April 15, 2024

Ms. Leigh Barr
New Mexico Energy, Minerals & Natural Resources Department
Oil Conservation Division, Environmental Bureau
LeighP.Barr@emnrd.nm.gov

Re: 2023 Annual Facility-Wide Groundwater Monitoring Report, HF Sinclair Navajo Refining LLC, Lovington, New Mexico, GW-014.

Dear Ms. Barr:

Please find attached the 2023 Annual Facility-Wide Groundwater Monitoring Report (Report) for the HF Sinclair Navajo Refining LLC (HFSNR) refinery located in Lovington, New Mexico. The Report summarizes the results of groundwater monitoring and remediation activities conducted at the refinery under GW-014 during calendar year 2023.

If you should have any questions or comments regarding this Report, please feel free to contact Teresa Alba at (575) 746-5391 or Mike Holder at (575) 308-1115.

Sincerely,

Case Hinkins
Environmental Manager
HF Sinclair Navajo Refining LLC

cc: HF Sinclair: T. Alba, M. Holder
TRC: J. Speer, A. Eljuri, C. Smith

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2023 Annual Facility-Wide Groundwater Monitoring Report

April 2024

HF Sinclair Navajo Refining LLC

GW-014

Lovington, New Mexico

Prepared For:

HF Sinclair Navajo Refining LLC

Prepared By:

TRC Environmental Corporation
Austin, Texas



2023 Annual Facility-Wide Groundwater Monitoring Report

HF Sinclair Navajo Refining LLC
GW-014
Lovington, New Mexico

Prepared for:

HF Sinclair Navajo Refining LLC
Artesia, New Mexico

Prepared by:

505 East Huntland Drive, Suite 250
Austin, Texas 78752

TRC Project No. 584880

April 2024

Project Manager
Audrey Eljuri

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EXECUTIVE SUMMARY

This *2023 Annual Facility-Wide Groundwater Monitoring Report* documents groundwater monitoring activities conducted at the HF Sinclair Navajo Refining LLC (HFSNR) facility (Refinery) located in Lovington, New Mexico, during calendar year 2023. The Refinery is currently regulated by New Mexico Oil Conservation Division (OCD) under Groundwater Discharge Permit GW-014 (Permit) issued by the OCD on November 16, 2022. The facility was subject to Abatement Plan AP-110 prior to issuance of the Permit.

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 FWGMWP) that was approved by OCD on February 1, 2018.

The 2023 groundwater monitoring results indicate physical and chemical groundwater conditions are 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 water supply wells for Refinery process use and non-potable restroom and safety shower use. Groundwater elevations across the Refinery have been decreasing since 2010 and continued to decrease during 2023. Seven monitoring wells (MW-17R, MW-21, MW-22, MW-27, MW-28, MW-29, and MW-30) were dry in October 2023 due to declining groundwater elevations. The presence of select anions (chloride, nitrate, and fluoride), total dissolved solids (TDS), and metals 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-HFSNR 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. LNAPL recovery was continuously conducted at MW-31 throughout 2023 using a pneumatic skimmer recovery system. Approximately 164 gallons of LNAPL were recovered using the skimmer system in 2023.

HFSNR will implement groundwater monitoring activities at the Refinery in 2024 under the *2024 Revised Facility-Wide Groundwater Monitoring Work Plan* (2024 FWGMWP) that was submitted on January 11, 2024, and approved by OCD on March 12, 2024. HFSNR will also

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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.

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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.
HFSNR	HF Sinclair Navajo Refining LLC
HMI	Hydrologic Monitoring
LCS/LCSD	Laboratory control sample and laboratory control sample duplicate
LNAPL	Light Non-Aqueous Phase Liquid
mg/L	milligrams per liter
NMAC	New Mexico Administrative Code
MS/MSD	Matrix spike and matrix spike duplicate
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
P&A	Plug and Abandon
POTW	Publicly-Owned Treatment Works
QA/QC	Quality Assurance/Quality Control
RDL	Reported Detection Limit
RPD	Relative Percent Difference
SM	Standard Method
SVOCs	Semi-Volatile Organic Compounds
TRC	TRC Environmental Corporation
TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbons
UIC	Underground Injection Control
VOCs	Volatile Organic Compounds
WQCC	New Mexico Water Quality Control Commission

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1.0 INTRODUCTION

On behalf of HF Sinclair Navajo Refining LLC (HFSNR), TRC Environmental Corporation (TRC) prepared this *2023 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 2023. 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 was then regulated by the OCD under Abatement Plan AP-110 until November 16, 2022, when the OCD issued a new Groundwater Discharge Permit GW-014 (the Permit).

1.1 Refinery Description

The Refinery is located approximately five miles south of Lovington in Lea County, New Mexico. The Refinery started operation in 1974 (Southern Union) and HFSNR became operator of the Refinery in early 1989. The Refinery is located on leased property owned by the City of Lovington. The property is located within the Permian oil field and surrounded by grazing land, oilfield production that started in approximately the 1940s, and produced water disposal wells. There are active and plugged oil wells and saltwater disposal wells within and surrounding the Refinery. The Refinery 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.

1.2 Discharge Permit Annual Report Requirements

This report was prepared to fulfill the requirement in Section 2.K. of GW-014. The requirement specifies that an Annual Report be submitted to the OCD by April 15 following the reporting (calendar) year and should include all components of the Annual Groundwater Monitoring Report and a summary "Section" demonstrating compliance with GW-014. The required information to be included in this Section is provided below:

A. Summary of major Facility activities and events – the Refinery conducted normal operations during 2023. No new tanks were brought online.

B. Summary of all leaks, spills, and releases and corrective actions taken – see Section 6.1 of this report.

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C. Summary of any new discoveries of groundwater and/or vadose zone contamination, including recommendations for further investigation and/or abatement – groundwater monitoring results and any notable changes from previous results that would indicate new groundwater or vadose zone contamination are discussed in Sections 3.1 and 3.2 of this report.

D. Summary of any Water Quality Control Commission (WQCC) constituents found to exceed the groundwater standards – see Section 3.2 of this report.

E. Summary of all waste and wastewater disposed of, sold, or treated on-site – no waste or wastewater is disposed of, sold, or treated on-site. The Refinery's wastewater is discharged to the City of Lovington's publicly-owned treatment works (POTW).

F. Summary of fluids detected in any leak detection system – there are no automatic leak detection systems in use at the Refinery. Equipment, tanks, and piping are routinely inspected and monitored by Refinery personnel. Any identified leaks are reported through shift leadership and managed through the Refinery's standard operating and incident management procedures.

G. Closure of any Underground Injection Control (UIC) Class V wells – there are no UIC wells at the Refinery.

H. Conclusions and recommendations – see Section 7.0 of this report.

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2.0 SEMI-ANNUAL GROUNDWATER MONITORING ACTIVITIES

Semi-annual groundwater monitoring activities were conducted at the Refinery in March and October 2023 in accordance with the November 2017 *Revised Facility-Wide Groundwater Monitoring Work Plan* (Revised FWGMWP) that was approved by the OCD on February 1, 2018. Hydrologic Monitoring (HMI) conducted the first semi-annual groundwater monitoring event on March 23, 2023, and the second semi-annual event on October 5, 2023. Groundwater monitoring activities consisted of (1) gauging existing Refinery monitoring wells (MW-1 through MW-24R and MW-26R 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 FWGMWP occurred during the March 2023 monitoring event:

- Well MW-31 was not sampled due to the presence of light non-aqueous phase liquid (LNAPL). This is consistent with previous sampling events conducted since 2017.
- Wells MW-8, MW-11R, MW-13R, and MW-27 were inaccessible due to refinery conditions and could not be gauged or sampled.
- Wells MW-28 and MW-29 were dry and could not be sampled.
- Wells MW-17R and MW-30 were sampled using bailing techniques rather than low-flow procedures with a submersible pump due to poor recharge and insufficient water column in the well. These wells were purged dry with a new disposable bailer and a grab sample was collected for laboratory analysis after the wells recharged.
- Field water quality parameters were not measured at wells MW-17R and MW-30 due to poor recharge resulting in insufficient water volume; however, the wells had enough water volume to be sampled for laboratory analysis.

The following deviations to the November 2017 Revised FWGMWP occurred during the October 2023 monitoring event:

- Well MW-31 was not sampled due to the presence of LNAPL. This is consistent with previous sampling events conducted since 2017.
- Wells MW-17R, MW-21, MW-22, MW-27, MW-28, MW-29, and MW-30 were dry and could not be sampled.

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2.1 Fluid Level Gauging

Existing Refinery monitoring and recovery wells were gauged during the March 2023 and October 2023 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:

- March 2023: 11 monitoring wells (MW-1 through MW-3, MW-6, MW-12R2, MW-15R, MW-17R, MW-19R, MW-30, MW-32, MW-33) and three Refinery water supply wells (WW-North, WW-East, and WW-South).
- October 2023: 23 monitoring wells (MW-1 through MW-6, MW-8 through MW-16R, MW-18R through MW-20R, MW-23R, MW-24R, MW-26R, MW-32, and MW-33) and three Refinery water supply wells (WW-North, WW-East, and WW-South).

Except as identified as deviations in Section 2.0, each monitoring 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 March and October 2023 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

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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) 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 FWGMWP:

- 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 3511/8015;
- Dissolved metals (aluminum, arsenic, barium, boron, cadmium, chromium, cobalt, copper, iron, lead, manganese, 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 SW-846 Method 9056A;
- Alkalinity by Standard Method (SM) 2320B-2011; and/or
- Total Dissolved Solids (TDS) by SM M2540C-2011.

The 2017 Revised FWGWMP included analysis of nitrate-nitrite as 20.6.2.3103 New Mexico Administrative Code (NMAC) only included standards for nitrate at the time. In December 2018, 20.6.3103 NMAC was updated to include separate standards for both nitrate and nitrite. Since the October 2022 semi-annual monitoring event, samples were submitted for separate laboratory analysis of nitrate and nitrite in accordance with the OCD email on June 22, 2022, and letter dated July 19, 2022.

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3.0 SEMI-ANNUAL GROUNDWATER MONITORING RESULTS

The results of the semi-annual groundwater monitoring activities conducted in March 2023 and October 2023 are discussed below.

3.1 Fluid Gauging Results

Fluid level gauging was performed on March 23, 2023, and on October 5, 2023, and the results are presented in Table 1. Potentiometric groundwater surface maps for the March 2023 and October 2023 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. Measured apparent LNAPL thicknesses in MW-31 during the March and October 2023 gauging events were 6.55 and 6.59 feet, respectively. HFSNR conducted routine LNAPL recovery using a pneumatic skimmer system at MW-31 throughout 2023, as discussed in Section 6.0. 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 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 March 2023 event decreased an average 1.26 feet from those measured in April 2022 (first semi-annual event of 2022). The March 2023 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 0.003 to 0.008 feet per foot.

Groundwater elevations measured during the October 2023 event decreased an average 2.14 feet from those measured in October 2022 (second semi-annual event of 2022). The October 2023 groundwater elevation data indicates groundwater northwest of the cone of depression

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flows southeast at a hydraulic gradient ranging from of 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 0.003 to 0.013 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 17.46 feet and 17.31 feet, respectively, from June 2009 to October 2023. 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, anions, and metal constituents in groundwater samples collected during the 2023 sampling events are summarized in Tables 2, 3, and 4, respectively. Analytical results are compared to the New Mexico 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 reported detection limit (RDL), or equivalent, more than once in each well are provided in Appendix C. Constituents that were never detected above the RDL, including those only detected at estimated J-flagged concentrations (i.e., detected above the method detection limit but below the RDL), 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 8260B) and SVOC (Method 8270C) 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 March 2023 and October 2023. Reported concentrations of VOCs during the 2023 sampling events were generally consistent with or less than previous sampling results, with notable increases of chloroform in the wells listed below. Chloroform concentrations in these wells remain at least one order of magnitude below the WQCC Standard of 0.1 milligrams per liter (mg/L) and will be reviewed again in 2024.

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- MW-1: Chloroform concentrations increased from an estimated J-flagged concentration of 0.000620 J mg/L to a historical maximum of 0.00162 J mg/L.
- MW-4: Chloroform concentrations increased over the five most recent sampling events from an estimated J-flagged concentration of 0.000574 J mg/L in October 2019 to a historical maximum of 0.0104 mg/L in October 2023.
- MW-16R: Chloroform concentrations increased from an estimated J-flagged concentration of 0.000201 J mg/L in October 2022 to a historical maximum of 0.00181 J mg/L in October 2023.
- MW-30: Chloroform concentrations overall increased from February 2015 (0.00072 J mg/L) to a historical maximum in March 2023 (0.0317 mg/L). This well was dry in October 2023.

Concentration maps of VOCs in groundwater for the March 2023 and October 2023 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 March 2016 until the well went dry in August 2016. From March 2015 to August 2016, HFSNR 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 was intermittently detected in MW-11R at estimated J-flagged concentrations an order of magnitude below the WQCC Standard of 0.005 mg/L in April 2021 (0.000660 J mg/L), September 2021 (0.000157 JB mg/L), and October 2023 (0.000170 J mg/L). HFSNR will continue to monitor benzene concentrations in MW-11R during subsequent groundwater monitoring events.

3.2.1.2 Semi-Volatile Organic Compounds

SVOCs were not detected above their respective WQCC Standards in any of the wells sampled in March 2023 and October 2023. Analytical results for SVOCs during the 2023 semi-annual monitoring events were generally consistent with previous sampling results. During 2022, total phenols in well MW-12R2 increased from non-detect in April 2022 to an estimated J-flagged concentration of 0.00662 J mg/L in October 2022; however, total phenols was not detected in well MW-12R2 during the March 2023 and October 2023 monitoring events.

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Concentration maps of SVOCs in groundwater for the March 2023 and October 2023 sampling events are not provided because none of the reported concentrations exceeded the WQCC Standards.

3.2.1.3 Total Petroleum Hydrocarbons

During the March 2023 sampling event, TPH GRO was not detected in the five wells sampled and analyzed for TPH GRO in March 2023 (MW-32, MW-33, WW-South, WW-North, and WW-East). TPH DRO was detected at concentrations above the RDL in wells MW-32 (0.546 mg/L), MW-33 (0.198 mg/L), and WW-South (0.103 mg/L, duplicate sample). Of the two other wells sampled and analyzed for TPH DRO in March 2023, TPH DRO was detected at estimated J-flagged concentrations below the RDL in wells WW-North and WW-East.

During the October 2023 monitoring event, TPH GRO was detected at an estimated J-flagged concentration below the RDL in well MW-33 (0.0842 J mg/L). TPH GRO was not detected in the other five wells sampled and analyzed for TPH GRO in October 2023 (MW-5, MW-32, WW-South, WW-North, and WW-East). TPH DRO was detected at concentrations above the RDL in wells MW-32 (0.334 mg/L) and MW-33 (0.483 mg/L, duplicate sample). Of the four other wells sampled and analyzed for TPH DRO in October 2023, TPH DRO was detected at estimated J-flagged concentrations below the RDL in wells MW-5, 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.

Reported TPH concentrations for the 2023 monitoring events were consistent with historical monitoring results (i.e., stable trends).

3.2.2 Inorganic Constituent Results

Analytical results for anions and TDS in groundwater are presented in Table 3 and for metals in groundwater are presented in Table 4 (i.e., inorganic constituents). A discussion of the inorganic constituent results is provided below.

3.2.2.1 Anions

The March 2023 analytical results indicate that chloride and nitrate 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 three of the 13 wells sampled for anions (MW-15R, MW-19R, and WW-South) with a maximum concentration of 436 mg/L in MW-15R. Nitrate was detected at a concentration above the WQCC Standard of 10.0 mg/L in one of the 13 wells sampled for anions at a concentration of 10.3 mg/L in MW-32.

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The October 2023 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 five of the 26 wells sampled for anions (MW-8, MW-11R, MW-15R, MW-19R, and WW-South) with a maximum detected concentration of 454 mg/L in MW-15R. Fluoride was detected at a concentration above the WQCC Standard of 1.6 mg/L in one of the 26 wells sampled for anions at a concentration of 2.41 mg/L in MW-24R.

Concentration maps of anions that exceeded WQCC Standards in groundwater for the March 2023 and October 2023 sampling events are provided as Figures 5 and 6, respectively.

Reported anion concentrations for the 2023 sampling events were generally consistent with previous sampling results. Notable increases of nitrate concentrations in the following wells were observed that may be associated with continually reducing groundwater elevations and will be reviewed again in 2024:

- Nitrate (and prior nitrate-nitrite) concentrations in wells MW-6 and MW-20/MW-20R exhibited an overall increasing trend since approximately 2015 and increased to a historical maximum of 8.82 mg/L in October 2023 at well MW-6 and decreased slightly from the historical maximum of 12.0 mg/L in October 2022 to 10.0 mg/L in October 2023 at well MW-20R.
- Nitrate and nitrate-nitrite concentrations in well MW-32 exceeded the WQCC Standard of 10.0 mg/L for the first time during both 2022 sampling events and again during October 2023 (10.3 mg/L). However, nitrate concentrations decreased below the WQCC Standard to 3.87 mg/L in October 2023.

As discussed in the 2022 *Annual Facility-Wide Groundwater Monitoring Report*, chloride concentrations in wells MW-4 and MW-12/MW-12R/MW-12R2 exhibited an overall increasing trend from approximately 2016 through 2022. Chloride concentrations in both wells decreased during the 2023 sampling events. Chloride and nitrate concentrations in well MW-9 in October 2022 increased to their historical maximums and first exceedance of WQCC Standards but decreased to below WQCC Standards in October 2023.

As discussed in the December 2013 *Refinery Investigation Report*, the presence of anions at concentrations above WQCC Standards at select well locations, including chloride (wells MW-8, MW-11R, MW-15R, MW-19R, and WW-South), fluoride (well MW-24R), and nitrate (MW-32) is due to off-site sources, background concentrations, and/or non-HFSNR sources at the Refinery.

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3.2.2.2 Total Dissolved Solids

During the March 2023 sampling event, TDS was detected at concentrations above the WQCC Standard of 1,000 mg/L in four of the 10 wells sampled for TDS (MW-15R, MW-19R, MW-33, and WW-South) with a maximum detected concentration of 1,550 mg/L in MW-15R. During the October 2023 sampling event, TDS was detected at concentrations above the WQCC Standard of 1,000 mg/L in seven of the 22 wells sampled for TDS (MW-8, MW-11R, MW-13R, MW-15R, MW-19R, MW-33, and WW-South) with a maximum detected concentration of 1,550 mg/L in MW-15R. Concentration maps of TDS in groundwater for the March 2023 and October 2023 sampling events are provided as Figures 7 and 8, respectively.

Reported TDS concentrations for both 2023 sampling events were generally consistent with previous sampling results. TDS concentrations have fluctuated above and below the WQCC Standard in multiple wells across the Refinery, including in wells MW-8, MW-11/MW-11R, MW-13/MW-13R, MW-15/MW-15R, MW-19/MW-19R, and WW-South.

As discussed in the December 2013 *Refinery Investigation Report*, the presence of TDS at concentrations above WQCC Standards at select well locations (including wells MW-8, MW-11R, MW-13R, MW-15R, MW-19R, MW-33, and WW-South) is due to off-site sources, background concentrations, and/or non-HFSNR sources at the Refinery.

3.2.2.3 Metals

Iron, manganese, and uranium 238 were detected at concentrations above their WQCC Standards of 1.0 mg/L, 0.2 mg/L, and 0.03 mg/L, respectively, in one (MW-33) of the 11 wells sampled in March 2023. In October 2023, out of the 21 wells sampled for metals, iron and uranium 238 were detected at concentrations above the WQCC Standards in MW-33 and manganese was detected at concentrations above the WQCC Standard in MW-11R and MW-33. Iron was detected at concentrations of 1.98 mg/L and 1.79 mg/L (duplicate sample) in MW-33 during March 2023 and October 2023, respectively. Manganese was detected at concentrations of 0.992 mg/L and 0.995 mg/L (duplicate sample) in MW-33 during March 2023 and October 2023, respectively; and 0.205 mg/L in MW-11R in October 2023. Uranium 238 was detected at concentrations of 0.0485 mg/L and 0.0558 mg/L (duplicate sample) in MW-33 during March 2023 and October 2023, respectively.

Concentration maps of metals that exceeded WQCC Standards in groundwater for the March 2023 and October 2023 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 iron, manganese, and uranium 238 above WQCC Standards in well MW-33, located along the southern Refinery boundary, is potentially attributed to nearby former produced-water injection wells LPU-38 and LSAU-23 and active oil

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production well LA-9 and former oil production well LPU-96 (Figure 2) based on the (1) distribution of iron, manganese, and uranium 238 in groundwater and (2) lack of potential sources for metals identified in this portion of the Refinery as discussed in the December 2013 *Refinery Investigation Report*.

Reported metal concentrations for the 2023 sampling events were generally consistent with or less than previous sampling results, with notable increases or trends in the following wells:

- Manganese concentrations in MW-11R increased over the five most recent sampling events. The October 2023 result (0.205 mg/L) is the first exceedance of the WQCC standard (0.2 mg/L) in this well. However, the former well MW-11 consistently exceeded the WQCC standard an order of magnitude higher than the October 2023 result. Manganese concentrations in MW-11R will continue to be monitored in 2024.
- Chromium concentrations in wells MW-15/MW-15R and MW-30 have overall increased since 2018; the March 2023 result in MW-30 (0.0314 mg/L) is a historical maximum but the 2023 results in MW-15R remain below the historical maximum reported in the former well MW-15. Chromium concentrations in MW-4 increased over the last three most recent sampling events to a historical maximum of 0.0100 mg/L in October 2023. However, chromium concentrations in all these wells remained below the WQCC Standard of 0.05 mg/L.
- Aluminum concentrations in MW-17R increased over the three most recent sampling events to a historical maximum of 0.543 mg/L in March 2023, but remain an order of magnitude below the WQCC Standard of 5.0 mg/L.
- MW-33: Iron concentrations decreased slightly from a historical maximum in October 2022 to 1.98 mg/L and 1.79 mg/L (duplicate sample) in March 2023 and October 2023, respectively. However, iron concentrations remained above the WQCC Standard of 1.0 mg/L since 2022. Uranium 238 concentrations have increased in this well since April 2018 (0.00269 J mg/L) to a historical maximum of 0.0558 mg/L (duplicate sample) in October 2023. Uranium 238 concentrations in MW-33 first exceeded the WQCC Standard of 0.03 mg/L in this well in April 2021, and have continued to exhibit an increasing trend. Iron and uranium 238 concentrations in MW-33 will continue to be monitored in 2024.

Notable concentration increases or trends of zinc in wells MW-4, MW-6, MW-12R2, and MW-20/MW-20R were discussed in the *2022 Annual Facility-Wide Groundwater Monitoring Report*, but the 2023 results in these wells decreased or were consistent with historical results.

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

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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 2023. 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). No deviations to the November 2017 Revised FWGMWP occurred during the quarterly water well sampling events in 2023.

Groundwater samples were collected from Refinery water supply wells WW-North, WW-South, and WW-East on January 26, 2023; March 23, 2023; July 27, 2023; and October 5, 2023. 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, anions, and metals analytical results of the quarterly Refinery water supply well samples are summarized and compared to WQCC Standards in Tables 2, 3, and 4, 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 256 mg/L (duplicate sample) in July 2023 to 344 mg/L in March 2023. Similar to historical results, TDS was detected in WW-South at concentrations above the WQCC Standard of 1,000 mg/L in two of the four quarterly sampling events ranging from 988 mg/L (duplicate sample) in July 2023 to 1,190 mg/L in March 2023. None of the remaining inorganic analytes were detected at concentrations above their respective WQCC Standards in any of the samples.

Chloroform was detected above the RDL or at J-flagged estimated concentrations in WW-South during all four quarterly sampling events in 2023. The reported chloroform concentrations were consistent with historical results and at least two orders of magnitude below the WQCC Standards of 0.1 mg/L.

TPH DRO was detected at estimated J-flagged concentrations in WW-North and WW-East during the March and October 2023 events and in WW-South during the October 2023 event. TPH DRO was detected above the RDL in well WW-South during the March 2023 event. During the January 2023 event, TPH DRO and TPH GRO were detected at an estimated J-flagged and B-flagged concentration in WW-North and WW-South and a B-flagged concentration in WW-East (with the “B” qualifier indicating it was detected within five times the associated laboratory method blank detection). Therefore, the detected B-flagged TPH DRO and TPH GRO concentrations in wells WW-North, WW-South, and WW-East in January 2023 likely include laboratory contributions.

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TPH DRO concentrations in the water supply wells during 2023 ranged from estimated concentration 0.0298 J mg/L in WW-East in October 2023 to 0.103 mg/L (duplicate sample) in WW-South in March 2023. TPH GRO concentrations during 2023 ranged from 0.0315 B mg/L in WW-East in January 2023 to an estimated concentration of 0.0382 JB mg/L in WW-North in January 2023. 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 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.

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5.0 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

Three water samples and one field duplicate were collected on January 26, 2023. Fourteen water samples, three field duplicates, two equipment blanks, and two trip blanks were collected on March 23, 2023. Three water samples, one field duplicate, and one trip blank were collected on July 27, 2023. Twenty-six water samples, three field duplicates, and two equipment blanks were collected on October 5, 2023. 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 L1579832, L1598018, L1639912, and L1663622 (revised 12/07/2023) 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
- 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 laboratory duplicate results
- Sample documentation

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 one exception. Due to significantly low (<10%) SVOC acid surrogate recoveries, the non-detect results for 4-chloro-3-methylphenol, 2-chlorophenol, 2,4-dichlorophenol, 2,4-dimethylphenol, 4,6-dinitro-2-methylphenol, 2,4-dinitrophenol, 2-nitrophenol, 2-methylphenol, 3&4-methyl phenol, 4-nitrophenol, pentachlorophenol, phenol, 2,4,5-trichlorophenol, and 2,4,6-trichlorophenol in the duplicate sample (DUP-01) collected from WW-South in July 2023 and MW-2 collected in October 2023 are not usable for project objectives. It should be noted that all SVOC results are usable for project objectives in the parent sample at WW-South collected in July 2023. Complete QA/QC data review results are provided in Appendix D.

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6.0 2023 RELEASES AND REMEDIATION ACTIVITIES

Per Item 2.G of the Permit issued on November 16, 2022, all leaks, spills, and releases during the calendar year will be summarized in Annual Facility-Wide Groundwater Monitoring Reports. The releases are discussed further in Section 6.1. Throughout 2023, HFSNR continued to recover LNAPL associated with the historical release discovered at the asphalt loading rack in November 2015 as discussed further in Section 6.2.

6.1 2023 Releases

Releases that occurred at the Refinery in 2023 and corrective actions taken are summarized in Table 5. All releases occurred within the active operating Refinery that is continuously secured to prevent access from unauthorized personnel and the general public. None of the releases occurred from the stormwater retention pond or firewater pond.

Only two releases occurred during 2023 that met the definition of a major release under 19.15.29.7 NMAC based on total volume (i.e., greater than 25 barrels) – a release of approximately 100 barrels of firewater from the firewater loop on March 25, 2023, and approximately 500 barrels of firewater from an underground line on November 14, 2023. However, neither of the firewater releases meet the criteria of Paragraph (4) of Subsection A of 19.15.29.7 NMAC or Subsection A of 20.6.2.1203 NMAC, as described further in the follow paragraph. The nine remaining releases were of volumes less than 5 barrels.

The firewater loop and line are sourced by groundwater from all the three Refinery water supply wells. As reported in this and previous Annual Facility-Wide Groundwater Monitoring Reports, chloride and TDS have historically exceeded WQCC Standards in well WW-South. No other constituent historically exceeds WQCC Standards in the other two wells (WW-North and WW-East) that source the firewater piping. A representative firewater sample was collected and submitted for laboratory analysis for the November 2023 release. No representative sample was collected for the March 2023 release, but two firewater samples were collected in August 2022 prior to the release. Chloride was reported below the WQCC Standard of 250 mg/L in all three samples, at 120 mg/L in the November 2023 sample, and at 236 mg/L and 240 mg/L in the August 2022 samples. Therefore, the March and November firewater releases would not with reasonable probability be detrimental to fresh water and do not meet the criteria of Paragraph (4) of Subsection A of 19.15.29.7 NMAC or Subsection A of 20.6.2.1203 NMAC. The analytical reports for the firewater sample are included in Appendix B.

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

HFSNR has conducted routine LNAPL recovery at monitoring well MW-31 since LNAPL was discovered in this well in February 2017. A passive skimmer (Petro-Bailer™) was installed and maintained in MW-31 through March 2019 and the skimmer was emptied on a daily to weekly basis. In addition to the passive skimmer, LNAPL was manually bailed from MW-31 on a primarily weekly basis from February 2018 through March 2019. In April 2019, HFSNR 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.

Throughout 2023, HFSNR conducted operation and maintenance (O&M) of the recovery system on at least 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 on a quarterly basis. Fluid gauging and LNAPL recovery results to date are summarized in Appendix E. Approximately 164 gallons of LNAPL were recovered by the pneumatic skimmer pump system from MW-31 during 2023. An approximate total of 1,891 gallons of LNAPL have been recovered manually or by the pneumatic skimmer pump system from MW-31 since February 2017. Apparent LNAPL thickness in MW-31 fluctuated during 2023 with operation of the skimmer system with thicknesses comparable to 2022. The apparent LNAPL thickness in MW-31 increased between January 2023 (5.19 feet) and March 2023 (6.55 feet), decreased in July 2023 (2.57 feet), and increased again in October 2023 (6.59 mg/L). The increased apparent LNAPL thickness in MW-31 during 2023 is attributed to (1) declining groundwater elevations and (2) issues with the system resulting from the needed replacement of the solar programable control panel on 10/27/23 and the replacement of the pump on November 27, 2023. The skimmer system has operated with no issues since the last repair.

HFSNR 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. Apparent in-well LNAPL thickness fluctuates with the water table because it relates to the hydrogeologic conditions and characteristics of the LNAPL and soil and is therefore a poor indicator of LNAPL mobility and recoverability. 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.

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7.0 CONCLUSIONS

Conclusions based on data collected during groundwater monitoring activities conducted during calendar year 2023 are discussed below.

Groundwater flow directions were consistent with previous groundwater monitoring events. Groundwater elevations decreased an average of 1.26 feet from April 2022 to March 2023 and 2.14 feet from October 2022 to October 2023. Groundwater elevations have continually decreased from June 2009 to October 2023 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. Groundwater elevations in the Refinery's monitoring well network will be closely monitored during future events and evaluated for potential well replacement. Consistent with previous results, LNAPL was detected in monitoring well MW-31. The apparent LNAPL thickness in MW-31 ranged from 2.57 feet to 6.59 feet throughout 2023.

Analytical results of groundwater samples collected during semi-annual groundwater monitoring events conducted in March 2023 and October 2023 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 at an estimated J-flagged concentration below the RDL in well MW-33 in October 2023. TPH DRO was detected above the RDL in wells MW-32, MW-33, and WW-South in March 2023, and wells MW-32 and MW-33 in October 2023. 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-15R, MW-19R, and WW-South) and nitrate (well MW-32) in March 2023; and chloride (wells MW-8, MW-11R, MW-15R, MW-19R, and WW-South) and fluoride (well MW-24R) in October 2023.
- TDS was reported at concentrations above its WQCC Standard in wells MW-15R, MW-19R, MW-33, and WW-South in March 2023; and in wells MW-8, MW-11R, MW-13R, MW-15R, MW-19R, MW-33, and WW-South in October 2023.

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- Metals were reported at concentrations above the WQCC Standard for iron, manganese, and uranium 238 in well MW-33 in March 2023 and October 2023. Manganese was detected at a concentration above the WQCC Standard in well MW-11R in October 2023.

The presence of select anions, TDS, and select metals at concentrations above WQCC Standards at select well locations is due to off-site sources, background concentrations, and/or non-HFSNR 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-12R2, MW-14R, 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 off-site migration of constituents, 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 except for chloride in WW-South. Based on these results, the water poses no risk associated with continued use in Refinery restrooms and safety showers.

LNAPL was continually recovered from MW-31 throughout 2023 using the pneumatic skimmer pump system. A total of 164 gallons of LNAPL was recovered from MW-31 during 2023.

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8.0 WORK PLANNED FOR 2024

The following summarizes the scope of work planned for 2024 at the Refinery:

- Submitted the *2024 Revised Facility-Wide Groundwater Monitoring Work Plan* (2024 FWGMWP) on January 11, 2024, to OCD. The 2024 FWGMWP includes updates to the monitoring well network and analytical program.
- Implement semi-annual groundwater monitoring and annual reporting activities in accordance with the 2024 FWGMWP that was approved by OCD on March 12, 2024. HFSNR 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, HFSNR's response letter on June 20, 2014, and the 2024 FWGMWP.
- 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 potentially 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.
- Replace dry wells MW-28 and MW-29 with deeper monitoring wells and plug and abandon (P&A) dry monitoring wells MW-21 and MW-27, in accordance with the approved 2024 FWGWMP. HFSNR will submit written request to replace or P&A any additional wells to OCD. No wells will be P&A'd without written OCD approval.

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FIGURES

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Coordinate System: NAD 1983 2011 StatePlane New Mexico East FIPS 3001 Ft US (Foot US)
Map Rotation: 0

TRC - GIS



LEGEND

W LW - CITY OF LOVINGTON WATER WELL
RAIL
FENCE

SOURCE: BASEMAP: WORLD IMAGERY - ESRI, VIVID MAXAR; 4/21/2022.

0 350 700
FEET
1 " = 700 '
1:8,400

N

TRC
505 East Huntland Drive
Suite #250
Austin, TX 78752
Phone: 512.329.6080

PROJECT:
HF SINCLAIR NAVAJO REFINING LLC
GW-014, LOVINGTON REFINERY, LOVINGTON, NM

TITLE:
REFINERY VICINITY MAP

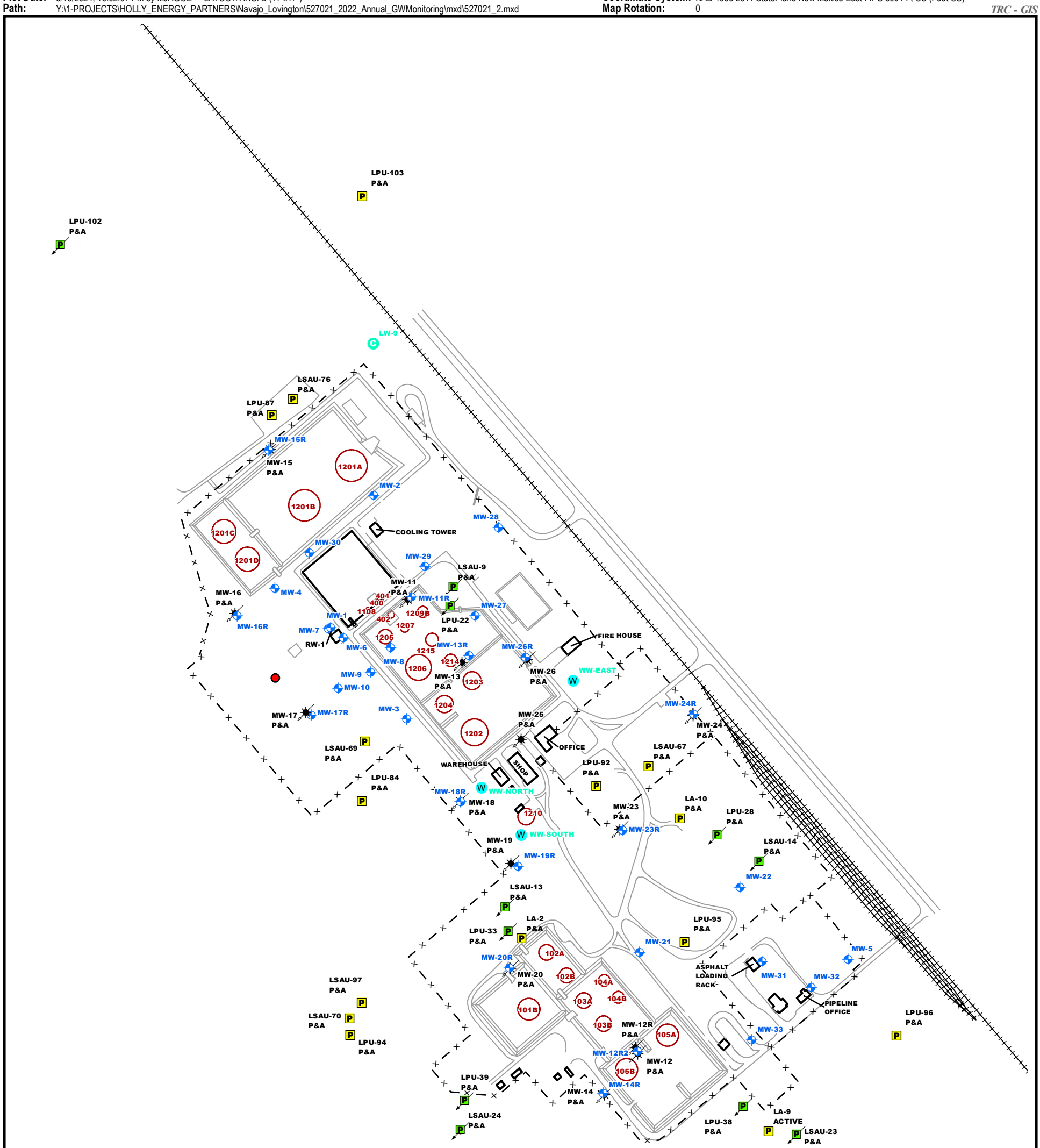
DRAWN BY:	S. RAY
CHECKED BY:	A. ELJURI
APPROVED BY:	J. SPEER
DATE:	MARCH 2023
PROJ. NO.:	527021
FILE:	527021_1.mxd

FIGURE 1

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Coordinate System: NAD 1983 2011 StatePlane New Mexico East FIPS 3001 Ft US (Foot US)
Map Rotation: 0

TRC - GIS



LEGEND

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

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N

TRC

PROJECT:
HF SINCLAIR NAVAJO REFINING LLC
GW-014, LOVINGTON REFINERY, LOVINGTON, NM

TITLE:
REFINERY SITE PLAN

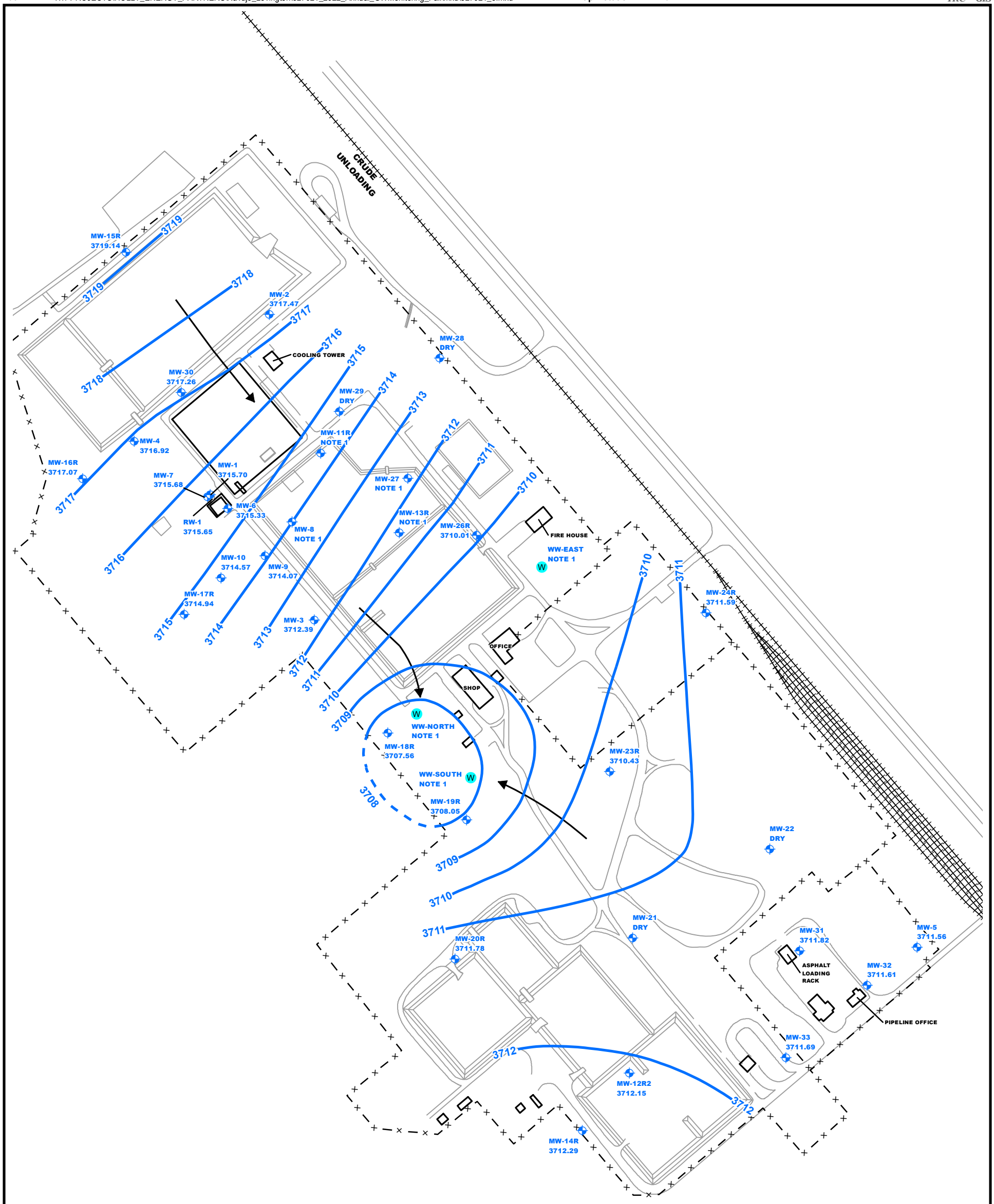
DRAWN BY:	S. RAY
CHECKED BY:	A. ELJURI
APPROVED BY:	J. SPEER
DATE:	MARCH 2024
PROJ. NO.:	527021
FILE:	527021_2.mxd

FIGURE 2

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Coordinate System: NAD 1983 2011 StatePlane New Mexico East FIPS 3001 Ft US (Foot US)
Map Rotation: 0

TRC - GIS



NOTE:
1. WATER WELL NOT ACCESSIBLE FOR GAUGING.
2. WELLS GAUGED ON MARCH 23, 2023.

LEGEND

- GROUNDWATER CONTOURS (DASHED WHERE INFERRED)
- MONITORING WELL
- RECOVERY WELL
- WATER WELL
- FENCE
- RAIL
- GROUNDWATER FLOW DIRECTION
- 3712.29 GROUNDWATER ELEVATION (FEET)
- BUILDINGS

0 175 350 FEET
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TRC

PROJECT:
HF SINCLAIR NAVAJO REFINING LLC
GW-014, LOVINGTON REFINERY, LOVINGTON, NM

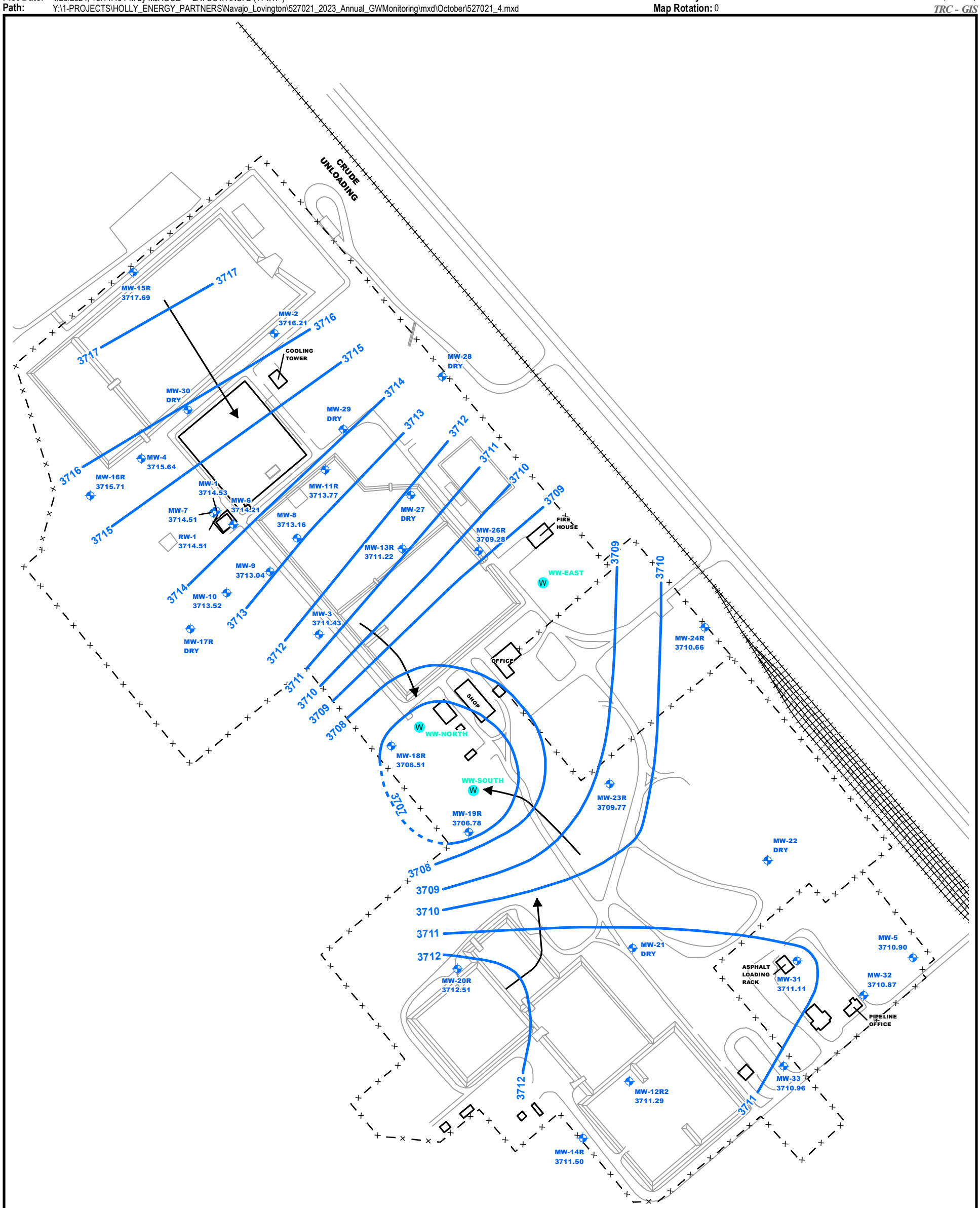
TITLE:
GROUNDWATER POTENTIOMETRIC SURFACE MAP - MARCH 2023

DRAWN BY:	M. JAGOE
CHECKED BY:	A. TREVINO
APPROVED BY:	A. ELJURI
DATE:	APRIL 2024
PROJ. NO.:	527021
FILE:	527021_3.mxd

FIGURE 3

Received by OCD: 4/15/2024 1:46:20 PM

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Coordinate System: NAD 1983 2011 StatePlane New Mexico East FIPS 3001 Ft US (Feet US)
Map Rotation: 0
TRC - GIS



NOTE:
1. WATER WELL NOT ACCESSIBLE FOR GAUGING.
2. WELLS GAUGED ON OCTOBER 5, 2023.

LEGEND

- GROUNDWATER CONTOURS (DASHED WHERE INFERRED)
- MONITORING WELL
- RECOVERY WELL
- WATER WELL
- FENCE
- RAIL
- GROUNDWATER FLOW DIRECTION
- 3711.29 GROUNDWATER ELEVATION (FEET)
- BUILDINGS
- WATER ELEVATION CONTOUR

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1 " = 350 '
1:4,200
N

TRC

PROJECT:
HF SINCLAIR NAVAJO REFINING LLC
GW-014, LOVINGTON REFINERY, LOVINGTON, NM

TITLE:
GROUNDWATER POTENTIOMETRIC SURFACE MAP - OCTOBER 2023

DRAWN BY:	M. JAGOE
CHECKED BY:	A. ELJURI
APPROVED BY:	J. SPEER
DATE:	JANUARY 2024
PROJ. NO.:	584880
FILE:	527021_4.mxd

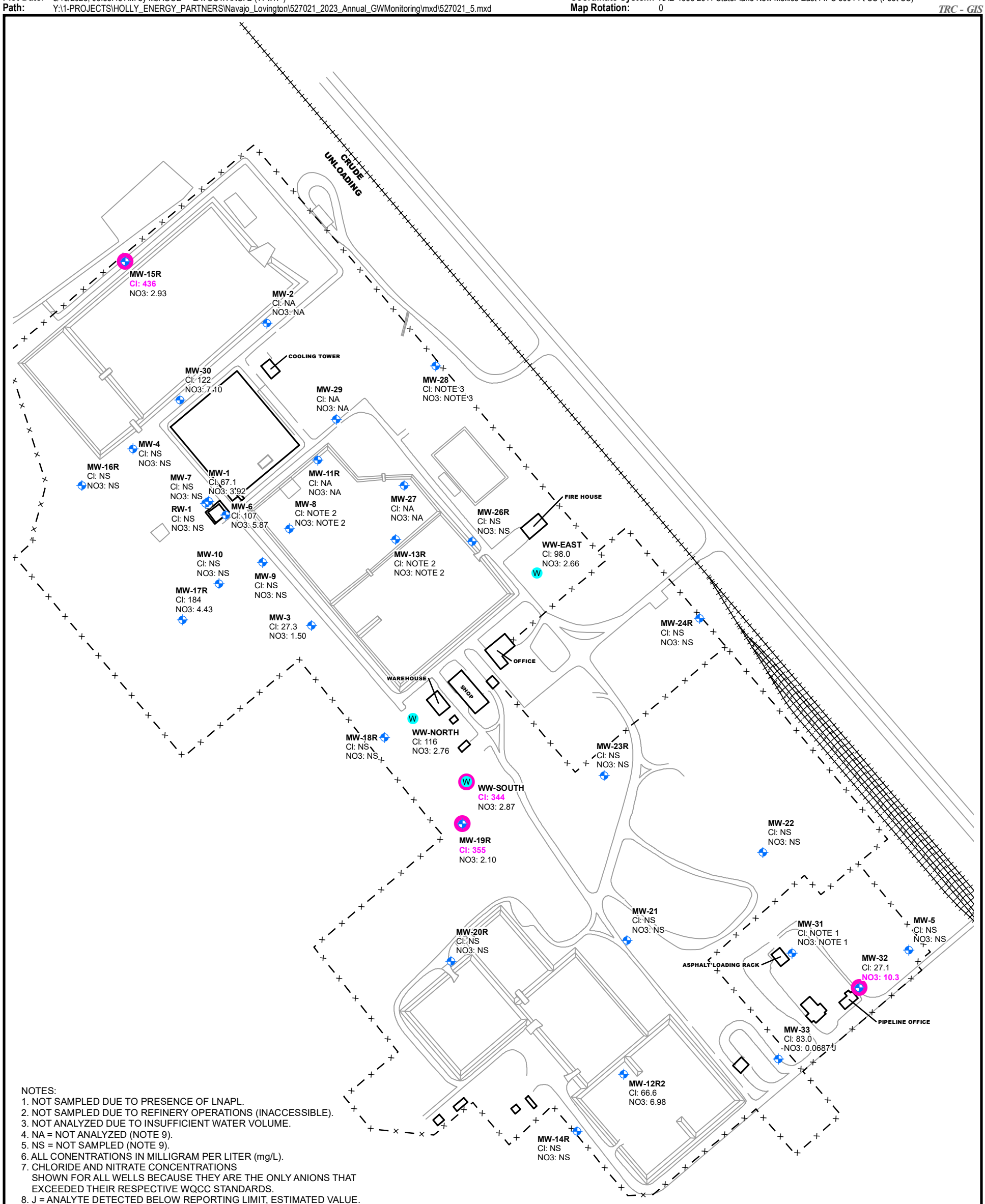
FIGURE 4

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Coordinate System: NAD 1983 2011 StatePlane New Mexico East FIPS 3001 Ft US (Foot US)
Map Rotation: 0

TRC - GIS



NOTES:
1. NOT SAMPLED DUE TO PRESENCE OF LNAPL.
2. NOT SAMPLED DUE TO REFINERY OPERATIONS (INACCESSIBLE).
3. NOT ANALYZED DUE TO INSUFFICIENT WATER VOLUME.
4. NA = NOT ANALYZED (NOTE 9).
5. NS = NOT SAMPLED (NOTE 9).
6. ALL CONENTRATIONS IN MILLIGRAM PER LITER (mg/L).
7. CHLORIDE AND NITRATE CONCENTRATIONS SHOWN FOR ALL WELLS BECAUSE THEY ARE THE ONLY ANIONS THAT EXCEEDED THEIR RESPECTIVE WQCC STANDARDS.
8. J = ANALYTE DETECTED BELOW REPORTING LIMIT, ESTIMATED VALUE.
9. IN ACCORDANCE WITH DECEMBER 2017 REVISED FACILITY-WIDE GROUNDWATER MONITORING WORK PLAN.

LABEL KEY:
Cl: 355 - CHLORIDE CONCENTRATION (WQCC STANDARD = 250 mg/L)
NO3: 10.3 - NITRATE CONCENTRATION (WQCC STANDARD = 10.0 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

0 175 350
FEET
1 " = 350 '
1:4,200

N

TRC
505 East Huntland Drive
Suite #250
Austin, TX 78752
Phone: 512.329.6080

PROJECT:
HF SINCLAIR NAVAJO REFINING LLC
GW-014, LOVINGTON REFINERY, LOVINGTON, NM

TITLE:
ANIONS CONCENTRATION MAP - MARCH 2023

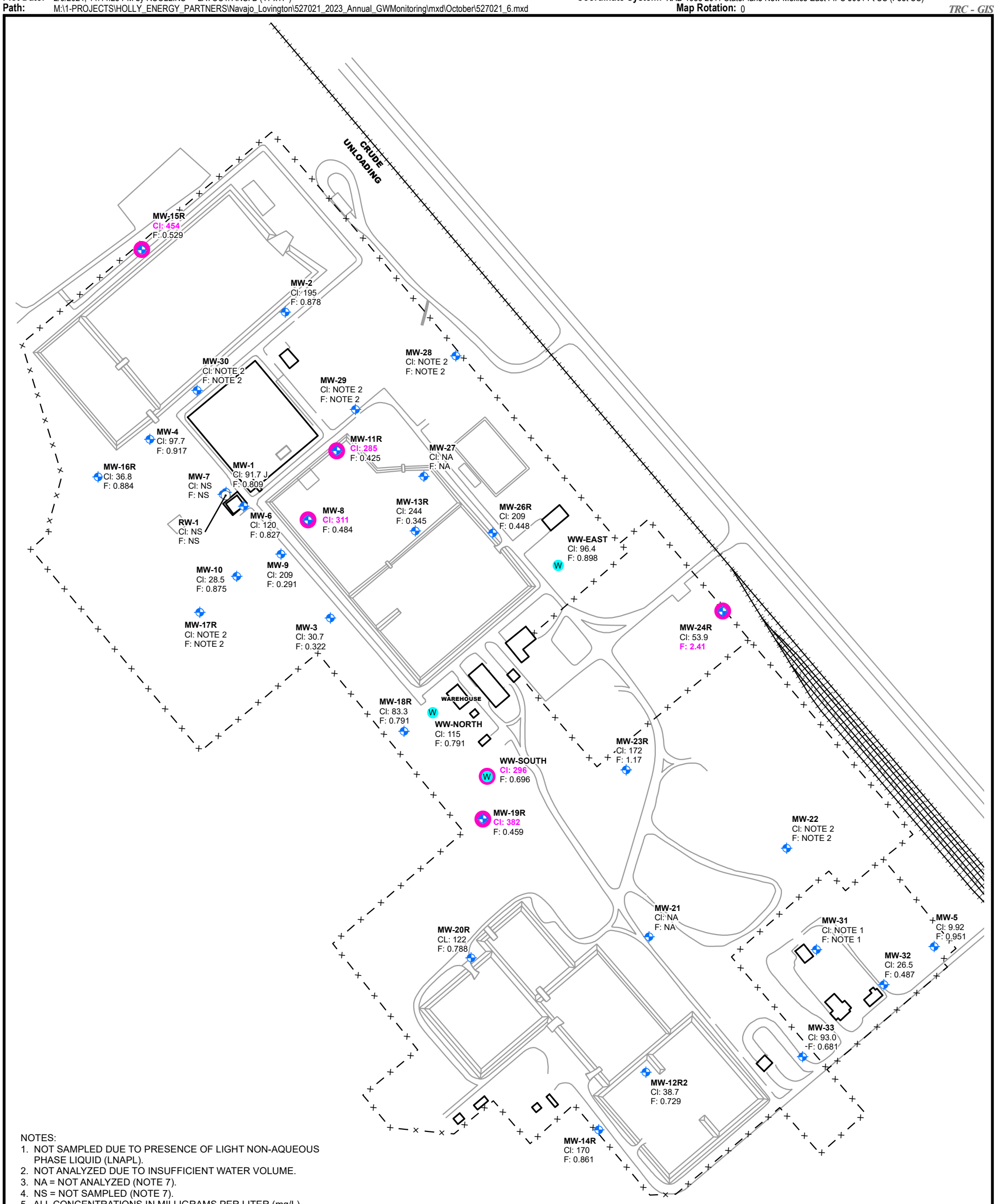
DRAWN BY:	M. JAGOE
CHECKED BY:	A. ELJURI
APPROVED BY:	J. SPEER
DATE:	AUGUST 2023
PROJ. NO.:	527021
FILE:	527021_5.mxd

FIGURE 5

Plot Date: 2/6/2024, 14:44:23 PM by RCOLLINS -- LAYOUT: ANSI B (11"x17")
Path: M:\1-PROJECTS\HOLLY_ENERGY_PARTNERS\Navajo_Lovington\527021_2023_Annual_GWMonitoring\mxd\October\527021_6.mxd

Coordinate System: NAD 1983 2011 StatePlane New Mexico East FIPS 3001 Ft US (Foot US)
Map Rotation: 0

TRC - GIS



NOTES:
1. NOT SAMPLED DUE TO PRESENCE OF LIGHT NON-AQUEOUS PHASE LIQUID (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: 382 - CHLORIDE CONCENTRATION (WQCC STANDARD = 250 mg/L)
F: 0.459 - 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

0 175 350 FEET
1 " = 350 '
1:4,200
N

505 East Huntland Drive
Suite #250
Austin, TX 78752
Phone: 512.329.6080

PROJECT:
HF SINCLAIR NAVAJO REFINING LLC
GW-014, LOVINGTON REFINERY, LOVINGTON, NM

TITLE:
ANIONS CONCENTRATION MAP - OCTOBER 2023

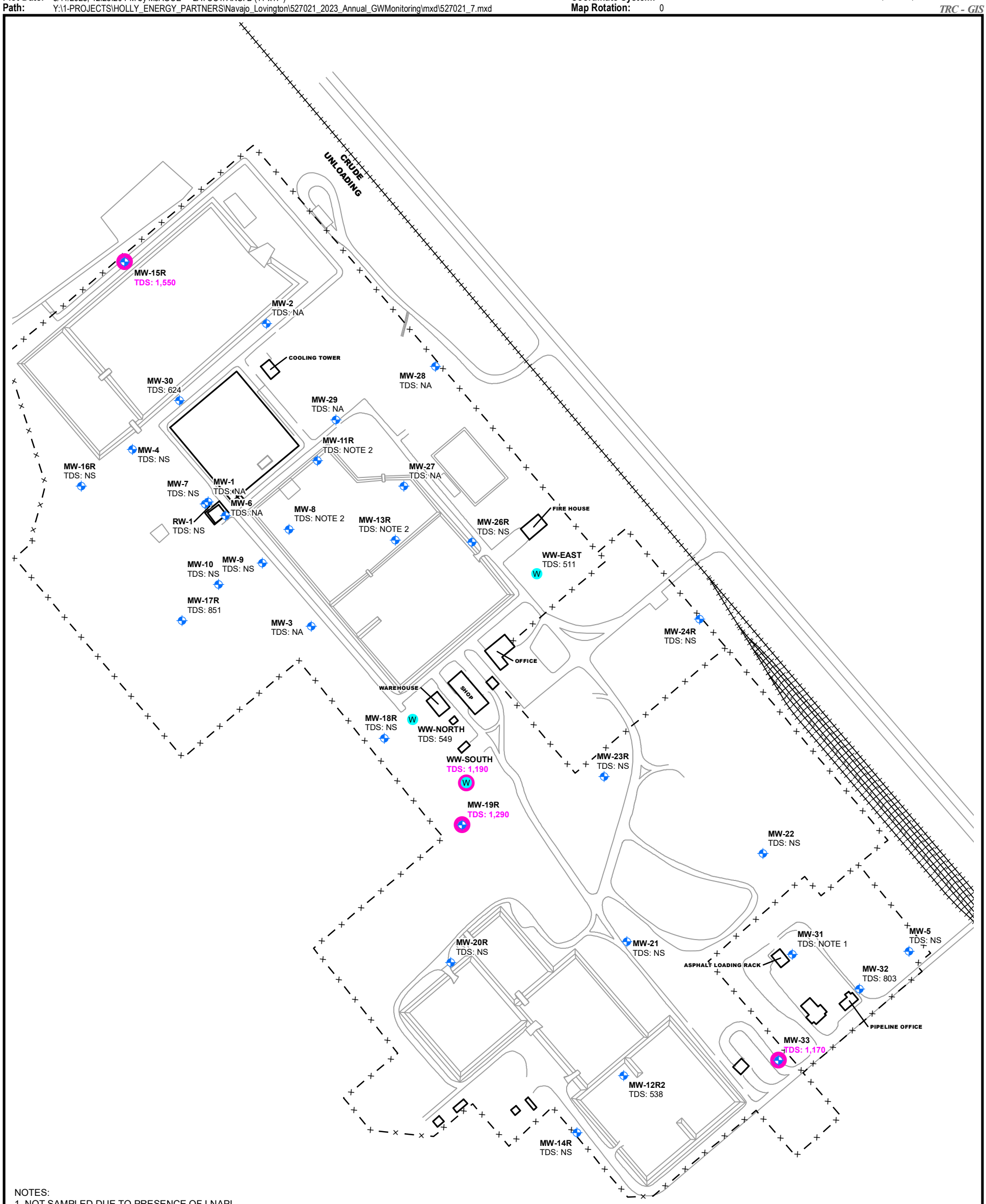
DRAWN BY:	R. COLLINS
CHECKED BY:	A. ELJURI
APPROVED BY:	J. SPEER
DATE:	FEBRUARY 2024
PROJ. NO.:	584880
FILE:	527021_6.mxd

FIGURE 6

Plot Date: 8/11/2023, 12:25:20 PM by MJAGOE -- LAYOUT: ANSI B (11"x17")
Path: Y:\1-PROJECTS\HOLLY_ENERGY_PARTNERS\Navajo_Lovington\527021_2023_Annual_GWMonitoring\mxd\527021_7.mxd

Coordinate System: NAD 1983 2011 StatePlane New Mexico East FIPS 3001 Ft US (Foot US)
Map Rotation: 0

TRC - GIS



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

LABEL KEY:
TDS: 1,190 - 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

0 175 350 FEET
1 " = 350 '
1:4,200

N

505 East Huntland Drive
Suite #250
Austin, TX 78752
Phone: 512.329.6080

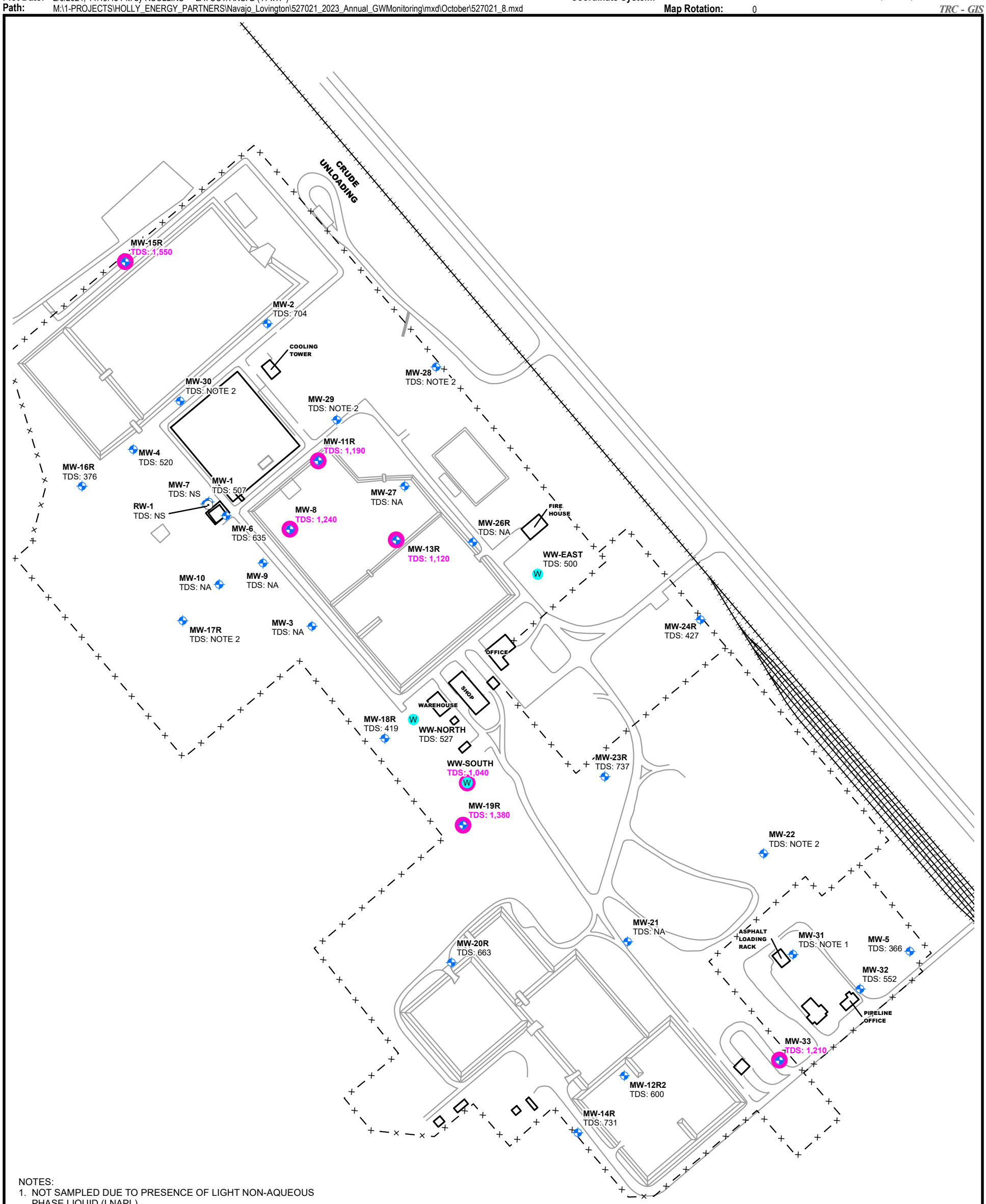
PROJECT:
HF SINCLAIR NAVAJO REFINING LLC
GW-014, LOVINGTON REFINERY, LOVINGTON, NM

TITLE:
TOTAL DISSOLVED SOLIDS CONCENTRATION MAP - MARCH 2023

DRAWN BY:	M. JAGOE
CHECKED BY:	A. ELJURI
APPROVED BY:	J. SPEER
DATE:	AUGUST 2023
PROJ. NO.:	527021
FILE:	527021_7.mxd

FIGURE 7

Plot Date: 2/6/2024, 14:49:43 PM by RCOLLINS -- LAYOUT: ANSI B (11"x17")
Path: M:\1-PROJECTS\HOLLY_ENERGY_PARTNERS\Navajo_Lovington\527021_2023_Annual_GWMonitoring\mxd\October\527021_8.mxd
Coordinate System: NAD 1983 2011 StatePlane New Mexico East FIPS 3001 Ft US (Foot US)
Map Rotation: 0
TRC - GIS



NOTES:
1. NOT SAMPLED DUE TO PRESENCE OF LIGHT NON-AQUEOUS PHASE LIQUID (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: 1,040 - 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

0 175 350 FEET
1 " = 350 '
1:4,200
N

505 East Huntland Drive
Suite #250
Austin, TX 78752
Phone: 512.329.6080

PROJECT:
HF SINCLAIR NAVAJO REFINING LLC
GW-014, LOVINGTON REFINERY, LOVINGTON, NM

TITLE:
TOTAL DISSOLVED SOLIDS CONCENTRATION MAP - OCTOBER 2023

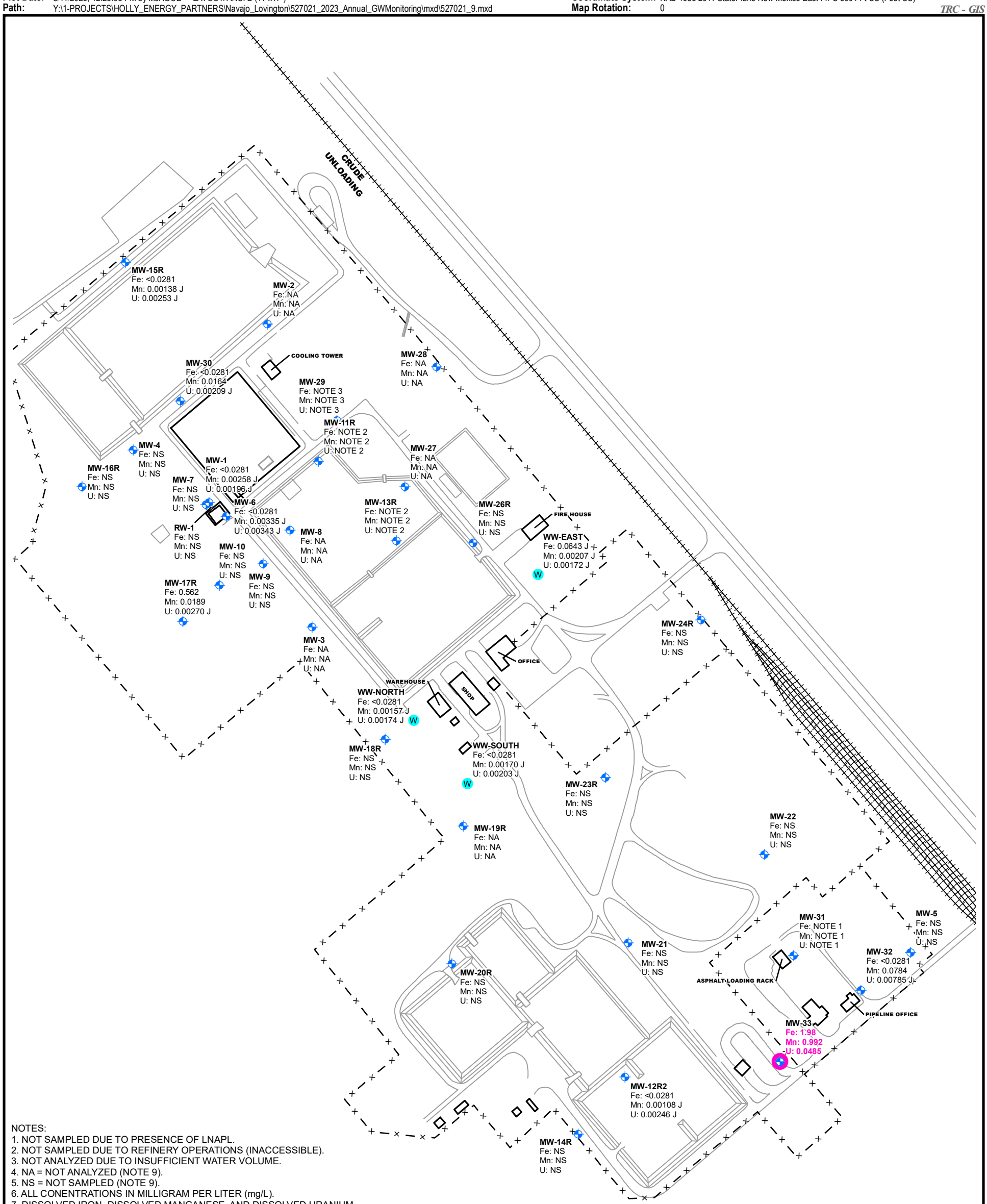
DRAWN BY:	R. COLLINS
CHECKED BY:	A. ELJURI
APPROVED BY:	J. SPEER
DATE:	FEBRUARY 2024
PROJ. NO.:	584880
FILE:	527021_8.mxd

FIGURE 8

Plot Date: 8/11/2023, 12:28:03 PM by MJAGOE -- LAYOUT: ANSI B (11"x17")
Path: Y:\1-PROJECTS\HOLLY_ENERGY_PARTNERS\Navajo_Lovington\527021_2023_Annual_GWMonitoring\mxd\527021_9.mxd

Coordinate System: NAD 1983 2011 StatePlane New Mexico East FIPS 3001 Ft US (Foot US)
Map Rotation: 0

TRC - GIS



NOTES:
1. NOT SAMPLED DUE TO PRESENCE OF LNAPL.
2. NOT SAMPLED DUE TO REFINERY OPERATIONS (INACCESSIBLE).
3. NOT ANALYZED DUE TO INSUFFICIENT WATER VOLUME.
4. NA = NOT ANALYZED (NOTE 9).
5. NS = NOT SAMPLED (NOTE 9).
6. ALL CONENTRATIONS IN MILLIGRAM PER LITER (mg/L).
7. DISSOLVED IRON, DISSOLVED MANGANESE, AND DISSOLVED URANIUM 238 CONCENTRATIONS SHOWN FOR ALL WELLS BECAUSE THEY ARE THE ONLY METALS THAT EXCEEDED THEIR RESPECTIVE WQCC STANDARD.
8. J = ANALYTE DETECTED BELOW REPORTING LIMIT, ESTIMATED VALUE.
9. IN ACCORDANCE WITH DECEMBER 2017 REVISED FACILITY-WIDE GROUNDWATER MONITORING WORK PLAN.

