0	76.4	1	37.0-120			3.19	24
Hexachlorobenzene	0.0500	ND	0.0380	0.0412	76.0	82.4	1	35.0-122			8.08	24
Hexachloro-1,3-butadiene	0.0500	ND	0.0224	0.0258	44.8	51.6	1	12.0-120			14.1	34
Hexachlorocyclopentadiene	0.0500	ND	0.0302	0.0341	60.4	68.2	1	10.0-120			12.1	33
Indeno(1,2,3-cd)pyrene	0.0500	ND	0.0381	0.0399	76.2	79.8	1	38.0-125			4.62	24
Isophorone	0.0500	ND	0.0304	0.0320	60.8	64.0	1	21.0-120			5.13	27
Naphthalene	0.0500	ND	0.0265	0.0289	53.0	57.8	1	10.0-120			8.66	31

L1086352-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1086352-07 04/11/19 14:13 • (MS) R3400852-6 04/11/19 14:33 • (MSD) R3400852-7 04/11/19 14:54

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Nitrobenzene	0.0500	ND	0.0261	0.0291	52.2	58.2	1	12.0-120			10.9	30
n-Nitrosodiphenylamine	0.0500	ND	0.0368	0.0393	73.6	78.6	1	37.0-120			6.57	24
n-Nitrosodi-n-propylamine	0.0500	ND	0.0331	0.0344	66.2	68.8	1	16.0-120			3.85	30
Phenanthrene	0.0500	ND	0.0349	0.0365	69.8	73.0	1	33.0-120			4.48	22
2-Methylphenol	0.0500	ND	0.0264	0.0288	52.8	57.6	1	10.0-120			8.70	30
Benzylbutyl phthalate	0.0500	ND	0.0372	0.0383	74.4	76.6	1	34.0-126			2.91	24
3&4-Methyl Phenol	0.0500	ND	0.0280	0.0310	56.0	62.0	1	10.0-120			10.2	36
Bis(2-ethylhexyl)phthalate	0.0500	ND	0.0365	0.0375	73.0	75.0	1	33.0-126			2.70	25
Di-n-butyl phthalate	0.0500	ND	0.0404	0.0420	80.8	84.0	1	35.0-128			3.88	23
Diethyl phthalate	0.0500	ND	0.0382	0.0392	76.4	78.4	1	39.0-125			2.58	24
Dimethyl phthalate	0.0500	ND	0.0361	0.0371	72.2	74.2	1	37.0-120			2.73	24
Di-n-octyl phthalate	0.0500	ND	0.0339	0.0355	67.8	71.0	1	25.0-135			4.61	26
Pyrene	0.0500	ND	0.0427	0.0433	85.4	86.6	1	39.0-120			1.40	22
1,2,4-Trichlorobenzene	0.0500	ND	0.0229	0.0262	45.8	52.4	1	15.0-120			13.4	31
2,4,5-Trichlorophenol	0.0500	ND	0.0361	0.0392	72.2	78.4	1	33.0-120			8.23	31
4-Chloro-3-methylphenol	0.0500	ND	0.0325	0.0337	65.0	67.4	1	26.0-120			3.63	27
2-Chlorophenol	0.0500	ND	0.0306	0.0355	61.2	71.0	1	18.0-120			14.8	34
2,4-Dichlorophenol	0.0500	ND	0.0289	0.0324	57.8	64.8	1	19.0-120			11.4	27
2,4-Dimethylphenol	0.0500	ND	0.0289	0.0308	57.8	61.6	1	15.0-120			6.37	28
4,6-Dinitro-2-methylphenol	0.0500	ND	0.0372	0.0412	74.4	82.4	1	10.0-144			10.2	39
2,4-Dinitrophenol	0.0500	ND	0.0293	0.0320	58.6	64.0	1	10.0-120			8.81	40
2-Nitrophenol	0.0500	ND	0.0331	0.0365	66.2	73.0	1	20.0-120			9.77	30
4-Nitrophenol	0.0500	ND	0.0148	0.0162	29.6	32.4	1	10.0-120			9.03	40
Pentachlorophenol	0.0500	ND	0.0273	0.0298	54.6	59.6	1	10.0-128			8.76	37
Phenol	0.0500	ND	0.0123	0.0141	24.6	28.2	1	10.0-120			13.6	40
2,4,6-Trichlorophenol	0.0500	ND	0.0373	0.0390	74.6	78.0	1	26.0-120			4.46	31
(S) Nitrobenzene-d5					*45.9*	*51.3*		*10.0-127*				
(S) 2-Fluorobiphenyl					*72.4*	*76.8*		*10.0-130*				
(S) p-Terphenyl-d14					*78.7*	*78.7*		*10.0-128*				
(S) Phenol-d5					*23.2*	*26.7*		*10.0-120*				
(S) 2-Fluorophenol					*37.8*	*46.0*		*10.0-120*				
(S) 2,4,6-Tribromophenol					*78.5*	*84.5*		*10.0-155*				

Method Blank (MB)

(MB) R3401041-3 04/11/19 23:33

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acenaphthene	U		0.000316	0.00100
Acenaphthylene	U		0.000309	0.00100
Acetophenone	U		0.00247	0.0100
Anthracene	U		0.000291	0.00100
Benzo(a)anthracene	U		0.0000510	0.00100
Atrazine	U		0.000260	0.0100
Benzo(b)fluoranthene	U		0.0000896	0.00100
Benzaldehyde	U		0.00140	0.0100
Benzo(k)fluoranthene	U		0.000355	0.00100
Benzo(g,h,i)perylene	U		0.00000227	0.00100
Benzo(a)pyrene	U		0.0000381	0.000200
Bis(2-chlorethoxy)methane	U		0.000329	0.0100
Bis(2-chloroethyl)ether	U		0.00162	0.0100
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100
4-Bromophenyl-phenylether	U		0.000335	0.0100
Biphenyl	U		0.000325	0.0100
Carbazole	U		0.000260	0.0100
2-Chloronaphthalene	U		0.000330	0.00100
4-Chlorophenyl-phenylether	U		0.000303	0.0100
Chrysene	U		0.000332	0.00100
Dibenz(a,h)anthracene	U		0.0000644	0.000200
Caprolactam	U		0.00259	0.0100
4-Chloroaniline	U		0.000382	0.0100
3,3-Dichlorobenzidine	U		0.00202	0.0100
2,4-Dinitrotoluene	U		0.00165	0.0100
2,6-Dinitrotoluene	U		0.000279	0.0100
Fluoranthene	U		0.000310	0.00100
Dibenzofuran	U		0.000338	0.0100
Fluorene	U		0.000323	0.00100
Hexachlorobenzene	U		0.000341	0.00100
Hexachloro-1,3-butadiene	U		0.000329	0.0100
Hexachlorocyclopentadiene	U		0.00233	0.0100
Hexachloroethane	U		0.000365	0.0100
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100
Isophorone	U		0.000272	0.0100
Naphthalene	U		0.000372	0.00100
Nitrobenzene	U		0.000367	0.0100
n-Nitrosodiphenylamine	U		0.00119	0.0100
n-Nitrosodi-n-propylamine	U		0.000403	0.0100
Phenanthrene	U		0.000366	0.00100

Method Blank (MB)

(MB) R3401041-3 04/11/19 23:33

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzylbutyl phthalate	U		0.000275	0.00300
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300
Di-n-butyl phthalate	U		0.000266	0.00300
1-Methylnaphthalene	U		0.000332	0.00100
Diethyl phthalate	U		0.000282	0.00300
2-Methylnaphthalene	U		0.000311	0.00100
Dimethyl phthalate	U		0.000283	0.00300
Di-n-octyl phthalate	U		0.000278	0.00300
2-Nitroaniline	U		0.00190	0.0100
Pyrene	U		0.000330	0.00100
1,2,4-Trichlorobenzene	U		0.000355	0.0100
3-Nitroaniline	U		0.000308	0.0100
4-Nitroaniline	U		0.000349	0.0100
4-Chloro-3-methylphenol	U		0.000263	0.0100
2-Chlorophenol	U		0.000283	0.0100
2-Nitrophenol	U		0.000320	0.0100
4-Nitrophenol	U		0.00201	0.0100
Pentachlorophenol	U		0.000313	0.0100
Phenol	U		0.000334	0.0100
2,4,6-Trichlorophenol	U		0.000297	0.0100
2,4-Dichlorophenol	U		0.000284	0.0100
2,4-Dimethylphenol	U		0.000624	0.0100
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100
2,4-Dinitrophenol	U		0.00325	0.0100
2-Methylphenol	U		0.000312	0.0100
3&4-Methyl Phenol	U		0.000266	0.0100
2,4,5-Trichlorophenol	U		0.000236	0.0100
(S) Nitrobenzene-d5	*23.4*			*10.0-127*
(S) 2-Fluorobiphenyl	*23.3*			*10.0-130*
(S) p-Terphenyl-d14	*64.0*			*10.0-128*
(S) Phenol-d5	*15.7*			*10.0-120*
(S) 2-Fluorophenol	*25.1*			*10.0-120*
(S) 2,4,6-Tribromophenol	*28.5*			*10.0-155*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3401041-1 04/11/19 22:46 • (LCSD) R3401041-2 04/11/19 23:09

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.0500	0.0290	0.0299	58.0	59.8	41.0-120			3.06	22
Acenaphthylene	0.0500	0.0266	0.0272	53.2	54.4	43.0-120			2.23	22
Anthracene	0.0500	0.0382	0.0378	76.4	75.6	45.0-120			1.05	20
Biphenyl	0.0500	0.0252	0.0264	50.4	52.8	38.0-120			4.65	27
Benzo(a)anthracene	0.0500	0.0408	0.0404	81.6	80.8	47.0-120			0.985	20
Benzo(b)fluoranthene	0.0500	0.0381	0.0356	76.2	71.2	46.0-120			6.78	20
Benzo(k)fluoranthene	0.0500	0.0369	0.0395	73.8	79.0	46.0-120			6.81	21
Benzo(g,h,i)perylene	0.0500	0.0389	0.0387	77.8	77.4	48.0-121			0.515	20
Benzo(a)pyrene	0.0500	0.0361	0.0359	72.2	71.8	47.0-120			0.556	20
Bis(2-chlorethoxy)methane	0.0500	0.0223	0.0242	44.6	48.4	33.0-120			8.17	24
Bis(2-chloroethyl)ether	0.0500	0.0221	0.0213	44.2	42.6	23.0-120			3.69	33
Bis(2-chloroisopropyl)ether	0.0500	0.0237	0.0230	47.4	46.0	28.0-120			3.00	31
4-Bromophenyl-phenylether	0.0500	0.0356	0.0349	71.2	69.8	45.0-120			1.99	20
Carbazole	0.0500	0.0408	0.0411	81.6	82.2	51.0-122			0.733	20
2-Chloronaphthalene	0.0500	0.0236	0.0241	47.2	48.2	37.0-120			2.10	25
4-Chlorophenyl-phenylether	0.0500	0.0338	0.0336	67.6	67.2	44.0-120			0.593	20
Chrysene	0.0500	0.0375	0.0375	75.0	75.0	48.0-120			0.000	20
Dibenz(a,h)anthracene	0.0500	0.0385	0.0382	77.0	76.4	47.0-120			0.782	20
3,3-Dichlorobenzidine	0.100	0.0685	0.0704	68.5	70.4	44.0-120			2.74	20
2,4-Dinitrotoluene	0.0500	0.0395	0.0394	79.0	78.8	49.0-124			0.253	20
2,6-Dinitrotoluene	0.0500	0.0341	0.0352	68.2	70.4	46.0-120			3.17	21
Fluoranthene	0.0500	0.0422	0.0419	84.4	83.8	51.0-120			0.713	20
Fluorene	0.0500	0.0341	0.0340	68.2	68.0	47.0-120			0.294	20
Hexachlorobenzene	0.0500	0.0340	0.0345	68.0	69.0	44.0-120			1.46	20
Atrazine	0.0500	0.0395	0.0394	79.0	78.8	39.0-141			0.253	20
Hexachloro-1,3-butadiene	0.0500	0.0203	0.0107	40.6	21.4	19.0-120		J3	61.9	32
Benzaldehyde	0.0500	0.0268	0.0272	53.6	54.4	10.0-160			1.48	40
Hexachlorocyclopentadiene	0.0500	0.0179	0.0125	35.8	25.0	15.0-120		J3	35.5	31
Hexachloroethane	0.0500	0.0181	0.0110	36.2	22.0	15.0-120		J3	48.8	37
Indeno(1,2,3-cd)pyrene	0.0500	0.0381	0.0383	76.2	76.6	49.0-122			0.524	20
Isophorone	0.0500	0.0240	0.0252	48.0	50.4	36.0-120			4.88	23
Naphthalene	0.0500	0.0211	0.0196	42.2	39.2	27.0-120			7.37	27
Nitrobenzene	0.0500	0.0215	0.0213	43.0	42.6	27.0-120			0.935	29
n-Nitrosodiphenylamine	0.0500	0.0333	0.0342	66.6	68.4	47.0-120			2.67	20
n-Nitrosodi-n-propylamine	0.0500	0.0253	0.0276	50.6	55.2	31.0-120			8.70	28
Phenanthrene	0.0500	0.0389	0.0382	77.8	76.4	46.0-120			1.82	20
Benzylbutyl phthalate	0.0500	0.0385	0.0386	77.0	77.2	43.0-121			0.259	20
Bis(2-ethylhexyl)phthalate	0.0500	0.0391	0.0382	78.2	76.4	43.0-122			2.33	20
Caprolactam	0.0500	0.0118	0.0122	23.6	24.4	10.0-120			3.33	26
Di-n-butyl phthalate	0.0500	0.0419	0.0418	83.8	83.6	49.0-121			0.239	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3401041-1 04/11/19 22:46 • (LCSD) R3401041-2 04/11/19 23:09

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Diethyl phthalate	0.0500	0.0395	0.0394	79.0	78.8	48.0-122			0.253	20
Dimethyl phthalate	0.0500	0.0348	0.0356	69.6	71.2	48.0-120			2.27	20
Di-n-octyl phthalate	0.0500	0.0427	0.0417	85.4	83.4	42.0-125			2.37	20
Pyrene	0.0500	0.0364	0.0362	72.8	72.4	47.0-120			0.551	20
1,2,4-Trichlorobenzene	0.0500	0.0208	0.0152	41.6	30.4	24.0-120		J3	31.1	29
4-Chloroaniline	0.0500	0.0318	0.0288	63.6	57.6	25.0-120			9.90	25
4-Chloro-3-methylphenol	0.0500	0.0310	0.0305	62.0	61.0	40.0-120			1.63	21
2-Chlorophenol	0.0500	0.0237	0.0210	47.4	42.0	25.0-120			12.1	35
Dibenzofuran	0.0500	0.0299	0.0310	59.8	62.0	44.0-120			3.61	22
2,4-Dichlorophenol	0.0500	0.0249	0.0246	49.8	49.2	36.0-120			1.21	26
2,4-Dimethylphenol	0.0500	0.0251	0.0244	50.2	48.8	33.0-120			2.83	26
4,6-Dinitro-2-methylphenol	0.0500	0.0545	0.0511	109	102	38.0-138			6.44	25
2,4-Dinitrophenol	0.0500	0.0469	0.0370	93.8	74.0	10.0-120			23.6	39
2-Methylnaphthalene	0.0500	0.0247	0.0241	49.4	48.2	33.0-120			2.46	25
2-Methylphenol	0.0500	0.0226	0.0213	45.2	42.6	28.0-120			5.92	29
3&4-Methyl Phenol	0.0500	0.0263	0.0248	52.6	49.6	31.0-120			5.87	30
2-Nitroaniline	0.0500	0.0321	0.0331	64.2	66.2	43.0-120			3.07	22
3-Nitroaniline	0.0500	0.0380	0.0380	76.0	76.0	38.0-120			0.000	21
4-Nitroaniline	0.0500	0.0438	0.0446	87.6	89.2	18.0-160			1.81	21
2-Nitrophenol	0.0500	0.0258	0.0266	51.6	53.2	31.0-120			3.05	29
4-Nitrophenol	0.0500	0.0156	0.0145	31.2	29.0	10.0-120			7.31	33
Pentachlorophenol	0.0500	0.0341	0.0293	68.2	58.6	23.0-120			15.1	25
Phenol	0.0500	0.0118	0.0103	23.6	20.6	10.0-120			13.6	36
2,4,6-Trichlorophenol	0.0500	0.0292	0.0287	58.4	57.4	42.0-120			1.73	23
Acetophenone	0.0500	0.0246	0.0256	49.2	51.2	29.0-120			3.98	28
2,4,5-Trichlorophenol	0.0500	0.0309	0.0297	61.8	59.4	44.0-120			3.96	22
1-Methylnaphthalene	0.0500	0.0253	0.0254	50.6	50.8	33.0-120			0.394	24
(S) Nitrobenzene-d5				*39.6*	*35.8*	*10.0-127*				
(S) 2-Fluorobiphenyl				*43.5*	*39.2*	*10.0-130*				
(S) p-Terphenyl-d14				*72.9*	*67.0*	*10.0-128*				
(S) Phenol-d5				*20.7*	*15.7*	*10.0-120*				
(S) 2-Fluorophenol				*31.4*	*24.3*	*10.0-120*				
(S) 2,4,6-Tribromophenol				*64.5*	*58.0*	*10.0-155*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
MQL	Method Quantitation Limit.
ND	Not detected at the Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.

Qualifier	Description
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
V	The sample concentration is too high to evaluate accurate spike recoveries.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

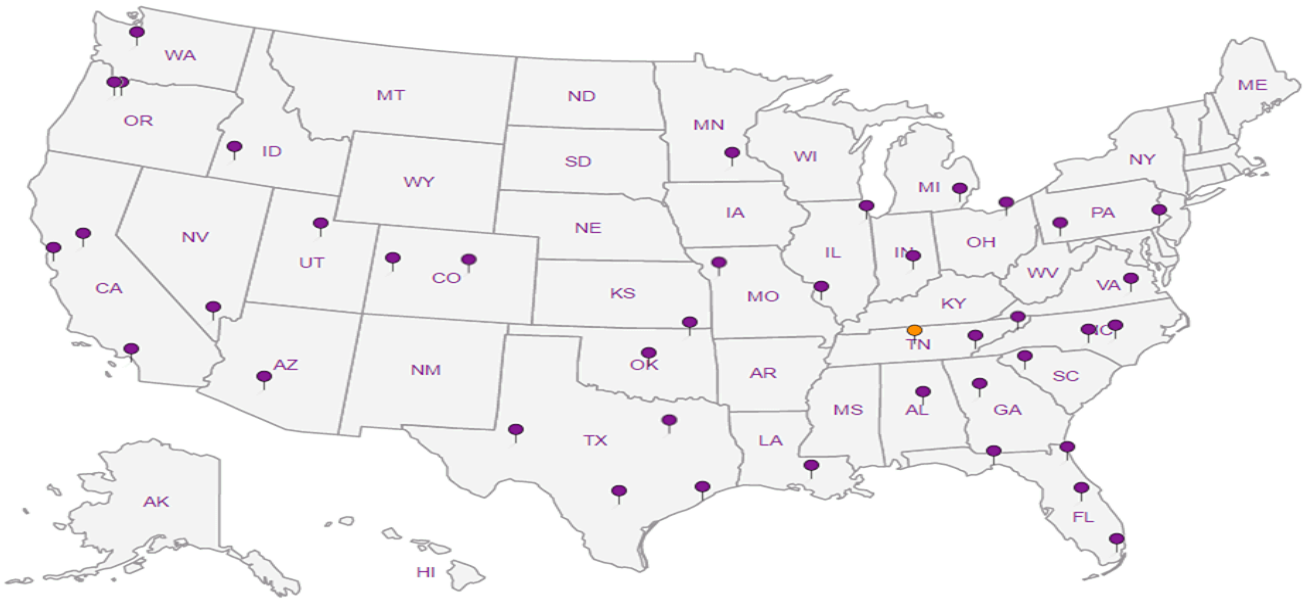
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Report to: **Julie Speer**

Email To: **jspeer@trcsolutions.com**

Project Description: **Lovington Lea Refinery**

City/State Collected: **Lovington, NM**

Phone: **512-684-3170**
Fax:

Client Project # **294319.0000.00000 5**

Lab Project # **TRCATX-LOVINGTON NAV**

Collected by (print): **Scott Ude/HMI Team**

Site/Facility ID #

P.O. #

Collected by (signature): Scott Ude

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Pres Chk

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOCs (8260) - Select List	LL SVOCs (8270) - TCL + 1-MNP	Total Metals (7470) - Hg	Dissolved Metals (6020)-Select List -LF	Anions (9056) - Cl, F, SO4	Nitrate/Nitrite (353.2)	TDS (2540 C-2011)	Alkalinity (2320 B-2011)	TPH (8015) - GRO/DRO		Remarks	Sample # (lab only)
MW-1	Grab	GW		4/4/19	1115	7	X		X	X	X	X						-01
MW-2	Grab	GW			1025	5	X	X										-02
MW-3	Grab	GW			1125	2					X	X						-03
MW-6	Grab	GW			1225	7	X		X	X	X	X						-04
MW-8	Grab	GW			1010	5 7	X				X	X	X					-05
MW-11R	Grab	GW			1055	8	X	X	X	X			X	X				-06
MW-12R	Grab	GW			955	9	X	X	X	X	X	X	X	X				-07
MW-13R	Grab	GW			1015	9	X	X	X	X	X	X	X					-08
MW-15	Grab	GW			915	4			X	X	X	X	X	X				-09
MW-17R	Grab	GW			1210	9	X	X	X	X	X	X	X	X				-10

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Use 8270TX for SVOCs.

RAD SCREEN: <0.5 mR/hr

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS ✓ FedEx __ Courier __ _____

Tracking #

Relinquished by : (Signature) Scott Ude — Date: 4/4/19 — Time: 1410

Relinquished by : (Signature) — Date: — Time:

Relinquished by : (Signature) — Date: — Time:

Received by: (Signature)

Received by: (Signature)

Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCL / MeoH
TBR

Temp: 2.2-0.1=2.1 °C Bottles Received: PM, 273

Date: 04/05/19 Time: 0845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Sample Receipt Checklist
COC Seal Present/Intact: NP Y N
COC Signed/Accurate: Y N
Bottles arrive intact: Y N
Correct bottles used: Y N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N

Chain of Custody Page 1 of 3

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 1086362
G037

Acctnum: TRCATX
Template: T133248
Prelogin: P698446
TSR: 526
PB: 3-15-19GM

Shipped Via:

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Pres Chk

Report to: **Julie Speer**

Email To: **jspeer@trcsolutions.com**

Project Description: **Lovington Lea Refinery**

City/State Collected: **Lovington, NM**

Phone: **512-684-3170**
Fax:

Client Project # **294319.0000.00000 5**

Lab Project # **TRCATX-LOVINGTON NAV**

Collected by (print): **Scott Ude/HMI Team**

Site/Facility ID #

P.O. #

Collected by (signature): Scott Ude
Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOCs (8260) - Select List	LL SVOCs (8270) - TCL + 1-MNP	Total Metals (7470) - Hg	Dissolved Metals (6020)-Select List -LF	Anions (9056) - Cl, F, SO4	Nitrate/Nitrite (353.2)	TDS (2540 C-2011)	Alkalinity (2320 B-2011)	TPH (8015) - GRO/DRO		Remarks	Sample # (lab only)
MW-19	Grab	GW		4/4/19	1045	2					X	X	X	X				-11
MW-25	Grab	GW			1155	9	X	X	X	X	X	X	X	X				-12
MW-27	Grab	GW			1140	3	X											-13
MW-28	Grab	GW			1155	2					X	X		X				-14
MW-29	Grab	GW			1110	5	X		X	X								-15
MW-30	Grab	GW			1125	~~13~~ 26	X	X	X	X	X	X	X	X	X	(MS/MSD)		-16
~~MW-31~~	~~Grab~~	~~GW~~				13	X	X	X	X	X	X	X	X	X	NOT SAMPLED; LNAPL		
MW-32	Grab	GW			1200	13	X	X	X	X	X	X	X	X	X			-17
MW-33	Grab	GW			1225	13	X	X	X	X	X	X	X	X	X			-18
WW-North	Grab	GW		↓	1230	13	X	X	X	X	X	X	X	X	X			-19

Chain of Custody Page 2 of 3

Pace Analytical® National Center for Testing & Innovation
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 1086362
Table #
Acctnum: TRCATX
Template: T133248
Prelogin: P698446
TSR: 526
PB: 3-15-19GM
Shipped Via:

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Use 8270TX for SVOCs.

RAD SCREEN: <0.5 mR/hr

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS ✓ FedEx __ Courier __ _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: ✓Y __N
Preservation Correct/Checked: ✓Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Scott Ude	4/4/19	1410	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / (No) HCL / MeoH TBR

Temp: 2.8-0.1=2.7 °C Bottles Received: 273

Date: 04/05/19 Time: 0845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Pres Chk

Report to: **Julie Speer**

Email To: **jspeer@trcsolutions.com**

Project Description: **Lovington Lea Refinery**

City/State Collected: **Lovington, NM**

Phone: **512-684-3170**
Fax:

Client Project # **294319.0000.00000 5**

Lab Project # **TRCATX-LOVINGTON NAV**

Collected by (print): **Scott Ude/HMI Team**

Site/Facility ID #

P.O. #

Collected by (signature): Scott Ude
Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Analysis / Container / Preservative

Chain of Custody Page 3 of 3

Pace Analytical® National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L # 1086362
Table #
Acctnum: TRCATX
Template: T133248
Prelogin: P698446
TSR: 526
PB: 3-15-19

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOCs (8260) - Select List	LL SVOCs (8270) - TCL + 1-MNP	Total Metals (7470) - Hg	Dissolved Metals (6020)-Select List -LF	Anions (9056) - Cl, F, SO4	Nitrate/Nitrite (353.2)	TDS (2540 C-2011)	Alkalinity (2320 B-2011)	TPH (8015) - GRO/DRO		Remarks	Sample # (lab only)
WW-South	Grab	GW		4/4/19	1305	13	X	X	X	X	X	X	X	X	X			-020
WW-East	Grab	GW			1330	13	X	X	X	X	X	X	X	X	X			-21
DUP-01	Grab	GW			900	9	X	X	X	X	X	X	X	X				-22
DUP-02	Grab	GW			1100	9	X	X	X	X	X	X	X	X				-23
DUP-03	Grab	GW				9	X	X	X	X	X	X	X	X				-24
EB-01	Grab	GW			1030	9	X	X	X	X	X	X	X					-25
EB-02	Grab	GW			1220	13	X	X	X	X	X	X	X	X	X			-26
Trip Blank-01	Grab	GW			—	1	X											-27
~~Trip Blank-02~~	~~Grab~~	~~GW~~				~~1~~	~~X~~	TBR										
	Grab	GW																

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Use 8270TX for SVOCs.

RAD SCREEN: <0.5 mR/hr

pH _____ Temp _____
Flow _____ Other _____

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: ✓Y __N
Preservation Correct/Checked: ✓Y __N

Samples returned via:
__ UPS ✓FedEx __ Courier __ _____

Tracking #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Scott Ude	4/4/19	1410	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)

Trip Blank Received: Yes / No
HCl / MeoH
TBR

Temp: 2.2-0.1 °C PM A3
Bottles Received: 273

Date: 04/05/19 Time: 0845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

July 22, 2019

TRC Solutions - Austin, TX

Sample Delivery Group:	L1118148
Samples Received:	07/12/2019
Project Number:	330769.0000.0000
Description:	Lovington Lea Refinery

Report To: Julie Speer
505 E. Huntland Drive, Suite 250
Austin, TX 78752

Entire Report Reviewed By:

Jason Romer
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace National is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.



Cp: Cover Page 1

Tc: Table of Contents 2

Ss: Sample Summary 3

Cn: Case Narrative 5

Sr: Sample Results 6

WW-NORTH L1118148-01 6

WW-SOUTH L1118148-02 10

WW-EAST L1118148-03 14

TRIP BLANK L1118148-04 18

Qc: Quality Control Summary 19

Gravimetric Analysis by Method 2540 C-2011 19

Wet Chemistry by Method 2320 B-2011 20

Wet Chemistry by Method 353.2 21

Wet Chemistry by Method 9056A 22

Mercury by Method 7470A 24

Metals (ICP) by Method 6010B 25

Metals (ICPMS) by Method 6020 26

Volatile Organic Compounds (GC) by Method 8015D/GRO 28

Volatile Organic Compounds (GC/MS) by Method 8260B 29

Semi-Volatile Organic Compounds (GC) by Method 3511/8015 32

Semi Volatile Organic Compounds (GC/MS) by Method 8270C 33

Gl: Glossary of Terms 37

Al: Accreditations & Locations 38

Sc: Sample Chain of Custody 39

WW-NORTH L1118148-01 GW

Collected by: Bryon Boyles | Collected date/time: 07/11/19 10:40 | Received date/time: 07/12/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1310930	1	07/15/19 10:48	07/15/19 11:11	TH	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1311460	1	07/16/19 11:36	07/16/19 11:36	LEB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1311824	2	07/18/19 16:58	07/18/19 16:58	JER	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1312642	1	07/18/19 22:02	07/18/19 22:02	LDC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1312642	5	07/18/19 22:17	07/18/19 22:17	LDC	Mt. Juliet, TN
Mercury by Method 7470A	WG1311778	1	07/16/19 11:47	07/16/19 19:50	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1310809	1	07/13/19 16:53	07/15/19 19:36	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1310811	1	07/15/19 07:52	07/15/19 20:37	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1312825	1	07/17/19 17:18	07/17/19 17:18	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1311158	1	07/14/19 17:55	07/14/19 17:55	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG1312208	1	07/16/19 18:32	07/17/19 19:50	SHG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1311664	1	07/18/19 14:35	07/20/19 06:37	AO	Mt. Juliet, TN

WW-SOUTH L1118148-02 GW

Collected by: Bryon Boyles | Collected date/time: 07/11/19 11:20 | Received date/time: 07/12/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1310930	1	07/15/19 10:48	07/15/19 11:11	TH	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1311460	1	07/16/19 12:54	07/16/19 12:54	LEB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1311824	2	07/18/19 16:59	07/18/19 16:59	JER	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1312642	1	07/18/19 22:32	07/18/19 22:32	LDC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1312642	10	07/18/19 22:47	07/18/19 22:47	LDC	Mt. Juliet, TN
Mercury by Method 7470A	WG1311778	1	07/16/19 11:47	07/16/19 19:52	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1310809	1	07/13/19 16:53	07/15/19 18:31	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1310811	1	07/15/19 07:52	07/15/19 20:41	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1312825	1	07/17/19 17:38	07/17/19 17:38	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1311158	1	07/14/19 18:15	07/14/19 18:15	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG1312208	1	07/16/19 18:32	07/17/19 20:12	SHG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1311664	1	07/18/19 14:35	07/20/19 06:59	JNJ	Mt. Juliet, TN

WW-EAST L1118148-03 GW

Collected by: Bryon Boyles | Collected date/time: 07/11/19 12:25 | Received date/time: 07/12/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1310930	1	07/15/19 10:48	07/15/19 11:11	TH	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1311460	1	07/16/19 11:59	07/16/19 11:59	LEB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1311824	2	07/18/19 17:01	07/18/19 17:01	JER	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1312642	1	07/18/19 23:02	07/18/19 23:02	LDC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1312642	10	07/18/19 23:17	07/18/19 23:17	LDC	Mt. Juliet, TN
Mercury by Method 7470A	WG1311778	1	07/16/19 11:47	07/16/19 19:55	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1310809	1	07/13/19 16:53	07/15/19 18:34	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1310811	1	07/15/19 07:52	07/15/19 20:46	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1312825	1	07/17/19 17:59	07/17/19 17:59	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1311158	1	07/14/19 18:34	07/14/19 18:34	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG1312208	1	07/16/19 18:32	07/17/19 20:34	SHG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1311664	1	07/18/19 14:35	07/20/19 07:21	JNJ	Mt. Juliet, TN

TRIP BLANK L1118148-04 GW

Collected by: Bryon Boyles
Collected date/time: 07/11/19 00:00
Received date/time: 07/12/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1311158	1	07/14/19 14:40	07/14/19 14:40	ACG	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Jason Romer
Project Manager

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	571		2.82	10.0	10.0	1	07/15/2019 11:11	WG1310930

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	174		2.71	20.0	20.0	1	07/16/2019 11:36	WG1311460

Sample Narrative:

L1118148-01 WG1311460: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	3.29		0.0394	0.100	0.200	2	07/18/2019 16:58	WG1311824

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	121		0.260	1.00	5.00	5	07/18/2019 22:17	WG1312642
Fluoride	0.931		0.00990	0.100	0.100	1	07/18/2019 22:02	WG1312642
Sulfate	77.5		0.0774	5.00	5.00	1	07/18/2019 22:02	WG1312642

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	0.000200	1	07/16/2019 19:50	WG1311778

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.146	J	0.0126	0.200	0.200	1	07/15/2019 19:36	WG1310809

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	07/15/2019 20:37	WG1310811
Arsenic,Dissolved	0.00582		0.000250	0.00200	0.00200	1	07/15/2019 20:37	WG1310811
Barium,Dissolved	0.111		0.000360	0.00500	0.00500	1	07/15/2019 20:37	WG1310811
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	07/15/2019 20:37	WG1310811
Chromium,Dissolved	0.00162	B J	0.000540	0.00200	0.00200	1	07/15/2019 20:37	WG1310811
Copper,Dissolved	0.00322	B J	0.000520	0.00500	0.00500	1	07/15/2019 20:37	WG1310811
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	07/15/2019 20:37	WG1310811
Iron,Dissolved	U		0.0150	0.100	0.100	1	07/15/2019 20:37	WG1310811
Lead,Dissolved	0.000313	B J	0.000240	0.00200	0.00200	1	07/15/2019 20:37	WG1310811
Manganese,Dissolved	0.000420	J	0.000250	0.00500	0.00500	1	07/15/2019 20:37	WG1310811
Molybdenum,Dissolved	0.00303	J	0.000140	0.00500	0.00500	1	07/15/2019 20:37	WG1310811
Nickel,Dissolved	0.000416	J	0.000350	0.00200	0.00200	1	07/15/2019 20:37	WG1310811
Selenium,Dissolved	0.00414		0.000380	0.00200	0.00200	1	07/15/2019 20:37	WG1310811
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	07/15/2019 20:37	WG1310811
Uranium,Dissolved	0.00173	J	0.000330	0.0100	0.0100	1	07/15/2019 20:37	WG1310811
Zinc,Dissolved	0.00600	J	0.00256	0.0250	0.0250	1	07/15/2019 20:37	WG1310811

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	0.100	1	07/17/2019 17:18	WG1312825
(S) a,a,a-Trifluorotoluene(FID)	*103*				*78.0-120*		*07/17/2019 17:18*	WG1312825

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0100	1.00	1.00	1	07/14/2019 17:55	WG1311158
Benzene	U		0.000331	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	07/14/2019 17:55	WG1311158
Bromoform	U		0.000469	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
Bromomethane	U		0.000866	0.00500	0.00500	1	07/14/2019 17:55	WG1311158
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
Carbon disulfide	U		0.000275	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
Chlorobenzene	U		0.000348	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
Chloroethane	U		0.000453	0.00500	0.00500	1	07/14/2019 17:55	WG1311158
Chloroform	U		0.000324	0.00500	0.00500	1	07/14/2019 17:55	WG1311158
Chloromethane	U		0.000276	0.00250	0.00250	1	07/14/2019 17:55	WG1311158
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
Ethylbenzene	U		0.000384	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
2-Hexanone	U		0.00382	0.0100	0.0100	1	07/14/2019 17:55	WG1311158
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	07/14/2019 17:55	WG1311158
Methylene Chloride	U		0.00100	0.00500	0.00500	1	07/14/2019 17:55	WG1311158
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	07/14/2019 17:55	WG1311158
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
Naphthalene	U		0.00100	0.00500	0.00500	1	07/14/2019 17:55	WG1311158
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
Styrene	U		0.000307	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
Toluene	U		0.000412	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
Trichloroethene	U		0.000398	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
Vinyl chloride	U		0.000259	0.00100	0.00100	1	07/14/2019 17:55	WG1311158
Xylenes, Total	U		0.00106	0.00300	0.00300	1	07/14/2019 17:55	WG1311158
(S) Toluene-d8	*114*				*80.0-120*		*07/14/2019 17:55*	WG1311158
(S) 4-Bromofluorobenzene	*102*				*77.0-126*		*07/14/2019 17:55*	WG1311158
(S) 1,2-Dichloroethane-d4	*101*				*70.0-130*		*07/14/2019 17:55*	WG1311158

Semi-Volatile Organic Compounds (GC) by Method 3511/8015

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
TPH (GC/FID) High Fraction	U		0.0247	0.100	0.100	1	07/17/2019 19:50	WG1312208
(S) o-Terphenyl	*57.4*				*31.0-160*		*07/17/2019 19:50*	WG1312208

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acenaphthene	U		0.000316	0.00100	0.00100	1	07/20/2019 06:37	WG1311664
Acenaphthylene	U	J4	0.000309	0.00100	0.00100	1	07/20/2019 06:37	WG1311664
Acetophenone	U		0.00247	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
Anthracene	U		0.000291	0.00100	0.00100	1	07/20/2019 06:37	WG1311664
Atrazine	U		0.000260	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	07/20/2019 06:37	WG1311664
Benzaldehyde	U		0.00140	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	07/20/2019 06:37	WG1311664
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	07/20/2019 06:37	WG1311664
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	07/20/2019 06:37	WG1311664
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	07/20/2019 06:37	WG1311664
Biphenyl	U		0.000325	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
Bis(2-chlorethoxy)methane	U	J4	0.000329	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
Bis(2-chloroisopropyl)ether	U	J4	0.000445	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
2-Chloronaphthalene	U	J4	0.000330	0.00100	0.00100	1	07/20/2019 06:37	WG1311664
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
Caprolactam	U		0.00259	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
Carbazole	U		0.000260	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
Chrysene	U		0.000332	0.00100	0.00100	1	07/20/2019 06:37	WG1311664
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	07/20/2019 06:37	WG1311664
Dibenzofuran	U		0.000338	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
3,3-Dichlorobenzidine	U	J4	0.00202	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
Fluoranthene	U		0.000310	0.00100	0.00100	1	07/20/2019 06:37	WG1311664
Fluorene	U		0.000323	0.00100	0.00100	1	07/20/2019 06:37	WG1311664
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	07/20/2019 06:37	WG1311664
Hexachloro-1,3-butadiene	U	J4	0.000329	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
Hexachloroethane	U		0.000365	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	07/20/2019 06:37	WG1311664
Isophorone	U	J4	0.000272	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
1-Methylnaphthalene	U	J4	0.000332	0.00100	0.00100	1	07/20/2019 06:37	WG1311664
2-Methylnaphthalene	U	J4	0.000311	0.00100	0.00100	1	07/20/2019 06:37	WG1311664
Naphthalene	U	J4	0.000372	0.00100	0.00100	1	07/20/2019 06:37	WG1311664
Nitrobenzene	U	J4	0.000367	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
Phenanthrene	U		0.000366	0.00100	0.00100	1	07/20/2019 06:37	WG1311664
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	07/20/2019 06:37	WG1311664
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	07/20/2019 06:37	WG1311664
Di-n-butyl phthalate	U		0.000266	0.00300	0.00300	1	07/20/2019 06:37	WG1311664
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	07/20/2019 06:37	WG1311664
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	07/20/2019 06:37	WG1311664
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	07/20/2019 06:37	WG1311664
Pyrene	U		0.000330	0.00100	0.00100	1	07/20/2019 06:37	WG1311664
1,2,4-Trichlorobenzene	U	J4	0.000355	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	07/20/2019 06:37	WG1311664

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
2,4-Dichlorophenol	U	J4	0.000284	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
2,4-Dimethylphenol	U	J4	0.000624	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
2-Nitrophenol	U	J4	0.000320	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
2-Methylphenol	U	J4	0.000312	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
3&4-Methyl Phenol	U	J4	0.000266	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
Phenol	U		0.000334	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	07/20/2019 06:37	WG1311664
(S) 2-Fluorophenol	*17.7*				*10.0-120*		*07/20/2019 06:37*	WG1311664
(S) Phenol-d5	*11.5*				*10.0-120*		*07/20/2019 06:37*	WG1311664
(S) Nitrobenzene-d5	*24.0*				*10.0-127*		*07/20/2019 06:37*	WG1311664
(S) 2-Fluorobiphenyl	*29.0*				*10.0-130*		*07/20/2019 06:37*	WG1311664
(S) 2,4,6-Tribromophenol	*40.2*				*10.0-155*		*07/20/2019 06:37*	WG1311664
(S) p-Terphenyl-d14	*72.1*				*10.0-128*		*07/20/2019 06:37*	WG1311664

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	1190		5.64	20.0	20.0	1	07/15/2019 11:11	WG1310930

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	173		2.71	20.0	20.0	1	07/16/2019 12:54	WG1311460

Sample Narrative:

L1118148-02 WG1311460: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	3.48		0.0394	0.100	0.200	2	07/18/2019 16:59	WG1311824

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	360		0.519	1.00	10.0	10	07/18/2019 22:47	WG1312642
Fluoride	0.741		0.00990	0.100	0.100	1	07/18/2019 22:32	WG1312642
Sulfate	97.3		0.0774	5.00	5.00	1	07/18/2019 22:32	WG1312642

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	0.000200	1	07/16/2019 19:52	WG1311778

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.198	J	0.0126	0.200	0.200	1	07/15/2019 18:31	WG1310809

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	07/15/2019 20:41	WG1310811
Arsenic,Dissolved	0.00375		0.000250	0.00200	0.00200	1	07/15/2019 20:41	WG1310811
Barium,Dissolved	0.126		0.000360	0.00500	0.00500	1	07/15/2019 20:41	WG1310811
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	07/15/2019 20:41	WG1310811
Chromium,Dissolved	0.00178	B J	0.000540	0.00200	0.00200	1	07/15/2019 20:41	WG1310811
Copper,Dissolved	0.00191	B J	0.000520	0.00500	0.00500	1	07/15/2019 20:41	WG1310811
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	07/15/2019 20:41	WG1310811
Iron,Dissolved	U		0.0150	0.100	0.100	1	07/15/2019 20:41	WG1310811
Lead,Dissolved	0.000540	B J	0.000240	0.00200	0.00200	1	07/15/2019 20:41	WG1310811
Manganese,Dissolved	0.00269	J	0.000250	0.00500	0.00500	1	07/15/2019 20:41	WG1310811
Molybdenum,Dissolved	0.00229	J	0.000140	0.00500	0.00500	1	07/15/2019 20:41	WG1310811
Nickel,Dissolved	0.000881	J	0.000350	0.00200	0.00200	1	07/15/2019 20:41	WG1310811
Selenium,Dissolved	0.00384		0.000380	0.00200	0.00200	1	07/15/2019 20:41	WG1310811
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	07/15/2019 20:41	WG1310811
Uranium,Dissolved	0.00223	J	0.000330	0.0100	0.0100	1	07/15/2019 20:41	WG1310811
Zinc,Dissolved	0.101		0.00256	0.0250	0.0250	1	07/15/2019 20:41	WG1310811

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	0.100	1	07/17/2019 17:38	WG1312825
(S) a,a,a-Trifluorotoluene(FID)	*105*				*78.0-120*		*07/17/2019 17:38*	WG1312825

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0100	1.00	1.00	1	07/14/2019 18:15	WG1311158
Benzene	U		0.000331	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	07/14/2019 18:15	WG1311158
Bromoform	U		0.000469	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
Bromomethane	U		0.000866	0.00500	0.00500	1	07/14/2019 18:15	WG1311158
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
Carbon disulfide	U		0.000275	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
Chlorobenzene	U		0.000348	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
Chloroethane	U		0.000453	0.00500	0.00500	1	07/14/2019 18:15	WG1311158
Chloroform	0.00104	J	0.000324	0.00500	0.00500	1	07/14/2019 18:15	WG1311158
Chloromethane	U		0.000276	0.00250	0.00250	1	07/14/2019 18:15	WG1311158
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
Ethylbenzene	U		0.000384	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
2-Hexanone	U		0.00382	0.0100	0.0100	1	07/14/2019 18:15	WG1311158
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	07/14/2019 18:15	WG1311158
Methylene Chloride	U		0.00100	0.00500	0.00500	1	07/14/2019 18:15	WG1311158
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	07/14/2019 18:15	WG1311158
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
Naphthalene	U		0.00100	0.00500	0.00500	1	07/14/2019 18:15	WG1311158
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
Styrene	U		0.000307	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
Toluene	U		0.000412	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
Trichloroethene	U		0.000398	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
Vinyl chloride	U		0.000259	0.00100	0.00100	1	07/14/2019 18:15	WG1311158
Xylenes, Total	U		0.00106	0.00300	0.00300	1	07/14/2019 18:15	WG1311158
(S) Toluene-d8	*108*				*80.0-120*		*07/14/2019 18:15*	WG1311158
(S) 4-Bromofluorobenzene	*97.7*				*77.0-126*		*07/14/2019 18:15*	WG1311158
(S) 1,2-Dichloroethane-d4	*105*				*70.0-130*		*07/14/2019 18:15*	WG1311158

Semi-Volatile Organic Compounds (GC) by Method 3511/8015

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
TPH (GC/FID) High Fraction	0.0258	B J	0.0247	0.100	0.100	1	07/17/2019 20:12	WG1312208
(S) o-Terphenyl	*57.4*				*31.0-160*		*07/17/2019 20:12*	WG1312208

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acenaphthene	U		0.000316	0.00100	0.00100	1	07/20/2019 06:59	WG1311664
Acenaphthylene	U	J4	0.000309	0.00100	0.00100	1	07/20/2019 06:59	WG1311664
Acetophenone	U		0.00247	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
Anthracene	U		0.000291	0.00100	0.00100	1	07/20/2019 06:59	WG1311664
Atrazine	U		0.000260	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	07/20/2019 06:59	WG1311664
Benzaldehyde	U		0.00140	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	07/20/2019 06:59	WG1311664
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	07/20/2019 06:59	WG1311664
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	07/20/2019 06:59	WG1311664
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	07/20/2019 06:59	WG1311664
Biphenyl	U		0.000325	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
Bis(2-chlorethoxy)methane	U	J4	0.000329	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
Bis(2-chloroisopropyl)ether	U	J4	0.000445	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
2-Chloronaphthalene	U	J4	0.000330	0.00100	0.00100	1	07/20/2019 06:59	WG1311664
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
Caprolactam	U		0.00259	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
Carbazole	U		0.000260	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
Chrysene	U		0.000332	0.00100	0.00100	1	07/20/2019 06:59	WG1311664
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	07/20/2019 06:59	WG1311664
Dibenzofuran	U		0.000338	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
3,3-Dichlorobenzidine	U	J4	0.00202	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
Fluoranthene	U		0.000310	0.00100	0.00100	1	07/20/2019 06:59	WG1311664
Fluorene	U		0.000323	0.00100	0.00100	1	07/20/2019 06:59	WG1311664
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	07/20/2019 06:59	WG1311664
Hexachloro-1,3-butadiene	U	J4	0.000329	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
Hexachloroethane	U		0.000365	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	07/20/2019 06:59	WG1311664
Isophorone	U	J4	0.000272	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
1-Methylnaphthalene	U	J4	0.000332	0.00100	0.00100	1	07/20/2019 06:59	WG1311664
2-Methylnaphthalene	U	J4	0.000311	0.00100	0.00100	1	07/20/2019 06:59	WG1311664
Naphthalene	U	J4	0.000372	0.00100	0.00100	1	07/20/2019 06:59	WG1311664
Nitrobenzene	U	J4	0.000367	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
Phenanthrene	U		0.000366	0.00100	0.00100	1	07/20/2019 06:59	WG1311664
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	07/20/2019 06:59	WG1311664
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	07/20/2019 06:59	WG1311664
Di-n-butyl phthalate	U		0.000266	0.00300	0.00300	1	07/20/2019 06:59	WG1311664
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	07/20/2019 06:59	WG1311664
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	07/20/2019 06:59	WG1311664
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	07/20/2019 06:59	WG1311664
Pyrene	U		0.000330	0.00100	0.00100	1	07/20/2019 06:59	WG1311664
1,2,4-Trichlorobenzene	U	J4	0.000355	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	07/20/2019 06:59	WG1311664

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
2,4-Dichlorophenol	U	J4	0.000284	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
2,4-Dimethylphenol	U	J4	0.000624	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
2-Nitrophenol	U	J4	0.000320	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
2-Methylphenol	U	J4	0.000312	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
3&4-Methyl Phenol	U	J4	0.000266	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
Phenol	U		0.000334	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	07/20/2019 06:59	WG1311664
(S) 2-Fluorophenol	*26.6*				*10.0-120*		*07/20/2019 06:59*	WG1311664
(S) Phenol-d5	*16.3*				*10.0-120*		*07/20/2019 06:59*	WG1311664
(S) Nitrobenzene-d5	*38.0*				*10.0-127*		*07/20/2019 06:59*	WG1311664
(S) 2-Fluorobiphenyl	*43.0*				*10.0-130*		*07/20/2019 06:59*	WG1311664
(S) 2,4,6-Tribromophenol	*53.4*				*10.0-155*		*07/20/2019 06:59*	WG1311664
(S) p-Terphenyl-d14	*69.6*				*10.0-128*		*07/20/2019 06:59*	WG1311664

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	557		2.82	10.0	10.0	1	07/15/2019 11:11	WG1310930

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	166		2.71	20.0	20.0	1	07/16/2019 11:59	WG1311460

Sample Narrative:

L1118148-03 WG1311460: Endpoint pH 4.5 HEADSPACE

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	3.09		0.0394	0.100	0.200	2	07/18/2019 17:01	WG1311824

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	112		0.519	1.00	10.0	10	07/18/2019 23:17	WG1312642
Fluoride	1.02		0.00990	0.100	0.100	1	07/18/2019 23:02	WG1312642
Sulfate	84.7		0.0774	5.00	5.00	1	07/18/2019 23:02	WG1312642

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	0.000200	1	07/16/2019 19:55	WG1311778

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.142	J	0.0126	0.200	0.200	1	07/15/2019 18:34	WG1310809

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	07/15/2019 20:46	WG1310811
Arsenic,Dissolved	0.00495		0.000250	0.00200	0.00200	1	07/15/2019 20:46	WG1310811
Barium,Dissolved	0.0952		0.000360	0.00500	0.00500	1	07/15/2019 20:46	WG1310811
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	07/15/2019 20:46	WG1310811
Chromium,Dissolved	0.00647	B	0.000540	0.00200	0.00200	1	07/15/2019 20:46	WG1310811
Copper,Dissolved	0.00995	B	0.000520	0.00500	0.00500	1	07/15/2019 20:46	WG1310811
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	07/15/2019 20:46	WG1310811
Iron,Dissolved	U		0.0150	0.100	0.100	1	07/15/2019 20:46	WG1310811
Lead,Dissolved	0.000637	B J	0.000240	0.00200	0.00200	1	07/15/2019 20:46	WG1310811
Manganese,Dissolved	U		0.000250	0.00500	0.00500	1	07/15/2019 20:46	WG1310811
Molybdenum,Dissolved	0.00266	J	0.000140	0.00500	0.00500	1	07/15/2019 20:46	WG1310811
Nickel,Dissolved	0.000563	J	0.000350	0.00200	0.00200	1	07/15/2019 20:46	WG1310811
Selenium,Dissolved	0.00341		0.000380	0.00200	0.00200	1	07/15/2019 20:46	WG1310811
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	07/15/2019 20:46	WG1310811
Uranium,Dissolved	0.00186	J	0.000330	0.0100	0.0100	1	07/15/2019 20:46	WG1310811
Zinc,Dissolved	0.0128	J	0.00256	0.0250	0.0250	1	07/15/2019 20:46	WG1310811

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
TPH (GC/FID) Low Fraction	U		0.0314	0.100	0.100	1	07/17/2019 17:59	WG1312825
(S) a,a,a-Trifluorotoluene(FID)	*104*				*78.0-120*		*07/17/2019 17:59*	WG1312825

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	07/14/2019 18:34	WG1311158
Benzene	U		0.000331	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	07/14/2019 18:34	WG1311158
Bromoform	U		0.000469	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
Bromomethane	U		0.000866	0.00500	0.00500	1	07/14/2019 18:34	WG1311158
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
Carbon disulfide	U		0.000275	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
Chlorobenzene	U		0.000348	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
Chloroethane	U		0.000453	0.00500	0.00500	1	07/14/2019 18:34	WG1311158
Chloroform	U		0.000324	0.00500	0.00500	1	07/14/2019 18:34	WG1311158
Chloromethane	U		0.000276	0.00250	0.00250	1	07/14/2019 18:34	WG1311158
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
Ethylbenzene	U		0.000384	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
2-Hexanone	U		0.00382	0.0100	0.0100	1	07/14/2019 18:34	WG1311158
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	07/14/2019 18:34	WG1311158
Methylene Chloride	U		0.00100	0.00500	0.00500	1	07/14/2019 18:34	WG1311158
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	07/14/2019 18:34	WG1311158
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
Naphthalene	U		0.00100	0.00500	0.00500	1	07/14/2019 18:34	WG1311158
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
Styrene	U		0.000307	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
Toluene	U		0.000412	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
Trichloroethene	U		0.000398	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
Vinyl chloride	U		0.000259	0.00100	0.00100	1	07/14/2019 18:34	WG1311158
Xylenes, Total	U		0.00106	0.00300	0.00300	1	07/14/2019 18:34	WG1311158
(S) Toluene-d8	*115*				*80.0-120*		*07/14/2019 18:34*	WG1311158
(S) 4-Bromofluorobenzene	*104*				*77.0-126*		*07/14/2019 18:34*	WG1311158
(S) 1,2-Dichloroethane-d4	*107*				*70.0-130*		*07/14/2019 18:34*	WG1311158

Semi-Volatile Organic Compounds (GC) by Method 3511/8015

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
TPH (GC/FID) High Fraction	U		0.0247	0.100	0.100	1	07/17/2019 20:34	WG1312208
(S) o-Terphenyl	*70.0*				*31.0-160*		*07/17/2019 20:34*	WG1312208

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acenaphthene	U		0.000316	0.00100	0.00100	1	07/20/2019 07:21	WG1311664
Acenaphthylene	U	J4	0.000309	0.00100	0.00100	1	07/20/2019 07:21	WG1311664
Acetophenone	U		0.00247	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
Anthracene	U		0.000291	0.00100	0.00100	1	07/20/2019 07:21	WG1311664
Atrazine	U		0.000260	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	07/20/2019 07:21	WG1311664
Benzaldehyde	U		0.00140	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	07/20/2019 07:21	WG1311664
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	07/20/2019 07:21	WG1311664
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	07/20/2019 07:21	WG1311664
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	07/20/2019 07:21	WG1311664
Biphenyl	U		0.000325	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
Bis(2-chlorethoxy)methane	U	J4	0.000329	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
Bis(2-chloroisopropyl)ether	U	J4	0.000445	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
2-Chloronaphthalene	U	J4	0.000330	0.00100	0.00100	1	07/20/2019 07:21	WG1311664
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
Caprolactam	U		0.00259	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
Carbazole	U		0.000260	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
Chrysene	U		0.000332	0.00100	0.00100	1	07/20/2019 07:21	WG1311664
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	07/20/2019 07:21	WG1311664
Dibenzofuran	U		0.000338	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
3,3-Dichlorobenzidine	U	J4	0.00202	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
Fluoranthene	U		0.000310	0.00100	0.00100	1	07/20/2019 07:21	WG1311664
Fluorene	U		0.000323	0.00100	0.00100	1	07/20/2019 07:21	WG1311664
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	07/20/2019 07:21	WG1311664
Hexachloro-1,3-butadiene	U	J4	0.000329	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
Hexachloroethane	U		0.000365	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	07/20/2019 07:21	WG1311664
Isophorone	U	J4	0.000272	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
1-Methylnaphthalene	U	J4	0.000332	0.00100	0.00100	1	07/20/2019 07:21	WG1311664
2-Methylnaphthalene	U	J4	0.000311	0.00100	0.00100	1	07/20/2019 07:21	WG1311664
Naphthalene	U	J4	0.000372	0.00100	0.00100	1	07/20/2019 07:21	WG1311664
Nitrobenzene	U	J4	0.000367	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
Phenanthrene	U		0.000366	0.00100	0.00100	1	07/20/2019 07:21	WG1311664
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	07/20/2019 07:21	WG1311664
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	07/20/2019 07:21	WG1311664
Di-n-butyl phthalate	U		0.000266	0.00300	0.00300	1	07/20/2019 07:21	WG1311664
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	07/20/2019 07:21	WG1311664
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	07/20/2019 07:21	WG1311664
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	07/20/2019 07:21	WG1311664
Pyrene	U		0.000330	0.00100	0.00100	1	07/20/2019 07:21	WG1311664
1,2,4-Trichlorobenzene	U	J4	0.000355	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	07/20/2019 07:21	WG1311664

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
2,4-Dichlorophenol	U	J4	0.000284	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
2,4-Dimethylphenol	U	J4	0.000624	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
2-Nitrophenol	U	J4	0.000320	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
2-Methylphenol	U	J4	0.000312	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
3&4-Methyl Phenol	U	J4	0.000266	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
Phenol	U		0.000334	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	07/20/2019 07:21	WG1311664
(S) 2-Fluorophenol	*29.3*				*10.0-120*		*07/20/2019 07:21*	WG1311664
(S) Phenol-d5	*18.9*				*10.0-120*		*07/20/2019 07:21*	WG1311664
(S) Nitrobenzene-d5	*41.9*				*10.0-127*		*07/20/2019 07:21*	WG1311664
(S) 2-Fluorobiphenyl	*47.6*				*10.0-130*		*07/20/2019 07:21*	WG1311664
(S) 2,4,6-Tribromophenol	*57.5*				*10.0-155*		*07/20/2019 07:21*	WG1311664
(S) p-Terphenyl-d14	*75.5*				*10.0-128*		*07/20/2019 07:21*	WG1311664

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	07/14/2019 14:40	WG1311158
Benzene	U		0.000331	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	07/14/2019 14:40	WG1311158
Bromoform	U		0.000469	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
Bromomethane	U		0.000866	0.00500	0.00500	1	07/14/2019 14:40	WG1311158
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
Carbon disulfide	U		0.000275	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
Chlorobenzene	U		0.000348	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
Chloroethane	U		0.000453	0.00500	0.00500	1	07/14/2019 14:40	WG1311158
Chloroform	U		0.000324	0.00500	0.00500	1	07/14/2019 14:40	WG1311158
Chloromethane	U		0.000276	0.00250	0.00250	1	07/14/2019 14:40	WG1311158
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
Ethylbenzene	U		0.000384	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
2-Hexanone	U		0.00382	0.0100	0.0100	1	07/14/2019 14:40	WG1311158
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	07/14/2019 14:40	WG1311158
Methylene Chloride	U		0.00100	0.00500	0.00500	1	07/14/2019 14:40	WG1311158
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	07/14/2019 14:40	WG1311158
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
Naphthalene	0.00107	J	0.00100	0.00500	0.00500	1	07/14/2019 14:40	WG1311158
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
Styrene	U		0.000307	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
Toluene	U		0.000412	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
Trichloroethene	U		0.000398	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
Vinyl chloride	U		0.000259	0.00100	0.00100	1	07/14/2019 14:40	WG1311158
Xylenes, Total	U		0.00106	0.00300	0.00300	1	07/14/2019 14:40	WG1311158
(S) Toluene-d8	*110*				*80.0-120*		*07/14/2019 14:40*	WG1311158
(S) 4-Bromofluorobenzene	*103*				*77.0-126*		*07/14/2019 14:40*	WG1311158
(S) 1,2-Dichloroethane-d4	*106*				*70.0-130*		*07/14/2019 14:40*	WG1311158

Method Blank (MB)

(MB) R3431164-1 07/15/19 11:11

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		2.82	10.0

L1117985-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1117985-04 07/15/19 11:11 • (DUP) R3431164-3 07/15/19 11:11

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	343	341	1	0.585		5

Laboratory Control Sample (LCS)

(LCS) R3431164-2 07/15/19 11:11

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8490	96.5	85.0-115	

Method Blank (MB)

(MB) R3431183-1 07/16/19 09:30

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	4.49	J	2.71	20.0

Sample Narrative:

BLANK: Endpoint pH 4.5

L1118147-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1118147-01 07/16/19 10:35 • (DUP) R3431183-3 07/16/19 10:42

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	267	268	1	0.144		20

Sample Narrative:

OS: Endpoint pH 4.5 HEADSPACE

DUP: Endpoint pH 4.5

L1118148-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1118148-02 07/16/19 12:54 • (DUP) R3431183-6 07/16/19 13:01

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	173	174	1	0.0600		20

Sample Narrative:

OS: Endpoint pH 4.5 HEADSPACE

DUP: Endpoint pH 4.5

Laboratory Control Sample (LCS)

(LCS) R3431183-5 07/16/19 10:58

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100	98.6	98.6	85.0-115	

Sample Narrative:

LCS: Endpoint pH 4.5

Method Blank (MB)

(MB) R3432099-1 07/18/19 16:55

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Nitrate-Nitrite	U		0.0197	0.100

L1118152-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1118152-01 07/18/19 17:02 • (DUP) R3432099-3 07/18/19 17:04

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Nitrate-Nitrite	0.545	0.501	1	8.41		20

Laboratory Control Sample (LCS)

(LCS) R3432099-2 07/18/19 16:56

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Nitrate-Nitrite	4.00	4.18	104	90.0-110	

L1118164-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1118164-03 07/18/19 17:07 • (MS) R3432099-4 07/18/19 17:08 • (MSD) R3432099-5 07/18/19 17:16

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Nitrate-Nitrite	2.50	ND	2.71	2.77	109	111	1	90.0-110		J5	1.93	20

Method Blank (MB)

(MB) R3432214-1 07/18/19 15:14

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.0519	1.00
Fluoride	U		0.00990	0.100
Sulfate	U		0.0774	5.00

L1117265-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1117265-01 07/18/19 16:20 • (DUP) R3432214-3 07/18/19 16:34

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	9.28	9.34	1	0.547		15
Fluoride	0.658	0.657	1	0.152		15
Sulfate	18.6	18.6	1	0.339		15

L1118147-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1118147-06 07/18/19 20:48 • (DUP) R3432214-6 07/18/19 21:03

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	85.7	85.7	1	0.0823		15
Fluoride	1.01	1.00	1	0.318		15
Sulfate	60.7	60.6	1	0.260		15

Laboratory Control Sample (LCS)

(LCS) R3432214-2 07/18/19 15:29

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	39.6	99.1	80.0-120	
Fluoride	8.00	8.17	102	80.0-120	
Sulfate	40.0	41.9	105	80.0-120	

L1117265-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1117265-01 07/18/19 16:20 • (MS) R3432214-4 07/18/19 16:49 • (MSD) R3432214-5 07/18/19 17:04

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	9.28	59.9	59.8	101	101	1	80.0-120			0.186	15
Fluoride	5.00	0.658	5.70	5.70	101	101	1	80.0-120			0.0263	15
Sulfate	50.0	18.6	68.6	68.6	99.9	99.9	1	80.0-120			0.0238	15

L1118147-06 Original Sample (OS) • Matrix Spike (MS)

(OS) L1118147-06 07/18/19 20:48 • (MS) R3432214-7 07/18/19 21:48

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	85.7	132	92.7	1	80.0-120	E
Fluoride	5.00	1.01	5.93	98.5	1	80.0-120	
Sulfate	50.0	60.7	108	94.9	1	80.0-120	E

Method Blank (MB)

(MB) R3431246-1 07/16/19 19:19

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	U		0.0000490	0.000200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3431246-2 07/16/19 19:21 • (LCSD) R3431246-3 07/16/19 19:23

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Mercury	0.00300	0.00261	0.00265	87.1	88.3	80.0-120			1.45	20

L1117742-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1117742-01 07/16/19 19:26 • (MS) R3431246-4 07/16/19 19:28 • (MSD) R3431246-5 07/16/19 19:31

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.00300	ND	0.00274	0.00293	91.2	97.8	1	75.0-125			6.99	20

Method Blank (MB)

(MB) R3430862-1 07/15/19 18:41

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Boron,Dissolved	U		0.0126	0.200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3430862-2 07/15/19 18:44 • (LCSD) R3430862-3 07/15/19 18:46

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
Boron,Dissolved	1.00	0.989	0.984	98.9	98.4	80.0-120			0.454	20

L1117800-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1117800-01 07/15/19 18:49 • (MS) R3430862-5 07/15/19 18:54 • (MSD) R3430862-6 07/15/19 18:56

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Boron,Dissolved	1.00	0.294	1.25	1.24	95.5	94.8	1	75.0-125			0.570	20

Method Blank (MB)

(MB) R3430839-1 07/15/19 18:53

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Aluminum,Dissolved	U		0.00515	0.100
Arsenic,Dissolved	U		0.000250	0.00200
Barium,Dissolved	U		0.000360	0.00500
Cadmium,Dissolved	U		0.000160	0.00100
Chromium,Dissolved	0.000787	J	0.000540	0.00200
Copper,Dissolved	0.00246	J	0.000520	0.00500
Cobalt,Dissolved	U		0.000260	0.00200
Iron,Dissolved	U		0.0150	0.100
Lead,Dissolved	0.000367	J	0.000240	0.00200
Manganese,Dissolved	U		0.000250	0.00500
Molybdenum,Dissolved	U		0.000140	0.00500
Nickel,Dissolved	U		0.000350	0.00200
Selenium,Dissolved	U		0.000380	0.00200
Silver,Dissolved	U		0.000310	0.00200
Uranium,Dissolved	U		0.000330	0.0100
Zinc,Dissolved	U		0.00256	0.0250

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3430839-2 07/15/19 18:58 • (LCSD) R3430839-3 07/15/19 19:02

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Aluminum,Dissolved	5.00	5.07	4.97	101	99.4	80.0-120			1.95	20
Arsenic,Dissolved	0.0500	0.0499	0.0487	99.8	97.5	80.0-120			2.31	20
Barium,Dissolved	0.0500	0.0510	0.0523	102	105	80.0-120			2.48	20
Cadmium,Dissolved	0.0500	0.0513	0.0514	103	103	80.0-120			0.276	20
Chromium,Dissolved	0.0500	0.0507	0.0496	101	99.2	80.0-120			2.32	20
Copper,Dissolved	0.0500	0.0530	0.0529	106	106	80.0-120			0.148	20
Cobalt,Dissolved	0.0500	0.0503	0.0484	101	96.8	80.0-120			3.80	20
Iron,Dissolved	5.00	4.94	4.82	98.8	96.3	80.0-120			2.54	20
Lead,Dissolved	0.0500	0.0501	0.0505	100	101	80.0-120			0.763	20
Manganese,Dissolved	0.0500	0.0496	0.0485	99.2	96.9	80.0-120			2.35	20
Molybdenum,Dissolved	0.0500	0.0501	0.0520	100	104	80.0-120			3.59	20
Nickel,Dissolved	0.0500	0.0506	0.0482	101	96.3	80.0-120			4.84	20
Selenium,Dissolved	0.0500	0.0560	0.0521	112	104	80.0-120			7.18	20
Silver,Dissolved	0.0500	0.0513	0.0518	103	104	80.0-120			1.02	20
Uranium,Dissolved	0.0500	0.0494	0.0494	98.7	98.9	80.0-120			0.150	20
Zinc,Dissolved	0.0500	0.0516	0.0495	103	99.0	80.0-120			4.08	20

L1117859-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1117859-01 07/15/19 19:07 • (MS) R3430839-5 07/15/19 19:16 • (MSD) R3430839-6 07/15/19 19:21

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aluminum,Dissolved	5.00	ND	4.89	4.94	97.6	98.6	1	75.0-125			0.999	20
Arsenic,Dissolved	0.0500	ND	0.0466	0.0469	92.5	93.2	1	75.0-125			0.655	20
Barium,Dissolved	0.0500	0.0153	0.0673	0.0667	104	103	1	75.0-125			0.932	20
Cadmium,Dissolved	0.0500	ND	0.0513	0.0508	103	102	1	75.0-125			0.953	20
Chromium,Dissolved	0.0500	ND	0.0479	0.0473	94.3	93.0	1	75.0-125			1.32	20
Copper,Dissolved	0.0500	ND	0.0519	0.0491	94.3	88.6	1	75.0-125			5.64	20
Cobalt,Dissolved	0.0500	ND	0.0461	0.0457	92.3	91.4	1	75.0-125			0.979	20
Iron,Dissolved	5.00	64.1	67.7	66.1	72.5	40.4	1	75.0-125	V	V	2.40	20
Lead,Dissolved	0.0500	ND	0.0493	0.0501	97.4	99.0	1	75.0-125			1.60	20
Manganese,Dissolved	0.0500	1.07	1.10	1.09	67.2	38.4	1	75.0-125	V	V	1.32	20
Molybdenum,Dissolved	0.0500	ND	0.0535	0.0555	103	107	1	75.0-125			3.75	20
Nickel,Dissolved	0.0500	ND	0.0460	0.0461	89.7	89.9	1	75.0-125			0.290	20
Selenium,Dissolved	0.0500	ND	0.0527	0.0528	105	106	1	75.0-125			0.185	20
Silver,Dissolved	0.0500	ND	0.0512	0.0512	102	102	1	75.0-125			0.0673	20
Uranium,Dissolved	0.0500	ND	0.0487	0.0494	97.4	98.7	1	75.0-125			1.36	20
Zinc,Dissolved	0.0500	ND	0.0503	0.0491	91.4	88.8	1	75.0-125			2.58	20

Method Blank (MB)

(MB) R3431839-3 07/17/19 11:43

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TPH (GC/FID) Low Fraction	U		0.0314	0.100
(S) a,a,a-Trifluorotoluene(FID)	*106*			*78.0-120*

Laboratory Control Sample (LCS)

(LCS) R3431839-2 07/17/19 11:02

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.07	110	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*102*	*78.0-120*	

L1117966-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1117966-01 07/17/19 15:55 • (MS) R3431839-4 07/18/19 09:38 • (MSD) R3431839-5 07/18/19 09:58

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	ND	3.00	3.00	53.5	53.5	1	10.0-160			0.109	22
(S) a,a,a-Trifluorotoluene(FID)					*104*	*104*		*78.0-120*				

Method Blank (MB)

(MB) R3431201-2 07/14/19 11:34

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0100	1.00
Benzene	U		0.000331	0.00100
Bromodichloromethane	U		0.000380	0.00125
Bromoform	U		0.000469	0.00100
Bromomethane	U		0.000866	0.00500
n-Butylbenzene	U		0.000361	0.00100
sec-Butylbenzene	U		0.000365	0.00100
tert-Butylbenzene	U		0.000399	0.00100
Carbon disulfide	U		0.000275	0.00100
Carbon tetrachloride	U		0.000379	0.00100
Chlorobenzene	U		0.000348	0.00100
Chlorodibromomethane	U		0.000327	0.00100
Chloroethane	U		0.000453	0.00500
Chloroform	U		0.000324	0.00500
Chloromethane	U		0.000276	0.00250
1,2-Dibromoethane	U		0.000381	0.00100
1,1-Dichloroethane	U		0.000259	0.00100
1,2-Dichloroethane	U		0.000361	0.00100
1,1-Dichloroethene	U		0.000398	0.00100
cis-1,2-Dichloroethene	U		0.000260	0.00100
trans-1,2-Dichloroethene	U		0.000396	0.00100
1,2-Dichloropropane	U		0.000306	0.00100
cis-1,3-Dichloropropene	U		0.000418	0.00100
trans-1,3-Dichloropropene	U		0.000419	0.00100
Ethylbenzene	U		0.000384	0.00100
Hexachloro-1,3-butadiene	U		0.000256	0.00100
2-Hexanone	U		0.00382	0.0100
Isopropylbenzene	U		0.000326	0.00100
p-Isopropyltoluene	U		0.000350	0.00100
2-Butanone (MEK)	U		0.00393	0.0100
Methylene Chloride	U		0.00100	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100
Methyl tert-butyl ether	U		0.000367	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.000349	0.00100
Styrene	U		0.000307	0.00100
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100
Tetrachloroethene	U		0.000372	0.00100
Toluene	U		0.000412	0.00100
1,1,1-Trichloroethane	U		0.000319	0.00100

Method Blank (MB)

(MB) R3431201-2 07/14/19 11:34

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,1,2-Trichloroethane	U		0.000383	0.00100
Trichloroethene	U		0.000398	0.00100
1,2,4-Trimethylbenzene	U		0.000373	0.00100
1,3,5-Trimethylbenzene	U		0.000387	0.00100
Vinyl chloride	U		0.000259	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	*110*			*80.0-120*
(S) 4-Bromofluorobenzene	*102*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*106*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3431201-1 07/14/19 10:56

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.125	0.127	102	19.0-160	
Benzene	0.0250	0.0232	92.9	70.0-123	
Bromodichloromethane	0.0250	0.0245	98.1	75.0-120	
Bromoform	0.0250	0.0253	101	68.0-132	
Bromomethane	0.0250	0.0203	81.3	10.0-160	
n-Butylbenzene	0.0250	0.0228	91.3	73.0-125	
sec-Butylbenzene	0.0250	0.0229	91.7	75.0-125	
tert-Butylbenzene	0.0250	0.0232	92.8	76.0-124	
Carbon disulfide	0.0250	0.0217	86.8	61.0-128	
Carbon tetrachloride	0.0250	0.0263	105	68.0-126	
Chlorobenzene	0.0250	0.0246	98.6	80.0-121	
Chlorodibromomethane	0.0250	0.0249	99.8	77.0-125	
Chloroethane	0.0250	0.0240	96.2	47.0-150	
Chloroform	0.0250	0.0234	93.7	73.0-120	
Chloromethane	0.0250	0.0188	75.1	41.0-142	
1,2-Dibromoethane	0.0250	0.0243	97.0	80.0-122	
1,1-Dichloroethane	0.0250	0.0227	90.6	70.0-126	
1,2-Dichloroethane	0.0250	0.0233	93.1	70.0-128	
1,1-Dichloroethene	0.0250	0.0236	94.4	71.0-124	
cis-1,2-Dichloroethene	0.0250	0.0237	94.8	73.0-120	
trans-1,2-Dichloroethene	0.0250	0.0242	96.7	73.0-120	
1,2-Dichloropropane	0.0250	0.0229	91.6	77.0-125	
cis-1,3-Dichloropropene	0.0250	0.0243	97.0	80.0-123	
trans-1,3-Dichloropropene	0.0250	0.0239	95.8	78.0-124	

Laboratory Control Sample (LCS)

(LCS) R3431201-1 07/14/19 10:56

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Ethylbenzene	0.0250	0.0245	97.8	79.0-123	
Hexachloro-1,3-butadiene	0.0250	0.0254	102	54.0-138	
2-Hexanone	0.125	0.126	101	67.0-149	
Isopropylbenzene	0.0250	0.0240	96.1	76.0-127	
p-Isopropyltoluene	0.0250	0.0232	92.6	76.0-125	
2-Butanone (MEK)	0.125	0.130	104	44.0-160	
Methylene Chloride	0.0250	0.0218	87.0	67.0-120	
4-Methyl-2-pentanone (MIBK)	0.125	0.121	97.1	68.0-142	
Methyl tert-butyl ether	0.0250	0.0237	94.8	68.0-125	
Naphthalene	0.0250	0.0224	89.8	54.0-135	
n-Propylbenzene	0.0250	0.0230	92.1	77.0-124	
Styrene	0.0250	0.0245	97.8	73.0-130	
1,1,2,2-Tetrachloroethane	0.0250	0.0228	91.2	65.0-130	
Tetrachloroethene	0.0250	0.0259	103	72.0-132	
Toluene	0.0250	0.0235	94.0	79.0-120	
1,1,1-Trichloroethane	0.0250	0.0245	97.9	73.0-124	
1,1,2-Trichloroethane	0.0250	0.0246	98.3	80.0-120	
Trichloroethene	0.0250	0.0233	93.3	78.0-124	
1,2,4-Trimethylbenzene	0.0250	0.0229	91.6	76.0-121	
1,3,5-Trimethylbenzene	0.0250	0.0231	92.3	76.0-122	
Vinyl chloride	0.0250	0.0236	94.3	67.0-131	
Xylenes, Total	0.0750	0.0714	95.2	79.0-123	
(S) Toluene-d8			*109*	*80.0-120*	
(S) 4-Bromofluorobenzene			*99.2*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*109*	*70.0-130*	

Method Blank (MB)

(MB) R3431800-1 07/17/19 19:06

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TPH (GC/FID) High Fraction	0.0438	J	0.0247	0.100
(S) o-Terphenyl	*90.5*			*31.0-160*

Laboratory Control Sample (LCS)

(LCS) R3431800-2 07/17/19 19:28

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) High Fraction	1.50	1.51	101	50.0-150	
(S) o-Terphenyl			*120*	*31.0-160*	

L1118148-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1118148-03 07/17/19 20:34 • (MS) R3431800-3 07/17/19 20:56 • (MSD) R3431800-4 07/17/19 21:18

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) High Fraction	1.43	U	1.64	1.53	115	107	1	50.0-150			6.94	20
(S) o-Terphenyl					*119*	*114*		*31.0-160*				

Method Blank (MB)

(MB) R3432436-3 07/19/19 01:38

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acenaphthene	U		0.000316	0.00100
Acenaphthylene	U		0.000309	0.00100
Anthracene	U		0.000291	0.00100
Benzo(a)anthracene	U		0.0000510	0.00100
Benzo(b)fluoranthene	U		0.0000896	0.00100
Benzo(k)fluoranthene	U		0.000355	0.00100
Benzo(g,h,i)perylene	U		0.00000227	0.00100
Benzo(a)pyrene	0.0000986	J	0.0000381	0.000200
Bis(2-chlorethoxy)methane	U		0.000329	0.0100
Bis(2-chloroethyl)ether	U		0.00162	0.0100
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100
4-Bromophenyl-phenylether	U		0.000335	0.0100
Carbazole	U		0.000260	0.0100
2-Chloronaphthalene	U		0.000330	0.00100
4-Chlorophenyl-phenylether	U		0.000303	0.0100
Chrysene	U		0.000332	0.00100
Dibenz(a,h)anthracene	U		0.0000644	0.000200
3,3-Dichlorobenzidine	U		0.00202	0.0100
2,4-Dinitrotoluene	U		0.00165	0.0100
2,6-Dinitrotoluene	U		0.000279	0.0100
Fluoranthene	U		0.000310	0.00100
Fluorene	U		0.000323	0.00100
Hexachlorobenzene	U		0.000341	0.00100
Hexachloro-1,3-butadiene	U		0.000329	0.0100
Hexachlorocyclopentadiene	U		0.00233	0.0100
Hexachloroethane	U		0.000365	0.0100
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100
Isophorone	U		0.000272	0.0100
Naphthalene	U		0.000372	0.00100
Nitrobenzene	U		0.000367	0.0100
n-Nitrosodiphenylamine	U		0.00119	0.0100
n-Nitrosodi-n-propylamine	U		0.000403	0.0100
Phenanthrene	U		0.000366	0.00100
Benzylbutyl phthalate	U		0.000275	0.00300
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300
Di-n-butyl phthalate	U		0.000266	0.00300
Diethyl phthalate	U		0.000282	0.00300
Dimethyl phthalate	U		0.000283	0.00300
Di-n-octyl phthalate	U		0.000278	0.00300
Pyrene	U		0.000330	0.00100

Method Blank (MB)

(MB) R3432436-3 07/19/19 01:38

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,2,4-Trichlorobenzene	U		0.000355	0.0100
4-Chloroaniline	U		0.000382	0.0100
4-Chloro-3-methylphenol	U		0.000263	0.0100
2-Chlorophenol	U		0.000283	0.0100
2-Nitrophenol	U		0.000320	0.0100
4-Nitrophenol	U		0.00201	0.0100
Pentachlorophenol	U		0.000313	0.0100
Phenol	U		0.000334	0.0100
2,4,6-Trichlorophenol	U		0.000297	0.0100
Dibenzofuran	U		0.000338	0.0100
2,4-Dichlorophenol	U		0.000284	0.0100
2,4-Dimethylphenol	U		0.000624	0.0100
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100
2,4-Dinitrophenol	U		0.00325	0.0100
2-Methylnaphthalene	U		0.000311	0.00100
2-Methylphenol	U		0.000312	0.0100
3&4-Methyl Phenol	U		0.000266	0.0100
2-Nitroaniline	U		0.00190	0.0100
3-Nitroaniline	U		0.000308	0.0100
4-Nitroaniline	U		0.000349	0.0100
Acetophenone	U		0.00247	0.0100
2,4,5-Trichlorophenol	U		0.000236	0.0100
1-Methylnaphthalene	U		0.000332	0.00100
Biphenyl	U		0.000325	0.0100
Atrazine	U		0.000260	0.0100
Benzaldehyde	U		0.00140	0.0100
Caprolactam	U		0.00259	0.0100
(S) Nitrobenzene-d5	*23.5*			*10.0-127*
(S) 2-Fluorobiphenyl	*28.3*			*10.0-130*
(S) p-Terphenyl-d14	*76.6*			*10.0-128*
(S) Phenol-d5	*11.8*			*10.0-120*
(S) 2-Fluorophenol	*19.4*			*10.0-120*
(S) 2,4,6-Tribromophenol	*41.2*			*10.0-155*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3432436-1 07/19/19 00:55 • (LCSD) R3432436-2 07/19/19 01:17

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.0500	0.0215	0.0243	43.0	48.6	41.0-120			12.2	22
Acenaphthylene	0.0500	0.0212	0.0242	42.4	48.4	43.0-120	J4		13.2	22
Anthracene	0.0500	0.0322	0.0342	64.4	68.4	45.0-120			6.02	20
Biphenyl	0.0500	0.0192	0.0218	38.4	43.6	38.0-120			12.7	27
Benzo(a)anthracene	0.0500	0.0375	0.0391	75.0	78.2	47.0-120			4.18	20
Benzo(b)fluoranthene	0.0500	0.0365	0.0377	73.0	75.4	46.0-120			3.23	20
Benzo(k)fluoranthene	0.0500	0.0374	0.0379	74.8	75.8	46.0-120			1.33	21
Benzo(g,h,i)perylene	0.0500	0.0364	0.0382	72.8	76.4	48.0-121			4.83	20
Benzo(a)pyrene	0.0500	0.0351	0.0362	70.2	72.4	47.0-120			3.09	20
Bis(2-chlorethoxy)methane	0.0500	0.0160	0.0178	32.0	35.6	33.0-120	J4		10.7	24
Bis(2-chloroethyl)ether	0.0500	0.0125	0.0146	25.0	29.2	23.0-120			15.5	33
Bis(2-chloroisopropyl)ether	0.0500	0.0130	0.0151	26.0	30.2	28.0-120	J4		14.9	31
4-Bromophenyl-phenylether	0.0500	0.0326	0.0356	65.2	71.2	45.0-120			8.80	20
Carbazole	0.0500	0.0342	0.0359	68.4	71.8	51.0-122			4.85	20
2-Chloronaphthalene	0.0500	0.0176	0.0203	35.2	40.6	37.0-120	J4		14.2	25
4-Chlorophenyl-phenylether	0.0500	0.0280	0.0305	56.0	61.0	44.0-120			8.55	20
Chrysene	0.0500	0.0368	0.0376	73.6	75.2	48.0-120			2.15	20
Dibenz(a,h)anthracene	0.0500	0.0352	0.0373	70.4	74.6	47.0-120			5.79	20
3,3-Dichlorobenzidine	0.100	0.0433	0.0476	43.3	47.6	44.0-120	J4		9.46	20
2,4-Dinitrotoluene	0.0500	0.0339	0.0356	67.8	71.2	49.0-124			4.89	20
2,6-Dinitrotoluene	0.0500	0.0302	0.0316	60.4	63.2	46.0-120			4.53	21
Fluoranthene	0.0500	0.0344	0.0358	68.8	71.6	51.0-120			3.99	20
Fluorene	0.0500	0.0271	0.0296	54.2	59.2	47.0-120			8.82	20
Hexachlorobenzene	0.0500	0.0341	0.0364	68.2	72.8	44.0-120			6.52	20
Hexachloro-1,3-butadiene	0.0500	0.00944	0.0105	18.9	21.0	19.0-120	J4		10.6	32
Hexachlorocyclopentadiene	0.0500	0.0119	0.0144	23.8	28.8	15.0-120			19.0	31
Hexachloroethane	0.0500	0.00813	0.00893	16.3	17.9	15.0-120			9.38	37
Indeno(1,2,3-cd)pyrene	0.0500	0.0349	0.0373	69.8	74.6	49.0-122			6.65	20
Isophorone	0.0500	0.0170	0.0194	34.0	38.8	36.0-120	J4		13.2	23
Naphthalene	0.0500	0.0122	0.0139	24.4	27.8	27.0-120	J4		13.0	27
Nitrobenzene	0.0500	0.0130	0.0153	26.0	30.6	27.0-120	J4		16.3	29
n-Nitrosodiphenylamine	0.0500	0.0238	0.0251	47.6	50.2	47.0-120			5.32	20
n-Nitrosodi-n-propylamine	0.0500	0.0161	0.0181	32.2	36.2	31.0-120			11.7	28
Phenanthrene	0.0500	0.0320	0.0332	64.0	66.4	46.0-120			3.68	20
Benzylbutyl phthalate	0.0500	0.0342	0.0350	68.4	70.0	43.0-121			2.31	20
Bis(2-ethylhexyl)phthalate	0.0500	0.0344	0.0351	68.8	70.2	43.0-122			2.01	20
Di-n-butyl phthalate	0.0500	0.0343	0.0350	68.6	70.0	49.0-121			2.02	20
Diethyl phthalate	0.0500	0.0317	0.0322	63.4	64.4	48.0-122			1.56	20
Dimethyl phthalate	0.0500	0.0307	0.0316	61.4	63.2	48.0-120			2.89	20
Di-n-octyl phthalate	0.0500	0.0300	0.0310	60.0	62.0	42.0-125			3.28	20

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3432436-1 07/19/19 00:55 • (LCSD) R3432436-2 07/19/19 01:17

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Pyrene	0.0500	0.0354	0.0368	70.8	73.6	47.0-120			3.88	20
1,2,4-Trichlorobenzene	0.0500	0.0108	0.0125	21.6	25.0	24.0-120	J4		14.6	29
4-Chloroaniline	0.0500	0.0229	0.0235	45.8	47.0	25.0-120			2.59	25
4-Chloro-3-methylphenol	0.0500	0.0213	0.0239	42.6	47.8	40.0-120			11.5	21
2-Chlorophenol	0.0500	0.0125	0.0151	25.0	30.2	25.0-120			18.8	35
Dibenzofuran	0.0500	0.0243	0.0270	48.6	54.0	44.0-120			10.5	22
2,4-Dichlorophenol	0.0500	0.0154	0.0181	30.8	36.2	36.0-120	J4		16.1	26
2,4-Dimethylphenol	0.0500	0.0151	0.0175	30.2	35.0	33.0-120	J4		14.7	26
4,6-Dinitro-2-methylphenol	0.0500	0.0331	0.0375	66.2	75.0	38.0-138			12.5	25
2,4-Dinitrophenol	0.0500	0.0296	0.0289	59.2	57.8	10.0-120			2.39	39
2-Methylnaphthalene	0.0500	0.0135	0.0153	27.0	30.6	33.0-120	J4	J4	12.5	25
2-Methylphenol	0.0500	0.0128	0.0148	25.6	29.6	28.0-120	J4		14.5	29
3&4-Methyl Phenol	0.0500	0.0146	0.0173	29.2	34.6	31.0-120	J4		16.9	30
2-Nitroaniline	0.0500	0.0297	0.0317	59.4	63.4	43.0-120			6.51	22
3-Nitroaniline	0.0500	0.0316	0.0322	63.2	64.4	38.0-120			1.88	21
4-Nitroaniline	0.0500	0.0306	0.0316	61.2	63.2	18.0-160			3.22	21
2-Nitrophenol	0.0500	0.0152	0.0180	30.4	36.0	31.0-120	J4		16.9	29
4-Nitrophenol	0.0500	0.0133	0.0154	26.6	30.8	10.0-120			14.6	33
Pentachlorophenol	0.0500	0.0296	0.0343	59.2	68.6	23.0-120			14.7	25
Phenol	0.0500	0.00595	0.00704	11.9	14.1	10.0-120			16.8	36
2,4,6-Trichlorophenol	0.0500	0.0246	0.0281	49.2	56.2	42.0-120			13.3	23
Acetophenone	0.0500	0.0147	0.0168	29.4	33.6	29.0-120			13.3	28
2,4,5-Trichlorophenol	0.0500	0.0252	0.0292	50.4	58.4	44.0-120			14.7	22
1-Methylnaphthalene	0.0500	0.0144	0.0164	28.8	32.8	33.0-120	J4	J4	13.0	24
Atrazine	0.0500	0.0312	0.0316	62.4	63.2	39.0-141			1.27	20
Benzaldehyde	0.0500	0.0150	0.0181	30.0	36.2	10.0-160			18.7	40
Caprolactam	0.0500	0.0118	0.0117	23.6	23.4	10.0-120			0.851	26
(S) Nitrobenzene-d5				*21.8*	*26.0*	*10.0-127*				
(S) 2-Fluorobiphenyl				*37.1*	*44.3*	*10.0-130*				
(S) p-Terphenyl-d14				*68.6*	*71.4*	*10.0-128*				
(S) Phenol-d5				*11.1*	*13.2*	*10.0-120*				
(S) 2-Fluorophenol				*16.9*	*20.8*	*10.0-120*				
(S) 2,4,6-Tribromophenol				*63.0*	*73.0*	*10.0-155*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Abbreviations and Definitions

MDL	Method Detection Limit.
MQL	Method Quantitation Limit.
ND	Not detected at the Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
V	The sample concentration is too high to evaluate accurate spike recoveries.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

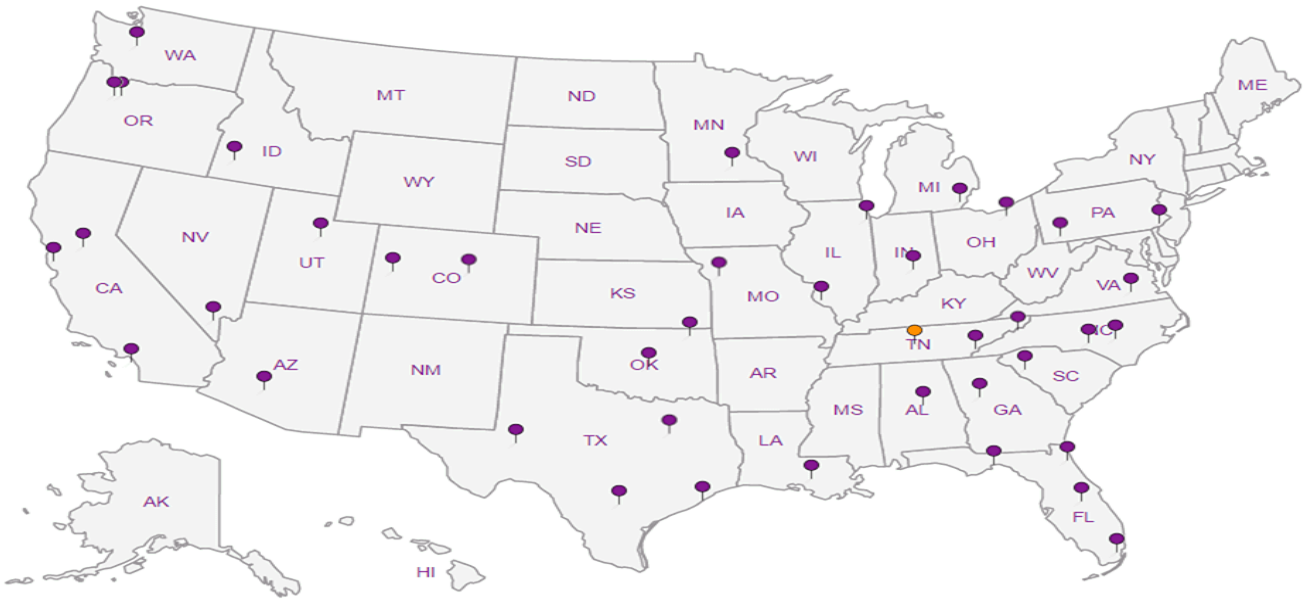
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



TRC Solutions - Austin, TX

505 E. Huntland Drive, Suite 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095

Report to: Julie Speer

Email To: jspeer@trcsolutions.com

Project Description: Lovington Lea Refinery

City/State Collected:

Phone: 512-684-3176
Fax:

Client Project # 330769.0000.0000

Lab Project # TRCATX-LOVINGTON NAV

Collected by (print): Bryan Byles

Site/Facility ID #

P.O. # 135698

Collected by (signature):

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Pres Chk

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	8270TX 100ml Amb NoPres	DROLVI 40mlAmb-HCl-BT	GRO 40mlAmb HCl	HG 250mlHDPE-HNO3	NAVAJOMETALSDISS 250mlHDPE-NoPres	NO2NO3 250mlHDPE-H2SO4	V8260 40mlAmb-HCl	V8260-TripBlank 40mlAmb-HCl-Blk	WetChem 500mlHDPE-NoPres	Remarks	Sample # (lab only)
WW-NORTH		GW		7/11/19	1040	13	X	X	X	X	X	X	X		X		-01
WW-SOUTH		GW			1120	13	X	X	X	X	X	X	X		X		-02
WW-EAST		GW		↓	1225	13	X	X	X	X	X	X	X		X		-03
		GW				13	X	X	X	X	X	X	X		X		
		GW				13	X	X	X	X	X	X	X		X		
		GW				13	X	X	X	X	X	X	X		X		
TRIP BLANK		GW		7/11/19	—	1								X			-04

Chain of Custody Page ___ of ___

Pace Analytical® National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# L1118148

J119

Acctnum: TRCATX
Template: T118335
Prelogin: P718698
TSR: 526 - Chris McCord
PB:
Shipped Via:

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks: WetChem = ALK,CHLORIDE,FLUORIDE,SULFATE,TDS.
Lab filter NAVAJOMETALSDISS.

RAD SCREEN: <0.3 mR/hr

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier __ _____

Tracking # 4510 1659 5406

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
VOA Zero Headspace: ✓Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeOH TBR
Bryan Byles	7/11/19	1500		
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Temp: 4.4 1.1=5.5 °C 397 TB
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 7/12/19 Time: 8:45

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

November 10, 2019

TRC Solutions - Austin, TX

Sample Delivery Group:	L1153940
Samples Received:	10/25/2019
Project Number:	330769.0000.0000
Description:	Lovington Lea Refinery

Report To: Julie Speer
505 E. Huntland Drive, Suite 250
Austin, TX 78752

Entire Report Reviewed By:

Chris McCord
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



TABLE OF CONTENTS

Cp: Cover Page 1

Tc: Table of Contents 2

Ss: Sample Summary 4

Cn: Case Narrative 15

Sr: Sample Results 16

MW-1 L1153940-01 16

MW-2 L1153940-02 18

MW-3 L1153940-03 22

MW-4 L1153940-04 23

MW-5 L1153940-05 27

MW-6 L1153940-06 31

MW-8 L1153940-07 35

MW-9 L1153940-08 37

MW-10 L1153940-09 38

MW-11R L1153940-10 39

MW-13R L1153940-11 43

MW-14R L1153940-12 47

MW-15 L1153940-13 51

MW-16 L1153940-14 55

MW-17R L1153940-15 59

MW-18 L1153940-16 63

MW-19 L1153940-17 67

MW-20 L1153940-18 71

MW-21 L1153940-19 75

MW-22 L1153940-20 77

MW-23 L1153940-21 81

MW-24 L1153940-22 82

MW-25 L1153940-23 86

MW-26 L1153940-24 90

MW-27 L1153940-25 91

MW-28 L1153940-26 94

MW-29 L1153940-27 98

MW-30 L1153940-28 102

MW-32 L1153940-29 106

MW-33 L1153940-30 110

WW-NORTH WELL L1153940-31 114

WW-SOUTH WELL L1153940-32 118

WW-EAST WELL L1153940-33 122

DUP-01 L1153940-34 126

DUP-02 L1153940-35 130

DUP-03 L1153940-36 134
DUP-04 L1153940-37 138
EB-01 L1153940-38 142
EB-02 L1153940-39 146
TRIP BLANK-01 L1153940-40 150
TRIP BLANK-02 L1153940-41 151
Qc: Quality Control Summary 152
Gravimetric Analysis by Method 2540 C-2011 152
Wet Chemistry by Method 2320 B-2011 154
Wet Chemistry by Method 353.2 155
Wet Chemistry by Method 9056A 157
Mercury by Method 7470A 163
Metals (ICP) by Method 6010B 165
Metals (ICPMS) by Method 6020 168
Volatile Organic Compounds (GC) by Method 8015D/GRO 173
Volatile Organic Compounds (GC/MS) by Method 8260B 175
Semi-Volatile Organic Compounds (GC) by Method 3511/8015 188
Semi Volatile Organic Compounds (GC/MS) by Method 8270C 190
Gl: Glossary of Terms 204
Al: Accreditations & Locations 206
Sc: Sample Chain of Custody 207

MW-1 L1153940-01 GW

Collected by	Collected date/time	Received date/time
Scott Ude / HMI Team	10/24/19 12:20	10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1370219	1	10/27/19 15:17	10/27/19 16:22	TH	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1371687	1	10/31/19 20:50	10/31/19 20:50	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1371200	1	10/29/19 06:37	10/29/19 06:37	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1369904	1	10/25/19 21:00	10/27/19 18:43	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1370033	1	10/30/19 10:35	10/30/19 17:08	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370036	1	10/30/19 06:10	10/31/19 15:37	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1373881	1	11/02/19 03:06	11/02/19 03:06	JCP	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1375560	1	11/05/19 22:47	11/05/19 22:47	ACG	Mt. Juliet, TN

MW-2 L1153940-02 GW

Collected by	Collected date/time	Received date/time
Scott Ude / HMI Team	10/24/19 12:05	10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1370219	1	10/27/19 15:17	10/27/19 16:22	TH	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1371687	1	10/31/19 20:53	10/31/19 20:53	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1371200	1	10/29/19 07:28	10/29/19 07:28	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1371200	5	10/29/19 07:41	10/29/19 07:41	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1369904	1	10/25/19 21:00	10/27/19 18:49	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1370033	1	10/30/19 10:35	10/30/19 17:11	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370036	1	10/30/19 06:10	10/31/19 15:50	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1373881	1	11/02/19 03:26	11/02/19 03:26	JCP	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1375560	1	11/05/19 23:07	11/05/19 23:07	ACG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1371928	1	10/30/19 16:20	10/31/19 02:37	AO	Mt. Juliet, TN

MW-3 L1153940-03 GW

Collected by	Collected date/time	Received date/time
Scott Ude / HMI Team	10/24/19 10:50	10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 353.2	WG1371687	1	10/31/19 20:58	10/31/19 20:58	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1370818	1	10/28/19 20:33	10/28/19 20:33	ELN	Mt. Juliet, TN

MW-4 L1153940-04 GW

Collected by	Collected date/time	Received date/time
Scott Ude / HMI Team	10/24/19 10:40	10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1370219	1	10/27/19 15:17	10/27/19 16:22	TH	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1371687	1	10/31/19 20:59	10/31/19 20:59	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1370818	1	10/28/19 21:26	10/28/19 21:26	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1369904	1	10/25/19 21:00	10/27/19 18:51	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1370033	1	10/30/19 10:35	10/30/19 17:13	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370036	1	10/30/19 06:10	10/31/19 15:53	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1373881	1	11/02/19 03:46	11/02/19 03:46	JCP	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1375560	1	11/05/19 23:26	11/05/19 23:26	ACG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1371928	1	10/30/19 16:20	10/31/19 02:59	AO	Mt. Juliet, TN

MW-5 L1153940-05 GW

Collected by	Collected date/time	Received date/time
Scott Ude / HMI Team	10/24/19 14:00	10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1370219	1	10/27/19 15:17	10/27/19 16:22	TH	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1371212	1	10/31/19 00:12	10/31/19 00:12	LEB	Mt. Juliet, TN

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

MW-5 L1153940-05 GW

Collected by: Scott Ude / HMI Team
Collected date/time: 10/24/19 14:00
Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 353.2	WG1371687	1	10/31/19 21:01	10/31/19 21:01	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1370818	1	10/28/19 21:39	10/28/19 21:39	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1369904	1	10/25/19 21:00	10/27/19 18:53	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1370034	1	10/30/19 06:08	10/30/19 14:49	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370036	1	10/30/19 06:10	10/31/19 15:57	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1373783	1	11/02/19 19:39	11/02/19 19:39	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1373881	1	11/02/19 04:07	11/02/19 04:07	JCP	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1375560	1	11/05/19 23:46	11/05/19 23:46	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG1370005	1	10/26/19 16:25	10/27/19 23:47	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1371928	1	10/30/19 16:20	10/31/19 03:21	AO	Mt. Juliet, TN

MW-6 L1153940-06 GW

Collected by: Scott Ude / HMI Team
Collected date/time: 10/24/19 12:20
Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1370219	1	10/27/19 15:17	10/27/19 16:22	TH	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1371687	1	10/31/19 22:13	10/31/19 22:13	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1370818	1	10/28/19 21:52	10/28/19 21:52	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1369904	1	10/25/19 21:00	10/27/19 18:55	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1370034	1	10/30/19 06:08	10/30/19 14:51	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370036	1	10/30/19 06:10	10/31/19 16:10	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1373881	1	11/02/19 04:27	11/02/19 04:27	JCP	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1375560	1	11/06/19 00:06	11/06/19 00:06	ACG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1371928	1	10/30/19 16:20	10/31/19 03:43	AO	Mt. Juliet, TN

MW-8 L1153940-07 GW

Collected by: Scott Ude / HMI Team
Collected date/time: 10/24/19 10:35
Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1370219	1	10/27/19 15:17	10/27/19 16:22	TH	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1371687	5	10/31/19 22:15	10/31/19 22:15	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1370818	1	10/28/19 22:05	10/28/19 22:05	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1370818	5	10/28/19 22:44	10/28/19 22:44	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1369904	1	10/25/19 21:00	10/27/19 18:57	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1370034	1	10/30/19 06:08	10/30/19 14:54	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370036	1	10/30/19 06:10	10/31/19 16:14	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1373881	1	11/02/19 04:47	11/02/19 04:47	JCP	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1375969	1	11/06/19 14:53	11/06/19 14:53	BMB	Mt. Juliet, TN

MW-9 L1153940-08 GW

Collected by: Scott Ude / HMI Team
Collected date/time: 10/24/19 11:25
Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 353.2	WG1371687	5	10/31/19 22:16	10/31/19 22:16	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1370818	1	10/28/19 22:57	10/28/19 22:57	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1370818	5	10/28/19 23:10	10/28/19 23:10	ELN	Mt. Juliet, TN

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

MW-10 L1153940-09 GW

Collected by	Collected date/time	Received date/time
Scott Ude / HMI Team	10/24/19 13:10	10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 353.2	WG1371687	1	10/31/19 22:18	10/31/19 22:18	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1370818	1	10/28/19 23:23	10/28/19 23:23	ELN	Mt. Juliet, TN

MW-11R L1153940-10 GW

Collected by	Collected date/time	Received date/time
Scott Ude / HMI Team	10/24/19 10:30	10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1370219	1	10/27/19 15:17	10/27/19 16:22	TH	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1371212	1	10/31/19 00:19	10/31/19 00:19	LEB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1371687	5	10/31/19 22:19	10/31/19 22:19	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1370818	1	10/28/19 23:36	10/28/19 23:36	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1370818	10	10/28/19 23:49	10/28/19 23:49	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1369904	1	10/25/19 21:00	10/27/19 18:59	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1370034	1	10/30/19 06:08	10/30/19 15:02	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370036	1	10/30/19 06:10	10/31/19 16:17	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1373882	1	11/02/19 01:53	11/02/19 01:53	BMB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1371928	1	10/30/19 16:20	10/31/19 04:27	AO	Mt. Juliet, TN

MW-13R L1153940-11 GW

Collected by	Collected date/time	Received date/time
Scott Ude / HMI Team	10/24/19 09:25	10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1370219	1	10/27/19 15:17	10/27/19 16:22	TH	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1371687	1	10/31/19 22:21	10/31/19 22:21	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1370818	1	10/29/19 00:02	10/29/19 00:02	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1370818	10	10/29/19 00:15	10/29/19 00:15	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1369904	1	10/25/19 21:00	10/27/19 19:01	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1370034	1	10/30/19 06:08	10/30/19 15:05	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370036	1	10/30/19 06:10	10/31/19 16:20	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1373882	1	11/02/19 02:13	11/02/19 02:13	BMB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1371928	1	10/30/19 16:20	10/31/19 04:05	AO	Mt. Juliet, TN

MW-14R L1153940-12 GW

Collected by	Collected date/time	Received date/time
Scott Ude / HMI Team	10/24/19 12:40	10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1370219	1	10/27/19 15:17	10/27/19 16:22	TH	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1371687	1	10/31/19 22:22	10/31/19 22:22	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1370818	1	10/29/19 00:29	10/29/19 00:29	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1370818	10	10/29/19 00:42	10/29/19 00:42	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1369904	1	10/25/19 21:00	10/27/19 19:03	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1370034	1	10/30/19 06:08	10/30/19 15:07	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370036	1	10/30/19 06:10	10/31/19 16:24	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1373882	1	11/02/19 02:33	11/02/19 02:33	BMB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1371928	1	10/30/19 16:20	10/31/19 04:50	AO	Mt. Juliet, TN

MW-15 L1153940-13 GW

Collected by	Collected date/time	Received date/time
Scott Ude / HMI Team	10/24/19 13:00	10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1370219	1	10/27/19 15:17	10/27/19 16:22	TH	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1371212	1	10/31/19 00:54	10/31/19 00:54	LEB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1371687	1	10/31/19 22:26	10/31/19 22:26	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1370818	1	10/29/19 01:21	10/29/19 01:21	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1370818	10	10/29/19 01:34	10/29/19 01:34	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1369904	1	10/25/19 21:00	10/27/19 19:05	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1370034	1	10/30/19 06:08	10/30/19 15:10	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370036	1	10/30/19 06:10	10/31/19 16:27	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1373882	1	11/02/19 02:53	11/02/19 02:53	BMB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1371928	1	10/30/19 16:20	10/31/19 05:12	AO	Mt. Juliet, TN

MW-16 L1153940-14 GW

Collected by	Collected date/time	Received date/time
Scott Ude / HMI Team	10/24/19 11:30	10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1370219	1	10/27/19 15:17	10/27/19 16:22	TH	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1371687	1	10/31/19 22:29	10/31/19 22:29	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1370818	1	10/29/19 01:47	10/29/19 01:47	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1369904	1	10/25/19 21:00	10/27/19 19:07	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1370034	1	10/30/19 06:08	10/30/19 15:13	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370036	1	10/30/19 06:10	10/31/19 16:30	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1373882	1	11/02/19 03:12	11/02/19 03:12	BMB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1371928	1	10/30/19 16:20	10/31/19 05:34	AO	Mt. Juliet, TN

MW-17R L1153940-15 GW

Collected by	Collected date/time	Received date/time
Scott Ude / HMI Team	10/24/19 12:15	10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1370219	1	10/27/19 15:17	10/27/19 16:22	TH	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1371212	1	10/31/19 01:09	10/31/19 01:09	LEB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1371687	1	10/31/19 22:38	10/31/19 22:38	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1370818	1	10/29/19 02:00	10/29/19 02:00	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1369904	1	10/25/19 21:00	10/27/19 19:13	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1370034	1	10/30/19 06:08	10/30/19 15:15	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370036	1	10/30/19 06:10	10/31/19 16:33	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1373882	1	11/02/19 03:32	11/02/19 03:32	BMB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1371928	1	10/30/19 16:20	10/31/19 05:56	AO	Mt. Juliet, TN

MW-18 L1153940-16 GW

Collected by	Collected date/time	Received date/time
Scott Ude / HMI Team	10/24/19 13:20	10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1370219	1	10/27/19 15:17	10/27/19 16:22	TH	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1371687	1	10/31/19 22:40	10/31/19 22:40	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1370818	1	10/29/19 02:13	10/29/19 02:13	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1370818	5	10/29/19 02:26	10/29/19 02:26	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1369904	1	10/25/19 21:00	10/27/19 19:15	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1370034	1	10/30/19 06:08	10/30/19 15:18	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370036	1	10/30/19 06:10	10/31/19 16:44	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1373882	1	11/02/19 03:52	11/02/19 03:52	BMB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1371928	1	10/30/19 16:20	10/31/19 06:18	AO	Mt. Juliet, TN

MW-19 L1153940-17 GW

Collected by: Scott Ude / HMI Team
Collected date/time: 10/24/19 12:35
Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1370219	1	10/27/19 15:17	10/27/19 16:22	TH	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1371212	1	10/31/19 01:16	10/31/19 01:16	LEB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1371687	1	10/31/19 22:41	10/31/19 22:41	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1370818	1	10/29/19 02:39	10/29/19 02:39	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1370818	10	10/29/19 02:52	10/29/19 02:52	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1369904	1	10/25/19 21:00	10/27/19 18:30	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1370034	1	10/30/19 06:08	10/30/19 15:21	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370036	1	10/30/19 06:10	10/31/19 16:48	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1373882	1	11/02/19 04:12	11/02/19 04:12	BMB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1371928	1	10/30/19 16:20	10/31/19 06:40	AO	Mt. Juliet, TN

MW-20 L1153940-18 GW

Collected by: Scott Ude / HMI Team
Collected date/time: 10/24/19 11:40
Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1370219	1	10/27/19 15:17	10/27/19 16:22	TH	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1371687	1	10/31/19 22:43	10/31/19 22:43	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1370818	1	10/29/19 03:05	10/29/19 03:05	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1370818	5	10/29/19 03:18	10/29/19 03:18	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1369905	1	10/25/19 21:00	10/27/19 19:28	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1370034	1	10/30/19 06:08	10/30/19 15:23	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370036	1	10/30/19 06:10	10/31/19 16:51	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1373882	1	11/02/19 04:31	11/02/19 04:31	BMB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1372208	1	10/30/19 15:46	10/31/19 03:16	AO	Mt. Juliet, TN

MW-21 L1153940-19 GW

Collected by: Scott Ude / HMI Team
Collected date/time: 10/24/19 13:30
Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1373783	1	11/02/19 20:02	11/02/19 20:02	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG1370005	1	10/26/19 16:25	10/28/19 00:12	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1372208	1	10/30/19 15:46	10/31/19 03:36	AO	Mt. Juliet, TN

MW-22 L1153940-20 GW

Collected by: Scott Ude / HMI Team
Collected date/time: 10/24/19 13:10
Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1370219	1	10/27/19 15:17	10/27/19 16:22	TH	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1371687	5	10/31/19 22:56	10/31/19 22:56	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1370818	1	10/29/19 03:58	10/29/19 03:58	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1369905	1	10/25/19 21:00	10/27/19 19:30	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1370034	1	10/30/19 06:08	10/30/19 15:26	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370036	1	10/30/19 06:10	10/31/19 16:54	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1373783	1	11/02/19 20:24	11/02/19 20:24	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1373882	1	11/02/19 04:51	11/02/19 04:51	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG1370005	2	10/26/19 16:25	10/28/19 00:38	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1372208	1	10/30/19 15:46	10/31/19 03:56	AO	Mt. Juliet, TN

MW-23 L1153940-21 GW

Collected by: Scott Ude / HMI Team
Collected date/time: 10/24/19 14:45
Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 353.2	WG1371687	1	10/31/19 22:46	10/31/19 22:46	AJC	Mt. Juliet, TN

MW-24 L1153940-22 GW

Collected by: Scott Ude / HMI Team
Collected date/time: 10/24/19 15:10
Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1370221	1	10/27/19 15:20	10/27/19 16:51	TH	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1371212	1	10/31/19 01:23	10/31/19 01:23	LEB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1371690	1	10/31/19 18:54	10/31/19 18:54	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1370818	1	10/29/19 04:11	10/29/19 04:11	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1369905	1	10/25/19 21:00	10/27/19 19:36	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1370034	1	10/30/19 06:08	10/30/19 15:34	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370036	1	10/30/19 06:10	10/31/19 16:58	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1373882	1	11/02/19 05:11	11/02/19 05:11	BMB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1372208	1	10/30/19 15:46	10/31/19 04:16	AO	Mt. Juliet, TN

MW-25 L1153940-23 GW

Collected by: Scott Ude / HMI Team
Collected date/time: 10/24/19 12:10
Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1370221	1	10/27/19 15:20	10/27/19 16:51	TH	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1371212	1	10/31/19 01:38	10/31/19 01:38	LEB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1371690	1	10/31/19 18:55	10/31/19 18:55	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1370818	1	10/29/19 04:50	10/29/19 04:50	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1370818	10	10/29/19 05:03	10/29/19 05:03	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1369905	1	10/25/19 21:00	10/27/19 19:38	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1370034	1	10/30/19 06:08	10/30/19 15:37	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370036	1	10/30/19 06:10	10/31/19 17:01	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1373882	1	11/02/19 05:31	11/02/19 05:31	BMB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1372208	1	10/30/19 15:46	10/31/19 04:36	AO	Mt. Juliet, TN

MW-26 L1153940-24 GW

Collected by: Scott Ude / HMI Team
Collected date/time: 10/24/19 13:25
Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 353.2	WG1371690	1	10/31/19 18:57	10/31/19 18:57	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1370818	1	10/29/19 05:16	10/29/19 05:16	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1370818	5	10/29/19 05:29	10/29/19 05:29	ELN	Mt. Juliet, TN

MW-27 L1153940-25 GW

Collected by: Scott Ude / HMI Team
Collected date/time: 10/24/19 11:15
Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1373882	1	11/02/19 05:50	11/02/19 05:50	BMB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1372208	1	10/30/19 15:46	10/31/19 04:56	AO	Mt. Juliet, TN

MW-28 L1153940-26 GW

Collected by: Scott Ude / HMI Team
Collected date/time: 10/24/19 14:00
Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1370221	1	10/27/19 15:20	10/27/19 16:51	TH	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1371212	1	10/31/19 01:45	10/31/19 01:45	LEB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1371690	1	10/31/19 18:58	10/31/19 18:58	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1371200	1	10/29/19 07:54	10/29/19 07:54	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1369905	1	10/25/19 21:00	10/27/19 19:40	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1370034	1	10/30/19 06:08	10/30/19 15:39	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370039	1	10/30/19 06:05	10/30/19 16:45	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370039	1	10/30/19 06:05	10/30/19 22:54	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1373882	1	11/02/19 06:10	11/02/19 06:10	BMB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1372208	1	10/30/19 15:46	10/31/19 05:16	AO	Mt. Juliet, TN

MW-29 L1153940-27 GW

Collected by: Scott Ude / HMI Team
Collected date/time: 10/24/19 13:10
Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1370221	1	10/27/19 15:20	10/27/19 16:51	TH	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1371690	5	10/31/19 19:00	10/31/19 19:00	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1371200	1	10/29/19 08:19	10/29/19 08:19	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1371200	5	10/29/19 08:32	10/29/19 08:32	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1369905	1	10/25/19 21:00	10/27/19 19:42	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1370034	1	10/30/19 06:08	10/30/19 15:42	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370039	1	10/30/19 06:05	10/30/19 16:48	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370039	1	10/30/19 06:05	10/30/19 22:57	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1373882	1	11/02/19 06:30	11/02/19 06:30	BMB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1372208	1	10/30/19 15:46	10/31/19 05:36	AO	Mt. Juliet, TN

MW-30 L1153940-28 GW

Collected by: Scott Ude / HMI Team
Collected date/time: 10/24/19 10:50
Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1370221	1	10/27/19 15:20	10/27/19 16:51	TH	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1371212	1	10/31/19 01:52	10/31/19 01:52	LEB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1371690	5	10/31/19 19:01	10/31/19 19:01	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1371200	1	10/29/19 09:11	10/29/19 09:11	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1369905	1	10/25/19 21:00	10/27/19 19:44	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1370034	1	10/30/19 06:08	10/30/19 15:45	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370039	1	10/30/19 06:05	10/30/19 16:52	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370039	1	10/30/19 06:05	10/30/19 21:32	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1373882	1	11/02/19 06:50	11/02/19 06:50	BMB	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1372208	1	10/30/19 15:46	10/31/19 05:56	AO	Mt. Juliet, TN

MW-32 L1153940-29 GW

Collected by: Scott Ude / HMI Team
Collected date/time: 10/24/19 10:30
Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1370221	1	10/27/19 15:20	10/27/19 16:51	TH	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1371212	1	10/31/19 02:03	10/31/19 02:03	LEB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1371690	5	10/31/19 19:09	10/31/19 19:09	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1371200	1	10/29/19 09:37	10/29/19 09:37	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1371200	5	10/29/19 09:50	10/29/19 09:50	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1369905	1	10/25/19 21:00	10/27/19 19:46	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1370034	1	10/30/19 06:08	10/30/19 15:47	EL	Mt. Juliet, TN

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

MW-32 L1153940-29 GW

Collected by: Scott Ude / HMI Team | Collected date/time: 10/24/19 10:30 | Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICPMS) by Method 6020	WG1370039	1	10/30/19 06:05	10/30/19 17:04	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370039	1	10/30/19 06:05	10/30/19 21:53	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1373783	1	11/02/19 20:46	11/02/19 20:46	BMB	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1373882	1	11/02/19 07:10	11/02/19 07:10	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG1370005	1	10/26/19 16:25	10/28/19 01:30	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1372208	1	10/30/19 15:46	10/31/19 06:16	AO	Mt. Juliet, TN

MW-33 L1153940-30 GW

Collected by: Scott Ude / HMI Team | Collected date/time: 10/24/19 11:30 | Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1370221	1	10/27/19 15:20	10/27/19 16:51	TH	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1371212	1	10/31/19 02:11	10/31/19 02:11	LEB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1371690	1	10/31/19 19:10	10/31/19 19:10	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1371288	1	10/29/19 12:11	10/29/19 12:11	ST	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1371288	10	10/29/19 13:00	10/29/19 13:00	ST	Mt. Juliet, TN
Mercury by Method 7470A	WG1369905	1	10/25/19 21:00	10/27/19 19:23	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1370034	1	10/30/19 06:08	10/30/19 14:38	EL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370039	1	10/30/19 06:05	10/30/19 16:30	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370039	1	10/30/19 06:05	10/30/19 21:10	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1373788	1	11/02/19 02:46	11/02/19 02:46	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1374036	1	11/02/19 18:50	11/02/19 18:50	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG1370005	1	10/26/19 16:25	10/27/19 17:44	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1372208	1	10/30/19 15:46	10/31/19 06:36	AO	Mt. Juliet, TN

WW-NORTH WELL L1153940-31 GW

Collected by: Scott Ude / HMI Team | Collected date/time: 10/24/19 11:00 | Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1370221	1	10/27/19 15:20	10/27/19 16:51	TH	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1371212	1	10/31/19 02:18	10/31/19 02:18	LEB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1371690	1	10/31/19 19:15	10/31/19 19:15	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1371200	1	10/29/19 10:03	10/29/19 10:03	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1371200	5	10/29/19 10:16	10/29/19 10:16	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1369905	1	10/25/19 21:00	10/27/19 19:48	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1372266	1	10/30/19 20:28	10/31/19 09:16	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370039	1	10/30/19 06:05	10/30/19 17:08	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370039	1	10/30/19 06:05	10/30/19 21:57	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1373788	1	11/02/19 03:10	11/02/19 03:10	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1373882	1	11/02/19 07:29	11/02/19 07:29	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG1370005	1	10/26/19 16:25	10/28/19 01:56	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1372208	1	10/30/19 15:46	10/31/19 07:36	AO	Mt. Juliet, TN

WW-SOUTH WELL L1153940-32 GW

Collected by: Scott Ude / HMI Team | Collected date/time: 10/24/19 10:00 | Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1370221	1	10/27/19 15:20	10/27/19 16:51	TH	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1371212	1	10/31/19 02:25	10/31/19 02:25	LEB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1371690	1	10/31/19 19:16	10/31/19 19:16	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1371200	1	10/29/19 10:29	10/29/19 10:29	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1371200	10	10/29/19 10:42	10/29/19 10:42	ELN	Mt. Juliet, TN

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

WW-SOUTH WELL L1153940-32 GW

Collected by: Scott Ude / HMI Team
Collected date/time: 10/24/19 10:00
Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Mercury by Method 7470A	WG1369905	1	10/25/19 21:00	10/27/19 19:50	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1372266	1	10/30/19 20:28	10/31/19 09:19	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370039	1	10/30/19 06:05	10/30/19 17:11	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370039	1	10/30/19 06:05	10/30/19 22:00	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1373788	1	11/02/19 03:34	11/02/19 03:34	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1373882	1	11/02/19 07:49	11/02/19 07:49	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG1370005	1	10/26/19 16:25	10/28/19 02:22	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1372208	1	10/30/19 15:46	10/31/19 07:56	AO	Mt. Juliet, TN

WW-EAST WELL L1153940-33 GW

Collected by: Scott Ude / HMI Team
Collected date/time: 10/24/19 10:30
Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1370221	1	10/27/19 15:20	10/27/19 16:51	TH	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1371212	1	10/31/19 02:32	10/31/19 02:32	LEB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1371690	1	10/31/19 19:19	10/31/19 19:19	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1371200	1	10/29/19 10:54	10/29/19 10:54	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1371200	5	10/29/19 11:07	10/29/19 11:07	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1369905	1	10/25/19 21:00	10/27/19 19:52	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1372266	1	10/30/19 20:28	10/31/19 09:21	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370039	1	10/30/19 06:05	10/30/19 17:15	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370039	1	10/30/19 06:05	10/30/19 22:04	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1373788	1	11/02/19 03:58	11/02/19 03:58	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1373882	1	11/02/19 08:09	11/02/19 08:09	BMB	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG1370005	1	10/26/19 16:25	10/28/19 02:47	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1372208	1	10/30/19 15:46	10/31/19 08:16	AO	Mt. Juliet, TN

DUP-01 L1153940-34 GW

Collected by: Scott Ude / HMI Team
Collected date/time: 10/24/19 11:00
Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1370221	1	10/27/19 15:20	10/27/19 16:51	TH	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1371690	5	10/31/19 19:22	10/31/19 19:22	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1371200	1	10/29/19 11:45	10/29/19 11:45	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1371200	5	10/29/19 11:58	10/29/19 11:58	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1369905	1	10/25/19 21:00	10/27/19 19:54	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1372266	1	10/30/19 20:28	10/31/19 09:30	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370039	1	10/30/19 06:05	10/30/19 17:18	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370039	1	10/30/19 06:05	10/30/19 22:08	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1374036	1	11/02/19 17:31	11/02/19 17:31	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1372208	1	10/30/19 15:46	10/31/19 08:35	AO	Mt. Juliet, TN

DUP-02 L1153940-35 GW

Collected by: Scott Ude / HMI Team
Collected date/time: 10/24/19 11:00
Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1370221	1	10/27/19 15:20	10/27/19 16:51	TH	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1371212	1	10/31/19 02:39	10/31/19 02:39	LEB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1371690	5	10/31/19 20:01	10/31/19 20:01	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1371200	1	10/29/19 12:11	10/29/19 12:11	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1371200	5	10/29/19 12:24	10/29/19 12:24	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1369905	1	10/25/19 21:00	10/27/19 20:00	TCT	Mt. Juliet, TN