LABEL KEY:
Fe: 1.98 - DISSOLVED IRON CONCENTRATION (WQCC STANDARD = 1.0 mg/L)
Mn: 0.992 - DISSOLVED MANGANESE CONCENTRATION (WQCC STANDARD = 0.2 mg/L)
U: 0.0485 - DISSOLVED URANIUM 238 CONCENTRATION (WQCC STANDARD = 0.03 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

0 175 350 FEET
1 " = 350 '
1:4,200

N

TRC
505 East Huntland Drive
Suite #250
Austin, TX 78752
Phone: 512.329.6080

PROJECT:
HF SINCLAIR NAVAJO REFINING LLC
GW-014, LOVINGTON REFINERY, LOVINGTON, NM

TITLE:
METALS CONCENTRATION MAP - MARCH 2023

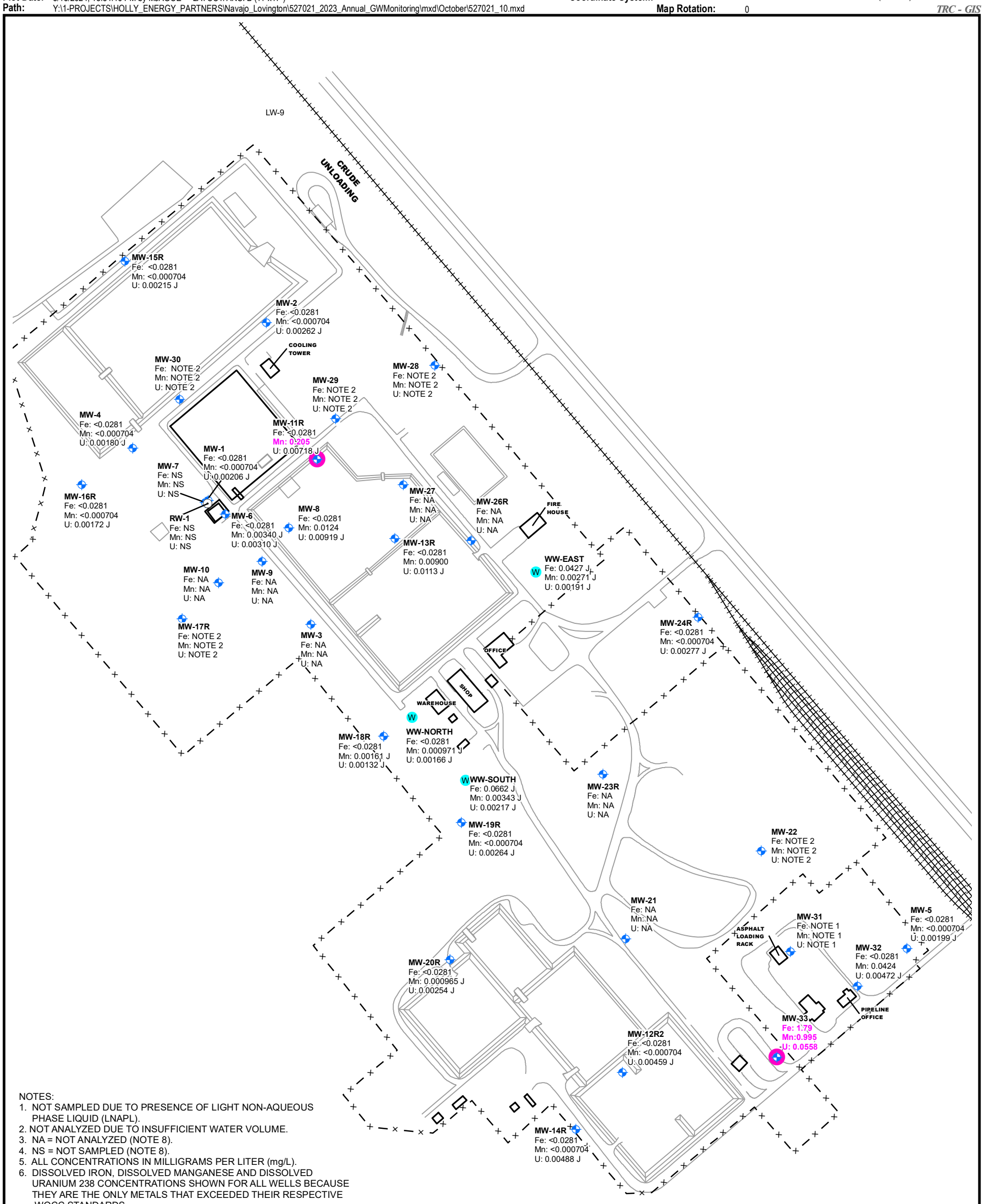
DRAWN BY:	M. JAGOE
CHECKED BY:	A. ELJURI
APPROVED BY:	J. SPEER
DATE:	AUGUST 2023
PROJ. NO.:	527021
FILE:	527021_9.mxd

FIGURE 9

Plot Date: 3/15/2024, 15:54:16 PM by MJAGOE -- LAYOUT: ANSI B (11"x17")
Path: Y:\1-PROJECTS\HOLLY_ENERGY_PARTNERS\Navajo_Lovington\527021_2023_Annual_GWMonitoring\mxd\October\527021_10.mxd

Coordinate System: NAD 1983 2011 StatePlane New Mexico East FIPS 3001 Ft US (Foot US)
Map Rotation: 0

TRC - GIS



NOTES:
1. NOT SAMPLED DUE TO PRESENCE OF LIGHT NON-AQUEOUS PHASE LIQUID (LNAPL).
2. NOT ANALYZED DUE TO INSUFFICIENT WATER VOLUME.
3. NA = NOT ANALYZED (NOTE 8).
4. NS = NOT SAMPLED (NOTE 8).
5. ALL CONCENTRATIONS IN MILLIGRAMS PER LITER (mg/L).
6. DISSOLVED IRON, DISSOLVED MANGANESE AND DISSOLVED URANIUM 238 CONCENTRATIONS SHOWN FOR ALL WELLS BECAUSE THEY ARE THE ONLY METALS THAT EXCEEDED THEIR RESPECTIVE WQCC STANDARDS.
7. J = ANALYTE DETECTED BELOW REPORTING LIMIT, ESTIMATED VALUE.
8. IN ACCORDANCE WITH DECEMBER 2017 REVISED FACILITY-WIDE GROUNDWATER MONITORING WORK PLAN.

LABEL KEY:
Fe: 1.79 - DISSOLVED IRON CONCENTRATION (WQCC STANDARD = 1.0 mg/L)
Mn: 0.995 - DISSOLVED MANGANESE CONCENTRATION (WQCC STANDARD = 0.2 mg/L)
U: 0.0558 - DISSOLVED URANIUM 238 CONCENTRATION (WQCC STANDARD = 0.03 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

0 175 350 FEET
1 " = 350 '
1:4,200

N

TRC
505 East Huntland Drive
Suite #250
Austin, TX 78752
Phone: 512.329.6080

PROJECT:
HF SINCLAIR NAVAJO REFINING LLC
GW-014, LOVINGTON REFINERY, LOVINGTON, NM

TITLE:
METALS CONCENTRATION MAP - OCTOBER 2023

DRAWN BY:	R. COLLINS
CHECKED BY:	A. ELJURI
APPROVED BY:	J. SPEER
DATE:	MARCH 2024
PROJ. NO.:	584880
FILE:	527021_10.mxd

FIGURE 10

TABLES

Released to Imaging: 4/26/2024 10:49:21 AM

Table 1. Water Elevation Measurements

HF Sinclair Navajo Refining LLC, GW-014, 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, btoc)	Product Thickness (feet)	Corrected Depth to Water[(1)] (feet)	Corrected Water Level Elev.[(1)] (feet)	Water Elevation Change
MW-1 [(2,6)]	3838.40	3838.19	3739.19 to 3709.19	04/30/09	- -	106.35	136.10	0.00	106.35	3732.05	NA
				06/10/09	- -	106.49	NM	0.00	106.49	3731.91	-0.14
				06/19/09	- -	106.57	129.12	0.00	106.57	3731.83	-0.08
				07/02/09	- -	106.74	129.13	0.00	106.74	3731.66	-0.17
				07/24/09	- -	106.83	129.11	0.00	106.83	3731.57	-0.09
				09/24/09	- -	107.31	129.12	0.00	107.31	3731.09	-0.48
				10/27/09	- -	107.44	129.10	0.00	107.44	3730.96	-0.13
				01/13/10	- -	107.57	129.11	0.00	107.57	3730.83	-0.13
				04/01/10	- -	107.51	NM	0.00	107.51	3730.89	0.06
				08/11/10	- -	108.09	129.16	0.00	108.09	3730.31	-0.58
				02/23/11	- -	108.12	129.14	0.00	108.12	3730.28	-0.03
				07/12/11	- -	109.00	129.11	0.00	109.00	3729.40	-0.88
				02/02/12	- -	109.68	129.12	0.00	109.68	3728.72	-0.68
				07/23/12	- -	110.88	128.87	0.00	110.88	3727.52	-1.20
				02/18/13	- -	110.51	129.22	0.00	110.51	3727.89	0.37
				08/19/13	- -	111.55	130.60	0.00	111.55	3726.85	-1.04
				02/24/14	- -	112.49	129.35	0.00	112.49	3725.91	-0.94
				08/18/14	- -	113.37	129.09	0.00	113.37	3725.03	-0.88
				02/23/15	- -	113.82	129.20	0.00	113.82	3724.58	-0.45
				08/24/15	- -	114.56	129.19	0.00	114.56	3723.84	-0.74
				03/07/16	- -	114.81	129.19	0.00	114.81	3723.59	-0.25
				08/15/16	- -	115.42	129.19	0.00	115.42	3722.98	-0.61
				02/06/17	- -	115.81	129.19	0.00	115.81	3722.59	-0.39
				06/22/17	- -	115.88	129.22	0.00	115.88	3722.52	-0.07
				08/17/17	- -	116.34	129.22	0.00	116.34	3722.06	-0.46
				04/05/18	- -	116.63	129.22	0.00	116.63	3721.77	-0.29
				10/01/18	- -	116.67	129.22	0.00	116.67	3721.73	-0.04
				04/04/19	- -	118.06	129.22	0.00	118.06	3720.34	-1.39
				10/24/19	- -	119.35	129.22	0.00	119.35	3719.05	-1.29
				06/18/20	- -	120.01	129.22	0.00	120.01	3718.39	-0.66
				10/08/20	- -	120.91	129.22	0.00	120.91	3717.49	-0.90
				04/15/21	- -	120.94	129.22	0.00	120.94	3717.46	-0.03
				09/16/21	- -	121.49	129.22	0.00	121.49	3716.91	-0.55
				04/14/22	- -	121.24	129.22	0.00	121.24	3717.16	0.25
				10/13/22	- -	122.49	129.22	0.00	122.49	3715.91	-1.25
				03/23/23	- -	122.70	129.22	0.00	122.70	3715.70	-0.21
				10/05/23	- -	123.87	129.22	0.00	123.87	3714.53	-1.17

Table 1. Water Elevation Measurements

HF Sinclair Navajo Refining LLC, GW-014, 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, btoc)	Product Thickness (feet)	Corrected Depth to Water[1] (feet)	Corrected Water Level Elev.[1] (feet)	Water Elevation Change
MW-2 [2,6]	3837.35	3837.27	3740.94 to 3710.94	06/22/09	- -	104.32	126.41	0.00	104.32	3733.03	NA
				01/13/10	- -	105.44	126.68	0.00	105.44	3731.91	-1.12
				08/11/10	- -	105.97	126.42	0.00	105.97	3731.38	-0.53
				02/23/11	- -	105.92	126.46	0.00	105.92	3731.43	0.05
				07/12/11	- -	107.22	126.47	0.00	107.22	3730.13	-1.30
				01/30/12	- -	107.55	126.47	0.00	107.55	3729.80	-0.33
				07/23/12	- -	108.72	126.48	0.00	108.72	3728.63	-1.17
				02/18/13	- -	108.15	126.69	0.00	108.15	3729.20	0.57
				08/19/13	- -	109.43	126.75	0.00	109.43	3727.92	-1.28
				02/24/14	- -	110.59	127.70	0.00	110.59	3726.76	-1.16
				08/18/14	- -	111.25	126.58	0.00	111.25	3726.10	-0.66
				02/23/15	- -	111.45	126.77	0.00	111.45	3725.90	-0.20
				08/24/15	- -	112.13	126.75	0.00	112.13	3725.22	-0.68
				03/07/16	- -	112.02	126.71	0.00	112.02	3725.33	0.11
				08/15/16	- -	113.01	126.70	0.00	113.01	3724.34	-0.99
				02/06/17	- -	112.96	126.70	0.00	112.96	3724.39	0.05
				06/22/17	- -	113.44	126.69	0.00	113.44	3723.91	-0.48
				08/16/17	- -	113.73	126.69	0.00	113.73	3723.62	-0.29
				04/05/18	- -	114.15	126.69	0.00	114.15	3723.20	-0.42
				10/01/18	- -	114.93	126.69	0.00	114.93	3722.42	-0.78
				04/04/19	- -	115.40	126.69	0.00	115.40	3721.95	-0.47
				10/24/19	- -	116.99	126.69	0.00	116.99	3720.36	-1.59
				06/18/20	- -	117.90	126.69	0.00	117.90	3719.45	-0.91
				10/08/20	- -	118.80	126.69	0.00	118.80	3718.55	-0.90
				04/15/21	- -	118.37	126.69	0.00	118.37	3718.98	0.43
				09/16/21	- -	118.58	126.69	0.00	118.58	3718.77	-0.21
				04/14/22	- -	118.20	126.69	0.00	118.20	3719.15	0.38
				10/13/22	- -	120.18	126.69	0.00	120.18	3717.17	-1.98
				03/23/23	- -	119.88	126.69	0.00	119.88	3717.47	0.30
				10/05/23	- -	121.14	126.69	0.00	121.14	3716.21	-1.26
MW-3 [2,6]	3831.65	3831.73	3731.20 to 3701.20	06/16/09	- -	102.65	130.45	0.00	102.65	3729.00	NA
				01/13/10	- -	103.29	130.69	0.00	103.29	3728.36	-0.64
				08/11/10	- -	104.82	130.42	0.00	104.82	3726.83	-1.53
				09/28/10	- -	104.70	NM	0.00	104.70	3726.95	0.12
				02/23/11	- -	104.11	130.47	0.00	104.11	3727.54	0.59
				07/12/11	- -	104.89	130.50	0.00	104.89	3726.76	-0.78
				01/30/12	- -	105.22	130.45	0.00	105.22	3726.43	-0.33
				07/23/12	- -	107.59	130.46	0.00	107.59	3724.06	-2.37
				02/18/13	- -	106.21	130.63	0.00	106.21	3725.44	1.38
				08/19/13	- -	108.11	130.88	0.00	108.11	3723.54	-1.90
				02/24/14	- -	108.45	130.75	0.00	108.45	3723.20	-0.34
				08/18/14	- -	110.33	130.71	0.00	110.33	3721.32	-1.88
				02/23/15	- -	110.35	130.60	0.00	110.35	3721.30	-0.02
				08/24/15	- -	111.14	130.57	0.00	111.14	3720.51	-0.79
				03/07/16	- -	112.20	130.51	0.00	112.20	3719.45	-1.06
				08/15/16	- -	112.68	130.68	0.00	112.68	3718.97	-0.48
				02/06/17	- -	112.74	130.61	0.00	112.74	3718.91	-0.06
				06/22/17	- -	112.76	130.59	0.00	112.76	3718.89	-0.02
				08/16/17	- -	112.94	130.59	0.00	112.94	3718.71	-0.18
				04/05/18	- -	113.40	130.59	0.00	113.40	3718.25	-0.46
				10/01/18	- -	114.50	130.59	0.00	114.50	3717.15	-1.10
				04/04/19	- -	114.37	130.59	0.00	114.37	3717.28	0.13
				10/24/19	- -	115.28	130.59	0.00	115.28	3716.37	-0.91
				06/18/20	- -	116.31	130.59	0.00	116.31	3715.34	-1.03
				10/08/20	- -	117.27	130.59	0.00	117.27	3714.38	-0.96
				04/15/21	- -	117.53	130.59	0.00	117.53	3714.12	-0.26
				09/16/21	- -	118.05	130.59	0.00	118.05	3713.60	-0.52
				04/14/22	- -	117.59	130.59	0.00	117.59	3714.06	0.46
				10/13/22	- -	118.53	130.59	0.00	118.53	3713.12	-0.94
				03/23/23	- -	119.26	130.59	0.00	119.26	3712.39	-0.73
				10/05/23	- -	120.22	130.59	0.00	120.22	3711.43	-0.96

Table 1. Water Elevation Measurements

HF Sinclair Navajo Refining LLC, GW-014, 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, btoc)	Product Thickness (feet)	Corrected Depth to Water[1] (feet)	Corrected Water Level Elev.[1] (feet)	Water Elevation Change
MW-4 [2,6]	3839.89	3839.76	3741.76 to 3711.76	06/16/09	- -	106.79	128.02	0.00	106.79	3733.10	NA
				01/13/10	- -	107.72	127.94	0.00	107.72	3732.17	-0.93
				08/11/10	- -	108.19	128.03	0.00	108.19	3731.70	-0.47
				09/28/10	- -	108.47	NM	0.00	108.47	3731.42	-0.28
				02/23/11	- -	108.31	127.82	0.00	108.31	3731.58	0.16
				07/12/11	- -	109.27	128.02	0.00	109.27	3730.62	-0.96
				01/30/12	- -	109.91	128.02	0.00	109.91	3729.98	-0.64
				07/23/12	- -	111.00	127.82	0.00	111.00	3728.89	-1.09
				02/18/13	- -	110.70	127.95	0.00	110.70	3729.19	0.30
				08/19/13	- -	111.60	128.01	0.00	111.60	3728.29	-0.90
				02/24/14	- -	112.78	127.80	0.00	112.78	3727.11	-1.18
				08/18/14	- -	113.42	127.63	0.00	113.42	3726.47	-0.64
				02/23/15	- -	113.89	127.68	0.00	113.89	3726.00	-0.47
				08/24/15	- -	114.47	127.99	0.00	114.47	3725.42	-0.58
				03/07/16	- -	114.66	127.78	0.00	114.66	3725.23	-0.19
				08/15/16	- -	115.38	128.10	0.00	115.38	3724.51	-0.72
				02/06/17	- -	115.71	128.04	0.00	115.71	3724.18	-0.33
				06/22/17	- -	115.88	127.73	0.00	115.88	3724.01	-0.17
				08/17/17	- -	116.12	127.73	0.00	116.12	3723.77	-0.24
				04/05/18	- -	116.73	127.73	0.00	116.73	3723.16	-0.61
				10/01/18	- -	117.74	127.73	0.00	117.74	3722.15	-1.01
				04/04/19	- -	118.25	127.73	0.00	118.25	3721.64	-0.51
				10/24/19	- -	119.54	127.73	0.00	119.54	3720.35	-1.29
				06/18/20	- -	120.32	127.73	0.00	120.32	3719.57	-0.78
				10/08/20	- -	121.18	127.73	0.00	121.18	3718.71	-0.86
				04/15/21	- -	121.06	127.73	0.00	121.06	3718.83	0.12
				09/16/21	- -	121.53	127.73	0.00	121.53	3718.36	-0.47
				04/14/22	- -	121.41	127.73	0.00	121.41	3718.48	0.12
				10/13/22	- -	122.82	127.73	0.00	122.82	3717.07	-1.41
				03/23/23	- -	122.97	127.73	0.00	122.97	3716.92	-0.15
				10/05/23	- -	124.25	127.73	0.00	124.25	3715.64	-1.28
MW-5 [2,6]	3819.15	3816.13	3730.85 to 3700.85	06/16/09	- -	90.84	NM	0.00	90.84	3728.31	NA
				01/13/10	- -	92.02	118.30	0.00	92.02	3727.13	-1.18
				08/11/10	- -	92.67	117.93	0.00	92.67	3726.48	-0.65
				02/23/11	- -	92.68	118.00	0.00	92.68	3726.47	-0.01
				07/12/11	- -	93.38	117.97	0.00	93.38	3725.77	-0.70
				01/31/12	- -	94.75	117.75	0.00	94.75	3724.40	-1.37
				07/23/12	- -	95.22	117.92	0.00	95.22	3723.93	-0.47
				02/18/13	- -	95.95	118.85	0.00	95.95	3723.20	-0.73
				08/19/13	- -	96.65	117.90	0.00	96.65	3722.50	-0.70
				02/24/14	- -	97.06	117.45	0.00	97.06	3722.09	-0.41
				08/18/14	- -	97.57	117.22	0.00	97.57	3721.58	-0.51
				02/23/15	- -	98.01	117.19	0.00	98.01	3721.14	-0.44
				08/24/15	- -	98.46	117.22	0.00	98.46	3720.69	-0.45
				03/07/16	- -	98.62	117.12	0.00	98.62	3720.53	-0.16
				08/15/16	- -	99.40	117.70	0.00	99.40	3719.75	-0.78
				02/06/17	- -	100.00	117.29	0.00	100.00	3719.15	-0.60
				06/22/17	- -	100.11	117.82	0.00	100.11	3719.04	-0.11
				08/16/17	- -	100.51	117.82	0.00	100.51	3718.64	-0.40
				04/05/18	- -	100.85	117.82	0.00	100.85	3718.30	-0.34
				10/01/18	- -	102.01	117.82	0.00	102.01	3717.14	-1.16
				04/04/19	- -	102.23	117.82	0.00	102.23	3716.92	-0.22
				10/24/19	- -	103.42	117.82	0.00	103.42	3715.73	-1.19
				06/18/20	- -	103.91	117.82	0.00	103.91	3715.24	-0.49
				10/08/20	- -	104.49	117.82	0.00	104.49	3714.66	-0.58
				04/15/21	- -	104.99	117.82	0.00	104.99	3714.16	-0.50
				09/16/21	- -	105.65	117.82	0.00	105.65	3713.50	-0.66
				04/14/22	- -	105.96	117.82	0.00	105.96	3713.19	-0.31
				10/13/22	- -	106.82	117.82	0.00	106.82	3712.33	-0.86
				03/23/23	- -	107.59	117.82	0.00	107.59	3711.56	-0.77
				10/05/23	- -	108.25	117.82	0.00	108.25	3710.90	-0.66

Table 1. Water Elevation Measurements

HF Sinclair Navajo Refining LLC, GW-014, 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, btoc)	Product Thickness (feet)	Corrected Depth to Water[1] (feet)	Corrected Water Level Elev.[1] (feet)	Water Elevation Change
MW-6 [2,6]	3838.16	3838.17	3738.17 to 3708.17	06/18/09	- -	106.64	129.48	0.00	106.64	3731.52	NA
				07/24/09	- -	106.92	129.71	0.00	106.92	3731.24	-0.28
				09/24/09	- -	107.44	129.74	0.00	107.44	3730.72	-0.52
				10/27/09	- -	107.55	129.73	0.00	107.55	3730.61	-0.11
				01/13/10	- -	107.64	129.71	0.00	107.64	3730.52	-0.09
				02/02/10	- -	107.69	NM	0.00	107.69	3730.47	-0.05
				04/01/10	- -	107.65	NM	0.00	107.65	3730.51	0.04
				08/11/10	- -	108.00	129.71	0.00	108.00	3730.16	-0.35
				02/23/11	- -	108.22	129.72	0.00	108.22	3729.94	-0.22
				07/12/11	- -	109.09	129.74	0.00	109.09	3729.07	-0.87
				02/02/12	- -	109.78	129.74	0.00	109.78	3728.38	-0.69
				07/23/12	- -	111.00	129.47	0.00	111.00	3727.16	-1.22
				02/18/13	- -	110.60	133.32	0.00	110.60	3727.56	0.40
				08/19/13	- -	111.70	130.84	0.00	111.70	3726.46	-1.10
				02/24/14	- -	112.57	130.00	0.00	112.57	3725.59	-0.87
				08/18/14	- -	113.50	129.71	0.00	113.50	3724.66	-0.93
				02/23/15	- -	114.00	129.90	0.00	114.00	3724.16	-0.50
				08/24/15	- -	114.63	129.69	0.00	114.63	3723.53	-0.63
				03/07/16	- -	115.02	129.69	0.00	115.02	3723.14	-0.39
				08/15/16	- -	115.62	129.69	0.00	115.62	3722.54	-0.60
				02/06/17	- -	115.99	129.69	0.00	115.99	3722.17	-0.37
				06/22/17	- -	116.05	129.76	0.00	116.05	3722.11	-0.06
				08/17/17	- -	116.31	129.76	0.00	116.31	3721.85	-0.26
				04/05/18	- -	116.78	129.76	0.00	116.78	3721.38	-0.47
				10/01/18	- -	117.81	129.76	0.00	117.81	3720.35	-1.03
				04/04/19	- -	118.19	129.76	0.00	118.19	3719.97	-0.38
				10/24/19	- -	119.38	129.76	0.00	119.38	3718.78	-1.19
				06/18/20	- -	120.11	129.76	0.00	120.11	3718.05	-0.73
				10/08/20	- -	121.02	129.76	0.00	121.02	3717.14	-0.91
				04/15/21	- -	121.11	129.76	0.00	121.11	3717.05	-0.09
				09/16/21	- -	121.57	129.76	0.00	121.57	3716.59	-0.46
				04/14/22	- -	121.34	129.76	0.00	121.34	3716.82	0.23
				10/13/22	- -	122.51	129.76	0.00	122.51	3715.65	-1.17
				03/23/23	- -	122.83	129.76	0.00	122.83	3715.33	-0.32
				10/05/23	- -	123.95	129.76	0.00	123.95	3714.21	-1.12

Table 1. Water Elevation Measurements

HF Sinclair Navajo Refining LLC, GW-014, 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, btoc)	Product Thickness (feet)	Corrected Depth to Water[1] (feet)	Corrected Water Level Elev.[1] (feet)	Water Elevation Change
MW-7 [2,6]	3838.42	3838.19	3738.19 to 3708.19	04/30/09	- -	106.37	135.54	0.00	106.37	3732.05	NA
				06/10/09	- -	106.48	NM	0.00	106.48	3731.94	-0.11
				06/19/09	- -	106.68	129.34	0.00	106.68	3731.74	-0.20
				07/02/09	- -	106.75	129.51	0.00	106.75	3731.67	-0.07
				07/24/09	- -	106.84	129.52	0.00	106.84	3731.58	-0.09
				09/24/09	- -	107.33	129.29	0.00	107.33	3731.09	-0.49
				10/27/09	- -	107.46	129.53	0.00	107.46	3730.96	-0.13
				01/13/10	- -	107.60	129.55	0.00	107.60	3730.82	-0.14
				02/02/10	- -	107.61	NM	0.00	107.61	3730.81	-0.01
				04/01/10	- -	107.52	NM	0.00	107.52	3730.90	0.09
				08/11/10	- -	108.10	129.57	0.00	108.10	3730.32	-0.58
				02/23/11	- -	108.13	129.52	0.00	108.13	3730.29	-0.03
				07/12/11	- -	109.01	129.50	0.00	109.01	3729.41	-0.88
				02/02/12	- -	109.71	129.26	0.00	109.71	3728.71	-0.70
				07/23/12	- -	109.88	129.30	0.00	109.88	3728.54	-0.17
				02/18/13	- -	110.52	129.55	0.00	110.52	3727.90	-0.64
				08/19/13	- -	111.57	129.17	0.00	111.57	3726.85	-1.05
				02/24/14	- -	112.50	129.90	0.00	112.50	3725.92	-0.93
				08/18/14	- -	113.40	129.58	0.00	113.40	3725.02	-0.90
				02/23/15	- -	113.86	129.62	0.00	113.86	3724.56	-0.46
				08/24/15	- -	114.47	129.64	0.00	114.47	3723.95	-0.61
				03/07/16	- -	114.84	129.64	0.00	114.84	3723.58	-0.37
				08/15/16	- -	115.43	129.64	0.00	115.43	3722.99	-0.59
				02/06/17	- -	115.80	129.64	0.00	115.80	3722.62	-0.37
				06/22/17	- -	115.89	129.64	0.00	115.89	3722.53	-0.09
				08/17/17	- -	116.32	129.64	0.00	116.32	3722.10	-0.43
				04/05/18	- -	116.71	129.64	0.00	116.71	3721.71	-0.39
				10/01/18	- -	117.67	129.64	0.00	117.67	3720.75	-0.96
				04/04/19	- -	118.14	129.64	0.00	118.14	3720.28	-0.47
				10/24/19	- -	119.37	129.64	0.00	119.37	3719.05	-1.23
				06/18/20	- -	120.04	129.64	0.00	120.04	3718.38	-0.67
				10/08/20	- -	120.92	129.64	0.00	120.92	3717.50	-0.88
				04/15/21	- -	120.94	129.64	0.00	120.94	3717.48	-0.02
				09/16/21	- -	121.48	129.64	0.00	121.48	3716.94	-0.54
				04/14/22	- -	121.26	129.64	0.00	121.26	3717.16	0.22
				10/13/22	- -	122.51	129.64	0.00	122.51	3715.91	-1.25
				03/23/23	- -	122.74	129.64	0.00	122.74	3715.68	-0.23
				10/05/23	- -	123.91	129.64	0.00	123.91	3714.51	-1.17
MW-8 [3,6]	3839.98	3836.44	3737.68 to 3707.68	06/18/09	- -	109.37	132.30	0.00	109.37	3730.61	NA
				01/13/10	- -	110.47	132.56	0.00	110.47	3729.51	-1.10
				08/11/10	- -	111.05	132.34	0.00	111.05	3728.93	-0.58
				02/23/11	- -	111.07	132.34	0.00	111.07	3728.91	-0.02
				07/12/11	- -	111.98	132.36	0.00	111.98	3728.00	-0.91
				02/01/12	- -	112.91	132.32	0.00	112.91	3727.07	-0.93
				07/23/12	- -	113.94	132.33	0.00	113.94	3726.04	-1.03
				02/18/13	- -	113.27	132.32	0.00	113.27	3726.71	0.67
				08/19/13	- -	114.69	132.39	0.00	114.69	3725.29	-1.42
				02/24/14	- -	115.44	132.60	0.00	115.44	3724.54	-0.75
				08/18/14	- -	116.56	132.16	0.00	116.56	3723.42	-1.12
				02/23/15	- -	116.91	132.10	0.00	116.91	3723.07	-0.35
				08/24/15	- -	117.61	132.20	0.00	117.61	3722.37	-0.70
				03/07/16	- -	118.05	132.04	0.00	118.05	3721.93	-0.44
				08/15/16	- -	118.73	132.15	0.00	118.73	3721.25	-0.68
				02/06/17	- -	119.02	132.15	0.00	119.02	3720.96	-0.29
				06/22/17	- -	119.05	132.15	0.00	119.05	3720.93	-0.03
				08/17/17	- -	119.40	132.15	0.00	119.40	3720.58	-0.35
				04/05/18	- -	119.81	132.15	0.00	119.81	3720.17	-0.41
				10/01/18	- -	120.82	132.15	0.00	120.82	3719.16	-1.01
				04/04/19	- -	121.05	132.15	0.00	121.05	3718.93	-0.23
				10/24/19	- -	122.17	132.15	0.00	122.17	3717.81	-1.12
				06/18/20	- -	122.93	132.15	0.00	122.93	3717.05	-0.76
				10/08/20	- -	123.87	132.15	0.00	123.87	3716.11	-0.94
				04/15/21	- -	123.90	132.15	0.00	123.90	3716.08	-0.03
				09/16/21	- -	124.51	132.15	0.00	124.51	3715.47	-0.61
				04/14/22	- -	124.26	132.15	0.00	124.26	3715.72	0.25
				10/13/22	- -	125.41	132.15	0.00	125.41	3714.57	-1.15
				03/23/23	INACCESSIBLE[16]						
				10/05/23	- -	126.82	132.15	0.00	126.82	3713.16	3713.16

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HF Sinclair Navajo Refining LLC, GW-014, 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, btoc)	Product Thickness (feet)	Corrected Depth to Water[1] (feet)	Corrected Water Level Elev.[1] (feet)	Water Elevation Change
MW-9 [3,6]	3835.22	3835.13	3736.13 to 3706.13	06/16/09	- -	104.58	129.18	0.00	104.58	3730.64	NA
				01/13/10	- -	105.61	129.48	0.00	105.61	3729.61	-1.03
				08/11/10	- -	106.37	129.21	0.00	106.37	3728.85	-0.76
				02/23/11	- -	106.28	129.24	0.00	106.28	3728.94	0.09
				07/12/11	- -	107.17	129.26	0.00	107.17	3728.05	-0.89
				01/31/12	- -	107.38	129.30	0.00	107.38	3727.84	-0.21
				07/23/12	- -	109.20	128.90	0.00	109.20	3726.02	-1.82
				02/18/13	- -	108.47	129.41	0.00	108.47	3726.75	0.73
				08/19/13	- -	109.91	129.38	0.00	109.91	3725.31	-1.44
				02/24/14	- -	110.63	129.35	0.00	110.63	3724.59	-0.72
				08/18/14	- -	111.81	129.01	0.00	111.81	3723.41	-1.18
				02/23/15	- -	112.20	124.08	0.00	112.20	3723.02	-0.39
				08/24/15	- -	112.89	129.06	0.00	112.89	3722.33	-0.69
				03/07/16	- -	113.47	129.07	0.00	113.47	3721.75	-0.58
				08/15/16	- -	114.02	129.15	0.00	114.02	3721.20	-0.55
				02/06/17	- -	114.37	129.24	0.00	114.37	3720.85	-0.35
				06/22/17	- -	114.38	129.18	0.00	114.38	3720.84	-0.01
				08/16/17	- -	114.67	129.18	0.00	114.67	3720.55	-0.29
				04/05/18	- -	115.12	129.18	0.00	115.12	3720.10	-0.45
				10/01/18	- -	116.18	129.18	0.00	116.18	3719.04	-1.06
				04/04/19	- -	116.40	129.18	0.00	116.40	3718.82	-0.22
				10/24/19	- -	117.44	129.18	0.00	117.44	3717.78	-1.04
				06/18/20	- -	118.21	129.18	0.00	118.21	3717.01	-0.77
				10/08/20	- -	119.09	129.18	0.00	119.09	3716.13	-0.88
				04/15/21	- -	119.21	129.18	0.00	119.21	3716.01	-0.12
				09/16/21	- -	119.87	129.18	0.00	119.87	3715.35	-0.66
				04/14/22	- -	119.54	129.18	0.00	119.54	3715.68	0.33
				10/13/22	- -	120.65	129.18	0.00	120.65	3714.57	-1.11
				03/23/23	- -	121.15	129.18	0.00	121.15	3714.07	-0.50
				10/05/23	- -	122.18	129.18	0.00	122.18	3713.04	-1.03
MW-10 [3,6]	3833.66	3833.49	3734.52 to 3704.52	06/16/09	- -	102.57	129.14	0.00	102.57	3731.09	NA
				01/13/10	- -	103.51	127.42	0.00	103.51	3730.15	-0.94
				08/11/10	- -	104.31	128.47	0.00	104.31	3729.35	-0.80
				02/23/11	- -	104.26	128.54	0.00	104.26	3729.40	0.05
				07/12/11	- -	105.08	128.46	0.00	105.08	3728.58	-0.82
				01/31/12	- -	105.73	128.40	0.00	105.73	3727.93	-0.65
				07/23/12	- -	107.05	128.50	0.00	107.05	3726.61	-1.32
				02/18/13	- -	106.63	128.59	0.00	106.63	3727.03	0.42
				08/19/13	- -	107.78	128.56	0.00	107.78	3725.88	-1.15
				02/24/14	- -	108.53	128.40	0.00	108.53	3725.13	-0.75
				08/18/14	- -	109.62	128.15	0.00	109.62	3724.04	-1.09
				02/23/15	- -	110.08	128.35	0.00	110.08	3723.58	-0.46
				08/24/15	- -	110.73	128.42	0.00	110.73	3722.93	-0.65
				03/07/16	- -	111.32	128.20	0.00	111.32	3722.34	-0.59
				08/15/16	- -	111.87	128.20	0.00	111.87	3721.79	-0.55
				02/06/17	- -	112.22	128.26	0.00	112.22	3721.44	-0.35
				06/22/17	- -	112.27	128.45	0.00	112.27	3721.39	-0.05
				08/16/17	- -	112.53	128.45	0.00	112.53	3721.13	-0.26
				04/05/18	- -	113.03	128.45	0.00	113.03	3720.63	-0.50
				10/01/18	- -	114.06	128.45	0.00	114.06	3719.60	-1.03
				04/04/19	- -	114.39	128.45	0.00	114.39	3719.27	-0.33
				10/24/19	- -	115.35	128.45	0.00	115.35	3718.31	-0.96
				06/18/20	- -	116.09	128.45	0.00	116.09	3717.57	-0.74
				10/08/20	- -	116.94	128.45	0.00	116.94	3716.72	-0.85
				04/15/21	- -	117.11	128.45	0.00	117.11	3716.55	-0.17
				09/16/21	- -	117.76	128.45	0.00	117.76	3715.90	-0.65
				04/14/22	- -	117.51	128.45	0.00	117.51	3716.15	0.25
				10/13/22	- -	118.59	128.45	0.00	118.59	3715.07	-1.08
				03/23/23	- -	119.09	128.45	0.00	119.09	3714.57	-0.50
				10/05/23	- -	120.14	128.45	0.00	120.14	3713.52	-1.05

Table 1. Water Elevation Measurements

HF Sinclair Navajo Refining LLC, GW-014, 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, btoc)	Product Thickness (feet)	Corrected Depth to Water[1] (feet)	Corrected Water Level Elev.[1] (feet)	Water Elevation Change
MW-11 [4,6,10]	3839.56	3836.14	3741.13 to 3721.13	06/20/02	- -	99.93	NM	0.00	99.93	3739.63	NA
				09/17/02	- -	100.63	NM	0.00	100.63	3738.93	-0.70
				12/19/02	- -	100.50	NM	0.00	100.50	3739.06	0.13
				03/28/03	- -	99.74	NM	0.00	99.74	3739.82	0.76
				06/20/03	- -	100.76	NM	0.00	100.76	3738.80	-1.02
				09/15/03	- -	101.51	NM	0.00	101.51	3738.05	-0.75
				04/30/04	- -	102.31	116.21	0.00	102.31	3737.25	-0.80
				02/21/05	- -	103.80	NM	0.00	103.80	3735.76	-1.49
				06/28/05	- -	104.33	NM	0.00	104.33	3735.23	-0.53
				09/30/05	- -	104.60	NM	0.00	104.60	3734.96	-0.27
				12/29/05	- -	104.81	NM	0.00	104.81	3734.75	-0.21
				04/10/06	- -	105.12	NM	0.00	105.12	3734.44	-0.31
				07/06/06	- -	105.61	NM	0.00	105.61	3733.95	-0.49
				01/26/07	- -	106.63	NM	0.00	106.63	3732.93	-1.02
				03/27/07	- -	106.80	NM	0.00	106.80	3732.76	-0.17
				07/13/07	- -	106.94	NM	0.00	106.94	3732.62	-0.14
				09/12/07	- -	107.22	NM	0.00	107.22	3732.34	-0.28
				12/31/07	- -	106.74	NM	0.00	106.74	3732.82	0.48
				03/26/08	- -	106.81	117.51	0.00	106.81	3732.75	-0.07
				06/13/08	- -	107.40	NM	0.00	107.40	3732.16	-0.59
				09/24/08	- -	108.76	NM	0.00	108.76	3730.80	-1.36
				12/29/08	- -	108.57	NM	0.00	108.57	3730.99	0.19
				03/17/09	- -	107.91	NM	0.00	107.91	3731.65	0.66
				06/18/09	- -	108.65	117.49	0.00	108.65	3730.91	-0.74
				01/13/10	- -	109.81	117.77	0.00	109.81	3729.75	-1.16
				08/11/10	- -	110.16	117.50	0.00	110.16	3729.40	-0.35
				02/23/11	- -	110.32	117.70	0.00	110.32	3729.24	-0.16
				07/12/11	- -	110.31	117.41	0.00	110.31	3729.25	0.01
				02/01/12	- -	112.02	117.37	0.00	112.02	3727.54	-1.71
				07/23/12	- -	113.10	117.38	0.00	113.10	3726.46	-1.08
				02/18/13	- -	112.53	117.75	0.00	112.53	3727.03	0.57
				08/19/13	- -	113.89	117.64	0.00	113.89	3725.67	-1.36
				02/24/14	- -	114.75	117.90	0.00	114.75	3724.81	-0.86
				08/18/14	- -	115.71	117.60	0.00	115.71	3723.85	-0.96
				02/23/15	- -	116.10	117.81	0.00	116.10	3723.46	-0.39
				08/24/15	- -	116.75	117.86	0.00	116.75	3722.81	-0.65
				03/07/16	- -	117.07	118.00	0.00	117.07	3722.49	-0.32
				08/15/16	WELL DRY						
				12/07/16	WELL PLUGGED AND ABANDONED						
MW-11R [10]	3838.51	3835.78	3724.72 to 3704.72	02/06/17	- -	116.82	133.79	0.00	116.82	3721.69	NA
				06/22/17	- -	116.93	133.84	0.00	116.93	3721.58	-0.11
				08/17/17	- -	117.33	133.84	0.00	117.33	3721.18	-0.40
				04/05/18	- -	117.73	133.84	0.00	117.73	3720.78	-0.40
				10/01/18	- -	118.67	133.84	0.00	118.67	3719.84	-0.94
				04/04/19	- -	118.94	133.84	0.00	118.94	3719.57	-0.27
				10/24/19	- -	120.29	133.84	0.00	120.29	3718.22	-1.35
				06/18/20	- -	122.19	133.84	0.00	122.19	3716.32	-1.90
				10/08/20	- -	121.98	133.84	0.00	121.98	3716.53	0.21
				04/15/21	- -	121.91	133.84	0.00	121.91	3716.60	0.07
				09/16/21	- -	122.34	133.84	0.00	122.34	3716.17	-0.43
				04/14/22	- -	122.10	133.84	0.00	122.10	3716.41	0.24
				10/13/22	- -	123.42	133.84	0.00	123.42	3715.09	-1.32
				03/23/23	INACCESSIBLE[16]						
				10/05/23	- -	124.74	133.84	0.00	124.74	3713.77	3713.77

Table 1. Water Elevation Measurements

HF Sinclair Navajo Refining LLC, GW-014, 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, btoc)	Product Thickness (feet)	Corrected Depth to Water[1] (feet)	Corrected Water Level Elev.[1] (feet)	Water Elevation Change
MW-12 [4,6,9]	3822.73	3820.29	3742.29 to 3722.29	06/20/02	- -	84.20	NM	0.00	84.20	3738.53	NA
				12/21/02	- -	85.21	NM	0.00	85.21	3737.52	-1.01
				03/28/03	- -	85.35	NM	0.00	85.35	3737.38	-0.14
				06/20/03	- -	85.51	NM	0.00	85.51	3737.22	-0.16
				09/15/03	- -	86.13	NM	0.00	86.13	3736.60	-0.62
				11/02/03	- -	86.57	NM	0.00	86.57	3736.16	-0.44
				04/30/04	- -	87.40	100.55	0.00	87.40	3735.33	-0.83
				02/21/05	- -	88.42	NM	0.00	88.42	3734.31	-1.02
				06/28/05	- -	88.76	NM	0.00	88.76	3733.97	-0.34
				09/30/05	- -	89.12	NM	0.00	89.12	3733.61	-0.36
				12/29/05	- -	89.31	NM	0.00	89.31	3733.42	-0.19
				04/10/06	- -	89.55	NM	0.00	89.55	3733.18	-0.24
				07/06/06	- -	90.03	NM	0.00	90.03	3732.70	-0.48
				01/26/07	- -	90.06	NM	0.00	90.06	3732.67	-0.03
				03/27/07	- -	90.10	NM	0.00	90.10	3732.63	-0.04
				07/13/07	- -	91.66	NM	0.00	91.66	3731.07	-1.56
				09/12/07	- -	92.01	NM	0.00	92.01	3730.72	-0.35
				12/31/07	- -	92.17	NM	0.00	92.17	3730.56	-0.16
				03/26/08	- -	92.39	100.57	0.00	92.39	3730.34	-0.22
				06/13/08	- -	92.59	NM	0.00	92.59	3730.14	-0.20
				09/24/08	- -	93.21	NM	0.00	93.21	3729.52	-0.62
				12/29/08	- -	93.59	NM	0.00	93.59	3729.14	-0.38
				03/17/09	- -	93.75	NM	0.00	93.75	3728.98	-0.16
				06/16/09	- -	93.83	100.51	0.00	93.83	3728.90	-0.08
				01/13/10	- -	94.78	100.71	0.00	94.78	3727.95	-0.95
				08/11/10	- -	95.67	100.56	0.00	95.67	3727.06	-0.89
				02/23/11	- -	95.85	100.56	0.00	95.85	3726.88	-0.18
				07/12/11	- -	96.58	100.55	0.00	96.58	3726.15	-0.73
				02/01/12	- -	97.57	100.57	0.00	97.57	3725.16	-0.99
				07/23/12	- -	98.10	100.50	0.00	98.10	3724.63	-0.53
				02/18/13	- -	98.95	100.50	0.00	98.95	3723.78	-0.85
				06/21/13	DAMAGED WELL - PLUGGED AND ABANDONED JUNE 2013						
MW-12R [9,14]	3823.29	3820.77	3734.95 to 3714.95	08/19/13	- -	100.25	108.34	0.00	100.25	3723.04	NA
				02/24/14	- -	100.92	108.50	0.00	100.92	3722.37	-0.67
				08/18/14	- -	101.33	108.22	0.00	101.33	3721.96	-0.41
				02/23/15	- -	101.73	107.50	0.00	101.73	3721.56	-0.40
				08/24/15	- -	102.25	107.72	0.00	102.25	3721.04	-0.52
				03/07/16	- -	102.52	107.61	0.00	102.52	3720.77	-0.27
				08/15/16	- -	103.28	107.52	0.00	103.28	3720.01	-0.76
				02/06/17	- -	103.79	107.50	0.00	103.79	3719.50	-0.51
				06/22/17	- -	103.95	107.39	0.00	103.95	3719.34	-0.16
				08/16/17	- -	104.31	107.39	0.00	104.31	3718.98	-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	3716.03	-2.95
				06/18/20	WELL DRY						
				08/13/20	DRY WELL - PLUGGED AND ABANDONED AUGUST 2020						
MW-12R2 [14]	3824.00	3820.87	3716.64 to 3696.64	10/08/20	- -	108.93	126.45	0.00	108.93	3715.07	NA
				04/15/21	- -	109.46	126.45	0.00	109.46	3714.54	-0.53
				09/16/21	- -	110.13	126.45	0.00	110.13	3713.87	-0.67
				04/14/22	- -	110.37	126.45	0.00	110.37	3713.63	-0.24
				10/13/22	- -	111.06	126.45	0.00	111.06	3712.94	-0.69
				03/23/23	- -	111.85	126.45	0.00	111.85	3712.15	-0.79
				10/05/23	- -	112.71	126.45	0.00	112.71	3711.29	-0.86

Table 1. Water Elevation Measurements

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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, btoc)	Product Thickness (feet)	Corrected Depth to Water[1] (feet)	Corrected Water Level Elev.[1] (feet)	Water Elevation Change
MW-13 [5,6,12]	3837.06	3834.75	3738.75 to 3718.75	04/30/04	- -	101.41	119.82	0.00	101.41	3735.65	NA
				02/21/05	- -	103.09	NM	0.00	103.09	3733.97	-1.68
				06/28/05	- -	103.48	NM	0.00	103.48	3733.58	-0.39
				09/30/05	- -	103.80	NM	0.00	103.80	3733.26	-0.32
				12/29/05	- -	104.41	NM	0.00	104.41	3732.65	-0.61
				04/10/06	- -	104.59	NM	0.00	104.59	3732.47	-0.18
				07/06/06	- -	104.94	NM	0.00	104.94	3732.12	-0.35
				01/26/07	- -	106.41	NM	0.00	106.41	3730.65	-1.47
				03/27/07	- -	106.47	NM	0.00	106.47	3730.59	-0.06
				07/13/07	- -	106.93	NM	0.00	106.93	3730.13	-0.46
				09/12/07	- -	107.19	NM	0.00	107.19	3729.87	-0.26
				12/31/07	- -	106.71	NM	0.00	106.71	3730.35	0.48
				03/26/08	- -	107.02	119.75	0.00	107.02	3730.04	-0.31
				06/13/08	- -	107.19	NM	0.00	107.19	3729.87	-0.17
				09/24/08	- -	108.56	NM	0.00	108.56	3728.50	-1.37
				12/29/08	- -	108.71	NM	0.00	108.71	3728.35	-0.15
				03/17/09	- -	108.36	NM	0.00	108.36	3728.70	0.35
				06/16/09	- -	108.58	108.58	0.00	108.58	3728.48	-0.22
				01/13/10	- -	109.68	119.95	0.00	109.68	3727.38	-1.10
				08/11/10	- -	109.72	119.68	0.00	109.72	3727.34	-0.04
				02/23/11	- -	110.14	119.69	0.00	110.14	3726.92	-0.42
				07/12/11	- -	111.17	119.71	0.00	111.17	3725.89	-1.03
				02/01/12	- -	111.81	119.66	0.00	111.81	3725.25	-0.64
				07/23/12	- -	113.11	119.66	0.00	113.11	3723.95	-1.30
				02/18/13	- -	111.84	119.87	0.00	111.84	3725.22	1.27
				08/19/13	- -	113.81	119.95	0.00	113.81	3723.25	-1.97
				02/24/14	- -	114.47	121.50	0.00	114.47	3722.59	-0.66
				08/18/14	- -	115.89	119.89	0.00	115.89	3721.17	-1.42
				02/23/15	- -	116.05	119.88	0.00	116.05	3721.01	-0.16
				08/24/15	- -	116.79	119.83	0.00	116.79	3720.27	-0.74
				03/07/16	- -	117.30	119.76	0.00	117.30	3719.76	-0.51
				08/15/16	- -	117.98	119.70	0.00	117.98	3719.08	-0.68
				02/06/17	- -	118.28	119.79	0.00	118.28	3718.78	-0.30
				06/22/17	- -	118.23	119.81	0.00	118.23	3718.83	0.05
				08/17/17	- -	118.72	119.81	0.00	118.72	3718.34	-0.49
				04/05/18	- -	119.02	119.81	0.00	119.02	3718.04	-0.30
				09/26/18	WELL PLUGGED AND ABANDONED SEPTEMBER 2018						
MW-13R [12]	3838.12	3835.02	3718.64 to 3698.64	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	3715.87	-1.28
				06/18/20	- -	123.02	139.48	0.00	123.02	3715.10	-0.77
				10/08/20	- -	124.05	139.48	0.00	124.05	3714.07	-1.03
				04/15/21	- -	124.05	139.48	0.00	124.05	3714.07	0.00
				09/16/21	- -	124.58	139.48	0.00	124.58	3713.54	-0.53
				04/14/22	- -	124.36	139.48	0.00	124.36	3713.76	0.22
				10/13/22	- -	125.36	139.48	0.00	125.36	3712.76	-1.00
				03/23/23	INACCESSIBLE[16]						
				10/05/23	- -	126.90	139.48	0.00	126.90	3711.22	3711.22

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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, btoc)	Product Thickness (feet)	Corrected Depth to Water[1] (feet)	Corrected Water Level Elev.[1] (feet)	Water Elevation Change
MW-14 [5,6,12]	3823.03	3820.38	3737.88 to 3717.88	04/30/04	- -	87.46	NM	0.00	87.46	3735.57	NA
				02/21/05	- -	88.48	NM	0.00	88.48	3734.55	-1.02
				06/28/05	- -	88.80	NM	0.00	88.80	3734.23	-0.32
				09/30/05	- -	89.14	NM	0.00	89.14	3733.89	-0.34
				12/29/05	- -	89.34	NM	0.00	89.34	3733.69	-0.20
				04/10/06	- -	89.63	NM	0.00	89.63	3733.40	-0.29
				07/06/06	- -	90.08	NM	0.00	90.08	3732.95	-0.45
				01/26/07	- -	91.02	NM	0.00	91.02	3732.01	-0.94
				03/27/07	- -	91.18	NM	0.00	91.18	3731.85	-0.16
				07/13/07	- -	91.68	NM	0.00	91.68	3731.35	-0.50
				09/12/07	- -	92.02	NM	0.00	92.02	3731.01	-0.34
				12/31/07	- -	92.25	NM	0.00	92.25	3730.78	-0.23
				03/26/08	- -	92.43	105.08	0.00	92.43	3730.60	-0.18
				06/13/08	- -	92.64	NM	0.00	92.64	3730.39	-0.21
				12/29/08	- -	93.60	NM	0.00	93.60	3729.43	-0.96
				03/17/09	- -	93.84	NM	0.00	93.84	3729.19	-0.24
				06/16/09	- -	93.92	105.04	0.00	93.92	3729.11	-0.08
				01/13/10	- -	94.80	105.30	0.00	94.80	3728.23	-0.88
				08/11/10	- -	95.67	105.04	0.00	95.67	3727.36	-0.87
				02/23/11	- -	95.99	105.05	0.00	95.99	3727.04	-0.32
				07/12/11	- -	96.59	105.06	0.00	96.59	3726.44	-0.60
				01/31/12	- -	97.54	105.05	0.00	97.54	3725.49	-0.95
				07/23/12	- -	98.20	105.05	0.00	98.20	3724.83	-0.66
				02/18/13	- -	99.07	105.38	0.00	99.07	3723.96	-0.87
				08/19/13	- -	99.82	105.30	0.00	99.82	3723.21	-0.75
				02/24/14	- -	100.55	105.60	0.00	100.55	3722.48	-0.73
				08/18/14	- -	100.94	105.35	0.00	100.94	3722.09	-0.39
				02/23/15	- -	101.42	105.35	0.00	101.42	3721.61	-0.48
				08/24/15	- -	101.86	105.37	0.00	101.86	3721.17	-0.44
				03/07/16	- -	102.21	105.27	0.00	102.21	3720.82	-0.35
				08/15/16	- -	102.84	105.30	0.00	102.84	3720.19	-0.63
				02/06/17	- -	103.44	105.29	0.00	103.44	3719.59	-0.60
				06/22/17	- -	103.59	105.25	0.00	103.59	3719.44	-0.15
				08/16/17	- -	103.97	105.25	0.00	103.97	3719.06	-0.38
				04/05/18	- -	104.47	105.25	0.00	104.47	3718.56	-0.50
				09/27/18	WELL PLUGGED AND ABANDONED SEPTEMBER 2018						
MW-14R [12]	3823.88	3821.05	3714.60 to 3694.60	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	3716.39	-0.89
				06/18/20	- -	107.59	129.28	0.00	107.59	3716.29	-0.10
				10/08/20	- -	108.43	129.28	0.00	108.43	3715.45	-0.84
				04/15/21	- -	108.71	129.28	0.00	108.71	3715.17	-0.28
				09/16/21	- -	109.65	129.28	0.00	109.65	3714.23	-0.94
				04/14/22	- -	109.79	129.28	0.00	109.79	3714.09	-0.14
				10/13/22	- -	110.66	129.28	0.00	110.66	3713.22	-0.87
				03/23/23	- -	111.59	129.28	0.00	111.59	3712.29	-0.93
				10/05/23	- -	112.38	129.28	0.00	112.38	3711.50	-0.79

Table 1. Water Elevation Measurements

HF Sinclair Navajo Refining LLC, GW-014, 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, btoc)	Product Thickness (feet)	Corrected Depth to Water[1] (feet)	Corrected Water Level Elev.[1] (feet)	Water Elevation Change
MW-15 [7,8,15]	3840.19	3840.54	3738.54 to 3718.54	08/11/10	- -	106.94	121.68	0.00	106.94	3733.25	NA
				02/23/11	- -	107.01	121.67	0.00	107.01	3733.18	-0.07
				07/12/11	- -	108.32	121.62	0.00	108.32	3731.87	-1.31
				01/30/12	- -	108.54	121.62	0.00	108.54	3731.65	-0.22
				07/23/12	- -	109.77	121.58	0.00	109.77	3730.42	-1.23
				02/18/13	- -	109.22	121.82	0.00	109.22	3730.97	0.55
				08/19/13	- -	110.34	121.83	0.00	110.34	3729.85	-1.12
				02/24/14	- -	111.72	122.05	0.00	111.72	3728.47	-1.38
				08/18/14	- -	112.16	121.70	0.00	112.16	3728.03	-0.44
				02/23/15	- -	112.42	121.80	0.00	112.42	3727.77	-0.26
				08/24/15	- -	113.09	121.78	0.00	113.09	3727.10	-0.67
				03/07/16	- -	112.85	121.67	0.00	112.85	3727.34	0.24
				08/15/16	- -	113.92	121.70	0.00	113.92	3726.27	-1.07
				02/06/17	- -	113.84	121.68	0.00	113.84	3726.35	0.08
				06/22/17	- -	114.40	121.70	0.00	114.40	3725.79	-0.56
				08/16/17	- -	114.57	121.70	0.00	114.57	3725.62	-0.17
				04/05/18	- -	115.19	121.70	0.00	115.19	3725.00	-0.62
				10/01/18	- -	115.93	121.70	0.00	115.93	3724.26	-0.74
				04/04/19	- -	116.51	121.70	0.00	116.51	3723.68	-0.58
				10/24/19	- -	118.22	121.70	0.00	118.22	3721.97	-1.71
				06/18/20	- -	119.24	121.70	0.00	119.24	3720.95	-1.02
				10/08/20	- -	120.11	121.70	0.00	120.11	3720.08	-0.87
				04/15/21	- -	119.46	121.70	0.00	119.46	3720.73	0.65
				06/09/21	WELL PLUGGED AND ABANDONED JUNE 2021						
MW-15R [15]	3839.99	3839.82	3722.00 to 3702.00	09/16/21	- -	119.46	138.49	0.00	119.46	3720.53	NA
				04/14/22	- -	119.08	138.49	0.00	119.08	3720.91	0.38
				10/13/22	- -	121.20	138.49	0.00	121.20	3718.79	-2.12
				03/23/23	- -	120.85	138.49	0.00	120.85	3719.14	0.35
				10/05/23	- -	122.30	138.49	0.00	122.30	3717.69	-1.45
MW-16 [7,8,14]	3838.20	3838.50	3738.59 to 3718.59	08/11/10	- -	106.18	119.61	0.00	106.18	3732.02	NA
				02/23/11	- -	106.34	119.67	0.00	106.34	3731.86	-0.16
				07/12/11	- -	107.21	119.61	0.00	107.21	3730.99	-0.87
				01/30/12	- -	107.93	119.47	0.00	107.93	3730.27	-0.72
				07/23/12	- -	108.98	119.14	0.00	108.98	3729.22	-1.05
				02/18/13	- -	108.69	119.63	0.00	108.69	3729.51	0.29
				08/19/13	- -	109.51	119.50	0.00	109.51	3728.69	-0.82
				02/24/14	- -	110.73	119.65	0.00	110.73	3727.47	-1.22
				08/18/14	- -	111.35	119.25	0.00	111.35	3726.85	-0.62
				02/23/15	- -	111.90	119.48	0.00	111.90	3726.30	-0.55
				08/24/15	- -	112.42	119.22	0.00	112.42	3725.78	-0.52
				03/07/16	- -	112.64	119.22	0.00	112.64	3725.56	-0.22
				08/15/16	- -	113.31	119.20	0.00	113.31	3724.89	-0.67
				02/06/17	- -	113.78	119.00	0.00	113.78	3724.42	-0.47
				06/22/17	- -	113.93	119.07	0.00	113.93	3724.27	-0.15
				08/17/17	- -	114.08	119.07	0.00	114.08	3724.12	-0.15
				04/05/18	- -	114.79	119.07	0.00	114.79	3723.41	-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	3720.56	-2.85
				06/18/20	- -	118.35	119.07	0.00	118.35	3719.85	-0.71
				08/13/20	DRY WELL - PLUGGED AND ABANDONED AUGUST 2020						
MW-16R [14]	3837.87	3837.85	3720.47 to 3700.47	10/08/20	- -	118.89	137.00	0.00	118.89	3718.98	NA
				04/15/21	- -	118.79	137.00	0.00	118.79	3719.08	0.10
				09/16/21	- -	119.13	137.00	0.00	119.13	3718.74	-0.34
				04/14/22	- -	119.28	137.00	0.00	119.28	3718.59	-0.15
				10/13/22	- -	120.61	137.00	0.00	120.61	3717.26	-1.33
				03/23/23	- -	120.80	137.00	0.00	120.80	3717.07	-0.19
				10/05/23	- -	122.16	137.00	0.00	122.16	3715.71	-1.36

Table 1. Water Elevation Measurements

HF Sinclair Navajo Refining LLC, GW-014, 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, btoc)	Product Thickness (feet)	Corrected Depth to Water[1] (feet)	Corrected Water Level Elev.[1] (feet)	Water Elevation Change
MW-17 [7,8,9]	3831.43	3831.79	3735.79 to 3715.79	08/11/10	- -	101.65	115.92	0.00	101.65	3729.78	NA
				02/23/11	- -	101.71	115.69	0.00	101.71	3729.72	-0.06
				07/12/11	- -	102.41	115.55	0.00	102.41	3729.02	-0.70
				06/21/13	DAMAGED WELL - PLUGGED AND ABANDONED JUNE 2013						
MW-17R [9]	3831.14	3831.48	3731.19 to 3711.19	08/19/13	- -	104.79	119.95	0.00	104.79	3726.35	NA
				02/24/14	- -	105.59	119.00	0.00	105.59	3725.55	-0.80
				08/18/14	- -	106.58	117.80	0.00	106.58	3724.56	-0.99
				02/23/15	- -	107.11	117.30	0.00	107.11	3724.03	-0.53
				08/24/15	- -	107.73	117.53	0.00	107.73	3723.41	-0.62
				03/07/16	- -	108.35	117.30	0.00	108.35	3722.79	-0.62
				08/15/16	- -	108.90	117.28	0.00	108.90	3722.24	-0.55
				02/06/17	- -	109.28	117.12	0.00	109.28	3721.86	-0.38
				06/22/17	- -	109.31	116.88	0.00	109.31	3721.83	-0.03
				08/16/17	- -	109.61	116.88	0.00	109.61	3721.53	-0.30
				04/05/18	- -	110.04	116.88	0.00	110.04	3721.10	-0.43
				10/01/18	- -	111.15	116.88	0.00	111.15	3719.99	-1.11
				04/04/19	- -	111.47	116.88	0.00	111.47	3719.67	-0.32
				10/24/19	- -	112.45	116.88	0.00	112.45	3718.69	-0.98
				06/18/20	- -	113.10	116.88	0.00	113.10	3718.04	-0.65
				10/08/20	- -	113.92	116.88	0.00	113.92	3717.22	-0.82
				04/15/21	- -	114.11	116.88	0.00	114.11	3717.03	-0.19
				09/16/21	- -	114.82	116.88	0.00	114.82	3716.32	-0.71
				04/14/22	- -	114.67	116.88	0.00	114.67	3716.47	0.15
				10/13/22	- -	115.67	116.88	0.00	115.67	3715.47	-1.00
				03/23/23	- -	116.20	116.88	0.00	116.20	3714.94	-0.53
				10/05/23	WELL DRY						
MW-18 [7,8,15]	3825.05	3825.52	3725.52 to 3705.52	08/11/10	- -	108.54	119.36	0.00	108.54	3716.51	NA
				09/30/10	- -	104.47	NM	0.00	104.47	3720.58	4.07
				02/23/11	- -	100.02	119.38	0.00	100.02	3725.03	4.45
				07/12/11	- -	100.73	119.38	0.00	100.73	3724.32	-0.71
				01/31/12	- -	100.49	119.38	0.00	100.49	3724.56	0.24
				07/23/12	- -	110.18	119.37	0.00	110.18	3714.87	-9.69
				02/18/13	- -	102.51	119.59	0.00	102.51	3722.54	7.67
				08/19/13	- -	109.79	119.68	0.00	109.79	3715.26	-7.28
				02/24/14	- -	105.20	119.85	0.00	105.20	3719.85	4.59
				08/18/14	- -	115.51	119.67	0.00	115.51	3709.54	-10.31
				02/23/15	- -	109.82	119.60	0.00	109.82	3715.23	5.69
				08/24/15	- -	110.97	119.55	0.00	110.97	3714.08	-1.15
				03/07/16	- -	117.00	119.61	0.00	117.00	3708.05	-6.03
				08/15/16	- -	116.06	119.60	0.00	116.06	3708.99	0.94
				02/06/17	- -	114.27	120.90	0.00	114.27	3710.78	1.79
				06/22/17	- -	113.83	119.61	0.00	113.83	3711.22	0.44
				08/16/17	- -	114.69	119.61	0.00	114.69	3710.36	-0.86
				04/05/18	- -	114.58	119.61	0.00	114.58	3710.47	0.11
				10/01/18	- -	115.61	119.61	0.00	115.61	3709.44	-1.03
				04/04/19	- -	112.14	119.61	0.00	112.14	3712.91	3.47
				10/24/19	- -	111.20	119.61	0.00	111.20	3713.85	0.94
				06/18/20	- -	116.25	119.61	0.00	116.25	3708.80	-5.05
				10/08/20	- -	117.21	119.61	0.00	117.21	3707.84	-0.96
				04/15/21	DRY WELL						
				06/09/21	WELL PLUGGED AND ABANDONED JUNE 2021						
MW-18R [15]	3825.33	3825.32	3712.78 to 3692.78	09/16/21	- -	116.75	133.05	0.00	116.75	3708.58	NA
				04/14/22	- -	115.42	133.05	0.00	115.42	3709.91	1.33
				10/13/22	- -	116.29	133.05	0.00	116.29	3709.04	-0.87
				03/23/23	- -	117.77	133.05	0.00	117.77	3707.56	-1.48
				10/05/23	- -	118.82	133.05	0.00	118.82	3706.51	-1.05

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MW-19 [7,8,15]	3823.97	3824.48	3730.37 to 3710.37	08/11/10	- -	102.35	113.60	0.00	102.35	3721.62	NA
				09/30/10	- -	98.70	NM	0.00	98.70	3725.27	3.65
				02/23/11	- -	98.32	113.57	0.00	98.32	3725.65	0.38
				07/12/11	- -	101.87	113.56	0.00	101.87	3722.10	-3.55
				01/31/12	- -	100.92	113.54	0.00	100.92	3723.05	0.95
				07/23/12	- -	100.98	113.56	0.00	100.98	3722.99	-0.06
				02/18/13	- -	103.45	113.76	0.00	103.45	3720.52	-2.47
				08/19/13	- -	104.87	113.81	0.00	104.87	3719.10	-1.42
				02/24/14	- -	105.76	114.00	0.00	105.76	3718.21	-0.89
				08/18/14	- -	104.60	113.79	0.00	104.60	3719.37	1.16
				02/23/15	- -	105.22	113.72	0.00	105.22	3718.75	-0.62
				08/24/15	- -	105.94	113.71	0.00	105.94	3718.03	-0.72
				03/07/16	- -	106.75	113.64	0.00	106.75	3717.22	-0.81
				08/15/16	- -	108.23	133.77	0.00	108.23	3715.74	-1.48
				02/06/17	- -	108.27	113.72	0.00	108.27	3715.70	-0.04
				06/22/17	- -	108.31	113.60	0.00	108.31	3715.66	-0.04
				08/16/17	- -	107.88	113.60	0.00	107.88	3716.09	0.43
				04/05/18	- -	109.32	113.60	0.00	109.32	3714.65	-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	3713.08	-1.57
				06/18/20	- -	112.75	113.60	0.00	112.75	3711.22	-1.86
				10/08/20	WELL DRY						
				04/15/21	WELL DRY						
				06/09/21	WELL PLUGGED AND ABANDONED JUNE 2021						
MW-19R [15]	3824.24	3824.33	3712.61 to 3692.61	09/16/21	- -	114.00	132.13	0.00	114.00	3710.24	NA
				04/14/22	- -	113.57	132.13	0.00	113.57	3710.67	0.43
				10/13/22	- -	113.05	132.13	0.00	113.05	3711.19	0.52
				03/23/23	- -	116.19	132.13	0.00	116.19	3708.05	-3.14
				10/05/23	- -	117.46	132.13	0.00	117.46	3706.78	-1.27
MW-20 [7,8,15]	3824.58	3825.03	3733.03 to 3713.03	08/11/10	- -	97.75	111.82	0.00	97.75	3726.83	NA
				02/23/11	- -	97.42	111.82	0.00	97.42	3727.16	0.33
				07/12/11	- -	98.50	111.74	0.00	98.50	3726.08	-1.08
				01/31/12	- -	99.07	111.74	0.00	99.07	3725.51	-0.57
				07/23/12	- -	99.75	111.75	0.00	99.75	3724.83	-0.68
				02/18/13	- -	100.50	111.78	0.00	100.50	3724.08	-0.75
				08/19/13	- -	101.60	111.98	0.00	101.60	3722.98	-1.10
				02/24/14	- -	102.37	112.15	0.00	102.37	3722.21	-0.77
				08/18/14	- -	102.81	111.87	0.00	102.81	3721.77	-0.44
				02/23/15	- -	103.25	111.82	0.00	103.25	3721.33	-0.44
				08/24/15	- -	103.80	112.89	0.00	103.80	3720.78	-0.55
				03/07/16	- -	104.28	111.78	0.00	104.28	3720.30	-0.48
				08/15/16	- -	105.18	111.88	0.00	105.18	3719.40	-0.90
				02/06/17	- -	105.57	111.70	0.00	105.57	3719.01	-0.39
				06/22/17	- -	105.63	111.70	0.00	105.63	3718.95	-0.06
				08/17/17	- -	105.89	111.70	0.00	105.89	3718.69	-0.26
				04/05/18	- -	106.49	111.70	0.00	106.49	3718.09	-0.60
				10/01/18	- -	107.45	111.70	0.00	107.45	3717.13	-0.96
				04/04/19	- -	107.75	111.70	0.00	107.75	3716.83	-0.30
				10/24/19	- -	108.68	111.70	0.00	108.68	3715.90	-0.93
				06/18/20	- -	109.38	111.70	0.00	109.38	3715.20	-0.70
				10/08/20	- -	109.95	111.70	0.00	109.95	3714.63	-0.57
				04/15/21	- -	110.70	111.70	0.00	110.70	3713.88	-0.75
				06/09/21	WELL PLUGGED AND ABANDONED JUNE 2021						
MW-20R [15]	3824.63	3824.86	3719.04 to 3699.04	09/16/21	- -	111.19	126.09	0.00	111.19	3713.44	NA
				04/14/22	- -	111.14	126.09	0.00	111.14	3713.49	0.05
				10/13/22	- -	111.45	126.09	0.00	111.45	3713.18	-0.31
				03/23/23	- -	112.85	126.09	0.00	112.85	3711.78	-1.40
				10/05/23	- -	112.12	126.09	0.00	112.12	3712.51	0.73

Table 1. Water Elevation Measurements

HF Sinclair Navajo Refining LLC, GW-014, 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, btoc)	Product Thickness (feet)	Corrected Depth to Water[1] (feet)	Corrected Water Level Elev.[1] (feet)	Water Elevation Change
MW-21 [7,8]	3820.26	3820.59	3731.59 to 3711.59	08/11/10	- -	94.06	108.31	0.00	94.06	3726.20	NA
				02/23/11	- -	93.84	108.27	0.00	93.84	3726.42	0.22
				07/12/11	- -	94.85	108.23	0.00	94.85	3725.41	-1.01
				01/31/12	- -	95.72	108.18	0.00	95.72	3724.54	-0.87
				07/23/12	- -	96.22	108.24	0.00	96.22	3724.04	-0.50
				02/18/13	- -	96.92	108.48	0.00	96.92	3723.34	-0.70
				08/19/13	- -	98.04	108.52	0.00	98.04	3722.22	-1.12
				02/24/14	- -	98.65	108.55	0.00	98.65	3721.61	-0.61
				08/18/14	- -	99.07	108.32	0.00	99.07	3721.19	-0.42
				02/23/15	- -	99.48	108.19	0.00	99.48	3720.78	-0.41
				08/24/15	- -	100.05	108.32	0.00	100.05	3720.21	-0.57
				03/07/16	- -	100.30	108.15	0.00	100.30	3719.96	-0.25
				08/15/16	- -	101.18	108.15	0.00	101.18	3719.08	-0.88
				02/06/17	- -	101.59	110.20	0.00	101.59	3718.67	-0.41
				06/22/17	- -	101.72	108.10	0.00	101.72	3718.54	-0.13
				08/17/17	- -	102.10	108.10	0.00	102.10	3718.16	-0.38
				04/05/18	- -	102.54	108.10	0.00	102.54	3717.72	-0.44
				10/01/18	- -	103.58	108.10	0.00	103.58	3716.68	-1.04
				04/04/19	- -	103.90	108.10	0.00	103.90	3716.36	-0.32
				10/24/19	- -	105.02	108.10	0.00	105.02	3715.24	-1.12
				06/18/20	- -	105.57	108.10	0.00	105.57	3714.69	-0.55
				10/08/20	- -	106.31	108.10	0.00	106.31	3713.95	-0.74
				04/15/21	- -	106.72	108.10	0.00	106.72	3713.54	-0.41
				09/16/21	- -	107.31	108.10	0.00	107.31	3712.95	-0.59
				04/14/22	- -	107.42	108.10	0.00	107.42	3712.84	-0.11
				10/13/22	- -	107.93	108.20	0.00	107.93	3712.33	-0.51
				03/23/23	WELL DRY						
				10/05/23	WELL DRY						
MW-22 [7,8]	3821.82	3819.27	3731.20 to 3711.27	08/11/10	- -	95.62	110.80	0.00	95.62	3726.20	NA
				02/23/11	- -	95.36	110.78	0.00	95.36	3726.46	0.26
				07/12/11	- -	96.26	110.74	0.00	96.26	3725.56	-0.90
				01/31/12	- -	97.56	110.72	0.00	97.56	3724.26	-1.30
				07/23/12	- -	97.90	110.70	0.00	97.90	3723.92	-0.34
				02/18/13	- -	98.45	110.92	0.00	98.45	3723.37	-0.55
				08/19/13	- -	99.54	110.85	0.00	99.54	3722.28	-1.09
				02/24/14	- -	99.97	111.00	0.00	99.97	3721.85	-0.43
				08/18/14	- -	100.52	110.26	0.00	100.52	3721.30	-0.55
				02/23/15	- -	100.85	109.10	0.00	100.85	3720.97	-0.33
				08/24/15	- -	101.42	109.05	0.00	101.42	3720.40	-0.57
				03/07/16	- -	101.56	109.19	0.00	101.56	3720.26	-0.14
				08/15/16	- -	102.45	109.50	0.00	102.45	3719.37	-0.89
				02/06/17	- -	102.99	109.58	0.00	102.99	3718.83	-0.54
				06/22/17	- -	103.04	109.60	0.00	103.04	3718.78	-0.05
				08/17/17	- -	103.51	109.60	0.00	103.51	3718.31	-0.47
				04/05/18	- -	103.85	109.60	0.00	103.85	3717.97	-0.34
				10/01/18	- -	104.96	109.60	0.00	104.96	3716.86	-1.11
				04/04/19	- -	105.12	109.60	0.00	105.12	3716.70	-0.16
				10/24/19	- -	106.45	109.60	0.00	106.45	3715.37	-1.33
				06/18/20	- -	106.97	109.60	0.00	106.97	3714.85	-0.52
				10/08/20	- -	107.70	109.60	0.00	107.70	3714.12	-0.73
				04/15/21	- -	107.97	109.60	0.00	107.97	3713.85	-0.27
				09/16/21	- -	109.18	110.30	0.00	109.18	3712.64	-1.21
				04/14/22	- -	109.29	110.30	0.00	109.29	3712.53	-0.11
				10/13/22	- -	109.51	110.30	0.00	109.51	3712.31	-0.22
				03/23/23	WELL DRY						
				10/05/23	WELL DRY						

Table 1. Water Elevation Measurements

HF Sinclair Navajo Refining LLC, GW-014, 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, btoc)	Product Thickness (feet)	Corrected Depth to Water[1] (feet)	Corrected Water Level Elev.[1] (feet)	Water Elevation Change
MW-23 [7,8,14]	3825.58	3822.91	3730.91 to 3710.91	08/11/10	- -	100.49	115.10	0.00	100.49	3725.09	NA
				02/23/11	- -	99.80	115.12	0.00	99.80	3725.78	0.69
				07/12/11	- -	101.29	115.10	0.00	101.29	3724.29	-1.49
				02/01/12	- -	102.04	115.07	0.00	102.04	3723.54	-0.75
				07/23/12	- -	102.39	114.98	0.00	102.39	3723.19	-0.35
				02/18/13	- -	102.69	115.25	0.00	102.69	3722.89	-0.30
				08/19/13	- -	104.23	115.00	0.00	104.23	3721.35	-1.54
				02/24/14	- -	104.93	115.35	0.00	104.93	3720.65	-0.70
				08/18/14	- -	105.36	119.14	0.00	105.36	3720.22	-0.43
				02/23/15	- -	105.74	114.85	0.00	105.74	3719.84	-0.38
				08/24/15	- -	106.33	114.84	0.00	106.33	3719.25	-0.59
				03/07/16	- -	106.72	114.66	0.00	106.72	3718.86	-0.39
				08/15/16	- -	107.69	114.80	0.00	107.69	3717.89	-0.97
				02/06/17	- -	108.05	114.70	0.00	108.05	3717.53	-0.36
				06/22/17	- -	108.04	114.60	0.00	108.04	3717.54	0.01
				08/17/17	- -	108.41	114.60	0.00	108.41	3717.17	-0.37
				04/05/18	- -	108.86	114.60	0.00	108.86	3716.72	-0.45
				10/01/18	- -	109.90	114.60	0.00	109.90	3715.68	-1.04
				04/04/19	- -	109.89	114.60	0.00	109.89	3715.69	0.01
				10/24/19	- -	112.87	114.60	0.00	112.87	3712.71	-2.98
				06/18/20	- -	112.11	114.60	0.00	112.11	3713.47	0.76
				08/13/20	DRY WELL - PLUGGED AND ABANDONED AUGUST 2020						
MW-23R [14]	3825.64	3822.75	3715.96 to 3695.96	10/08/20	- -	112.81	129.63	0.00	112.81	3712.83	NA
				04/15/21	- -	113.17	129.63	0.00	113.17	3712.47	-0.36
				09/16/21	- -	113.53	129.63	0.00	113.53	3712.11	-0.36
				04/14/22	- -	113.46	129.63	0.00	113.46	3712.18	0.07
				10/13/22	- -	113.74	129.63	0.00	113.74	3711.90	-0.28
				03/23/23	- -	115.21	129.63	0.00	115.21	3710.43	-1.47
				10/05/23	- -	115.87	129.63	0.00	115.87	3709.77	-0.66
MW-24 [7,8,15]	3830.50	3830.81	3732.36 to 3712.36	08/11/10	- -	104.04	118.14	0.00	104.04	3726.46	NA
				02/23/11	- -	104.26	118.09	0.00	104.26	3726.24	-0.22
				07/12/11	- -	105.29	118.04	0.00	105.29	3725.21	-1.03
				02/01/12	- -	106.65	119.10	0.00	106.65	3723.85	-1.36
				07/23/12	- -	106.96	118.04	0.00	106.96	3723.54	-0.31
				02/18/13	- -	106.77	118.35	0.00	106.77	3723.73	0.19
				08/19/13	- -	108.30	118.21	0.00	108.30	3722.20	-1.53
				02/24/14	- -	108.66	118.45	0.00	108.66	3721.84	-0.36
				08/18/14	- -	109.61	118.91	0.00	109.61	3720.89	-0.95
				02/23/15	- -	109.92	118.12	0.00	109.92	3720.58	-0.31
				08/24/15	- -	110.47	118.11	0.00	110.47	3720.03	-0.55
				03/07/16	- -	110.59	118.15	0.00	110.59	3719.91	-0.12
				08/15/16	- -	111.52	118.05	0.00	111.52	3718.98	-0.93
				02/06/17	- -	112.01	118.08	0.00	112.01	3718.49	-0.49
				06/22/17	- -	111.96	117.90	0.00	111.96	3718.54	0.05
				08/17/17	- -	112.55	117.90	0.00	112.55	3717.95	-0.59
				04/05/18	- -	112.85	117.90	0.00	112.85	3717.65	-0.30
				10/01/18	- -	113.89	117.90	0.00	113.89	3716.61	-1.04
				04/04/19	- -	113.84	117.90	0.00	113.84	3716.66	0.05
				10/24/19	- -	115.72	117.90	0.00	115.72	3714.78	-1.88
				06/18/20	- -	116.14	117.90	0.00	116.14	3714.36	-0.42
				10/08/20	- -	116.91	117.90	0.00	116.91	3713.59	-0.77
				04/15/21	- -	117.02	117.90	0.00	117.02	3713.48	-0.11
				06/09/21	WELL PLUGGED AND ABANDONED JUNE 2021						
MW-24R [15]	3830.38	3830.82	3715.11 to 3695.11	09/16/21	- -	117.38	135.77	0.00	117.38	3713.00	NA
				04/14/22	- -	117.33	135.77	0.00	117.33	3713.05	0.05
				10/13/22	- -	118.12	135.77	0.00	118.12	3712.26	-0.79
				03/23/23	- -	118.79	135.77	0.00	118.79	3711.59	-0.67
				10/05/23	- -	119.72	135.77	0.00	119.72	3710.66	-0.93

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HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

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MW-25 [7,8,15]	3830.77	3831.00	3729.00 to 3709.00	08/11/10	- -	106.46	121.66	0.00	106.46	3724.31	NA
				02/23/11	- -	105.72	121.60	0.00	105.72	3725.05	0.74
				07/12/11	- -	107.24	121.49	0.00	107.24	3723.53	-1.52
				02/01/12	- -	108.53	121.42	0.00	108.53	3722.24	-1.29
				07/23/12	- -	109.13	121.47	0.00	109.13	3721.64	-0.60
				02/18/13	- -	107.65	121.45	0.00	107.65	3723.12	1.48
				08/19/13	- -	110.15	121.49	0.00	110.15	3720.62	-2.50
				02/24/14	- -	110.62	121.60	0.00	110.62	3720.15	-0.47
				08/18/14	- -	112.14	121.46	0.00	112.14	3718.63	-1.52
				02/23/15	- -	112.11	121.71	0.00	112.11	3718.66	0.03
				08/24/15	- -	112.89	121.23	0.00	112.89	3717.88	-0.78
				03/07/16	- -	113.76	121.10	0.00	113.76	3717.01	-0.87
				08/15/16	- -	114.52	121.10	0.00	114.52	3716.25	-0.76
				02/06/17	- -	114.68	121.03	0.00	114.68	3716.09	-0.16
				06/22/17	- -	114.64	120.99	0.00	114.64	3716.13	0.04
				08/16/17	- -	114.91	120.99	0.00	114.91	3715.86	-0.27
				04/05/18	- -	115.38	120.99	0.00	115.38	3715.39	-0.47
				10/01/18	- -	116.42	120.99	0.00	116.42	3714.35	-1.04
				04/04/19	- -	116.12	120.99	0.00	116.12	3714.65	0.30
				10/24/19	- -	117.22	120.99	0.00	117.22	3713.55	-1.10
				06/18/20	- -	118.44	120.99	0.00	118.44	3712.33	-1.22
				10/08/20	- -	119.59	120.99	0.00	119.59	3711.18	-1.15
				04/15/21	- -	119.65	120.99	0.00	119.65	3711.12	-0.06
				06/09/21	WELL PLUGGED AND ABANDONED JUNE 2021						
MW-26 [7,8,14]	3833.18	3833.39	3731.85 to 3711.85	08/11/10	- -	106.22	121.33	0.00	106.22	3726.96	NA
				02/23/11	- -	108.44	121.31	0.00	108.44	3724.74	-2.22
				07/12/11	- -	109.58	121.26	0.00	109.58	3723.60	-1.14
				02/01/12	- -	110.38	121.21	0.00	110.38	3722.80	-0.80
				07/23/12	- -	111.28	121.24	0.00	111.28	3721.90	-0.90
				02/18/13	- -	109.00	121.43	0.00	109.00	3724.18	2.28
				08/19/13	- -	111.46	121.43	0.00	111.46	3721.72	-2.46
				02/24/14	- -	112.28	122.30	0.00	112.28	3720.90	-0.82
				08/18/14	- -	113.98	121.31	0.00	113.98	3719.20	-1.70
				02/23/15	- -	114.20	121.20	0.00	114.20	3718.98	-0.22
				08/24/15	- -	114.86	121.15	0.00	114.86	3718.32	-0.66
				03/07/16	- -	115.22	121.12	0.00	115.22	3717.96	-0.36
				08/15/16	- -	115.98	121.18	0.00	115.98	3717.20	-0.76
				02/06/17	- -	116.38	121.07	0.00	116.38	3716.80	-0.40
				06/22/17	- -	116.24	121.21	0.00	116.24	3716.94	0.14
				08/17/17	- -	116.79	121.21	0.00	116.79	3716.39	-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	3713.66	-2.73
				06/18/20	- -	120.20	121.21	0.00	120.20	3712.98	-0.68
				08/13/20	DRY WELL - PLUGGED AND ABANDONED AUGUST 2020						
MW-26R [14]	3833.65	3833.37	3716.15 to 3696.15	10/08/20	- -	121.48	137.08	0.00	121.48	3712.17	NA
				04/15/21	- -	121.24	137.08	0.00	121.24	3712.41	0.24
				09/16/21	- -	121.93	137.08	0.00	121.93	3711.72	-0.69
				04/14/22	- -	121.90	137.08	0.00	121.90	3711.75	0.03
				10/13/22	- -	122.83	137.08	0.00	122.83	3710.82	-0.93
				03/23/23	- -	123.64	137.08	0.00	123.64	3710.01	-0.81
				10/05/23	- -	124.37	137.08	0.00	124.37	3709.28	-0.73

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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, btoc)	Product Thickness (feet)	Corrected Depth to Water[1] (feet)	Corrected Water Level Elev.[1] (feet)	Water Elevation Change
MW-27 [7,8]	3837.27	3834.53	3733.20 to 3713.20	08/11/10	- -	109.00	124.07	0.00	109.00	3728.27	NA
				02/23/11	- -	109.58	123.96	0.00	109.58	3727.69	-0.58
				07/12/11	- -	110.59	124.00	0.00	110.59	3726.68	-1.01
				02/01/12	- -	111.37	123.97	0.00	111.37	3725.90	-0.78
				07/23/12	- -	112.32	123.78	0.00	112.32	3724.95	-0.95
				02/18/13	- -	111.19	123.89	0.00	111.19	3726.08	1.13
				08/19/13	- -	113.06	123.60	0.00	113.06	3724.21	-1.87
				02/24/14	- -	113.81	122.60	0.00	113.81	3723.46	-0.75
				08/18/14	- -	114.96	123.68	0.00	114.96	3722.31	-1.15
				02/23/15	- -	115.32	120.95	0.00	115.32	3721.95	-0.36
				08/24/15	- -	115.99	122.37	0.00	115.99	3721.28	-0.67
				03/07/16	- -	116.26	122.87	0.00	116.26	3721.01	-0.27
				08/15/16	- -	116.94	123.78	0.00	116.94	3720.33	-0.68
				02/06/17	- -	117.32	123.25	0.00	117.32	3719.95	-0.38
				06/22/17	- -	117.30	123.56	0.00	117.30	3719.97	0.02
				08/17/17	- -	117.78	123.56	0.00	117.78	3719.49	-0.48
				04/05/18	- -	118.11	123.56	0.00	118.11	3719.16	-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	3716.73	-2.43
				06/18/20	- -	121.25	123.56	0.00	121.25	3716.02	-0.71
				10/08/20	- -	122.21	123.56	0.00	122.21	3715.06	-0.96
				04/15/21	- -	122.14	123.56	0.00	122.14	3715.13	0.07
				09/16/21	- -	122.72	123.56	0.00	122.72	3714.55	-0.58
				04/14/22	- -	122.53	123.56	0.00	122.53	3714.74	0.19
				10/13/22	WELL DRY						
				03/23/23	INACCESSIBLE[16]						
				10/05/23	WELL DRY						
MW-28 [7,8]	3833.44	3833.73	3735.02 to 3715.02	08/11/10	- -	103.72	118.42	0.00	103.72	3729.72	NA
				02/23/11	- -	104.03	118.42	0.00	104.03	3729.41	-0.31
				07/12/11	- -	105.07	118.35	0.00	105.07	3728.37	-1.04
				01/30/12	- -	105.84	118.38	0.00	105.84	3727.60	-0.77
				07/23/12	- -	106.65	118.31	0.00	106.65	3726.79	-0.81
				02/18/13	- -	106.17	118.47	0.00	106.17	3727.27	0.48
				08/19/13	- -	107.53	118.50	0.00	107.53	3725.91	-1.36
				02/24/14	- -	108.39	118.70	0.00	108.39	3725.05	-0.86
				08/18/14	- -	109.29	118.30	0.00	109.29	3724.15	-0.90
				02/23/15	- -	109.60	118.47	0.00	109.60	3723.84	-0.31
				08/24/15	- -	110.16	118.44	0.00	110.16	3723.28	-0.56
				03/07/16	- -	110.25	118.40	0.00	110.25	3723.19	-0.09
				08/15/16	- -	111.03	118.31	0.00	111.03	3722.41	-0.78
				02/06/17	- -	111.33	118.20	0.00	111.33	3722.11	-0.30
				06/22/17	- -	111.49	118.26	0.00	111.49	3721.95	-0.16
				08/17/17	- -	112.14	118.26	0.00	112.14	3721.30	-0.65
				04/05/18	- -	112.17	118.26	0.00	112.17	3721.27	-0.03
				10/01/18	- -	113.16	118.26	0.00	113.16	3720.28	-0.99
				04/04/19	- -	113.32	118.26	0.00	113.32	3720.12	-0.16
				10/24/19	- -	115.05	118.26	0.00	115.05	3718.39	-1.73
				06/18/20	- -	115.64	118.26	0.00	115.64	3717.80	-0.59
				10/08/20	- -	116.26	118.26	0.00	116.26	3717.18	-0.62
				04/15/21	- -	116.41	118.26	0.00	116.41	3717.03	-0.15
				09/16/21	- -	116.78	118.26	0.00	116.78	3716.66	-0.37
				04/14/22	- -	116.60	118.26	0.00	116.60	3716.84	0.18
				10/13/22	WELL DRY						
				03/23/23	WELL DRY						
				10/05/23	WELL DRY						

Table 1. Water Elevation Measurements

HF Sinclair Navajo Refining LLC, GW-014, 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, btoc)	Product Thickness (feet)	Corrected Depth to Water[1] (feet)	Corrected Water Level Elev.[1] (feet)	Water Elevation Change
MW-29 [7,8]	3835.55	3836.02	3734.52 to 3714.52	08/11/10	- -	105.80	120.42	0.00	105.80	3729.75	NA
				02/23/11	- -	105.97	120.35	0.00	105.97	3729.58	-0.17
				07/12/11	- -	107.08	120.33	0.00	107.08	3728.47	-1.11
				01/30/12	- -	107.69	120.33	0.00	107.69	3727.86	-0.61
				07/23/12	- -	108.74	120.27	0.00	108.74	3726.81	-1.05
				02/18/13	- -	108.12	120.47	0.00	108.12	3727.43	0.62
				08/19/13	- -	109.49	120.68	0.00	109.49	3726.06	-1.37
				02/24/14	- -	110.43	120.70	0.00	110.43	3725.12	-0.94
				08/18/14	- -	111.35	120.30	0.00	111.35	3724.20	-0.92
				02/23/15	- -	111.65	120.30	0.00	111.65	3723.90	-0.30
				08/24/15	- -	112.29	120.35	0.00	112.29	3723.26	-0.64
				03/07/16	- -	112.47	120.48	0.00	112.47	3723.08	-0.18
				08/15/16	- -	113.21	120.30	0.00	113.21	3722.34	-0.74
				02/06/17	- -	113.46	120.19	0.00	113.46	3722.09	-0.25
				06/22/17	- -	113.62	120.30	0.00	113.62	3721.93	-0.16
				08/17/17	- -	114.05	120.30	0.00	114.05	3721.50	-0.43
				04/05/18	- -	114.39	120.30	0.00	114.39	3721.16	-0.34
				10/01/18	- -	115.35	120.30	0.00	115.35	3720.20	-0.96
				04/04/19	- -	115.55	120.30	0.00	115.55	3720.00	-0.20
				10/24/19	- -	117.03	120.30	0.00	117.03	3718.52	-1.48
				06/18/20	- -	117.80	120.30	0.00	117.80	3717.75	-0.77
				10/08/20	- -	118.70	120.30	0.00	118.70	3716.85	-0.90
				04/15/21	- -	118.55	120.30	0.00	118.55	3717.00	0.15
				09/16/21	- -	118.99	120.30	0.00	118.99	3716.56	-0.44
				04/14/22	- -	118.72	120.30	0.00	118.72	3716.83	0.27
				10/13/22	WELL DRY						
				03/23/23	WELL DRY						
				10/05/23	WELL DRY						
MW-30 [9]	3839.25	3836.02	3732.28 to 3712.28	08/19/13	- -	110.94	126.97	0.00	110.94	3728.31	NA
				02/24/14	- -	112.14	126.60	0.00	112.14	3727.11	-1.20
				08/18/14	- -	112.79	126.36	0.00	112.79	3726.46	-0.65
				02/23/15	- -	113.18	126.68	0.00	113.18	3726.07	-0.39
				08/24/15	- -	113.75	125.03	0.00	113.75	3725.50	-0.57
				03/07/16	- -	113.90	124.75	0.00	113.90	3725.35	-0.15
				08/15/16	- -	114.65	124.40	0.00	114.65	3724.60	-0.75
				02/06/17	- -	114.91	123.95	0.00	114.91	3724.34	-0.26
				06/22/17	- -	115.12	123.64	0.00	115.12	3724.13	-0.21
				08/16/17	- -	115.37	123.64	0.00	115.37	3723.88	-0.25
				04/05/18	- -	115.94	123.64	0.00	115.94	3723.31	-0.57
				10/01/18	- -	116.93	123.64	0.00	116.93	3722.32	-0.99
				04/04/19	- -	117.36	123.64	0.00	117.36	3721.89	-0.43
				10/24/19	- -	118.81	123.64	0.00	118.81	3720.44	-1.45
				06/18/20	- -	119.59	123.64	0.00	119.59	3719.66	-0.78
				10/08/20	- -	120.45	123.64	0.00	120.45	3718.80	-0.86
				04/15/21	- -	120.39	123.64	0.00	120.39	3718.86	0.06
				09/16/21	- -	120.78	123.64	0.00	120.78	3718.47	-0.39
				04/14/22	- -	120.70	123.64	0.00	120.70	3718.55	0.08
				10/13/22	- -	122.04	123.64	0.00	122.04	3717.21	-1.34
				03/23/23	- -	121.99	123.64	0.00	121.99	3717.26	0.05
				10/05/23	WELL DRY						

Table 1. Water Elevation Measurements

HF Sinclair Navajo Refining LLC, GW-014, 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, btoc)	Product Thickness (feet)	Corrected Depth to Water[1] (feet)	Corrected Water Level Elev.[1] (feet)	Water Elevation Change
MW-31 [10,13]	3819.17	3818.90	3718.90 to 3698.90	02/06/17	98.95	105.11	NM	6.16	99.75	3719.42	NA
				06/22/17	- -	99.84	NM	0.00	99.84	3719.33	-0.09
				08/17/17	100.24	101.22	NM	0.98	100.37	3718.80	-0.53
				04/05/18	100.05	105.55	NM	5.50	100.77	3718.40	-0.40
				10/01/18	101.07	106.82	NM	5.75	101.82	3717.35	-1.05
	3820.17			04/01/19	102.33	107.98	NM	5.65	103.06	3717.11	-0.24
				10/24/19	104.32	104.97	NM	0.65	104.40	3715.77	-1.34
				06/18/20	104.41	107.28	NM	2.87	104.78	3715.39	-0.38
				10/08/20	105.09	108.59	NM	3.50	105.55	3714.62	-0.77
				04/15/21	105.34	109.53	NM	4.19	105.89	3714.29	-0.33
				09/16/21	105.73	111.52	NM	5.79	106.48	3713.69	-0.60
				04/14/22	105.96	111.72	NM	5.76	106.71	3713.46	-0.23
				10/13/22	106.41	112.32	NM	5.91	107.18	3712.99	-0.47
				03/23/23	107.50	114.05	NM	6.55	108.35	3711.82	-1.17
				10/05/23	108.20	114.79	NM	6.59	109.06	3711.11	-0.71
MW-32 [11]	3817.69	3818.07	3721.96 to 3701.96	06/22/17	- -	98.62	115.73	0.00	98.62	3719.07	NA
				08/17/17	- -	98.91	115.73	0.00	98.91	3718.78	-0.29
				04/05/18	- -	99.34	115.73	0.00	99.34	3718.35	-0.43
				10/01/18	- -	100.44	115.73	0.00	100.44	3717.25	-1.10
				04/04/19	- -	100.74	115.73	0.00	100.74	3716.95	-0.30
				10/24/19	- -	101.92	115.73	0.00	101.92	3715.77	-1.18
				06/18/20	- -	102.40	115.73	0.00	102.40	3715.29	-0.48
				10/08/20	- -	103.08	115.73	0.00	103.08	3714.61	-0.68
				04/15/21	- -	103.51	115.73	0.00	103.51	3714.18	-0.43
				09/16/21	- -	104.18	115.73	0.00	104.18	3713.51	-0.67
				04/14/22	- -	104.44	115.73	0.00	104.44	3713.25	-0.26
				10/13/22	- -	105.22	115.73	0.00	105.22	3712.47	-0.78
				03/23/23	- -	106.08	115.73	0.00	106.08	3711.61	-0.86
				10/05/23	- -	106.82	115.73	0.00	106.82	3710.87	-0.74
MW-33 [11]	3819.68	3817.09	3719.78 to 3699.78	06/22/17	- -	100.55	119.90	0.00	100.55	3719.13	NA
				08/17/17	- -	100.99	119.90	0.00	100.99	3718.69	-0.44
				04/05/18	- -	101.26	119.90	0.00	101.26	3718.42	-0.27
				10/01/18	- -	102.37	119.90	0.00	102.37	3717.31	-1.11
				04/04/19	- -	102.77	119.90	0.00	102.77	3716.91	-0.40
				10/24/19	- -	103.83	119.90	0.00	103.83	3715.85	-1.06
				06/18/20	- -	104.29	119.90	0.00	104.29	3715.39	-0.46
				10/08/20	- -	104.96	119.90	0.00	104.96	3714.72	-0.67
				04/15/21	- -	105.44	119.90	0.00	105.44	3714.24	-0.48
				09/16/21	- -	106.11	119.90	0.00	106.11	3713.57	-0.67
				04/14/22	- -	106.42	119.90	0.00	106.42	3713.26	-0.31
				10/13/22	- -	107.06	119.90	0.00	107.06	3712.62	-0.64
				03/23/23	- -	107.99	119.90	0.00	107.99	3711.69	-0.93
				10/05/23	- -	108.72	119.90	0.00	108.72	3710.96	-0.73

Table 1. Water Elevation Measurements

HF Sinclair Navajo Refining LLC, GW-014, 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, btoc)	Product Thickness (feet)	Corrected Depth to Water[(1)] (feet)	Corrected Water Level Elev.[(1)] (feet)	Water Elevation Change
RW-1	3838.48	3838.19	3738.19 to 3708.19	04/30/09	- -	106.45	136.09	0.00	106.45	3732.03	NA
				06/10/09	- -	106.59	NM	0.00	106.59	3731.89	-0.14
				06/19/09	- -	106.61	129.62	0.00	106.61	3731.87	-0.02
				07/02/09	- -	106.82	129.25	0.00	106.82	3731.66	-0.21
				07/24/09	- -	106.92	129.31	0.00	106.92	3731.56	-0.10
				09/24/09	- -	107.42	129.73	0.00	107.42	3731.06	-0.50
				10/27/09	- -	107.53	129.25	0.00	107.53	3730.95	-0.11
				01/13/10	- -	107.67	129.29	0.00	107.67	3730.81	-0.14
				02/02/10	- -	107.69	NM	0.00	107.69	3730.79	-0.02
				04/01/10	- -	107.60	NM	0.00	107.60	3730.88	0.09
				08/11/10	- -	108.18	129.29	0.00	108.18	3730.30	-0.58
				02/23/11	- -	108.22	129.31	0.00	108.22	3730.26	-0.04
				07/12/11	- -	109.09	129.27	0.00	109.09	3729.39	-0.87
				02/02/12	- -	109.81	129.34	0.00	109.81	3728.67	-0.72
				07/23/12	- -	110.98	129.07	0.00	110.98	3727.50	-1.17
				02/18/13	- -	110.61	135.79	0.00	110.61	3727.87	0.37
				08/19/13	- -	111.67	129.64	0.00	111.67	3726.81	-1.06
				02/24/14	- -	112.59	129.60	0.00	112.59	3725.89	-0.92
				08/18/14	- -	113.50	129.28	0.00	113.50	3724.98	-0.91
				02/23/15	- -	113.95	129.26	0.00	113.95	3724.53	-0.45
				08/24/15	- -	114.56	129.25	0.00	114.56	3723.92	-0.61
				03/07/16	- -	114.92	129.25	0.00	114.92	3723.56	-0.36
				08/15/16	- -	115.52	129.25	0.00	115.52	3722.96	-0.60
				02/06/17	- -	115.92	129.25	0.00	115.92	3722.56	-0.40
				06/22/17	- -	116.00	129.42	0.00	116.00	3722.48	-0.08
				08/17/17	- -	116.44	129.42	0.00	116.44	3722.04	-0.44
				04/05/18	- -	116.82	129.42	0.00	116.82	3721.66	-0.38
				10/01/18	- -	117.77	129.42	0.00	117.77	3720.71	-0.95
				04/04/19	- -	118.23	129.42	0.00	118.23	3720.25	-0.46
				10/24/19	- -	119.43	129.42	0.00	119.43	3719.05	-1.20
				06/18/20	- -	120.13	129.42	0.00	120.13	3718.35	-0.70
				10/08/20	- -	121.01	129.42	0.00	121.01	3717.47	-0.88
				04/15/21	- -	121.01	129.42	0.00	121.01	3717.47	0.00
				09/16/21	- -	121.57	129.42	0.00	121.57	3716.91	-0.56
				04/14/22	- -	121.35	129.42	0.00	121.35	3717.13	0.22
				10/13/22	- -	122.60	129.42	0.00	122.60	3715.88	-1.25
				03/23/23	- -	122.83	129.42	0.00	122.83	3715.65	-0.23
				10/05/23	- -	123.97	129.42	0.00	123.97	3714.51	-1.14

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.
14. Monitoring wells MW-12R2, MW-16R, MW-23R, and MW-26R installed and elevations surveyed August 2020; MW-12R, MW-16, MW-23, and MW-26 plugged and abandoned August 2020.
15. Monitoring well MW-20R installed in June 2021 and MW-15R, MW-18R, MW-19R, and MW-24R installed in September 2021 (all surveyed in September 2021); MW-15, MW-18, MW-19, MW-20, MW-24, and MW-25 plugged and abandoned June 2021.
16. Well inaccessible due to refinery operations.

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

HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

			WQCC Volatiles (Method 8260, mg/L)						WQCC Semi-Volatiles (Method 8270, mg/L)					TPH (Method 8015, mg/L)	
Monitor Well	Sample Date	Duplicate	Benzene	Ethylbenzene	Toluene	Total Xylenes	Naphthalene	Chloroform	Total Naphthalene	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Total Phenols	TPH GRO (Low Fraction)	TPH DRO (High Fraction)
New Mexico WQCC Groundwater Standards			0.005	0.7	1	0.62	0.03	0.1	0.03	N/A	N/A	N/A	0.005	N/A	N/A
MW-1	06/19/2009		<0.0050	0.012	<0.0050	0.031	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	01/19/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	- -	<0.00020	<0.00020	<0.00020	- -	- -
	08/18/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	03/01/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/20/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	02/02/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/27/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/25/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/27/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	03/09/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	08/17/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	02/07/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	08/17/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	04/05/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	04/04/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	06/18/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000293 J	- -	- -	- -	- -	- -	- -	- -
	06/18/2020	FD	<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000296 J	- -	- -	- -	- -	- -	- -	- -
	10/08/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000275 J	- -	- -	- -	- -	- -	- -	- -
	04/15/2021		<0.0000941	0.000266 J	<0.000278	<0.000174	<0.00100	0.000439 J	- -	- -	- -	- -	- -	- -	- -
	09/16/2021		0.000102 JB	<0.000137	<0.000278	<0.000174	<0.00100	0.000560 J	- -	- -	- -	- -	- -	- -	- -
	04/14/2022		<0.0000941	0.000241 J	<0.000278	<0.000174	<0.00100	0.000522 J	- -	- -	- -	- -	- -	- -	- -
	10/13/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000455 J	- -	- -	- -	- -	- -	- -	- -
	03/23/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000620 J	- -	- -	- -	- -	- -	- -	- -
	10/05/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.00162 J	- -	- -	- -	- -	- -	- -	- -
MW-2	06/22/2009		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	01/19/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	08/16/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	03/03/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/14/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/30/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/24/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/19/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	0.00022	- -	- -
	08/20/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/25/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/24/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	0.00084 J	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/28/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.000696 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	03/07/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.000942 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/18/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00293 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	02/07/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00719	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/16/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00812	<0.000372	<0.000372	<0.000332	<0.000311	0.00403 JB	- -	- -
	04/05/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00385 J	0.00228	0.00228	<0.000332	<0.000311	0.00721 JB	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00214 J	<0.000372	<0.000372	<0.000332	<0.000311	0.000912 JB	- -	- -
	04/04/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00260 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00260 J	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000728 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	06/18/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000475 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	10/08/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000370 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	04/15/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000448 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	09/16/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000706 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	04/14/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000630 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	10/13/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000218 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	03/23/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000171 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	10/05/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000178 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433 [R]	- -	- -
MW-3	06/16/2009		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	01/14/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	01/14/2010	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	08/19/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	02/24/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/15/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/30/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/25/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/26/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	02/26/2015	FD	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/26/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	03/08/2016		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/18/2016		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	02/07/2017		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/16/2017		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	04/05/2018		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	04/04/2019		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	06/18/2020		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/08/2020		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	04/15/2021		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	09/16/2021		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	04/14/2022		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/13/2022		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	03/23/2023		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/05/2023		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -

Table 2. Organic Constituent Concentrations in Groundwater

HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	WQCC Volatiles (Method 8260, mg/L)						WQCC Semi-Volatiles (Method 8270, mg/L)					TPH (Method 8015, mg/L)	
			Benzene	Ethylbenzene	Toluene	Total Xylenes	Naphthalene	Chloroform	Total Naphthalene	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Total Phenols	TPH GRO (Low Fraction)	TPH DRO (High Fraction)
New Mexico WQCC Groundwater Standards			0.005	0.7	1	0.62	0.03	0.1	0.03	N/A	N/A	N/A	0.005	N/A	N/A
MW-4	06/16/2009		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	01/13/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	08/19/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/28/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/15/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	0.00044	0.00044	- -	<0.00020	<0.00020	- -	- -
	01/30/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/24/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.005	<0.0050	<0.0002	<0.0002	<0.00020	<0.00020	<0.00020	- -	- -
	02/21/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/25/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/24/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/28/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/15/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/17/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00267 JB	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00302 JB	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000574 J	<0.000372	<0.000372	<0.000332	<0.000311	0.000493 J	- -	- -
	10/08/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.00140 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	09/16/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.00664	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	10/13/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.00906	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	10/05/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.0104	<0.000167	<0.000167	<0.0000829	<0.000123	<0.00455	- -	- -
MW-5	06/16/2009		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	01/18/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	08/20/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/28/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/19/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/31/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/31/2012	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/25/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/21/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/25/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/19/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/24/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/24/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000382 J	- -	- -
	08/17/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.366
	08/16/2017		<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
	10/01/2018		<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
	10/24/2019		<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
	10/08/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0586 J
	09/16/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	<0.0247
	10/13/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0918 J
	10/05/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000167	<0.000167	<0.0000829	<0.000123	<0.00455	<0.0314	0.0420 J
MW-6	06/18/2009		<0.0050	<0.0050	<0.0050	<0.015	0.0075	- -	- -	- -	- -	- -	- -	- -	- -
	06/18/2009	FD	<0.0050	<0.0050	<0.0050	<0.015	0.0074	- -	- -	- -	- -	- -	- -	- -	- -
	02/02/2010		<0.0050	0.013	<0.0050	<0.015	0.0099	- -	- -	- -	- -	- -	- -	- -	- -
	08/19/2010		<0.0050	0.015	<0.0050	<0.015	<0.0050	- -	0.0034	0.0017	- -	0.0017	<0.0010	- -	- -
	03/01/2011		<0.0050	0.018	<0.0050	<0.015	0.013	- -	0.0094	0.0062	<0.00020	0.0032	0.0255	- -	- -
	07/20/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	0.0008	0.0008	- -	<0.00020	<0.00020	- -	- -
	02/02/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/24/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2013	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	0.00116	0.00052	0.00064	<0.00020	<0.00020	- -	- -
	08/21/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	0.00292	0.00092	0.0020	<0.00010	<0.00020	- -	- -
	02/25/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/27/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	03/10/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	08/17/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	02/07/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	08/16/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00123 JB	- -	- -
	04/05/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000859 JB	- -	- -
	04/04/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	06/18/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	- -	- -	- -	- -	- -	- -	- -
	06/18/2020	FD	<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	- -	- -	- -	- -	- -	- -	- -
	10/08/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	04/15/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000149 J	- -	- -	- -	- -	- -	- -	- -
	09/16/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000274 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	04/14/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000268 J	- -	- -	- -	- -	- -	- -	- -
	10/13/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000248 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	03/23/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000331 J	- -	- -	- -	- -	- -	- -	- -
	10/05/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000265 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
MW-7	06/19/2009		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	02/02/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	08/18/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	03/01/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/20/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	02/02/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/27/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/25/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/27/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000507 J	- -	- -

Table 2. Organic Constituent Concentrations in Groundwater

HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	WQCC Volatiles (Method 8260, mg/L)						WQCC Semi-Volatiles (Method 8270, mg/L)					TPH (Method 8015, mg/L)	
			Benzene	Ethylbenzene	Toluene	Total Xylenes	Naphthalene	Chloroform	Total Naphthalene	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Total Phenols	TPH GRO (Low Fraction)	TPH DRO (High Fraction)
New Mexico WQCC Groundwater Standards			0.005	0.7	1	0.62	0.03	0.1	0.03	N/A	N/A	N/A	0.005	N/A	N/A
MW-8	06/18/2009		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	01/18/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	08/18/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	02/25/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/19/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	02/01/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.0020	<0.0020	- -	<0.0020	<0.0020	- -	- -
	07/27/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/26/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/27/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000990 J	- -	- -
	03/08/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	08/18/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	02/08/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	08/17/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	04/05/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	04/04/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	06/18/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	- -	- -	- -	- -	- -	- -	- -
	10/08/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000307 J	- -	- -	- -	- -	- -	- -	- -
	04/15/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000573 J	- -	- -	- -	- -	- -	- -	- -
	09/16/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000183 J	- -	- -	- -	- -	- -	- -	- -
	04/14/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000352 J	- -	- -	- -	- -	- -	- -	- -
	10/13/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	- -	- -	- -	- -	- -	- -	- -
	03/23/2023		--[2]	--[2]	--[2]	--[2]	--[2]	--[2]	- -	- -	- -	- -	- -	- -	- -
	10/05/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	- -	- -	- -	- -	- -	- -	- -
MW-9	06/16/2009		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	01/14/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	08/19/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	03/01/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/15/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/31/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/25/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/25/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/26/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/17/2016		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/16/2017		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/08/2020		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	09/16/2021		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/13/2022		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/05/2023		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
MW-10	06/16/2009		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	01/13/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	08/19/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	- -	- -	<0.00020	<0.00020	- -	- -
	03/03/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	0.00028	0.00028	<0.00020	<0.00020	<0.00020	- -	- -
	07/15/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/31/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/25/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	0.00032	- -	- -
	02/26/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/26/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/26/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/17/2016		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/16/2017		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/08/2020		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	09/16/2021		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/13/2022		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/05/2023		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
MW-11	06/18/2009		0.10	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	01/18/2010		0.20 E	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	08/18/2010		0.078	0.021	<0.0050	<0.015	<0.0050	- -	0.00036	0.00036	- -	- -	0.00122	- -	- -
	02/25/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/19/2011		1.2	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	0.00036	0.00036	- -	<0.00020	0.00089	- -	- -
	02/01/2012		7.8	0.051	<0.0050	0.20	0.096	<0.0050	0.0435	0.039	- -	0.0045	0.0035	- -	- -
	07/27/2012		0.049	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	0.00022	0.00022	<0.00020	<0.00020	0.00023	- -	- -
	02/27/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2013	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2013	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/28/2014		0.96	0.25	<0.0050	0.20	0.0064	<0.0050	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -
	08/20/2014		0.11	0.011	<0.0050	0.030	<0.0050	<0.0050	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -
	02/27/2015		0.0026	0.00099 J	<0.00078	0.0036	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	0.0010 J	- -	- -
	08/28/2015		0.00856	0.00194	0.00283 J	0.0158	<0.00100	0.000420 J	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -
	08/28/2015	FD	0.00922	0.00216	0.00305 J	0.0180	<0.00100	0.000467 J	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -
	03/09/2016		0.000627 J	0.000778 J	<0.000780	<0.00106	<0.00100	<0.000324	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -
	03/09/2016	FD	0.000772 J	0.000908 J	<0.000780	<0.00106	<0.00100	<0.000324	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -
	08/15/2016		DRY WELL - PLUGGED AND ABANDONED DECEMBER 2016												

Table 2. Organic Constituent Concentrations in Groundwater

HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	WQCC Volatiles (Method 8260, mg/L)						WQCC Semi-Volatiles (Method 8270, mg/L)					TPH (Method 8015, mg/L)	
			Benzene	Ethylbenzene	Toluene	Total Xylenes	Naphthalene	Chloroform	Total Naphthalene	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Total Phenols	TPH GRO (Low Fraction)	TPH DRO (High Fraction)
New Mexico WQCC Groundwater Standards			0.005	0.7	1	0.62	0.03	0.1	0.03	N/A	N/A	N/A	0.005	N/A	N/A
MW-11R	02/08/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	02/08/2017	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/17/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000392 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00167 JB	- -	- -
	04/05/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000350 J	<0.000413	<0.000413	<0.000368	<0.000345	0.000744 JB	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	04/04/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000971 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00284 J	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000614 J	<0.000372	<0.000372	<0.000332	<0.000311	0.000390 J	- -	- -
	06/18/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000844 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	10/08/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000927 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	04/15/2021		0.000660 J	<0.000137	<0.000278	<0.000174	<0.00100	0.000900 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	09/16/2021		0.000157 JB	<0.000137	<0.000278	<0.000174	<0.00100	0.000916 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	04/14/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.00174 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	10/13/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.00272 J	0.0000799 J	<0.000159	0.0000799 J	<0.000117	<0.00433	- -	- -
	03/23/2023		--(2)	--(2)	--(2)	--(2)	--(2)	--(2)	--(2)	--(2)	--(2)	--(2)	--(2)	- -	- -
	10/05/2023		0.000170 J	<0.000137	<0.000278	<0.000174	<0.00100	0.00346 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
MW-12	06/16/2009		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	01/18/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	08/20/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/25/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/19/2011		<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	08/21/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/24/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/25/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000362 J	- -	- -
	03/09/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/18/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000439	<0.000439	<0.000392	<0.000367	<0.000394	- -	- -
	02/08/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/16/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00273 JB	- -	- -
	04/05/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00237 JB	- -	- -
	04/05/2018	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00230 JB	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00262 JB	- -	- -
	10/01/2018	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00441 JB	- -	- -
	04/04/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00257 J	- -	- -
	04/04/2019	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000708 J	- -	- -
	10/24/2019		--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	- -	- -
	06/18/2020		--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	- -	- -
	08/13/2020		DRY WELL - PLUGGED AND ABANDONED AUGUST 2020												
MW-12R2	10/08/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	04/15/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	09/16/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	04/14/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	10/13/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	0.00662 J	- -	- -
	03/23/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	10/05/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
MW-13	06/16/2009		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	01/18/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	08/18/2010		0.016	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	02/25/2011		0.0057	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	0.00091	- -	- -
	07/19/2011		0.0063	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	02/01/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/26/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/19/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/27/2015		0.00034 J	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/26/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000379 J	- -	- -
	03/08/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/17/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	02/08/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	08/17/2017		0.000397 J	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00270 JB	- -	- -
	04/05/2018		--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	- -	- -
	09/26/2018		DRY WELL - PLUGGED AND ABANDONED SEPTEMBER 2018												
MW-13R	10/01/2018		<0.000331	<0.000384	0.000506 J	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00134 JB	- -	- -
	04/04/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00164 J	- -	- -
	06/18/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	- -	- -	- -	- -	- -	- -	- -
	06/18/2020	FD	<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	- -	- -	- -	- -	- -	- -	- -
	10/08/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000113 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	10/08/2020	FD	<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	04/15/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000195 J	- -	- -	- -	- -	- -	- -	- -
	09/16/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000239 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	09/16/2021	FD	<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000114 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	04/14/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000225 J	- -	- -	- -	- -	- -	- -	- -
	10/13/2022		0.0000984 J	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	10/13/2022	FD	<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	03/23/2023		--(2)	--(2)	--(2)	--(2)	--(2)	--(2)	- -	- -	- -	- -	- -	- -	- -
	10/05/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000233 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -

Table 2. Organic Constituent Concentrations in Groundwater

HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	WQCC Volatiles (Method 8260, mg/L)						WQCC Semi-Volatiles (Method 8270, mg/L)					TPH (Method 8015, mg/L)	
			Benzene	Ethylbenzene	Toluene	Total Xylenes	Naphthalene	Chloroform	Total Naphthalene	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Total Phenols	TPH GRO (Low Fraction)	TPH DRO (High Fraction)
New Mexico WQCC Groundwater Standards			0.005	0.7	1	0.62	0.03	0.1	0.03	N/A	N/A	N/A	0.005	N/A	N/A
MW-14	06/16/2009		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	01/18/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	08/20/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/25/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/18/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/31/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/25/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/21/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	- -	- -	- -	- -	- -	- -	- -
	02/22/2013		- -	- -	- -	- -	- -	- -	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	- -	- -
	08/22/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -
	02/28/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -
	08/20/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -
	02/27/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/27/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000530 J	- -	- -
	08/19/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000413	<0.000413	<0.000368	<0.000345	0.000642 J	- -	- -
	08/16/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00318 JB	- -	- -
	09/27/2018		DRY WELL - PLUGGED AND ABANDONED SEPTEMBER 2018												
MW-14R	10/01/2018		<0.000331	<0.000384	0.00186	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00278 JB	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	10/08/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	09/16/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	10/13/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	10/05/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
MW-15	08/20/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/24/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/14/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	0.017	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/30/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	0.0095	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/24/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	0.017	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/19/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	0.030	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	0.0060	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/2013	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	0.0056	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/24/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	0.013	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/24/2014	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	0.011	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	0.011	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	08/21/2014	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	0.011	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/24/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	0.0081	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/27/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00447 J	<0.000372	<0.000372	<0.000332	<0.000311	0.000997 J	- -	- -
	08/27/2015	FD	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00574	<0.000372	<0.000372	<0.000332	<0.000311	0.000595 J	- -	- -
	03/07/2016		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/15/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00570	<0.000372	<0.000372	<0.000332	<0.000311	0.000534 J	- -	- -
	08/15/2016	FD	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00539	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	02/06/2017		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/16/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00474 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00209 JB	- -	- -
	04/05/2018		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00217 J	<0.000372	<0.000372	<0.000332	<0.000311	0.000915 JB	- -	- -
	04/04/2019		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00226 J	<0.000372	<0.000372	<0.000332	<0.000311	0.000561 J	- -	- -
	06/18/2020		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/08/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000889 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	04/15/2021		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	06/09/2021		PLUGGED AND ABANDONED JUNE 2021												
MW-15R	09/16/2021		0.000105 JB	<0.000137	<0.000278	<0.000174	<0.00100	0.0120	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	04/14/2022		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/13/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.0119	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	03/23/2023		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/05/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.0173	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
MW-16	08/20/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/24/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/15/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	0.00030	0.00030	- -	<0.00020	<0.00020	- -	- -
	07/15/2011	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/30/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/24/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/20/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/25/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/19/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/24/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/27/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000397 J	- -	- -
	08/15/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/17/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00429 JB	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000817 JB	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000913 J	- -	- -
	08/13/2020		DRY WELL - PLUGGED AND ABANDONED AUGUST 2020												
MW-16R	10/08/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	09/16/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	10/13/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000201 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	10/05/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.00181 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
MW-17	08/20/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/24/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/18/2011		<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

HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	WQCC Volatiles (Method 8260, mg/L)						WQCC Semi-Volatiles (Method 8270, mg/L)					TPH (Method 8015, mg/L)	
			Benzene	Ethylbenzene	Toluene	Total Xylenes	Naphthalene	Chloroform	Total Naphthalene	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Total Phenols	TPH GRO (Low Fraction)	TPH DRO (High Fraction)
New Mexico WQCC Groundwater Standards			0.005	0.7	1	0.62	0.03	0.1	0.03	N/A	N/A	N/A	0.005	N/A	N/A
MW-17R	08/22/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/26/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/27/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000465 J	- -	- -
	03/08/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/17/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	02/09/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/16/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00208 JB	- -	- -
	04/05/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	0.00133	0.00133	<0.000332	<0.000311	0.00488 JB	- -	- -
	04/05/2018	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00290 JB	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00259 JB	- -	- -
	04/04/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00242 J	- -	- -
	04/04/2019	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000493 J	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000373 J	- -	- -
	06/18/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	10/08/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	10/24/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	04/15/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	09/16/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	10/13/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	03/23/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	10/05/2023		--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	- -	- -
MW-18	08/23/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	02/24/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/18/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/31/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	0.00021	0.00021	- -	<0.00020	<0.00020	- -	- -
	07/25/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/22/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	0.00056	- -	- -
	08/20/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/26/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/25/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000507 J	- -	- -
	08/17/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000439	<0.000439	<0.000392	<0.000367	0.000507 J	- -	- -
	08/16/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00205 JB	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00283 JB	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000389 J	- -	- -
	10/08/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	06/09/2021		PLUGGED AND ABANDONED JUNE 2021												
MW-18R	09/16/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	10/13/2022		<0.0000941	<0.000137	<0.000278	0.000200 J	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	10/05/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000167	<0.000167	<0.0000829	<0.000123	<0.00455	- -	- -
MW-19	08/23/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	02/24/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/18/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/31/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/25/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/2013	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2014	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	0.00034	- -	- -
	08/19/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	08/19/2014	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/26/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	02/26/2015	FD	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/26/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000610 J	- -	- -
	03/08/2016		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/17/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.00186	<0.00186	<0.00166	<0.00156	0.00818 J	- -	- -
	02/08/2017		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/16/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00310 JB	- -	- -
	08/16/2017	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00320 JB	- -	- -
	04/05/2018		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00216 JB	- -	- -
	04/04/2019		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	06/18/2020		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/08/2020		--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	- -	- -
	04/15/2021		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	06/09/2021		PLUGGED AND ABANDONED JUNE 2021												
MW-19R	09/16/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	04/14/2022		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/13/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	03/23/2023		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/05/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
MW-20	08/23/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	02/25/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/18/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/31/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/25/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/22/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/19/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/24/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/25/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000508 J	- -	- -
	08/16/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/17/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00262 JB	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00309 JB	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00161 J	- -	- -
	10/08/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	06/09/2021		PLUGGED AND ABANDONED JUNE 2021												

Table 2. Organic Constituent Concentrations in Groundwater

HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	WQCC Volatiles (Method 8260, mg/L)						WQCC Semi-Volatiles (Method 8270, mg/L)					TPH (Method 8015, mg/L)	
			Benzene	Ethylbenzene	Toluene	Total Xylenes	Naphthalene	Chloroform	Total Naphthalene	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Total Phenols	TPH GRO (Low Fraction)	TPH DRO (High Fraction)
New Mexico WQCC Groundwater Standards			0.005	0.7	1	0.62	0.03	0.1	0.03	N/A	N/A	N/A	0.005	N/A	N/A
MW-20R	09/16/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	10/13/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	10/05/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
MW-21	08/23/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	02/28/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/28/2011	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/19/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/31/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/26/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/22/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	0.00131	0.0010	<0.00020	0.00031	<0.00020	- -	- -
	08/20/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/25/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/19/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/24/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/25/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000497 J	- -	- -
	08/16/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.624
	08/17/2017		- -	- -	- -	- -	- -	- -	<0.000372	<0.000372	<0.000332	<0.000311	0.00375 JB	0.0889 JB	0.124
	10/01/2018		- -	- -	- -	- -	- -	- -	<0.000372	<0.000372	<0.000332	<0.000311	0.000383 JB	<0.0314	0.120
	10/24/2019		- -	- -	- -	- -	- -	- -	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	0.0524 JB	0.196
	10/08/2020		- -	- -	- -	- -	- -	- -	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.175
	09/16/2021		- -	- -	- -	- -	- -	- -	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.312
	10/13/2022		- -	- -	- -	- -	- -	- -	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.136
	10/05/2023		- -	- -	- -	- -	- -	- -	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]
MW-22	08/23/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	02/28/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/19/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/31/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/26/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/21/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/25/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/24/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/25/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/16/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.819
	08/17/2017		<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
	10/01/2018		<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
	10/24/2019		<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
	10/08/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.122 J
	09/16/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.179 J
	10/13/2022		<0.0000941	0.000152 J	<0.000278	0.000227 J	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.450
	10/05/2023		--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]
MW-23	08/23/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	02/28/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/19/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	02/01/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/26/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/25/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/25/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/25/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/17/2016		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/17/2017		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/13/2020		DRY WELL - PLUGGED AND ABANDONED AUGUST 2020												
MW-23R	10/08/2020		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	09/16/2021		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/13/2022		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/05/2023		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
MW-24	08/24/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	02/28/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/14/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	02/01/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/30/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/30/2012	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/25/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/25/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000405 J	- -	- -
	08/16/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/17/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00301 JB	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00178 JB	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	10/08/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	06/09/2021		PLUGGED AND ABANDONED JUNE 2021												
MW-24R	09/16/2021		0.000725 JB	<0.000137	0.000828 J	0.000194 J	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	10/13/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	10/05/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -

Table 2. Organic Constituent Concentrations in Groundwater

HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	WQCC Volatiles (Method 8260, mg/L)						WQCC Semi-Volatiles (Method 8270, mg/L)					TPH (Method 8015, mg/L)	
			Benzene	Ethylbenzene	Toluene	Total Xylenes	Naphthalene	Chloroform	Total Naphthalene	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Total Phenols	TPH GRO (Low Fraction)	TPH DRO (High Fraction)
New Mexico WQCC Groundwater Standards			0.005	0.7	1	0.62	0.03	0.1	0.03	N/A	N/A	N/A	0.005	N/A	N/A
MW-25	08/23/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	02/28/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/18/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	02/01/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/26/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/2013	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2014	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/19/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	08/19/2014	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/25/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	02/25/2015	FD	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/25/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000728 J	- -	- -
	08/25/2015	FD	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000581 J	- -	- -
	03/09/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/16/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/16/2016	FD	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	02/07/2017		0.000424 J	<0.000384	<0.000412	0.00207 J	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/16/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00347 JB	- -	- -
	08/16/2017	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00233 JB	- -	- -
	04/05/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	0.00159	0.00159	<0.000349	<0.000326	0.000731 JB	- -	- -
	04/05/2018	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00118 JB	- -	- -
	10/01/2018	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00274 JB	- -	- -
	04/04/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00201 J	- -	- -
	04/04/2019	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000526 J	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00240 J	- -	- -
	10/24/2019	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000637 J	- -	- -
	06/18/2020		0.000201 J	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	10/08/2020		0.000137 J	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	04/15/2021		0.000809 J	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	06/09/2021		PLUGGED AND ABANDONED JUNE 2021												
MW-26	08/24/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	02/28/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/14/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	02/01/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/26/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	0.00061	- -	- -
	02/26/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/25/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/25/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/17/2016		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/17/2017		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/13/2020		DRY WELL - PLUGGED AND ABANDONED AUGUST 2020												
MW-26R	10/08/2020		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	09/16/2021		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/13/2022		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/05/2023		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
MW-27	08/18/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	02/25/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	0.00099	- -	- -
	07/20/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	0.00034	- -	- -
	02/01/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/26/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/27/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/26/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	03/08/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	08/18/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	02/08/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	08/17/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00241 JB	- -	- -
	04/05/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000380	<0.000380	<0.000339	<0.000317	0.00451 JB	- -	- -
	04/04/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000917 J	- -	- -
	06/18/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	- -	- -	- -	- -	- -	- -	- -
	10/08/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	04/15/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	- -	- -	- -	- -	- -	- -	- -
	09/16/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	04/14/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000199 J	- -	- -	- -	- -	- -	- -	- -
	10/13/2022		--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	- -	- -
	03/23/2023		--(2)	--(2)	--(2)	--(2)	--(2)	--(2)	- -	- -	- -	- -	- -	- -	- -
	10/05/2023		--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	- -	- -

Table 2. Organic Constituent Concentrations in Groundwater

HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	WQCC Volatiles (Method 8260, mg/L)						WQCC Semi-Volatiles (Method 8270, mg/L)					TPH (Method 8015, mg/L)	
			Benzene	Ethylbenzene	Toluene	Total Xylenes	Naphthalene	Chloroform	Total Naphthalene	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Total Phenols	TPH GRO (Low Fraction)	TPH DRO (High Fraction)
New Mexico WQCC Groundwater Standards			0.005	0.7	1	0.62	0.03	0.1	0.03	N/A	N/A	N/A	0.005	N/A	N/A
MW-28	08/24/2010		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/28/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	02/23/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/14/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/30/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/24/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/19/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	0.00086	- -	- -
	08/20/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	0.00022	- -	- -
	02/24/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/19/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/23/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	0.00033 J	- -	- -
	08/27/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000774 J	- -	- -
	03/07/2016		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/15/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000391	<0.000391	<0.000349	<0.000326	0.000459 J	- -	- -
	02/06/2017		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/17/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00236 JB	- -	- -
	04/05/2018		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00119 JB	- -	- -
	04/04/2019		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	06/18/2020		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/08/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	04/15/2021		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	09/16/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	04/14/2022		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/13/2022		--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -
	03/23/2023		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/05/2023		--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -
MW-29	08/24/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	08/24/2010	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	02/28/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/14/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/30/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	0.00050	0.00050	- -	<0.00020	<0.00020	- -	- -
	07/24/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2014	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/25/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	0.00039 J	- -	- -
	08/27/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.000329 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	03/08/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00224 J	- -	- -	- -	- -	- -	- -	- -
	08/17/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00197 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	02/09/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00246 J	- -	- -	- -	- -	- -	- -	- -
	08/17/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00175 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00419 JB	- -	- -
	04/05/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00142 J	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000903 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00164 JB	- -	- -
	04/04/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00133 J	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000578 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	10/24/2019	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000686 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	06/18/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000719 J	- -	- -	- -	- -	- -	- -	- -
	10/08/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.00146 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	04/15/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.00156 J	- -	- -	- -	- -	- -	- -	- -
	09/16/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.00276 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	04/14/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000558 J	- -	- -	- -	- -	- -	- -	- -
	10/13/2022		--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -
	03/23/2023		--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -	- -	- -	- -	- -	- -
	10/05/2023		--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -
MW-30	06/21/2013		<0.0050	<0.0050	<0.0050	<0.015	- -	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/25/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	0.00072 J	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/28/2015		<0.000331	<0.000384	<0.000780	0.00142 J	<0.00100	0.000887 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	03/08/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.000964 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	03/08/2016	FD	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.000911 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/16/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00107 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/16/2016	FD	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00111 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	02/09/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00190 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/16/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00376 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00799 JB	0.0792 J	0.0551 J
	08/16/2017	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00336 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00141 JB	- -	- -
	04/05/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00468 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00900 JB	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00549	<0.000372	<0.000372	<0.000332	<0.000311	0.00181 JB	- -	- -
	10/01/2018	FD	<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
	04/04/2019		<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
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00916	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	10/24/2019	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.0110	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	06/18/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.0139	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	10/08/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.0159	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	04/15/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.0266	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	09/16/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.0282	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	04/14/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.0311	<0.000167	<0.000167	<0.0000829	<0.000123	<0.00455	- -	- -
	10/13/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.0288	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
	03/23/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.0317	0.000288 J	0.000288 J	<0.0000790	<0.000117	<0.00433	- -	- -
	10/05/2023		--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -

Table 2. Organic Constituent Concentrations in Groundwater

HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	WQCC Volatiles (Method 8260, mg/L)						WQCC Semi-Volatiles (Method 8270, mg/L)					TPH (Method 8015, mg/L)	
			Benzene	Ethylbenzene	Toluene	Total Xylenes	Naphthalene	Chloroform	Total Naphthalene	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Total Phenols	TPH GRO (Low Fraction)	TPH DRO (High Fraction)
New Mexico WQCC Groundwater Standards			0.005	0.7	1	0.62	0.03	0.1	0.03	N/A	N/A	N/A	0.005	N/A	N/A
MW-32	06/15/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.507
	06/15/2017	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.427
	08/17/2017		<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
	04/05/2018		<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
	10/01/2018		<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
	10/01/2018	FD	<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
	04/04/2019		<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
	10/24/2019		<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
	10/24/2019	FD	<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
	06/18/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.146
	10/08/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	0.0320 JB	0.507
	10/08/2020	FD	<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.438
	04/15/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.366
	04/15/2021	FD	<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.380
	09/16/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.178
	09/16/2021	FD	<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.182 J
	04/14/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.385
	04/14/2022	FD	<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.364
	10/13/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.382
	10/13/2022	FD	<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.353
	03/23/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.546
	03/23/2023	FD	<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.405
	10/05/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.334
	10/05/2023	FD	<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.316
MW-33	06/15/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	0.105 B	3.14
	08/17/2017		0.000884 J	0.000627 J	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00306 JB	0.335 B	0.250
	04/05/2018		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
	10/01/2018		<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
	04/04/2019		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
	10/24/2019		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	0.167
	06/18/2020		0.000244 J	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	0.229	0.0490 J
	10/08/2020		0.000342 J	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	0.107 B	0.0941 J
	10/08/2020	FD	0.000342 J	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0989 J
	04/15/2021		0.000296 J	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	0.0501 J	0.161 B
	04/15/2021	FD	0.000282 J	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	0.0474 J	0.188 B
	09/16/2021		0.000313 JB	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	0.0464 J	0.0765 J
	09/16/2021	FD	0.000284 JB	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	0.0707 J	0.0786 J
	04/14/2022		0.000234 J	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	0.188	0.138
	04/14/2022	FD	0.000225 J	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.142
	10/13/2022		0.000217 J	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	0.0398 J	0.173
	10/13/2022	FD	0.000216 J	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.177
	03/23/2023		0.000285 J	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.198
	03/23/2023	FD	0.000240 J	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.183
	10/05/2023		0.000281 J	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	0.0842 J	0.478
	10/05/2023	FD	0.000285 J	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	0.0509 J	0.483
North Well	06/18/2009		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	01/14/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	08/24/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	03/03/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/20/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	02/02/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/30/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/19/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	12/17/2014		<0.0010	<0.0010	<0.0010	<0.0015	<0.0020	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	- -	- -
	03/09/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	05/19/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00033	<0.00031	<0.00033	- -	- -
	08/28/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	12/17/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	03/10/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	05/25/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/18/2016		0.000425 J	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	<0.0247
	12/08/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.0621 J
	02/07/2017		<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
	05/31/2017		<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
	08/17/2017		<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
	12/14/2017		<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
	02/23/2018		<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
	04/05/2018		<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
	07/31/2018		<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
	10/01/2018		<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
	01/23/2019		<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
	04/04/2019		<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
	07/11/2019		<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
	10/24/2019		<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
	01/15/2020		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00108 J	0.0611 JB	<0.0247
	06/18/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	<0.0247
	08/19/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	<0.0247
	10/08/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	0.0342 JB	0.0415 J
	01/28/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	0.0420 JB	0.0450 JB
	04/15/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0644 J
	07/15/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	0.000169 J	0.000169 J	<0.0000790	<0.000117	<0.00433	<0.0314	0.0368 J
	09/16/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	<0.0247
	01/20/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0357 J
	04/14/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0366 J
	07/14/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0417 JB
	10/13/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0610 J
	01/26/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	0.000303 J	0.000303 J	<0.0000790	<0.000117	<0.00433	0.0382 JB	0.0768 JB
	03/23/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0759 J
	07/27/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	<0.0247
	10/05/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0572 J

Table 2. Organic Constituent Concentrations in Groundwater

HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	WQCC Volatiles (Method 8260, mg/L)						WQCC Semi-Volatiles (Method 8270, mg/L)					TPH (Method 8015, mg/L)	
			Benzene	Ethylbenzene	Toluene	Total Xylenes	Naphthalene	Chloroform	Total Naphthalene	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Total Phenols	TPH GRO (Low Fraction)	TPH DRO (High Fraction)
New Mexico WQCC Groundwater Standards			0.005	0.7	1	0.62	0.03	0.1	0.03	N/A	N/A	N/A	0.005	N/A	N/A
South Well	06/22/2009		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	01/14/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	08/24/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	03/03/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/20/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	02/02/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/30/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/19/2013		0.0052	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/28/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	08/22/2014	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	12/17/2014		0.0023	<0.0010	<0.0010	<0.0015	<0.0020	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	- -	- -
	12/17/2014	FD	0.0023	<0.0010	<0.0010	<0.0015	<0.0020	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	- -	- -
	03/09/2015		0.0014	<0.00038	<0.00078	<0.0011	<0.0010	0.00039 J	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	03/09/2015	FD	0.0016	<0.00038	<0.00078	<0.0011	<0.0010	0.00037 J	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	05/19/2015		0.0010 J	<0.00038	<0.00078	<0.0011	<0.0010	0.00052 J	<0.00037	<0.00037	<0.00033	<0.00031	<0.00033	- -	- -
	05/19/2015	FD	0.00091 J	<0.00038	<0.00078	<0.0011	<0.0010	0.00054 J	<0.00037	<0.00037	<0.00033	<0.00031	<0.00033	- -	- -
	08/28/2015		0.00113	<0.000384	<0.000780	<0.00106	<0.00100	0.000518 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/28/2015	FD	0.000921 J	<0.000384	<0.000780	<0.00106	<0.00100	0.000527 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	12/17/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.000815 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	12/17/2015	FD	0.00119	<0.000384	<0.000780	<0.00106	<0.00100	0.000861 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	03/10/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	05/25/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00114 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	05/25/2016	FD	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00118 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/18/2016		0.000451 J	<0.000384	<0.000780	<0.00106	<0.00100	0.00135 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	0.0343 J	0.0303 J
	08/18/2016	FD	0.000509 J	<0.000384	<0.000780	<0.00106	<0.00100	0.00138 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.0482 J
	12/08/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00228 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.0961 J
	12/08/2016	FD	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00190 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.118
	02/07/2017		<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
	02/07/2017	FD	<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
	05/31/2017		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
	05/31/2017	FD	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
	08/17/2017		<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
	08/17/2017	FD	<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
	12/14/2017		<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
	12/14/2017	FD	<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
	02/23/2018		<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
	02/23/2018	FD	<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
	04/05/2018		<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
	07/31/2018		<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
	07/31/2018	FD	<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
	10/01/2018		<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
	01/23/2019		<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
	01/23/2019	FD	<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
	04/04/2019		<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
	07/11/2019		<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
	10/24/2019		<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
	01/15/2020		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00111 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00102 J	0.0405 JB	<0.0247
	06/18/2020		0.000210 J	<0.000137	<0.000278	<0.000174	<0.00100	0.000757 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	<0.0247
	08/19/2020		0.000168 J	<0.000137	<0.000278	<0.000174	<0.00100	0.00108 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	<0.0247
	08/19/2020	FD	0.000187 J	<0.000137	<0.000278	<0.000174	<0.00100	0.00102 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	<0.0247
	10/08/2020		0.000205 J	<0.000137	<0.000278	<0.000174	<0.00100	0.000912 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0461 J
	10/08/2020	FD	0.000224 J	<0.000137	<0.000278	<0.000174	<0.00100	0.000877 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0406 J
	01/28/2021		0.000323 J	<0.000137	<0.000278	<0.000174	<0.00100	0.000936 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0582 JB
	01/28/2021	FD	0.000194 J	<0.000137	<0.000278	<0.000174	<0.00100	0.00127 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0575 JB
	04/15/2021		0.000397 J	<0.000137	<0.000278	<0.000174	<0.00100	0.000898 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0865 J
	04/15/2021	FD	0.000447 J	<0.000137	<0.000278	<0.000174	<0.00100	0.000949 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0812 J
	07/15/2021		0.000491 J	<0.000137	<0.000278	<0.000174	<0.00100	0.000805 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0625 J
	07/15/2021	FD	0.000437 J	<0.000137	<0.000278	<0.000174	<0.00100	0.000883 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0510 J
	09/16/2021		0.000345 J	<0.000137	<0.000278	<0.000174	<0.00100	0.000827 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	<0.0247
	09/16/2021	FD	0.000304 J	<0.000137	<0.000278	<0.000174	<0.00100	0.000767 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	<0.0247
	01/20/2022		0.000339 J	<0.000137	<0.000278	<0.000174	<0.00100	0.000699 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0514 J
	01/20/2022	FD	0.000325 J	<0.000137	<0.000278	<0.000174	<0.00100	0.000715 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0558 J
	04/14/2022		0.000255 J	<0.000137	<0.000278	<0.000174	<0.00100	0.00106 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0647 J
	04/14/2022	FD	0.000260 J	<0.000137	<0.000278	<0.000174	<0.00100	0.00103 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0803 J
	07/14/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000939 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433 [R]	<0.0314	0.0675 JB
	07/14/2022	FD	<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000816 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0685 JB
	10/13/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000828 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0932 J
	10/13/2022	FD	<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000883 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0754 J
	01/26/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.00127 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0717 JB
	01/26/2023	FD	<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.00134	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	0.0323 JB	0.0606 JB
	03/23/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.00154 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0429 J
	03/23/2023	FD	<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.00106 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.103
	07/27/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000763 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	<0.0247
	07/27/2023	FD	<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000619	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433 [R]	<0.0314	<0.0247
	10/05/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.00113 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0524 J
	10/05/2023	FD	<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.00125 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0533 J

Table 2. Organic Constituent Concentrations in Groundwater

HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	WQCC Volatiles (Method 8260, mg/L)						WQCC Semi-Volatiles (Method 8270, mg/L)					TPH (Method 8015, mg/L)	
			Benzene	Ethylbenzene	Toluene	Total Xylenes	Naphthalene	Chloroform	Total Naphthalene	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Total Phenols	TPH GRO (Low Fraction)	TPH DRO (High Fraction)
New Mexico WQCC Groundwater Standards			0.005	0.7	1	0.62	0.03	0.1	0.03	N/A	N/A	N/A	0.005	N/A	N/A
East Well	06/18/2009		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	--	--	--	--	--	--	--	--
	01/14/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	--	--	--	--	--	--	--	--
	08/25/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	--	--	--	--	--	--	--	--
	03/03/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	--	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	--	--
	07/20/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	--	<0.00020	<0.00020	--	--
	02/02/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	--	<0.00020	<0.00020	--	--
	07/30/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	--	--
	08/27/2012		<0.0050	<0.0050	<0.0050	<0.015	--	<0.0050	<0.00020	<0.00020	<0.00020	--	<0.00020	--	--
	09/26/2012		<0.0050	<0.0050	<0.0050	<0.015	--	<0.0050	<0.00020	<0.00020	<0.00020	--	<0.00020	--	--
	10/22/2012		<0.0050	<0.0050	<0.0050	<0.015	--	<0.0050	<0.00020	<0.00020	<0.00020	--	<0.00020	--	--
	12/27/2012		<0.0050	<0.0050	<0.0050	<0.015	--	<0.0050	<0.00020	<0.00020	<0.00020	--	<0.00020	--	--
	02/28/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	--	--
	08/22/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	--	--
	12/17/2014		<0.0010	<0.0010	<0.0010	<0.0015	<0.0020	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	--	--
	03/09/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	--	--
	05/19/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00033	<0.00031	<0.00033	--	--
	08/28/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	--	--
	12/17/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	--	--
	03/10/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	--	--
	05/25/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	--	--
	08/18/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.0357 J
	12/08/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.0673 J
	02/07/2017		<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
	05/31/2017		<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
	08/17/2017		<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
	12/14/2017		<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
	02/23/2018		<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
	04/05/2018		<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
	07/31/2018		<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
	10/01/2018		<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
	01/23/2019		<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
	04/04/2019		<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
	07/11/2019		<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
	10/24/2019		<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
	01/15/2020		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00417 J	0.0353 JB	<0.0247
	06/18/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	<0.0247
	08/19/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	<0.0247
	10/08/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0366 J
	01/28/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0943 JB
	04/15/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0703 J
	07/15/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	<0.0247
	09/16/2021		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	0.000475 J	0.000187 J	0.000117 J	0.000171 J	<0.00433	<0.0314	<0.0247
	11/10/2021		--	--	--	--	--	--	<0.000159	<0.000159	<0.0000790	<0.000117	--	--	--
	11/10/2021	FD	--	--	--	--	--	--	<0.000159	<0.000159	<0.0000790	<0.000117	--	--	--
	01/20/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	<0.0247
	04/14/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0480 J
	07/14/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0267 JB
	10/13/2022		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0496 J
	01/26/2023		0.0000943 J	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	0.0315 B	0.0510 B
	03/23/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0579 J
	07/27/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	<0.0247
	10/05/2023		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.0298 J

Notes:

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

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

mg/L = milligrams per liter

FD = Field Duplicate

< = Not reported above laboratory reporting limit

-- = Not Analyzed

(1)= Not analyzed due to insufficient water volume

(2)= Not analyzed due to refinery operations (inaccessible)

J = analyte was detected below the laboratory reporting limit (June 2009 to December 2014) or the method quantitation limit (February 2015 to April 2021) or reported detection limit (July 2021, to October 2023), 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

[R] analyte not usable for project objectives according to the United States Environmental Protection Agency (USEPA) *National Functional Guidelines for Organic Superfund Methods* (USEPA, November 2020)

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 present analyses completed by Pace Analytical National Center for Testing & Innovation (formerly ESC Lab Sciences) in Mount Juliet, Tennessee

Analytical data from 2009 to 2011 were provided by a previous consultant and could not be confirmed against the original data packages

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Table 3. Anions and TDS Concentrations in Groundwater

HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)
New Mexico WQCC Groundwater Standards			250	1.6	10.0	10.0	1.0	600.0	1,000
MW-1	06/19/2009		131	0.827	3.75	- -	- -	123	694
	01/19/2010		266	0.249	5.84	- -	- -	145	1,240
	08/18/2010		126	0.623	2.59	- -	- -	111	694
	03/01/2011		100	0.502	1.84	- -	- -	83.4	580
	07/20/2011		34.7	0.623	1.14	- -	- -	73.9	492
	02/02/2012		29.9	0.773	<1.00	- -	- -	65.4	392
	07/27/2012		27.3	0.944	<2.00	- -	- -	59.5	358
	02/27/2013		30.0	0.872	<2.00	- -	- -	67.2	400
	08/21/2013		33.2	1.03	<1.00	- -	- -	70.5	406
	02/27/2014		30.0	0.758	0.710	- -	- -	63.2	418
	08/21/2014		26.6	1.10	1.23	- -	- -	68.0	395
	02/25/2015		26	1.1	1.5	- -	- -	66	390
	08/27/2015		27.3	0.961	1.70	- -	- -	72.2	441
	03/09/2016		28.9	1.09	1.76	- -	- -	68.1	- -
	08/17/2016		38.4	1.04	1.93	- -	- -	69.3	436
	02/07/2017		54.6	0.978	2.91	- -	- -	78.9	- -
	08/17/2017		61.5	1.07	2.58	- -	- -	68.1	453
	04/05/2018		48.3	1.04	2.14	- -	- -	63.4	- -
	10/01/2018		42.0	1.03	2.59	- -	- -	65.7	402
	04/04/2019		42.0	1.06	2.80	- -	- -	59.8	- -
	10/24/2019		50.2	1.10	2.72	- -	- -	61.2	389
	06/18/2020		51.8	1.11	3.48	- -	- -	68.2	- -
	06/18/2020	FD	51.4	1.11	3.37	- -	- -	68.0	- -
	10/08/2020		49.9	1.04	3.48	- -	- -	64.4	403
	04/15/2021		50.6	0.926	4.04	- -	- -	68.6	- -
	09/16/2021		52.4	0.914	3.80	- -	- -	73.6	438
	04/14/2022		51.9	0.985	3.79	- -	- -	73.1	- -
	10/13/2022		61.2	0.937	- -	4.08	<0.0420	72.0	448
	03/23/2023		67.1	0.873	- -	3.92	<0.0420	69.1	- -
	10/05/2023		91.7 J	0.809	- -	5.21	0.0657 J	71.1 J	507
MW-2	06/22/2009		252	0.765	2.69	- -	- -	66.8	988
	01/19/2010		246	0.672	3.39	- -	- -	55.1	966
	08/16/2010		276	0.824	3.23	- -	- -	55.9	1,180
	03/03/2011		221	0.763	3.49	- -	- -	57.6	1,010
	07/14/2011		190	0.647	2.98	- -	- -	58.4	966
	01/30/2012		214	0.784	3.43	- -	- -	75.1	1,230
	07/24/2012		201	0.898	3.24	- -	- -	76.3	908
	02/19/2013		213	0.810	3.90	- -	- -	86.6	834
	08/20/2013		178	0.920	5.33	- -	- -	88.9	682
	02/25/2014		139	0.693	5.25	- -	- -	79.4	616
	08/21/2014		122	0.812	6.17	- -	- -	82.3	588
	02/24/2015		130	0.92	7.9	- -	- -	94	710
	08/28/2015		343	1.41	8.33	- -	- -	152	1,000
	03/07/2016		- -	- -	- -	- -	- -	- -	- -
	08/18/2016		123	0.864	6.84	- -	- -	71.8	640
	02/07/2017		- -	- -	- -	- -	- -	- -	- -
	08/16/2017		126	0.977	4.83	- -	- -	70.7	596
	04/05/2018		- -	- -	- -	- -	- -	- -	- -
	10/01/2018		142	0.839	4.46	- -	- -	83.4	693
	04/04/2019		- -	- -	- -	- -	- -	- -	- -
	10/24/2019		159	0.914	3.46	- -	- -	75.0	602
	06/18/2020		- -	- -	- -	- -	- -	- -	- -
	10/08/2020		151	0.915	3.66	- -	- -	96.0	713
	04/15/2021		- -	- -	- -	- -	- -	- -	- -
	09/16/2021		122	0.936	2.77	- -	- -	82.3	606
	04/14/2022		- -	- -	- -	- -	- -	- -	- -
	10/13/2022		133	0.993	- -	3.74	<0.0420	71.0	600
	03/23/2023		- -	- -	- -	- -	- -	- -	- -
	10/05/2023		195	0.878	- -	4.32	<0.0420	62.3	704

Table 3. Anions and TDS Concentrations in Groundwater

HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)
New Mexico WQCC Groundwater Standards			250	1.6	10.0	10.0	1.0	600.0	1,000
MW-3	06/16/2009		29.1	3.38	2.19	- -	- -	64.6	504
	01/14/2010		49.9	3.18	2.11	- -	- -	76.5	540
	01/14/2010	FD	49.8	3.18	2.11	- -	- -	75.0	552
	08/19/2010		72.7	2.99	1.52	- -	- -	77.7	518
	02/24/2011		88.2	2.58	3.02	- -	- -	80.5	566
	07/15/2011		67.3	2.37	2.59	- -	- -	74.7	568
	01/30/2012		65.6	2.94	2.37	- -	- -	86.3	472
	07/25/2012		35.0	2.70	<2.00	- -	- -	81.3	436
	02/27/2013		54.2	2.47	2.30	- -	- -	89.5	478
	08/22/2013		46.1	2.40	2.06	- -	- -	81.9	456
	02/26/2014		36.9	1.84	2.08	- -	- -	79.1	430
	08/21/2014		30.0	1.84	1.53	- -	- -	78.0	420
	02/26/2015		31	1.5	1.9	- -	- -	74	420
	02/26/2015	FD	32	1.6	2.0	- -	- -	74	420
	08/26/2015		27.3	1.55	1.88	- -	- -	77.6	520
	03/08/2016		23.9	1.32	1.84	- -	- -	65.4	- -
	08/18/2016		24.4	1.16	1.81	- -	- -	66.3	- -
	02/07/2017		25.4	1.25	1.83	- -	- -	77.3	- -
	08/16/2017		29.9	1.15	1.88	- -	- -	71.6	- -
	04/05/2018		26.9	0.896	1.75	- -	- -	73.1	- -
	10/01/2018		30.9	0.783	1.79	- -	- -	74.5	- -
	04/04/2019		37.9	0.628	1.73	- -	- -	73.4	- -
	10/24/2019		29.8	0.648	1.49	- -	- -	75.4	- -
	06/18/2020		30.9	0.442	1.84	- -	- -	76.5	- -
	10/08/2020		28.8	0.369	1.75	- -	- -	72.5	- -
	04/15/2021		26.7	0.353	1.85	- -	- -	76.1	- -
	09/16/2021		29.1	0.326	1.81	- -	- -	80.1	- -
	04/14/2022		27.4	0.357	1.63	- -	- -	73.9	- -
	10/13/2022		29.4	0.289 B	- -	1.68	<0.0420	71.8	- -
	03/23/2023		27.3	0.276	- -	1.50	<0.0420	67.5	- -
	10/05/2023		30.7	0.322	- -	1.69	<0.0420	68.0	- -
MW-4	06/16/2009		28.9	0.841	1.84	- -	- -	61.5	422
	01/13/2010		29.3	1.10	1.67	- -	- -	66.7	416
	08/19/2010		26.1	1.10	1.10	- -	- -	65.8	324
	02/28/2011		27.1	1.02	1.91	- -	- -	64.4	378
	07/15/2011		25.8	1.12	1.57	- -	- -	63.6	422
	01/30/2012		30.0	1.08	1.71	- -	- -	73.4	388
	07/24/2012		28.9	1.18	<2.00	- -	- -	69.4	414
	02/21/2013		26.6	1.05	<2.00	- -	- -	75.5	360
	08/20/2013		26.4	1.20	1.72	- -	- -	71.6	382
	02/25/2014		26.9	0.877	2.02	- -	- -	75.5	390
	08/20/2014		24.1	1.15	1.64	- -	- -	70.2	372
	02/24/2015		24	1.1	2.1	- -	- -	66	390
	08/28/2015		28.8	1.26	2.32	- -	- -	63.8	479
	08/15/2016		25.1	1.02	2.24	- -	- -	60.3	411
	08/17/2017		34.0	1.17	2.39	- -	- -	57.5	384
	10/01/2018		62.6	1.04	2.60	- -	- -	53.6	574
	10/24/2019		75.6	1.10	2.62	- -	- -	55.0	403
	10/08/2020		98.7	1.04	3.34	- -	- -	53.2	507
	09/16/2021		138	0.857	3.84	- -	- -	55.8	629
	10/13/2022		114	0.947	- -	3.64	<0.0420	58.6	616
	10/05/2023		97.7	0.917	- -	4.24	<0.0420	55.2	520

Table 3. Anions and TDS Concentrations in Groundwater

HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)
New Mexico WQCC Groundwater Standards			250	1.6	10.0	10.0	1.0	600.0	1,000
MW-5	06/16/2009		186	1.39	3.31	- -	- -	131	952
	01/18/2010		26.4	0.781	4.91	- -	- -	80.6	508
	08/20/2010		18.5	1.13	3.43	- -	- -	77.7	440
	02/28/2011		29.8	1.03	2.91	- -	- -	70.5	570
	07/19/2011		20.9	0.858	2.72	- -	- -	59.0	524
	01/31/2012		26.9	1.04	2.49	- -	- -	61.2	504
	01/31/2012	FD	27.1	1.05	2.54	- -	- -	62.0	436
	07/25/2012		15.9	1.10	2.22	- -	- -	50.1	434
	02/21/2013		10.9	1.04	2.01	- -	- -	40.8	412
	08/20/2013		13.9	1.16	2.05	- -	- -	44.2	448
	02/25/2014		11.8	0.877	2.52	- -	- -	48.4	436
	08/19/2014		8.71	1.16	1.68	- -	- -	44.6	478
	02/24/2015		21	1.4	2.2	- -	- -	43	520
	08/24/2015		19.9	1.52	1.97	- -	- -	39.9	586
	08/17/2016		18.4	1.62	2.15	- -	- -	38.1	449
	08/16/2017		16.0	1.85	2.26	- -	- -	34.2	479
	10/01/2018		23.8	1.31	2.57	- -	- -	26.8	440
	10/24/2019		12.9	1.30	2.04	- -	- -	25.6	335
	10/08/2020		15.1	1.22	2.11	- -	- -	22.2	374
	09/16/2021		28.0	1.03	2.40	- -	- -	22.2	415
	10/13/2022		13.3	0.981	- -	3.03	<0.0420	24.5	393
	10/05/2023		9.92	0.951	- -	2.98	<0.0420	24.2	366
MW-6	06/18/2009		188	0.113	0.678	- -	- -	101	844
	06/18/2009	FD	168	<0.100	0.682	- -	- -	90.4	812
	02/02/2010		334	<0.100	0.822	- -	- -	90.2	1,400
	08/19/2010		285	<0.100	<1.00	- -	- -	111	1,350
	03/01/2011		282	<0.100	0.750	- -	- -	80.7	1,340
	07/20/2011		174	<0.500	<0.500	- -	- -	114	970
	02/02/2012		58.4	0.313	<1.00	- -	- -	88.0	398
	07/24/2012		77.7	0.217	<2.00	- -	- -	80.1	690
	02/27/2013		65.4	0.368	<2.00	- -	- -	77.1	542
	02/27/2013	FD	65.7	0.370	<2.00	- -	- -	77.6	556
	08/21/2013		43.3	0.441	<0.200	- -	- -	76.6	502
	02/27/2014		124	0.309	<0.500	- -	- -	51.0	814
	08/21/2014		132	0.230	<1.00	- -	- -	34.4	832
	02/25/2015		42	0.58	0.17	- -	- -	67	500
	08/27/2015		32.4	0.505	0.835	- -	- -	66.5	473
	03/10/2016		34.5	0.621	0.688	- -	- -	71.8	- -
	08/17/2016		27.0	0.642	1.06	- -	- -	68.5	1,000
	02/07/2017		31.3	0.665	1.20	- -	- -	79.9	- -
	08/16/2017		46.8	0.761	1.52	- -	- -	73.8	463
	04/05/2018		55.8	0.719	2.04	- -	- -	76.7	- -
	10/01/2018		55.9	0.691	2.02	- -	- -	79.0	485
	04/04/2019		47.4	0.717	2.04	- -	- -	72.9	- -
	10/24/2019		50.0	0.982	2.48	- -	- -	73.1	438
	06/18/2020		55.4	1.03	3.00	- -	- -	75.2	- -
	06/18/2020	FD	55.3	1.03	2.97	- -	- -	74.9	- -
	10/08/2020		50.9	1.02	2.82	- -	- -	66.1	445
	04/15/2021		53.9	0.854	3.66	- -	- -	69.6	- -
	09/16/2021		59.3	0.840	4.05	- -	- -	78.3	517
	04/14/2022		91.2	0.807	5.60	- -	- -	78.6	- -
	10/13/2022		84.7	0.849	- -	5.26	<0.0420	72.3	512
	03/23/2023		107	0.722	- -	5.87	<0.0420	73.0	- -
	10/05/2023		120	0.827	- -	8.82	<0.0420	80.9	635

Table 3. Anions and TDS Concentrations in Groundwater

HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)
New Mexico WQCC Groundwater Standards			250	1.6	10.0	10.0	1.0	600.0	1,000
MW-7	06/19/2009		30.6	1.12	1.66	- -	- -	67.2	384
	02/02/2010		28.0	0.854	1.72	- -	- -	62.2	350
	08/18/2010		27.2	0.570	1.12	- -	- -	60.2	370
	03/01/2011		26.5	0.599	1.91	- -	- -	58.2	376
	07/20/2011		23.3	0.626	1.35	- -	- -	56.8	396
	02/02/2012		25.5	0.633	1.66	- -	- -	61.5	356
	07/27/2012		23.6	0.796	2.01	- -	- -	55.2	342
	02/27/2013		25.8	0.709	<2.00	- -	- -	67.3	286
	08/21/2013		26.9	0.748	1.62	- -	- -	60.8	290
	02/27/2014		31.0	0.501	1.50	- -	- -	62.1	408
	08/21/2014		30.8	0.642	1.72	- -	- -	62.2	380
	02/25/2015		35	0.71	2.0	- -	- -	60	420
	08/27/2015		38.4	0.866	2.28	- -	- -	66.9	471
MW-8	06/18/2009		219	0.730	3.46	- -	- -	73.3	798
	01/18/2010		151	0.493	3.80	- -	- -	67.6	742
	08/18/2010		279	0.560	7.08	- -	- -	65.3	1,260
	02/25/2011		144	0.820	<0.500	- -	- -	87.5	694
	07/19/2011		313	0.522	4.49	- -	- -	72.4	1,460
	02/01/2012		376	0.498	8.21	- -	- -	102	1,530
	07/27/2012		224	0.490	8.55	- -	- -	122	1,080
	02/26/2013		246	0.371	11.1	- -	- -	118	1,080
	08/21/2013		101	0.513	9.49	- -	- -	129	788
	02/27/2014		368	0.417	1.43	- -	- -	88.1	1,440
	08/21/2014		360	0.268	4.42	- -	- -	76.6	1,310
	02/26/2015		220	0.49	7.0	- -	- -	86	960
	08/27/2015		258	0.368 J	8.80	- -	- -	88.5	1,260
	03/08/2016		291	0.357	7.84	- -	- -	78.2	1,290
	08/18/2016		94.1	0.537	3.67	- -	- -	71.4	593
	02/08/2017		50.7	0.760	3.02	- -	- -	78.6	- -
	08/17/2017		29.4	0.798	4.02	- -	- -	76.1	699
	04/05/2018		170	0.599	5.61	- -	- -	77.1	877
	10/01/2018		159	0.653	6.49	- -	- -	85.8	807
	04/04/2019		148	0.552	6.29	- -	- -	76.0	819
	10/24/2019		169	0.669	5.98	- -	- -	87.2	765
	06/18/2020		293	0.610	7.50	- -	- -	78.6	1,180
	10/08/2020		139	0.726	5.15	- -	- -	79.5	707
	04/15/2021		126	0.710	5.80	- -	- -	78.2	648
	09/16/2021		168	0.620	7.95	- -	- -	76.1	863
	04/14/2022		193	0.618	8.40	- -	- -	81.6	881
	10/13/2022		279	0.570	- -	8.32	<0.0420	89.8	1,260
	03/23/2023		--(2)	--(2)	- -	--(2)	--(2)	--(2)	--(2)
	10/05/2023		311	0.484	- -	1.59	0.441	35.2	1,240
MW-9	06/16/2009		23.0	1.69	0.748	- -	- -	73.2	380
	01/14/2010		23.9	1.78	1.72	- -	- -	74.4	450
	08/19/2010		21.8	1.64	1.32	- -	- -	75.2	412
	03/01/2011		24.1	1.63	2.01	- -	- -	74.6	414
	07/15/2011		24.9	1.65	1.78	- -	- -	70.2	434
	01/31/2012		31.5	2.22	1.43	- -	- -	80.5	484
	07/25/2012		30.4	1.99	<2.00	- -	- -	77.8	420
	02/27/2013		31.3	1.11	2.82	- -	- -	79.1	440
	08/22/2013		35.7	1.80	3.01	- -	- -	74.0	466
	02/26/2014		54.0	1.48	3.17	- -	- -	71.5	452
	08/21/2014		197	0.655	2.35	- -	- -	111	932
	02/25/2015		49	0.69	3.5	- -	- -	69	440
	08/26/2015		46.6	0.527	4.17	- -	- -	67.5	495
	08/17/2016		81.8	0.544	3.11	- -	- -	73.8	- -
	08/16/2017		100	0.441	3.73	- -	- -	73.9	- -
	10/01/2018		232	0.489	9.00	- -	- -	110	- -
	10/24/2019		220	0.291	5.70	- -	- -	108	- -
	10/08/2020		126	0.300	3.60	- -	- -	93.3	- -
	09/16/2021		123	0.366	3.41	- -	- -	78.6	- -
	10/13/2022		278	0.289 B	- -	10.9	<0.0420	93.6	- -
	10/05/2023		209	0.291	- -	9.76	0.633	126	- -

Table 3. Anions and TDS Concentrations in Groundwater

HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)
New Mexico WQCC Groundwater Standards			250	1.6	10.0	10.0	1.0	600.0	1,000
MW-10	06/16/2009		32.2	0.878	1.83	- -	- -	76.5	378
	01/13/2010		33.4	1.05	1.84	- -	- -	77.9	436
	08/19/2010		31.7	1.07	1.91	- -	- -	79.8	508
	03/03/2011		32.8	0.945	2.06	- -	- -	79.1	422
	07/15/2011		30.7	1.06	1.68	- -	- -	75.7	470
	01/31/2012		42.9	1.00	1.85	- -	- -	87.4	444
	07/25/2012		42.7	1.10	<2.00	- -	- -	82.6	382
	02/27/2013		48.0	0.960	<2.00	- -	- -	83.5	416
	08/22/2013		95.0	0.994	2.12	- -	- -	72.2	516
	02/26/2014		112	0.674	2.43	- -	- -	70.9	568
	08/21/2014		156	0.856	2.08	- -	- -	68.5	750
	02/26/2015		120	0.71	2.1	- -	- -	68	540
	08/26/2015		115	1.19	1.92	- -	- -	102	551
	08/17/2016		57.5	0.954	1.61	- -	- -	75.0	- -
	08/16/2017		94.0	0.966	2.15	- -	- -	74.5	- -
	10/01/2018		33.3	0.955	1.69	- -	- -	76.3	- -
	10/24/2019		27.4	1.07	1.55	- -	- -	67.6	- -
	10/08/2020		35.2	1.04	1.95	- -	- -	63.2	- -
	09/16/2021		30.3	0.902	2.20	- -	- -	65.8	- -
	10/13/2022		18.1	1.03	- -	1.99	<0.0420	60.9	- -
	10/05/2023		28.5	0.875	- -	2.08	<0.0420	54.2	- -
MW-11	06/18/2009		204	0.579	1.23	- -	- -	43.1	994
	01/18/2010		164	0.527	1.37	- -	- -	71.4	842
	08/18/2010		146	0.616	2.38	- -	- -	50.6	802
	02/25/2011		415	0.549	<0.500	- -	- -	82.3	1,510
	07/19/2011		134	0.575	0.778	- -	- -	57.0	894
	02/01/2012		175	0.749	<0.500	- -	- -	4.96	966
	07/27/2012		133	0.708	<2.00	- -	- -	59.7	784
	02/27/2013		140	0.576	3.11	- -	- -	32.6	908
	02/27/2013	FD	143	0.585	3.23	- -	- -	32.0	908
	08/21/2013		182	0.668	4.04	- -	- -	75.3	854
	08/21/2013	FD	172	0.673	4.19	- -	- -	76.2	868
	02/28/2014		--(1)	--(1)	--(1)	- -	- -	--(1)	--(1)
	08/20/2014		--(1)	--(1)	<1.00	- -	- -	--(1)	--(1)
	02/27/2015		--(1)	--(1)	--(1)	- -	- -	--(1)	--(1)
	08/28/2015		--(1)	--(1)	--(1)	- -	- -	--(1)	--(1)
	08/28/2015	FD	--(1)	--(1)	--(1)	- -	- -	--(1)	--(1)
	03/09/2016		--(1)	--(1)	--(1)	- -	- -	--(1)	--(1)
	03/09/2016	FD	--(1)	--(1)	--(1)	- -	- -	--(1)	--(1)
	08/15/2016		DRY WELL - PLUGGED AND ABANDONED DECEMBER 2016						
MW-11R	02/08/2017		- -	- -	- -	- -	- -	- -	972
	02/08/2017	FD	- -	- -	- -	- -	- -	- -	980
	08/17/2017		271	0.599	2.38	- -	- -	157	1,170
	04/05/2018		- -	- -	- -	- -	- -	- -	1,080
	10/01/2018		293	0.587	3.94	- -	- -	116	1,220
	04/04/2019		- -	- -	- -	- -	- -	- -	1,480
	10/24/2019		344	0.574	6.23	- -	- -	130	1,330
	06/18/2020		- -	- -	- -	- -	- -	- -	1,280
	10/08/2020		303	0.495	4.80	- -	- -	90.2	1,200
	04/15/2021		- -	- -	- -	- -	- -	- -	1,120
	09/16/2021		321	0.455	2.87	- -	- -	93.8	1,270
	04/14/2022		- -	- -	- -	- -	- -	- -	1,140
	10/13/2022		305	0.537	- -	3.09	<0.0420	83.6	1,150
	03/23/2023		- -	- -	- -	- -	- -	- -	--(2)
	10/05/2023		285	0.425	- -	0.932	<0.0420	64.8	1,190

Table 3. Anions and TDS Concentrations in Groundwater

HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)
New Mexico WQCC Groundwater Standards			250	1.6	10.0	10.0	1.0	600.0	1,000
MW-12	06/16/2009		23.0	1.16	1.98	- -	- -	49.6	354
	01/18/2010		26.1	1.05	2.31	- -	- -	49.8	398
	08/20/2010		25.8	1.22	2.00	- -	- -	50.3	340
	02/25/2011		28.5	1.14	<0.500	- -	- -	50.8	402
	07/19/2011		26.8	0.856	2.91	- -	- -	51.2	410
	--		DAMAGED WELL - PLUGGED AND ABANDONED JUNE 2013						
MW-12R	08/21/2013		31.2	1.40	8.14	- -	- -	71.1	404
	02/27/2014		28.3	0.886	7.38	- -	- -	63.4	432
	08/20/2014		24.5	1.05	6.98	- -	- -	67.2	410
	02/24/2015		29	1.1	7.0	- -	- -	63	500
	08/25/2015		19.8	1.02	7.36	- -	- -	71.1	527
	03/09/2016		21.6	0.985	6.35	- -	- -	68.2	503
	08/18/2016		25.1	0.810	6.14	- -	- -	75.9	394
	02/08/2017		28.4	0.890	5.25	- -	- -	75.0	509
	08/16/2017		31.0	0.813	5.34	- -	- -	68.8	528
	04/05/2018		33.2	0.699	4.77	- -	- -	71.1	520
	04/05/2018	FD	31.3	0.730	4.78	- -	- -	71.7	535
	10/01/2018		32.9	0.685	4.88	- -	- -	82.9	503
	10/01/2018	FD	32.1	0.645	4.90	- -	- -	87.4	588
	04/04/2019		41.2	0.551	5.09	- -	- -	77.1	623
	04/04/2019	FD	41.8	0.534	5.61	- -	- -	76.1	624
	10/24/2019		--[1]	--[1]	--[1]	- -	- -	--[1]	--[1]
	06/18/2020		--[1]	--[1]	--[1]	- -	- -	--[1]	--[1]
	08/13/2020		DRY WELL - PLUGGED AND ABANDONED AUGUST 2020						
MW-12R2	10/08/2020		80.0	0.809	3.50	- -	- -	55.5	430
	04/15/2021		86.7	0.924	4.32	- -	- -	59.1	456
	09/16/2021		92.3	0.881	4.11	- -	- -	62.6	496
	04/14/2022		92.1	0.912	4.98	- -	- -	65.0	508
	10/13/2022		95.0	0.920	- -	4.91	<0.0420	73.9	508
	03/23/2023		66.6	0.790	- -	6.98	<0.0420	79.9	538
	10/05/2023		38.7	0.729	- -	6.98	<0.0420	110	600
MW-13	06/16/2009		425	0.220	2.65	- -	- -	138	1,790
	01/18/2010		604	0.170	1.08	- -	- -	79.8	2,210
	08/18/2010		390	0.278	<1.00	- -	- -	144	1,720
	02/25/2011		340	0.281	<0.500	- -	- -	235	1,540
	07/19/2011		351	0.327	<0.500	- -	- -	244	1,960
	02/01/2012		418	0.322	<0.500	- -	- -	122	1,590
	07/26/2012		462	0.422	<2.00	- -	- -	123	2,150
	02/26/2013		430	0.366	<2.00	- -	- -	135	1,610
	08/21/2013		548	0.389	<1.00	- -	- -	108	2,000
	02/27/2014		588	0.282	<0.500	- -	- -	106	2,380
	08/19/2014		485	<1.00	<1.00	- -	- -	87.2	1,900
	02/27/2015		550	0.38	0.056 J	- -	- -	59	1,600
	08/26/2015		396	0.505	0.956	- -	- -	107	1,890
	03/08/2016		217	0.552	2.53	- -	- -	75.7	972
	08/17/2016		336	0.396	1.81	- -	- -	97.5	1,340
	02/08/2017		307	0.428	1.28	- -	- -	102	1,140
	08/17/2017		--[1]	--[1]	--[1]	- -	- -	--[1]	--[1]
	04/05/2018		--[1]	--[1]	--[1]	- -	- -	--[1]	--[1]
	09/26/2018		DRY WELL - PLUGGED AND ABANDONED SEPTEMBER 2018						
MW-13R	10/01/2018		407	0.629	3.50	- -	- -	90.2	1,410
	04/04/2019		464	0.326	3.66	- -	- -	94.8	1,980
	10/24/2019		354	0.410	4.02	- -	- -	74.5	1,360
	06/18/2020		294	0.421	5.15	- -	- -	153	1,380
	06/18/2020	FD	297	0.413	5.28	- -	- -	153	1,310
	10/08/2020		272	0.375	5.50	- -	- -	136	1,420
	10/08/2020	FD	276	0.337	5.40	- -	- -	156	1,250
	04/15/2021		291	0.370	6.15	- -	- -	123	1,200
	09/16/2021		285	0.368	5.72	- -	- -	160	1,320
	09/16/2021	FD	270	0.372	5.76	- -	- -	154	1,240
	04/14/2022		242	0.402	5.35	- -	- -	144	1,120
	10/13/2022		206	0.413	- -	3.08	<0.0420	110	1,020
	10/13/2022	FD	206	0.421	- -	3.11	0.0829 JB	111	993
	03/23/2023		--[2]	--[2]	- -	--[2]	--[2]	--[2]	--[2]
	10/05/2023		244	0.345	- -	5.42	<0.0420	110	1,120

Table 3. Anions and TDS Concentrations in Groundwater

HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)
New Mexico WQCC Groundwater Standards			250	1.6	10.0	10.0	1.0	600.0	1,000
MW-14	06/16/2009		93.0	0.851	5.16	- -	- -	60.9	540
	01/18/2010		103	0.810	6.03	- -	- -	59.0	598
	08/20/2010		74.1	0.986	2.76	- -	- -	61.3	340
	02/25/2011		58.2	0.918	2.32	- -	- -	58.7	440
	07/18/2011		48.4	1.05	1.36	- -	- -	53.0	482
	01/31/2012		59.7	0.984	1.58	- -	- -	58.3	444
	07/25/2012		69.3	1.03	<2.00	- -	- -	54.8	446
	02/21/2013		- -	- -	<2.00	- -	- -	- -	- -
	02/22/2013		71.9	0.795	- -	- -	- -	52.9	428
	08/22/2013		- -	- -	- -	- -	- -	- -	- -
	02/28/2014		--(1)	--(1)	--(1)	- -	- -	--(1)	--(1)
	08/20/2014		--(1)	--(1)	1.10	- -	- -	--(1)	534
	02/27/2015		--(1)	--(1)	--(1)	- -	- -	--(1)	--(1)
	08/27/2015		104	0.940	1.96	- -	- -	44.6	611
	08/19/2016		118	0.796	4.13	- -	- -	39.3	674
	08/16/2017		--(1)	--(1)	--(1)	- -	- -	--(1)	--(1)
	09/27/2018		DRY WELL - PLUGGED AND ABANDONED SEPTEMBER 2018						
MW-14R	10/01/2018		216	1.15	2.81	- -	- -	54.3	867
	10/24/2019		518	0.873	4.96	- -	- -	61.1	1,840
	10/08/2020		394	0.864	4.81	- -	- -	49.8	1,440
	09/16/2021		394	0.723	5.20	- -	- -	50.6	1,440
	10/13/2022		304	0.744	- -	3.95	<0.0420	49.1	1,160
	10/05/2023		170	0.861	- -	2.71	<0.0420	45.2	731
MW-15	08/20/2010		221	0.921	3.22	- -	- -	77.6	776
	02/24/2011		190	0.885	4.28	- -	- -	67.0	738
	07/14/2011		236	0.701	4.18	- -	- -	60.9	940
	01/30/2012		304	0.840	4.09	- -	- -	78.6	1,330
	07/24/2012		291	0.965	8.22	- -	- -	80.3	1,060
	02/19/2013		254	0.819	5.12	- -	- -	76.0	882
	08/20/2013		379	0.910	6.82	- -	- -	71.3	1,280
	08/20/2013	FD	381	0.931	6.83	- -	- -	72.7	1,230
	02/24/2014		256	0.715	7.86	- -	- -	83.0	858
	02/24/2014	FD	263	0.832	8.07	- -	- -	82.5	810
	08/21/2014		148	1.02	8.52	- -	- -	97.5	690
	08/21/2014	FD	150	1.01	8.53	- -	- -	95.6	706
	02/24/2015		150	0.90	8.4	- -	- -	94	650
	08/27/2015		181	1.13	8.48	- -	- -	123	728
	08/27/2015	FD	234	1.46	8.47	- -	- -	158	729
	03/07/2016		160	0.877	6.53	- -	- -	85.9	727
	08/15/2016		169	0.685	5.19	- -	- -	93.2	721
	08/15/2016	FD	165	0.738	5.09	- -	- -	93.3	723
	02/06/2017		177	0.781	5.80	- -	- -	105	800
	08/16/2017		219	0.772	5.02	- -	- -	90.2	808
	04/05/2018		222	0.644	4.28	- -	- -	111	808
	10/01/2018		348	0.549	4.26	- -	- -	105	2,230
	04/04/2019		537	0.478	3.85	- -	- -	100	1,880
	10/24/2019		437	0.592	3.29	- -	- -	111	1,370
	06/18/2020		288	0.720	3.88	- -	- -	117	988
	10/08/2020		327	0.583	3.85	- -	- -	99.4	1,150
	04/15/2021		173	0.610	4.00	- -	- -	98.3	679
	06/09/2021		PLUGGED AND ABANDONED JUNE 2021						
MW-15R	09/16/2021		363	0.776	3.56	- -	- -	102	1,080
	04/14/2022		595	0.573	3.50	- -	- -	92.3	1,430
	10/13/2022		466	0.542	- -	3.41	<0.0420	103	1,440
	03/23/2023		436	0.560	- -	2.93	<0.0420	92.5	1,550
	10/05/2023		454	0.529	- -	2.96	<0.0420	91.0	1,550

Table 3. Anions and TDS Concentrations in Groundwater

HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)
New Mexico WQCC Groundwater Standards			**250**	**1.6**	**10.0**	**10.0**	**1.0**	**600.0**	**1,000**
MW-16	08/20/2010		25.3	0.930	1.13	- -	- -	73.7	406
	02/24/2011		28.1	0.928	2.36	- -	- -	73.7	412
	07/15/2011		25.5	1.04	1.82	- -	- -	72.0	484
	07/15/2011	FD	21.0	0.733	1.98	- -	- -	54.1	476
	01/30/2012		27.9	0.994	1.79	- -	- -	77.6	398
	07/24/2012		26.6	1.14	<2.00	- -	- -	72.6	404
	02/20/2013		24.0	0.966	<2.00	- -	- -	68.1	316
	08/20/2013		24.7	1.02	1.75	- -	- -	64.0	392
	02/25/2014		23.9	0.766	1.83	- -	- -	62.3	362
	08/19/2014		21.7	0.975	1.41	- -	- -	64.9	362
	02/24/2015		20	1.0	1.9	- -	- -	61	360
	08/27/2015		21.3	1.07	2.34	- -	- -	66.0	408
	08/15/2016		22.3	0.859	1.69	- -	- -	63.5	418
	08/17/2017		25.5	0.940	1.94	- -	- -	66.4	392
	10/01/2018		28.1	0.900	2.16	- -	- -	67.8	386
	10/24/2019		32.0	1.01	2.10	- -	- -	69.8	432
	08/13/2020		DRY WELL - PLUGGED AND ABANDONED AUGUST 2020						
MW-16R	10/08/2020		28.8	1.19	2.11	- -	- -	61.5	372
	09/16/2021		41.9	0.805	2.95	- -	- -	68.2	443
	10/13/2022		30.0	0.913	- -	2.63	<0.0420	62.2	419
	10/05/2023		36.8	0.884	- -	2.76	<0.0420	56.3	376
MW-17	08/20/2010		426	0.517	4.27	- -	- -	72.6	1,650
	02/24/2011		412	0.435	5.33	- -	- -	80.0	1,634
	07/18/2011		336	0.753	4.07	- -	- -	82.7	1,850
	--		DAMAGED WELL - PLUGGED AND ABANDONED JUNE 2013						
MW-17R	08/22/2013		246	0.602	3.44	- -	- -	81.7	1,190
	02/27/2014		184	0.425	0.629	- -	- -	92.5	904
	08/22/2014		170	0.602	2.70	- -	- -	94.8	860
	02/26/2015		150	0.65	2.6	- -	- -	75	670
	08/27/2015		110	0.859	2.86	- -	- -	87.4	658
	03/08/2016		65.3	0.722	2.55	- -	- -	76	465
	08/17/2016		219	0.578	4.37	- -	- -	79.8	526
	02/09/2017		150	0.654	3.01	- -	- -	86.3	715
	08/16/2017		60.0	0.770	2.21	- -	- -	85.9	502
	04/05/2018		124	0.664	2.46	- -	- -	68.2	587
	04/05/2018	FD	124	0.679	2.48	- -	- -	69.7	589
	10/01/2018		136	0.631	2.88	- -	- -	79.7	682
	04/04/2019		94.5	0.627	2.21	- -	- -	78.5	568
	04/04/2019	FD	94.3	0.629	2.53	- -	- -	78.5	562
	10/24/2019		67.7	0.771	1.94	- -	- -	89.9	467
	06/18/2020		80.6	0.786	2.13	- -	- -	85.9	503
	10/08/2020		57.6	0.805	2.11	- -	- -	84.7	465
	04/15/2021		80.5	0.641	2.64	- -	- -	82.0	505
	09/16/2021		--[1]	--[1]	--[1]	- -	- -	--[1]	--[1]
	04/14/2022		126	0.634	3.06	- -	- -	72.5	586
	10/13/2022		138	0.640	- -	3.43	<0.0420	67.8	663
	03/23/2023		184	0.486	- -	4.43	<0.0420	71.0	851
	10/05/2023		--[1]	--[1]	- -	--[1]	--[1]	--[1]	--[1]

Table 3. Anions and TDS Concentrations in Groundwater

HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)
New Mexico WQCC Groundwater Standards			250	1.6	10.0	10.0	1.0	600.0	1,000
MW-18	08/23/2010		176	0.456	0.733	- -	- -	287	1,080
	02/24/2011		286	0.514	4.14	- -	- -	298	1,240
	07/18/2011		218	0.800	5.74	- -	- -	234	1,290
	01/31/2012		106	0.722	3.89	- -	- -	94.3	584
	07/25/2012		103	0.753	2.01	- -	- -	63.4	562
	02/22/2013		181	0.564	4.02	- -	- -	116	782
	08/22/2013		197	0.531	5.59	- -	- -	130	1,100
	02/26/2014		145	0.514	4.36	- -	- -	89.1	680
	08/20/2014		143	0.590	1.97	- -	- -	123	678
	02/26/2015		130	0.68	3.5	- -	- -	97	670
	08/25/2015		136	0.703	2.73	- -	- -	65.8	844
	08/17/2016		162	0.557	3.71	- -	- -	53.4	799
	08/16/2017		234	0.648	6.10	- -	- -	93.5	1,030
	10/01/2018		99.6	0.599	2.48	- -	- -	73.8	659
	10/24/2019		120	0.634	3.82	- -	- -	113	653
	10/08/2020		214	0.491	4.72	- -	- -	171	1,090
	06/09/2021		PLUGGED AND ABANDONED JUNE 2021						
MW-18R	09/16/2021		138	0.677	3.32	- -	- -	96.5	653
	10/13/2022		95.0	0.801	- -	1.89	<0.0420	33.0	443
	10/05/2023		83.3	0.791	- -	1.73	<0.0420	42.2	419
MW-19	08/23/2010		469	0.536	2.94	- -	- -	178	1,650
	02/24/2011		235	0.713	2.87	- -	- -	90.7	828
	07/18/2011		688	0.734	3.66	- -	- -	142	2,880
	01/31/2012		610	0.568	4.12	- -	- -	121	1,770
	07/25/2012		1,130	0.450	5.11	- -	- -	117	3,570
	02/26/2013		540	0.519	4.21	- -	- -	115	1,650
	08/22/2013		487	0.645	3.43	- -	- -	92.6	1,430
	08/22/2013	FD	475	0.672	3.38	- -	- -	95.7	1,670
	02/26/2014		264	0.576	2.34	- -	- -	72.3	850
	02/26/2014	FD	288	0.555	2.51	- -	- -	76.0	950
	08/19/2014		233	0.592	2.48	- -	- -	84.5	774
	08/19/2014	FD	241	0.627	2.59	- -	- -	84.7	820
	02/26/2015		140	0.87	2.3	- -	- -	82	630
	02/26/2015	FD	130	0.86	2.4	- -	- -	85	660
	08/26/2015		236	0.789	2.86	- -	- -	70.9	888
	03/08/2016		297	0.749	2.81	- -	- -	63.2	1,170
	08/17/2016		470	0.749	2.93	- -	- -	90.3	1,660
	02/08/2017		302	0.735	2.39	- -	- -	57.6	864
	08/16/2017		236	0.832	2.02	- -	- -	57.8	907
	08/16/2017	FD	257	0.626	2.08	- -	- -	61.8	944
	04/05/2018		176	0.797	1.48	- -	- -	61.3	722
	10/01/2018		292	0.706	2.96	- -	- -	85.6	1,270
	04/04/2019		276	0.647	2.32	- -	- -	81.8	1,090
	10/24/2019		323	0.671	3.76	- -	- -	126	1,220
	06/18/2020		299	0.657	2.88	- -	- -	168	1,290
	10/08/2020		--[1]	--[1]	--[1]	- -	- -	--[1]	--[1]
	04/15/2021		--[1]	--[1]	--[1]	- -	- -	--[1]	--[1]
	06/09/2021		PLUGGED AND ABANDONED JUNE 2021						
MW-19R	09/16/2021		297	0.643	2.37	- -	- -	65.2	1,060
	04/14/2022		273	0.643	1.97	- -	- -	55.4	780
	10/13/2022		464	0.537	- -	2.54	<0.0420	103	1,420
	03/23/2023		355	0.484	- -	2.10	<0.0420	88.1	1,290
	10/05/2023		382	0.459	- -	1.98	<0.0420	82.9	1,380

Table 3. Anions and TDS Concentrations in Groundwater

HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)
New Mexico WQCC Groundwater Standards			250	1.6	10.0	10.0	1.0	600.0	1,000
MW-20	08/23/2010		169	0.570	1.74	- -	- -	65.1	868
	02/25/2011		187	0.603	2.58	- -	- -	66.3	840
	07/18/2011		148	0.765	2.06	- -	- -	51.3	1,020
	01/31/2012		174	0.641	2.51	- -	- -	61.4	726
	07/25/2012		189	0.742	2.24	- -	- -	56.0	848
	02/22/2013		155	0.570	2.26	- -	- -	55.8	600
	08/20/2013		180	0.755	2.40	- -	- -	60.4	736
	02/26/2014		159	0.664	2.70	- -	- -	53.4	696
	08/19/2014		138	0.574	2.09	- -	- -	58.5	672
	02/24/2015		120	0.65	2.6	- -	- -	56	690
	08/25/2015		130	0.822	2.61	- -	- -	65.7	750
	08/16/2016		137	0.663	2.50	- -	- -	59.9	652
	08/17/2017		164	0.802	3.12	- -	- -	53.8	757
	10/01/2018		180	0.713	3.86	- -	- -	49.3	785
	10/24/2019		202	0.766	3.97	- -	- -	42.4	825
	10/08/2020		167	0.786	4.47	- -	- -	54.5	762
	06/09/2021		PLUGGED AND ABANDONED JUNE 2021						
MW-20R	09/16/2021		114	0.724	11.7	- -	- -	73.7	688
	10/13/2022		115	0.791	- -	12.0	<0.0420	72.6	629
	10/05/2023		122	0.788	- -	10.0	<0.0420	69.1	663
MW-21	08/23/2010		115	0.250	2.12	- -	- -	52.7	966
	02/28/2011		182	0.257	3.02	- -	- -	56.7	1,050
	02/28/2011	FD	183	0.249	2.99	- -	- -	56.3	1,000
	07/19/2011		191	0.163	2.62	- -	- -	57.0	1,250
	01/31/2012		200	0.229	2.84	- -	- -	64.7	1,040
	07/26/2012		186	0.306	2.64	- -	- -	60.4	1,130
	02/22/2013		160	0.246	2.86	- -	- -	78.3	968
	08/20/2013		156	0.268	3.96	- -	- -	82.5	972
	02/25/2014		134	0.213	3.78	- -	- -	75.9	918
	08/19/2014		156	0.250	3.35	- -	- -	72.7	938
	02/24/2015		160	0.32	3.7	- -	- -	70	1,100
	08/25/2015		197	0.341	3.06	- -	- -	77.0	1,430
	08/16/2016		131	0.253	4.05	- -	- -	71.7	- -
	08/17/2017		- -	- -	- -	- -	- -	- -	- -
	10/01/2018		- -	- -	- -	- -	- -	- -	- -
	10/24/2019		- -	- -	- -	- -	- -	- -	- -
	10/08/2020		- -	- -	- -	- -	- -	- -	- -
	09/16/2021		- -	- -	- -	- -	- -	- -	- -
	10/13/2022		- -	- -	- -	- -	- -	- -	- -
	10/05/2023		- -	- -	- -	- -	- -	- -	- -
MW-22	08/23/2010		115	0.552	1.76	- -	- -	62.3	726
	02/28/2011		117	0.587	2.36	- -	- -	68.6	678
	07/19/2011		107	0.568	2.06	- -	- -	64.1	740
	01/31/2012		141	0.570	2.26	- -	- -	74.3	766
	07/26/2012		149	0.628	2.09	- -	- -	68.3	830
	02/21/2013		178	0.500	2.30	- -	- -	80.4	798
	08/21/2013		176	0.606	2.94	- -	- -	83.0	890
	02/25/2014		172	0.416	3.53	- -	- -	85.2	842
	08/20/2014		120	1.00	2.36	- -	- -	127	738
	02/24/2015		110	0.57	3.3	- -	- -	81	820
	08/25/2015		118	0.618	4.85	- -	- -	81.1	928
	08/16/2016		128	0.577	5.86	- -	- -	57.6	827
	08/17/2017		87.4	0.644	48.6	- -	- -	53.6	700
	10/01/2018		34.3	0.652	12.9	- -	- -	46.7	883
	10/24/2019		61.9	0.775	6.54	- -	- -	42.7	637
	10/08/2020		49.2	0.800	5.85	- -	- -	41.1	651
	09/16/2021		53.8	0.742	3.58	- -	- -	58.4	659
	10/13/2022		121	0.744	- -	4.98	<0.0420	83.8	--(1)
	10/05/2023		--(1)	--(1)	- -	--(1)	--(1)	--(1)	--(1)