DUP-02 L1153940-35 GW

Collected by: Scott Ude / HMI Team | Collected date/time: 10/24/19 11:00 | Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010B	WG1372266	1	10/30/19 20:28	10/31/19 09:32	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370039	1	10/30/19 06:05	10/30/19 17:22	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370039	1	10/30/19 06:05	10/30/19 22:13	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1374036	1	11/02/19 17:51	11/02/19 17:51	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1372208	1	10/30/19 15:46	10/31/19 08:55	AO	Mt. Juliet, TN

DUP-03 L1153940-36 GW

Collected by: Scott Ude / HMI Team | Collected date/time: 10/24/19 08:00 | Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1370221	1	10/27/19 15:20	10/27/19 16:51	TH	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1371212	1	10/31/19 02:59	10/31/19 02:59	LEB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1371690	1	10/31/19 20:02	10/31/19 20:02	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1371200	1	10/29/19 12:37	10/29/19 12:37	ELN	Mt. Juliet, TN
Mercury by Method 7470A	WG1369905	1	10/25/19 21:00	10/27/19 20:02	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1372266	1	10/30/19 20:28	10/31/19 09:35	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370039	1	10/30/19 06:05	10/30/19 17:25	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370039	1	10/30/19 06:05	10/30/19 22:17	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1374036	1	11/02/19 18:10	11/02/19 18:10	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1372632	1	10/31/19 06:18	10/31/19 15:23	JNJ	Mt. Juliet, TN

DUP-04 L1153940-37 GW

Collected by: Scott Ude / HMI Team | Collected date/time: 10/24/19 10:00 | Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1370221	1	10/27/19 15:20	10/27/19 16:51	TH	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1371212	1	10/31/19 03:06	10/31/19 03:06	LEB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1371690	5	10/31/19 20:04	10/31/19 20:04	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1371288	1	10/29/19 13:16	10/29/19 13:16	ST	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1371288	5	10/29/19 20:39	10/29/19 20:39	ST	Mt. Juliet, TN
Mercury by Method 7470A	WG1369905	1	10/25/19 21:00	10/27/19 20:04	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1372266	1	10/30/19 20:28	10/31/19 09:38	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370039	1	10/30/19 06:05	10/30/19 17:29	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370039	1	10/30/19 06:05	10/30/19 22:20	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1373788	1	11/02/19 04:22	11/02/19 04:22	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1374036	1	11/02/19 18:30	11/02/19 18:30	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG1370254	1	10/26/19 18:01	10/28/19 01:11	JN	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1372632	1.11	10/31/19 06:18	10/31/19 15:45	JNJ	Mt. Juliet, TN

EB-01 L1153940-38 GW

Collected by: Scott Ude / HMI Team | Collected date/time: 10/24/19 12:30 | Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1370221	1	10/27/19 15:20	10/27/19 16:51	TH	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1371212	1	10/31/19 03:13	10/31/19 03:13	LEB	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1371690	1	10/31/19 20:05	10/31/19 20:05	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1371288	1	10/29/19 13:32	10/29/19 13:32	ST	Mt. Juliet, TN
Mercury by Method 7470A	WG1369905	1	10/25/19 21:00	10/27/19 20:06	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1372266	1	10/30/19 20:28	10/31/19 09:41	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370039	1	10/30/19 06:05	10/30/19 17:33	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370039	1	10/30/19 06:05	10/30/19 22:24	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1374036	1	11/02/19 14:34	11/02/19 14:34	JAH	Mt. Juliet, TN

EB-01 L1153940-38 GW

Collected by: Scott Ude / HMI Team | Collected date/time: 10/24/19 12:30 | Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1372632	1.25	10/31/19 06:18	10/31/19 16:08	JNJ	Mt. Juliet, TN

EB-02 L1153940-39 GW

Collected by: Scott Ude / HMI Team | Collected date/time: 10/24/19 09:40 | Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1370221	1	10/27/19 15:20	10/27/19 16:51	TH	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG1371690	1	10/31/19 20:07	10/31/19 20:07	AJC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1371288	1	10/29/19 13:49	10/29/19 13:49	ST	Mt. Juliet, TN
Mercury by Method 7470A	WG1369905	1	10/25/19 21:00	10/27/19 20:08	TCT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1372266	1	10/30/19 20:28	10/31/19 09:44	CCE	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370039	1	10/30/19 06:05	10/30/19 17:36	LD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1370039	1	10/30/19 06:05	10/30/19 22:28	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1374036	1	11/02/19 14:54	11/02/19 14:54	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1372632	1	10/31/19 06:18	10/31/19 16:30	JNJ	Mt. Juliet, TN

TRIP BLANK-01 L1153940-40 GW

Collected by: Scott Ude / HMI Team | Collected date/time: 10/24/19 00:00 | Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1374036	1	11/02/19 13:35	11/02/19 13:35	JAH	Mt. Juliet, TN

TRIP BLANK-02 L1153940-41 GW

Collected by: Scott Ude / HMI Team | Collected date/time: 10/24/19 00:00 | Received date/time: 10/25/19 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1374036	1	11/02/19 13:55	11/02/19 13:55	JAH	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Chris McCord
Project Manager

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	389		2.82	10.0	10.0	1	10/27/2019 16:22	WG1370219

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	2.72		0.0197	0.100	0.100	1	10/31/2019 20:50	WG1371687

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	50.2		0.0519	1.00	1.00	1	10/29/2019 06:37	WG1371200
Fluoride	1.10		0.00990	0.100	0.100	1	10/29/2019 06:37	WG1371200
Sulfate	61.2		0.0774	5.00	5.00	1	10/29/2019 06:37	WG1371200

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	0.0000684	B J	0.0000490	0.000200	0.000200	1	10/27/2019 18:43	WG1369904

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.152	J	0.0126	0.200	0.200	1	10/30/2019 17:08	WG1370033

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	10/31/2019 15:37	WG1370036
Arsenic,Dissolved	0.00605		0.000250	0.00200	0.00200	1	10/31/2019 15:37	WG1370036
Barium,Dissolved	0.137		0.000360	0.00500	0.00500	1	10/31/2019 15:37	WG1370036
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	10/31/2019 15:37	WG1370036
Chromium,Dissolved	U		0.000540	0.00200	0.00200	1	10/31/2019 15:37	WG1370036
Copper,Dissolved	U		0.000520	0.00500	0.00500	1	10/31/2019 15:37	WG1370036
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	10/31/2019 15:37	WG1370036
Iron,Dissolved	U		0.0150	0.100	0.100	1	10/31/2019 15:37	WG1370036
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	10/31/2019 15:37	WG1370036
Manganese,Dissolved	U		0.000250	0.00500	0.00500	1	10/31/2019 15:37	WG1370036
Molybdenum,Dissolved	0.00331	J	0.000140	0.00500	0.00500	1	10/31/2019 15:37	WG1370036
Nickel,Dissolved	U		0.000350	0.00200	0.00200	1	10/31/2019 15:37	WG1370036
Selenium,Dissolved	0.00291	B	0.000380	0.00200	0.00200	1	10/31/2019 15:37	WG1370036
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	10/31/2019 15:37	WG1370036
Uranium,Dissolved	0.00163	J	0.000330	0.0100	0.0100	1	10/31/2019 15:37	WG1370036
Zinc,Dissolved	0.00451	J	0.00256	0.0250	0.0250	1	10/31/2019 15:37	WG1370036

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 03:06	WG1373881
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 03:06	WG1373881
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	11/02/2019 03:06	WG1373881
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 03:06	WG1373881
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 03:06	WG1373881
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 03:06	WG1373881

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 03:06	WG1373881
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 03:06	WG1373881
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 03:06	WG1373881
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/05/2019 22:47	WG1375560
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 03:06	WG1373881
Chlorodibromomethane	U	J4	0.000327	0.00100	0.00100	1	11/02/2019 03:06	WG1373881
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 03:06	WG1373881
Chloroform	U		0.000324	0.00500	0.00500	1	11/02/2019 03:06	WG1373881
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 03:06	WG1373881
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 03:06	WG1373881
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 03:06	WG1373881
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 03:06	WG1373881
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 03:06	WG1373881
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 03:06	WG1373881
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 03:06	WG1373881
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 03:06	WG1373881
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 03:06	WG1373881
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 03:06	WG1373881
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 03:06	WG1373881
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 03:06	WG1373881
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 03:06	WG1373881
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 03:06	WG1373881
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 03:06	WG1373881
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 03:06	WG1373881
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 03:06	WG1373881
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 03:06	WG1373881
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 03:06	WG1373881
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 03:06	WG1373881
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 03:06	WG1373881
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 03:06	WG1373881
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 03:06	WG1373881
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 03:06	WG1373881
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 03:06	WG1373881
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 03:06	WG1373881
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 03:06	WG1373881
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 03:06	WG1373881
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 03:06	WG1373881
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 03:06	WG1373881
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 03:06	WG1373881
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 03:06	WG1373881
(S) Toluene-d8	*106*				*80.0-120*		*11/02/2019 03:06*	WG1373881
(S) Toluene-d8	*91.8*				*80.0-120*		*11/05/2019 22:47*	WG1375560
(S) 4-Bromofluorobenzene	*107*				*77.0-126*		*11/02/2019 03:06*	WG1373881
(S) 4-Bromofluorobenzene	*94.9*				*77.0-126*		*11/05/2019 22:47*	WG1375560
(S) 1,2-Dichloroethane-d4	*109*				*70.0-130*		*11/02/2019 03:06*	WG1373881
(S) 1,2-Dichloroethane-d4	*93.3*				*70.0-130*		*11/05/2019 22:47*	WG1375560

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	602		2.82	10.0	10.0	1	10/27/2019 16:22	WG1370219

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	3.46	J6	0.0197	0.100	0.100	1	10/31/2019 20:53	WG1371687

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	159		0.260	1.00	5.00	5	10/29/2019 07:41	WG1371200
Fluoride	0.914		0.00990	0.100	0.100	1	10/29/2019 07:28	WG1371200
Sulfate	75.0		0.0774	5.00	5.00	1	10/29/2019 07:28	WG1371200

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	0.0000719	B J	0.0000490	0.000200	0.000200	1	10/27/2019 18:49	WG1369904

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.189	J	0.0126	0.200	0.200	1	10/30/2019 17:11	WG1370033

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	10/31/2019 15:50	WG1370036
Arsenic,Dissolved	0.00361		0.000250	0.00200	0.00200	1	10/31/2019 15:50	WG1370036
Barium,Dissolved	0.108		0.000360	0.00500	0.00500	1	10/31/2019 15:50	WG1370036
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	10/31/2019 15:50	WG1370036
Chromium,Dissolved	0.000871	B J	0.000540	0.00200	0.00200	1	10/31/2019 15:50	WG1370036
Copper,Dissolved	0.00277	B J	0.000520	0.00500	0.00500	1	10/31/2019 15:50	WG1370036
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	10/31/2019 15:50	WG1370036
Iron,Dissolved	U		0.0150	0.100	0.100	1	10/31/2019 15:50	WG1370036
Lead,Dissolved	0.000263	J	0.000240	0.00200	0.00200	1	10/31/2019 15:50	WG1370036
Manganese,Dissolved	U		0.000250	0.00500	0.00500	1	10/31/2019 15:50	WG1370036
Molybdenum,Dissolved	0.00268	J	0.000140	0.00500	0.00500	1	10/31/2019 15:50	WG1370036
Nickel,Dissolved	0.00412		0.000350	0.00200	0.00200	1	10/31/2019 15:50	WG1370036
Selenium,Dissolved	0.00172	B J	0.000380	0.00200	0.00200	1	10/31/2019 15:50	WG1370036
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	10/31/2019 15:50	WG1370036
Uranium,Dissolved	0.00346	J	0.000330	0.0100	0.0100	1	10/31/2019 15:50	WG1370036
Zinc,Dissolved	0.0420		0.00256	0.0250	0.0250	1	10/31/2019 15:50	WG1370036

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 03:26	WG1373881
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 03:26	WG1373881
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	11/02/2019 03:26	WG1373881
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 03:26	WG1373881
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 03:26	WG1373881
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 03:26	WG1373881

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 03:26	WG1373881
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 03:26	WG1373881
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 03:26	WG1373881
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/05/2019 23:07	WG1375560
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 03:26	WG1373881
Chlorodibromomethane	U	J4	0.000327	0.00100	0.00100	1	11/02/2019 03:26	WG1373881
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 03:26	WG1373881
Chloroform	0.000728	J	0.000324	0.00500	0.00500	1	11/02/2019 03:26	WG1373881
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 03:26	WG1373881
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 03:26	WG1373881
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 03:26	WG1373881
1,2-Dichloroethane	0.000475	J	0.000361	0.00100	0.00100	1	11/02/2019 03:26	WG1373881
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 03:26	WG1373881
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 03:26	WG1373881
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 03:26	WG1373881
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 03:26	WG1373881
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 03:26	WG1373881
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 03:26	WG1373881
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 03:26	WG1373881
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 03:26	WG1373881
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 03:26	WG1373881
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 03:26	WG1373881
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 03:26	WG1373881
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 03:26	WG1373881
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 03:26	WG1373881
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 03:26	WG1373881
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 03:26	WG1373881
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 03:26	WG1373881
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 03:26	WG1373881
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 03:26	WG1373881
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 03:26	WG1373881
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 03:26	WG1373881
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 03:26	WG1373881
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 03:26	WG1373881
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 03:26	WG1373881
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 03:26	WG1373881
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 03:26	WG1373881
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 03:26	WG1373881
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 03:26	WG1373881
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 03:26	WG1373881
(S) Toluene-d8	*112*				*80.0-120*		*11/02/2019 03:26*	WG1373881
(S) Toluene-d8	*93.4*				*80.0-120*		*11/05/2019 23:07*	WG1375560
(S) 4-Bromofluorobenzene	*111*				*77.0-126*		*11/02/2019 03:26*	WG1373881
(S) 4-Bromofluorobenzene	*93.4*				*77.0-126*		*11/05/2019 23:07*	WG1375560
(S) 1,2-Dichloroethane-d4	*107*				*70.0-130*		*11/02/2019 03:26*	WG1373881
(S) 1,2-Dichloroethane-d4	*92.6*				*70.0-130*		*11/05/2019 23:07*	WG1375560

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U	J3	0.000316	0.00100	0.00100	1	10/31/2019 02:37	WG1371928
Acenaphthylene	U	J3	0.000309	0.00100	0.00100	1	10/31/2019 02:37	WG1371928
Acetophenone	U		0.00247	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
Anthracene	U	J3	0.000291	0.00100	0.00100	1	10/31/2019 02:37	WG1371928
Atrazine	U		0.000260	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	10/31/2019 02:37	WG1371928

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzaldehyde	U		0.00140	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	10/31/2019 02:37	WG1371928
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	10/31/2019 02:37	WG1371928
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	10/31/2019 02:37	WG1371928
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	10/31/2019 02:37	WG1371928
Biphenyl	U		0.000325	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
4-Bromophenyl-phenylether	U	J3	0.000335	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	10/31/2019 02:37	WG1371928
4-Chlorophenyl-phenylether	U	J3	0.000303	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
Caprolactam	U		0.00259	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
Carbazole	U		0.000260	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
Chrysene	U		0.000332	0.00100	0.00100	1	10/31/2019 02:37	WG1371928
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	10/31/2019 02:37	WG1371928
Dibenzofuran	U	J3	0.000338	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
2,4-Dinitrotoluene	U	J3	0.00165	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
2,6-Dinitrotoluene	U	J3	0.000279	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
Fluoranthene	U		0.000310	0.00100	0.00100	1	10/31/2019 02:37	WG1371928
Fluorene	U	J3	0.000323	0.00100	0.00100	1	10/31/2019 02:37	WG1371928
Hexachlorobenzene	U	J3	0.000341	0.00100	0.00100	1	10/31/2019 02:37	WG1371928
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
Hexachloroethane	U		0.000365	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	10/31/2019 02:37	WG1371928
Isophorone	U		0.000272	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	10/31/2019 02:37	WG1371928
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	10/31/2019 02:37	WG1371928
Naphthalene	U		0.000372	0.00100	0.00100	1	10/31/2019 02:37	WG1371928
Nitrobenzene	U		0.000367	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
n-Nitrosodiphenylamine	U	J3	0.00119	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
Phenanthrene	U		0.000366	0.00100	0.00100	1	10/31/2019 02:37	WG1371928
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	10/31/2019 02:37	WG1371928
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	10/31/2019 02:37	WG1371928
Di-n-butyl phthalate	0.000267	J	0.000266	0.00300	0.00300	1	10/31/2019 02:37	WG1371928
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	10/31/2019 02:37	WG1371928
Dimethyl phthalate	U	J3	0.000283	0.00300	0.00300	1	10/31/2019 02:37	WG1371928
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	10/31/2019 02:37	WG1371928
Pyrene	U		0.000330	0.00100	0.00100	1	10/31/2019 02:37	WG1371928
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
4,6-Dinitro-2-methylphenol	U	J3	0.00262	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
2,4-Dinitrophenol	U	J3	0.00325	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
2-Nitroaniline	U	J3	0.00190	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
2-Methylphenol	U		0.000312	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	10/31/2019 02:37	WG1371928

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
Phenol	U		0.000334	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	10/31/2019 02:37	WG1371928
(S) 2-Fluorophenol	*31.0*				*10.0-120*		*10/31/2019 02:37*	WG1371928
(S) Phenol-d5	*19.2*				*10.0-120*		*10/31/2019 02:37*	WG1371928
(S) Nitrobenzene-d5	*44.3*				*10.0-127*		*10/31/2019 02:37*	WG1371928
(S) 2-Fluorobiphenyl	*54.0*				*10.0-130*		*10/31/2019 02:37*	WG1371928
(S) 2,4,6-Tribromophenol	*57.1*				*10.0-155*		*10/31/2019 02:37*	WG1371928
(S) p-Terphenyl-d14	*65.1*				*10.0-128*		*10/31/2019 02:37*	WG1371928

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	1.49		0.0197	0.100	0.100	1	10/31/2019 20:58	WG1371687

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	29.8		0.0519	1.00	1.00	1	10/28/2019 20:33	WG1370818
Fluoride	0.648		0.00990	0.100	0.100	1	10/28/2019 20:33	WG1370818
Sulfate	75.4		0.0774	5.00	5.00	1	10/28/2019 20:33	WG1370818

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	403		2.82	10.0	10.0	1	10/27/2019 16:22	WG1370219

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	2.62		0.0197	0.100	0.100	1	10/31/2019 20:59	WG1371687

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	75.6		0.0519	1.00	1.00	1	10/28/2019 21:26	WG1370818
Fluoride	1.10		0.00990	0.100	0.100	1	10/28/2019 21:26	WG1370818
Sulfate	55.0		0.0774	5.00	5.00	1	10/28/2019 21:26	WG1370818

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	0.0000637	B J	0.0000490	0.000200	0.000200	1	10/27/2019 18:51	WG1369904

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.145	J	0.0126	0.200	0.200	1	10/30/2019 17:13	WG1370033

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	10/31/2019 15:53	WG1370036
Arsenic,Dissolved	0.00478		0.000250	0.00200	0.00200	1	10/31/2019 15:53	WG1370036
Barium,Dissolved	0.107		0.000360	0.00500	0.00500	1	10/31/2019 15:53	WG1370036
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	10/31/2019 15:53	WG1370036
Chromium,Dissolved	0.00301	B	0.000540	0.00200	0.00200	1	10/31/2019 15:53	WG1370036
Copper,Dissolved	0.00323	B J	0.000520	0.00500	0.00500	1	10/31/2019 15:53	WG1370036
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	10/31/2019 15:53	WG1370036
Iron,Dissolved	U		0.0150	0.100	0.100	1	10/31/2019 15:53	WG1370036
Lead,Dissolved	0.000333	J	0.000240	0.00200	0.00200	1	10/31/2019 15:53	WG1370036
Manganese,Dissolved	U		0.000250	0.00500	0.00500	1	10/31/2019 15:53	WG1370036
Molybdenum,Dissolved	0.00302	J	0.000140	0.00500	0.00500	1	10/31/2019 15:53	WG1370036
Nickel,Dissolved	0.00172	J	0.000350	0.00200	0.00200	1	10/31/2019 15:53	WG1370036
Selenium,Dissolved	0.00272	B	0.000380	0.00200	0.00200	1	10/31/2019 15:53	WG1370036
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	10/31/2019 15:53	WG1370036
Uranium,Dissolved	0.00167	J	0.000330	0.0100	0.0100	1	10/31/2019 15:53	WG1370036
Zinc,Dissolved	0.00736	J	0.00256	0.0250	0.0250	1	10/31/2019 15:53	WG1370036

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 03:46	WG1373881
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 03:46	WG1373881
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	11/02/2019 03:46	WG1373881
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 03:46	WG1373881
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 03:46	WG1373881
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 03:46	WG1373881

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 03:46	WG1373881
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 03:46	WG1373881
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 03:46	WG1373881
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/05/2019 23:26	WG1375560
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 03:46	WG1373881
Chlorodibromomethane	U	J4	0.000327	0.00100	0.00100	1	11/02/2019 03:46	WG1373881
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 03:46	WG1373881
Chloroform	0.000574	J	0.000324	0.00500	0.00500	1	11/02/2019 03:46	WG1373881
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 03:46	WG1373881
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 03:46	WG1373881
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 03:46	WG1373881
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 03:46	WG1373881
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 03:46	WG1373881
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 03:46	WG1373881
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 03:46	WG1373881
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 03:46	WG1373881
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 03:46	WG1373881
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 03:46	WG1373881
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 03:46	WG1373881
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 03:46	WG1373881
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 03:46	WG1373881
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 03:46	WG1373881
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 03:46	WG1373881
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 03:46	WG1373881
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 03:46	WG1373881
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 03:46	WG1373881
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 03:46	WG1373881
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 03:46	WG1373881
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 03:46	WG1373881
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 03:46	WG1373881
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 03:46	WG1373881
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 03:46	WG1373881
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 03:46	WG1373881
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 03:46	WG1373881
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 03:46	WG1373881
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 03:46	WG1373881
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 03:46	WG1373881
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 03:46	WG1373881
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 03:46	WG1373881
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 03:46	WG1373881
(S) Toluene-d8	*110*				*80.0-120*		*11/02/2019 03:46*	WG1373881
(S) Toluene-d8	*92.0*				*80.0-120*		*11/05/2019 23:26*	WG1375560
(S) 4-Bromofluorobenzene	*110*				*77.0-126*		*11/02/2019 03:46*	WG1373881
(S) 4-Bromofluorobenzene	*93.8*				*77.0-126*		*11/05/2019 23:26*	WG1375560
(S) 1,2-Dichloroethane-d4	*107*				*70.0-130*		*11/02/2019 03:46*	WG1373881
(S) 1,2-Dichloroethane-d4	*90.7*				*70.0-130*		*11/05/2019 23:26*	WG1375560

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U	J3	0.000316	0.00100	0.00100	1	10/31/2019 02:59	WG1371928
Acenaphthylene	U	J3	0.000309	0.00100	0.00100	1	10/31/2019 02:59	WG1371928
Acetophenone	U		0.00247	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
Anthracene	U	J3	0.000291	0.00100	0.00100	1	10/31/2019 02:59	WG1371928
Atrazine	U		0.000260	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	10/31/2019 02:59	WG1371928

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzaldehyde	U		0.00140	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	10/31/2019 02:59	WG1371928
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	10/31/2019 02:59	WG1371928
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	10/31/2019 02:59	WG1371928
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	10/31/2019 02:59	WG1371928
Biphenyl	U		0.000325	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
4-Bromophenyl-phenylether	U	J3	0.000335	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	10/31/2019 02:59	WG1371928
4-Chlorophenyl-phenylether	U	J3	0.000303	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
Caprolactam	U		0.00259	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
Carbazole	U		0.000260	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
Chrysene	U		0.000332	0.00100	0.00100	1	10/31/2019 02:59	WG1371928
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	10/31/2019 02:59	WG1371928
Dibenzofuran	U	J3	0.000338	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
2,4-Dinitrotoluene	U	J3	0.00165	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
2,6-Dinitrotoluene	U	J3	0.000279	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
Fluoranthene	U		0.000310	0.00100	0.00100	1	10/31/2019 02:59	WG1371928
Fluorene	U	J3	0.000323	0.00100	0.00100	1	10/31/2019 02:59	WG1371928
Hexachlorobenzene	U	J3	0.000341	0.00100	0.00100	1	10/31/2019 02:59	WG1371928
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
Hexachloroethane	U		0.000365	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	10/31/2019 02:59	WG1371928
Isophorone	U		0.000272	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	10/31/2019 02:59	WG1371928
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	10/31/2019 02:59	WG1371928
Naphthalene	U		0.000372	0.00100	0.00100	1	10/31/2019 02:59	WG1371928
Nitrobenzene	U		0.000367	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
n-Nitrosodiphenylamine	U	J3	0.00119	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
Phenanthrene	U		0.000366	0.00100	0.00100	1	10/31/2019 02:59	WG1371928
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	10/31/2019 02:59	WG1371928
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	10/31/2019 02:59	WG1371928
Di-n-butyl phthalate	U		0.000266	0.00300	0.00300	1	10/31/2019 02:59	WG1371928
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	10/31/2019 02:59	WG1371928
Dimethyl phthalate	U	J3	0.000283	0.00300	0.00300	1	10/31/2019 02:59	WG1371928
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	10/31/2019 02:59	WG1371928
Pyrene	U		0.000330	0.00100	0.00100	1	10/31/2019 02:59	WG1371928
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
4,6-Dinitro-2-methylphenol	U	J3	0.00262	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
2,4-Dinitrophenol	U	J3	0.00325	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
2-Nitroaniline	U	J3	0.00190	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
2-Methylphenol	U		0.000312	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	10/31/2019 02:59	WG1371928

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
Phenol	0.000493	J	0.000334	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	10/31/2019 02:59	WG1371928
(S) 2-Fluorophenol	*40.0*				*10.0-120*		*10/31/2019 02:59*	WG1371928
(S) Phenol-d5	*25.5*				*10.0-120*		*10/31/2019 02:59*	WG1371928
(S) Nitrobenzene-d5	*52.2*				*10.0-127*		*10/31/2019 02:59*	WG1371928
(S) 2-Fluorobiphenyl	*62.6*				*10.0-130*		*10/31/2019 02:59*	WG1371928
(S) 2,4,6-Tribromophenol	*67.6*				*10.0-155*		*10/31/2019 02:59*	WG1371928
(S) p-Terphenyl-d14	*63.2*				*10.0-128*		*10/31/2019 02:59*	WG1371928

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	335		2.82	10.0	10.0	1	10/27/2019 16:22	WG1370219

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	259		2.71	20.0	20.0	1	10/31/2019 00:12	WG1371212

Sample Narrative:

L1153940-05 WG1371212: Endpoint pH 4.5 headspace

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	2.04		0.0197	0.100	0.100	1	10/31/2019 21:01	WG1371687

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	12.9		0.0519	1.00	1.00	1	10/28/2019 21:39	WG1370818
Fluoride	1.30		0.00990	0.100	0.100	1	10/28/2019 21:39	WG1370818
Sulfate	25.6		0.0774	5.00	5.00	1	10/28/2019 21:39	WG1370818

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	0.0000584	B J	0.0000490	0.000200	0.000200	1	10/27/2019 18:53	WG1369904

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.0517	J	0.0126	0.200	0.200	1	10/30/2019 14:49	WG1370034

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	10/31/2019 15:57	WG1370036
Arsenic,Dissolved	0.00370		0.000250	0.00200	0.00200	1	10/31/2019 15:57	WG1370036
Barium,Dissolved	0.110		0.000360	0.00500	0.00500	1	10/31/2019 15:57	WG1370036
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	10/31/2019 15:57	WG1370036
Chromium,Dissolved	U		0.000540	0.00200	0.00200	1	10/31/2019 15:57	WG1370036
Copper,Dissolved	0.00242	B J	0.000520	0.00500	0.00500	1	10/31/2019 15:57	WG1370036
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	10/31/2019 15:57	WG1370036
Iron,Dissolved	U		0.0150	0.100	0.100	1	10/31/2019 15:57	WG1370036
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	10/31/2019 15:57	WG1370036
Manganese,Dissolved	U		0.000250	0.00500	0.00500	1	10/31/2019 15:57	WG1370036
Molybdenum,Dissolved	0.00260	J	0.000140	0.00500	0.00500	1	10/31/2019 15:57	WG1370036
Nickel,Dissolved	0.00131	J	0.000350	0.00200	0.00200	1	10/31/2019 15:57	WG1370036
Selenium,Dissolved	0.000554	B J	0.000380	0.00200	0.00200	1	10/31/2019 15:57	WG1370036
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	10/31/2019 15:57	WG1370036
Uranium,Dissolved	0.00152	J	0.000330	0.0100	0.0100	1	10/31/2019 15:57	WG1370036
Zinc,Dissolved	0.00812	J	0.00256	0.0250	0.0250	1	10/31/2019 15:57	WG1370036

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0494	B J	0.0314	0.100	0.100	1	11/02/2019 19:39	WG1373783
(S) a,a,a-Trifluorotoluene(FID)	*106*				*78.0-120*		*11/02/2019 19:39*	WG1373783

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 04:07	WG1373881
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	11/02/2019 04:07	WG1373881
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 04:07	WG1373881
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/05/2019 23:46	WG1375560
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
Chlorodibromomethane	U	J4	0.000327	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 04:07	WG1373881
Chloroform	U		0.000324	0.00500	0.00500	1	11/02/2019 04:07	WG1373881
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 04:07	WG1373881
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 04:07	WG1373881
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 04:07	WG1373881
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 04:07	WG1373881
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 04:07	WG1373881
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 04:07	WG1373881
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 04:07	WG1373881
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 04:07	WG1373881
(S) Toluene-d8	*112*				*80.0-120*		*11/02/2019 04:07*	WG1373881
(S) Toluene-d8	*94.9*				*80.0-120*		*11/05/2019 23:46*	WG1375560
(S) 4-Bromofluorobenzene	*110*				*77.0-126*		*11/02/2019 04:07*	WG1373881
(S) 4-Bromofluorobenzene	*94.9*				*77.0-126*		*11/05/2019 23:46*	WG1375560

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
(S) 1,2-Dichloroethane-d4	*108*				*70.0-130*		*11/02/2019 04:07*	WG1373881
(S) 1,2-Dichloroethane-d4	*91.8*				*70.0-130*		*11/05/2019 23:46*	WG1375560

Semi-Volatile Organic Compounds (GC) by Method 3511/8015

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	0.0620	J	0.0247	0.100	0.100	1	10/27/2019 23:47	WG1370005
(S) o-Terphenyl	*73.7*				*31.0-160*		*10/27/2019 23:47*	WG1370005

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U	J3	0.000316	0.00100	0.00100	1	10/31/2019 03:21	WG1371928
Acenaphthylene	U	J3	0.000309	0.00100	0.00100	1	10/31/2019 03:21	WG1371928
Acetophenone	U		0.00247	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
Anthracene	U	J3	0.000291	0.00100	0.00100	1	10/31/2019 03:21	WG1371928
Atrazine	U		0.000260	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	10/31/2019 03:21	WG1371928
Benzaldehyde	U		0.00140	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	10/31/2019 03:21	WG1371928
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	10/31/2019 03:21	WG1371928
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	10/31/2019 03:21	WG1371928
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	10/31/2019 03:21	WG1371928
Biphenyl	U		0.000325	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
4-Bromophenyl-phenylether	U	J3	0.000335	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	10/31/2019 03:21	WG1371928
4-Chlorophenyl-phenylether	U	J3	0.000303	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
Caprolactam	U		0.00259	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
Carbazole	U		0.000260	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
Chrysene	U		0.000332	0.00100	0.00100	1	10/31/2019 03:21	WG1371928
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	10/31/2019 03:21	WG1371928
Dibenzofuran	U	J3	0.000338	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
2,4-Dinitrotoluene	U	J3	0.00165	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
2,6-Dinitrotoluene	U	J3	0.000279	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
Fluoranthene	U		0.000310	0.00100	0.00100	1	10/31/2019 03:21	WG1371928
Fluorene	U	J3	0.000323	0.00100	0.00100	1	10/31/2019 03:21	WG1371928
Hexachlorobenzene	U	J3	0.000341	0.00100	0.00100	1	10/31/2019 03:21	WG1371928
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
Hexachloroethane	U		0.000365	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	10/31/2019 03:21	WG1371928
Isophorone	U		0.000272	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	10/31/2019 03:21	WG1371928
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	10/31/2019 03:21	WG1371928
Naphthalene	U		0.000372	0.00100	0.00100	1	10/31/2019 03:21	WG1371928
Nitrobenzene	U		0.000367	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
n-Nitrosodiphenylamine	U	J3	0.00119	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
Phenanthrene	U		0.000366	0.00100	0.00100	1	10/31/2019 03:21	WG1371928
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	10/31/2019 03:21	WG1371928
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	10/31/2019 03:21	WG1371928

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Di-n-butyl phthalate	U		0.000266	0.00300	0.00300	1	10/31/2019 03:21	WG1371928
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	10/31/2019 03:21	WG1371928
Dimethyl phthalate	U	J3	0.000283	0.00300	0.00300	1	10/31/2019 03:21	WG1371928
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	10/31/2019 03:21	WG1371928
Pyrene	U		0.000330	0.00100	0.00100	1	10/31/2019 03:21	WG1371928
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
4,6-Dinitro-2-methylphenol	U	J3	0.00262	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
2,4-Dinitrophenol	U	J3	0.00325	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
2-Nitroaniline	U	J3	0.00190	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
2-Methylphenol	U		0.000312	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
Phenol	0.000880	J	0.000334	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	10/31/2019 03:21	WG1371928
(S) 2-Fluorophenol	*27.3*				*10.0-120*		*10/31/2019 03:21*	WG1371928
(S) Phenol-d5	*16.5*				*10.0-120*		*10/31/2019 03:21*	WG1371928
(S) Nitrobenzene-d5	*41.9*				*10.0-127*		*10/31/2019 03:21*	WG1371928
(S) 2-Fluorobiphenyl	*50.3*				*10.0-130*		*10/31/2019 03:21*	WG1371928
(S) 2,4,6-Tribromophenol	*56.0*				*10.0-155*		*10/31/2019 03:21*	WG1371928
(S) p-Terphenyl-d14	*59.6*				*10.0-128*		*10/31/2019 03:21*	WG1371928

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	438		2.82	10.0	10.0	1	10/27/2019 16:22	WG1370219

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	2.48		0.0197	0.100	0.100	1	10/31/2019 22:13	WG1371687

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	50.0		0.0519	1.00	1.00	1	10/28/2019 21:52	WG1370818
Fluoride	0.982		0.00990	0.100	0.100	1	10/28/2019 21:52	WG1370818
Sulfate	73.1		0.0774	5.00	5.00	1	10/28/2019 21:52	WG1370818

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	0.0000653	B J	0.0000490	0.000200	0.000200	1	10/27/2019 18:55	WG1369904

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.156	J	0.0126	0.200	0.200	1	10/30/2019 14:51	WG1370034

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	10/31/2019 16:10	WG1370036
Arsenic,Dissolved	0.00739		0.000250	0.00200	0.00200	1	10/31/2019 16:10	WG1370036
Barium,Dissolved	0.143		0.000360	0.00500	0.00500	1	10/31/2019 16:10	WG1370036
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	10/31/2019 16:10	WG1370036
Chromium,Dissolved	U		0.000540	0.00200	0.00200	1	10/31/2019 16:10	WG1370036
Copper,Dissolved	U		0.000520	0.00500	0.00500	1	10/31/2019 16:10	WG1370036
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	10/31/2019 16:10	WG1370036
Iron,Dissolved	U		0.0150	0.100	0.100	1	10/31/2019 16:10	WG1370036
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	10/31/2019 16:10	WG1370036
Manganese,Dissolved	0.00807		0.000250	0.00500	0.00500	1	10/31/2019 16:10	WG1370036
Molybdenum,Dissolved	0.00276	J	0.000140	0.00500	0.00500	1	10/31/2019 16:10	WG1370036
Nickel,Dissolved	0.000391	J	0.000350	0.00200	0.00200	1	10/31/2019 16:10	WG1370036
Selenium,Dissolved	0.00394	B	0.000380	0.00200	0.00200	1	10/31/2019 16:10	WG1370036
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	10/31/2019 16:10	WG1370036
Uranium,Dissolved	0.00335	J	0.000330	0.0100	0.0100	1	10/31/2019 16:10	WG1370036
Zinc,Dissolved	0.00752	J	0.00256	0.0250	0.0250	1	10/31/2019 16:10	WG1370036

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 04:27	WG1373881
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 04:27	WG1373881
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	11/02/2019 04:27	WG1373881
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 04:27	WG1373881
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 04:27	WG1373881
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 04:27	WG1373881

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 04:27	WG1373881
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 04:27	WG1373881
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 04:27	WG1373881
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/06/2019 00:06	WG1375560
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 04:27	WG1373881
Chlorodibromomethane	U	J4	0.000327	0.00100	0.00100	1	11/02/2019 04:27	WG1373881
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 04:27	WG1373881
Chloroform	U		0.000324	0.00500	0.00500	1	11/02/2019 04:27	WG1373881
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 04:27	WG1373881
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 04:27	WG1373881
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 04:27	WG1373881
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 04:27	WG1373881
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 04:27	WG1373881
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 04:27	WG1373881
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 04:27	WG1373881
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 04:27	WG1373881
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 04:27	WG1373881
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 04:27	WG1373881
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 04:27	WG1373881
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 04:27	WG1373881
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 04:27	WG1373881
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 04:27	WG1373881
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 04:27	WG1373881
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 04:27	WG1373881
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 04:27	WG1373881
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 04:27	WG1373881
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 04:27	WG1373881
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 04:27	WG1373881
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 04:27	WG1373881
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 04:27	WG1373881
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 04:27	WG1373881
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 04:27	WG1373881
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 04:27	WG1373881
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 04:27	WG1373881
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 04:27	WG1373881
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 04:27	WG1373881
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 04:27	WG1373881
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 04:27	WG1373881
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 04:27	WG1373881
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 04:27	WG1373881
(S) Toluene-d8	*110*				*80.0-120*		*11/02/2019 04:27*	WG1373881
(S) Toluene-d8	*93.3*				*80.0-120*		*11/06/2019 00:06*	WG1375560
(S) 4-Bromofluorobenzene	*110*				*77.0-126*		*11/02/2019 04:27*	WG1373881
(S) 4-Bromofluorobenzene	*92.8*				*77.0-126*		*11/06/2019 00:06*	WG1375560
(S) 1,2-Dichloroethane-d4	*105*				*70.0-130*		*11/02/2019 04:27*	WG1373881
(S) 1,2-Dichloroethane-d4	*91.7*				*70.0-130*		*11/06/2019 00:06*	WG1375560

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U	J3	0.000316	0.00100	0.00100	1	10/31/2019 03:43	WG1371928
Acenaphthylene	U	J3	0.000309	0.00100	0.00100	1	10/31/2019 03:43	WG1371928
Acetophenone	U		0.00247	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
Anthracene	U	J3	0.000291	0.00100	0.00100	1	10/31/2019 03:43	WG1371928
Atrazine	U		0.000260	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	10/31/2019 03:43	WG1371928

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzaldehyde	U		0.00140	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	10/31/2019 03:43	WG1371928
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	10/31/2019 03:43	WG1371928
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	10/31/2019 03:43	WG1371928
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	10/31/2019 03:43	WG1371928
Biphenyl	U		0.000325	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
4-Bromophenyl-phenylether	U	J3	0.000335	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	10/31/2019 03:43	WG1371928
4-Chlorophenyl-phenylether	U	J3	0.000303	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
Caprolactam	U		0.00259	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
Carbazole	U		0.000260	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
Chrysene	U		0.000332	0.00100	0.00100	1	10/31/2019 03:43	WG1371928
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	10/31/2019 03:43	WG1371928
Dibenzofuran	U	J3	0.000338	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
2,4-Dinitrotoluene	U	J3	0.00165	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
2,6-Dinitrotoluene	U	J3	0.000279	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
Fluoranthene	U		0.000310	0.00100	0.00100	1	10/31/2019 03:43	WG1371928
Fluorene	U	J3	0.000323	0.00100	0.00100	1	10/31/2019 03:43	WG1371928
Hexachlorobenzene	U	J3	0.000341	0.00100	0.00100	1	10/31/2019 03:43	WG1371928
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
Hexachloroethane	U		0.000365	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	10/31/2019 03:43	WG1371928
Isophorone	U		0.000272	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	10/31/2019 03:43	WG1371928
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	10/31/2019 03:43	WG1371928
Naphthalene	U		0.000372	0.00100	0.00100	1	10/31/2019 03:43	WG1371928
Nitrobenzene	U		0.000367	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
n-Nitrosodiphenylamine	U	J3	0.00119	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
Phenanthrene	U		0.000366	0.00100	0.00100	1	10/31/2019 03:43	WG1371928
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	10/31/2019 03:43	WG1371928
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	10/31/2019 03:43	WG1371928
Di-n-butyl phthalate	U		0.000266	0.00300	0.00300	1	10/31/2019 03:43	WG1371928
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	10/31/2019 03:43	WG1371928
Dimethyl phthalate	U	J3	0.000283	0.00300	0.00300	1	10/31/2019 03:43	WG1371928
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	10/31/2019 03:43	WG1371928
Pyrene	U		0.000330	0.00100	0.00100	1	10/31/2019 03:43	WG1371928
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
4,6-Dinitro-2-methylphenol	U	J3	0.00262	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
2,4-Dinitrophenol	U	J3	0.00325	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
2-Nitroaniline	U	J3	0.00190	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
2-Methylphenol	U		0.000312	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	10/31/2019 03:43	WG1371928

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
Phenol	U		0.000334	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	10/31/2019 03:43	WG1371928
(S) 2-Fluorophenol	*28.2*				*10.0-120*		*10/31/2019 03:43*	WG1371928
(S) Phenol-d5	*16.0*				*10.0-120*		*10/31/2019 03:43*	WG1371928
(S) Nitrobenzene-d5	*45.9*				*10.0-127*		*10/31/2019 03:43*	WG1371928
(S) 2-Fluorobiphenyl	*56.5*				*10.0-130*		*10/31/2019 03:43*	WG1371928
(S) 2,4,6-Tribromophenol	*59.3*				*10.0-155*		*10/31/2019 03:43*	WG1371928
(S) p-Terphenyl-d14	*71.3*				*10.0-128*		*10/31/2019 03:43*	WG1371928

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	765		3.75	13.3	13.3	1	10/27/2019 16:22	WG1370219

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	5.98		0.0985	0.100	0.500	5	10/31/2019 22:15	WG1371687

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	169		0.260	1.00	5.00	5	10/28/2019 22:44	WG1370818
Fluoride	0.669		0.00990	0.100	0.100	1	10/28/2019 22:05	WG1370818
Sulfate	87.2		0.0774	5.00	5.00	1	10/28/2019 22:05	WG1370818

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	0.0000632	B J	0.0000490	0.000200	0.000200	1	10/27/2019 18:57	WG1369904

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.204		0.0126	0.200	0.200	1	10/30/2019 14:54	WG1370034

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	10/31/2019 16:14	WG1370036
Arsenic,Dissolved	0.00700		0.000250	0.00200	0.00200	1	10/31/2019 16:14	WG1370036
Barium,Dissolved	0.190		0.000360	0.00500	0.00500	1	10/31/2019 16:14	WG1370036
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	10/31/2019 16:14	WG1370036
Chromium,Dissolved	U		0.000540	0.00200	0.00200	1	10/31/2019 16:14	WG1370036
Copper,Dissolved	0.00143	B J	0.000520	0.00500	0.00500	1	10/31/2019 16:14	WG1370036
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	10/31/2019 16:14	WG1370036
Iron,Dissolved	U		0.0150	0.100	0.100	1	10/31/2019 16:14	WG1370036
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	10/31/2019 16:14	WG1370036
Manganese,Dissolved	U		0.000250	0.00500	0.00500	1	10/31/2019 16:14	WG1370036
Molybdenum,Dissolved	0.00108	J	0.000140	0.00500	0.00500	1	10/31/2019 16:14	WG1370036
Nickel,Dissolved	0.00560		0.000350	0.00200	0.00200	1	10/31/2019 16:14	WG1370036
Selenium,Dissolved	0.00214	B	0.000380	0.00200	0.00200	1	10/31/2019 16:14	WG1370036
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	10/31/2019 16:14	WG1370036
Uranium,Dissolved	0.00473	J	0.000330	0.0100	0.0100	1	10/31/2019 16:14	WG1370036
Zinc,Dissolved	0.0210	J	0.00256	0.0250	0.0250	1	10/31/2019 16:14	WG1370036

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 04:47	WG1373881
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 04:47	WG1373881
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	11/02/2019 04:47	WG1373881
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 04:47	WG1373881
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 04:47	WG1373881
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 04:47	WG1373881

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 04:47	WG1373881
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 04:47	WG1373881
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 04:47	WG1373881
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/06/2019 14:53	WG1375969
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 04:47	WG1373881
Chlorodibromomethane	U	J4	0.000327	0.00100	0.00100	1	11/02/2019 04:47	WG1373881
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 04:47	WG1373881
Chloroform	U		0.000324	0.00500	0.00500	1	11/02/2019 04:47	WG1373881
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 04:47	WG1373881
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 04:47	WG1373881
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 04:47	WG1373881
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 04:47	WG1373881
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 04:47	WG1373881
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 04:47	WG1373881
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 04:47	WG1373881
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 04:47	WG1373881
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 04:47	WG1373881
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 04:47	WG1373881
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 04:47	WG1373881
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 04:47	WG1373881
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 04:47	WG1373881
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 04:47	WG1373881
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 04:47	WG1373881
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 04:47	WG1373881
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 04:47	WG1373881
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 04:47	WG1373881
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 04:47	WG1373881
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 04:47	WG1373881
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 04:47	WG1373881
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 04:47	WG1373881
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 04:47	WG1373881
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 04:47	WG1373881
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 04:47	WG1373881
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 04:47	WG1373881
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 04:47	WG1373881
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 04:47	WG1373881
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 04:47	WG1373881
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 04:47	WG1373881
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 04:47	WG1373881
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 04:47	WG1373881
(S) Toluene-d8	*109*				*80.0-120*		*11/02/2019 04:47*	WG1373881
(S) Toluene-d8	*104*				*80.0-120*		*11/06/2019 14:53*	WG1375969
(S) 4-Bromofluorobenzene	*111*				*77.0-126*		*11/02/2019 04:47*	WG1373881
(S) 4-Bromofluorobenzene	*95.8*				*77.0-126*		*11/06/2019 14:53*	WG1375969
(S) 1,2-Dichloroethane-d4	*108*				*70.0-130*		*11/02/2019 04:47*	WG1373881
(S) 1,2-Dichloroethane-d4	*121*				*70.0-130*		*11/06/2019 14:53*	WG1375969

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	5.70		0.0985	0.100	0.500	5	10/31/2019 22:16	WG1371687

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	220		0.260	1.00	5.00	5	10/28/2019 23:10	WG1370818
Fluoride	0.291		0.00990	0.100	0.100	1	10/28/2019 22:57	WG1370818
Sulfate	108		0.387	5.00	25.0	5	10/28/2019 23:10	WG1370818

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	1.55		0.0197	0.100	0.100	1	10/31/2019 22:18	WG1371687

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	27.4		0.0519	1.00	1.00	1	10/28/2019 23:23	WG1370818
Fluoride	1.07		0.00990	0.100	0.100	1	10/28/2019 23:23	WG1370818
Sulfate	67.6		0.0774	5.00	5.00	1	10/28/2019 23:23	WG1370818

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	1330		5.64	20.0	20.0	1	10/27/2019 16:22	WG1370219

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	262		2.71	20.0	20.0	1	10/31/2019 00:19	WG1371212

Sample Narrative:

L1153940-10 WG1371212: Endpoint pH 4.5 headspace

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	6.23		0.0985	0.100	0.500	5	10/31/2019 22:19	WG1371687

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	344		0.519	1.00	10.0	10	10/28/2019 23:49	WG1370818
Fluoride	0.574		0.00990	0.100	0.100	1	10/28/2019 23:36	WG1370818
Sulfate	130		0.774	5.00	50.0	10	10/28/2019 23:49	WG1370818

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	0.0000675	B J	0.0000490	0.000200	0.000200	1	10/27/2019 18:59	WG1369904

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.218		0.0126	0.200	0.200	1	10/30/2019 15:02	WG1370034

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	10/31/2019 16:17	WG1370036
Arsenic,Dissolved	0.00249		0.000250	0.00200	0.00200	1	10/31/2019 16:17	WG1370036
Barium,Dissolved	0.187		0.000360	0.00500	0.00500	1	10/31/2019 16:17	WG1370036
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	10/31/2019 16:17	WG1370036
Chromium,Dissolved	0.00179	B J	0.000540	0.00200	0.00200	1	10/31/2019 16:17	WG1370036
Copper,Dissolved	0.0435		0.000520	0.00500	0.00500	1	10/31/2019 16:17	WG1370036
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	10/31/2019 16:17	WG1370036
Iron,Dissolved	U		0.0150	0.100	0.100	1	10/31/2019 16:17	WG1370036
Lead,Dissolved	0.00131	J	0.000240	0.00200	0.00200	1	10/31/2019 16:17	WG1370036
Manganese,Dissolved	U		0.000250	0.00500	0.00500	1	10/31/2019 16:17	WG1370036
Molybdenum,Dissolved	0.000953	J	0.000140	0.00500	0.00500	1	10/31/2019 16:17	WG1370036
Nickel,Dissolved	0.00148	J	0.000350	0.00200	0.00200	1	10/31/2019 16:17	WG1370036
Selenium,Dissolved	0.00289	B	0.000380	0.00200	0.00200	1	10/31/2019 16:17	WG1370036
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	10/31/2019 16:17	WG1370036
Uranium,Dissolved	0.00537	J	0.000330	0.0100	0.0100	1	10/31/2019 16:17	WG1370036
Zinc,Dissolved	0.126		0.00256	0.0250	0.0250	1	10/31/2019 16:17	WG1370036

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 01:53	WG1373882
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	11/02/2019 01:53	WG1373882
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 01:53	WG1373882
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 01:53	WG1373882
Chloroform	0.000614	J	0.000324	0.00500	0.00500	1	11/02/2019 01:53	WG1373882
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 01:53	WG1373882
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 01:53	WG1373882
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 01:53	WG1373882
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 01:53	WG1373882
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 01:53	WG1373882
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 01:53	WG1373882
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 01:53	WG1373882
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 01:53	WG1373882
(S) Toluene-d8	*93.0*				*80.0-120*		*11/02/2019 01:53*	WG1373882
(S) 4-Bromofluorobenzene	*92.9*				*77.0-126*		*11/02/2019 01:53*	WG1373882
(S) 1,2-Dichloroethane-d4	*94.0*				*70.0-130*		*11/02/2019 01:53*	WG1373882

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acenaphthene	U	J3	0.000316	0.00100	0.00100	1	10/31/2019 04:27	WG1371928
Acenaphthylene	U	J3	0.000309	0.00100	0.00100	1	10/31/2019 04:27	WG1371928
Acetophenone	U		0.00247	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
Anthracene	U	J3	0.000291	0.00100	0.00100	1	10/31/2019 04:27	WG1371928
Atrazine	U		0.000260	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	10/31/2019 04:27	WG1371928
Benzaldehyde	U		0.00140	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	10/31/2019 04:27	WG1371928
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	10/31/2019 04:27	WG1371928
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	10/31/2019 04:27	WG1371928
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	10/31/2019 04:27	WG1371928
Biphenyl	U		0.000325	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
4-Bromophenyl-phenylether	U	J3	0.000335	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	10/31/2019 04:27	WG1371928
4-Chlorophenyl-phenylether	U	J3	0.000303	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
Caprolactam	U		0.00259	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
Carbazole	U		0.000260	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
Chrysene	U		0.000332	0.00100	0.00100	1	10/31/2019 04:27	WG1371928
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	10/31/2019 04:27	WG1371928
Dibenzofuran	U	J3	0.000338	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
2,4-Dinitrotoluene	U	J3	0.00165	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
2,6-Dinitrotoluene	U	J3	0.000279	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
Fluoranthene	U		0.000310	0.00100	0.00100	1	10/31/2019 04:27	WG1371928
Fluorene	U	J3	0.000323	0.00100	0.00100	1	10/31/2019 04:27	WG1371928
Hexachlorobenzene	U	J3	0.000341	0.00100	0.00100	1	10/31/2019 04:27	WG1371928
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
Hexachloroethane	U		0.000365	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	10/31/2019 04:27	WG1371928
Isophorone	U		0.000272	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	10/31/2019 04:27	WG1371928
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	10/31/2019 04:27	WG1371928
Naphthalene	U		0.000372	0.00100	0.00100	1	10/31/2019 04:27	WG1371928
Nitrobenzene	U		0.000367	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
n-Nitrosodiphenylamine	U	J3	0.00119	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
Phenanthrene	U		0.000366	0.00100	0.00100	1	10/31/2019 04:27	WG1371928
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	10/31/2019 04:27	WG1371928
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	10/31/2019 04:27	WG1371928
Di-n-butyl phthalate	0.000308	J	0.000266	0.00300	0.00300	1	10/31/2019 04:27	WG1371928
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	10/31/2019 04:27	WG1371928
Dimethyl phthalate	U	J3	0.000283	0.00300	0.00300	1	10/31/2019 04:27	WG1371928
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	10/31/2019 04:27	WG1371928
Pyrene	U		0.000330	0.00100	0.00100	1	10/31/2019 04:27	WG1371928
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
4,6-Dinitro-2-methylphenol	U	J3	0.00262	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
2,4-Dinitrophenol	U	J3	0.00325	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	10/31/2019 04:27	WG1371928

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
2-Nitroaniline	U	J3	0.00190	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
2-Methylphenol	U		0.000312	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
Phenol	0.000390	J	0.000334	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	10/31/2019 04:27	WG1371928
(S) 2-Fluorophenol	*40.9*				*10.0-120*		*10/31/2019 04:27*	WG1371928
(S) Phenol-d5	*25.7*				*10.0-120*		*10/31/2019 04:27*	WG1371928
(S) Nitrobenzene-d5	*61.9*				*10.0-127*		*10/31/2019 04:27*	WG1371928
(S) 2-Fluorobiphenyl	*71.7*				*10.0-130*		*10/31/2019 04:27*	WG1371928
(S) 2,4,6-Tribromophenol	*72.5*				*10.0-155*		*10/31/2019 04:27*	WG1371928
(S) p-Terphenyl-d14	*70.0*				*10.0-128*		*10/31/2019 04:27*	WG1371928

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	1360		5.64	20.0	20.0	1	10/27/2019 16:22	WG1370219

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	4.02		0.0197	0.100	0.100	1	10/31/2019 22:21	WG1371687

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	354		0.519	1.00	10.0	10	10/29/2019 00:15	WG1370818
Fluoride	0.410		0.00990	0.100	0.100	1	10/29/2019 00:02	WG1370818
Sulfate	74.5		0.0774	5.00	5.00	1	10/29/2019 00:02	WG1370818

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	0.000152	B J	0.0000490	0.000200	0.000200	1	10/27/2019 19:01	WG1369904

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.262		0.0126	0.200	0.200	1	10/30/2019 15:05	WG1370034

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	10/31/2019 16:20	WG1370036
Arsenic,Dissolved	0.00205		0.000250	0.00200	0.00200	1	10/31/2019 16:20	WG1370036
Barium,Dissolved	0.225		0.000360	0.00500	0.00500	1	10/31/2019 16:20	WG1370036
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	10/31/2019 16:20	WG1370036
Chromium,Dissolved	0.00255	B	0.000540	0.00200	0.00200	1	10/31/2019 16:20	WG1370036
Copper,Dissolved	0.0104	B	0.000520	0.00500	0.00500	1	10/31/2019 16:20	WG1370036
Cobalt,Dissolved	0.000874	J	0.000260	0.00200	0.00200	1	10/31/2019 16:20	WG1370036
Iron,Dissolved	U		0.0150	0.100	0.100	1	10/31/2019 16:20	WG1370036
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	10/31/2019 16:20	WG1370036
Manganese,Dissolved	0.0508		0.000250	0.00500	0.00500	1	10/31/2019 16:20	WG1370036
Molybdenum,Dissolved	0.000608	J	0.000140	0.00500	0.00500	1	10/31/2019 16:20	WG1370036
Nickel,Dissolved	0.0127		0.000350	0.00200	0.00200	1	10/31/2019 16:20	WG1370036
Selenium,Dissolved	0.000645	B J	0.000380	0.00200	0.00200	1	10/31/2019 16:20	WG1370036
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	10/31/2019 16:20	WG1370036
Uranium,Dissolved	0.0102		0.000330	0.0100	0.0100	1	10/31/2019 16:20	WG1370036
Zinc,Dissolved	0.0184	J	0.00256	0.0250	0.0250	1	10/31/2019 16:20	WG1370036

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 02:13	WG1373882
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	11/02/2019 02:13	WG1373882
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 02:13	WG1373882
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 02:13	WG1373882

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 02:13	WG1373882
Chloroform	U		0.000324	0.00500	0.00500	1	11/02/2019 02:13	WG1373882
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 02:13	WG1373882
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 02:13	WG1373882
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 02:13	WG1373882
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 02:13	WG1373882
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 02:13	WG1373882
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 02:13	WG1373882
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 02:13	WG1373882
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 02:13	WG1373882
(S) Toluene-d8	*91.6*				*80.0-120*		*11/02/2019 02:13*	WG1373882
(S) 4-Bromofluorobenzene	*93.1*				*77.0-126*		*11/02/2019 02:13*	WG1373882
(S) 1,2-Dichloroethane-d4	*95.1*				*70.0-130*		*11/02/2019 02:13*	WG1373882

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acenaphthene	U	J3	0.000316	0.00100	0.00100	1	10/31/2019 04:05	WG1371928
Acenaphthylene	U	J3	0.000309	0.00100	0.00100	1	10/31/2019 04:05	WG1371928
Acetophenone	U		0.00247	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
Anthracene	U	J3	0.000291	0.00100	0.00100	1	10/31/2019 04:05	WG1371928
Atrazine	U		0.000260	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	10/31/2019 04:05	WG1371928
Benzaldehyde	U		0.00140	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	10/31/2019 04:05	WG1371928
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	10/31/2019 04:05	WG1371928

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	10/31/2019 04:05	WG1371928
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	10/31/2019 04:05	WG1371928
Biphenyl	U		0.000325	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
4-Bromophenyl-phenylether	U	J3	0.000335	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	10/31/2019 04:05	WG1371928
4-Chlorophenyl-phenylether	U	J3	0.000303	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
Caprolactam	U		0.00259	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
Carbazole	U		0.000260	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
Chrysene	U		0.000332	0.00100	0.00100	1	10/31/2019 04:05	WG1371928
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	10/31/2019 04:05	WG1371928
Dibenzofuran	U	J3	0.000338	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
2,4-Dinitrotoluene	U	J3	0.00165	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
2,6-Dinitrotoluene	U	J3	0.000279	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
Fluoranthene	U		0.000310	0.00100	0.00100	1	10/31/2019 04:05	WG1371928
Fluorene	U	J3	0.000323	0.00100	0.00100	1	10/31/2019 04:05	WG1371928
Hexachlorobenzene	U	J3	0.000341	0.00100	0.00100	1	10/31/2019 04:05	WG1371928
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
Hexachloroethane	U		0.000365	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	10/31/2019 04:05	WG1371928
Isophorone	U		0.000272	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	10/31/2019 04:05	WG1371928
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	10/31/2019 04:05	WG1371928
Naphthalene	U		0.000372	0.00100	0.00100	1	10/31/2019 04:05	WG1371928
Nitrobenzene	U		0.000367	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
n-Nitrosodiphenylamine	U	J3	0.00119	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
Phenanthrene	U		0.000366	0.00100	0.00100	1	10/31/2019 04:05	WG1371928
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	10/31/2019 04:05	WG1371928
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	10/31/2019 04:05	WG1371928
Di-n-butyl phthalate	0.000271	J	0.000266	0.00300	0.00300	1	10/31/2019 04:05	WG1371928
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	10/31/2019 04:05	WG1371928
Dimethyl phthalate	U	J3	0.000283	0.00300	0.00300	1	10/31/2019 04:05	WG1371928
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	10/31/2019 04:05	WG1371928
Pyrene	U		0.000330	0.00100	0.00100	1	10/31/2019 04:05	WG1371928
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
4,6-Dinitro-2-methylphenol	U	J3	0.00262	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
2,4-Dinitrophenol	U	J3	0.00325	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
2-Nitroaniline	U	J3	0.00190	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
2-Methylphenol	U		0.000312	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
Phenol	0.00164	J	0.000334	0.0100	0.0100	1	10/31/2019 04:05	WG1371928

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	10/31/2019 04:05	WG1371928
(S) 2-Fluorophenol	*34.7*				*10.0-120*		*10/31/2019 04:05*	WG1371928
(S) Phenol-d5	*22.6*				*10.0-120*		*10/31/2019 04:05*	WG1371928
(S) Nitrobenzene-d5	*53.4*				*10.0-127*		*10/31/2019 04:05*	WG1371928
(S) 2-Fluorobiphenyl	*65.5*				*10.0-130*		*10/31/2019 04:05*	WG1371928
(S) 2,4,6-Tribromophenol	*66.5*				*10.0-155*		*10/31/2019 04:05*	WG1371928
(S) p-Terphenyl-d14	*65.9*				*10.0-128*		*10/31/2019 04:05*	WG1371928

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	1840		5.64	20.0	20.0	1	10/27/2019 16:22	WG1370219

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	4.96		0.0197	0.100	0.100	1	10/31/2019 22:22	WG1371687

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	518		0.519	1.00	10.0	10	10/29/2019 00:42	WG1370818
Fluoride	0.873		0.00990	0.100	0.100	1	10/29/2019 00:29	WG1370818
Sulfate	61.1		0.0774	5.00	5.00	1	10/29/2019 00:29	WG1370818

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	0.0000617	B J	0.0000490	0.000200	0.000200	1	10/27/2019 19:03	WG1369904

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.181	J	0.0126	0.200	0.200	1	10/30/2019 15:07	WG1370034

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	10/31/2019 16:24	WG1370036
Arsenic,Dissolved	0.00248		0.000250	0.00200	0.00200	1	10/31/2019 16:24	WG1370036
Barium,Dissolved	0.332		0.000360	0.00500	0.00500	1	10/31/2019 16:24	WG1370036
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	10/31/2019 16:24	WG1370036
Chromium,Dissolved	U		0.000540	0.00200	0.00200	1	10/31/2019 16:24	WG1370036
Copper,Dissolved	U		0.000520	0.00500	0.00500	1	10/31/2019 16:24	WG1370036
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	10/31/2019 16:24	WG1370036
Iron,Dissolved	U		0.0150	0.100	0.100	1	10/31/2019 16:24	WG1370036
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	10/31/2019 16:24	WG1370036
Manganese,Dissolved	U		0.000250	0.00500	0.00500	1	10/31/2019 16:24	WG1370036
Molybdenum,Dissolved	0.00242	J	0.000140	0.00500	0.00500	1	10/31/2019 16:24	WG1370036
Nickel,Dissolved	U		0.000350	0.00200	0.00200	1	10/31/2019 16:24	WG1370036
Selenium,Dissolved	0.00219	B	0.000380	0.00200	0.00200	1	10/31/2019 16:24	WG1370036
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	10/31/2019 16:24	WG1370036
Uranium,Dissolved	0.00509	J	0.000330	0.0100	0.0100	1	10/31/2019 16:24	WG1370036
Zinc,Dissolved	U		0.00256	0.0250	0.0250	1	10/31/2019 16:24	WG1370036

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 02:33	WG1373882
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	11/02/2019 02:33	WG1373882
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 02:33	WG1373882
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 02:33	WG1373882

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 02:33	WG1373882
Chloroform	U		0.000324	0.00500	0.00500	1	11/02/2019 02:33	WG1373882
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 02:33	WG1373882
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 02:33	WG1373882
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 02:33	WG1373882
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 02:33	WG1373882
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 02:33	WG1373882
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 02:33	WG1373882
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 02:33	WG1373882
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 02:33	WG1373882
(S) Toluene-d8	*92.4*				*80.0-120*		*11/02/2019 02:33*	WG1373882
(S) 4-Bromofluorobenzene	*95.3*				*77.0-126*		*11/02/2019 02:33*	WG1373882
(S) 1,2-Dichloroethane-d4	*92.7*				*70.0-130*		*11/02/2019 02:33*	WG1373882

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U	J3	0.000316	0.00100	0.00100	1	10/31/2019 04:50	WG1371928
Acenaphthylene	U	J3	0.000309	0.00100	0.00100	1	10/31/2019 04:50	WG1371928
Acetophenone	U		0.00247	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
Anthracene	U	J3	0.000291	0.00100	0.00100	1	10/31/2019 04:50	WG1371928
Atrazine	U		0.000260	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	10/31/2019 04:50	WG1371928
Benzaldehyde	U		0.00140	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	10/31/2019 04:50	WG1371928
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	10/31/2019 04:50	WG1371928

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	10/31/2019 04:50	WG1371928
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	10/31/2019 04:50	WG1371928
Biphenyl	U		0.000325	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
4-Bromophenyl-phenylether	U	J3	0.000335	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	10/31/2019 04:50	WG1371928
4-Chlorophenyl-phenylether	U	J3	0.000303	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
Caprolactam	U		0.00259	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
Carbazole	U		0.000260	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
Chrysene	U		0.000332	0.00100	0.00100	1	10/31/2019 04:50	WG1371928
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	10/31/2019 04:50	WG1371928
Dibenzofuran	U	J3	0.000338	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
2,4-Dinitrotoluene	U	J3	0.00165	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
2,6-Dinitrotoluene	U	J3	0.000279	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
Fluoranthene	U		0.000310	0.00100	0.00100	1	10/31/2019 04:50	WG1371928
Fluorene	U	J3	0.000323	0.00100	0.00100	1	10/31/2019 04:50	WG1371928
Hexachlorobenzene	U	J3	0.000341	0.00100	0.00100	1	10/31/2019 04:50	WG1371928
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
Hexachloroethane	U		0.000365	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	10/31/2019 04:50	WG1371928
Isophorone	U		0.000272	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	10/31/2019 04:50	WG1371928
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	10/31/2019 04:50	WG1371928
Naphthalene	U		0.000372	0.00100	0.00100	1	10/31/2019 04:50	WG1371928
Nitrobenzene	U		0.000367	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
n-Nitrosodiphenylamine	U	J3	0.00119	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
Phenanthrene	U		0.000366	0.00100	0.00100	1	10/31/2019 04:50	WG1371928
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	10/31/2019 04:50	WG1371928
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	10/31/2019 04:50	WG1371928
Di-n-butyl phthalate	U		0.000266	0.00300	0.00300	1	10/31/2019 04:50	WG1371928
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	10/31/2019 04:50	WG1371928
Dimethyl phthalate	U	J3	0.000283	0.00300	0.00300	1	10/31/2019 04:50	WG1371928
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	10/31/2019 04:50	WG1371928
Pyrene	U		0.000330	0.00100	0.00100	1	10/31/2019 04:50	WG1371928
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
4,6-Dinitro-2-methylphenol	U	J3	0.00262	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
2,4-Dinitrophenol	U	J3	0.00325	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
2-Nitroaniline	U	J3	0.00190	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
2-Methylphenol	U		0.000312	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
Phenol	U		0.000334	0.0100	0.0100	1	10/31/2019 04:50	WG1371928

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	10/31/2019 04:50	WG1371928
(S) 2-Fluorophenol	*39.1*				*10.0-120*		*10/31/2019 04:50*	WG1371928
(S) Phenol-d5	*23.4*				*10.0-120*		*10/31/2019 04:50*	WG1371928
(S) Nitrobenzene-d5	*56.3*				*10.0-127*		*10/31/2019 04:50*	WG1371928
(S) 2-Fluorobiphenyl	*67.1*				*10.0-130*		*10/31/2019 04:50*	WG1371928
(S) 2,4,6-Tribromophenol	*67.6*				*10.0-155*		*10/31/2019 04:50*	WG1371928
(S) p-Terphenyl-d14	*68.0*				*10.0-128*		*10/31/2019 04:50*	WG1371928

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	1370		5.64	20.0	20.0	1	10/27/2019 16:22	WG1370219

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	181		2.71	20.0	20.0	1	10/31/2019 00:54	WG1371212

Sample Narrative:

L1153940-13 WG1371212: Endpoint pH 4.5 headspace

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	3.29		0.0197	0.100	0.100	1	10/31/2019 22:26	WG1371687

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	437		0.519	1.00	10.0	10	10/29/2019 01:34	WG1370818
Fluoride	0.592		0.00990	0.100	0.100	1	10/29/2019 01:21	WG1370818
Sulfate	111		0.774	5.00	50.0	10	10/29/2019 01:34	WG1370818

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	0.0000657	B J	0.0000490	0.000200	0.000200	1	10/27/2019 19:05	WG1369904

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.172	J	0.0126	0.200	0.200	1	10/30/2019 15:10	WG1370034

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	10/31/2019 16:27	WG1370036
Arsenic,Dissolved	0.00246		0.000250	0.00200	0.00200	1	10/31/2019 16:27	WG1370036
Barium,Dissolved	0.160		0.000360	0.00500	0.00500	1	10/31/2019 16:27	WG1370036
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	10/31/2019 16:27	WG1370036
Chromium,Dissolved	0.00321	B	0.000540	0.00200	0.00200	1	10/31/2019 16:27	WG1370036
Copper,Dissolved	0.00177	B J	0.000520	0.00500	0.00500	1	10/31/2019 16:27	WG1370036
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	10/31/2019 16:27	WG1370036
Iron,Dissolved	U		0.0150	0.100	0.100	1	10/31/2019 16:27	WG1370036
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	10/31/2019 16:27	WG1370036
Manganese,Dissolved	0.00280	J	0.000250	0.00500	0.00500	1	10/31/2019 16:27	WG1370036
Molybdenum,Dissolved	0.00567		0.000140	0.00500	0.00500	1	10/31/2019 16:27	WG1370036
Nickel,Dissolved	0.0322		0.000350	0.00200	0.00200	1	10/31/2019 16:27	WG1370036
Selenium,Dissolved	0.00252	B	0.000380	0.00200	0.00200	1	10/31/2019 16:27	WG1370036
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	10/31/2019 16:27	WG1370036
Uranium,Dissolved	0.00273	J	0.000330	0.0100	0.0100	1	10/31/2019 16:27	WG1370036
Zinc,Dissolved	0.128		0.00256	0.0250	0.0250	1	10/31/2019 16:27	WG1370036

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 02:53	WG1373882
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
Bromodichloromethane	0.000551	J	0.000380	0.00125	0.00125	1	11/02/2019 02:53	WG1373882
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 02:53	WG1373882
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
Carbon disulfide	0.00273		0.000275	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 02:53	WG1373882
Chloroform	0.00226	J	0.000324	0.00500	0.00500	1	11/02/2019 02:53	WG1373882
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 02:53	WG1373882
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 02:53	WG1373882
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 02:53	WG1373882
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 02:53	WG1373882
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 02:53	WG1373882
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 02:53	WG1373882
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 02:53	WG1373882
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 02:53	WG1373882
(S) Toluene-d8	*95.1*				*80.0-120*		*11/02/2019 02:53*	WG1373882
(S) 4-Bromofluorobenzene	*92.9*				*77.0-126*		*11/02/2019 02:53*	WG1373882
(S) 1,2-Dichloroethane-d4	*94.4*				*70.0-130*		*11/02/2019 02:53*	WG1373882

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U	J3	0.000316	0.00100	0.00100	1	10/31/2019 05:12	WG1371928
Acenaphthylene	U	J3	0.000309	0.00100	0.00100	1	10/31/2019 05:12	WG1371928
Acetophenone	U		0.00247	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
Anthracene	U	J3	0.000291	0.00100	0.00100	1	10/31/2019 05:12	WG1371928
Atrazine	U		0.000260	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	10/31/2019 05:12	WG1371928
Benzaldehyde	U		0.00140	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	10/31/2019 05:12	WG1371928
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	10/31/2019 05:12	WG1371928
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	10/31/2019 05:12	WG1371928
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	10/31/2019 05:12	WG1371928
Biphenyl	U		0.000325	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
4-Bromophenyl-phenylether	U	J3	0.000335	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	10/31/2019 05:12	WG1371928
4-Chlorophenyl-phenylether	U	J3	0.000303	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
Caprolactam	U		0.00259	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
Carbazole	U		0.000260	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
Chrysene	U		0.000332	0.00100	0.00100	1	10/31/2019 05:12	WG1371928
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	10/31/2019 05:12	WG1371928
Dibenzofuran	U	J3	0.000338	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
2,4-Dinitrotoluene	U	J3	0.00165	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
2,6-Dinitrotoluene	U	J3	0.000279	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
Fluoranthene	U		0.000310	0.00100	0.00100	1	10/31/2019 05:12	WG1371928
Fluorene	U	J3	0.000323	0.00100	0.00100	1	10/31/2019 05:12	WG1371928
Hexachlorobenzene	U	J3	0.000341	0.00100	0.00100	1	10/31/2019 05:12	WG1371928
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
Hexachloroethane	U		0.000365	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	10/31/2019 05:12	WG1371928
Isophorone	U		0.000272	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	10/31/2019 05:12	WG1371928
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	10/31/2019 05:12	WG1371928
Naphthalene	U		0.000372	0.00100	0.00100	1	10/31/2019 05:12	WG1371928
Nitrobenzene	U		0.000367	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
n-Nitrosodiphenylamine	U	J3	0.00119	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
Phenanthrene	U		0.000366	0.00100	0.00100	1	10/31/2019 05:12	WG1371928
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	10/31/2019 05:12	WG1371928
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	10/31/2019 05:12	WG1371928
Di-n-butyl phthalate	U		0.000266	0.00300	0.00300	1	10/31/2019 05:12	WG1371928
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	10/31/2019 05:12	WG1371928
Dimethyl phthalate	U	J3	0.000283	0.00300	0.00300	1	10/31/2019 05:12	WG1371928
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	10/31/2019 05:12	WG1371928
Pyrene	U		0.000330	0.00100	0.00100	1	10/31/2019 05:12	WG1371928
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
4,6-Dinitro-2-methylphenol	U	J3	0.00262	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
2,4-Dinitrophenol	U	J3	0.00325	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	10/31/2019 05:12	WG1371928

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
2-Nitroaniline	U	J3	0.00190	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
2-Methylphenol	U		0.000312	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
Phenol	0.000561	J	0.000334	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	10/31/2019 05:12	WG1371928
(S) 2-Fluorophenol	*33.7*				*10.0-120*		*10/31/2019 05:12*	WG1371928
(S) Phenol-d5	*21.0*				*10.0-120*		*10/31/2019 05:12*	WG1371928
(S) Nitrobenzene-d5	*51.6*				*10.0-127*		*10/31/2019 05:12*	WG1371928
(S) 2-Fluorobiphenyl	*61.1*				*10.0-130*		*10/31/2019 05:12*	WG1371928
(S) 2,4,6-Tribromophenol	*59.3*				*10.0-155*		*10/31/2019 05:12*	WG1371928
(S) p-Terphenyl-d14	*67.8*				*10.0-128*		*10/31/2019 05:12*	WG1371928

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	432		2.82	10.0	10.0	1	10/27/2019 16:22	WG1370219

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	2.10	J6	0.0197	0.100	0.100	1	10/31/2019 22:29	WG1371687

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	32.0		0.0519	1.00	1.00	1	10/29/2019 01:47	WG1370818
Fluoride	1.01		0.00990	0.100	0.100	1	10/29/2019 01:47	WG1370818
Sulfate	69.8		0.0774	5.00	5.00	1	10/29/2019 01:47	WG1370818

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	0.0000606	B J	0.0000490	0.000200	0.000200	1	10/27/2019 19:07	WG1369904

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.157	J	0.0126	0.200	0.200	1	10/30/2019 15:13	WG1370034

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	10/31/2019 16:30	WG1370036
Arsenic,Dissolved	0.00557		0.000250	0.00200	0.00200	1	10/31/2019 16:30	WG1370036
Barium,Dissolved	0.109		0.000360	0.00500	0.00500	1	10/31/2019 16:30	WG1370036
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	10/31/2019 16:30	WG1370036
Chromium,Dissolved	0.00107	B J	0.000540	0.00200	0.00200	1	10/31/2019 16:30	WG1370036
Copper,Dissolved	0.00290	B J	0.000520	0.00500	0.00500	1	10/31/2019 16:30	WG1370036
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	10/31/2019 16:30	WG1370036
Iron,Dissolved	U		0.0150	0.100	0.100	1	10/31/2019 16:30	WG1370036
Lead,Dissolved	0.000400	J	0.000240	0.00200	0.00200	1	10/31/2019 16:30	WG1370036
Manganese,Dissolved	0.00116	J	0.000250	0.00500	0.00500	1	10/31/2019 16:30	WG1370036
Molybdenum,Dissolved	0.00251	J	0.000140	0.00500	0.00500	1	10/31/2019 16:30	WG1370036
Nickel,Dissolved	0.00120	J	0.000350	0.00200	0.00200	1	10/31/2019 16:30	WG1370036
Selenium,Dissolved	0.00358	B	0.000380	0.00200	0.00200	1	10/31/2019 16:30	WG1370036
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	10/31/2019 16:30	WG1370036
Uranium,Dissolved	0.00226	J	0.000330	0.0100	0.0100	1	10/31/2019 16:30	WG1370036
Zinc,Dissolved	0.0369		0.00256	0.0250	0.0250	1	10/31/2019 16:30	WG1370036

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 03:12	WG1373882
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	11/02/2019 03:12	WG1373882
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 03:12	WG1373882
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 03:12	WG1373882

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 03:12	WG1373882
Chloroform	U		0.000324	0.00500	0.00500	1	11/02/2019 03:12	WG1373882
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 03:12	WG1373882
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 03:12	WG1373882
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 03:12	WG1373882
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 03:12	WG1373882
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 03:12	WG1373882
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 03:12	WG1373882
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 03:12	WG1373882
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 03:12	WG1373882
(S) Toluene-d8	*95.8*				*80.0-120*		*11/02/2019 03:12*	WG1373882
(S) 4-Bromofluorobenzene	*91.8*				*77.0-126*		*11/02/2019 03:12*	WG1373882
(S) 1,2-Dichloroethane-d4	*94.3*				*70.0-130*		*11/02/2019 03:12*	WG1373882

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acenaphthene	U	J3	0.000316	0.00100	0.00100	1	10/31/2019 05:34	WG1371928
Acenaphthylene	U	J3	0.000309	0.00100	0.00100	1	10/31/2019 05:34	WG1371928
Acetophenone	U		0.00247	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
Anthracene	U	J3	0.000291	0.00100	0.00100	1	10/31/2019 05:34	WG1371928
Atrazine	U		0.000260	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	10/31/2019 05:34	WG1371928
Benzaldehyde	U		0.00140	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	10/31/2019 05:34	WG1371928
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	10/31/2019 05:34	WG1371928

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	10/31/2019 05:34	WG1371928
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	10/31/2019 05:34	WG1371928
Biphenyl	U		0.000325	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
4-Bromophenyl-phenylether	U	J3	0.000335	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	10/31/2019 05:34	WG1371928
4-Chlorophenyl-phenylether	U	J3	0.000303	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
Caprolactam	0.00506	J	0.00259	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
Carbazole	U		0.000260	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
Chrysene	U		0.000332	0.00100	0.00100	1	10/31/2019 05:34	WG1371928
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	10/31/2019 05:34	WG1371928
Dibenzofuran	U	J3	0.000338	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
2,4-Dinitrotoluene	U	J3	0.00165	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
2,6-Dinitrotoluene	U	J3	0.000279	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
Fluoranthene	U		0.000310	0.00100	0.00100	1	10/31/2019 05:34	WG1371928
Fluorene	U	J3	0.000323	0.00100	0.00100	1	10/31/2019 05:34	WG1371928
Hexachlorobenzene	U	J3	0.000341	0.00100	0.00100	1	10/31/2019 05:34	WG1371928
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
Hexachloroethane	U		0.000365	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	10/31/2019 05:34	WG1371928
Isophorone	U		0.000272	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	10/31/2019 05:34	WG1371928
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	10/31/2019 05:34	WG1371928
Naphthalene	U		0.000372	0.00100	0.00100	1	10/31/2019 05:34	WG1371928
Nitrobenzene	U		0.000367	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
n-Nitrosodiphenylamine	U	J3	0.00119	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
Phenanthrene	U		0.000366	0.00100	0.00100	1	10/31/2019 05:34	WG1371928
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	10/31/2019 05:34	WG1371928
Bis(2-ethylhexyl)phthalate	0.000894	J	0.000709	0.00300	0.00300	1	10/31/2019 05:34	WG1371928
Di-n-butyl phthalate	0.000666	J	0.000266	0.00300	0.00300	1	10/31/2019 05:34	WG1371928
Diethyl phthalate	0.00330		0.000282	0.00300	0.00300	1	10/31/2019 05:34	WG1371928
Dimethyl phthalate	U	J3	0.000283	0.00300	0.00300	1	10/31/2019 05:34	WG1371928
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	10/31/2019 05:34	WG1371928
Pyrene	U		0.000330	0.00100	0.00100	1	10/31/2019 05:34	WG1371928
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
4,6-Dinitro-2-methylphenol	U	J3	0.00262	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
2,4-Dinitrophenol	U	J3	0.00325	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
2-Nitroaniline	U	J3	0.00190	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
2-Methylphenol	U		0.000312	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
Phenol	0.000913	J	0.000334	0.0100	0.0100	1	10/31/2019 05:34	WG1371928

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	10/31/2019 05:34	WG1371928
(S) 2-Fluorophenol	*41.4*				*10.0-120*		*10/31/2019 05:34*	WG1371928
(S) Phenol-d5	*25.5*				*10.0-120*		*10/31/2019 05:34*	WG1371928
(S) Nitrobenzene-d5	*54.3*				*10.0-127*		*10/31/2019 05:34*	WG1371928
(S) 2-Fluorobiphenyl	*67.4*				*10.0-130*		*10/31/2019 05:34*	WG1371928
(S) 2,4,6-Tribromophenol	*72.5*				*10.0-155*		*10/31/2019 05:34*	WG1371928
(S) p-Terphenyl-d14	*58.1*				*10.0-128*		*10/31/2019 05:34*	WG1371928

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	467		2.82	10.0	10.0	1	10/27/2019 16:22	WG1370219

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	189		2.71	20.0	20.0	1	10/31/2019 01:09	WG1371212

Sample Narrative:

L1153940-15 WG1371212: Endpoint pH 4.5 headspace

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	1.94		0.0197	0.100	0.100	1	10/31/2019 22:38	WG1371687

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	67.7		0.0519	1.00	1.00	1	10/29/2019 02:00	WG1370818
Fluoride	0.771		0.00990	0.100	0.100	1	10/29/2019 02:00	WG1370818
Sulfate	89.9		0.0774	5.00	5.00	1	10/29/2019 02:00	WG1370818

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	0.0000572	B J	0.0000490	0.000200	0.000200	1	10/27/2019 19:13	WG1369904

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.116	J	0.0126	0.200	0.200	1	10/30/2019 15:15	WG1370034

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	10/31/2019 16:33	WG1370036
Arsenic,Dissolved	0.00378		0.000250	0.00200	0.00200	1	10/31/2019 16:33	WG1370036
Barium,Dissolved	0.0915		0.000360	0.00500	0.00500	1	10/31/2019 16:33	WG1370036
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	10/31/2019 16:33	WG1370036
Chromium,Dissolved	0.00223	B	0.000540	0.00200	0.00200	1	10/31/2019 16:33	WG1370036
Copper,Dissolved	0.000686	B J	0.000520	0.00500	0.00500	1	10/31/2019 16:33	WG1370036
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	10/31/2019 16:33	WG1370036
Iron,Dissolved	U		0.0150	0.100	0.100	1	10/31/2019 16:33	WG1370036
Lead,Dissolved	0.000244	J	0.000240	0.00200	0.00200	1	10/31/2019 16:33	WG1370036
Manganese,Dissolved	U		0.000250	0.00500	0.00500	1	10/31/2019 16:33	WG1370036
Molybdenum,Dissolved	0.00167	J	0.000140	0.00500	0.00500	1	10/31/2019 16:33	WG1370036
Nickel,Dissolved	0.00478		0.000350	0.00200	0.00200	1	10/31/2019 16:33	WG1370036
Selenium,Dissolved	0.00218	B	0.000380	0.00200	0.00200	1	10/31/2019 16:33	WG1370036
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	10/31/2019 16:33	WG1370036
Uranium,Dissolved	0.00166	J	0.000330	0.0100	0.0100	1	10/31/2019 16:33	WG1370036
Zinc,Dissolved	0.0365		0.00256	0.0250	0.0250	1	10/31/2019 16:33	WG1370036

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 03:32	WG1373882
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	11/02/2019 03:32	WG1373882
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 03:32	WG1373882
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 03:32	WG1373882
Chloroform	U		0.000324	0.00500	0.00500	1	11/02/2019 03:32	WG1373882
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 03:32	WG1373882
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 03:32	WG1373882
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 03:32	WG1373882
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 03:32	WG1373882
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 03:32	WG1373882
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 03:32	WG1373882
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 03:32	WG1373882
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 03:32	WG1373882
(S) Toluene-d8	*94.4*				*80.0-120*		*11/02/2019 03:32*	WG1373882
(S) 4-Bromofluorobenzene	*95.8*				*77.0-126*		*11/02/2019 03:32*	WG1373882
(S) 1,2-Dichloroethane-d4	*93.9*				*70.0-130*		*11/02/2019 03:32*	WG1373882

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U	J3	0.000316	0.00100	0.00100	1	10/31/2019 05:56	WG1371928
Acenaphthylene	U	J3	0.000309	0.00100	0.00100	1	10/31/2019 05:56	WG1371928
Acetophenone	U		0.00247	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
Anthracene	U	J3	0.000291	0.00100	0.00100	1	10/31/2019 05:56	WG1371928
Atrazine	U		0.000260	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	10/31/2019 05:56	WG1371928
Benzaldehyde	U		0.00140	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	10/31/2019 05:56	WG1371928
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	10/31/2019 05:56	WG1371928
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	10/31/2019 05:56	WG1371928
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	10/31/2019 05:56	WG1371928
Biphenyl	U		0.000325	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
4-Bromophenyl-phenylether	U	J3	0.000335	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	10/31/2019 05:56	WG1371928
4-Chlorophenyl-phenylether	U	J3	0.000303	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
Caprolactam	U		0.00259	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
Carbazole	U		0.000260	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
Chrysene	U		0.000332	0.00100	0.00100	1	10/31/2019 05:56	WG1371928
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	10/31/2019 05:56	WG1371928
Dibenzofuran	U	J3	0.000338	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
2,4-Dinitrotoluene	U	J3	0.00165	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
2,6-Dinitrotoluene	U	J3	0.000279	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
Fluoranthene	U		0.000310	0.00100	0.00100	1	10/31/2019 05:56	WG1371928
Fluorene	U	J3	0.000323	0.00100	0.00100	1	10/31/2019 05:56	WG1371928
Hexachlorobenzene	U	J3	0.000341	0.00100	0.00100	1	10/31/2019 05:56	WG1371928
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
Hexachloroethane	U		0.000365	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	10/31/2019 05:56	WG1371928
Isophorone	U		0.000272	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	10/31/2019 05:56	WG1371928
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	10/31/2019 05:56	WG1371928
Naphthalene	U		0.000372	0.00100	0.00100	1	10/31/2019 05:56	WG1371928
Nitrobenzene	U		0.000367	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
n-Nitrosodiphenylamine	U	J3	0.00119	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
Phenanthrene	U		0.000366	0.00100	0.00100	1	10/31/2019 05:56	WG1371928
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	10/31/2019 05:56	WG1371928
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	10/31/2019 05:56	WG1371928
Di-n-butyl phthalate	U		0.000266	0.00300	0.00300	1	10/31/2019 05:56	WG1371928
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	10/31/2019 05:56	WG1371928
Dimethyl phthalate	U	J3	0.000283	0.00300	0.00300	1	10/31/2019 05:56	WG1371928
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	10/31/2019 05:56	WG1371928
Pyrene	U		0.000330	0.00100	0.00100	1	10/31/2019 05:56	WG1371928
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
4,6-Dinitro-2-methylphenol	U	J3	0.00262	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
2,4-Dinitrophenol	U	J3	0.00325	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	10/31/2019 05:56	WG1371928

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
2-Nitroaniline	U	J3	0.00190	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
2-Methylphenol	U		0.000312	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
Phenol	0.000373	J	0.000334	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	10/31/2019 05:56	WG1371928
(S) 2-Fluorophenol	*25.8*				*10.0-120*		*10/31/2019 05:56*	WG1371928
(S) Phenol-d5	*14.1*				*10.0-120*		*10/31/2019 05:56*	WG1371928
(S) Nitrobenzene-d5	*48.6*				*10.0-127*		*10/31/2019 05:56*	WG1371928
(S) 2-Fluorobiphenyl	*59.6*				*10.0-130*		*10/31/2019 05:56*	WG1371928
(S) 2,4,6-Tribromophenol	*63.0*				*10.0-155*		*10/31/2019 05:56*	WG1371928
(S) p-Terphenyl-d14	*69.5*				*10.0-128*		*10/31/2019 05:56*	WG1371928

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	653		2.82	10.0	10.0	1	10/27/2019 16:22	WG1370219

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	3.82		0.0197	0.100	0.100	1	10/31/2019 22:40	WG1371687

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	120		0.260	1.00	5.00	5	10/29/2019 02:26	WG1370818
Fluoride	0.634		0.00990	0.100	0.100	1	10/29/2019 02:13	WG1370818
Sulfate	113		0.387	5.00	25.0	5	10/29/2019 02:26	WG1370818

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	0.0000660	B J	0.0000490	0.000200	0.000200	1	10/27/2019 19:15	WG1369904

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.168	J	0.0126	0.200	0.200	1	10/30/2019 15:18	WG1370034

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	10/31/2019 16:44	WG1370036
Arsenic,Dissolved	0.00232		0.000250	0.00200	0.00200	1	10/31/2019 16:44	WG1370036
Barium,Dissolved	0.0826		0.000360	0.00500	0.00500	1	10/31/2019 16:44	WG1370036
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	10/31/2019 16:44	WG1370036
Chromium,Dissolved	0.00258	B	0.000540	0.00200	0.00200	1	10/31/2019 16:44	WG1370036
Copper,Dissolved	0.00302	B J	0.000520	0.00500	0.00500	1	10/31/2019 16:44	WG1370036
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	10/31/2019 16:44	WG1370036
Iron,Dissolved	U		0.0150	0.100	0.100	1	10/31/2019 16:44	WG1370036
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	10/31/2019 16:44	WG1370036
Manganese,Dissolved	U		0.000250	0.00500	0.00500	1	10/31/2019 16:44	WG1370036
Molybdenum,Dissolved	0.00193	J	0.000140	0.00500	0.00500	1	10/31/2019 16:44	WG1370036
Nickel,Dissolved	0.00878		0.000350	0.00200	0.00200	1	10/31/2019 16:44	WG1370036
Selenium,Dissolved	0.00190	B J	0.000380	0.00200	0.00200	1	10/31/2019 16:44	WG1370036
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	10/31/2019 16:44	WG1370036
Uranium,Dissolved	0.00354	J	0.000330	0.0100	0.0100	1	10/31/2019 16:44	WG1370036
Zinc,Dissolved	0.0682		0.00256	0.0250	0.0250	1	10/31/2019 16:44	WG1370036

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 03:52	WG1373882
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	11/02/2019 03:52	WG1373882
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 03:52	WG1373882
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 03:52	WG1373882

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 03:52	WG1373882
Chloroform	U		0.000324	0.00500	0.00500	1	11/02/2019 03:52	WG1373882
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 03:52	WG1373882
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 03:52	WG1373882
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 03:52	WG1373882
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 03:52	WG1373882
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 03:52	WG1373882
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 03:52	WG1373882
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 03:52	WG1373882
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 03:52	WG1373882
(S) Toluene-d8	*95.3*				*80.0-120*		*11/02/2019 03:52*	WG1373882
(S) 4-Bromofluorobenzene	*94.6*				*77.0-126*		*11/02/2019 03:52*	WG1373882
(S) 1,2-Dichloroethane-d4	*93.0*				*70.0-130*		*11/02/2019 03:52*	WG1373882

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acenaphthene	U	J3	0.000316	0.00100	0.00100	1	10/31/2019 06:18	WG1371928
Acenaphthylene	U	J3	0.000309	0.00100	0.00100	1	10/31/2019 06:18	WG1371928
Acetophenone	U		0.00247	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
Anthracene	U	J3	0.000291	0.00100	0.00100	1	10/31/2019 06:18	WG1371928
Atrazine	U		0.000260	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	10/31/2019 06:18	WG1371928
Benzaldehyde	U		0.00140	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	10/31/2019 06:18	WG1371928
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	10/31/2019 06:18	WG1371928

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	10/31/2019 06:18	WG1371928
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	10/31/2019 06:18	WG1371928
Biphenyl	U		0.000325	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
4-Bromophenyl-phenylether	U	J3	0.000335	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	10/31/2019 06:18	WG1371928
4-Chlorophenyl-phenylether	U	J3	0.000303	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
Caprolactam	U		0.00259	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
Carbazole	U		0.000260	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
Chrysene	U		0.000332	0.00100	0.00100	1	10/31/2019 06:18	WG1371928
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	10/31/2019 06:18	WG1371928
Dibenzofuran	U	J3	0.000338	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
2,4-Dinitrotoluene	U	J3	0.00165	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
2,6-Dinitrotoluene	U	J3	0.000279	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
Fluoranthene	U		0.000310	0.00100	0.00100	1	10/31/2019 06:18	WG1371928
Fluorene	U	J3	0.000323	0.00100	0.00100	1	10/31/2019 06:18	WG1371928
Hexachlorobenzene	U	J3	0.000341	0.00100	0.00100	1	10/31/2019 06:18	WG1371928
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
Hexachloroethane	U		0.000365	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	10/31/2019 06:18	WG1371928
Isophorone	U		0.000272	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	10/31/2019 06:18	WG1371928
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	10/31/2019 06:18	WG1371928
Naphthalene	U		0.000372	0.00100	0.00100	1	10/31/2019 06:18	WG1371928
Nitrobenzene	U		0.000367	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
n-Nitrosodiphenylamine	U	J3	0.00119	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
Phenanthrene	U		0.000366	0.00100	0.00100	1	10/31/2019 06:18	WG1371928
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	10/31/2019 06:18	WG1371928
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	10/31/2019 06:18	WG1371928
Di-n-butyl phthalate	U		0.000266	0.00300	0.00300	1	10/31/2019 06:18	WG1371928
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	10/31/2019 06:18	WG1371928
Dimethyl phthalate	U	J3	0.000283	0.00300	0.00300	1	10/31/2019 06:18	WG1371928
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	10/31/2019 06:18	WG1371928
Pyrene	U		0.000330	0.00100	0.00100	1	10/31/2019 06:18	WG1371928
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
4,6-Dinitro-2-methylphenol	U	J3	0.00262	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
2,4-Dinitrophenol	U	J3	0.00325	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
2-Nitroaniline	U	J3	0.00190	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
2-Methylphenol	U		0.000312	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
Phenol	0.000389	J	0.000334	0.0100	0.0100	1	10/31/2019 06:18	WG1371928

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	10/31/2019 06:18	WG1371928
(S) 2-Fluorophenol	*35.7*				*10.0-120*		*10/31/2019 06:18*	WG1371928
(S) Phenol-d5	*22.1*				*10.0-120*		*10/31/2019 06:18*	WG1371928
(S) Nitrobenzene-d5	*50.9*				*10.0-127*		*10/31/2019 06:18*	WG1371928
(S) 2-Fluorobiphenyl	*64.8*				*10.0-130*		*10/31/2019 06:18*	WG1371928
(S) 2,4,6-Tribromophenol	*66.0*				*10.0-155*		*10/31/2019 06:18*	WG1371928
(S) p-Terphenyl-d14	*70.6*				*10.0-128*		*10/31/2019 06:18*	WG1371928

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	1220		5.64	20.0	20.0	1	10/27/2019 16:22	WG1370219

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	186		2.71	20.0	20.0	1	10/31/2019 01:16	WG1371212

Sample Narrative:

L1153940-17 WG1371212: Endpoint pH 4.5 headspace

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	3.76		0.0197	0.100	0.100	1	10/31/2019 22:41	WG1371687

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	323		0.519	1.00	10.0	10	10/29/2019 02:52	WG1370818
Fluoride	0.671		0.00990	0.100	0.100	1	10/29/2019 02:39	WG1370818
Sulfate	126		0.774	5.00	50.0	10	10/29/2019 02:52	WG1370818

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	0.000200	1	10/27/2019 18:30	WG1369904

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.162	J	0.0126	0.200	0.200	1	10/30/2019 15:21	WG1370034

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	10/31/2019 16:48	WG1370036
Arsenic,Dissolved	0.00135	J	0.000250	0.00200	0.00200	1	10/31/2019 16:48	WG1370036
Barium,Dissolved	0.0639		0.000360	0.00500	0.00500	1	10/31/2019 16:48	WG1370036
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	10/31/2019 16:48	WG1370036
Chromium,Dissolved	U		0.000540	0.00200	0.00200	1	10/31/2019 16:48	WG1370036
Copper,Dissolved	0.00138	B J	0.000520	0.00500	0.00500	1	10/31/2019 16:48	WG1370036
Cobalt,Dissolved	0.00261		0.000260	0.00200	0.00200	1	10/31/2019 16:48	WG1370036
Iron,Dissolved	U		0.0150	0.100	0.100	1	10/31/2019 16:48	WG1370036
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	10/31/2019 16:48	WG1370036
Manganese,Dissolved	0.0406		0.000250	0.00500	0.00500	1	10/31/2019 16:48	WG1370036
Molybdenum,Dissolved	0.00358	J	0.000140	0.00500	0.00500	1	10/31/2019 16:48	WG1370036
Nickel,Dissolved	0.181		0.000350	0.00200	0.00200	1	10/31/2019 16:48	WG1370036
Selenium,Dissolved	0.00146	B J	0.000380	0.00200	0.00200	1	10/31/2019 16:48	WG1370036
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	10/31/2019 16:48	WG1370036
Uranium,Dissolved	0.00274	J	0.000330	0.0100	0.0100	1	10/31/2019 16:48	WG1370036
Zinc,Dissolved	0.0196	J	0.00256	0.0250	0.0250	1	10/31/2019 16:48	WG1370036

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 04:12	WG1373882
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	11/02/2019 04:12	WG1373882
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 04:12	WG1373882
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 04:12	WG1373882
Chloroform	U		0.000324	0.00500	0.00500	1	11/02/2019 04:12	WG1373882
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 04:12	WG1373882
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 04:12	WG1373882
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 04:12	WG1373882
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 04:12	WG1373882
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 04:12	WG1373882
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 04:12	WG1373882
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 04:12	WG1373882
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 04:12	WG1373882
(S) Toluene-d8	*91.9*				*80.0-120*		*11/02/2019 04:12*	WG1373882
(S) 4-Bromofluorobenzene	*93.3*				*77.0-126*		*11/02/2019 04:12*	WG1373882
(S) 1,2-Dichloroethane-d4	*92.9*				*70.0-130*		*11/02/2019 04:12*	WG1373882

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acenaphthene	U	J3	0.000316	0.00100	0.00100	1	10/31/2019 06:40	WG1371928
Acenaphthylene	U	J3	0.000309	0.00100	0.00100	1	10/31/2019 06:40	WG1371928
Acetophenone	U		0.00247	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
Anthracene	U	J3	0.000291	0.00100	0.00100	1	10/31/2019 06:40	WG1371928
Atrazine	U		0.000260	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	10/31/2019 06:40	WG1371928
Benzaldehyde	U		0.00140	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	10/31/2019 06:40	WG1371928
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	10/31/2019 06:40	WG1371928
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	10/31/2019 06:40	WG1371928
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	10/31/2019 06:40	WG1371928
Biphenyl	U		0.000325	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
4-Bromophenyl-phenylether	U	J3	0.000335	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	10/31/2019 06:40	WG1371928
4-Chlorophenyl-phenylether	U	J3	0.000303	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
Caprolactam	U		0.00259	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
Carbazole	U		0.000260	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
Chrysene	U		0.000332	0.00100	0.00100	1	10/31/2019 06:40	WG1371928
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	10/31/2019 06:40	WG1371928
Dibenzofuran	U	J3	0.000338	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
2,4-Dinitrotoluene	U	J3	0.00165	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
2,6-Dinitrotoluene	U	J3	0.000279	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
Fluoranthene	U		0.000310	0.00100	0.00100	1	10/31/2019 06:40	WG1371928
Fluorene	U	J3	0.000323	0.00100	0.00100	1	10/31/2019 06:40	WG1371928
Hexachlorobenzene	U	J3	0.000341	0.00100	0.00100	1	10/31/2019 06:40	WG1371928
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
Hexachloroethane	U		0.000365	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	10/31/2019 06:40	WG1371928
Isophorone	U		0.000272	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	10/31/2019 06:40	WG1371928
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	10/31/2019 06:40	WG1371928
Naphthalene	U		0.000372	0.00100	0.00100	1	10/31/2019 06:40	WG1371928
Nitrobenzene	U		0.000367	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
n-Nitrosodiphenylamine	U	J3	0.00119	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
Phenanthrene	U		0.000366	0.00100	0.00100	1	10/31/2019 06:40	WG1371928
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	10/31/2019 06:40	WG1371928
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	10/31/2019 06:40	WG1371928
Di-n-butyl phthalate	U		0.000266	0.00300	0.00300	1	10/31/2019 06:40	WG1371928
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	10/31/2019 06:40	WG1371928
Dimethyl phthalate	U	J3	0.000283	0.00300	0.00300	1	10/31/2019 06:40	WG1371928
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	10/31/2019 06:40	WG1371928
Pyrene	U		0.000330	0.00100	0.00100	1	10/31/2019 06:40	WG1371928
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
4,6-Dinitro-2-methylphenol	U	J3	0.00262	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
2,4-Dinitrophenol	U	J3	0.00325	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	10/31/2019 06:40	WG1371928

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2-Nitroaniline	U	J3	0.00190	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
2-Methylphenol	U		0.000312	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
Phenol	U		0.000334	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	10/31/2019 06:40	WG1371928
(S) 2-Fluorophenol	*39.7*				*10.0-120*		*10/31/2019 06:40*	WG1371928
(S) Phenol-d5	*25.1*				*10.0-120*		*10/31/2019 06:40*	WG1371928
(S) Nitrobenzene-d5	*56.9*				*10.0-127*		*10/31/2019 06:40*	WG1371928
(S) 2-Fluorobiphenyl	*69.8*				*10.0-130*		*10/31/2019 06:40*	WG1371928
(S) 2,4,6-Tribromophenol	*69.8*				*10.0-155*		*10/31/2019 06:40*	WG1371928
(S) p-Terphenyl-d14	*71.1*				*10.0-128*		*10/31/2019 06:40*	WG1371928

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	825		2.82	10.0	10.0	1	10/27/2019 16:22	WG1370219

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	3.97		0.0197	0.100	0.100	1	10/31/2019 22:43	WG1371687

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	202		0.260	1.00	5.00	5	10/29/2019 03:18	WG1370818
Fluoride	0.766		0.00990	0.100	0.100	1	10/29/2019 03:05	WG1370818
Sulfate	42.4		0.0774	5.00	5.00	1	10/29/2019 03:05	WG1370818

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	0.000200	1	10/27/2019 19:28	WG1369905

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.164	J	0.0126	0.200	0.200	1	10/30/2019 15:23	WG1370034

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	10/31/2019 16:51	WG1370036
Arsenic,Dissolved	0.00342		0.000250	0.00200	0.00200	1	10/31/2019 16:51	WG1370036
Barium,Dissolved	0.139		0.000360	0.00500	0.00500	1	10/31/2019 16:51	WG1370036
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	10/31/2019 16:51	WG1370036
Chromium,Dissolved	0.00133	B J	0.000540	0.00200	0.00200	1	10/31/2019 16:51	WG1370036
Copper,Dissolved	U		0.000520	0.00500	0.00500	1	10/31/2019 16:51	WG1370036
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	10/31/2019 16:51	WG1370036
Iron,Dissolved	U		0.0150	0.100	0.100	1	10/31/2019 16:51	WG1370036
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	10/31/2019 16:51	WG1370036
Manganese,Dissolved	0.000407	J	0.000250	0.00500	0.00500	1	10/31/2019 16:51	WG1370036
Molybdenum,Dissolved	0.0144		0.000140	0.00500	0.00500	1	10/31/2019 16:51	WG1370036
Nickel,Dissolved	0.0135		0.000350	0.00200	0.00200	1	10/31/2019 16:51	WG1370036
Selenium,Dissolved	0.00136	B J	0.000380	0.00200	0.00200	1	10/31/2019 16:51	WG1370036
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	10/31/2019 16:51	WG1370036
Uranium,Dissolved	0.00208	J	0.000330	0.0100	0.0100	1	10/31/2019 16:51	WG1370036
Zinc,Dissolved	0.0260		0.00256	0.0250	0.0250	1	10/31/2019 16:51	WG1370036

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 04:31	WG1373882
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	11/02/2019 04:31	WG1373882
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 04:31	WG1373882
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 04:31	WG1373882

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 04:31	WG1373882
Chloroform	U		0.000324	0.00500	0.00500	1	11/02/2019 04:31	WG1373882
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 04:31	WG1373882
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 04:31	WG1373882
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 04:31	WG1373882
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 04:31	WG1373882
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 04:31	WG1373882
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 04:31	WG1373882
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 04:31	WG1373882
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 04:31	WG1373882
(S) Toluene-d8	*93.8*				*80.0-120*		*11/02/2019 04:31*	WG1373882
(S) 4-Bromofluorobenzene	*92.9*				*77.0-126*		*11/02/2019 04:31*	WG1373882
(S) 1,2-Dichloroethane-d4	*93.4*				*70.0-130*		*11/02/2019 04:31*	WG1373882

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.000316	0.00100	0.00100	1	10/31/2019 03:16	WG1372208
Acenaphthylene	U		0.000309	0.00100	0.00100	1	10/31/2019 03:16	WG1372208
Acetophenone	U		0.00247	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
Anthracene	U		0.000291	0.00100	0.00100	1	10/31/2019 03:16	WG1372208
Atrazine	U		0.000260	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	10/31/2019 03:16	WG1372208
Benzaldehyde	U		0.00140	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	10/31/2019 03:16	WG1372208
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	10/31/2019 03:16	WG1372208

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	10/31/2019 03:16	WG1372208
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	10/31/2019 03:16	WG1372208
Biphenyl	U		0.000325	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	10/31/2019 03:16	WG1372208
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
Caprolactam	U		0.00259	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
Carbazole	U		0.000260	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
Chrysene	U		0.000332	0.00100	0.00100	1	10/31/2019 03:16	WG1372208
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	10/31/2019 03:16	WG1372208
Dibenzofuran	U		0.000338	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
Fluoranthene	U		0.000310	0.00100	0.00100	1	10/31/2019 03:16	WG1372208
Fluorene	U		0.000323	0.00100	0.00100	1	10/31/2019 03:16	WG1372208
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	10/31/2019 03:16	WG1372208
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
Hexachloroethane	U		0.000365	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	10/31/2019 03:16	WG1372208
Isophorone	U		0.000272	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	10/31/2019 03:16	WG1372208
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	10/31/2019 03:16	WG1372208
Naphthalene	U		0.000372	0.00100	0.00100	1	10/31/2019 03:16	WG1372208
Nitrobenzene	U		0.000367	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
Phenanthrene	U		0.000366	0.00100	0.00100	1	10/31/2019 03:16	WG1372208
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	10/31/2019 03:16	WG1372208
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	10/31/2019 03:16	WG1372208
Di-n-butyl phthalate	0.000376	B J	0.000266	0.00300	0.00300	1	10/31/2019 03:16	WG1372208
Diethyl phthalate	0.00126	J	0.000282	0.00300	0.00300	1	10/31/2019 03:16	WG1372208
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	10/31/2019 03:16	WG1372208
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	10/31/2019 03:16	WG1372208
Pyrene	U		0.000330	0.00100	0.00100	1	10/31/2019 03:16	WG1372208
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
2-Methylphenol	U		0.000312	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
Phenol	0.00161	J	0.000334	0.0100	0.0100	1	10/31/2019 03:16	WG1372208

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	10/31/2019 03:16	WG1372208
(S) 2-Fluorophenol	*42.7*				*10.0-120*		*10/31/2019 03:16*	WG1372208
(S) Phenol-d5	*25.8*				*10.0-120*		*10/31/2019 03:16*	WG1372208
(S) Nitrobenzene-d5	*61.1*				*10.0-127*		*10/31/2019 03:16*	WG1372208
(S) 2-Fluorobiphenyl	*68.2*				*10.0-130*		*10/31/2019 03:16*	WG1372208
(S) 2,4,6-Tribromophenol	*68.1*				*10.0-155*		*10/31/2019 03:16*	WG1372208
(S) p-Terphenyl-d14	*78.5*				*10.0-128*		*10/31/2019 03:16*	WG1372208

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0524	B J	0.0314	0.100	0.100	1	11/02/2019 20:02	WG1373783
(S) a,a,a-Trifluorotoluene(FID)	*106*				*78.0-120*		*11/02/2019 20:02*	WG1373783

Semi-Volatile Organic Compounds (GC) by Method 3511/8015

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	0.196		0.0247	0.100	0.100	1	10/28/2019 00:12	WG1370005
(S) o-Terphenyl	*81.6*				*31.0-160*		*10/28/2019 00:12*	WG1370005

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.000316	0.00100	0.00100	1	10/31/2019 03:36	WG1372208
Acenaphthylene	U		0.000309	0.00100	0.00100	1	10/31/2019 03:36	WG1372208
Acetophenone	U		0.00247	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
Anthracene	U		0.000291	0.00100	0.00100	1	10/31/2019 03:36	WG1372208
Atrazine	U		0.000260	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	10/31/2019 03:36	WG1372208
Benzaldehyde	U		0.00140	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	10/31/2019 03:36	WG1372208
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	10/31/2019 03:36	WG1372208
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	10/31/2019 03:36	WG1372208
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	10/31/2019 03:36	WG1372208
Biphenyl	U		0.000325	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	10/31/2019 03:36	WG1372208
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
Caprolactam	U		0.00259	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
Carbazole	U		0.000260	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
Chrysene	U		0.000332	0.00100	0.00100	1	10/31/2019 03:36	WG1372208
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	10/31/2019 03:36	WG1372208
Dibenzofuran	U		0.000338	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
Fluoranthene	U		0.000310	0.00100	0.00100	1	10/31/2019 03:36	WG1372208
Fluorene	U		0.000323	0.00100	0.00100	1	10/31/2019 03:36	WG1372208
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	10/31/2019 03:36	WG1372208
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
Hexachloroethane	U		0.000365	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	10/31/2019 03:36	WG1372208
Isophorone	U		0.000272	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	10/31/2019 03:36	WG1372208
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	10/31/2019 03:36	WG1372208
Naphthalene	U		0.000372	0.00100	0.00100	1	10/31/2019 03:36	WG1372208
Nitrobenzene	U		0.000367	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
Phenanthrene	U		0.000366	0.00100	0.00100	1	10/31/2019 03:36	WG1372208
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	10/31/2019 03:36	WG1372208
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	10/31/2019 03:36	WG1372208

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Di-n-butyl phthalate	0.000487	B J	0.000266	0.00300	0.00300	1	10/31/2019 03:36	WG1372208
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	10/31/2019 03:36	WG1372208
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	10/31/2019 03:36	WG1372208
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	10/31/2019 03:36	WG1372208
Pyrene	U		0.000330	0.00100	0.00100	1	10/31/2019 03:36	WG1372208
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
2-Methylphenol	U		0.000312	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
Phenol	U		0.000334	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	10/31/2019 03:36	WG1372208
(S) 2-Fluorophenol	*45.8*				*10.0-120*		*10/31/2019 03:36*	WG1372208
(S) Phenol-d5	*28.2*				*10.0-120*		*10/31/2019 03:36*	WG1372208
(S) Nitrobenzene-d5	*61.9*				*10.0-127*		*10/31/2019 03:36*	WG1372208
(S) 2-Fluorobiphenyl	*73.3*				*10.0-130*		*10/31/2019 03:36*	WG1372208
(S) 2,4,6-Tribromophenol	*71.5*				*10.0-155*		*10/31/2019 03:36*	WG1372208
(S) p-Terphenyl-d14	*80.3*				*10.0-128*		*10/31/2019 03:36*	WG1372208

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	637		2.82	10.0	10.0	1	10/27/2019 16:22	WG1370219

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	6.54		0.0985	0.100	0.500	5	10/31/2019 22:56	WG1371687

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	61.9		0.0519	1.00	1.00	1	10/29/2019 03:58	WG1370818
Fluoride	0.775		0.00990	0.100	0.100	1	10/29/2019 03:58	WG1370818
Sulfate	42.7		0.0774	5.00	5.00	1	10/29/2019 03:58	WG1370818

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	U		0.0000490	0.000200	0.000200	1	10/27/2019 19:30	WG1369905

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.184	J	0.0126	0.200	0.200	1	10/30/2019 15:26	WG1370034

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	10/31/2019 16:54	WG1370036
Arsenic,Dissolved	0.00238		0.000250	0.00200	0.00200	1	10/31/2019 16:54	WG1370036
Barium,Dissolved	0.122		0.000360	0.00500	0.00500	1	10/31/2019 16:54	WG1370036
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	10/31/2019 16:54	WG1370036
Chromium,Dissolved	0.00289	B	0.000540	0.00200	0.00200	1	10/31/2019 16:54	WG1370036
Copper,Dissolved	0.0144	B	0.000520	0.00500	0.00500	1	10/31/2019 16:54	WG1370036
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	10/31/2019 16:54	WG1370036
Iron,Dissolved	U		0.0150	0.100	0.100	1	10/31/2019 16:54	WG1370036
Lead,Dissolved	0.000482	J	0.000240	0.00200	0.00200	1	10/31/2019 16:54	WG1370036
Manganese,Dissolved	0.000636	J	0.000250	0.00500	0.00500	1	10/31/2019 16:54	WG1370036
Molybdenum,Dissolved	0.00214	J	0.000140	0.00500	0.00500	1	10/31/2019 16:54	WG1370036
Nickel,Dissolved	0.0150		0.000350	0.00200	0.00200	1	10/31/2019 16:54	WG1370036
Selenium,Dissolved	0.000956	B J	0.000380	0.00200	0.00200	1	10/31/2019 16:54	WG1370036
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	10/31/2019 16:54	WG1370036
Uranium,Dissolved	0.00609	J	0.000330	0.0100	0.0100	1	10/31/2019 16:54	WG1370036
Zinc,Dissolved	0.130		0.00256	0.0250	0.0250	1	10/31/2019 16:54	WG1370036

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
TPH (GC/FID) Low Fraction	0.0606	B J	0.0314	0.100	0.100	1	11/02/2019 20:24	WG1373783
(S) a,a,a-Trifluorotoluene(FID)	*105*				*78.0-120*		*11/02/2019 20:24*	WG1373783

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 04:51	WG1373882
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	11/02/2019 04:51	WG1373882
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 04:51	WG1373882
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 04:51	WG1373882
Chloroform	U		0.000324	0.00500	0.00500	1	11/02/2019 04:51	WG1373882
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 04:51	WG1373882
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 04:51	WG1373882
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 04:51	WG1373882
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 04:51	WG1373882
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 04:51	WG1373882
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 04:51	WG1373882
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 04:51	WG1373882
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 04:51	WG1373882
(S) Toluene-d8	*93.3*				*80.0-120*		*11/02/2019 04:51*	WG1373882
(S) 4-Bromofluorobenzene	*94.8*				*77.0-126*		*11/02/2019 04:51*	WG1373882
(S) 1,2-Dichloroethane-d4	*93.4*				*70.0-130*		*11/02/2019 04:51*	WG1373882

Semi-Volatile Organic Compounds (GC) by Method 3511/8015

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	0.0674	J	0.0494	0.100	0.200	2	10/28/2019 00:38	WG1370005
(S) o-Terphenyl	*61.5*				*31.0-160*		*10/28/2019 00:38*	WG1370005

Sample Narrative:

L1153940-20 WG1370005: Dilution due to matrix impact during extraction procedure

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.000316	0.00100	0.00100	1	10/31/2019 03:56	WG1372208
Acenaphthylene	U		0.000309	0.00100	0.00100	1	10/31/2019 03:56	WG1372208
Acetophenone	U		0.00247	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
Anthracene	U		0.000291	0.00100	0.00100	1	10/31/2019 03:56	WG1372208
Atrazine	U		0.000260	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	10/31/2019 03:56	WG1372208
Benzaldehyde	U		0.00140	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	10/31/2019 03:56	WG1372208
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	10/31/2019 03:56	WG1372208
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	10/31/2019 03:56	WG1372208
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	10/31/2019 03:56	WG1372208
Biphenyl	U		0.000325	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	10/31/2019 03:56	WG1372208
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
Caprolactam	U		0.00259	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
Carbazole	U		0.000260	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
Chrysene	U		0.000332	0.00100	0.00100	1	10/31/2019 03:56	WG1372208
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	10/31/2019 03:56	WG1372208
Dibenzofuran	U		0.000338	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
Fluoranthene	U		0.000310	0.00100	0.00100	1	10/31/2019 03:56	WG1372208
Fluorene	U		0.000323	0.00100	0.00100	1	10/31/2019 03:56	WG1372208
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	10/31/2019 03:56	WG1372208
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
Hexachloroethane	U		0.000365	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	10/31/2019 03:56	WG1372208
Isophorone	U		0.000272	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	10/31/2019 03:56	WG1372208
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	10/31/2019 03:56	WG1372208
Naphthalene	U		0.000372	0.00100	0.00100	1	10/31/2019 03:56	WG1372208
Nitrobenzene	U		0.000367	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
Phenanthrene	U		0.000366	0.00100	0.00100	1	10/31/2019 03:56	WG1372208
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	10/31/2019 03:56	WG1372208
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	10/31/2019 03:56	WG1372208
Di-n-butyl phthalate	U		0.000266	0.00300	0.00300	1	10/31/2019 03:56	WG1372208
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	10/31/2019 03:56	WG1372208
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	10/31/2019 03:56	WG1372208
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	10/31/2019 03:56	WG1372208

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Pyrene	U		0.000330	0.00100	0.00100	1	10/31/2019 03:56	WG1372208
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
2-Methylphenol	U		0.000312	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
Phenol	0.000635	J	0.000334	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	10/31/2019 03:56	WG1372208
(S) 2-Fluorophenol	*44.5*				*10.0-120*		*10/31/2019 03:56*	WG1372208
(S) Phenol-d5	*27.3*				*10.0-120*		*10/31/2019 03:56*	WG1372208
(S) Nitrobenzene-d5	*58.7*				*10.0-127*		*10/31/2019 03:56*	WG1372208
(S) 2-Fluorobiphenyl	*68.2*				*10.0-130*		*10/31/2019 03:56*	WG1372208
(S) 2,4,6-Tribromophenol	*67.0*				*10.0-155*		*10/31/2019 03:56*	WG1372208
(S) p-Terphenyl-d14	*72.9*				*10.0-128*		*10/31/2019 03:56*	WG1372208

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	4.67		0.0197	0.100	0.100	1	10/31/2019 22:46	WG1371687

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	344		2.82	10.0	10.0	1	10/27/2019 16:51	WG1370221

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	202		2.71	20.0	20.0	1	10/31/2019 01:23	WG1371212

Sample Narrative:

L1153940-22 WG1371212: Endpoint pH 4.5 headspace

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	3.69		0.0197	0.100	0.100	1	10/31/2019 18:54	WG1371690

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	34.8		0.0519	1.00	1.00	1	10/29/2019 04:11	WG1370818
Fluoride	2.93		0.00990	0.100	0.100	1	10/29/2019 04:11	WG1370818
Sulfate	41.7		0.0774	5.00	5.00	1	10/29/2019 04:11	WG1370818

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	0.0000560	B J	0.0000490	0.000200	0.000200	1	10/27/2019 19:36	WG1369905

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.152	J	0.0126	0.200	0.200	1	10/30/2019 15:34	WG1370034

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	10/31/2019 16:58	WG1370036
Arsenic,Dissolved	0.00556		0.000250	0.00200	0.00200	1	10/31/2019 16:58	WG1370036
Barium,Dissolved	0.0794		0.000360	0.00500	0.00500	1	10/31/2019 16:58	WG1370036
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	10/31/2019 16:58	WG1370036
Chromium,Dissolved	0.00101	B J	0.000540	0.00200	0.00200	1	10/31/2019 16:58	WG1370036
Copper,Dissolved	0.00158	B J	0.000520	0.00500	0.00500	1	10/31/2019 16:58	WG1370036
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	10/31/2019 16:58	WG1370036
Iron,Dissolved	U		0.0150	0.100	0.100	1	10/31/2019 16:58	WG1370036
Lead,Dissolved	0.000342	J	0.000240	0.00200	0.00200	1	10/31/2019 16:58	WG1370036
Manganese,Dissolved	0.00107	J	0.000250	0.00500	0.00500	1	10/31/2019 16:58	WG1370036
Molybdenum,Dissolved	0.00279	J	0.000140	0.00500	0.00500	1	10/31/2019 16:58	WG1370036
Nickel,Dissolved	0.00167	J	0.000350	0.00200	0.00200	1	10/31/2019 16:58	WG1370036
Selenium,Dissolved	0.000408	B J	0.000380	0.00200	0.00200	1	10/31/2019 16:58	WG1370036
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	10/31/2019 16:58	WG1370036
Uranium,Dissolved	0.00298	J	0.000330	0.0100	0.0100	1	10/31/2019 16:58	WG1370036
Zinc,Dissolved	0.0285		0.00256	0.0250	0.0250	1	10/31/2019 16:58	WG1370036

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 05:11	WG1373882
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	11/02/2019 05:11	WG1373882
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 05:11	WG1373882
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 05:11	WG1373882
Chloroform	U		0.000324	0.00500	0.00500	1	11/02/2019 05:11	WG1373882
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 05:11	WG1373882
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 05:11	WG1373882
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 05:11	WG1373882
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 05:11	WG1373882
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 05:11	WG1373882
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 05:11	WG1373882
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 05:11	WG1373882
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 05:11	WG1373882
(S) Toluene-d8	*94.3*				*80.0-120*		*11/02/2019 05:11*	WG1373882
(S) 4-Bromofluorobenzene	*93.4*				*77.0-126*		*11/02/2019 05:11*	WG1373882
(S) 1,2-Dichloroethane-d4	*95.5*				*70.0-130*		*11/02/2019 05:11*	WG1373882