Table 3. Anions and TDS Concentrations in Groundwater

HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)
New Mexico WQCC Groundwater Standards			250	1.6	10.0	10.0	1.0	600.0	1,000
MW-23	08/23/2010		645	0.782	2.92	- -	- -	121	2,260
	02/28/2011		511	0.676	3.47	- -	- -	81.9	1,540
	07/19/2011		712	0.670	3.79	- -	- -	108	3,090
	02/01/2012		887	0.697	4.07	- -	- -	85.4	2,720
	07/26/2012		774	0.750	3.45	- -	- -	100	3,060
	02/26/2013		662	0.690	3.46	- -	- -	93.9	2,040
	08/21/2013		530	0.808	3.29	- -	- -	115	1,910
	02/25/2014		574	0.605	3.41	- -	- -	89.0	1,860
	08/21/2014		443	0.792	2.89	- -	- -	98.1	1,680
	02/25/2015		57	0.63	3.1	- -	- -	92	1,000
	08/25/2015		431	0.874	4.39	- -	- -	91.9	2,190
	08/17/2016		411	0.792	3.02	- -	- -	88.5	1,400
	08/17/2017		237	0.917	2.45	- -	- -	97.4	1,050
	10/01/2018		27.0	0.825	1.93	- -	- -	47.0	720
	10/24/2019		--(1)	--(1)	4.67	- -	- -	--(1)	--(1)
	08/13/2020		DRY WELL - PLUGGED AND ABANDONED AUGUST 2020						
MW-23R	10/08/2020		191	1.26	3.37	- -	- -	89.2	754
	09/16/2021		176	1.01	3.85	- -	- -	100	793
	10/13/2022		145	1.26	- -	3.27	<0.0420	89.2	696
	10/05/2023		172	1.17	- -	3.66	<0.0420	87.9	737
MW-24	08/24/2010		34.6	2.31	2.40	- -	- -	53.9	422
	02/28/2011		39.6	2.16	2.94	- -	- -	55.3	414
	07/14/2011		43.1	1.55	2.38	- -	- -	48.1	504
	02/01/2012		50.6	2.42	2.32	- -	- -	62.3	418
	07/30/2012		51.8	2.42	2.39	- -	- -	55.1	420
	07/30/2012	FD	55.5	2.34	2.34	- -	- -	58.8	446
	02/26/2013		46.6	2.39	2.05	- -	- -	68.6	442
	08/21/2013		56.5	2.77	2.04	- -	- -	55.6	426
	02/27/2014		37.3	2.28	2.11	- -	- -	51.3	396
	08/21/2014		29.2	2.76	2.39	- -	- -	44.0	368
	02/25/2015		24	2.7	2.8	- -	- -	42	360
	08/25/2015		25.5	2.75	2.95	- -	- -	43.2	494
	08/16/2016		26.0	2.78	2.83	- -	- -	42.9	407
	08/17/2017		40.5	2.96	2.86	- -	- -	45.2	388
	10/01/2018		35.8	2.65	3.80	- -	- -	35.3	397
	10/24/2019		34.8	2.93	3.69	- -	- -	41.7	344
	10/08/2020		21.4	2.68	4.94	- -	- -	36.9	417
	06/09/2021		PLUGGED AND ABANDONED JUNE 2021						
MW-24R	09/16/2021		80.8	2.79	2.51	- -	- -	72.8	455
	10/13/2022		71.0	2.35	- -	2.60	<0.0420	75.5	457
	10/05/2023		53.9	2.41	- -	4.36	<0.0420	59.6	427

Table 3. Anions and TDS Concentrations in Groundwater

HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)
New Mexico WQCC Groundwater Standards			250	1.6	10.0	10.0	1.0	600.0	1,000
MW-25	08/23/2010		178	0.871	2.42	- -	- -	182	946
	02/28/2011		256	0.729	2.83	- -	- -	93.9	998
	07/18/2011		77.8	1.12	3.64	- -	- -	96.2	634
	02/01/2012		175	0.813	4.56	- -	- -	84.4	820
	07/26/2012		133	0.892	37.1	- -	- -	144	1,110
	02/26/2013		109	0.710	19.4	- -	- -	113	788
	08/22/2013		314	0.696	3.36	- -	- -	74.7	1,350
	08/22/2013	FD	310	0.684	3.42	- -	- -	74.3	1,350
	02/26/2014		293	0.476	2.98	- -	- -	69.3	1,100
	02/26/2014	FD	289	0.546	2.98	- -	- -	68.6	1,090
	08/19/2014		302	<0.500	3.06	- -	- -	79.5	1,230
	08/19/2014	FD	319	<0.500	2.76	- -	- -	83.5	1,200
	02/25/2015		38	0.73	3.1	- -	- -	69	870
	02/25/2015	FD	180	0.71	3.1	- -	- -	69	840
	08/25/2015		211	0.693	2.96	- -	- -	72.6	1,110
	08/25/2015	FD	207	0.631	2.9	- -	- -	71.1	1,140
	03/09/2016		345	0.618	2.65	- -	- -	68.5	1,140
	08/16/2016		292	0.637	1.44	- -	- -	73.9	976
	08/16/2016	FD	287	0.638	1.50	- -	- -	73.5	1,010
	02/07/2017		298	0.567	1.64	- -	- -	93.4	1,000
	08/16/2017		280	0.791	1.52	- -	- -	68.4	996
	08/16/2017	FD	287	0.600	1.57	- -	- -	71.2	1,050
	04/05/2018		82.6	0.568	2.16	- -	- -	76.4	1,380
	04/05/2018	FD	401	0.605	2.17	- -	- -	79.5	1,360
	10/01/2018		284	0.518	3.89	- -	- -	105	1,090
	10/01/2018	FD	288	0.508	3.86	- -	- -	110	1,180
	04/04/2019		224	0.509	3.84	- -	- -	103	1,040
	04/04/2019	FD	224	0.500	4.57	- -	- -	104	1,030
	10/24/2019		232	0.586	3.89	- -	- -	112	986
	10/24/2019	FD	223	0.572	3.91	- -	- -	107	1,010
	06/18/2020		368	0.467	3.96	- -	- -	188	1,460
	10/08/2020		390	0.383	2.83	- -	- -	129	1,440
	04/15/2021		361	0.405	3.80	- -	- -	119	1,320
	06/09/2021		PLUGGED AND ABANDONED JUNE 2021						
MW-26	08/24/2010		217	0.484	2.88	- -	- -	98.5	958
	02/28/2011		202	0.517	3.86	- -	- -	125	940
	07/14/2011		184	<0.500	3.95	- -	- -	128	1,030
	02/01/2012		196	0.568	3.68	- -	- -	131	952
	07/26/2012		179	0.647	3.11	- -	- -	121	940
	02/26/2013		144	0.640	4.78	- -	- -	138	760
	08/22/2013		222	0.611	5.55	- -	- -	133	1,170
	02/26/2014		187	0.470	3.11	- -	- -	146	944
	08/21/2014		67.8	0.511	3.18	- -	- -	78.9	644
	02/25/2015		190	0.71	2.3	- -	- -	110	790
	08/25/2015		220	0.670	2.93	- -	- -	143	1,160
	08/17/2016		223	0.645	2.28	- -	- -	122	- -
	08/17/2017		301	0.162	4.06	- -	- -	92.1	- -
	10/01/2018		235	0.466	- -	- -	- -	126	1,020
	10/24/2019		244	0.722	4.11	- -	- -	132	- -
	08/13/2020		DRY WELL - PLUGGED AND ABANDONED AUGUST 2020						
MW-26R	10/08/2020		238	0.530	10.0	- -	- -	131	- -
	09/16/2021		329	0.429	11.6	- -	- -	161	- -
	10/13/2022		255	0.543	- -	6.60	<0.0420	130	- -
	10/05/2023		209	0.448	- -	4.24	<0.0420	138	- -

Table 3. Anions and TDS Concentrations in Groundwater

HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)
New Mexico WQCC Groundwater Standards			250	1.6	10.0	10.0	1.0	600.0	1,000
MW-27	08/18/2010		115	0.644	5.10	- -	- -	118	752
	02/25/2011		144	0.595	<0.500	- -	- -	78.5	746
	07/20/2011		150	0.510	1.69	- -	- -	73.2	812
	02/01/2012		164	0.691	2.43	- -	- -	99.8	676
	07/26/2012		164	0.680	2.95	- -	- -	65.3	754
	02/26/2013		199	0.647	2.77	- -	- -	70.7	756
	08/20/2013		315	0.562	7.12	- -	- -	75.5	1,180
	02/27/2014		298	0.415	8.00	- -	- -	89.3	1,150
	08/21/2014		256	0.540	4.99	- -	- -	85.1	1,100
	02/27/2015		170	1.0	3.8	- -	- -	96	790
	08/26/2015		139	2.27	2.94	- -	- -	95.2	690
	03/08/2016		- -	- -	- -	- -	- -	- -	- -
	08/18/2016		- -	- -	- -	- -	- -	- -	- -
	02/08/2017		- -	- -	- -	- -	- -	- -	- -
	08/17/2017		- -	- -	- -	- -	- -	- -	- -
	04/05/2018		- -	- -	- -	- -	- -	- -	- -
	10/01/2018		- -	- -	- -	- -	- -	- -	- -
	04/04/2019		- -	- -	- -	- -	- -	- -	- -
	10/24/2019		- -	- -	- -	- -	- -	- -	- -
	06/18/2020		- -	- -	- -	- -	- -	- -	- -
	10/08/2020		- -	- -	- -	- -	- -	- -	- -
	04/15/2021		- -	- -	- -	- -	- -	- -	- -
	09/16/2021		- -	- -	- -	- -	- -	- -	- -
	04/14/2022		- -	- -	- -	- -	- -	- -	- -
	10/13/2022		- -	- -	- -	- -	- -	- -	- -
	03/23/2023		- -	- -	- -	- -	- -	- -	- -
	10/05/2023		- -	- -	- -	- -	- -	- -	- -
MW-28	08/24/2010		71.2	1.66	1.70	- -	- -	60.3	440
	08/28/2010		- -	- -	- -	- -	- -	- -	- -
	02/23/2011		106	1.57	<0.500	- -	- -	67.4	540
	07/14/2011		106	1.28	2.40	- -	- -	67.8	732
	01/30/2012		80.6	1.68	2.53	- -	- -	81.1	572
	07/24/2012		74.9	1.79	2.33	- -	- -	81.6	500
	02/19/2013		65.5	1.61	2.57	- -	- -	88.4	468
	08/20/2013		70.4	1.77	2.42	- -	- -	77.4	480
	02/24/2014		71.7	1.30	2.60	- -	- -	74.2	480
	08/19/2014		70.0	1.65	2.31	- -	- -	78.2	512
	02/23/2015		70	1.6	2.8	- -	- -	72	500
	08/27/2015		142	3.07	3.08	- -	- -	143	549
	03/07/2016		73.1	1.62	3.31	- -	- -	70.8	- -
	08/15/2016		73.2	1.37	3.08	- -	- -	70.6	612
	02/06/2017		79.1	1.63	3.92	- -	- -	98.4	- -
	08/17/2017		66.3	1.82	4.02	- -	- -	97.5	524
	04/05/2018		63.1	1.74	4.11	- -	- -	99.7	- -
	10/01/2018		63.6	1.76	3.91	- -	- -	92.2	490
	04/04/2019		75.3	1.76	3.69	- -	- -	80.1	- -
	10/24/2019		87.8	2.04	3.40	- -	- -	79.9	519
	06/18/2020		103	2.11	3.45	- -	- -	76.8	- -
	10/08/2020		152	1.81	3.41	- -	- -	98.8	664
	04/15/2021		119	1.91	4.06	- -	- -	84.5	- -
	09/16/2021		141	1.86	4.12	- -	- -	79.2	639
	04/14/2022		133	1.94	3.66	- -	- -	85.4	- -
	10/13/2022		--(1)	--(1)	- -	--(1)	--(1)	--(1)	--(1)
	03/23/2023		--(1)	--(1)	- -	--(1)	--(1)	--(1)	- -
	10/05/2023		--(1)	--(1)	- -	--(1)	--(1)	--(1)	--(1)

Table 3. Anions and TDS Concentrations in Groundwater

HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)
New Mexico WQCC Groundwater Standards			250	1.6	10.0	10.0	1.0	600.0	1,000
MW-29	08/24/2010		456	0.753	2.18	- -	- -	167	726
	08/24/2010	FD	132	0.741	2.15	- -	- -	100	742
	02/28/2011		119	0.819	3.05	- -	- -	101	670
	07/14/2011		135	0.707	2.61	- -	- -	71.6	798
	01/30/2012		152	0.769	3.22	- -	- -	96.3	898
	07/24/2012		250	0.828	4.08	- -	- -	90.1	1,120
	02/26/2013		159	0.788	2.90	- -	- -	82.4	722
	08/20/2013		152	0.934	2.95	- -	- -	96.2	654
	02/27/2014		141	0.811	3.22	- -	- -	74.4	660
	02/27/2014	FD	141	0.819	3.37	- -	- -	74.3	690
	08/20/2014		177	0.809	3.44	- -	- -	72.9	826
	02/25/2015		250	0.95	5.6	- -	- -	90	1,000
	08/27/2015		247	0.573	6.77	- -	- -	81.8	1,220
	03/08/2016		- -	- -	- -	- -	- -	- -	- -
	08/17/2016		171	0.693	4.61	- -	- -	81.5	349
	02/09/2017		- -	- -	- -	- -	- -	- -	- -
	08/17/2017		201	0.723	4.76	- -	- -	86.4	920
	04/05/2018		- -	- -	- -	- -	- -	- -	- -
	10/01/2018		175	0.490	5.62	- -	- -	113	1,010
	04/04/2019		- -	- -	- -	- -	- -	- -	- -
	10/24/2019		264	0.674	5.33	- -	- -	87.7	1,000
	10/24/2019	FD	258	0.649	5.32	- -	- -	87.9	1,060
	06/18/2020		- -	- -	- -	- -	- -	- -	- -
	10/08/2020		150	0.748	6.90	- -	- -	96.1	705
	04/15/2021		- -	- -	- -	- -	- -	- -	- -
	09/16/2021		187	0.672	6.40	- -	- -	76.8	827
	04/14/2022		- -	- -	- -	- -	- -	- -	- -
	10/13/2022		--[1]	--[1]	- -	--[1]	--[1]	--[1]	--[1]
	03/23/2023		- -	- -	- -	- -	- -	- -	- -
	10/05/2023		--[1]	--[1]	- -	--[1]	--[1]	--[1]	--[1]
MW-30	06/21/2013		51.2	1.87	3.51	- -	- -	96.7	426
	08/20/2013		63.7	1.59	2.85	- -	- -	87.0	438
	02/27/2014		64.0	1.07	2.96	- -	- -	90.0	476
	08/22/2014		61.1	1.45	2.75	- -	- -	84.5	444
	02/25/2015		75	1.4	3.1	- -	- -	81	460
	08/28/2015		83.6	1.61	3.97	- -	- -	86.2	525
	03/08/2016		70.6	1.3	3.53	- -	- -	83	450
	03/08/2016	FD	70.4	1.3	3.54	- -	- -	83	464
	08/16/2016		71.6	1.29	3.24	- -	- -	87.5	534
	08/16/2016	FD	75.5	1.29	3.22	- -	- -	87.7	491
	02/09/2017		71.7	1.26	3.52	- -	- -	87.3	497
	08/16/2017		68.3	1.31	3.38	- -	- -	78.9	468
	08/16/2017	FD	68.4	1.05	3.50	- -	- -	82.2	479
	04/05/2018		70.8	1.19	3.35	- -	- -	77.2	474
	10/01/2018		76.7	1.11	3.52	- -	- -	81.2	517
	10/01/2018	FD	76.3	1.09	3.70	- -	- -	80.6	509
	04/04/2019		78.5	1.06	3.61	- -	- -	69.4	513
	10/24/2019		85.0	1.24	3.29	- -	- -	71.7	479
	10/24/2019	FD	86.0	1.23	3.18	- -	- -	72.6	501
	06/18/2020		91.7	1.20	3.31	- -	- -	71.2	520
	10/08/2020		94.3	1.05	3.29	- -	- -	77.3	496
	04/15/2021		93.2	0.960	3.68	- -	- -	62.9	501
	09/16/2021		95.4	0.990	3.57	- -	- -	62.7	539
	04/14/2022		110	0.951	4.03	- -	- -	60.8	536
	10/13/2022		107	0.981	- -	4.85	<0.0420	56.5	548
	03/23/2023		122	0.800	- -	7.10	<0.0420	53.1	624
	10/05/2023		--[1]	--[1]	- -	--[1]	--[1]	--[1]	--[1]

Table 3. Anions and TDS Concentrations in Groundwater

HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)
New Mexico WQCC Groundwater Standards			250	1.6	10.0	10.0	1.0	600.0	1,000
MW-32	06/15/2017		- -	- -	- -	- -	- -	- -	- -
	06/15/2017	FD	- -	- -	- -	- -	- -	- -	- -
	08/17/2017		109	2.77	<0.0197	- -	- -	99.4	683
	04/05/2018		165	1.12	1.74	- -	- -	143	939
	10/01/2018		34.7	0.357 B	<0.0197	- -	- -	47.4	383
	10/01/2018	FD	34.9	0.360 B	<0.0197	- -	- -	47.7	451
	04/04/2019		159	0.478	1.10	- -	- -	146	940
	10/24/2019		90.5	0.453	7.15	- -	- -	173	745
	10/24/2019	FD	89.1	0.422	7.08	- -	- -	172	827
	06/18/2020		92.7	0.355	6.25	- -	- -	183	872
	10/08/2020		54.1	0.286	3.36	- -	- -	182	741
	10/08/2020	FD	50.6	0.278	3.13	- -	- -	190	760
	04/15/2021		61.8	0.292	1.71	- -	- -	132	692
	04/15/2021	FD	60.4	0.292	1.70	- -	- -	128	677
	09/16/2021		57.0	0.247	3.56	- -	- -	142	728
	09/16/2021	FD	57.4	0.245	3.57	- -	- -	150	740
	04/14/2022		42.5	0.274	12.5	- -	- -	170	813
	04/14/2022	FD	42.9	0.272	12.7	- -	- -	167	788
	10/13/2022		34.2	0.412	- -	12.1	0.0486 J	172	828
	10/13/2022	FD	34.5	0.395	- -	12.9	0.0901 JB	179	822
	03/23/2023		26.7	0.330	- -	10.3	0.118	150	803
	03/23/2023	FD	27.1	0.426	- -	9.78	0.0892 J	145	775
	10/05/2023		26.5	0.487	- -	3.87	0.234	78.7	552
	10/05/2023	FD	26.5	0.482	- -	3.84	0.241	78.6	548
MW-33	06/15/2017		- -	- -	- -	- -	- -	- -	- -
	08/17/2017		74.7	2.26	<0.0197	- -	- -	57.1	792
	04/05/2018		84.1	1.15	<0.0197	- -	- -	15.4	902
	10/01/2018		118	0.859	<0.0197	- -	- -	13.8	1,170
	04/04/2019		137	0.729	<0.0197	- -	- -	12.4	1,230
	10/24/2019		160	0.748	<0.0197	- -	- -	7.98	1,160
	06/18/2020		145	0.770	<0.0500	- -	- -	12.8	1,220
	10/08/2020		95.3	0.647	<0.0500	- -	- -	21.6	1,090
	10/08/2020	FD	96.3	0.644	<0.0500	- -	- -	21.3	1,060
	04/15/2021		78.7	0.635	<0.0500 [R]	- -	- -	9.75	1,090
	04/15/2021	FD	79.3	0.620	<0.0500 [R]	- -	- -	9.74	1,100
	09/16/2021		56.3	0.640	<0.0500	- -	- -	11.5	1,130
	09/16/2021	FD	56.3	0.639	<0.0500	- -	- -	11.7	1,130
	04/14/2022		91.8	0.715	<0.0500	- -	- -	8.21	1,220
	04/14/2022	FD	90.5	0.713	<0.0500	- -	- -	8.57	1,210
	10/13/2022		86.9	0.786	- -	0.0606 JB	0.0525 JB	7.78	1,220
	10/13/2022	FD	88.0	0.791	- -	0.0602 JB	0.0498 JB	8.10	1,160
	03/23/2023		82.6	0.690	- -	0.0687 JB	<0.0420	6.12	1,170
	03/23/2023	FD	83.0	0.708	- -	<0.0480	<0.0420	6.03	1,160
	10/05/2023		93.0 J	0.681	- -	0.127	<0.0420	6.45	1,180
	10/05/2023	FD	93.0	0.671	- -	0.125	<0.0420	6.44	1,210

Table 3. Anions and TDS Concentrations in Groundwater

HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)
New Mexico WQCC Groundwater Standards			250	1.6	10.0	10.0	1.0	600.0	1,000
North Well	06/18/2009		140	0.933	2.72	- -	- -	80.6	664
	01/14/2010		143	0.793	2.90	- -	- -	74.2	638
	08/24/2010		127	0.932	1.81	- -	- -	80.4	594
	03/03/2011		137	0.932	2.76	- -	- -	75.2	804
	07/20/2011		124	0.803	2.07	- -	- -	76.5	628
	02/02/2012		149	0.977	2.54	- -	- -	82.1	656
	07/30/2012		121	0.986	2.63	- -	- -	72.7	528
	02/19/2013		105	1.02	2.54	- -	- -	83.3	496
	08/22/2014		57.3	0.462	2.73	- -	- -	37.6	532
	12/17/2014		110	0.91	- -	3.0	<0.10	69	- -
	03/09/2015		11	0.098 J	2.7	- -	- -	7.3	520
	05/19/2015		110	0.88	3.2	- -	- -	73	550
	08/28/2015		193	1.55	4.34	- -	- -	127	593
	12/17/2015		121	0.982	3.46	- -	- -	76.7	588
	03/10/2016		136	0.939	3.34	- -	- -	74.1	575
	05/25/2016		128	0.941	3.03	- -	- -	75.1	634
	08/18/2016		129	0.872	5.76	- -	- -	70.9	626
	12/08/2016		156	0.942	3.23	- -	- -	74.3	676
	02/07/2017		148	0.893	3.55	- -	- -	82.9	613
	05/31/2017		150	0.836	3.27	- -	- -	75.9	597
	08/17/2017		135	0.740	3.19	- -	- -	76.5	662
	12/14/2017		133	0.816	3.13	- -	- -	77.3	616
	02/23/2018		133	0.948	3.46	- -	- -	76.5	603
	04/05/2018		131	0.878	3.09	- -	- -	75.6	584
	07/31/2018		121	0.881	3.03	- -	- -	74.7	584
	10/01/2018		121	0.797	3.11	- -	- -	79.9	573
	01/23/2019		120	0.775	2.86	- -	- -	75.6	550
	04/04/2019		120	0.776	3.17	- -	- -	74.9	590
	07/11/2019		121	0.931	3.29	- -	- -	77.5	571
	10/24/2019		122	0.930	2.57	- -	- -	76.8	484
	01/15/2020		117	0.860	2.94	- -	- -	77.5	549
	06/18/2020		118	0.953	2.92	- -	- -	78.6	548
	08/19/2020		111	0.837	2.82	- -	- -	78.3	568
	10/08/2020		116	0.824	2.74	- -	- -	83.4	519
	01/28/2021		120	0.798	2.86	- -	- -	80.1	520
	04/15/2021		113	0.796	3.20	- -	- -	78.1	530
	07/15/2021		114	0.802	3.15	- -	- -	77.8	541
	09/16/2021		128	0.771	2.90	- -	- -	78.0	580
	01/20/2022		124	0.938	2.97	- -	- -	78.1	544
	04/14/2022		128	0.836	2.93	- -	- -	79.8	586
	07/14/2022		122	0.845	- -	2.82	0.0786 J	79.1	528
	10/13/2022		128	0.868	- -	2.87	0.0930 JB	76.3	573
	01/26/2023		98.3	0.939	- -	1.66	<0.0420	74.2	449
	03/23/2023		116	0.830	- -	2.76	<0.0420	76.4	549
	07/27/2023		111	0.923	- -	2.51	<0.0420	70.3	533
	10/05/2023		115	0.791	- -	2.74	<0.0420	75.2	527
South Well	06/22/2009		497	0.665	3.02	- -	- -	106	1,450
	01/14/2010		498	0.686	3.27	- -	- -	113	1,520
	08/24/2010		477	0.651	2.18	- -	- -	101	1,760
	03/03/2011		549	0.647	3.24	- -	- -	122	1,840
	07/20/2011		420	0.687	2.48	- -	- -	103	1,600
	02/02/2012		368	0.756	3.02	- -	- -	89.0	1,210
	07/30/2012		135	1.01	2.53	- -	- -	73.3	582
	02/19/2013		359	0.743	2.88	- -	- -	99.2	1,170
	02/28/2014		352	0.575	0.660	- -	- -	99.2	1,210
	08/22/2014		435	0.720	3.00	- -	- -	100	1,480
	08/22/2014	FD	437	0.724	3.00	- -	- -	107	1,480
	12/17/2014		390	0.63	- -	3.2	<0.10	91	- -
	12/17/2014	FD	390	0.63	- -	3.2	<0.10	90	- -

Table 3. Anions and TDS Concentrations in Groundwater

HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)
New Mexico WQCC Groundwater Standards			250	1.6	10.0	10.0	1.0	600.0	1,000
South Well	03/09/2015		340	0.82	2.7	- -	- -	99	1,100
	03/09/2015	FD	340	0.82	650	- -	- -	98	1,100
	05/19/2015		330	0.76	3.2	- -	- -	92	1,100
	05/19/2015	FD	340	0.76	3.1	- -	- -	95	1,000
	08/28/2015		426	0.810	3.48	- -	- -	107	1,440
	08/28/2015	FD	382	0.734	3.50	- -	- -	95.9	1,320
	12/17/2015		400	0.751	3.35	- -	- -	115	1,400
	12/17/2015	FD	402	0.752	3.47	- -	- -	114	1,360
	03/10/2016		354	0.76	3.53	- -	- -	103	1,100
	05/25/2016		361	0.743	3.11	- -	- -	101	1,620
	05/25/2016	FD	377	0.741	3.11	- -	- -	102	1,440
	08/18/2016		381	0.692	3.18	- -	- -	98.2	1,420
	08/18/2016	FD	385	0.695	3.18	- -	- -	97.6	1,390
	12/08/2016		419	0.772	3.27	- -	- -	105	1,300
	12/08/2016	FD	425	0.777	3.27	- -	- -	106	1,310
	02/07/2017		379	0.712	3.41	- -	- -	115	1,110
	02/07/2017	FD	375	0.723	3.77	- -	- -	114	1,170
	05/31/2017		433	0.636	3.20	- -	- -	101	1,350
	05/31/2017	FD	426	0.619	3.16	- -	- -	101	1,330
	08/17/2017		406	0.579	2.96	- -	- -	97.7	1,260
	08/17/2017	FD	400	0.577	2.94	- -	- -	92.4	1,460
	12/14/2017		383	0.625	2.97	- -	- -	92.4	1,290
	12/14/2017	FD	405	0.625	3.03	- -	- -	94.4	1,410
	02/23/2018		429	0.746	3.28	- -	- -	103	1,410
	02/23/2018	FD	432	0.735	3.27	- -	- -	104	1,270
	04/05/2018		406	0.676	2.98	- -	- -	99.9	1,300
	07/31/2018		409	0.752	3.14	- -	- -	103	1,420
	07/31/2018	FD	396	0.685	3.20	- -	- -	97.5	1,230
	10/01/2018		368	0.625	3.00	- -	- -	97.0	1,360
	01/23/2019		396	0.601	2.67	- -	- -	90.1	1,100
	01/23/2019	FD	382	0.606	2.64	- -	- -	88.3	1,100
	04/04/2019		344	0.619	3.18	- -	- -	97.3	1,280
	07/11/2019		360	0.741	3.48	- -	- -	97.3	1,190
	10/24/2019		335	0.798	2.80	- -	- -	86.8	992
	01/15/2020		328	0.692	3.12	- -	- -	94.7	1,010
	06/18/2020		330	0.784	3.10	- -	- -	95.7	1,090
	08/19/2020		333	0.690	2.99	- -	- -	96.1	1,040
	08/19/2020	FD	341	0.684	2.99	- -	- -	95.8	1,070
	10/08/2020		309	0.711	2.93	- -	- -	92.5	1,010
	10/08/2020	FD	312	0.637	2.97	- -	- -	96.5	1,010
	01/28/2021		334	0.646	3.06	- -	- -	96.2	986
	01/28/2021	FD	349	0.650	3.05	- -	- -	96.7	1,040
	04/15/2021		302	0.659	3.36	- -	- -	91.6	948
	04/15/2021	FD	304	0.658	3.36	- -	- -	91.7	960
	07/15/2021		267	0.700	3.11	- -	- -	99.1	1,010
	07/15/2021	FD	266	0.677	3.04	- -	- -	95.3	1,020
	09/16/2021		315	0.637	3.32	- -	- -	94.8	1,050
	09/16/2021	FD	301	0.628	3.35	- -	- -	90.9	990
	01/20/2022		264	0.744	3.16	- -	- -	85.8	867
	01/20/2022	FD	277	0.724	2.63	- -	- -	86.3	860
	04/14/2022		318	0.695	3.05	- -	- -	91.2	960
	04/14/2022	FD	317	0.693	2.91	- -	- -	91.2	924
	07/14/2022		287	0.709	- -	3.01	0.167	90.6	964
	07/14/2022	FD	301	0.698	- -	2.94	0.178	87.6	924
	10/13/2022		291	0.682	- -	2.96	0.0443 JB	89.4	974
	10/13/2022	FD	287	0.680	- -	2.96	0.0610 JB	89.7	926
	01/26/2023		324	0.845	- -	3.11	<0.0420	87.2	990
	01/26/2023	FD	319	0.829	- -	3.09	<0.0420	87.3	1,000
	03/23/2023		344	0.687	- -	2.83	<0.0420	83.6	1,190
	03/23/2023	FD	293	0.649	- -	2.87	<0.0420	83.7	1,150
	07/27/2023		244	0.702	- -	2.84	<0.0420	79.6	878
	07/27/2023	FD	256	0.849	- -	2.85	<0.0420	79.6	988
	10/05/2023		292	0.696	- -	3.12	<0.0420	80.1	1,040
	10/05/2023	FD	296	0.666	- -	2.97	<0.0420	85.1	1,000

Table 3. Anions and TDS Concentrations in Groundwater

HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)
New Mexico WQCC Groundwater Standards			250	1.6	10.0	10.0	1.0	600.0	1,000
East Well	06/18/2009		107	0.980	2.59	- -	- -	84.0	554
	01/14/2010		138	0.991	2.70	- -	- -	72.7	676
	08/25/2010		106	1.00	0.523	- -	- -	74.5	522
	03/03/2011		135	0.905	2.68	- -	- -	75.6	644
	07/20/2011		124	0.810	1.83	- -	- -	73.8	596
	02/02/2012		150	0.967	2.56	- -	- -	81.4	664
	07/30/2012		144	0.962	2.40	- -	- -	80.9	636
	08/27/2012		- -	- -	- -	- -	- -	- -	- -
	09/26/2012		- -	- -	- -	- -	- -	- -	- -
	10/22/2012		- -	- -	- -	- -	- -	- -	- -
	12/27/2012		- -	- -	- -	- -	- -	- -	- -
	02/28/2014		138	0.899	0.564	- -	- -	80.6	658
	08/22/2014		124	0.914	2.71	- -	- -	78.5	614
	12/17/2014		120	0.90	- -	2.7	<0.10	73	- -
	03/09/2015		120	1.1	2.6	- -	- -	81	570
	05/19/2015		120	0.90	2.8	- -	- -	78	560
	08/28/2015		206	1.75	3.00	- -	- -	145	603
	12/17/2015		114	1.03	3.01	- -	- -	80.9	621
	03/10/2016		112	1.01	3.01	- -	- -	78.9	562
	05/25/2016		114	1.01	2.70	- -	- -	80.0	608
	08/18/2016		104	0.915	3.12	- -	- -	74.4	555
	12/08/2016		104	1.02	2.88	- -	- -	79.9	582
	02/07/2017		112	0.975	3.26	- -	- -	88.7	498
	05/31/2017		110	0.926	2.91	- -	- -	81.5	532
	08/17/2017		109	0.812	3.02	- -	- -	83.0	547
	12/14/2017		108	0.883	2.88	- -	- -	83.3	560
	02/23/2018		110	1.04	3.06	- -	- -	82.7	564
	04/05/2018		110	0.968	2.81	- -	- -	81.3	543
	07/31/2018		110	1.03	2.93	- -	- -	84.8	578
	10/01/2018		109	0.871	2.92	- -	- -	88.2	583
	01/23/2019		103	0.861	2.66	- -	- -	80.8	525
	04/04/2019		110	0.877	2.93	- -	- -	81.8	560
	07/11/2019		112	1.02	3.09	- -	- -	84.7	557
	10/24/2019		111	1.04	2.71	- -	- -	79.2	547
	01/15/2020		114	0.967	2.84	- -	- -	83.5	549
	06/18/2020		124	1.04	2.84	- -	- -	85.3	568
	08/19/2020		119	0.928	2.79	- -	- -	86.1	592
	10/08/2020		123	0.864	2.75	- -	- -	91.1	570
	01/28/2021		130	0.866	2.82	- -	- -	89.0	565
	04/15/2021		115	0.869	3.12	- -	- -	86.2	551
	07/15/2021		112	0.906	3.08	- -	- -	86.7	563
	09/16/2021		116	0.880	2.90	- -	- -	86.9	558
	11/10/2021		- -	- -	- -	- -	- -	- -	- -
	11/10/2021	FD	- -	- -	- -	- -	- -	- -	- -
	01/20/2022		114	0.977	2.93	- -	- -	82.5	515
	04/14/2022		112	0.949	2.87	- -	- -	85.4	540
	07/14/2022		106	0.943	- -	2.74	0.0722 J	82.2	493
	10/13/2022		107	1.04	- -	2.89	0.0803 JB	84.9	477
	01/26/2023		102	1.09	- -	2.95	<0.0420	81.8	502
	03/23/2023		98.0	0.956	- -	2.66	<0.0420	79.3	511
	07/27/2023		93.3	1.05	- -	2.45	<0.0420	75.7	503
	10/05/2023		96.4	0.898	- -	2.66	<0.0420	80.3	500

Notes:

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

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

mg/L = milligrams per liter

FD = Field Duplicate

< = Not reported above laboratory reporting limit

-- = Not Analyzed

(1)= Not analyzed due to insufficient water volume

(2)= Not analyzed due to refinery operations (inaccessible)

J = analyte was detected below the laboratory reporting limit (June 2009 to December 2014) or the method quantitation limit (February 2015 to April 2021) or reported detection limit (July 2021, to October 2023), 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

[R] analyte not usable for project objectives according to the United States Environmental Protection Agency (USEPA) *National Functional Guidelines for Inorganic Superfund Methods* (USEPA, November 2020)

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 present analyses completed by Pace Analytical National Center for Testing & Innovation (formerly ESC Lab Sciences) in Mount Juliet, Tennesse

Analytical data from 2009 to 2011 were provided by a previous consultant and could not be confirmed against the original data packages

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Table 4. Dissolved Metals Concentrations in Groundwater
HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	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 238 (mg/L)	Zinc (mg/L)
New Mexico WQCC Groundwater Standards			5.0	0.01	2	0.75	0.005	0.05	0.05	1.0	1.0	0.015	0.2	0.002	1.0	0.2	0.05	0.05	0.03	10.0
MW-1	06/19/2009		<0.0100	0.00914	0.147	0.175	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.974	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	0.0124
	01/19/2010		0.0202	0.00634	0.164	0.236	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	2.72	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00615	0.00989
	08/18/2010		<0.0100	0.00841	0.117	0.182	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	1.62	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00538
	03/01/2011		<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
	07/20/2011		<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
	02/02/2012		<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
	07/27/2012		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
	02/27/2013		<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	0.0107
	08/21/2013		0.0158	0.00589	0.102	0.187	<0.00200	0.0160	<0.00500	<0.00500	<0.200	<0.00500	1.32	<0.000200	<0.00500	0.0164	<0.00500	<0.00500	<0.00500	0.00641
	02/27/2014		<0.0100	0.00775	0.111	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
	08/21/2014		0.0135	0.0102	0.138	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	0.0242
	02/25/2015		<0.035	0.012	0.13	0.18 J	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	0.00048 J	<0.0012	<0.000049	0.0025 J	<0.0049	<0.0074	<0.0028	0.0022 J	0.0067 J
	08/27/2015		<0.0350	0.0120	0.122	0.170	<0.000160	<0.000540	<0.000260	<0.000520	<0.0141	<0.000240	0.00191 J	<0.0000490	0.00236 J	<0.000350	0.00268	<0.000310	0.00187 J	<0.00256
	03/09/2016		0.00841 JB	0.00292	0.121	0.155	<0.000160	0.0276	<0.000260	0.00141 JB	<0.0150	<0.000240	0.00102 JB	<0.0000490	0.00170 JB	0.000910 JB	0.00150 J	<0.000310	0.00246 J	0.00436 JB
	08/17/2016		0.00284 JB	0.0117	0.138	0.189	<0.000160	0.00112 JB	<0.000260	0.000802 JB	0.0529 JB	<0.000240	0.00295 JB	<0.0000490	0.00260 J	<0.000350	0.00278	<0.000310	0.00261 J	0.00377 J
	02/07/2017		<0.0258	0.00618 J	0.163	0.190	<0.000800	<0.00270	<0.00130	<0.00260	<0.0750	<0.00120	0.0124 J	<0.0000490	0.00549 J	0.0137	0.00237	<0.00155	0.00276 J	0.0160 J
	08/17/2017		0.0110 JB	0.00809	0.146	0.157	<0.000160	<0.000540	<0.000260	<0.000520	<0.0150	<0.000240	0.00371 J	0.000258	0.00229 J	0.0237	0.00228	<0.000310	0.00230 J	0.00494 J
	04/05/2018		<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
	10/01/2018		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
	04/04/2019		<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
	10/24/2019		<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
	06/18/2020		<0.0554	0.00564	0.152	0.168 J	<0.000478	<0.00149	<0.000477	0.00362 J	<0.0489	<0.00249	<0.00132	<0.000100	0.00285 J	<0.000952	0.00255	<0.000513	<0.00754	<0.00996
	06/18/2020	FD	<0.0554	0.00543	0.153	0.156 J	<0.000478	<0.00149	<0.000477	<0.00250	<0.0489	<0.00249	<0.00132	<0.000100	0.00262 J	<0.000952	0.00204	<0.000513	<0.00754	<0.00996
	10/08/2020		<0.0554	0.00570	0.165	0.161 J	<0.000478	<0.00149	<0.000477	<0.00250	<0.0489	<0.00249	0.00241 J	<0.000100	0.00322 J	0.00120 J	0.00232	<0.000513	<0.00754	<0.00996
	04/15/2021		<0.0185	0.00542	0.151	0.166 J	<0.000150	0.00157 J	<0.0000596	0.00216 J	<0.0281	<0.000849	<0.000704	<0.000100	0.00318 J	<0.000816	0.00213	<0.0000700	0.00173 J	0.00613 JB
	09/16/2021		<0.0185	0.00520	0.151	0.168 J	<0.000150	<0.00124	0.0000677 J	<0.00151	<0.0281	<0.000849	0.00101 J	<0.000100	0.00272 J	<0.000816	0.00210	<0.0000700	0.00175 J	0.00603 J
	04/14/2022		<0.0185	0.00543	0.145	0.166 J	<0.000150	<0.00124	0.0000640 J	0.00187 J	<0.0281	<0.000849	0.00117 J	<0.000100	0.00312 J	<0.000816	0.00220	<0.0000700	0.00167 J	0.0122 J
	10/13/2022		0.0273 JB	0.00629	0.141	0.181 J	<0.000150	<0.00124	<0.0000596	<0.00151	<0.0281	<0.000849	0.000902 J	<0.000100	0.00245 J	<0.000816	0.00180 J	<0.0000700	0.00173 J	0.0135 J
	03/23/2023		<0.0185	0.00615	0.163	0.167 J	<0.000150	<0.00124	<0.0000596	0.00436 J	<0.0281	<0.000849	0.00258 J	<0.000100	0.00230 J	<0.000816	0.00188 J	<0.0000700	0.00196 J	0.00442 J
	10/05/2023		<0.0185	0.00567	0.175	0.179 J	<0.000150	0.00134 J	<0.0000596	0.00189 J	<0.0281	<0.000849	<0.000704	<0.000100	0.00205 J	<0.000816	0.00186 J	<0.0000700	0.00206 J	<0.00302
MW-2	06/22/2009		0.0657	0.0386	0.0803	0.190	<0.00200	<0.00500	<0.00500	0.00621	<0.200	<0.00500	0.00583	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	0.110
	01/19/2010		<0.0100	<0.00500	0.00500	0.191	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00538	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0166
	08/16/2010		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
	03/03/2011		<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
	07/14/2011		<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
	01/30/2012		<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
	07/24/2012		<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
	02/19/2013		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
	08/20/2013		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
	02/25/2014		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
	08/21/2014		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
	02/24/2015		<0.035	0.0037	0.090	0.21	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	<0.00024	<0.0012	<0.000049	0.0034 J	<0.0049	<0.0074	<0.0028	0.0026 J	<0.0059
	08/28/2015		<0.0350	0.00355	0.111	0.213	<0.000160	0.000625 J	<0.000260	0.000548 J	<0.0141	<0.000240	0.000533 J	<0.0000490	0.00254 J	0.00115 J	0.00147 J	<0.000310	0.00340 J	0.00382 J
	03/07/2016		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/18/2016		0.00451 JB	0.00304	0.105	0.235	<0.000160	0.000981 JB	<0.000260	0.000952 JB	<0.0150	<0.000240	0.000769 JB	0.0000534 JB	0.00282 J	0.00129 JB	0.00166 J	<0.000310	0.00297 J	0.00316 JB
	02/07/2017		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/16/2017		0.0175 JB	0.00351	0.100	0.180	<0.000160	0.00333	<0.000260	0.00159 J	<0.0150	<0.000240	0.000347 J	0.0000703 J	0.00288 J	0.00713	0.00161 J	<0.000310	0.00268 J	0.0179 J
	04/05/2018		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		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
	04/04/2019		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		<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
	06/18/2020		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/08/2020		<0.0554	0.00362	0.0734	0.196 J	<0.000478	<0.00149	<0.000477	0.00407 J	<0.0489	<0.00249	<0.00132	<0.000100	0.00288 J	0.00433	0.00173 J	<0.000513	<0.00754	0.0439
	04/15/2021		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	09/16/2021		<0.0185	0.00410	0.0717	0.190 J	<0.000150	0.00131 J	0.0000770 J	0.00496 JB	<0.0281	<0.000849	<0.000704	<0.000100	0.00342 J	0.000979 J	0.00166 J	<0.0000700	0.00298 J	0.0391
	04/14/2022		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/13/2022		<0.0185	0.00423	0.0894	0.203	<0.000150	0.00177 J	0.0000687 J	0.00522	<0.0281	<0.000849	<0.000704	<0.000100	0.00323 J	0.00173 J	0.00162 J	<0.0000700	0.00271 J	0.0464
	03/23/2023		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/05/2023		<0.0185	0.00357	0.109	0.211	<0.000150	0.00135 J	<0.0000596	0.00774	<0.0281	<0.000849	<0.000704	<0.000100	0.00243 J	0.00112 J	0.00224	<0.0000700	0.00262 J	0.0371

Released to Imaging: 4/26/2024 10:49:21 AM

Table 4. Dissolved Metals Concentrations in Groundwater
HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	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 238 (mg/L)	Zinc (mg/L)
New Mexico WQCC Groundwater Standards			5.0	0.01	2	0.75	0.005	0.05	0.05	1.0	1.0	0.015	0.2	0.002	1.0	0.2	0.05	0.05	0.03	10.0
MW-3	06/16/2009		0.308	0.00815	0.115	0.160	<0.00200	0.00709	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	0.0151	<0.00500	<0.00500	<0.00500	- -	<0.0100
	01/14/2010		0.144	0.00703	0.119	0.148	<0.00200	0.00977	<0.00500	0.121	<0.200	<0.00500	0.00597	<0.000200	0.0200	0.00842	<0.00500	<0.00500	0.000625	0.0195
	01/14/2010	FD	0.142	0.00798	0.125	0.167	<0.00200	0.0105	<0.00500	0.148	<0.200	<0.00500	0.00699	<0.000200	0.0216	0.00960	<0.00500	<0.00500	0.000721	0.0230
	08/19/2010		0.0767	0.00935	0.127	0.151	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	0.00790	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	02/24/2011		<0.0100	0.00892	0.124	0.178	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0524
	07/15/2011		<0.0100	0.0125	0.113	0.202	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	0.00510	<0.00500	<0.00500	<0.00500	<0.00500	0.0156
	01/30/2012		<0.0100	0.0117	0.0831	0.168	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	0.00621	<0.00500	<0.00500	<0.00500	<0.00500	0.00886
	07/25/2012		<0.0100	0.0152	0.0773	0.209	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00673
	02/27/2013		<0.0100	0.0156	0.101	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
	08/22/2013		0.0185	0.0169	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
	02/26/2014		<0.0100	0.0179	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
	08/21/2014		0.0128	0.0183	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
	02/26/2015		<0.035	0.019	0.061	0.16 J	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	<0.00024	<0.0012	<0.000049	0.00094 J	<0.0049	<0.0074	<0.0028	0.00057 J	<0.0059
	02/26/2015	FD	<0.035	0.020	0.062	0.16 J	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	<0.00024	<0.0012	<0.000049	0.0011 J	<0.0049	0.0085 J	<0.0028	0.00056 J	0.0088 J
	08/26/2015		<0.0350	0.0195	0.0529	0.166 J	<0.000160	0.000912 J	<0.000260	0.00101 J	<0.0141	<0.000240	0.000572 J	<0.0000490	<0.00160	0.000483 J	0.00269	<0.000310	0.000567 J	0.00296 J
	03/08/2016		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/18/2016		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	02/07/2017		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/16/2017		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	04/05/2018		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	04/04/2019		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	06/18/2020		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/08/2020		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	04/15/2021		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	09/16/2021		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	04/14/2022		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/13/2022		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	03/23/2023		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/05/2023		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
MW-4	06/16/2009		0.180	<0.00500	0.174	0.160	<0.00200	0.00534	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	0.0120
	01/13/2010		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
	08/19/2010		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
	02/28/2011		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
	07/15/2011		0.144	<0.00500	0.141	0.172	<0.00200	0.00619	<0.00500	<0.00500	<0.200	<0.00500	0.0114	<0.000200	<0.00500	0.0103	<0.00500	<0.00500	<0.00500	0.0211
	01/30/2012		0.0119	<0.00500	0.0796	0.150	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0147
	07/24/2012		<0.0100	<0.00500	0.0883	0.199	<0.00200	<0.00500	<0.00500	<0.00500	<0.20	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.0050	0.0102
	02/21/2013		<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	0.0116
	08/20/2013		<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
	02/25/2014		<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
	08/20/2014		0.603	0.00501	0.213	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	0.0221
	02/24/2015		<0.035	0.0046	0.090	0.15 J	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	0.00025 J	<0.0012	0.00011 J	0.0034 J	<0.0049	<0.0074	<0.0028	0.0016 J	<0.0059
	08/28/2015		<0.0350	0.00526	0.0930	0.157	<0.000160	<0.000540	<0.000260	<0.000520	<0.0141	<0.000240	0.00114 J	<0.0000490	0.00319 J	0.000482 J	0.00228	<0.000310	0.00168 J	0.00269 J
	08/15/2016		0.00568 JB	0.00564	0.0894	0.155	<0.000160	0.00117 JB	<0.000260	0.000614 JB	0.0640 JB	<0.000240	0.000588 JB	<0.0000490	0.00358 J	0.000488 JB	0.00272	<0.000310	0.00170 J	0.00298 J
	08/17/2017		0.0196 JB	0.00480	0.0871	0.139	<0.000160	0.000569 J	<0.000260	0.000818 J	<0.0150	<0.000240	<0.000250	<0.0000490	0.00313 J	0.00317 B	0.00220	<0.000310	0.00141 J	0.00637 J
	10/01/2018		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
	10/24/2019		<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
	10/08/2020		<0.0554	0.00456	0.111	0.155 J	<0.000478	<0.00149	<0.000477	<0.00250	<0.0489	<0.00249	<0.00132	<0.000100 [R]	0.00296 J	0.00226	0.00201	<0.000513	<0.00754	0.0309
	09/16/2021		0.163	0.00427	0.118	0.170 J	<0.000150	0.00167 J	<0.0000596	0.00195 JB	<0.0281	<0.000849	<0.000704	<0.000100	0.00255 J	<0.000816	0.00171 J	<0.0000700	0.00177 J	0.0334
	10/13/2022		<0.0185	0.00456	0.110	0.173 J	<0.000150	0.00523	<0.0000596	0.00191 J	<0.0281	<0.000849	<0.000704	<0.000100	0.00283 J	0.00111 J	0.00198 J	<0.0000700	0.00173 J	0.0352
	10/05/2023		<0.0185	0.00438	0.111	0.177 J	<0.000150	0.0100	<0.0000596	0.00181 J	<0.0281	<0.000849	<0.000704	<0.000100	0.00265 J	0.00202	0.00132 J	<0.0000700	0.00180 J	0.0134 J
MW-5	06/16/2009		0.796	0.0233	0.0639	0.116	<0.00200	<0.00500	<0.00500	<0.00500	0.399	<0.00500	0.00670	<0.000200	0.0103	<0.00500	<0.00500	<0.00500	- -	<0.0100
	01/18/2010		<0.0100	<0.00500	0.0966	0.135	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	08/20/2010		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
	02/28/2011		0.123	<0.00500	0.100	0.0854	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0142	<0.000200	<0.00500	0.0112	<0.00500	<0.00500	<0.00500	0.0368
	07/19/2011		<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	0.0309
	01/31/2012		<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
	01/31/2012	FD	<0.0100	<0.00500	0.0947	0.0728	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0119
	07/25/2012		0.0205	<0.00500	0.0931	0.134	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0562
	02/21/2013		0.0487	<0.00500	0.104	0.0997	<0.00200	<0.00500	<0.00500	0.0434	<0.200	<0.00500	0.0158	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00582	0.0289
	08/20/2013		<0.0100	<0.00500	0.105	0.100	<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	0.0208
	02/25/2014		<0.0100	<0.00500	0.116	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	0.0114
	08/19/2014		0.148	<0.00500	0.123	<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
	02/24/2015		0.038 J	0.0029	0.12	0.091 J	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	<0.00024	<0.0012	<0.000049	0.0045 J	<0.0049	<0.0074	<0.0028	0.0040 J	0.0089 J
	08/24/2015		<0.0350	0.00410	0.121	0.0899 J	<0.000160	0.00111 J	<0.000260	0.00102 J	<0.0141	<0.000240	<0.000250	<0.0000490	0.00476 J	0.000814 J	<0.000380	<0.000310	0.00410 J	0.00539 J
	08/17/2016		0.0155 JB	0.00425	0.119	0.108	<0.000160	0.00217 B	<0.000260	0.00122 JB	0.0974 JB	<0.000240	0.000764 JB	<0.0000490	0.00876	0.000540 JB	0.000502 J	<0.000310	0.00553 J	0.00590 J
	08/16/2017		0.0209 JB	0.00382	0.118	0.0893	<0.000160	0.00128 J	<0.000260	0.00261 J	<0.0150	<0.000240	0.000398 J	<0.0000490	0.00616	0.000700 JB	0.000574 J	<0.000310	0.00432 J	0.00391 J
	10/01/2018		<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
	10/24/2019		<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
	10/08/2020		<0.0554	0.00325	0.118	0.0725 J	<0.000478	<0.00149	<0.000477	0.00460 J	<0.0489	<0.00249	<0.00132	0.000103 J	0.00254 J	0.00147 J	<0.000657	<0.000513	<0.00754	0.0166 J
	09/16/2021		<0.0185	0.00120 J	0.118	0.0740 J	<0.000150	<0.00124	0.000325 J	0.00311 JB	<0.0281	<0.000849	0.00886	<0.000100	0.00201 J	0.00154 J	0.000738 J	<0.0000700	0.00234 J	0.559
	10/13/2022		0.0271 J	0.00251	0.111	0.0743 J	<0.000150	<0.00124	<0.0000596	0.00655	0.0627 J	0.00171 J	0.00149 J	<0.000100	0.00179 J	0.00230	0.000426 J	<0.0000700	0.00239 J	0.0448
	10/05/2023		<0.0185	0.00233	0.106	0.0774 J	<0.000150	<0.00124	<0.0000596	0.00759	<0.0281	<0.000849	<0.000704	<0.000100	0.00174 J	0.00179 J	0.000583 J	<0.0000700	0.00199 J	0.0217 J

Table 4. Dissolved Metals Concentrations in Groundwater
HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	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 238 (mg/L)	Zinc (mg/L)
New Mexico WQCC Groundwater Standards			5.0	0.01	2	0.75	0.005	0.05	0.05	1.0	1.0	0.015	0.2	0.002	1.0	0.2	0.05	0.05	0.03	10.0
MW-6	06/18/2009		<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
	06/18/2009	FD	<0.0100	0.0221	0.200	0.192	<0.00200	<0.00500	<0.00500	<0.00500	0.219	<0.00500	2.76	<0.000200	<0.00500	0.00653	<0.00500	<0.00500	- -	0.0141
	02/02/2010		<0.0200	0.0250	0.499	0.234	<0.00200	<0.00500	<0.00500	<0.00500	2.08	<0.00500	4.51	<0.000200	<0.00500	0.00634	<0.00500	<0.00500	0.0113	<0.00500
	08/19/2010		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
	03/01/2011		<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
	07/20/2011		<0.0100	0.0336	0.220	0.223	<0.00200	0.00972	<0.00500	<0.00500	1.57	<0.00500	4.51	<0.000200	<0.00500	0.00576	<0.00500	<0.00500	<0.00500	0.0176
	02/02/2012		<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
	07/24/2012		<0.0100	0.0128	0.143	0.265	<0.00200	<0.00500	<0.00500	<0.00500	1.28	<0.00500	2.53	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.0102	0.0194
	02/27/2013		<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	0.0123
	02/27/2013	FD	<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	0.0106
	08/21/2013		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
	02/27/2014		<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
	08/21/2014		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	0.0151
	02/25/2015		0.092 J	0.0061	0.19	0.19 J	<0.00070	<0.0014	<0.0023	<0.0053	0.015 J	0.00072 J	1.0	<0.000049	0.0026 J	<0.0049	<0.0074	<0.0028	0.0066 J	0.020 J
	08/27/2015		<0.0350	0.00539	0.152	0.181	<0.000160	<0.000540	<0.000260	0.000540 J	<0.0141	<0.000240	0.411	<0.0000490	0.00192 J	0.00134 J	0.00242	<0.000310	0.00463 J	0.00347 J
	03/10/2016		0.00858 JB	0.00529	0.149	0.174	<0.000160	<0.000540	<0.000260	0.000554 J	<0.0150	<0.000240	0.138 B	<0.0000490	0.00202 JB	0.000974 JB	0.00298	<0.000310	0.00573 J	0.00327 JB
	08/17/2016		0.00297 JB	0.00654	0.131	0.196	<0.000160	0.000782 JB	<0.000260	0.00132 JB	<0.0150	<0.000240	0.0144	<0.0000490	0.00215 J	0.00121 JB	0.00316	<0.000310	0.00726 J	0.00362 JB
	02/07/2017		<0.0258	0.00762 J	0.168	0.181	<0.000800	<0.00270	<0.00130	<0.00260	<0.0750	<0.00120	0.0323	<0.0000490	0.00260 J	0.00285 J	0.00409	<0.00155	0.00537 J	<0.0128
	08/16/2017		0.0121 JB	0.00653	0.179	0.156	<0.000160	<0.000540	<0.000260	0.00294 J	<0.0150	<0.000240	0.737	<0.0000490	0.00380 J	0.0163	0.00417	<0.000310	0.00406 J	0.0262
	04/05/2018		<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
	10/01/2018		<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
	04/04/2019		<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
	10/24/2019		<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
	06/18/2020		<0.0554	0.00798	0.147	0.174 J	<0.000478	<0.00149	<0.000477	0.00258 J	<0.0489	<0.00249	0.0294	<0.000100	0.00272 J	0.00194 J	0.00310	<0.000513	<0.00754	0.0360
	06/18/2020	FD	<0.0554	0.00819	0.156	0.168 J	<0.000478	<0.00149	<0.000477	<0.00250	<0.0489	<0.00249	0.0289	<0.000100	0.00274 J	0.00231	0.00364	<0.000513	<0.00754	0.0336
	10/08/2020		<0.0554	0.00792	0.140	0.163 J	<0.000478	<0.00149	<0.000477	<0.00250	<0.0489	<0.00249	0.0276	0.000139 J	0.00295 J	0.00221	0.00315	<0.000513	<0.00754	0.0498
	04/15/2021		<0.0185	0.00780	0.151	0.173 J	<0.000150	<0.00124	<0.0000596	0.00261 J	<0.0281	<0.000849	0.00292 JB	<0.000100	0.00260 J	0.00101 J	0.00302	<0.0000700	0.00283 J	0.0402
	09/16/2021		<0.0185	0.00679	0.158	0.170 J	<0.000150	<0.00124	<0.0000596	0.00312 JB	<0.0281	<0.000849	0.00171 J	<0.000100	0.00240 J	0.00875	0.00295	<0.0000700	0.00425 J	0.0732
	04/14/2022		0.0331 JB	0.00682	0.178	0.180 J	<0.000150	<0.00124	0.0000813 J	0.00613	<0.0281	<0.000849	0.00132 J	<0.000100	0.00201 JB	0.00234 B	0.00328	<0.0000700	0.00435 J	0.0601
	10/13/2022		<0.0185	0.00628	0.150	0.178 J	<0.000150	<0.00124	<0.0000596	0.00326 J	<0.0281	<0.000849	0.00273 J	<0.000100	0.00210 J	0.00249	0.00281	<0.0000700	0.00307 J	0.105
	03/23/2023		<0.0185	0.00592	0.188	0.197 J	<0.000150	<0.00124	0.0000750 J	0.00500 J	<0.0281	<0.000849	0.00335 J	<0.000100	0.00171 J	0.00175 J	0.00298	<0.0000700	0.00343 J	0.0755
	10/05/2023		<0.0185	0.00529	0.188	0.188 J	<0.000150	0.00132 J	0.0000667 J	0.00792	<0.0281	<0.000849	0.00340 J	<0.000100	0.00197 J	0.00203	0.00242	<0.0000700	0.00310 J	0.0995
MW-7	06/19/2009		<0.0100	0.00923	0.169	0.161	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.127	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	0.0137
	02/02/2010		<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
	08/18/2010		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
	03/01/2011		<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
	07/20/2011		<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
	02/02/2012		<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
	07/27/2012		0.0727	<0.00500	0.234	0.196	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.642	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0114
	02/27/2013		<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
	08/21/2013		<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
	02/27/2014		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
	08/21/2014		<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
	02/25/2015		<0.035	0.0055	0.24	0.18 J	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	0.00041 J	0.011	<0.000049	0.0011 J	<0.0049	<0.0074	<0.0028	0.0033 J	0.0083 J
	08/27/2015		<0.0350	0.00650	0.215	0.180	<0.000160	<0.000540	<0.000260	<0.000520	<0.0141	<0.000240	0.0184	<0.0000490	0.00175 J	<0.000350	0.00334	<0.000310	0.00236 J	<0.00256
MW-8	06/18/2009		<0.0100	0.00501	0.181	0.228	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00919	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	0.0458
	01/18/2010		<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
	08/18/2010		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
	02/25/2011		<0.0100	<0.00500	0.106	0.175	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.281	<0.000200	<0.00500	0.00620	<0.00500	<0.00500	<0.00500	0.0316
	07/19/2011		<0.0100	<0.00500	0.229	0.278	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00928	0.0213
	02/01/2012		<0.0100	<0.00500	0.221	0.210	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00636	<0.000200	<0.00500	0.0119	<0.00500	<0.00500	0.00745	0.0339
	07/27/2012		<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
	02/26/2013		<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	0.0188
	08/21/2013		<0.0100	<0.00500	0.119	0.266	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0208	<0.000200	<0.00500	0.0135	<0.00500	<0.00500	<0.00500	0.0107
	02/27/2014		0.747	<0.00500	0.233	0.284	<0.00200	0.0417	<0.00500	<0.00500	0.541	<0.00500	0.0240	<0.000200	<0.00500	0.0339	<0.00500	<0.00500	0.00916	0.0102
	08/21/2014		0.314	<0.00500	0.212	0.230	<0.00200	0.0404	<0.00500	<0.00500	0.274	<0.00500	0.0128	<0.000200	<0.00500	0.0258	<0.00500	<0.00500	0.00639	0.0181
	02/26/2015		0.11	0.0055	0.20	0.23	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	<0.00024	<0.0012	<0.000049	0.00083 J	<0.0049	<0.0074	<0.0028	0.0073 J	0.0059 J
	08/27/2015		<0.0350	0.00537	0.232	0.245	<0.000160	0.000562 J	0.000346 J	0.000544 J	<0.0141	<0.000240	0.00141 J	<0.0000490	0.000854 J	0.00204	0.00224	<0.000310	0.00891 J	0.00316 J
	03/08/2016		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/18/2016		0.0111 JB	0.00686	0.121	0.187	<0.000160	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	<0.000310	0.00245 J	0.00318 JB
	02/08/2017		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/17/2017		0.0129 JB	0.00790	0.126	0.151	<0.000160	<0.000540	<0.000260	0.00265 J	<0.0150	<0.000240	<0.000250	<0.0000490	0.00207 J	0.00679	0.00278	<0.000310	0.00347 J	0.0133 J
	04/05/2018		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		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
	04/04/2019		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		<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
	06/18/2020		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/08/2020		<0.0554	0.00715	0.167	0.228	<0.000478	0.00162 J	<0.000477	0.00397 J	<0.0489	<0.00249	0.00181 J	0.000110 J	0.00132 J	0.00400	0.00264	<0.000513	<0.00754	0.0383
	04/15/2021		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	09/16/2021		<0.0185	0.00722	0.203	0.217	<0.000150	0.00130 J	0.000116 J	0.00588 B	<0.0281	<0.000849	<0.000704	<0.000100	0.00137 J	0.00366	0.00185 J	<0.0000700	0.00680 J	0.0235 J
	04/14/2022		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/13/2022		0.0298 J	0.00698	0.298	0.232	<0.000150	0.00344	0.000135 J	0.00298 J	0.0377 J	<0.000849	0.00351 J	<0.000100	0.000965 J	0.0184	0.00126 J	<0.0000700	0.0147 J	0.0348
	03/23/2023		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/05/2023		<0.0185	0.00614	0.324	0.696	<0.000150	<0.00124	0.000549 J	0.00299 J	<0.0281	<0.000849	0.0124	<0.000100	0.000931 J	0.00420	<0.000300	<0.0000700	0.00919 J	0.00552 J

Table 4. Dissolved Metals Concentrations in Groundwater
HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	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 238 (mg/L)	Zinc (mg/L)
New Mexico WQCC Groundwater Standards			5.0	0.01	2	0.75	0.005	0.05	0.05	1.0	1.0	0.015	0.2	0.002	1.0	0.2	0.05	0.05	0.03	10.0
MW-9	06/16/2009		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
	01/14/2010		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
	08/19/2010		0.115	0.0358	0.0649	0.121	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00961	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	03/01/2011		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
	07/15/2011		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
	01/31/2012		<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
	07/25/2012		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
	02/27/2013		<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	0.0167
	08/22/2013		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
	02/26/2014		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
	08/21/2014		2.47	<0.00500	0.174	0.124	<0.00200	0.205	<0.00500	0.00644	2.22	<0.00500	0.0903	<0.000200	0.00662	0.111	<0.00500	<0.00500	<0.00500	0.0334
	02/25/2015		<0.035	0.0087	0.10	0.18 J	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	<0.00024	<0.0012	<0.000049	0.0014 J	<0.0049	<0.0074	<0.0028	0.0031 J	<0.0059
	08/26/2015		<0.0350	0.00744	0.108	0.163 J	<0.000160	<0.000540	<0.000260	0.000626 J	<0.0141	<0.000240	<0.000250	<0.0000490	<0.00160	0.000566 J	0.00297	<0.000310	0.00285 J	0.00258 J
	08/17/2016		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/16/2017		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/08/2020		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	09/16/2021		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/13/2022		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/05/2023		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
MW-10	06/16/2009		<0.0200	<0.00500	0.113	0.138	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	0.0127
	01/13/2010		<0.0100	<0.00500	0.0815	0.162	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.000911	0.0133
	08/19/2010		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
	03/03/2011		<0.0100	<0.00500	0.0772	0.159	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0133
	07/15/2011		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
	01/31/2012		<0.0100	<0.00500	0.0865	0.109	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0252
	07/25/2012		<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
	02/27/2013		<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
	08/22/2013		<0.0100	<0.00500	0.104	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
	02/26/2014		<0.0100	<0.00500	0.106	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
	08/21/2014		<0.0100	<0.00500	0.134	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	0.0114
	02/26/2015		<0.035	0.0043	0.12	0.17 J	<0.00070	0.0016 J	<0.0023	<0.0053	<0.014	0.00030 J	<0.0012	<0.000049	0.0026 J	<0.0049	<0.0074	<0.0028	0.0019 J	0.0060 J
	08/26/2015		<0.0350	0.00466	0.0982	0.154	<0.000160	0.000709 J	<0.000260	0.000803 J	<0.0141	<0.000240	<0.000250	<0.0000490	0.00258 J	<0.000350	0.00283	<0.000310	0.00158 J	<0.00256
	08/17/2016		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/16/2017		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/08/2020		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	09/16/2021		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/13/2022		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/05/2023		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
MW-11	06/18/2009		<0.0100	<0.00500	0.194	0.199	<0.00200	<0.00500	<0.00500	<0.00500	0.571	<0.00500	0.387	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	0.0212
	01/18/2010		<0.0100	<0.00500	0.147	0.238	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0559	<0.000200	<0.00500	0.0126	<0.00500	<0.00500	0.00635	<0.00500
	08/18/2010		0.0125	<0.00500	0.471	0.255	<0.00200	<0.00500	<0.00500	<0.00500	0.347	<0.00500	0.571	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00718	<0.00500
	02/25/2011		<0.0100	<0.00500	0.241	0.244	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0101	<0.000200	<0.00500	0.00856	<0.00500	<0.00500	0.00878	0.0982
	07/19/2011		<0.0100	<0.00500	0.150	0.232	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0301	<0.000200	<0.00500	0.00846	<0.00500	<0.00500	0.00616	0.0265
	02/01/2012		<0.0100	0.0176	1.40	0.288	<0.00200	<0.00500	<0.00500	<0.00500	1.77	<0.00500	1.05	<0.000200	<0.00500	0.0169	<0.00500	<0.00500	0.0138	0.0189
	07/27/2012		<0.0100	0.0128	0.827	0.374	<0.00200	<0.00500	<0.00500	<0.00500	2.02	<0.00500	2.54	<0.000200	<0.00500	0.0351	<0.00500	<0.00500	0.0330	<0.00500
	02/27/2013		<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	0.0861	<0.00500	<0.00500	0.0127	0.0226
	02/27/2013	FD	<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	0.0811	<0.00500	<0.00500	0.0125	0.0199
	08/21/2013		<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
	08/21/2013	FD	<0.0100	<0.00500	0.198	0.290	<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
	02/28/2014		--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)
	08/20/2014		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	0.0217	<0.00500	<0.00500	0.0269	0.0104
	02/27/2015		--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)
	08/28/2015		--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)
	08/28/2015	FD	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)
	03/09/2016		--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)
	03/09/2016	FD	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)
	08/15/2016		DRY WELL - PLUGGED AND ABANDONED DECEMBER 2016																	
MW-11R	02/08/2017		<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
	02/08/2017	FD	<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
	08/17/2017		0.00988 JB	0.00225	0.156	0.162	<0.000160	<0.000540	<0.000260	0.00242 J	<0.0150	<0.000240	0.00888	<0.0000490	0.00115 J	0.0275	0.00123 J	<0.000310	0.00349 J	0.0152 J
	04/05/2018		<0.00515	0.00250	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
	10/01/2018		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
	04/04/2019		<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
	10/24/2019		<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
	06/18/2020		<0.0554	0.00239	0.187	0.294	<0.000478	<0.00149	<0.000477	0.0351	<0.0489	<0.00249	<0.00132	<0.000100	<0.000953	0.00455	0.00181 J	<0.000513	<0.00754	0.108
	10/08/2020		<0.0554	0.00250	0.186	0.286	<0.000478	<0.00149	<0.000477	0.0309	<0.0489	<0.00249	<0.00132	0.000104 J	<0.000953	0.00143 J	0.00205	<0.000513	<0.00754	0.0912
	04/15/2021		<0.0185	0.00247	0.201	0.303	<0.000150	<0.00124	0.000102 J	0.00452 J	<0.0281	<0.000849	0.00409 JB	<0.000100	0.00106 J	0.00193 J	0.000975 J	<0.0000700	0.00623 J	0.00533 JB
	09/16/2021		<0.0185	0.00254	0.198	0.296	<0.000150	<0.00124	0.000246 J	0.0326	<0.0281	0.00151 J	0.0343	<0.000100	0.00138 J	0.00174 J	0.00141 J	<0.0000700	0.00720 J	0.0562
	04/14/2022		<0.0185	0.00256	0.181	0.267	<0.000150	<0.00124	0.000135 J	0.0441	<0.0281	0.000957 J	0.0166	<0.000100	0.00114 JB	0.00303 B	0.00153 J	<0.0000700	0.00455 J	0.0660
	10/13/2022		<0.0185	0.00260	0.187	0.259	<0.000150	0.00153 J	0.000116 J	0.0380	<0.0281	0.00143 J	0.0265	<0.000100	0.00109 J	0.00276	0.00115 J	<0.0000700	0.00581 J	0.0893
	03/23/2023		--(2)	--(2)	--(2)	--(2)	--(2)	--(2)	--(2)	--(2)	--(2)	--(2)	--(2)	--(2)	--(2)	--(2)	--(2)	--(2)	--(2)	--(2)
	10/05/2023		<0.0185	0.00292	0.218	0.273	<0.000150	<0.00124	0.00114 J	0.0126	<0.0281	0.000966 J	0.205	<0.000100	0.00118 J	0.00470	0.000546 J	<0.0000700	0.00718 J	0.0184 J

Table 4. Dissolved Metals Concentrations in Groundwater
HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	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 238 (mg/L)	Zinc (mg/L)
New Mexico WQCC Groundwater Standards			5.0	0.01	2	0.75	0.005	0.05	0.05	1.0	1.0	0.015	0.2	0.002	1.0	0.2	0.05	0.05	0.03	10.0
MW-12	06/16/2009		<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
	01/18/2010		<0.0100	<0.00500	0.0755	0.235	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0219	<0.000200	<0.00500	0.0182	<0.00500	<0.00500	<0.00500	<0.00500
	08/20/2010		0.115	0.00550	0.0756	0.176	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	02/25/2011		<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	0.0185
	07/19/2011		<0.0100	<0.00500	0.0828	0.215	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	0.00575	0.00684	<0.00500	<0.00500	<0.00500	<0.00500
	--		DAMAGED WELL - PLUGGED AND ABANDONED JUNE 2013																	
MW-12R	08/21/2013		<0.0100	<0.00500	0.0937	0.194	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0129	<0.000200	0.00647	0.0103	<0.00500	<0.00500	<0.00500	0.00956
	02/27/2014		<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
	08/20/2014		1.31	<0.00500	0.145	0.223	<0.00200	0.0516	<0.00500	<0.00500	0.867	<0.00500	0.0483	<0.000200	0.00554	0.0350	<0.00500	<0.00500	<0.00500	0.00962
	02/24/2015		0.037 J	0.0038	0.095	0.20	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	<0.00024	<0.0012	<0.000049	0.0042 J	<0.0049	<0.0074	<0.0028	0.0019 J	0.0081 J
	08/25/2015		<0.0350	0.00413	0.102	0.233	<0.000160	<0.000540	<0.000260	<0.000520	<0.0141	<0.000240	0.00203 J	<0.0000490	0.00294 J	0.00191 J	0.000707 J	<0.000310	0.00270 J	0.00291 J
	03/09/2016		0.00398 J	0.0034	0.0972	0.214	<0.000160	0.000653 J	<0.000260	0.00331 J	<0.0150	<0.000240	0.00314 JB	<0.0000490	0.00348 J	0.00349 B	0.00121 J	<0.000310	0.00291 J	<0.00256
	08/18/2016		0.00468 JB	0.00294	0.111	0.274	<0.000160	0.00128 JB	<0.000260	0.00176 JB	<0.0150	0.000332 J	0.00250 J	0.0000689 JB	0.00267 J	0.00238 B	0.00151 J	<0.000310	0.00400 J	<0.00256
	02/08/2017		<0.0258	0.00348 J	0.133	0.273	<0.000800	<0.00270	<0.00130	<0.00260	<0.0750	<0.00120	0.0377	<0.0000490	0.00446 J	0.00769 J	0.00185 J	<0.00155	0.00430 J	0.0192 J
	08/16/2017		0.0102 JB	0.00270	0.118	0.229	<0.000160	0.000749 J	<0.000260	0.000969 J	<0.0150	<0.000240	<0.000250	<0.0000490	0.00285 J	0.00185 JB	0.00147 J	<0.000310	0.00422 J	0.00320 J
	04/05/2018		<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
	04/05/2018	FD	<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
	10/01/2018		<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
	10/01/2018	FD	<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
	04/04/2019		<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
	04/04/2019	FD	<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
	10/24/2019		--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]
	06/18/2020		--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]
	08/13/2020		DRY WELL - PLUGGED AND ABANDONED AUGUST 2020																	
MW-12R2	10/08/2020		<0.0554	0.00455	0.101	0.187 J	<0.000478	<0.00149	<0.000477	<0.00250	<0.0489	<0.00249	0.0112	0.000103 J	0.00701	0.00393	0.00223	<0.000513	<0.00754	0.0128 J
	04/15/2021		<0.0185	0.00425	0.118	0.197 J	<0.000150	<0.00124	<0.0000596	0.00196 J	<0.0281	<0.000849	0.00109 JB	<0.000100	0.00454 J	0.00430	0.00202	<0.0000700	0.00169 J	0.00906 JB
	09/16/2021		<0.0185	0.00406	0.110	0.193 J	<0.000150	<0.00124	<0.0000596	<0.00151	<0.0281	<0.000849	<0.000704	<0.000100	0.00408 J	0.00409	0.00212	<0.0000700	0.00181 J	0.0171 J
	04/14/2022		0.0222 JB	0.00406	0.118	0.189 J	<0.000150	0.00170 JB	0.0000920 J	0.00254 J	<0.0281	<0.000849	0.00106 J	<0.000100	0.00380 J	0.00614 B	0.00265	<0.0000700	0.00152 J	0.0314
	10/13/2022		<0.0185	0.00401	0.120	0.189 J	<0.000150	<0.00124	<0.0000596	0.00356 J	<0.0281	<0.000849	<0.000704	<0.000100	0.00370 J	0.00355	0.00249	<0.0000700	0.00171 J	0.109
	03/23/2023		<0.0185	0.00413	0.121	0.193 J	<0.000150	<0.00124	0.0000647 J	0.00365 J	<0.0281	<0.000849	0.00108 J	<0.000100	0.00330 J	0.00152 J	0.00296	0.0000741 J	0.00246 J	0.0149 J
	10/05/2023		0.0207 J	0.00392	0.113	0.278	<0.000150	<0.00124	0.0000604 J	0.00567	<0.0281	<0.000849	<0.000704	<0.000100	0.00213 J	0.00601	0.00318	<0.0000700	0.00459 J	0.0409
MW-13	06/16/2009		<0.0200	<0.00500	0.0692	0.253	<0.00200	<0.00500	0.0285	<0.00500	<0.200	<0.00500	0.0176	<0.000200	<0.00500	0.0126	<0.00500	<0.00500	- -	0.0269
	01/18/2010		<0.0100	<0.00500	0.111	0.231	<0.00200	0.00728	0.00624	<0.00500	<0.200	<0.00500	0.0591	<0.000200	<0.00500	0.0110	<0.00500	<0.00500	0.0119	0.00769
	08/18/2010		0.0196	<0.00500	0.106	0.221	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.256	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.0128	0.00618
	02/25/2011		<0.0100	<0.00500	0.0692	0.242	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.225	<0.000200	<0.00500	0.0144	<0.00500	<0.00500	0.0170	0.0744
	07/19/2011		<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
	02/01/2012		<0.0100	<0.00500	0.0752	0.228	<0.00200	<0.00500	0.00663	<0.00500	<0.200	<0.00500	0.341	<0.000200	<0.00500	0.0136	<0.00500	<0.00500	0.0128	0.0553
	07/26/2012		<0.0100	<0.00500	0.112	0.284	<0.00200	<0.00500	0.00644	<0.00500	<0.200	<0.00500	0.459	<0.000200	<0.00500	0.0108	<0.00500	<0.00500	0.0158	0.0361
	02/26/2013		0.0139	<0.00500	0.129	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	0.0359
	08/21/2013		<0.0100	0.00590	0.159	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
	02/27/2014		0.0110	<0.00500	0.191	0.258	<0.00200	0.0140	0.00541	<0.00500	0.321	<0.00500	1.01	<0.000200	<0.00500	0.0300	<0.00500	<0.00500	0.0173	0.0291
	08/19/2014		0.0737	<0.00500	0.207	0.287	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.940	<0.000200	<0.00500	0.00650	<0.00500	<0.00500	0.0151	0.0115
	02/27/2015		<0.035	0.0034	0.23	0.24	<0.00070	<0.0014	0.0047 J	<0.0053	<0.014	<0.00024	0.82	<0.000049	0.0010 J	<0.0049	<0.0074	<0.0028	0.014	0.019 J
	08/26/2015		<0.0350	0.00301	0.197	0.231	<0.000160	<0.000540	0.00163 J	0.00208 J	<0.0141	<0.000240	0.383	- -	0.00143 J	0.00276	0.000710 J	<0.000310	0.0112	0.00592 J
	03/08/2016		0.00530 JB	0.00365	0.0976	0.196	<0.000160	<0.000540	<0.000260	0.00100 JB	0.0238 JB	0.000241 JB	0.00062 J	<0.0000490	0.00288 J	0.000721 JB	0.00144 J	<0.000310	0.00303 J	0.00418 JB
	08/17/2016		0.00748 JB	0.00398	0.149	0.223	<0.000160	0.00130 JB	0.00218	0.00287 JB	0.0220 JB	<0.000240	0.241	<0.0000490	0.00111 J	0.00409 B	0.000998 J	<0.000310	0.0119	0.0159 J
	02/08/2017		<0.0258	0.00409 J	0.150	0.217	<0.000800	<0.00270	0.00296 J	<0.00260	<0.0750	<0.00120	0.157	<0.0000490	0.00132 J	0.00726 J	0.000432 J	<0.00155	0.0123 J	0.0382 J
	08/17/2017		0.00785 JB	0.00687	0.142	0.187	<0.000160	0.00128 J	<0.000260	0.00517	<0.0150	<0.000240	0.0258	<0.0000490	0.00193 J	0.0231	0.000828 J	<0.000310	0.0141	0.240
	04/05/2018		--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]
	09/26/2018		DRY WELL - PLUGGED AND ABANDONED SEPTEMBER 2018																	
MW-13R	10/01/2018		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
	04/04/2019		<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
	10/24/2019		<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
	06/18/2020		<0.0554	0.00238	0.127	0.274	<0.000478	<0.00149	0.000767 J	0.0110	<0.0489	<0.00249	0.0392	<0.000100	<0.000953	0.0103	0.00122 J	<0.000513	0.00887 J	0.0131 J
	06/18/2020	FD	<0.0554	0.00229	0.122	0.277	<0.000478	<0.00149	0.000716 J	0.00941	<0.0489	<0.00249	0.0374	<0.000100	<0.000953	0.00920	0.00104 J	<0.000513	0.00865 J	0.0128 J
	10/08/2020		<0.0554	0.00276	0.123	0.263	<0.000478	<0.00149	0.000901 J	0.0105	<0.0489	<0.00249	0.0349	0.000132 J	<0.000953	0.0101	0.00122 J	<0.000513	0.0106 J	0.0158 J
	10/08/2020	FD	<0.0554	0.00270	0.116	0.270	<0.000478	<0.00149	0.000872 J	0.00964	<0.0489	<0.00249	0.0327	0.000107 J	<0.000953	0.00888	0.000881 J	<0.000513	0.0101 J	0.0143 J
	04/15/2021		<0.0185	0.00258	0.121	0.253	<0.000150	<0.00124	0.000640 J	0.00821	<0.0281	<0.000849	0.0255	<0.000100	0.000796 J	0.00629	0.00102 J	<0.0000700	0.00962 J	0.0126 JB
	09/16/2021		<0.0185	0.00265	0.104	0.240	<0.000150	<0.00124	0.000438 J	0.00757 B	<0.0281	<0.000849	0.0155	<0.000100	0.000681 J	0.00401	0.000929 J	<0.0000700	0.0119 J	0.00987 J
	09/16/2021	FD	<0.0185	0.00271	0.109	0.244	<0.000150	<0.00124	0.000408 J	0.00795	<0.0281	<0.000849	0.0153	<0.000100	0.000737 JB	0.00429	0.00104 J	<0.0000700	0.0101 J	0.00984 J
	04/14/2022		0.0557 J	0.00275	0.125	0.230	<0.000150	0.00661	0.000277 J	0.00775	<0.0281	<0.000849	0.0145	<0.000100	0.000995 J	0.00528	0.00132 J	<0.0000700	0.0117 J	0.0232 J
	10/13/2022		<0.0185	0.00293	0.140	0.263	<0.000150	0.00183 J	0.000369 J	0.00854	<0.0281	<0.000849	0.0169	<0.000100	0.000618 J	0.00780	0.000660 J	<0.0000700	0.0120 J	0.0164 J
	10/13/2022	FD	<0.0185	0.00286	0.144	0.239	<0.000150	0.00175 J	0.000369 J	0.00847	<0.0281	<0.000849	0.0167	<0.000100	0.000653 J	0.00729	0.000656 J	<0.0000700	0.0115 J	0.0179 J
	03/23/2023		--[2]	--[2]	--[2]	--[2]	--[2]	--[2]	--[2]	--[2]	--[2]	--[2]	--[2]	--[2]	--[2]	--[2]	--[2]	--[2]	--[2]	--[2]
	10/05/2023		<0.0185	0.00274	0.149	0.312	<0.000150	0.00294	0.000479 J	0.00635	<0.0281	<0.000849	0.00900	<0.000100	0.000668 J	0.00854	0.000861 J	<0.0000700	0.0113 J	0.00442 J

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Table 4. Dissolved Metals Concentrations in Groundwater
HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	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 238 (mg/L)	Zinc (mg/L)
New Mexico WQCC Groundwater Standards			5.0	0.01	2	0.75	0.005	0.05	0.05	1.0	1.0	0.015	0.2	0.002	1.0	0.2	0.05	0.05	0.03	10.0
MW-14	06/16/2009		<0.0200	<0.00500	0.0770	0.132	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0199	<0.000200	0.0215	<0.00501	<0.00500	<0.00500	- -	0.0255
	01/18/2010		<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
	08/20/2010		0.103	<0.00500	0.0774	0.131	<0.00200	0.0119	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	0.00964	0.0480	<0.00500	<0.00500	0.00527	<0.00500
	02/25/2011		0.0101	<0.00500	0.0778	0.151	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0234	<0.000200	0.00903	0.0138	<0.00500	<0.00500	0.00541	0.0532
	07/18/2011		0.176	0.00615	0.110	0.156	<0.00200	12.5	0.122	0.218	54.9	<0.00500	1.45	<0.000200	0.0860	6.81	<0.00500	<0.00500	0.00544	0.0446
	01/31/2012		<0.0100	<0.00500	0.0802	0.129	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0276	<0.000200	0.00608	0.0186	<0.00500	<0.00500	<0.00500	0.0287
	07/25/2012		0.0116	<0.00500	0.0905	0.216	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0321	<0.000200	<0.00500	0.0240	<0.00500	<0.00500	<0.00500	0.0448
	02/21/2013		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	02/22/2013		<0.0100	<0.00500	0.0900	0.174	<0.00200	<0.00500	<0.00500	0.0705	<0.200	<0.00500	0.0349	<0.000200	0.0121	0.0106	<0.00500	<0.00500	0.00591	0.148
	08/22/2013		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	02/28/2014		--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]
	08/20/2014		0.573	<0.00500	0.125	0.203	<0.00200	0.0247	<0.00500	<0.00500	0.314	<0.00500	0.00919	<0.000200	0.00533	0.0178	<0.00500	<0.00500	0.00502	0.0134
	02/27/2015		<0.035	0.0023	0.10	0.20 J	<0.00070	0.0026 J	<0.0023	<0.0053	<0.014	<0.00024	<0.0012	--[1]	0.0040 J	<0.0049	<0.0074	<0.0028	0.0047 J	0.0070 J
	08/27/2015		<0.0350	0.00271	0.0998	0.188	<0.000160	0.00261	0.000326 J	0.00122 J	<0.0141	<0.000240	<0.000250	--[1]	0.00429 J	0.00190 J	0.00123 J	<0.000310	0.00485 J	0.00334 J
	08/19/2016		0.00385 JB	0.00244	0.124	0.216	<0.000160	0.00335 B	0.000476 J	0.00230 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
	08/16/2017		--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	<0.0000490	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]
	09/27/2018		DRY WELL - PLUGGED AND ABANDONED SEPTEMBER 2018																	
MW-14R	10/01/2018		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
	10/24/2019		<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
	10/08/2020		<0.0554	0.00257	0.275	0.202	<0.000478	<0.00149	<0.000477	<0.00250	<0.0489	<0.00249	<0.00132	0.000115 J	0.00241 J	<0.000952	0.00226	<0.000513	<0.00754	<0.00996
	09/16/2021		<0.0185	0.00250	0.250	0.208	<0.000150	<0.00124	<0.0000596	<0.00151	<0.0281	<0.000849	<0.000704	<0.000100	0.00221 J	<0.000816	0.00178 J	<0.0000700	0.00653 J	0.00738 J
	10/13/2022		<0.0185	0.00260	0.232	0.209	<0.000150	<0.00124	<0.0000596	0.00161 J	<0.0281	<0.000849	<0.000704	<0.000100	0.00227 J	<0.000816	0.00184 J	<0.0000700	0.00598 J	0.0119 J
	10/05/2023		<0.0185	0.00288	0.157	0.221	<0.000150	<0.00124	<0.0000596	<0.00151	<0.0281	<0.000849	<0.000704	<0.000100	0.00260 J	<0.000816	0.00162 J	<0.0000700	0.00488 J	<0.00302
MW-15	08/20/2010		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	0.0198
	02/24/2011		<0.0100	<0.00500	0.127	0.165	<0.00200	0.0102	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0385
	07/14/2011		<0.0100	<0.00500	0.173	0.201	<0.00200	0.0132	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	0.00657	<0.00500	<0.00500	<0.00500	0.0122
	01/30/2012		<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
	07/24/2012		<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
	02/19/2013		0.0682	<0.00500	0.178	0.191	<0.00200	0.129	<0.00500	<0.00500	0.610	<0.00500	0.0198	<0.000200	<0.00500	0.0704	<0.00500	<0.00500	<0.00500	0.0160
	08/20/2013		<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
	08/20/2013	FD	<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
	02/24/2014		<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
	02/24/2014	FD	<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
	08/21/2014		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	0.0149
	08/21/2014	FD	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	0.0213
	02/24/2015		0.052 J	0.0040	0.15	0.17 J	<0.00070	0.0034 J	<0.0023	<0.0053	<0.014	<0.00024	<0.0012	<0.0000490	0.0024 J	<0.0049	<0.0074	<0.0028	0.0021 J	0.012 J
	08/27/2015		<0.0350	0.00424	0.146	0.167	<0.000160	0.00285	<0.000260	0.00109 J	<0.0141	0.000373 J	0.000492 J	<0.0000490	0.00249 J	0.000825 J	0.00232	<0.000310	0.00220 J	<0.00256
	08/27/2015	FD	<0.0350	0.00443	0.146	0.174	<0.000160	0.00272	<0.000260	<0.000520	0.0144 J	<0.000240	0.000276 J	<0.0000490	0.00254 J	0.000688 J	0.00253	<0.000310	0.00200 J	<0.00256
	03/07/2016		0.00537 JB	0.0042	0.14	0.156	<0.000160	0.00281	<0.000260	0.000956 J	<0.0150	0.000309 JB	0.000837 JB	<0.0000490	0.00240 J	0.00173 JB	0.00234	<0.000310	0.00248 J	0.00275 JB
	08/15/2016		0.00418 JB	0.00353	0.140	0.176	<0.000160	0.00128 JB	0.000281 J	0.00193 JB	<0.0150	<0.000240	0.00394 J	<0.0000490	0.00326 J	0.00597 B	0.00245	<0.000310	0.00275 J	0.00409 J
	08/15/2016	FD	0.00531 JB	0.00353	0.145	0.183	<0.000160	0.00130 JB	0.000293 J	0.000569 JB	0.0441 JB	<0.000240	0.00413 J	<0.0000490	0.00340 J	0.00598 B	0.00259	<0.000310	0.00281 J	0.00403 J
	02/06/2017		<0.0258	0.00342 J	0.160	0.198	<0.000800	<0.00270	<0.00130	<0.00260	<0.0750	<0.00120	0.00764 J	<0.0000490	0.00419 J	0.0145	0.00213	<0.00155	0.00275 J	0.0140 J
	08/16/2017		0.00788 JB	0.00362	0.161	0.161	<0.000160	0.00242	<0.000260	0.00189 J	<0.0150	<0.000240	<0.000250	<0.0000490	0.00183 J	0.00373 B	0.00191 J	<0.000310	0.00257 J	0.0104 J
	04/05/2018		<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
	10/01/2018		<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
	04/04/2019		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
	10/24/2019		<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
	06/18/2020		<0.0554	0.00285	0.137	0.183 J	<0.000478	0.00504	<0.000477	0.00313 J	<0.0489	<0.00249	0.00176 J	<0.000100	0.00697	0.0396	0.00184 J	<0.000513	<0.00754	0.168
	10/08/2020		<0.0554	0.00315	0.132	0.183 J	<0.000478	0.00433	<0.000477	0.00340 J	<0.0489	<0.00249	0.00368 J	0.000103 J	0.00521	0.0259	0.00165 J	<0.000513	<0.00754	0.175
	04/15/2021		<0.0185	0.00217	0.120	0.180 J	<0.000150	0.00670	0.000593 J	0.0219	<0.0281	<0.000849	0.00472 JB	<0.000100	0.0102	1.29	0.00206	<0.0000700	0.00251 J	3.68
	06/09/2021		PLUGGED AND ABANDONED JUNE 2021																	
MW-15R	09/16/2021		<0.0185	0.00391	0.154	0.190 J	<0.000150	0.00864	0.000137 J	0.00425 JB	<0.0281	<0.000849	0.00653	<0.000100	0.00864	0.00497	0.00244	<0.0000700	0.00252 J	0.0312
	04/14/2022		<0.0185	0.00258	0.178	0.197 J	<0.000150	0.0102	<0.0000596	0.00866	<0.0281	<0.000849	0.00210 JB	<0.000100	0.00175 J	0.00312	0.00233	<0.0000700	0.00237 J	0.0687
	10/13/2022		<0.0185	0.00269	0.148	0.170 J	<0.000150	0.0147	<0.0000596	0.00456 J	<0.0281	<0.000849	0.000723 J	<0.000100	0.00127 J	0.00184 J	0.00194 J	<0.0000700	0.00260 J	0.0469
	03/23/2023		<0.0185	0.00281	0.114	0.192 J	<0.000150	0.0214	<0.0000596	0.00488 J	<0.0281	<0.000849	0.00138 J	<0.000100	0.00169 J	<0.000816	0.00209	<0.0000700	0.00253 J	0.0474
	10/05/2023		<0.0185	0.00288	0.128	0.203	<0.000150	0.0215	<0.0000596	0.00437 J	<0.0281	<0.000849	<0.000704	<0.000100	0.00182 J	0.00174 J	0.00174 J	<0.0000700	0.00215 J	0.0674
MW-16	08/20/2010		0.0746	<0.00500	0.109	0.156	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00554	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0145
	02/24/2011		<0.0100	<0.00500	0.107	0.162	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00671	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0248
	07/15/2011		0.188	<0.00500	0.129	0.181	<0.00200	0.115	<0.00500	<0.00500	0.613	<0.00500	0.0164	<0.000200	<0.00500	0.0591	<0.00500	<0.00500	<0.00500	0.0176
	07/15/2011	FD	0.0374	<0.00500	0.118	0.185	<0.00200	0.0251	<0.00500	<0.00500	0.241	<0.00500	0.00820	<0.000200	<0.00500	0.0234	<0.00500	<0.00500	<0.00500	0.0166
	01/30/2012		<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
	07/24/2012		0.0102	<0.00500	0.0966	0.202	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0162	<0.000200	<0.00500	0.0112	<0.00500	<0.00500	<0.00500	0.0167
	02/20/2013		<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
	08/20/2013		0.0260	<0.00500	0.105	0.192	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0219	<0.000200	<0.00500	0.0177	<0.00500	<0.00500	<0.00500	<0.00500
	02/25/2014		<0.0100	<0.00500	0.0938	0.172	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0225	<0.000200	0.00516	0.0295	<0.00500	<0.00500	<0.00500	0.00786
	08/19/2014		0.335	<0.00500	0.104	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
	02/24/2015		0.042 J	0.0051	0.098	0.17 J	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	<0.00024	0.0042 J	<0.000049	0.0035 J	<0.0049	<0.0074	<0.0028	0.0016 J	0.014 J
	08/27/2015		<0.0350	0.00528	0.0936	0.176	<0.000160	<0.000540	<0.000260	0.000638 J	<0.0141	<0.000240	0.000312 J	<0.0000490	0.00293 J	<0.000350	0.00228	<0.000310	0.00156 J	0.00343 J
	08/15/2016		0.00512 JB	0.00434	0.0973	0.181	<0.000160	0.00122 JB	<0.000260	0.000659 JB	0.0571 JB	<0.000240	0.00916	<0.0000490	0.00631	0.0117	0.00246	<0.000310	0.00206 J	0.00454 J
	08/17/2017		0.0178 JB	0.00488	0.106	0.162	<0.000160	0.000796 J	<0.000260	0.00279 J	<0.0150	<0.000240	0.000295 J	<0.0000490	0.00256 J	0.00343 B	0.00257	<0.000310	0.00198 J	0.0285
	10/01/2018		<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
	10/24/2019		<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
	08/13/2020		DRY WELL - PLUGGED AND ABANDONED AUGUST 2020																	
MW-16R	10/08/2020		<0.0554	0.00601	0.0895	0.162 J	<0.000478	<0.00149	<0.000477	0.00410 J	<0.0489	<0.00249	0.00805	<0.000100 [R]	0.00398 J	<0.000952	0.00252	<0.000513	<0.00754	<0.00996
	09/16/2021		<0.0185	0.00459	0.105	0.167 J	<0.000150	<0.00124	<0.0000596	0.00299 JB	<0.0281	<0.000849	0.000862 J	<0.000100	0.00290 J	0.00190 J	0.00257	<0.0000700	0.00301 J	0.0297
	10/13/2022		0.0192 J	0.00478	0.0980	0.154 J	<0.000150	<0.00124	<0.0000596	0.00241 J	<0.0281	<0.000849	0.000881 J	<0.000100	0.00243 J	<0.000816	0.00256	<0.0000700	0.00247 J	0.00935 J
	10/05/2023		<0.0185	0.00535	0.0895	0.170 J	<0.000150	0.00169 J	<0.0000596	0.00475 J	<0.0281	<0.000849	<0.000704	<0.000100	0.00276 J	0.00273	0.00237	<0.0000700	0.00172 J	0.0188 J

Released to Imaging: 4/26/2024 10:49:21 AM

Received by OCD: 4/15/2024 1:46:20 PM

Table 4. Dissolved Metals Concentrations in Groundwater
HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	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 238 (mg/L)	Zinc (mg/L)
New Mexico WQCC Groundwater Standards			5.0	0.01	2	0.75	0.005	0.05	0.05	1.0	1.0	0.015	0.2	0.002	1.0	0.2	0.05	0.05	0.03	10.0
MW-17	08/20/2010		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
	02/24/2011		<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
	07/18/2011		<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	08/22/2013		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
	02/27/2014		0.254	<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
	08/22/2014		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	0.0243
	02/26/2015		0.046 J	0.0028	0.12	- -	<0.00070	0.0022 J	<0.0023	<0.0053	<0.014	0.00030 J	<0.0012	<0.000049	0.0013 J	<0.0049	<0.0074	<0.0028	0.0030 J	0.023 J
	08/27/2015		<0.0350	0.00320	0.0972	0.171	<0.000160	0.000967 J	<0.000260	0.000632 J	0.0218 J	<0.000240	0.00123 J	<0.0000490	0.00163 J	0.000779 J	0.00203	<0.000310	0.00267 J	<0.00256
	03/08/2016		0.0150 JB	0.00259	0.0739	0.161	<0.000160	<0.000540	0.000315 J	0.000717 J	<0.0150	<0.000240	0.0544	<0.0000490	0.000749 J	0.00103 JB	0.00185 J	<0.000310	0.00666 J	0.00412 JB
	08/17/2016		0.00299 JB	0.00251	0.143	0.199	<0.000160	0.00110 JB	<0.000260	0.00145 JB	<0.0150	<0.000240	0.00281 J	<0.0000490	0.00140 J	0.00147 JB	0.00143 J	<0.000310	0.00285 J	<0.00256
	02/09/2017		<0.0258	0.00292 J	0.0993	0.183	<0.000800	<0.00270	<0.00130	0.00839 J	<0.0750	<0.00120	0.0450	<0.0000490	0.00415 J	0.0112	0.00227	<0.00155	0.00227 J	<0.0128
	08/16/2017		0.00847 JB	0.00367	0.0723	0.154	<0.000160	0.00244	<0.000260	0.00105 J	<0.0150	<0.000240	<0.000250	<0.0000490	0.00161 J	0.00196 JB	0.00274	<0.000310	0.00179 J	0.00448 J
	04/05/2018		<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
	04/05/2018	FD	<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
	10/01/2018		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
	04/04/2019		<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
	04/04/2019	FD	<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
	10/24/2019		<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
	06/18/2020		<0.0554	0.00386	0.0956	0.148 J	<0.000478	0.00178 J	<0.000477	<0.00250	<0.0489	<0.00249	<0.00132	<0.000100	0.00174 J	0.00270	0.00256	<0.000513	<0.00754	0.0203 J
	10/08/2020		<0.0554	0.00355	0.0888	0.151 J	<0.000478	0.00166 J	<0.000477	<0.00250	<0.0489	<0.00249	<0.00132	<0.000100 [R]	0.00189 J	<0.000952	0.00272	<0.000513	<0.00754	0.0302
	04/15/2021		<0.0185	0.00406	0.101	0.145 J	<0.000150	0.00244	<0.0000596	0.00308 J	<0.0281	<0.000849	<0.000704	<0.000100	0.00195 J	0.00163 J	0.00233	<0.0000700	0.00163 J	0.0107 JB
	09/16/2021		<0.0185	0.00347	0.115	0.147 J	<0.000150	0.00165 J	<0.0000596	0.00159 JB	<0.0281	<0.000849	<0.000704	<0.000100	0.00169 J	0.000903 J	0.00185 J	<0.0000700	0.00217 J	0.00895 J
	04/14/2022		0.0872 J	0.00385	0.117	0.153 J	<0.000150	0.00214	<0.0000596	0.00286 J	<0.0281	<0.000849	0.00193 JB	<0.000100	0.00167 J	0.00218	0.00156 J	<0.0000700	0.00209 J	0.00729 J
	10/13/2022		0.0857 J	0.00372	0.134	0.133 J	<0.000150	0.00158 J	0.000117 J	0.00255 J	0.0723 J	<0.000849	0.00436 J	<0.000100	0.00170 J	0.00158 J	0.00154 J	<0.0000700	0.00230 J	0.0155 J
	03/23/2023		0.543	0.00367	0.179	0.155 J	<0.000150	0.00508	0.000364 J	0.00219 J	0.562	0.000878 J	0.0189	<0.000100	0.00182 J	0.00194 J	0.00124 J	<0.0000700	0.00270 J	0.00795 J
	10/05/2023		--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]
MW-18	08/23/2010		0.0787	<0.00500	0.0575	0.334	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.314	<0.000200	0.00561	0.0298	0.00548	<0.00500	0.0123	0.0772
	02/24/2011		0.0157	<0.00500	0.0766	0.330	<0.00200	0.0186	<0.00500	<0.00500	<0.200	<0.00500	0.00536	<0.000200	<0.00500	0.0144	0.00501	<0.00500	0.00883	0.0439
	07/18/2011		0.0244	<0.00500	0.05636	0.396	<0.00200	0.0111	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	0.0129	<0.00500	<0.00500	0.00666	0.0661
	01/31/2012		0.0113	<0.00500	0.0645	0.133	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0191
	07/25/2012		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
	02/22/2013		0.0742	<0.00500	0.105	0.249	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0129	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.0138	0.0187
	08/22/2013		<0.0100	<0.00500	0.110	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
	02/26/2014		0.0213	<0.00500	0.0766	0.244	<0.00200	<0.00500	<0.00500	0.0215	<0.200	<0.00500	0.0117	<0.000200	<0.00500	0.00681	<0.00500	<0.00500	0.00701	0.0465
	08/20/2014		1.31	<0.00500	0.145	0.242	<0.00200	0.00506	<0.00500	<0.00500	0.637	<0.00500	0.0378	<0.000200	<0.00500	0.00634	<0.00500	<0.00500	<0.00500	0.0363
	02/26/2015		0.069 J	0.0026	0.10	0.26	<0.00070	<0.0014	<0.0023	0.0061 J	0.022 J	0.00026 J	<0.0012	<0.000049	0.0020 J	<0.0049	<0.0074	<0.0028	0.0039 J	0.017 J
	08/25/2015		<0.0350	0.00288	0.116	0.188 J	<0.000160	0.00118 J	<0.000260	0.000646 J	<0.0141	<0.000240	0.00120 J	<0.0000490	0.00612	0.00151 J	0.00178 J	<0.000310	0.00434 J	0.00669 J
	08/17/2016		<0.00200	0.00194 J	0.108	0.223	<0.000160	0.00195 JB	<0.000260	0.00214 JB	0.0201 J	<0.000240	0.00261 J	0.0000593 JB	0.00217 J	0.00139 JB	0.00173 J	<0.000310	0.00423 J	0.00992 JB
	08/16/2017		<0.00515	0.00174 J	0.135	0.169	<0.000160	0.00176 J	<0.000260	0.000766 J	<0.0150	<0.000240	<0.000250	<0.0000490	0.00174 J	0.00106 JB	0.00299	<0.000310	0.00434 J	0.00897 J
	10/01/2018		<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
	10/24/2019		<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
	10/08/2020		<0.0554	0.00209	0.102	0.183 J	<0.000478	0.00337	<0.000477	0.00637	<0.0489	<0.00249	0.00412 J	--[1]	0.00166 J	0.0117	0.00196 J	<0.000513	<0.00754	0.124
	06/09/2021		PLUGGED AND ABANDONED JUNE 2021																	
MW-18R	09/16/2021		<0.0185	0.00409	0.105	0.122 J	<0.000150	0.00139 J	<0.0000596	0.00238 JB	<0.0281	<0.000849	0.00166 J	<0.000100	0.00448 J	<0.000816	0.00455	<0.0000700	0.00269 J	0.00553 J
	10/13/2022		0.0268 J	0.00534	0.114	0.141 J	<0.000150	<0.00124	<0.0000596	0.00317 J	<0.0281	<0.000849	0.00171 J	<0.000100	0.00339 J	<0.000816	0.00143 J	<0.0000700	0.00141 J	0.0841
	10/05/2023		<0.0185	0.00598	0.0859	0.167 J	<0.000150	0.00131 J	<0.0000596	0.00155 J	<0.0281	<0.000849	0.00161 J	<0.000100	0.00321 J	0.00640	0.00220	<0.0000700	0.00132 J	0.0738
MW-19	08/23/2010		0.101	0.0476	0.229	<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	0.0227
	02/24/2011		<0.0100	<0.00500	0.0764	0.180	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0318
	07/18/2011		<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	0.0553
	01/31/2012		<0.0100	<0.00500	0.0688	0.350	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00553	<0.000200	<0.00500	0.00525	<0.00500	<0.00500	<0.00500	0.0345
	07/25/2012		0.0114	<0.00500	0.106	0.535	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00593	<0.000200	<0.00500	0.00664	<0.00500	<0.00500	<0.00500	0.0714
	02/26/2013		<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	0.0629
	08/22/2013		<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
	08/22/2013	FD	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
	02/26/2014		0.0120	<0.00500	0.0793	0.227	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0157	<0.000200	<0.00500	0.0122	<0.00500	<0.00500	<0.00500	0.0333
	02/26/2014	FD	0.0435	<0.00500	0.0753	0.204	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0165	<0.000200	<0.00500	0.0123	<0.00500	<0.00500	<0.00500	0.0350
	08/19/2014		0.0461	<0.00500	0.269	0.279	<0.00200	0.0352	<0.00500	<0.00500	0.263	<0.00500	0.0204	<0.000200	<0.00500	0.0261	<0.00500	<0.00500	<0.00500	0.00854
	08/19/2014	FD	0.0208	<0.00500	0.0846	0.236	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0106	<0.000200	<0.00500	0.00943	<0.00500	<0.00500	<0.00500	0.00640
	02/26/2015		<0.035	0.0046	0.070	0.22	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	<0.00024	<0.0012	<0.000049	0.0032 J	<0.0049	<0.0074	<0.0028	0.0025 J	0.014 J
	02/26/2015	FD	0.089 J	0.0046	0.069	0.21	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	<0.00024	<0.0012	<0.000049	0.0030 J	<0.0049	<0.0074	<0.0028	0.0025 J	0.013 J
	08/26/2015		<0.0350	0.00422	0.0875	0.185 J	<0.000160	0.00105 J	<0.000260	0.000732 J	<0.0141	<0.000240	<0.000250	<0.0000490	0.0107	0.00168 J	0.00138 J	<0.000310	0.00179 J	0.00486 J
	03/08/2016		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/17/2016		0.00479 JB	0.00383	0.0919	0.191	<0.000160	0.00129 JB	<0.000260	0.000646 JB	0.0268 JB	<0.000240	0.00104 JB	<0.0000490	0.00287 J	0.000547 JB	0.00148 J	<0.000310	0.00312 J	0.00397 J
	02/08/2017		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/16/2017		0.00686 JB	0.00365	0.104	0.148	<0.000160	0.000704 J	<0.000260	0.00395 J	<0.0150	<0.000240	0.000510 J	<0.0000490	0.00328 J	0.0123	0.00143 J	<0.000310	0.00208 J	0.0241 J
	08/16/2017	FD	<0.00515	0.00351	0.103	0.151	<0.000160	0.000627 J	<0.000260	0.00304 J	<0.0150	<0.000240	0.000995 JB	<0.0000490	0.00317 J	0.00919	0.00138 J	<0.000310	0.00220 J	0.0207 J
	04/05/2018		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		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
	04/04/2019		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		<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
	06/18/2020		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/08/2020		--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]
	04/15/2021		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	06/09/2021		PLUGGED AND ABANDONED JUNE 2021																	

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Table 4. Dissolved Metals Concentrations in Groundwater
HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	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 238 (mg/L)	Zinc (mg/L)
New Mexico WQCC Groundwater Standards			5.0	0.01	2	0.75	0.005	0.05	0.05	1.0	1.0	0.015	0.2	0.002	1.0	0.2	0.05	0.05	0.03	10.0
MW-19R	09/16/2021		0.0302 J	0.00316	0.112	0.166 J	<0.000150	<0.00124	0.000518 J	0.00355 JB	<0.0281	<0.000849	0.0160	<0.000100	0.00424 J	0.0142	0.00150 J	<0.0000700	0.00244 J	0.0329
	04/14/2022		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/13/2022		0.0443 J	0.00332	0.186	0.179 J	<0.000150	<0.00124	0.0000855 J	0.00166 J	0.0357 J	<0.000849	0.00245 J	<0.000100	0.00175 J	0.000997 J	0.00129 J	<0.0000700	0.00323 J	0.0192 J
	03/23/2023		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/05/2023		<0.0185	0.00319	0.169	0.183 J	<0.000150	0.00175 J	0.0000642 J	0.00198 J	<0.0281	<0.000849	<0.000704	<0.000100	0.00265 J	0.00203	0.00121 J	<0.0000700	0.00264 J	0.0285
MW-20	08/23/2010		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
	02/25/2011		<0.0100	<0.00500	0.120	0.150	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0643
	07/18/2011		<0.0100	<0.00500	0.134	0.159	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0278
	01/31/2012		<0.0100	<0.00500	0.114	0.149	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0171
	07/25/2012		<0.0100	<0.00500	0.107	0.217	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0187
	02/22/2013		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	0.0165
	08/20/2013		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	0.0242
	02/26/2014		<0.0100	<0.00500	0.112	0.173	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0107	<0.000200	<0.00500	0.00800	<0.00500	<0.00500	<0.00500	0.00954
	08/19/2014		0.290	<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	0.0116
	02/24/2015		0.038 J	0.0031	0.11	0.17 J	<0.00070	0.0020 J	<0.0023	<0.0053	<0.014	<0.00024	<0.0012	<0.000049	0.0024 J	<0.0049	<0.0074	<0.0028	0.0026 J	0.023 J
	08/25/2015		<0.0350	0.00396	0.108	0.180 J	<0.000160	0.000955 J	<0.000260	0.00109 J	<0.0141	<0.000240	<0.000250	<0.0000490	0.00167 J	0.000669 J	0.00141 J	<0.000310	0.00254 J	0.00578 J
	08/16/2016		0.00470 JB	0.00389	0.108	0.177	<0.000160	0.00177 JB	<0.000260	0.00552	0.0167 JB	0.000352 JB	0.000461 JB	<0.0000490	0.00236 J	0.000656 JB	0.00145 J	<0.000310	0.00275 J	0.00757 J
	08/17/2017		0.00779 JB	0.00353	0.112	0.152	<0.000160	0.000878 J	<0.000260	0.00200 J	<0.0150	<0.000240	0.000300 J	<0.0000490	0.00241 J	0.00383	0.00130 J	<0.000310	0.00222 J	0.0218 J
	10/01/2018		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
	10/24/2019		<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
	10/08/2020		<0.0554	0.00367	0.122	0.182 J	<0.000478	<0.00149	<0.000477	<0.00250	<0.0489	<0.00249	<0.00132	<0.000100 [R]	0.00276 J	0.00103 J	0.00117 J	<0.000513	<0.00754	0.0150 J
	06/09/2021		PLUGGED AND ABANDONED JUNE 2021																	
MW-20R	09/16/2021		<0.0185	0.00322	0.114	0.195 J	<0.000150	<0.00124	0.000467 J	0.00401 JB	<0.0281	<0.000849	0.0109	<0.000100	0.0242	0.00560	0.00167 J	<0.0000700	0.00303 J	0.0399
	10/13/2022		0.139	0.00376	0.120	0.169 J	<0.000150	0.00963	0.000277 J	0.00462 J	0.117	<0.000849	0.00715	<0.000100	0.0147	0.00779	0.00181 J	<0.0000700	0.00275 J	0.0931
	10/05/2023		<0.0185	0.00380	0.117	0.181 J	<0.000150	0.00181 J	0.000101 J	0.00268 J	<0.0281	<0.000849	0.000965 J	<0.000100	0.00571	0.00282	0.00206	<0.0000700	0.00254 J	0.0677
MW-21	08/23/2010		0.195	<0.00500	0.232	0.208	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0567	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00898	0.0307
	02/28/2011		<0.0100	<0.00500	0.258	0.257	<0.00200	0.00620	<0.00500	<0.00500	<0.200	<0.00500	0.102	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.0101	0.0184
	02/28/2011	FD	<0.0100	<0.00500	0.256	0.252	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.101	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00975	0.0213
	07/19/2011		<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
	01/31/2012		<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
	07/26/2012		<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
	02/22/2013		0.0818	<0.00500	0.224	0.286	<0.00200	0.0364	<0.00500	<0.00500	0.403	<0.00500	0.0467	<0.000200	<0.00500	0.0409	<0.00500	<0.00500	0.00962	0.0319
	08/20/2013		<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	0.0219	<0.00500	<0.00500	0.00936	0.0195
	02/25/2014		<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	0.0171	<0.00500	<0.00500	0.00939	0.0531
	08/19/2014		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
	02/24/2015		<0.035	0.0017 J	0.21	0.36	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	0.00032 J	0.028	<0.000049	0.00074 J	<0.0049	<0.0074	<0.0028	0.0089 J	0.025 J
	08/25/2015		<0.0350	0.00221	0.224	0.369	<0.000160	0.000810 J	<0.000260	0.000702 J	<0.0141	0.000854 J	0.0110	<0.0000490	<0.00160	0.00180 J	0.000525 J	<0.000310	0.00837 J	0.00615 J
	08/16/2016		0.00210 JB	0.00147 J	0.171	0.460	<0.000160	0.00115 JB	<0.000260	0.000881 JB	<0.0150	<0.000240	0.00793	- -	0.000639 J	0.00167 JB	0.000702 J	<0.000310	0.00920 J	0.00432 J
	08/17/2017		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/08/2020		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	09/16/2021		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/13/2022		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/05/2023		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
MW-22	08/23/2010		0.121	<0.00500	0.165	0.174	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0306	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00604	0.0916
	02/28/2011		<0.0100	<0.00500	0.146	0.173	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0108	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00616	0.0487
	07/19/2011		<0.0100	<0.00500	0.150	0.178	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00721	<0.000200	<0.00500	0.00546	<0.00500	<0.00500	0.00638	0.0203
	01/31/2012		<0.0100	<0.00500	0.151	0.141	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0103	<0.000200	<0.00500	0.00762	<0.00500	<0.00500	0.00501	0.0183
	07/26/2012		<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
	02/21/2013		0.0231	<0.00500	0.145	0.180	<0.00200	0.0305	<0.00500	<0.00500	0.269	<0.00500	0.0386	<0.000200	<0.00500	0.0520	<0.00500	<0.00500	0.00590	0.0208
	08/21/2013		<0.0100	<0.00500	0.137	0.210	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0233	<0.000200	<0.00500	0.0209	<0.00500	<0.00500	0.00658	0.00566
	02/25/2014		<0.0100	<0.00500	0.143	0.204	<0.00200	0.0133	<0.00500	<0.00500	<0.200	<0.00500	0.0238	<0.000200	<0.00500	0.0266	<0.00500	<0.00500	0.00632	0.0150
	08/20/2014		40.3	0.00642	0.141	0.239	<0.00200	0.184	<0.00500	0.00983	4.32	0.00743	0.0715	<0.000200	0.00881	0.0999	<0.00500	<0.00500	0.0336	0.0370
	02/24/2015		0.037 J	0.0025	0.18	0.21	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	0.00077 J	0.0026 J	<0.000049	0.0014 J	<0.0049	<0.0074	<0.0028	0.012	0.019 J
	08/25/2015		0.0452 J	0.00279	0.167	0.208	<0.000160	0.00139 J	0.000337 J	0.000760 J	<0.0141	<0.000240	0.00253 J	<0.0000490	<0.00160	0.00240	<0.000380	<0.000310	0.00934 J	0.00438 J
	08/16/2016		0.00281 JB	0.00241	0.150	0.190	<0.000160	0.00199 JB	<0.000260	0.000854 JB	<0.0150	<0.000240	0.00134 JB	<0.0000490	0.00142 J	0.00143 JB	0.000387 J	<0.000310	0.00865 J	0.00380 J
	08/17/2017		0.00751 JB	0.00196 J	0.130	0.159	<0.000160	0.00103 J	<0.000260	0.000730 J	<0.0150	<0.000240	0.000893 J	<0.0000490	0.00161 J	0.0670	0.000652 J	<0.000310	0.00690 J	0.00439 J
	10/01/2018		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
	10/24/2019		<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
	10/08/2020		<0.0554	0.00225	0.106	0.216	<0.000478	0.00593	<0.000477	0.0113	<0.0489	<0.00249	<0.00132	0.000100 J	0.00280 J	0.0109	<0.000657	<0.000513	<0.00754	0.105
	09/16/2021		0.0236 J	0.00209	0.103	0.205	<0.000150	0.00865	<0.0000596	0.00392 JB	<0.0281	<0.000849	<0.000704	<0.000100	0.00330 J	0.00983	<0.000300	<0.0000700	0.00889 J	0.0140 J
	10/13/2022		<0.0185	0.00203	0.126	0.172 J	<0.000150	0.00366	0.0000707 J	<0.00151	<0.0281	<0.000849	<0.000704	--[1]	0.00187 J	0.00439	0.000647 J	<0.0000700	0.00757 J	0.0164 J
	10/05/2023		--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]

Table 4. Dissolved Metals Concentrations in Groundwater
HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	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 238 (mg/L)	Zinc (mg/L)
New Mexico WQCC Groundwater Standards			5.0	0.01	2	0.75	0.005	0.05	0.05	1.0	1.0	0.015	0.2	0.002	1.0	0.2	0.05	0.05	0.03	10.0
MW-23	08/23/2010		0.237	<0.00500	0.245	0.157	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00669	<0.000200	<0.00500	0.00859	<0.00500	<0.00500	<0.00500	0.0570
	02/28/2011		<0.0100	<0.00500	0.164	0.151	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00831	<0.000200	<0.00500	0.00930	<0.00500	<0.00500	<0.00500	0.0463
	07/19/2011		<0.0100	<0.00500	0.272	0.181	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00647	<0.000200	<0.00500	0.00912	<0.00500	<0.00500	<0.00500	0.0213
	02/01/2012		0.0108	<0.00500	0.268	0.159	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00658	<0.000200	<0.00500	0.00714	<0.00500	<0.00500	<0.00500	0.0207
	07/26/2012		<0.0100	<0.00500	0.252	0.198	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0101
	02/26/2013		<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	0.0155	<0.00500	<0.00500	<0.00500	0.0179
	08/21/2013		<0.0100	<0.00500	0.141	0.207	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0315	<0.000200	<0.00500	0.0286	<0.00500	<0.00500	0.00533	0.00919
	02/25/2014		<0.0100	<0.00500	0.162	0.198	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0486	<0.000200	<0.00500	0.0410	<0.00500	<0.00500	<0.00500	0.0224
	08/21/2014		0.0606	<0.00500	0.147	0.138	<0.00200	0.0129	<0.00500	<0.00500	<0.200	<0.00500	0.157	<0.000200	0.00522	0.0719	<0.00500	<0.00500	<0.00500	0.0104
	02/25/2015		0.042 J	0.0024	0.11	0.21	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	0.00031 J	<0.0012	<0.000049	0.0017 J	<0.0049	<0.0074	<0.0028	0.0052 J	0.046 J
	08/25/2015		<0.0350	0.00255	0.152	0.195 J	<0.000160	0.00188 J	<0.000260	0.00198 J	<0.0141	0.000316 J	0.00167 J	<0.0000490	<0.00160	0.00187 J	0.00147 J	<0.000310	0.00508 J	0.00494 J
	08/17/2016		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/17/2017		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/01/2018		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/24/2019		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/13/2020		DRY WELL - PLUGGED AND ABANDONED AUGUST 2020																	
MW-23R	10/08/2020		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/16/2021		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/13/2022		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/05/2023		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-24	08/24/2010		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
	02/28/2011		<0.0100	<0.00500	0.0878	0.154	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	0.00634	<0.00500	<0.00500	<0.00500	0.0245
	07/14/2011		<0.0100	<0.00500	0.0932	0.173	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	0.00543	<0.00500	<0.00500	<0.00500	0.0249
	02/01/2012		<0.0100	<0.00500	0.0946	0.127	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00760	<0.000200	<0.00500	0.00725	<0.00500	<0.00500	<0.00500	0.0101
	07/30/2012		<0.0100	<0.00500	0.0889	0.179	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00508	<0.000200	<0.00500	0.00758	<0.00500	<0.00500	<0.00500	0.0127
	07/30/2012	FD	<0.0100	<0.00500	0.0851	0.160	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	0.00731	<0.00500	<0.00500	<0.00500	0.0155
	02/26/2013		<0.0100	<0.00500	0.0913	0.187	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0106	<0.000200	<0.00500	0.0165	<0.00500	<0.00500	<0.00500	0.0151
	08/21/2013		<0.0100	<0.00500	0.0856	0.183	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0146	<0.000200	<0.00500	0.0157	<0.00500	<0.00500	<0.00500	0.00684
	02/27/2014		0.0247	<0.00500	0.0803	0.197	<0.00200	0.0128	<0.00500	<0.00500	<0.200	<0.00500	0.0139	<0.000200	<0.00500	0.0213	<0.00500	<0.00500	<0.00500	0.0207
	08/21/2014		0.270	<0.00500	0.0901	0.117	<0.00200	0.258	<0.00500	0.00634	1.28	<0.00500	0.0383	<0.000200	0.00911	0.135	<0.00500	<0.00500	<0.00500	0.0114
	02/25/2015		0.040 J	0.0055	0.078	0.19 J	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	<0.00024	<0.0012	<0.000049	0.0025 J	<0.0049	<0.0074	<0.0028	0.0026 J	0.013 J
	08/25/2015		<0.0350	0.00600	0.0765	0.177 J	<0.000160	<0.000540	<0.000260	0.000742 J	<0.0141	<0.000240	0.000287 J	<0.0000490	0.00185 J	0.000580 J	0.00102 J	<0.000310	0.00239 J	0.00575 J
	08/16/2016		0.00364 JB	0.00606	0.0725	0.168	<0.000160	0.00155 JB	<0.000260	0.00302 JB	0.0247 JB	<0.000240	0.000485 JB	<0.0000490	0.00290 J	0.000402 JB	0.00140 J	<0.000310	0.00237 J	0.00752 J
	08/17/2017		0.0133 JB	0.00539	0.0724	0.137	<0.000160	0.00205	<0.000260	0.00136 J	<0.0150	<0.000240	0.000648 J	<0.0000490	0.00245 J	0.00205 B	0.00140 J	<0.000310	0.00209 J	0.00720 J
	10/01/2018		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
	10/24/2019		<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
	10/08/2020		<0.0554	0.00547	0.0854	0.166 J	<0.000478	0.00362	<0.000477	<0.00250	<0.0489	<0.00249	0.00401 J	0.000100 J	0.00244 J	0.00104 J	<0.000657	<0.000513	<0.00754	0.0192 J
	06/09/2021		PLUGGED AND ABANDONED JUNE 2021																	
MW-24R	09/16/2021		0.0434 J	0.00479	0.0812	0.132 J	<0.000150	0.0224	<0.0000596	0.00269 JB	<0.0281	<0.000849	<0.000704	<0.000100	0.00939	0.00426	0.00235	<0.0000700	0.00226 J	0.0110 J
	10/13/2022		<0.0185	0.00576	0.0838	0.126 J	<0.000150	0.0148	<0.0000596	0.00281 J	<0.0281	<0.000849	<0.000704	<0.000100	0.00237 J	0.00167 J	0.00251	<0.0000700	0.00221 J	0.0321
	10/05/2023		0.0190 J	0.00532	0.0813	0.131 J	<0.000150	0.00665	0.0000597 J	0.00199 J	<0.0281	<0.000849	<0.000704	<0.000100	0.00246 J	0.00195 J	0.00138 J	<0.0000700	0.00277 J	0.0436
MW-25	08/23/2010		0.244	<0.00500	0.246	0.174	<0.00200	0.0476	<0.00500	<0.00500	<0.200	<0.00500	0.0109	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0194
	02/28/2011		<0.0100	<0.00500	0.205	0.198	<0.00200	0.0537	<0.00500	<0.00500	<0.200	<0.00500	0.00715	<0.000200	<0.00500	0.00516	<0.00500	<0.00500	0.00535	0.0424
	07/18/2011		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
	02/01/2012		<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
	07/26/2012		<0.0100	<0.00500	0.178	0.220	<0.00200	0.00961	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0102
	02/26/2013		<0.0100	<0.00500	0.149	0.241	<0.00200	0.00822	<0.00500	<0.00500	<0.200	<0.00500	0.0104	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00807	0.0148
	08/22/2013		<0.0100	<0.00500	0.224	0.262	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0122	<0.000200	<0.00500	0.0210	<0.00500	<0.00500	0.00862	<0.00500
	08/22/2013	FD	<0.0100	<0.00500	0.226	0.263	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0127	<0.000200	<0.00500	0.0210	<0.00500	<0.00500	0.00860	0.00607
	02/26/2014		<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	0.0210
	02/26/2014	FD	<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	0.0205
	08/19/2014		0.285	<0.00500	0.198	0.265	<0.00200	0.154	<0.00500	<0.00500	0.814	<0.00500	0.0456	<0.000200	0.00573	0.100	<0.00500	<0.00500	0.00749	0.0106
	08/19/2014	FD	0.291	<0.00500	0.201	0.263	<0.00200	0.185	<0.00500	0.00504	0.968	<0.00500	0.0511	<0.000200	0.00638	0.113	<0.00500	<0.00500	0.00764	0.0120
	02/25/2015		0.13	0.0023	0.20	0.23	<0.00070	0.0016 J	<0.0023	<0.0053	<0.014	0.00050 J	<0.0012	<0.000049	0.0029 J	0.0056 J	<0.0074	<0.0028	0.0078 J	0.0086 J
	02/25/2015	FD	<0.035	0.0023	0.20	0.22	<0.00070	0.0017 J	<0.0023	<0.0053	<0.014	0.00026 J	<0.0012	<0.000049	0.0011 J	0.0054 J	<0.0074	<0.0028	0.0080 J	0.014 J
	08/25/2015		<0.0350	0.00287	0.227	0.216	<0.000160	0.00160 J	0.00119 J	<0.000520	<0.0141	<0.000240	0.00279 J	<0.0000490	<0.00160	0.00514	0.00109 J	<0.000310	0.00732 J	0.00472 J
	08/25/2015	FD	<0.0350	0.00296	0.231	0.214	<0.000160	0.00170 J	0.00113 J	0.00103 J	<0.0141	<0.000240	0.00287 J	<0.0000490	<0.00160	0.00528	0.00102 J	<0.000310	0.00748 J	0.00497 J
	03/09/2016		0.00206 JB	0.00229	0.301	0.214	<0.000160	0.000609 J	0.00141 J	0.000781 J	0.0403 J	<0.000240	0.0386	<0.0000490	0.00171 JB	0.00572 B	0.00054 J	<0.000310	0.00852 J	0.00590 JB
	08/16/2016		0.00850 JB	0.00248	0.285	0.228	<0.000160	0.00166 JB	0.00171 J	0.00107 JB	0.0293 JB	<0.000240	0.0314	<0.0000490	0.00139 J	0.00617	0.000689 J	<0.000310	0.00928 J	0.00584 J
	08/16/2016	FD	0.00458 JB	0.00262	0.284	0.223	<0.000160	0.00155 JB	0.00179 J	0.000790 JB	0.0474 JB	<0.000240	0.0326	<0.0000490	0.00131 J	0.00570	0.000791 J	<0.000310	0.00939 J	0.00627 J
	02/07/2017		<0.0258	0.00261 J	0.322	0.227	<0.000800	<0.00270	0.00382 J	0.00406 J	<0.0750	<0.00120	0.0478	<0.0000490	0.00306 J	0.0165	0.000505 J	<0.00155	0.0104 J	<0.0128
	08/16/2017		0.00773 JB	0.00227	0.206	0.171	<0.000160	0.00158 J	0.00522	0.00310 J	<0.0150	<0.000240	<0.000250	0.0000544 J	0.00113 J	0.0556	0.00162 J	<0.000310	0.00588 J	0.0276
	08/16/2017	FD	0.00864 JB	0.00242	0.210	0.181	<0.000160	0.00153 J	0.00520	0.00289 J	<0.0150	<0.000240	<0.000250	<0.0000490	0.00124 J	0.0551	0.00128 J	<0.000310	0.00606 J	0.0262
	04/05/2018		<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
	04/05/2018	FD	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
	10/01/2018		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
	10/01/2018	FD	<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
	04/04/2019		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
	04/04/2019	FD	<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
	10/24/2019		<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
	10/24/2019	FD	<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
	06/18/2020		<0.0554	0.00274	0.127	0.297	<0.000478	<0.00149	0.0158	<0.00250	<0.0489	<0.00249	<0.00132	<0.000100	0.00121 J	0.0104	<0.000657	<0.000513	0.0115 J	<0.00996
	10/08/2020		<0.0554	0.00233	0.126	0.275	<0.000478	<0.00149	0.00930	0.00324 J	<0.0489	<0.00249	0.0112	0.000108 J	0.00101 J	0.0189	<0.000657	<0.000513	0.00881 J	0.0261
	04/15/2021		<0.0185	0.00209	0.142	0.258	<0.000150	<0.00124	0.00562	0.00281 J	<0.0281	<0.000849	<0.000704	<0.000100	0.00123 J	0.00763	<0.000300	<0.0000700	0.0102 J	0.00447 JB
	06/09/2021		PLUGGED AND ABANDONED JUNE 2021																	

Table 4. Dissolved Metals Concentrations in Groundwater
HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	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 238 (mg/L)	Zinc (mg/L)
New Mexico WQCC Groundwater Standards			5.0	0.01	2	0.75	0.005	0.05	0.05	1.0	1.0	0.015	0.2	0.002	1.0	0.2	0.05	0.05	0.03	10.0
MW-26	08/24/2010		0.115	<0.00500	0.131	0.169	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0156	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0254
	02/28/2011		<0.0100	<0.00500	0.110	0.187	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00890	<0.000200	<0.00500	0.00734	<0.00500	<0.00500	0.00602	0.0328
	07/14/2011		<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
	02/01/2012		<0.0100	<0.00500	0.0854	0.163	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0122	<0.000200	<0.00500	0.0133	<0.00500	<0.00500	<0.00500	0.00949
	07/26/2012		0.0121	<0.00500	0.0966	0.214	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00694	<0.000200	<0.00500	0.00568	<0.00500	<0.00500	0.00559	0.0117
	02/26/2013		0.0134	<0.00500	0.103	0.189	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0635	<0.000200	<0.00500	0.0558	<0.00500	<0.00500	<0.00500	0.0233
	08/22/2013		0.0319	<0.00500	0.0910	0.209	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0174	<0.000200	<0.00500	0.00539	<0.00500	<0.00500	0.00577	0.00877
	02/26/2014		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	0.0128	<0.00500	<0.00500	0.00583	<0.00500
	08/21/2014		0.132	0.00816	0.138	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	0.00770
	02/25/2015		0.051 J	0.0024	0.099	0.18 J	<0.00070	<0.0014	<0.0023	<0.0053	0.058 J	<0.00024	0.0022 J	<0.000049	0.0011 J	<0.0049	<0.0074	<0.0028	0.0041 J	0.015 J
	08/25/2015		<0.0350	0.00263	0.0990	0.181 J	<0.000160	0.000822 J	0.000366 J	0.000593 J	<0.0141	<0.000240	0.00175 J	<0.0000490	<0.00160	0.00104 J	<0.000380	<0.000310	0.00440 J	0.00418 J
	08/17/2016		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/17/2017		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/01/2018		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/24/2019		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/13/2020		DRY WELL - PLUGGED AND ABANDONED AUGUST 2020																	
MW-26R	10/08/2020		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/16/2021		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/13/2022		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/05/2023		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-27	08/18/2010		0.218	<0.00500	0.100	0.152	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0534	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00544	0.0453
	02/25/2011		<0.0100	<0.00500	0.0985	0.139	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0336	<0.000200	<0.00500	0.00769	<0.00500	<0.00500	0.00625	0.0294
	07/20/2011		0.0378	<0.00500	0.112	0.165	<0.00200	0.0353	<0.00500	<0.00500	0.393	<0.00500	0.0179	<0.000200	<0.00500	0.0415	<0.00500	<0.00500	0.00571	0.0121
	02/01/2012		<0.0100	<0.00500	0.0902	0.126	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00556	<0.00800	<0.00500	0.00533	<0.00500	<0.00500	<0.00500	0.0121
	07/26/2012		0.0155	<0.00500	0.118	0.172	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00587	<0.000200	<0.00500	0.00737	<0.00500	<0.00500	<0.00500	0.0117
	02/26/2013		<0.0100	<0.00500	0.120	0.184	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0586	<0.000200	0.00513	0.0593	<0.00500	<0.00500	<0.00500	0.0104
	08/20/2013		0.0440	<0.00500	0.162	0.222	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0239	<0.000200	<0.00500	0.0189	<0.00500	<0.00500	0.00899	<0.00500
	02/27/2014		<0.0100	<0.00500	0.139	0.232	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0134	<0.000200	<0.00500	0.0286	<0.00500	<0.00500	0.00680	0.00624
	08/21/2014		0.210	<0.00500	0.126	0.160	<0.00200	0.0447	<0.00500	<0.00500	0.278	<0.00500	0.0636	<0.000200	<0.00500	0.0592	<0.00500	<0.00500	0.00648	0.0182
	02/27/2015		<0.035	0.0033	0.084	0.30	<0.00070	0.0038 J	<0.0023	<0.0053	<0.014	<0.00024	<0.0012	<0.000049	0.0029 J	<0.0049	0.0080 J	<0.0028	0.0098 J	<0.0059
	08/26/2015		<0.0350	0.00353	0.0571	0.264	<0.000160	0.00256	<0.000260	0.000627 J	<0.0141	<0.000240	0.00206 J	<0.0000490	0.0139	0.00405	0.00318	<0.000310	0.00550 J	<0.00256
	03/08/2016		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/18/2016		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/08/2017		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/17/2017		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/05/2018		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/01/2018		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/04/2019		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/24/2019		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/18/2020		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/08/2020		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/15/2021		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/16/2021		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/14/2022		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/13/2022		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	03/23/2023		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/05/2023		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-28	08/24/2010		0.129	<0.00500	0.0846	0.153	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	08/28/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/23/2011		<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	0.0190
	07/14/2011		<0.0100	<0.00500	0.103	0.172	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00658	<0.000200	<0.00500	0.00696	<0.00500	<0.00500	<0.00500	0.0113
	01/30/2012		<0.0100	<0.00500	0.0746	0.152	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0113
	07/24/2012		<0.0100	<0.00500	0.0830	0.204	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00812
	02/19/2013		<0.0100	<0.00500	0.0883	0.174	<0.00200	<0.00500	<0.00500	0.203	<0.200	<0.00500	0.0275	<0.000200	0.0100	<0.00500	<0.00500	<0.00500	<0.00500	0.0466
	08/20/2013		<0.0100	<0.00500	0.0790	0.168	<0.00200	<0.00500	<0.00500	0.0101	<0.200	<0.00500	0.00874	<0.000200	<0.00500	0.00561	<0.00500	<0.00500	<0.00500	0.0168
	02/24/2014		<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	0.00674
	08/19/2014		0.947	<0.00500	0.106	0.205	<0.00200	0.0238	<0.00500	0.0396	0.760	<0.00500	0.0128	<0.000200	<0.00500	0.0129	<0.00500	<0.00500	<0.00500	0.0335
	02/23/2015		<0.035	0.0040	0.090	0.17 J	<0.00070	<0.0014	<0.0023	0.0055 J	<0.014	<0.00024	<0.0012	<0.000049	0.0018 J	<0.0049	<0.0074	<0.0028	0.0025 J	0.017 J
	08/27/2015		<0.0350	0.00433	0.0849	0.171	<0.000160	<0.000540	<0.000260	0.00598	0.0385 J	<0.000240	0.000680 J	<0.0000490	0.00186 J	<0.000350	0.00220	<0.000310	0.00238 J	0.00393 J
	03/07/2016		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/15/2016		0.00413 JB	0.00448	0.0819	0.167	<0.000160	0.00104 JB	<0.000260	0.00860	0.0226 JB	<0.000240	0.000376 JB	<0.0000490	0.00221 J	0.000525 JB	0.00268	<0.000310	0.00266 J	0.00540 J
	02/06/2017		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/17/2017		0.0112 JB	0.00383	0.0715	0.136	<0.000160	<0.000540	<0.000260	0.00523	<0.0150	<0.000240	<0.000250	<0.0000490	0.00227 J	0.00178 JB	0.00158 J	<0.000310	0.00252 J	0.00955 J
	04/05/2018		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/01/2018		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
	04/04/2019		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/24/2019		<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
	06/18/2020		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/08/2020		<0.0554	0.00389	0.111	0.167 J	<0.000478	<0.00149	<0.000477	0.00502	<0.0489	<0.00249	0.00169 J	<0.000100 [R]	0.00292 J	0.00132 J	0.00216	<0.000513	<0.00754	0.0305
	04/15/2021		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/16/2021		0.0243 J	0.00393	0.105	0.166 J	<0.000150	<0.00124	<0.0000596	0.00567 B	0.0285 JB	<0.000849	<0.000704	<0.000100	0.00195 J	<0.000816	0.00243	<0.0000700	0.00254 J	0.00556 J
	04/14/2022		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/13/2022		--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)
	03/23/2023		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/05/2023		--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)