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.000316	0.00100	0.00100	1	10/31/2019 04:16	WG1372208
Acenaphthylene	U		0.000309	0.00100	0.00100	1	10/31/2019 04:16	WG1372208
Acetophenone	U		0.00247	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
Anthracene	U		0.000291	0.00100	0.00100	1	10/31/2019 04:16	WG1372208
Atrazine	U		0.000260	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	10/31/2019 04:16	WG1372208
Benzaldehyde	U		0.00140	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	10/31/2019 04:16	WG1372208
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	10/31/2019 04:16	WG1372208
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	10/31/2019 04:16	WG1372208
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	10/31/2019 04:16	WG1372208
Biphenyl	U		0.000325	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	10/31/2019 04:16	WG1372208
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
Caprolactam	U		0.00259	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
Carbazole	U		0.000260	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
Chrysene	U		0.000332	0.00100	0.00100	1	10/31/2019 04:16	WG1372208
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	10/31/2019 04:16	WG1372208
Dibenzofuran	U		0.000338	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
Fluoranthene	U		0.000310	0.00100	0.00100	1	10/31/2019 04:16	WG1372208
Fluorene	U		0.000323	0.00100	0.00100	1	10/31/2019 04:16	WG1372208
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	10/31/2019 04:16	WG1372208
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
Hexachloroethane	U		0.000365	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	10/31/2019 04:16	WG1372208
Isophorone	U		0.000272	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	10/31/2019 04:16	WG1372208
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	10/31/2019 04:16	WG1372208
Naphthalene	U		0.000372	0.00100	0.00100	1	10/31/2019 04:16	WG1372208
Nitrobenzene	U		0.000367	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
Phenanthrene	U		0.000366	0.00100	0.00100	1	10/31/2019 04:16	WG1372208
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	10/31/2019 04:16	WG1372208
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	10/31/2019 04:16	WG1372208
Di-n-butyl phthalate	U		0.000266	0.00300	0.00300	1	10/31/2019 04:16	WG1372208
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	10/31/2019 04:16	WG1372208
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	10/31/2019 04:16	WG1372208
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	10/31/2019 04:16	WG1372208
Pyrene	U		0.000330	0.00100	0.00100	1	10/31/2019 04:16	WG1372208
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	10/31/2019 04:16	WG1372208

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
2-Methylphenol	U		0.000312	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
Phenol	U		0.000334	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	10/31/2019 04:16	WG1372208
(S) 2-Fluorophenol	*49.1*				*10.0-120*		*10/31/2019 04:16*	WG1372208
(S) Phenol-d5	*30.7*				*10.0-120*		*10/31/2019 04:16*	WG1372208
(S) Nitrobenzene-d5	*59.6*				*10.0-127*		*10/31/2019 04:16*	WG1372208
(S) 2-Fluorobiphenyl	*68.6*				*10.0-130*		*10/31/2019 04:16*	WG1372208
(S) 2,4,6-Tribromophenol	*67.0*				*10.0-155*		*10/31/2019 04:16*	WG1372208
(S) p-Terphenyl-d14	*78.3*				*10.0-128*		*10/31/2019 04:16*	WG1372208

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	986		5.64	20.0	20.0	1	10/27/2019 16:51	WG1370221

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	470		2.71	20.0	20.0	1	10/31/2019 01:38	WG1371212

Sample Narrative:

L1153940-23 WG1371212: Endpoint pH 4.5 headspace

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	3.89		0.0197	0.100	0.100	1	10/31/2019 18:55	WG1371690

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	232		0.519	1.00	10.0	10	10/29/2019 05:03	WG1370818
Fluoride	0.586		0.00990	0.100	0.100	1	10/29/2019 04:50	WG1370818
Sulfate	112		0.774	5.00	50.0	10	10/29/2019 05:03	WG1370818

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	0.0000625	B J	0.0000490	0.000200	0.000200	1	10/27/2019 19:38	WG1369905

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.230		0.0126	0.200	0.200	1	10/30/2019 15:37	WG1370034

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	10/31/2019 17:01	WG1370036
Arsenic,Dissolved	0.00264		0.000250	0.00200	0.00200	1	10/31/2019 17:01	WG1370036
Barium,Dissolved	0.223		0.000360	0.00500	0.00500	1	10/31/2019 17:01	WG1370036
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	10/31/2019 17:01	WG1370036
Chromium,Dissolved	0.000564	B J	0.000540	0.00200	0.00200	1	10/31/2019 17:01	WG1370036
Copper,Dissolved	0.0791		0.000520	0.00500	0.00500	1	10/31/2019 17:01	WG1370036
Cobalt,Dissolved	0.0124		0.000260	0.00200	0.00200	1	10/31/2019 17:01	WG1370036
Iron,Dissolved	U		0.0150	0.100	0.100	1	10/31/2019 17:01	WG1370036
Lead,Dissolved	0.00292		0.000240	0.00200	0.00200	1	10/31/2019 17:01	WG1370036
Manganese,Dissolved	0.0597		0.000250	0.00500	0.00500	1	10/31/2019 17:01	WG1370036
Molybdenum,Dissolved	0.00130	J	0.000140	0.00500	0.00500	1	10/31/2019 17:01	WG1370036
Nickel,Dissolved	0.0149		0.000350	0.00200	0.00200	1	10/31/2019 17:01	WG1370036
Selenium,Dissolved	0.00122	B J	0.000380	0.00200	0.00200	1	10/31/2019 17:01	WG1370036
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	10/31/2019 17:01	WG1370036
Uranium,Dissolved	0.0102		0.000330	0.0100	0.0100	1	10/31/2019 17:01	WG1370036
Zinc,Dissolved	0.234		0.00256	0.0250	0.0250	1	10/31/2019 17:01	WG1370036

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 05:31	WG1373882
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	11/02/2019 05:31	WG1373882
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 05:31	WG1373882
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 05:31	WG1373882
Chloroform	U		0.000324	0.00500	0.00500	1	11/02/2019 05:31	WG1373882
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 05:31	WG1373882
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 05:31	WG1373882
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 05:31	WG1373882
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 05:31	WG1373882
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 05:31	WG1373882
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 05:31	WG1373882
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 05:31	WG1373882
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 05:31	WG1373882
(S) Toluene-d8	*93.3*				*80.0-120*		*11/02/2019 05:31*	WG1373882
(S) 4-Bromofluorobenzene	*92.1*				*77.0-126*		*11/02/2019 05:31*	WG1373882
(S) 1,2-Dichloroethane-d4	*90.9*				*70.0-130*		*11/02/2019 05:31*	WG1373882

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.000316	0.00100	0.00100	1	10/31/2019 04:36	WG1372208
Acenaphthylene	U		0.000309	0.00100	0.00100	1	10/31/2019 04:36	WG1372208
Acetophenone	U		0.00247	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
Anthracene	U		0.000291	0.00100	0.00100	1	10/31/2019 04:36	WG1372208
Atrazine	U		0.000260	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	10/31/2019 04:36	WG1372208
Benzaldehyde	U		0.00140	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	10/31/2019 04:36	WG1372208
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	10/31/2019 04:36	WG1372208
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	10/31/2019 04:36	WG1372208
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	10/31/2019 04:36	WG1372208
Biphenyl	U		0.000325	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	10/31/2019 04:36	WG1372208
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
Caprolactam	U		0.00259	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
Carbazole	U		0.000260	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
Chrysene	U		0.000332	0.00100	0.00100	1	10/31/2019 04:36	WG1372208
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	10/31/2019 04:36	WG1372208
Dibenzofuran	U		0.000338	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
Fluoranthene	U		0.000310	0.00100	0.00100	1	10/31/2019 04:36	WG1372208
Fluorene	U		0.000323	0.00100	0.00100	1	10/31/2019 04:36	WG1372208
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	10/31/2019 04:36	WG1372208
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
Hexachloroethane	U		0.000365	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	10/31/2019 04:36	WG1372208
Isophorone	U		0.000272	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	10/31/2019 04:36	WG1372208
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	10/31/2019 04:36	WG1372208
Naphthalene	U		0.000372	0.00100	0.00100	1	10/31/2019 04:36	WG1372208
Nitrobenzene	U		0.000367	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
Phenanthrene	U		0.000366	0.00100	0.00100	1	10/31/2019 04:36	WG1372208
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	10/31/2019 04:36	WG1372208
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	10/31/2019 04:36	WG1372208
Di-n-butyl phthalate	0.000403	B J	0.000266	0.00300	0.00300	1	10/31/2019 04:36	WG1372208
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	10/31/2019 04:36	WG1372208
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	10/31/2019 04:36	WG1372208
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	10/31/2019 04:36	WG1372208
Pyrene	U		0.000330	0.00100	0.00100	1	10/31/2019 04:36	WG1372208
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	10/31/2019 04:36	WG1372208

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
2-Methylphenol	U		0.000312	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
Phenol	0.00240	J	0.000334	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	10/31/2019 04:36	WG1372208
(S) 2-Fluorophenol	*36.6*				*10.0-120*		*10/31/2019 04:36*	WG1372208
(S) Phenol-d5	*22.0*				*10.0-120*		*10/31/2019 04:36*	WG1372208
(S) Nitrobenzene-d5	*55.1*				*10.0-127*		*10/31/2019 04:36*	WG1372208
(S) 2-Fluorobiphenyl	*63.8*				*10.0-130*		*10/31/2019 04:36*	WG1372208
(S) 2,4,6-Tribromophenol	*70.9*				*10.0-155*		*10/31/2019 04:36*	WG1372208
(S) p-Terphenyl-d14	*81.3*				*10.0-128*		*10/31/2019 04:36*	WG1372208

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	4.11		0.0197	0.100	0.100	1	10/31/2019 18:57	WG1371690

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	244		0.260	1.00	5.00	5	10/29/2019 05:29	WG1370818
Fluoride	0.722		0.00990	0.100	0.100	1	10/29/2019 05:16	WG1370818
Sulfate	132		0.387	5.00	25.0	5	10/29/2019 05:29	WG1370818

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 05:50	WG1373882
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	11/02/2019 05:50	WG1373882
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 05:50	WG1373882
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 05:50	WG1373882
Chloroform	U		0.000324	0.00500	0.00500	1	11/02/2019 05:50	WG1373882
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 05:50	WG1373882
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 05:50	WG1373882
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 05:50	WG1373882
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 05:50	WG1373882
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 05:50	WG1373882
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 05:50	WG1373882
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 05:50	WG1373882
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 05:50	WG1373882
(S) Toluene-d8	*92.6*				*80.0-120*		*11/02/2019 05:50*	WG1373882
(S) 4-Bromofluorobenzene	*93.3*				*77.0-126*		*11/02/2019 05:50*	WG1373882
(S) 1,2-Dichloroethane-d4	*93.3*				*70.0-130*		*11/02/2019 05:50*	WG1373882

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acenaphthene	U		0.000316	0.00100	0.00100	1	10/31/2019 04:56	WG1372208
Acenaphthylene	U		0.000309	0.00100	0.00100	1	10/31/2019 04:56	WG1372208
Acetophenone	U		0.00247	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
Anthracene	U		0.000291	0.00100	0.00100	1	10/31/2019 04:56	WG1372208
Atrazine	U		0.000260	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	10/31/2019 04:56	WG1372208
Benzaldehyde	U		0.00140	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	10/31/2019 04:56	WG1372208
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	10/31/2019 04:56	WG1372208
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	10/31/2019 04:56	WG1372208
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	10/31/2019 04:56	WG1372208
Biphenyl	U		0.000325	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	10/31/2019 04:56	WG1372208
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
Caprolactam	U		0.00259	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
Carbazole	U		0.000260	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
Chrysene	U		0.000332	0.00100	0.00100	1	10/31/2019 04:56	WG1372208
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	10/31/2019 04:56	WG1372208
Dibenzofuran	U		0.000338	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
Fluoranthene	U		0.000310	0.00100	0.00100	1	10/31/2019 04:56	WG1372208
Fluorene	U		0.000323	0.00100	0.00100	1	10/31/2019 04:56	WG1372208
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	10/31/2019 04:56	WG1372208
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
Hexachloroethane	U		0.000365	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	10/31/2019 04:56	WG1372208
Isophorone	U		0.000272	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	10/31/2019 04:56	WG1372208
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	10/31/2019 04:56	WG1372208
Naphthalene	U		0.000372	0.00100	0.00100	1	10/31/2019 04:56	WG1372208
Nitrobenzene	U		0.000367	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
Phenanthrene	U		0.000366	0.00100	0.00100	1	10/31/2019 04:56	WG1372208
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	10/31/2019 04:56	WG1372208
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	10/31/2019 04:56	WG1372208
Di-n-butyl phthalate	0.000433	B J	0.000266	0.00300	0.00300	1	10/31/2019 04:56	WG1372208
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	10/31/2019 04:56	WG1372208
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	10/31/2019 04:56	WG1372208
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	10/31/2019 04:56	WG1372208
Pyrene	U		0.000330	0.00100	0.00100	1	10/31/2019 04:56	WG1372208
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	10/31/2019 04:56	WG1372208

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
2-Methylphenol	U		0.000312	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
Phenol	0.000917	J	0.000334	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	10/31/2019 04:56	WG1372208
(S) 2-Fluorophenol	*46.4*				*10.0-120*		*10/31/2019 04:56*	WG1372208
(S) Phenol-d5	*27.2*				*10.0-120*		*10/31/2019 04:56*	WG1372208
(S) Nitrobenzene-d5	*65.8*				*10.0-127*		*10/31/2019 04:56*	WG1372208
(S) 2-Fluorobiphenyl	*77.3*				*10.0-130*		*10/31/2019 04:56*	WG1372208
(S) 2,4,6-Tribromophenol	*69.8*				*10.0-155*		*10/31/2019 04:56*	WG1372208
(S) p-Terphenyl-d14	*73.5*				*10.0-128*		*10/31/2019 04:56*	WG1372208

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	519		2.82	10.0	10.0	1	10/27/2019 16:51	WG1370221

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	187		2.71	20.0	20.0	1	10/31/2019 01:45	WG1371212

Sample Narrative:

L1153940-26 WG1371212: Endpoint pH 4.5 headspace

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	3.40		0.0197	0.100	0.100	1	10/31/2019 18:58	WG1371690

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	87.8		0.0519	1.00	1.00	1	10/29/2019 07:54	WG1371200
Fluoride	2.04		0.00990	0.100	0.100	1	10/29/2019 07:54	WG1371200
Sulfate	79.9		0.0774	5.00	5.00	1	10/29/2019 07:54	WG1371200

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	0.0000569	B J	0.0000490	0.000200	0.000200	1	10/27/2019 19:40	WG1369905

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.144	J	0.0126	0.200	0.200	1	10/30/2019 15:39	WG1370034

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	10/30/2019 16:45	WG1370039
Arsenic,Dissolved	0.00394		0.000250	0.00200	0.00200	1	10/30/2019 16:45	WG1370039
Barium,Dissolved	0.0920		0.000360	0.00500	0.00500	1	10/30/2019 16:45	WG1370039
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	10/30/2019 16:45	WG1370039
Chromium,Dissolved	0.000804	J	0.000540	0.00200	0.00200	1	10/30/2019 16:45	WG1370039
Copper,Dissolved	0.00468	J	0.000520	0.00500	0.00500	1	10/30/2019 16:45	WG1370039
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	10/30/2019 16:45	WG1370039
Iron,Dissolved	U		0.0150	0.100	0.100	1	10/30/2019 16:45	WG1370039
Lead,Dissolved	0.000284	J	0.000240	0.00200	0.00200	1	10/30/2019 16:45	WG1370039
Manganese,Dissolved	0.00166	J	0.000250	0.00500	0.00500	1	10/30/2019 16:45	WG1370039
Molybdenum,Dissolved	0.00182	J	0.000140	0.00500	0.00500	1	10/30/2019 16:45	WG1370039
Nickel,Dissolved	0.00149	J	0.000350	0.00200	0.00200	1	10/30/2019 16:45	WG1370039
Selenium,Dissolved	0.00177	J	0.000380	0.00200	0.00200	1	10/30/2019 16:45	WG1370039
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	10/30/2019 16:45	WG1370039
Uranium,Dissolved	0.00242	J	0.000330	0.0100	0.0100	1	10/30/2019 16:45	WG1370039
Zinc,Dissolved	0.0290		0.00256	0.0250	0.0250	1	10/30/2019 22:54	WG1370039

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 06:10	WG1373882
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	11/02/2019 06:10	WG1373882
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 06:10	WG1373882
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 06:10	WG1373882
Chloroform	U		0.000324	0.00500	0.00500	1	11/02/2019 06:10	WG1373882
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 06:10	WG1373882
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 06:10	WG1373882
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 06:10	WG1373882
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 06:10	WG1373882
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 06:10	WG1373882
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 06:10	WG1373882
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 06:10	WG1373882
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 06:10	WG1373882
(S) Toluene-d8	*91.6*				*80.0-120*		*11/02/2019 06:10*	WG1373882
(S) 4-Bromofluorobenzene	*92.2*				*77.0-126*		*11/02/2019 06:10*	WG1373882
(S) 1,2-Dichloroethane-d4	*93.6*				*70.0-130*		*11/02/2019 06:10*	WG1373882

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acenaphthene	U		0.000316	0.00100	0.00100	1	10/31/2019 05:16	WG1372208
Acenaphthylene	U		0.000309	0.00100	0.00100	1	10/31/2019 05:16	WG1372208
Acetophenone	U		0.00247	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
Anthracene	U		0.000291	0.00100	0.00100	1	10/31/2019 05:16	WG1372208
Atrazine	U		0.000260	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	10/31/2019 05:16	WG1372208
Benzaldehyde	U		0.00140	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	10/31/2019 05:16	WG1372208
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	10/31/2019 05:16	WG1372208
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	10/31/2019 05:16	WG1372208
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	10/31/2019 05:16	WG1372208
Biphenyl	U		0.000325	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	10/31/2019 05:16	WG1372208
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
Caprolactam	U		0.00259	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
Carbazole	U		0.000260	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
Chrysene	U		0.000332	0.00100	0.00100	1	10/31/2019 05:16	WG1372208
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	10/31/2019 05:16	WG1372208
Dibenzofuran	U		0.000338	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
Fluoranthene	U		0.000310	0.00100	0.00100	1	10/31/2019 05:16	WG1372208
Fluorene	U		0.000323	0.00100	0.00100	1	10/31/2019 05:16	WG1372208
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	10/31/2019 05:16	WG1372208
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
Hexachloroethane	U		0.000365	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	10/31/2019 05:16	WG1372208
Isophorone	U		0.000272	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	10/31/2019 05:16	WG1372208
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	10/31/2019 05:16	WG1372208
Naphthalene	U		0.000372	0.00100	0.00100	1	10/31/2019 05:16	WG1372208
Nitrobenzene	U		0.000367	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
Phenanthrene	U		0.000366	0.00100	0.00100	1	10/31/2019 05:16	WG1372208
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	10/31/2019 05:16	WG1372208
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	10/31/2019 05:16	WG1372208
Di-n-butyl phthalate	0.000357	B J	0.000266	0.00300	0.00300	1	10/31/2019 05:16	WG1372208
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	10/31/2019 05:16	WG1372208
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	10/31/2019 05:16	WG1372208
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	10/31/2019 05:16	WG1372208
Pyrene	U		0.000330	0.00100	0.00100	1	10/31/2019 05:16	WG1372208
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	10/31/2019 05:16	WG1372208

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
2-Methylphenol	U		0.000312	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
Phenol	U		0.000334	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	10/31/2019 05:16	WG1372208
(S) 2-Fluorophenol	*46.3*				*10.0-120*		*10/31/2019 05:16*	WG1372208
(S) Phenol-d5	*27.0*				*10.0-120*		*10/31/2019 05:16*	WG1372208
(S) Nitrobenzene-d5	*64.2*				*10.0-127*		*10/31/2019 05:16*	WG1372208
(S) 2-Fluorobiphenyl	*74.0*				*10.0-130*		*10/31/2019 05:16*	WG1372208
(S) 2,4,6-Tribromophenol	*68.5*				*10.0-155*		*10/31/2019 05:16*	WG1372208
(S) p-Terphenyl-d14	*79.8*				*10.0-128*		*10/31/2019 05:16*	WG1372208

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	1000		5.64	20.0	20.0	1	10/27/2019 16:51	WG1370221

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	5.33		0.0985	0.100	0.500	5	10/31/2019 19:00	WG1371690

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	264		0.260	1.00	5.00	5	10/29/2019 08:32	WG1371200
Fluoride	0.674		0.00990	0.100	0.100	1	10/29/2019 08:19	WG1371200
Sulfate	87.7		0.0774	5.00	5.00	1	10/29/2019 08:19	WG1371200

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	0.0000693	B J	0.0000490	0.000200	0.000200	1	10/27/2019 19:42	WG1369905

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.193	J	0.0126	0.200	0.200	1	10/30/2019 15:42	WG1370034

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	10/30/2019 16:48	WG1370039
Arsenic,Dissolved	0.00227		0.000250	0.00200	0.00200	1	10/30/2019 16:48	WG1370039
Barium,Dissolved	0.117		0.000360	0.00500	0.00500	1	10/30/2019 16:48	WG1370039
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	10/30/2019 16:48	WG1370039
Chromium,Dissolved	0.0528		0.000540	0.00200	0.00200	1	10/30/2019 16:48	WG1370039
Copper,Dissolved	0.00457	J	0.000520	0.00500	0.00500	1	10/30/2019 16:48	WG1370039
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	10/30/2019 16:48	WG1370039
Iron,Dissolved	U		0.0150	0.100	0.100	1	10/30/2019 16:48	WG1370039
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	10/30/2019 16:48	WG1370039
Manganese,Dissolved	0.00139	J	0.000250	0.00500	0.00500	1	10/30/2019 16:48	WG1370039
Molybdenum,Dissolved	0.00144	J	0.000140	0.00500	0.00500	1	10/30/2019 16:48	WG1370039
Nickel,Dissolved	0.00230		0.000350	0.00200	0.00200	1	10/30/2019 16:48	WG1370039
Selenium,Dissolved	0.00168	J	0.000380	0.00200	0.00200	1	10/30/2019 16:48	WG1370039
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	10/30/2019 16:48	WG1370039
Uranium,Dissolved	0.00539	J	0.000330	0.0100	0.0100	1	10/30/2019 16:48	WG1370039
Zinc,Dissolved	0.0628		0.00256	0.0250	0.0250	1	10/30/2019 22:57	WG1370039

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 06:30	WG1373882
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	11/02/2019 06:30	WG1373882
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 06:30	WG1373882
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 06:30	WG1373882

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 06:30	WG1373882
Chloroform	0.000578	J	0.000324	0.00500	0.00500	1	11/02/2019 06:30	WG1373882
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 06:30	WG1373882
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 06:30	WG1373882
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 06:30	WG1373882
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 06:30	WG1373882
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 06:30	WG1373882
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 06:30	WG1373882
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 06:30	WG1373882
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 06:30	WG1373882
(S) Toluene-d8	*93.1*				*80.0-120*		*11/02/2019 06:30*	WG1373882
(S) 4-Bromofluorobenzene	*93.6*				*77.0-126*		*11/02/2019 06:30*	WG1373882
(S) 1,2-Dichloroethane-d4	*94.5*				*70.0-130*		*11/02/2019 06:30*	WG1373882

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.000316	0.00100	0.00100	1	10/31/2019 05:36	WG1372208
Acenaphthylene	U		0.000309	0.00100	0.00100	1	10/31/2019 05:36	WG1372208
Acetophenone	U		0.00247	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
Anthracene	U		0.000291	0.00100	0.00100	1	10/31/2019 05:36	WG1372208
Atrazine	U		0.000260	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	10/31/2019 05:36	WG1372208
Benzaldehyde	U		0.00140	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	10/31/2019 05:36	WG1372208
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	10/31/2019 05:36	WG1372208

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	10/31/2019 05:36	WG1372208
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	10/31/2019 05:36	WG1372208
Biphenyl	U		0.000325	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	10/31/2019 05:36	WG1372208
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
Caprolactam	U		0.00259	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
Carbazole	U		0.000260	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
Chrysene	U		0.000332	0.00100	0.00100	1	10/31/2019 05:36	WG1372208
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	10/31/2019 05:36	WG1372208
Dibenzofuran	U		0.000338	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
Fluoranthene	U		0.000310	0.00100	0.00100	1	10/31/2019 05:36	WG1372208
Fluorene	U		0.000323	0.00100	0.00100	1	10/31/2019 05:36	WG1372208
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	10/31/2019 05:36	WG1372208
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
Hexachloroethane	U		0.000365	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	10/31/2019 05:36	WG1372208
Isophorone	U		0.000272	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	10/31/2019 05:36	WG1372208
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	10/31/2019 05:36	WG1372208
Naphthalene	U		0.000372	0.00100	0.00100	1	10/31/2019 05:36	WG1372208
Nitrobenzene	U		0.000367	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
Phenanthrene	U		0.000366	0.00100	0.00100	1	10/31/2019 05:36	WG1372208
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	10/31/2019 05:36	WG1372208
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	10/31/2019 05:36	WG1372208
Di-n-butyl phthalate	0.000297	B J	0.000266	0.00300	0.00300	1	10/31/2019 05:36	WG1372208
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	10/31/2019 05:36	WG1372208
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	10/31/2019 05:36	WG1372208
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	10/31/2019 05:36	WG1372208
Pyrene	U		0.000330	0.00100	0.00100	1	10/31/2019 05:36	WG1372208
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
2-Methylphenol	U		0.000312	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
Phenol	U		0.000334	0.0100	0.0100	1	10/31/2019 05:36	WG1372208

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	10/31/2019 05:36	WG1372208
(S) 2-Fluorophenol	*43.9*				*10.0-120*		*10/31/2019 05:36*	WG1372208
(S) Phenol-d5	*26.6*				*10.0-120*		*10/31/2019 05:36*	WG1372208
(S) Nitrobenzene-d5	*62.2*				*10.0-127*		*10/31/2019 05:36*	WG1372208
(S) 2-Fluorobiphenyl	*75.3*				*10.0-130*		*10/31/2019 05:36*	WG1372208
(S) 2,4,6-Tribromophenol	*70.3*				*10.0-155*		*10/31/2019 05:36*	WG1372208
(S) p-Terphenyl-d14	*82.2*				*10.0-128*		*10/31/2019 05:36*	WG1372208

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	479		2.82	10.0	10.0	1	10/27/2019 16:51	WG1370221

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	185		2.71	20.0	20.0	1	10/31/2019 01:52	WG1371212

Sample Narrative:

L1153940-28 WG1371212: Endpoint pH 4.5 headspace

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	3.29		0.0985	0.100	0.500	5	10/31/2019 19:01	WG1371690

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	85.0		0.0519	1.00	1.00	1	10/29/2019 09:11	WG1371200
Fluoride	1.24		0.00990	0.100	0.100	1	10/29/2019 09:11	WG1371200
Sulfate	71.7		0.0774	5.00	5.00	1	10/29/2019 09:11	WG1371200

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	0.0000605	B J	0.0000490	0.000200	0.000200	1	10/27/2019 19:44	WG1369905

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.171	J	0.0126	0.200	0.200	1	10/30/2019 15:45	WG1370034

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	0.00831	J	0.00515	0.100	0.100	1	10/30/2019 16:52	WG1370039
Arsenic,Dissolved	0.00381		0.000250	0.00200	0.00200	1	10/30/2019 16:52	WG1370039
Barium,Dissolved	0.0903		0.000360	0.00500	0.00500	1	10/30/2019 16:52	WG1370039
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	10/30/2019 16:52	WG1370039
Chromium,Dissolved	0.00162	J	0.000540	0.00200	0.00200	1	10/30/2019 16:52	WG1370039
Copper,Dissolved	0.00273	J	0.000520	0.00500	0.00500	1	10/30/2019 16:52	WG1370039
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	10/30/2019 16:52	WG1370039
Iron,Dissolved	U		0.0150	0.100	0.100	1	10/30/2019 16:52	WG1370039
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	10/30/2019 16:52	WG1370039
Manganese,Dissolved	0.00286	J	0.000250	0.00500	0.00500	1	10/30/2019 16:52	WG1370039
Molybdenum,Dissolved	0.00199	J	0.000140	0.00500	0.00500	1	10/30/2019 16:52	WG1370039
Nickel,Dissolved	0.00417		0.000350	0.00200	0.00200	1	10/30/2019 16:52	WG1370039
Selenium,Dissolved	0.00174	J	0.000380	0.00200	0.00200	1	10/30/2019 16:52	WG1370039
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	10/30/2019 16:52	WG1370039
Uranium,Dissolved	0.00208	J	0.000330	0.0100	0.0100	1	10/30/2019 16:52	WG1370039
Zinc,Dissolved	0.0682		0.00256	0.0250	0.0250	1	10/30/2019 21:32	WG1370039

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 06:50	WG1373882
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
Bromodichloromethane	0.00270		0.000380	0.00125	0.00125	1	11/02/2019 06:50	WG1373882
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 06:50	WG1373882
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 06:50	WG1373882
Chloroform	0.00916		0.000324	0.00500	0.00500	1	11/02/2019 06:50	WG1373882
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 06:50	WG1373882
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 06:50	WG1373882
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 06:50	WG1373882
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 06:50	WG1373882
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 06:50	WG1373882
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 06:50	WG1373882
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 06:50	WG1373882
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 06:50	WG1373882
(S) Toluene-d8	*93.2*				*80.0-120*		*11/02/2019 06:50*	WG1373882
(S) 4-Bromofluorobenzene	*94.0*				*77.0-126*		*11/02/2019 06:50*	WG1373882
(S) 1,2-Dichloroethane-d4	*96.3*				*70.0-130*		*11/02/2019 06:50*	WG1373882

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acenaphthene	U		0.000316	0.00100	0.00100	1	10/31/2019 05:56	WG1372208
Acenaphthylene	U		0.000309	0.00100	0.00100	1	10/31/2019 05:56	WG1372208
Acetophenone	U		0.00247	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
Anthracene	U		0.000291	0.00100	0.00100	1	10/31/2019 05:56	WG1372208
Atrazine	U		0.000260	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	10/31/2019 05:56	WG1372208
Benzaldehyde	U		0.00140	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	10/31/2019 05:56	WG1372208
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	10/31/2019 05:56	WG1372208
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	10/31/2019 05:56	WG1372208
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	10/31/2019 05:56	WG1372208
Biphenyl	U		0.000325	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	10/31/2019 05:56	WG1372208
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
Caprolactam	U		0.00259	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
Carbazole	U		0.000260	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
Chrysene	U		0.000332	0.00100	0.00100	1	10/31/2019 05:56	WG1372208
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	10/31/2019 05:56	WG1372208
Dibenzofuran	U		0.000338	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
Fluoranthene	U		0.000310	0.00100	0.00100	1	10/31/2019 05:56	WG1372208
Fluorene	U		0.000323	0.00100	0.00100	1	10/31/2019 05:56	WG1372208
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	10/31/2019 05:56	WG1372208
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
Hexachloroethane	U		0.000365	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	10/31/2019 05:56	WG1372208
Isophorone	U		0.000272	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	10/31/2019 05:56	WG1372208
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	10/31/2019 05:56	WG1372208
Naphthalene	U		0.000372	0.00100	0.00100	1	10/31/2019 05:56	WG1372208
Nitrobenzene	U		0.000367	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
Phenanthrene	U		0.000366	0.00100	0.00100	1	10/31/2019 05:56	WG1372208
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	10/31/2019 05:56	WG1372208
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	10/31/2019 05:56	WG1372208
Di-n-butyl phthalate	0.000324	B J	0.000266	0.00300	0.00300	1	10/31/2019 05:56	WG1372208
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	10/31/2019 05:56	WG1372208
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	10/31/2019 05:56	WG1372208
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	10/31/2019 05:56	WG1372208
Pyrene	U		0.000330	0.00100	0.00100	1	10/31/2019 05:56	WG1372208
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	10/31/2019 05:56	WG1372208

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
2-Methylphenol	U		0.000312	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
Phenol	U		0.000334	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	10/31/2019 05:56	WG1372208
(S) 2-Fluorophenol	*39.4*				*10.0-120*		*10/31/2019 05:56*	WG1372208
(S) Phenol-d5	*24.2*				*10.0-120*		*10/31/2019 05:56*	WG1372208
(S) Nitrobenzene-d5	*59.6*				*10.0-127*		*10/31/2019 05:56*	WG1372208
(S) 2-Fluorobiphenyl	*69.9*				*10.0-130*		*10/31/2019 05:56*	WG1372208
(S) 2,4,6-Tribromophenol	*65.5*				*10.0-155*		*10/31/2019 05:56*	WG1372208
(S) p-Terphenyl-d14	*79.9*				*10.0-128*		*10/31/2019 05:56*	WG1372208

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	745		3.75	13.3	13.3	1	10/27/2019 16:51	WG1370221

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	391		2.71	20.0	20.0	1	10/31/2019 02:03	WG1371212

Sample Narrative:

L1153940-29 WG1371212: Endpoint pH 4.5 headspace

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	7.15		0.0985	0.100	0.500	5	10/31/2019 19:09	WG1371690

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	90.5		0.0519	1.00	1.00	1	10/29/2019 09:37	WG1371200
Fluoride	0.453		0.00990	0.100	0.100	1	10/29/2019 09:37	WG1371200
Sulfate	173		0.387	5.00	25.0	5	10/29/2019 09:50	WG1371200

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	0.0000640	B J	0.0000490	0.000200	0.000200	1	10/27/2019 19:46	WG1369905

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.188	J	0.0126	0.200	0.200	1	10/30/2019 15:47	WG1370034

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	10/30/2019 17:04	WG1370039
Arsenic,Dissolved	0.00353		0.000250	0.00200	0.00200	1	10/30/2019 17:04	WG1370039
Barium,Dissolved	0.341		0.000360	0.00500	0.00500	1	10/30/2019 17:04	WG1370039
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	10/30/2019 17:04	WG1370039
Chromium,Dissolved	U		0.000540	0.00200	0.00200	1	10/30/2019 17:04	WG1370039
Copper,Dissolved	0.00397	J	0.000520	0.00500	0.00500	1	10/30/2019 17:04	WG1370039
Cobalt,Dissolved	0.000415	J	0.000260	0.00200	0.00200	1	10/30/2019 17:04	WG1370039
Iron,Dissolved	U		0.0150	0.100	0.100	1	10/30/2019 17:04	WG1370039
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	10/30/2019 17:04	WG1370039
Manganese,Dissolved	0.278		0.000250	0.00500	0.00500	1	10/30/2019 17:04	WG1370039
Molybdenum,Dissolved	0.00197	J	0.000140	0.00500	0.00500	1	10/30/2019 17:04	WG1370039
Nickel,Dissolved	0.0150		0.000350	0.00200	0.00200	1	10/30/2019 17:04	WG1370039
Selenium,Dissolved	0.000492	J	0.000380	0.00200	0.00200	1	10/30/2019 17:04	WG1370039
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	10/30/2019 17:04	WG1370039
Uranium,Dissolved	0.00884	J	0.000330	0.0100	0.0100	1	10/30/2019 17:04	WG1370039
Zinc,Dissolved	0.0379		0.00256	0.0250	0.0250	1	10/30/2019 21:53	WG1370039

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0510	B J	0.0314	0.100	0.100	1	11/02/2019 20:46	WG1373783
(S) a,a,a-Trifluorotoluene(FID)	*106*				*78.0-120*		*11/02/2019 20:46*	WG1373783

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 07:10	WG1373882
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	11/02/2019 07:10	WG1373882
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 07:10	WG1373882
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 07:10	WG1373882
Chloroform	U		0.000324	0.00500	0.00500	1	11/02/2019 07:10	WG1373882
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 07:10	WG1373882
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 07:10	WG1373882
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 07:10	WG1373882
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 07:10	WG1373882
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 07:10	WG1373882
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 07:10	WG1373882
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 07:10	WG1373882
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 07:10	WG1373882
(S) Toluene-d8	*92.3*				*80.0-120*		*11/02/2019 07:10*	WG1373882
(S) 4-Bromofluorobenzene	*92.1*				*77.0-126*		*11/02/2019 07:10*	WG1373882
(S) 1,2-Dichloroethane-d4	*94.5*				*70.0-130*		*11/02/2019 07:10*	WG1373882

Semi-Volatile Organic Compounds (GC) by Method 3511/8015

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	0.272		0.0247	0.100	0.100	1	10/28/2019 01:30	WG1370005
(S) o-Terphenyl	*69.5*				*31.0-160*		*10/28/2019 01:30*	WG1370005

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.000316	0.00100	0.00100	1	10/31/2019 06:16	WG1372208
Acenaphthylene	U		0.000309	0.00100	0.00100	1	10/31/2019 06:16	WG1372208
Acetophenone	U		0.00247	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
Anthracene	U		0.000291	0.00100	0.00100	1	10/31/2019 06:16	WG1372208
Atrazine	U		0.000260	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
Benzo(a)anthracene	0.0000551	J	0.0000510	0.00100	0.00100	1	10/31/2019 06:16	WG1372208
Benzaldehyde	U		0.00140	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	10/31/2019 06:16	WG1372208
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	10/31/2019 06:16	WG1372208
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	10/31/2019 06:16	WG1372208
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	10/31/2019 06:16	WG1372208
Biphenyl	U		0.000325	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	10/31/2019 06:16	WG1372208
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
Caprolactam	U		0.00259	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
Carbazole	U		0.000260	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
Chrysene	U		0.000332	0.00100	0.00100	1	10/31/2019 06:16	WG1372208
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	10/31/2019 06:16	WG1372208
Dibenzofuran	U		0.000338	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
Fluoranthene	U		0.000310	0.00100	0.00100	1	10/31/2019 06:16	WG1372208
Fluorene	U		0.000323	0.00100	0.00100	1	10/31/2019 06:16	WG1372208
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	10/31/2019 06:16	WG1372208
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
Hexachloroethane	U		0.000365	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	10/31/2019 06:16	WG1372208
Isophorone	U		0.000272	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	10/31/2019 06:16	WG1372208
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	10/31/2019 06:16	WG1372208
Naphthalene	U		0.000372	0.00100	0.00100	1	10/31/2019 06:16	WG1372208
Nitrobenzene	U		0.000367	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
Phenanthrene	U		0.000366	0.00100	0.00100	1	10/31/2019 06:16	WG1372208
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	10/31/2019 06:16	WG1372208
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	10/31/2019 06:16	WG1372208
Di-n-butyl phthalate	0.000447	B J	0.000266	0.00300	0.00300	1	10/31/2019 06:16	WG1372208
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	10/31/2019 06:16	WG1372208
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	10/31/2019 06:16	WG1372208
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	10/31/2019 06:16	WG1372208
Pyrene	U		0.000330	0.00100	0.00100	1	10/31/2019 06:16	WG1372208
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	10/31/2019 06:16	WG1372208

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
2-Methylphenol	U		0.000312	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
Phenol	0.00114	J	0.000334	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	10/31/2019 06:16	WG1372208
(S) 2-Fluorophenol	*43.8*				*10.0-120*		*10/31/2019 06:16*	WG1372208
(S) Phenol-d5	*26.2*				*10.0-120*		*10/31/2019 06:16*	WG1372208
(S) Nitrobenzene-d5	*62.6*				*10.0-127*		*10/31/2019 06:16*	WG1372208
(S) 2-Fluorobiphenyl	*71.8*				*10.0-130*		*10/31/2019 06:16*	WG1372208
(S) 2,4,6-Tribromophenol	*70.9*				*10.0-155*		*10/31/2019 06:16*	WG1372208
(S) p-Terphenyl-d14	*80.5*				*10.0-128*		*10/31/2019 06:16*	WG1372208

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	1160		5.64	20.0	20.0	1	10/27/2019 16:51	WG1370221

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	882		2.71	20.0	20.0	1	10/31/2019 02:11	WG1371212

Sample Narrative:

L1153940-30 WG1371212: Endpoint pH 4.5 headspace

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	U	J5	0.0197	0.100	0.100	1	10/31/2019 19:10	WG1371690

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	160		0.519	1.00	10.0	10	10/29/2019 13:00	WG1371288
Fluoride	0.748		0.00990	0.100	0.100	1	10/29/2019 12:11	WG1371288
Sulfate	7.98		0.0774	5.00	5.00	1	10/29/2019 12:11	WG1371288

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	U	J6 O1	0.0000490	0.000200	0.000200	1	10/27/2019 19:23	WG1369905

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.158	J	0.0126	0.200	0.200	1	10/30/2019 14:38	WG1370034

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	10/30/2019 16:30	WG1370039
Arsenic,Dissolved	0.00228		0.000250	0.00200	0.00200	1	10/30/2019 16:30	WG1370039
Barium,Dissolved	0.496		0.000360	0.00500	0.00500	1	10/30/2019 16:30	WG1370039
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	10/30/2019 16:30	WG1370039
Chromium,Dissolved	U		0.000540	0.00200	0.00200	1	10/30/2019 16:30	WG1370039
Copper,Dissolved	U		0.000520	0.00500	0.00500	1	10/30/2019 16:30	WG1370039
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	10/30/2019 16:30	WG1370039
Iron,Dissolved	0.0209	J	0.0150	0.100	0.100	1	10/30/2019 16:30	WG1370039
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	10/30/2019 16:30	WG1370039
Manganese,Dissolved	1.02	V	0.000250	0.00500	0.00500	1	10/30/2019 16:30	WG1370039
Molybdenum,Dissolved	0.00183	J	0.000140	0.00500	0.00500	1	10/30/2019 16:30	WG1370039
Nickel,Dissolved	0.00323		0.000350	0.00200	0.00200	1	10/30/2019 16:30	WG1370039
Selenium,Dissolved	U		0.000380	0.00200	0.00200	1	10/30/2019 16:30	WG1370039
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	10/30/2019 16:30	WG1370039
Uranium,Dissolved	0.0167		0.000330	0.0100	0.0100	1	10/30/2019 16:30	WG1370039
Zinc,Dissolved	0.00581	J	0.00256	0.0250	0.0250	1	10/30/2019 21:10	WG1370039

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.244	B J3	0.0314	0.100	0.100	1	11/02/2019 02:46	WG1373788
(S) a,a,a-Trifluorotoluene(FID)	*101*				*78.0-120*		*11/02/2019 02:46*	WG1373788

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 18:50	WG1374036
Benzene	0.000352	J	0.000331	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	11/02/2019 18:50	WG1374036
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 18:50	WG1374036
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
sec-Butylbenzene	0.00229		0.000365	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
Carbon tetrachloride	U	J3 J5	0.000379	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 18:50	WG1374036
Chloroform	U		0.000324	0.00500	0.00500	1	11/02/2019 18:50	WG1374036
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 18:50	WG1374036
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 18:50	WG1374036
Isopropylbenzene	0.0164	J6	0.000326	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 18:50	WG1374036
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 18:50	WG1374036
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 18:50	WG1374036
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 18:50	WG1374036
n-Propylbenzene	0.000566	J	0.000349	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 18:50	WG1374036
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 18:50	WG1374036
(S) Toluene-d8	*93.7*				*80.0-120*		*11/02/2019 18:50*	WG1374036
(S) 4-Bromofluorobenzene	*101*				*77.0-126*		*11/02/2019 18:50*	WG1374036
(S) 1,2-Dichloroethane-d4	*97.8*				*70.0-130*		*11/02/2019 18:50*	WG1374036

Semi-Volatile Organic Compounds (GC) by Method 3511/8015

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
TPH (GC/FID) High Fraction	0.167		0.0247	0.100	0.100	1	10/27/2019 17:44	WG1370005
(S) o-Terphenyl	*67.9*				*31.0-160*		*10/27/2019 17:44*	WG1370005

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acenaphthene	U		0.000316	0.00100	0.00100	1	10/31/2019 06:36	WG1372208
Acenaphthylene	U		0.000309	0.00100	0.00100	1	10/31/2019 06:36	WG1372208
Acetophenone	U		0.00247	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
Anthracene	U		0.000291	0.00100	0.00100	1	10/31/2019 06:36	WG1372208
Atrazine	U		0.000260	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	10/31/2019 06:36	WG1372208
Benzaldehyde	U		0.00140	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	10/31/2019 06:36	WG1372208
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	10/31/2019 06:36	WG1372208
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	10/31/2019 06:36	WG1372208
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	10/31/2019 06:36	WG1372208
Biphenyl	U		0.000325	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	10/31/2019 06:36	WG1372208
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
Caprolactam	U		0.00259	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
Carbazole	U		0.000260	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
Chrysene	U		0.000332	0.00100	0.00100	1	10/31/2019 06:36	WG1372208
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	10/31/2019 06:36	WG1372208
Dibenzofuran	U		0.000338	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
Fluoranthene	U		0.000310	0.00100	0.00100	1	10/31/2019 06:36	WG1372208
Fluorene	U		0.000323	0.00100	0.00100	1	10/31/2019 06:36	WG1372208
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	10/31/2019 06:36	WG1372208
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
Hexachloroethane	U		0.000365	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	10/31/2019 06:36	WG1372208
Isophorone	U		0.000272	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	10/31/2019 06:36	WG1372208
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	10/31/2019 06:36	WG1372208
Naphthalene	U		0.000372	0.00100	0.00100	1	10/31/2019 06:36	WG1372208
Nitrobenzene	U		0.000367	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
Phenanthrene	U		0.000366	0.00100	0.00100	1	10/31/2019 06:36	WG1372208
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	10/31/2019 06:36	WG1372208
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	10/31/2019 06:36	WG1372208
Di-n-butyl phthalate	0.000321	B J	0.000266	0.00300	0.00300	1	10/31/2019 06:36	WG1372208
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	10/31/2019 06:36	WG1372208
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	10/31/2019 06:36	WG1372208
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	10/31/2019 06:36	WG1372208
Pyrene	U		0.000330	0.00100	0.00100	1	10/31/2019 06:36	WG1372208
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	10/31/2019 06:36	WG1372208

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
2-Methylphenol	U		0.000312	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
Phenol	0.00315	J	0.000334	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	10/31/2019 06:36	WG1372208
(S) 2-Fluorophenol	*44.0*				*10.0-120*		*10/31/2019 06:36*	WG1372208
(S) Phenol-d5	*26.9*				*10.0-120*		*10/31/2019 06:36*	WG1372208
(S) Nitrobenzene-d5	*66.8*				*10.0-127*		*10/31/2019 06:36*	WG1372208
(S) 2-Fluorobiphenyl	*72.7*				*10.0-130*		*10/31/2019 06:36*	WG1372208
(S) 2,4,6-Tribromophenol	*70.0*				*10.0-155*		*10/31/2019 06:36*	WG1372208
(S) p-Terphenyl-d14	*82.9*				*10.0-128*		*10/31/2019 06:36*	WG1372208

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	484		2.82	10.0	10.0	1	10/27/2019 16:51	WG1370221

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	180		2.71	20.0	20.0	1	10/31/2019 02:18	WG1371212

Sample Narrative:

L1153940-31 WG1371212: Endpoint pH 4.5 headspace

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	2.57		0.0197	0.100	0.100	1	10/31/2019 19:15	WG1371690

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	122		0.260	1.00	5.00	5	10/29/2019 10:16	WG1371200
Fluoride	0.930		0.00990	0.100	0.100	1	10/29/2019 10:03	WG1371200
Sulfate	76.8		0.0774	5.00	5.00	1	10/29/2019 10:03	WG1371200

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	0.0000637	B J	0.0000490	0.000200	0.000200	1	10/27/2019 19:48	WG1369905

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.149	J	0.0126	0.200	0.200	1	10/31/2019 09:16	WG1372266

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	10/30/2019 17:08	WG1370039
Arsenic,Dissolved	0.00483		0.000250	0.00200	0.00200	1	10/30/2019 17:08	WG1370039
Barium,Dissolved	0.106		0.000360	0.00500	0.00500	1	10/30/2019 17:08	WG1370039
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	10/30/2019 17:08	WG1370039
Chromium,Dissolved	0.00115	J	0.000540	0.00200	0.00200	1	10/30/2019 17:08	WG1370039
Copper,Dissolved	0.00265	J	0.000520	0.00500	0.00500	1	10/30/2019 17:08	WG1370039
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	10/30/2019 17:08	WG1370039
Iron,Dissolved	U		0.0150	0.100	0.100	1	10/30/2019 17:08	WG1370039
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	10/30/2019 17:08	WG1370039
Manganese,Dissolved	0.0172		0.000250	0.00500	0.00500	1	10/30/2019 17:08	WG1370039
Molybdenum,Dissolved	0.00279	J	0.000140	0.00500	0.00500	1	10/30/2019 17:08	WG1370039
Nickel,Dissolved	0.000441	J	0.000350	0.00200	0.00200	1	10/30/2019 17:08	WG1370039
Selenium,Dissolved	0.00306		0.000380	0.00200	0.00200	1	10/30/2019 17:08	WG1370039
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	10/30/2019 17:08	WG1370039
Uranium,Dissolved	0.00148	J	0.000330	0.0100	0.0100	1	10/30/2019 17:08	WG1370039
Zinc,Dissolved	0.0105	J	0.00256	0.0250	0.0250	1	10/30/2019 21:57	WG1370039

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0381	B J	0.0314	0.100	0.100	1	11/02/2019 03:10	WG1373788
(S) a,a,a-Trifluorotoluene(FID)	*105*				*78.0-120*		*11/02/2019 03:10*	WG1373788

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 07:29	WG1373882
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	11/02/2019 07:29	WG1373882
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 07:29	WG1373882
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 07:29	WG1373882
Chloroform	U		0.000324	0.00500	0.00500	1	11/02/2019 07:29	WG1373882
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 07:29	WG1373882
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 07:29	WG1373882
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 07:29	WG1373882
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 07:29	WG1373882
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 07:29	WG1373882
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 07:29	WG1373882
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 07:29	WG1373882
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 07:29	WG1373882
(S) Toluene-d8	*91.3*				*80.0-120*		*11/02/2019 07:29*	WG1373882
(S) 4-Bromofluorobenzene	*92.4*				*77.0-126*		*11/02/2019 07:29*	WG1373882
(S) 1,2-Dichloroethane-d4	*94.8*				*70.0-130*		*11/02/2019 07:29*	WG1373882

Semi-Volatile Organic Compounds (GC) by Method 3511/8015

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
TPH (GC/FID) High Fraction	U		0.0247	0.100	0.100	1	10/28/2019 01:56	WG1370005
(S) o-Terphenyl	*70.5*				*31.0-160*		*10/28/2019 01:56*	WG1370005

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acenaphthene	U		0.000316	0.00100	0.00100	1	10/31/2019 07:36	WG1372208
Acenaphthylene	U		0.000309	0.00100	0.00100	1	10/31/2019 07:36	WG1372208
Acetophenone	U		0.00247	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
Anthracene	U		0.000291	0.00100	0.00100	1	10/31/2019 07:36	WG1372208
Atrazine	U		0.000260	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	10/31/2019 07:36	WG1372208
Benzaldehyde	U		0.00140	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	10/31/2019 07:36	WG1372208
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	10/31/2019 07:36	WG1372208
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	10/31/2019 07:36	WG1372208
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	10/31/2019 07:36	WG1372208
Biphenyl	U		0.000325	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	10/31/2019 07:36	WG1372208
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
Caprolactam	U		0.00259	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
Carbazole	U		0.000260	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
Chrysene	U		0.000332	0.00100	0.00100	1	10/31/2019 07:36	WG1372208
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	10/31/2019 07:36	WG1372208
Dibenzofuran	U		0.000338	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
Fluoranthene	U		0.000310	0.00100	0.00100	1	10/31/2019 07:36	WG1372208
Fluorene	U		0.000323	0.00100	0.00100	1	10/31/2019 07:36	WG1372208
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	10/31/2019 07:36	WG1372208
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
Hexachloroethane	U		0.000365	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	10/31/2019 07:36	WG1372208
Isophorone	U		0.000272	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	10/31/2019 07:36	WG1372208
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	10/31/2019 07:36	WG1372208
Naphthalene	U		0.000372	0.00100	0.00100	1	10/31/2019 07:36	WG1372208
Nitrobenzene	U		0.000367	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
Phenanthrene	U		0.000366	0.00100	0.00100	1	10/31/2019 07:36	WG1372208
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	10/31/2019 07:36	WG1372208
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	10/31/2019 07:36	WG1372208
Di-n-butyl phthalate	0.000310	B J	0.000266	0.00300	0.00300	1	10/31/2019 07:36	WG1372208
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	10/31/2019 07:36	WG1372208
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	10/31/2019 07:36	WG1372208
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	10/31/2019 07:36	WG1372208
Pyrene	U		0.000330	0.00100	0.00100	1	10/31/2019 07:36	WG1372208
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	10/31/2019 07:36	WG1372208

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
2-Methylphenol	U		0.000312	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
Phenol	U		0.000334	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	10/31/2019 07:36	WG1372208
(S) 2-Fluorophenol	*30.1*				*10.0-120*		*10/31/2019 07:36*	WG1372208
(S) Phenol-d5	*19.1*				*10.0-120*		*10/31/2019 07:36*	WG1372208
(S) Nitrobenzene-d5	*41.5*				*10.0-127*		*10/31/2019 07:36*	WG1372208
(S) 2-Fluorobiphenyl	*49.1*				*10.0-130*		*10/31/2019 07:36*	WG1372208
(S) 2,4,6-Tribromophenol	*54.5*				*10.0-155*		*10/31/2019 07:36*	WG1372208
(S) p-Terphenyl-d14	*80.4*				*10.0-128*		*10/31/2019 07:36*	WG1372208

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	992		5.64	20.0	20.0	1	10/27/2019 16:51	WG1370221

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	175		2.71	20.0	20.0	1	10/31/2019 02:25	WG1371212

Sample Narrative:

L1153940-32 WG1371212: Endpoint pH 4.5 headspace

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	2.80		0.0197	0.100	0.100	1	10/31/2019 19:16	WG1371690

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	335		0.519	1.00	10.0	10	10/29/2019 10:42	WG1371200
Fluoride	0.798		0.00990	0.100	0.100	1	10/29/2019 10:29	WG1371200
Sulfate	86.8		0.0774	5.00	5.00	1	10/29/2019 10:29	WG1371200

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	0.0000822	B J	0.0000490	0.000200	0.000200	1	10/27/2019 19:50	WG1369905

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.190	J	0.0126	0.200	0.200	1	10/31/2019 09:19	WG1372266

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	10/30/2019 17:11	WG1370039
Arsenic,Dissolved	0.00405		0.000250	0.00200	0.00200	1	10/30/2019 17:11	WG1370039
Barium,Dissolved	0.119		0.000360	0.00500	0.00500	1	10/30/2019 17:11	WG1370039
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	10/30/2019 17:11	WG1370039
Chromium,Dissolved	0.000880	J	0.000540	0.00200	0.00200	1	10/30/2019 17:11	WG1370039
Copper,Dissolved	0.000922	J	0.000520	0.00500	0.00500	1	10/30/2019 17:11	WG1370039
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	10/30/2019 17:11	WG1370039
Iron,Dissolved	U		0.0150	0.100	0.100	1	10/30/2019 17:11	WG1370039
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	10/30/2019 17:11	WG1370039
Manganese,Dissolved	0.00155	J	0.000250	0.00500	0.00500	1	10/30/2019 17:11	WG1370039
Molybdenum,Dissolved	0.00212	J	0.000140	0.00500	0.00500	1	10/30/2019 17:11	WG1370039
Nickel,Dissolved	0.00157	J	0.000350	0.00200	0.00200	1	10/30/2019 17:11	WG1370039
Selenium,Dissolved	0.00343		0.000380	0.00200	0.00200	1	10/30/2019 17:11	WG1370039
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	10/30/2019 17:11	WG1370039
Uranium,Dissolved	0.00188	J	0.000330	0.0100	0.0100	1	10/30/2019 17:11	WG1370039
Zinc,Dissolved	0.0189	J	0.00256	0.0250	0.0250	1	10/30/2019 22:00	WG1370039

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0381	B J	0.0314	0.100	0.100	1	11/02/2019 03:34	WG1373788
(S) a,a,a-Trifluorotoluene(FID)	*105*				*78.0-120*		*11/02/2019 03:34*	WG1373788

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 07:49	WG1373882
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	11/02/2019 07:49	WG1373882
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 07:49	WG1373882
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 07:49	WG1373882
Chloroform	0.000903	J	0.000324	0.00500	0.00500	1	11/02/2019 07:49	WG1373882
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 07:49	WG1373882
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 07:49	WG1373882
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 07:49	WG1373882
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 07:49	WG1373882
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 07:49	WG1373882
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 07:49	WG1373882
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 07:49	WG1373882
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 07:49	WG1373882
(S) Toluene-d8	*94.3*				*80.0-120*		*11/02/2019 07:49*	WG1373882
(S) 4-Bromofluorobenzene	*93.4*				*77.0-126*		*11/02/2019 07:49*	WG1373882
(S) 1,2-Dichloroethane-d4	*97.8*				*70.0-130*		*11/02/2019 07:49*	WG1373882

Semi-Volatile Organic Compounds (GC) by Method 3511/8015

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
TPH (GC/FID) High Fraction	U		0.0247	0.100	0.100	1	10/28/2019 02:22	WG1370005
(S) o-Terphenyl	*73.2*				*31.0-160*		*10/28/2019 02:22*	WG1370005

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acenaphthene	U		0.000316	0.00100	0.00100	1	10/31/2019 07:56	WG1372208
Acenaphthylene	U		0.000309	0.00100	0.00100	1	10/31/2019 07:56	WG1372208
Acetophenone	U		0.00247	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
Anthracene	U		0.000291	0.00100	0.00100	1	10/31/2019 07:56	WG1372208
Atrazine	U		0.000260	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	10/31/2019 07:56	WG1372208
Benzaldehyde	U		0.00140	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	10/31/2019 07:56	WG1372208
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	10/31/2019 07:56	WG1372208
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	10/31/2019 07:56	WG1372208
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	10/31/2019 07:56	WG1372208
Biphenyl	U		0.000325	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	10/31/2019 07:56	WG1372208
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
Caprolactam	U		0.00259	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
Carbazole	U		0.000260	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
Chrysene	U		0.000332	0.00100	0.00100	1	10/31/2019 07:56	WG1372208
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	10/31/2019 07:56	WG1372208
Dibenzofuran	U		0.000338	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
Fluoranthene	U		0.000310	0.00100	0.00100	1	10/31/2019 07:56	WG1372208
Fluorene	U		0.000323	0.00100	0.00100	1	10/31/2019 07:56	WG1372208
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	10/31/2019 07:56	WG1372208
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
Hexachloroethane	U		0.000365	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	10/31/2019 07:56	WG1372208
Isophorone	U		0.000272	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	10/31/2019 07:56	WG1372208
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	10/31/2019 07:56	WG1372208
Naphthalene	U		0.000372	0.00100	0.00100	1	10/31/2019 07:56	WG1372208
Nitrobenzene	U		0.000367	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
Phenanthrene	U		0.000366	0.00100	0.00100	1	10/31/2019 07:56	WG1372208
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	10/31/2019 07:56	WG1372208
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	10/31/2019 07:56	WG1372208
Di-n-butyl phthalate	U		0.000266	0.00300	0.00300	1	10/31/2019 07:56	WG1372208
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	10/31/2019 07:56	WG1372208
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	10/31/2019 07:56	WG1372208
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	10/31/2019 07:56	WG1372208
Pyrene	U		0.000330	0.00100	0.00100	1	10/31/2019 07:56	WG1372208
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	10/31/2019 07:56	WG1372208

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
2-Methylphenol	U		0.000312	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
Phenol	0.000746	J	0.000334	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	10/31/2019 07:56	WG1372208
(S) 2-Fluorophenol	*40.3*				*10.0-120*		*10/31/2019 07:56*	WG1372208
(S) Phenol-d5	*23.8*				*10.0-120*		*10/31/2019 07:56*	WG1372208
(S) Nitrobenzene-d5	*56.2*				*10.0-127*		*10/31/2019 07:56*	WG1372208
(S) 2-Fluorobiphenyl	*68.3*				*10.0-130*		*10/31/2019 07:56*	WG1372208
(S) 2,4,6-Tribromophenol	*64.0*				*10.0-155*		*10/31/2019 07:56*	WG1372208
(S) p-Terphenyl-d14	*79.3*				*10.0-128*		*10/31/2019 07:56*	WG1372208

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	547		2.82	10.0	10.0	1	10/27/2019 16:51	WG1370221

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	169		2.71	20.0	20.0	1	10/31/2019 02:32	WG1371212

Sample Narrative:

L1153940-33 WG1371212: Endpoint pH 4.5 headspace

Wet Chemistry by Method 353.2

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	2.71		0.0197	0.100	0.100	1	10/31/2019 19:19	WG1371690

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Chloride	111		0.260	1.00	5.00	5	10/29/2019 11:07	WG1371200
Fluoride	1.04		0.00990	0.100	0.100	1	10/29/2019 10:54	WG1371200
Sulfate	79.2		0.0774	5.00	5.00	1	10/29/2019 10:54	WG1371200

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Mercury	0.0000613	B J	0.0000490	0.000200	0.000200	1	10/27/2019 19:52	WG1369905

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.138	J	0.0126	0.200	0.200	1	10/31/2019 09:21	WG1372266

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	10/30/2019 17:15	WG1370039
Arsenic,Dissolved	0.00454		0.000250	0.00200	0.00200	1	10/30/2019 17:15	WG1370039
Barium,Dissolved	0.0937		0.000360	0.00500	0.00500	1	10/30/2019 17:15	WG1370039
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	10/30/2019 17:15	WG1370039
Chromium,Dissolved	0.00320		0.000540	0.00200	0.00200	1	10/30/2019 17:15	WG1370039
Copper,Dissolved	U		0.000520	0.00500	0.00500	1	10/30/2019 17:15	WG1370039
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	10/30/2019 17:15	WG1370039
Iron,Dissolved	U		0.0150	0.100	0.100	1	10/30/2019 17:15	WG1370039
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	10/30/2019 17:15	WG1370039
Manganese,Dissolved	0.000903	J	0.000250	0.00500	0.00500	1	10/30/2019 17:15	WG1370039
Molybdenum,Dissolved	0.00260	J	0.000140	0.00500	0.00500	1	10/30/2019 17:15	WG1370039
Nickel,Dissolved	0.000377	J	0.000350	0.00200	0.00200	1	10/30/2019 17:15	WG1370039
Selenium,Dissolved	0.00393		0.000380	0.00200	0.00200	1	10/30/2019 17:15	WG1370039
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	10/30/2019 17:15	WG1370039
Uranium,Dissolved	0.00168	J	0.000330	0.0100	0.0100	1	10/30/2019 17:15	WG1370039
Zinc,Dissolved	0.00418	J	0.00256	0.0250	0.0250	1	10/30/2019 22:04	WG1370039

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0386	B J	0.0314	0.100	0.100	1	11/02/2019 03:58	WG1373788
(S) a,a,a-Trifluorotoluene(FID)	*105*				*78.0-120*		*11/02/2019 03:58*	WG1373788

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 08:09	WG1373882
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	11/02/2019 08:09	WG1373882
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 08:09	WG1373882
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 08:09	WG1373882
Chloroform	U		0.000324	0.00500	0.00500	1	11/02/2019 08:09	WG1373882
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 08:09	WG1373882
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 08:09	WG1373882
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 08:09	WG1373882
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 08:09	WG1373882
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 08:09	WG1373882
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 08:09	WG1373882
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 08:09	WG1373882
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 08:09	WG1373882
(S) Toluene-d8	*93.9*				*80.0-120*		*11/02/2019 08:09*	WG1373882
(S) 4-Bromofluorobenzene	*95.0*				*77.0-126*		*11/02/2019 08:09*	WG1373882
(S) 1,2-Dichloroethane-d4	*94.9*				*70.0-130*		*11/02/2019 08:09*	WG1373882

Semi-Volatile Organic Compounds (GC) by Method 3511/8015

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
TPH (GC/FID) High Fraction	U		0.0247	0.100	0.100	1	10/28/2019 02:47	WG1370005
(S) o-Terphenyl	*67.4*				*31.0-160*		*10/28/2019 02:47*	WG1370005

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acenaphthene	U		0.000316	0.00100	0.00100	1	10/31/2019 08:16	WG1372208
Acenaphthylene	U		0.000309	0.00100	0.00100	1	10/31/2019 08:16	WG1372208
Acetophenone	U		0.00247	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
Anthracene	U		0.000291	0.00100	0.00100	1	10/31/2019 08:16	WG1372208
Atrazine	U		0.000260	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	10/31/2019 08:16	WG1372208
Benzaldehyde	U		0.00140	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	10/31/2019 08:16	WG1372208
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	10/31/2019 08:16	WG1372208
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	10/31/2019 08:16	WG1372208
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	10/31/2019 08:16	WG1372208
Biphenyl	U		0.000325	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	10/31/2019 08:16	WG1372208
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
Caprolactam	U		0.00259	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
Carbazole	U		0.000260	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
Chrysene	U		0.000332	0.00100	0.00100	1	10/31/2019 08:16	WG1372208
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	10/31/2019 08:16	WG1372208
Dibenzofuran	U		0.000338	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
Fluoranthene	U		0.000310	0.00100	0.00100	1	10/31/2019 08:16	WG1372208
Fluorene	U		0.000323	0.00100	0.00100	1	10/31/2019 08:16	WG1372208
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	10/31/2019 08:16	WG1372208
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
Hexachloroethane	U		0.000365	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	10/31/2019 08:16	WG1372208
Isophorone	U		0.000272	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	10/31/2019 08:16	WG1372208
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	10/31/2019 08:16	WG1372208
Naphthalene	U		0.000372	0.00100	0.00100	1	10/31/2019 08:16	WG1372208
Nitrobenzene	U		0.000367	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
Phenanthrene	U		0.000366	0.00100	0.00100	1	10/31/2019 08:16	WG1372208
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	10/31/2019 08:16	WG1372208
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	10/31/2019 08:16	WG1372208
Di-n-butyl phthalate	U		0.000266	0.00300	0.00300	1	10/31/2019 08:16	WG1372208
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	10/31/2019 08:16	WG1372208
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	10/31/2019 08:16	WG1372208
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	10/31/2019 08:16	WG1372208
Pyrene	U		0.000330	0.00100	0.00100	1	10/31/2019 08:16	WG1372208
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	10/31/2019 08:16	WG1372208

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
2-Methylphenol	U		0.000312	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
Phenol	0.000657	J	0.000334	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	10/31/2019 08:16	WG1372208
(S) 2-Fluorophenol	*41.9*				*10.0-120*		*10/31/2019 08:16*	WG1372208
(S) Phenol-d5	*24.7*				*10.0-120*		*10/31/2019 08:16*	WG1372208
(S) Nitrobenzene-d5	*59.2*				*10.0-127*		*10/31/2019 08:16*	WG1372208
(S) 2-Fluorobiphenyl	*68.9*				*10.0-130*		*10/31/2019 08:16*	WG1372208
(S) 2,4,6-Tribromophenol	*65.9*				*10.0-155*		*10/31/2019 08:16*	WG1372208
(S) p-Terphenyl-d14	*80.1*				*10.0-128*		*10/31/2019 08:16*	WG1372208

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	1060		5.64	20.0	20.0	1	10/27/2019 16:51	WG1370221

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	5.32		0.0985	0.100	0.500	5	10/31/2019 19:22	WG1371690

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	258		0.260	1.00	5.00	5	10/29/2019 11:58	WG1371200
Fluoride	0.649		0.00990	0.100	0.100	1	10/29/2019 11:45	WG1371200
Sulfate	87.9		0.0774	5.00	5.00	1	10/29/2019 11:45	WG1371200

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	0.0000681	B J	0.0000490	0.000200	0.000200	1	10/27/2019 19:54	WG1369905

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.207		0.0126	0.200	0.200	1	10/31/2019 09:30	WG1372266

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	10/30/2019 17:18	WG1370039
Arsenic,Dissolved	0.00230		0.000250	0.00200	0.00200	1	10/30/2019 17:18	WG1370039
Barium,Dissolved	0.113		0.000360	0.00500	0.00500	1	10/30/2019 17:18	WG1370039
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	10/30/2019 17:18	WG1370039
Chromium,Dissolved	0.0560		0.000540	0.00200	0.00200	1	10/30/2019 17:18	WG1370039
Copper,Dissolved	0.00949		0.000520	0.00500	0.00500	1	10/30/2019 17:18	WG1370039
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	10/30/2019 17:18	WG1370039
Iron,Dissolved	U		0.0150	0.100	0.100	1	10/30/2019 17:18	WG1370039
Lead,Dissolved	0.000462	J	0.000240	0.00200	0.00200	1	10/30/2019 17:18	WG1370039
Manganese,Dissolved	0.00170	J	0.000250	0.00500	0.00500	1	10/30/2019 17:18	WG1370039
Molybdenum,Dissolved	0.00145	J	0.000140	0.00500	0.00500	1	10/30/2019 17:18	WG1370039
Nickel,Dissolved	0.00382		0.000350	0.00200	0.00200	1	10/30/2019 17:18	WG1370039
Selenium,Dissolved	0.00161	J	0.000380	0.00200	0.00200	1	10/30/2019 17:18	WG1370039
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	10/30/2019 17:18	WG1370039
Uranium,Dissolved	0.00535	J	0.000330	0.0100	0.0100	1	10/30/2019 17:18	WG1370039
Zinc,Dissolved	0.0811		0.00256	0.0250	0.0250	1	10/30/2019 22:08	WG1370039

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 17:31	WG1374036
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	11/02/2019 17:31	WG1374036
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 17:31	WG1374036
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 17:31	WG1374036

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 17:31	WG1374036
Chloroform	0.000686	J	0.000324	0.00500	0.00500	1	11/02/2019 17:31	WG1374036
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 17:31	WG1374036
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 17:31	WG1374036
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 17:31	WG1374036
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 17:31	WG1374036
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 17:31	WG1374036
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 17:31	WG1374036
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 17:31	WG1374036
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 17:31	WG1374036
(S) Toluene-d8	*98.9*				*80.0-120*		*11/02/2019 17:31*	WG1374036
(S) 4-Bromofluorobenzene	*102*				*77.0-126*		*11/02/2019 17:31*	WG1374036
(S) 1,2-Dichloroethane-d4	*102*				*70.0-130*		*11/02/2019 17:31*	WG1374036

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.000316	0.00100	0.00100	1	10/31/2019 08:35	WG1372208
Acenaphthylene	U		0.000309	0.00100	0.00100	1	10/31/2019 08:35	WG1372208
Acetophenone	U		0.00247	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
Anthracene	U		0.000291	0.00100	0.00100	1	10/31/2019 08:35	WG1372208
Atrazine	U		0.000260	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	10/31/2019 08:35	WG1372208
Benzaldehyde	U		0.00140	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	10/31/2019 08:35	WG1372208
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	10/31/2019 08:35	WG1372208

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	10/31/2019 08:35	WG1372208
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	10/31/2019 08:35	WG1372208
Biphenyl	U		0.000325	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	10/31/2019 08:35	WG1372208
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
Caprolactam	U		0.00259	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
Carbazole	U		0.000260	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
Chrysene	U		0.000332	0.00100	0.00100	1	10/31/2019 08:35	WG1372208
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	10/31/2019 08:35	WG1372208
Dibenzofuran	U		0.000338	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
Fluoranthene	U		0.000310	0.00100	0.00100	1	10/31/2019 08:35	WG1372208
Fluorene	U		0.000323	0.00100	0.00100	1	10/31/2019 08:35	WG1372208
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	10/31/2019 08:35	WG1372208
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
Hexachloroethane	U		0.000365	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	10/31/2019 08:35	WG1372208
Isophorone	U		0.000272	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	10/31/2019 08:35	WG1372208
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	10/31/2019 08:35	WG1372208
Naphthalene	U		0.000372	0.00100	0.00100	1	10/31/2019 08:35	WG1372208
Nitrobenzene	U		0.000367	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
Phenanthrene	U		0.000366	0.00100	0.00100	1	10/31/2019 08:35	WG1372208
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	10/31/2019 08:35	WG1372208
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	10/31/2019 08:35	WG1372208
Di-n-butyl phthalate	0.000370	B J	0.000266	0.00300	0.00300	1	10/31/2019 08:35	WG1372208
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	10/31/2019 08:35	WG1372208
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	10/31/2019 08:35	WG1372208
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	10/31/2019 08:35	WG1372208
Pyrene	U		0.000330	0.00100	0.00100	1	10/31/2019 08:35	WG1372208
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
2-Methylphenol	U		0.000312	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
Phenol	U		0.000334	0.0100	0.0100	1	10/31/2019 08:35	WG1372208

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	10/31/2019 08:35	WG1372208
(S) 2-Fluorophenol	*42.4*				*10.0-120*		*10/31/2019 08:35*	WG1372208
(S) Phenol-d5	*25.3*				*10.0-120*		*10/31/2019 08:35*	WG1372208
(S) Nitrobenzene-d5	*57.8*				*10.0-127*		*10/31/2019 08:35*	WG1372208
(S) 2-Fluorobiphenyl	*69.1*				*10.0-130*		*10/31/2019 08:35*	WG1372208
(S) 2,4,6-Tribromophenol	*65.9*				*10.0-155*		*10/31/2019 08:35*	WG1372208
(S) p-Terphenyl-d14	*76.3*				*10.0-128*		*10/31/2019 08:35*	WG1372208

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	1010		5.64	20.0	20.0	1	10/27/2019 16:51	WG1370221

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	475		2.71	20.0	20.0	1	10/31/2019 02:39	WG1371212

Sample Narrative:

L1153940-35 WG1371212: Endpoint pH 4.5 headspace

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	3.91		0.0985	0.100	0.500	5	10/31/2019 20:01	WG1371690

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	223		0.260	1.00	5.00	5	10/29/2019 12:24	WG1371200
Fluoride	0.572		0.00990	0.100	0.100	1	10/29/2019 12:11	WG1371200
Sulfate	107		0.387	5.00	25.0	5	10/29/2019 12:24	WG1371200

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	0.0000660	B J	0.0000490	0.000200	0.000200	1	10/27/2019 20:00	WG1369905

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.242		0.0126	0.200	0.200	1	10/31/2019 09:32	WG1372266

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	10/30/2019 17:22	WG1370039
Arsenic,Dissolved	0.00261		0.000250	0.00200	0.00200	1	10/30/2019 17:22	WG1370039
Barium,Dissolved	0.235		0.000360	0.00500	0.00500	1	10/30/2019 17:22	WG1370039
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	10/30/2019 17:22	WG1370039
Chromium,Dissolved	0.000541	J	0.000540	0.00200	0.00200	1	10/30/2019 17:22	WG1370039
Copper,Dissolved	0.0867		0.000520	0.00500	0.00500	1	10/30/2019 17:22	WG1370039
Cobalt,Dissolved	0.0121		0.000260	0.00200	0.00200	1	10/30/2019 17:22	WG1370039
Iron,Dissolved	U		0.0150	0.100	0.100	1	10/30/2019 17:22	WG1370039
Lead,Dissolved	0.00509		0.000240	0.00200	0.00200	1	10/30/2019 17:22	WG1370039
Manganese,Dissolved	0.0758		0.000250	0.00500	0.00500	1	10/30/2019 17:22	WG1370039
Molybdenum,Dissolved	0.00137	J	0.000140	0.00500	0.00500	1	10/30/2019 17:22	WG1370039
Nickel,Dissolved	0.0162		0.000350	0.00200	0.00200	1	10/30/2019 17:22	WG1370039
Selenium,Dissolved	0.000627	J	0.000380	0.00200	0.00200	1	10/30/2019 17:22	WG1370039
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	10/30/2019 17:22	WG1370039
Uranium,Dissolved	0.00970	J	0.000330	0.0100	0.0100	1	10/30/2019 17:22	WG1370039
Zinc,Dissolved	0.212		0.00256	0.0250	0.0250	1	10/30/2019 22:13	WG1370039

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 17:51	WG1374036
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	11/02/2019 17:51	WG1374036
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 17:51	WG1374036
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 17:51	WG1374036
Chloroform	U		0.000324	0.00500	0.00500	1	11/02/2019 17:51	WG1374036
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 17:51	WG1374036
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 17:51	WG1374036
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 17:51	WG1374036
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 17:51	WG1374036
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 17:51	WG1374036
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 17:51	WG1374036
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 17:51	WG1374036
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 17:51	WG1374036
(S) Toluene-d8	*97.9*				*80.0-120*		*11/02/2019 17:51*	WG1374036
(S) 4-Bromofluorobenzene	*107*				*77.0-126*		*11/02/2019 17:51*	WG1374036
(S) 1,2-Dichloroethane-d4	*99.9*				*70.0-130*		*11/02/2019 17:51*	WG1374036

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acenaphthene	U		0.000316	0.00100	0.00100	1	10/31/2019 08:55	WG1372208
Acenaphthylene	U		0.000309	0.00100	0.00100	1	10/31/2019 08:55	WG1372208
Acetophenone	U		0.00247	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
Anthracene	U		0.000291	0.00100	0.00100	1	10/31/2019 08:55	WG1372208
Atrazine	U		0.000260	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	10/31/2019 08:55	WG1372208
Benzaldehyde	U		0.00140	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	10/31/2019 08:55	WG1372208
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	10/31/2019 08:55	WG1372208
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	10/31/2019 08:55	WG1372208
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	10/31/2019 08:55	WG1372208
Biphenyl	U		0.000325	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	10/31/2019 08:55	WG1372208
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
Caprolactam	U		0.00259	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
Carbazole	U		0.000260	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
Chrysene	U		0.000332	0.00100	0.00100	1	10/31/2019 08:55	WG1372208
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	10/31/2019 08:55	WG1372208
Dibenzofuran	U		0.000338	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
Fluoranthene	U		0.000310	0.00100	0.00100	1	10/31/2019 08:55	WG1372208
Fluorene	U		0.000323	0.00100	0.00100	1	10/31/2019 08:55	WG1372208
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	10/31/2019 08:55	WG1372208
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
Hexachloroethane	U		0.000365	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	10/31/2019 08:55	WG1372208
Isophorone	U		0.000272	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	10/31/2019 08:55	WG1372208
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	10/31/2019 08:55	WG1372208
Naphthalene	U		0.000372	0.00100	0.00100	1	10/31/2019 08:55	WG1372208
Nitrobenzene	U		0.000367	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
Phenanthrene	U		0.000366	0.00100	0.00100	1	10/31/2019 08:55	WG1372208
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	10/31/2019 08:55	WG1372208
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	10/31/2019 08:55	WG1372208
Di-n-butyl phthalate	0.000347	B J	0.000266	0.00300	0.00300	1	10/31/2019 08:55	WG1372208
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	10/31/2019 08:55	WG1372208
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	10/31/2019 08:55	WG1372208
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	10/31/2019 08:55	WG1372208
Pyrene	U		0.000330	0.00100	0.00100	1	10/31/2019 08:55	WG1372208
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	10/31/2019 08:55	WG1372208

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
2-Methylphenol	U		0.000312	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
Phenol	0.000637	J	0.000334	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	10/31/2019 08:55	WG1372208
(S) 2-Fluorophenol	*34.6*				*10.0-120*		*10/31/2019 08:55*	WG1372208
(S) Phenol-d5	*22.7*				*10.0-120*		*10/31/2019 08:55*	WG1372208
(S) Nitrobenzene-d5	*49.7*				*10.0-127*		*10/31/2019 08:55*	WG1372208
(S) 2-Fluorobiphenyl	*61.6*				*10.0-130*		*10/31/2019 08:55*	WG1372208
(S) 2,4,6-Tribromophenol	*63.7*				*10.0-155*		*10/31/2019 08:55*	WG1372208
(S) p-Terphenyl-d14	*79.0*				*10.0-128*		*10/31/2019 08:55*	WG1372208

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	501		2.82	10.0	10.0	1	10/27/2019 16:51	WG1370221

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	186		2.71	20.0	20.0	1	10/31/2019 02:59	WG1371212

Sample Narrative:

L1153940-36 WG1371212: Endpoint pH 4.5 headspace

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	3.18		0.0197	0.100	0.100	1	10/31/2019 20:02	WG1371690

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	86.0		0.0519	1.00	1.00	1	10/29/2019 12:37	WG1371200
Fluoride	1.23		0.00990	0.100	0.100	1	10/29/2019 12:37	WG1371200
Sulfate	72.6		0.0774	5.00	5.00	1	10/29/2019 12:37	WG1371200

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	0.0000596	B J	0.0000490	0.000200	0.000200	1	10/27/2019 20:02	WG1369905

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.174	J	0.0126	0.200	0.200	1	10/31/2019 09:35	WG1372266

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	10/30/2019 17:25	WG1370039
Arsenic,Dissolved	0.00414		0.000250	0.00200	0.00200	1	10/30/2019 17:25	WG1370039
Barium,Dissolved	0.0871		0.000360	0.00500	0.00500	1	10/30/2019 17:25	WG1370039
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	10/30/2019 17:25	WG1370039
Chromium,Dissolved	0.00245		0.000540	0.00200	0.00200	1	10/30/2019 17:25	WG1370039
Copper,Dissolved	0.00275	J	0.000520	0.00500	0.00500	1	10/30/2019 17:25	WG1370039
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	10/30/2019 17:25	WG1370039
Iron,Dissolved	U		0.0150	0.100	0.100	1	10/30/2019 17:25	WG1370039
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	10/30/2019 17:25	WG1370039
Manganese,Dissolved	0.000416	J	0.000250	0.00500	0.00500	1	10/30/2019 17:25	WG1370039
Molybdenum,Dissolved	0.00198	J	0.000140	0.00500	0.00500	1	10/30/2019 17:25	WG1370039
Nickel,Dissolved	0.00409		0.000350	0.00200	0.00200	1	10/30/2019 17:25	WG1370039
Selenium,Dissolved	0.00179	J	0.000380	0.00200	0.00200	1	10/30/2019 17:25	WG1370039
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	10/30/2019 17:25	WG1370039
Uranium,Dissolved	0.00206	J	0.000330	0.0100	0.0100	1	10/30/2019 17:25	WG1370039
Zinc,Dissolved	0.0528		0.00256	0.0250	0.0250	1	10/30/2019 22:17	WG1370039

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 18:10	WG1374036
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
Bromodichloromethane	0.00289		0.000380	0.00125	0.00125	1	11/02/2019 18:10	WG1374036
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 18:10	WG1374036
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 18:10	WG1374036
Chloroform	0.0110		0.000324	0.00500	0.00500	1	11/02/2019 18:10	WG1374036
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 18:10	WG1374036
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 18:10	WG1374036
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 18:10	WG1374036
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 18:10	WG1374036
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 18:10	WG1374036
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 18:10	WG1374036
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 18:10	WG1374036
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 18:10	WG1374036
(S) Toluene-d8	*106*				*80.0-120*		*11/02/2019 18:10*	WG1374036
(S) 4-Bromofluorobenzene	*112*				*77.0-126*		*11/02/2019 18:10*	WG1374036
(S) 1,2-Dichloroethane-d4	*95.5*				*70.0-130*		*11/02/2019 18:10*	WG1374036

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acenaphthene	U		0.000316	0.00100	0.00100	1	10/31/2019 15:23	WG1372632
Acenaphthylene	U		0.000309	0.00100	0.00100	1	10/31/2019 15:23	WG1372632
Acetophenone	U		0.00247	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
Anthracene	U		0.000291	0.00100	0.00100	1	10/31/2019 15:23	WG1372632
Atrazine	U		0.000260	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	10/31/2019 15:23	WG1372632
Benzaldehyde	U		0.00140	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	10/31/2019 15:23	WG1372632
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	10/31/2019 15:23	WG1372632
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	10/31/2019 15:23	WG1372632
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	10/31/2019 15:23	WG1372632
Biphenyl	U		0.000325	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	10/31/2019 15:23	WG1372632
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
Caprolactam	U		0.00259	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
Carbazole	U		0.000260	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
Chrysene	U		0.000332	0.00100	0.00100	1	10/31/2019 15:23	WG1372632
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	10/31/2019 15:23	WG1372632
Dibenzofuran	U		0.000338	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
Fluoranthene	U		0.000310	0.00100	0.00100	1	10/31/2019 15:23	WG1372632
Fluorene	U		0.000323	0.00100	0.00100	1	10/31/2019 15:23	WG1372632
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	10/31/2019 15:23	WG1372632
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
Hexachloroethane	U		0.000365	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	10/31/2019 15:23	WG1372632
Isophorone	U		0.000272	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	10/31/2019 15:23	WG1372632
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	10/31/2019 15:23	WG1372632
Naphthalene	U		0.000372	0.00100	0.00100	1	10/31/2019 15:23	WG1372632
Nitrobenzene	U		0.000367	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
Phenanthrene	U		0.000366	0.00100	0.00100	1	10/31/2019 15:23	WG1372632
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	10/31/2019 15:23	WG1372632
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	10/31/2019 15:23	WG1372632
Di-n-butyl phthalate	U		0.000266	0.00300	0.00300	1	10/31/2019 15:23	WG1372632
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	10/31/2019 15:23	WG1372632
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	10/31/2019 15:23	WG1372632
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	10/31/2019 15:23	WG1372632
Pyrene	U		0.000330	0.00100	0.00100	1	10/31/2019 15:23	WG1372632
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	10/31/2019 15:23	WG1372632

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
2-Methylphenol	U		0.000312	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
Phenol	U		0.000334	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	10/31/2019 15:23	WG1372632
(S) 2-Fluorophenol	*20.3*				*10.0-120*		*10/31/2019 15:23*	WG1372632
(S) Phenol-d5	*10.8*				*10.0-120*		*10/31/2019 15:23*	WG1372632
(S) Nitrobenzene-d5	*42.0*				*10.0-127*		*10/31/2019 15:23*	WG1372632
(S) 2-Fluorobiphenyl	*47.0*				*10.0-130*		*10/31/2019 15:23*	WG1372632
(S) 2,4,6-Tribromophenol	*53.8*				*10.0-155*		*10/31/2019 15:23*	WG1372632
(S) p-Terphenyl-d14	*58.7*				*10.0-128*		*10/31/2019 15:23*	WG1372632

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	827		3.75	13.3	13.3	1	10/27/2019 16:51	WG1370221

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Alkalinity	401		2.71	20.0	20.0	1	10/31/2019 03:06	WG1371212

Sample Narrative:

L1153940-37 WG1371212: Endpoint pH 4.5 headspace

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	7.08		0.0985	0.100	0.500	5	10/31/2019 20:04	WG1371690

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	89.1		0.0519	1.00	1.00	1	10/29/2019 13:16	WG1371288
Fluoride	0.422		0.00990	0.100	0.100	1	10/29/2019 13:16	WG1371288
Sulfate	172		0.387	5.00	25.0	5	10/29/2019 20:39	WG1371288

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	0.0000644	B J	0.0000490	0.000200	0.000200	1	10/27/2019 20:04	WG1369905

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	0.213		0.0126	0.200	0.200	1	10/31/2019 09:38	WG1372266

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	10/30/2019 17:29	WG1370039
Arsenic,Dissolved	0.00342		0.000250	0.00200	0.00200	1	10/30/2019 17:29	WG1370039
Barium,Dissolved	0.345		0.000360	0.00500	0.00500	1	10/30/2019 17:29	WG1370039
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	10/30/2019 17:29	WG1370039
Chromium,Dissolved	U		0.000540	0.00200	0.00200	1	10/30/2019 17:29	WG1370039
Copper,Dissolved	0.00418	J	0.000520	0.00500	0.00500	1	10/30/2019 17:29	WG1370039
Cobalt,Dissolved	0.000372	J	0.000260	0.00200	0.00200	1	10/30/2019 17:29	WG1370039
Iron,Dissolved	U		0.0150	0.100	0.100	1	10/30/2019 17:29	WG1370039
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	10/30/2019 17:29	WG1370039
Manganese,Dissolved	0.262		0.000250	0.00500	0.00500	1	10/30/2019 17:29	WG1370039
Molybdenum,Dissolved	0.00209	J	0.000140	0.00500	0.00500	1	10/30/2019 17:29	WG1370039
Nickel,Dissolved	0.0130		0.000350	0.00200	0.00200	1	10/30/2019 17:29	WG1370039
Selenium,Dissolved	U		0.000380	0.00200	0.00200	1	10/30/2019 17:29	WG1370039
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	10/30/2019 17:29	WG1370039
Uranium,Dissolved	0.00883	J	0.000330	0.0100	0.0100	1	10/30/2019 17:29	WG1370039
Zinc,Dissolved	0.0405		0.00256	0.0250	0.0250	1	10/30/2019 22:20	WG1370039

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0316	B J	0.0314	0.100	0.100	1	11/02/2019 04:22	WG1373788
(S) a,a,a-Trifluorotoluene(FID)	*107*				*78.0-120*		*11/02/2019 04:22*	WG1373788

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 18:30	WG1374036
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	11/02/2019 18:30	WG1374036
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 18:30	WG1374036
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 18:30	WG1374036
Chloroform	U		0.000324	0.00500	0.00500	1	11/02/2019 18:30	WG1374036
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 18:30	WG1374036
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 18:30	WG1374036
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 18:30	WG1374036
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 18:30	WG1374036
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 18:30	WG1374036
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 18:30	WG1374036
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 18:30	WG1374036
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 18:30	WG1374036
(S) Toluene-d8	*99.2*				*80.0-120*		*11/02/2019 18:30*	WG1374036
(S) 4-Bromofluorobenzene	*108*				*77.0-126*		*11/02/2019 18:30*	WG1374036
(S) 1,2-Dichloroethane-d4	*96.8*				*70.0-130*		*11/02/2019 18:30*	WG1374036

Semi-Volatile Organic Compounds (GC) by Method 3511/8015

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
TPH (GC/FID) High Fraction	0.228		0.0247	0.100	0.100	1	10/28/2019 01:11	WG1370254
(S) o-Terphenyl	*74.2*				*31.0-160*		*10/28/2019 01:11*	WG1370254

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acenaphthene	U		0.000351	0.00100	0.00111	1.11	10/31/2019 15:45	WG1372632
Acenaphthylene	U		0.000343	0.00100	0.00111	1.11	10/31/2019 15:45	WG1372632
Acetophenone	U		0.00274	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
Anthracene	U		0.000323	0.00100	0.00111	1.11	10/31/2019 15:45	WG1372632
Atrazine	U		0.000289	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
Benzo(a)anthracene	U		0.0000566	0.00100	0.00111	1.11	10/31/2019 15:45	WG1372632
Benzaldehyde	U		0.00155	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
Benzo(b)fluoranthene	U		0.0000995	0.00100	0.00111	1.11	10/31/2019 15:45	WG1372632
Benzo(k)fluoranthene	U		0.000394	0.00100	0.00111	1.11	10/31/2019 15:45	WG1372632
Benzo(g,h,i)perylene	U		0.00000252	0.00100	0.00111	1.11	10/31/2019 15:45	WG1372632
Benzo(a)pyrene	U		0.0000423	0.000200	0.000222	1.11	10/31/2019 15:45	WG1372632
Biphenyl	U		0.000361	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
Bis(2-chlorethoxy)methane	U		0.000365	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
Bis(2-chloroethyl)ether	U		0.00180	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
Bis(2-chloroisopropyl)ether	U		0.000494	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
4-Bromophenyl-phenylether	U		0.000372	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
2-Chloronaphthalene	U		0.000366	0.00100	0.00111	1.11	10/31/2019 15:45	WG1372632
4-Chlorophenyl-phenylether	U		0.000336	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
Caprolactam	U		0.00287	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
Carbazole	U		0.000289	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
Chrysene	U		0.000369	0.00100	0.00111	1.11	10/31/2019 15:45	WG1372632
Dibenz(a,h)anthracene	U		0.0000715	0.000200	0.000222	1.11	10/31/2019 15:45	WG1372632
Dibenzofuran	U		0.000375	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
3,3-Dichlorobenzidine	U		0.00224	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
2,4-Dinitrotoluene	U		0.00183	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
2,6-Dinitrotoluene	U		0.000310	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
Fluoranthene	U		0.000344	0.00100	0.00111	1.11	10/31/2019 15:45	WG1372632
Fluorene	U		0.000359	0.00100	0.00111	1.11	10/31/2019 15:45	WG1372632
Hexachlorobenzene	U		0.000379	0.00100	0.00111	1.11	10/31/2019 15:45	WG1372632
Hexachloro-1,3-butadiene	U		0.000365	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
Hexachlorocyclopentadiene	U		0.00259	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
Hexachloroethane	U		0.000405	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
Indeno(1,2,3-cd)pyrene	U		0.000310	0.00100	0.00111	1.11	10/31/2019 15:45	WG1372632
Isophorone	U		0.000302	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
1-Methylnaphthalene	U		0.000369	0.00100	0.00111	1.11	10/31/2019 15:45	WG1372632
2-Methylnaphthalene	U		0.000345	0.00100	0.00111	1.11	10/31/2019 15:45	WG1372632
Naphthalene	U		0.000413	0.00100	0.00111	1.11	10/31/2019 15:45	WG1372632
Nitrobenzene	U		0.000407	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
n-Nitrosodiphenylamine	U		0.00132	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
n-Nitrosodi-n-propylamine	U		0.000447	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
Phenanthrene	U		0.000406	0.00100	0.00111	1.11	10/31/2019 15:45	WG1372632
Benzylbutyl phthalate	U		0.000305	0.00300	0.00333	1.11	10/31/2019 15:45	WG1372632
Bis(2-ethylhexyl)phthalate	U		0.000787	0.00300	0.00333	1.11	10/31/2019 15:45	WG1372632
Di-n-butyl phthalate	U		0.000295	0.00300	0.00333	1.11	10/31/2019 15:45	WG1372632
Diethyl phthalate	U		0.000313	0.00300	0.00333	1.11	10/31/2019 15:45	WG1372632
Dimethyl phthalate	U		0.000314	0.00300	0.00333	1.11	10/31/2019 15:45	WG1372632
Di-n-octyl phthalate	U		0.000309	0.00300	0.00333	1.11	10/31/2019 15:45	WG1372632
Pyrene	U		0.000366	0.00100	0.00111	1.11	10/31/2019 15:45	WG1372632
1,2,4-Trichlorobenzene	U		0.000394	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
4-Chloro-3-methylphenol	U		0.000292	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
2-Chlorophenol	U		0.000314	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
2,4-Dichlorophenol	U		0.000315	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
2,4-Dimethylphenol	U		0.000693	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
4,6-Dinitro-2-methylphenol	U		0.00291	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
2,4-Dinitrophenol	U		0.00361	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
2-Nitrophenol	U		0.000355	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
2-Nitroaniline	U		0.00211	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
2-Methylphenol	U		0.000346	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
3&4-Methyl Phenol	U		0.000295	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
3-Nitroaniline	U		0.000342	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
4-Chloroaniline	U		0.000424	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
4-Nitroaniline	U		0.000387	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
4-Nitrophenol	U		0.00223	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
Pentachlorophenol	U		0.000347	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
Phenol	U		0.000371	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
2,4,5-Trichlorophenol	U		0.000262	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
2,4,6-Trichlorophenol	U		0.000330	0.0100	0.0111	1.11	10/31/2019 15:45	WG1372632
(S) 2-Fluorophenol	*22.7*				*10.0-120*		*10/31/2019 15:45*	WG1372632
(S) Phenol-d5	*14.8*				*10.0-120*		*10/31/2019 15:45*	WG1372632
(S) Nitrobenzene-d5	*47.5*				*10.0-127*		*10/31/2019 15:45*	WG1372632
(S) 2-Fluorobiphenyl	*53.3*				*10.0-130*		*10/31/2019 15:45*	WG1372632
(S) 2,4,6-Tribromophenol	*62.6*				*10.0-155*		*10/31/2019 15:45*	WG1372632
(S) p-Terphenyl-d14	*73.7*				*10.0-128*		*10/31/2019 15:45*	WG1372632

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	25.0	J P1	14.1	50.0	50.0	1	10/27/2019 16:51	WG1370221

Sample Narrative:
L1153940-38 WG1370221: used the wrong volume. Not enough sample to rr

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	4.55	B J	2.71	20.0	20.0	1	10/31/2019 03:13	WG1371212

Sample Narrative:
L1153940-38 WG1371212: Endpoint pH 4.5 headspace

Wet Chemistry by Method 353.2

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	U		0.0197	0.100	0.100	1	10/31/2019 20:05	WG1371690

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Chloride	0.103	J	0.0519	1.00	1.00	1	10/29/2019 13:32	WG1371288
Fluoride	U		0.00990	0.100	0.100	1	10/29/2019 13:32	WG1371288
Sulfate	U		0.0774	5.00	5.00	1	10/29/2019 13:32	WG1371288

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Mercury	0.0000619	B J	0.0000490	0.000200	0.000200	1	10/27/2019 20:06	WG1369905

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	U		0.0126	0.200	0.200	1	10/31/2019 09:41	WG1372266

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	0.0103	J	0.00515	0.100	0.100	1	10/30/2019 17:33	WG1370039
Arsenic,Dissolved	U		0.000250	0.00200	0.00200	1	10/30/2019 17:33	WG1370039
Barium,Dissolved	0.000687	J	0.000360	0.00500	0.00500	1	10/30/2019 17:33	WG1370039
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	10/30/2019 17:33	WG1370039
Chromium,Dissolved	U		0.000540	0.00200	0.00200	1	10/30/2019 17:33	WG1370039
Copper,Dissolved	U		0.000520	0.00500	0.00500	1	10/30/2019 17:33	WG1370039
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	10/30/2019 17:33	WG1370039
Iron,Dissolved	U		0.0150	0.100	0.100	1	10/30/2019 17:33	WG1370039
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	10/30/2019 17:33	WG1370039
Manganese,Dissolved	0.000496	J	0.000250	0.00500	0.00500	1	10/30/2019 17:33	WG1370039
Molybdenum,Dissolved	U		0.000140	0.00500	0.00500	1	10/30/2019 17:33	WG1370039
Nickel,Dissolved	U		0.000350	0.00200	0.00200	1	10/30/2019 17:33	WG1370039
Selenium,Dissolved	U		0.000380	0.00200	0.00200	1	10/30/2019 17:33	WG1370039
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	10/30/2019 17:33	WG1370039
Uranium,Dissolved	U		0.000330	0.0100	0.0100	1	10/30/2019 17:33	WG1370039

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Zinc,Dissolved	U		0.00256	0.0250	0.0250	1	10/30/2019 22:24	WG1370039

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 14:34	WG1374036
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	11/02/2019 14:34	WG1374036
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 14:34	WG1374036
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 14:34	WG1374036
Chloroform	U		0.000324	0.00500	0.00500	1	11/02/2019 14:34	WG1374036
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 14:34	WG1374036
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 14:34	WG1374036
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 14:34	WG1374036
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 14:34	WG1374036
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 14:34	WG1374036
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 14:34	WG1374036
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 14:34	WG1374036
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 14:34	WG1374036
(S) Toluene-d8	*97.9*				*80.0-120*		*11/02/2019 14:34*	WG1374036
(S) 4-Bromofluorobenzene	*105*				*77.0-126*		*11/02/2019 14:34*	WG1374036
(S) 1,2-Dichloroethane-d4	*105*				*70.0-130*		*11/02/2019 14:34*	WG1374036

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acenaphthene	U		0.000395	0.00100	0.00125	1.25	10/31/2019 16:08	WG1372632
Acenaphthylene	U		0.000386	0.00100	0.00125	1.25	10/31/2019 16:08	WG1372632
Acetophenone	U		0.00309	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
Anthracene	U		0.000364	0.00100	0.00125	1.25	10/31/2019 16:08	WG1372632
Atrazine	U		0.000325	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
Benzo(a)anthracene	U		0.0000638	0.00100	0.00125	1.25	10/31/2019 16:08	WG1372632
Benzaldehyde	U		0.00175	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
Benzo(b)fluoranthene	U		0.000112	0.00100	0.00125	1.25	10/31/2019 16:08	WG1372632
Benzo(k)fluoranthene	U		0.000444	0.00100	0.00125	1.25	10/31/2019 16:08	WG1372632
Benzo(g,h,i)perylene	U		0.00000284	0.00100	0.00125	1.25	10/31/2019 16:08	WG1372632
Benzo(a)pyrene	U		0.0000476	0.000200	0.000250	1.25	10/31/2019 16:08	WG1372632
Biphenyl	U		0.000406	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
Bis(2-chlorethoxy)methane	U		0.000411	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
Bis(2-chloroethyl)ether	U		0.00202	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
Bis(2-chloroisopropyl)ether	U		0.000556	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
4-Bromophenyl-phenylether	U		0.000419	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
2-Chloronaphthalene	U		0.000413	0.00100	0.00125	1.25	10/31/2019 16:08	WG1372632
4-Chlorophenyl-phenylether	U		0.000379	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
Caprolactam	U		0.00324	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
Carbazole	U		0.000325	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
Chrysene	U		0.000415	0.00100	0.00125	1.25	10/31/2019 16:08	WG1372632
Dibenz(a,h)anthracene	U		0.0000805	0.000200	0.000250	1.25	10/31/2019 16:08	WG1372632
Dibenzofuran	U		0.000423	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
3,3-Dichlorobenzidine	U		0.00253	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
2,4-Dinitrotoluene	U		0.00206	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
2,6-Dinitrotoluene	U		0.000349	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
Fluoranthene	U		0.000388	0.00100	0.00125	1.25	10/31/2019 16:08	WG1372632
Fluorene	U		0.000404	0.00100	0.00125	1.25	10/31/2019 16:08	WG1372632
Hexachlorobenzene	U		0.000426	0.00100	0.00125	1.25	10/31/2019 16:08	WG1372632
Hexachloro-1,3-butadiene	U		0.000411	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
Hexachlorocyclopentadiene	U		0.00291	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
Hexachloroethane	U		0.000456	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
Indeno(1,2,3-cd)pyrene	U		0.000349	0.00100	0.00125	1.25	10/31/2019 16:08	WG1372632
Isophorone	U		0.000340	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
1-Methylnaphthalene	U		0.000415	0.00100	0.00125	1.25	10/31/2019 16:08	WG1372632
2-Methylnaphthalene	U		0.000389	0.00100	0.00125	1.25	10/31/2019 16:08	WG1372632
Naphthalene	U		0.000465	0.00100	0.00125	1.25	10/31/2019 16:08	WG1372632
Nitrobenzene	U		0.000459	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
n-Nitrosodiphenylamine	U		0.00149	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
n-Nitrosodi-n-propylamine	U		0.000504	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
Phenanthrene	U		0.000458	0.00100	0.00125	1.25	10/31/2019 16:08	WG1372632
Benzylbutyl phthalate	U		0.000344	0.00300	0.00375	1.25	10/31/2019 16:08	WG1372632
Bis(2-ethylhexyl)phthalate	U		0.000886	0.00300	0.00375	1.25	10/31/2019 16:08	WG1372632
Di-n-butyl phthalate	U		0.000333	0.00300	0.00375	1.25	10/31/2019 16:08	WG1372632
Diethyl phthalate	U		0.000353	0.00300	0.00375	1.25	10/31/2019 16:08	WG1372632
Dimethyl phthalate	U		0.000354	0.00300	0.00375	1.25	10/31/2019 16:08	WG1372632
Di-n-octyl phthalate	U		0.000347	0.00300	0.00375	1.25	10/31/2019 16:08	WG1372632
Pyrene	U		0.000413	0.00100	0.00125	1.25	10/31/2019 16:08	WG1372632
1,2,4-Trichlorobenzene	U		0.000444	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
4-Chloro-3-methylphenol	U		0.000329	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
2-Chlorophenol	U		0.000354	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
2,4-Dichlorophenol	U		0.000355	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
2,4-Dimethylphenol	U		0.000780	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
4,6-Dinitro-2-methylphenol	U		0.00328	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
2,4-Dinitrophenol	U		0.00406	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
2-Nitrophenol	U		0.000400	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2-Nitroaniline	U		0.00238	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
2-Methylphenol	U		0.000390	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
3&4-Methyl Phenol	U		0.000333	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
3-Nitroaniline	U		0.000385	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
4-Chloroaniline	U		0.000478	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
4-Nitroaniline	U		0.000436	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
4-Nitrophenol	U		0.00251	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
Pentachlorophenol	U		0.000391	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
Phenol	U		0.000418	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
2,4,5-Trichlorophenol	U		0.000295	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
2,4,6-Trichlorophenol	U		0.000371	0.0100	0.0125	1.25	10/31/2019 16:08	WG1372632
(S) 2-Fluorophenol	*18.2*				*10.0-120*		*10/31/2019 16:08*	WG1372632
(S) Phenol-d5	*11.5*				*10.0-120*		*10/31/2019 16:08*	WG1372632
(S) Nitrobenzene-d5	*34.5*				*10.0-127*		*10/31/2019 16:08*	WG1372632
(S) 2-Fluorobiphenyl	*39.2*				*10.0-130*		*10/31/2019 16:08*	WG1372632
(S) 2,4,6-Tribromophenol	*49.2*				*10.0-155*		*10/31/2019 16:08*	WG1372632
(S) p-Terphenyl-d14	*54.5*				*10.0-128*		*10/31/2019 16:08*	WG1372632

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Dissolved Solids	U		2.82	10.0	10.0	1	10/27/2019 16:51	WG1370221

Wet Chemistry by Method 353.2

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Nitrate-Nitrite	U		0.0197	0.100	0.100	1	10/31/2019 20:07	WG1371690

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Chloride	0.0855	J	0.0519	1.00	1.00	1	10/29/2019 13:49	WG1371288
Fluoride	U		0.00990	0.100	0.100	1	10/29/2019 13:49	WG1371288
Sulfate	U		0.0774	5.00	5.00	1	10/29/2019 13:49	WG1371288

Mercury by Method 7470A

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Mercury	0.0000648	B J	0.0000490	0.000200	0.000200	1	10/27/2019 20:08	WG1369905

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Boron,Dissolved	U		0.0126	0.200	0.200	1	10/31/2019 09:44	WG1372266

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.00515	0.100	0.100	1	10/30/2019 17:36	WG1370039
Arsenic,Dissolved	U		0.000250	0.00200	0.00200	1	10/30/2019 17:36	WG1370039
Barium,Dissolved	0.000404	J	0.000360	0.00500	0.00500	1	10/30/2019 17:36	WG1370039
Cadmium,Dissolved	U		0.000160	0.00100	0.00100	1	10/30/2019 17:36	WG1370039
Chromium,Dissolved	U		0.000540	0.00200	0.00200	1	10/30/2019 17:36	WG1370039
Copper,Dissolved	0.00305	J	0.000520	0.00500	0.00500	1	10/30/2019 17:36	WG1370039
Cobalt,Dissolved	U		0.000260	0.00200	0.00200	1	10/30/2019 17:36	WG1370039
Iron,Dissolved	U		0.0150	0.100	0.100	1	10/30/2019 17:36	WG1370039
Lead,Dissolved	U		0.000240	0.00200	0.00200	1	10/30/2019 17:36	WG1370039
Manganese,Dissolved	0.000471	J	0.000250	0.00500	0.00500	1	10/30/2019 17:36	WG1370039
Molybdenum,Dissolved	U		0.000140	0.00500	0.00500	1	10/30/2019 17:36	WG1370039
Nickel,Dissolved	U		0.000350	0.00200	0.00200	1	10/30/2019 17:36	WG1370039
Selenium,Dissolved	U		0.000380	0.00200	0.00200	1	10/30/2019 17:36	WG1370039
Silver,Dissolved	U		0.000310	0.00200	0.00200	1	10/30/2019 17:36	WG1370039
Uranium,Dissolved	U		0.000330	0.0100	0.0100	1	10/30/2019 17:36	WG1370039
Zinc,Dissolved	U		0.00256	0.0250	0.0250	1	10/30/2019 22:28	WG1370039

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 14:54	WG1374036
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	11/02/2019 14:54	WG1374036
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 14:54	WG1374036
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 14:54	WG1374036

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 14:54	WG1374036
Chloroform	U		0.000324	0.00500	0.00500	1	11/02/2019 14:54	WG1374036
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 14:54	WG1374036
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 14:54	WG1374036
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 14:54	WG1374036
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 14:54	WG1374036
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 14:54	WG1374036
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 14:54	WG1374036
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 14:54	WG1374036
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 14:54	WG1374036
(S) Toluene-d8	*107*				*80.0-120*		*11/02/2019 14:54*	WG1374036
(S) 4-Bromofluorobenzene	*112*				*77.0-126*		*11/02/2019 14:54*	WG1374036
(S) 1,2-Dichloroethane-d4	*92.2*				*70.0-130*		*11/02/2019 14:54*	WG1374036

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.000316	0.00100	0.00100	1	10/31/2019 16:30	WG1372632
Acenaphthylene	U		0.000309	0.00100	0.00100	1	10/31/2019 16:30	WG1372632
Acetophenone	U		0.00247	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
Anthracene	U		0.000291	0.00100	0.00100	1	10/31/2019 16:30	WG1372632
Atrazine	U		0.000260	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
Benzo(a)anthracene	U		0.0000510	0.00100	0.00100	1	10/31/2019 16:30	WG1372632
Benzaldehyde	U		0.00140	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
Benzo(b)fluoranthene	U		0.0000896	0.00100	0.00100	1	10/31/2019 16:30	WG1372632
Benzo(k)fluoranthene	U		0.000355	0.00100	0.00100	1	10/31/2019 16:30	WG1372632

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Benzo(g,h,i)perylene	U		0.00000227	0.00100	0.00100	1	10/31/2019 16:30	WG1372632
Benzo(a)pyrene	U		0.0000381	0.000200	0.000200	1	10/31/2019 16:30	WG1372632
Biphenyl	U		0.000325	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
Bis(2-chlorethoxy)methane	U		0.000329	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
Bis(2-chloroethyl)ether	U		0.00162	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
4-Bromophenyl-phenylether	U		0.000335	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
2-Chloronaphthalene	U		0.000330	0.00100	0.00100	1	10/31/2019 16:30	WG1372632
4-Chlorophenyl-phenylether	U		0.000303	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
Caprolactam	U		0.00259	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
Carbazole	U		0.000260	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
Chrysene	U		0.000332	0.00100	0.00100	1	10/31/2019 16:30	WG1372632
Dibenz(a,h)anthracene	U		0.0000644	0.000200	0.000200	1	10/31/2019 16:30	WG1372632
Dibenzofuran	U		0.000338	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
3,3-Dichlorobenzidine	U		0.00202	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
2,4-Dinitrotoluene	U		0.00165	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
2,6-Dinitrotoluene	U		0.000279	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
Fluoranthene	U		0.000310	0.00100	0.00100	1	10/31/2019 16:30	WG1372632
Fluorene	U		0.000323	0.00100	0.00100	1	10/31/2019 16:30	WG1372632
Hexachlorobenzene	U		0.000341	0.00100	0.00100	1	10/31/2019 16:30	WG1372632
Hexachloro-1,3-butadiene	U		0.000329	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
Hexachlorocyclopentadiene	U		0.00233	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
Hexachloroethane	U		0.000365	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	0.00100	1	10/31/2019 16:30	WG1372632
Isophorone	U		0.000272	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
1-Methylnaphthalene	U		0.000332	0.00100	0.00100	1	10/31/2019 16:30	WG1372632
2-Methylnaphthalene	U		0.000311	0.00100	0.00100	1	10/31/2019 16:30	WG1372632
Naphthalene	U		0.000372	0.00100	0.00100	1	10/31/2019 16:30	WG1372632
Nitrobenzene	U		0.000367	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
n-Nitrosodiphenylamine	U		0.00119	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
n-Nitrosodi-n-propylamine	U		0.000403	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
Phenanthrene	U		0.000366	0.00100	0.00100	1	10/31/2019 16:30	WG1372632
Benzylbutyl phthalate	U		0.000275	0.00300	0.00300	1	10/31/2019 16:30	WG1372632
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300	0.00300	1	10/31/2019 16:30	WG1372632
Di-n-butyl phthalate	U		0.000266	0.00300	0.00300	1	10/31/2019 16:30	WG1372632
Diethyl phthalate	U		0.000282	0.00300	0.00300	1	10/31/2019 16:30	WG1372632
Dimethyl phthalate	U		0.000283	0.00300	0.00300	1	10/31/2019 16:30	WG1372632
Di-n-octyl phthalate	U		0.000278	0.00300	0.00300	1	10/31/2019 16:30	WG1372632
Pyrene	U		0.000330	0.00100	0.00100	1	10/31/2019 16:30	WG1372632
1,2,4-Trichlorobenzene	U		0.000355	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
4-Chloro-3-methylphenol	U		0.000263	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
2-Chlorophenol	U		0.000283	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
2,4-Dichlorophenol	U		0.000284	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
2,4-Dimethylphenol	U		0.000624	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
2,4-Dinitrophenol	U		0.00325	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
2-Nitrophenol	U		0.000320	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
2-Nitroaniline	U		0.00190	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
2-Methylphenol	U		0.000312	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
3&4-Methyl Phenol	U		0.000266	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
3-Nitroaniline	U		0.000308	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
4-Chloroaniline	U		0.000382	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
4-Nitroaniline	U		0.000349	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
4-Nitrophenol	U		0.00201	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
Pentachlorophenol	U		0.000313	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
Phenol	U		0.000334	0.0100	0.0100	1	10/31/2019 16:30	WG1372632

Semi Volatile Organic Compounds (GC/MS) by Method 8270C

Analyte	Result mg/l	Qualifier	SDL mg/l	Unadj. MQL mg/l	MQL mg/l	Dilution	Analysis date / time	Batch
2,4,5-Trichlorophenol	U		0.000236	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
2,4,6-Trichlorophenol	U		0.000297	0.0100	0.0100	1	10/31/2019 16:30	WG1372632
(S) 2-Fluorophenol	*16.8*				*10.0-120*		*10/31/2019 16:30*	WG1372632
(S) Phenol-d5	*9.95*	J2			*10.0-120*		*10/31/2019 16:30*	WG1372632
(S) Nitrobenzene-d5	*39.0*				*10.0-127*		*10/31/2019 16:30*	WG1372632
(S) 2-Fluorobiphenyl	*47.9*				*10.0-130*		*10/31/2019 16:30*	WG1372632
(S) 2,4,6-Tribromophenol	*54.2*				*10.0-155*		*10/31/2019 16:30*	WG1372632
(S) p-Terphenyl-d14	*63.7*				*10.0-128*		*10/31/2019 16:30*	WG1372632

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 13:35	WG1374036
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	11/02/2019 13:35	WG1374036
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 13:35	WG1374036
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 13:35	WG1374036
Chloroform	U		0.000324	0.00500	0.00500	1	11/02/2019 13:35	WG1374036
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 13:35	WG1374036
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 13:35	WG1374036
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 13:35	WG1374036
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 13:35	WG1374036
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 13:35	WG1374036
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 13:35	WG1374036
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 13:35	WG1374036
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 13:35	WG1374036
(S) Toluene-d8	*104*				*80.0-120*		*11/02/2019 13:35*	WG1374036
(S) 4-Bromofluorobenzene	*108*				*77.0-126*		*11/02/2019 13:35*	WG1374036
(S) 1,2-Dichloroethane-d4	*99.4*				*70.0-130*		*11/02/2019 13:35*	WG1374036

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result	Qualifier	SDL	Unadj. MQL	MQL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l	mg/l		date / time	
Acetone	U		0.0100	1.00	1.00	1	11/02/2019 13:55	WG1374036
Benzene	U		0.000331	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
Bromodichloromethane	U		0.000380	0.00125	0.00125	1	11/02/2019 13:55	WG1374036
Bromoform	U		0.000469	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
Bromomethane	U		0.000866	0.00500	0.00500	1	11/02/2019 13:55	WG1374036
n-Butylbenzene	U		0.000361	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
sec-Butylbenzene	U		0.000365	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
tert-Butylbenzene	U		0.000399	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
Carbon disulfide	U		0.000275	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
Carbon tetrachloride	U		0.000379	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
Chlorobenzene	U		0.000348	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
Chlorodibromomethane	U		0.000327	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
Chloroethane	U		0.000453	0.00500	0.00500	1	11/02/2019 13:55	WG1374036
Chloroform	U		0.000324	0.00500	0.00500	1	11/02/2019 13:55	WG1374036
Chloromethane	U		0.000276	0.00250	0.00250	1	11/02/2019 13:55	WG1374036
1,2-Dibromoethane	U		0.000381	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
1,1-Dichloroethane	U		0.000259	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
1,2-Dichloroethane	U		0.000361	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
1,1-Dichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
cis-1,2-Dichloroethene	U		0.000260	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
trans-1,2-Dichloroethene	U		0.000396	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
1,2-Dichloropropane	U		0.000306	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
cis-1,3-Dichloropropene	U		0.000418	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
trans-1,3-Dichloropropene	U		0.000419	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
Ethylbenzene	U		0.000384	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
Hexachloro-1,3-butadiene	U		0.000256	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
2-Hexanone	U		0.00382	0.0100	0.0100	1	11/02/2019 13:55	WG1374036
Isopropylbenzene	U		0.000326	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
p-Isopropyltoluene	U		0.000350	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
2-Butanone (MEK)	U		0.00393	0.0100	0.0100	1	11/02/2019 13:55	WG1374036
Methylene Chloride	U		0.00100	0.00500	0.00500	1	11/02/2019 13:55	WG1374036
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100	0.0100	1	11/02/2019 13:55	WG1374036
Methyl tert-butyl ether	U		0.000367	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
Naphthalene	U		0.00100	0.00500	0.00500	1	11/02/2019 13:55	WG1374036
n-Propylbenzene	U		0.000349	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
Styrene	U		0.000307	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
Tetrachloroethene	U		0.000372	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
Toluene	U		0.000412	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
1,1,1-Trichloroethane	U		0.000319	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
1,1,2-Trichloroethane	U		0.000383	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
Trichloroethene	U		0.000398	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
1,2,4-Trimethylbenzene	U		0.000373	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
1,3,5-Trimethylbenzene	U		0.000387	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
Vinyl chloride	U		0.000259	0.00100	0.00100	1	11/02/2019 13:55	WG1374036
Xylenes, Total	U		0.00106	0.00300	0.00300	1	11/02/2019 13:55	WG1374036
(S) Toluene-d8	*104*				*80.0-120*		*11/02/2019 13:55*	WG1374036
(S) 4-Bromofluorobenzene	*107*				*77.0-126*		*11/02/2019 13:55*	WG1374036
(S) 1,2-Dichloroethane-d4	*104*				*70.0-130*		*11/02/2019 13:55*	WG1374036

Method Blank (MB)

(MB) R3465983-1 10/27/19 16:22

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	3.00	J	2.82	10.0

L1153940-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1153940-10 10/27/19 16:22 • (DUP) R3465983-3 10/27/19 16:22

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1330	1370	1	2.81		5

L1153940-17 Original Sample (OS) • Duplicate (DUP)

(OS) L1153940-17 10/27/19 16:22 • (DUP) R3465983-4 10/27/19 16:22

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1220	1220	1	0.000		5

Laboratory Control Sample (LCS)

(LCS) R3465983-2 10/27/19 16:22

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8190	93.1	85.0-115	

Method Blank (MB)

(MB) R3465979-1 10/27/19 16:51

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		2.82	10.0

L1153940-23 Original Sample (OS) • Duplicate (DUP)

(OS) L1153940-23 10/27/19 16:51 • (DUP) R3465979-3 10/27/19 16:51

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	986	990	1	0.405		5

L1153940-38 Original Sample (OS) • Duplicate (DUP)

(OS) L1153940-38 10/27/19 16:51 • (DUP) R3465979-4 10/27/19 16:51

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	25.0	30.0	1	18.2	J P1	5

Sample Narrative:

OS: used the wrong volume. Not enough sample to rr

Laboratory Control Sample (LCS)

(LCS) R3465979-2 10/27/19 16:51

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8490	96.5	85.0-115	

Method Blank (MB)

(MB) R3466936-1 10/30/19 23:15

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	3.69	J	2.71	20.0

Sample Narrative:

BLANK: Endpoint pH 4.5

L1153940-13 Original Sample (OS) • Duplicate (DUP)

(OS) L1153940-13 10/31/19 00:54 • (DUP) R3466936-2 10/31/19 01:02

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	181	177	1	1.91		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

L1153940-35 Original Sample (OS) • Duplicate (DUP)

(OS) L1153940-35 10/31/19 02:39 • (DUP) R3466936-4 10/31/19 02:45

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	475	472	1	0.541		20

Sample Narrative:

OS: Endpoint pH 4.5 headspace

DUP: Endpoint pH 4.5

Laboratory Control Sample (LCS)

(LCS) R3466936-3 10/31/19 01:31

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100	96.3	96.3	85.0-115	

Sample Narrative:

LCS: Endpoint pH 4.5

Method Blank (MB)

(MB) R3467292-1 10/31/19 20:47

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Nitrate-Nitrite	U		0.0197	0.100

L1153940-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1153940-01 10/31/19 20:50 • (DUP) R3467292-3 10/31/19 20:52

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Nitrate-Nitrite	2.72	2.86	1	5.01		20

L1153940-13 Original Sample (OS) • Duplicate (DUP)

(OS) L1153940-13 10/31/19 22:26 • (DUP) R3467292-6 10/31/19 22:28

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Nitrate-Nitrite	3.29	3.37	1	2.43		20

Laboratory Control Sample (LCS)

(LCS) R3467292-2 10/31/19 20:49

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Nitrate-Nitrite	4.00	3.82	95.6	90.0-110	

L1153940-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1153940-02 10/31/19 20:53 • (MS) R3467292-4 10/31/19 20:55 • (MSD) R3467292-5 10/31/19 20:56

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Nitrate-Nitrite	2.50	3.46	5.51	5.50	82.0	81.6	1	90.0-110	E J6	E J6	0.200	20

L1153940-14 Original Sample (OS) • Matrix Spike (MS)

(OS) L1153940-14 10/31/19 22:29 • (MS) R3467292-7 10/31/19 22:37

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Nitrate-Nitrite	2.50	2.10	4.33	89.3	1	90.0-110	J6

Method Blank (MB)

(MB) R3467270-1 10/31/19 18:48

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Nitrate-Nitrite	U		0.0197	0.100

L1153773-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1153773-01 10/31/19 18:51 • (DUP) R3467270-3 10/31/19 18:52

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Nitrate-Nitrite	0.242	0.214	1	12.3		20

L1153940-32 Original Sample (OS) • Duplicate (DUP)

(OS) L1153940-32 10/31/19 19:16 • (DUP) R3467270-6 10/31/19 19:18

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Nitrate-Nitrite	2.80	2.78	1	0.538		20

Laboratory Control Sample (LCS)

(LCS) R3467270-2 10/31/19 18:49

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Nitrate-Nitrite	4.00	3.87	96.7	90.0-110	

L1153940-30 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1153940-30 10/31/19 19:10 • (MS) R3467270-4 10/31/19 19:12 • (MSD) R3467270-5 10/31/19 19:13

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Nitrate-Nitrite	2.50	U	2.79	2.76	111	110	1	90.0-110	J5		0.974	20

L1153940-33 Original Sample (OS) • Matrix Spike (MS)

(OS) L1153940-33 10/31/19 19:19 • (MS) R3467270-7 10/31/19 19:21

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Nitrate-Nitrite	2.50	2.71	5.09	95.4	1	90.0-110	E

Method Blank (MB)

(MB) R3466123-1 10/28/19 14:58

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	0.156	J	0.0519	1.00
Fluoride	U		0.00990	0.100
Sulfate	0.268	J	0.0774	5.00

L1153940-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1153940-03 10/28/19 20:33 • (DUP) R3466123-3 10/28/19 20:46

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	29.8	29.6	1	0.855		15
Fluoride	0.648	0.642	1	0.837		15
Sulfate	75.4	74.6	1	1.09		15

L1153940-22 Original Sample (OS) • Duplicate (DUP)

(OS) L1153940-22 10/29/19 04:11 • (DUP) R3466123-6 10/29/19 04:24

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	34.8	35.1	1	0.699		15
Fluoride	2.93	2.98	1	1.99		15
Sulfate	41.7	42.4	1	1.49		15

Laboratory Control Sample (LCS)

(LCS) R3466123-2 10/28/19 15:11

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	39.2	98.1	80.0-120	
Fluoride	8.00	7.95	99.4	80.0-120	
Sulfate	40.0	39.7	99.3	80.0-120	

L1153940-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1153940-03 10/28/19 20:33 • (MS) R3466123-4 10/28/19 20:59 • (MSD) R3466123-5 10/28/19 21:12

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	29.8	79.6	79.2	99.6	98.9	1	80.0-120			0.472	15
Fluoride	5.00	0.648	5.84	5.81	104	103	1	80.0-120			0.483	15
Sulfate	50.0	75.4	122	122	93.1	92.8	1	80.0-120	E	E	0.138	15

L1153940-22 Original Sample (OS) • Matrix Spike (MS)

(OS) L1153940-22 10/29/19 04:11 • (MS) R3466123-7 10/29/19 04:37

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	34.8	86.0	102	1	80.0-120	
Fluoride	5.00	2.93	8.03	102	1	80.0-120	
Sulfate	50.0	41.7	92.4	101	1	80.0-120	

Method Blank (MB)

(MB) R3466290-1 10/29/19 03:51

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	0.0859	J	0.0519	1.00
Fluoride	U		0.00990	0.100
Sulfate	0.574	J	0.0774	5.00

L1153940-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1153940-01 10/29/19 06:37 • (DUP) R3466290-3 10/29/19 06:50

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	50.2	50.0	1	0.282		15
Fluoride	1.10	1.11	1	0.479		15
Sulfate	61.2	61.5	1	0.532		15

L1154449-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1154449-02 10/29/19 13:15 • (DUP) R3466290-6 10/29/19 13:28

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	12.7	12.3	1	3.42		15
Fluoride	0.720	0.713	1	1.05		15
Sulfate	24.7	24.0	1	2.99		15

Laboratory Control Sample (LCS)

(LCS) R3466290-2 10/29/19 04:04

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	39.0	97.4	80.0-120	
Fluoride	8.00	7.79	97.4	80.0-120	
Sulfate	40.0	39.0	97.6	80.0-120	

L1153940-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1153940-01 10/29/19 06:37 • (MS) R3466290-4 10/29/19 07:03 • (MSD) R3466290-5 10/29/19 07:15

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	50.2	98.5	97.0	96.7	93.6	1	80.0-120			1.56	15
Fluoride	5.00	1.10	6.17	6.09	101	99.7	1	80.0-120			1.30	15
Sulfate	50.0	61.2	109	107	95.1	92.2	1	80.0-120	E	E	1.34	15

L1154449-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1154449-02 10/29/19 13:15 • (MS) R3466290-7 10/29/19 13:41

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	12.7	63.2	101	1	80.0-120	
Fluoride	5.00	0.720	5.80	102	1	80.0-120	
Sulfate	50.0	24.7	72.9	96.5	1	80.0-120	

Method Blank (MB)

(MB) R3466456-1 10/29/19 10:08

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.0519	1.00
Fluoride	U		0.00990	0.100
Sulfate	U		0.0774	5.00

L1154108-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1154108-01 10/29/19 14:05 • (DUP) R3466456-5 10/29/19 14:54

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	5.69	5.60	1	1.67		15
Fluoride	ND	0.000	1	0.000		15
Sulfate	5.36	5.51	1	2.93		15

L1154298-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1154298-03 10/29/19 18:44 • (DUP) R3466456-6 10/29/19 19:01

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	77.0	77.1	1	0.0506		15
Fluoride	1.31	1.30	1	0.138		15
Sulfate	129	129	1	0.140	E	15

Laboratory Control Sample (LCS)

(LCS) R3466456-2 10/29/19 10:24

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	39.0	97.6	80.0-120	
Fluoride	8.00	8.01	100	80.0-120	
Sulfate	40.0	39.6	99.1	80.0-120	

L1153940-30 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1153940-30 10/29/19 12:11 • (MS) R3466456-3 10/29/19 12:27 • (MSD) R3466456-4 10/29/19 12:43

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	158	200	200	83.5	84.0	1	80.0-120	E	E	0.127	15
Fluoride	5.00	0.748	5.64	5.66	97.8	98.2	1	80.0-120			0.367	15
Sulfate	50.0	7.98	56.1	56.4	96.3	96.8	1	80.0-120			0.465	15

L1154298-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1154298-03 10/29/19 18:44 • (MS) R3466456-7 10/29/19 19:17

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	77.0	123	92.2	1	80.0-120	E
Fluoride	5.00	1.31	6.17	97.2	1	80.0-120	
Sulfate	50.0	129	172	86.0	1	80.0-120	E

Method Blank (MB)

(MB) R3465646-1 10/27/19 18:20

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	0.0000591	J	0.0000490	0.000200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3465646-2 10/27/19 18:26 • (LCSD) R3465646-3 10/27/19 18:28

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Mercury	0.00300	0.00289	0.00326	96.4	109	80.0-120			12.0	20

L1153940-17 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1153940-17 10/27/19 18:30 • (MS) R3465646-4 10/27/19 18:32 • (MSD) R3465646-5 10/27/19 18:34

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.00300	U	0.00286	0.00307	95.2	102	1	75.0-125			7.06	20

Method Blank (MB)

(MB) R3465647-1 10/27/19 19:17

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	0.0000546	J	0.0000490	0.000200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3465647-2 10/27/19 19:19 • (LCSD) R3465647-3 10/27/19 19:21

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Mercury	0.00300	0.00291	0.00325	97.2	108	80.0-120			11.0	20

L1153940-30 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1153940-30 10/27/19 19:23 • (MS) R3465647-4 10/27/19 19:24 • (MSD) R3465647-5 10/27/19 19:26

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Mercury	0.00300	U	0.00224	0.00193	74.6	64.4	1	75.0-125	J6	J6	14.7	20

Method Blank (MB)

(MB) R3466876-1 10/30/19 15:55

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Boron,Dissolved	U		0.0126	0.200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3466876-2 10/30/19 15:58 • (LCSD) R3466876-3 10/30/19 16:00

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Boron,Dissolved	1.00	0.952	0.957	95.2	95.7	80.0-120			0.446	20

L1153790-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1153790-04 10/30/19 16:03 • (MS) R3466876-5 10/30/19 16:08 • (MSD) R3466876-6 10/30/19 16:11

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Boron,Dissolved	1.00	0.859	1.82	1.82	95.9	95.9	1	75.0-125			0.00330	20

Method Blank (MB)

(MB) R3466875-1 10/30/19 14:30

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Boron,Dissolved	U		0.0126	0.200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3466875-2 10/30/19 14:33 • (LCSD) R3466875-3 10/30/19 14:35

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Boron,Dissolved	1.00	0.934	0.941	93.4	94.1	80.0-120			0.793	20

L1153940-30 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1153940-30 10/30/19 14:38 • (MS) R3466875-5 10/30/19 14:43 • (MSD) R3466875-6 10/30/19 14:46

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Boron,Dissolved	1.00	0.158	1.11	1.13	95.5	97.0	1	75.0-125			1.29	20

Method Blank (MB)

(MB) R3467045-1 10/31/19 08:57

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Boron,Dissolved	U		0.0126	0.200

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3467045-2 10/31/19 09:00 • (LCSD) R3467045-3 10/31/19 09:03

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Boron,Dissolved	1.00	0.967	1.00	96.7	100	80.0-120			3.55	20

L1154217-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1154217-01 10/31/19 09:05 • (MS) R3467045-5 10/31/19 09:11 • (MSD) R3467045-6 10/31/19 09:13

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Boron,Dissolved	1.00	ND	1.02	1.00	99.1	97.1	1	75.0-125			1.97	20

Method Blank (MB)

(MB) R3467242-1 10/31/19 15:27

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Aluminum,Dissolved	U		0.00515	0.100
Arsenic,Dissolved	U		0.000250	0.00200
Barium,Dissolved	U		0.000360	0.00500
Cadmium,Dissolved	U		0.000160	0.00100
Chromium,Dissolved	0.000563	J	0.000540	0.00200
Copper,Dissolved	0.00234	J	0.000520	0.00500
Cobalt,Dissolved	U		0.000260	0.00200
Iron,Dissolved	U		0.0150	0.100
Lead,Dissolved	U		0.000240	0.00200
Manganese,Dissolved	U		0.000250	0.00500
Molybdenum,Dissolved	U		0.000140	0.00500
Nickel,Dissolved	U		0.000350	0.00200
Selenium,Dissolved	0.000503	J	0.000380	0.00200
Silver,Dissolved	U		0.000310	0.00200
Uranium,Dissolved	U		0.000330	0.0100
Zinc,Dissolved	U		0.00256	0.0250

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3467242-2 10/31/19 15:30 • (LCSD) R3467242-3 10/31/19 15:33

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Aluminum,Dissolved	5.00	5.04	4.89	101	97.8	80.0-120			3.06	20
Arsenic,Dissolved	0.0500	0.0492	0.0489	98.3	97.8	80.0-120			0.536	20
Barium,Dissolved	0.0500	0.0505	0.0510	101	102	80.0-120			1.01	20
Cadmium,Dissolved	0.0500	0.0504	0.0504	101	101	80.0-120			0.0296	20
Chromium,Dissolved	0.0500	0.0506	0.0492	101	98.4	80.0-120			2.91	20
Copper,Dissolved	0.0500	0.0531	0.0539	106	108	80.0-120			1.41	20
Cobalt,Dissolved	0.0500	0.0506	0.0505	101	101	80.0-120			0.289	20
Iron,Dissolved	5.00	5.04	4.97	101	99.4	80.0-120			1.48	20
Lead,Dissolved	0.0500	0.0506	0.0499	101	99.9	80.0-120			1.27	20
Manganese,Dissolved	0.0500	0.0508	0.0509	102	102	80.0-120			0.334	20
Molybdenum,Dissolved	0.0500	0.0500	0.0514	100	103	80.0-120			2.89	20
Nickel,Dissolved	0.0500	0.0517	0.0512	103	102	80.0-120			0.966	20
Selenium,Dissolved	0.0500	0.0534	0.0482	107	96.5	80.0-120			10.1	20
Silver,Dissolved	0.0500	0.0506	0.0508	101	102	80.0-120			0.347	20
Uranium,Dissolved	0.0500	0.0500	0.0497	100	99.4	80.0-120			0.633	20
Zinc,Dissolved	0.0500	0.0491	0.0480	98.2	96.0	80.0-120			2.30	20

L1153940-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1153940-01 10/31/19 15:37 • (MS) R3467242-5 10/31/19 15:43 • (MSD) R3467242-6 10/31/19 15:47

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aluminum,Dissolved	5.00	U	4.97	4.81	99.3	96.2	1	75.0-125			3.18	20
Arsenic,Dissolved	0.0500	0.00605	0.0541	0.0595	96.1	107	1	75.0-125			9.47	20
Barium,Dissolved	0.0500	0.137	0.194	0.189	114	103	1	75.0-125			2.89	20
Cadmium,Dissolved	0.0500	U	0.0516	0.0513	103	103	1	75.0-125			0.486	20
Chromium,Dissolved	0.0500	U	0.0480	0.0530	96.0	106	1	75.0-125			9.87	20
Copper,Dissolved	0.0500	U	0.0492	0.0551	98.5	110	1	75.0-125			11.2	20
Cobalt,Dissolved	0.0500	U	0.0479	0.0537	95.8	107	1	75.0-125			11.5	20
Iron,Dissolved	5.00	U	4.77	5.35	95.4	107	1	75.0-125			11.3	20
Lead,Dissolved	0.0500	U	0.0495	0.0505	98.9	101	1	75.0-125			1.99	20
Manganese,Dissolved	0.0500	U	0.0485	0.0546	97.0	109	1	75.0-125			11.9	20
Molybdenum,Dissolved	0.0500	0.00331	0.0524	0.0540	98.2	101	1	75.0-125			2.98	20
Nickel,Dissolved	0.0500	U	0.0471	0.0544	94.1	109	1	75.0-125			14.5	20
Selenium,Dissolved	0.0500	0.00291	0.0572	0.0535	108	101	1	75.0-125			6.64	20
Silver,Dissolved	0.0500	U	0.0503	0.0515	101	103	1	75.0-125			2.50	20
Uranium,Dissolved	0.0500	0.00163	0.0513	0.0522	99.4	101	1	75.0-125			1.69	20
Zinc,Dissolved	0.0500	0.00451	0.0520	0.0598	94.9	111	1	75.0-125			14.1	20

Method Blank (MB)

(MB) R3466887-1 10/30/19 16:19

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Aluminum,Dissolved	U		0.00515	0.100
Arsenic,Dissolved	U		0.000250	0.00200
Barium,Dissolved	U		0.000360	0.00500
Cadmium,Dissolved	U		0.000160	0.00100
Chromium,Dissolved	U		0.000540	0.00200
Copper,Dissolved	U		0.000520	0.00500
Cobalt,Dissolved	U		0.000260	0.00200
Iron,Dissolved	U		0.0150	0.100
Lead,Dissolved	U		0.000240	0.00200
Manganese,Dissolved	U		0.000250	0.00500
Molybdenum,Dissolved	U		0.000140	0.00500
Nickel,Dissolved	U		0.000350	0.00200
Selenium,Dissolved	U		0.000380	0.00200
Silver,Dissolved	U		0.000310	0.00200
Uranium,Dissolved	U		0.000330	0.0100

Method Blank (MB)

(MB) R3466890-1 10/30/19 20:58

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Zinc,Dissolved	U		0.00256	0.0250

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3466887-2 10/30/19 16:23 • (LCSD) R3466887-3 10/30/19 16:27

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Aluminum,Dissolved	5.00	5.08	5.15	102	103	80.0-120			1.43	20
Arsenic,Dissolved	0.0500	0.0491	0.0490	98.2	98.0	80.0-120			0.196	20
Barium,Dissolved	0.0500	0.0502	0.0510	100	102	80.0-120			1.72	20
Cadmium,Dissolved	0.0500	0.0485	0.0487	97.0	97.4	80.0-120			0.396	20
Chromium,Dissolved	0.0500	0.0488	0.0487	97.6	97.3	80.0-120			0.274	20
Copper,Dissolved	0.0500	0.0460	0.0457	92.0	91.5	80.0-120			0.516	20
Cobalt,Dissolved	0.0500	0.0498	0.0496	99.7	99.2	80.0-120			0.477	20
Iron,Dissolved	5.00	5.06	4.98	101	99.6	80.0-120			1.56	20
Lead,Dissolved	0.0500	0.0495	0.0492	98.9	98.4	80.0-120			0.485	20
Manganese,Dissolved	0.0500	0.0502	0.0497	100	99.4	80.0-120			0.952	20
Molybdenum,Dissolved	0.0500	0.0480	0.0481	96.0	96.2	80.0-120			0.190	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3466887-2 10/30/19 16:23 • (LCSD) R3466887-3 10/30/19 16:27

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Nickel,Dissolved	0.0500	0.0496	0.0493	99.2	98.6	80.0-120			0.602	20
Selenium,Dissolved	0.0500	0.0504	0.0500	101	100	80.0-120			0.753	20
Silver,Dissolved	0.0500	0.0491	0.0497	98.3	99.3	80.0-120			1.02	20
Uranium,Dissolved	0.0500	0.0444	0.0444	88.9	88.8	80.0-120			0.0974	20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3466890-2 10/30/19 21:02 • (LCSD) R3466890-3 10/30/19 21:06

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Zinc,Dissolved	0.0500	0.0502	0.0546	100	109	80.0-120			8.50	20

L1153940-30 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1153940-30 10/30/19 16:30 • (MS) R3466887-5 10/30/19 16:37 • (MSD) R3466887-6 10/30/19 16:41

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Aluminum,Dissolved	5.00	U	5.04	4.97	101	99.3	1	75.0-125			1.41	20
Arsenic,Dissolved	0.0500	0.00228	0.0530	0.0519	101	99.1	1	75.0-125			2.20	20
Barium,Dissolved	0.0500	0.496	0.542	0.546	91.6	99.1	1	75.0-125			0.694	20
Cadmium,Dissolved	0.0500	U	0.0492	0.0488	98.4	97.5	1	75.0-125			0.933	20
Chromium,Dissolved	0.0500	U	0.0487	0.0474	97.4	94.8	1	75.0-125			2.77	20
Copper,Dissolved	0.0500	U	0.0502	0.0489	100	97.8	1	75.0-125			2.70	20
Cobalt,Dissolved	0.0500	U	0.0493	0.0479	98.6	95.7	1	75.0-125			2.92	20
Iron,Dissolved	5.00	0.0209	4.80	4.82	95.5	96.0	1	75.0-125			0.504	20
Lead,Dissolved	0.0500	U	0.0489	0.0491	97.7	98.2	1	75.0-125			0.508	20
Manganese,Dissolved	0.0500	1.02	1.03	1.03	17.9	20.6	1	75.0-125	V	V	0.130	20
Molybdenum,Dissolved	0.0500	0.00183	0.0522	0.0519	101	100	1	75.0-125			0.624	20
Nickel,Dissolved	0.0500	0.00323	0.0512	0.0503	96.0	94.2	1	75.0-125			1.80	20
Selenium,Dissolved	0.0500	U	0.0543	0.0528	109	106	1	75.0-125			2.69	20
Silver,Dissolved	0.0500	U	0.0496	0.0487	99.2	97.4	1	75.0-125			1.82	20
Uranium,Dissolved	0.0500	0.0167	0.0621	0.0638	90.7	94.1	1	75.0-125			2.72	20

L1153940-30 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1153940-30 10/30/19 21:10 • (MS) R3466890-5 10/30/19 21:17 • (MSD) R3466890-6 10/30/19 21:21

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Zinc,Dissolved	0.0500	0.00581	0.0571	0.0570	103	102	1	75.0-125			0.156	20

Method Blank (MB)

(MB) R3467799-5 11/02/19 14:45

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TPH (GC/FID) Low Fraction	0.0453	J	0.0314	0.100
(S) a,a,a-Trifluorotoluene(FID)	*106*			*78.0-120*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3467799-3 11/02/19 13:38 • (LCSD) R3467799-4 11/02/19 14:00

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	6.33	6.33	115	115	72.0-127			0.000	20
(S) a,a,a-Trifluorotoluene(FID)				*109*	*109*	*78.0-120*				

L1153301-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1153301-01 11/02/19 15:34 • (MS) R3467799-8 11/02/19 21:54 • (MSD) R3467799-9 11/02/19 22:16

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	ND	6.12	6.33	111	115	1	10.0-160			3.37	22
(S) a,a,a-Trifluorotoluene(FID)					*108*	*108*		*78.0-120*				

Method Blank (MB)

(MB) R3467915-2 11/01/19 20:01

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TPH (GC/FID) Low Fraction	0.0421	J	0.0314	0.100
(S) a,a,a-Trifluorotoluene(FID)	*106*			*78.0-120*

Laboratory Control Sample (LCS)

(LCS) R3467915-1 11/01/19 18:53

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.34	115	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*96.9*	*78.0-120*	

L1153940-30 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1153940-30 11/02/19 02:46 • (MS) R3467915-3 11/02/19 05:58 • (MSD) R3467915-4 11/02/19 06:22

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	0.244	6.62	5.27	116	91.4	1	10.0-160		J3	22.7	22
(S) a,a,a-Trifluorotoluene(FID)					*92.5*	*94.5*		*78.0-120*				

Method Blank (MB)

(MB) R3468499-3 11/02/19 01:24

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0100	1.00
Benzene	U		0.000331	0.00100
Bromodichloromethane	U		0.000380	0.00125
Bromoform	U		0.000469	0.00100
Bromomethane	U		0.000866	0.00500
n-Butylbenzene	U		0.000361	0.00100
sec-Butylbenzene	U		0.000365	0.00100
tert-Butylbenzene	U		0.000399	0.00100
Carbon disulfide	U		0.000275	0.00100
Chlorobenzene	U		0.000348	0.00100
Chlorodibromomethane	U		0.000327	0.00100
Chloroethane	U		0.000453	0.00500
Chloroform	U		0.000324	0.00500
Chloromethane	U		0.000276	0.00250
1,2-Dibromoethane	U		0.000381	0.00100
1,1-Dichloroethane	U		0.000259	0.00100
1,2-Dichloroethane	U		0.000361	0.00100
1,1-Dichloroethene	U		0.000398	0.00100
cis-1,2-Dichloroethene	U		0.000260	0.00100
trans-1,2-Dichloroethene	U		0.000396	0.00100
1,2-Dichloropropane	U		0.000306	0.00100
cis-1,3-Dichloropropene	U		0.000418	0.00100
trans-1,3-Dichloropropene	U		0.000419	0.00100
Ethylbenzene	U		0.000384	0.00100
Hexachloro-1,3-butadiene	U		0.000256	0.00100
2-Hexanone	U		0.00382	0.0100
Isopropylbenzene	U		0.000326	0.00100
p-Isopropyltoluene	U		0.000350	0.00100
2-Butanone (MEK)	U		0.00393	0.0100
Methylene Chloride	U		0.00100	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100
Methyl tert-butyl ether	U		0.000367	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.000349	0.00100
Styrene	U		0.000307	0.00100
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100
Tetrachloroethene	U		0.000372	0.00100
Toluene	U		0.000412	0.00100
1,1,1-Trichloroethane	U		0.000319	0.00100
1,1,2-Trichloroethane	U		0.000383	0.00100

Method Blank (MB)

(MB) R3468499-3 11/02/19 01:24

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Trichloroethene	U		0.000398	0.00100
1,2,4-Trimethylbenzene	U		0.000373	0.00100
1,3,5-Trimethylbenzene	U		0.000387	0.00100
Vinyl chloride	U		0.000259	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	*112*			*80.0-120*
(S) 4-Bromofluorobenzene	*111*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*110*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3468499-2 11/02/19 00:44

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.0250	0.0161	64.4	19.0-160	
Benzene	0.00500	0.00482	96.4	70.0-123	
Bromodichloromethane	0.00500	0.00529	106	75.0-120	
Bromoform	0.00500	0.00626	125	68.0-132	
Bromomethane	0.00500	0.00540	108	10.0-160	
n-Butylbenzene	0.00500	0.00428	85.6	73.0-125	
sec-Butylbenzene	0.00500	0.00452	90.4	75.0-125	
tert-Butylbenzene	0.00500	0.00497	99.4	76.0-124	
Carbon disulfide	0.00500	0.00477	95.4	61.0-128	
Chlorobenzene	0.00500	0.00544	109	80.0-121	
Chlorodibromomethane	0.00500	0.00630	126	77.0-125	J4
Chloroethane	0.00500	0.00498	99.6	47.0-150	
Chloroform	0.00500	0.00486	97.2	73.0-120	
Chloromethane	0.00500	0.00504	101	41.0-142	
1,2-Dibromoethane	0.00500	0.00528	106	80.0-122	
1,1-Dichloroethane	0.00500	0.00518	104	70.0-126	
1,2-Dichloroethane	0.00500	0.00546	109	70.0-128	
1,1-Dichloroethene	0.00500	0.00532	106	71.0-124	
cis-1,2-Dichloroethene	0.00500	0.00526	105	73.0-120	
trans-1,2-Dichloroethene	0.00500	0.00509	102	73.0-120	
1,2-Dichloropropane	0.00500	0.00468	93.6	77.0-125	
cis-1,3-Dichloropropene	0.00500	0.00510	102	80.0-123	
trans-1,3-Dichloropropene	0.00500	0.00510	102	78.0-124	
Ethylbenzene	0.00500	0.00523	105	79.0-123	
Hexachloro-1,3-butadiene	0.00500	0.00526	105	54.0-138	

Laboratory Control Sample (LCS)

(LCS) R3468499-2 11/02/19 00:44

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
2-Hexanone	0.0250	0.0245	98.0	67.0-149	
Isopropylbenzene	0.00500	0.00573	115	76.0-127	
p-Isopropyltoluene	0.00500	0.00466	93.2	76.0-125	
2-Butanone (MEK)	0.0250	0.0220	88.0	44.0-160	
Methylene Chloride	0.00500	0.00460	92.0	67.0-120	
4-Methyl-2-pentanone (MIBK)	0.0250	0.0247	98.8	68.0-142	
Methyl tert-butyl ether	0.00500	0.00523	105	68.0-125	
Naphthalene	0.00500	0.00417	83.4	54.0-135	
n-Propylbenzene	0.00500	0.00436	87.2	77.0-124	
Styrene	0.00500	0.00559	112	73.0-130	
1,1,2,2-Tetrachloroethane	0.00500	0.00379	75.8	65.0-130	
Tetrachloroethene	0.00500	0.00577	115	72.0-132	
Toluene	0.00500	0.00507	101	79.0-120	
1,1,1-Trichloroethane	0.00500	0.00606	121	73.0-124	
1,1,2-Trichloroethane	0.00500	0.00523	105	80.0-120	
Trichloroethene	0.00500	0.00608	122	78.0-124	
1,2,4-Trimethylbenzene	0.00500	0.00454	90.8	76.0-121	
1,3,5-Trimethylbenzene	0.00500	0.00453	90.6	76.0-122	
Vinyl chloride	0.00500	0.00491	98.2	67.0-131	
Xylenes, Total	0.0150	0.0161	107	79.0-123	
(S) Toluene-d8			*109*	*80.0-120*	
(S) 4-Bromofluorobenzene			*112*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*109*	*70.0-130*	

Method Blank (MB)

(MB) R3468691-2 11/02/19 01:34

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0100	1.00
Benzene	U		0.000331	0.00100
Bromodichloromethane	U		0.000380	0.00125
Bromoform	U		0.000469	0.00100
Bromomethane	U		0.000866	0.00500
n-Butylbenzene	U		0.000361	0.00100
sec-Butylbenzene	U		0.000365	0.00100
tert-Butylbenzene	U		0.000399	0.00100
Carbon disulfide	U		0.000275	0.00100
Carbon tetrachloride	U		0.000379	0.00100
Chlorobenzene	U		0.000348	0.00100
Chlorodibromomethane	U		0.000327	0.00100
Chloroethane	U		0.000453	0.00500
Chloroform	U		0.000324	0.00500
Chloromethane	U		0.000276	0.00250
1,2-Dibromoethane	U		0.000381	0.00100
1,1-Dichloroethane	U		0.000259	0.00100
1,2-Dichloroethane	U		0.000361	0.00100
1,1-Dichloroethene	U		0.000398	0.00100
cis-1,2-Dichloroethene	U		0.000260	0.00100
trans-1,2-Dichloroethene	U		0.000396	0.00100
1,2-Dichloropropane	U		0.000306	0.00100
cis-1,3-Dichloropropene	U		0.000418	0.00100
trans-1,3-Dichloropropene	U		0.000419	0.00100
Ethylbenzene	U		0.000384	0.00100
Hexachloro-1,3-butadiene	U		0.000256	0.00100
2-Hexanone	U		0.00382	0.0100
Isopropylbenzene	U		0.000326	0.00100
p-Isopropyltoluene	U		0.000350	0.00100
2-Butanone (MEK)	U		0.00393	0.0100
Methylene Chloride	U		0.00100	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100
Methyl tert-butyl ether	U		0.000367	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.000349	0.00100
Styrene	U		0.000307	0.00100
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100
Tetrachloroethene	U		0.000372	0.00100
Toluene	U		0.000412	0.00100
1,1,1-Trichloroethane	U		0.000319	0.00100

Method Blank (MB)

(MB) R3468691-2 11/02/19 01:34

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,1,2-Trichloroethane	U		0.000383	0.00100
Trichloroethene	U		0.000398	0.00100
1,2,4-Trimethylbenzene	U		0.000373	0.00100
1,3,5-Trimethylbenzene	U		0.000387	0.00100
Vinyl chloride	U		0.000259	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	*92.8*			*80.0-120*
(S) 4-Bromofluorobenzene	*94.4*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*95.2*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3468691-1 11/02/19 00:54

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.0250	0.0369	148	19.0-160	
Benzene	0.00500	0.00494	98.8	70.0-123	
Bromodichloromethane	0.00500	0.00478	95.6	75.0-120	
Bromoform	0.00500	0.00517	103	68.0-132	
Bromomethane	0.00500	0.00536	107	10.0-160	
n-Butylbenzene	0.00500	0.00500	100	73.0-125	
sec-Butylbenzene	0.00500	0.00501	100	75.0-125	
tert-Butylbenzene	0.00500	0.00515	103	76.0-124	
Carbon disulfide	0.00500	0.00535	107	61.0-128	
Carbon tetrachloride	0.00500	0.00518	104	68.0-126	
Chlorobenzene	0.00500	0.00526	105	80.0-121	
Chlorodibromomethane	0.00500	0.00525	105	77.0-125	
Chloroethane	0.00500	0.00480	96.0	47.0-150	
Chloroform	0.00500	0.00493	98.6	73.0-120	
Chloromethane	0.00500	0.00467	93.4	41.0-142	
1,2-Dibromoethane	0.00500	0.00543	109	80.0-122	
1,1-Dichloroethane	0.00500	0.00508	102	70.0-126	
1,2-Dichloroethane	0.00500	0.00518	104	70.0-128	
1,1-Dichloroethene	0.00500	0.00549	110	71.0-124	
cis-1,2-Dichloroethene	0.00500	0.00527	105	73.0-120	
trans-1,2-Dichloroethene	0.00500	0.00516	103	73.0-120	
1,2-Dichloropropane	0.00500	0.00498	99.6	77.0-125	
cis-1,3-Dichloropropene	0.00500	0.00477	95.4	80.0-123	
trans-1,3-Dichloropropene	0.00500	0.00522	104	78.0-124	

Laboratory Control Sample (LCS)

(LCS) R3468691-1 11/02/19 00:54

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Ethylbenzene	0.00500	0.00517	103	79.0-123	
Hexachloro-1,3-butadiene	0.00500	0.00503	101	54.0-138	
2-Hexanone	0.0250	0.0317	127	67.0-149	
Isopropylbenzene	0.00500	0.00507	101	76.0-127	
p-Isopropyltoluene	0.00500	0.00520	104	76.0-125	
2-Butanone (MEK)	0.0250	0.0326	130	44.0-160	
Methylene Chloride	0.00500	0.00510	102	67.0-120	
4-Methyl-2-pentanone (MIBK)	0.0250	0.0291	116	68.0-142	
Methyl tert-butyl ether	0.00500	0.00525	105	68.0-125	
Naphthalene	0.00500	0.00583	117	54.0-135	
n-Propylbenzene	0.00500	0.00515	103	77.0-124	
Styrene	0.00500	0.00530	106	73.0-130	
1,1,2,2-Tetrachloroethane	0.00500	0.00516	103	65.0-130	
Tetrachloroethene	0.00500	0.00539	108	72.0-132	
Toluene	0.00500	0.00489	97.8	79.0-120	
1,1,1-Trichloroethane	0.00500	0.00512	102	73.0-124	
1,1,2-Trichloroethane	0.00500	0.00527	105	80.0-120	
Trichloroethene	0.00500	0.00542	108	78.0-124	
1,2,4-Trimethylbenzene	0.00500	0.00526	105	76.0-121	
1,3,5-Trimethylbenzene	0.00500	0.00519	104	76.0-122	
Vinyl chloride	0.00500	0.00477	95.4	67.0-131	
Xylenes, Total	0.0150	0.0151	101	79.0-123	
(S) Toluene-d8			*96.3*	*80.0-120*	
(S) 4-Bromofluorobenzene			*95.1*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*94.0*	*70.0-130*	

Method Blank (MB)

(MB) R3468148-2 11/02/19 13:00

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0100	1.00
Benzene	U		0.000331	0.00100
Bromodichloromethane	U		0.000380	0.00125
Bromoform	U		0.000469	0.00100
Bromomethane	U		0.000866	0.00500
n-Butylbenzene	U		0.000361	0.00100
sec-Butylbenzene	U		0.000365	0.00100
tert-Butylbenzene	U		0.000399	0.00100
Carbon disulfide	U		0.000275	0.00100
Carbon tetrachloride	U		0.000379	0.00100
Chlorobenzene	U		0.000348	0.00100
Chlorodibromomethane	U		0.000327	0.00100
Chloroethane	U		0.000453	0.00500
Chloroform	U		0.000324	0.00500
Chloromethane	U		0.000276	0.00250
1,2-Dibromoethane	U		0.000381	0.00100
1,1-Dichloroethane	U		0.000259	0.00100
1,2-Dichloroethane	U		0.000361	0.00100
1,1-Dichloroethene	U		0.000398	0.00100
cis-1,2-Dichloroethene	U		0.000260	0.00100
trans-1,2-Dichloroethene	U		0.000396	0.00100
1,2-Dichloropropane	U		0.000306	0.00100
cis-1,3-Dichloropropene	U		0.000418	0.00100
trans-1,3-Dichloropropene	U		0.000419	0.00100
Ethylbenzene	U		0.000384	0.00100
Hexachloro-1,3-butadiene	U		0.000256	0.00100
2-Hexanone	U		0.00382	0.0100
Isopropylbenzene	U		0.000326	0.00100
p-Isopropyltoluene	U		0.000350	0.00100
2-Butanone (MEK)	U		0.00393	0.0100
Methylene Chloride	U		0.00100	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.00214	0.0100
Methyl tert-butyl ether	U		0.000367	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.000349	0.00100
Styrene	U		0.000307	0.00100
1,1,2,2-Tetrachloroethane	U		0.000130	0.00100
Tetrachloroethene	U		0.000372	0.00100
Toluene	U		0.000412	0.00100
1,1,1-Trichloroethane	U		0.000319	0.00100

Method Blank (MB)

(MB) R3468148-2 11/02/19 13:00

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,1,2-Trichloroethane	U		0.000383	0.00100
Trichloroethene	U		0.000398	0.00100
1,2,4-Trimethylbenzene	U		0.000373	0.00100
1,3,5-Trimethylbenzene	U		0.000387	0.00100
Vinyl chloride	U		0.000259	0.00100
Xylenes, Total	U		0.00106	0.00300
(S) Toluene-d8	*96.4*			*80.0-120*
(S) 4-Bromofluorobenzene	*108*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*102*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3468148-1 11/02/19 12:01

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.0250	0.0262	105	19.0-160	
Benzene	0.00500	0.00515	103	70.0-123	
Bromodichloromethane	0.00500	0.00548	110	75.0-120	
Bromoform	0.00500	0.00487	97.4	68.0-132	
Bromomethane	0.00500	0.00379	75.8	10.0-160	
n-Butylbenzene	0.00500	0.00449	89.8	73.0-125	
sec-Butylbenzene	0.00500	0.00445	89.0	75.0-125	
tert-Butylbenzene	0.00500	0.00431	86.2	76.0-124	
Carbon disulfide	0.00500	0.00503	101	61.0-128	
Carbon tetrachloride	0.00500	0.00550	110	68.0-126	
Chlorobenzene	0.00500	0.00525	105	80.0-121	
Chlorodibromomethane	0.00500	0.00464	92.8	77.0-125	
Chloroethane	0.00500	0.00699	140	47.0-150	
Chloroform	0.00500	0.00557	111	73.0-120	
Chloromethane	0.00500	0.00415	83.0	41.0-142	
1,2-Dibromoethane	0.00500	0.00545	109	80.0-122	
1,1-Dichloroethane	0.00500	0.00536	107	70.0-126	
1,2-Dichloroethane	0.00500	0.00547	109	70.0-128	
1,1-Dichloroethene	0.00500	0.00544	109	71.0-124	
cis-1,2-Dichloroethene	0.00500	0.00543	109	73.0-120	
trans-1,2-Dichloroethene	0.00500	0.00548	110	73.0-120	
1,2-Dichloropropane	0.00500	0.00525	105	77.0-125	
cis-1,3-Dichloropropene	0.00500	0.00523	105	80.0-123	
trans-1,3-Dichloropropene	0.00500	0.00451	90.2	78.0-124	

Laboratory Control Sample (LCS)

(LCS) R3468148-1 11/02/19 12:01

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Ethylbenzene	0.00500	0.00490	98.0	79.0-123	
Hexachloro-1,3-butadiene	0.00500	0.00434	86.8	54.0-138	
2-Hexanone	0.0250	0.0210	84.0	67.0-149	
Isopropylbenzene	0.00500	0.00464	92.8	76.0-127	
p-Isopropyltoluene	0.00500	0.00455	91.0	76.0-125	
2-Butanone (MEK)	0.0250	0.0248	99.2	44.0-160	
Methylene Chloride	0.00500	0.00571	114	67.0-120	
4-Methyl-2-pentanone (MIBK)	0.0250	0.0246	98.4	68.0-142	
Methyl tert-butyl ether	0.00500	0.00550	110	68.0-125	
Naphthalene	0.00500	0.00376	75.2	54.0-135	
n-Propylbenzene	0.00500	0.00473	94.6	77.0-124	
Styrene	0.00500	0.00484	96.8	73.0-130	
1,1,2,2-Tetrachloroethane	0.00500	0.00485	97.0	65.0-130	
Tetrachloroethene	0.00500	0.00517	103	72.0-132	
Toluene	0.00500	0.00469	93.8	79.0-120	
1,1,1-Trichloroethane	0.00500	0.00551	110	73.0-124	
1,1,2-Trichloroethane	0.00500	0.00481	96.2	80.0-120	
Trichloroethene	0.00500	0.00495	99.0	78.0-124	
1,2,4-Trimethylbenzene	0.00500	0.00453	90.6	76.0-121	
1,3,5-Trimethylbenzene	0.00500	0.00467	93.4	76.0-122	
Vinyl chloride	0.00500	0.00530	106	67.0-131	
Xylenes, Total	0.0150	0.0143	95.3	79.0-123	
(S) Toluene-d8			*95.2*	*80.0-120*	
(S) 4-Bromofluorobenzene			*104*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*100*	*70.0-130*	

L1153940-30 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1153940-30 11/02/19 18:50 • (MS) R3468148-3 11/02/19 19:29 • (MSD) R3468148-4 11/02/19 19:49

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	0.0250	U	0.0298	0.0289	119	116	1	10.0-160			3.07	35
Benzene	0.00500	0.000352	0.00558	0.00547	105	102	1	17.0-158			1.99	27
Bromodichloromethane	0.00500	U	0.00533	0.00558	107	112	1	31.0-150			4.58	27
Bromoform	0.00500	U	0.00499	0.00463	99.8	92.6	1	29.0-150			7.48	29
Bromomethane	0.00500	U	0.00484	0.00433	96.8	86.6	1	10.0-160			11.1	38
n-Butylbenzene	0.00500	U	0.00451	0.00468	90.2	93.6	1	31.0-150			3.70	30
sec-Butylbenzene	0.00500	0.00229	0.00637	0.00687	81.6	91.6	1	33.0-155			7.55	29
tert-Butylbenzene	0.00500	U	0.00475	0.00446	95.0	89.2	1	34.0-153			6.30	28

L1153940-30 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1153940-30 11/02/19 18:50 • (MS) R3468148-3 11/02/19 19:29 • (MSD) R3468148-4 11/02/19 19:49

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Carbon disulfide	0.00500	U	0.00584	0.00559	117	112	1	10.0-156			4.37	28
Carbon tetrachloride	0.00500	U	0.00868	0.00601	174	120	1	23.0-159	J5	J3	36.4	28
Chlorobenzene	0.00500	U	0.00508	0.00473	102	94.6	1	33.0-152			7.14	27
Chlorodibromomethane	0.00500	U	0.00459	0.00411	91.8	82.2	1	37.0-149			11.0	27
Chloroethane	0.00500	U	0.00650	0.00607	130	121	1	10.0-160			6.84	30
Chloroform	0.00500	U	0.00654	0.00612	131	122	1	29.0-154			6.64	28
Chloromethane	0.00500	U	0.00436	0.00397	87.2	79.4	1	10.0-160			9.36	29
1,2-Dibromoethane	0.00500	U	0.00460	0.00423	92.0	84.6	1	34.0-147			8.38	27
1,1-Dichloroethane	0.00500	U	0.00591	0.00568	118	114	1	25.0-158			3.97	27
1,2-Dichloroethane	0.00500	U	0.00596	0.00581	119	116	1	29.0-151			2.55	27
1,1-Dichloroethene	0.00500	U	0.00640	0.00507	128	101	1	11.0-160			23.2	29
cis-1,2-Dichloroethene	0.00500	U	0.00557	0.00542	111	108	1	10.0-160			2.73	27
trans-1,2-Dichloroethene	0.00500	U	0.00562	0.00541	112	108	1	17.0-153			3.81	27
1,2-Dichloropropane	0.00500	U	0.00520	0.00540	104	108	1	30.0-156			3.77	27
cis-1,3-Dichloropropene	0.00500	U	0.00500	0.00523	100	105	1	34.0-149			4.50	28
trans-1,3-Dichloropropene	0.00500	U	0.00396	0.00404	79.2	80.8	1	32.0-149			2.00	28
Ethylbenzene	0.00500	U	0.00486	0.00467	97.2	93.4	1	30.0-155			3.99	27
Hexachloro-1,3-butadiene	0.00500	U	0.00434	0.00431	86.8	86.2	1	20.0-154			0.694	34
2-Hexanone	0.0250	U	0.0211	0.0204	84.4	81.6	1	21.0-160			3.37	29
Isopropylbenzene	0.00500	0.0164	0.0177	0.0208	26.0	88.0	1	28.0-157	J6		16.1	27
p-Isopropyltoluene	0.00500	U	0.00462	0.00455	92.4	91.0	1	30.0-154			1.53	29
2-Butanone (MEK)	0.0250	U	0.0244	0.0266	97.6	106	1	10.0-160			8.63	32
Methylene Chloride	0.00500	U	0.00510	0.00513	102	103	1	23.0-144			0.587	28
4-Methyl-2-pentanone (MIBK)	0.0250	U	0.0248	0.0238	99.2	95.2	1	29.0-160			4.12	29
Methyl tert-butyl ether	0.00500	U	0.00515	0.00534	103	107	1	28.0-150			3.62	29
Naphthalene	0.00500	U	0.00326	0.00380	65.2	76.0	1	12.0-156			15.3	35
n-Propylbenzene	0.00500	0.000566	0.00517	0.00517	92.1	92.1	1	31.0-154			0.000	28
Styrene	0.00500	U	0.00462	0.00478	92.4	95.6	1	33.0-155			3.40	28
1,1,2,2-Tetrachloroethane	0.00500	U	0.00469	0.00482	93.8	96.4	1	33.0-150			2.73	28
Tetrachloroethene	0.00500	U	0.00581	0.00506	116	101	1	10.0-160			13.8	27
Toluene	0.00500	U	0.00487	0.00456	97.4	91.2	1	26.0-154			6.57	28
1,1,1-Trichloroethane	0.00500	U	0.00640	0.00615	128	123	1	23.0-160			3.98	28
1,1,2-Trichloroethane	0.00500	U	0.00529	0.00494	106	98.8	1	35.0-147			6.84	27
Trichloroethene	0.00500	U	0.00592	0.00593	118	119	1	10.0-160			0.169	25
1,2,4-Trimethylbenzene	0.00500	U	0.00447	0.00435	89.4	87.0	1	26.0-154			2.72	27
1,3,5-Trimethylbenzene	0.00500	U	0.00498	0.00460	99.6	92.0	1	28.0-153			7.93	27
Vinyl chloride	0.00500	U	0.00514	0.00490	103	98.0	1	10.0-160			4.78	27
Xylenes, Total	0.0150	U	0.0152	0.0136	101	90.7	1	29.0-154			11.1	28
(S) Toluene-d8					*93.1*	*94.8*		*80.0-120*				
(S) 4-Bromofluorobenzene					*100*	*105*		*77.0-126*				

L1153940-30 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1153940-30 11/02/19 18:50 • (MS) R3468148-3 11/02/19 19:29 • (MSD) R3468148-4 11/02/19 19:49

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
(S) 1,2-Dichloroethane-d4					*101*	*108*		*70.0-130*				

Method Blank (MB)

(MB) R3468949-3 11/05/19 13:57

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Carbon tetrachloride	U		0.000379	0.00100
(S) Toluene-d8	*93.5*			*80.0-120*
(S) 4-Bromofluorobenzene	*94.1*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*88.8*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3468949-1 11/05/19 12:39 • (LCSD) R3468949-2 11/05/19 12:58

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Carbon tetrachloride	0.00500	0.00480	0.00481	96.0	96.2	68.0-126			0.208	20
(S) Toluene-d8				*92.4*	*89.4*	*80.0-120*				
(S) 4-Bromofluorobenzene				*94.3*	*90.9*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*93.5*	*92.9*	*70.0-130*				

Method Blank (MB)

(MB) R3469239-3 11/06/19 13:14

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Carbon tetrachloride	U		0.000379	0.00100
(S) Toluene-d8	*104*			*80.0-120*
(S) 4-Bromofluorobenzene	*97.6*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*117*			*70.0-130*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3469239-1 11/06/19 12:17 • (LCSD) R3469239-2 11/06/19 12:36

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Carbon tetrachloride	0.00500	0.00439	0.00465	87.8	93.0	68.0-126			5.75	20
(S) Toluene-d8				*101*	*100*	*80.0-120*				
(S) 4-Bromofluorobenzene				*96.7*	*96.1*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*120*	*123*	*70.0-130*				

Method Blank (MB)

(MB) R3465776-1 10/27/19 15:03

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
TPH (GC/FID) High Fraction	U		0.0247	0.100
(S) o-Terphenyl	*61.0*			*31.0-160*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3465776-2 10/27/19 15:29 • (LCSD) R3465776-3 10/27/19 15:54

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	%	%	%			%	%
TPH (GC/FID) High Fraction	1.50	1.21	1.24	80.7	82.7	50.0-150			2.45	20
(S) o-Terphenyl				*83.5*	*87.0*	*31.0-160*				

L1153940-30 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1153940-30 10/27/19 17:44 • (MS) R3465776-4 10/27/19 18:10 • (MSD) R3465776-5 10/27/19 18:36

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
TPH (GC/FID) High Fraction	1.43	0.167	1.35	1.35	82.7	82.7	1	50.0-150			0.000	20
(S) o-Terphenyl					*79.5*	*73.7*		*31.0-160*				

Method Blank (MB)

(MB) R3466020-1 10/28/19 09:07

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TPH (GC/FID) High Fraction	U		0.0247	0.100
(S) o-Terphenyl	*65.5*			*31.0-160*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3466020-2 10/28/19 09:28 • (LCSD) R3466020-3 10/28/19 09:49

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) High Fraction	1.50	1.34	1.40	89.3	93.3	50.0-150			4.38	20
(S) o-Terphenyl				*83.5*	*89.5*	*31.0-160*				

Method Blank (MB)

(MB) R3467118-3 10/31/19 01:53

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acenaphthene	U		0.000316	0.00100
Acenaphthylene	U		0.000309	0.00100
Acetophenone	U		0.00247	0.0100
Anthracene	U		0.000291	0.00100
Atrazine	U		0.000260	0.0100
Benzaldehyde	U		0.00140	0.0100
Benzo(a)anthracene	U		0.0000510	0.00100
Benzo(b)fluoranthene	U		0.0000896	0.00100
Benzo(k)fluoranthene	U		0.000355	0.00100
Benzo(g,h,i)perylene	U		0.00000227	0.00100
Benzo(a)pyrene	U		0.0000381	0.000200
Biphenyl	U		0.000325	0.0100
Bis(2-chlorethoxy)methane	U		0.000329	0.0100
Bis(2-chloroethyl)ether	U		0.00162	0.0100
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100
4-Bromophenyl-phenylether	U		0.000335	0.0100
Caprolactam	U		0.00259	0.0100
Carbazole	U		0.000260	0.0100
4-Chloroaniline	U		0.000382	0.0100
2-Chloronaphthalene	U		0.000330	0.00100
4-Chlorophenyl-phenylether	U		0.000303	0.0100
Chrysene	U		0.000332	0.00100
Dibenz(a,h)anthracene	U		0.0000644	0.000200
Dibenzofuran	U		0.000338	0.0100
3,3-Dichlorobenzidine	U		0.00202	0.0100
2,4-Dinitrotoluene	U		0.00165	0.0100
2,6-Dinitrotoluene	U		0.000279	0.0100
Fluoranthene	U		0.000310	0.00100
Fluorene	U		0.000323	0.00100
Hexachlorobenzene	U		0.000341	0.00100
Hexachloro-1,3-butadiene	U		0.000329	0.0100
Hexachlorocyclopentadiene	U		0.00233	0.0100
Hexachloroethane	U		0.000365	0.0100
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100
Isophorone	U		0.000272	0.0100
1-Methylnaphthalene	U		0.000332	0.00100
2-Methylnaphthalene	U		0.000311	0.00100
Naphthalene	U		0.000372	0.00100
2-Nitroaniline	U		0.00190	0.0100
3-Nitroaniline	U		0.000308	0.0100

Method Blank (MB)

(MB) R3467118-3 10/31/19 01:53

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
4-Nitroaniline	U		0.000349	0.0100
Nitrobenzene	U		0.000367	0.0100
n-Nitrosodiphenylamine	U		0.00119	0.0100
n-Nitrosodi-n-propylamine	U		0.000403	0.0100
Phenanthrene	U		0.000366	0.00100
Benzylbutyl phthalate	U		0.000275	0.00300
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300
Di-n-butyl phthalate	U		0.000266	0.00300
Diethyl phthalate	U		0.000282	0.00300
Dimethyl phthalate	U		0.000283	0.00300
Di-n-octyl phthalate	U		0.000278	0.00300
Pyrene	U		0.000330	0.00100
1,2,4-Trichlorobenzene	U		0.000355	0.0100
4-Chloro-3-methylphenol	U		0.000263	0.0100
2-Chlorophenol	U		0.000283	0.0100
2-Methylphenol	U		0.000312	0.0100
3&4-Methyl Phenol	U		0.000266	0.0100
2,4-Dichlorophenol	U		0.000284	0.0100
2,4-Dimethylphenol	U		0.000624	0.0100
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100
2,4-Dinitrophenol	U		0.00325	0.0100
2-Nitrophenol	U		0.000320	0.0100
4-Nitrophenol	U		0.00201	0.0100
Pentachlorophenol	U		0.000313	0.0100
Phenol	U		0.000334	0.0100
2,4,5-Trichlorophenol	U		0.000236	0.0100
2,4,6-Trichlorophenol	U		0.000297	0.0100
(S) Nitrobenzene-d5	*52.6*			*10.0-127*
(S) 2-Fluorobiphenyl	*69.4*			*10.0-130*
(S) p-Terphenyl-d14	*71.1*			*10.0-128*
(S) Phenol-d5	*20.1*			*10.0-120*
(S) 2-Fluorophenol	*33.6*			*10.0-120*
(S) 2,4,6-Tribromophenol	*66.0*			*10.0-155*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3467118-1 10/31/19 01:09 • (LCSD) R3467118-2 10/31/19 01:31

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.0500	0.0387	0.0305	77.4	61.0	41.0-120		J3	23.7	22
Acenaphthylene	0.0500	0.0414	0.0325	82.8	65.0	43.0-120		J3	24.1	22
Acetophenone	0.0500	0.0358	0.0289	71.6	57.8	29.0-120			21.3	28
Anthracene	0.0500	0.0394	0.0318	78.8	63.6	45.0-120		J3	21.3	20
Atrazine	0.0500	0.0487	0.0403	97.4	80.6	39.0-141			18.9	20
Benzaldehyde	0.0500	0.0338	0.0271	67.6	54.2	10.0-160			22.0	40
Benzo(a)anthracene	0.0500	0.0404	0.0341	80.8	68.2	47.0-120			16.9	20
Benzo(b)fluoranthene	0.0500	0.0457	0.0391	91.4	78.2	46.0-120			15.6	20
Benzo(k)fluoranthene	0.0500	0.0438	0.0360	87.6	72.0	46.0-120			19.5	21
Benzo(g,h,i)perylene	0.0500	0.0408	0.0341	81.6	68.2	48.0-121			17.9	20
Benzo(a)pyrene	0.0500	0.0467	0.0385	93.4	77.0	47.0-120			19.2	20
Biphenyl	0.0500	0.0384	0.0304	76.8	60.8	38.0-120			23.3	27
Bis(2-chlorethoxy)methane	0.0500	0.0312	0.0257	62.4	51.4	33.0-120			19.3	24
Bis(2-chloroethyl)ether	0.0500	0.0336	0.0273	67.2	54.6	23.0-120			20.7	33
Bis(2-chloroisopropyl)ether	0.0500	0.0335	0.0270	67.0	54.0	28.0-120			21.5	31
4-Bromophenyl-phenylether	0.0500	0.0391	0.0312	78.2	62.4	45.0-120		J3	22.5	20
Caprolactam	0.0500	0.0174	0.0137	34.8	27.4	10.0-120			23.8	26
Carbazole	0.0500	0.0423	0.0353	84.6	70.6	51.0-122			18.0	20
4-Chloroaniline	0.0500	0.0269	0.0242	53.8	48.4	25.0-120			10.6	25
2-Chloronaphthalene	0.0500	0.0387	0.0303	77.4	60.6	37.0-120			24.3	25
4-Chlorophenyl-phenylether	0.0500	0.0418	0.0337	83.6	67.4	44.0-120		J3	21.5	20
Chrysene	0.0500	0.0392	0.0330	78.4	66.0	48.0-120			17.2	20
Dibenz(a,h)anthracene	0.0500	0.0392	0.0328	78.4	65.6	47.0-120			17.8	20
Dibenzofuran	0.0500	0.0407	0.0324	81.4	64.8	44.0-120		J3	22.7	22
3,3-Dichlorobenzidine	0.100	0.0874	0.0722	87.4	72.2	44.0-120			19.0	20
2,4-Dinitrotoluene	0.0500	0.0494	0.0403	98.8	80.6	49.0-124		J3	20.3	20
2,6-Dinitrotoluene	0.0500	0.0446	0.0356	89.2	71.2	46.0-120		J3	22.4	21
Fluoranthene	0.0500	0.0433	0.0367	86.6	73.4	51.0-120			16.5	20
Fluorene	0.0500	0.0428	0.0336	85.6	67.2	47.0-120		J3	24.1	20
Hexachlorobenzene	0.0500	0.0382	0.0310	76.4	62.0	44.0-120		J3	20.8	20
Hexachloro-1,3-butadiene	0.0500	0.0332	0.0272	66.4	54.4	19.0-120			19.9	32
Hexachlorocyclopentadiene	0.0500	0.0312	0.0239	62.4	47.8	15.0-120			26.5	31
Hexachloroethane	0.0500	0.0309	0.0255	61.8	51.0	15.0-120			19.1	37
Indeno(1,2,3-cd)pyrene	0.0500	0.0394	0.0329	78.8	65.8	49.0-122			18.0	20
Isophorone	0.0500	0.0335	0.0277	67.0	55.4	36.0-120			19.0	23
1-Methylnaphthalene	0.0500	0.0322	0.0265	64.4	53.0	33.0-120			19.4	24
2-Methylnaphthalene	0.0500	0.0313	0.0258	62.6	51.6	33.0-120			19.3	25
Naphthalene	0.0500	0.0292	0.0241	58.4	48.2	27.0-120			19.1	27
2-Nitroaniline	0.0500	0.0447	0.0348	89.4	69.6	43.0-120		J3	24.9	22
3-Nitroaniline	0.0500	0.0417	0.0344	83.4	68.8	38.0-120			19.2	21

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3467118-1 10/31/19 01:09 • (LCSD) R3467118-2 10/31/19 01:31

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Nitroaniline	0.0500	0.0454	0.0372	90.8	74.4	18.0-160			19.9	21
Nitrobenzene	0.0500	0.0303	0.0247	60.6	49.4	27.0-120			20.4	29
n-Nitrosodiphenylamine	0.0500	0.0391	0.0318	78.2	63.6	47.0-120		J3	20.6	20
n-Nitrosodi-n-propylamine	0.0500	0.0365	0.0290	73.0	58.0	31.0-120			22.9	28
Phenanthrene	0.0500	0.0368	0.0303	73.6	60.6	46.0-120			19.4	20
Benzylbutyl phthalate	0.0500	0.0446	0.0377	89.2	75.4	43.0-121			16.8	20
Bis(2-ethylhexyl)phthalate	0.0500	0.0443	0.0379	88.6	75.8	43.0-122			15.6	20
Di-n-butyl phthalate	0.0500	0.0474	0.0398	94.8	79.6	49.0-121			17.4	20
Diethyl phthalate	0.0500	0.0478	0.0396	95.6	79.2	48.0-122			18.8	20
Dimethyl phthalate	0.0500	0.0450	0.0366	90.0	73.2	48.0-120		J3	20.6	20
Di-n-octyl phthalate	0.0500	0.0474	0.0406	94.8	81.2	42.0-125			15.5	20
Pyrene	0.0500	0.0380	0.0318	76.0	63.6	47.0-120			17.8	20
1,2,4-Trichlorobenzene	0.0500	0.0303	0.0251	60.6	50.2	24.0-120			18.8	29
4-Chloro-3-methylphenol	0.0500	0.0357	0.0300	71.4	60.0	40.0-120			17.4	21
2-Chlorophenol	0.0500	0.0305	0.0252	61.0	50.4	25.0-120			19.0	35
2-Methylphenol	0.0500	0.0295	0.0244	59.0	48.8	28.0-120			18.9	29
3&4-Methyl Phenol	0.0500	0.0304	0.0251	60.8	50.2	31.0-120			19.1	30
2,4-Dichlorophenol	0.0500	0.0344	0.0286	68.8	57.2	36.0-120			18.4	26
2,4-Dimethylphenol	0.0500	0.0312	0.0263	62.4	52.6	33.0-120			17.0	26
4,6-Dinitro-2-methylphenol	0.0500	0.0436	0.0334	87.2	66.8	38.0-138		J3	26.5	25
2,4-Dinitrophenol	0.0500	0.0488	0.0269	97.6	53.8	10.0-120		J3	57.9	39
2-Nitrophenol	0.0500	0.0349	0.0289	69.8	57.8	31.0-120			18.8	29
4-Nitrophenol	0.0500	0.0219	0.0161	43.8	32.2	10.0-120			30.5	33
Pentachlorophenol	0.0500	0.0367	0.0287	73.4	57.4	23.0-120			24.5	25
Phenol	0.0500	0.0142	0.0120	28.4	24.0	10.0-120			16.8	36
2,4,5-Trichlorophenol	0.0500	0.0465	0.0377	93.0	75.4	44.0-120			20.9	22
2,4,6-Trichlorophenol	0.0500	0.0418	0.0342	83.6	68.4	42.0-120			20.0	23
(S) Nitrobenzene-d5				*51.5*	*44.6*	*10.0-127*				
(S) 2-Fluorobiphenyl				*74.1*	*59.9*	*10.0-130*				
(S) p-Terphenyl-d14				*74.6*	*63.3*	*10.0-128*				
(S) Phenol-d5				*26.6*	*21.7*	*10.0-120*				
(S) 2-Fluorophenol				*40.4*	*34.1*	*10.0-120*				
(S) 2,4,6-Tribromophenol				*76.0*	*61.0*	*10.0-155*				

Method Blank (MB)

(MB) R3467037-1 10/31/19 01:17

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acenaphthene	U		0.000316	0.00100
Acenaphthylene	U		0.000309	0.00100
Acetophenone	U		0.00247	0.0100
Anthracene	U		0.000291	0.00100
Atrazine	U		0.000260	0.0100
Benzaldehyde	U		0.00140	0.0100
Benzo(a)anthracene	U		0.0000510	0.00100
Benzo(b)fluoranthene	U		0.0000896	0.00100
Benzo(k)fluoranthene	U		0.000355	0.00100
Benzo(g,h,i)perylene	U		0.00000227	0.00100
Benzo(a)pyrene	U		0.0000381	0.000200
Biphenyl	U		0.000325	0.0100
Bis(2-chlorethoxy)methane	U		0.000329	0.0100
Bis(2-chloroethyl)ether	U		0.00162	0.0100
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100
4-Bromophenyl-phenylether	U		0.000335	0.0100
Caprolactam	U		0.00259	0.0100
Carbazole	U		0.000260	0.0100
4-Chloroaniline	U		0.000382	0.0100
2-Chloronaphthalene	U		0.000330	0.00100
4-Chlorophenyl-phenylether	U		0.000303	0.0100
Chrysene	U		0.000332	0.00100
Dibenz(a,h)anthracene	U		0.0000644	0.000200
Dibenzofuran	U		0.000338	0.0100
3,3-Dichlorobenzidine	U		0.00202	0.0100
2,4-Dinitrotoluene	U		0.00165	0.0100
2,6-Dinitrotoluene	U		0.000279	0.0100
Fluoranthene	U		0.000310	0.00100
Fluorene	U		0.000323	0.00100
Hexachlorobenzene	U		0.000341	0.00100
Hexachloro-1,3-butadiene	U		0.000329	0.0100
Hexachlorocyclopentadiene	U		0.00233	0.0100
Hexachloroethane	U		0.000365	0.0100
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100
Isophorone	U		0.000272	0.0100
1-Methylnaphthalene	U		0.000332	0.00100
2-Methylnaphthalene	U		0.000311	0.00100
Naphthalene	U		0.000372	0.00100
2-Nitroaniline	U		0.00190	0.0100
3-Nitroaniline	U		0.000308	0.0100

Method Blank (MB)

(MB) R3467037-1 10/31/19 01:17

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
4-Nitroaniline	U		0.000349	0.0100
Nitrobenzene	U		0.000367	0.0100
n-Nitrosodiphenylamine	U		0.00119	0.0100
n-Nitrosodi-n-propylamine	U		0.000403	0.0100
Phenanthrene	U		0.000366	0.00100
Benzylbutyl phthalate	U		0.000275	0.00300
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300
Di-n-butyl phthalate	0.000289	J	0.000266	0.00300
Diethyl phthalate	U		0.000282	0.00300
Dimethyl phthalate	U		0.000283	0.00300
Di-n-octyl phthalate	U		0.000278	0.00300
Pyrene	U		0.000330	0.00100
1,2,4-Trichlorobenzene	U		0.000355	0.0100
4-Chloro-3-methylphenol	U		0.000263	0.0100
2-Chlorophenol	U		0.000283	0.0100
2-Methylphenol	U		0.000312	0.0100
3&4-Methyl Phenol	U		0.000266	0.0100
2,4-Dichlorophenol	U		0.000284	0.0100
2,4-Dimethylphenol	U		0.000624	0.0100
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100
2,4-Dinitrophenol	U		0.00325	0.0100
2-Nitrophenol	U		0.000320	0.0100
4-Nitrophenol	U		0.00201	0.0100
Pentachlorophenol	U		0.000313	0.0100
Phenol	U		0.000334	0.0100
2,4,5-Trichlorophenol	U		0.000236	0.0100
2,4,6-Trichlorophenol	U		0.000297	0.0100
(S) Nitrobenzene-d5	*40.2*			*10.0-127*
(S) 2-Fluorobiphenyl	*50.5*			*10.0-130*
(S) p-Terphenyl-d14	*74.0*			*10.0-128*
(S) Phenol-d5	*19.3*			*10.0-120*
(S) 2-Fluorophenol	*32.1*			*10.0-120*
(S) 2,4,6-Tribromophenol	*47.7*			*10.0-155*

Laboratory Control Sample (LCS)

(LCS) R3467037-2 10/31/19 01:37

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0500	0.0325	65.0	41.0-120	
Acenaphthylene	0.0500	0.0351	70.2	43.0-120	
Acetophenone	0.0500	0.0278	55.6	29.0-120	
Anthracene	0.0500	0.0371	74.2	45.0-120	
Atrazine	0.0500	0.0456	91.2	39.0-141	
Benzaldehyde	0.0500	0.0237	47.4	10.0-160	
Benzo(a)anthracene	0.0500	0.0437	87.4	47.0-120	
Benzo(b)fluoranthene	0.0500	0.0471	94.2	46.0-120	
Benzo(k)fluoranthene	0.0500	0.0445	89.0	46.0-120	
Benzo(g,h,i)perylene	0.0500	0.0418	83.6	48.0-121	
Benzo(a)pyrene	0.0500	0.0475	95.0	47.0-120	
Biphenyl	0.0500	0.0312	62.4	38.0-120	
Bis(2-chlorethoxy)methane	0.0500	0.0254	50.8	33.0-120	
Bis(2-chloroethyl)ether	0.0500	0.0250	50.0	23.0-120	
Bis(2-chloroisopropyl)ether	0.0500	0.0243	48.6	28.0-120	
4-Bromophenyl-phenylether	0.0500	0.0318	63.6	45.0-120	
Caprolactam	0.0500	0.0157	31.4	10.0-120	
Carbazole	0.0500	0.0413	82.6	51.0-122	
4-Chloroaniline	0.0500	0.0268	53.6	25.0-120	
2-Chloronaphthalene	0.0500	0.0308	61.6	37.0-120	
4-Chlorophenyl-phenylether	0.0500	0.0348	69.6	44.0-120	
Chrysene	0.0500	0.0418	83.6	48.0-120	
Dibenz(a,h)anthracene	0.0500	0.0411	82.2	47.0-120	
Dibenzofuran	0.0500	0.0348	69.6	44.0-120	
3,3-Dichlorobenzidine	0.100	0.0876	87.6	44.0-120	
2,4-Dinitrotoluene	0.0500	0.0443	88.6	49.0-124	
2,6-Dinitrotoluene	0.0500	0.0398	79.6	46.0-120	
Fluoranthene	0.0500	0.0406	81.2	51.0-120	
Fluorene	0.0500	0.0369	73.8	47.0-120	
Hexachlorobenzene	0.0500	0.0335	67.0	44.0-120	
Hexachloro-1,3-butadiene	0.0500	0.0219	43.8	19.0-120	
Hexachlorocyclopentadiene	0.0500	0.0217	43.4	15.0-120	
Hexachloroethane	0.0500	0.0226	45.2	15.0-120	
Indeno(1,2,3-cd)pyrene	0.0500	0.0407	81.4	49.0-122	
Isophorone	0.0500	0.0268	53.6	36.0-120	
1-Methylnaphthalene	0.0500	0.0262	52.4	33.0-120	
2-Methylnaphthalene	0.0500	0.0255	51.0	33.0-120	
Naphthalene	0.0500	0.0234	46.8	27.0-120	
2-Nitroaniline	0.0500	0.0396	79.2	43.0-120	
3-Nitroaniline	0.0500	0.0429	85.8	38.0-120	

Laboratory Control Sample (LCS)

(LCS) R3467037-2 10/31/19 01:37

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
4-Nitroaniline	0.0500	0.0472	94.4	18.0-160	
Nitrobenzene	0.0500	0.0242	48.4	27.0-120	
n-Nitrosodiphenylamine	0.0500	0.0351	70.2	47.0-120	
n-Nitrosodi-n-propylamine	0.0500	0.0293	58.6	31.0-120	
Phenanthrene	0.0500	0.0355	71.0	46.0-120	
Benzylbutyl phthalate	0.0500	0.0521	104	43.0-121	
Bis(2-ethylhexyl)phthalate	0.0500	0.0540	108	43.0-122	
Di-n-butyl phthalate	0.0500	0.0472	94.4	49.0-121	
Diethyl phthalate	0.0500	0.0457	91.4	48.0-122	
Dimethyl phthalate	0.0500	0.0398	79.6	48.0-120	
Di-n-octyl phthalate	0.0500	0.0481	96.2	42.0-125	
Pyrene	0.0500	0.0406	81.2	47.0-120	
1,2,4-Trichlorobenzene	0.0500	0.0231	46.2	24.0-120	
4-Chloro-3-methylphenol	0.0500	0.0315	63.0	40.0-120	
2-Chlorophenol	0.0500	0.0238	47.6	25.0-120	
2-Methylphenol	0.0500	0.0235	47.0	28.0-120	
3&4-Methyl Phenol	0.0500	0.0269	53.8	31.0-120	
2,4-Dichlorophenol	0.0500	0.0262	52.4	36.0-120	
2,4-Dimethylphenol	0.0500	0.0269	53.8	33.0-120	
4,6-Dinitro-2-methylphenol	0.0500	0.0401	80.2	38.0-138	
2,4-Dinitrophenol	0.0500	0.0448	89.6	10.0-120	
2-Nitrophenol	0.0500	0.0262	52.4	31.0-120	
4-Nitrophenol	0.0500	0.0200	40.0	10.0-120	
Pentachlorophenol	0.0500	0.0362	72.4	23.0-120	
Phenol	0.0500	0.0132	26.4	10.0-120	
2,4,5-Trichlorophenol	0.0500	0.0388	77.6	44.0-120	
2,4,6-Trichlorophenol	0.0500	0.0348	69.6	42.0-120	
(S) Nitrobenzene-d5			*43.9*	*10.0-127*	
(S) 2-Fluorobiphenyl			*58.4*	*10.0-130*	
(S) p-Terphenyl-d14			*78.6*	*10.0-128*	
(S) Phenol-d5			*21.3*	*10.0-120*	
(S) 2-Fluorophenol			*31.9*	*10.0-120*	
(S) 2,4,6-Tribromophenol			*66.5*	*10.0-155*	

L1153940-30 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1153940-30 10/31/19 06:36 • (MS) R3467037-4 10/31/19 06:56 • (MSD) R3467037-5 10/31/19 07:16

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.0500	U	0.0375	0.0345	75.0	69.0	1	28.0-120			8.33	25
Acenaphthylene	0.0500	U	0.0406	0.0367	81.2	73.4	1	31.0-121			10.1	25
Acetophenone	0.0500	U	0.0358	0.0306	71.6	61.2	1	20.0-120			15.7	35
Anthracene	0.0500	U	0.0389	0.0382	77.8	76.4	1	36.0-120			1.82	23
Atrazine	0.0500	U	0.0479	0.0468	95.8	93.6	1	39.0-130			2.32	23
Benzaldehyde	0.0500	U	0.0310	0.0262	62.0	52.4	1	10.0-160			16.8	40
Benzo(a)anthracene	0.0500	U	0.0446	0.0430	89.2	86.0	1	39.0-120			3.65	23
Benzo(b)fluoranthene	0.0500	U	0.0475	0.0456	95.0	91.2	1	37.0-120			4.08	23
Benzo(k)fluoranthene	0.0500	U	0.0453	0.0450	90.6	90.0	1	37.0-120			0.664	26
Benzo(g,h,i)perylene	0.0500	U	0.0392	0.0391	78.4	78.2	1	37.0-123			0.255	25
Benzo(a)pyrene	0.0500	U	0.0484	0.0466	96.8	93.2	1	37.0-120			3.79	24
Biphenyl	0.0500	U	0.0377	0.0333	75.4	66.6	1	29.0-120			12.4	33
Bis(2-chlorethoxy)methane	0.0500	U	0.0321	0.0284	64.2	56.8	1	17.0-120			12.2	31
Bis(2-chloroethyl)ether	0.0500	U	0.0335	0.0273	67.0	54.6	1	14.0-120			20.4	33
Bis(2-chloroisopropyl)ether	0.0500	U	0.0335	0.0274	67.0	54.8	1	18.0-120			20.0	34
4-Bromophenyl-phenylether	0.0500	U	0.0356	0.0340	71.2	68.0	1	37.0-120			4.60	24
Caprolactam	0.0500	U	0.0171	0.0192	34.2	38.4	1	10.0-120			11.6	40
Carbazole	0.0500	U	0.0416	0.0413	83.2	82.6	1	38.0-127			0.724	21
4-Chloroaniline	0.0500	U	0.0320	0.0306	64.0	61.2	1	10.0-120			4.47	31
2-Chloronaphthalene	0.0500	U	0.0364	0.0320	72.8	64.0	1	29.0-120			12.9	28
4-Chlorophenyl-phenylether	0.0500	U	0.0383	0.0382	76.6	76.4	1	36.0-120			0.261	23
Chrysene	0.0500	U	0.0418	0.0408	83.6	81.6	1	38.0-120			2.42	23
Dibenz(a,h)anthracene	0.0500	U	0.0391	0.0391	78.2	78.2	1	36.0-121			0.000	24
Dibenzofuran	0.0500	U	0.0390	0.0361	78.0	72.2	1	32.0-120			7.72	26
3,3-Dichlorobenzidine	0.100	U	0.0841	0.0818	84.1	81.8	1	10.0-134			2.77	30
2,4-Dinitrotoluene	0.0500	U	0.0443	0.0454	88.6	90.8	1	39.0-125			2.45	25
2,6-Dinitrotoluene	0.0500	U	0.0437	0.0434	87.4	86.8	1	36.0-120			0.689	27
Fluoranthene	0.0500	U	0.0412	0.0402	82.4	80.4	1	41.0-121			2.46	22
Fluorene	0.0500	U	0.0398	0.0392	79.6	78.4	1	37.0-120			1.52	24
Hexachlorobenzene	0.0500	U	0.0356	0.0351	71.2	70.2	1	35.0-122			1.41	24
Hexachloro-1,3-butadiene	0.0500	U	0.0307	0.0248	61.4	49.6	1	12.0-120			21.3	34
Hexachlorocyclopentadiene	0.0500	U	0.0281	0.0254	56.2	50.8	1	10.0-120			10.1	33
Hexachloroethane	0.0500	U	0.0326	0.0271	65.2	54.2	1	10.0-120			18.4	40
Indeno(1,2,3-cd)pyrene	0.0500	U	0.0405	0.0401	81.0	80.2	1	38.0-125			0.993	24
Isophorone	0.0500	U	0.0331	0.0296	66.2	59.2	1	21.0-120			11.2	27
1-Methylnaphthalene	0.0500	U	0.0320	0.0279	64.0	55.8	1	11.0-120			13.7	27
2-Methylnaphthalene	0.0500	U	0.0308	0.0269	61.6	53.8	1	17.0-120			13.5	28
Naphthalene	0.0500	U	0.0294	0.0248	58.8	49.6	1	10.0-120			17.0	31
2-Nitroaniline	0.0500	U	0.0444	0.0435	88.8	87.0	1	33.0-120			2.05	27
3-Nitroaniline	0.0500	U	0.0439	0.0456	87.8	91.2	1	20.0-120			3.80	27

L1153940-30 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1153940-30 10/31/19 06:36 • (MS) R3467037-4 10/31/19 06:56 • (MSD) R3467037-5 10/31/19 07:16

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
4-Nitroaniline	0.0500	U	0.0474	0.0465	94.8	93.0	1	10.0-160			1.92	26
Nitrobenzene	0.0500	U	0.0318	0.0266	63.6	53.2	1	12.0-120			17.8	30
n-Nitrosodiphenylamine	0.0500	U	0.0377	0.0370	75.4	74.0	1	37.0-120			1.87	24
n-Nitrosodi-n-propylamine	0.0500	U	0.0371	0.0318	74.2	63.6	1	16.0-120			15.4	30
Phenanthrene	0.0500	U	0.0377	0.0369	75.4	73.8	1	33.0-120			2.14	22
Benzylbutyl phthalate	0.0500	U	0.0558	0.0540	112	108	1	34.0-126			3.28	24
Bis(2-ethylhexyl)phthalate	0.0500	U	0.0551	0.0545	110	109	1	33.0-126			1.09	25
Di-n-butyl phthalate	0.0500	0.000321	0.0491	0.0481	97.6	95.6	1	35.0-128			2.06	23
Diethyl phthalate	0.0500	U	0.0471	0.0474	94.2	94.8	1	39.0-125			0.635	24
Dimethyl phthalate	0.0500	U	0.0423	0.0420	84.6	84.0	1	37.0-120			0.712	24
Di-n-octyl phthalate	0.0500	U	0.0495	0.0478	99.0	95.6	1	25.0-135			3.49	26
Pyrene	0.0500	U	0.0419	0.0415	83.8	83.0	1	39.0-120			0.959	22
1,2,4-Trichlorobenzene	0.0500	U	0.0299	0.0250	59.8	50.0	1	15.0-120			17.9	31
4-Chloro-3-methylphenol	0.0500	U	0.0351	0.0330	70.2	66.0	1	26.0-120			6.17	27
2-Chlorophenol	0.0500	U	0.0316	0.0265	63.2	53.0	1	18.0-120			17.6	34
2-Methylphenol	0.0500	U	0.0301	0.0262	60.2	52.4	1	10.0-120			13.9	30
3&4-Methyl Phenol	0.0500	U	0.0330	0.0285	66.0	57.0	1	10.0-120			14.6	36
2,4-Dichlorophenol	0.0500	U	0.0321	0.0271	64.2	54.2	1	19.0-120			16.9	27
2,4-Dimethylphenol	0.0500	U	0.0330	0.0290	66.0	58.0	1	15.0-120			12.9	28
4,6-Dinitro-2-methylphenol	0.0500	U	0.0423	0.0361	84.6	72.2	1	10.0-144			15.8	39
2,4-Dinitrophenol	0.0500	U	0.0473	0.0407	94.6	81.4	1	10.0-120			15.0	40
2-Nitrophenol	0.0500	U	0.0343	0.0288	68.6	57.6	1	20.0-120			17.4	30
4-Nitrophenol	0.0500	U	0.0197	0.0166	39.4	33.2	1	10.0-120			17.1	40
Pentachlorophenol	0.0500	U	0.0389	0.0317	77.8	63.4	1	10.0-128			20.4	37
Phenol	0.0500	0.00315	0.0176	0.0157	28.9	25.1	1	10.0-120			11.4	40
2,4,5-Trichlorophenol	0.0500	U	0.0430	0.0367	86.0	73.4	1	33.0-120			15.8	31
2,4,6-Trichlorophenol	0.0500	U	0.0400	0.0343	80.0	68.6	1	26.0-120			15.3	31
(S) Nitrobenzene-d5					*51.2*	*47.3*		*10.0-127*				
(S) 2-Fluorobiphenyl					*70.8*	*63.3*		*10.0-130*				
(S) p-Terphenyl-d14					*82.2*	*80.5*		*10.0-128*				
(S) Phenol-d5					*27.5*	*22.7*		*10.0-120*				
(S) 2-Fluorophenol					*45.0*	*37.4*		*10.0-120*				
(S) 2,4,6-Tribromophenol					*75.5*	*61.0*		*10.0-155*				

Method Blank (MB)

(MB) R3467560-3 10/31/19 15:01

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acenaphthene	U		0.000316	0.00100
Acenaphthylene	U		0.000309	0.00100
Acetophenone	U		0.00247	0.0100
Anthracene	U		0.000291	0.00100
Atrazine	U		0.000260	0.0100
Benzaldehyde	U		0.00140	0.0100
Benzo(a)anthracene	U		0.0000510	0.00100
Benzo(b)fluoranthene	U		0.0000896	0.00100
Benzo(k)fluoranthene	U		0.000355	0.00100
Benzo(g,h,i)perylene	U		0.00000227	0.00100
Benzo(a)pyrene	U		0.0000381	0.000200
Biphenyl	U		0.000325	0.0100
Bis(2-chlorethoxy)methane	U		0.000329	0.0100
Bis(2-chloroethyl)ether	U		0.00162	0.0100
Bis(2-chloroisopropyl)ether	U		0.000445	0.0100
4-Bromophenyl-phenylether	U		0.000335	0.0100
Caprolactam	U		0.00259	0.0100
Carbazole	U		0.000260	0.0100
4-Chloroaniline	U		0.000382	0.0100
2-Chloronaphthalene	U		0.000330	0.00100
4-Chlorophenyl-phenylether	U		0.000303	0.0100
Chrysene	U		0.000332	0.00100
Dibenz(a,h)anthracene	U		0.0000644	0.000200
Dibenzofuran	U		0.000338	0.0100
3,3-Dichlorobenzidine	U		0.00202	0.0100
2,4-Dinitrotoluene	U		0.00165	0.0100
2,6-Dinitrotoluene	U		0.000279	0.0100
Fluoranthene	U		0.000310	0.00100
Fluorene	U		0.000323	0.00100
Hexachlorobenzene	U		0.000341	0.00100
Hexachloro-1,3-butadiene	U		0.000329	0.0100
Hexachlorocyclopentadiene	U		0.00233	0.0100
Hexachloroethane	U		0.000365	0.0100
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100
Isophorone	U		0.000272	0.0100
1-Methylnaphthalene	U		0.000332	0.00100
2-Methylnaphthalene	U		0.000311	0.00100
Naphthalene	U		0.000372	0.00100
2-Nitroaniline	U		0.00190	0.0100
3-Nitroaniline	U		0.000308	0.0100

Method Blank (MB)

(MB) R3467560-3 10/31/19 15:01

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
4-Nitroaniline	U		0.000349	0.0100
Nitrobenzene	U		0.000367	0.0100
n-Nitrosodiphenylamine	U		0.00119	0.0100
n-Nitrosodi-n-propylamine	U		0.000403	0.0100
Phenanthrene	U		0.000366	0.00100
Benzylbutyl phthalate	U		0.000275	0.00300
Bis(2-ethylhexyl)phthalate	U		0.000709	0.00300
Di-n-butyl phthalate	U		0.000266	0.00300
Diethyl phthalate	U		0.000282	0.00300
Dimethyl phthalate	U		0.000283	0.00300
Di-n-octyl phthalate	U		0.000278	0.00300
Pyrene	U		0.000330	0.00100
1,2,4-Trichlorobenzene	U		0.000355	0.0100
4-Chloro-3-methylphenol	U		0.000263	0.0100
2-Chlorophenol	U		0.000283	0.0100
2-Methylphenol	U		0.000312	0.0100
3&4-Methyl Phenol	U		0.000266	0.0100
2,4-Dichlorophenol	U		0.000284	0.0100
2,4-Dimethylphenol	U		0.000624	0.0100
4,6-Dinitro-2-methylphenol	U		0.00262	0.0100
2,4-Dinitrophenol	U		0.00325	0.0100
2-Nitrophenol	U		0.000320	0.0100
4-Nitrophenol	U		0.00201	0.0100
Pentachlorophenol	U		0.000313	0.0100
Phenol	U		0.000334	0.0100
2,4,5-Trichlorophenol	U		0.000236	0.0100
2,4,6-Trichlorophenol	U		0.000297	0.0100
(S) Nitrobenzene-d5	*48.0*			*10.0-127*
(S) 2-Fluorobiphenyl	*54.3*			*10.0-130*
(S) p-Terphenyl-d14	*63.8*			*10.0-128*
(S) Phenol-d5	*10.8*			*10.0-120*
(S) 2-Fluorophenol	*20.8*			*10.0-120*
(S) 2,4,6-Tribromophenol	*58.5*			*10.0-155*

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3467560-1 10/31/19 14:18 • (LCSD) R3467560-2 10/31/19 14:40

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acenaphthene	0.0500	0.0356	0.0341	71.2	68.2	41.0-120			4.30	22
Acenaphthylene	0.0500	0.0385	0.0371	77.0	74.2	43.0-120			3.70	22
Acetophenone	0.0500	0.0342	0.0331	68.4	66.2	29.0-120			3.27	28
Anthracene	0.0500	0.0389	0.0368	77.8	73.6	45.0-120			5.55	20
Atrazine	0.0500	0.0401	0.0370	80.2	74.0	39.0-141			8.04	20
Benzaldehyde	0.0500	0.0320	0.0322	64.0	64.4	10.0-160			0.623	40
Benzo(a)anthracene	0.0500	0.0389	0.0371	77.8	74.2	47.0-120			4.74	20
Benzo(b)fluoranthene	0.0500	0.0401	0.0386	80.2	77.2	46.0-120			3.81	20
Benzo(k)fluoranthene	0.0500	0.0391	0.0369	78.2	73.8	46.0-120			5.79	21
Benzo(g,h,i)perylene	0.0500	0.0407	0.0382	81.4	76.4	48.0-121			6.34	20
Benzo(a)pyrene	0.0500	0.0426	0.0398	85.2	79.6	47.0-120			6.80	20
Biphenyl	0.0500	0.0360	0.0347	72.0	69.4	38.0-120			3.68	27
Bis(2-chlorethoxy)methane	0.0500	0.0305	0.0297	61.0	59.4	33.0-120			2.66	24
Bis(2-chloroethyl)ether	0.0500	0.0337	0.0333	67.4	66.6	23.0-120			1.19	33
Bis(2-chloroisopropyl)ether	0.0500	0.0321	0.0326	64.2	65.2	28.0-120			1.55	31
4-Bromophenyl-phenylether	0.0500	0.0386	0.0364	77.2	72.8	45.0-120			5.87	20
Caprolactam	0.0500	0.00853	0.00722	17.1	14.4	10.0-120			16.6	26
Carbazole	0.0500	0.0410	0.0388	82.0	77.6	51.0-122			5.51	20
4-Chloroaniline	0.0500	0.0299	0.0240	59.8	48.0	25.0-120			21.9	25
2-Chloronaphthalene	0.0500	0.0363	0.0351	72.6	70.2	37.0-120			3.36	25
4-Chlorophenyl-phenylether	0.0500	0.0378	0.0354	75.6	70.8	44.0-120			6.56	20
Chrysene	0.0500	0.0376	0.0361	75.2	72.2	48.0-120			4.07	20
Dibenz(a,h)anthracene	0.0500	0.0372	0.0348	74.4	69.6	47.0-120			6.67	20
Dibenzofuran	0.0500	0.0376	0.0357	75.2	71.4	44.0-120			5.18	22
3,3-Dichlorobenzidine	0.100	0.0937	0.0889	93.7	88.9	44.0-120			5.26	20
2,4-Dinitrotoluene	0.0500	0.0418	0.0396	83.6	79.2	49.0-124			5.41	20
2,6-Dinitrotoluene	0.0500	0.0407	0.0376	81.4	75.2	46.0-120			7.92	21
Fluoranthene	0.0500	0.0420	0.0393	84.0	78.6	51.0-120			6.64	20
Fluorene	0.0500	0.0381	0.0367	76.2	73.4	47.0-120			3.74	20
Hexachlorobenzene	0.0500	0.0374	0.0355	74.8	71.0	44.0-120			5.21	20
Hexachloro-1,3-butadiene	0.0500	0.0284	0.0289	56.8	57.8	19.0-120			1.75	32
Hexachlorocyclopentadiene	0.0500	0.0299	0.0292	59.8	58.4	15.0-120			2.37	31
Hexachloroethane	0.0500	0.0281	0.0292	56.2	58.4	15.0-120			3.84	37
Indeno(1,2,3-cd)pyrene	0.0500	0.0383	0.0362	76.6	72.4	49.0-122			5.64	20
Isophorone	0.0500	0.0330	0.0319	66.0	63.8	36.0-120			3.39	23
1-Methylnaphthalene	0.0500	0.0300	0.0299	60.0	59.8	33.0-120			0.334	24
2-Methylnaphthalene	0.0500	0.0291	0.0289	58.2	57.8	33.0-120			0.690	25
Naphthalene	0.0500	0.0281	0.0281	56.2	56.2	27.0-120			0.000	27
2-Nitroaniline	0.0500	0.0396	0.0373	79.2	74.6	43.0-120			5.98	22
3-Nitroaniline	0.0500	0.0375	0.0309	75.0	61.8	38.0-120			19.3	21

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3467560-1 10/31/19 14:18 • (LCSD) R3467560-2 10/31/19 14:40

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
4-Nitroaniline	0.0500	0.0381	0.0348	76.2	69.6	18.0-160			9.05	21
Nitrobenzene	0.0500	0.0293	0.0295	58.6	59.0	27.0-120			0.680	29
n-Nitrosodiphenylamine	0.0500	0.0395	0.0372	79.0	74.4	47.0-120			6.00	20
n-Nitrosodi-n-propylamine	0.0500	0.0346	0.0343	69.2	68.6	31.0-120			0.871	28
Phenanthrene	0.0500	0.0370	0.0352	74.0	70.4	46.0-120			4.99	20
Benzylbutyl phthalate	0.0500	0.0391	0.0373	78.2	74.6	43.0-121			4.71	20
Bis(2-ethylhexyl)phthalate	0.0500	0.0377	0.0359	75.4	71.8	43.0-122			4.89	20
Di-n-butyl phthalate	0.0500	0.0430	0.0404	86.0	80.8	49.0-121			6.24	20
Diethyl phthalate	0.0500	0.0409	0.0386	81.8	77.2	48.0-122			5.79	20
Dimethyl phthalate	0.0500	0.0392	0.0374	78.4	74.8	48.0-120			4.70	20
Di-n-octyl phthalate	0.0500	0.0405	0.0384	81.0	76.8	42.0-125			5.32	20
Pyrene	0.0500	0.0364	0.0348	72.8	69.6	47.0-120			4.49	20
1,2,4-Trichlorobenzene	0.0500	0.0281	0.0283	56.2	56.6	24.0-120			0.709	29
4-Chloro-3-methylphenol	0.0500	0.0318	0.0310	63.6	62.0	40.0-120			2.55	21
2-Chlorophenol	0.0500	0.0283	0.0287	56.6	57.4	25.0-120			1.40	35
2-Methylphenol	0.0500	0.0242	0.0241	48.4	48.2	28.0-120			0.414	29
3&4-Methyl Phenol	0.0500	0.0243	0.0248	48.6	49.6	31.0-120			2.04	30
2,4-Dichlorophenol	0.0500	0.0327	0.0319	65.4	63.8	36.0-120			2.48	26
2,4-Dimethylphenol	0.0500	0.0295	0.0295	59.0	59.0	33.0-120			0.000	26
4,6-Dinitro-2-methylphenol	0.0500	0.0413	0.0397	82.6	79.4	38.0-138			3.95	25
2,4-Dinitrophenol	0.0500	0.0375	0.0371	75.0	74.2	10.0-120			1.07	39
2-Nitrophenol	0.0500	0.0339	0.0330	67.8	66.0	31.0-120			2.69	29
4-Nitrophenol	0.0500	0.0124	0.0125	24.8	25.0	10.0-120			0.803	33
Pentachlorophenol	0.0500	0.0326	0.0312	65.2	62.4	23.0-120			4.39	25
Phenol	0.0500	0.00949	0.00971	19.0	19.4	10.0-120			2.29	36
2,4,5-Trichlorophenol	0.0500	0.0417	0.0401	83.4	80.2	44.0-120			3.91	22
2,4,6-Trichlorophenol	0.0500	0.0393	0.0376	78.6	75.2	42.0-120			4.42	23
(S) Nitrobenzene-d5				*52.0*	*50.8*	*10.0-127*				
(S) 2-Fluorobiphenyl				*69.5*	*67.6*	*10.0-130*				
(S) p-Terphenyl-d14				*70.3*	*68.3*	*10.0-128*				
(S) Phenol-d5				*17.4*	*18.2*	*10.0-120*				
(S) 2-Fluorophenol				*32.0*	*32.4*	*10.0-120*				
(S) 2,4,6-Tribromophenol				*79.0*	*71.0*	*10.0-155*				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
MQL	Method Quantitation Limit.
ND	Not detected at the Method Quantitation Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
SDL	Sample Detection Limit.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Sample Detection Limit.
Unadj. MQL	Unadjusted Method Quantitation Limit.
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state “ND” (Not Detected) or “BDL” (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

Qualifier	Description
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
V	The sample concentration is too high to evaluate accurate spike recoveries.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

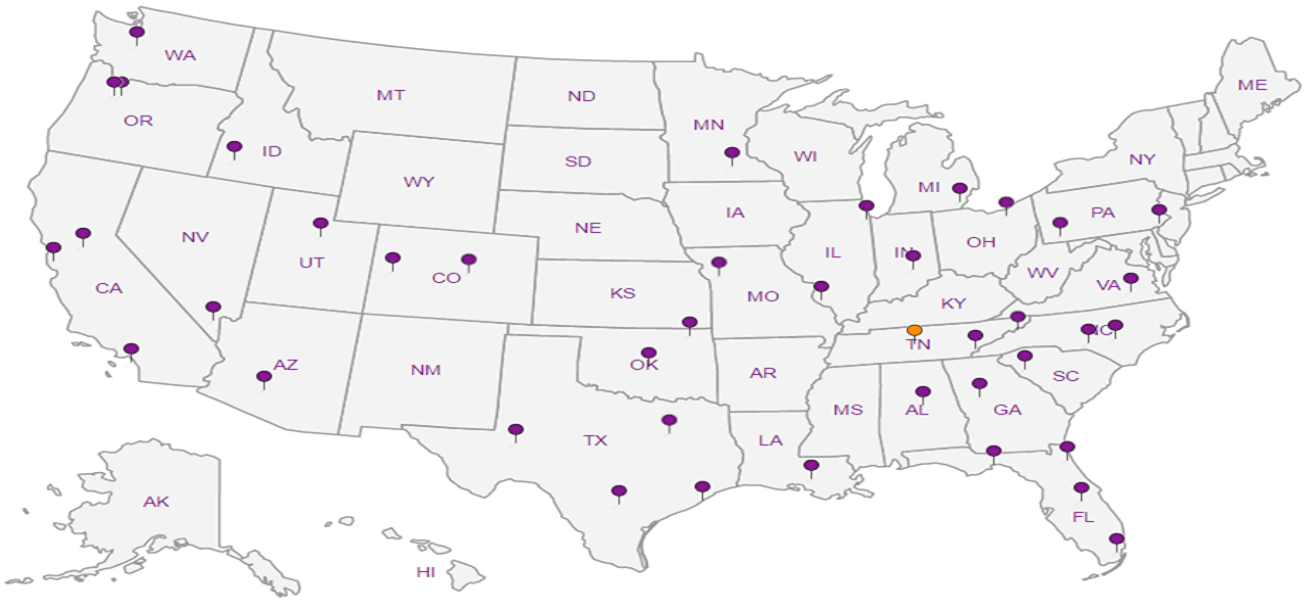
Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.



TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Pres Chk

Report to: **Julie Speer**

Email To: **jspeer@trcsolutions.com**

Project Description: **Lovington Lea Refinery**

City/State Collected: **Lovington, NM**

Phone: **512-684-3170**
Fax:

Client Project # **330769.0000.0000**

Lab Project # **TRCATX-LOVINGTON NAV**

Collected by (print): **Scott Ude/HMI Team**

Site/Facility ID #

P.O. # **135698**

Collected by (signature): Scott Ude

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Analysis / Container / Preservative

Chain of Custody Page 1 of 5

Pace Analytical® National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L # 115396
E218

Acctnum: TRCATX
Template: T114712
Prelogin: P732607
TSR: 526
PB: 9-30-19 6

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOCs (8260) - Select List	LL SVOCs (8270) - TCL + 1-MNP	Total Metals (7470) - Hg	Dissolved Metals (6020)-Select List -LF (lab filter)	Anions (9056) - Cl, F, SO4	Nitrate/Nitrite (353.2)	TDS (2540 C-2011)	Alkalinity (2320 B-2011)	TPH (8015) - GRO/DRO		Remarks	Sample # (lab only)
MW-1	Grab	GW		10/24/19	1220	7	X		X	X	X	X	X					01
MW-2	Grab	GW			1205	9	X	X	X	X	X	X	X					02
MW-3	Grab	GW			1050	2					X	X						03
MW-4	Grab	GW			1040	9	X	X	X	X	X	X	X					04
MW-5	Grab	GW			1400	13	X	X	X	X	X	X	X	X	X			05
MW-6	Grab	GW			1220	9	X	X	X	X	X	X	X					06
MW-8	Grab	GW			1035	7	X	~~X~~ SU	X	X	X	X	X					07
MW-9	Grab	GW			1125	2					X	X						08
MW-10	Grab	GW			1310	2					X	X						09
MW-11R	Grab	GW			1030	9	X	X	X	X	X	X	X	X				10

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Use 8270TX for SVOCs.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS ✓ FedEx __ Courier __ _____

Tracking # 1203 5786 5593

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: ✓Y __N
Preservation Correct/Checked: ✓Y __N
RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
Scott Ude	10/24/19	1600		✓	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:	
			Carol Kemp	0.7-1.6 AL 16 357	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:	Hold: Condition: NCF / OK
			CK	10/25/19 08:30	

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Report to: **Julie Speer**
Email To: **jspeer@trcsolutions.com**

Project Description: **Lovington Lea Refinery**
City/State Collected: **Lovington, NM**

Phone: **512-684-3170**
Fax:
Client Project # **330769.0000.0000**
Lab Project # **TRCATX-LOVINGTON NAV**

Collected by (print): **Scott Ude/HMI Team**
Site/Facility ID #
P.O. # **135698**

Collected by (signature): Scott Ude
Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day
Date Results Needed
Quote #

Analysis / Container / Preservative

Chain of Custody Page 2 of 5

Pace Analytical® National Center for Testing & Innovation
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L # 1153940
Table #
Acctnum: TRCATX
Template: T114712
Prelogin: P732607
TSR: 526
PB: 9-30-19 GM
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOCs (8260) - Select List	LL SVOCs (8270) - TCL + 1-MNP	Total Metals (7470) - Hg	Dissolved Metals (6020)-Select List -LF (Lab filter)	Anions (9056) - Cl, F, SO4	Nitrate/Nitrite (353.2)	TDS (2540 C-2011)	Alkalinity (2320 B-2011)	TPH (8015) - GRO/DRO		Remarks	Sample # (lab only)
~~MW-12R~~	~~Grab~~	~~GW~~		~~10/24/19~~		9	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	Not sampled; effectively dry			
MW-13R	Grab	GW		10/24/19	925	9	X	X	X	X	X	X	X					11
MW-14R	Grab	GW			1240	9	X	X	X	X	X	X	X					12
MW-15	Grab	GW			1300	9	X	X	X	X	X	X	X	X				13
MW-16	Grab	GW			1130	9	X	X	X	X	X	X	X					14
MW-17R	Grab	GW			1215	9	X	X	X	X	X	X	X	X				15
MW-18	Grab	GW			1320	9	X	X	X	X	X	X	X					16
MW-19	Grab	GW			1235	9	X	X	X	X	X	X	X	X				17
MW-20	Grab	GW			1140	9	X	X	X	X	X	X	X					18
MW-21	Grab	GW			1330	6		X							X			19

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Use 8270TX for SVOCs.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx ✓ Courier __ _____

Tracking # 1203 5786 5593

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: ✓Y __N
Preservation Correct/Checked: ✓Y __N
RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeOH TBR	If preservation required by Login: Date/Time
Scott Ude	10/24/19	1600		✓	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 0.7-1=0.6 °C	Bottles Received: 35
			Carol Kemp		
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 10/25/19	Time: 08:30
			W Taylor CK		

Hold: | Condition: NCF / OK

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
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Collected by (print): **Scott Ude/HMI Team**

Site/Facility ID #

P.O. # **135698**

Collected by (signature): Scott Ude

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Pres Chk

Analysis / Container / Preservative

Chain of Custody Page 3 of 5

Pace Analytical® National Center for Testing & Innovation
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 115446
Table #
Acctnum: TRCATX
Template: T114712
Prelogin: P732607
TSR: 526
PB: 9-30-19 GW
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CK	VOCs (8260) - Select List	LL SVOCs (8270) - TCL + 1-MNP	Total Metals (7470) - Hg	Dissolved Metals (6020)-Select List-LF (Lab Filter)	Anions (9056) - Cl, F, SO4	Nitrate/Nitrite (353.2)	TDS (2540 C-2011)	Alkalinity (2320 B-2011)	TPH (8015) - GRO/DRO		Remarks	Sample # (lab only)
MW-22	Grab	GW		10/24/19	1310	13		X	X	X	X	X	X	X		X			20
MW-23	Grab	GW			1445	~~2~~						~~X~~ SW	X	~~X~~ SW				(very limited water pulled full sample)	21
MW-24	Grab	GW			1510	9		X	X	X	X	X	X	X	X				22
MW-25	Grab	GW			1210	9		X	X	X	X	X	X	X	X				23
MW-26	Grab	GW			1325	2						X	X	~~X~~ SW					24
MW-27	Grab	GW			1115	5		X	X										25
MW-28	Grab	GW			1400	9		X	X	X	X	X	X	X	X				26
MW-29	Grab	GW			1310	9		X	X	X	X	X	X	X					27
MW-30	Grab	GW			1050	13		X	X	X	X	X	X	X	X	X			28
~~MW-31~~	~~Grab~~	~~GW~~				~~13~~		X	X	X	X	X	X	X	X	X		No sample; LNAPL system	

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Use 8270TX for SVOCs.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx ✓ Courier _____

Tracking # 1203 5786 5593

Sample Receipt Checklist
COC Seal Present/Intact: __NP__ Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: ✓Y __N
Preservation Correct/Checked: __Y __N
RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Scott Ude	10/24/19	1600		T
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
			Carol Kemp	07.1=0.6 35
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:
			W Tuttle CK	10/25/19 08:30

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
Accounts Payable
21 Griffin Road North
Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Report to: **Julie Speer**

Email To: **jspeer@trcsolutions.com**

Project Description: **Lovington Lea Refinery**

City/State Collected: **Lovington, NM**

Phone: **512-684-3170**
Fax:

Client Project # **330769.0000.0000**

Lab Project # **TRCATX-LOVINGTON NAV**

Collected by (print): **Scott Ude/HMI Team**

Site/Facility ID #

P.O. # **135698**

Collected by (signature): Scott Ude

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Chain of Custody Page 4 of 5

Pace Analytical® National Center for Testing & Innovation
12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L# 1153540

Table #

Acctnum: TRCATX
Template: T114712
Prelogin: P732607
TSR: 526
PB: 9-30-19 BM

Shipped Via:

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOCs (8260) - Select List	LL SVOCs (8270) - TCL + 1-MNP	Total Metals (7470) - Hg	Dissolved Metals (6020)-Select List -LF (lab filter)	Anions (9056) - Cl, F, SO4	Nitrate/Nitrite (353.2)	TDS (2540 C-2011)	Alkalinity (2320 B-2011)	TPH (8015) - GRO/DRO	O = MS/MSD Volume provided	Remarks	Sample # (lab only)
MW-32	Grab	GW		10/24/19	1030	13	X	X	X	X	X	X	X	X	X			29
MW-33	Grab	GW			1130	13	X	X	X	X	X	X	X	X	X			30
WW-NORTH WELL	Grab	GW			1100	13	X	X	X	X	X	X	X	X	X			31
WW-SOUTH WELL	Grab	GW			1000	13	X	X	X	X	X	X	X	X	X			32
WW-EAST WELL	Grab	GW			1030	13	X	X	X	X	X	X	X	X	X			33
DUP-01	Grab	GW			1100	9	X	X	X	X	X	X	X	X54				34
DUP-02	Grab	GW			1100	9	X	X	X	X	X	X	X	X				35
DUP-03	Grab	GW			800	13	X	X	X	X	X	X	X	X	X			36
DUP-04	Grab	GW			1000	13	X	X	X	X	X	X	X	X	X			37
EB-01	Grab	GW			1230	9	X	X	X	X	X	X	X	X				38

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Use 8270TX for SVOCs.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx ✓ Courier __ _____

Tracking # 1203 5786 5593

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: ✓Y __N
Preservation Correct/Checked: ✓Y __N
RAD SCREEN: <0.5 mR/hr

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
Scott Ude	10/24/19	1600		✓	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 0.1-1.0-0.6 °C	Bottles Received: 35
			Carol Kemp		
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 10/25/19	Time: 08:30
			W Tuttle CK		

Hold: | Condition: NCF / OK

TRC Solutions - Austin, TX
505 E. Huntland Dr, Ste 250
Austin, TX 78752

Billing Information:
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Pres Chk

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Lab Project # **TRCATX-LOVINGTON NAV**

Collected by (print): **Scott Ude/HMI Team**

Site/Facility ID #

P.O. # **135698**

Collected by (signature): Scott Ude

Immediately Packed on Ice N ___ Y ✓

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
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___ Three Day

Date Results Needed

Quote #

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	VOCs (8260) - Select List	LL SVOCs (8270) - TCL + 1-MNP	Total Metals (7470) - Hg	Dissolved Metals (6020)-Select List -LF (lab filter)	Anions (9056) - Cl, F, SO4	Nitrate/Nitrite (353.2)	TDS (2540 C-2011)	Alkalinity (2320 B-2011)	TPH (8015) - GRO/DRO	Remarks	Sample # (lab only)
EB-02	Grab	GW		10/24/19	940	9	X	X	X	X	X	X	X				39
Trip Blank-01	Grab	GW		10/24/19	—	1	X										40
Trip Blank-02	Grab	GW		10/24/19	—	1	X										41

Chain of Custody Page 5 of 5

Pace Analytical®
National Center for Testing & Innovation

12065 Lebanon Rd
Mount Juliet, TN 37122
Phone: 615-758-5858
Phone: 800-767-5859
Fax: 615-758-5859

L # 153940

Table #

Acctnum: **TRCATX**

Template: **T114712**

Prelogin: **P732607**

TSR: **526**

PB: 9-30-19 GM

Shipped Via:

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:
Use 8270TX for SVOCs.

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx ✓ Courier ___ _____

Tracking # 1203 5786 5593

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: ✓Y __N
Preservation Correct/Checked: ✓Y __N
RAD SCREEN: <0.5 mR/hr

	Date:	Time:	
Relinquished by : (Signature) Scott Ude	10/24/19	1600	Received by: (Signature)
Relinquished by : (Signature)			Received by: (Signature) Carol Kemp
Relinquished by : (Signature)			Received for lab by: (Signature) W Tay CK

Trip Blank Received: Yes / No HCL / MeoH TBR

Temp: °C Bottles Received: 357

0.7-1=0.6

Date: 10/25/19 Time: 08:30

If preservation required by Login: Date/Time

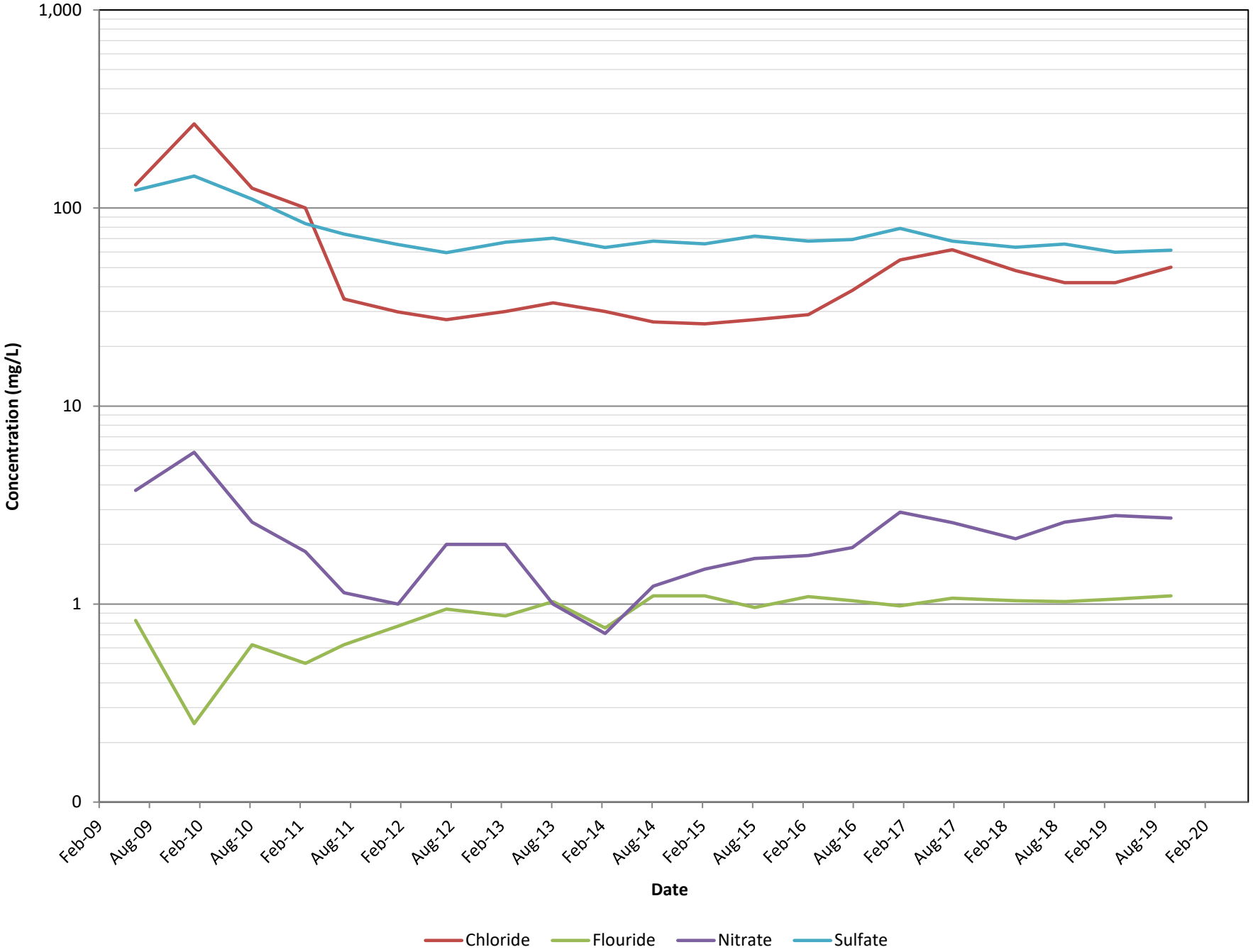
Hold:

Condition: NCF / OK

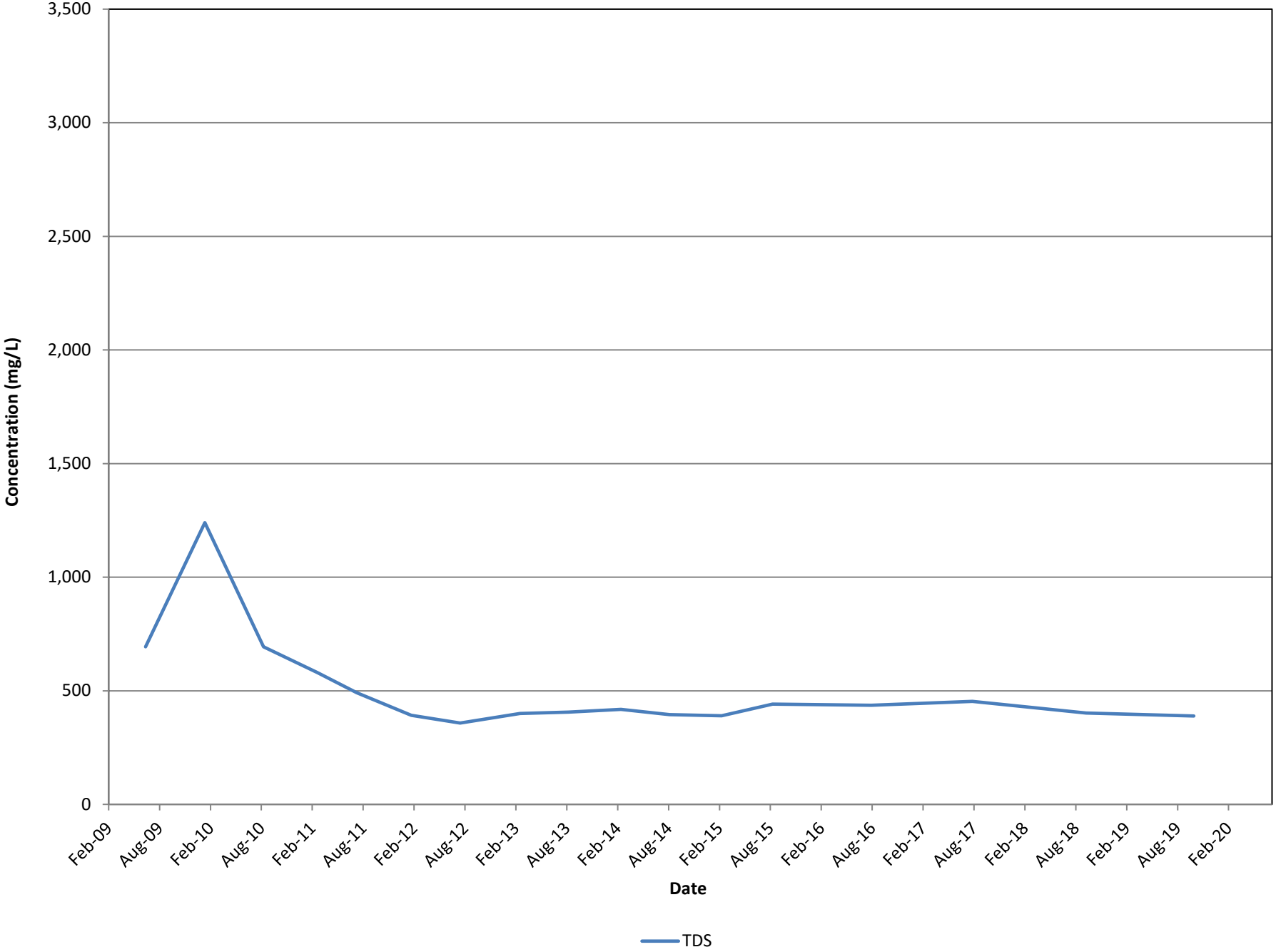
APPENDIX C

PLOTS OF GROUNDWATER CONCENTRATIONS OVER TIME

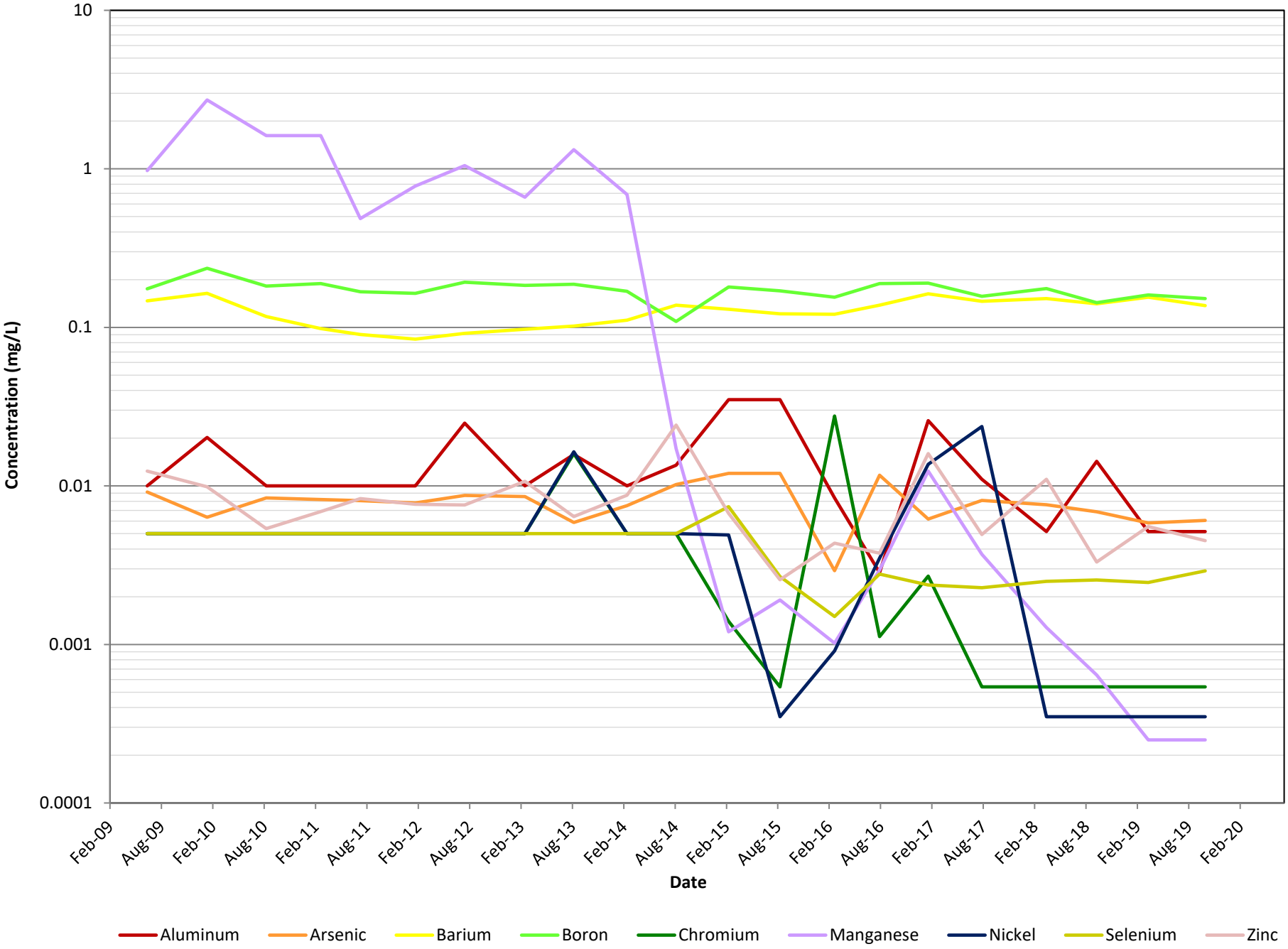
MW-1: ANION CONCENTRATIONS OVER TIME



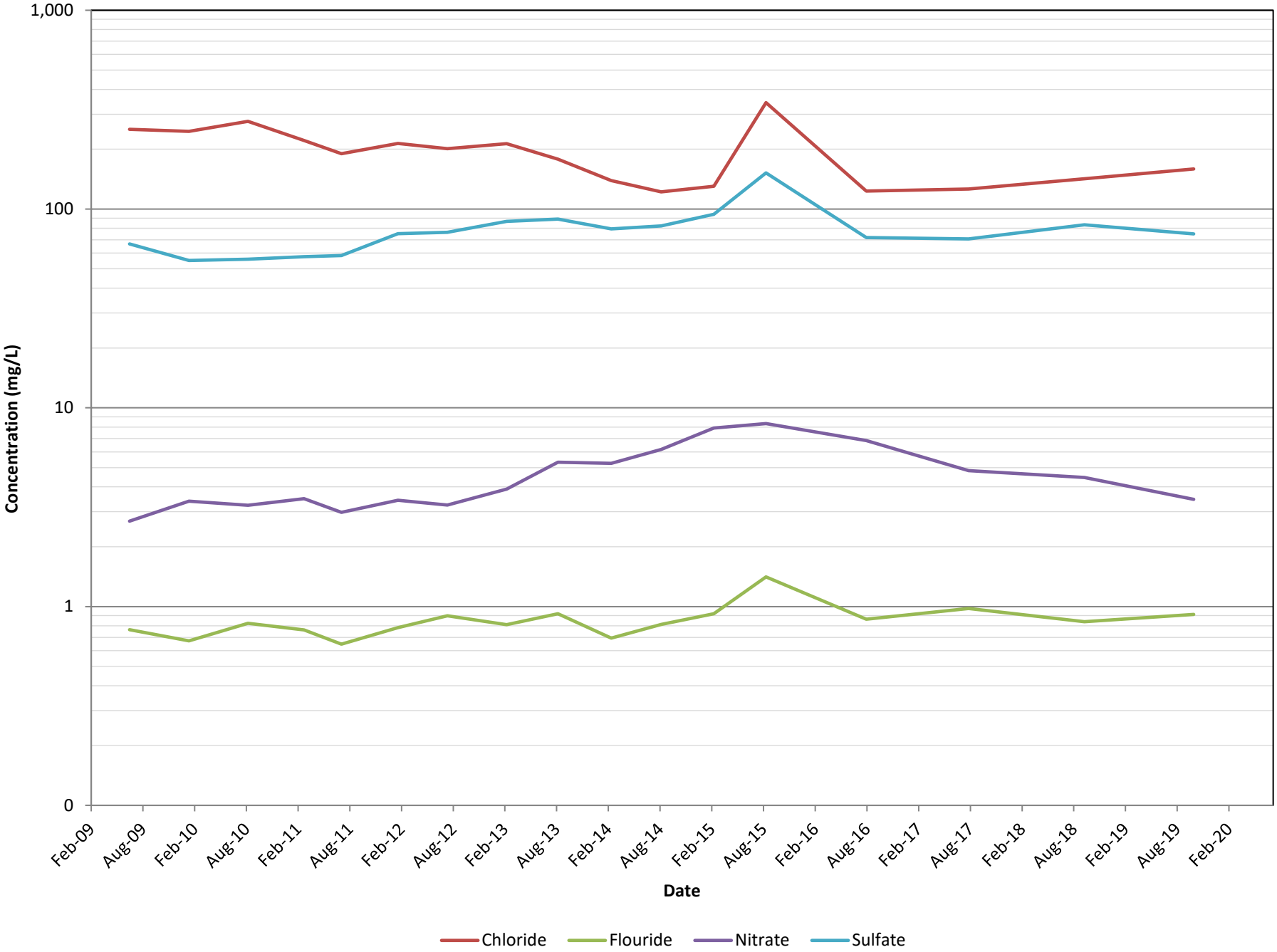
MW-1: TDS CONCENTRATIONS OVER TIME



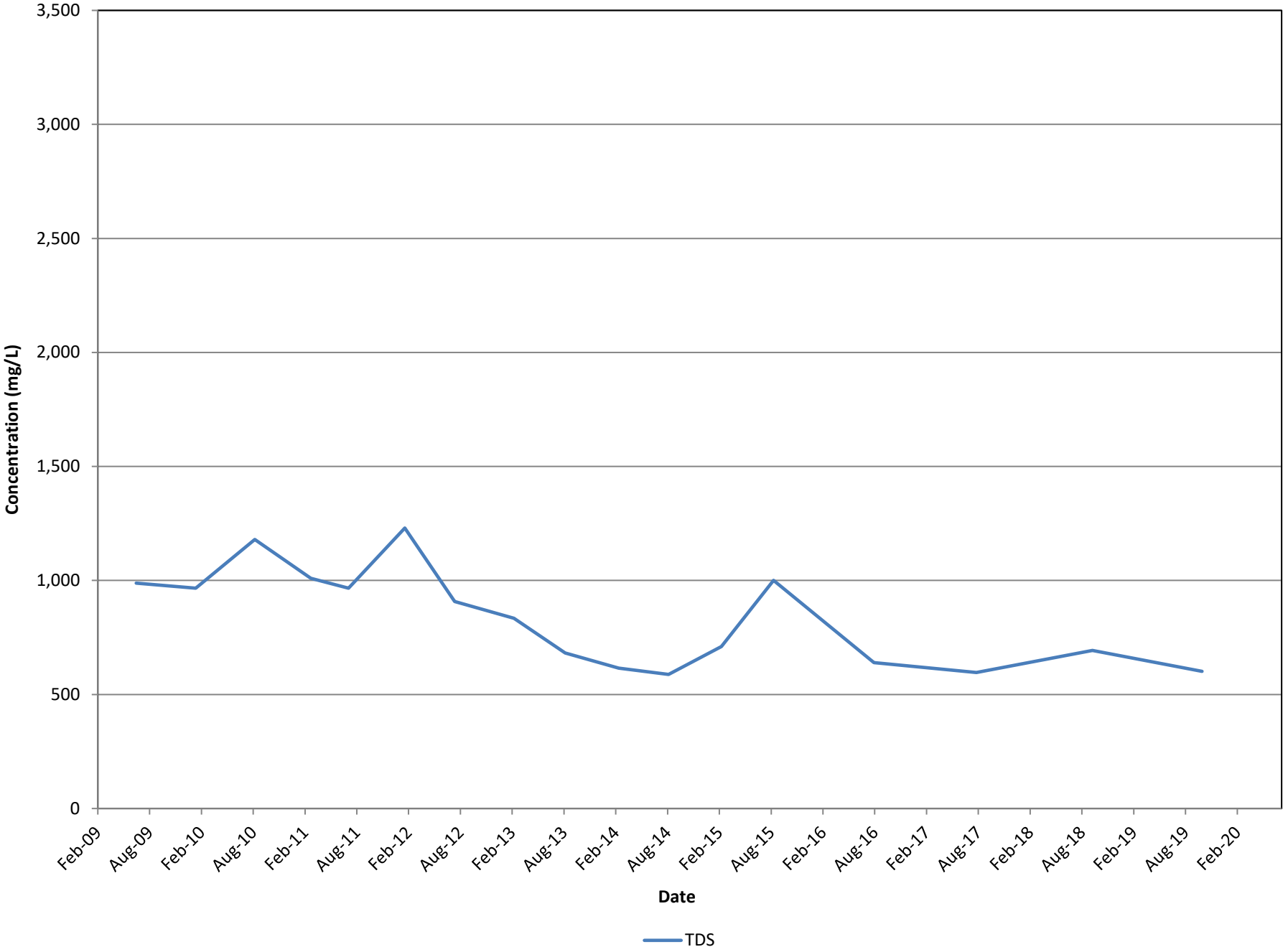
MW-1: METAL CONCENTRATIONS OVER TIME



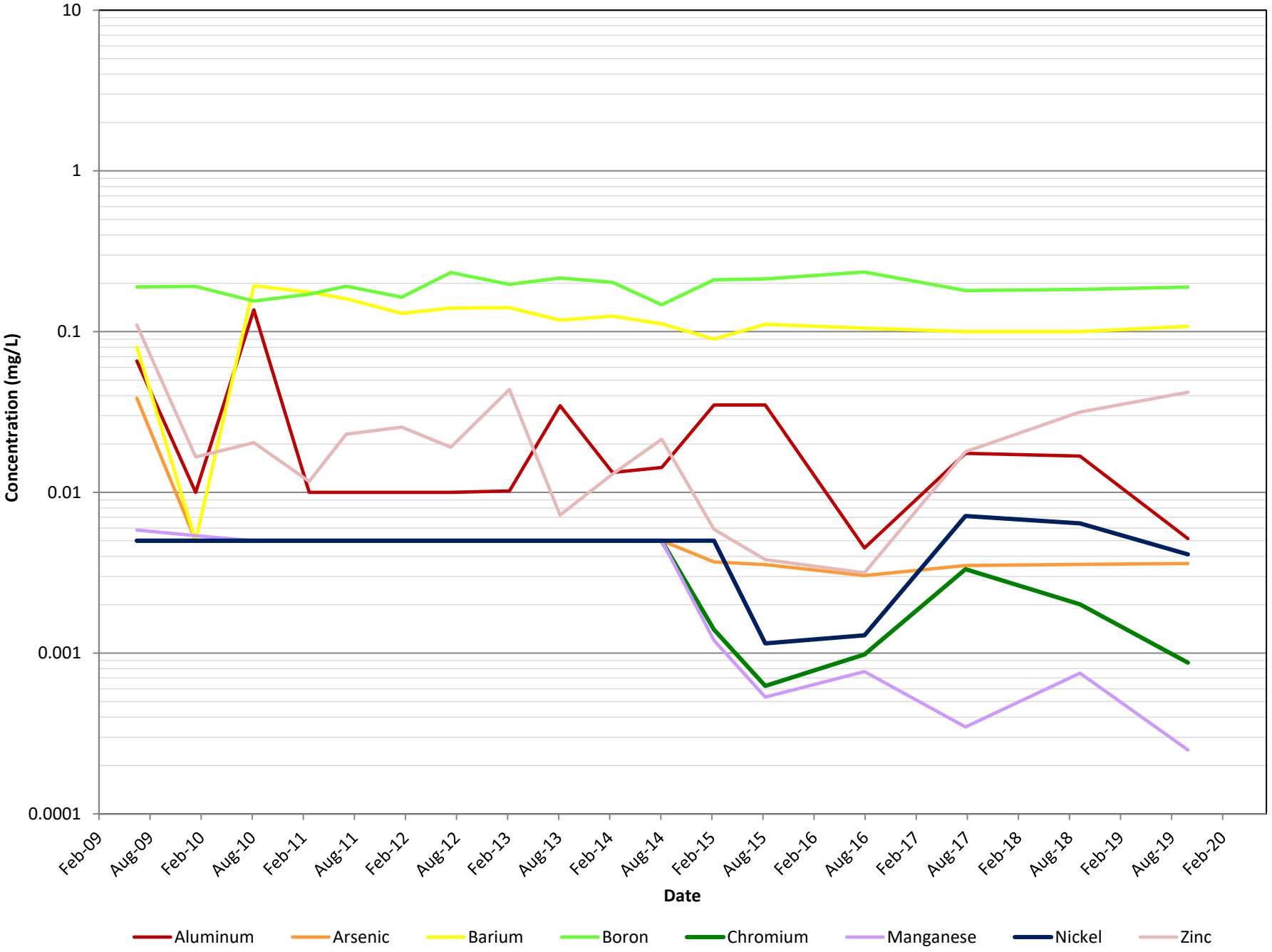
MW-2: ANION CONCENTRATIONS OVER TIME



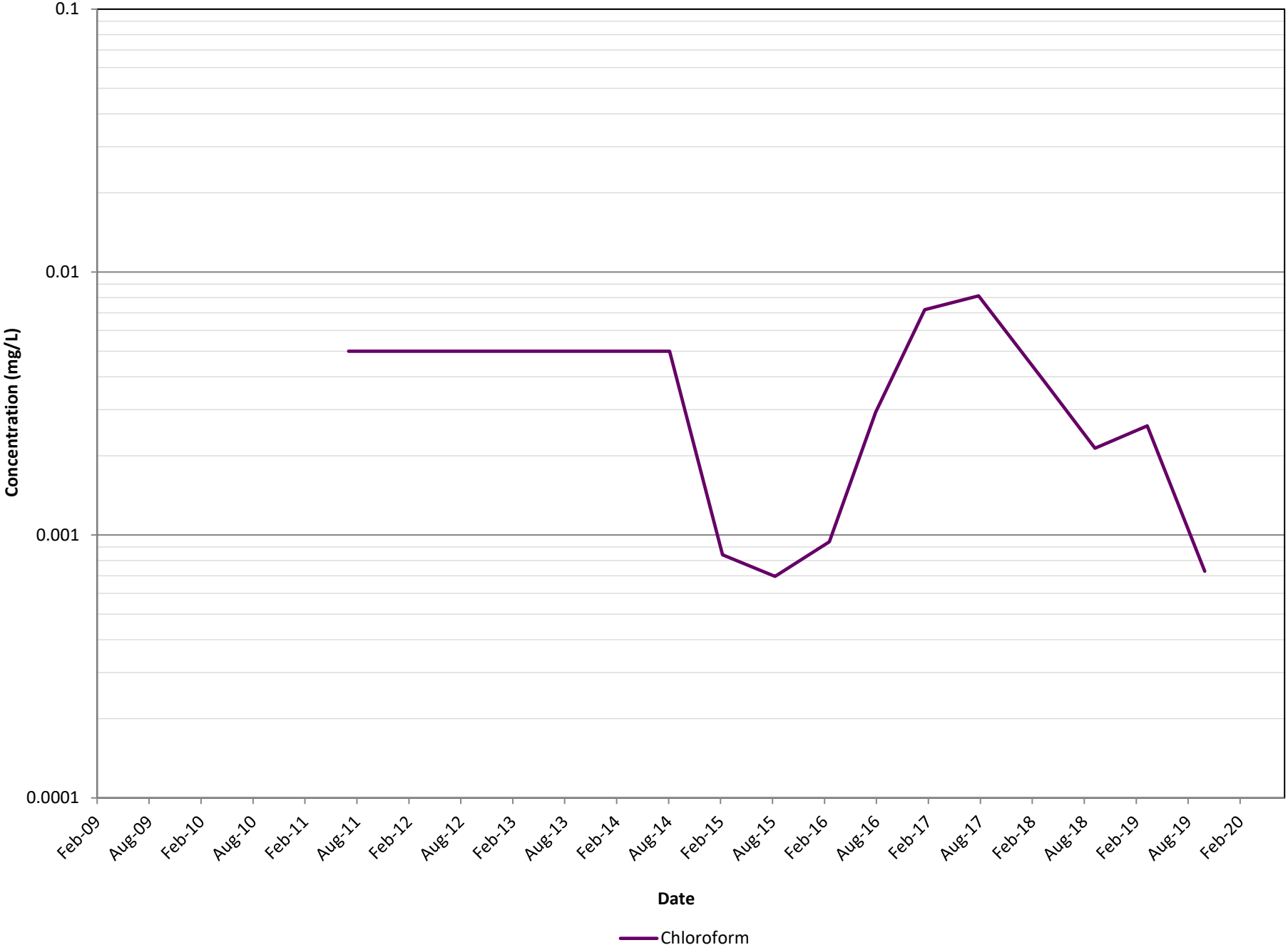
MW-2: TDS CONCENTRATIONS OVER TIME



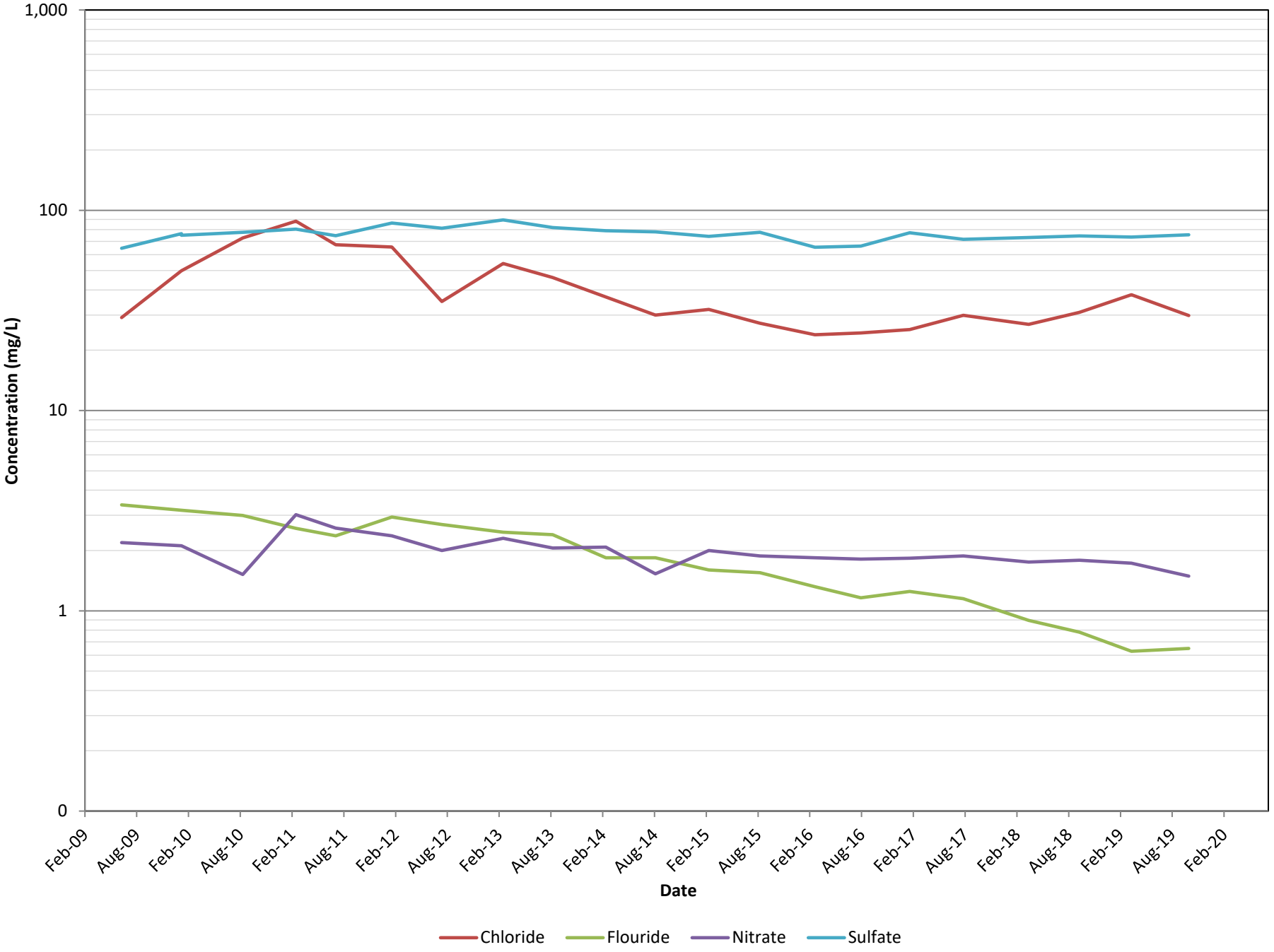
MW-2: METAL CONCENTRATIONS OVER TIME



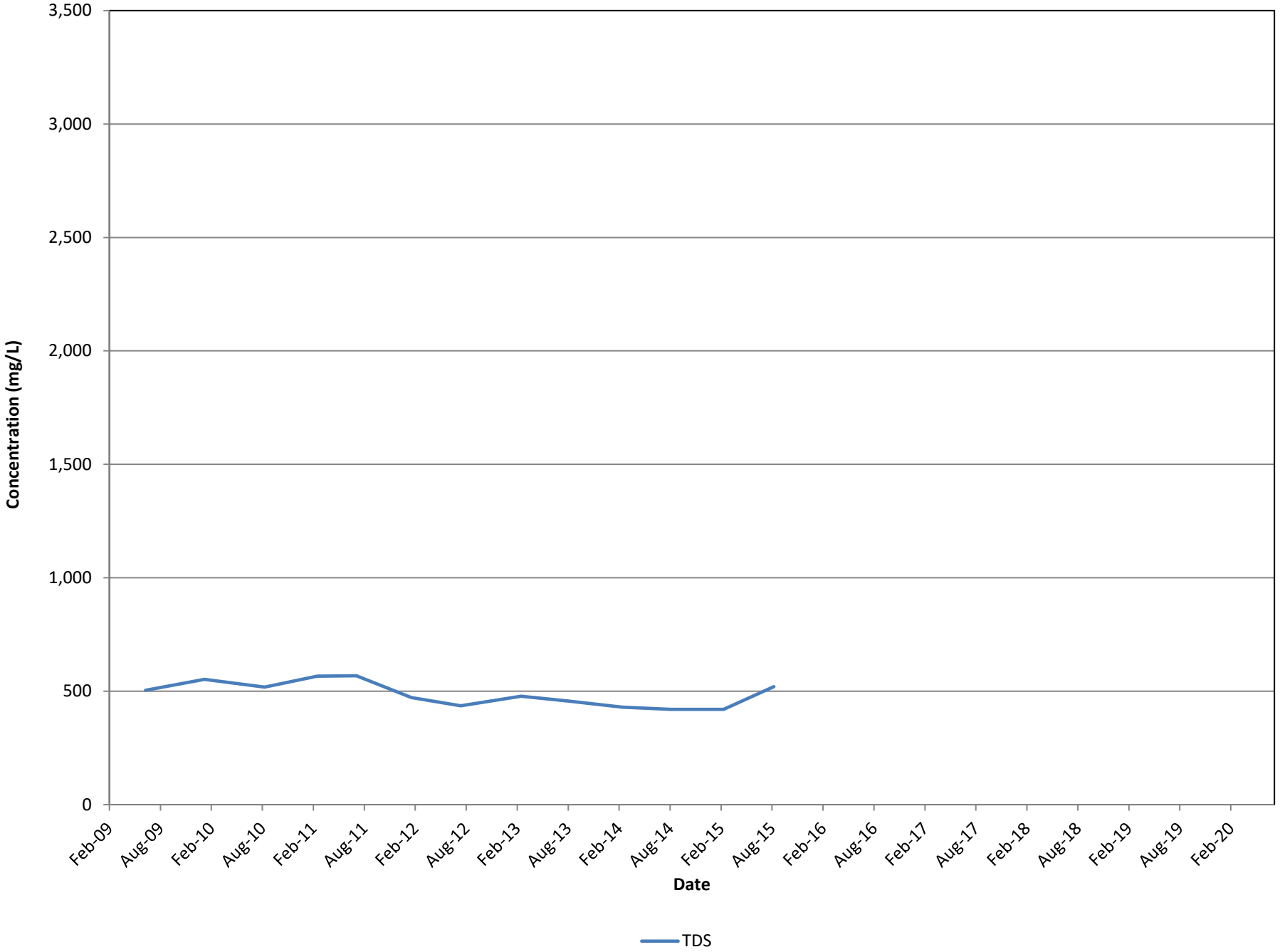
MW-2: VOC CONCENTRATIONS OVER TIME



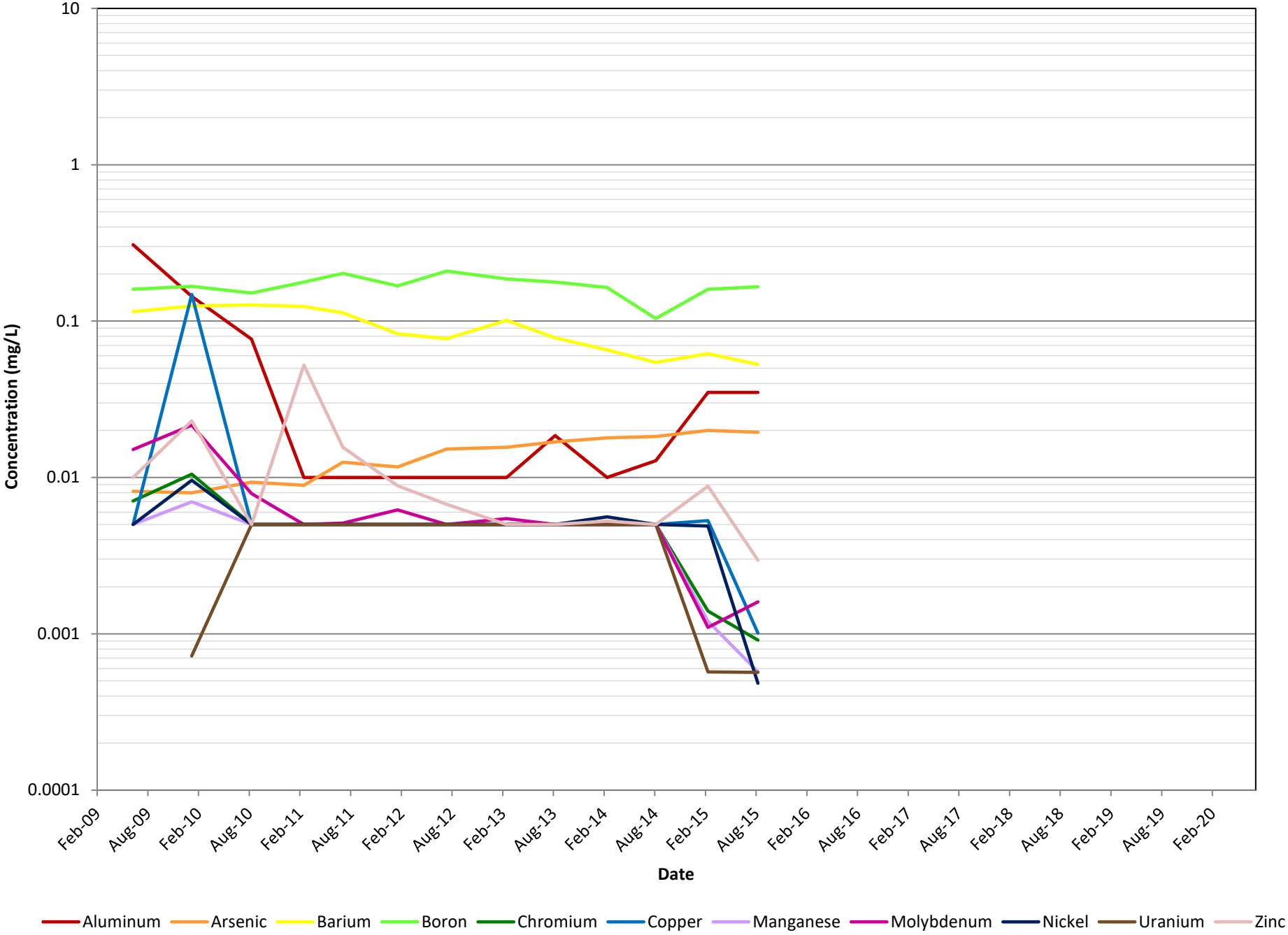
MW-3: ANION CONCENTRATIONS OVER TIME



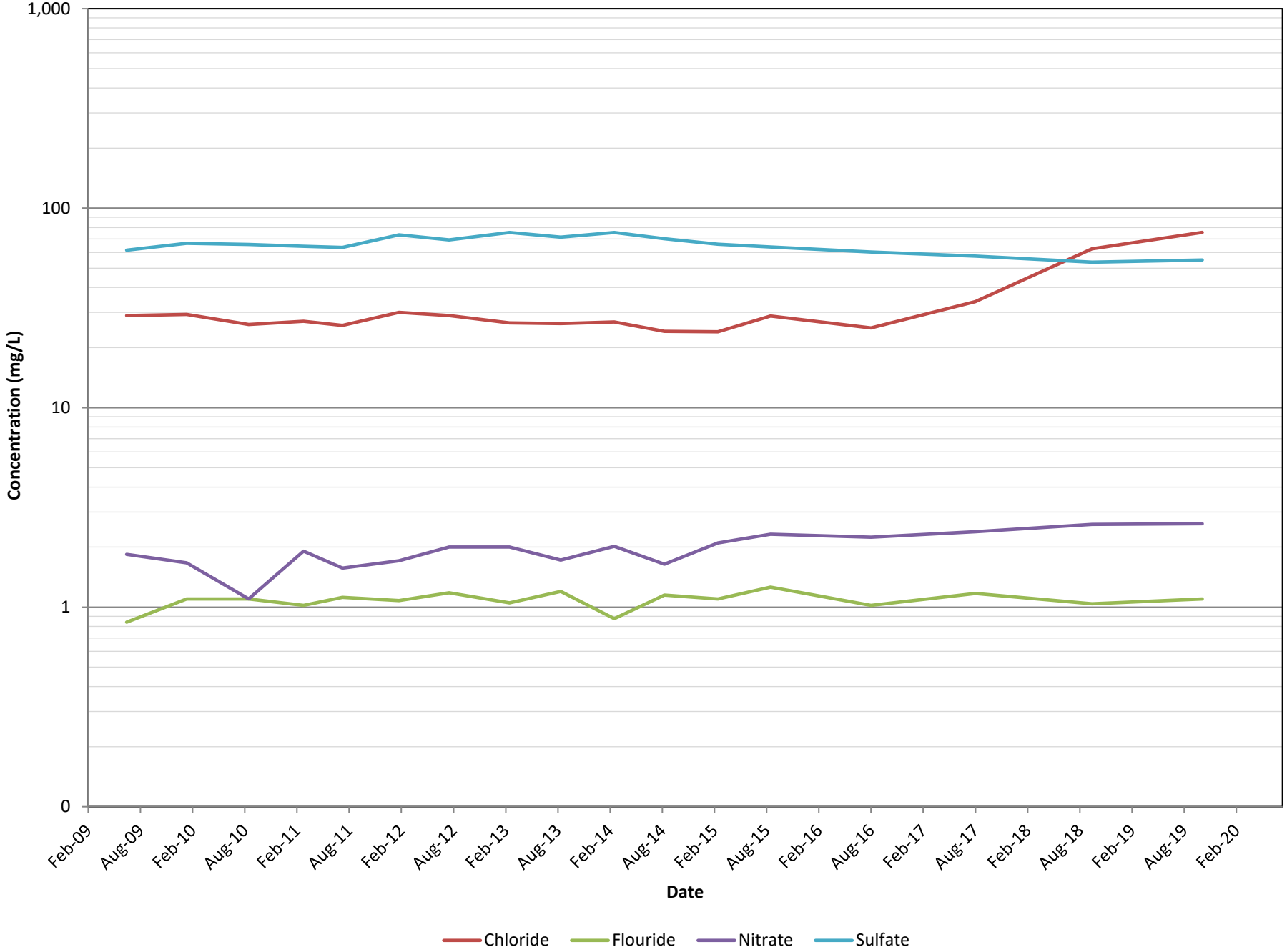
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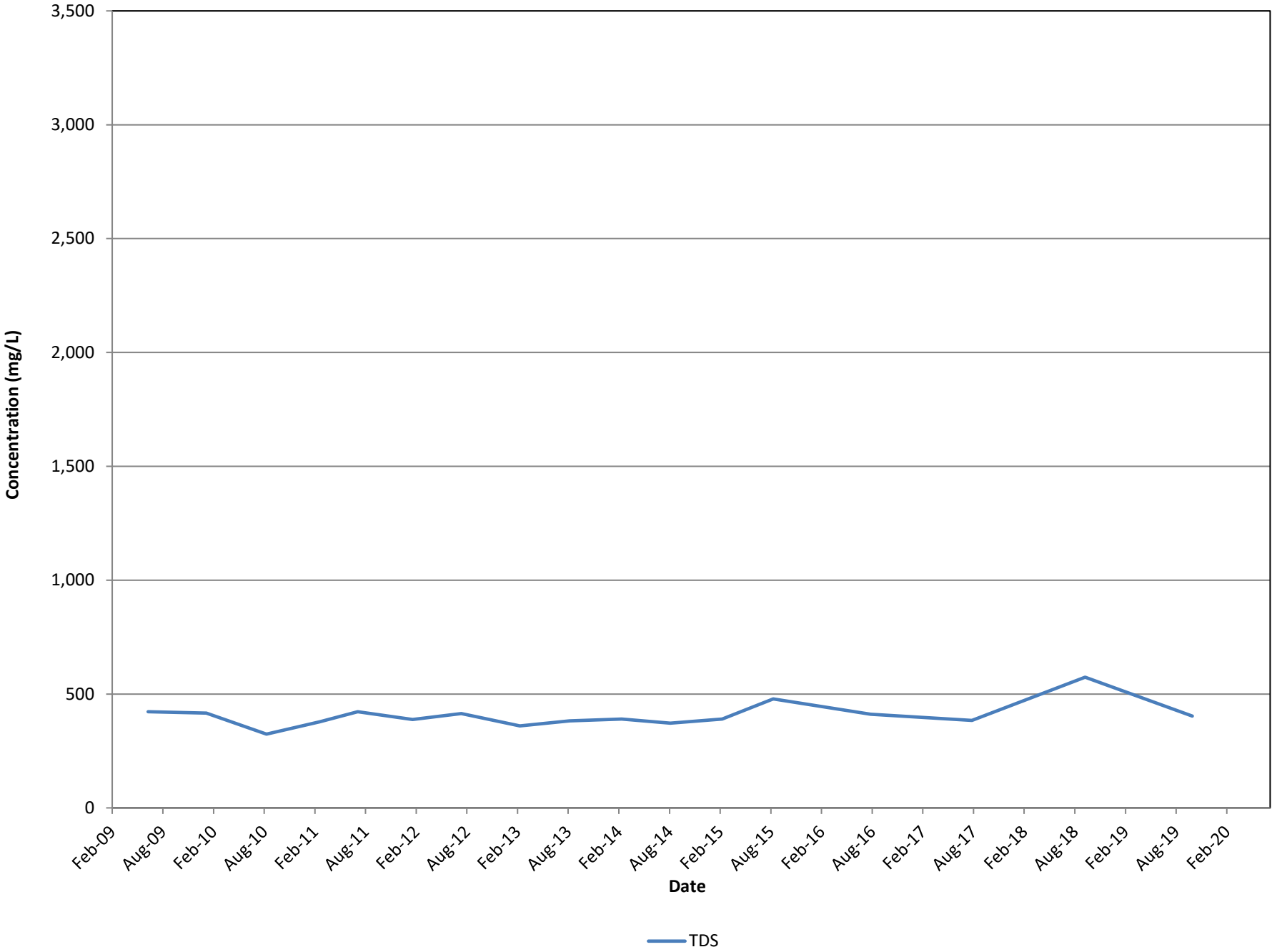
MW-3: METAL CONCENTRATIONS OVER TIME



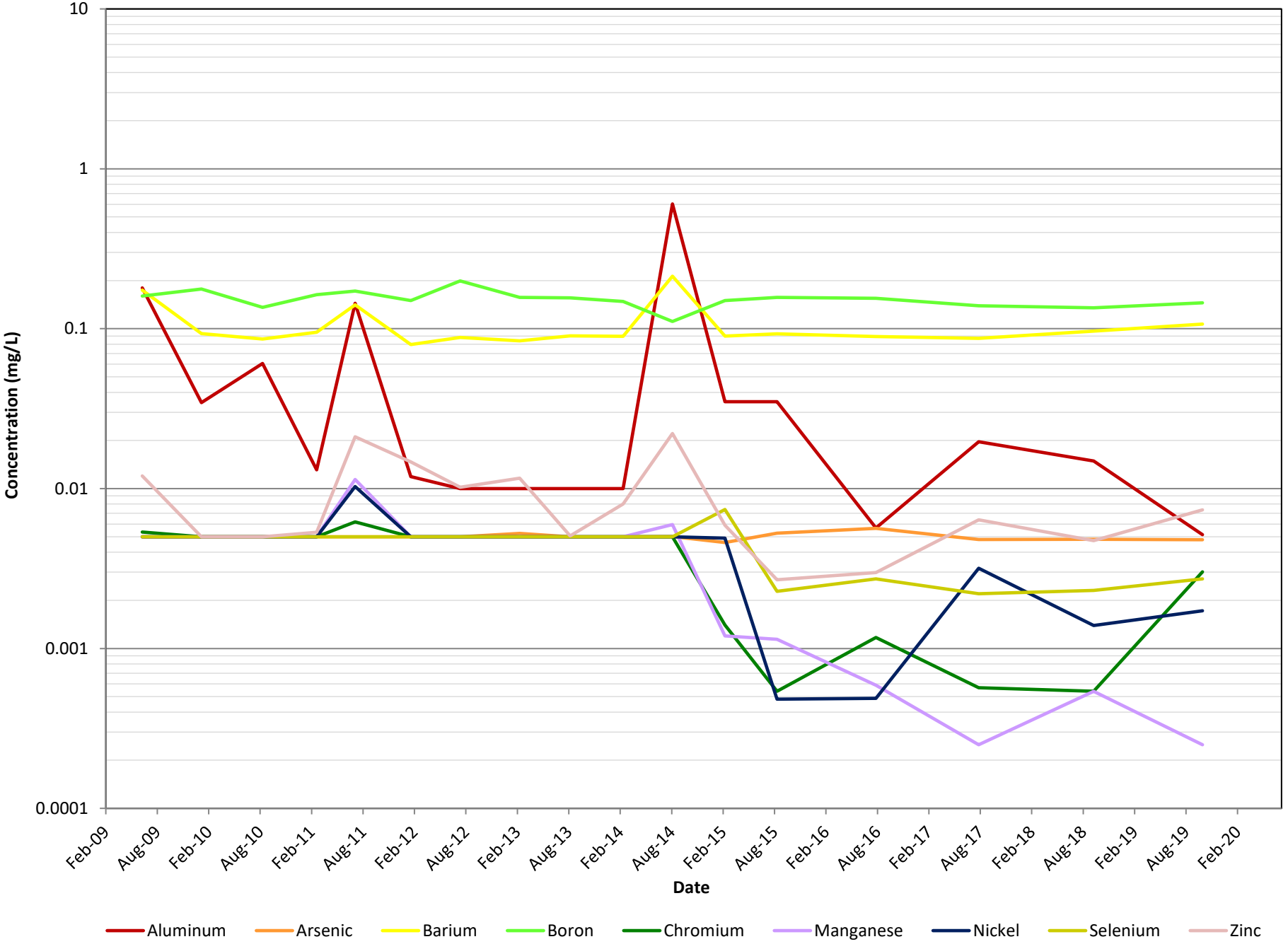
MW-4: ANION CONCENTRATIONS OVER TIME



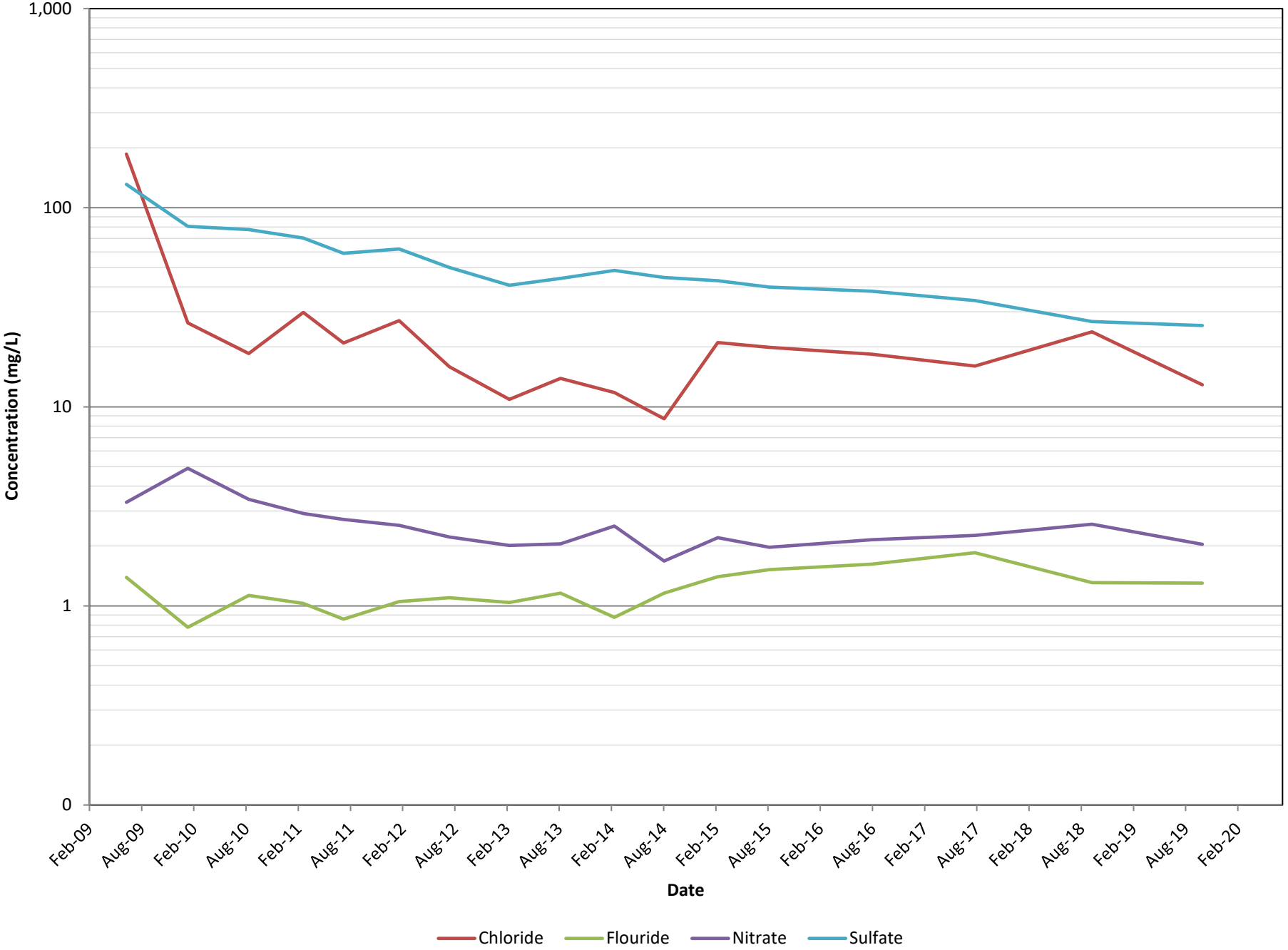
MW-4: TDS CONCENTRATIONS OVER TIME



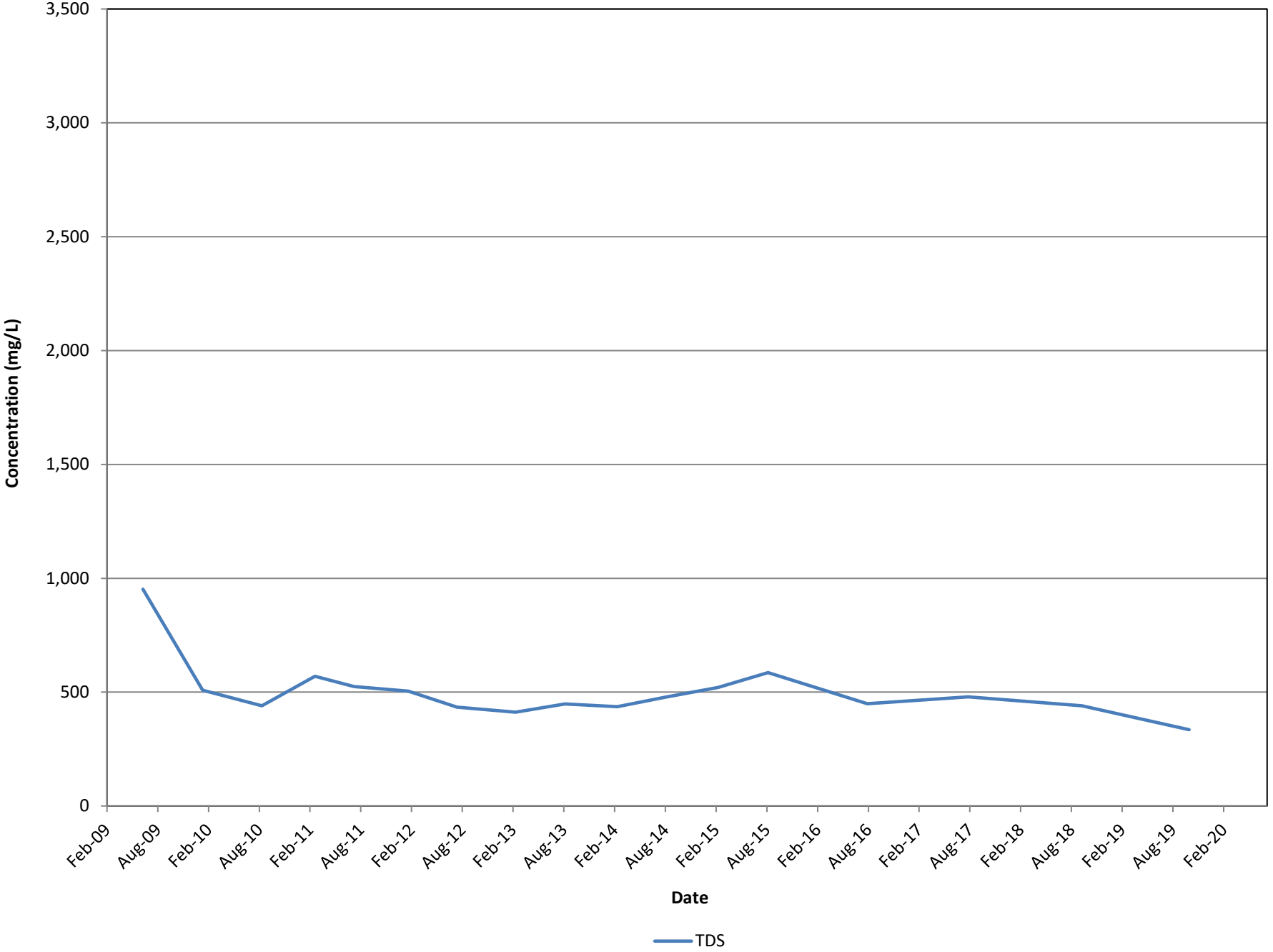
MW-4: METAL CONCENTRATIONS OVER TIME



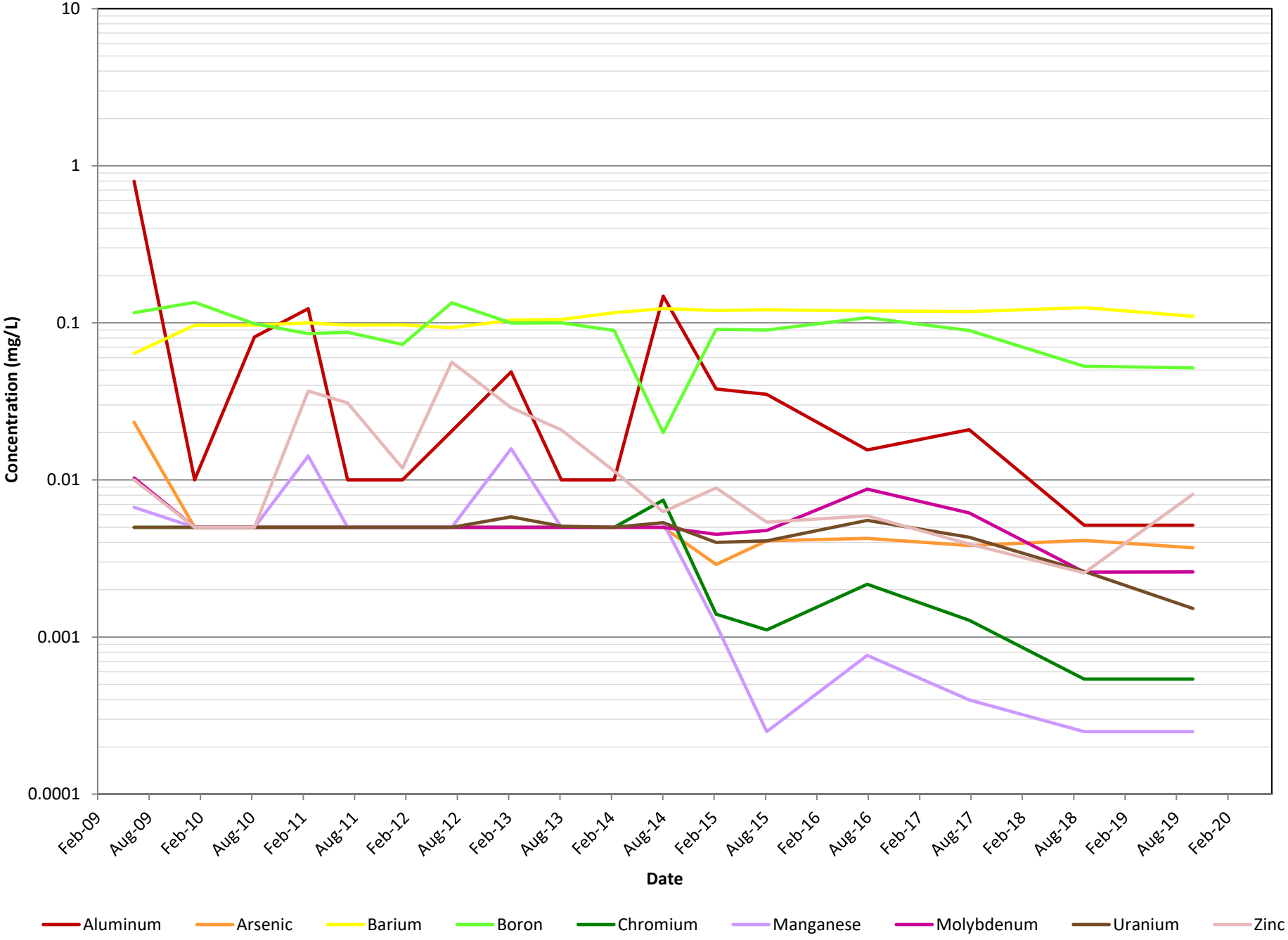
MW-5: ANION CONCENTRATIONS OVER TIME



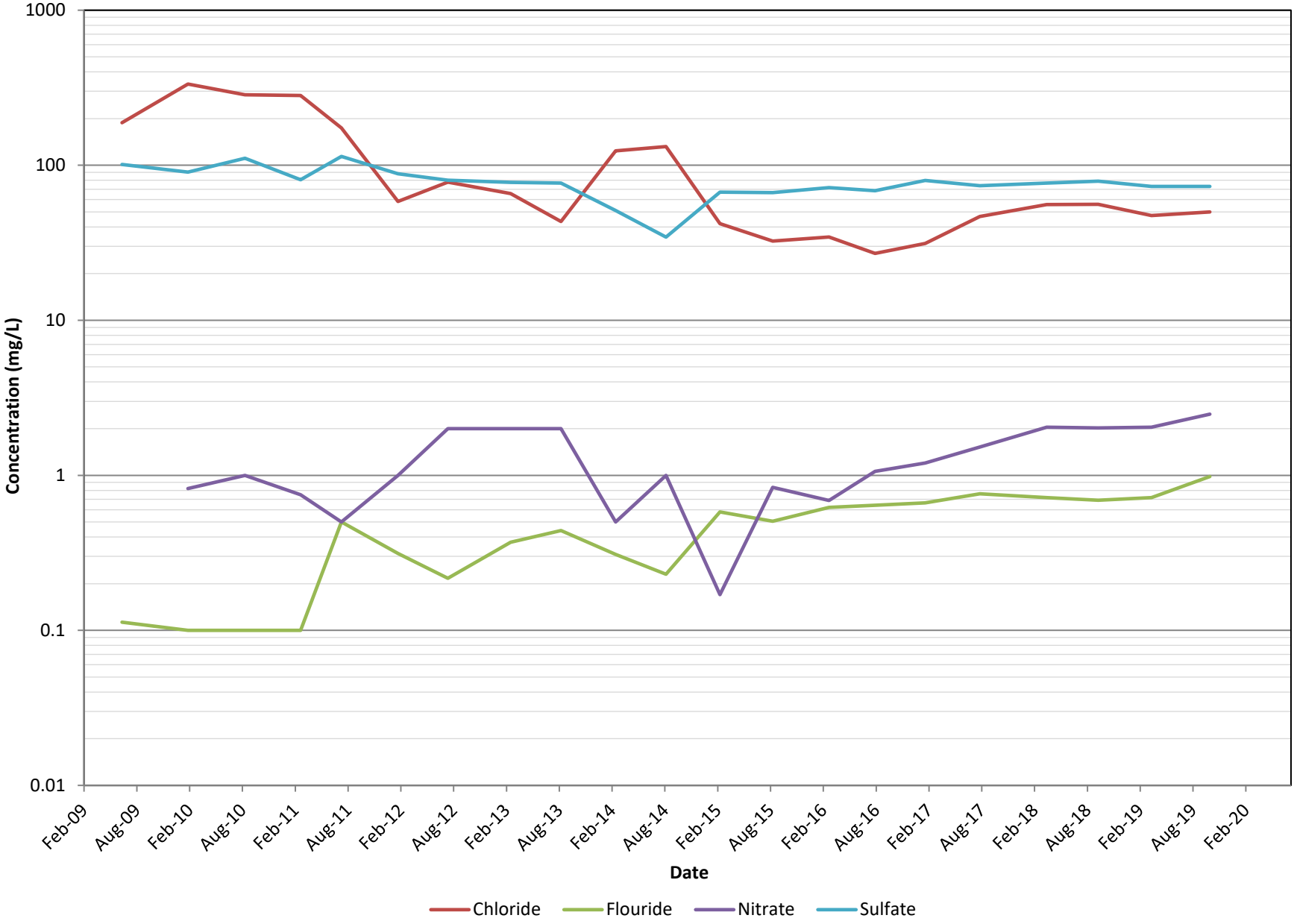
MW-5: TDS CONCENTRATIONS OVER TIME



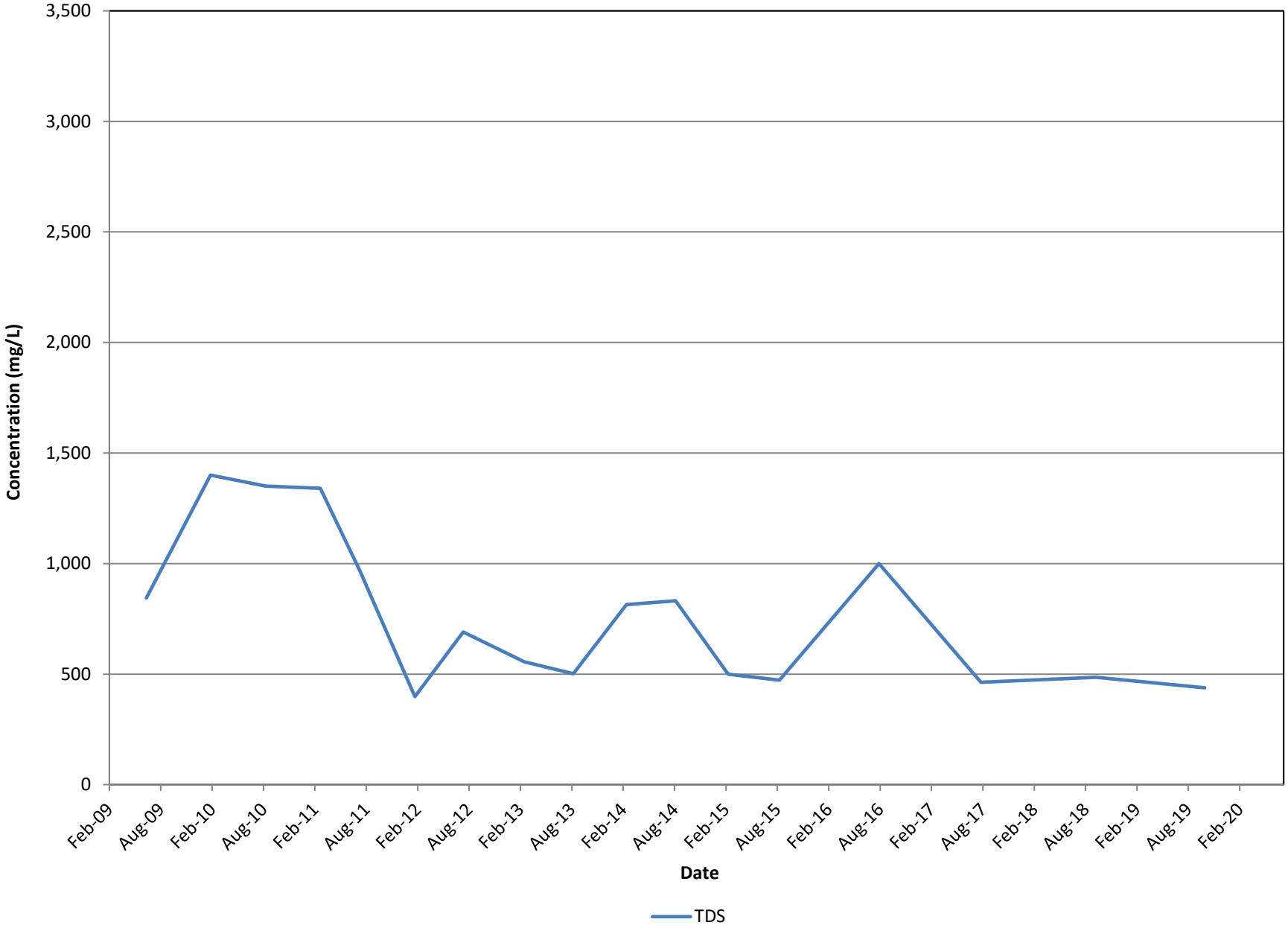
MW-5: METAL CONCENTRATIONS OVER TIME



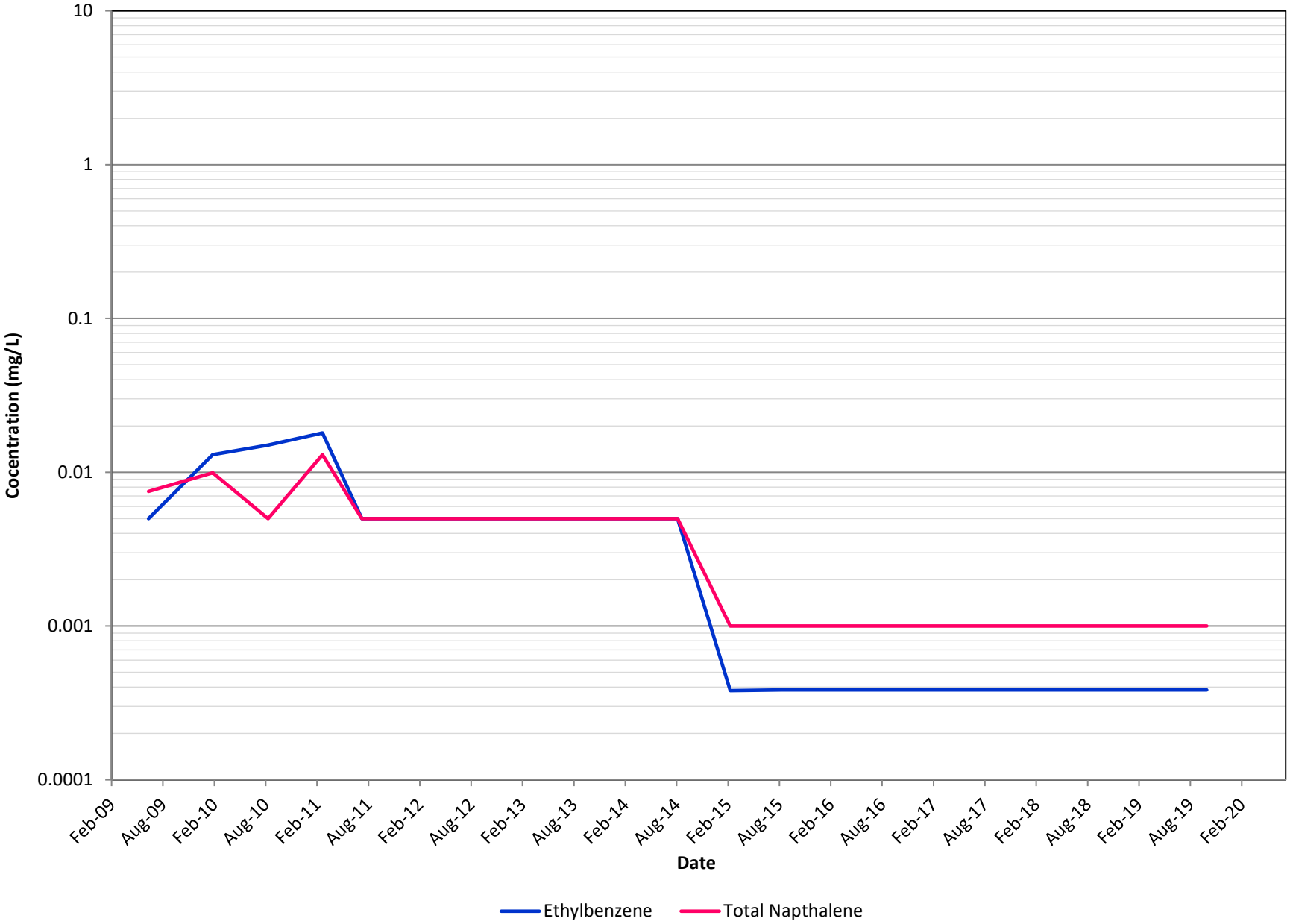
MW-6: ANION CONCENTRATIONS OVER TIME



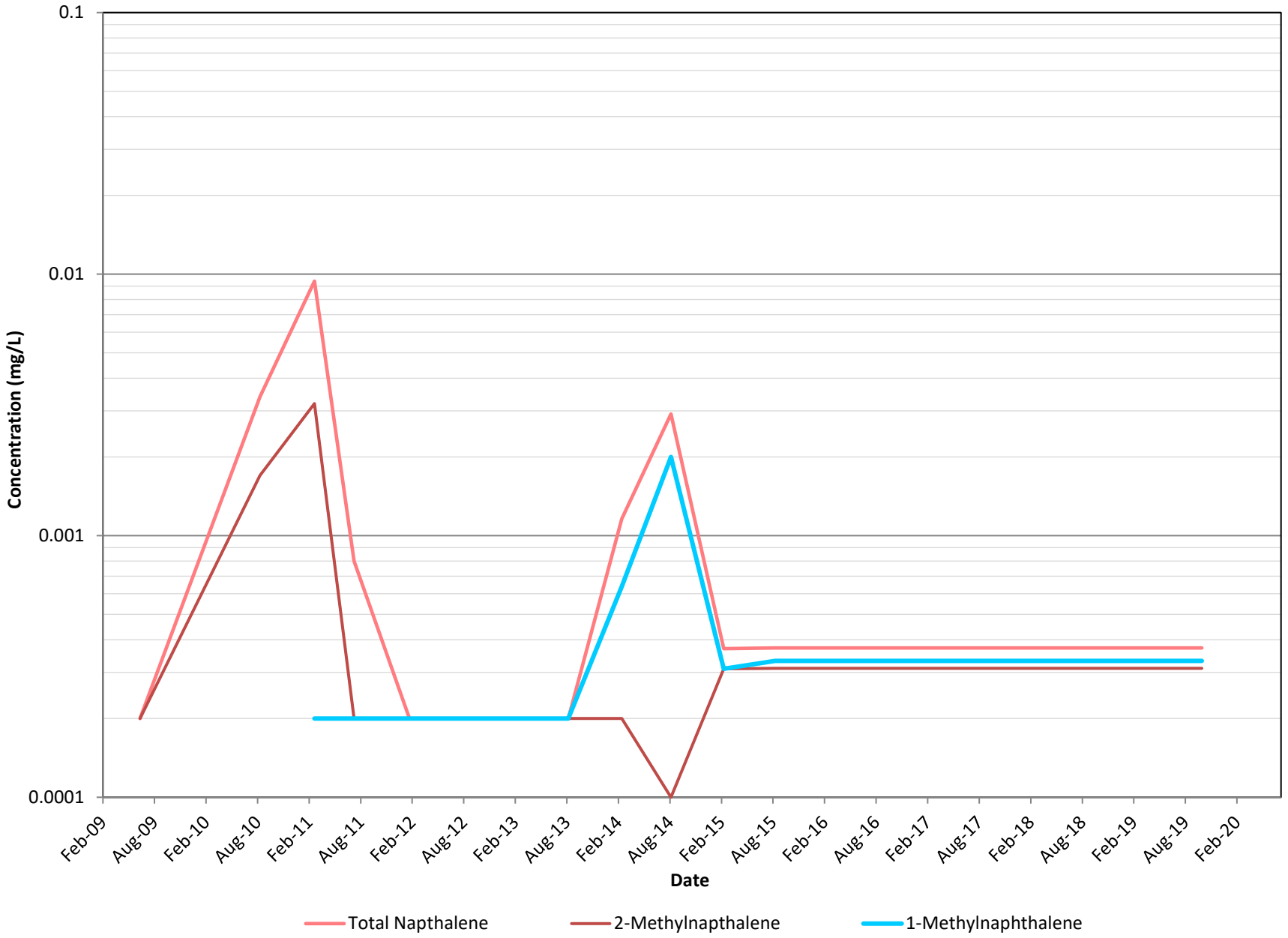
MW-6: TDS CONCENTRATIONS OVER TIME



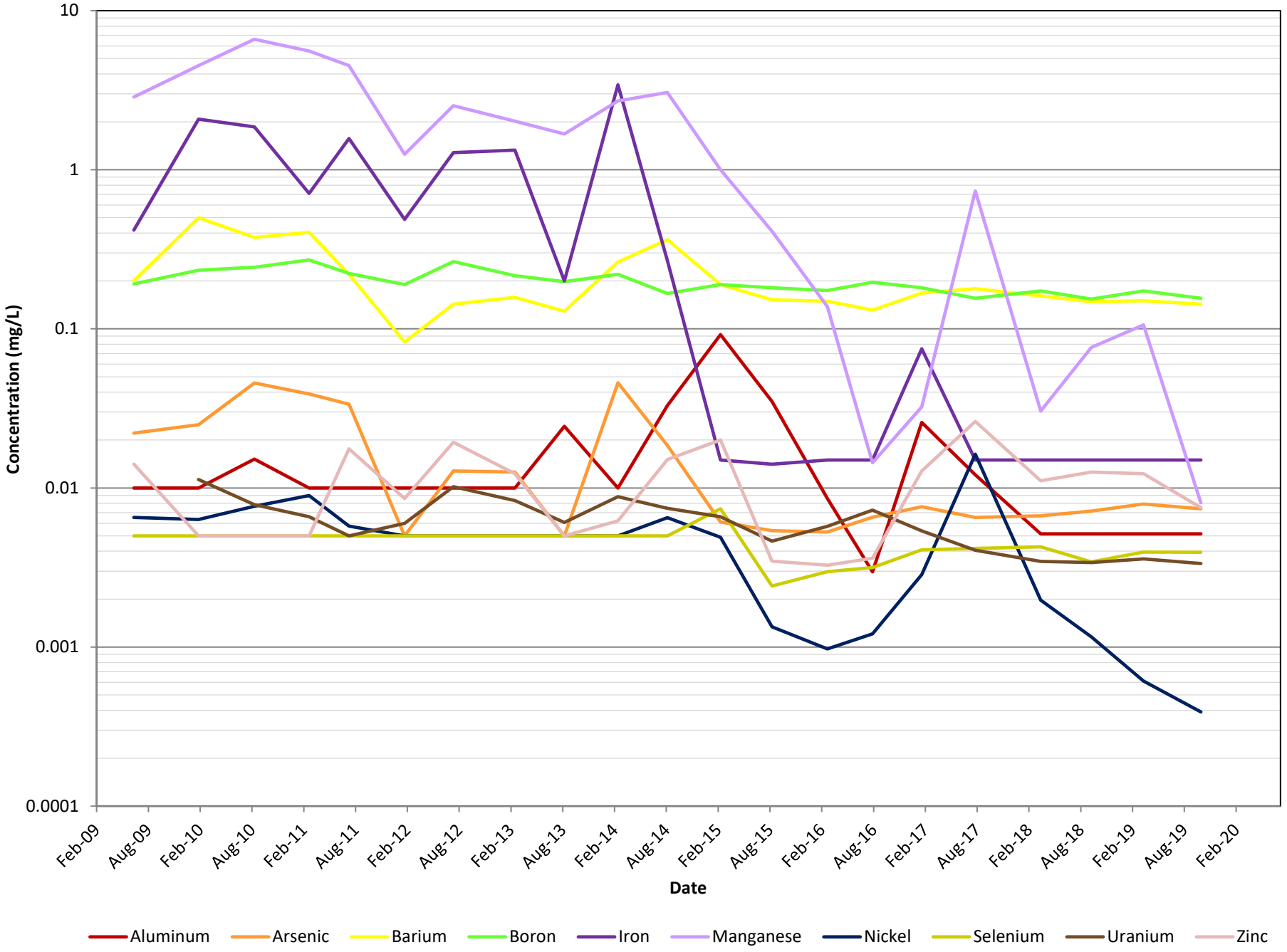
MW-6: VOC CONCENTRATIONS OVER TIME



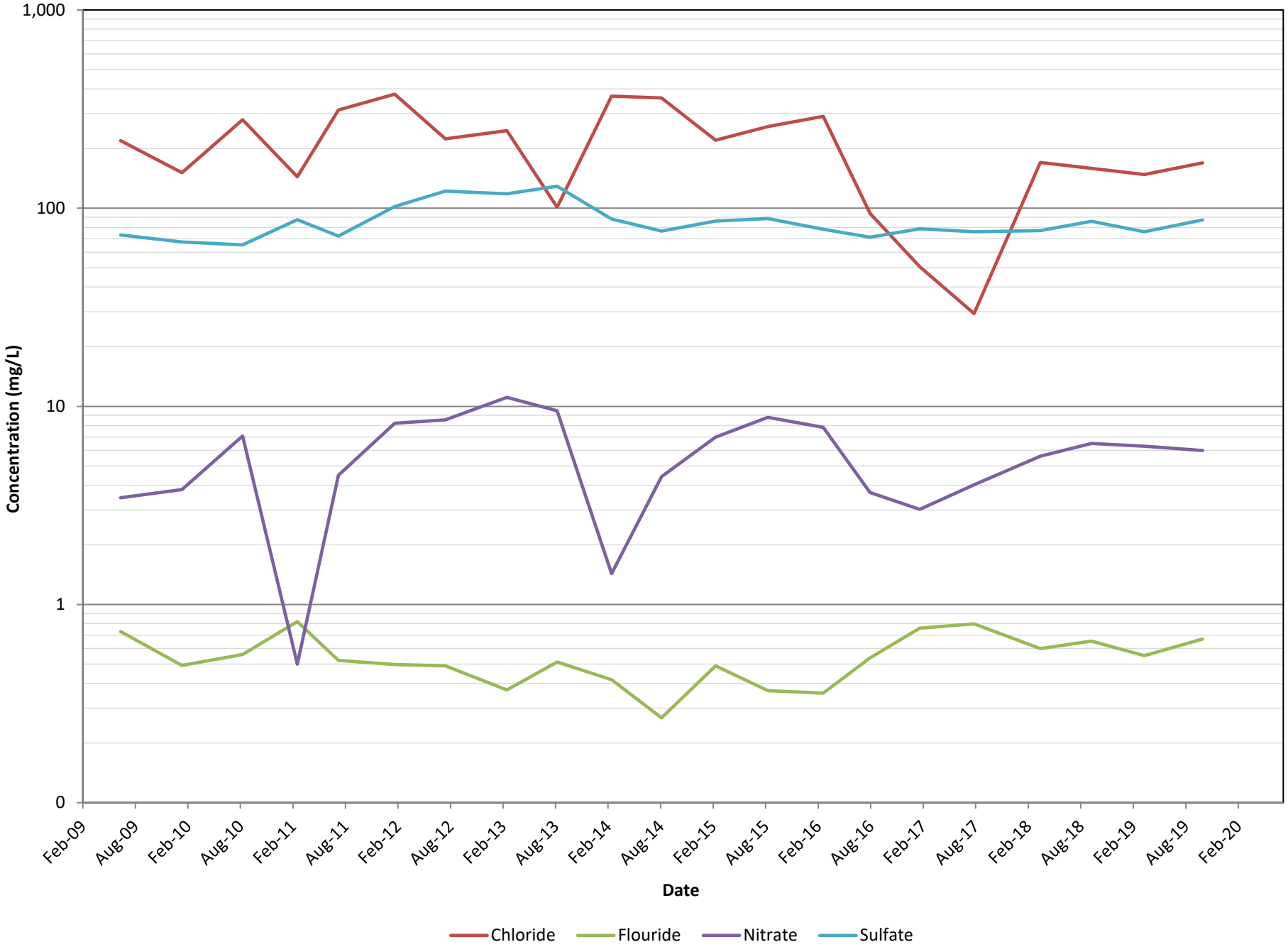
MW-6: SVOC CONCENTRATIONS OVER TIME



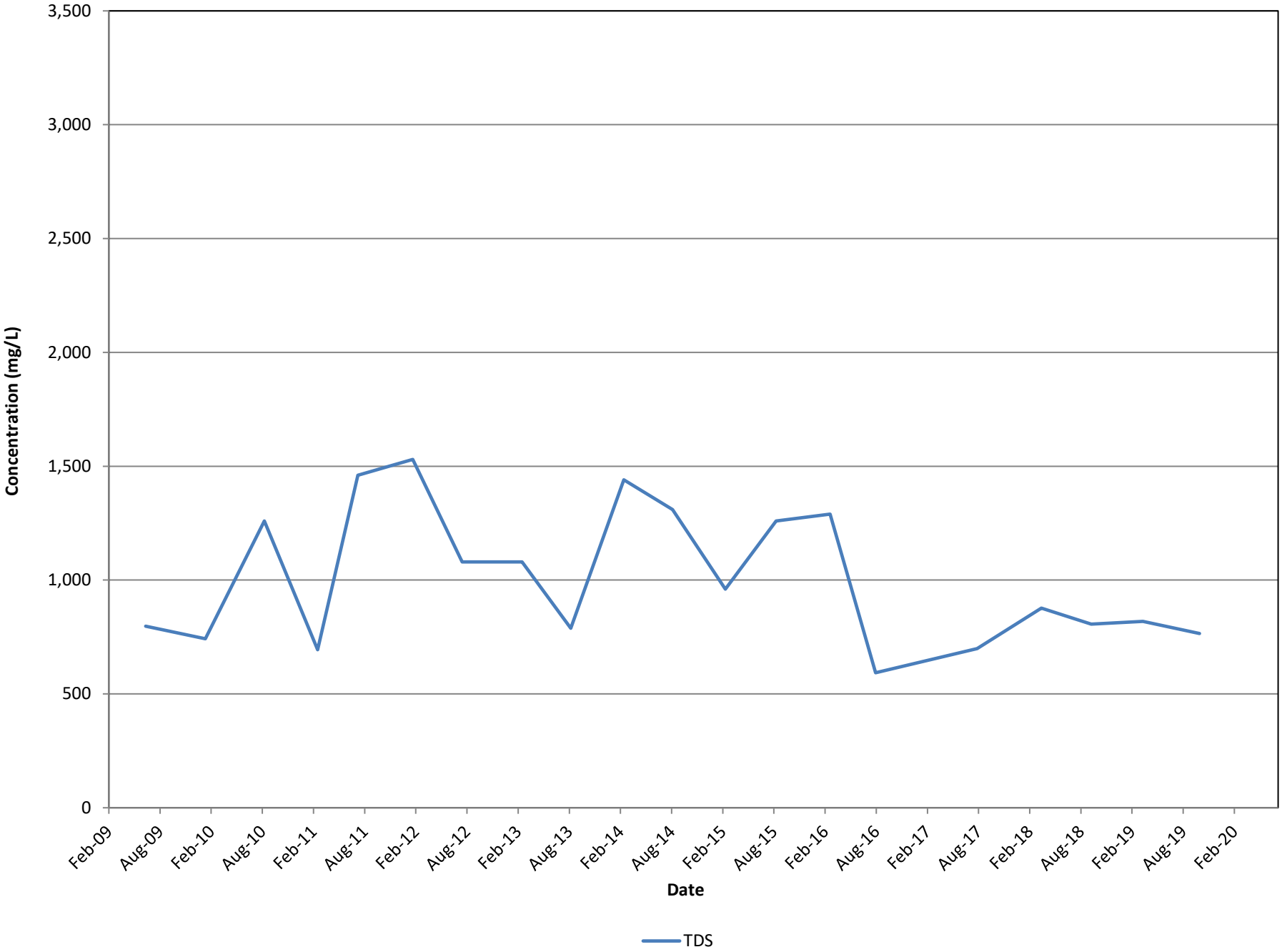
MW-6: METAL CONCENTRATIONS OVER TIME



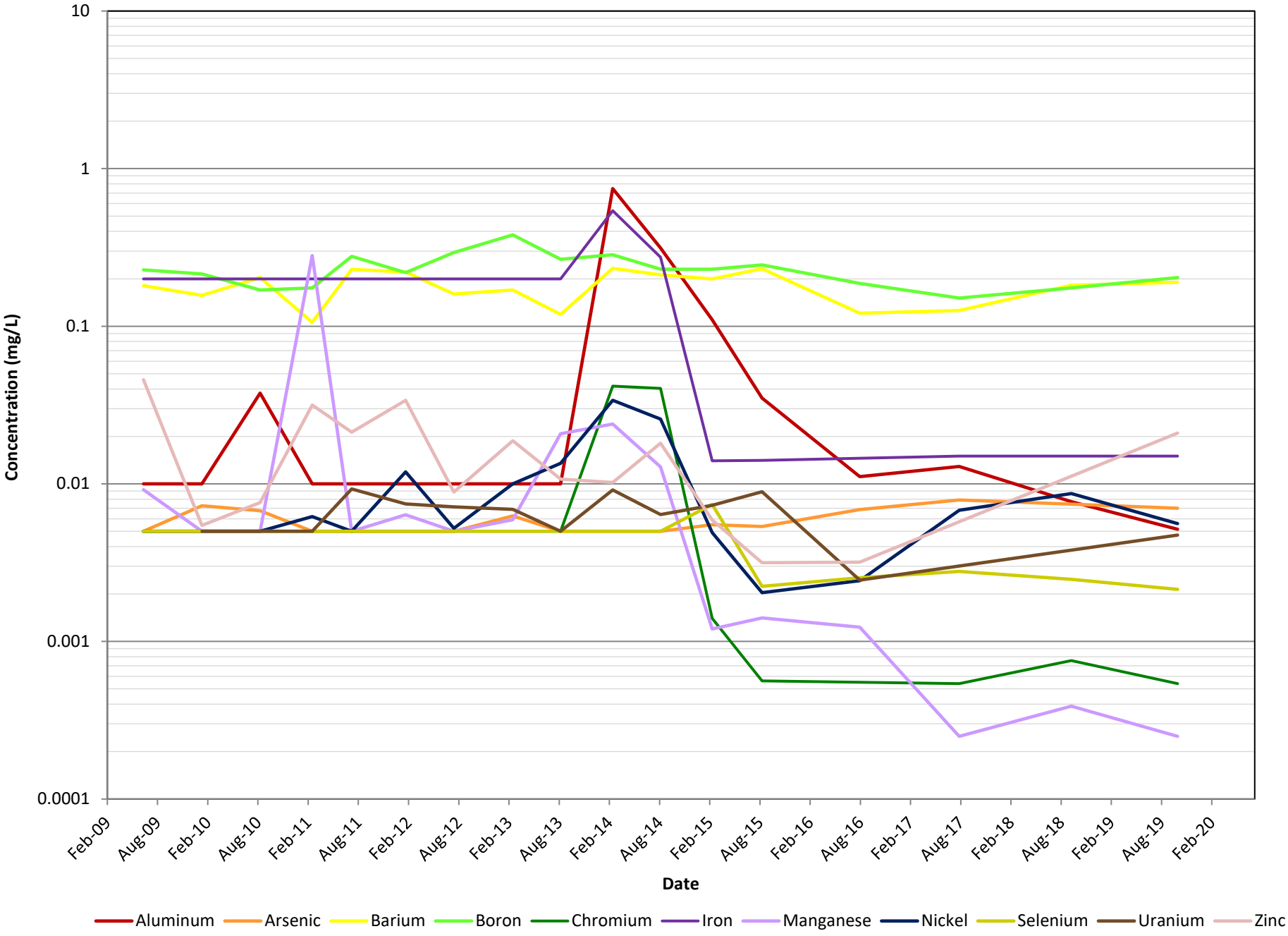
MW-8: ANION CONCENTRATIONS OVER TIME



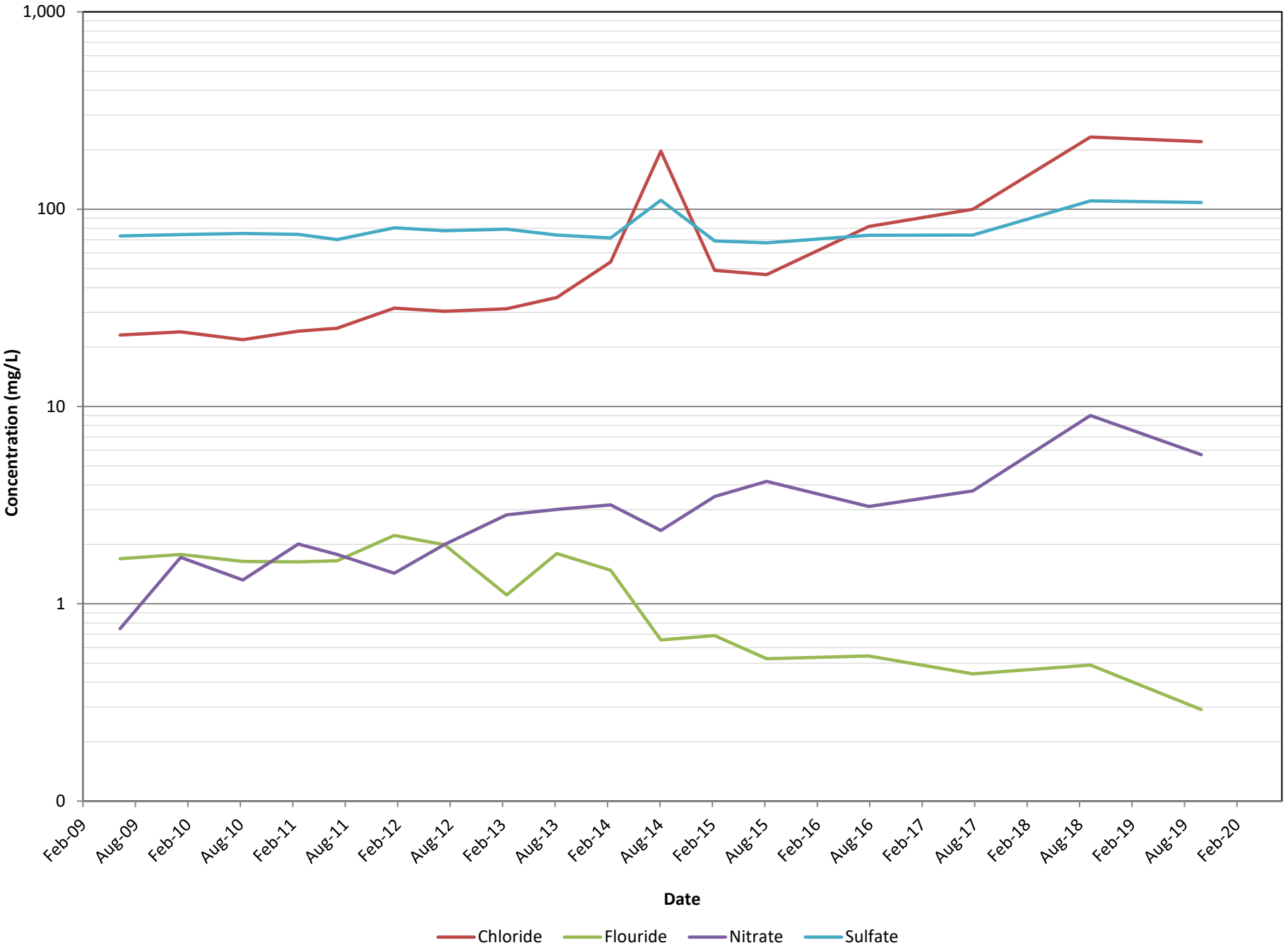
MW-8: TDS CONCENTRATIONS OVER TIME



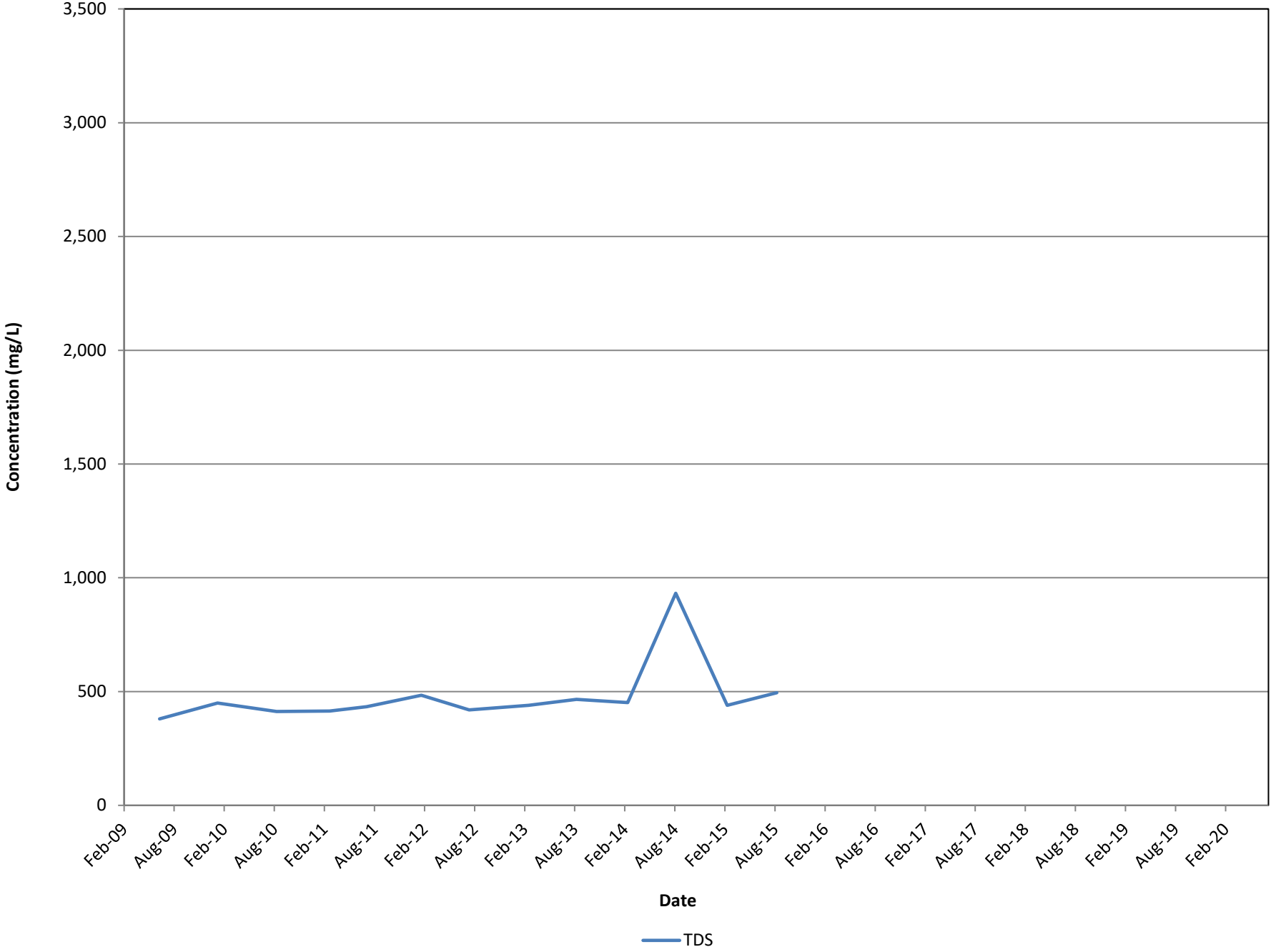
MW-8: METAL CONCENTRATIONS OVER TIME



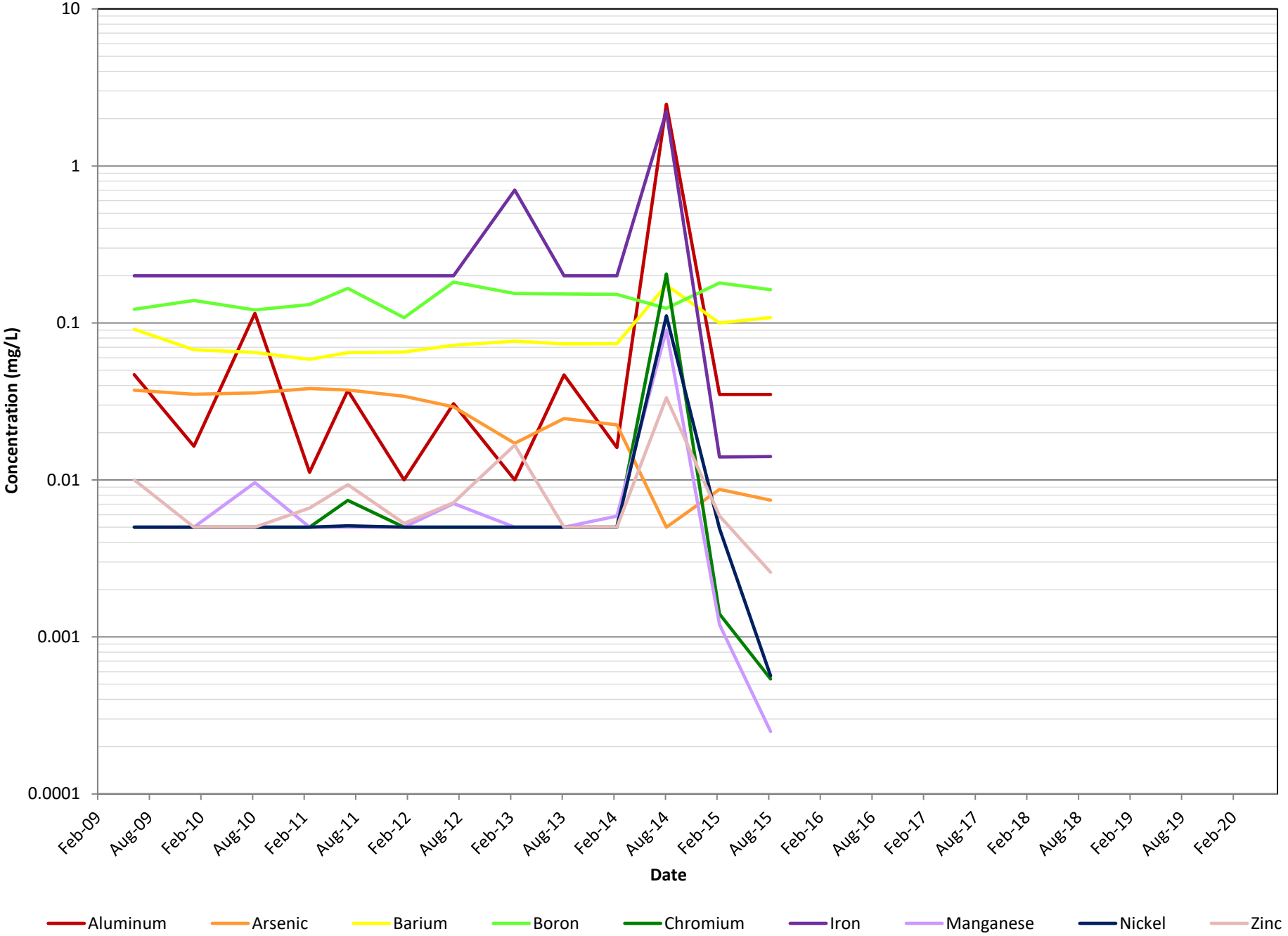
MW-9: ANION CONCENTRATIONS OVER TIME



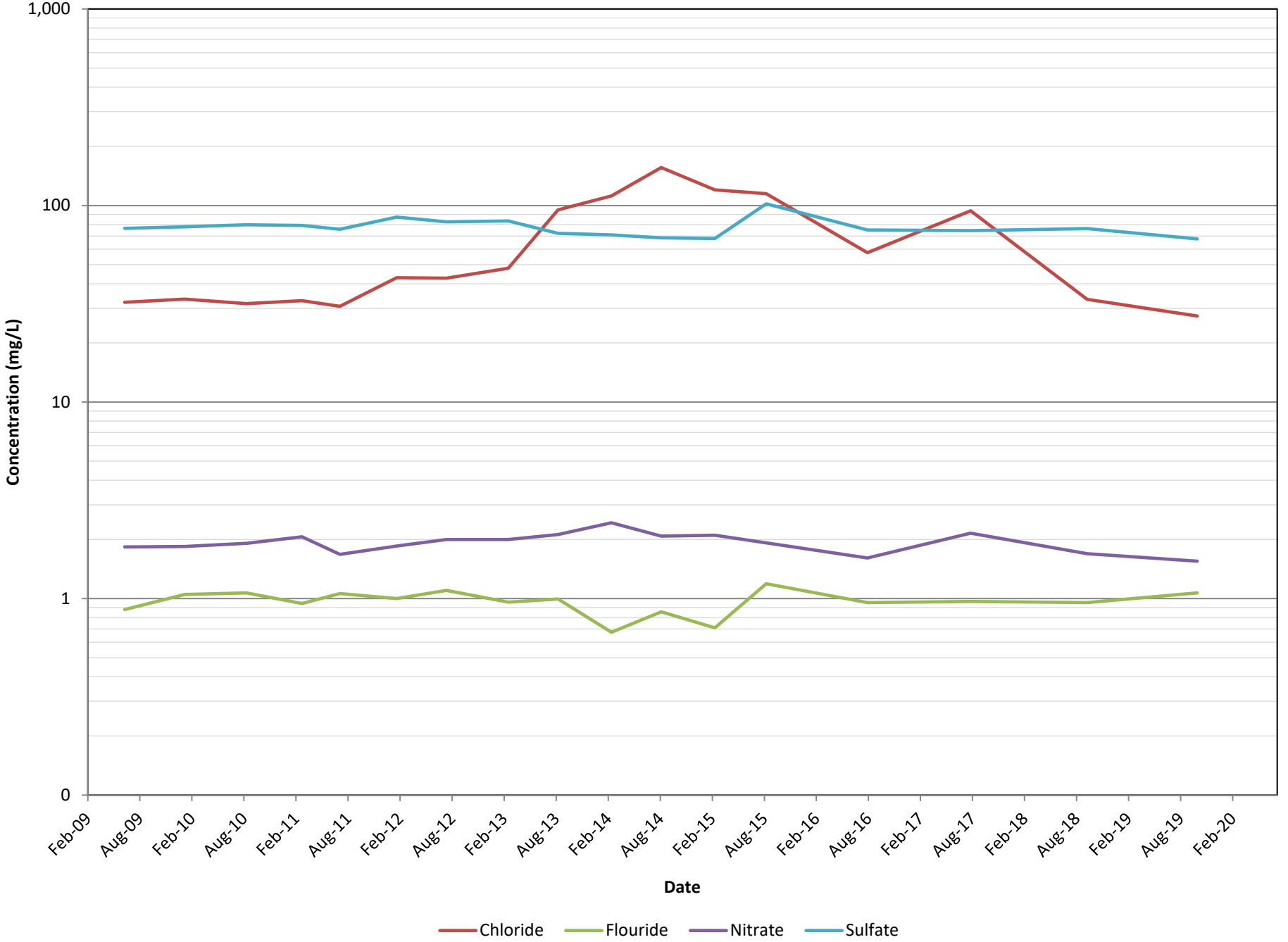
MW-9: TDS CONCENTRATIONS OVER TIME



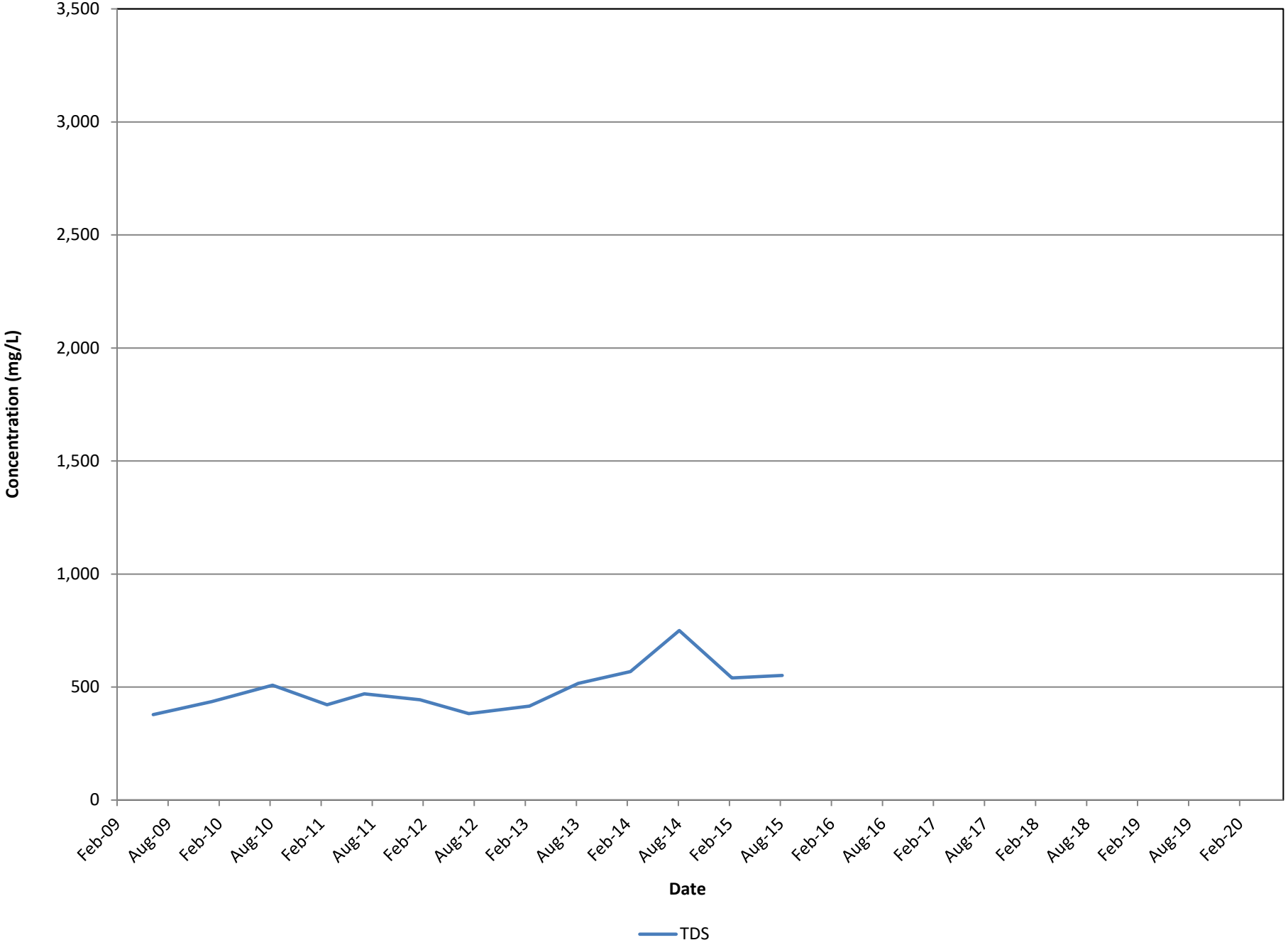
MW-9: METAL CONCENTRATIONS OVER TIME



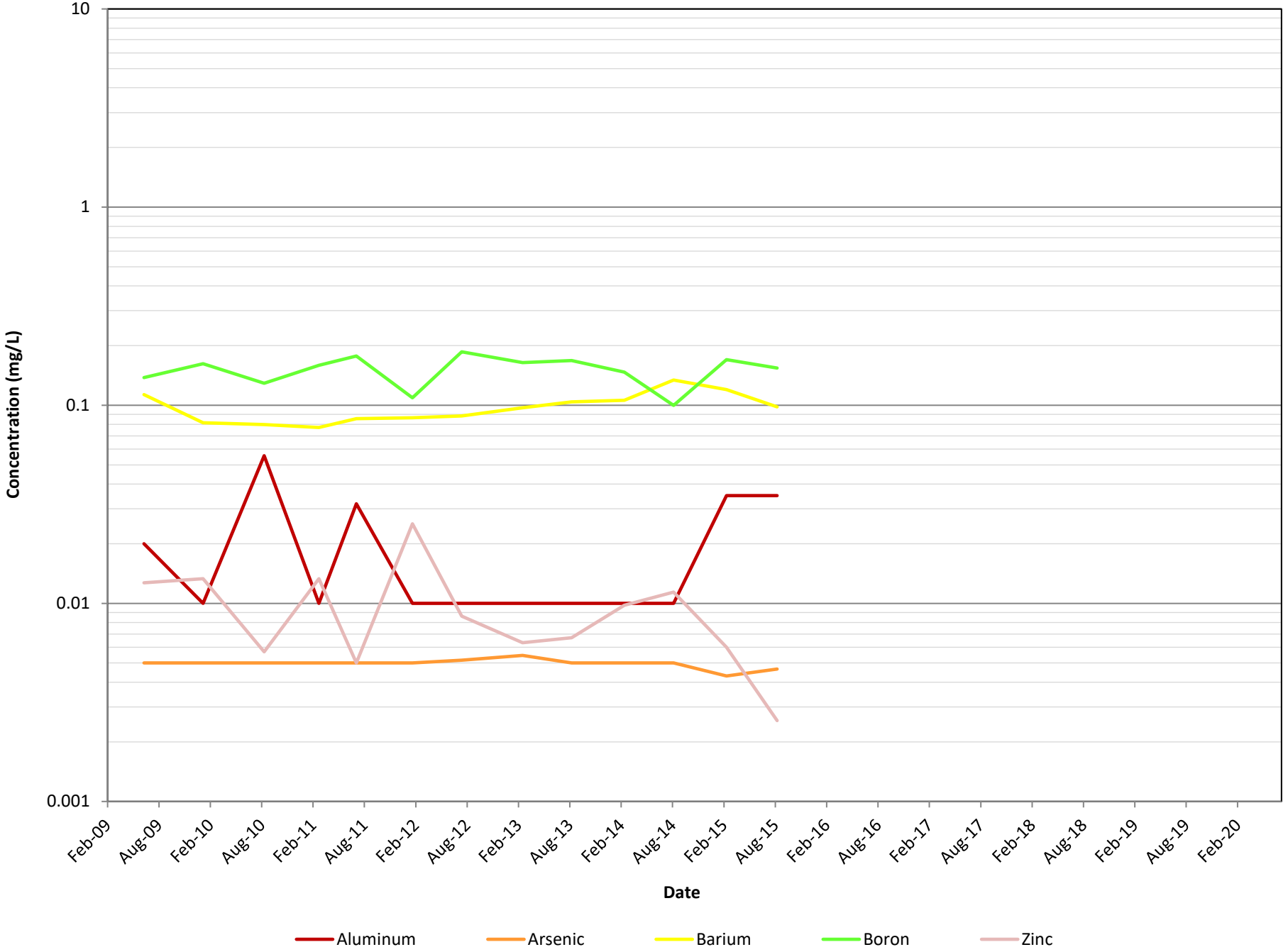
MW-10: ANION CONCENTRATIONS OVER TIME



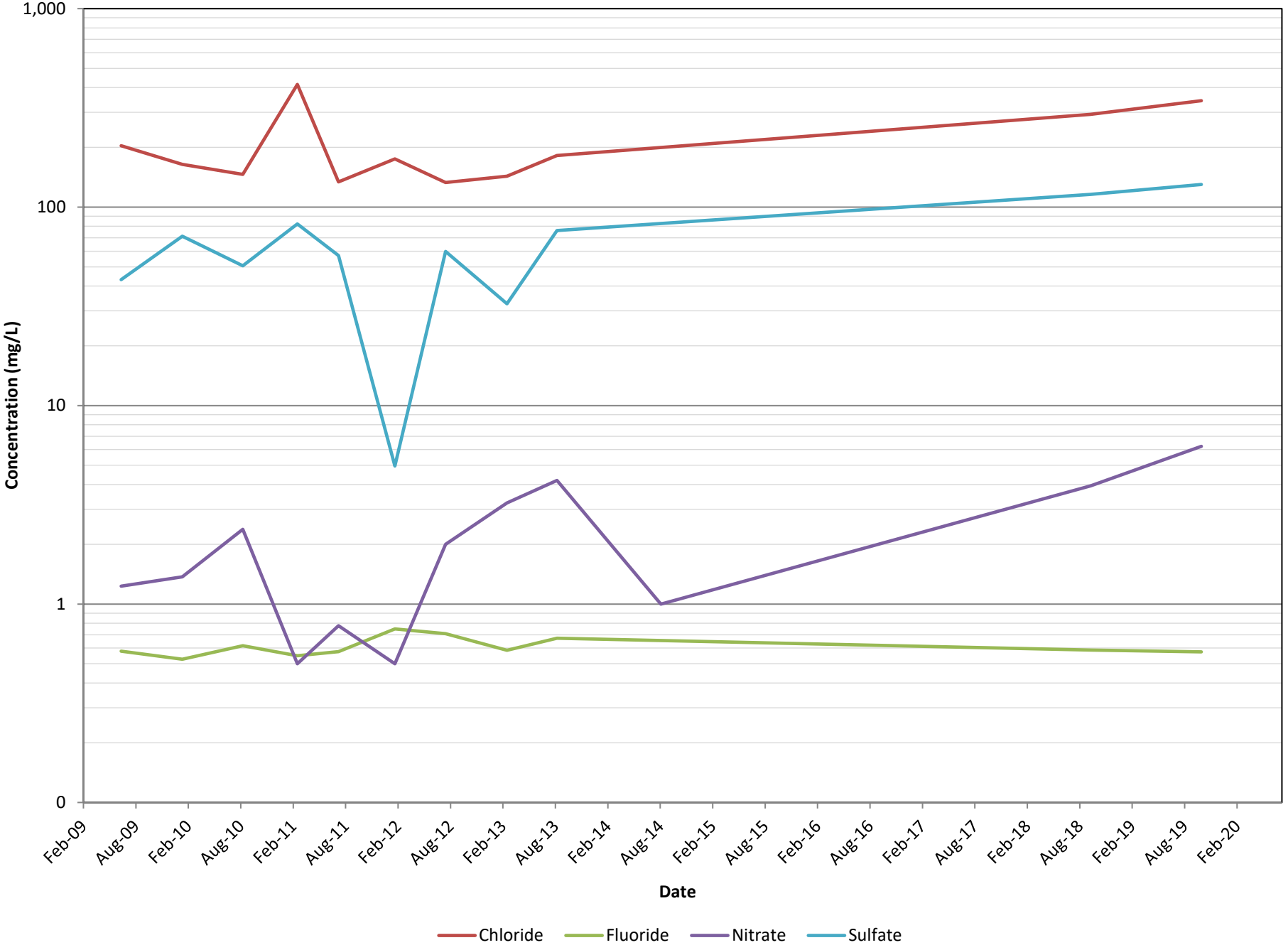
MW-10: TDS CONCENTRATIONS OVER TIME



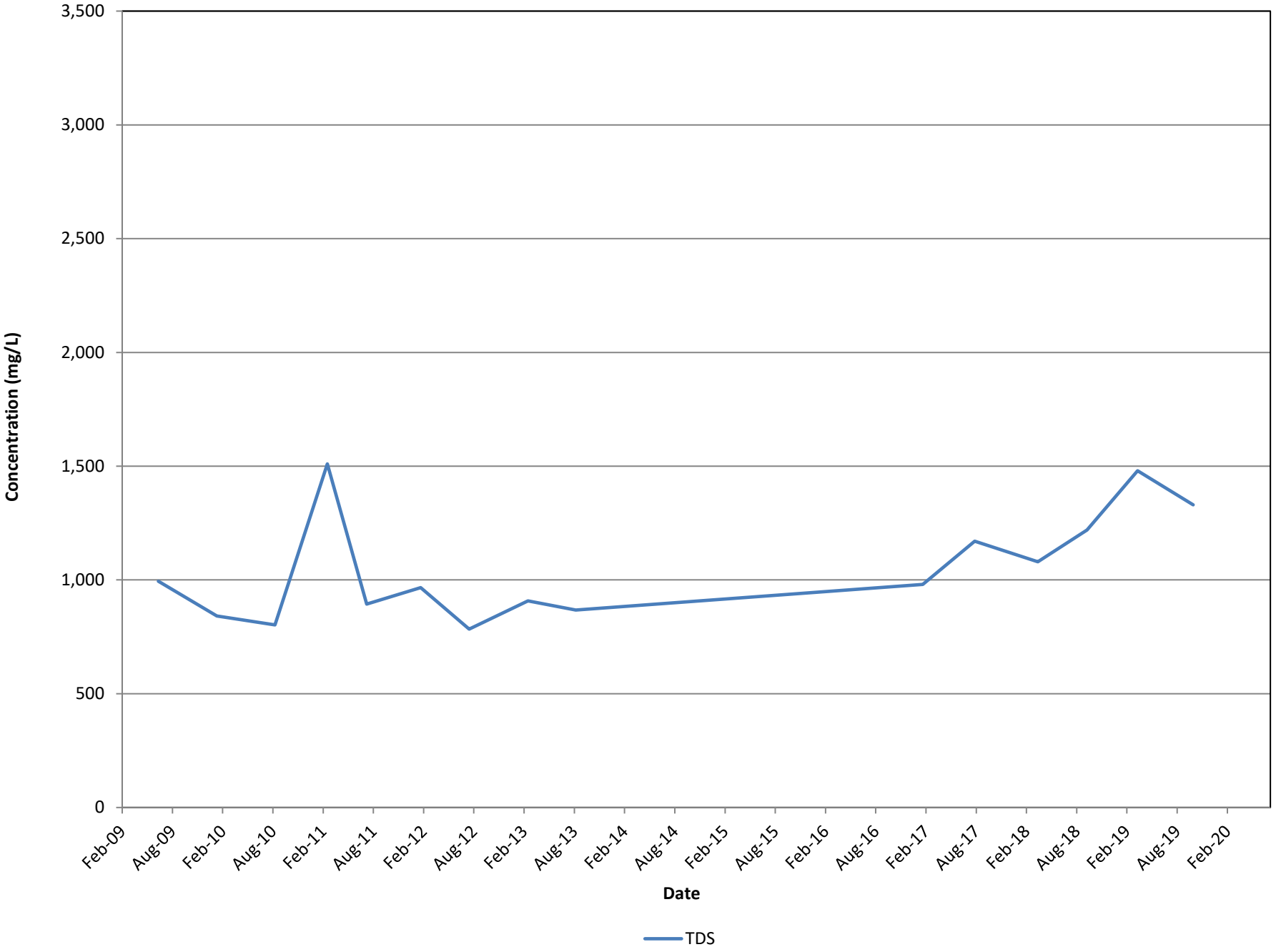
MW-10: METAL CONCENTRATIONS OVER TIME



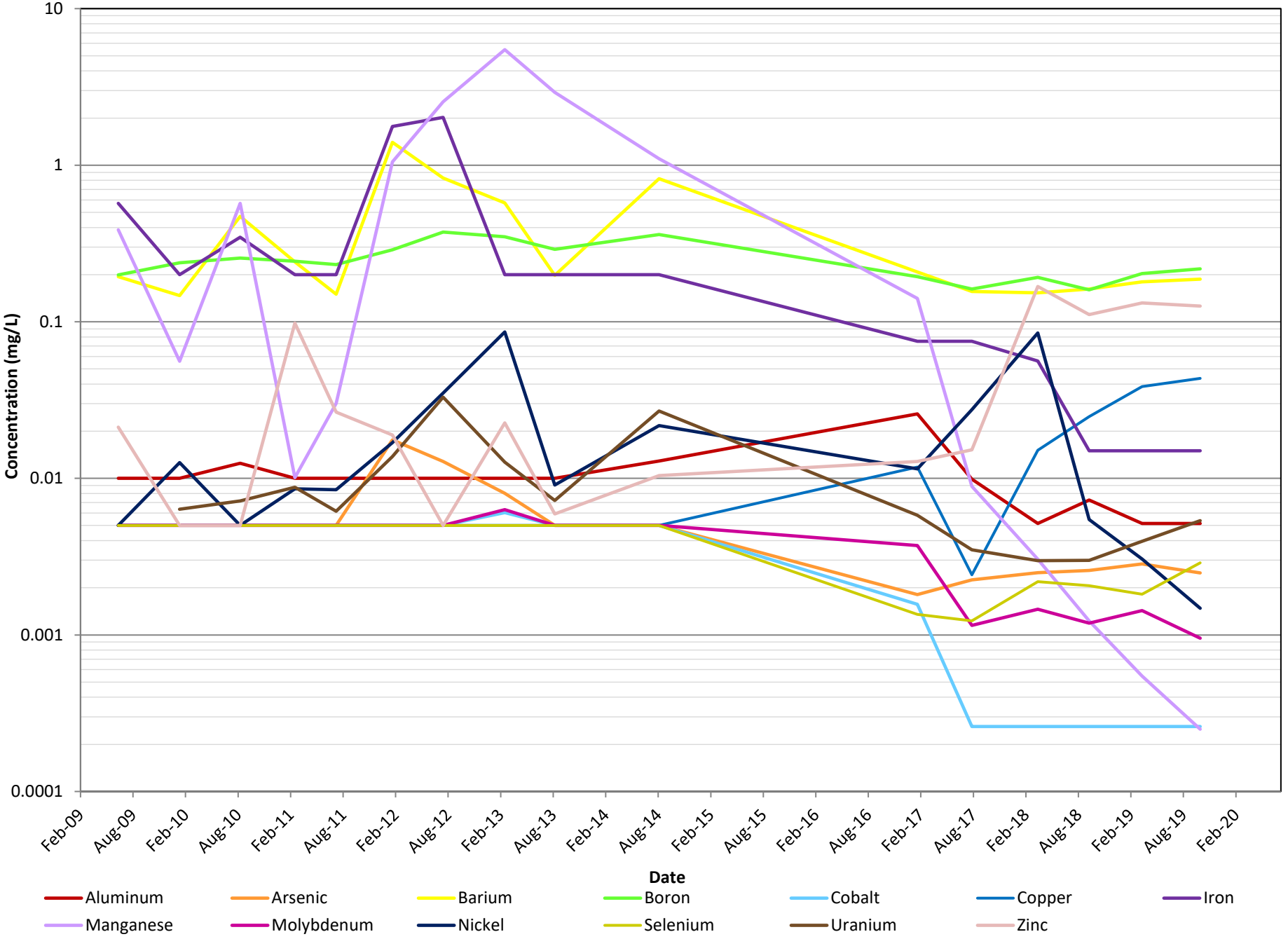
MW-11/MW-11R: ANION CONCENTRATIONS OVER TIME



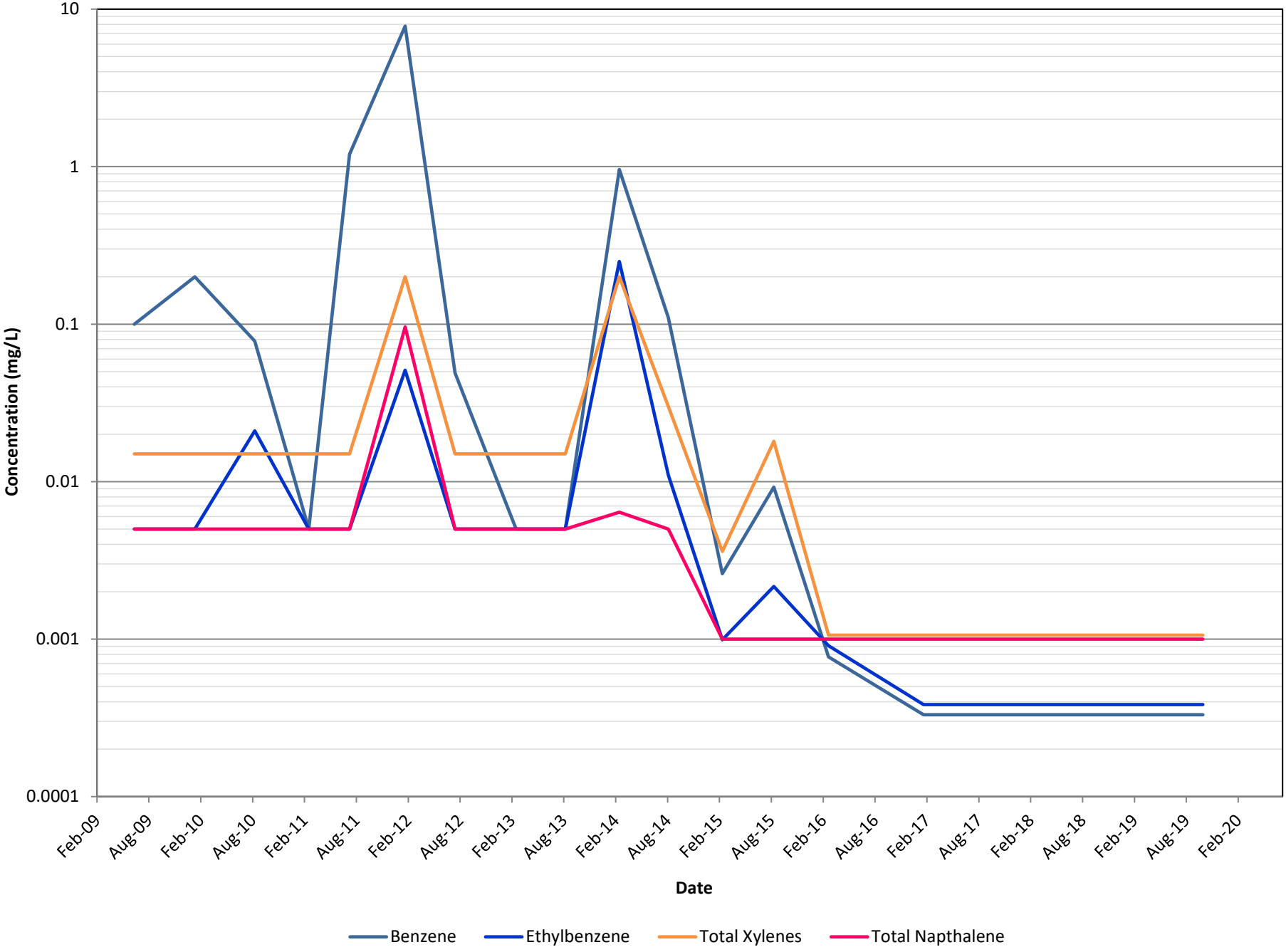
MW-11/MW-11R: TDS CONCENTRATIONS OVER TIME



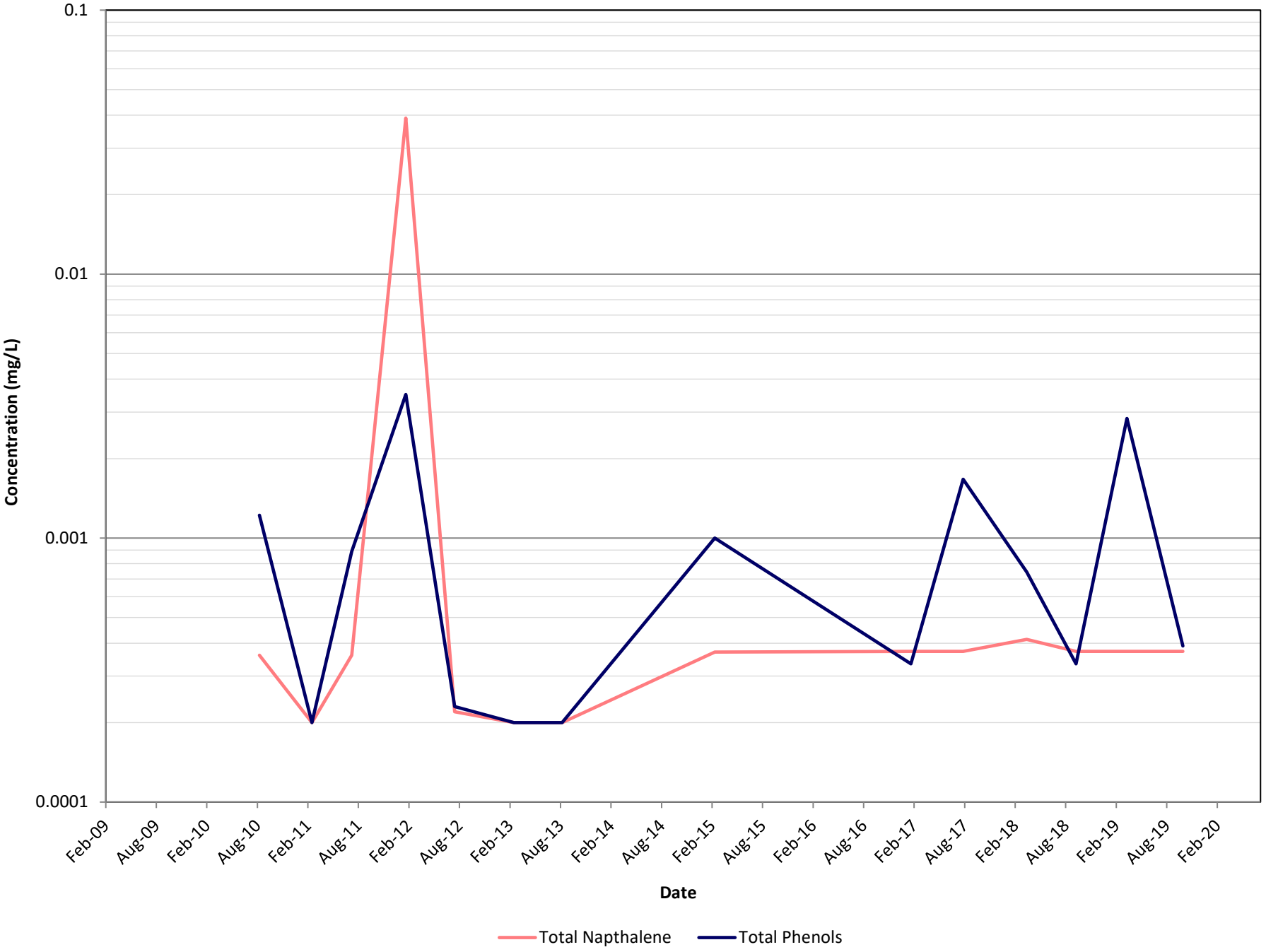
MW-11/MW-11R: METAL CONCENTRATIONS OVER TIME



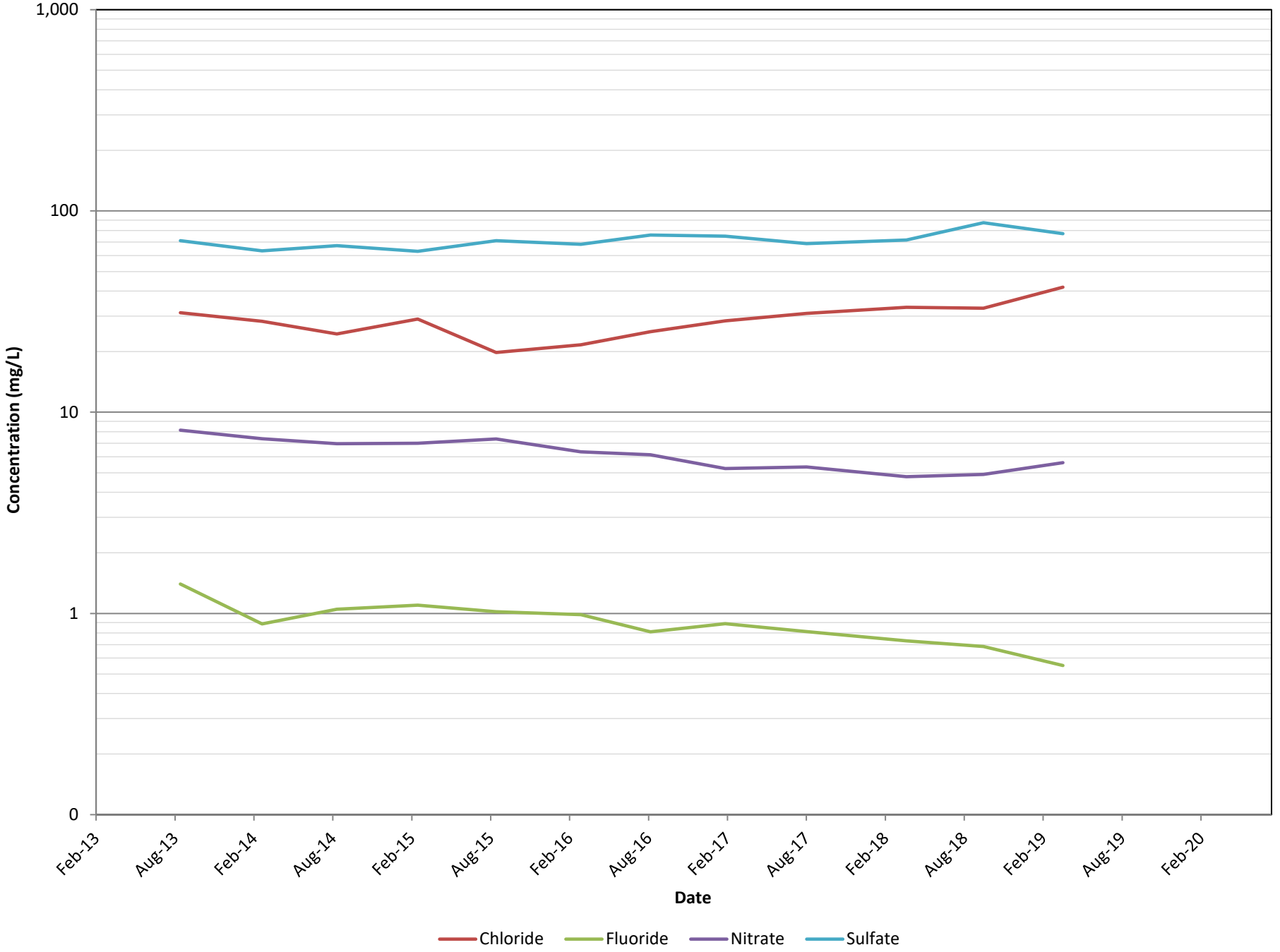
MW-11/MW-11R: VOC CONCENTRATIONS OVER TIME



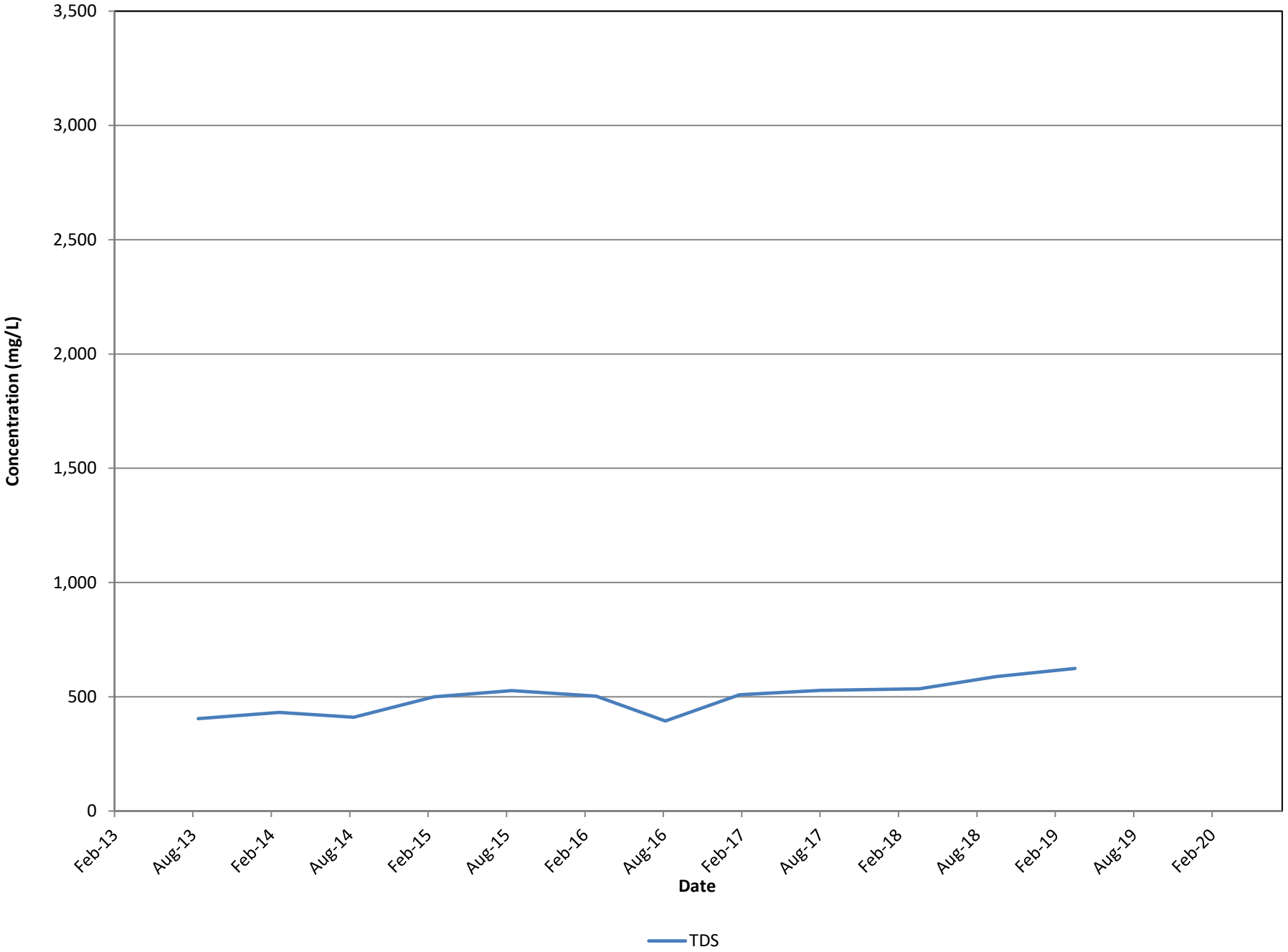
MW-11/MW-11R: SVOC CONCENTRATIONS OVER TIME