Table 4. Dissolved Metals Concentrations in Groundwater
HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	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 238 (mg/L)	Zinc (mg/L)
New Mexico WQCC Groundwater Standards			5.0	0.01	2	0.75	0.005	0.05	0.05	1.0	1.0	0.015	0.2	0.002	1.0	0.2	0.05	0.05	0.03	10.0
MW-29	08/24/2010		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	0.0375
	08/24/2010	FD	<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	0.0301
	02/28/2011		<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	0.0267
	07/14/2011		<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	0.0240
	01/30/2012		<0.0100	<0.00500	0.0580	0.181	<0.00200	0.106	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0240
	07/24/2012		<0.0100	<0.00500	0.0978	0.249	<0.00200	0.261	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0162
	02/26/2013		<0.0100	<0.00500	0.0857	0.182	<0.00200	0.0690	<0.00500	<0.00500	<0.200	<0.00500	0.0471	<0.000200	<0.00500	0.0334	<0.00500	<0.00500	<0.00500	0.0132
	08/20/2013		<0.0100	<0.00500	0.0738	0.187	<0.00200	0.117	<0.00500	<0.00500	<0.200	<0.00500	0.0159	<0.000200	<0.00500	0.00667	<0.00500	<0.00500	<0.00500	<0.00500
	02/27/2014		<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	0.0115
	02/27/2014	FD	<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	0.00739
	08/20/2014		0.188	<0.00500	0.106	0.134	<0.00200	0.331	<0.00500	<0.00500	0.697	<0.00500	0.0754	<0.000200	0.00594	0.0777	<0.00500	<0.00500	<0.00500	0.00902
	02/25/2015		<0.035	0.0020	0.13	0.26	<0.00070	0.24	<0.0023	<0.0053	<0.014	<0.00024	<0.0012	<0.000049	0.0012 J	<0.0049	<0.0074	<0.0028	0.0062 J	0.013 J
	08/27/2015		<0.0350	0.00246	0.0884	0.238	<0.000160	0.130	<0.000260	0.000784 J	<0.0141	<0.000240	0.00153 J	<0.0000490	0.00111 J	0.000629 J	0.00169 J	<0.000310	0.00641 J	0.00333 J
	03/08/2016		0.00829 JB	0.00465	0.0757	0.165	<0.000160	0.00111 J	<0.000260	0.000558 J	<0.0150	<0.000240	0.000652 JB	<0.0000490	0.00482 J	0.00069 JB	0.00190 J	<0.000310	0.00213 J	<0.00256
	08/17/2016		<0.00200	0.00253	0.0851	0.204	<0.000160	0.00897	<0.000260	0.000863 JB	<0.0150	<0.000240	0.00135 JB	<0.0000490	0.00204 J	0.00119 JB	0.00140 J	<0.000310	0.00380 J	0.00330 JB
	02/09/2017		<0.0258	0.00263 J	0.0932	0.203	<0.000800	0.00552 J	<0.00130	0.00328 J	<0.0750	<0.00120	0.0150 J	<0.0000490	0.00291 J	0.00524 J	0.00148 J	<0.00155	0.00391 J	<0.0128
	08/17/2017		0.00798 JB	0.00242	0.0870	0.172	<0.000160	0.0178	<0.000260	0.00489 J	<0.0150	<0.000240	0.000305 J	<0.0000490	0.00200 J	0.00567	0.00181 J	<0.000310	0.00451 J	0.0308
	04/05/2018		<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
	10/01/2018		<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
	04/04/2019		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
	10/24/2019		<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
	10/24/2019	FD	<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
	06/18/2020		<0.0554	0.00259	0.0880	0.194 J	<0.000478	0.0163	<0.000477	0.00330 J	<0.0489	<0.00249	<0.00132	<0.000100	0.00169 J	0.00189 J	0.00136 J	<0.000513	<0.00754	0.0215 J
	10/08/2020		<0.0554	0.00296	0.0672	0.177 J	<0.000478	0.00364	<0.000477	0.00283 J	<0.0489	<0.00249	<0.00132	<0.000100 [R]	0.00217 J	<0.000952	0.00178 J	<0.000513	<0.00754	0.0271
	04/15/2021		<0.0185	0.00241	0.0834	0.191 J	<0.000150	0.00334	<0.0000596	0.00235 J	<0.0281	<0.000849	<0.000704	<0.000100	0.00185 J	0.00125 J	0.00137 J	<0.0000700	0.00355 J	0.0101 JB
	09/16/2021		<0.0185	0.00464	0.133	0.188 J	0.000543 J	0.00141 J	0.0000838 J	0.00757 B	<0.0281	<0.000849	0.00807	<0.000100	0.00263 J	0.00309	0.00137 J	<0.0000700	0.00361 J	0.0788
	04/14/2022		<0.0185	0.00265	0.182	0.210	<0.000150	0.0425	<0.0000596	0.00253 J	<0.0281	<0.000849	0.000863 JB	<0.000100	0.00190 J	0.00171 J	0.00159 J	<0.0000700	0.00689 J	0.0241 J
	10/13/2022		--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)
	03/23/2023		--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)
	10/05/2023		--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)
MW-30	06/21/2013		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
	08/20/2013		<0.0100	<0.00500	0.0761	0.159	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0589	<0.000200	<0.00500	0.0263	<0.00500	<0.00500	<0.00500	<0.00500
	02/27/2014		0.0201	<0.00500	0.0672	0.180	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0644	<0.000200	0.00588	0.0516	<0.00500	<0.00500	<0.00500	<0.00500
	08/22/2014		0.132	<0.00500	0.0736	<0.0200	<0.00200	0.0137	<0.00500	<0.00500	<0.200	<0.00500	0.148	<0.000200	0.00597	0.0485	<0.00500	<0.00500	<0.00500	<0.00500
	02/25/2015		0.077 J	0.0043	0.073	0.16 J	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	<0.00024	0.0066 J	<0.000049	0.0027 J	<0.0049	<0.0074	<0.0028	0.0018 J	<0.0059
	08/28/2015		<0.0350	0.00478	0.0757	0.163	<0.000160	<0.000540	<0.000260	0.000922 J	<0.0141	<0.000240	0.00315 J	<0.0000490	0.00248 J	0.00109 J	0.00177 J	<0.000310	0.00203 J	<0.00256
	03/08/2016		0.00402 JB	0.00375	0.0711	0.152	<0.000160	0.0032	<0.000260	0.000933 J	<0.0150	<0.000240	0.000911 JB	<0.0000490	0.00219 J	0.000955 JB	0.00253	<0.000310	0.00187 J	<0.00256
	03/08/2016	FD	0.00986 JB	0.00457	0.071	0.154	<0.000160	0.00148 J	<0.000260	0.00123 JB	<0.0150	0.000299 JB	0.000664 JB	<0.0000490	0.00479 J	0.000797 JB	0.00175 J	0.000842 J	0.00197 J	0.00268 JB
	08/16/2016		0.00299 JB	0.00476	0.0734	0.175	<0.000160	0.00110 JB	<0.000260	<0.000520	<0.0150	<0.000240	0.00222 JB	<0.0000490	0.00263 J	0.000470 JB	0.00198 J	<0.000310	0.00223 J	<0.00256
	08/16/2016	FD	0.0189 JB	0.00479	0.0733	0.175	<0.000160	0.00110 JB	<0.000260	0.00371 JB	<0.0150	<0.000240	0.00228 JB	<0.0000490	0.00252 J	0.000495 JB	0.00210	<0.000310	0.00224 J	<0.00256
	02/09/2017		<0.0258	0.00428 J	0.0852	0.182	<0.000800	<0.00270	<0.00130	0.00675 J	<0.0750	<0.00120	0.0332	<0.0000490	0.00302 J	0.00266 J	0.00191 J	<0.00155	0.00227 J	<0.0128
	08/16/2017		0.0259 JB	0.00436	0.0735	0.159	<0.000160	0.00104 J	<0.000260	0.000947 J	<0.0150	<0.000240	0.000987 J	<0.0000490	0.00229 J	0.00289	0.00205	<0.000310	0.00216 J	0.00591 J
	08/16/2017	FD	0.0132 JB	0.00431	0.0727	0.158	<0.000160	0.00103 J	<0.000260	0.000862 J	<0.0150	<0.000240	0.000551 JB	<0.0000490	0.00218 J	0.00280	0.00196 J	<0.000310	0.00213 J	0.00628 J
	04/05/2018		<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
	10/01/2018		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
	10/01/2018	FD	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
	04/04/2019		<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
	10/24/2019		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
	10/24/2019	FD	<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
	06/18/2020		<0.0554	0.00408	0.0896	0.182 J	<0.000478	0.00542	<0.000477	0.00274 J	<0.0489	<0.00249	<0.00132	<0.000100	0.00208 J	0.00435	0.00207	<0.000513	<0.00754	0.0437
	10/08/2020		<0.0554	0.00417	0.0863	0.187 J	<0.000478	0.00718	<0.000477	<0.00250	<0.0489	<0.00249	<0.00132	0.000101 J	0.00223 J	0.00157 J	0.00186 J	<0.000513	<0.00754	0.0314
	04/15/2021		0.0293 JB	0.00423	0.0928	0.185 J	<0.000150	0.0145	<0.0000596	0.00327 J	<0.0281	<0.000849	0.00326 JB	<0.000100	0.00226 J	0.00207	0.00191 J	<0.0000700	0.00220 J	0.00496 JB
	09/16/2021		<0.0185	0.00428	0.0914	0.177 J	<0.000150	0.0166	<0.0000596	<0.00151	<0.0281	<0.000849	<0.000704	<0.000100	0.00228 J	0.00194 J	0.00199 J	<0.0000700	0.00203 J	0.0118 J
	04/14/2022		0.0333 J	0.00423	0.108	0.176 J	<0.000150	0.0229	<0.0000596	0.00178 J	<0.0281	<0.000849	0.00112 JB	<0.000100	0.00213 J	0.00325	0.00191 J	<0.0000700	0.00223 J	0.00903 J
	10/13/2022		<0.0185	0.00427	0.106	0.166 J	<0.000150	0.0279	<0.0000596	0.00244 J	<0.0281	<0.000849	<0.000704	<0.000100	0.00208 J	0.00358	0.00175 J	<0.0000700	0.00216 J	0.0258
	03/23/2023		<0.0185	0.00410	0.112	0.184 J	0.000286 J	0.0314	0.000135 J	0.00529	<0.0281	<0.000849	0.0164	<0.000100	0.00202 J	0.00238	0.00196 J	<0.0000700	0.00209 J	0.0156 J
	10/05/2023		--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)

Table 4. Dissolved Metals Concentrations in Groundwater
HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	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 238 (mg/L)	Zinc (mg/L)
New Mexico WQCC Groundwater Standards			5.0	0.01	2	0.75	0.005	0.05	0.05	1.0	1.0	0.015	0.2	0.002	1.0	0.2	0.05	0.05	0.03	10.0
MW-32	06/15/2017		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/15/2017	FD	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/17/2017		0.0212 JB	0.00332	0.188	0.564	<0.000160	<0.000540	0.00108 J	0.000684 J	<0.0150	<0.000240	0.536	<0.0000490	0.0141	0.00430	<0.000380	<0.000310	0.00888 J	0.00320 J
	04/05/2018		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
	10/01/2018		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
	10/01/2018	FD	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
	04/04/2019		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
	10/24/2019		<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
	10/24/2019	FD	<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
	06/18/2020		<0.0554	0.00323	0.454	0.207	<0.000478	<0.00149	<0.000477	0.00255 J	<0.0489	<0.00249	0.0616	<0.000100	0.00132 J	0.00557	<0.000657	<0.000513	0.00769 J	0.0147 J
	10/08/2020		<0.0554	0.00317	0.372	0.168 J	<0.000478	<0.00149	0.000936 J	<0.00250	<0.0489	<0.00249	0.207	<0.000100 [R]	0.00263 J	0.00427	<0.000657	<0.000513	<0.00754	0.0141 J
	10/08/2020	FD	<0.0554	0.00329	0.370	0.162 J	<0.000478	<0.00149	0.000654 J	0.00316 J	<0.0489	<0.00249	0.160	0.000106 J	0.00260 J	0.00408	<0.000657	<0.000513	<0.00754	0.103
	04/15/2021		0.284	0.00395	0.440	0.142 J	<0.000150	<0.00124	<0.0000596	0.00584	<0.0281	<0.000849	0.00436 JB	<0.000100	0.00131 J	0.00425	0.000466 J	<0.0000700	0.00609 J	0.0241 J
	04/15/2021	FD	<0.0185	0.00421	0.426	0.141 J	<0.000150	<0.00124	0.0000794 J	0.00591 B	<0.0281	<0.000849	0.0111	<0.000100	0.00119 J	0.00435	0.000932 J	<0.0000700	0.00589 J	0.0228 J
	09/16/2021		<0.0185	0.00416	0.380	0.170 J	<0.000150	<0.00124	0.000141 J	0.00386 J	<0.0281	<0.000849	0.0402	<0.000100	0.00714	0.00418	0.000943 J	<0.0000700	0.00547 J	0.0196 J
	09/16/2021	FD	<0.0185	0.00404	0.405	0.160 J	<0.000150	<0.00124	0.000155 J	0.00411 J	<0.0281	<0.000849	0.0433	<0.000100	0.00725	0.00415	0.000731 J	<0.0000700	0.00576 J	0.0188 J
	04/14/2022		<0.0185	0.00266	0.337	0.226	<0.000150	<0.00124	0.00102 J	0.00446 J	<0.0281	<0.000849	0.198	<0.000100	0.00159 JB	0.00345 B	0.000501 J	<0.0000700	0.00889 J	0.0278
	04/14/2022	FD	<0.0185	0.00291	0.316	0.230	<0.000150	<0.00124	0.000849 J	0.00388 J	<0.0281	<0.000849	0.177	<0.000100	0.00146 J	0.00320	0.00148 J	<0.0000700	0.00823 J	0.0281
	10/13/2022		<0.0185	0.00277	0.310	0.220	<0.000150	<0.00124	0.000459 J	0.00687	<0.0281	<0.000849	0.105	<0.000100	0.00140 J	0.00248	0.000444 J	<0.0000700	0.00895 J	0.0461
	10/13/2022	FD	<0.0185	0.00284	0.312	0.220	<0.000150	<0.00124	0.000476 J	0.00710	<0.0281	<0.000849	0.108	<0.000100	0.00136 J	0.00240	0.000632 J	<0.0000700	0.00910 J	0.0483
	03/23/2023		<0.0185	0.00281	0.301	0.202	<0.000150	<0.00124	0.000352 J	0.00697	<0.0281	0.00230	0.0784	<0.000100	0.00135 J	0.00222	0.000645 J	<0.0000700	0.00785 J	0.0299
	03/23/2023	FD	<0.0185	0.00282	0.290	0.202	<0.000150	<0.00124	0.000330 J	0.00520	<0.0281	<0.000849	0.0768	<0.000100	0.00140 J	0.00204	0.000662 J	<0.0000700	0.00771 J	0.0290
	10/05/2023		<0.0185	0.00420	0.185	0.110 J	<0.000150	<0.00124	0.000200 J	0.00767	<0.0281	<0.000849	0.0402	<0.000100	0.00433 J	0.00177 J	0.000773 J	<0.0000700	0.00446 J	0.0194 J
	10/05/2023	FD	<0.0185	0.00434	0.183	0.114 J	<0.000150	<0.00124	0.000225 J	0.00761	<0.0281	<0.000849	0.0424	<0.000100	0.00451 J	0.00176 J	0.000573 J	<0.0000700	0.00472 J	0.0208 J
MW-33	06/15/2017		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/17/2017		0.0123 JB	0.00377	0.218	0.447	<0.000160	<0.000540	0.000834 J	0.00129 J	0.0373 J	<0.000240	0.985	<0.0000490	0.00531	0.000613 J	<0.000380	<0.000310	0.00325 J	0.00358 J
	04/05/2018		<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
	10/01/2018		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
	04/04/2019		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
	10/24/2019		<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
	06/18/2020		<0.0554	0.00202	0.500	0.163 J	<0.000478	<0.00149	<0.000477	<0.00250	<0.0489	<0.00249	0.816	<0.000100	0.00268 J	0.00409	<0.000657	<0.000513	0.0241	<0.00996
	10/08/2020		<0.0554	0.00322	0.423	0.167 J	<0.000478	<0.00149	<0.000477	<0.00250	<0.0489	<0.00249	0.699	<0.000100 [R]	0.00280 J	0.00164 J	<0.000657	<0.000513	0.0236	<0.00996
	10/08/2020	FD	<0.0554	0.00316	0.411	0.167 J	<0.000478	<0.00149	<0.000477	<0.00250	<0.0489	<0.00249	0.691	0.000121 J	0.00277 J	0.00111 J	<0.000657	<0.000513	0.0233	0.0171 J
	04/15/2021		<0.0185	0.00297	0.471	0.159 J	<0.000150	<0.00124	0.000108 J	<0.00151	0.526	<0.000849	0.701	<0.000100	0.00330 J	0.00198 J	<0.000300	<0.0000700	0.0322	0.00441 JB
	04/15/2021	FD	<0.0185	0.00187 J	0.441	0.159 J	<0.000150	<0.00124	0.0000890 J	0.00175 JB	<0.0281	<0.000849	0.685	<0.000100	0.00289 J	0.00178 J	<0.000300	<0.0000700	0.0308	<0.00302
	09/16/2021		<0.0185	0.00293	0.409	0.168 J	<0.000150	<0.00124	0.0000660 J	<0.00151	<0.0281	<0.000849	0.621	<0.000100	0.00267 J	0.00157 J	0.000473 J	<0.0000700	0.0314	<0.00302
	09/16/2021	FD	0.389	0.00297	0.436	0.165 J	<0.000150	<0.00124	0.000123 J	<0.00151	0.263 B	<0.000849	0.645	<0.000100	0.00266 JB	0.00234	<0.000300	<0.0000700	0.0328	<0.00302
	04/14/2022		<0.0185	0.00654	0.470	0.161 J	0.000220 J	<0.00124	0.000265 J	<0.00151	1.99	<0.000849	0.897	<0.000100	0.00278 J	0.00186 J	0.000394 J	<0.0000700	0.0353	<0.00302
	04/14/2022	FD	0.0312 J	0.00602	0.477	0.156 J	<0.000150	<0.00124	0.0000782 J	<0.00151	1.99	<0.000849	0.884	<0.000100	0.00259 J	0.00168 J	0.000665 J	<0.0000700	0.0355	0.00327 J
	10/13/2022		<0.0185	0.00677	0.557	0.143 J	<0.000150	<0.00124	0.0000730 J	<0.00151	2.01	<0.000849	0.973	<0.000100	0.00243 J	0.00209	<0.000300	<0.0000700	0.0424	0.00914 J
	10/13/2022	FD	<0.0185	0.00675	0.547	0.151 J	<0.000150	<0.00124	0.0000802 J	<0.00151	2.02	<0.000849	0.973	<0.000100	0.00237 J	0.00219	<0.000300	<0.0000700	0.0438	0.0133 J
	03/23/2023		<0.0185	0.00603	0.557	0.163 J	<0.000150	<0.00124	0.0000794 J	0.00513	1.98	<0.000849	0.992	<0.000100	0.00220 J	0.00174 J	<0.000300	<0.0000700	0.0485	0.00319 J
	03/23/2023	FD	<0.0185	0.00594	0.554	0.158 J	<0.000150	<0.00124	0.0000761 J	<0.00151	1.87	<0.000849	0.974	<0.000100	0.00213 J	0.00527	<0.000300	<0.0000700	0.0472	<0.00302
	10/05/2023		<0.0185	0.00483	0.566	0.157 J	<0.000150	0.00128 J	0.0000684 J	<0.00151	1.71	<0.000849	0.947	<0.000100	0.00215 J	0.00157 J	<0.000300	<0.0000700	0.0491	<0.00302
	10/05/2023	FD	<0.0185	0.00554	0.600	0.155 J	<0.000150	<0.00124	0.0000859 J	<0.00151	1.79	<0.000849	0.995	<0.000100	0.00212 J	0.00113 J	<0.000300	<0.0000700	0.0558	<0.00302

Table 4. Dissolved Metals Concentrations in Groundwater
HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	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 238 (mg/L)	Zinc (mg/L)
New Mexico WQCC Groundwater Standards			5.0	0.01	2	0.75	0.005	0.05	0.05	1.0	1.0	0.015	0.2	0.002	1.0	0.2	0.05	0.05	0.03	10.0
North Well	06/18/2009		<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
	01/14/2010		<0.0100	<0.00500	0.107	0.172	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00134	0.00920
	08/24/2010		<0.0100	0.00552	0.100	0.147	<0.00200	<0.00500	<0.00500	0.00856	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	0.0161	<0.00500	<0.00500	<0.00500	<0.00500
	03/03/2011		<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	0.0695
	07/20/2011		<0.0100	<0.00500	0.106	0.142	<0.00200	0.0140	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	02/02/2012		0.0126	<0.00500	0.0944	0.132	<0.00200	0.0145	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	07/30/2012		<0.0100	0.00523	0.106	0.159	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0178
	02/19/2013		<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	0.00873
	08/22/2014		0.0170	0.00530	0.106	<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	0.0119
	12/17/2014		<0.0100	0.00579	0.0985	0.121	<0.00100	0.00101	<0.00100	0.00108	0.0180	<0.00100	<0.00100	<0.00020	0.00346	<0.00100	0.00359	<0.00100	0.00179	0.00315
	03/09/2015		<0.035	0.0055	0.11	0.15	<0.00070	<0.0014	<0.0023	0.012 J	<0.014	0.00062 J	<0.0012	<0.000049	0.0032 J	<0.0049	0.0097 J	<0.0028	0.0016 J	0.015 J
	05/19/2015		<0.035	0.0060	0.11	0.14 J	<0.00070	0.0018 J	<0.0023	0.015 J	<0.014	0.00074 J	<0.0012	<0.000049	0.0042 J	<0.0049	0.0033	<0.0028	0.0018 J	0.017 J
	08/28/2015		<0.0350	0.00551	0.103	0.155	<0.000160	0.000676 J	<0.000260	0.00121 J	<0.0141	<0.000240	0.000878 J	<0.0000490	0.00306 J	<0.000350	0.00332	<0.000310	0.00156 J	<0.00256
	12/17/2015		<0.0350	0.00572	0.104	0.155 J	<0.000160	0.00103 J	<0.000260	0.00216 J	0.0158 J	<0.000240	0.000476 J	<0.0000490	<0.00160	0.000388 J	0.00342	<0.000310	0.00160 J	0.00427 J
	03/10/2016		0.00383 J	0.00557	0.108	0.138	<0.000160	0.00106 J	<0.000260	0.00183 JB	0.0200 J	<0.000240	0.000748 J	<0.0000490	0.00307 JB	0.000364 JB	0.00342	<0.000310	0.00161 J	0.00420 JB
	05/25/2016		<0.00200	0.00451	0.104	0.166	<0.000160	<0.000540	<0.000260	0.0141	<0.0150	0.000323 J	0.00281 J	<0.0000490	0.00272 J	0.000909 J	0.00365	<0.000310	0.00159 J	0.0101 J
	08/18/2016		0.00295 JB	0.00548	0.111	0.157	<0.000160	0.00139 JB	<0.000260	0.00146 JB	<0.0150	<0.000240	0.00101 JB	0.0000503 JB	0.00293 J	0.00103 JB	0.00367	<0.000310	0.00176 J	0.00285 JB
	12/08/2016		0.00412 JB	0.00544	0.122	0.127	<0.000160	0.00108 J	<0.000260	0.00236 J	<0.0150	<0.000240	0.000506 JB	<0.0000490	0.00281 J	<0.000350	0.00333	<0.000310	0.00177 J	0.00374 J
	02/07/2017		<0.0258	0.00615 J	0.143	0.163	<0.000800	<0.00270	<0.00130	0.00320 J	<0.0750	<0.00120	<0.00125	<0.0000490	0.00293 J	<0.00175	0.00336	<0.00155	0.00188 J	<0.0128
	05/31/2017		<0.00515	0.00559	0.127	0.149	<0.000160	0.00101 J	<0.000260	0.00435 J	<0.0150	<0.000240	0.000388 JB	<0.0000490	0.00280 J	0.000572 J	0.00322	<0.000310	0.00183 J	0.00513 JB
	08/17/2017		0.0185 JB	0.00569	0.113	0.142	<0.000160	0.00110 J	<0.000260	0.00355 J	<0.0150	0.000261 J	0.00121 JB	<0.0000490	0.00282 J	0.000633 J	0.00347	<0.000310	0.00177 J	0.00834 J
	12/14/2017		0.00620 JB	0.00598	0.109	0.135	<0.000160	0.00142 J	<0.000260	0.00253 JB	0.0491 J	0.000679 J	0.00115 J	<0.0000490	0.00282 J	0.000606 J	0.00355	<0.000310	0.00183 J	0.00679 J
	02/23/2018		0.00601 JB	0.00621	0.109	0.189 J	<0.000160	0.00134 JB	<0.000260	0.00292 J	<0.0150	<0.000240	0.000796 JB	<0.0000490	0.00304 J	0.000612 JB	0.00371	<0.000310	0.00176 J	0.00383 J
	04/05/2018		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
	07/31/2018		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
	10/01/2018		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
	01/23/2019		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
	04/04/2019		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
	07/11/2019		<0.00515	0.00582	0.111	0.146 J	<0.000160	0.00162 JB	<0.000260	0.00322 JB	<0.0150	0.000313 JB	0.00042 J	<0.0000490	0.00303 J	0.000416 J	0.00414	<0.000310	0.00173 J	0.006 J
	10/24/2019		<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
	01/15/2020		0.0222 JB	0.00611	0.105	0.152 J	<0.000160	0.00159 JB	<0.000260	0.0459	<0.0150	0.00257	0.00113 JB	<0.0000490	0.00298 J	0.00184 JB	0.00381	<0.000310	0.00195 J	0.0282
	06/18/2020		<0.0554	0.00601	0.106	0.150 J	<0.000478	0.00178 J	<0.000477	<0.00250	<0.0489	<0.00249	<0.00132	<0.000100	0.00297 J	0.000965 J	0.00412	<0.000513	<0.00754	<0.00996
	08/19/2020		<0.0554	0.00592	0.0976	0.150 J	<0.000478	0.00178 J	<0.000477	<0.00250	<0.0489	<0.00249	<0.00132	<0.000100	0.00284 J	<0.000952	0.00352	<0.000513	<0.00754	<0.00996
	10/08/2020		<0.0554	0.00637	0.102	0.153 J	<0.000478	0.00233	<0.000477	<0.00250	<0.0489	<0.00249	<0.00132	<0.000100	0.00286 J	<0.000952	0.00316	<0.000513	<0.00754	<0.00996
	01/28/2021		<0.0185	0.00505	0.106	0.143 J	<0.000150	0.00141 J	0.000118 J	0.00209 J	<0.0281	<0.000849	0.00175 J	<0.000100	0.00309 J	0.00121 J	0.00361	<0.0000700	0.00171 J	0.0109 JB
	04/15/2021		<0.0185	0.00634	0.106	0.143 J	<0.000150	0.00227 B	0.000115 J	0.0723	<0.0281	0.00354 B	0.000746 J	<0.000100	0.00314 J	0.00231	0.00462	<0.0000700	0.00161 J	0.0519
	07/15/2021		<0.0185	0.00518	0.102	0.137 J	<0.000150	0.00219	0.0000724 J	0.00672 B	<0.0281	<0.000849	0.00522 B	<0.000100	0.00282 J	0.00227 B	0.00332	<0.0000700	0.00151 J	0.0140 JB
	09/16/2021		<0.0185	0.00522	0.110	0.142 J	<0.000150	0.00205	0.000107 J	0.0439	<0.0281	0.00141 J	0.000928 J	<0.000100	0.00277 JB	0.00186 J	0.00373	<0.0000700	0.00162 J	0.0295
	01/20/2022		<0.0185	0.00319	0.107	0.150 J	<0.000150	0.00164 J	0.000177 J	0.00482 J	0.105	<0.000849	0.00420 J	<0.000100	0.00298 J	0.00103 J	0.00369	<0.0000700	0.00199 J	0.0148 J
	04/14/2022		<0.0185	0.00555	0.118	0.143 J	<0.000150	0.00284	<0.0000596	0.00334 J	<0.0281	<0.000849	<0.000704	<0.000100	0.00281 J	0.000873 J	0.00392	<0.0000700	0.00183 J	0.00638 J
	07/14/2022		<0.0185	0.00557	0.108	0.148 J	<0.000150	0.00217	0.0000720 J	0.00467 J	<0.0281	<0.000849	0.00179 J	<0.000100	0.00281 J	0.00152 J	0.00401	<0.0000700	0.00186 J	0.0128 J
	10/13/2022		<0.0185	0.00579	0.111	0.133 J	<0.000150	0.00182 J	0.000101 J	0.00300 J	<0.0281	<0.000849	<0.000704	<0.000100	0.00282 J	0.000828 J	0.00390	<0.0000700	0.00164 J	0.0203 J
	01/26/2023		<0.0185	0.00196	0.0829	0.131	<0.000150	0.00125	0.00234	0.00448	0.587	<0.000849	0.0460	<0.000100	0.00295	0.00117	0.00340	<0.0000700	0.00125	0.0227
	03/23/2023		<0.0185	0.00586	0.108	0.142 J	<0.000150	0.00244	<0.0000596	0.00330 J	<0.0281	<0.000849	0.00157 J	<0.000100	0.00262 J	<0.000816	0.00346	<0.0000700	0.00174 J	0.00994 J
	07/27/2023		<0.0185	0.00589	0.105	0.170 JB	<0.000150	0.00241	0.000145 J	0.00563	<0.0281	<0.000849	0.00168 J	<0.000100	0.00266 JB	0.00193 J	0.00369	<0.0000700	0.00161 J	0.0217 J
	10/05/2023		<0.0185	0.00584	0.106	0.142 J	<0.000150	0.00272	0.0000681 J	0.00375 J	<0.0281	<0.000849	0.000971 J	<0.000100	0.00275 J	0.00145 J	0.00344	<0.0000700	0.00166 J	0.0118 J

Table 4. Dissolved Metals Concentrations in Groundwater
HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	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 238 (mg/L)	Zinc (mg/L)
New Mexico WQCC Groundwater Standards			5.0	0.01	2	0.75	0.005	0.05	0.05	1.0	1.0	0.015	0.2	0.002	1.0	0.2	0.05	0.05	0.03	10.0
	06/22/2009		<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
	01/14/2010		0.0176	<0.00500	0.138	0.229	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0224	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00236	0.0207
	08/24/2010		<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	0.0329
	03/03/2011		<0.0100	<0.00500	0.147	0.261	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0226	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	07/20/2011		<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
	02/02/2012		<0.0100	<0.00500	0.117	0.165	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00777
	07/30/2012		<0.0100	<0.00500	0.103	0.160	<0.00200	0.0111	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0401
	02/19/2013		<0.0100	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	0.0172
	02/28/2014		<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	0.0155
	08/22/2014		<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	0.0159
	08/22/2014	FD	0.0689	<0.00500	0.145	<0.0200	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0103	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0214
	12/17/2014		<0.0100	0.00431	0.125	0.159	<0.00100	0.00178	<0.00100	0.00128	0.0277	<0.00100	0.00422	<0.00020	0.00242	<0.00100	0.00387	<0.00100	0.00227	0.0163
	12/17/2014	FD	<0.0100	0.00422	0.126	0.162	<0.00100	0.00179	<0.00100	0.00136	0.0226	<0.00100	0.00409	<0.00020	0.00203	<0.00100	0.00359	<0.00100	0.00217	0.0151
	03/09/2015		<0.035	0.0040	0.14	0.20	<0.00070	0.0015 J	<0.0023	0.032	<0.014	0.0031	0.0046 J	<0.000049	0.0020 J	<0.0049	0.012 J	<0.0028	0.0021 J	0.049 J
	03/09/2015	FD	0.037 J	0.0042	0.14	0.20	<0.00070	<0.0014	<0.0023	0.019 J	<0.014	0.0026	0.0030 J	<0.000049	0.0021 J	<0.0049	0.015 J	<0.0028	0.0021 J	0.025 J
	05/19/2015		<0.035	0.0023	0.14	0.18 J	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	<0.00024	0.0088 J	<0.000049	0.0022 J	<0.0049	0.0034	<0.0028	0.0021 J	<0.0059
	05/19/2015	FD	<0.035	0.0024	0.14	0.18 J	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	<0.00024	0.0081 J	<0.000049	0.0023 J	<0.0049	0.0032	<0.0028	0.0021 J	<0.0059
	08/28/2015		<0.0350	0.00436	0.137	0.194	<0.000700	0.00156 J	<0.00230	<0.00530	0.0168 J	0.000477 J	0.00776 J	<0.0000490	0.00204 J	<0.00490	0.00360	<0.00280	0.00214 J	0.00662 J
	08/28/2015	FD	<0.0350	0.00430	0.133	0.197	<0.000160	0.00127 J	<0.000260	0.00376 J	<0.0141	<0.000240	0.00654	0.0000599 J	0.00199 J	<0.000350	0.00328	<0.000310	0.00205 J	0.00638 J
	12/17/2015		<0.0350	0.00426	0.138	0.235	<0.000160	0.00205	<0.000260	0.00257 J	<0.0141	<0.000240	0.00564	<0.0000490	<0.00160	0.000645 J	0.00334	<0.000310	0.00238 J	0.00388 J
	12/17/2015	FD	<0.0350	0.00425	0.136	0.193 J	<0.000160	0.00160 J	<0.000260	0.00250 J	<0.0141	<0.000240	0.00546	<0.0000490	<0.00160	0.000442 J	0.00343	<0.000310	0.00238 J	0.00430 J
	03/10/2016		0.00624 J	0.00425	0.118	0.211	<0.000160	0.00135 J	<0.000260	0.00864	<0.0150	0.000256 J	0.00332 JB	<0.0000490	0.00204 JB	0.000524 JB	0.00354	<0.000310	0.00230 J	0.0119 JB
	05/25/2016		<0.00200	0.00433	0.124	0.214	<0.000160	0.00139 J	<0.000260	0.00384 J	<0.0150	<0.000240	0.00551	<0.0000490	0.00196 J	<0.000350	0.00374	<0.000310	0.00249 J	0.00351 J
	05/25/2016	FD	<0.00200	0.00459	0.125	0.224	<0.000160	0.00196 J	<0.000260	0.00445 J	<0.0150	<0.000240	0.00535	<0.0000490	0.00194 J	<0.000350	0.00343	<0.000310	0.00247 J	0.00394 J
	08/18/2016		<0.00200	0.00419	0.134	0.224	<0.000160	0.00138 J	<0.000260	0.00444 JB	<0.0150	<0.000240	0.00250 J	0.0000764 JB	0.00188 J	0.00106 JB	0.00326	<0.000310	0.00257 J	0.00833 JB
	08/18/2016	FD	0.00377 JB	0.00370	0.137	0.233	<0.000160	0.00165 J	<0.000260	0.00485 JB	<0.0150	<0.000240	0.00270 J	0.0000788 JB	0.00201 J	0.00128 JB	0.00318	<0.000310	0.00262 J	0.00936 JB
	12/08/2016		0.00439 JB	0.00310	0.120	0.188	<0.000160	0.000590 J	<0.000260	0.00192 J	<0.0150	<0.000240	0.00796	<0.0000490	0.00181 J	<0.000350	0.00373	<0.000310	0.00257 J	0.00418 J
	12/08/2016	FD	0.00364 JB	0.00313	0.120	0.194	<0.000160	0.000601 J	<0.000260	0.00215 J	<0.0150	0.000317 J	0.00673	<0.0000490	0.00184 J	<0.000350	0.00307	<0.000310	0.00253 J	0.00420 J
	02/07/2017		0.00532 J	0.00343	0.117	0.223	<0.000160	0.000753 J	<0.000260	0.00340 J	<0.0150	0.000385 JB	0.00227 J	<0.0000490	0.00190 J	<0.000350	0.00337	<0.000310	0.00229 J	0.00405 J
	02/07/2017	FD	<0.0258	0.00424 J	0.140	0.228	<0.000800	<0.00270	<0.00130	0.00352 J	<0.0750	<0.00120	0.00308 J	<0.0000490	0.00217 J	<0.00175	0.00338	<0.00155	0.00266 J	<0.0128
	05/31/2017		<0.00515	0.00327	0.144	0.209	<0.000160	0.000988 J	<0.000260	0.00419 J	<0.0150	<0.000240	0.00311 J	0.0000506 J	0.00174 J	<0.000350	0.00303	<0.000310	0.00235 J	0.00458 JB
	05/31/2017	FD	0.00778 JB	0.00326	0.139	0.197	<0.000160	0.00106 J	<0.000260	0.00419 J	<0.0150	<0.000240	0.00315 J	0.0000515 J	0.00163 J	0.000376 J	0.00338	<0.000310	0.00236 J	0.00426 JB
	08/17/2017		0.00883 JB	0.00392	0.125	0.191	<0.000160	0.00187 J	<0.000260	0.00229 J	<0.0150	<0.000240	0.00253 JB	<0.0000490	0.00183 J	<0.000350	0.00353	<0.000310	0.00230 J	0.00365 J
	08/17/2017	FD	0.00607 JB	0.00413	0.127	0.191	<0.000160	0.00204	<0.000260	0.00364 J	<0.0150	<0.000240	0.00182 JB	<0.0000490	0.00185 J	<0.000350	0.00338	<0.000310	0.00232 J	0.00339 J
	12/14/2017		<0.00515	0.00417	0.125	0.176	<0.000160	0.00221	<0.000260	0.00500 B	<0.0150	<0.000240	0.00223 J	<0.0000490	0.00180 J	0.000406 J	0.00357	<0.000310	0.00237 J	0.00659 J
	12/14/2017	FD	<0.00515	0.00417	0.129	0.184	<0.000160	0.00223	<0.000260	0.00526 B	<0.0150	0.000263 J	0.00259 J	<0.0000490	0.00185 J	0.000357 J	0.00356	<0.000310	0.00244 J	0.00474 J
	02/23/2018		0.00900 JB	0.00419	0.143	0.258	<0.000160	0.00265 B	<0.000260	0.00656	<0.0150	0.000278 JB	0.00225 J	<0.0000490	0.00191 J	0.000488 JB	0.00453	<0.000310	0.00245 J	0.00958 J
	02/23/2018	FD	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
South Well	04/05/2018		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
	07/31/2018		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
	07/31/2018	FD	<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
	10/01/2018		<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
	01/23/2019		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
	01/23/2019	FD	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
	04/04/2019		<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
	07/11/2019		<0.00515	0.00375	0.126	0.198 J	<0.000160	0.00178 JB	<0.000260	0.00191 JB	<0.0150	0.00054 JB	0.00269 J	<0.0000490	0.00229 J	0.000881 J	0.00384	<0.000310	0.00223 J	0.101
	10/24/2019		<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
	01/15/2020		0.00859 JB	0.00287	0.122	0.184 J	<0.000160	0.000722 JB	<0.000260	0.00316 J	<0.0150	0.000365 JB	0.0101	<0.0000490	0.00215 J	0.0106	0.00482	<0.000310	0.00245 J	0.0942
	06/18/2020		<0.0554	0.00430	0.116	0.183 J	<0.000478	0.00168 J	<0.000477	<0.00250	<0.0489	<0.00249	<0.00132	<0.000100	0.00210 J	<0.000952	0.00360	<0.000513	<0.00754	0.0142 J
	08/19/2020		<0.0554	0.00419	0.105	0.190 J	<0.000478	<0.00149	<0.000477	<0.00250	<0.0489	<0.00249	0.00168 J	<0.000100	0.00206 J	<0.000952	0.00417	<0.000513	<0.00754	0.0193 J
	08/19/2020	FD	<0.0554	0.00419	0.105	0.192 J	<0.000478	<0.00149	<0.000477	<0.00250	<0.0489	<0.00249	0.00145 J	<0.000100	0.00200 J	<0.000952	0.00394	<0.000513	<0.00754	0.0194 J
	10/08/2020		<0.0554	0.00324	0.108	0.188 J	<0.000478	<0.00149	<0.000477	<0.00250	<0.0489	<0.00249	0.00949	<0.000100	0.00225 J	0.00472	0.00400	<0.000513	<0.00754	0.0494
	10/08/2020	FD	<0.0554	0.00254	0.107	0.192 J	<0.000478	<0.00149	<0.000477	0.00292 J	<0.0489	<0.00249	0.0173	0.000114 J	0.00221 J	0.0201	0.00387	<0.000513	<0.00754	0.0868
	01/28/2021		<0.0185	0.00420	0.116	0.178 J	<0.000150	0.00173 J	<0.0000596	<0.00151	<0.0281	0.00152 J	0.00208 J	<0.000100	0.00218 J	0.000963 J	0.00367	<0.0000700	0.00241 J	0.0278 B
	01/28/2021	FD	<0.0185	0.00397	0.116	0.180 J	<0.000150	0.00125 J	<0.0000596	0.00189 J	<0.0281	<0.000849	0.00184 J	<0.000100	0.00219 J	<0.000816	0.00372	<0.0000700	0.00222 J	0.0183 JB
	04/15/2021		<0.0185	0.00233	0.112	0.177 J	<0.000150	0.00184 JB	0.000201 J	0.00881 B	0.0389 J	<0.000849	0.0174	<0.000100	0.00211 J	0.0334	0.00409	<0.0000700	0.00217 J	0.0951
	04/15/2021	FD	<0.0185	0.00391	0.109	0.183 J	<0.000150	<0.00124	<0.0000596	0.00264 JB	<0.0281	<0.000849	0.00545	<0.000100	0.00192 J	0.00192 J	0.00350	<0.0000700	0.00205 J	0.0379
	07/15/2021		<0.0185	0.00407	0.106	0.173 J	<0.000150	0.00151 J	<0.0000596	0.00206 JB	<0.0281	<0.000849	0.00275 JB	0.000102 J	0.00227 J	0.00113 JB	0.00313	<0.0000700	0.00212 J	0.0163 JB
	07/15/2021	FD	<0.0185	0.00394	0.107	0.179 J	<0.000150	0.00161 J	0.0000875 J	0.00186 JB	<0.0281	0.00118 J	0.00411 JB	<0.000100	0.00213 J	0.00117 JB	0.00316	<0.0000700	0.00202 J	0.0175 JB
	09/16/2021		<0.0185	0.00407	0.110	0.188 J	<0.000150	0.00136 J	<0.0000596	0.00241 J	<0.0281	<0.000849	0.00199 J	<0.000100	0.00202 JB	0.00133 J	0.00370	<0.0000700	0.00222 J	0.0155 J
	09/16/2021	FD	<0.0185	0.00387	0.113	0.184 J	<0.000150	0.00177 J	0.0000678 J	0.00294 J	<0.0281	<0.000849	0.00630	<0.000100	0.00207 JB	0.00101 J	0.00372	<0.0000700	0.00217 J	0.0246 J
	01/20/2022		<0.0185	0.00293	0.122	0.187 J	<0.000150	<0.00124	0.000122 J	0.00233 J	<0.0281	<0.000849	0.00337 J	<0.000100	0.00227 J	<0.000816	0.00412	<0.0000700	0.00230 J	0.0118 J
	01/20/2022	FD	<0.0185	0.00285	0.123	0.174 J	<0.000150	<0.00124	0.0000993 J	0.00206 J	<0.0281	<0.000849	0.00299 J	<0.000100	0.00232 J	<0.000816	0.00371	<0.0000700	0.00243 J	0.0120 J
	04/14/2022		0.0370 J	0.00471	0.119	0.179 J	<0.000150	0.00217	<0.0000596	0.00206 J	0.0526 J	<0.000849	0.00182 JB	<0.000100	0.00223 J	<0.000816	0.00359	<0.0000700	0.00226 J	0.0226 J
	04/14/2022	FD	0.0244 J	0.00539	0.118	0.178 J	0.000322 J	0.00172 J	0.000109 J	0.00262 J	0.0819 J	<0.000849	0.00262 J	<0.000100	0.00232 J	0.00118 J	0.00496	<0.0000700	0.00206 J	0.0254
	07/14/2022		<0.0185	0.00365	0.116	0.176 J	<0.000150	<0.00124	<0.0000596	0.0342	<0.0281	<0.000849	0.00389 J	<0.000100	0.00209 J	0.00143 J	0.00399	<0.0000700	0.00200 J	0.232
	07/14/2022	FD	<0.0185	0.00278	0.113	0.174 J	<0.000150	<0.00124	0.0000817 J	0.00281 J	<0.0281	<0.000849	0.00923	<0.000100	0.00218 J	0.00302	0.00351	<0.0000700	0.00209 J	0.123
	10/13/2022		<0.0185	0.00455	0.122	0.285	<0.000150	0.00236	0.0000730 J	0.00353 J	0.0742 J	<0.000849	0.00636	<0.000100	0.00206 J	0.000924 J	0.00354	<0.0000700	0.00240 J	0.0239 J
	10/13/2022	FD	<0.0185	0.00447	0.119	0.274	<0.000150	0.00126 J	0.0000609 J	<0.00151	0.0501 J	<0.000849	0.00459 J	<0.000100	0.00200 J	<0.000816	0.00371	<0.0000700	0.00228 J	0.0216 J
	01/26/2023		<0.0185	0.00448	0.106	0.176	<0.000150	0.00131	0.000586	0.00386	0.0485	0.00147	0.00397	<0.000100	0.00221	0.00171	0.00371	<0.0000700	0.00199	0.0672
	01/26/2023	FD	<0.0185	0.00497	0.105	0.184	<0.000150	0.00136	<0.0000596	0.00388	0.0541	0.00225	0.00137	<0.000100	0.00219	0.000858	0.00393	<0.0000700	0.00193	0.0241
	03/23/2023		<0.0185	0.00478	0.113	0.181 J	<0.000150	0.00131 J	<0.0000596	0.00264 J	<0.0281	<0.000849	0.00170 J	<0.000100	0.00201 J	<0.000816	0.00350	<0.0000700	0.00199 J	0.0353
	03/23/2023	FD	<0.0185	0.00476	0.111	0.185 J	<0.000150	0.00125 J	<0.0000596	0.00284 J	<0.0281	<0.000849	0.00161 J	<0.000100	0.00198 J	<0.000816	0.00367	<0.0000700	0.00203 J	0.0370
	07/27/2023		<0.0185	0.00454	0.127	0.208 B	<0.000150	0.00143 J	0.000125 J	0.00267 JB	0.336	0.00250	0.00394 J	<0.000100	0.00368 J	0.00741	0.00376	<0.0000700	0.00206 J	0.123
	07/27/2023	FD	<0.0185	0.00500	0.113	0.197 JB	0.000243 J	0.00142 J	0.000371 J	0.00172 JB	<0.0281	0.00218	0.00134 J	<0.000100	0.00222 JB	0.00152 J	0.00382	<0.0000700	0.00240 J	0.0254
	10/05/2023		<0.0185	0.00453	0.117	0.172 J	<0.000150	0.00197 J	0.0000795 J	0.00248 J	0.0662 J	0.00237	0.00343 J	<0.000100	0.00227 J	0.00717	0.00356	<0.0000700	0.00193 J	0.0702
	10/05/2023	FD	<0.0185	0.00480	0.113	0.179 J	<0.000150	0.00145 J	<0.0000596	<0.00151	<0.0281	0.00199 J	0.00159 J	<0.000100	0.00222 J	0.00302	0.00388	<0.0000700	0.00217 J	0.0438

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Table 4. Dissolved Metals Concentrations in Groundwater
HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Monitor Well	Sample Date	Duplicate	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 238 (mg/L)	Zinc (mg/L)
New Mexico WQCC Groundwater Standards			5.0	0.01	2	0.75	0.005	0.05	0.05	1.0	1.0	0.015	0.2	0.002	1.0	0.2	0.05	0.05	0.03	10.0
East Well	06/18/2009		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	- -	0.0291
	01/14/2010		<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	0.0146
	08/25/2010		<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	0.0347
	03/03/2011		<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
	07/20/2011		<0.0100	<0.00500	0.104	0.142	<0.00200	0.0200	<0.00500	<0.00500	<0.200	0.0116	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0937
	02/02/2012		0.0150	<0.00500	0.0993	0.145	<0.00200	0.0166	<0.00500	<0.00500	<0.200	0.00988	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0937
	07/30/2012		<0.0100	<0.00500	0.0922	0.136	<0.00200	0.0157	<0.00500	0.00774	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0166
	08/27/2012		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	<0.000200	- -	- -	- -	- -	- -	- -
	09/26/2012		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	<0.000200	- -	- -	- -	- -	- -	- -
	10/22/2012		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	<0.000200	- -	- -	- -	- -	- -	- -
	12/27/2012		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	<0.000200	- -	- -	- -	- -	- -	- -
	02/28/2014		0.0104	<0.00500	0.116	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	0.0317
	08/22/2014		<0.0100	<0.00500	0.103	<0.0200	<0.00200	0.0119	<0.00500	<0.00500	<0.200	<0.00500	0.00812	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0156
	12/17/2014		<0.0100	0.00436	0.0905	0.120	<0.00100	0.0112	<0.00100	<0.00100	0.143	<0.00100	0.00430	<0.00020	0.00241	<0.00100	0.00395	<0.00100	0.00181	0.0147
	03/09/2015		<0.035	0.0046	0.10	0.15	<0.00070	0.012	<0.0023	0.068	<0.014	0.0012 J	0.0021 J	<0.000049	0.0023 J	<0.0049	0.010 J	<0.0028	0.0018 J	0.086
	05/19/2015		<0.035	0.0050	0.10	0.14 J	<0.00070	0.012	<0.0023	<0.0053	<0.014	<0.00024	0.0016 J	<0.000049	0.0028 J	<0.0049	0.0037	<0.0028	0.0019 J	0.013 J
	08/28/2015		<0.0350	0.00445	0.0981	0.149	<0.000700	0.00866 J	<0.00230	<0.00530	0.0248 J	0.000241 J	0.0129	<0.0000490	0.00236 J	<0.00490	0.00388	<0.00280	0.00174 J	0.0284 J
	12/17/2015		0.0668 J	0.00507	0.0997	0.167 J	<0.000160	0.00866	<0.000260	0.00143 J	<0.0141	<0.000240	0.00217 J	<0.0000490	<0.00160	0.000365 J	0.00387	<0.000310	0.00188 J	0.0101 J
	03/10/2016		0.00534 J	0.00454	0.0926	0.143	<0.000160	0.00835	<0.000260	0.000987 J	<0.0150	<0.000240	0.00274 JB	<0.0000490	0.00246 JB	0.000662 JB	0.00384	<0.000310	0.00166 J	0.0260 B
	05/25/2016		<0.00200	0.00483	0.0906	0.154	<0.000160	0.00902	<0.000260	0.0315	<0.0150	0.00141 J	0.00181 JB	<0.0000490	0.00217 J	<0.000350	0.00376	<0.000310	0.00181 J	0.0399
	08/18/2016		0.00258 JB	0.00454	0.0939	0.162	<0.000160	0.00451 B	<0.000260	0.00196 JB	0.0337 J	<0.000240	0.00346 J	<0.0000490	0.00288 J	0.00121 JB	0.00386	<0.000310	0.00194 J	0.0291 B
	12/08/2016		0.00471 JB	0.00464	0.0858	0.122	<0.000160	0.00702	<0.000260	0.00390 J	<0.0150	<0.000240	0.00178 J	<0.0000490	0.00254 J	<0.000350	0.00384	<0.000310	0.00172 J	0.0269
	02/07/2017		<0.0258	0.00523 J	0.105	0.158	<0.000800	0.00749 J	<0.00130	<0.00260	<0.0750	<0.00120	0.00214 J	<0.0000490	0.00260 J	<0.00175	0.00358	<0.00155	0.00201 J	0.0141 J
	05/31/2017		<0.00515	0.00462	0.0928	0.144	<0.000160	0.00662	<0.000260	0.0259	<0.0150	0.00115 J	0.00132 J	<0.0000490	0.00228 J	0.000529 J	0.00351	<0.000310	0.00184 J	0.0297
	08/17/2017		0.0583 J	0.00476	0.0903	0.134	<0.000160	0.00699	<0.000260	0.000968 J	<0.0150	<0.000240	0.000802 JB	<0.0000490	0.00237 J	<0.000350	0.00396	<0.000310	0.00181 J	0.00556 J
	12/14/2017		0.0284 JB	0.00527	0.0881	0.128	0.000195 J	0.00619	0.000334 J	0.00244 JB	0.0331 J	0.000575 J	0.00129 J	<0.0000490	0.00286 J	0.000638 J	0.00386	<0.000310	0.00221 J	0.00987 J
	02/23/2018		0.0326 JB	0.00531	0.0893	0.150 J	0.000266 J	0.00730	0.000381 J	0.00559	0.0313 J	0.00188 J	0.000591 JB	<0.0000490	0.00303 J	0.000904 JB	0.00491	<0.000310	0.00212 J	0.0340
	04/05/2018		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
	07/31/2018		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
	10/01/2018		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
	01/23/2019		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
	04/04/2019		<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
	07/11/2019		<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
	10/24/2019		<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
	01/15/2020		<0.00515	0.00436	0.0986	0.143 J	<0.000160	0.000797 JB	<0.000260	0.000843 J	<0.0150	<0.000240	0.00221 JB	<0.0000490	0.00269 J	0.000845 JB	0.00564	<0.000310	0.00209 J	0.00523 J
	06/18/2020		<0.0554	0.00489	0.0965	0.140 J	<0.000478	0.00504	<0.000477	<0.00250	<0.0489	<0.00249	<0.00132	<0.000100	0.00258 J	<0.000952	0.00420	<0.000513	<0.00754	0.0300
	08/19/2020		<0.0554	0.00516	0.0909	0.148 J	<0.000478	0.00348	<0.000477	<0.00250	<0.0489	<0.00249	0.00242 J	<0.000100	0.00254 J	<0.000952	0.00419	<0.000513	<0.00754	<0.00996
	10/08/2020		<0.0554	0.00495	0.0927	0.146 J	<0.000478	0.00482	<0.000477	<0.00250	<0.0489	<0.00249	<0.00132	<0.000100	0.00262 J	<0.000952	0.00404	<0.000513	<0.00754	0.0112 J
	01/28/2021		<0.0185	0.00516	0.0975	0.142 J	<0.000150	0.00541	0.0000716 J	0.00497 J	<0.0281	0.00224	0.000778 J	<0.000100	0.00269 J	0.000993 J	0.00419	<0.0000700	0.00192 J	0.0338
	04/15/2021		0.0274 J	0.00504	0.0943	0.139 J	<0.000150	0.00473 B	0.0000755 J	<0.00151	<0.0281	<0.000849	<0.000704	<0.000100	0.00239 J	0.000944 J	0.00448	<0.0000700	0.00182 J	0.0102 J
	07/15/2021		<0.0185	0.00481	0.0870	0.129 J	<0.000150	0.00511	0.0000821 J	0.00159 JB	<0.0281	<0.000849	0.00152 JB	<0.000100	0.00263 J	0.000916 JB	0.00404	<0.0000700	0.00170 J	0.0101 JB
	09/16/2021		<0.0185	0.00452	0.0920	0.150 J	<0.000150	0.00342	0.0000724 J	0.00303 J	<0.0281	<0.000849	0.00522	<0.000100	0.00257 JB	<0.000816	0.00403	<0.0000700	0.00191 J	0.0321
	11/10/2021		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	11/10/2021	FD	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	01/20/2022		<0.0185	0.00396	0.0975	0.149 J	<0.000150	<0.00124	0.000260 J	<0.00151	<0.0281	<0.000849	0.00328 J	<0.000100	0.00285 J	<0.000816	0.00454	<0.0000700	0.00201 J	<0.00302
	04/14/2022		<0.0185	0.00578	0.0938	0.142 J	0.000301 J	0.00394	0.000137 J	0.00253 J	0.0601 J	0.00281	0.00553	<0.000100	0.00295 J	0.00126 J	0.0197	<0.0000700	0.00186 J	0.0149 J
	07/14/2022		<0.0185	0.00450	0.0851	0.146 J	<0.000150	0.00279	0.0000825 J	0.00232 J	<0.0281	<0.000849	0.00278 J	<0.000100	0.00272 J	0.00164 J	0.00414	<0.0000700	0.00182 J	0.00870 J
	10/13/2022		<0.0185	0.00529	0.0883	0.136 J	<0.000150	0.00364	0.000135 J	<0.00151	0.0510 J	<0.000849	0.00114 J	<0.000100	0.00267 J	0.00196 J	0.00418	<0.0000700	0.00184 J	0.0167 J
	01/26/2023		<0.0185	0.00483	0.0824	0.140	<0.000150	0.00302	0.0000771	0.00188	0.115	<0.000849	0.00368	<0.000100	0.00259	0.00195	0.00425	<0.0000700	0.00177	0.0127
	03/23/2023		<0.0185	0.00511	0.0891	0.144 J	<0.000150	0.00338	0.0000632 J	0.00201 J	0.0643 J	<0.000849	0.00207 J	<0.000100	0.00255 J	<0.000816	0.00388	<0.0000700	0.00172 J	0.00557 J
	07/27/2023		<0.0185	0.00525	0.0878	0.164 B	<0.000150	0.00402	0.000160 J	0.00265 JB	0.0444 J	<0.000849	0.00143 J	<0.000100	0.00274 JB	0.000821 J	0.00431	<0.0000700	0.00175 J	<0.00302
	10/05/2023		<0.0185	0.00547	0.0874	0.144 J	<0.000150	0.00354	<0.0000596	0.00279 J	0.0427 J	<0.000849	0.00271 J	<0.000100	0.00276 J	0.00224	0.00425	<0.0000700	0.00191 J	0.00692 J

Notes:
Shading indicates detected result exceeded the New Mexico Water Quality Control Commission (WQCC) Groundwater Standard
N/A = Not Applicable, no New Mexico WQCC Groundwater Standard established for constituent
mg/L = milligrams per liter
FD = Field Duplicate
< = Not reported above laboratory reporting limit
-- = Not Analyzed
(1)= Not analyzed due to insufficient water volume
(2)= Not analyzed due to refinery operations (inaccessible)
J = analyte was detected below the laboratory reporting limit (June 2009 to December 2014) or the method quantitation limit (February 2015 to April 2021), or reported detection limit (July 2021, to October 2023), 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
[R] analyte not usable for project objectives according to the United States Environmental Protection Agency (USEPA) *National Functional Guidelines for Inorganic Superfund Methods* (USEPA, November 2020)
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 present analyses completed by Pace Analytical National Center for Testing & Innovation (formerly ESC Lab Sciences) in Mount Juliet, Tennessee
Analytical data from 2009 to 2011 were provided by a previous consultant and could not be confirmed against the original data packages

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Table 5. Summary of Releases in 2023
HF Sinclair Navajo Refining LLC, GW-014, Lovington, New Mexico

Date Release Discovered	Release Location	Estimated Volume Released to Ground*	Estimated Volume Recovered from Ground	Released Material	Release Summary	Corrective Action
March 25, 2023	Firewater Loop, west of Loading Rack	100 barrels	0	Firewater	Personnel noticed water leaking from firewater loop that was being charged. It is believed the line may have frozen in cold weather earlier this year causing a split in the firewater piping. Approximately 100 bbls of well water were released to the ground.	Isolated the section of firewater piping to stop the release. The firewater is sourced from the three onsite water supply wells WW-North, WW-South, and WW-East. Previous representative samples of firewater were collected and submitted for laboratory analysis of chloride (i.e., the only analyte other than total dissolved solids that has historically exceeded WQCC Standards in water supply well WW-South) and the chloride results were below the WQCC Standard of 250 mg/L. Therefore, this release does not meet meets the criteria of 19.15.29.7.A.4 NMAC or 20.6.2.1203.A NMAC and no further action is required.
April 14, 2023	Unit: 84 Lovington - Tankage/Trucks/Loading	10 gallons	<10 gallons	Crude Oil	Approximately 10 gallons of oil spilled onto the ground out of a containment box used for meter proving due to air eliminator leaking.	Free liquid recovered via vacuum truck.
April 20, 2023	Information not Available.	2.5 barrels	0 barrels	Decontamination Water	Frac tank overfilled and overfilled containment. Approximately 2.5 barrels were released outside of the containment onto the ground.	Free liquid inside containment recovered via vacuum truck.
June 1, 2023	Unit: 84 Lovington - Tankage/Trucks/Loading	3 gallons	0 gallons	Crude Oil	While verifying lineups to storage tanks during startup, the packing on the suction valve to the TP-105 pumps had leaked approximately 3 gallons of crude to the ground and standing water around the tank.	The packing on the suction valve was repaired.
June 10, 2023	Unit: 86 Lovington - Utilities	1 barrel	0 gallons	Cooling Tower Water	Two leaks were identified on the bottom south side of the cooling tower basin that leaked approximately 1 barrel of cooling water to ground before containment was set up to reroute water to cement containment on west side of the cooling tower.	Free liquid inside containment recovered via vacuum truck. Two leaks were repaired.
August 24, 2023	Unit: 84 Lovington - Tankage/Trucks/Loading	20 gallons	<20 gallons	Wastewater	During the start up and transfer of water out of TK-1201D to temporary frac tanks, a malfunction of the tramp/booster pump caused the effluent flow out of the frac tank to not keep up with the influent flow. Before the flow of water into the frac tank could be blocked in, the frac tank overfilled into the containment and onto the ground surface. approximately 20 gallons of water was released out of the containment and to the ground.	Operator immediately blocked in the incoming water and opened an auxiliary frac tank to equalize the water level and stop the frac tank from overflowing. Vacuum truck was utilized to clean up the water.
October 6, 2023	Unit: 86 Lovington - Utilities	10 gallons	0 gallons	Tank 101B Hydrotreated water	Contract employee and escorting operator were preparing to unload Tank 101B hydro-water at the API Separator. Contractor connected the hose to the trailer and opened the valve. Unbeknownst to the driver, that valve was broken and not tagged out of service for use. Upon opening the valve, water began to come out from the hose connection. Contractor attempted to close the valve and found the valve to not be operable so he quickly returned the truck to vacuum service to stop the water from coming out. Approximately 10 gallons of hydro-water were spilled on the ground.	Broken valve was tagged out of service for use.
November 14, 2023	Unit: 86 Lovington - Utilities	500 barrels	0 barrels	Firewater	Mechanics were doing a check on the firewater pump and asked operator to turn on the pump remotely. After the pump ran for several minutes, operations was alerted by another contractor that there was water coming out of the ground near Tank 125. Source was a fire water line under the ground next to PIV-6. An estimated 1,000 barrels of water was released from piping. Approximately 500 barrels of water was contained in the sump near Tank 125 and the other 500 barrels ran into the dirt.	Operations turned off firewater pump and blocked in all sources of water to that section of piping to stop and repair the leak. The firewater is sourced from the three onsite water supply wells WW-North, WW-South, and WW-East. A representative sample of the firewater was collected and submitted for laboratory analysis of chloride (i.e., the only analyte other than total dissolved solids that has historically exceeded WQCC Standards in water supply well WW-South) and the chloride result was below the WQCC Standard of 250 mg/L. Therefore, this release does not meet meets the criteria of 19.15.29.7.A.4 NMAC or 20.6.2.1203.A NMAC and no further action is required.
December 5, 2023	Unit: 84 Lovington - Tankage/Trucks/Loading	2 quarts	0 barrels	Tank 103A Product	During a tank swap, outside operator noticed stained soil at Tank 103-A outlet line to pipeline transfer pump. Further investigation revealed a pinhole in the line with product dripping out at a very slow rate with an estimated two quarts on the ground.	Notified lead operator and installed a temporary containment. Repair was made.
December 15, 2023	Unit: 84 Lovington - Tankage/Trucks/Loading	15 gallons	<15 gallons	Oil	Upon completion of confined space work on Tank 1201-B, the mixer was restarted. Upon restarting, the mixer sprayed out approximately 15 gallons of oil from around the knuckle joint area that was not in a containment. The leak stopped.	Notified maintenance foreman of issue and began cleanup.
December 21, 2023	Unit: 86 Lovington - Utilities	1 barrel	<1 barrel	Oily water mix	The drainage piping from the sump to the pump had solids built up in the piping causing the level to build up and spill over onto the concrete, asphalt pad, and dirt. The oily water mix that reached the dirt was estimated to be 1 barrel.	Free liquid was recovered via vacuum truck and apparently affected dirt (based on visual observation of staining and saturated) was manually removed and placed in a container for characterization and offsite disposal. The blockage in the drain to the pump was cleared of all debris.