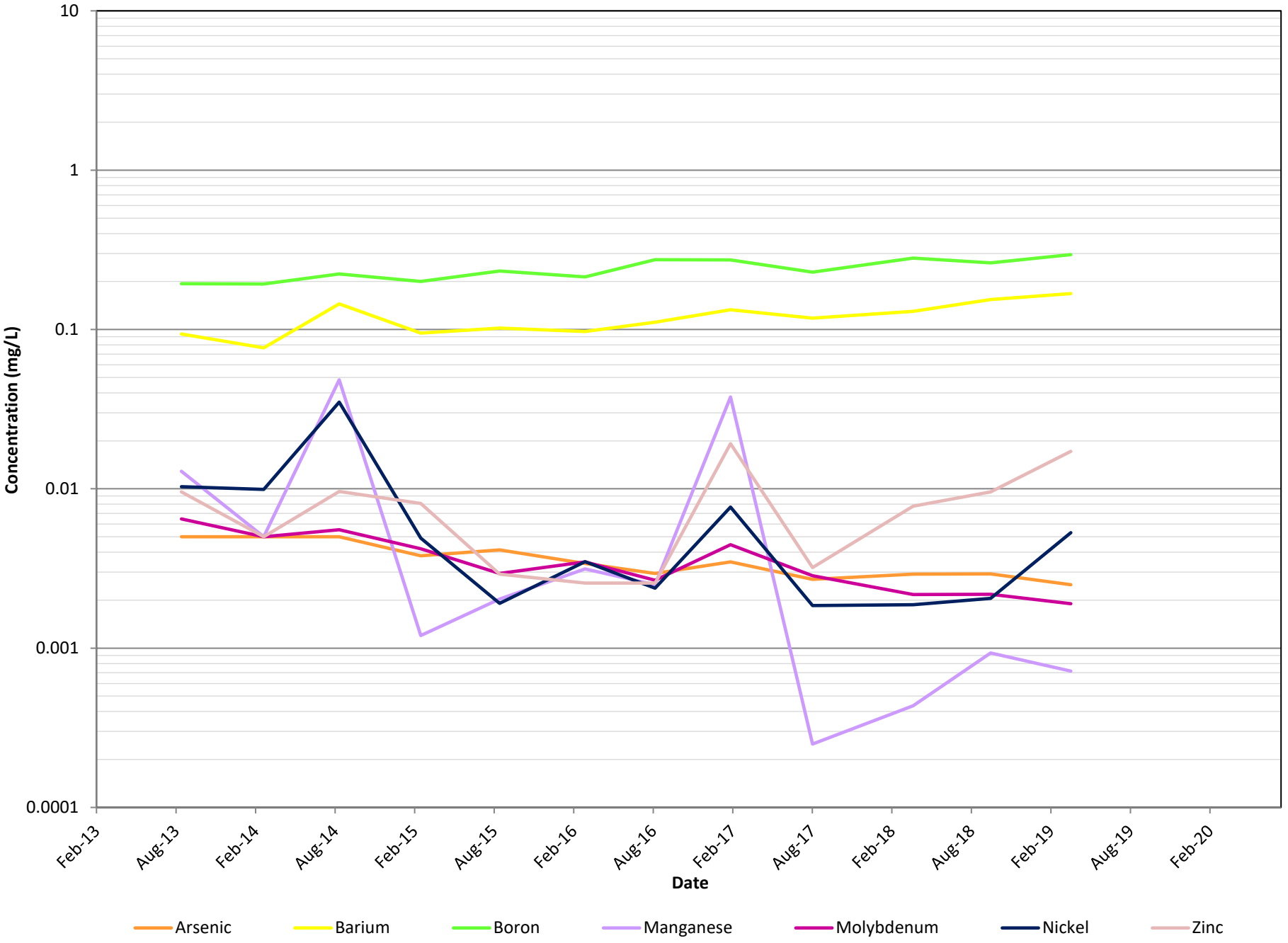
MW-12R: ANION CONCENTRATIONS OVER TIME



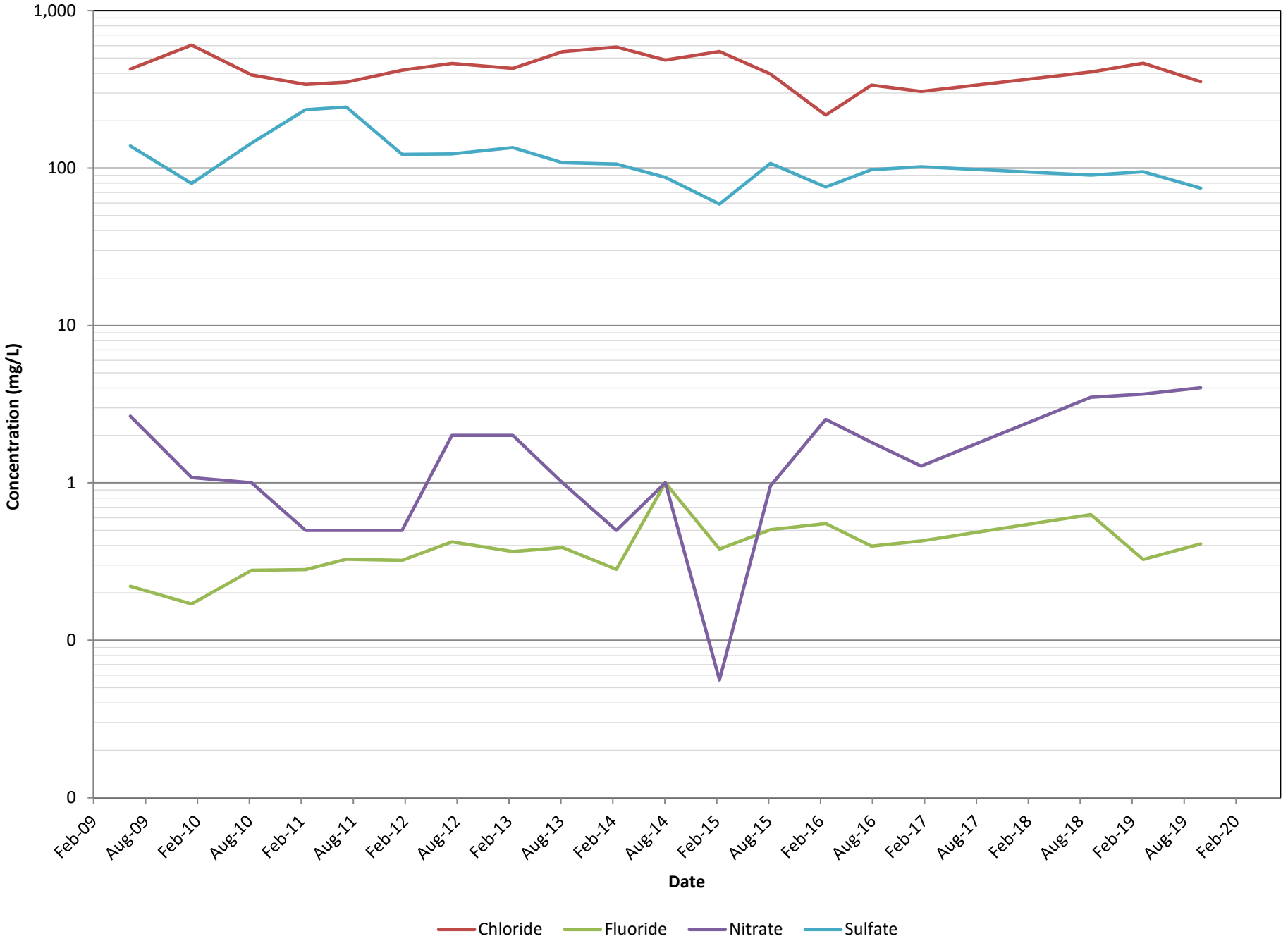
MW-12R: TDS CONCENTRATIONS OVER TIME



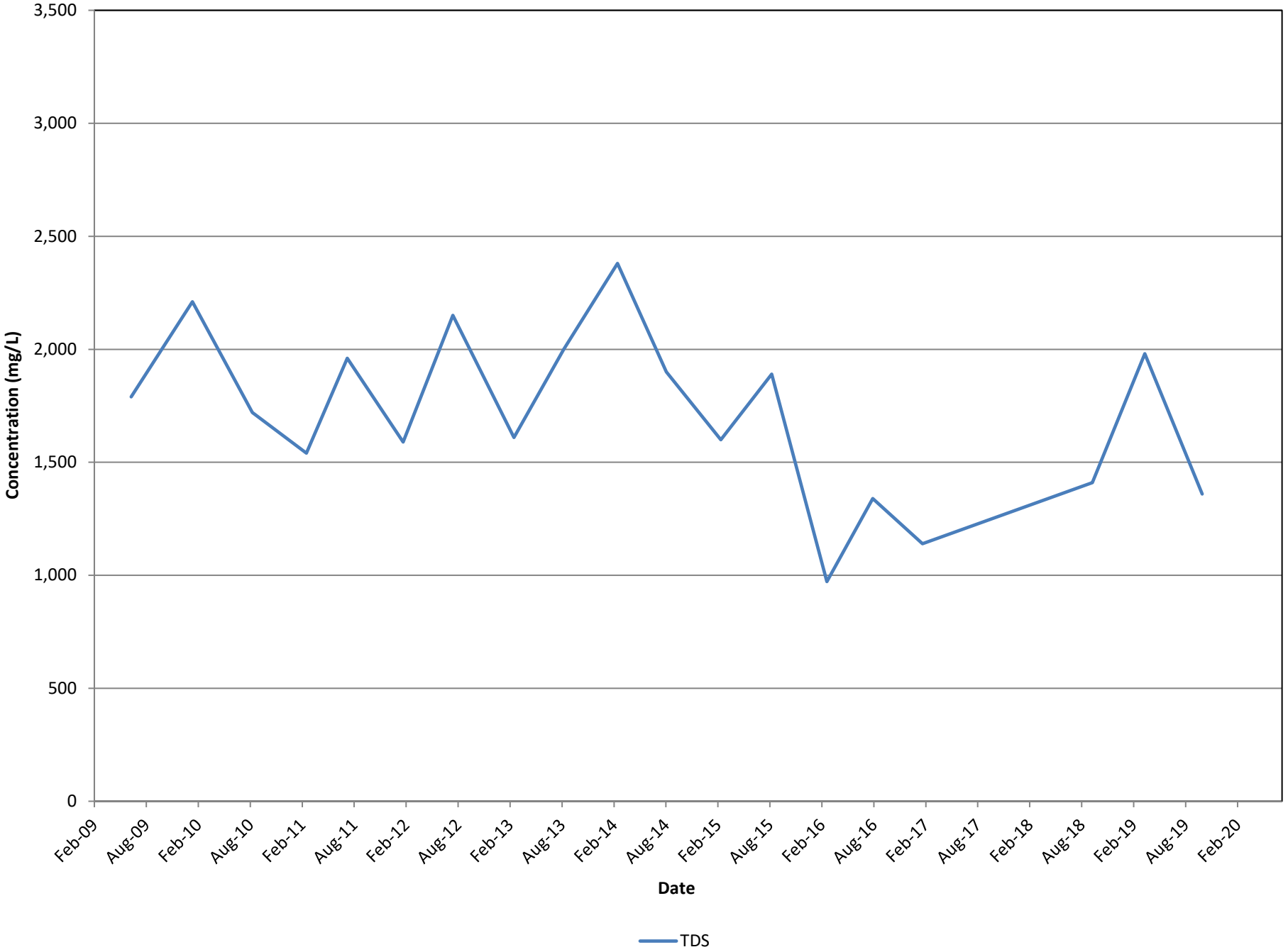
MW-12R: METAL CONCENTRATIONS OVER TIME



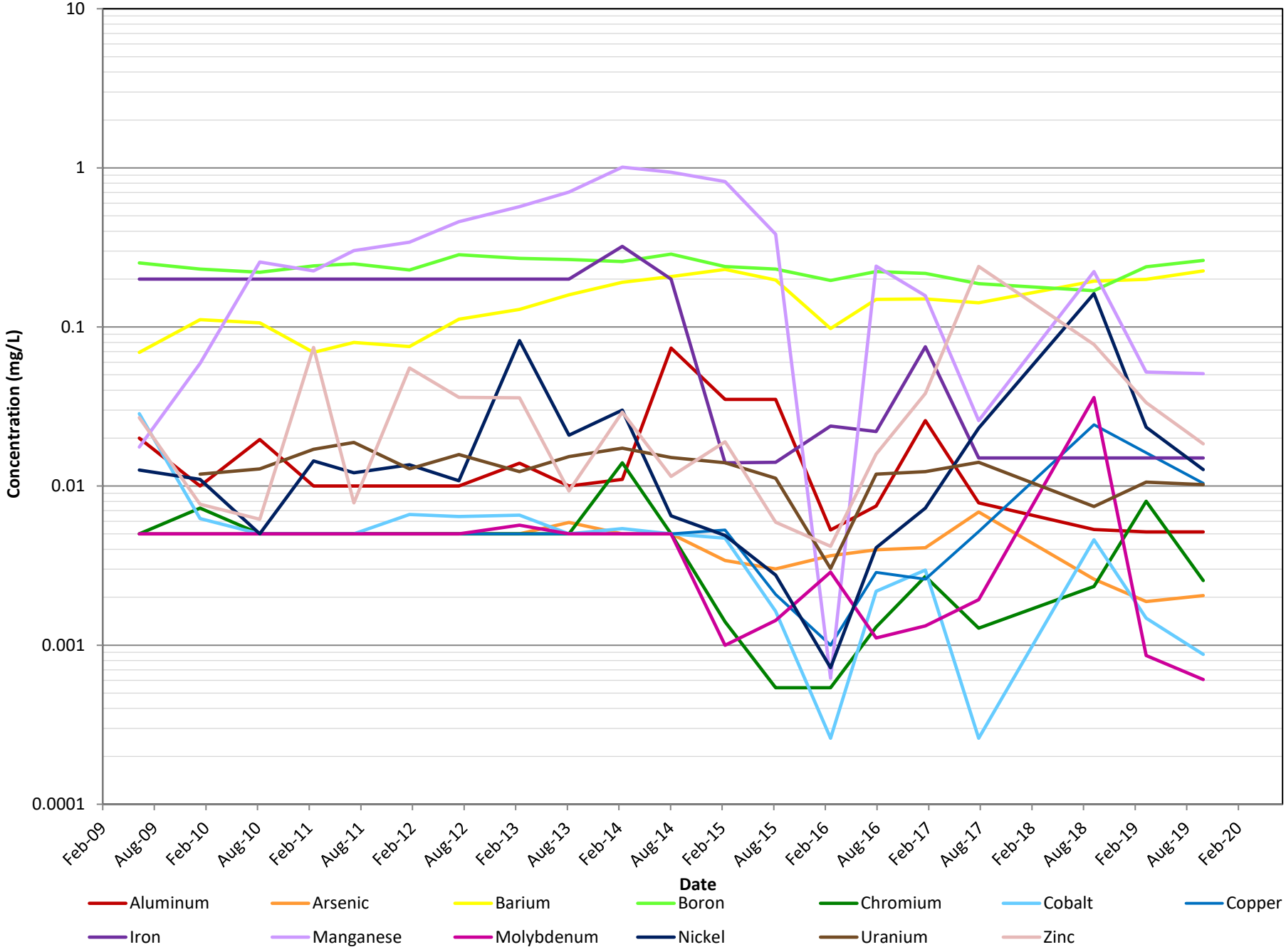
MW-13/MW-13R: ANION CONCENTRATIONS OVER TIME



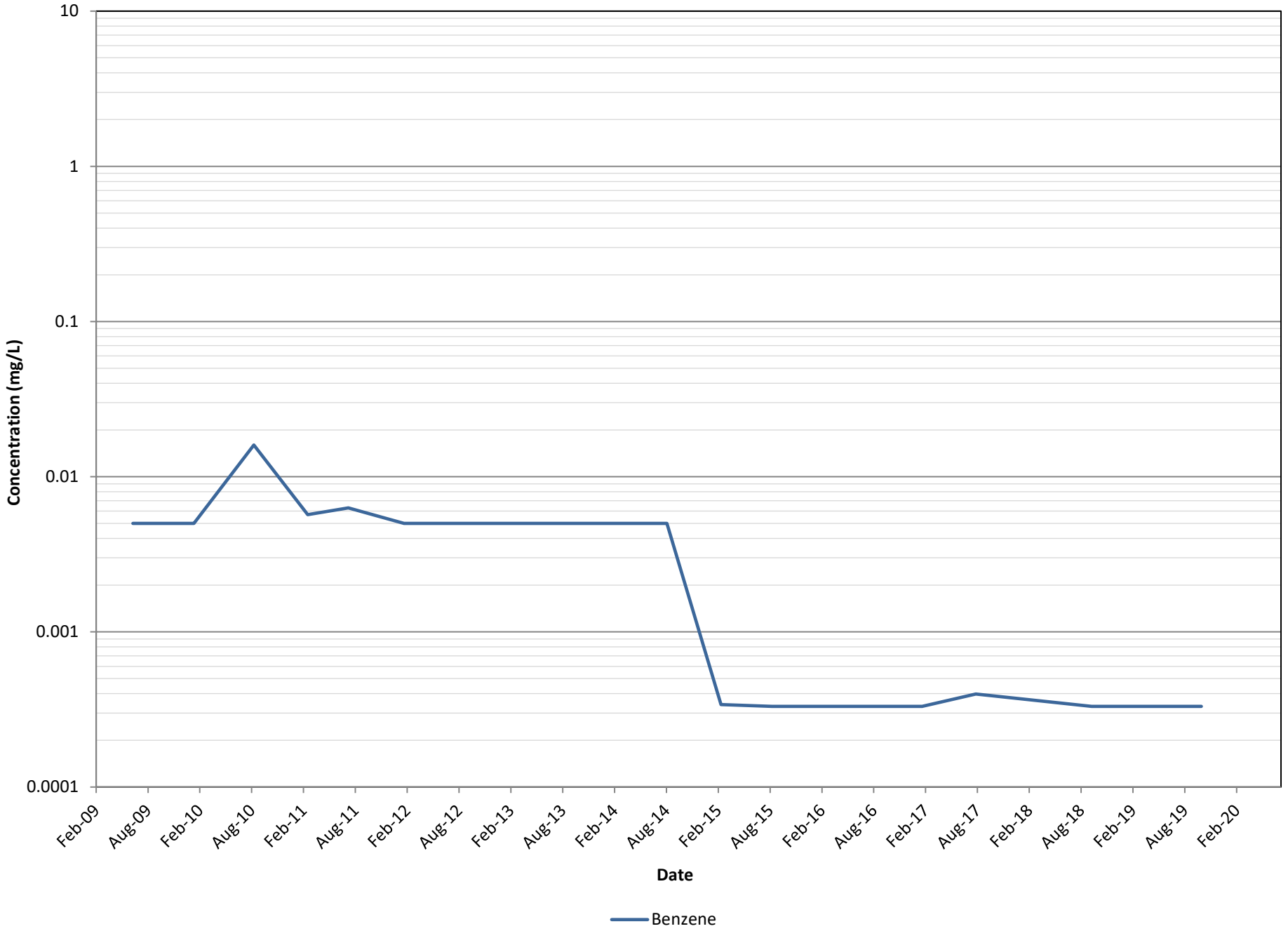
MW-13/MW-13R: TDS CONCENTRATIONS OVER TIME



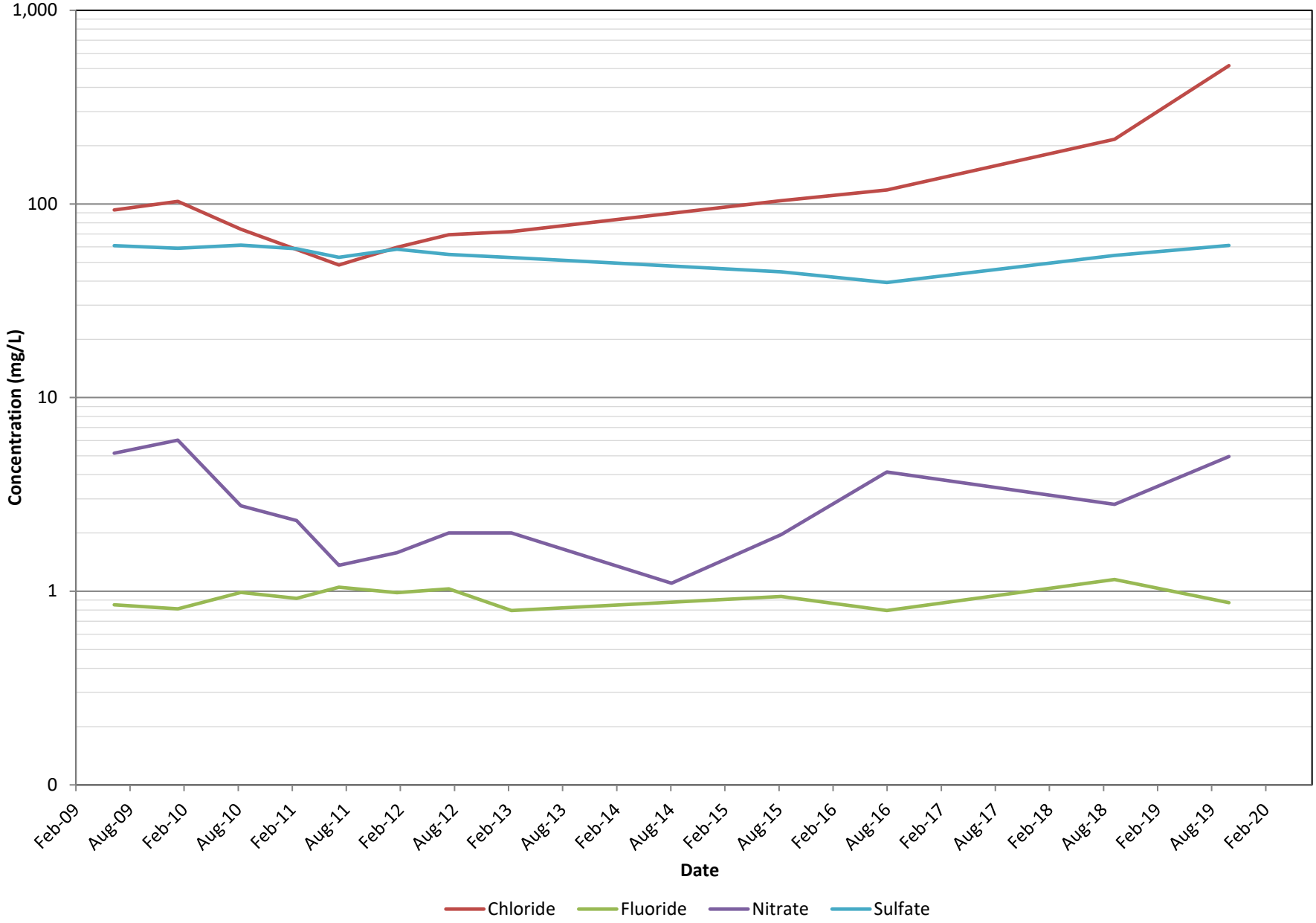
MW-13/MW-13R: METAL CONCENTRATIONS OVER TIME



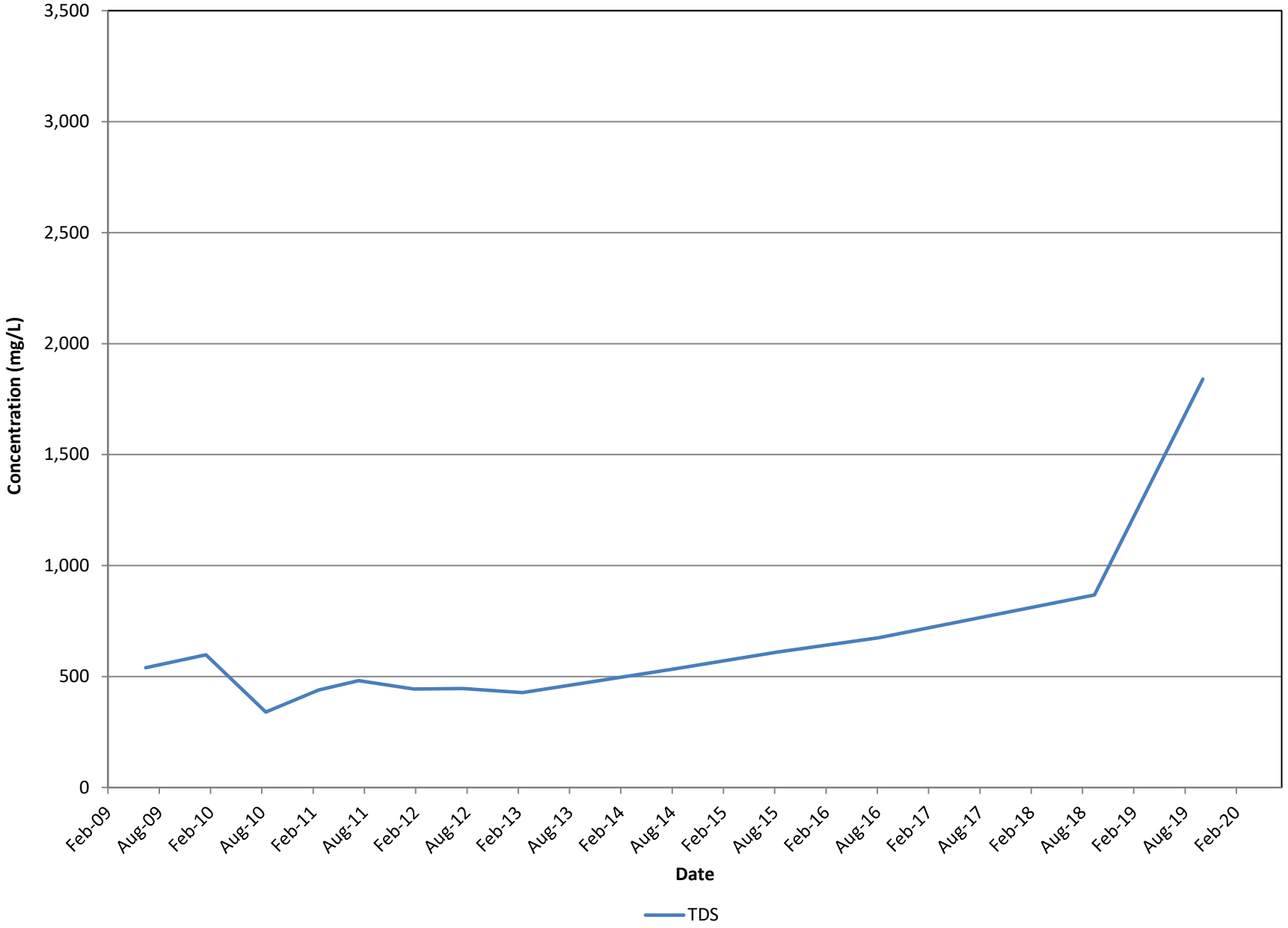
MW-13/MW-13R: VOC CONCENTRATIONS OVER TIME



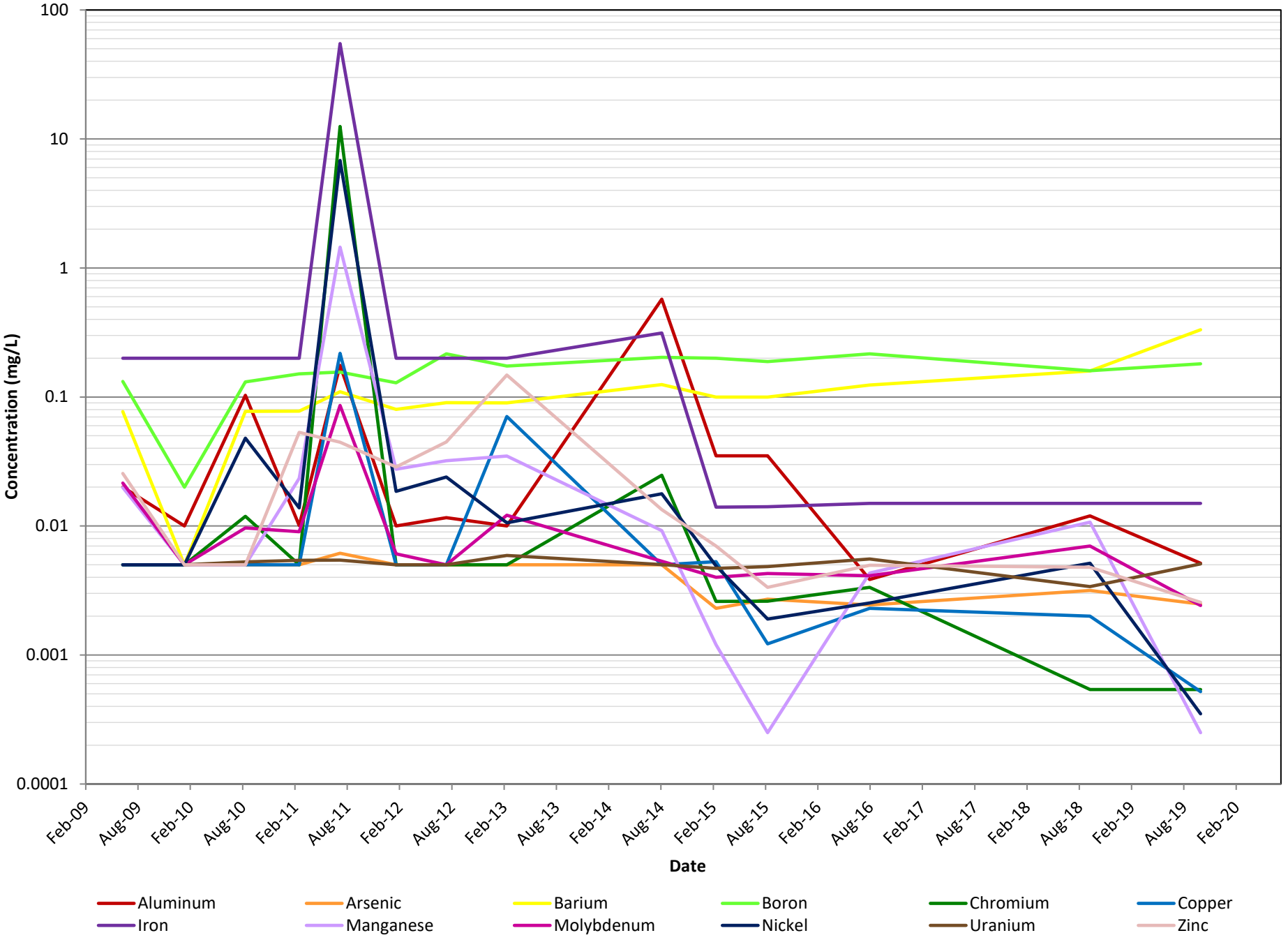
MW-14/MW-14R: ANION CONCENTRATIONS OVER TIME



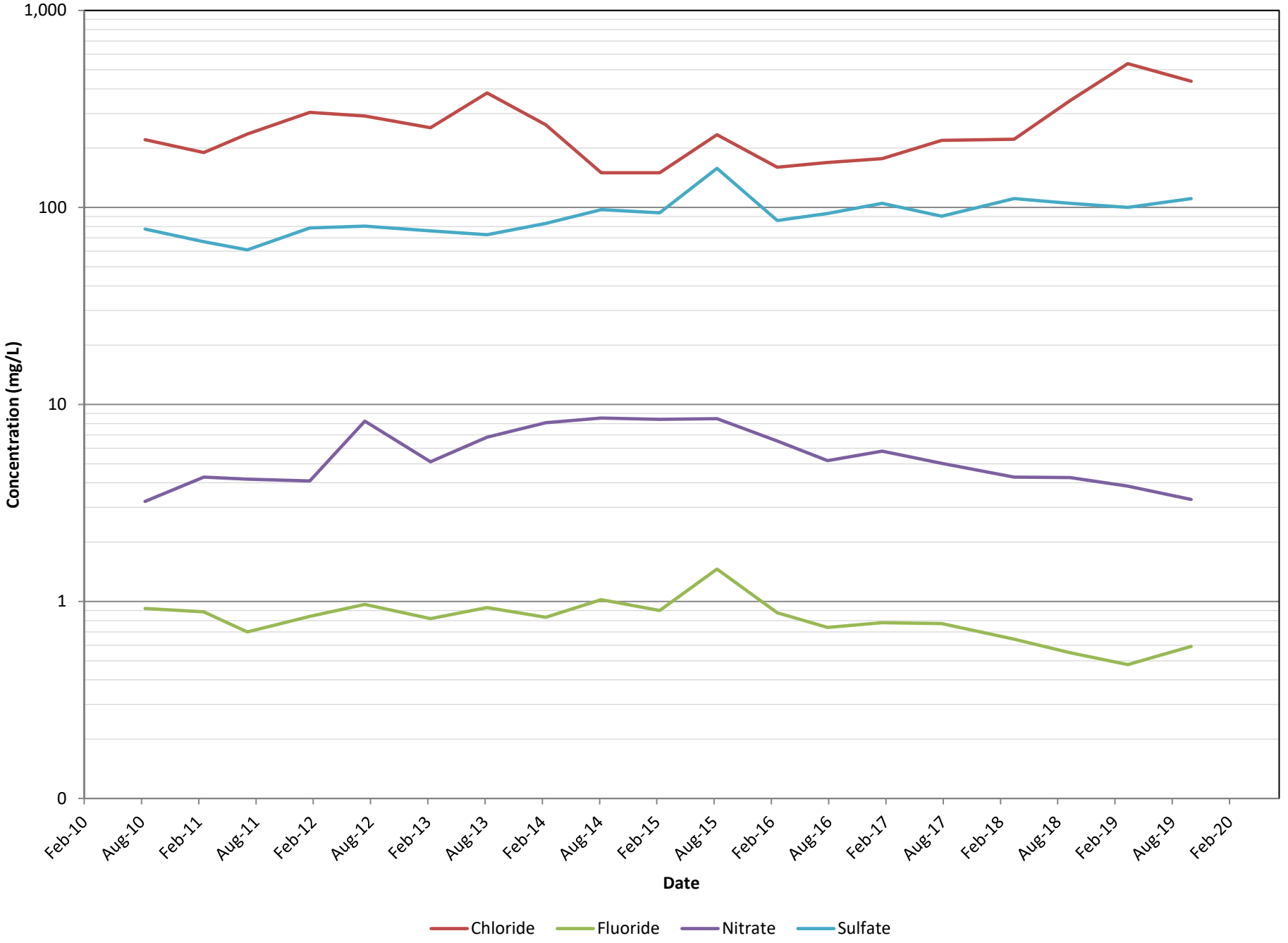
MW-14/MW-14R: TDS CONCENTRATIONS OVER TIME



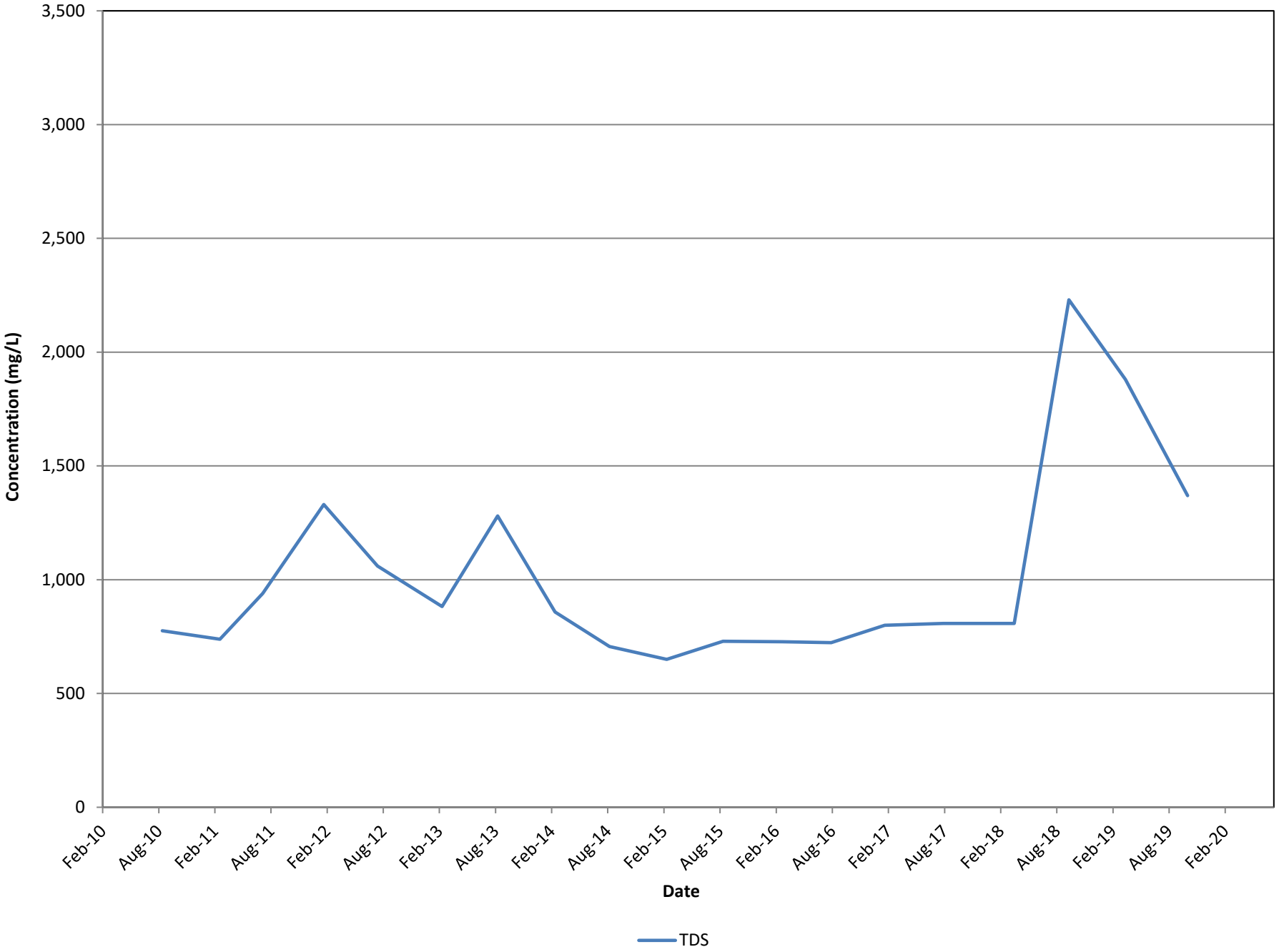
MW-14/MW-14R: METAL CONCENTRATIONS OVER TIME



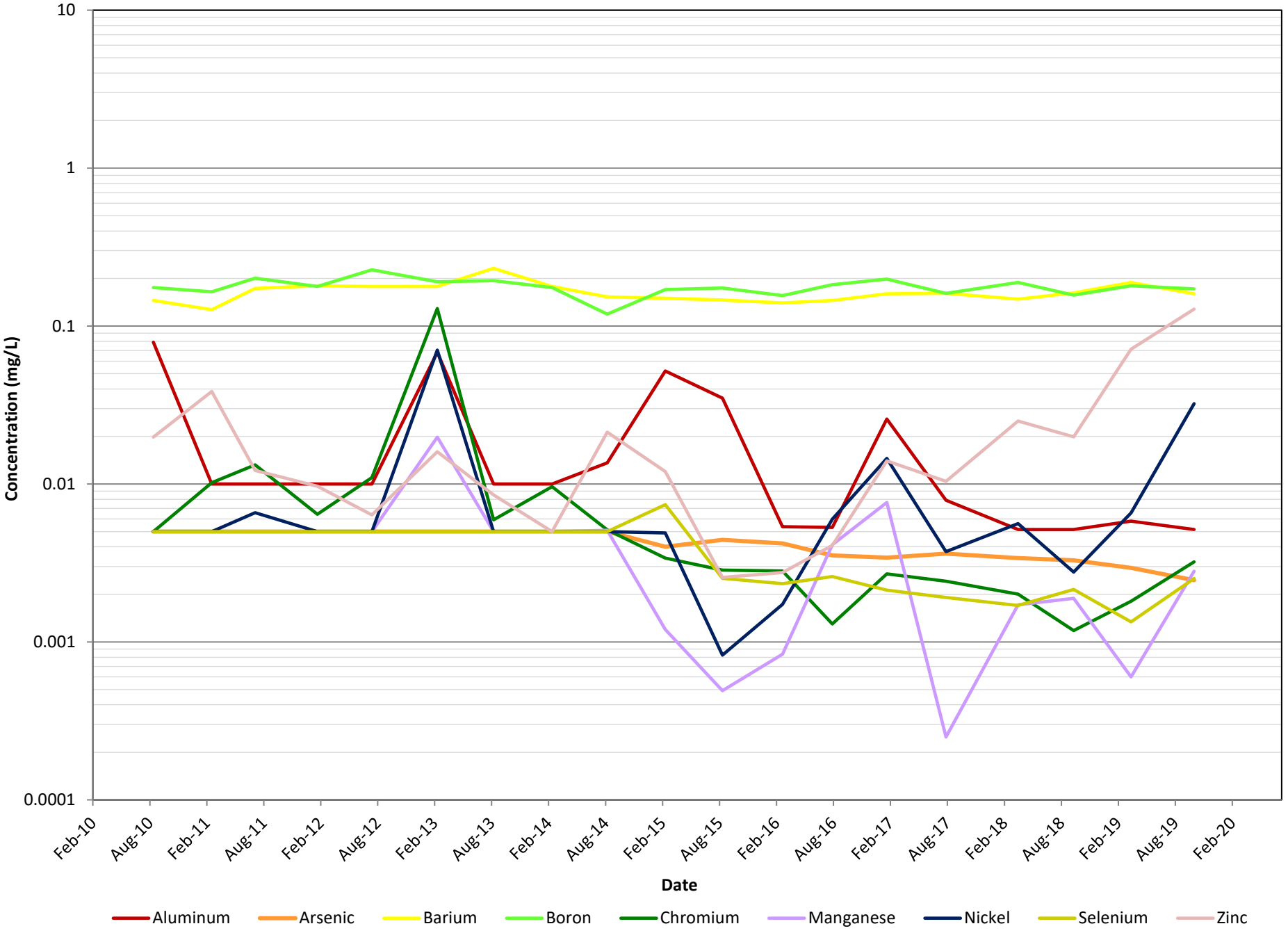
MW-15: ANION CONCENTRATIONS OVER TIME



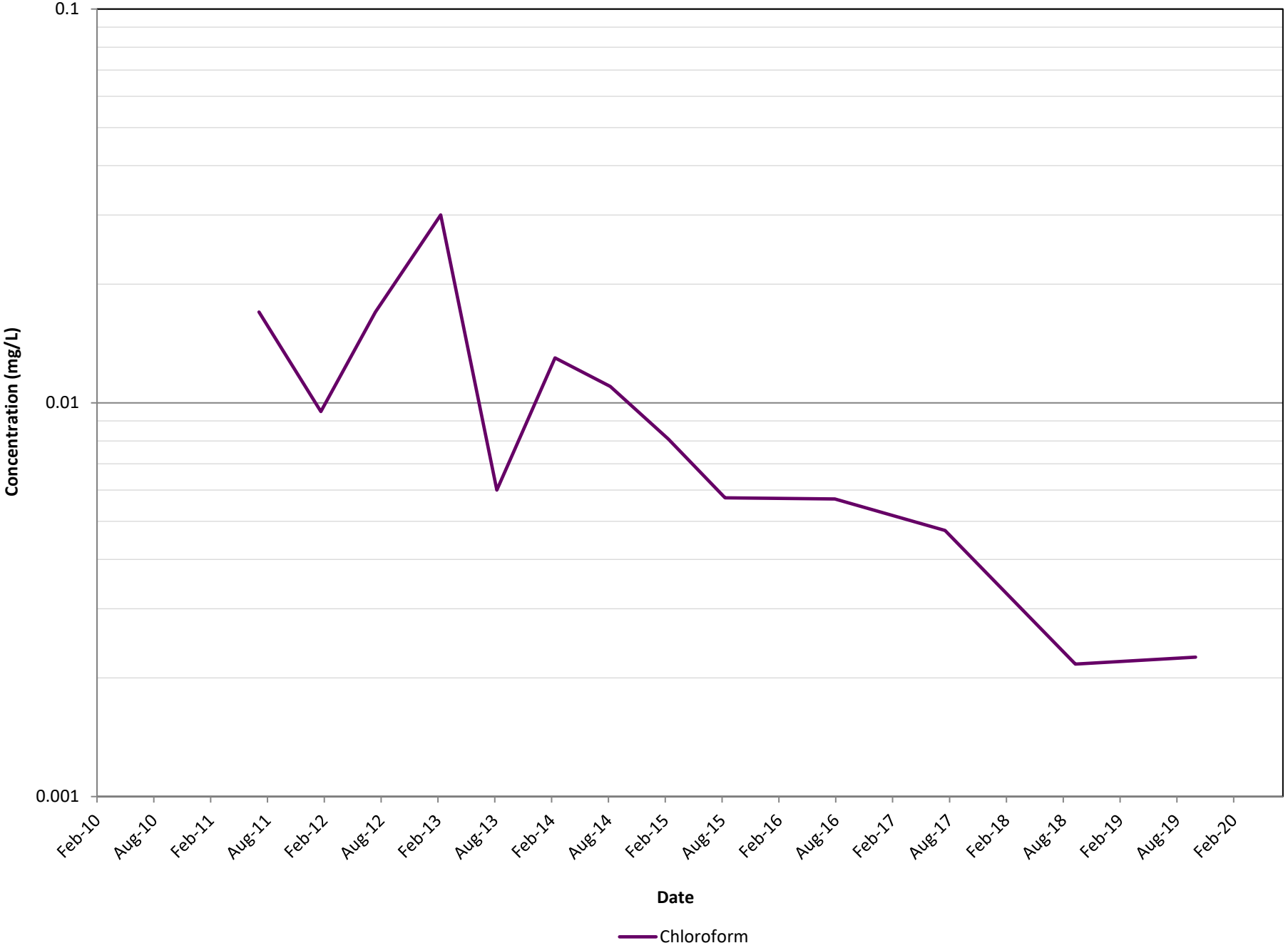
MW-15: TDS CONCENTRATIONS OVER TIME



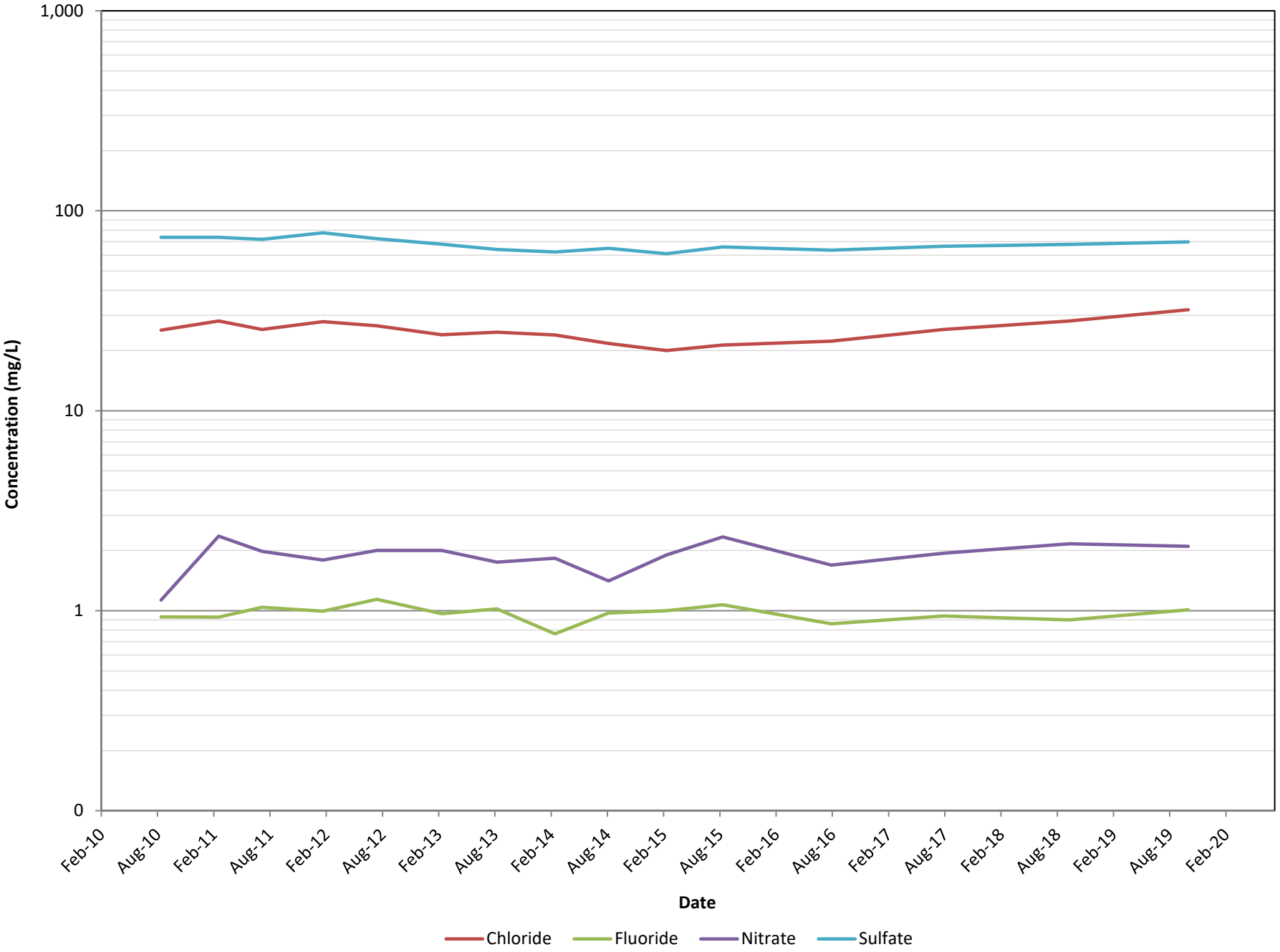
MW-15: METAL CONCENTRATIONS OVER TIME



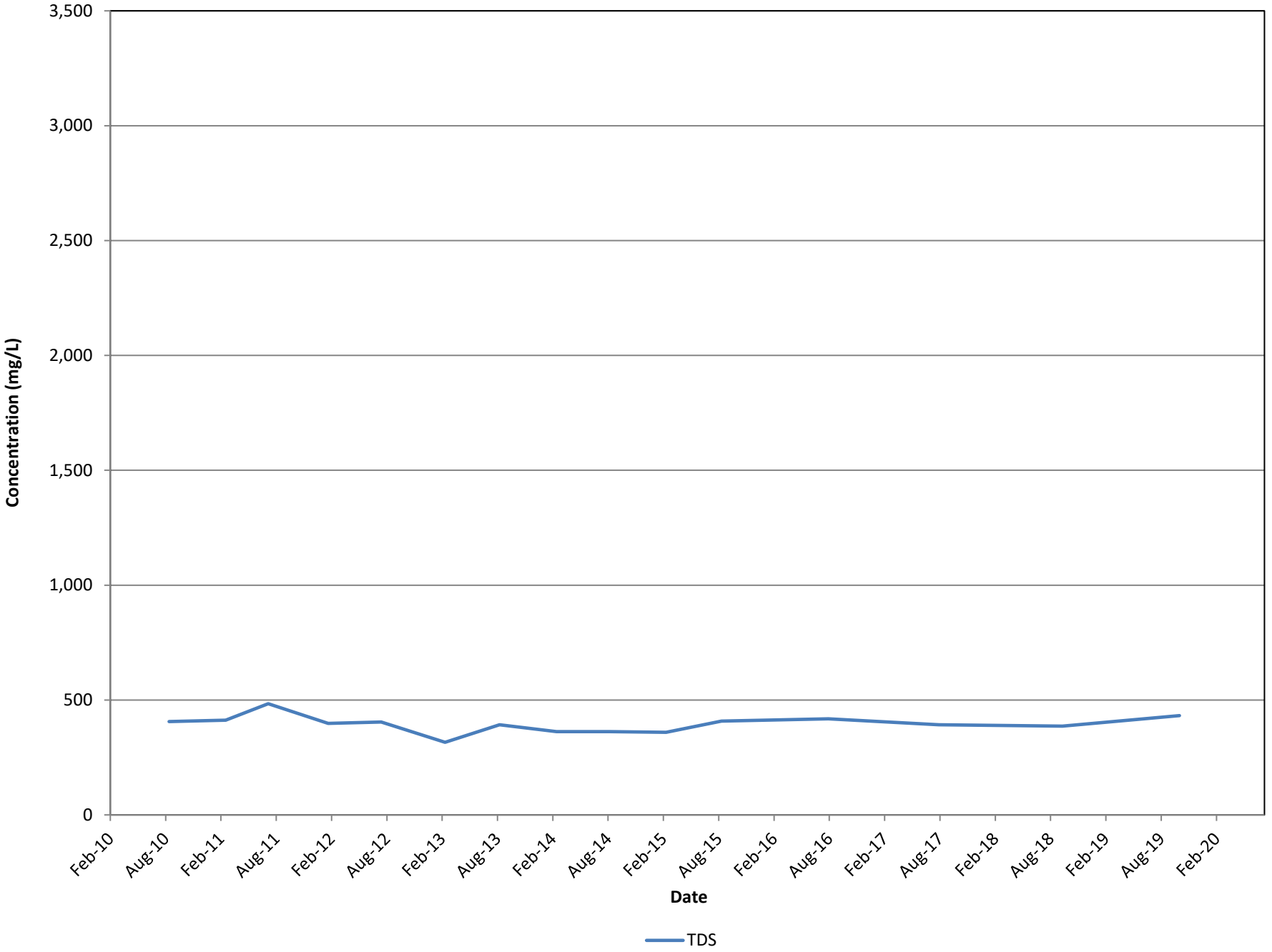
MW-15: VOC CONCENTRATIONS OVER TIME



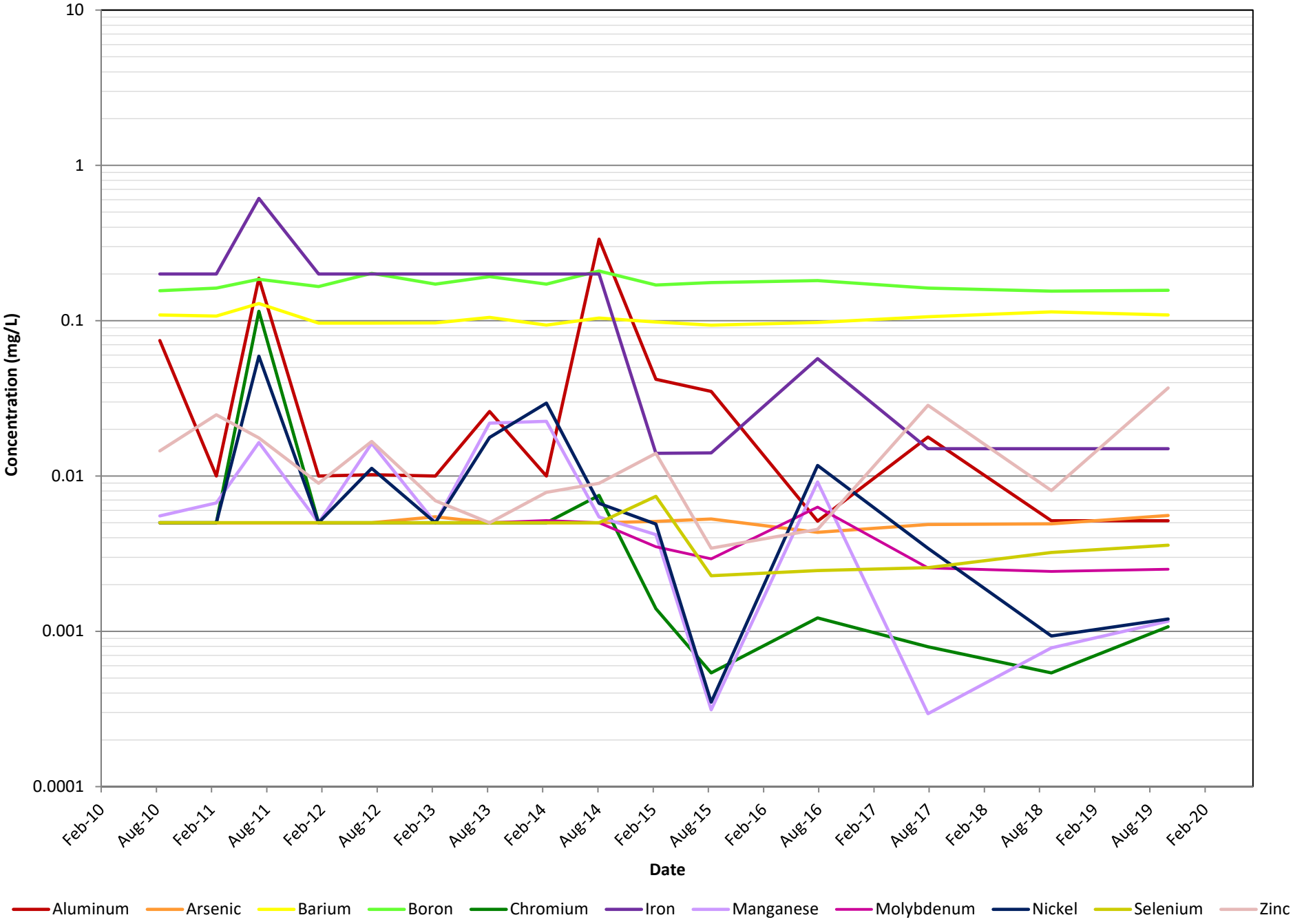
MW-16: ANION CONCENTRATIONS OVER TIME



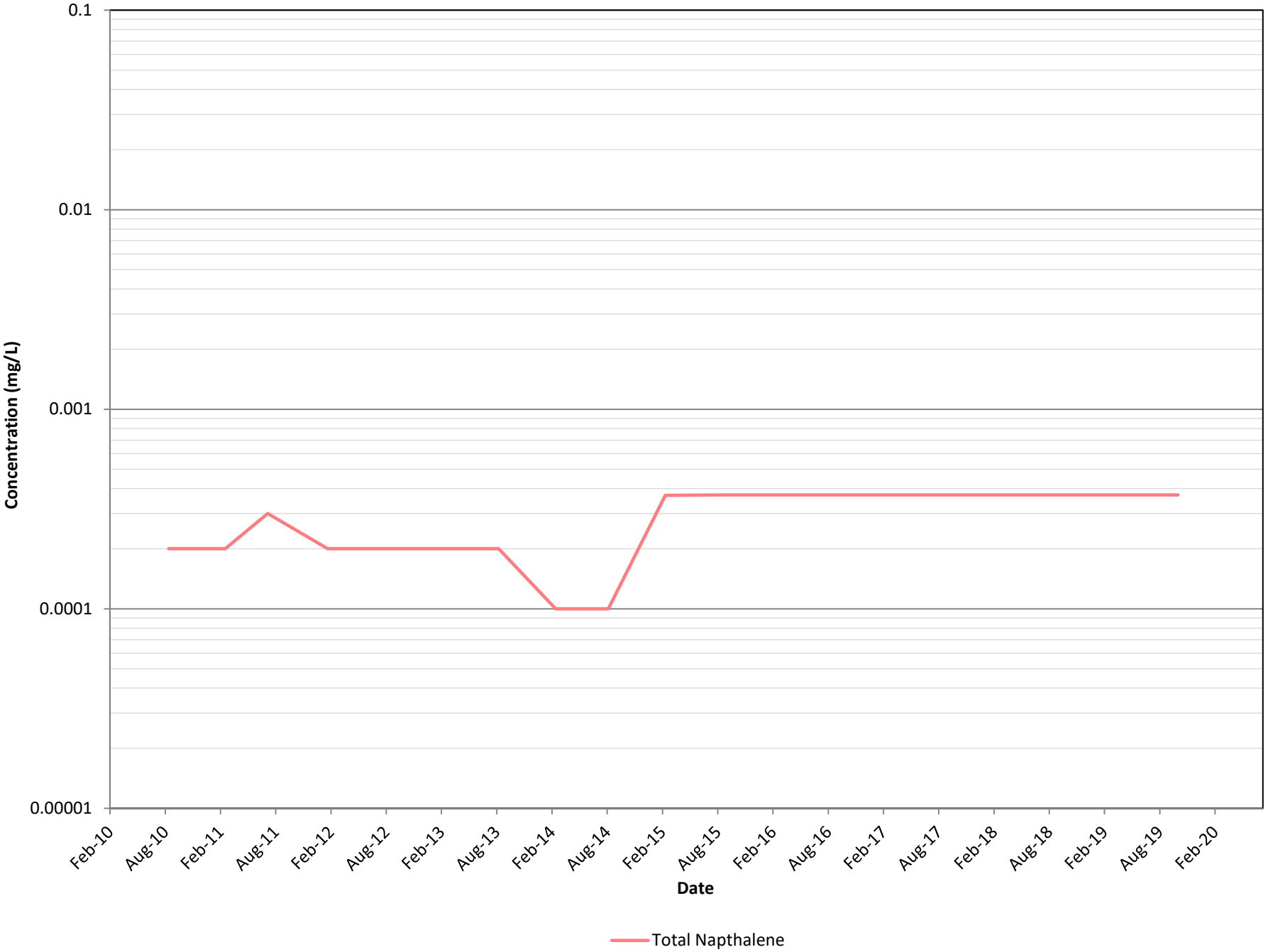
MW-16: TDS CONCENTRATIONS OVER TIME



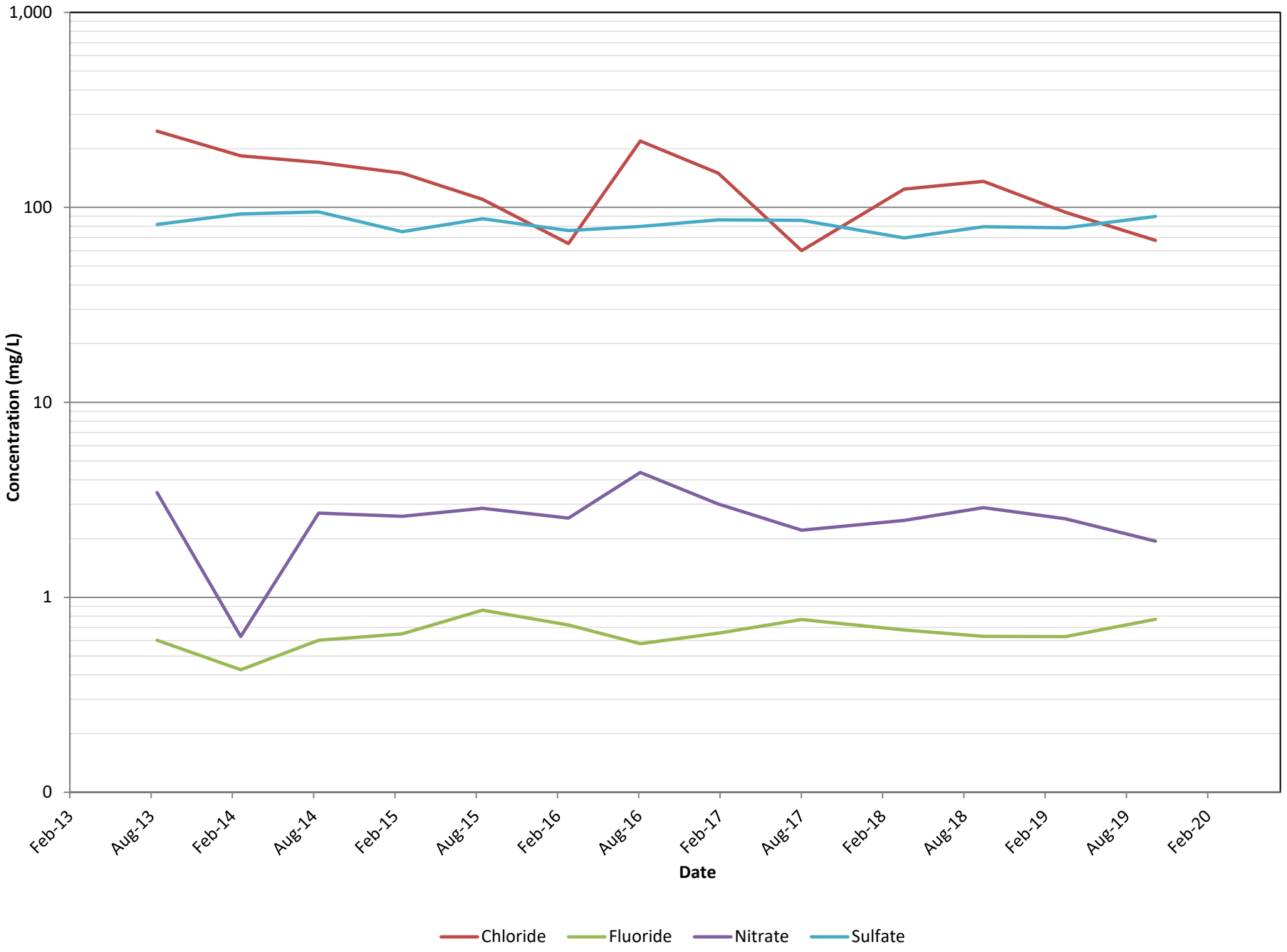
MW-16: METAL CONCENTRATIONS OVER TIME



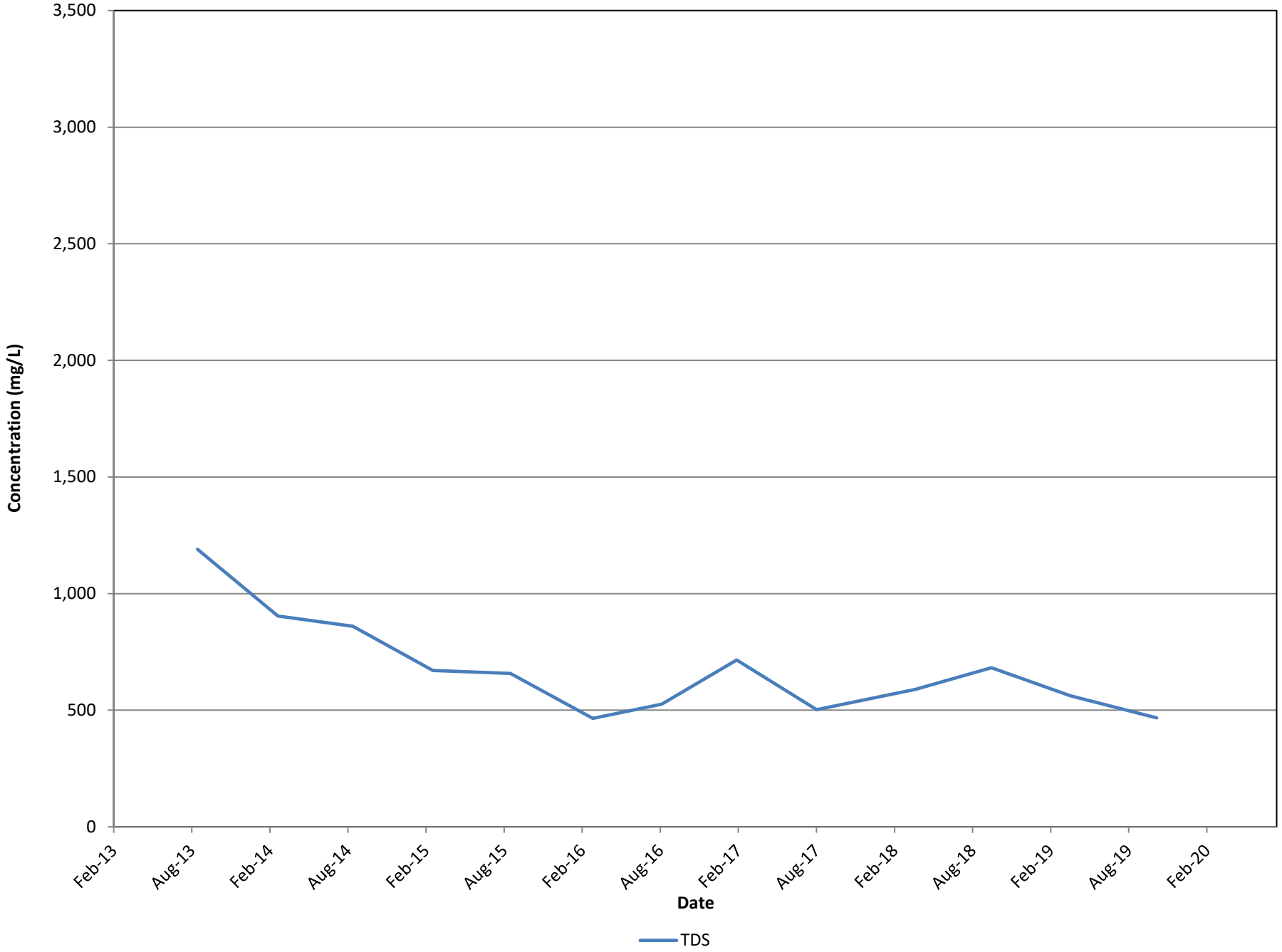
MW-16: SVOC CONCENTRATIONS OVER TIME



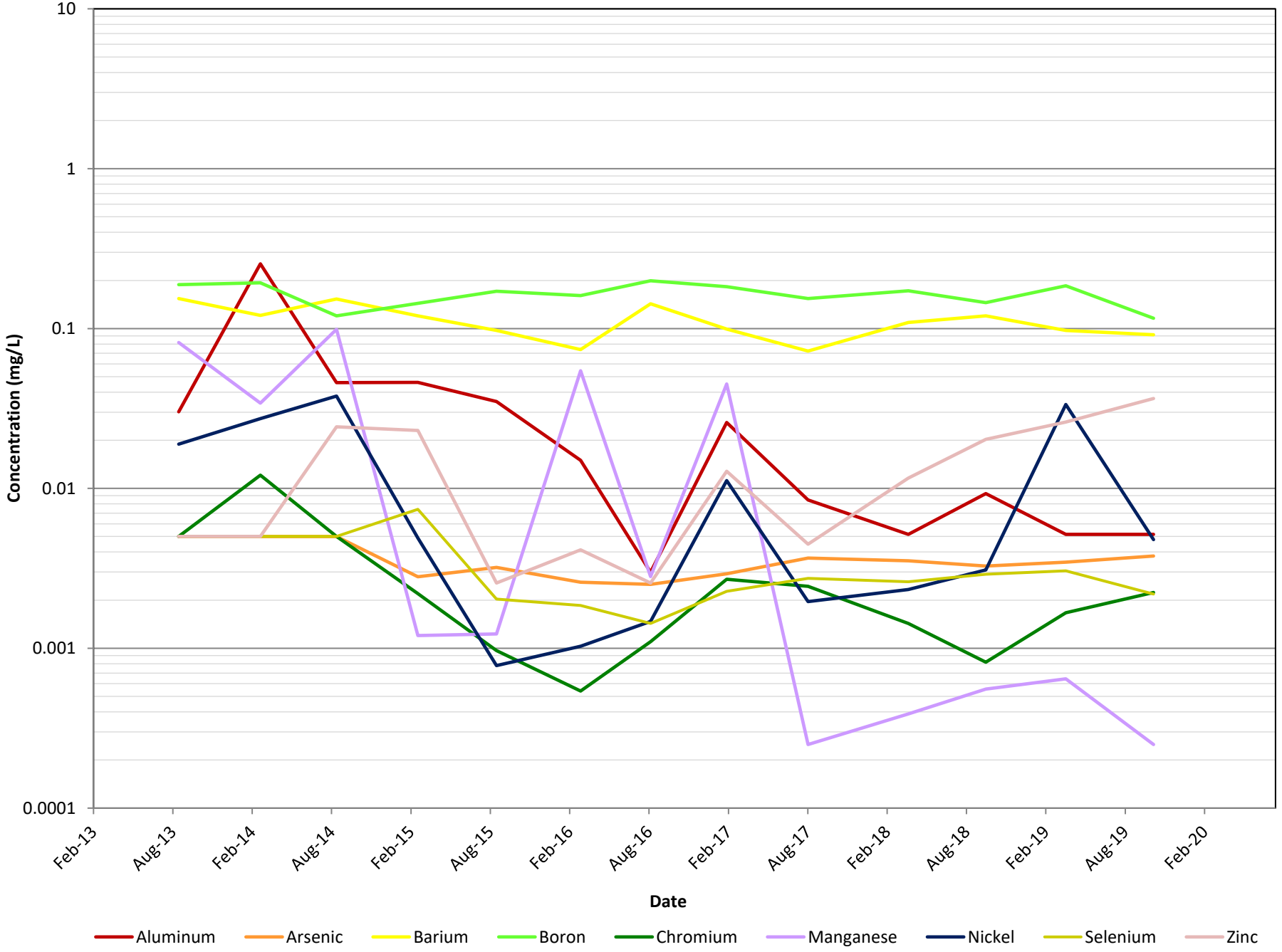
MW-17R: ANION CONCENTRATIONS OVER TIME

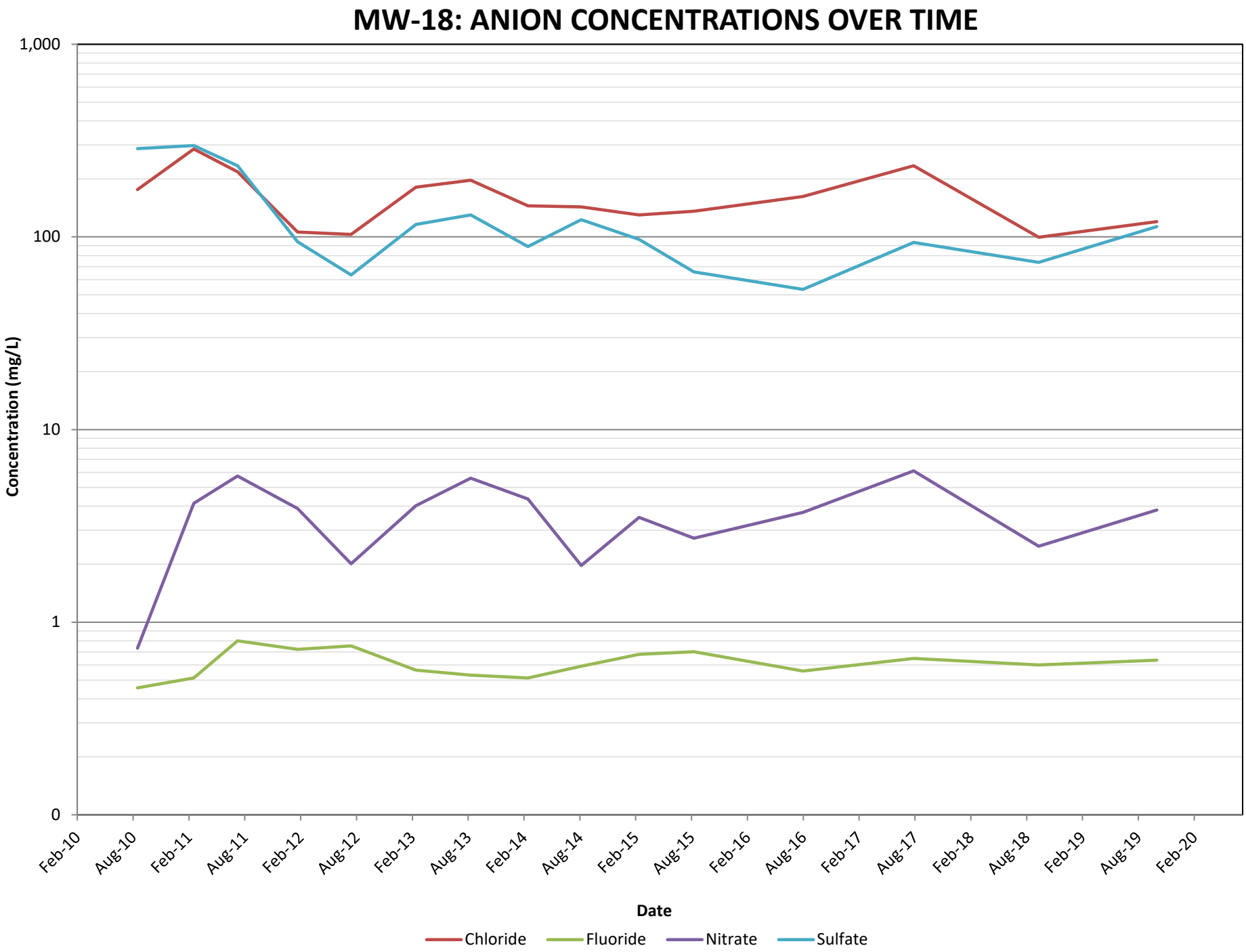


MW-17R: TDS CONCENTRATIONS OVER TIME

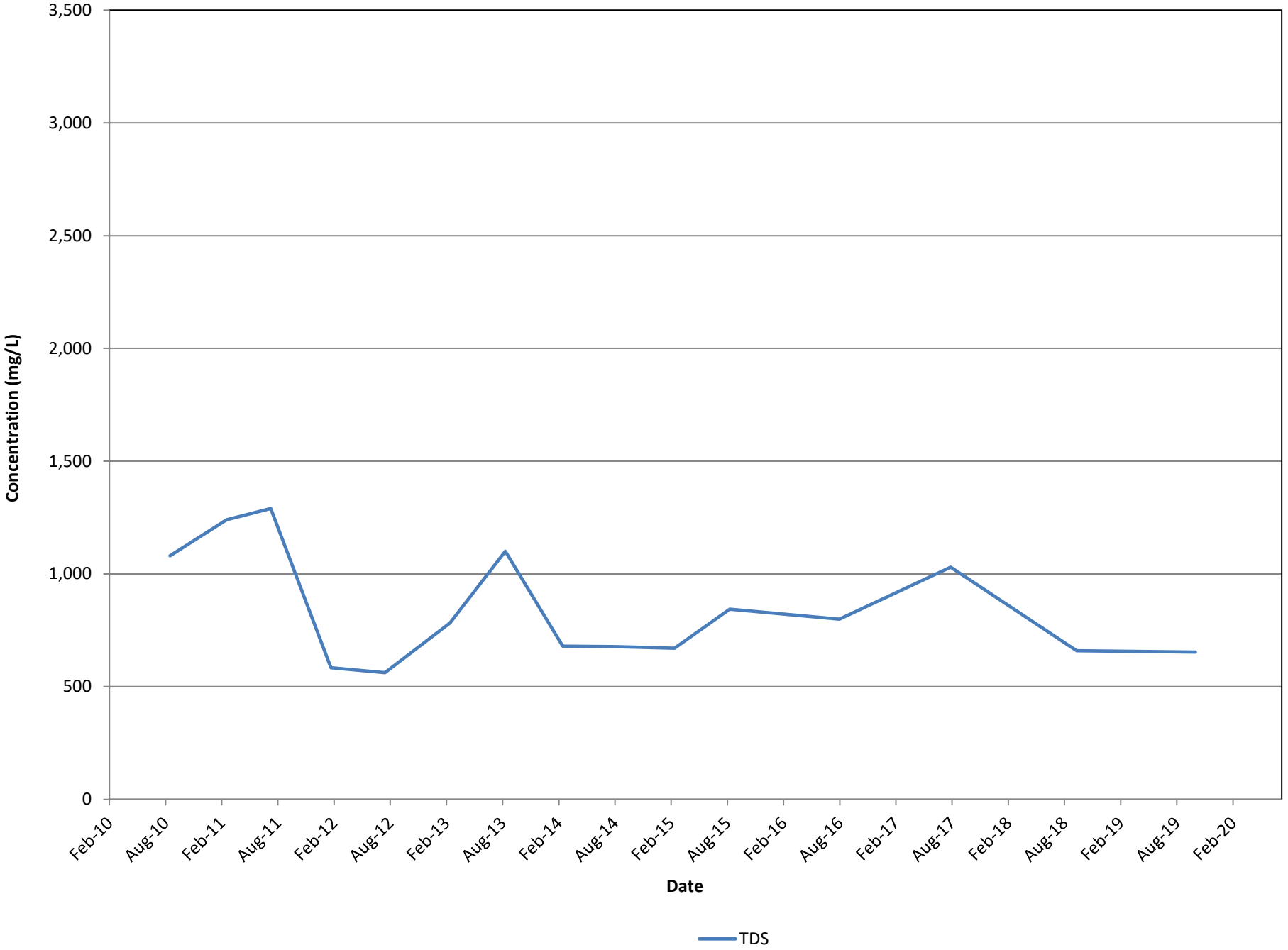


MW-17R: METAL CONCENTRATIONS OVER TIME

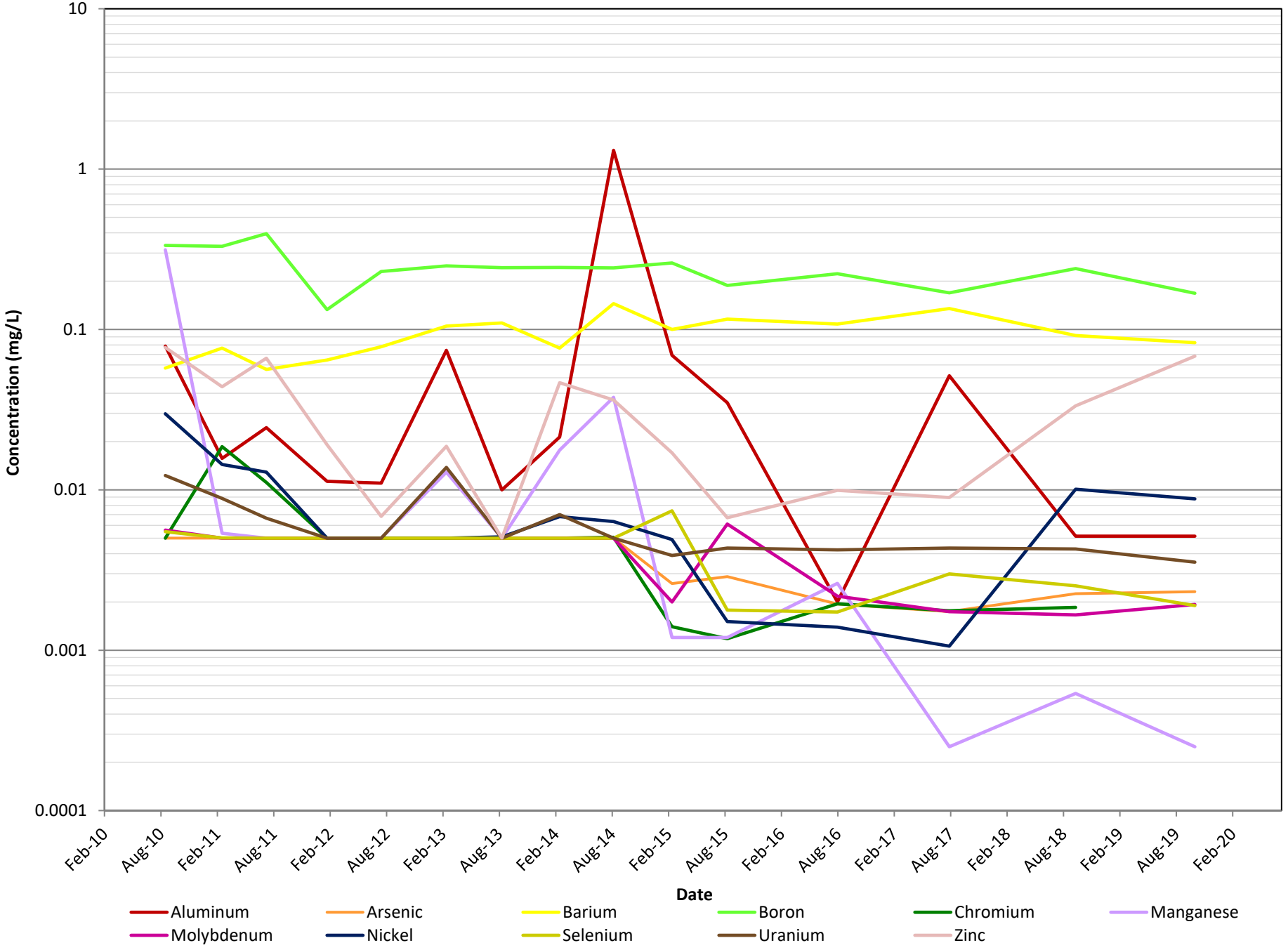



MW-18: ANION CONCENTRATIONS OVER TIME
1,000
100
10
1
0
Concentration (mg/L)
Feb-10
Aug-10
Feb-11
Aug-11
Feb-12
Aug-12
Feb-13
Aug-13
Feb-14
Aug-14
Feb-15
Aug-15
Feb-16
Aug-16
Feb-17
Aug-17
Feb-18
Aug-18
Feb-19
Aug-19
Feb-20
Date
Chloride
Fluoride
Nitrate
Sulfate

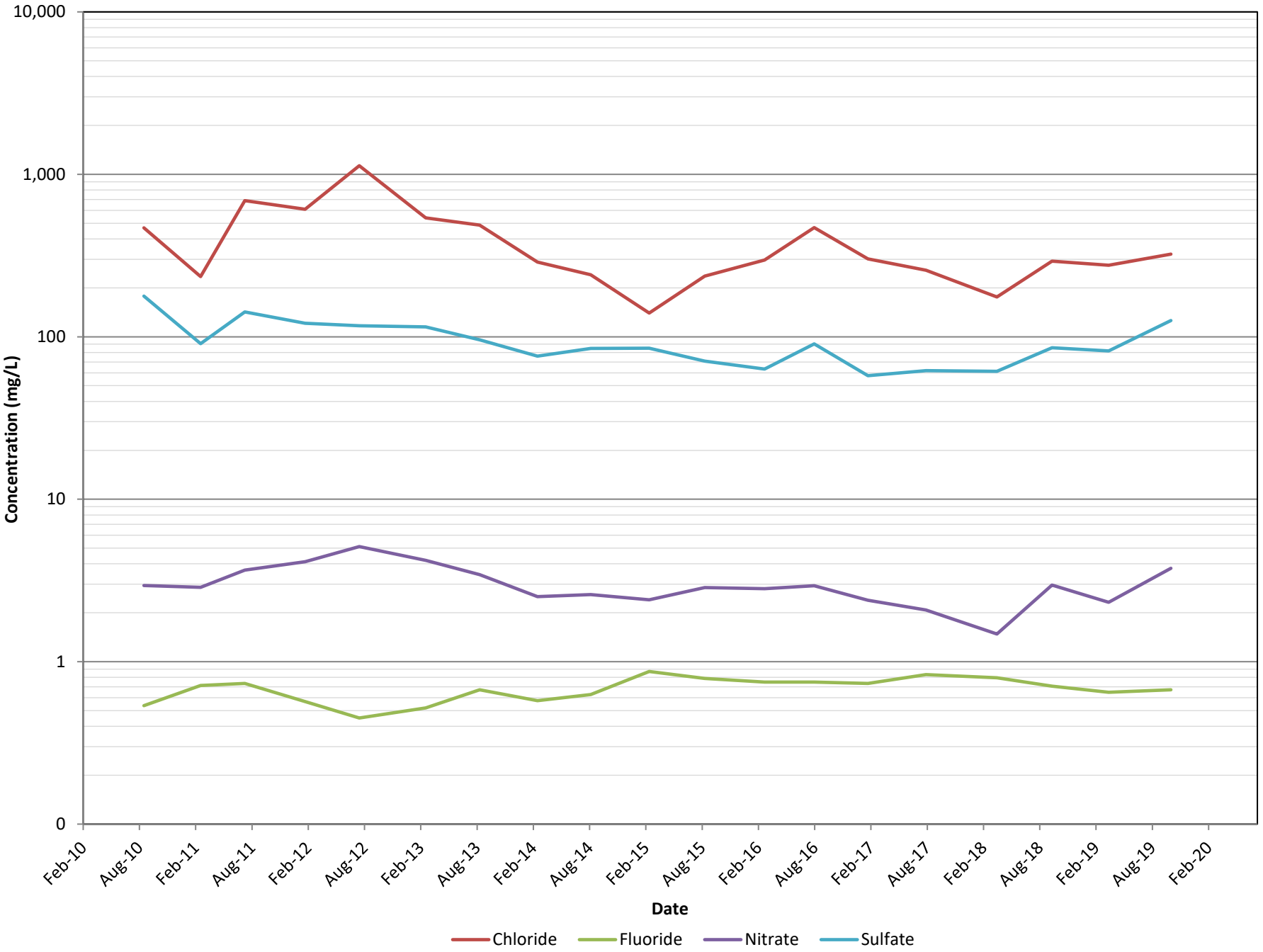
MW-18: TDS CONCENTRATIONS OVER TIME



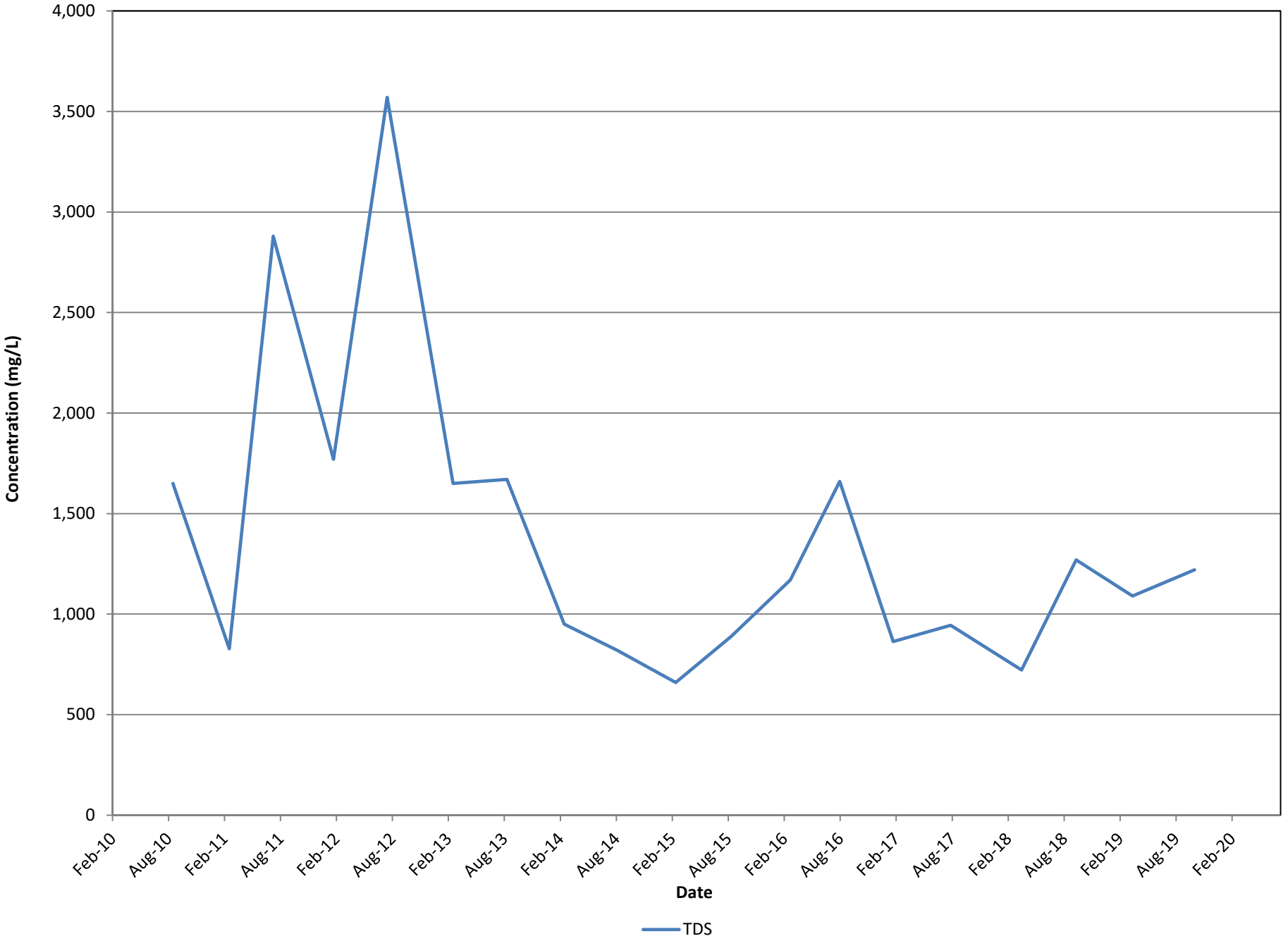
MW-18: METAL CONCENTRATIONS OVER TIME



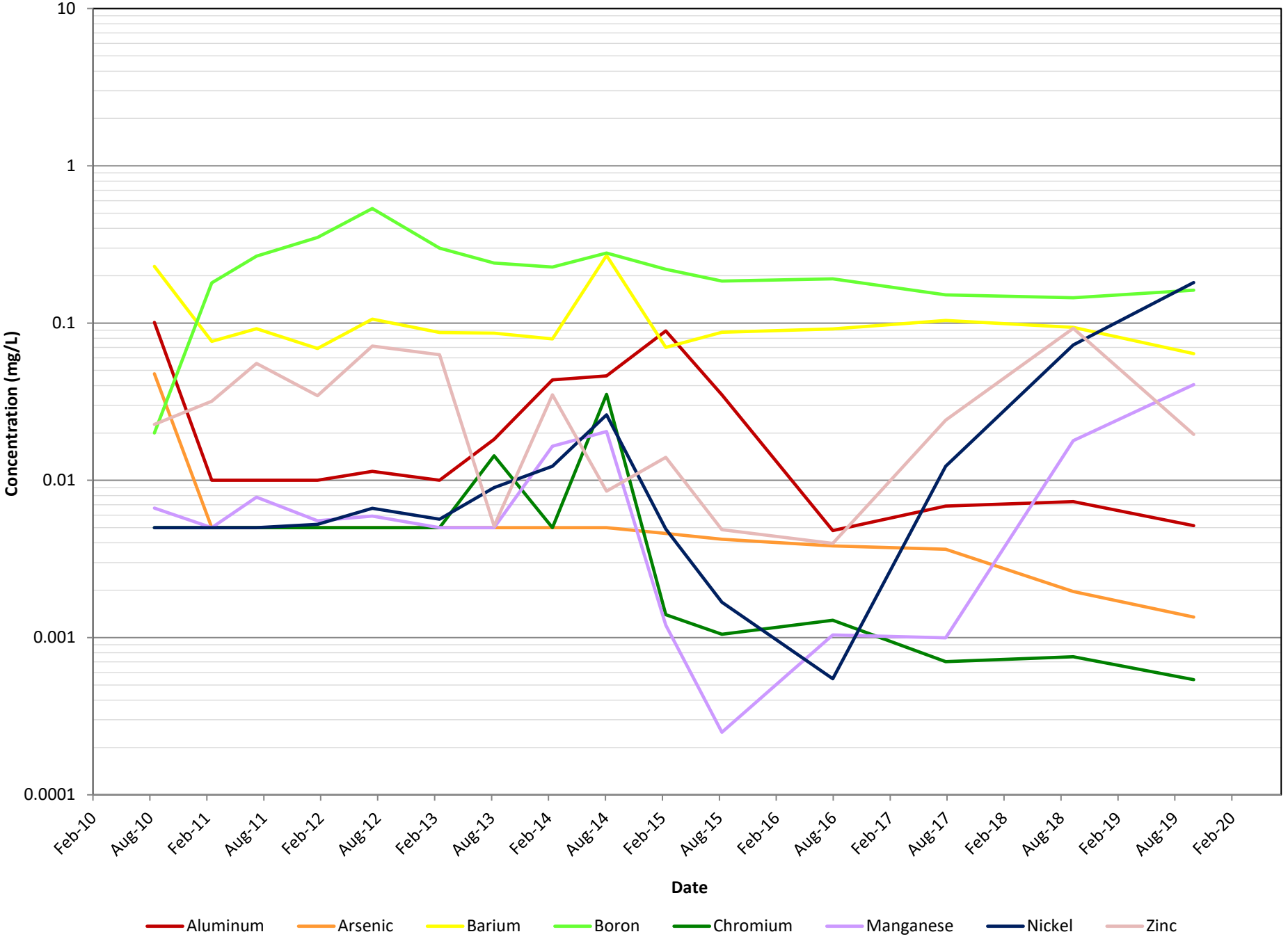
MW-19: ANION CONCENTRATIONS OVER TIME



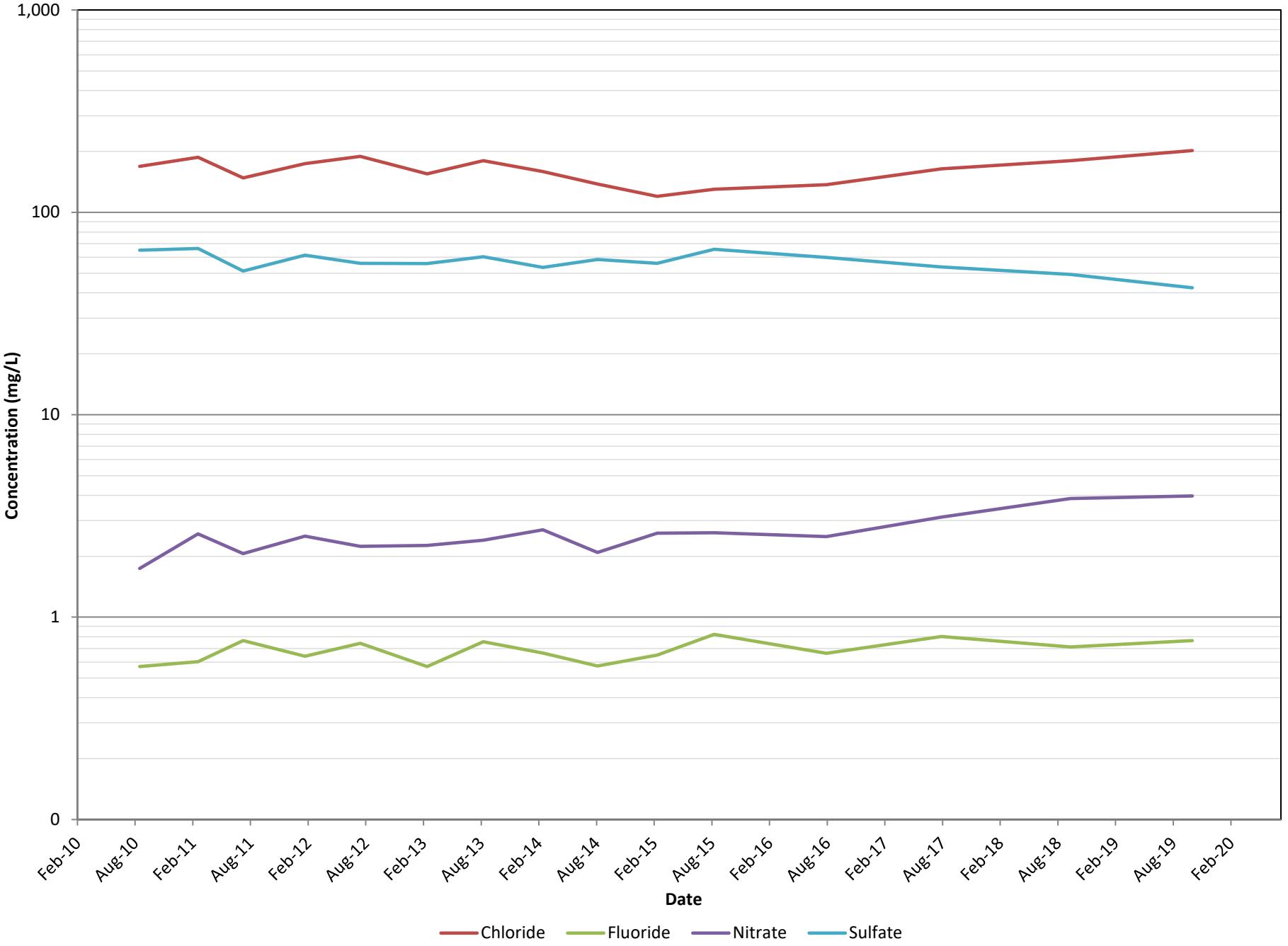
MW-19: TDS CONCENTRATIONS OVER TIME



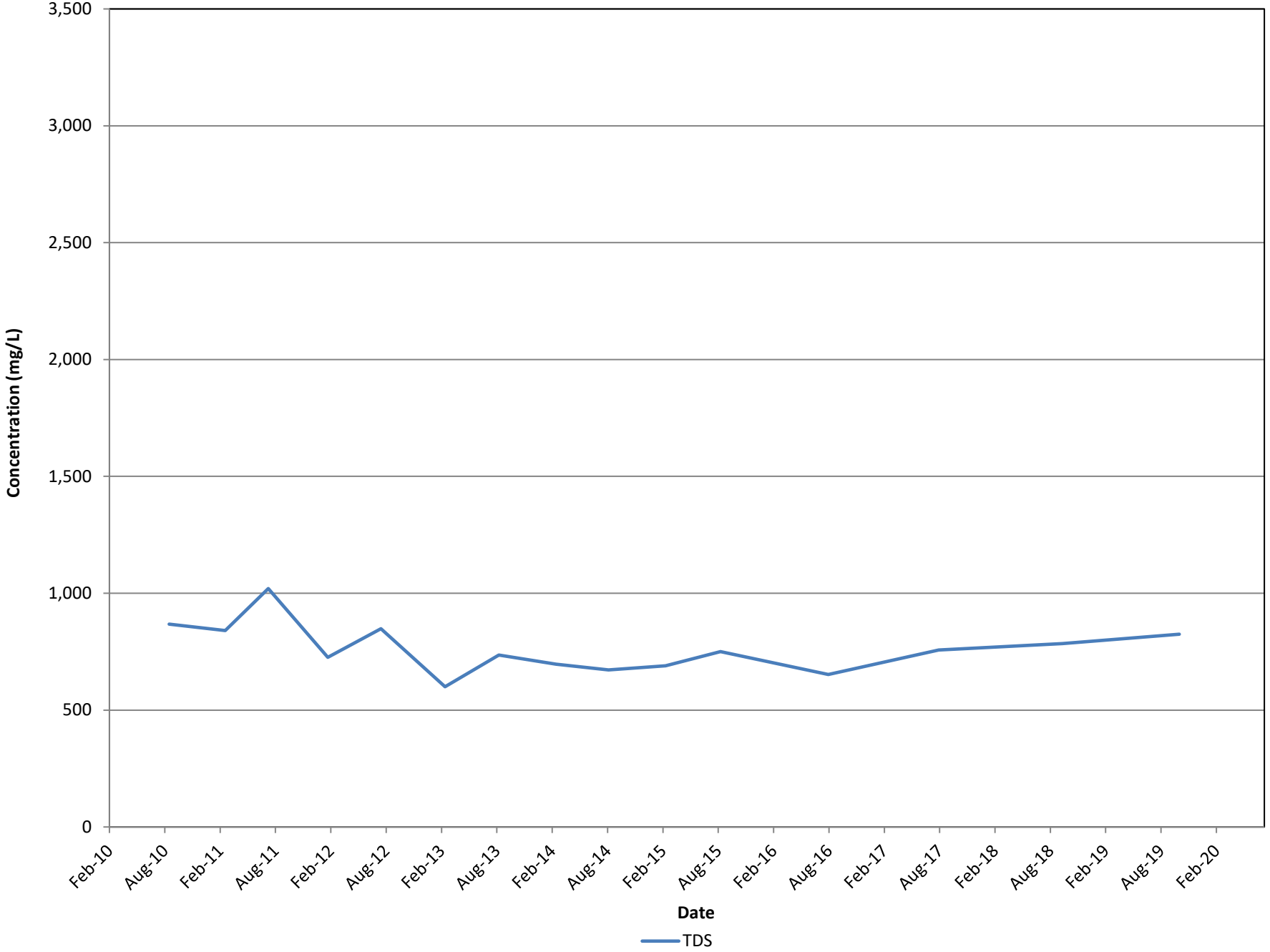
MW-19: METAL CONCENTRATIONS OVER TIME



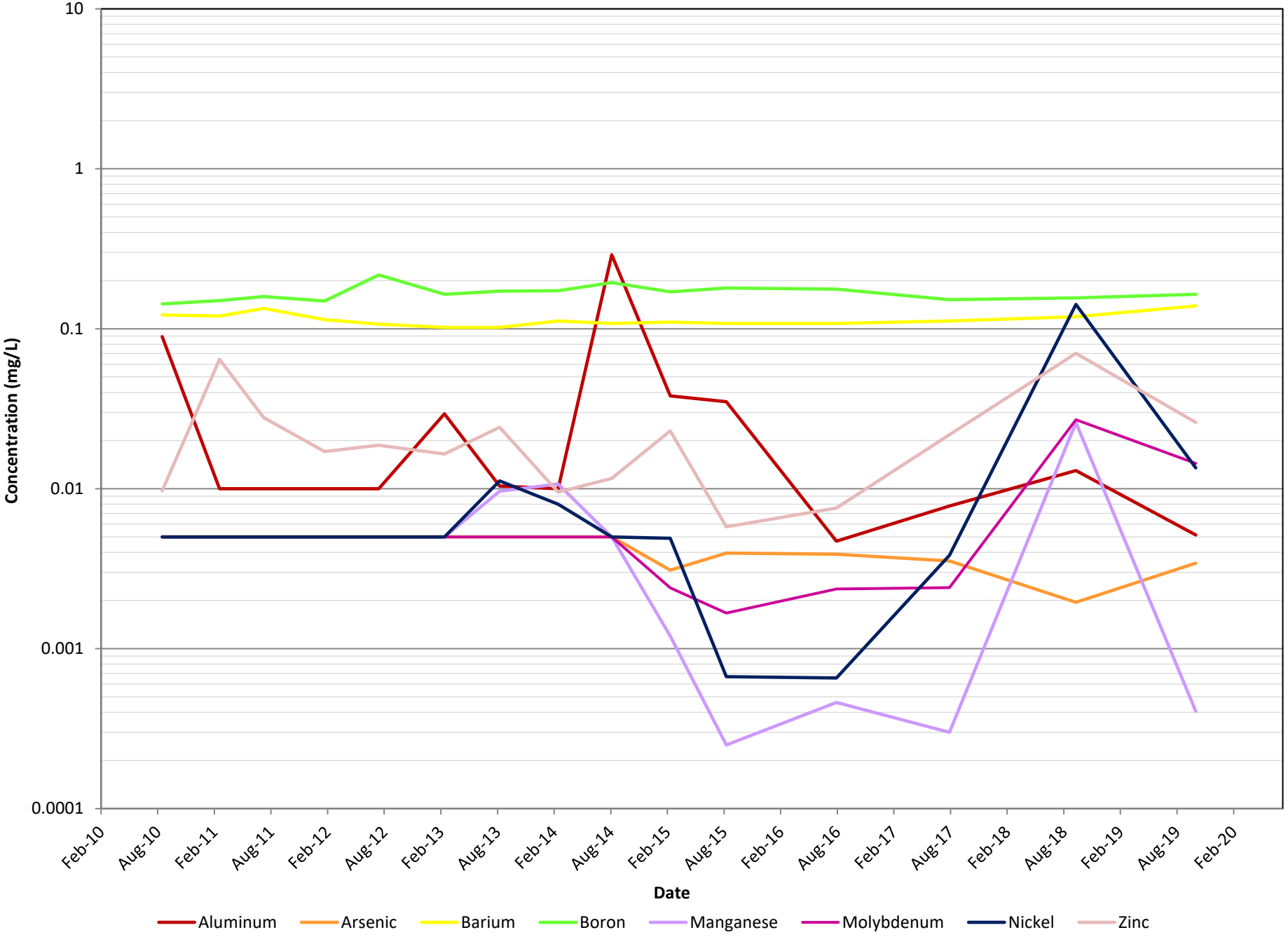
MW-20: ANION CONCENTRATIONS OVER TIME



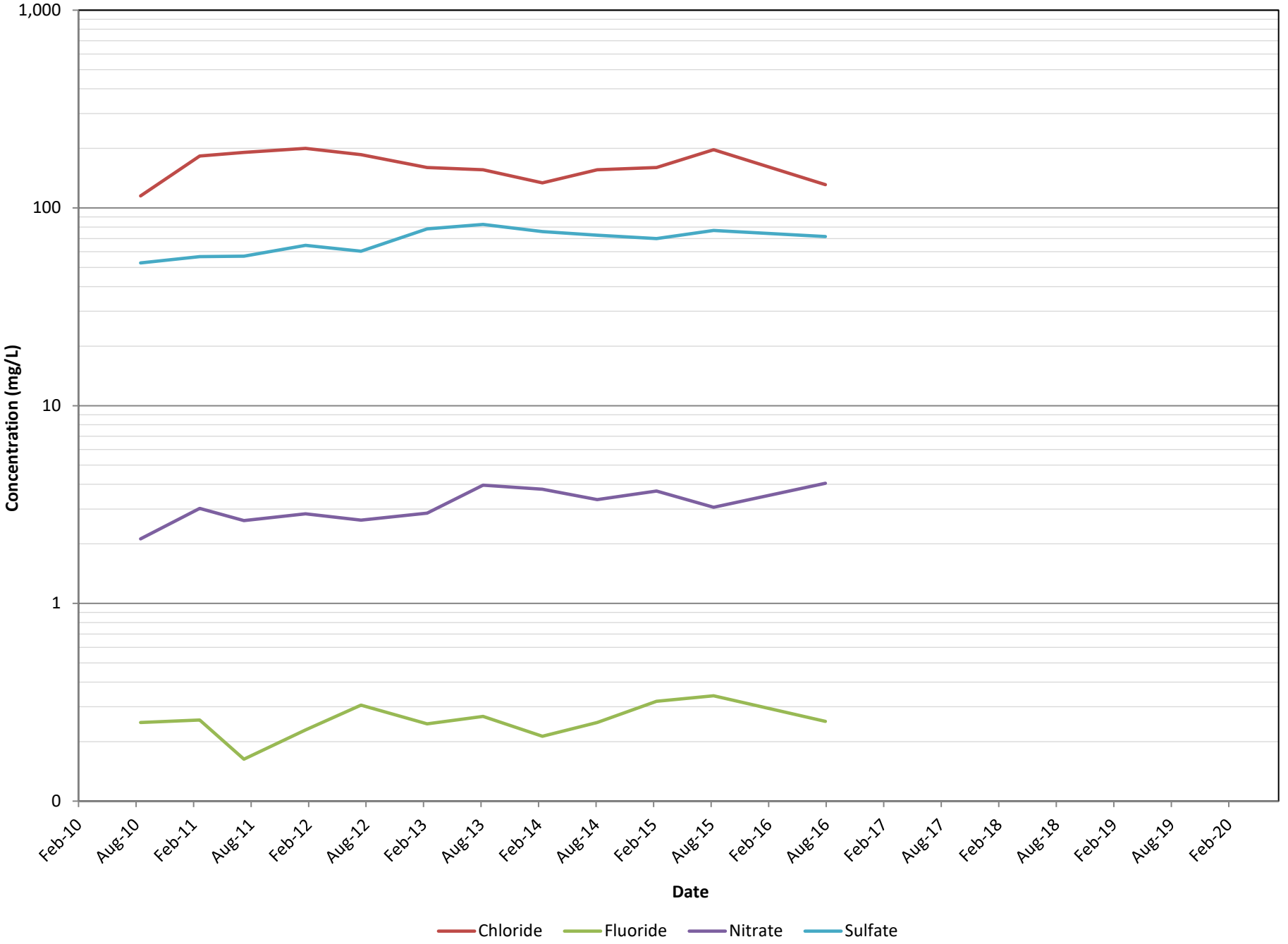
MW-20: TDS CONCENTRATIONS OVER TIME



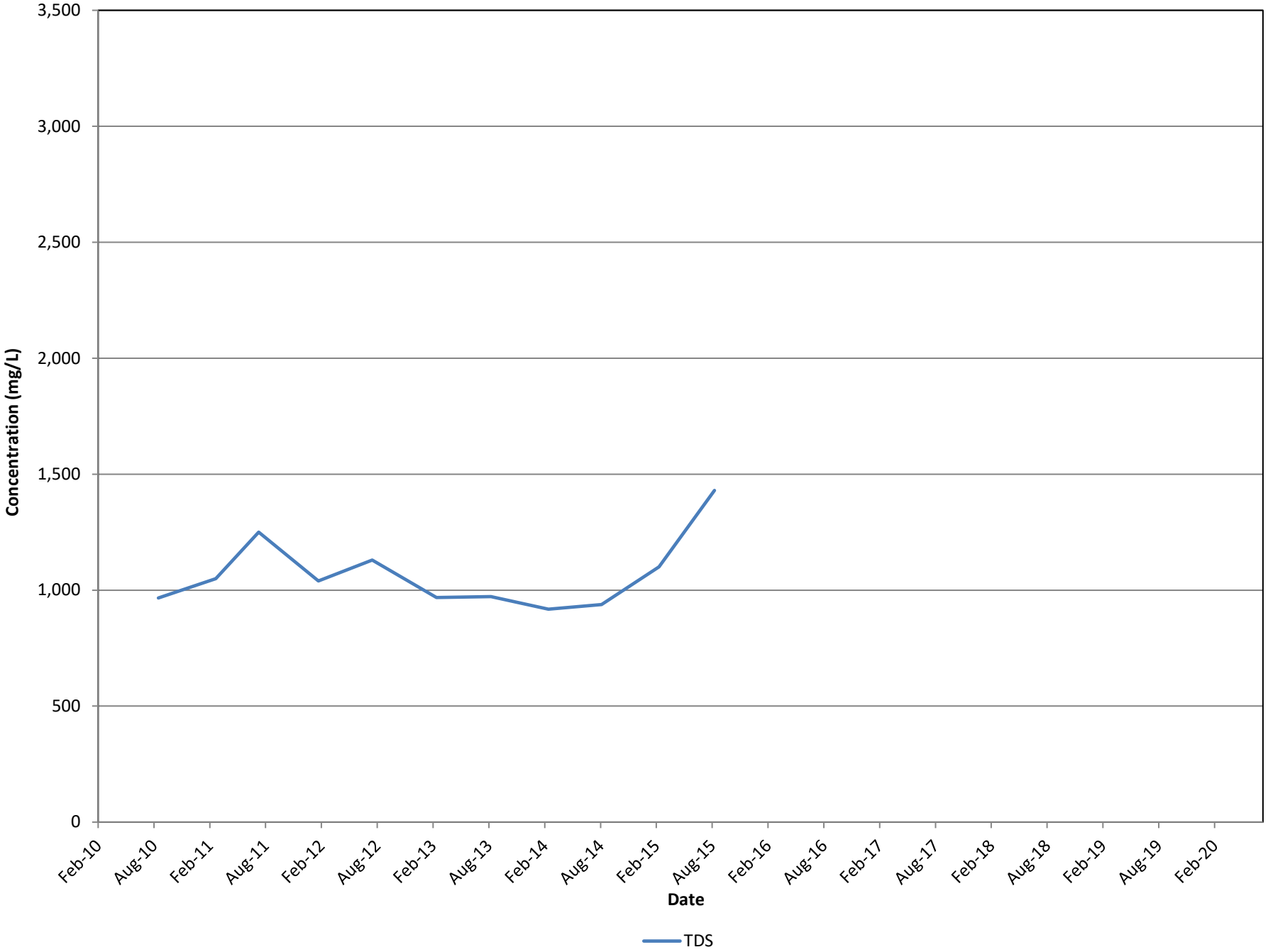
MW-20: METAL CONCENTRATIONS OVER TIME



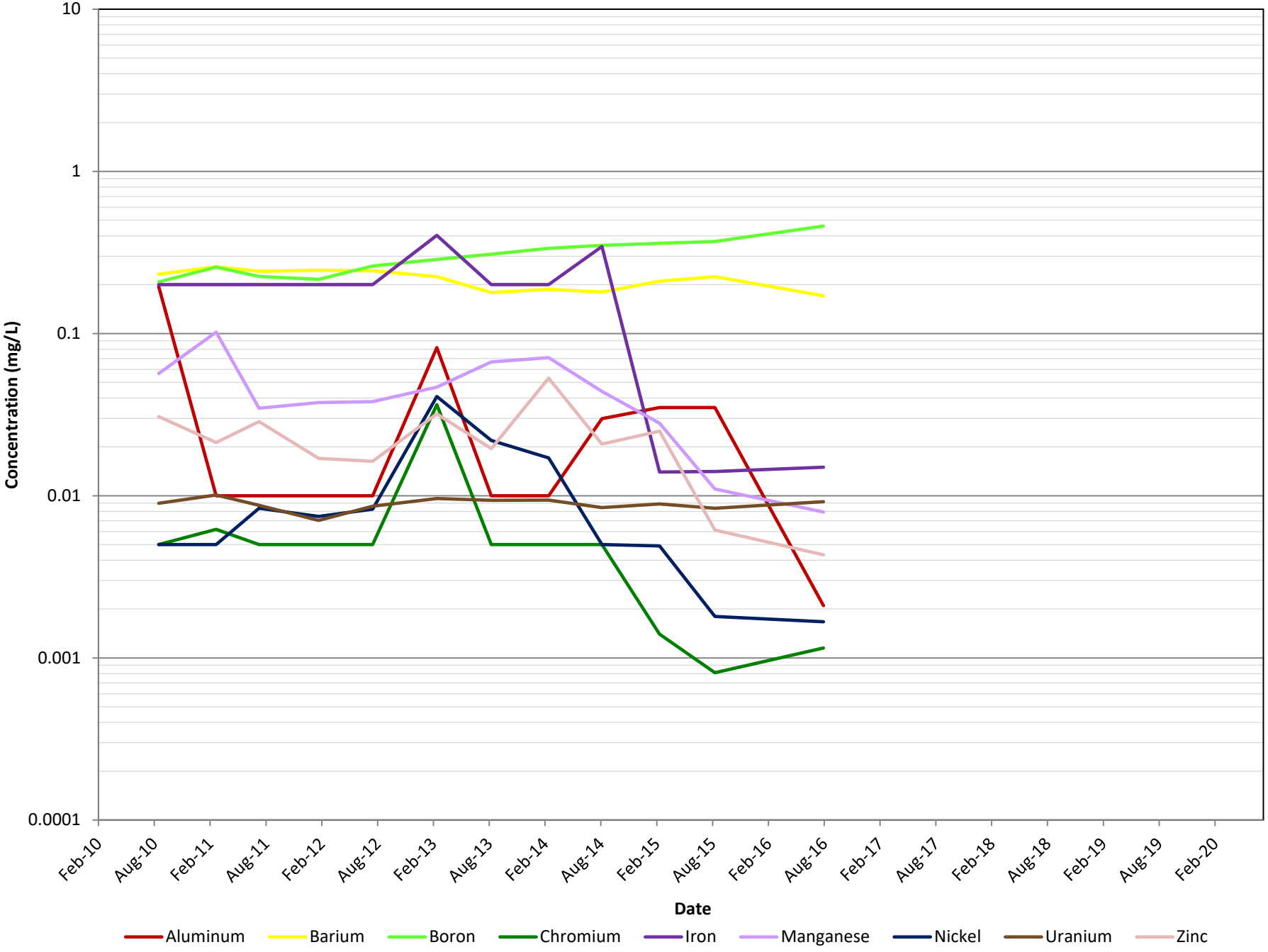
MW-21: ANION CONCENTRATIONS OVER TIME



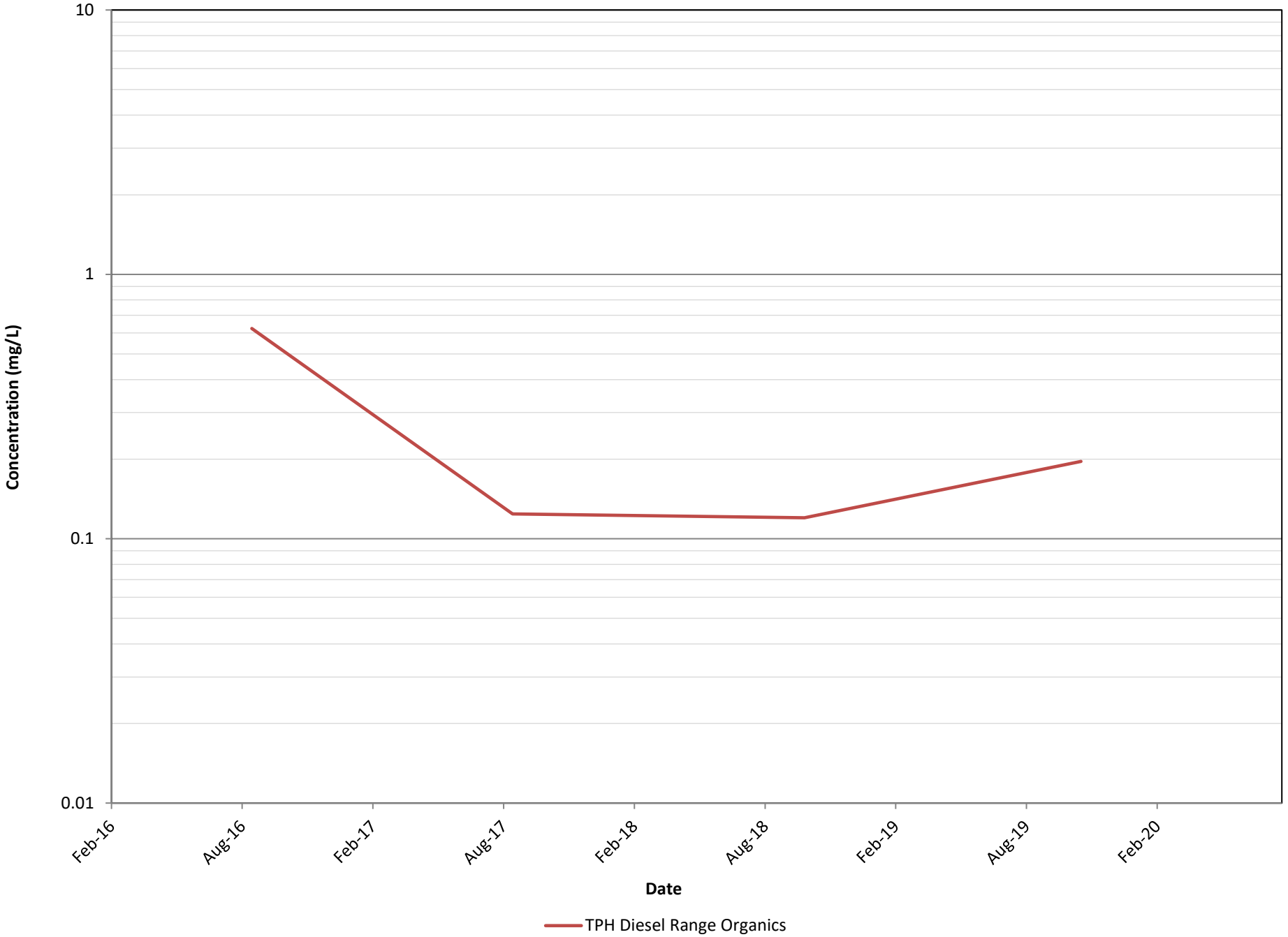
MW-21: TDS CONCENTRATIONS OVER TIME



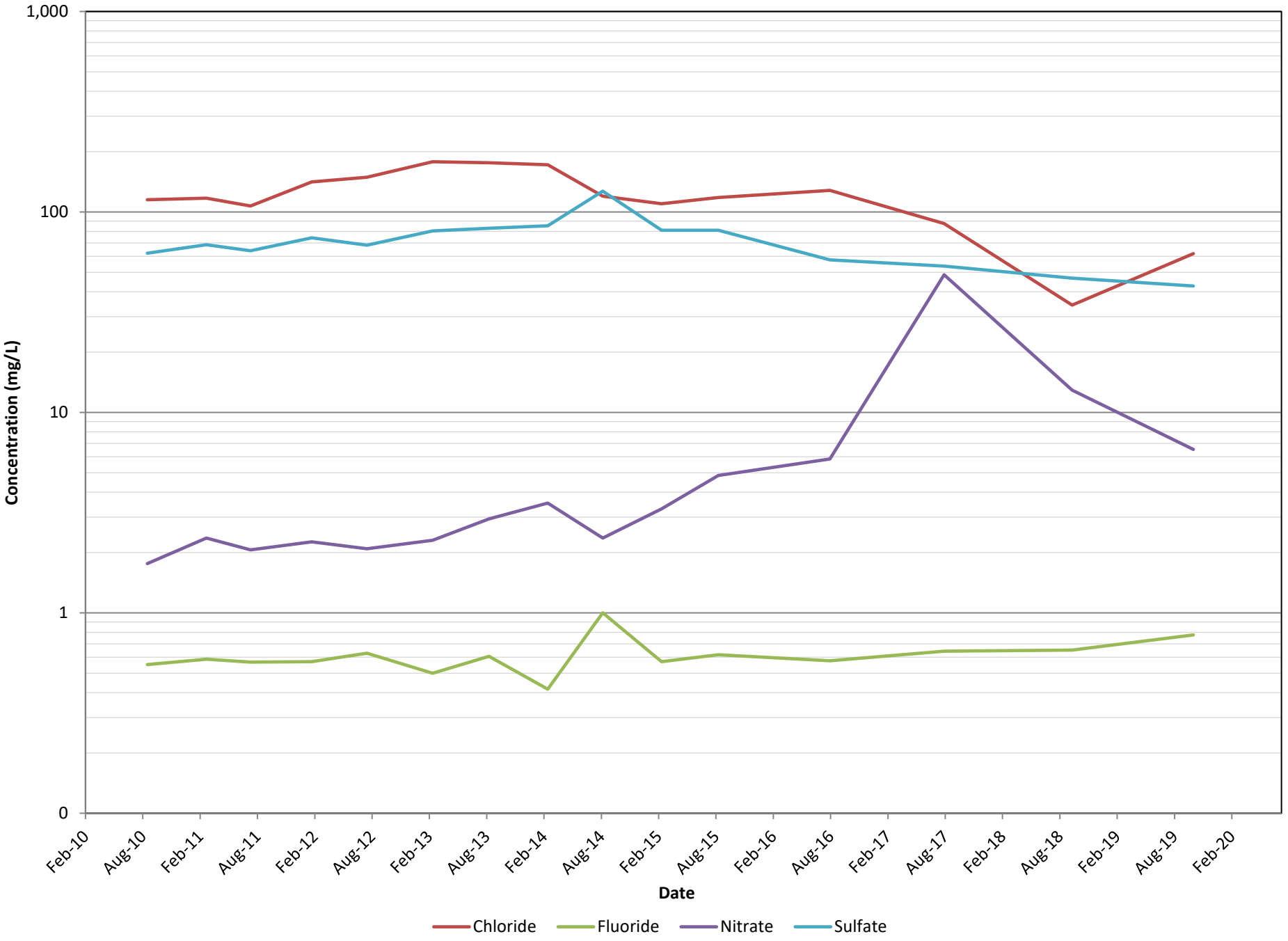
MW-21: METAL CONCENTRATIONS OVER TIME



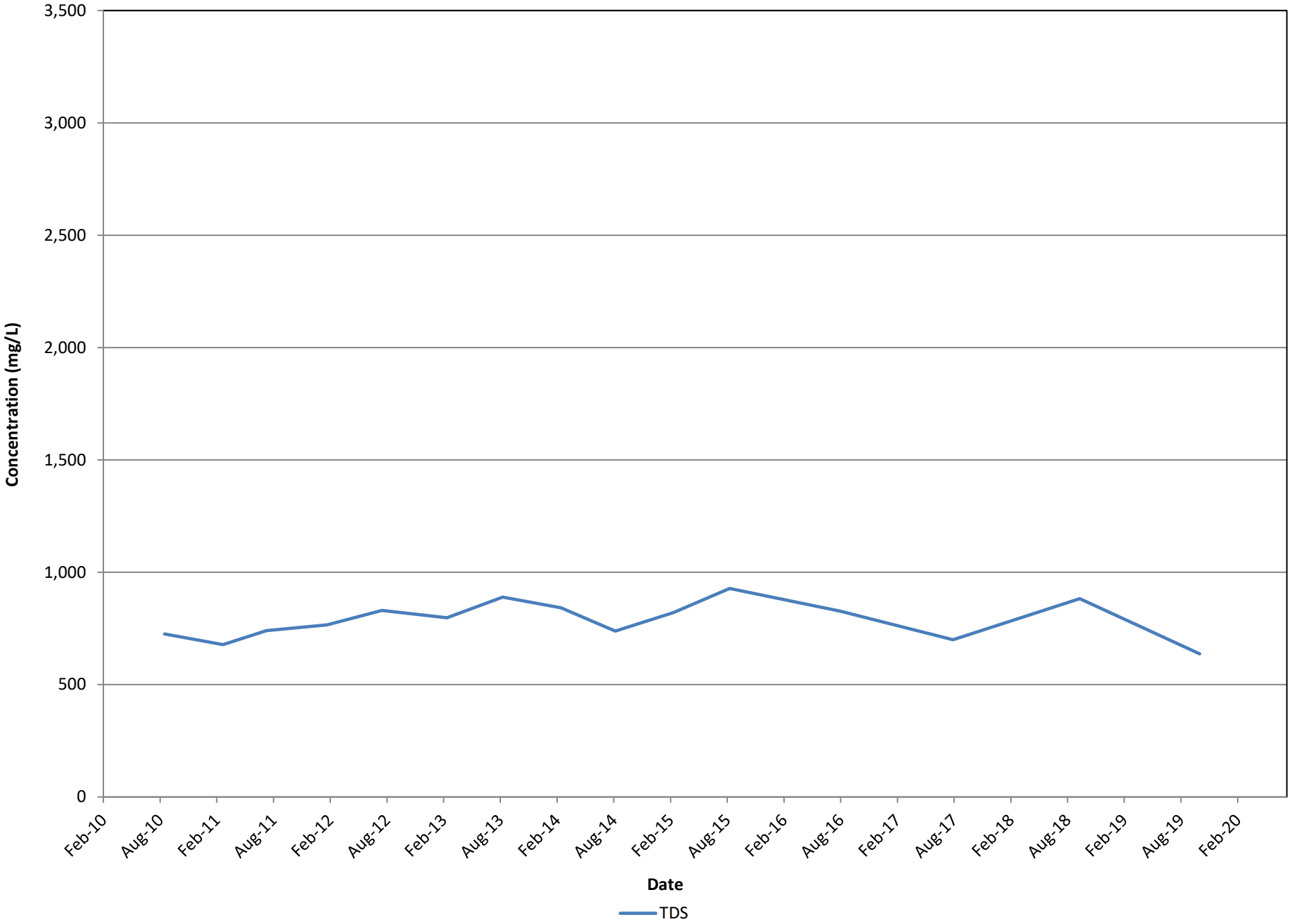
MW-21: TPH CONCENTRATIONS OVER TIME



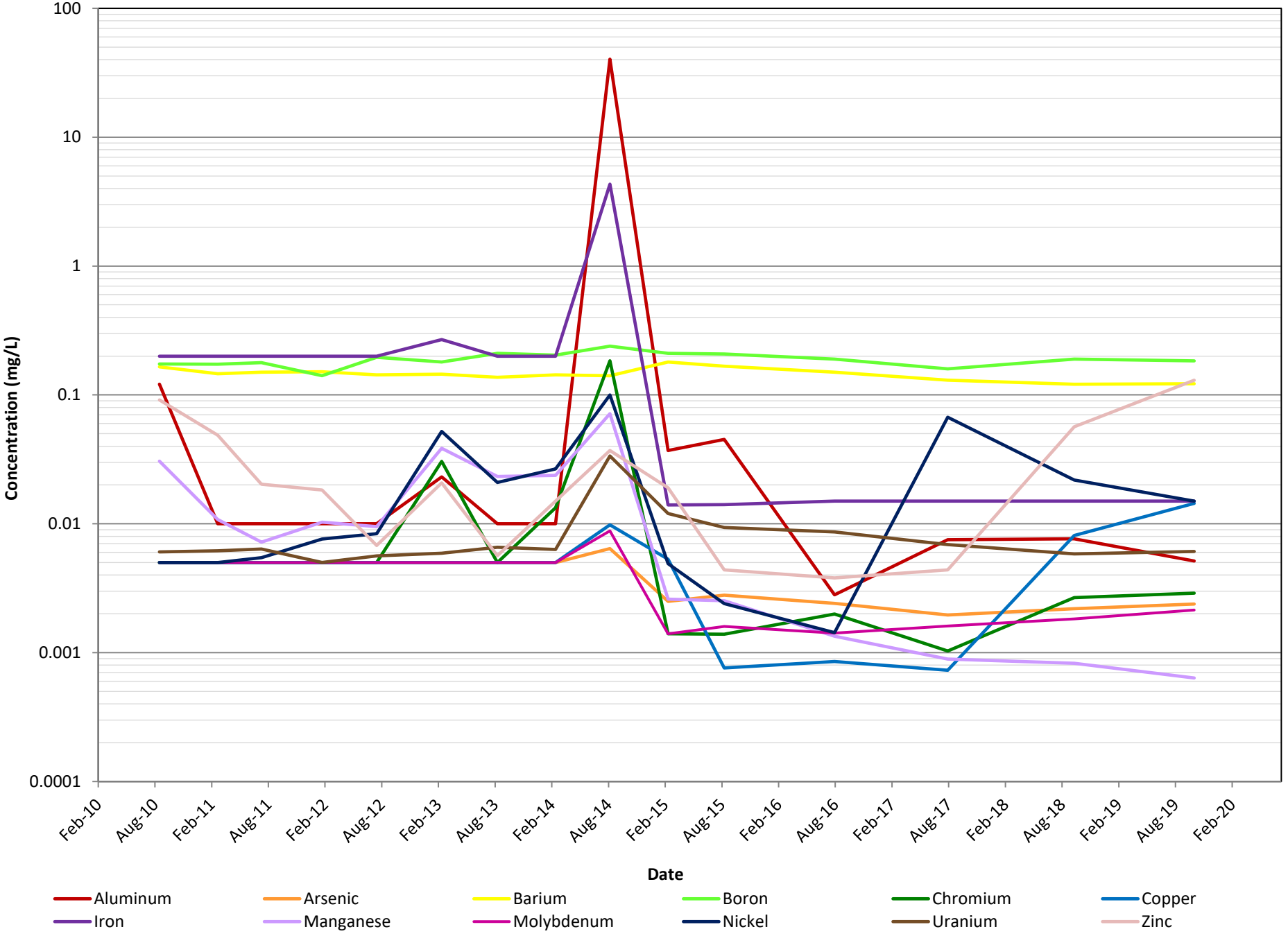
MW-22: ANION CONCENTRATIONS OVER TIME



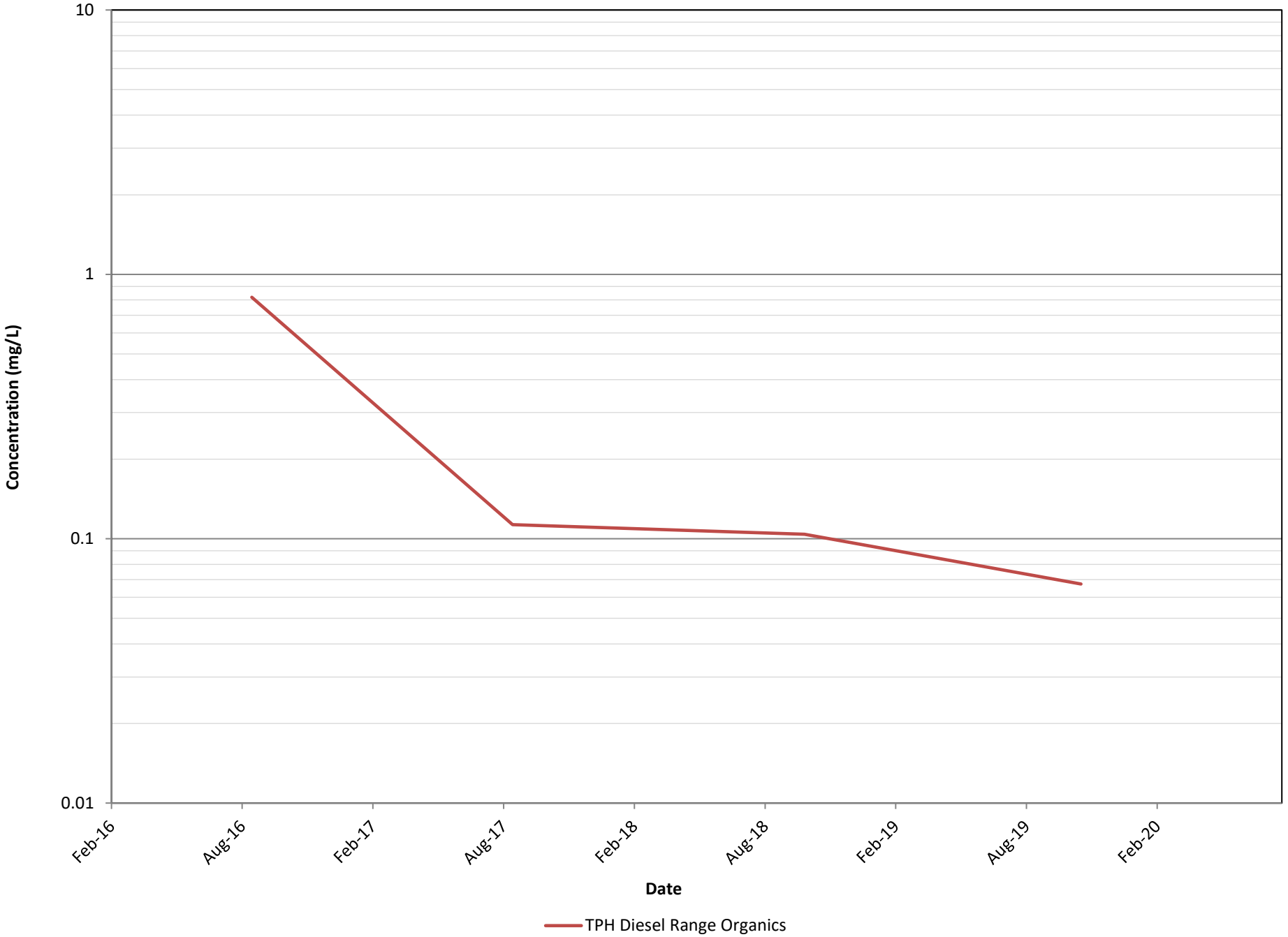
MW-22: TDS CONCENTRATIONS OVER TIME



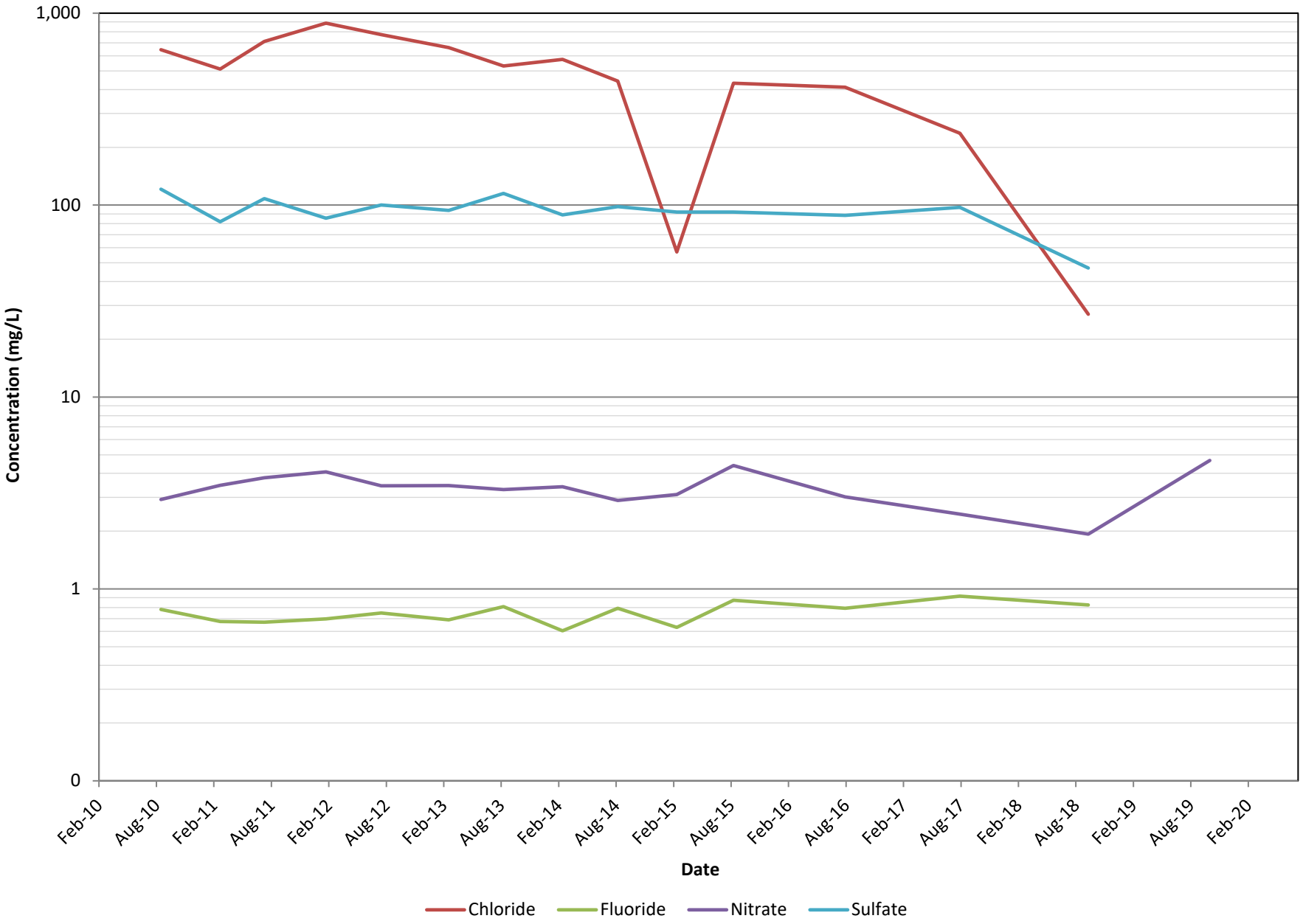
MW-22: METAL CONCENTRATIONS OVER TIME



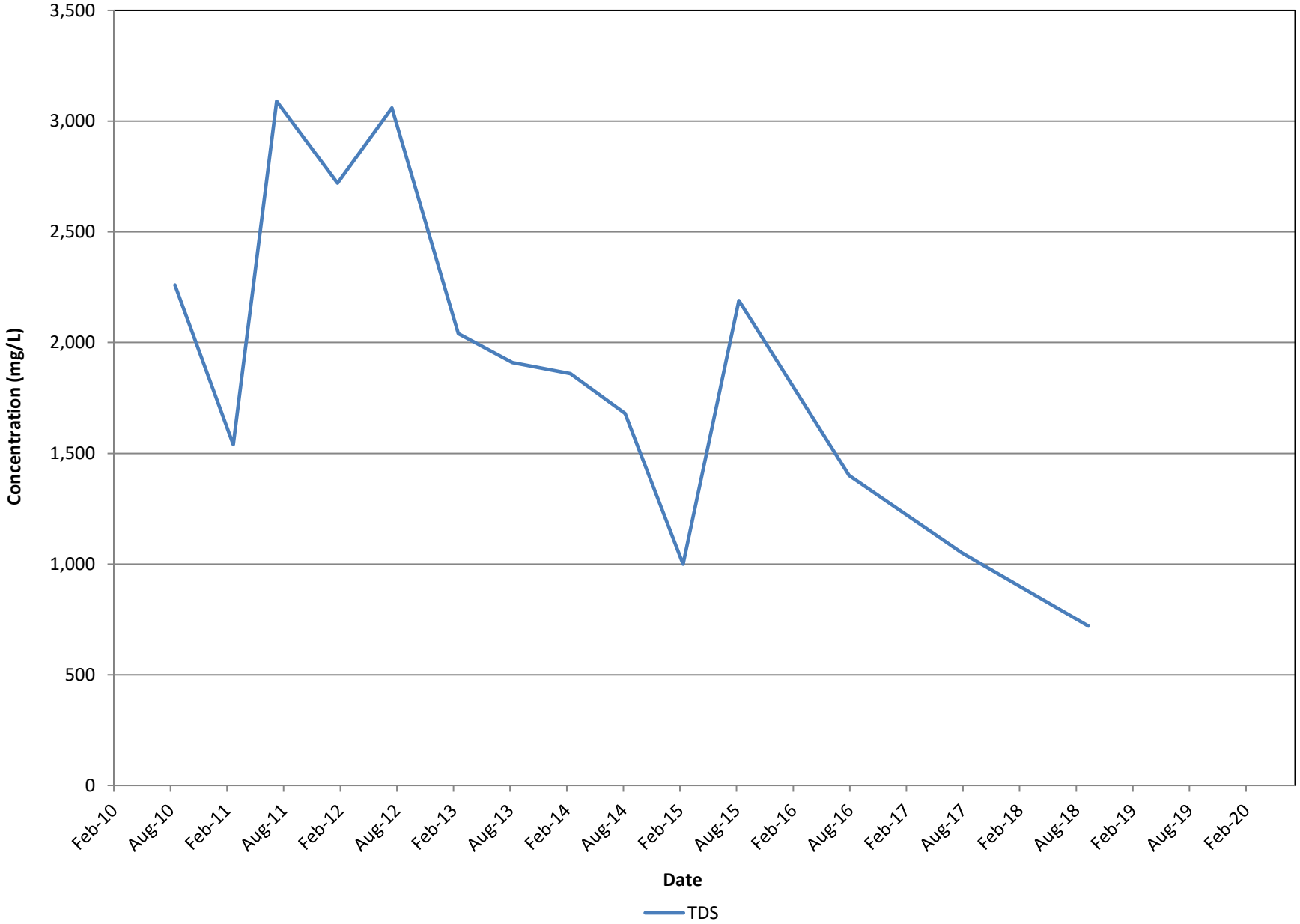
MW-22: TPH CONCENTRATIONS OVER TIME



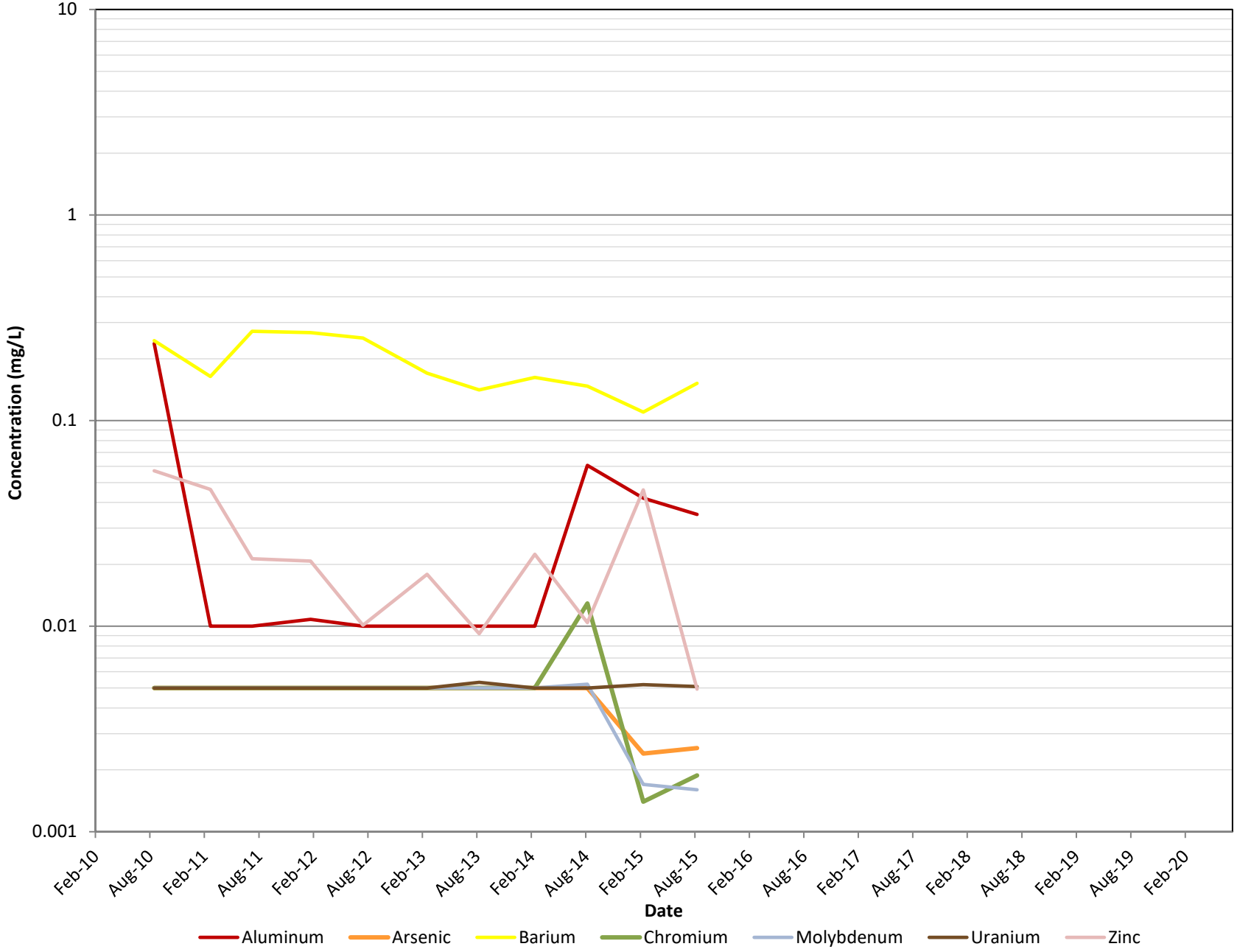
MW-23: ANION CONCENTRATIONS OVER TIME



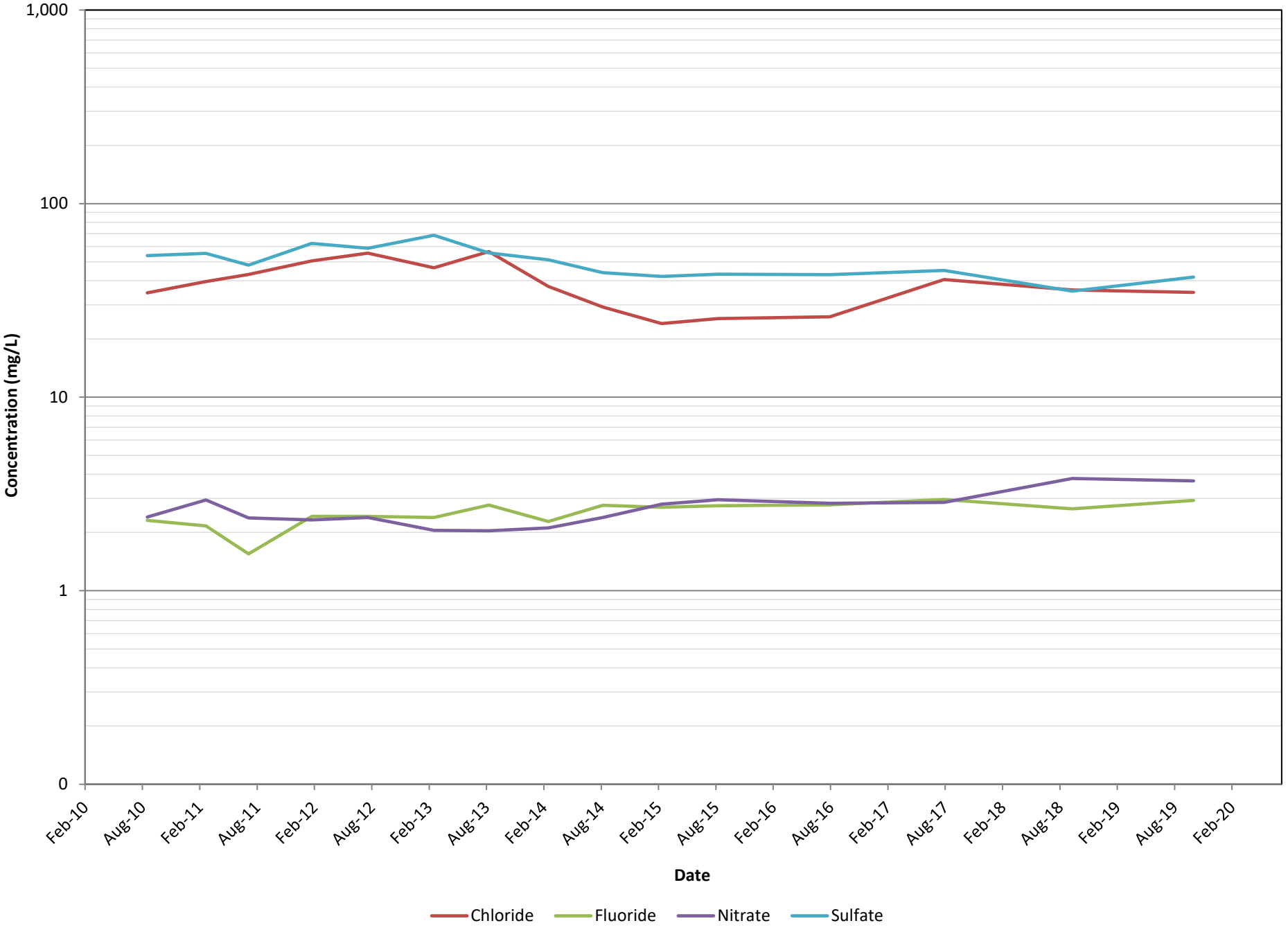
MW-23: TDS CONCENTRATIONS OVER TIME



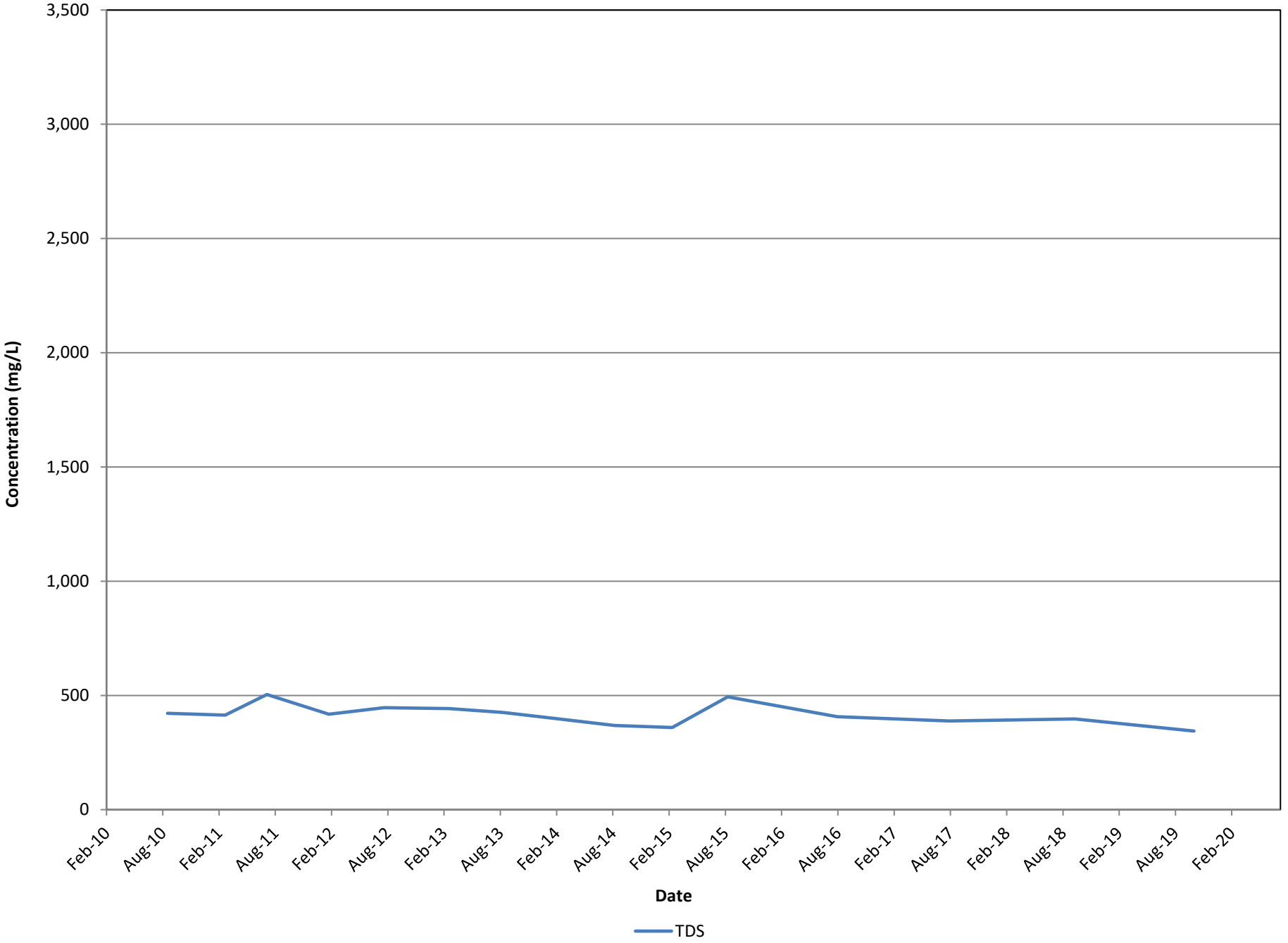
MW-23: METAL CONCENTRATIONS OVER TIME



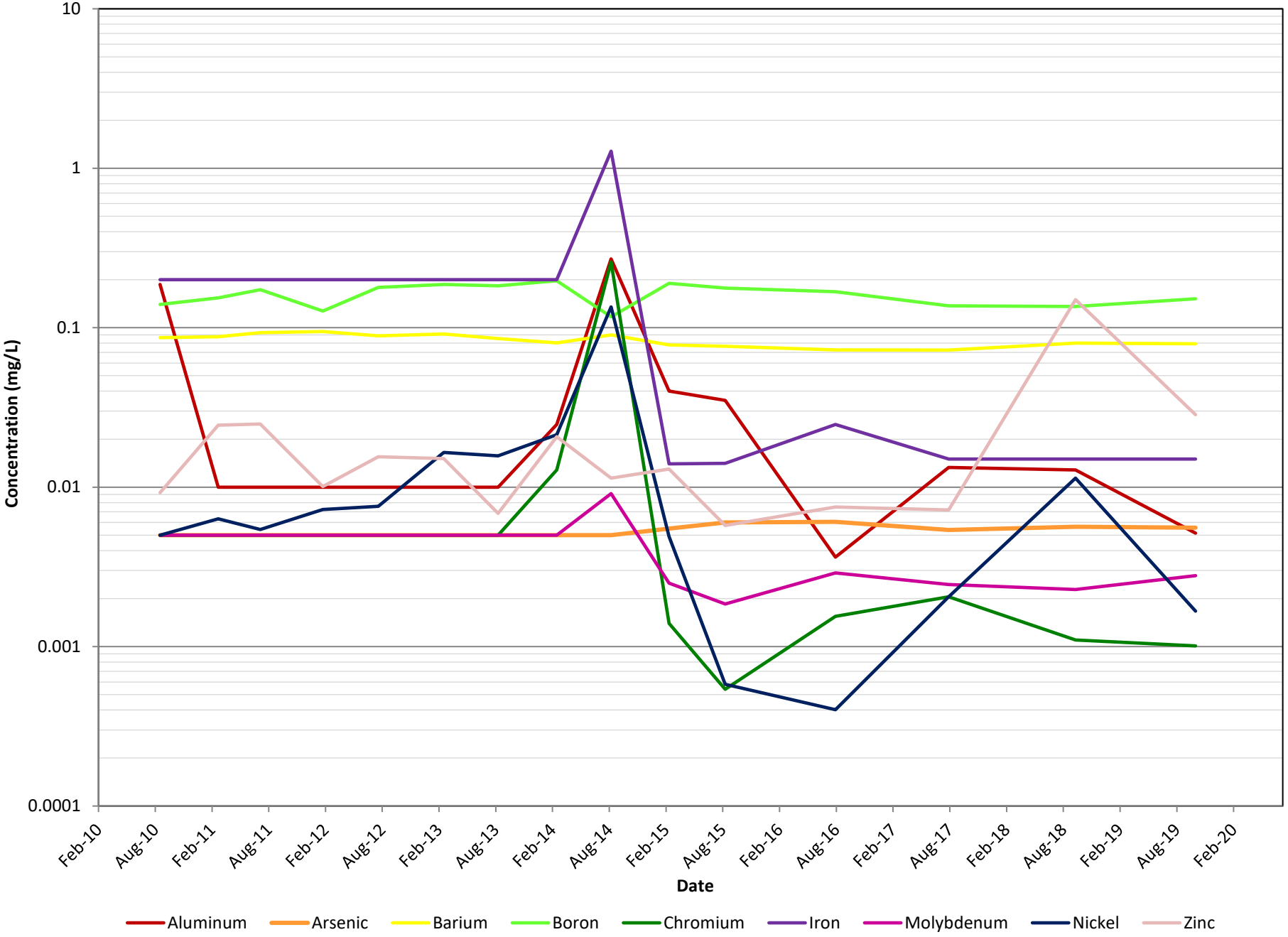
MW-24: ANION CONCENTRATIONS OVER TIME

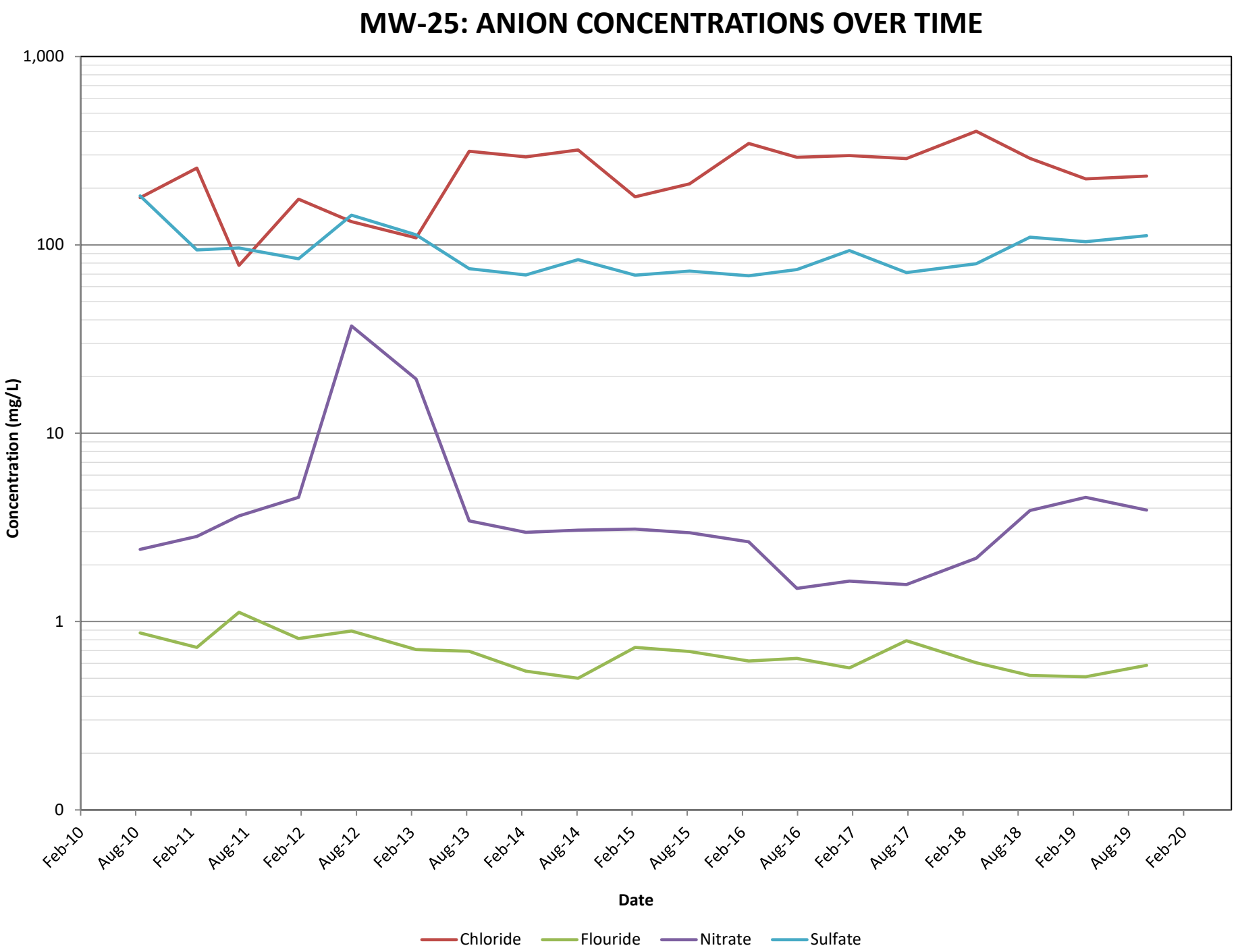


MW-24: TDS CONCENTRATIONS OVER TIME

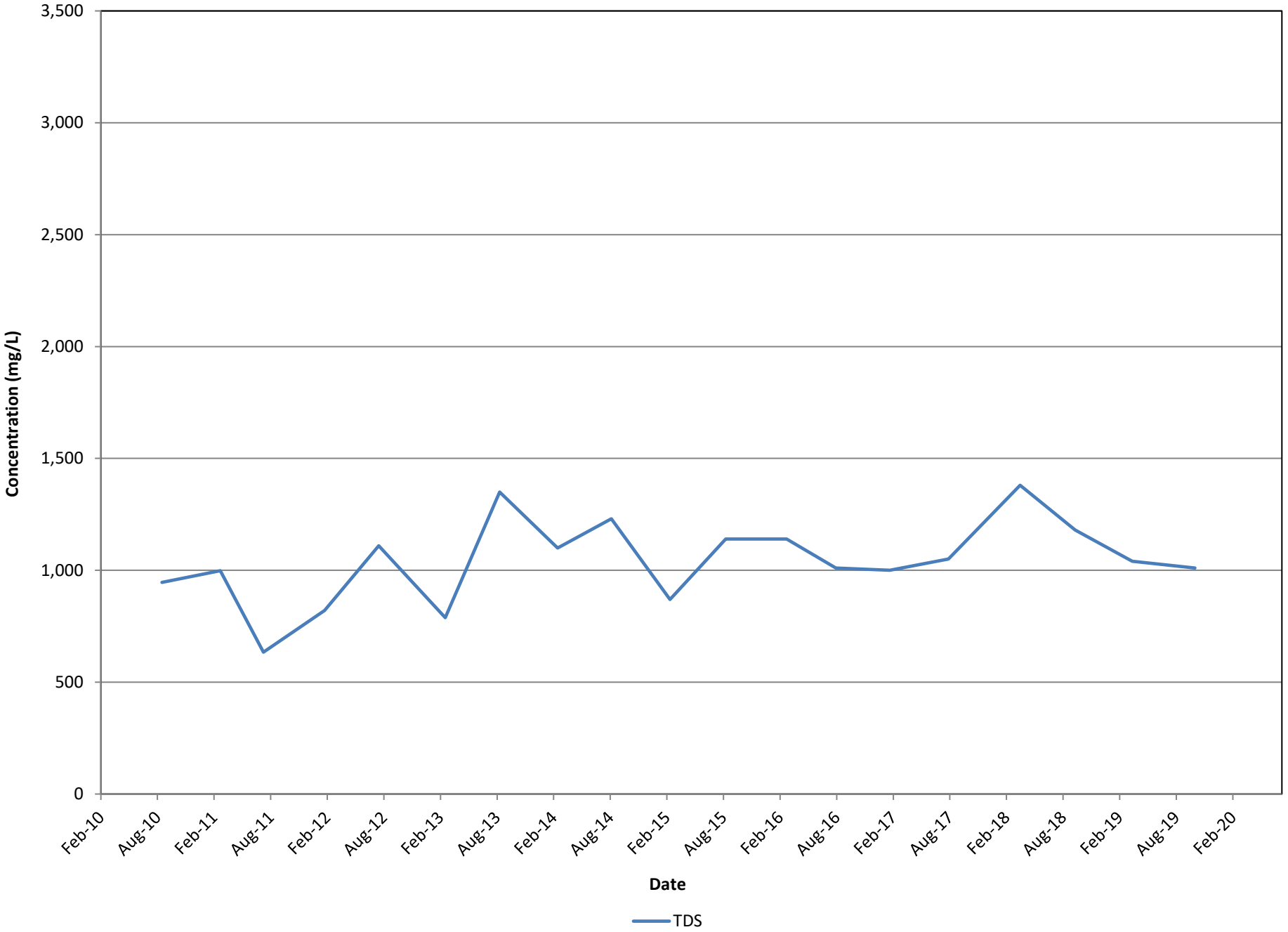


MW-24: METAL CONCENTRATIONS OVER TIME

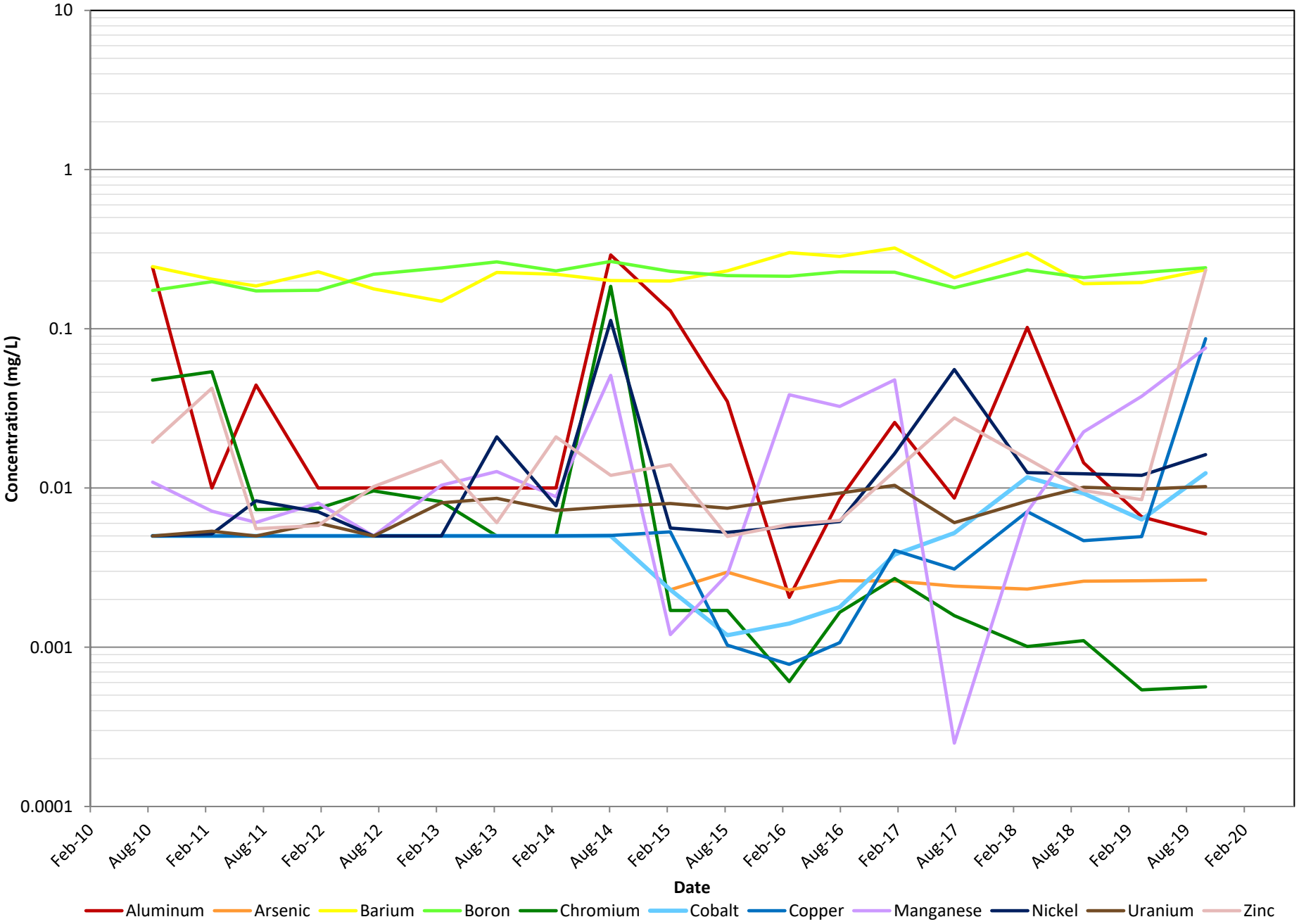



MW-25: ANION CONCENTRATIONS OVER TIME
1,000
100
10
1
0
Concentration (mg/L)
Feb-10
Aug-10
Feb-11
Aug-11
Feb-12
Aug-12
Feb-13
Aug-13
Feb-14
Aug-14
Feb-15
Aug-15
Feb-16
Aug-16
Feb-17
Aug-17
Feb-18
Aug-18
Feb-19
Aug-19
Feb-20
Date
Chloride
Flouride
Nitrate
Sulfate

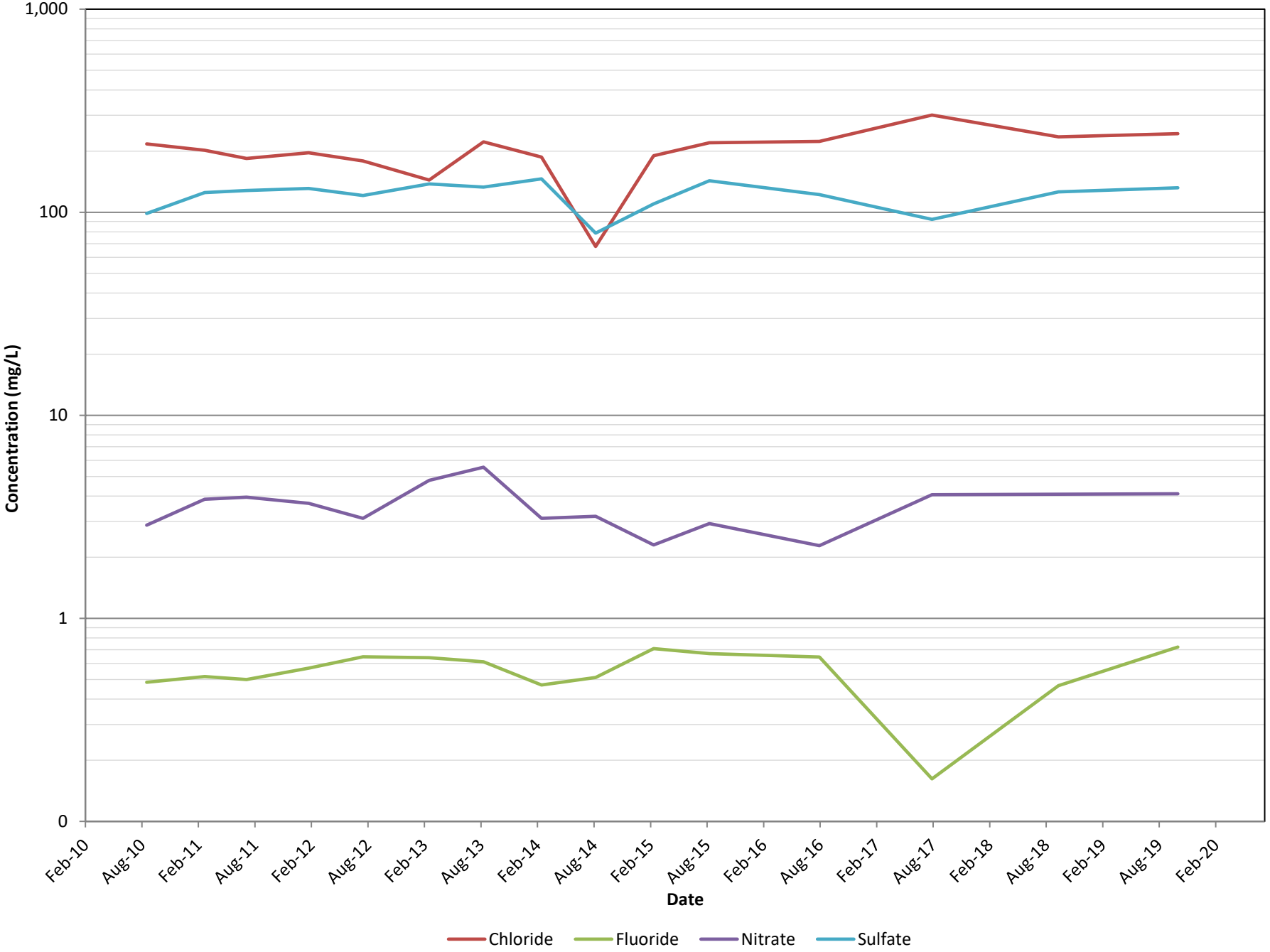
MW-25: TDS CONCENTRATIONS OVER TIME



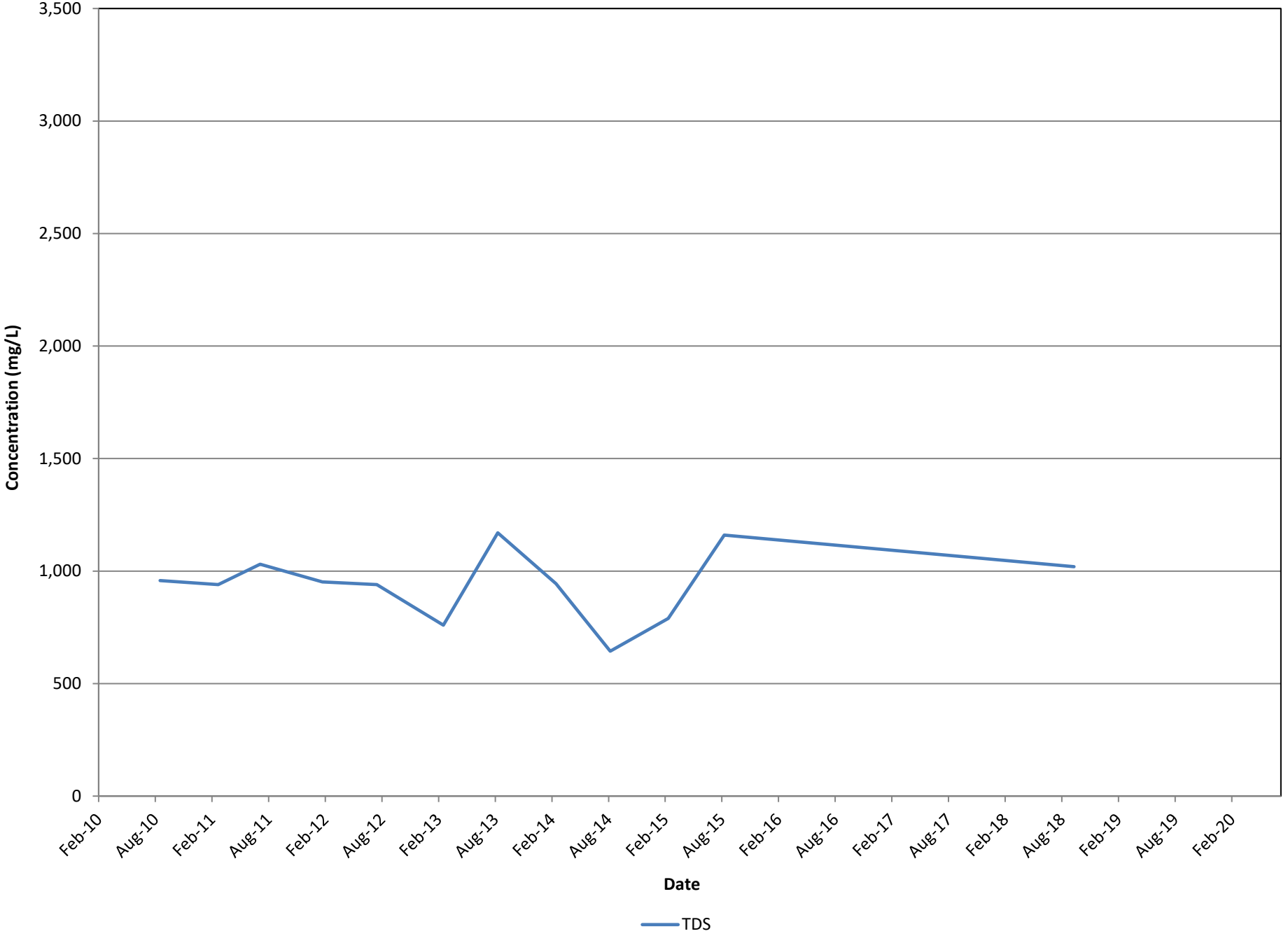
MW-25: METAL CONCENTRATIONS OVER TIME



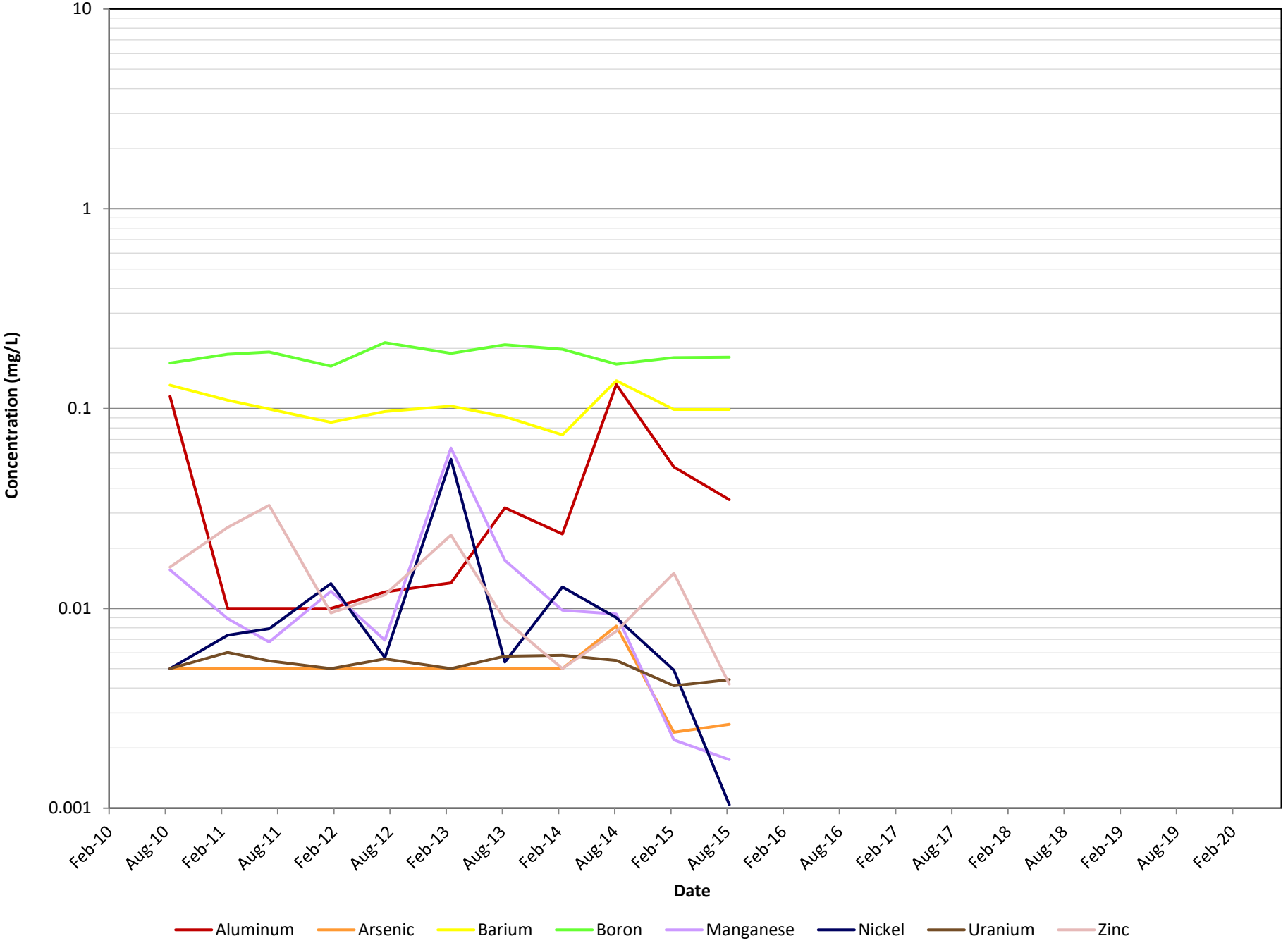
MW-26: ANION CONCENTRATIONS OVER TIME



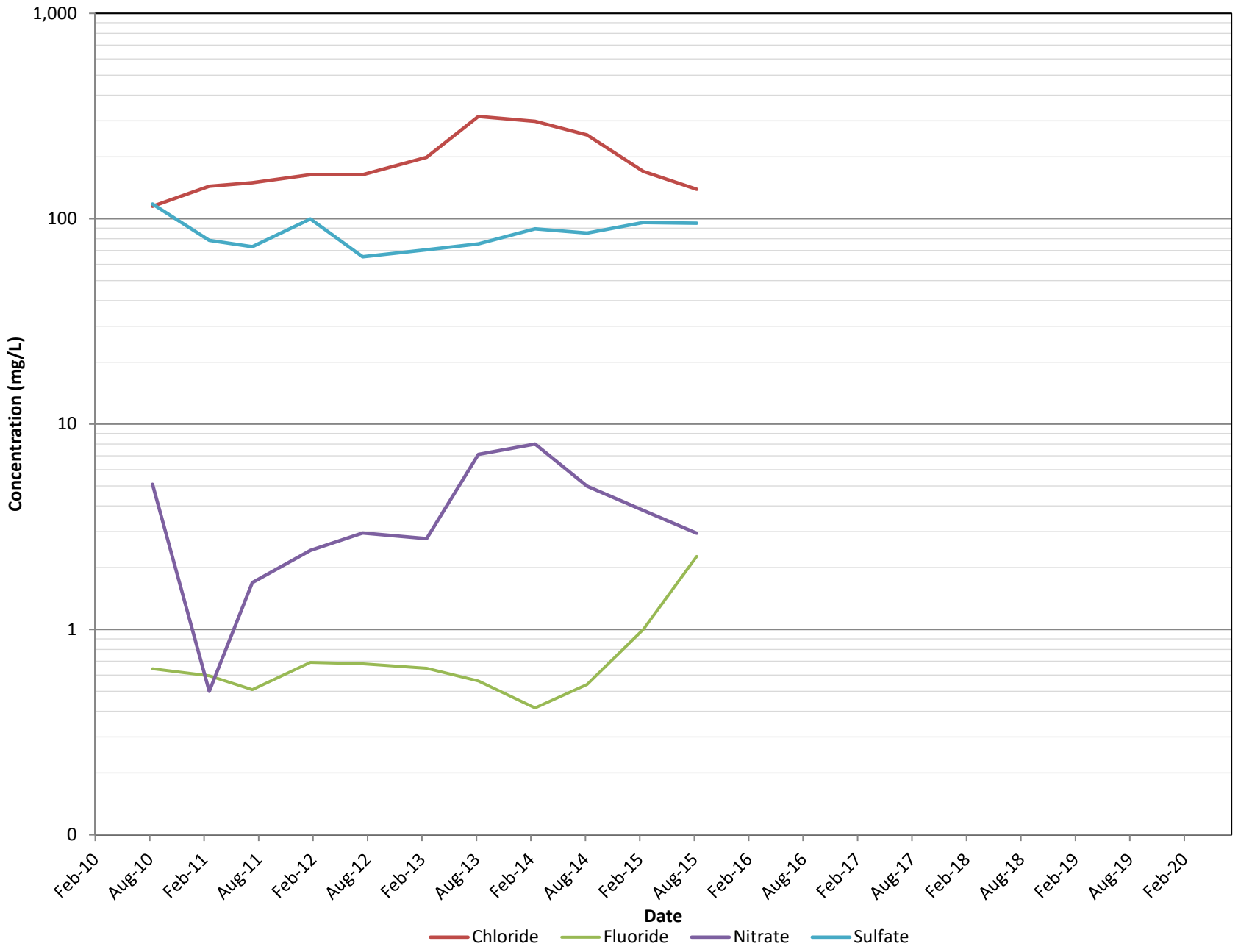
MW-26: TDS CONCENTRATIONS OVER TIME



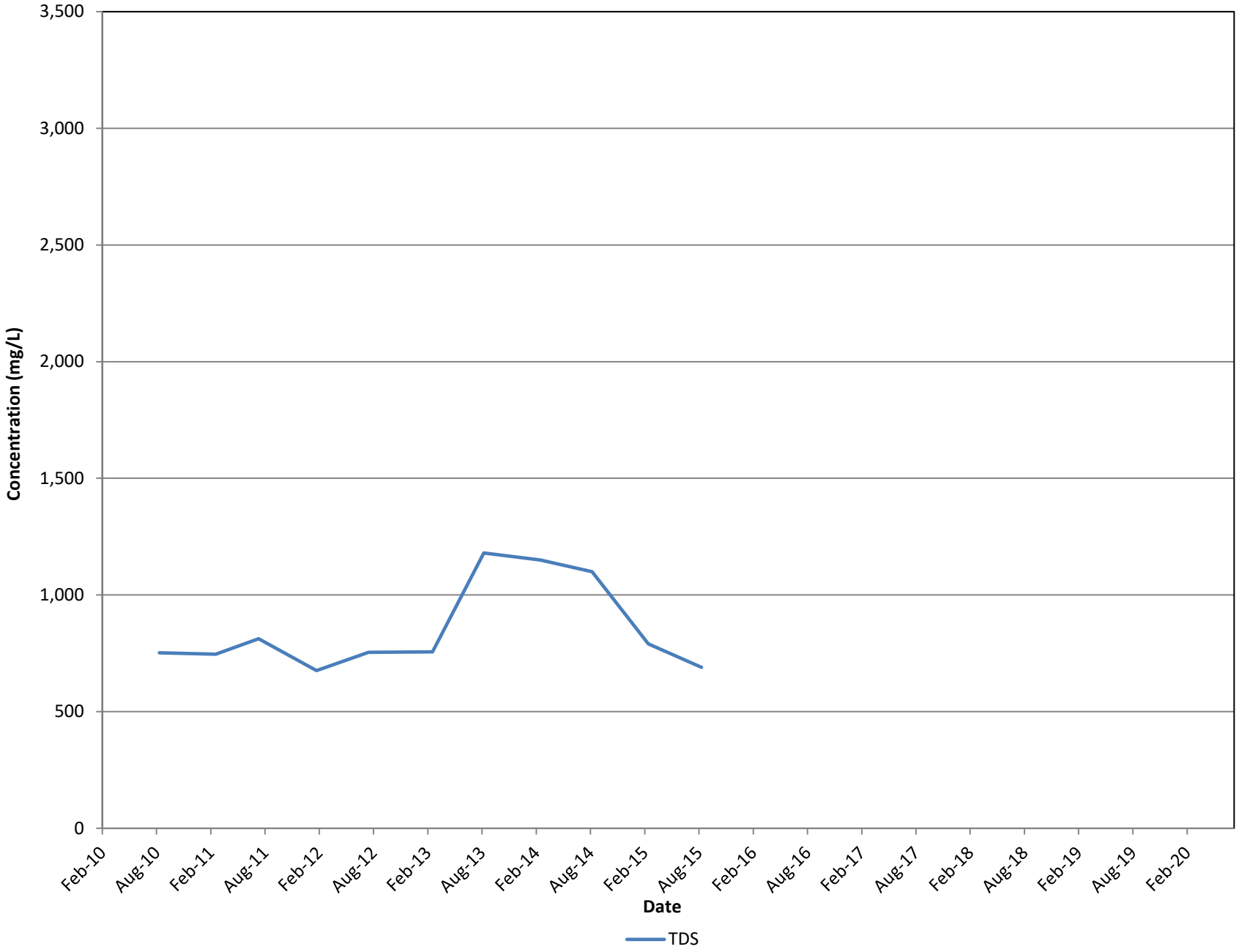
MW-26: METAL CONCENTRATIONS OVER TIME



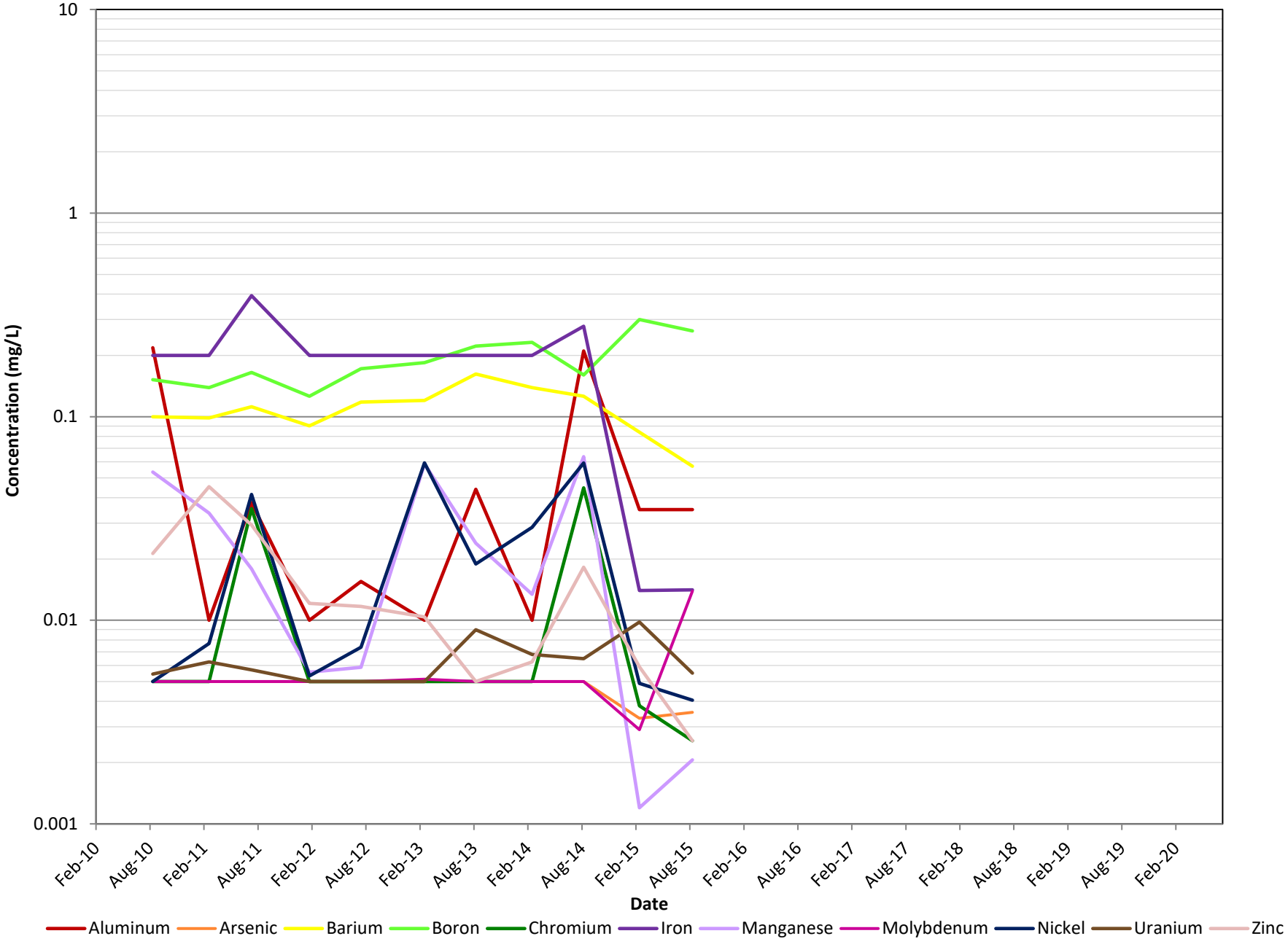
MW-27: ANION CONCENTRATIONS OVER TIME



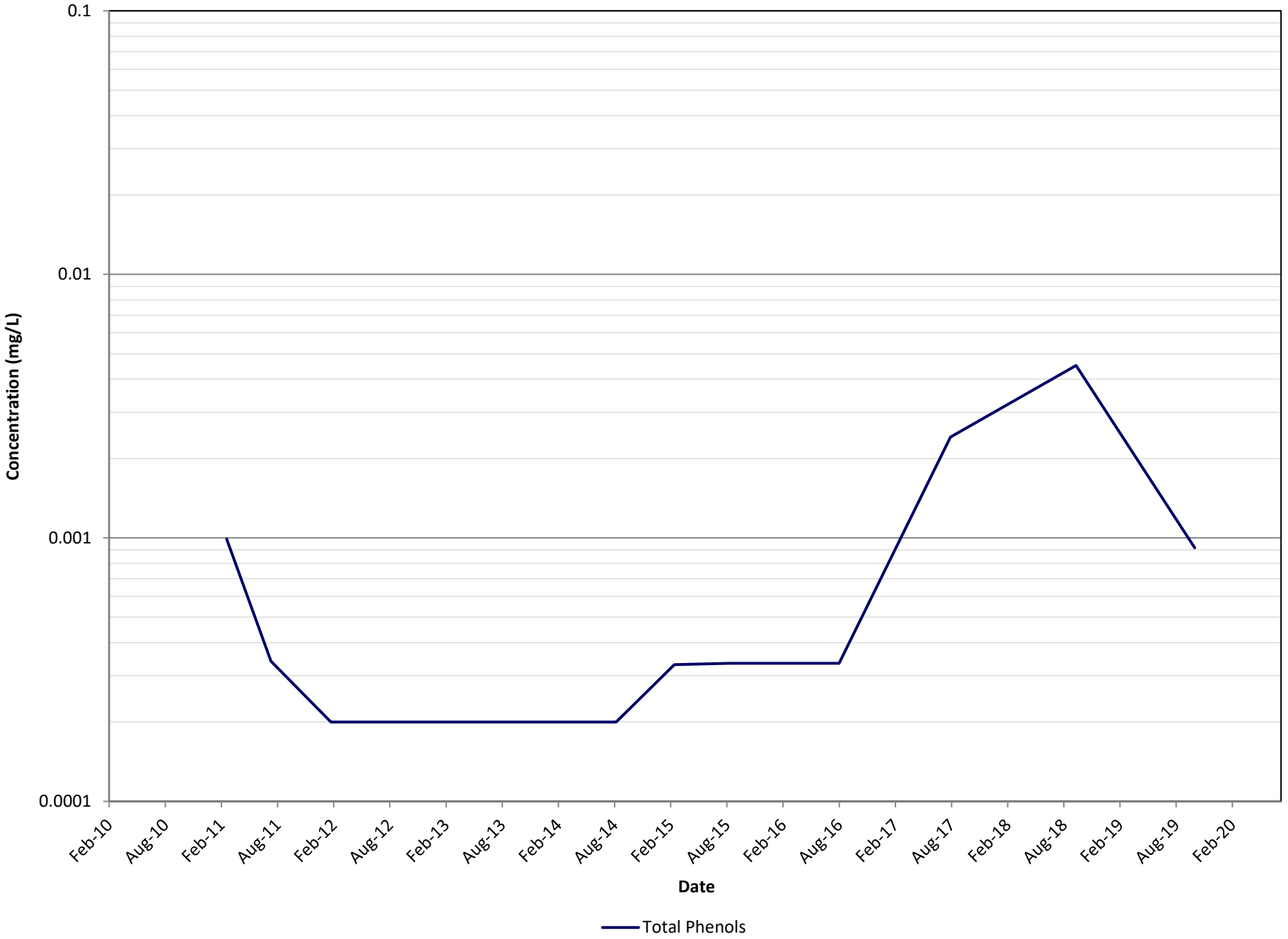
MW-27: TDS CONCENTRATIONS OVER TIME



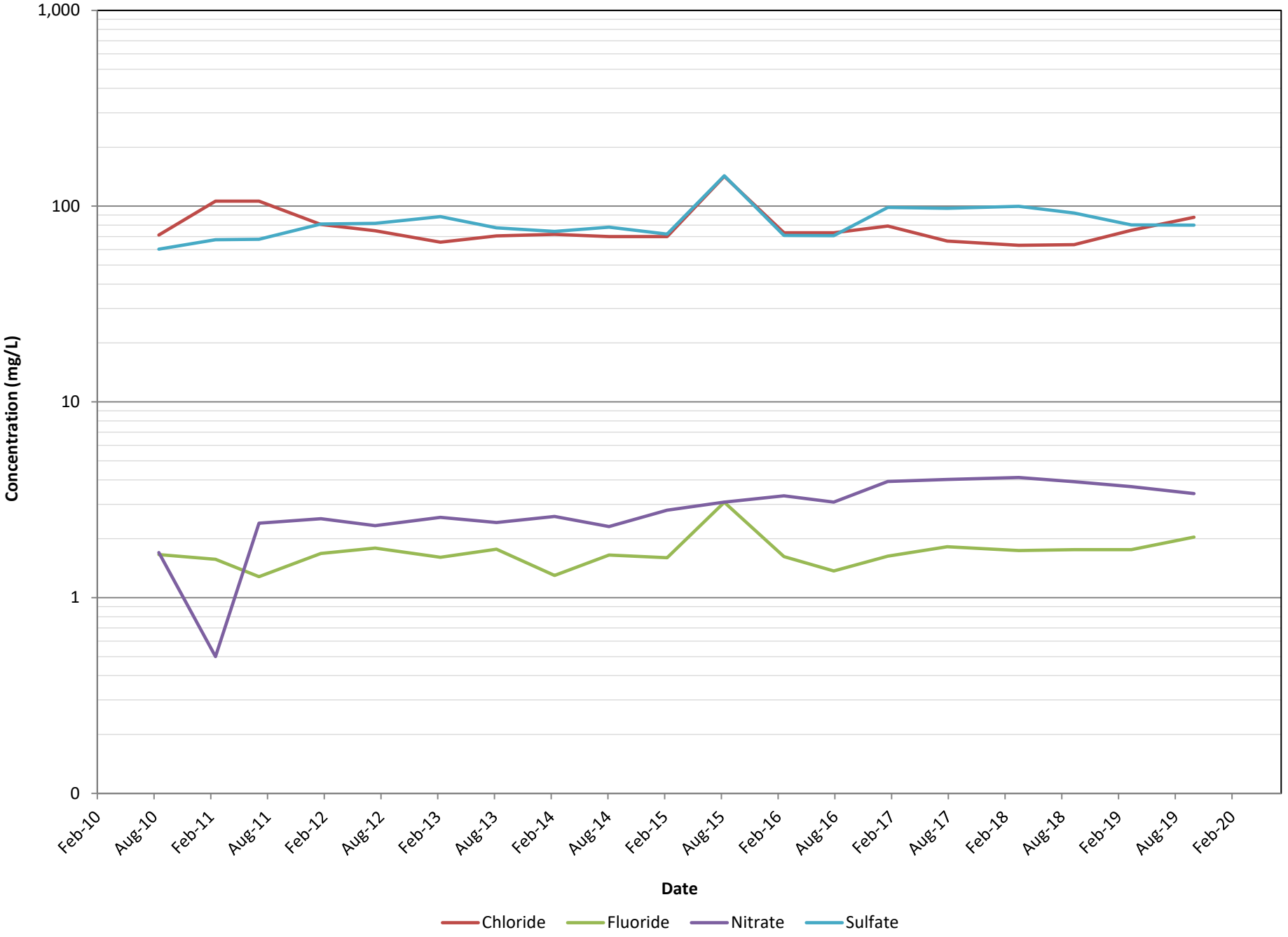
MW-27: METAL CONCENTRATIONS OVER TIME



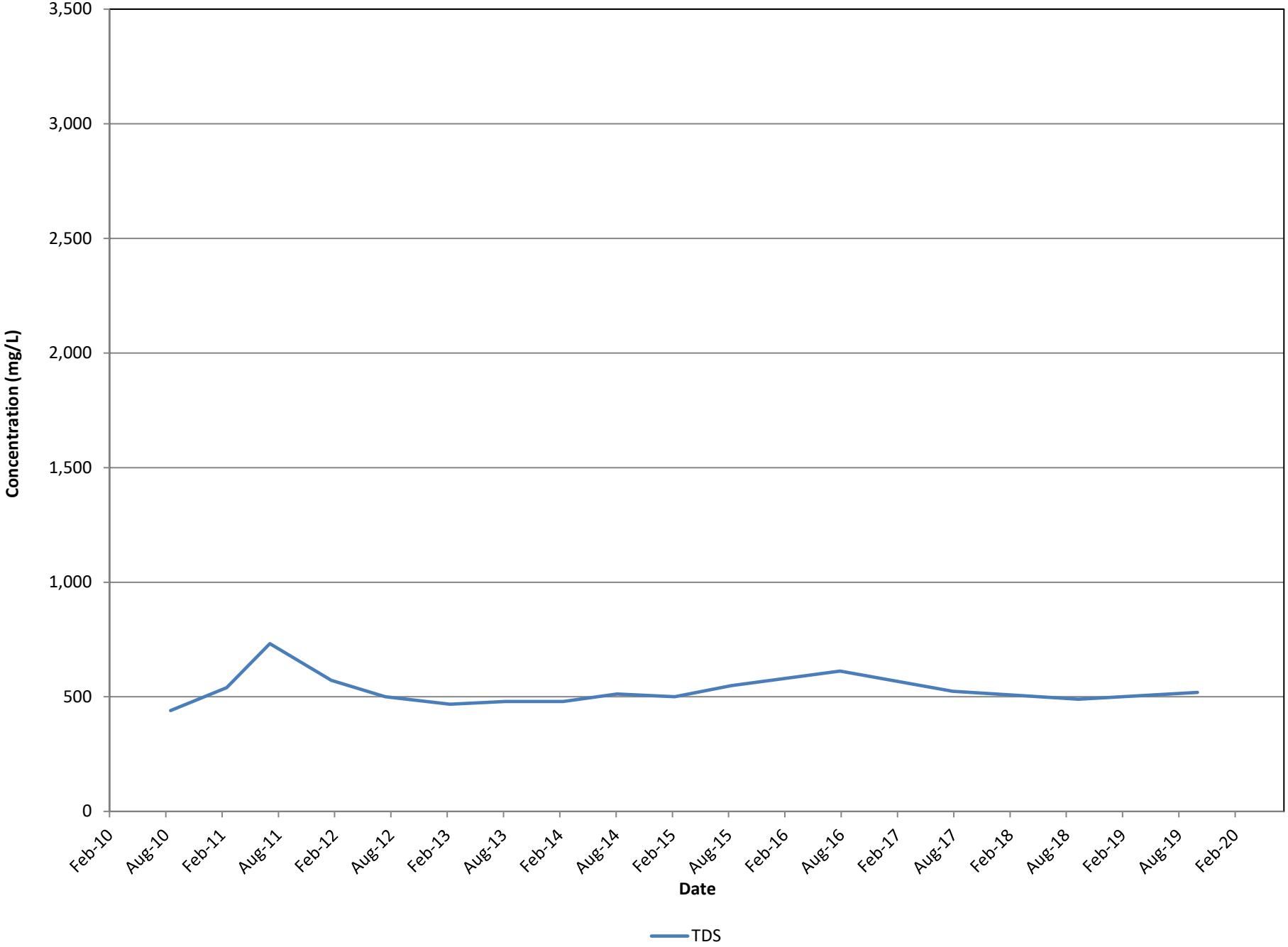
MW-27: SVOC CONCENTRATIONS OVER TIME



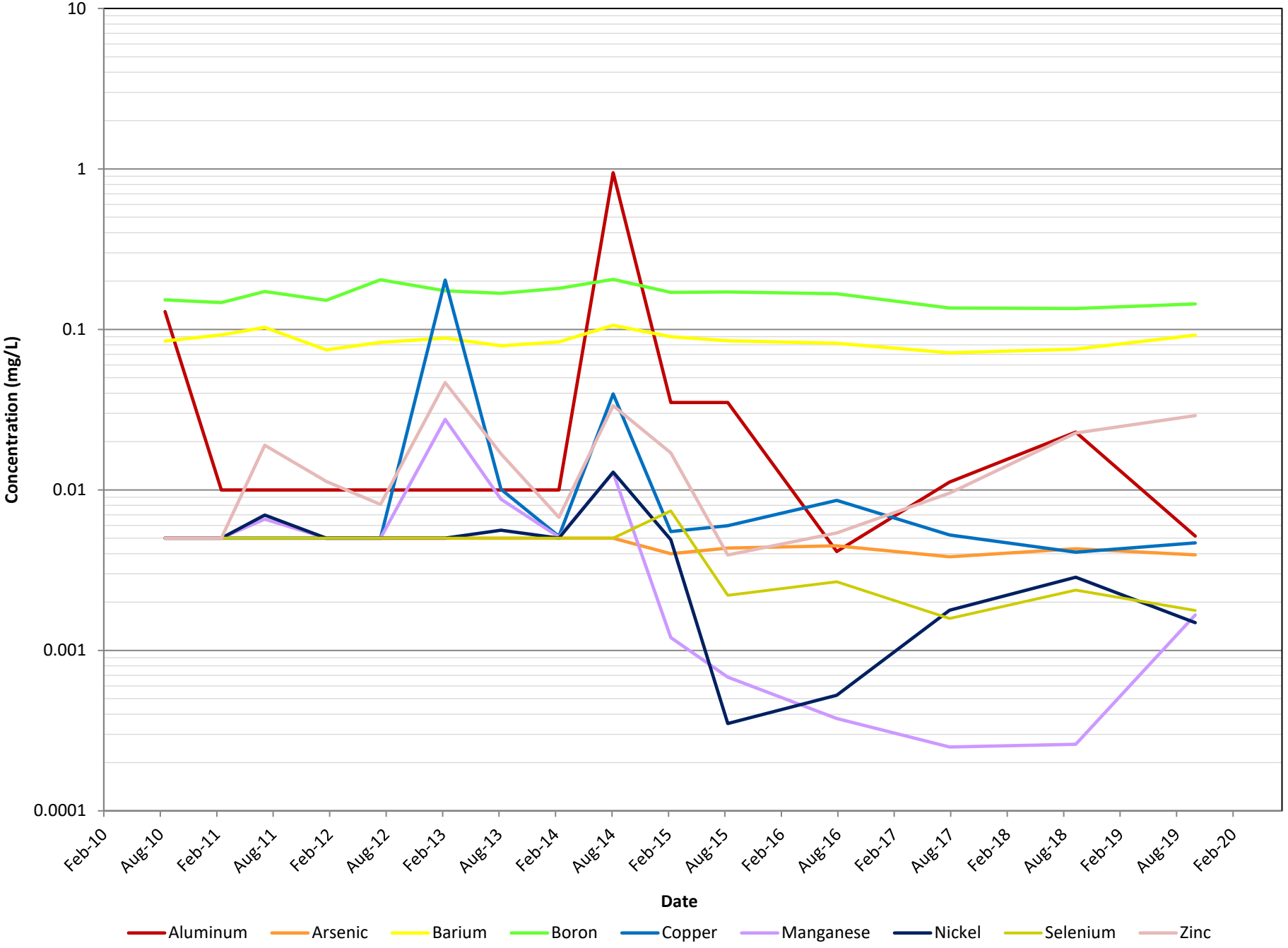
MW-28: ANION CONCENTRATIONS OVER TIME



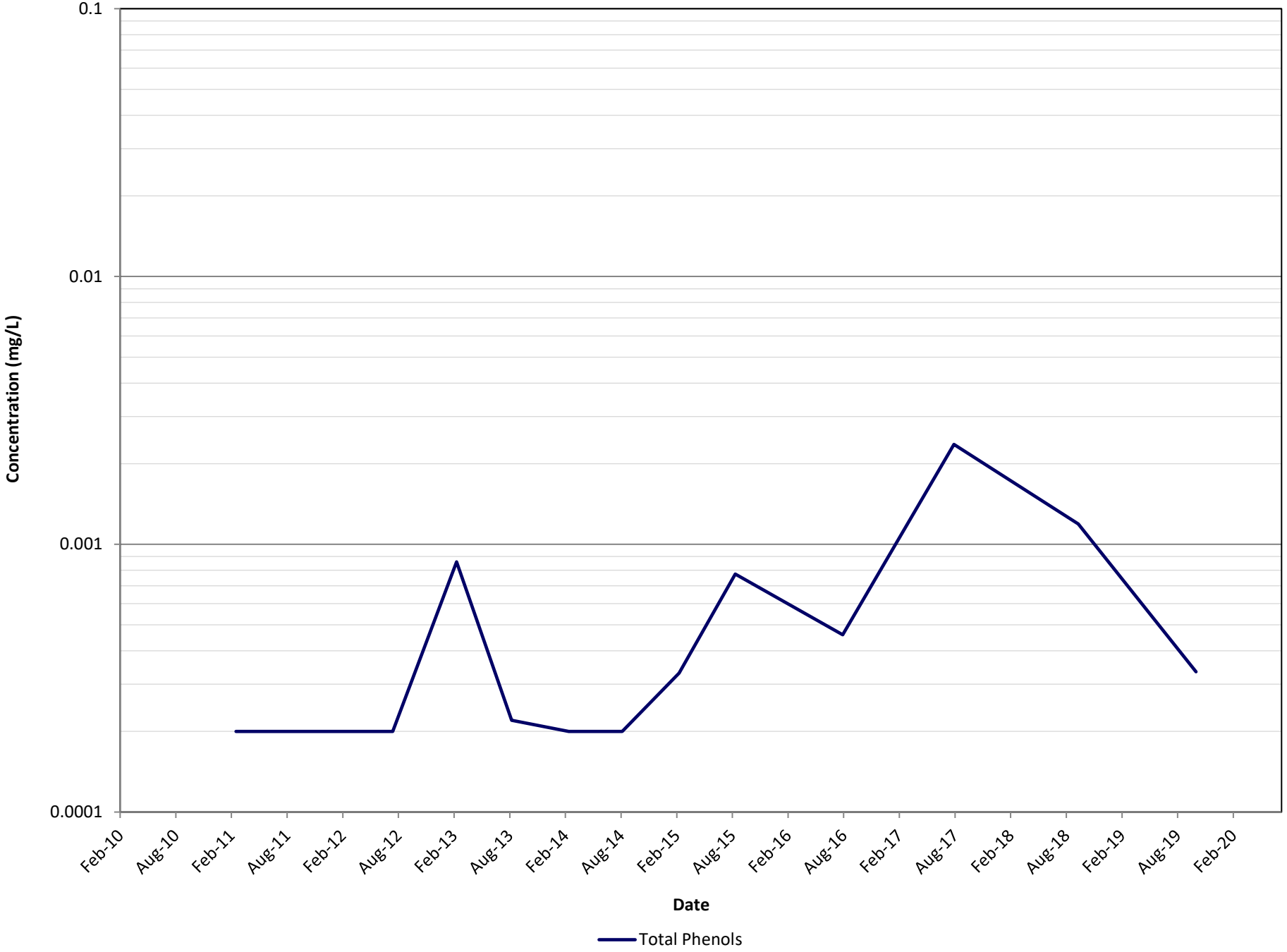
MW-28: TDS CONCENTRATIONS OVER TIME



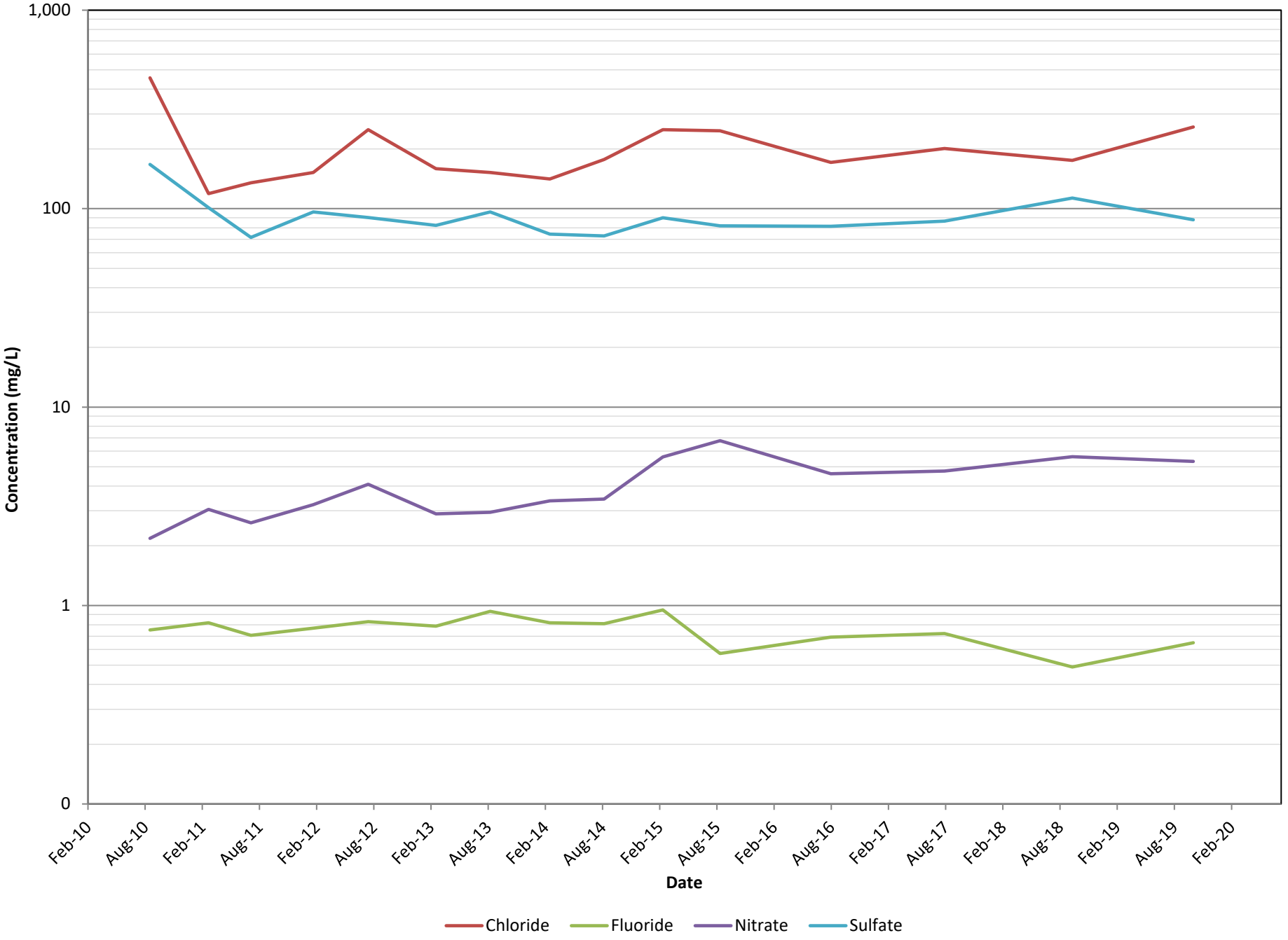
MW-28: METAL CONCENTRATIONS OVER TIME



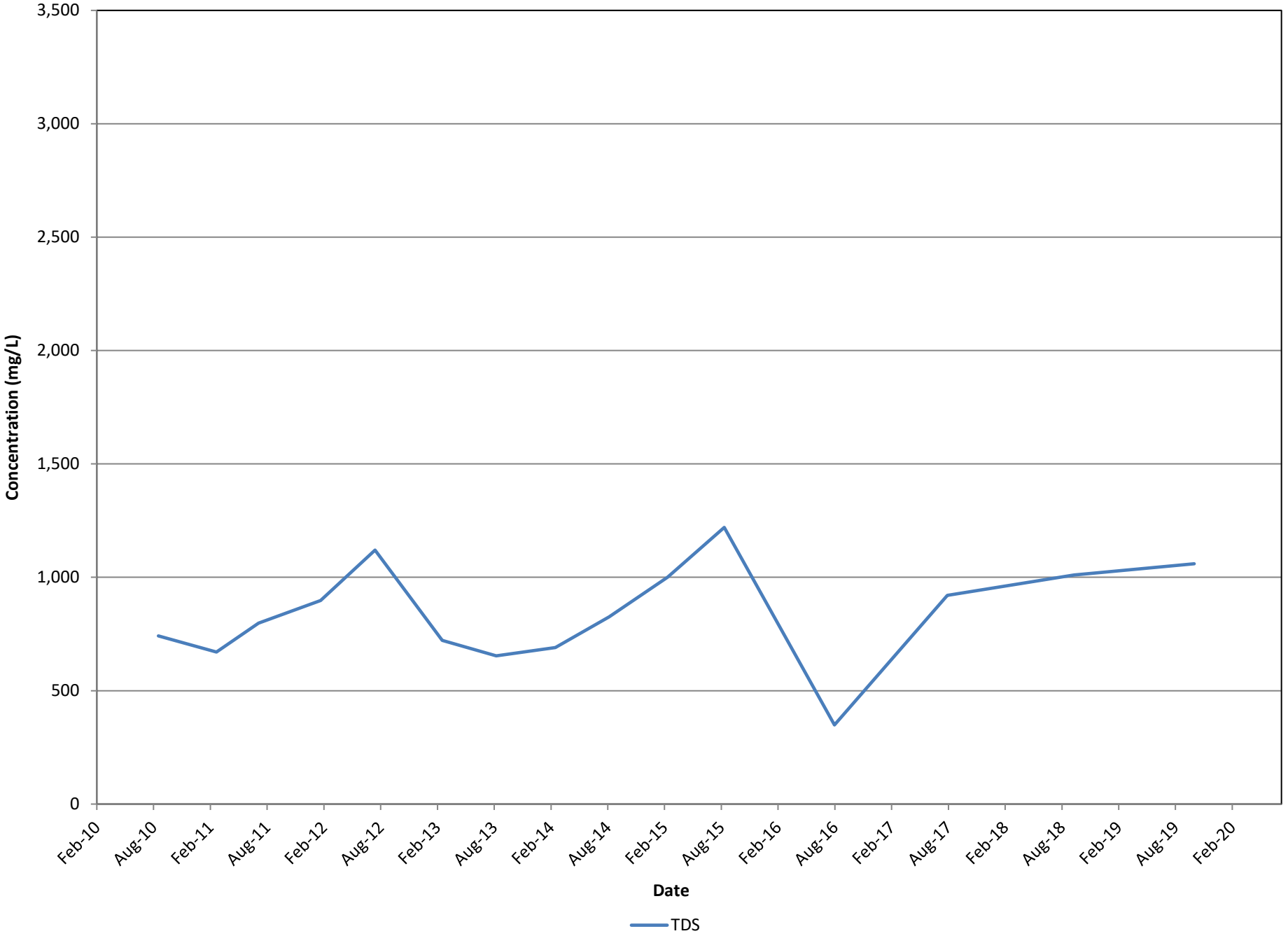
MW-28: SVOC CONCENTRATIONS OVER TIME



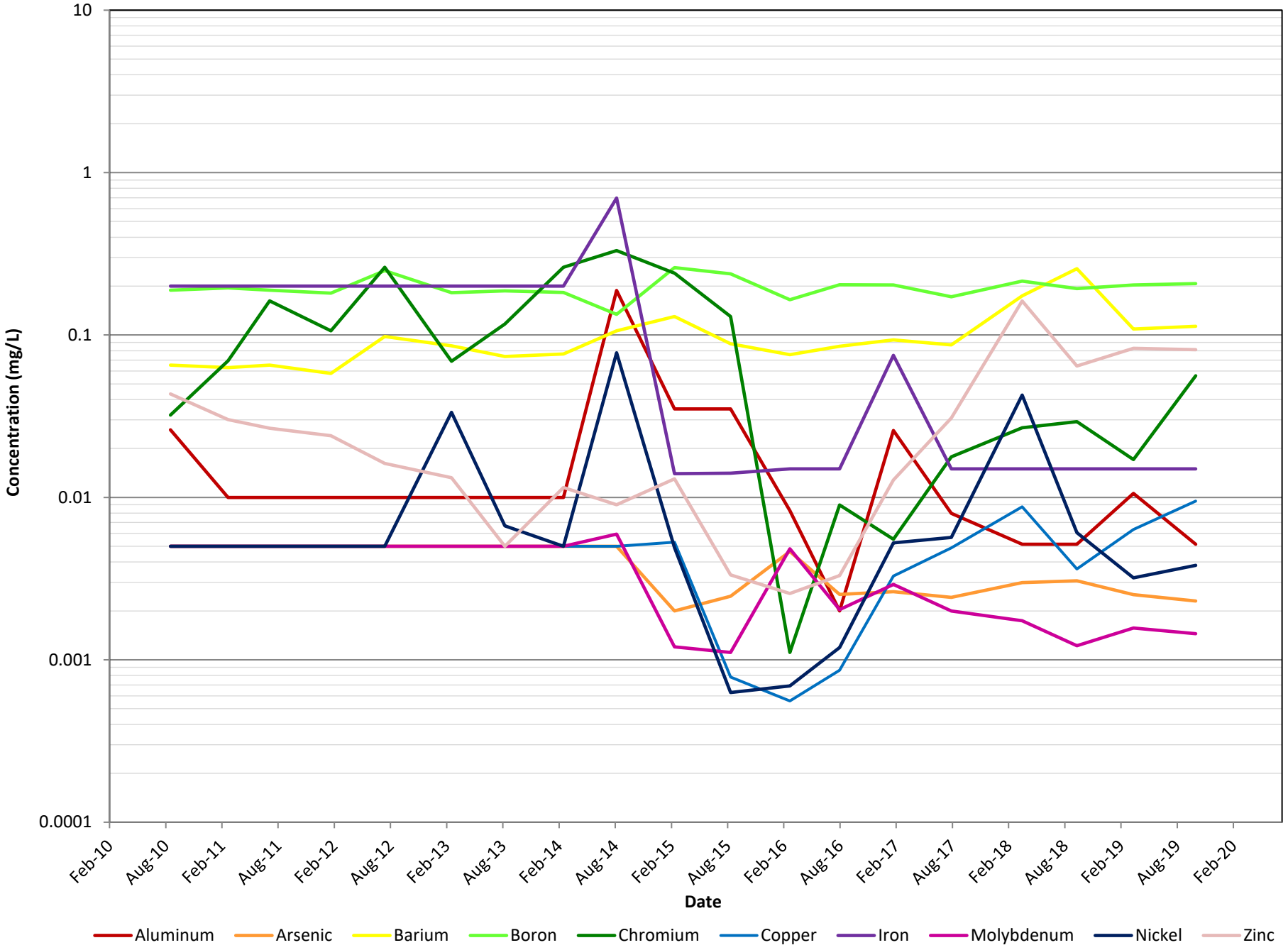
MW-29: ANION CONCENTRATIONS OVER TIME



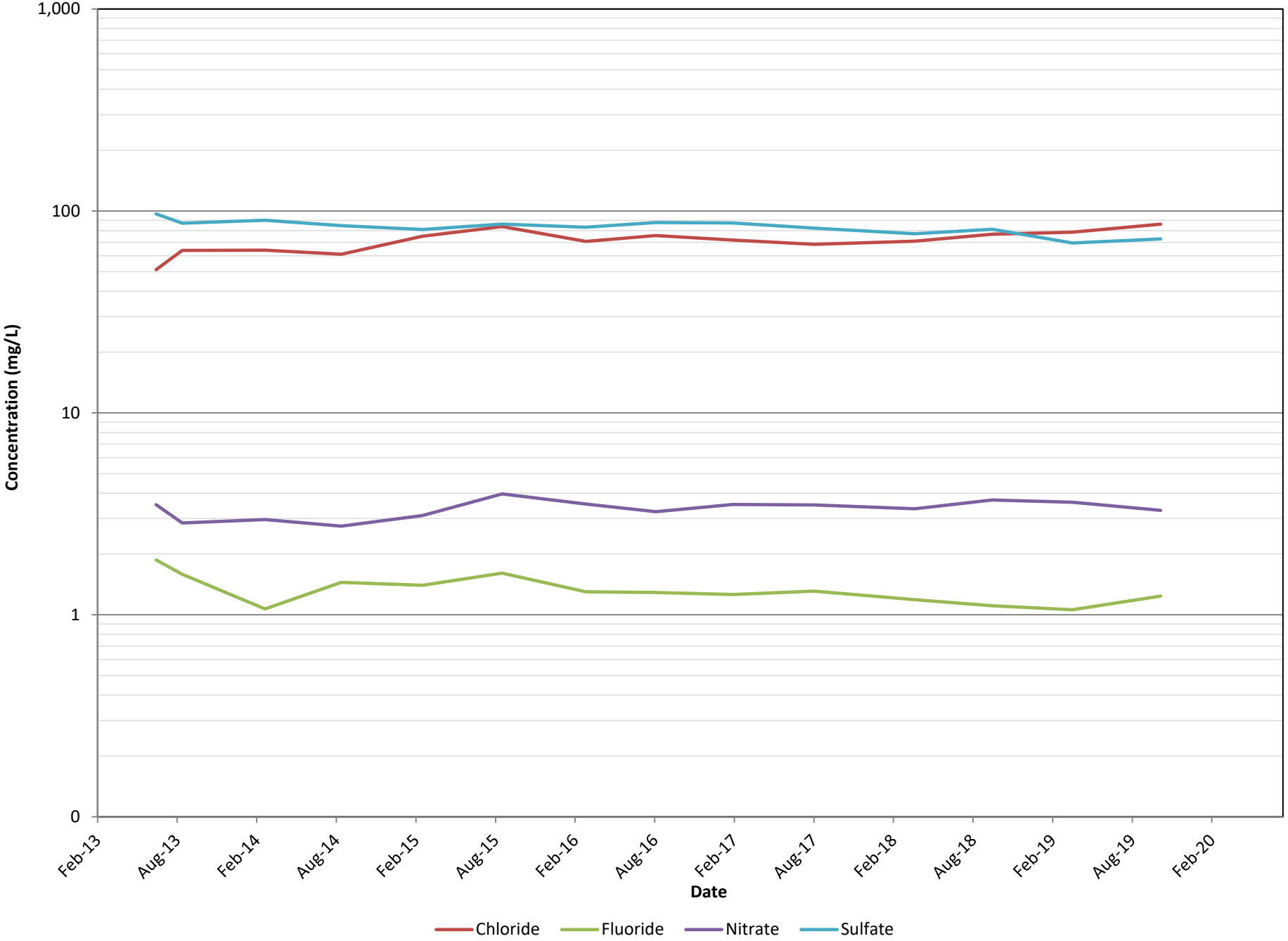
MW-29: TDS CONCENTRATIONS OVER TIME



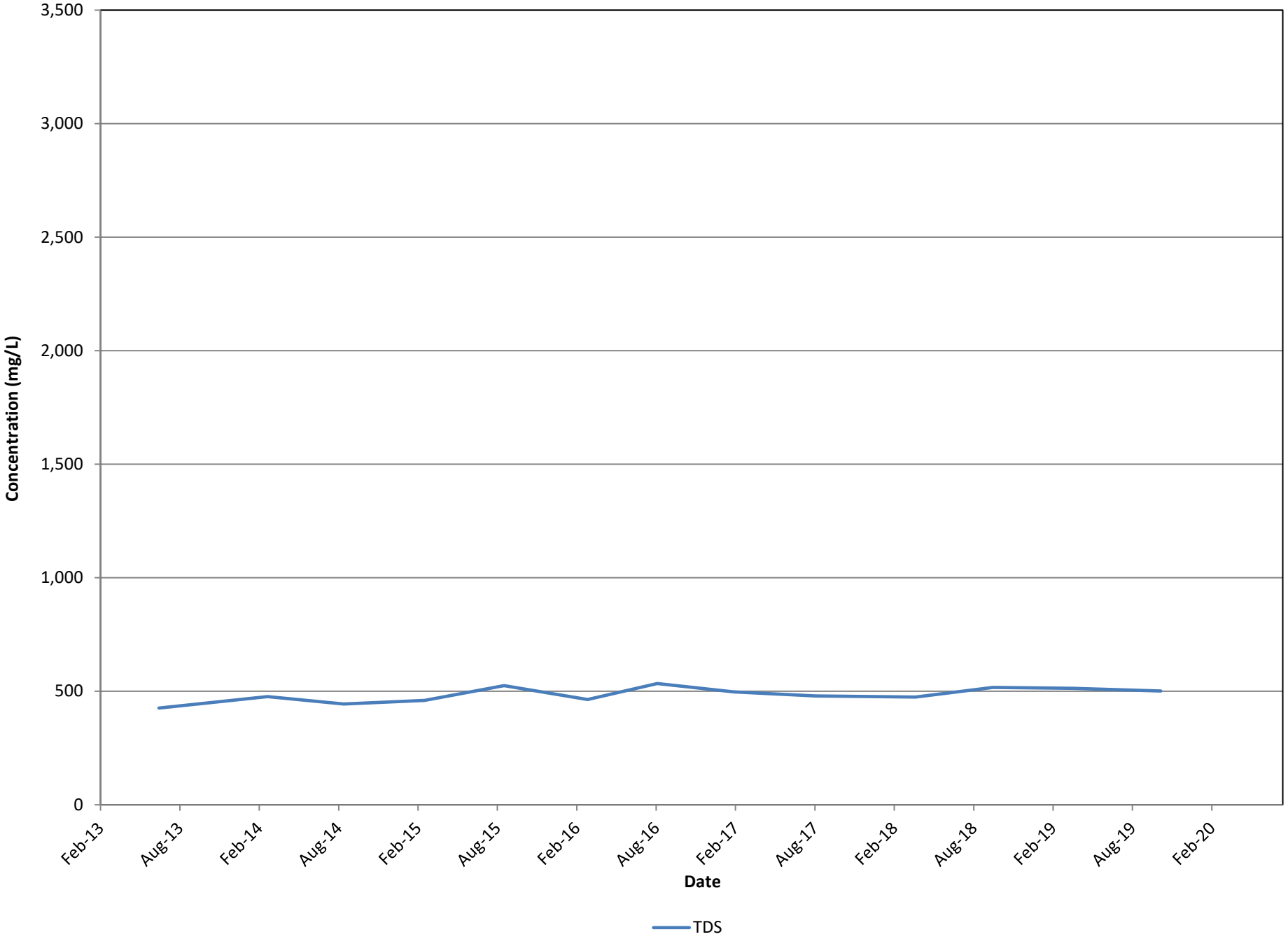
MW-29: METAL CONCENTRATIONS OVER TIME



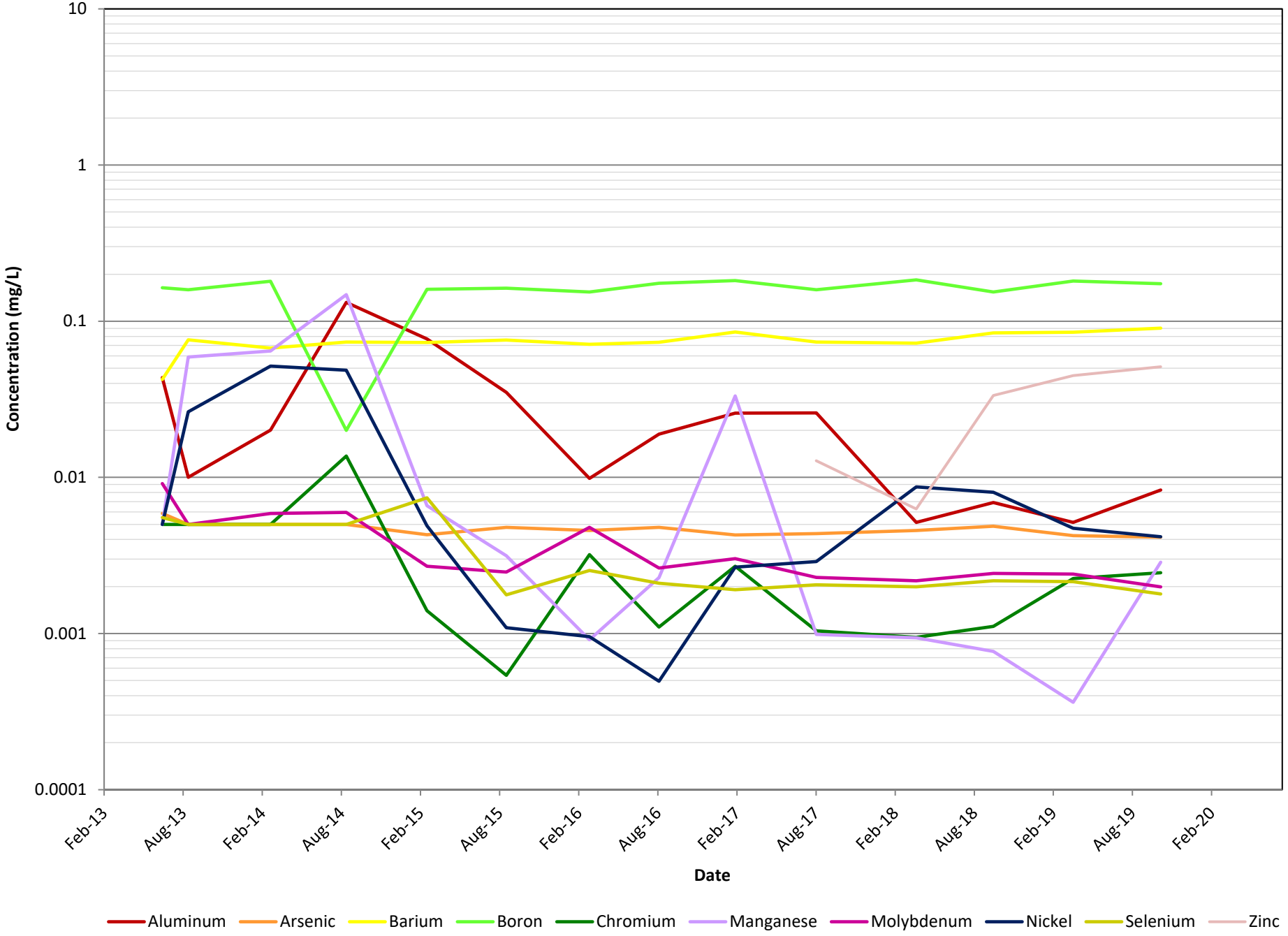
MW-30: ANION CONCENTRATIONS OVER TIME



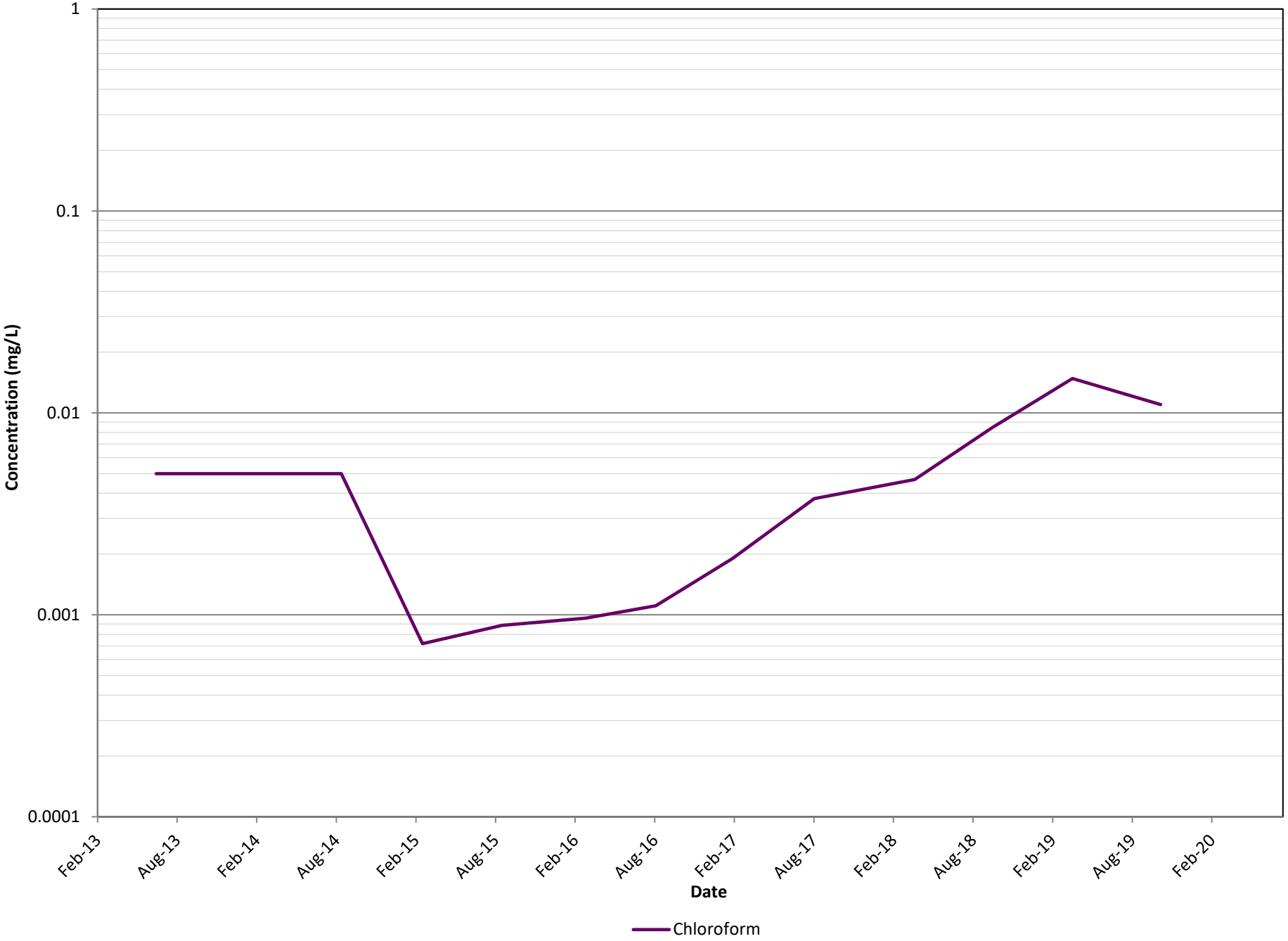
MW-30: TDS CONCENTRATIONS OVER TIME



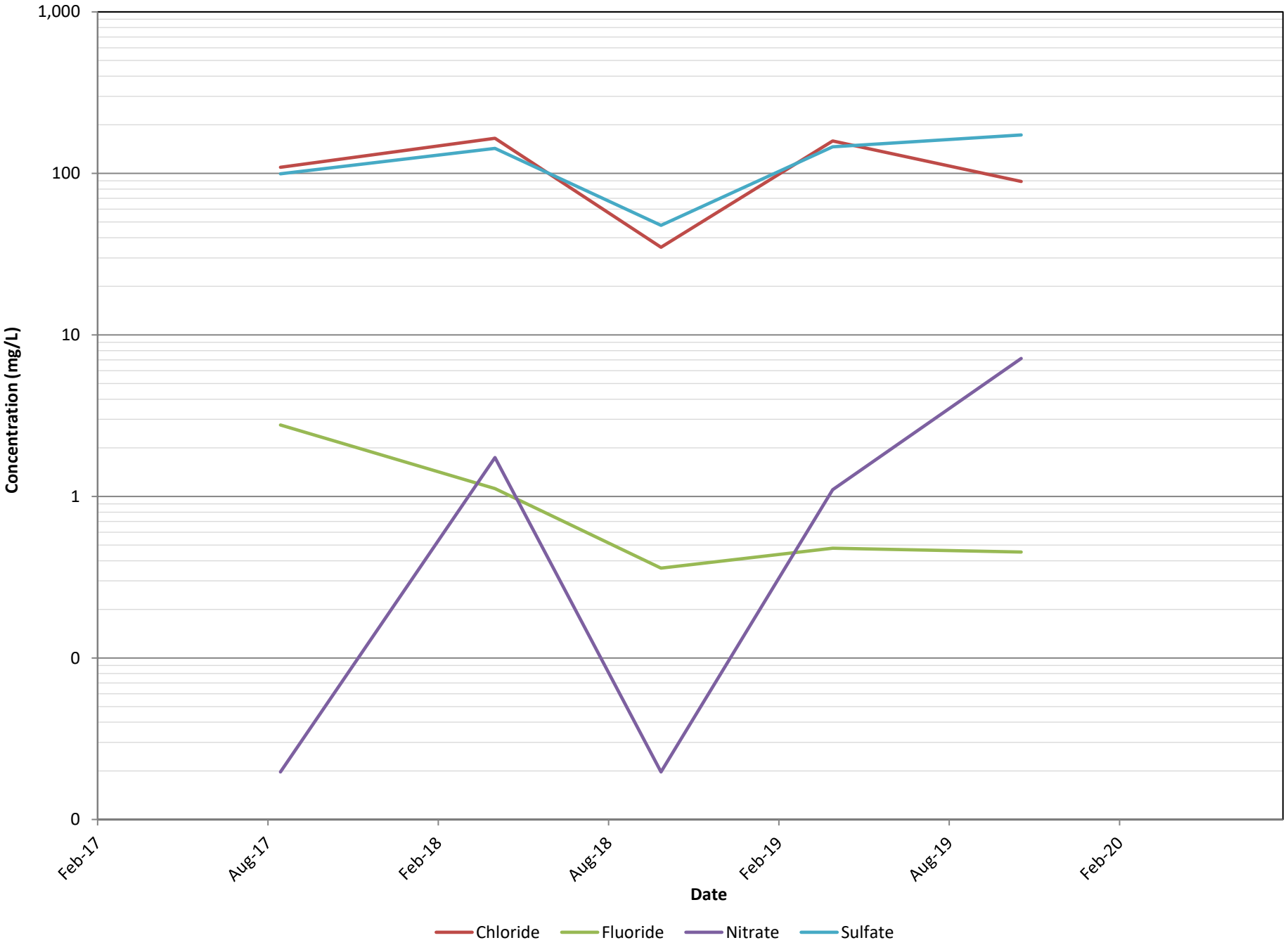
MW-30: METAL CONCENTRATIONS OVER TIME



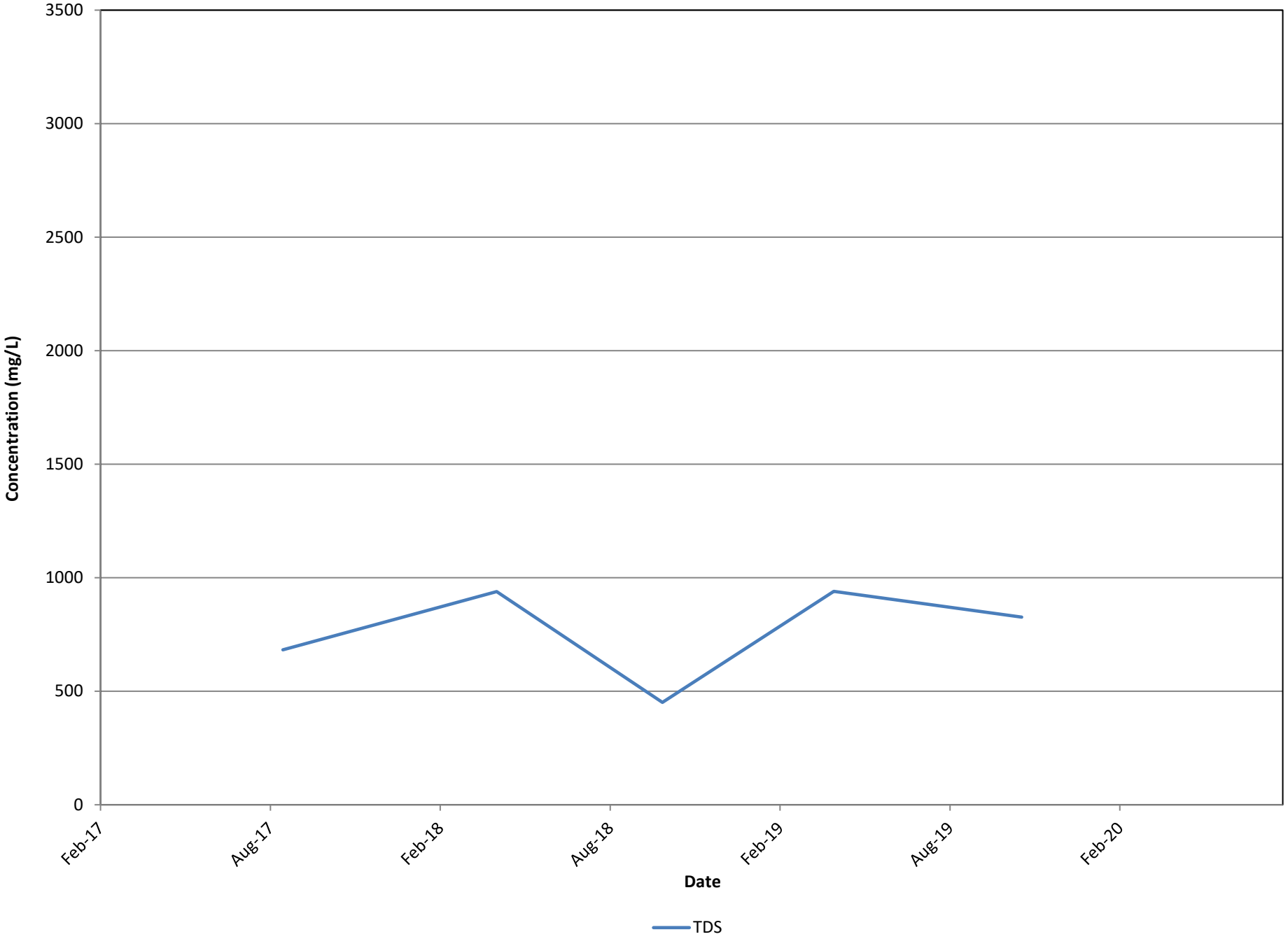
MW-30: VOC CONCENTRATIONS OVER TIME



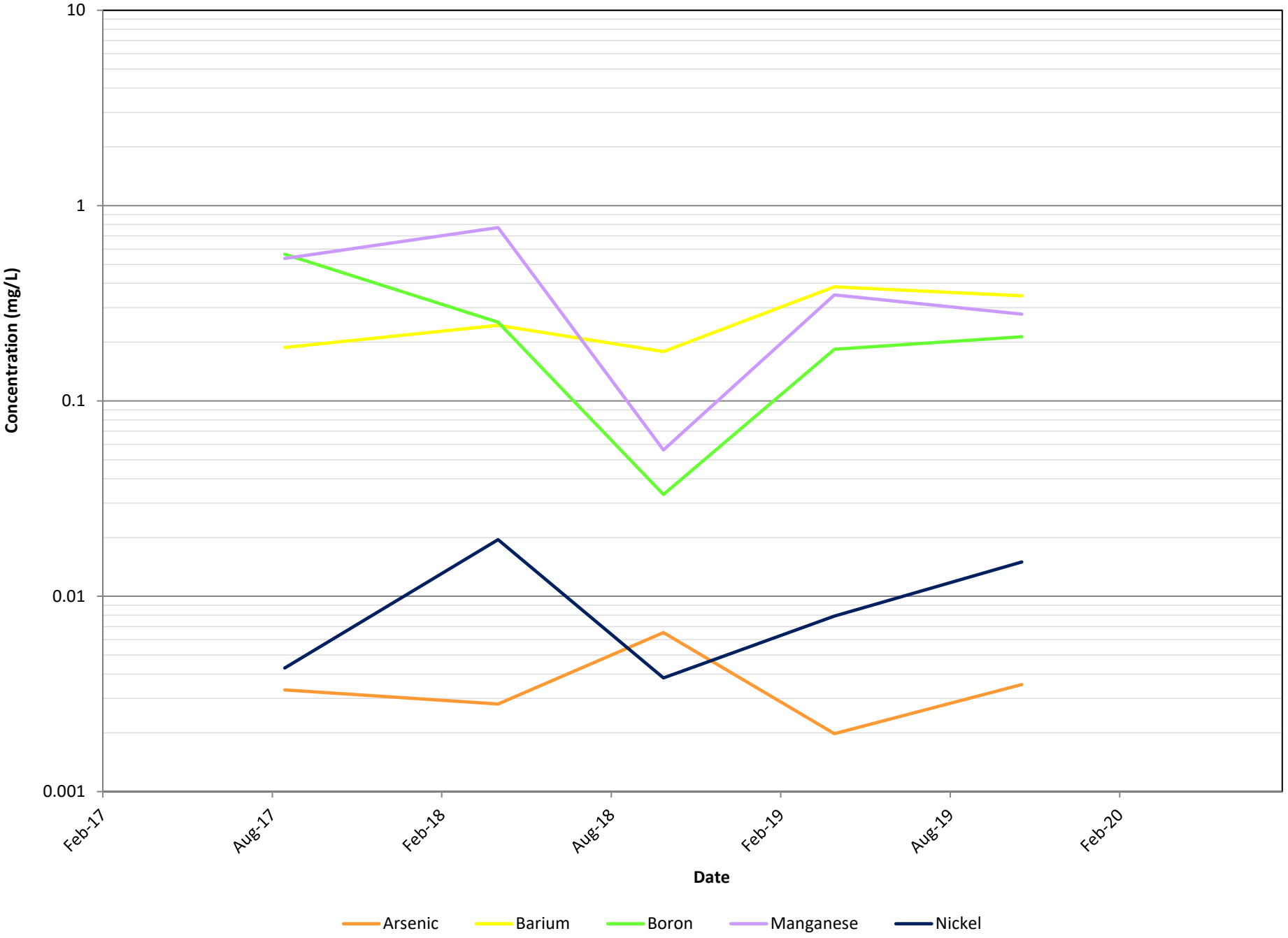
MW-32: ANION CONCENTRATIONS OVER TIME



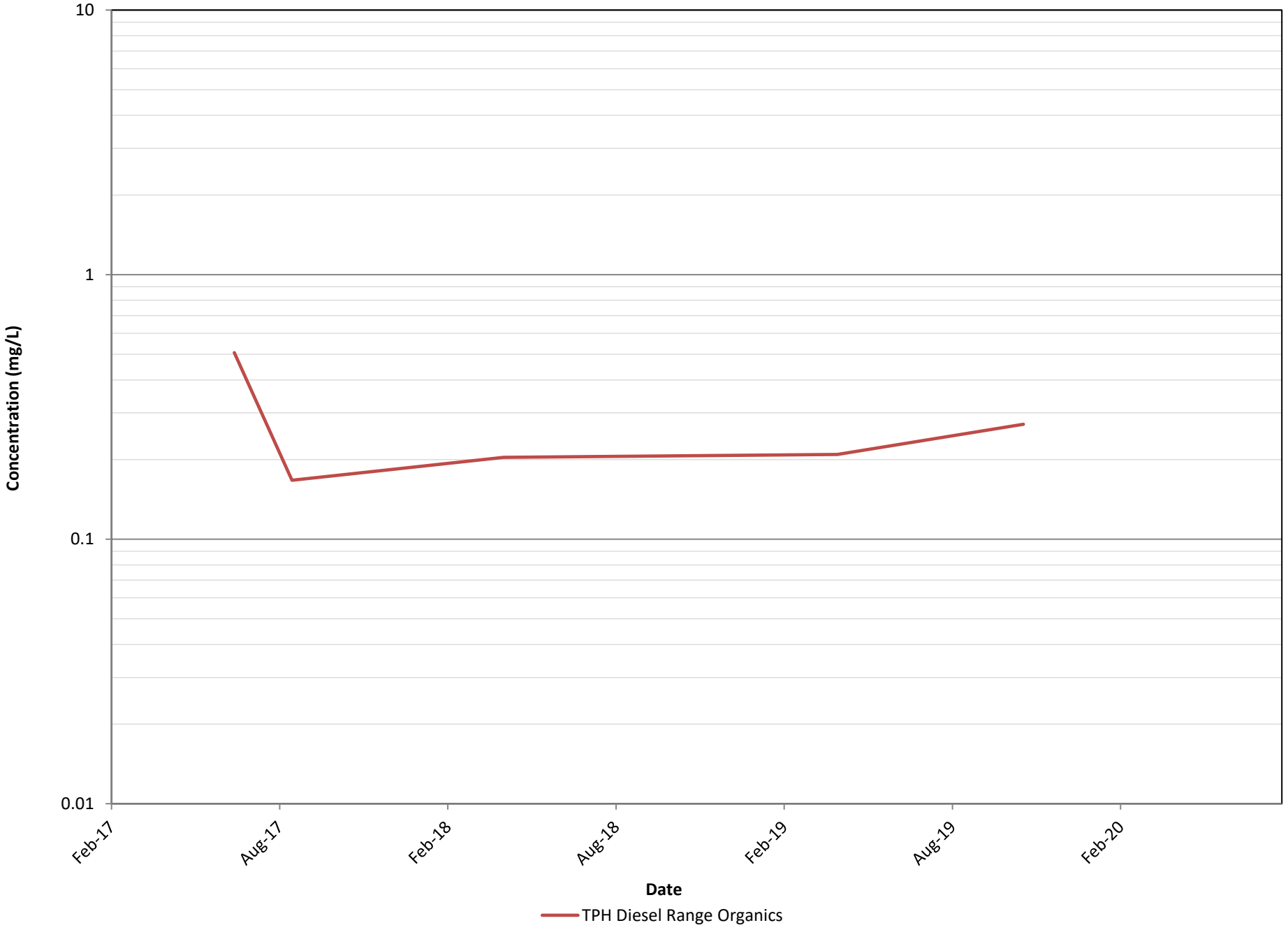
MW-32: TDS CONCENTRATIONS OVER TIME



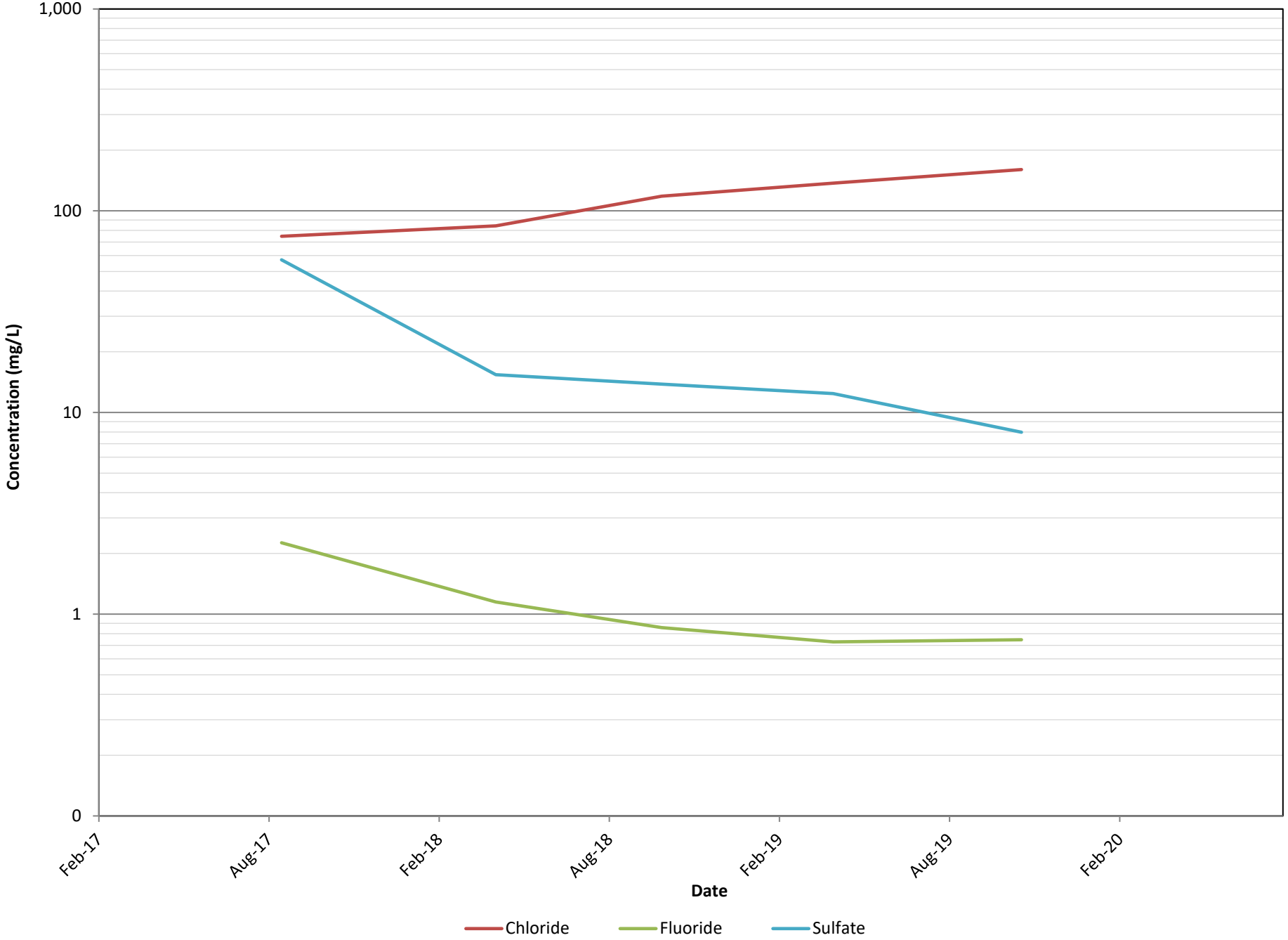
MW-32: METAL CONCENTRATIONS OVER TIME



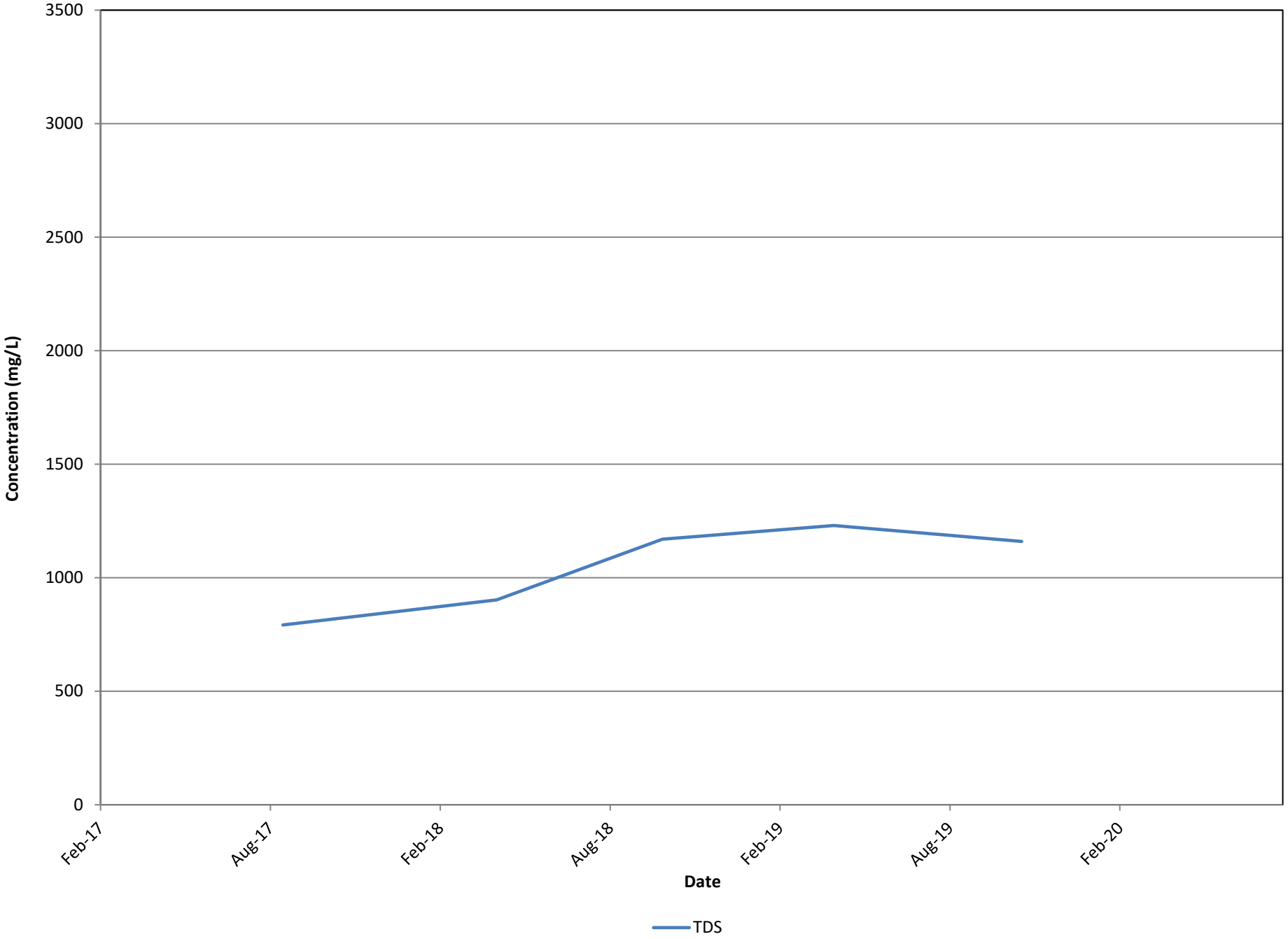
MW-32: TPH CONCENTRATIONS OVER TIME



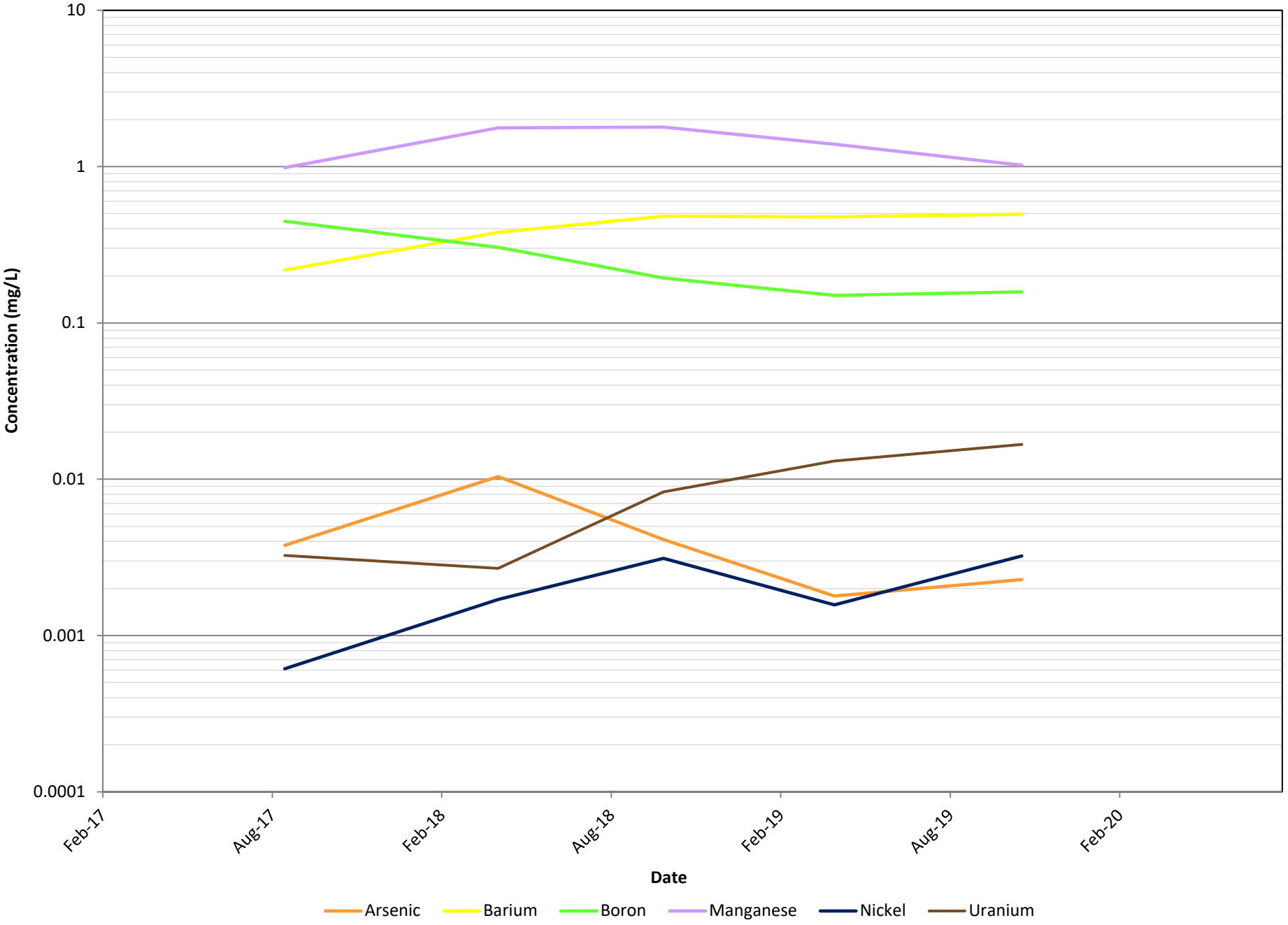
MW-33: ANION CONCENTRATIONS OVER TIME



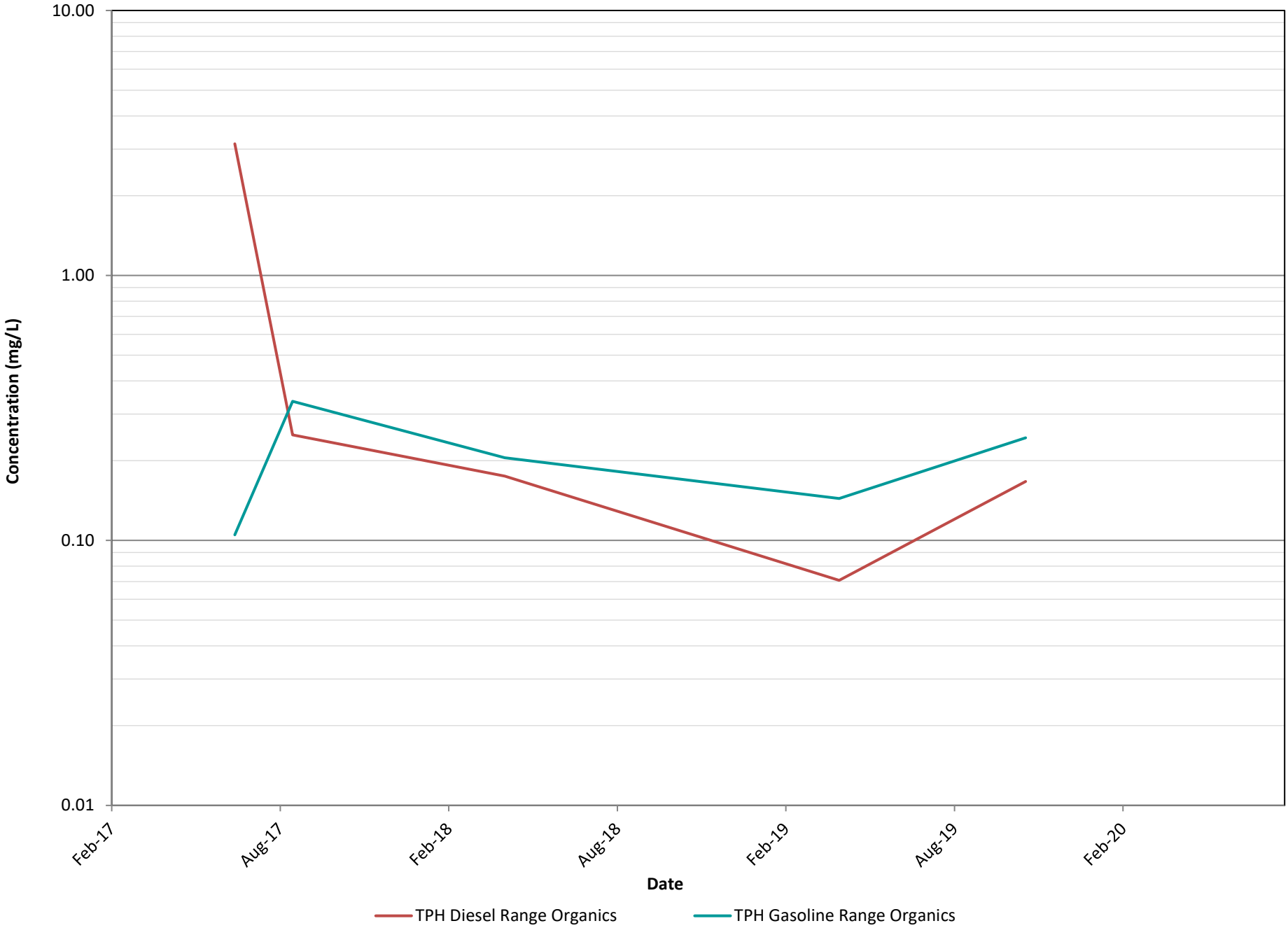
MW-33: TDS CONCENTRATIONS OVER TIME



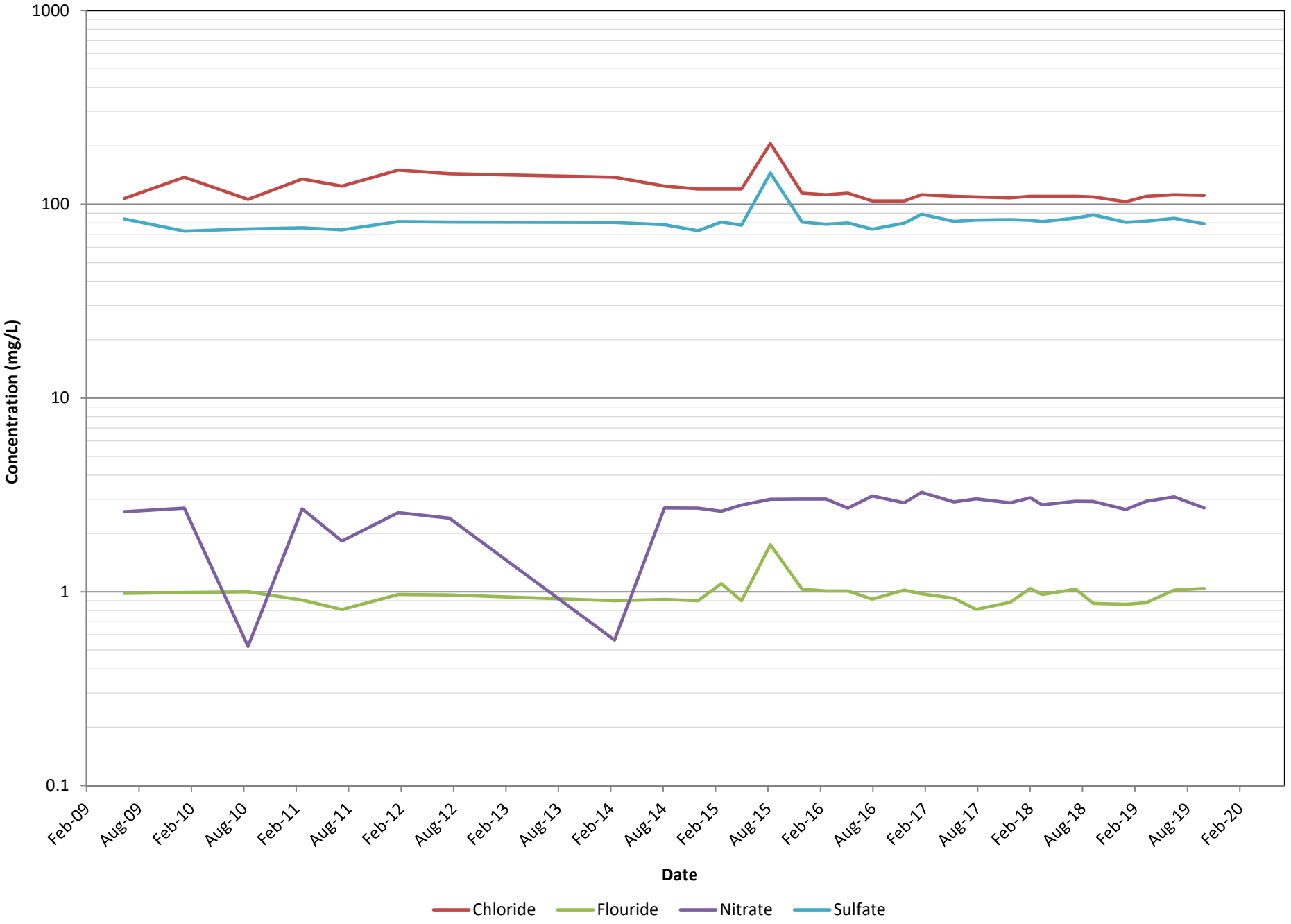
MW-33: METAL CONCENTRATIONS OVER TIME



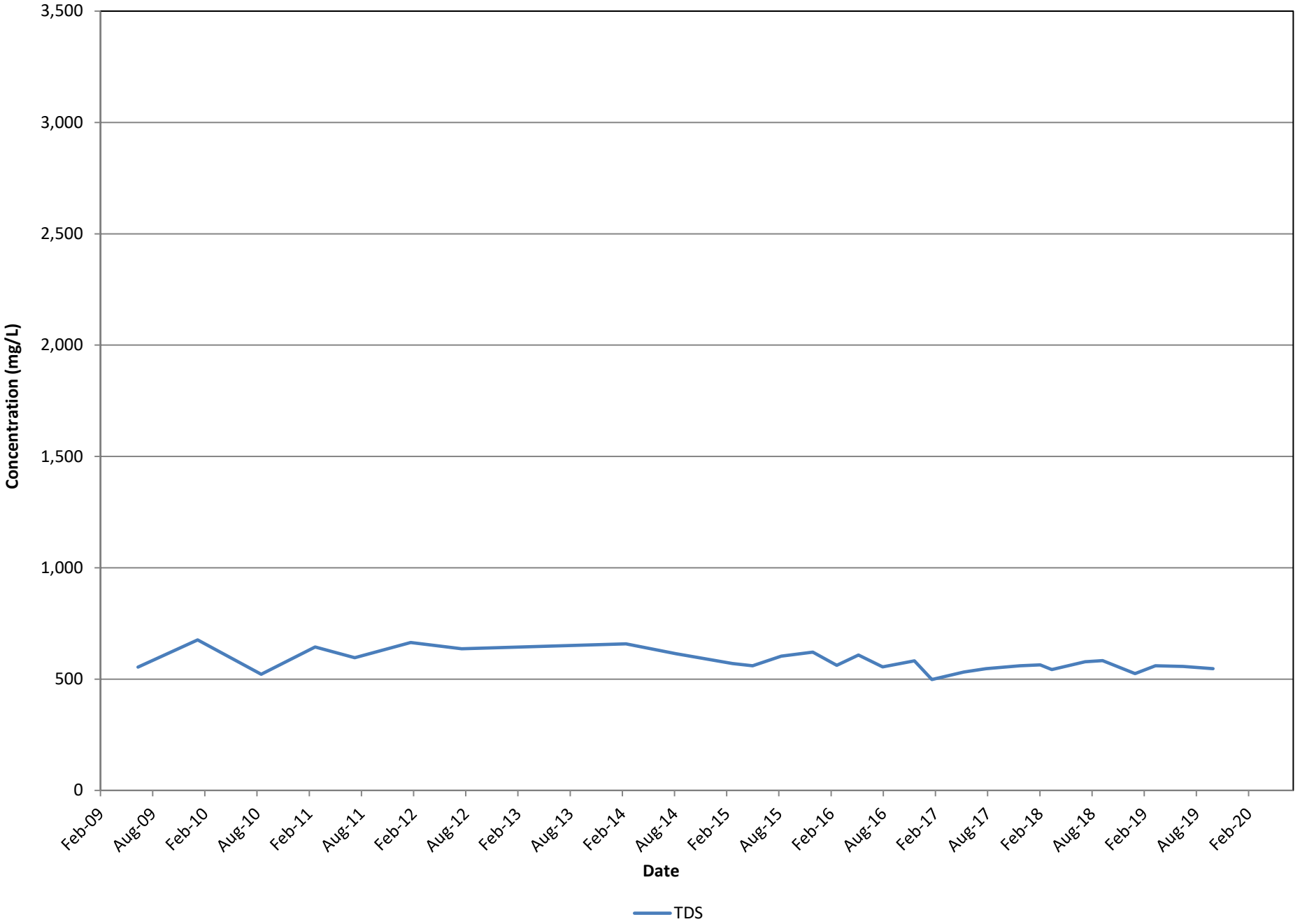
MW-33: TPH CONCENTRATIONS OVER TIME



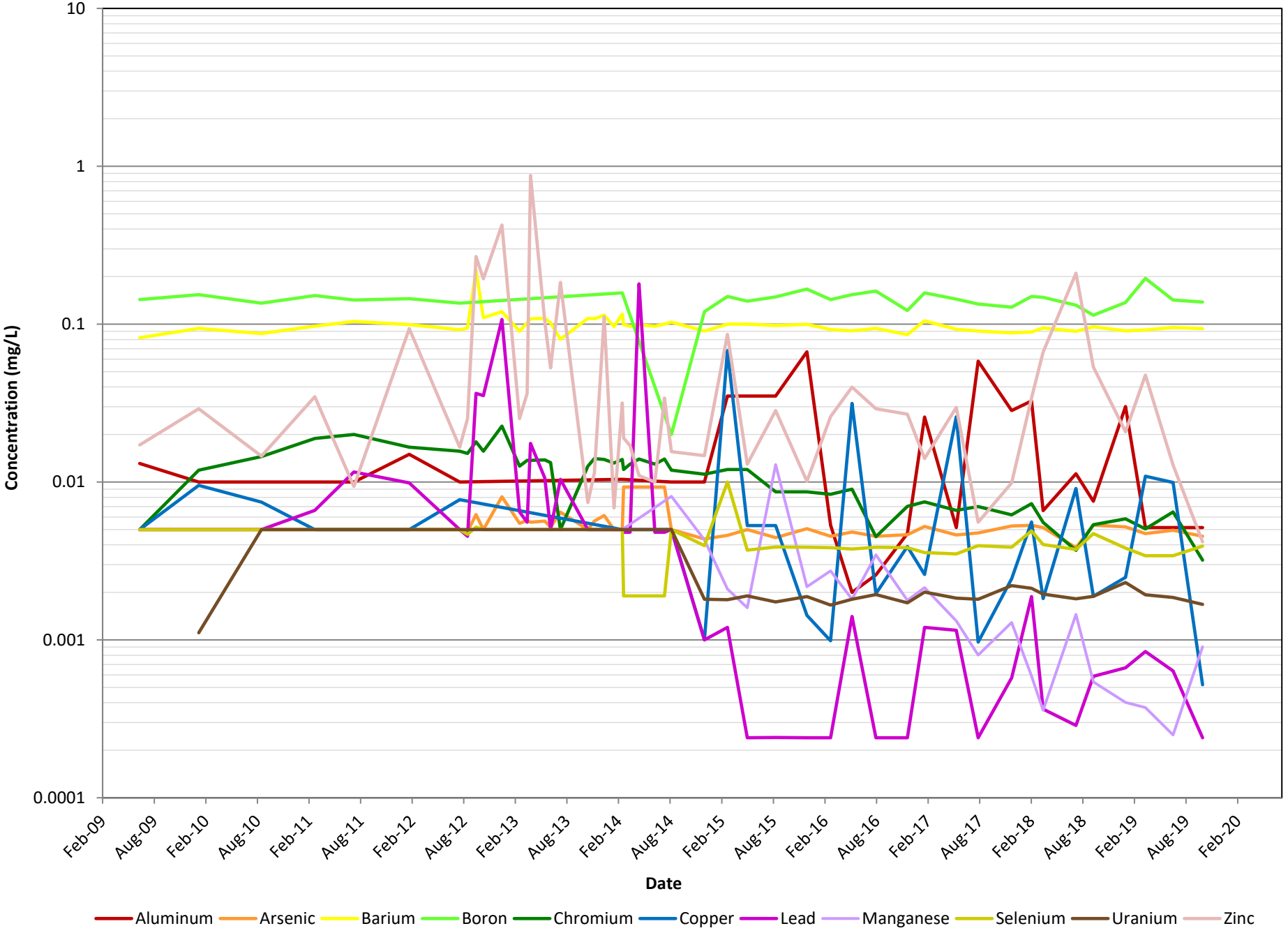
EAST WELL (WW-EAST): ANION CONCENTRATIONS OVER TIME



EAST WELL (WW-EAST): TDS CONCENTRATIONS OVER TIME



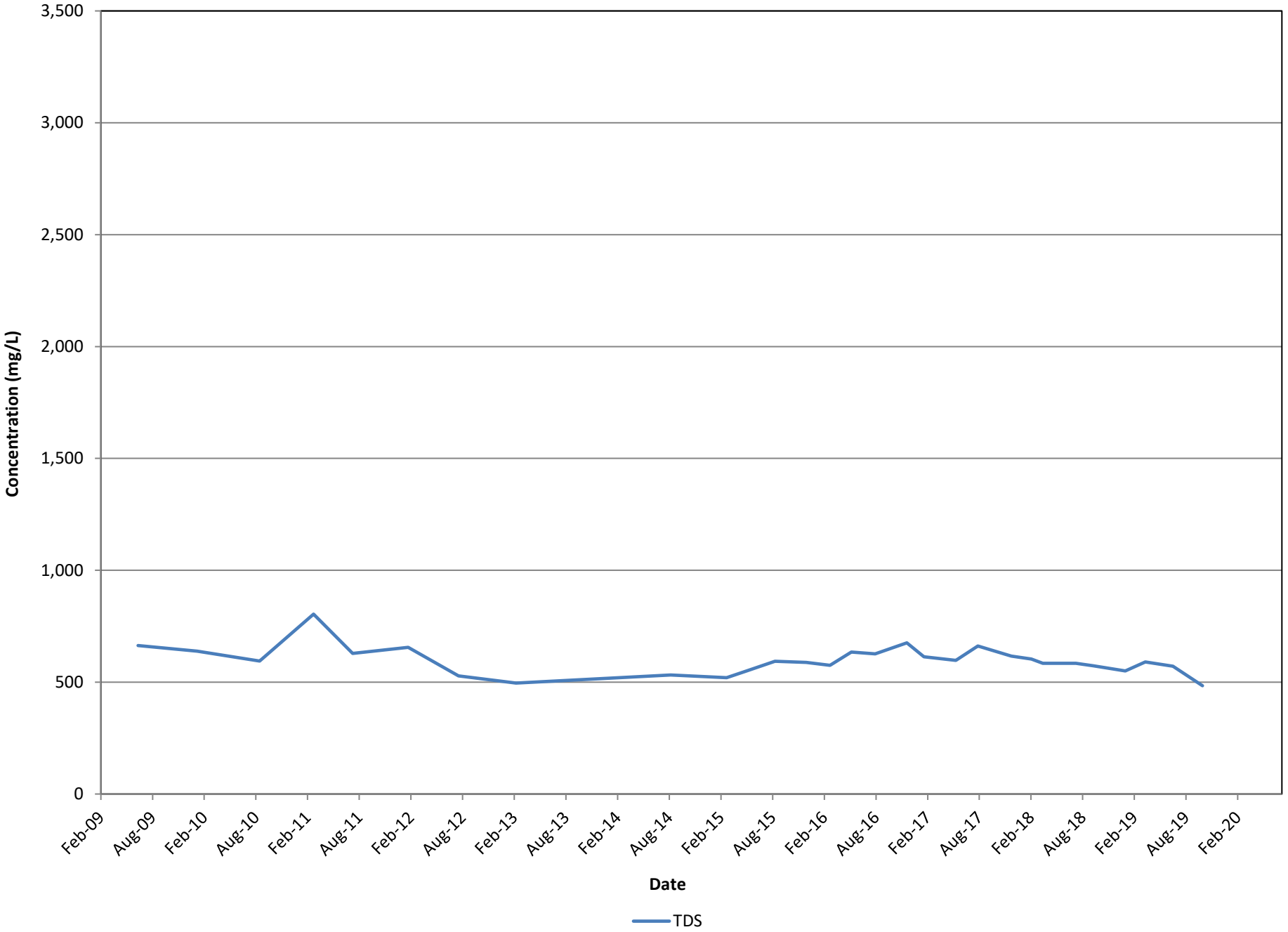
EAST WELL (WW-EAST): METAL CONCENTRATIONS OVER TIME



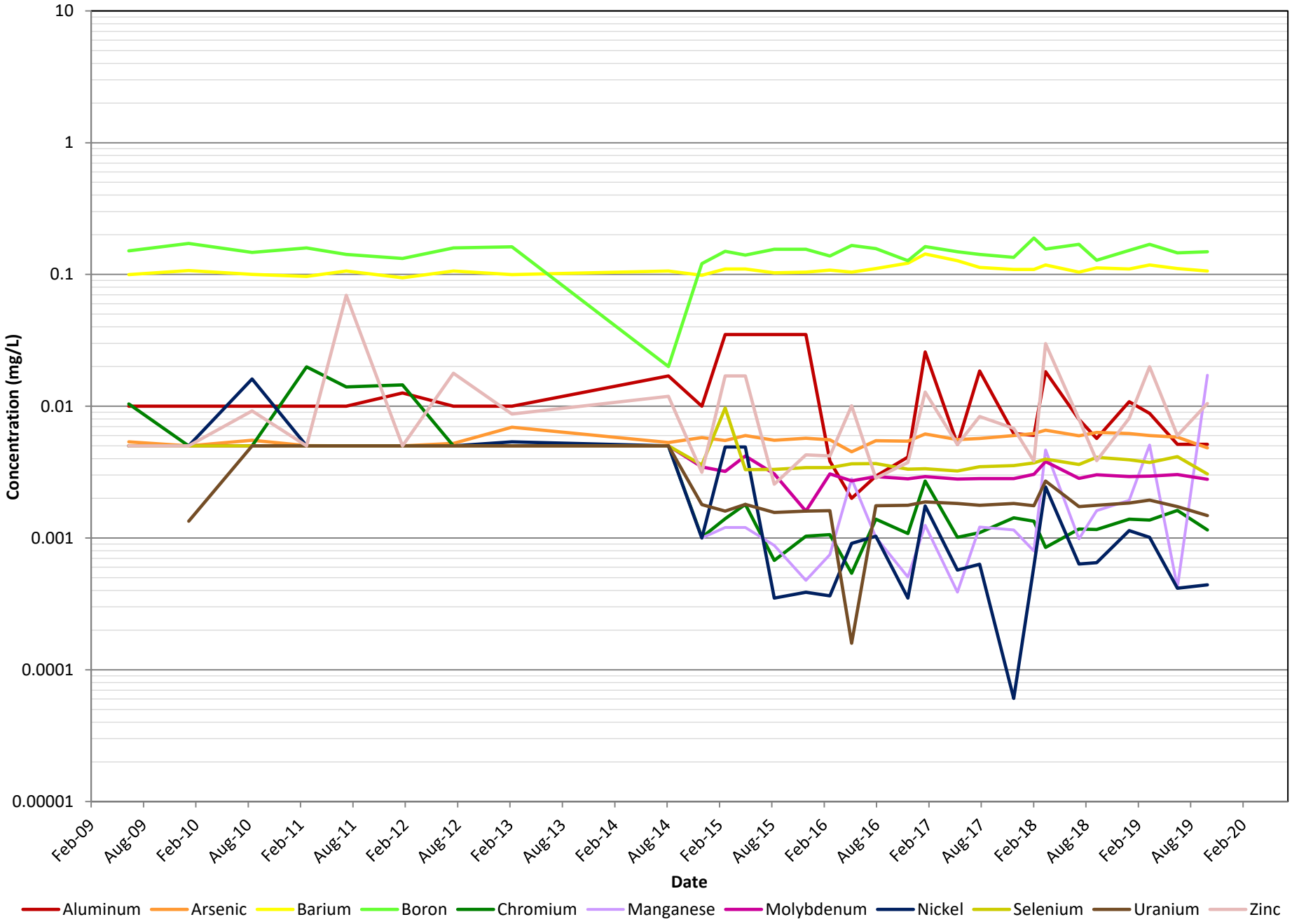
NORTH WELL (WW-NORTH): ANION CONCENTRATIONS OVER TIME



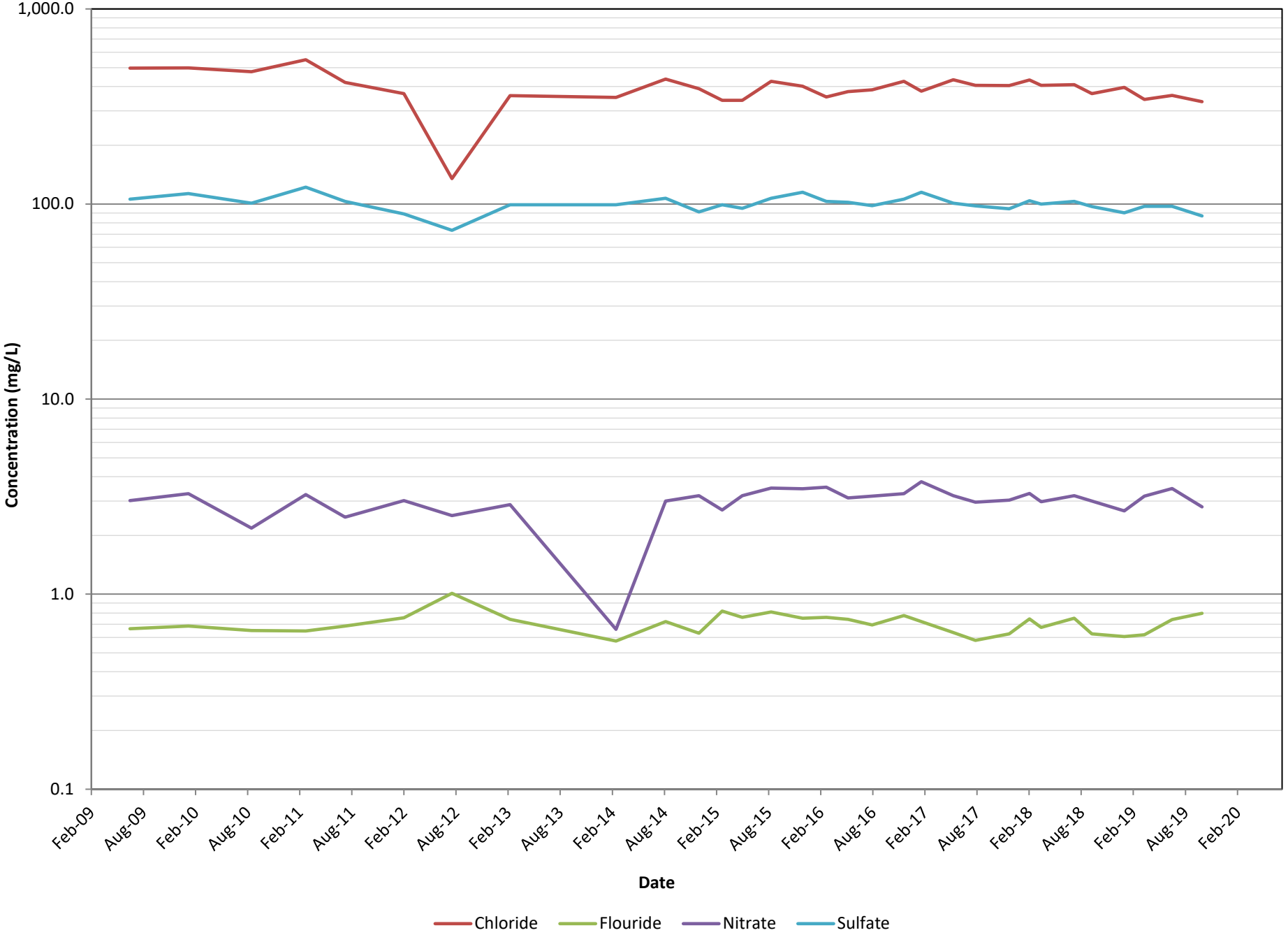
NORTH WELL (WW-NORTH): TDS CONCENTRATIONS OVER TIME



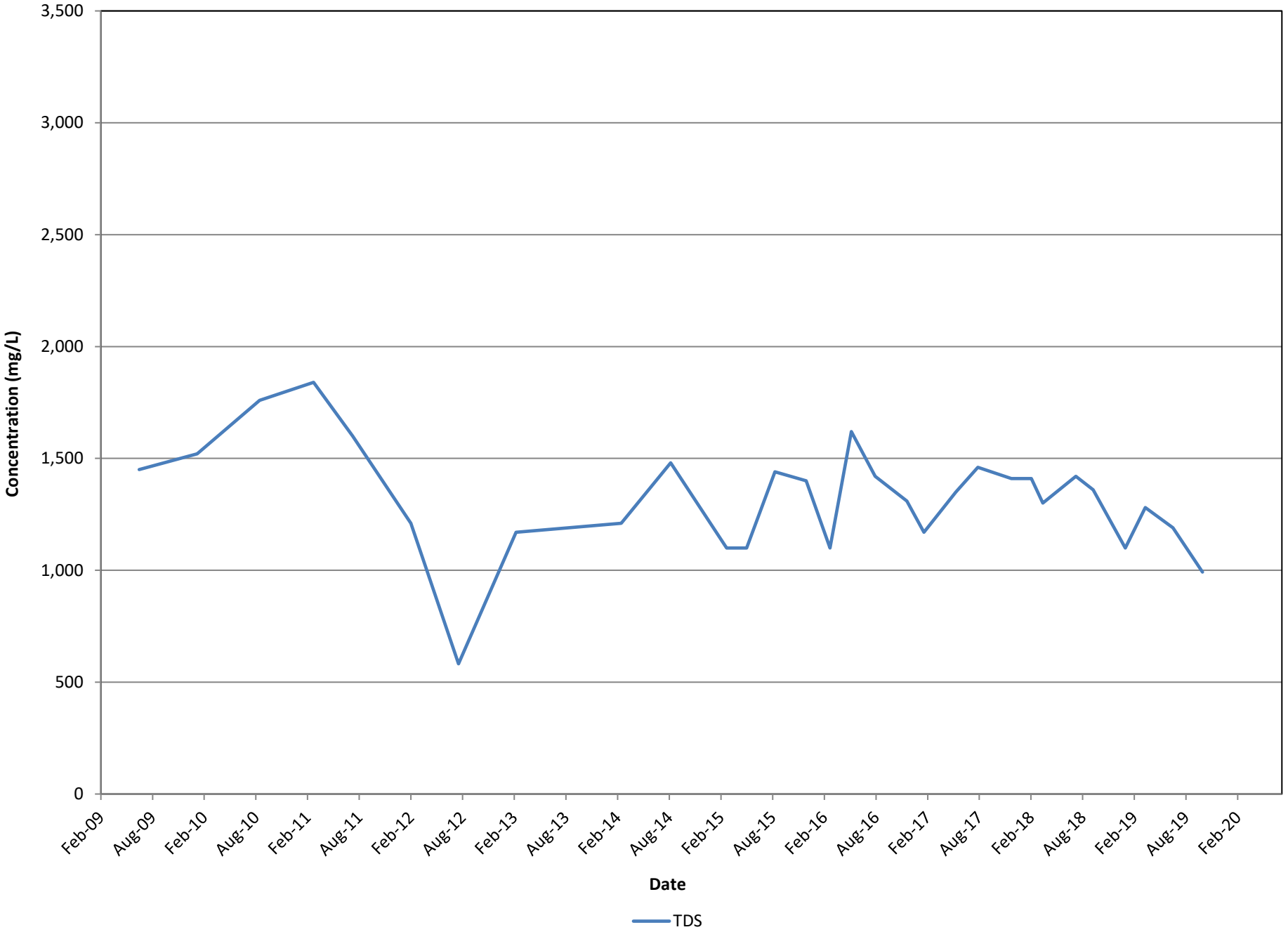
NORTH WELL (WW-NORTH): METAL CONCENTRATIONS OVER TIME



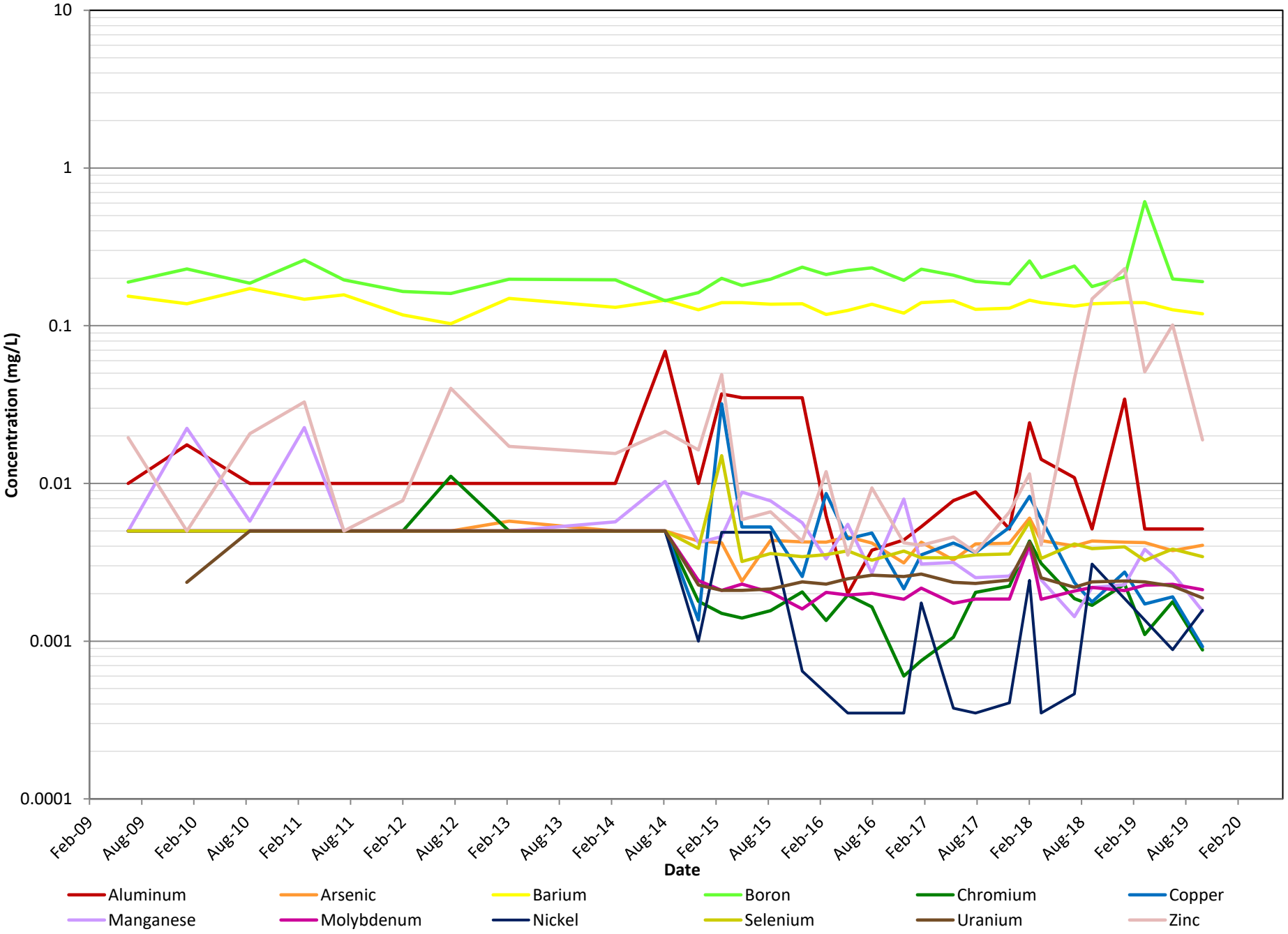
SOUTH WELL (WW-SOUTH): ANION CONCENTRATIONS OVER TIME



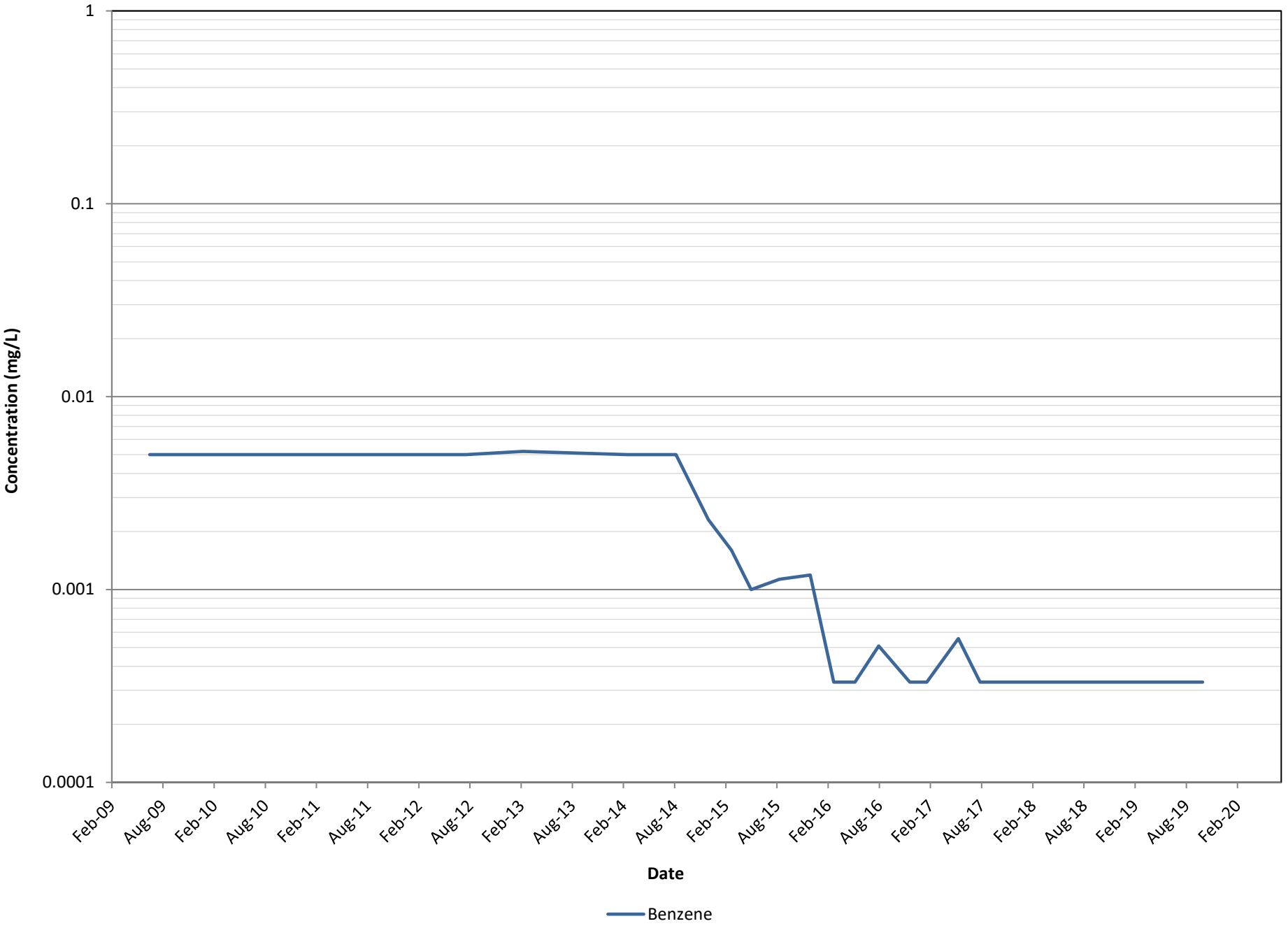
SOUTH WELL (WW-SOUTH): TDS CONCENTRATIONS OVER TIME



SOUTH WELL (WW-SOUTH): METAL CONCENTRATIONS OVER TIME



SOUTH WELL (WW-SOUTH): VOC CONCENTRATIONS OVER TIME



APPENDIX D

QUALITY ASSURANCE/QUALITY CONTROL DATA SUMMARY

APPENDIX D – QUALITY ASSURANCE/QUALITY CONTROL DATA SUMMARY

1.1 Semi-Annual and Quarterly Groundwater Samples

Data reported by Pace National (formerly known as ESC Lab Sciences) in Mount Juliet, Tennessee for the groundwater samples collected in January, April, July, and October 2019 were reviewed in accordance with the United States Environmental Protection Agency (USEPA) *National Functional Guidelines for Organic Superfund Methods Data Review* (USEPA, January 2017), *National Functional Guidelines for Inorganic Superfund Methods Data Review* (USEPA, January 2017), modified for the individual methods, as applicable. Three water samples, one field duplicate, and one trip blank were collected on January 23, 2019. Twenty-one water samples, three field duplicates, two equipment blanks, and one trip blank were collected on April 4, 2019. Three water samples and one trip blank were collected on July 11, 2019. Thirty-three water samples, four field duplicates, two equipment blanks, and two trip blanks were collected on October 24, 2019. Samples were submitted for one or more of the following parameters:

- Dissolved solids by Standard Methods (SM) 2540C
- Alkalinity by SM 2320 B
- Nitrate-nitrite by EPA method 353.2
- Chloride, fluoride, and sulfate by SW-846 method 9056A
- Mercury by SW-846 method 7470A
- Dissolved boron by SW-846 method 6010B (6020 for January 2019 samples)
- Dissolved metals by SW-846 method 6020
- Total Petroleum Hydrocarbons (TPH)-Low Fraction by SW-846 method 8015D
- Volatile organic compounds (VOCs) by SW-846 method 8260B
- TPH-High Fraction by SW-846 method 8015
- Semi-volatile organic compounds (SVOCs) by SW-846 method 8270C

TRC Quality Assurance (QA) staff reviewed the data. Four data packages identified as L1064582, L1086362, L1118148, and L1153940 were reviewed. Data were reviewed for compliance with the analytical protocols used for sample analysis and laboratory-defined quality control (QC) limits. Items reviewed during the data evaluation process included the following:

- Sample integrity, preservation, and holding times
- Blank analyses

- Surrogate recoveries
- Matrix spike and matrix spike duplicate (MS/MSD) recoveries and relative percent differences (RPDs)
- Laboratory control sample and laboratory control sample duplicate (LCS/LCSD) recoveries and RPDs
- Field duplicate and lab duplicate RPDs
- Sample documentation

Data interpretation issues are identified in the following subsections. QC data indicate that measurement data are sufficient to meet method quality objectives, reported data are defensible, and QC mechanisms were generally effective in ensuring measurement data reliability within the expected limits of sampling and analytical error with the following exceptions.

1.1.1 Sample Integrity, Preservation, and Holding Times

Samples were received at the laboratory properly preserved and in good condition. All samples collected during January, April, July, and October 2019 were prepared and/or analyzed within holding time. The following transcription errors were noted in April 2019:

- The collection times for MW-3, MW-15, and duplicate DUP-03 in the laboratory report did not match the chain-of-custody. The correct collection times are 12:25, 9:15, and 0:00, respectively.

1.1.2 Surrogates

In January and July 2019, there were no surrogate recovery nonconformances in the VOC, SVOC, TPH-Low Fraction, and TPH-High Fraction analyses. The surrogate recovery nonconformances in the VOC and SVOC analyses in April 2019 and October 2019 are summarized below.

- In April 2019, the surrogate compounds 2-fluorophenol, phenol-d5, nitrobenzene-d5, 2-fluorobiphenyl, 2,4,6-tribromophenol, and p-terphenyl-d14 did not recover in the SVOC analysis of equipment blank EB-02. Due to the significantly low surrogate recoveries (<10%) of the surrogates, the nondetect SVOC results for EB-02 are not usable for project objectives. The SVOC results from equipment blank EB-01 were used instead to evaluate the quality of field decontamination.
- In April 2019, the surrogate 1,2-dichloroethane-d4 recovered above the laboratory control limits (10.0-130%) in the VOC analysis of the MS/MSD analysis performed on sample MW-30 (134%/133%) in WG1262803. Qualification of the data is not required since only the MS/MSD analyses were affected and not the parent sample.

- In October 2019, the surrogate phenol-d5 recovered below the laboratory control limits (10.0-120%) in the SVOC analysis of equipment blank EB-02 (9.95%). Due to the significantly low surrogate recovery (<10%) of one acid surrogate, the nondetect acid SVOC results for EB-02 are not usable for project objectives. The acid SVOC results from equipment blank EB-01 were used instead to evaluate the quality of field decontamination.

1.1.3 Laboratory Method Blanks

- In January 2019, dissolved boron, dissolved copper, and dissolved nickel were detected in the laboratory method blank in QC batch WG1229136. The dissolved boron results in the associated samples were greater than five times the method blank concentration and therefore not impacted by the method blank results. All dissolved copper and dissolved nickel results were detected at concentrations less than five times the associated method blank concentration. Therefore, the dissolved copper and dissolved nickel results in samples WW-EAST, WW-NORTH, WW-SOUTH, and DUP-1 (WW-SOUTH) may include measurement contribution from laboratory sources.

- In January 2019, benzo(a)anthracene and benzo(a)pyrene were detected in the laboratory method blank in QC batch WG1229409. All benzo(a)anthracene and benzo(a)pyrene results were detected at concentrations less than five times the associated method blank concentration. Therefore, the benzo(a)anthracene and benzo(a)pyrene results in samples WW-EAST, WW-NORTH, WW-SOUTH, and DUP-1 (WW-SOUTH) may include measurement contribution from laboratory sources.

- In April 2019, chloride was detected in the laboratory method blank in QC batch WG1265412. All detected chloride concentrations were greater than five times the method blank concentration in the related samples. Therefore, no data interpretation issues were noted.

- In April 2019, TPH Low Fraction was detected in the laboratory method blank in QC batch WG1264226. The detected TPH Low Fraction result in sample MW-32 was less than five times the associated method blank concentration. Therefore, the TPH Low Fraction result in sample MW-32 may include measurement contributions from laboratory sources.

- In April 2019, benzo(a)anthracene, benzo(g,h,i)perylene, dibenz(a,h)anthracene, and bis(2-ethylhexyl)phthalate were detected in the laboratory method blank in QC batch WG1262825. Benzo(a)anthracene, benzo(g,h,i)perylene, and dibenz(a,h)anthracene sample results associated with this batch were nondetect; therefore, no data interpretation issues were noted. All detected bis(2-ethylhexyl)phthalate concentrations

were less than five times the associated method blank concentration. Therefore, the bis(2-ethyhexyl)phthalate results in samples MW-2, MW-11R, MW-12R, MW-17R, and MW-25 may include measurement contributions from laboratory sources.

- In April 2019, dissolved manganese, dissolved potassium, and dissolved chromium were detected in the laboratory method blank in QC batch WG1262065. All detected dissolved potassium concentrations were greater than five times the method blank concentration in the related samples. Dissolved manganese and dissolved chromium were detected in the following associated samples at concentrations less than five times the method blank concentrations; therefore, they may include measurement contributions from laboratory sources:
  - Dissolved Manganese: WW-East, DUP-01 (MW-12R), DUP-02 (MW-17R), EB-02
  - Dissolved Chromium: DUP-01 (MW-12R), DUP-02 (MW-17R)
- In April 2019, dissolved aluminum and dissolved nickel were detected in the laboratory method blank in QC batch WG1262074. Dissolved aluminum and dissolved nickel were detected in the following associated samples at concentrations less than five times the method blank concentrations; therefore, they may include measurement contributions from laboratory sources:
  - Dissolved Aluminum: MW-15, MW-25, MW-29, MW-32, MW-33, WW-NORTH
  - Dissolved Nickel: MW-6, MW-33, WW-NORTH, WW-SOUTH
- In July 2019, dissolved chromium, dissolved copper, and dissolved lead were detected in the laboratory method blank in QC batch WG1310811. Dissolved chromium, dissolved copper, and dissolved lead were detected in the following associated samples at concentrations less than five times the method blank concentrations; therefore, these results may include measurement contributions from laboratory sources:
  - Dissolved Chromium: WW-NORTH, WW-SOUTH
  - Dissolved Copper: WW-NORTH, WW-SOUTH, WW-EAST
  - Dissolved Lead: WW-NORTH, WW-SOUTH, WW-EAST
- In July 2019, TPH High Fraction was detected in the laboratory method blank in QC batch WG1312208. The detected TPH High Fraction result in sample WW-SOUTH was less than five times the associated method blank concentration. Therefore, the TPH High Fraction result in sample WW-SOUTH may include measurement contributions from laboratory sources.

- In July 2019, benzo(a)pyrene was detected in the laboratory method blank in QC batch WG1311664. Benzo(a)pyrene sample results associated with this batch were nondetect; therefore, no data interpretation issues were noted.
- In October 2019, dissolved solids was detected in the laboratory method blank in QC batch WG1370219. Dissolved solids was detected in associated samples at concentrations greater than five times the method blank concentration; therefore no data interpretation issues were noted.
- In October 2019, chloride and sulfate were detected in the laboratory method blank in QC batches WG1370818 and WG1371200. Chloride and sulfate were detected in associated samples at concentrations greater than five times the method blank concentrations; therefore, no data interpretation issues were noted.
- In October 2019, mercury was detected in the laboratory method blank in QC batch WG1369904. The detected mercury results in samples MW-1, MW-2, MW-4, MW-5, MW-6, MW-8, MW-11R, MW-13R, MW-14R, MW-15, MW-16, MW-17R, and MW-18 were less than five times the associated method blank concentration. Therefore, the mercury results in these samples may include measurement contributions from laboratory sources.
- In October 2019, mercury was detected in the laboratory method blank in QC batch WG1369905. The detected mercury results in samples MW-24, MW-25, MW-28, MW-29, MW-30, MW-32, WW-NORTH WELL, WW-SOUTH WELL, WW-EAST WELL, DUP-01 (MW-29), DUP-02 (MW-25), DUP-03 (MW-30), DUP-04 (MW-32), EB-01, and EB-02 were less than five times the associated method blank concentration. Therefore, the mercury results in these samples may include measurement contributions from laboratory sources.
- In October 2019, dissolved chromium, dissolved copper, and dissolved selenium were detected in the laboratory method blank in QC batch WG1370036. Dissolved chromium, dissolved copper, and dissolved selenium were detected in the following associated samples at concentrations less than five times the method blank concentrations; therefore, these results may include measurement contributions from laboratory sources:
    - Dissolved Chromium: MW-2, MW-11R, MW-13R, MW-16, MW-17R, MW-18, MW-20, MW-24, MW-25
    - Dissolved Copper: MW-2, MW-4, MW-5, MW-8, MW-13R, MW-15, MW-16, MW-17R, MW-18, MW-19, MW-24

- Dissolved Selenium: MW-2, MW-5, MW-8, MW-13R, MW-14R, MW-17R, MW-18, MW-19, MW-20, MW-22, MW-24, MW-25

- In October 2019, TPH Low Fraction was detected in the laboratory method blanks in QC batches WG1373783 and WG1373788. The detected TPH Low Fraction results in samples MW-5, MW-21, MW-22, MW-32, WW-NORTH WELL, WW-SOUTH WELL, WW-EAST WELL, and DUP-04 (MW-32) were less than five times the associated method blank concentration. Therefore, the TPH Low Fraction results in these samples may include measurement contributions from laboratory sources.

- In October 2019, di-n-butyl phthalate was detected in the laboratory method blank in QC batch WG1372208. The detected di-n-butyl phthalate results in samples MW-20, MW-21, MW-25, MW-27 through MW-30, MW-32, MW-33, WW-NORTH WELL, DUP-01 (MW-29), and DUP-02 (MW-25) were less than 10 times the associated method blank concentration. Therefore, the di-n-butyl phthalate results in these samples may include measurement contributions from laboratory sources.

1.1.4 Equipment Blanks

- In April 2019, the following analytes were detected in equipment blank EB-01: dissolved aluminum, dissolved barium, dissolved boron, dissolved lead, dissolved sodium, sulfate, and phenol. The following analytes were detected in equipment blank EB-02: nitrate-nitrite, dissolved barium, dissolved boron, dissolved manganese, dissolved nickel, and dissolved sodium. As discussed above, dissolved manganese was detected in equipment blank EB-02 at concentrations less than five times the associated method blank concentration; the presence of this analyte in EB-02 was therefore not used to evaluate the associated samples. Dissolved barium, dissolved sodium, nitrate-nitrite, and sulfate were not detected in any associated samples at concentrations below five times the equipment blank concentration; therefore, there are no data interpretation issues noted associated with detection of these analytes in this equipment blank. Dissolved aluminum, dissolved boron, dissolved lead, dissolved nickel, and phenol were detected in the following associated samples at concentrations less than five times the equipment blank concentrations; therefore, these results may include measurement contributions from inadequate decontamination of field equipment:

  - Dissolved Aluminum: MW-15, MW-25, MW-29, MW-32, MW-33

  - Dissolved Boron: MW-1, MW-6, MW-11R, MW-12R, MW-13R, MW-15, MW-17R, MW-25, MW-29, MW-30, MW-32, MW-33, DUP-01 (MW-12R), DUP-02 (MW-17R), DUP-03 (MW-25)

  - Dissolved Lead: MW-11R, MW-15, MW-25, DUP-03 (MW-25)

- Dissolved Nickel: MW-6, MW-33
- Phenol: MW-2, MW-11R, MW-12R, MW-17R, MW-25, MW-30, MW-32, MW-33, DUP-01 (MW-12R), DUP-02 (MW-17R), DUP-03 (MW-25)

- In October 2019, the following analytes were detected in equipment blank EB-01: alkalinity, dissolved aluminum, dissolved barium, dissolved manganese, mercury, dissolved solids, and chloride. The following analytes were detected in equipment blank EB-02: dissolved barium, dissolved copper, dissolved manganese, mercury, and chloride. As discussed above, mercury was detected in equipment blank EB-01 and EB-02 at concentrations less than five times the associated method blank sample concentration; the presence of mercury in EB-01 and EB-02 were therefore not used to evaluate the associated samples. Alkalinity, dissolved solids, dissolved barium, and chloride were not detected in any associated samples at concentrations below five times the equipment blank concentration; therefore, there are no data interpretation issues associated with detection of these analytes in this equipment blank. Dissolved aluminum, dissolved copper, and dissolved manganese were detected in the following associated samples at concentrations less than five times the equipment blank concentrations; therefore, these results may include measurement contributions from inadequate decontamination of field equipment:
  - Dissolved Aluminum: MW-30
  - Dissolved Manganese: MW-16, MW-20, MW-22, MW-24, MW-28, MW-29, DUP-01 (MW-29), DUP-03 (MW-30)
  - Dissolved Copper: MW-2, MW-4, MW-5, MW-8, MW-13R, MW-15, MW-16, MW-17R, MW-18, MW-19, MW-22, MW-24, MW-28, MW-29, MW-30, MW-32, DUP-01 (MW-29), DUP-03 (MW-30), DUP-04 (MW-32)

1.1.5 Trip Blanks

- In January, April, and October 2019, there were no detections in the trip blanks; therefore, there are no data interpretation issues. The following issue was noted in July 2019:
  - Naphthalene was detected in the trip blank at 0.00107 mg/L. Naphthalene was not detected in associated samples WW-EAST, WW-NORTH, and WW-SOUTH; therefore, there are no data interpretation issues.

1.1.6 Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD)

- In January 2019, the LCS/LCSD RPD for carbon disulfide in QC batch WG1228944 was outside the laboratory-defined limit. Carbon disulfide was not detected in any of the associated samples; therefore, there are no data interpretation issues associated with this RPD.

- In January 2019, the LCS/LCSD recoveries and RPD for 4-chloroaniline in QC batch WG122409 were outside the laboratory-defined limits. 4-Chloroaniline was not detected in any of the associated samples; therefore, the nondetect results for 4-chloroaniline in samples WW-EAST, WW-SOUTH, WW-NORTH, and DUP-01 (WW-SOUTH) may be biased low.

- In April 2019, the LCS/LCSD RPDs for hexachloro-1,3-butadiene, hexachlorocyclopentadiene, hexachloroethane, and 1,2,4-trichlorobenzene exceeded their laboratory-defined limits in QC batch WG1263260. These compounds were not detected in any of the associated samples; therefore, there are no data interpretation issues associated with these RPDs.

- In April 2019, LCS recoveries and LCS/LCSD RPDs for select SVOCs in QC batch WG1262825 were outside the laboratory-defined limits. Bis(2-ethylhexyl)phthalate was detected in samples MW-2, MW-11R, MW-12R, MW-17R, and MW-25 and therefore the bis(2-ethylhexyl)phthalate results in these samples may be considered variable. Diethylphthalate was detected in sample MW-12R; therefore, this result may be considered variable. The remaining analytes that had an LCS recovery or RPD above the laboratory-defined limit were not detected in the corresponding samples; therefore there are no data interpretation issues associated with the high recoveries or RPDs.

- In July 2019, LCS recoveries for acenaphthylene, bis(2-chloroethoxy)methane, bis(2-chloroisopropyl)ether, 2-chloronaphthalene, 3,3-dichlorobenzidine, hexachlorobutadiene, isophorone, naphthalene, nitrobenzene, 1,2,4-trichlorobenzene, 2,4-dichlorophenol, 2,4-dimethylphenol, 2-methylphenol, 3&4-methylphenol, and 2-nitrophenol and the LCS/LCSD recoveries for 2-methylnaphthalene and 1-methylnaphtalene were below their laboratory-defined limits in QC batch WG1311664. These SVOCs were not detected in any of the associated samples; therefore, the nondetect results for these SVOCs in samples WW-SOUTH, WW-NORTH, and WW-EAST may be biased low.

- In October 2019, the LCS recovery of chlorodibromomethane in QC batch WG1373881 was above its laboratory-defined limits. Chlorodibromomethane was not

detected in any of the associated samples; therefore, there are no data interpretation issues associated with the high recoveries.

- In October 2019, LCS/LCSD RPDs for acenaphthene, acenaphthylene, anthracene, 4-bromophenyl-phenylether, 4-chlorophenyl-phenylether, dibenzofuran, 2,4-dinitrotoluene, 2,6-dinitrotoluene, fluorene, hexachlorobenzene, 2-nitroaniline, n-nitrosodiphenylamine, dimethyl phthalate, 4,6-dinitro-2-methylphenol, and 2,4-dinitrophenol in QC batch WG1371928 were above the laboratory-defined limits. These SVOCs were not detected in the corresponding samples; therefore, there are no data interpretation issues associated with these RPDs.

1.1.7 Matrix Spike/Matrix Spike Duplicate (MS/MSD)

The following table summarizes the MS/MSD analyses performed with these data sets.

Sample ID	Analytical Parameters
January 2019	
WW-EAST	VOCs, SVOCs, TPH-Low Fraction, TPH-High Fraction, Nitrate-nitrite, Chloride, Fluoride, Sulfate, Mercury, Dissolved boron, Dissolved metals
April 2019	
MW-25	Nitrate-nitrite
MW-30	VOCs, TPH-High Fraction, Chloride, Fluoride, Sulfate, Dissolved boron, Dissolved metals, Mercury
MW-33	Mercury
MW-3	Chloride, Fluoride, Sulfate
EB-02	Chloride, Fluoride, Sulfate
July 2019	
WW-East	TPH-High Fraction
October 2019	
MW-1	Fluoride, Chloride, Sulfate, Dissolved metals (excluding dissolved boron and mercury)
MW-2	Nitrate-nitrite
MW-3	Fluoride, Chloride, Sulfate
MW-16	Nitrate-nitrite
MW-19	Mercury
MW-24	Fluoride, Chloride, Sulfate
MW-30	Nitrate-nitrite
MW-33	VOCs, SVOCs, TPH-Low Fraction, TPH-High Fraction, Nitrate-nitrite, Fluoride, Sulfate, Chloride, Mercury, Dissolved boron, Dissolved metals (excluding mercury)
WW-EAST WELL	Nitrate-nitrite

- In January 2019, the MS and/or MSD recoveries of select analytes did not meet laboratory-defined limits in the following samples, and therefore the results may be biased as specified below:
    - The recoveries (48.3%/76.0%) of nitrate-nitrite in the MS/MSD analyses performed on sample WW-EAST were below laboratory-defined limits (90.0-110%) in QC batch WG1229383. Therefore, the positive results for nitrate-nitrite in all samples in this QC batch, WW-EAST, WW-SOUTH, WW-NORTH, and DUP-01 (WW-SOUTH), may be biased low.
    - The RPD for select VOCs in the MS/MSD analyses performed on sample WW-East were outside the laboratory-defined limits in QC batch WG1228944. The select VOCs were not detected in sample WW-East; therefore, there are no data interpretation issues associated with these RPDs.
    - The MS/MSD RPD for 4-chloroaniline (43.0%) in the MS/MSD analyses performed on sample WW-East was outside the laboratory-defined limit (31%) in QC batch WG1229409. 4-Chloroaniline was not detected in sample WW-East; therefore, there are no data interpretation issues associated with this RPD.
- In April 2019, the MS and/or MSD recoveries of select analytes did not meet laboratory-defined limits in the following samples, and therefore the results may be biased as specified below:
    - The MS recovery (77.1%) of nitrate-nitrite in the MS analysis performed on sample MW-25 was below the laboratory-defined limits (90.0-110%). Therefore, the positive results for nitrate-nitrite in samples MW-1, MW-3, MW-6, MW-8, MW-12R, MW-13R, MW-15, MW-17R, MW-19, and MW-25 may be biased low.
    - The MS/MSD recoveries of dissolved calcium in the MS/MSD analyses performed on sample MW-30 were below the laboratory-defined limits. However, the concentrations of dissolved calcium in the unspiked sample were greater than four times the concentration spiked; thus, the recoveries of dissolved calcium were not used to evaluate potential matrix effects.
- In October 2019, the MS and/or MSD recoveries of select analytes did not meet laboratory-defined limits in the following samples, and therefore the results may be biased as specified below:
    - The nitrate-nitrite recoveries (82.0%/81.6%) in the MS/MSD analyses performed on sample MW-2 and the nitrate-nitrite recovery (89.3%) in the MS analysis performed on sample MW-16 were below laboratory-defined limits (90.0-110%)

in QC batch WG1371687. Therefore, the positive results for nitrate-nitrite in all samples in this QC batch, MW-1 through MW-6, MW-8 through MW-11R, MW-13R through MW-20, MW-22, and MW-23, may be biased low.

- The nitrate-nitrite recovery (111%) in the MS analysis performed on sample MW-33 was above laboratory-defined limits (90.0-110%) in QC batch WG1371690. Therefore, the positive results for nitrate-nitrite in all samples in this QC batch, MW-24, MW-25, MW-26, MW-28, MW-29, MW-30, MW-32, WW-NORTH WELL, WW-SOUTH WELL, DUP-01 (MW-29), DUP-02 (MW-25), DUP-03 (MW-30), and DUP-04 (MW-32) and with the exception of sample WW-EAST WELL, may be biased high. The recovery of nitrate-nitrite in the MS analysis performed on sample WW-EAST WELL was within laboratory-defined limits.

- The mercury recoveries (74.6%/64.4%) in the MS/MSD analyses performed on sample MW-33 were below laboratory-defined limits (75.0-125%) in QC batch WG1369905. Therefore, the positive and nondetect results for mercury in samples in this QC batch, MW-20, MW-22, MW-24, MW-25, MW-28, MW-29, MW-30, MW-31, MW-32, WW-NORTH WELL, WW-SOUTH WELL, WW-EAST WELL, DUP-01 (MW-29), DUP-02 (MW-25), DUP-03 (MW-30), and DUP-04 (MW-32), may be biased low. Equipment blanks, though included in this QC batch, are not affected by MS/MSD recoveries.

- The dissolved manganese recoveries in the MS/MSD analyses performed on sample MW-33 were below laboratory-defined limits in QC batch WG1370039. However, the concentration of dissolved manganese in the unspiked sample was greater than four times the concentration spiked; therefore, the recoveries of dissolved manganese were not used to evaluate potential matrix effects.

- The RPD (22.7%) for TPH Low Fraction was above the laboratory-defined limit (22%) in the MS/MSD analyses performed on sample MW-33 in QC batch WG1373788. Therefore, the positive result for TPH Low Fraction in sample MW-33 may be considered variable.

- The recovery (174%) and RPD (36.4%) of carbon tetrachloride in the MS/MSD analyses performed on sample MW-33 in QC batch WG1370039 were above laboratory-defined limits (23.0-159%/28%) and the recovery (26.0%) of isopropylbenzene in the MS analysis was below laboratory-defined limits (28.0-157%). Carbon tetrachloride was not detected in this sample; therefore, there are no data interpretation issues associated with the MS recovery and RPD. The detected isopropylbenzene result in sample MW-33 may be biased low.

1.1.8 Laboratory Duplicates

The following table summarizes the laboratory duplicate analyses performed with these data sets.

Sample ID	Analytical Parameters
January 2019	
DUP-01	Dissolved solids, Alkalinity
April 2019	
MW-1	Nitrate-nitrite
MW-3	Chloride, Fluoride, Sulfate
MW-11R	Dissolved solids
MW-30	Chloride, Fluoride, Sulfate
WW-EAST	Alkalinity
WW-SOUTH	Dissolved solids
DUP-01	Alkalinity
DUP-03	Dissolved solids
EB-02	Alkalinity, Chloride, Fluoride, Sulfate
July 2019	
WW-SOUTH	Alkalinity
October 2019	
MW-1	Nitrate-nitrite, Chloride, Fluoride, Sulfate
MW-3	Chloride, Fluoride, Sulfate
MW-11R	Dissolved solids
MW-15	Alkalinity, Nitrate-nitrite
MW-19	Dissolved solids
MW-24	Chloride, Fluoride, Sulfate
MW-25	Dissolved solids
WW-SOUTH WELL	Nitrate-nitrite
DUP-02 (MW-25)	Alkalinity
EB-01	Dissolved solids

- In October 2019, the RPD for dissolved solids (18.2%) in the duplicate analysis performed on sample EB-01 (QC batch WG1370221) exceeded the laboratory-defined control limits (5%). Due to a laboratory error, the lab duplicate could not be rerun. However, this RPD value was less than the acceptance criteria used in this evaluation (30%); thus, precision was deemed acceptable and no data interpretation issues were noted.

1.1.9 Field Duplicates

- In January 2019, the calculated RPDs for dissolved aluminum (112.32%) and dissolved zinc (88.49%) in the duplicate pair WW-SOUTH and DUP-01 did not meet the acceptance limits (<30%). The original and duplicate results for dissolved aluminum were less than five times the MQL and the absolute difference between the sample and duplicate results was less than the MQL. Therefore, no data interpretation issues were

noted for dissolved aluminum. The original and duplicate results for dissolved zinc in the duplicate pair WW-SOUTH and DUP-01 may be considered estimated.

- In April 2019, the calculated RPDs for dissolved boron (63.39%), dissolved copper (100.75%), and phenol (113.61%) in the duplicate pair MW-12R and DUP-01 did not meet the acceptance limits (<30%). The original and duplicate results for dissolved boron, dissolved copper, and phenol were less than five times the MQL; the absolute differences between the sample and duplicate results were less than the MQL for dissolved boron and phenol. Therefore, no data interpretation issues were noted for dissolved boron or phenol. The original and duplicate results for dissolved copper in the duplicate pair MW-12R and DUP-01 may be considered estimated since the absolute difference between the sample and duplicate results was greater than the MQL.

- In April 2019, the calculated RPDs for dissolved copper (45.59%), dissolved nickel (165.72%), phenol (132.30%), and dissolved zinc (30.09%) in the duplicate pair MW-17R and DUP-02 did not meet the acceptance limits (<30%). The original and duplicate samples were less than five times the MQL and the absolute differences between the sample and duplicate results were less than the MQL for dissolved copper, phenol, and dissolved zinc. Therefore, no data interpretation issues were noted for dissolved copper, phenol, and dissolved zinc. The positive results for dissolved nickel in samples MW-17R and DUP-02 may be considered estimated.

- In April 2019, the calculated RPDs for dissolved boron (47.25%), dissolved molybdenum (32.03%), and phenol (117.03%) in the duplicate pair MW-25 and DUP-03 did not meet the acceptance limits (<30%). The original and duplicate samples were less than five times the MQL and the absolute differences between the sample and duplicate results were less than the MQL for dissolved boron, dissolved molybdenum, and phenol. Therefore, no data interpretation issues were noted.

- In October 2019, the calculated RPDs for dissolved copper (69.99%) and dissolved nickel (49.67%) in the duplicate pair MW-29 and DUP-01 did not meet the acceptance limits (<30%). The original and duplicate results for dissolved copper and dissolved nickel were less than five times the MQL and the absolute differences between the sample and duplicate results were less than the MQL. Therefore, no data interpretation issues were noted for dissolved copper and dissolved nickel.

- In October 2019, the calculated RPDs for dissolved lead (54.18%), dissolved selenium (64.21%), and phenol (116.10%) in the duplicate pair MW-25 and DUP-02 did not meet the acceptance limits (<30%). The original and duplicate results for dissolved selenium, dissolved lead, and phenol were less than five times the MQL; the absolute differences between the sample and duplicate results were less than the MQL for

dissolved selenium and phenol. Therefore, no data interpretation issues were noted for dissolved selenium or phenol. The original and duplicate results for dissolved lead in the duplicate pair MW-25 and DUP-02 may be considered estimated since the absolute difference between the sample and duplicate results was greater than the MQL.

- In October 2019, the calculated RPDs for dissolved chromium (40.79%) and dissolved manganese (149.21%) in the duplicate pair MW-30 and DUP-03 did not meet the acceptance limits (<30%). The original and duplicate results for dissolved chromium and dissolved manganese were less than five times the MQL and the absolute differences between the sample and duplicate results were less than the MQL. Therefore, no data interpretation issues were noted for dissolved chromium and dissolved manganese.
- In October 2019, the calculated RPDs for TPH Low Fraction (46.97%) in the duplicate pair MW-32 and DUP-04 did not meet the acceptance limits (<30%). The original and duplicate results for TPH Low Fraction were less than five times the MQL and the absolute difference between the sample and duplicate results was less than the MQL. Therefore, no data interpretation issues were noted for TPH Low Fraction.

APPENDIX E

LNAPL GAUGING AND RECOVERY RESULTS, MONITORING WELL MW-31

Appendix E - LNAPL Gauging and Recovery Results, Monitoring Well MW-31

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

Date	Prior to Bailing or After Removing Skimmer[1,3]				After Bailing				LNAPL Volume Recovered (gal)	Cumulative LNAPL Recovered (gal)
	Initial Depth to Water (ft btoc)	Initial Depth to LNAPL (ft btoc)	Initial Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation[2] (ft amsl)	Final Depth to Water (ft btoc)	Final Depth to LNAPL (ft btoc)	Final Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation[2] (ft amsl)		
2/9/2017	105.04	98.92	6.12	3,719.22	100.52	99.81	0.71	3,719.24	7.50	7.50
3/3/2017	102.71	99.39	3.32	3,719.22	100.30	99.90	0.40	3,719.20	3.28	10.8
3/8/2017	101.21	99.57	1.64	3,719.32	99.95	99.83	0.12	3,719.32	1.19	12.0
3/15/2017	101.48	99.45	2.03	3,719.38	99.98	99.82	0.16	3,719.32	1.59	13.5
3/22/2017	101.84	99.34	2.50	3,719.41	100.07	99.99	0.08	3,719.17	1.72	15.3
3/29/2017	101.73	99.42	2.31	3,719.36	100.47	100.37	0.10	3,718.78	1.72	17.0
4/4/2017	101.79	99.47	2.32	3,719.31	100.27	100.11	0.16	3,719.03	1.85	18.8
4/12/2017	101.77	99.37	2.40	3,719.40	100.30	100.10	0.20	3,719.04	1.85	20.7
4/19/2017	101.71	99.40	2.31	3,719.38	100.27	100.17	0.10	3,718.98	1.72	22.4
4/24/2017	101.48	99.45	2.03	3,719.38	100.09	99.77	0.32	3,719.35	1.66	24.1
4/25/2017	100.68	99.67	1.01	3,719.33	99.83	99.78	0.05	3,719.38	0.96	25.0
4/26/2017	100.82	99.56	1.26	3,719.40	100.02	99.75	0.27	3,719.37	2.50	27.5
4/27/2017	100.51	99.61	0.90	3,719.41	99.88	99.73	0.15	3,719.41	1.50	29.0
4/28/2017	100.73	99.55	1.18	3,719.42	99.68	99.59	0.09	3,719.56	1.00	30.0
5/4/2017	101.44	99.52	1.92	3,719.33	100.33	99.74	0.59	3,719.33	1.45	31.5
5/11/2017	101.59	99.59	2.00	3,719.24	100.00	99.89	0.11	3,719.26	1.85	33.3
5/16/2017	101.78	99.62	2.16	3,719.19	100.30	99.83	0.47	3,719.26	1.45	34.8
5/18/2017	101.73	99.58	2.15	3,719.23	100.37	99.43	0.94	3,719.58	1.32	36.1
5/24/2017	101.85	99.38	2.47	3,719.37	100.89	99.98	0.91	3,719.04	1.72	37.8
5/31/2017	101.49	99.55	1.94	3,719.29	100.26	99.38	0.88	3,719.64	1.19	39.0
6/12/2017	103.28	99.50	3.78	3,719.03	100.80	99.96	0.84	3,719.07	2.51	41.5
6/23/2017	101.78	99.61	2.17	3,719.19	100.04	99.83	0.21	3,719.30	1.32	42.8
6/26/2017	101.71	99.70	2.01	3,719.13	100.27	99.87	0.40	3,719.23	1.45	44.3
6/29/2017	101.59	99.54	2.05	3,719.28	100.56	99.89	0.67	3,719.17	1.45	45.7
7/6/2017	100.78	99.65	1.13	3,719.33	100.02	99.63	0.39	3,719.47	1.72	47.5
7/11/2017	101.48	99.59	1.89	3,719.26	100.37	99.67	0.70	3,719.38	1.32	48.8
7/13/2017	103.58	99.91	3.67	3,718.64	101.13	100.42	0.71	3,718.63	1.98	50.8
7/18/2017	102.90	99.98	2.92	3,718.70	101.11	100.32	0.79	3,718.72	1.72	52.5
7/21/2017	101.54	99.54	2.00	3,719.29	--	--	--	--	1.32	53.8
8/22/2017	101.03	100.41	0.62	3,718.66	--	--	--	--	0.26	54.1
8/23/2017	101.01	100.04	0.97	3,718.97	--	--	--	--	0.26	54.3
8/29/2017	101.46	100.36	1.10	3,718.62	--	--	--	--	0.26	54.6
8/31/2017	101.45	100.35	1.10	3,718.63	--	--	--	--	0.26	54.9
9/5/2017	101.35	100.31	1.04	3,718.68	--	--	--	--	0.26	55.1
9/7/2017	101.13	100.25	0.88	3,718.77	--	--	--	--	0.26	55.4
9/11/2017	101.47	100.36	1.11	3,718.62	--	--	--	--	0.26	55.6
9/12/2017	101.45	100.35	1.10	3,718.63	--	--	--	--	0.26	55.9
9/14/2017	101.44	100.36	1.08	3,718.63	--	--	--	--	0.26	56.2
9/18/2017	101.47	100.27	1.20	3,718.70	--	--	--	--	0.26	56.4
9/19/2017	101.38	100.23	1.15	3,718.75	--	--	--	--	0.26	56.7
9/20/2017	101.44	100.32	1.12	3,718.66	--	--	--	--	0.26	57.0
9/22/2017	101.40	100.28	1.12	3,718.70	--	--	--	--	0.26	57.2
9/25/2017	101.47	100.25	1.22	3,718.71	--	--	--	--	0.26	57.5

Appendix E - LNAPL Gauging and Recovery Results, Monitoring Well MW-31

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

Date	Prior to Bailing or After Removing Skimmer[1,3]				After Bailing				LNAPL Volume Recovered (gal)	Cumulative LNAPL Recovered (gal)
	Initial Depth to Water (ft btoc)	Initial Depth to LNAPL (ft btoc)	Initial Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation[2] (ft amsl)	Final Depth to Water (ft btoc)	Final Depth to LNAPL (ft btoc)	Final Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation[2] (ft amsl)		
9/26/2017	101.45	100.36	1.09	3,718.63	--	--	--	--	0.26	57.8
9/27/2017	101.45	100.35	1.10	3,718.63	--	--	--	--	0.26	58.0
9/28/2017	101.13	100.20	0.93	3,718.81	--	--	--	--	0.26	58.3
10/2/2017	101.47	100.25	1.22	3,718.71	--	--	--	--	0.26	58.5
10/3/2017	101.45	100.36	1.09	3,718.63	--	--	--	--	0.26	58.8
10/4/2017	102.67	100.14	2.53	3,718.60	--	--	--	--	0.26	59.1
10/5/2017	102.73	100.10	2.63	3,718.63	--	--	--	--	0.26	59.3
10/9/2017	101.44	100.36	1.08	3,718.63	--	--	--	--	0.26	59.6
10/10/2017	101.46	100.36	1.10	3,718.62	--	--	--	--	0.26	59.9
10/12/2017	102.67	100.14	2.53	3,718.60	--	--	--	--	0.26	60.1
10/13/2017	102.50	100.05	2.45	3,718.71	--	--	--	--	0.26	60.4
10/16/2017	102.46	100.05	2.41	3,718.71	--	--	--	--	0.26	60.7
10/17/2017	102.56	100.23	2.33	3,718.55	--	--	--	--	0.26	60.9
10/18/2017	102.22	100.23	1.99	3,718.61	--	--	--	--	0.26	61.2
10/19/2017	102.71	99.89	2.82	3,718.81	--	--	--	--	0.26	61.5
10/23/2017	102.62	100.15	2.47	3,718.60	--	--	--	--	0.26	61.7
10/24/2017	101.87	99.57	2.30	3,719.21	--	--	--	--	0.26	62.0
10/25/2017	101.88	99.87	2.01	3,718.96	--	--	--	--	0.26	62.2
10/31/2017	102.82	100.00	2.82	3,718.70	--	--	--	--	0.26	62.5
11/1/2017	102.70	100.02	2.68	3,718.70	--	--	--	--	0.26	62.8
11/2/2017	102.72	100.00	2.72	3,718.71	--	--	--	--	0.26	63.0
11/3/2017	102.41	100.05	2.36	3,718.72	--	--	--	--	0.26	63.3
11/6/2017	102.44	100.13	2.31	3,718.65	--	--	--	--	0.26	63.6
11/7/2017	102.23	100.20	2.03	3,718.63	--	--	--	--	0.26	63.8
11/8/2017	102.43	100.25	2.18	3,718.55	--	--	--	--	0.26	64.1
11/13/2017	102.60	100.07	2.53	3,718.67	--	--	--	--	0.26	64.4
11/14/2017	102.35	100.12	2.23	3,718.67	--	--	--	--	0.26	64.6
11/15/2017	102.10	100.17	1.93	3,718.68	--	--	--	--	0.26	64.9
11/16/2017	101.88	100.21	1.67	3,718.68	--	--	--	--	0.26	65.2
11/17/2017	101.85	100.27	1.58	3,718.63	--	--	--	--	0.26	65.4
11/20/2017	102.05	100.15	1.90	3,718.70	101.12	100.40	0.72	3,718.65	1.45	66.9
11/22/2017	101.20	100.40	0.80	3,718.64	100.94	100.45	0.49	3,718.64	0.53	67.4
11/28/2017	101.05	100.47	0.58	3,718.60	--	--	--	--	0.26	67.7
11/29/2017	101.26	100.58	0.68	3,718.48	--	--	--	--	0.26	67.9
11/30/2017	101.27	100.56	0.71	3,718.49	--	--	--	--	0.26	68.2
12/1/2017	101.27	100.55	0.72	3,718.50	--	--	--	--	0.26	68.5
12/4/2017	101.30	100.67	0.63	3,718.39	--	--	--	--	0.26	68.7
12/5/2017	101.37	100.66	0.71	3,718.39	--	--	--	--	0.26	69.0
12/6/2017	101.23	100.50	0.73	3,718.55	--	--	--	--	0.26	69.2
12/7/2017	101.33	100.54	0.79	3,718.50	--	--	--	--	0.26	69.5
12/8/2017	101.28	100.56	0.72	3,718.49	--	--	--	--	0.26	69.8
12/12/2017	102.78	100.12	2.66	3,718.60	--	--	--	--	0.26	70.0
12/13/2017	102.75	100.09	2.66	3,718.63	--	--	--	--	0.26	70.3

Appendix E - LNAPL Gauging and Recovery Results, Monitoring Well MW-31

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

Date	Prior to Bailing or After Removing Skimmer[1,3]				After Bailing				LNAPL Volume Recovered (gal)	Cumulative LNAPL Recovered (gal)
	Initial Depth to Water (ft btoc)	Initial Depth to LNAPL (ft btoc)	Initial Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation[2] (ft amsl)	Final Depth to Water (ft btoc)	Final Depth to LNAPL (ft btoc)	Final Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation[2] (ft amsl)		
12/14/2017	--	--	--	--	102.66	100.26	2.40	3,718.51	1.98	72.3
12/15/2017	101.28	100.48	0.80	3,718.56	--	--	--	--	0.26	72.6
12/18/2017	101.64	100.38	1.26	3,718.58	--	--	--	--	0.26	72.8
12/19/2017	101.60	100.34	1.26	3,718.62	--	--	--	--	0.26	73.1
12/21/2017	101.75	100.35	1.40	3,718.58	--	--	--	--	0.26	73.3
12/22/2017	101.66	100.43	1.23	3,718.53	--	--	--	--	0.26	73.6
1/2/2018	104.05	99.85	4.20	3,718.61	--	--	--	--	0.26	73.9
1/3/2018	104.10	99.93	4.17	3,718.54	--	--	--	--	0.26	74.1
1/4/2018	104.13	99.89	4.24	3,718.57	--	--	--	--	0.26	74.4
1/9/2018	104.14	99.88	4.26	3,718.57	--	--	--	--	0.26	74.7
1/12/2018	104.15	99.90	4.25	3,718.55	--	--	--	--	0.26	74.9
1/18/2018	104.63	99.82	4.81	3,718.54	--	--	--	--	0.26	75.2
1/19/2018	104.66	99.84	4.82	3,718.52	--	--	--	--	0.26	75.5
1/23/2018	104.68	99.93	4.75	3,718.44	--	--	--	--	0.26	75.7
1/26/2018	104.60	99.86	4.74	3,718.51	--	--	--	--	0.26	76.0
1/31/2018	105.51	99.70	5.81	3,718.49	--	--	--	--	0.26	76.2
2/2/2018	105.55	99.78	5.77	3,718.42	--	--	--	--	0.26	76.5
2/9/2018	--	--	--	--	105.68	99.35	6.33	3,718.75	1.72	78.2
2/14/2018	--	--	--	--	104.67	99.43	5.24	3,718.86	1.59	79.8
2/21/2018	--	--	--	--	105.51	99.73	5.78	3,718.47	1.45	81.3
3/6/2018	--	--	--	--	105.78	100.43	5.35	3,717.84	1.59	82.9
3/12/2018	--	--	--	--	105.77	100.35	5.42	3,717.91	1.32	84.2
3/16/2018	--	--	--	--	105.48	100.29	5.19	3,718.01	1.45	85.6
3/20/2018	--	--	--	--	106.26	99.75	6.51	3,718.32	1.06	86.7
3/21/2018	106.02	99.77	6.25	3,718.35	101.53	100.71	0.82	3,718.32	1.19	87.9
3/22/2018	102.04	100.06	1.98	3,718.78	101.38	100.78	0.60	3,718.29	1.32	89.2
3/26/2018	104.53	100.13	4.40	3,718.30	101.82	100.69	1.13	3,718.29	1.59	90.8
3/27/2018	102.45	100.06	2.39	3,718.71	101.53	100.79	0.74	3,718.26	1.19	92.0
3/28/2018	102.28	100.56	1.72	3,718.32	101.49	100.73	0.76	3,718.31	1.06	93.0
4/5/2018	105.55	100.05	5.50	3,718.19	101.34	100.90	0.44	3,718.20	5.00	98.0
4/11/2018	104.18	100.36	3.82	3,718.17	101.76	100.84	0.92	3,718.18	1.72	99.7
4/16/2018	105.03	100.26	4.77	3,718.11	101.73	100.89	0.84	3,718.14	3.70	103
4/19/2018	105.15	100.37	4.78	3,718.00	101.89	100.81	1.08	3,718.18	2.64	106
4/20/2018	104.05	100.32	3.73	3,718.22	101.53	100.73	0.80	3,718.31	2.77	109
4/24/2018	105.19	100.38	4.81	3,717.98	101.79	100.88	0.91	3,718.14	3.96	113
4/25/2018	104.20	100.29	3.91	3,718.22	101.39	100.79	0.60	3,718.28	3.43	116
4/30/2018	105.17	100.40	4.77	3,717.97	101.67	100.80	0.87	3,718.22	3.96	120
5/1/2018	104.67	100.52	4.15	3,717.95	101.49	100.03	1.46	3,718.89	2.77	123
5/3/2018	104.55	100.58	3.97	3,717.92	101.40	100.67	0.73	3,718.38	3.17	126
5/8/2018	105.09	100.41	4.68	3,717.97	101.77	100.08	1.69	3,718.81	1.59	128
5/9/2018	106.02	99.69	6.33	3,718.41	101.56	100.77	0.79	3,718.27	1.85	130
5/10/2018	105.67	99.70	5.97	3,718.47	101.64	100.71	0.93	3,718.30	2.25	132
5/14/2018	104.63	99.82	4.81	3,718.54	101.55	100.87	0.68	3,718.19	2.64	134

Appendix E - LNAPL Gauging and Recovery Results, Monitoring Well MW-31

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

Date	Prior to Bailing or After Removing Skimmer[1,3]				After Bailing				LNAPL Volume Recovered (gal)	Cumulative LNAPL Recovered (gal)
	Initial Depth to Water (ft btoc)	Initial Depth to LNAPL (ft btoc)	Initial Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation[2] (ft amsl)	Final Depth to Water (ft btoc)	Final Depth to LNAPL (ft btoc)	Final Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation[2] (ft amsl)		
5/16/2018	104.32	100.58	3.74	3,717.96	101.49	100.98	0.51	3,718.10	2.25	137
5/17/2018	102.54	99.39	3.15	3,719.25	100.77	99.90	0.87	3,719.12	1.85	139
5/18/2018	102.09	100.1	1.99	3,718.74	101.35	100.81	0.54	3,718.27	1.85	140
5/21/2018	102.77	99.39	3.38	3,719.21	100.37	99.98	0.39	3,719.12	4.09	145
5/23/2018	101.78	99.57	2.21	3,719.23	99.89	99.83	0.06	3,719.33	1.85	146
5/24/2018	101.48	99.47	2.01	3,719.36	99.95	99.88	0.07	3,719.28	1.85	148
5/25/2018	101.44	99.61	1.83	3,719.25	100.29	99.83	0.46	3,719.26	1.98	150
5/30/2018	102.71	99.37	3.34	3,719.24	101.31	99.79	1.52	3,719.12	1.72	152
6/1/2018	101.79	99.47	2.32	3,719.31	100.32	99.89	0.43	3,719.21	1.85	154
6/4/2018	104.18	100.36	3.82	3,718.17	101.76	100.84	0.92	3,718.18	1.45	155
6/6/2018	106.51	100.53	5.98	3,717.63	102.16	101.38	0.78	3,717.66	1.45	157
6/7/2018	104.18	100.36	3.82	3,718.17	101.76	100.84	0.92	3,718.18	1.59	158
6/12/2018	105.03	100.26	4.77	3,718.11	101.73	100.29	1.44	3,718.64	1.59	160
6/14/2018	102.73	99.42	3.31	3,719.19	101.73	100.47	1.26	3,718.49	1.59	161
6/19/2018	101.44	99.54	1.90	3,719.31	100.33	99.74	0.59	3,719.33	1.72	163
6/20/2018	101.48	99.45	2.03	3,719.38	99.98	99.82	0.16	3,719.32	1.85	165
6/25/2018	101.20	100.4	0.80	3,718.64	100.94	100.45	0.49	3,718.64	1.85	167
6/27/2018	101.77	99.37	2.40	3,719.40	100.27	100.07	0.20	3,719.07	1.32	168
6/29/2018	101.57	99.82	1.75	3,719.06	100.73	99.87	0.86	3,719.16	1.72	170
7/3/2018	101.66	99.92	1.74	3,718.96	100.64	100.10	0.54	3,718.98	1.32	171
7/5/2018	101.45	99.79	1.66	3,719.10	100.32	99.81	0.51	3,719.27	1.32	173
7/10/2018	101.47	99.69	1.78	3,719.18	100.27	99.88	0.39	3,719.22	1.06	174
7/20/2018	101.21	99.57	1.64	3,719.32	100.21	99.83	0.38	3,719.28	1.19	175
7/25/2018	101.77	99.37	2.40	3,719.40	100.30	100.10	0.20	3,719.04	1.45	176
7/27/2018	101.78	99.62	2.16	3,719.19	100.30	99.83	0.47	3,719.26	1.32	178
7/30/2018	106.75	100.90	5.85	3,717.29	101.99	101.75	0.24	3,717.38	9.25	187
8/7/2018	101.48	99.45	2.03	3,719.38	100.09	99.77	0.32	3,719.35	1.32	188
8/10/2018	100.78	99.65	1.13	3,719.33	100.02	99.63	0.39	3,719.47	1.45	190
8/14/2018	103.58	99.91	3.67	3,718.64	101.13	100.42	0.71	3,718.63	1.59	191
8/16/2018	104.18	100.36	3.82	3,718.17	101.76	100.84	0.92	3,718.18	1.32	192
8/22/2018	101.73	99.58	2.15	3,719.23	100.37	99.43	0.94	3,719.58	1.59	194
8/23/2018	101.59	99.54	2.05	3,719.28	101.56	99.89	1.67	3,719.00	1.45	196
8/31/2018	106.02	99.77	6.25	3,718.35	101.53	100.71	0.82	3,718.32	1.72	197
9/3/2018	104.67	100.52	4.15	3,717.95	101.49	100.03	1.46	3,718.89	1.59	199
9/6/2018	105.67	99.70	5.97	3,718.47	101.64	100.71	0.93	3,718.30	1.72	201
9/11/2018	102.71	99.29	3.42	3,719.30	100.30	99.90	0.40	3,719.20	1.98	203
9/12/2018	101.77	99.37	2.40	3,719.40	100.30	100.10	0.20	3,719.04	1.59	204
9/19/2018	106.59	101.30	5.29	3,716.98	101.77	100.08	1.69	3,718.81	1.85	206
9/26/2018	104.57	101.46	3.11	3,717.19	102.55	100.20	2.35	3,718.57	1.85	208
10/1/2018	106.82	101.07	5.75	3,717.13	--	--	--	--	0.26	208
10/4/2018	106.78	101.09	5.69	3,717.12	102.77	101.91	0.86	3,717.12	4.76	213
10/5/2018	104.15	101.69	2.46	3,717.07	102.44	101.98	0.46	3,717.11	2.51	215
10/9/2018	105.96	101.36	4.60	3,717.04	102.64	102.01	0.63	3,717.05	4.49	220

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Date	Prior to Bailing or After Removing Skimmer[1,3]				After Bailing				LNAPL Volume Recovered (gal)	Cumulative LNAPL Recovered (gal)
	Initial Depth to Water (ft btoc)	Initial Depth to LNAPL (ft btoc)	Initial Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation[2] (ft amsl)	Final Depth to Water (ft btoc)	Final Depth to LNAPL (ft btoc)	Final Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation[2] (ft amsl)		
10/11/2018	105.12	101.55	3.57	3,717.02	102.57	102.10	0.47	3,716.99	3.43	223
10/16/2018	105.63	101.27	4.36	3,717.17	102.32	102.20	0.12	3,716.95	4.49	228
10/18/2018	106.58	101.63	4.95	3,716.71	102.87	102.53	0.34	3,716.58	3.70	231
10/23/2018	105.83	101.37	4.46	3,717.05	102.85	102.68	0.17	3,716.46	3.70	235
10/25/2018	105.67	101.73	3.94	3,716.78	101.86	101.53	0.33	3,717.58	4.49	240
10/30/2018	104.68	101.43	3.25	3,717.19	102.74	102.59	0.15	3,716.55	3.70	243
11/1/2018	105.23	101.77	3.46	3,716.82	102.56	101.98	0.58	3,717.09	3.70	247
11/6/2018	105.55	101.96	3.59	3,716.61	102.54	102.38	0.16	3,716.76	4.23	251
11/8/2018	105.78	101.68	4.10	3,716.80	102.68	102.53	0.15	3,716.61	2.64	254
11/13/2018	105.66	101.67	3.99	3,716.83	102.53	102.36	0.17	3,716.78	2.64	257
11/14/2018	105.23	101.78	3.45	3,716.81	102.47	102.26	0.21	3,716.87	3.96	260
11/20/2018	106.93	101.31	5.62	3,716.91	104.25	101.85	2.40	3,716.92	3.96	264
11/27/2018	106.59	101.4	5.19	3,716.90	102.55	101.78	0.77	3,717.26	3.96	268
11/29/2018	106.87	101.17	5.70	3,717.04	102.62	101.75	0.87	3,717.27	3.96	272
12/4/2018	105.87	101.36	4.51	3,717.05	102.59	101.83	0.76	3,717.21	2.64	275
12/5/2018	105.67	101.37	4.30	3,717.08	102.79	101.76	1.03	3,717.24	3.96	279
12/11/2018	106.48	101.66	4.82	3,716.70	102.86	101.82	1.04	3,717.17	3.96	283
12/12/2018	105.79	101.83	3.96	3,716.67	102.66	101.92	0.74	3,717.13	4.49	287
12/18/2018	105.87	101.56	4.31	3,716.88	102.55	101.36	1.19	3,717.61	3.96	291
12/20/2018	105.79	101.46	4.33	3,716.98	102.36	101.45	0.91	3,717.57	2.64	294
12/28/2018	107	101.2	5.80	3,716.99	103.59	101.90	1.69	3,716.99	5.28	299
1/8/2019	107.88	101.75	6.13	3,716.39	102.59	101.98	0.61	3,717.09	5.28	305
1/10/2019	106.86	101.68	5.18	3,716.62	102.76	101.73	1.03	3,717.27	6.60	311
1/15/2019	106.56	101.74	4.82	3,716.62	102.83	101.76	1.07	3,717.23	6.60	318
1/17/2019	106.78	101.62	5.16	3,716.68	102.62	101.86	0.76	3,717.18	5.28	323
1/23/2019	106.52	101.47	5.05	3,716.85	102.65	101.72	0.93	3,717.29	4.49	328
1/24/2019	106.72	101.45	5.27	3,716.83	102.73	101.82	0.91	3,717.20	5.28	333
1/30/2019	106.78	101.64	5.14	3,716.66	102.35	101.86	0.49	3,717.23	7.13	340
1/31/2019	105.89	101.63	4.26	3,716.82	102.72	101.84	0.88	3,717.18	4.49	345
2/5/2019	106.63	101.83	4.80	3,716.53	102.36	101.85	0.51	3,717.23	5.28	350
2/7/2019	105.87	101.63	4.24	3,716.83	102.83	101.86	0.97	3,717.15	4.49	354
2/12/2019	105.67	101.78	3.89	3,716.74	102.73	101.23	1.50	3,717.69	5.28	360
2/14/2019	105.73	101.63	4.10	3,716.85	102.82	101.93	0.89	3,717.09	3.96	364
2/20/2019	105.32	101.53	3.79	3,717.00	102.37	101.86	0.51	3,717.22	4.49	368
2/21/2019	105.33	101.86	3.47	3,716.73	102.83	102.46	0.37	3,716.65	3.96	372
2/26/2019	106.98	101.26	5.72	3,716.95	102.78	101.89	0.89	3,717.13	3.96	376
2/28/2019	105.86	101.75	4.11	3,716.73	102.63	101.64	0.99	3,717.36	2.64	379
3/7/2019	105.68	101.56	4.12	3,716.92	102.68	101.57	1.11	3,717.41	3.96	383
3/13/2019	105.47	101.56	3.91	3,716.95	102.56	101.57	0.99	3,717.43	3.96	387
3/14/2019	105.52	101.53	3.99	3,716.97	102.47	101.83	0.64	3,717.23	4.49	391
3/20/2019	105.63	101.58	4.05	3,716.91	102.76	101.89	0.87	3,717.13	5.28	396
3/21/2019	102.05	100.15	1.90	3,718.70	101.14	100.40	0.74	3,718.65	3.96	400
3/25/2019	102.77	99.88	2.89	3,718.80	101.30	99.96	1.34	3,718.98	3.96	404

Appendix E - LNAPL Gauging and Recovery Results, Monitoring Well MW-31

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

Date	Prior to Bailing or After Removing Skimmer[1,3]				After Bailing				LNAPL Volume Recovered (gal)	Cumulative LNAPL Recovered (gal)
	Initial Depth to Water (ft btoc)	Initial Depth to LNAPL (ft btoc)	Initial Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation[2] (ft amsl)	Final Depth to Water (ft btoc)	Final Depth to LNAPL (ft btoc)	Final Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation[2] (ft amsl)		
3/27/2019	102.45	100.05	2.40	3,718.72	101.57	100.58	0.99	3,718.42	2.64	407
4/1/2019 [3]	107.98	102.33	5.65	3,715.89	--	--	--	--	--	--
5/22/2019	108.14	102.56	5.58	3,715.67	--	--	--	--	35.0	442
5/24/2019	--	--	--	--	--	--	--	--	2.00	444
5/29/2019	--	--	--	--	--	--	--	--	14.0	458
5/31/2019	--	--	--	--	--	--	--	--	6.00	464
6/3/2019	--	--	--	--	--	--	--	--	5.00	469
6/7/2019	--	--	--	--	--	--	--	--	6.50	475
6/12/2019	--	--	--	--	--	--	--	--	9.00	484
6/14/2019	--	--	--	--	--	--	--	--	3.50	488
6/17/2019	105.61	103.21	2.40	3,715.56	--	--	--	--	4.00	492
6/20/2019	--	--	--	--	--	--	--	--	4.00	496
6/26/2019	--	--	--	--	--	--	--	--	9.00	505
7/2/2019	--	--	--	--	--	--	--	--	7.00	512
7/5/2019	--	--	--	--	--	--	--	--	0.00	512
7/11/2019	108.33	102.96	5.37	3,715.31	--	--	--	--	3.00	515
7/12/2019	--	--	--	--	--	--	--	--	3.00	518
7/15/2019	--	--	--	--	--	--	--	--	2.00	520
7/19/2019	--	--	--	--	--	--	--	--	6.00	526
7/23/2019	--	--	--	--	--	--	--	--	6.00	532
7/26/2019	--	--	--	--	--	--	--	--	3.00	535
7/31/2019	--	--	--	--	--	--	--	--	1.00	536
8/2/2019	--	--	--	--	--	--	--	--	6.00	542
8/7/2019	--	--	--	--	--	--	--	--	4.00	546
8/9/2019	--	--	--	--	--	--	--	--	2.00	548
8/13/2019	--	--	--	--	--	--	--	--	3.00	551
8/15/2019	--	--	--	--	--	--	--	--	2.00	553
8/20/2019	--	--	--	--	--	--	--	--	3.00	556
8/22/2019	--	--	--	--	--	--	--	--	2.00	558
8/29/2019	105.78	103.79	1.99	3,715.05	--	--	--	--	4.00	562
8/30/2019	--	--	--	--	--	--	--	--	8.00	570
9/3/2019	--	--	--	--	--	--	--	--	24.0	594
9/6/2019	--	--	--	--	--	--	--	--	15.0	609
9/10/2019	104.95	104.08	0.87	3,714.94	--	--	--	--	0.00	609
9/16/2019	--	--	--	--	--	--	--	--	35.0	644
9/20/2019	--	--	--	--	--	--	--	--	19.0	663
9/23/2019	--	--	--	--	--	--	--	--	21.0	684
9/27/2019	--	--	--	--	--	--	--	--	21.0	705
9/30/2019	--	--	--	--	--	--	--	--	17.0	722
10/3/2019	--	--	--	--	--	--	--	--	20.0	742
10/8/2019	--	--	--	--	--	--	--	--	30.0	772
10/10/2019	--	--	--	--	--	--	--	--	12.0	784
10/14/2019	--	--	--	--	--	--	--	--	19.0	803

Appendix E - LNAPL Gauging and Recovery Results, Monitoring Well MW-31

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

Date	Prior to Bailing or After Removing Skimmer[1,3]				After Bailing				LNAPL Volume Recovered (gal)	Cumulative LNAPL Recovered (gal)
	Initial Depth to Water (ft btoc)	Initial Depth to LNAPL (ft btoc)	Initial Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation[2] (ft amsl)	Final Depth to Water (ft btoc)	Final Depth to LNAPL (ft btoc)	Final Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation[2] (ft amsl)		
10/17/2019	--	--	--	--	--	--	--	--	2.25	805
10/21/2019	--	--	--	--	--	--	--	--	0.00	805
10/24/2019	104.97	104.32	0.65	3,715.77	--	--	--	--	0.00	805
11/15/2019	--	--	--	--	--	--	--	--	0.00	805
11/18/2019	--	--	--	--	--	--	--	--	0.00	805
11/22/2019	--	--	--	--	--	--	--	--	2.00	807
11/25/2019	--	--	--	--	--	--	--	--	4.00	811
11/26/2019	--	--	--	--	--	--	--	--	0.00	811
12/2/2019	--	--	--	--	--	--	--	--	4.00	815
12/6/2019	--	--	--	--	--	--	--	--	3.00	818
12/10/2019	--	--	--	--	--	--	--	--	4.00	822
12/23/2019	--	--	--	--	--	--	--	--	12.0	834
12/26/2019	--	--	--	--	--	--	--	--	3.00	837

Notes:

LNAPL = Light Non-Aqueous Phase Liquid

ft btoc = feet below top of casing

ft amsl = feet above mean sea level

-- = not measured

[1] Passive skimmer (Petro-Bailer™) installed in well on August 17, 2017. Passive skimmer prohibits fluid gauging prior to removal from well.

[2] Groundwater elevation corrected for the presence of LNAPL using a specific gravity of 0.8317. Top of well casing elevation = 3,819.17 feet amsl.

[3] Pneumatic skimmer pump system (Geotech SpOILer System) installed on April 1, 2019. Fluid gauging conducted after skimmer pump removed from well and well equilibrates.

Graph E.1: Cumulative Volume of Recovered LNAPL at MW-31