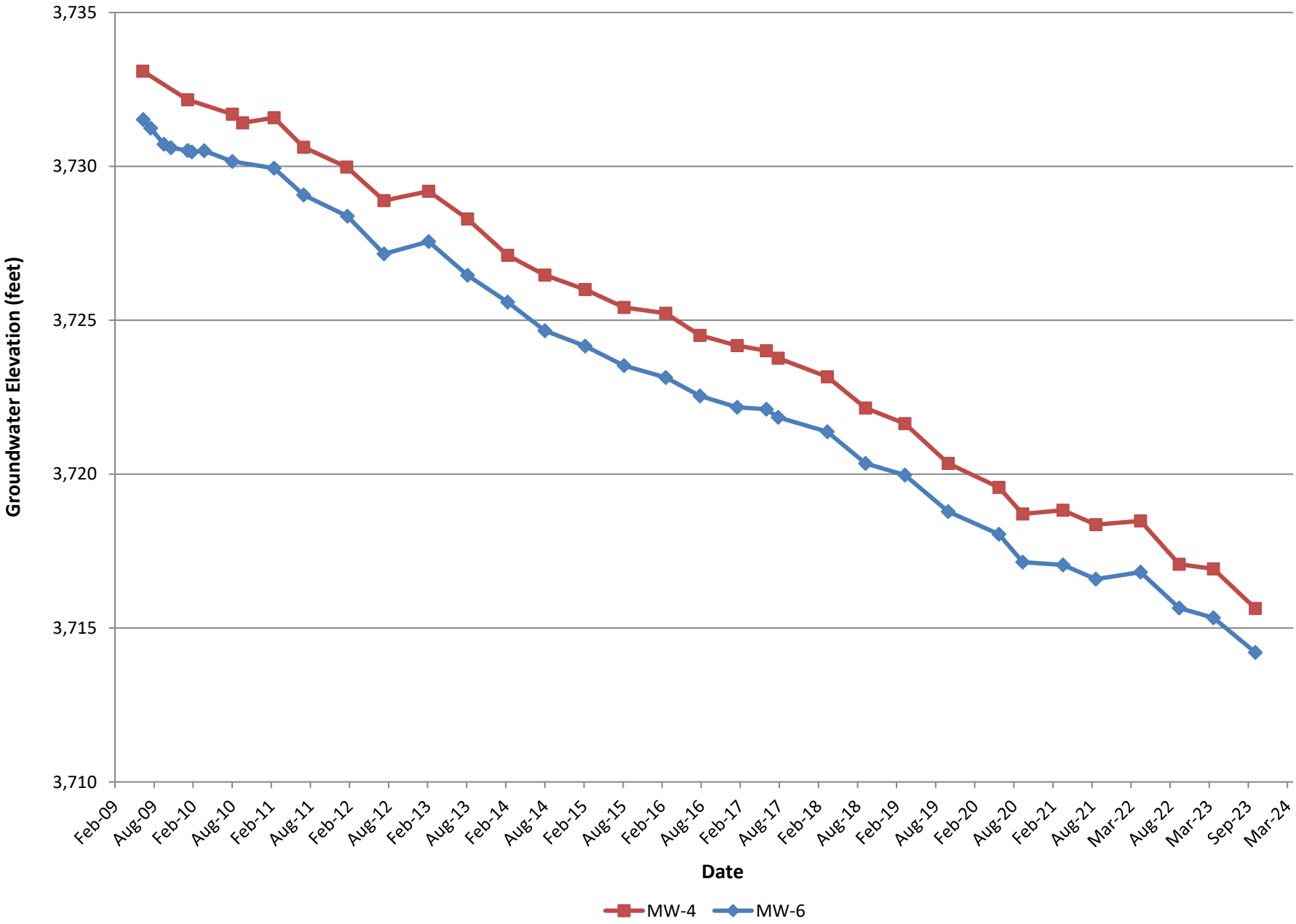
* Releases that resulted in any of the released material contacting the ground surface are included in this table. Releases that were entirely contained within any lined or cemented secondary containment are not included in this table.

APPENDIX A

PLOT OF GROUNDWATER ELEVATIONS OVER TIME

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APPENDIX A - GROUNDWATER ELEVATIONS OVER TIME
HF Sinclair Navajo Refining LLC
GW-014, Lovington, New Mexico



APPENDIX B

LABORATORY ANALYTICAL REPORTS

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Pace Analytical®

ANALYTICAL REPORT

February 03, 2023

TRC Solutions - Austin, TX

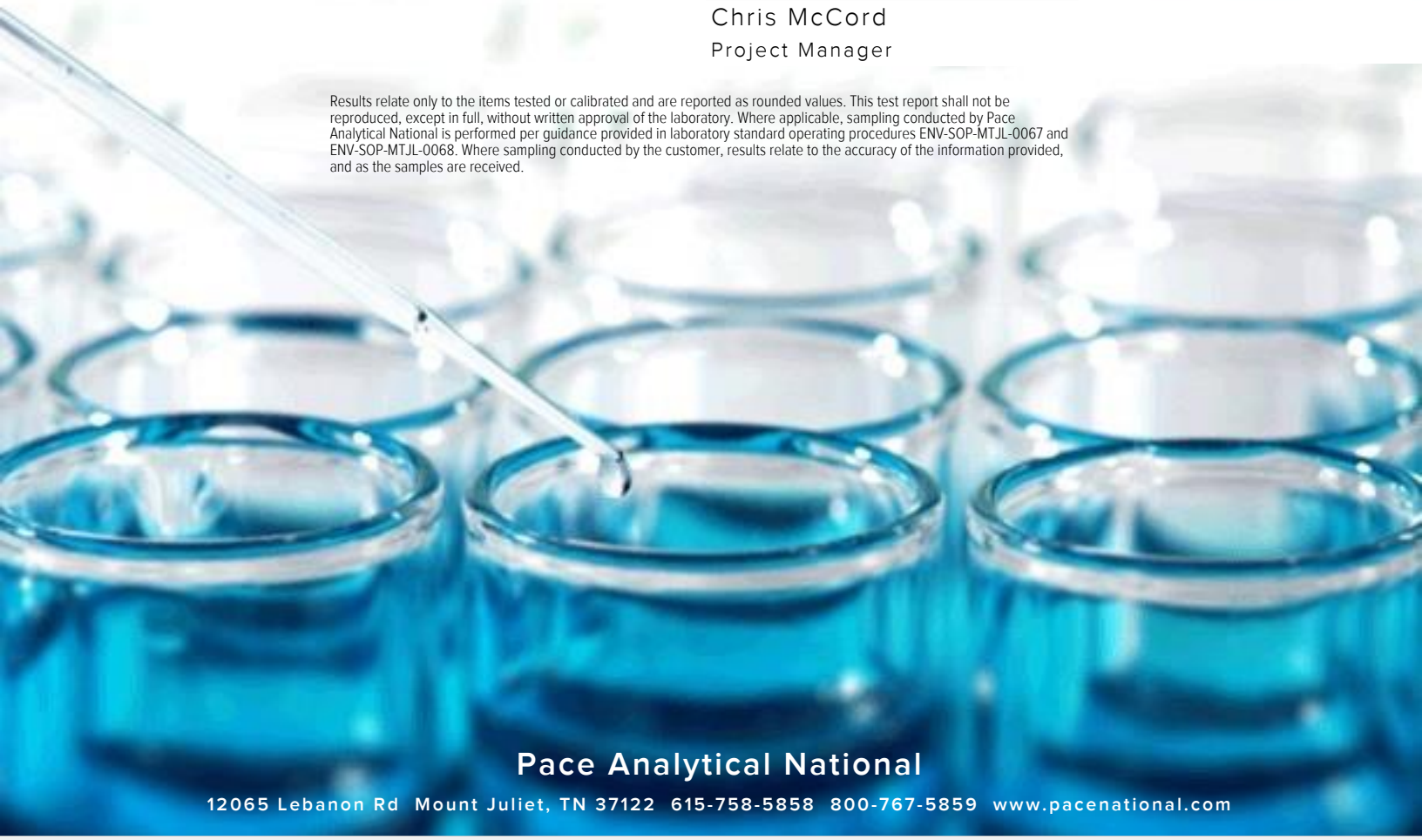
Sample Delivery Group:	L1579832
Samples Received:	01/27/2023
Project Number:	377274.0000.0000.
Description:	Lovington Lea Refinery

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.



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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WW-NORTH L1579832-01 GW

Collected by: BB & HMI Team | Collected date/time: 01/26/23 11:20 | Received date/time: 01/27/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1996143	1	01/27/23 16:48	01/27/23 20:35	AS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1997034	1	01/31/23 10:57	01/31/23 10:57	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1995863	1	01/27/23 15:18	01/27/23 15:18	LBR	Mt. Juliet, TN
Mercury by Method 7470A	WG1995945	1	01/29/23 20:19	01/30/23 09:11	LAS	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1996038	1	01/28/23 11:29	01/29/23 19:53	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1996039	1	01/28/23 11:31	01/30/23 01:14	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1997027	1	01/30/23 14:16	01/30/23 14:16	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1996320	1	01/29/23 01:59	01/29/23 01:59	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG1996649	1	01/30/23 10:10	01/31/23 22:41	MWS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1995998	1	01/28/23 06:55	01/28/23 20:14	CCW	Mt. Juliet, TN

WW-SOUTH L1579832-02 GW

Collected by: BB & HMI Team | Collected date/time: 01/26/23 10:35 | Received date/time: 01/27/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1996143	1	01/27/23 16:48	01/27/23 20:35	AS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1997034	1	01/31/23 11:02	01/31/23 11:02	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1995863	1	01/27/23 15:34	01/27/23 15:34	LBR	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1995863	5	01/27/23 15:50	01/27/23 15:50	LBR	Mt. Juliet, TN
Mercury by Method 7470A	WG1995945	1	01/29/23 20:19	01/30/23 10:04	LAS	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1996038	1	01/28/23 11:29	01/29/23 19:56	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1996039	1	01/28/23 11:31	01/30/23 01:27	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1997027	1	01/30/23 14:38	01/30/23 14:38	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1996320	1	01/29/23 02:19	01/29/23 02:19	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG1996649	1	01/30/23 10:10	01/31/23 23:01	MWS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1995998	1	01/28/23 06:55	01/28/23 20:35	CCW	Mt. Juliet, TN

WW-EAST L1579832-03 GW

Collected by: BB & HMI Team | Collected date/time: 01/26/23 12:05 | Received date/time: 01/27/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1996143	1	01/27/23 16:48	01/27/23 20:35	AS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1997034	1	01/31/23 11:07	01/31/23 11:07	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1995863	1	01/27/23 16:06	01/27/23 16:06	LBR	Mt. Juliet, TN
Mercury by Method 7470A	WG1996629	1	01/30/23 19:23	01/31/23 09:06	SRT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1996038	1	01/28/23 11:29	01/29/23 19:22	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1996039	1	01/28/23 11:31	01/30/23 01:30	LD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1997027	1	01/30/23 15:00	01/30/23 15:00	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1996320	1	01/29/23 02:39	01/29/23 02:39	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG1996649	1	01/30/23 10:10	01/31/23 23:21	MWS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1995998	1	01/28/23 06:55	01/28/23 20:56	CCW	Mt. Juliet, TN

DUP-01 L1579832-04 GW

Collected by: BB & HMI Team | Collected date/time: 01/26/23 11:00 | Received date/time: 01/27/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG1996143	1	01/27/23 16:48	01/27/23 20:35	AS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG1997034	1	01/31/23 11:11	01/31/23 11:11	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1995863	1	01/27/23 16:22	01/27/23 16:22	LBR	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1995863	5	01/27/23 16:38	01/27/23 16:38	LBR	Mt. Juliet, TN
Mercury by Method 7470A	WG1996629	1	01/30/23 19:23	01/31/23 09:08	SRT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG1996038	1	01/28/23 11:29	01/29/23 19:59	ABL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG1996039	1	01/28/23 11:31	01/30/23 01:34	LD	Mt. Juliet, TN

DUP-01 L1579832-04 GW

Collected by: BB & HMI Team
Collected date/time: 01/26/23 11:00
Received date/time: 01/27/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG1997027	1	01/30/23 15:22	01/30/23 15:22	MGF	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1996320	1	01/29/23 03:00	01/29/23 03:00	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG1996649	1	01/30/23 10:10	01/31/23 23:41	MWS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG1995998	1	01/28/23 06:55	01/28/23 21:17	CCW	Mt. Juliet, TN

TRIP BLANK L1579832-05 GW

Collected by: BB & HMI Team
Collected date/time: 01/26/23 00:00
Received date/time: 01/27/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1996320	1	01/28/23 23:15	01/28/23 23:15	ACG	Mt. Juliet, TN

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

CASE NARRATIVE

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

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Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	449		10.0	1	01/27/2023 20:35	WG1996143

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	151		8.45	20.0	1	01/31/2023 10:57	WG1997034

Sample Narrative:

L1579832-01 WG1997034: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	98.3		0.379	1.00	1	01/27/2023 15:18	WG1995863
Fluoride	0.939		0.0640	0.150	1	01/27/2023 15:18	WG1995863
Nitrate	1.66		0.0480	0.100	1	01/27/2023 15:18	WG1995863
Nitrite	U		0.0420	0.100	1	01/27/2023 15:18	WG1995863
Sulfate	74.2		0.594	5.00	1	01/27/2023 15:18	WG1995863

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	01/30/2023 09:11	WG1995945

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.131	J	0.0200	0.200	1	01/29/2023 19:53	WG1996038

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		0.0185	0.100	1	01/30/2023 01:14	WG1996039
Arsenic,Dissolved	0.00196	J	0.000180	0.00200	1	01/30/2023 01:14	WG1996039
Barium,Dissolved	0.0829		0.000381	0.00200	1	01/30/2023 01:14	WG1996039
Cadmium,Dissolved	U		0.000150	0.00100	1	01/30/2023 01:14	WG1996039
Chromium,Dissolved	0.00125	J	0.00124	0.00200	1	01/30/2023 01:14	WG1996039
Copper,Dissolved	0.00448	J	0.00151	0.00500	1	01/30/2023 01:14	WG1996039
Cobalt,Dissolved	0.00234		0.0000596	0.00200	1	01/30/2023 01:14	WG1996039
Iron,Dissolved	0.587		0.0281	0.100	1	01/30/2023 01:14	WG1996039
Lead,Dissolved	U		0.000849	0.00200	1	01/30/2023 01:14	WG1996039
Manganese,Dissolved	0.0460		0.000704	0.00500	1	01/30/2023 01:14	WG1996039
Molybdenum,Dissolved	0.00295	J	0.000348	0.00500	1	01/30/2023 01:14	WG1996039
Nickel,Dissolved	0.00117	J	0.000816	0.00200	1	01/30/2023 01:14	WG1996039
Selenium,Dissolved	0.00340		0.000300	0.00200	1	01/30/2023 01:14	WG1996039
Silver,Dissolved	U		0.0000700	0.00200	1	01/30/2023 01:14	WG1996039
Uranium,Dissolved	0.00125	J	0.0000700	0.0200	1	01/30/2023 01:14	WG1996039
Zinc,Dissolved	0.0227	J	0.00302	0.0250	1	01/30/2023 01:14	WG1996039

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0382	B J	0.0314	0.100	1	01/30/2023 14:16	WG1997027
(S) a,a,a-Trifluorotoluene(FID)	*97.5*			*78.0-120*		*01/30/2023 14:16*	WG1997027

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0113	0.0500	1	01/29/2023 01:59	WG1996320
Benzene	U		0.0000941	0.00100	1	01/29/2023 01:59	WG1996320
Bromodichloromethane	U		0.000136	0.00100	1	01/29/2023 01:59	WG1996320
Bromoform	U		0.000129	0.00100	1	01/29/2023 01:59	WG1996320
Bromomethane	U		0.000605	0.00500	1	01/29/2023 01:59	WG1996320
n-Butylbenzene	U		0.000157	0.00100	1	01/29/2023 01:59	WG1996320
sec-Butylbenzene	U		0.000125	0.00100	1	01/29/2023 01:59	WG1996320
tert-Butylbenzene	U		0.000127	0.00100	1	01/29/2023 01:59	WG1996320
Carbon disulfide	U		0.0000962	0.00100	1	01/29/2023 01:59	WG1996320
Carbon tetrachloride	U		0.000128	0.00100	1	01/29/2023 01:59	WG1996320
Chlorobenzene	U		0.000116	0.00100	1	01/29/2023 01:59	WG1996320
Chlorodibromomethane	U		0.000140	0.00100	1	01/29/2023 01:59	WG1996320
Chloroethane	U		0.000192	0.00500	1	01/29/2023 01:59	WG1996320
Chloroform	U		0.000111	0.00500	1	01/29/2023 01:59	WG1996320
Chloromethane	U		0.000960	0.00250	1	01/29/2023 01:59	WG1996320
1,2-Dibromoethane	U		0.000126	0.00100	1	01/29/2023 01:59	WG1996320
1,1-Dichloroethane	U		0.000100	0.00100	1	01/29/2023 01:59	WG1996320
1,2-Dichloroethane	U		0.0000819	0.00100	1	01/29/2023 01:59	WG1996320
1,1-Dichloroethene	U		0.000188	0.00100	1	01/29/2023 01:59	WG1996320
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	01/29/2023 01:59	WG1996320
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	01/29/2023 01:59	WG1996320
1,2-Dichloropropane	U		0.000149	0.00100	1	01/29/2023 01:59	WG1996320
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	01/29/2023 01:59	WG1996320
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	01/29/2023 01:59	WG1996320
Ethylbenzene	U		0.000137	0.00100	1	01/29/2023 01:59	WG1996320
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	01/29/2023 01:59	WG1996320
2-Hexanone	U		0.000787	0.0100	1	01/29/2023 01:59	WG1996320
Isopropylbenzene	U		0.000105	0.00100	1	01/29/2023 01:59	WG1996320
p-Isopropyltoluene	U		0.000120	0.00100	1	01/29/2023 01:59	WG1996320
2-Butanone (MEK)	U		0.00119	0.0100	1	01/29/2023 01:59	WG1996320
Methylene Chloride	U		0.000430	0.00500	1	01/29/2023 01:59	WG1996320
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	01/29/2023 01:59	WG1996320
Methyl tert-butyl ether	U		0.000101	0.00100	1	01/29/2023 01:59	WG1996320
Naphthalene	U		0.00100	0.00500	1	01/29/2023 01:59	WG1996320
n-Propylbenzene	U		0.0000993	0.00100	1	01/29/2023 01:59	WG1996320
Styrene	U		0.000118	0.00100	1	01/29/2023 01:59	WG1996320
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	01/29/2023 01:59	WG1996320
Tetrachloroethene	U		0.000300	0.00100	1	01/29/2023 01:59	WG1996320
Toluene	U		0.000278	0.00100	1	01/29/2023 01:59	WG1996320
1,1,1-Trichloroethane	U		0.000149	0.00100	1	01/29/2023 01:59	WG1996320
1,1,2-Trichloroethane	U		0.000158	0.00100	1	01/29/2023 01:59	WG1996320
Trichloroethene	U		0.000190	0.00100	1	01/29/2023 01:59	WG1996320
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	01/29/2023 01:59	WG1996320
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	01/29/2023 01:59	WG1996320
Vinyl chloride	U		0.000234	0.00100	1	01/29/2023 01:59	WG1996320
Xylenes, Total	U		0.000174	0.00300	1	01/29/2023 01:59	WG1996320
(S) Toluene-d8	*93.1*			*80.0-120*		*01/29/2023 01:59*	WG1996320
(S) 4-Bromofluorobenzene	*86.6*			*77.0-126*		*01/29/2023 01:59*	WG1996320
(S) 1,2-Dichloroethane-d4	*115*			*70.0-130*		*01/29/2023 01:59*	WG1996320

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	0.0768	B J	0.0247	0.100	1	01/31/2023 22:41	WG1996649
(S) o-Terphenyl	*89.5*			*31.0-160*		*01/31/2023 22:41*	WG1996649

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000886	0.00100	1	01/28/2023 20:14	WG1995998
Acenaphthylene	U		0.0000921	0.00100	1	01/28/2023 20:14	WG1995998
Acetophenone	U		0.000208	0.0100	1	01/28/2023 20:14	WG1995998
Anthracene	U		0.0000804	0.00100	1	01/28/2023 20:14	WG1995998
Atrazine	U		0.000255	0.0100	1	01/28/2023 20:14	WG1995998
Benzo(a)anthracene	U		0.000199	0.00100	1	01/28/2023 20:14	WG1995998
Benzaldehyde	U	J4	0.00169	0.0100	1	01/28/2023 20:14	WG1995998
Benzo(b)fluoranthene	U		0.000130	0.00100	1	01/28/2023 20:14	WG1995998
Benzo(k)fluoranthene	U		0.000120	0.00100	1	01/28/2023 20:14	WG1995998
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	01/28/2023 20:14	WG1995998
Benzo(a)pyrene	U		0.0000381	0.000200	1	01/28/2023 20:14	WG1995998
Biphenyl	U		0.000790	0.0100	1	01/28/2023 20:14	WG1995998
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	01/28/2023 20:14	WG1995998
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	01/28/2023 20:14	WG1995998
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	01/28/2023 20:14	WG1995998
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	01/28/2023 20:14	WG1995998
2-Chloronaphthalene	U		0.0000648	0.00100	1	01/28/2023 20:14	WG1995998
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	01/28/2023 20:14	WG1995998
Caprolactam	U		0.000309	0.0100	1	01/28/2023 20:14	WG1995998
Carbazole	U		0.000111	0.0100	1	01/28/2023 20:14	WG1995998
Chrysene	U		0.000130	0.00100	1	01/28/2023 20:14	WG1995998
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	01/28/2023 20:14	WG1995998
Dibenzofuran	U		0.0000970	0.0100	1	01/28/2023 20:14	WG1995998
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	01/28/2023 20:14	WG1995998
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	01/28/2023 20:14	WG1995998
2,6-Dinitrotoluene	U		0.000250	0.0100	1	01/28/2023 20:14	WG1995998
Fluoranthene	U		0.000102	0.00100	1	01/28/2023 20:14	WG1995998
Fluorene	U		0.0000844	0.00100	1	01/28/2023 20:14	WG1995998
Hexachlorobenzene	U		0.0000755	0.00100	1	01/28/2023 20:14	WG1995998
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	01/28/2023 20:14	WG1995998
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	01/28/2023 20:14	WG1995998
Hexachloroethane	U		0.000127	0.0100	1	01/28/2023 20:14	WG1995998
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	01/28/2023 20:14	WG1995998
Isophorone	U		0.000143	0.0100	1	01/28/2023 20:14	WG1995998
1-Methylnaphthalene	U		0.0000790	0.00100	1	01/28/2023 20:14	WG1995998
2-Methylnaphthalene	U		0.000117	0.00100	1	01/28/2023 20:14	WG1995998
Naphthalene	0.000303	J	0.000159	0.00100	1	01/28/2023 20:14	WG1995998
Nitrobenzene	U		0.000297	0.0100	1	01/28/2023 20:14	WG1995998
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	01/28/2023 20:14	WG1995998
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	01/28/2023 20:14	WG1995998
Phenanthrene	U		0.000112	0.00100	1	01/28/2023 20:14	WG1995998
Benzylbutyl phthalate	U		0.000765	0.00300	1	01/28/2023 20:14	WG1995998
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	01/28/2023 20:14	WG1995998
Di-n-butyl phthalate	U		0.000453	0.00300	1	01/28/2023 20:14	WG1995998
Diethyl phthalate	U		0.000287	0.00300	1	01/28/2023 20:14	WG1995998
Dimethyl phthalate	U		0.000260	0.00300	1	01/28/2023 20:14	WG1995998
Di-n-octyl phthalate	U		0.000932	0.00300	1	01/28/2023 20:14	WG1995998
Pyrene	U		0.000107	0.00100	1	01/28/2023 20:14	WG1995998
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	01/28/2023 20:14	WG1995998
4-Chloro-3-methylphenol	U		0.000131	0.0100	1	01/28/2023 20:14	WG1995998

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
2-Chlorophenol	U		0.000133	0.0100	1	01/28/2023 20:14	WG1995998
2,4-Dichlorophenol	U		0.000102	0.0100	1	01/28/2023 20:14	WG1995998
2,4-Dimethylphenol	U		0.0000636	0.0100	1	01/28/2023 20:14	WG1995998
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	01/28/2023 20:14	WG1995998
2,4-Dinitrophenol	U		0.00593	0.0100	1	01/28/2023 20:14	WG1995998
2-Nitrophenol	U		0.000117	0.0100	1	01/28/2023 20:14	WG1995998
2-Nitroaniline	U		0.000102	0.0100	1	01/28/2023 20:14	WG1995998
2-Methylphenol	U		0.0000929	0.0100	1	01/28/2023 20:14	WG1995998
3&4-Methyl Phenol	U		0.000168	0.0100	1	01/28/2023 20:14	WG1995998
3-Nitroaniline	U		0.0000869	0.0100	1	01/28/2023 20:14	WG1995998
4-Chloroaniline	U		0.000234	0.0100	1	01/28/2023 20:14	WG1995998
4-Nitroaniline	U		0.0000910	0.0100	1	01/28/2023 20:14	WG1995998
4-Nitrophenol	U		0.000143	0.0100	1	01/28/2023 20:14	WG1995998
Pentachlorophenol	U		0.000313	0.0100	1	01/28/2023 20:14	WG1995998
Phenol	U		0.00433	0.0100	1	01/28/2023 20:14	WG1995998
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	01/28/2023 20:14	WG1995998
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	01/28/2023 20:14	WG1995998
(S) 2-Fluorophenol	*28.5*			*10.0-120*		*01/28/2023 20:14*	WG1995998
(S) Phenol-d5	*18.4*			*10.0-120*		*01/28/2023 20:14*	WG1995998
(S) Nitrobenzene-d5	*54.2*			*10.0-127*		*01/28/2023 20:14*	WG1995998
(S) 2-Fluorobiphenyl	*60.7*			*10.0-130*		*01/28/2023 20:14*	WG1995998
(S) 2,4,6-Tribromophenol	*58.8*			*10.0-155*		*01/28/2023 20:14*	WG1995998
(S) p-Terphenyl-d14	*65.4*			*10.0-128*		*01/28/2023 20:14*	WG1995998

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	990		20.0	1	01/27/2023 20:35	WG1996143

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	174		8.45	20.0	1	01/31/2023 11:02	WG1997034

Sample Narrative:

L1579832-02 WG1997034: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	324		1.90	5.00	5	01/27/2023 15:50	WG1995863
Fluoride	0.845		0.0640	0.150	1	01/27/2023 15:34	WG1995863
Nitrate	3.11		0.0480	0.100	1	01/27/2023 15:34	WG1995863
Nitrite	U		0.0420	0.100	1	01/27/2023 15:34	WG1995863
Sulfate	87.2		0.594	5.00	1	01/27/2023 15:34	WG1995863

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	01/30/2023 10:04	WG1995945

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.176	J	0.0200	0.200	1	01/29/2023 19:56	WG1996038

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		0.0185	0.100	1	01/30/2023 01:27	WG1996039
Arsenic,Dissolved	0.00448		0.000180	0.00200	1	01/30/2023 01:27	WG1996039
Barium,Dissolved	0.106		0.000381	0.00200	1	01/30/2023 01:27	WG1996039
Cadmium,Dissolved	U		0.000150	0.00100	1	01/30/2023 01:27	WG1996039
Chromium,Dissolved	0.00131	J	0.00124	0.00200	1	01/30/2023 01:27	WG1996039
Copper,Dissolved	0.00386	J	0.00151	0.00500	1	01/30/2023 01:27	WG1996039
Cobalt,Dissolved	0.000586	J	0.0000596	0.00200	1	01/30/2023 01:27	WG1996039
Iron,Dissolved	0.0485	J	0.0281	0.100	1	01/30/2023 01:27	WG1996039
Lead,Dissolved	0.00147	J	0.000849	0.00200	1	01/30/2023 01:27	WG1996039
Manganese,Dissolved	0.00397	J	0.000704	0.00500	1	01/30/2023 01:27	WG1996039
Molybdenum,Dissolved	0.00221	J	0.000348	0.00500	1	01/30/2023 01:27	WG1996039
Nickel,Dissolved	0.00171	J	0.000816	0.00200	1	01/30/2023 01:27	WG1996039
Selenium,Dissolved	0.00371		0.000300	0.00200	1	01/30/2023 01:27	WG1996039
Silver,Dissolved	U		0.0000700	0.00200	1	01/30/2023 01:27	WG1996039
Uranium,Dissolved	0.00199	J	0.0000700	0.0200	1	01/30/2023 01:27	WG1996039
Zinc,Dissolved	0.0672		0.00302	0.0250	1	01/30/2023 01:27	WG1996039

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	1	01/30/2023 14:38	WG1997027
(S) a,a,a-Trifluorotoluene(FID)	*96.6*			*78.0-120*		*01/30/2023 14:38*	WG1997027

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0113	0.0500	1	01/29/2023 02:19	WG1996320
Benzene	U		0.0000941	0.00100	1	01/29/2023 02:19	WG1996320
Bromodichloromethane	U		0.000136	0.00100	1	01/29/2023 02:19	WG1996320
Bromoform	U		0.000129	0.00100	1	01/29/2023 02:19	WG1996320
Bromomethane	U		0.000605	0.00500	1	01/29/2023 02:19	WG1996320
n-Butylbenzene	U		0.000157	0.00100	1	01/29/2023 02:19	WG1996320
sec-Butylbenzene	U		0.000125	0.00100	1	01/29/2023 02:19	WG1996320
tert-Butylbenzene	U		0.000127	0.00100	1	01/29/2023 02:19	WG1996320
Carbon disulfide	U		0.0000962	0.00100	1	01/29/2023 02:19	WG1996320
Carbon tetrachloride	U		0.000128	0.00100	1	01/29/2023 02:19	WG1996320
Chlorobenzene	U		0.000116	0.00100	1	01/29/2023 02:19	WG1996320
Chlorodibromomethane	U		0.000140	0.00100	1	01/29/2023 02:19	WG1996320
Chloroethane	U		0.000192	0.00500	1	01/29/2023 02:19	WG1996320
Chloroform	0.00127	J	0.000111	0.00500	1	01/29/2023 02:19	WG1996320
Chloromethane	U		0.000960	0.00250	1	01/29/2023 02:19	WG1996320
1,2-Dibromoethane	U		0.000126	0.00100	1	01/29/2023 02:19	WG1996320
1,1-Dichloroethane	U		0.000100	0.00100	1	01/29/2023 02:19	WG1996320
1,2-Dichloroethane	U		0.0000819	0.00100	1	01/29/2023 02:19	WG1996320
1,1-Dichloroethene	U		0.000188	0.00100	1	01/29/2023 02:19	WG1996320
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	01/29/2023 02:19	WG1996320
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	01/29/2023 02:19	WG1996320
1,2-Dichloropropane	U		0.000149	0.00100	1	01/29/2023 02:19	WG1996320
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	01/29/2023 02:19	WG1996320
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	01/29/2023 02:19	WG1996320
Ethylbenzene	U		0.000137	0.00100	1	01/29/2023 02:19	WG1996320
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	01/29/2023 02:19	WG1996320
2-Hexanone	U		0.000787	0.0100	1	01/29/2023 02:19	WG1996320
Isopropylbenzene	U		0.000105	0.00100	1	01/29/2023 02:19	WG1996320
p-Isopropyltoluene	U		0.000120	0.00100	1	01/29/2023 02:19	WG1996320
2-Butanone (MEK)	U		0.00119	0.0100	1	01/29/2023 02:19	WG1996320
Methylene Chloride	U		0.000430	0.00500	1	01/29/2023 02:19	WG1996320
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	01/29/2023 02:19	WG1996320
Methyl tert-butyl ether	U		0.000101	0.00100	1	01/29/2023 02:19	WG1996320
Naphthalene	U		0.00100	0.00500	1	01/29/2023 02:19	WG1996320
n-Propylbenzene	U		0.0000993	0.00100	1	01/29/2023 02:19	WG1996320
Styrene	U		0.000118	0.00100	1	01/29/2023 02:19	WG1996320
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	01/29/2023 02:19	WG1996320
Tetrachloroethene	U		0.000300	0.00100	1	01/29/2023 02:19	WG1996320
Toluene	U		0.000278	0.00100	1	01/29/2023 02:19	WG1996320
1,1,1-Trichloroethane	U		0.000149	0.00100	1	01/29/2023 02:19	WG1996320
1,1,2-Trichloroethane	U		0.000158	0.00100	1	01/29/2023 02:19	WG1996320
Trichloroethene	U		0.000190	0.00100	1	01/29/2023 02:19	WG1996320
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	01/29/2023 02:19	WG1996320
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	01/29/2023 02:19	WG1996320
Vinyl chloride	U		0.000234	0.00100	1	01/29/2023 02:19	WG1996320
Xylenes, Total	U		0.000174	0.00300	1	01/29/2023 02:19	WG1996320
(S) Toluene-d8	*91.6*			*80.0-120*		*01/29/2023 02:19*	WG1996320
(S) 4-Bromofluorobenzene	*86.4*			*77.0-126*		*01/29/2023 02:19*	WG1996320
(S) 1,2-Dichloroethane-d4	*115*			*70.0-130*		*01/29/2023 02:19*	WG1996320

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	0.0717	B J	0.0247	0.100	1	01/31/2023 23:01	WG1996649
(S) o-Terphenyl	*88.4*			*31.0-160*		*01/31/2023 23:01*	WG1996649

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000886	0.00100	1	01/28/2023 20:35	WG1995998
Acenaphthylene	U		0.0000921	0.00100	1	01/28/2023 20:35	WG1995998
Acetophenone	U		0.000208	0.0100	1	01/28/2023 20:35	WG1995998
Anthracene	U		0.0000804	0.00100	1	01/28/2023 20:35	WG1995998
Atrazine	U		0.000255	0.0100	1	01/28/2023 20:35	WG1995998
Benzo(a)anthracene	U		0.000199	0.00100	1	01/28/2023 20:35	WG1995998
Benzaldehyde	U	J4	0.00169	0.0100	1	01/28/2023 20:35	WG1995998
Benzo(b)fluoranthene	U		0.000130	0.00100	1	01/28/2023 20:35	WG1995998
Benzo(k)fluoranthene	U		0.000120	0.00100	1	01/28/2023 20:35	WG1995998
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	01/28/2023 20:35	WG1995998
Benzo(a)pyrene	U		0.0000381	0.000200	1	01/28/2023 20:35	WG1995998
Biphenyl	U		0.000790	0.0100	1	01/28/2023 20:35	WG1995998
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	01/28/2023 20:35	WG1995998
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	01/28/2023 20:35	WG1995998
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	01/28/2023 20:35	WG1995998
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	01/28/2023 20:35	WG1995998
2-Chloronaphthalene	U		0.0000648	0.00100	1	01/28/2023 20:35	WG1995998
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	01/28/2023 20:35	WG1995998
Caprolactam	U		0.000309	0.0100	1	01/28/2023 20:35	WG1995998
Carbazole	U		0.000111	0.0100	1	01/28/2023 20:35	WG1995998
Chrysene	U		0.000130	0.00100	1	01/28/2023 20:35	WG1995998
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	01/28/2023 20:35	WG1995998
Dibenzofuran	U		0.0000970	0.0100	1	01/28/2023 20:35	WG1995998
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	01/28/2023 20:35	WG1995998
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	01/28/2023 20:35	WG1995998
2,6-Dinitrotoluene	U		0.000250	0.0100	1	01/28/2023 20:35	WG1995998
Fluoranthene	U		0.000102	0.00100	1	01/28/2023 20:35	WG1995998
Fluorene	U		0.0000844	0.00100	1	01/28/2023 20:35	WG1995998
Hexachlorobenzene	U		0.0000755	0.00100	1	01/28/2023 20:35	WG1995998
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	01/28/2023 20:35	WG1995998
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	01/28/2023 20:35	WG1995998
Hexachloroethane	U		0.000127	0.0100	1	01/28/2023 20:35	WG1995998
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	01/28/2023 20:35	WG1995998
Isophorone	U		0.000143	0.0100	1	01/28/2023 20:35	WG1995998
1-Methylnaphthalene	U		0.0000790	0.00100	1	01/28/2023 20:35	WG1995998
2-Methylnaphthalene	U		0.000117	0.00100	1	01/28/2023 20:35	WG1995998
Naphthalene	U		0.000159	0.00100	1	01/28/2023 20:35	WG1995998
Nitrobenzene	U		0.000297	0.0100	1	01/28/2023 20:35	WG1995998
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	01/28/2023 20:35	WG1995998
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	01/28/2023 20:35	WG1995998
Phenanthrene	U		0.000112	0.00100	1	01/28/2023 20:35	WG1995998
Benzylbutyl phthalate	U		0.000765	0.00300	1	01/28/2023 20:35	WG1995998
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	01/28/2023 20:35	WG1995998
Di-n-butyl phthalate	U		0.000453	0.00300	1	01/28/2023 20:35	WG1995998
Diethyl phthalate	U		0.000287	0.00300	1	01/28/2023 20:35	WG1995998
Dimethyl phthalate	U		0.000260	0.00300	1	01/28/2023 20:35	WG1995998
Di-n-octyl phthalate	U		0.000932	0.00300	1	01/28/2023 20:35	WG1995998
Pyrene	U		0.000107	0.00100	1	01/28/2023 20:35	WG1995998
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	01/28/2023 20:35	WG1995998
4-Chloro-3-methylphenol	U		0.000131	0.0100	1	01/28/2023 20:35	WG1995998

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
2-Chlorophenol	U		0.000133	0.0100	1	01/28/2023 20:35	WG1995998
2,4-Dichlorophenol	U		0.000102	0.0100	1	01/28/2023 20:35	WG1995998
2,4-Dimethylphenol	U		0.0000636	0.0100	1	01/28/2023 20:35	WG1995998
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	01/28/2023 20:35	WG1995998
2,4-Dinitrophenol	U		0.00593	0.0100	1	01/28/2023 20:35	WG1995998
2-Nitrophenol	U		0.000117	0.0100	1	01/28/2023 20:35	WG1995998
2-Nitroaniline	U		0.000102	0.0100	1	01/28/2023 20:35	WG1995998
2-Methylphenol	U		0.0000929	0.0100	1	01/28/2023 20:35	WG1995998
3&4-Methyl Phenol	U		0.000168	0.0100	1	01/28/2023 20:35	WG1995998
3-Nitroaniline	U		0.0000869	0.0100	1	01/28/2023 20:35	WG1995998
4-Chloroaniline	U		0.000234	0.0100	1	01/28/2023 20:35	WG1995998
4-Nitroaniline	U		0.0000910	0.0100	1	01/28/2023 20:35	WG1995998
4-Nitrophenol	U		0.000143	0.0100	1	01/28/2023 20:35	WG1995998
Pentachlorophenol	U		0.000313	0.0100	1	01/28/2023 20:35	WG1995998
Phenol	U		0.00433	0.0100	1	01/28/2023 20:35	WG1995998
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	01/28/2023 20:35	WG1995998
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	01/28/2023 20:35	WG1995998
(S) 2-Fluorophenol	*26.0*			*10.0-120*		*01/28/2023 20:35*	WG1995998
(S) Phenol-d5	*17.4*			*10.0-120*		*01/28/2023 20:35*	WG1995998
(S) Nitrobenzene-d5	*55.6*			*10.0-127*		*01/28/2023 20:35*	WG1995998
(S) 2-Fluorobiphenyl	*56.2*			*10.0-130*		*01/28/2023 20:35*	WG1995998
(S) 2,4,6-Tribromophenol	*55.5*			*10.0-155*		*01/28/2023 20:35*	WG1995998
(S) p-Terphenyl-d14	*58.9*			*10.0-128*		*01/28/2023 20:35*	WG1995998

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	502		10.0	1	01/27/2023 20:35	WG1996143

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	171		8.45	20.0	1	01/31/2023 11:07	WG1997034

Sample Narrative:

L1579832-03 WG1997034: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	102		0.379	1.00	1	01/27/2023 16:06	WG1995863
Fluoride	1.09		0.0640	0.150	1	01/27/2023 16:06	WG1995863
Nitrate	2.95		0.0480	0.100	1	01/27/2023 16:06	WG1995863
Nitrite	U		0.0420	0.100	1	01/27/2023 16:06	WG1995863
Sulfate	81.8		0.594	5.00	1	01/27/2023 16:06	WG1995863

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	01/31/2023 09:06	WG1996629

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.140	J	0.0200	0.200	1	01/29/2023 19:22	WG1996038

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		0.0185	0.100	1	01/30/2023 01:30	WG1996039
Arsenic,Dissolved	0.00483		0.000180	0.00200	1	01/30/2023 01:30	WG1996039
Barium,Dissolved	0.0824		0.000381	0.00200	1	01/30/2023 01:30	WG1996039
Cadmium,Dissolved	U		0.000150	0.00100	1	01/30/2023 01:30	WG1996039
Chromium,Dissolved	0.00302		0.00124	0.00200	1	01/30/2023 01:30	WG1996039
Copper,Dissolved	0.00188	J	0.00151	0.00500	1	01/30/2023 01:30	WG1996039
Cobalt,Dissolved	0.0000771	J	0.0000596	0.00200	1	01/30/2023 01:30	WG1996039
Iron,Dissolved	0.115		0.0281	0.100	1	01/30/2023 01:30	WG1996039
Lead,Dissolved	U		0.000849	0.00200	1	01/30/2023 01:30	WG1996039
Manganese,Dissolved	0.00368	J	0.000704	0.00500	1	01/30/2023 01:30	WG1996039
Molybdenum,Dissolved	0.00259	J	0.000348	0.00500	1	01/30/2023 01:30	WG1996039
Nickel,Dissolved	0.00195	J	0.000816	0.00200	1	01/30/2023 01:30	WG1996039
Selenium,Dissolved	0.00425		0.000300	0.00200	1	01/30/2023 01:30	WG1996039
Silver,Dissolved	U		0.0000700	0.00200	1	01/30/2023 01:30	WG1996039
Uranium,Dissolved	0.00177	J	0.0000700	0.0200	1	01/30/2023 01:30	WG1996039
Zinc,Dissolved	0.0127	J	0.00302	0.0250	1	01/30/2023 01:30	WG1996039

Received by OCD: 4/15/2024 1:46:20 PM

WW-EAST
Collected date/time: 01/26/23 12:05
L1579832

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0315	B J	0.0314	0.100	1	01/30/2023 15:00	WG1997027
(S) a,a,a-Trifluorotoluene(FID)	*97.0*			*78.0-120*		*01/30/2023 15:00*	WG1997027

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0113	0.0500	1	01/29/2023 02:39	WG1996320
Benzene	0.0000943	J	0.0000941	0.00100	1	01/29/2023 02:39	WG1996320
Bromodichloromethane	U		0.000136	0.00100	1	01/29/2023 02:39	WG1996320
Bromoform	U		0.000129	0.00100	1	01/29/2023 02:39	WG1996320
Bromomethane	U		0.000605	0.00500	1	01/29/2023 02:39	WG1996320
n-Butylbenzene	U		0.000157	0.00100	1	01/29/2023 02:39	WG1996320
sec-Butylbenzene	U		0.000125	0.00100	1	01/29/2023 02:39	WG1996320
tert-Butylbenzene	U		0.000127	0.00100	1	01/29/2023 02:39	WG1996320
Carbon disulfide	U		0.0000962	0.00100	1	01/29/2023 02:39	WG1996320
Carbon tetrachloride	U		0.000128	0.00100	1	01/29/2023 02:39	WG1996320
Chlorobenzene	U		0.000116	0.00100	1	01/29/2023 02:39	WG1996320
Chlorodibromomethane	U		0.000140	0.00100	1	01/29/2023 02:39	WG1996320
Chloroethane	U		0.000192	0.00500	1	01/29/2023 02:39	WG1996320
Chloroform	U		0.000111	0.00500	1	01/29/2023 02:39	WG1996320
Chloromethane	U		0.000960	0.00250	1	01/29/2023 02:39	WG1996320
1,2-Dibromoethane	U		0.000126	0.00100	1	01/29/2023 02:39	WG1996320
1,1-Dichloroethane	U		0.000100	0.00100	1	01/29/2023 02:39	WG1996320
1,2-Dichloroethane	U		0.0000819	0.00100	1	01/29/2023 02:39	WG1996320
1,1-Dichloroethene	U		0.000188	0.00100	1	01/29/2023 02:39	WG1996320
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	01/29/2023 02:39	WG1996320
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	01/29/2023 02:39	WG1996320
1,2-Dichloropropane	U		0.000149	0.00100	1	01/29/2023 02:39	WG1996320
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	01/29/2023 02:39	WG1996320
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	01/29/2023 02:39	WG1996320
Ethylbenzene	U		0.000137	0.00100	1	01/29/2023 02:39	WG1996320
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	01/29/2023 02:39	WG1996320
2-Hexanone	U		0.000787	0.0100	1	01/29/2023 02:39	WG1996320
Isopropylbenzene	U		0.000105	0.00100	1	01/29/2023 02:39	WG1996320
p-Isopropyltoluene	U		0.000120	0.00100	1	01/29/2023 02:39	WG1996320
2-Butanone (MEK)	U		0.00119	0.0100	1	01/29/2023 02:39	WG1996320
Methylene Chloride	U		0.000430	0.00500	1	01/29/2023 02:39	WG1996320
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	01/29/2023 02:39	WG1996320
Methyl tert-butyl ether	U		0.000101	0.00100	1	01/29/2023 02:39	WG1996320
Naphthalene	U		0.00100	0.00500	1	01/29/2023 02:39	WG1996320
n-Propylbenzene	U		0.0000993	0.00100	1	01/29/2023 02:39	WG1996320
Styrene	U		0.000118	0.00100	1	01/29/2023 02:39	WG1996320
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	01/29/2023 02:39	WG1996320
Tetrachloroethene	U		0.000300	0.00100	1	01/29/2023 02:39	WG1996320
Toluene	U		0.000278	0.00100	1	01/29/2023 02:39	WG1996320
1,1,1-Trichloroethane	U		0.000149	0.00100	1	01/29/2023 02:39	WG1996320
1,1,2-Trichloroethane	U		0.000158	0.00100	1	01/29/2023 02:39	WG1996320
Trichloroethene	U		0.000190	0.00100	1	01/29/2023 02:39	WG1996320
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	01/29/2023 02:39	WG1996320
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	01/29/2023 02:39	WG1996320
Vinyl chloride	U		0.000234	0.00100	1	01/29/2023 02:39	WG1996320
Xylenes, Total	U		0.000174	0.00300	1	01/29/2023 02:39	WG1996320
(S) Toluene-d8	*94.4*			*80.0-120*		*01/29/2023 02:39*	WG1996320
(S) 4-Bromofluorobenzene	*87.4*			*77.0-126*		*01/29/2023 02:39*	WG1996320
(S) 1,2-Dichloroethane-d4	*114*			*70.0-130*		*01/29/2023 02:39*	WG1996320

Released to Imaging: 4/26/2024 10:49:21 AM

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	0.0510	B J	0.0247	0.100	1	01/31/2023 23:21	WG1996649
(S) o-Terphenyl	*80.0*			*31.0-160*		*01/31/2023 23:21*	WG1996649

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000886	0.00100	1	01/28/2023 20:56	WG1995998
Acenaphthylene	U		0.0000921	0.00100	1	01/28/2023 20:56	WG1995998
Acetophenone	U		0.000208	0.0100	1	01/28/2023 20:56	WG1995998
Anthracene	U		0.0000804	0.00100	1	01/28/2023 20:56	WG1995998
Atrazine	U		0.000255	0.0100	1	01/28/2023 20:56	WG1995998
Benzo(a)anthracene	U		0.000199	0.00100	1	01/28/2023 20:56	WG1995998
Benzaldehyde	U	J4	0.00169	0.0100	1	01/28/2023 20:56	WG1995998
Benzo(b)fluoranthene	U		0.000130	0.00100	1	01/28/2023 20:56	WG1995998
Benzo(k)fluoranthene	U		0.000120	0.00100	1	01/28/2023 20:56	WG1995998
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	01/28/2023 20:56	WG1995998
Benzo(a)pyrene	U		0.0000381	0.000200	1	01/28/2023 20:56	WG1995998
Biphenyl	U		0.000790	0.0100	1	01/28/2023 20:56	WG1995998
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	01/28/2023 20:56	WG1995998
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	01/28/2023 20:56	WG1995998
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	01/28/2023 20:56	WG1995998
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	01/28/2023 20:56	WG1995998
2-Chloronaphthalene	U		0.0000648	0.00100	1	01/28/2023 20:56	WG1995998
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	01/28/2023 20:56	WG1995998
Caprolactam	U		0.000309	0.0100	1	01/28/2023 20:56	WG1995998
Carbazole	U		0.000111	0.0100	1	01/28/2023 20:56	WG1995998
Chrysene	U		0.000130	0.00100	1	01/28/2023 20:56	WG1995998
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	01/28/2023 20:56	WG1995998
Dibenzofuran	U		0.0000970	0.0100	1	01/28/2023 20:56	WG1995998
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	01/28/2023 20:56	WG1995998
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	01/28/2023 20:56	WG1995998
2,6-Dinitrotoluene	U		0.000250	0.0100	1	01/28/2023 20:56	WG1995998
Fluoranthene	U		0.000102	0.00100	1	01/28/2023 20:56	WG1995998
Fluorene	U		0.0000844	0.00100	1	01/28/2023 20:56	WG1995998
Hexachlorobenzene	U		0.0000755	0.00100	1	01/28/2023 20:56	WG1995998
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	01/28/2023 20:56	WG1995998
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	01/28/2023 20:56	WG1995998
Hexachloroethane	U		0.000127	0.0100	1	01/28/2023 20:56	WG1995998
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	01/28/2023 20:56	WG1995998
Isophorone	U		0.000143	0.0100	1	01/28/2023 20:56	WG1995998
1-Methylnaphthalene	U		0.0000790	0.00100	1	01/28/2023 20:56	WG1995998
2-Methylnaphthalene	U		0.000117	0.00100	1	01/28/2023 20:56	WG1995998
Naphthalene	U		0.000159	0.00100	1	01/28/2023 20:56	WG1995998
Nitrobenzene	U		0.000297	0.0100	1	01/28/2023 20:56	WG1995998
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	01/28/2023 20:56	WG1995998
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	01/28/2023 20:56	WG1995998
Phenanthrene	U		0.000112	0.00100	1	01/28/2023 20:56	WG1995998
Benzylbutyl phthalate	U		0.000765	0.00300	1	01/28/2023 20:56	WG1995998
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	01/28/2023 20:56	WG1995998
Di-n-butyl phthalate	U		0.000453	0.00300	1	01/28/2023 20:56	WG1995998
Diethyl phthalate	U		0.000287	0.00300	1	01/28/2023 20:56	WG1995998
Dimethyl phthalate	U		0.000260	0.00300	1	01/28/2023 20:56	WG1995998
Di-n-octyl phthalate	U		0.000932	0.00300	1	01/28/2023 20:56	WG1995998
Pyrene	U		0.000107	0.00100	1	01/28/2023 20:56	WG1995998
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	01/28/2023 20:56	WG1995998
4-Chloro-3-methylphenol	U		0.000131	0.0100	1	01/28/2023 20:56	WG1995998

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
2-Chlorophenol	U		0.000133	0.0100	1	01/28/2023 20:56	WG1995998
2,4-Dichlorophenol	U		0.000102	0.0100	1	01/28/2023 20:56	WG1995998
2,4-Dimethylphenol	U		0.0000636	0.0100	1	01/28/2023 20:56	WG1995998
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	01/28/2023 20:56	WG1995998
2,4-Dinitrophenol	U		0.00593	0.0100	1	01/28/2023 20:56	WG1995998
2-Nitrophenol	U		0.000117	0.0100	1	01/28/2023 20:56	WG1995998
2-Nitroaniline	U		0.000102	0.0100	1	01/28/2023 20:56	WG1995998
2-Methylphenol	U		0.0000929	0.0100	1	01/28/2023 20:56	WG1995998
3&4-Methyl Phenol	U		0.000168	0.0100	1	01/28/2023 20:56	WG1995998
3-Nitroaniline	U		0.0000869	0.0100	1	01/28/2023 20:56	WG1995998
4-Chloroaniline	U		0.000234	0.0100	1	01/28/2023 20:56	WG1995998
4-Nitroaniline	U		0.0000910	0.0100	1	01/28/2023 20:56	WG1995998
4-Nitrophenol	U		0.000143	0.0100	1	01/28/2023 20:56	WG1995998
Pentachlorophenol	U		0.000313	0.0100	1	01/28/2023 20:56	WG1995998
Phenol	U		0.00433	0.0100	1	01/28/2023 20:56	WG1995998
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	01/28/2023 20:56	WG1995998
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	01/28/2023 20:56	WG1995998
(S) 2-Fluorophenol	*20.6*			*10.0-120*		*01/28/2023 20:56*	WG1995998
(S) Phenol-d5	*16.1*			*10.0-120*		*01/28/2023 20:56*	WG1995998
(S) Nitrobenzene-d5	*58.9*			*10.0-127*		*01/28/2023 20:56*	WG1995998
(S) 2-Fluorobiphenyl	*60.2*			*10.0-130*		*01/28/2023 20:56*	WG1995998
(S) 2,4,6-Tribromophenol	*36.1*			*10.0-155*		*01/28/2023 20:56*	WG1995998
(S) p-Terphenyl-d14	*51.6*			*10.0-128*		*01/28/2023 20:56*	WG1995998

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1000		20.0	1	01/27/2023 20:35	WG1996143

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Alkalinity	175		8.45	20.0	1	01/31/2023 11:11	WG1997034

Sample Narrative:

L1579832-04 WG1997034: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	319		1.90	5.00	5	01/27/2023 16:38	WG1995863
Fluoride	0.829		0.0640	0.150	1	01/27/2023 16:22	WG1995863
Nitrate	3.09		0.0480	0.100	1	01/27/2023 16:22	WG1995863
Nitrite	U		0.0420	0.100	1	01/27/2023 16:22	WG1995863
Sulfate	87.3		0.594	5.00	1	01/27/2023 16:22	WG1995863

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.000100	0.000200	1	01/31/2023 09:08	WG1996629

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron,Dissolved	0.184	J	0.0200	0.200	1	01/29/2023 19:59	WG1996038

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.0185	0.100	1	01/30/2023 01:34	WG1996039
Arsenic,Dissolved	0.00497		0.000180	0.00200	1	01/30/2023 01:34	WG1996039
Barium,Dissolved	0.105		0.000381	0.00200	1	01/30/2023 01:34	WG1996039
Cadmium,Dissolved	U		0.000150	0.00100	1	01/30/2023 01:34	WG1996039
Chromium,Dissolved	0.00136	J	0.00124	0.00200	1	01/30/2023 01:34	WG1996039
Copper,Dissolved	0.00388	J	0.00151	0.00500	1	01/30/2023 01:34	WG1996039
Cobalt,Dissolved	U		0.0000596	0.00200	1	01/30/2023 01:34	WG1996039
Iron,Dissolved	0.0541	J	0.0281	0.100	1	01/30/2023 01:34	WG1996039
Lead,Dissolved	0.00225		0.000849	0.00200	1	01/30/2023 01:34	WG1996039
Manganese,Dissolved	0.00137	J	0.000704	0.00500	1	01/30/2023 01:34	WG1996039
Molybdenum,Dissolved	0.00219	J	0.000348	0.00500	1	01/30/2023 01:34	WG1996039
Nickel,Dissolved	0.000858	J	0.000816	0.00200	1	01/30/2023 01:34	WG1996039
Selenium,Dissolved	0.00393		0.000300	0.00200	1	01/30/2023 01:34	WG1996039
Silver,Dissolved	U		0.0000700	0.00200	1	01/30/2023 01:34	WG1996039
Uranium,Dissolved	0.00193	J	0.0000700	0.0200	1	01/30/2023 01:34	WG1996039
Zinc,Dissolved	0.0241	J	0.00302	0.0250	1	01/30/2023 01:34	WG1996039

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0323	B J	0.0314	0.100	1	01/30/2023 15:22	WG1997027
(S) a,a,a-Trifluorotoluene(FID)	*97.9*			*78.0-120*		*01/30/2023 15:22*	WG1997027

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0113	0.0500	1	01/29/2023 03:00	WG1996320
Benzene	U		0.0000941	0.00100	1	01/29/2023 03:00	WG1996320
Bromodichloromethane	U		0.000136	0.00100	1	01/29/2023 03:00	WG1996320
Bromoform	U		0.000129	0.00100	1	01/29/2023 03:00	WG1996320
Bromomethane	U		0.000605	0.00500	1	01/29/2023 03:00	WG1996320
n-Butylbenzene	U		0.000157	0.00100	1	01/29/2023 03:00	WG1996320
sec-Butylbenzene	U		0.000125	0.00100	1	01/29/2023 03:00	WG1996320
tert-Butylbenzene	U		0.000127	0.00100	1	01/29/2023 03:00	WG1996320
Carbon disulfide	U		0.0000962	0.00100	1	01/29/2023 03:00	WG1996320
Carbon tetrachloride	U		0.000128	0.00100	1	01/29/2023 03:00	WG1996320
Chlorobenzene	U		0.000116	0.00100	1	01/29/2023 03:00	WG1996320
Chlorodibromomethane	U		0.000140	0.00100	1	01/29/2023 03:00	WG1996320
Chloroethane	U		0.000192	0.00500	1	01/29/2023 03:00	WG1996320
Chloroform	0.00134	J	0.000111	0.00500	1	01/29/2023 03:00	WG1996320
Chloromethane	U		0.000960	0.00250	1	01/29/2023 03:00	WG1996320
1,2-Dibromoethane	U		0.000126	0.00100	1	01/29/2023 03:00	WG1996320
1,1-Dichloroethane	U		0.000100	0.00100	1	01/29/2023 03:00	WG1996320
1,2-Dichloroethane	U		0.0000819	0.00100	1	01/29/2023 03:00	WG1996320
1,1-Dichloroethene	U		0.000188	0.00100	1	01/29/2023 03:00	WG1996320
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	01/29/2023 03:00	WG1996320
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	01/29/2023 03:00	WG1996320
1,2-Dichloropropane	U		0.000149	0.00100	1	01/29/2023 03:00	WG1996320
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	01/29/2023 03:00	WG1996320
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	01/29/2023 03:00	WG1996320
Ethylbenzene	U		0.000137	0.00100	1	01/29/2023 03:00	WG1996320
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	01/29/2023 03:00	WG1996320
2-Hexanone	U		0.000787	0.0100	1	01/29/2023 03:00	WG1996320
Isopropylbenzene	U		0.000105	0.00100	1	01/29/2023 03:00	WG1996320
p-Isopropyltoluene	U		0.000120	0.00100	1	01/29/2023 03:00	WG1996320
2-Butanone (MEK)	U		0.00119	0.0100	1	01/29/2023 03:00	WG1996320
Methylene Chloride	U		0.000430	0.00500	1	01/29/2023 03:00	WG1996320
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	01/29/2023 03:00	WG1996320
Methyl tert-butyl ether	U		0.000101	0.00100	1	01/29/2023 03:00	WG1996320
Naphthalene	U		0.00100	0.00500	1	01/29/2023 03:00	WG1996320
n-Propylbenzene	U		0.0000993	0.00100	1	01/29/2023 03:00	WG1996320
Styrene	U		0.000118	0.00100	1	01/29/2023 03:00	WG1996320
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	01/29/2023 03:00	WG1996320
Tetrachloroethene	U		0.000300	0.00100	1	01/29/2023 03:00	WG1996320
Toluene	U		0.000278	0.00100	1	01/29/2023 03:00	WG1996320
1,1,1-Trichloroethane	U		0.000149	0.00100	1	01/29/2023 03:00	WG1996320
1,1,2-Trichloroethane	U		0.000158	0.00100	1	01/29/2023 03:00	WG1996320
Trichloroethene	U		0.000190	0.00100	1	01/29/2023 03:00	WG1996320
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	01/29/2023 03:00	WG1996320
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	01/29/2023 03:00	WG1996320
Vinyl chloride	U		0.000234	0.00100	1	01/29/2023 03:00	WG1996320
Xylenes, Total	U		0.000174	0.00300	1	01/29/2023 03:00	WG1996320
(S) Toluene-d8	*103*			*80.0-120*		*01/29/2023 03:00*	WG1996320
(S) 4-Bromofluorobenzene	*86.3*			*77.0-126*		*01/29/2023 03:00*	WG1996320
(S) 1,2-Dichloroethane-d4	*113*			*70.0-130*		*01/29/2023 03:00*	WG1996320

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	0.0606	B J	0.0247	0.100	1	01/31/2023 23:41	WG1996649
(S) o-Terphenyl	*85.3*			*31.0-160*		*01/31/2023 23:41*	WG1996649

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000886	0.00100	1	01/28/2023 21:17	WG1995998
Acenaphthylene	U		0.0000921	0.00100	1	01/28/2023 21:17	WG1995998
Acetophenone	U		0.000208	0.0100	1	01/28/2023 21:17	WG1995998
Anthracene	U		0.0000804	0.00100	1	01/28/2023 21:17	WG1995998
Atrazine	U		0.000255	0.0100	1	01/28/2023 21:17	WG1995998
Benzo(a)anthracene	U		0.000199	0.00100	1	01/28/2023 21:17	WG1995998
Benzaldehyde	U	J4	0.00169	0.0100	1	01/28/2023 21:17	WG1995998
Benzo(b)fluoranthene	U		0.000130	0.00100	1	01/28/2023 21:17	WG1995998
Benzo(k)fluoranthene	U		0.000120	0.00100	1	01/28/2023 21:17	WG1995998
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	01/28/2023 21:17	WG1995998
Benzo(a)pyrene	U		0.0000381	0.000200	1	01/28/2023 21:17	WG1995998
Biphenyl	U		0.000790	0.0100	1	01/28/2023 21:17	WG1995998
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	01/28/2023 21:17	WG1995998
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	01/28/2023 21:17	WG1995998
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	01/28/2023 21:17	WG1995998
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	01/28/2023 21:17	WG1995998
2-Chloronaphthalene	U		0.0000648	0.00100	1	01/28/2023 21:17	WG1995998
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	01/28/2023 21:17	WG1995998
Caprolactam	U		0.000309	0.0100	1	01/28/2023 21:17	WG1995998
Carbazole	U		0.000111	0.0100	1	01/28/2023 21:17	WG1995998
Chrysene	U		0.000130	0.00100	1	01/28/2023 21:17	WG1995998
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	01/28/2023 21:17	WG1995998
Dibenzofuran	U		0.0000970	0.0100	1	01/28/2023 21:17	WG1995998
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	01/28/2023 21:17	WG1995998
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	01/28/2023 21:17	WG1995998
2,6-Dinitrotoluene	U		0.000250	0.0100	1	01/28/2023 21:17	WG1995998
Fluoranthene	U		0.000102	0.00100	1	01/28/2023 21:17	WG1995998
Fluorene	U		0.0000844	0.00100	1	01/28/2023 21:17	WG1995998
Hexachlorobenzene	U		0.0000755	0.00100	1	01/28/2023 21:17	WG1995998
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	01/28/2023 21:17	WG1995998
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	01/28/2023 21:17	WG1995998
Hexachloroethane	U		0.000127	0.0100	1	01/28/2023 21:17	WG1995998
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	01/28/2023 21:17	WG1995998
Isophorone	U		0.000143	0.0100	1	01/28/2023 21:17	WG1995998
1-Methylnaphthalene	U		0.0000790	0.00100	1	01/28/2023 21:17	WG1995998
2-Methylnaphthalene	U		0.000117	0.00100	1	01/28/2023 21:17	WG1995998
Naphthalene	U		0.000159	0.00100	1	01/28/2023 21:17	WG1995998
Nitrobenzene	U		0.000297	0.0100	1	01/28/2023 21:17	WG1995998
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	01/28/2023 21:17	WG1995998
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	01/28/2023 21:17	WG1995998
Phenanthrene	U		0.000112	0.00100	1	01/28/2023 21:17	WG1995998
Benzylbutyl phthalate	U		0.000765	0.00300	1	01/28/2023 21:17	WG1995998
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	01/28/2023 21:17	WG1995998
Di-n-butyl phthalate	U		0.000453	0.00300	1	01/28/2023 21:17	WG1995998
Diethyl phthalate	U		0.000287	0.00300	1	01/28/2023 21:17	WG1995998
Dimethyl phthalate	U		0.000260	0.00300	1	01/28/2023 21:17	WG1995998
Di-n-octyl phthalate	U		0.000932	0.00300	1	01/28/2023 21:17	WG1995998
Pyrene	U		0.000107	0.00100	1	01/28/2023 21:17	WG1995998
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	01/28/2023 21:17	WG1995998
4-Chloro-3-methylphenol	U		0.000131	0.0100	1	01/28/2023 21:17	WG1995998

DUP-01
Collected date/time: 01/26/23 11:00
L1579832

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
2-Chlorophenol	U		0.000133	0.0100	1	01/28/2023 21:17	WG1995998
2,4-Dichlorophenol	U		0.000102	0.0100	1	01/28/2023 21:17	WG1995998
2,4-Dimethylphenol	U		0.0000636	0.0100	1	01/28/2023 21:17	WG1995998
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	01/28/2023 21:17	WG1995998
2,4-Dinitrophenol	U		0.00593	0.0100	1	01/28/2023 21:17	WG1995998
2-Nitrophenol	U		0.000117	0.0100	1	01/28/2023 21:17	WG1995998
2-Nitroaniline	U		0.000102	0.0100	1	01/28/2023 21:17	WG1995998
2-Methylphenol	U		0.0000929	0.0100	1	01/28/2023 21:17	WG1995998
3&4-Methyl Phenol	U		0.000168	0.0100	1	01/28/2023 21:17	WG1995998
3-Nitroaniline	U		0.0000869	0.0100	1	01/28/2023 21:17	WG1995998
4-Chloroaniline	U		0.000234	0.0100	1	01/28/2023 21:17	WG1995998
4-Nitroaniline	U		0.0000910	0.0100	1	01/28/2023 21:17	WG1995998
4-Nitrophenol	U		0.000143	0.0100	1	01/28/2023 21:17	WG1995998
Pentachlorophenol	U		0.000313	0.0100	1	01/28/2023 21:17	WG1995998
Phenol	U		0.00433	0.0100	1	01/28/2023 21:17	WG1995998
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	01/28/2023 21:17	WG1995998
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	01/28/2023 21:17	WG1995998
(S) 2-Fluorophenol	*20.6*			*10.0-120*		*01/28/2023 21:17*	WG1995998
(S) Phenol-d5	*15.1*			*10.0-120*		*01/28/2023 21:17*	WG1995998
(S) Nitrobenzene-d5	*57.1*			*10.0-127*		*01/28/2023 21:17*	WG1995998
(S) 2-Fluorobiphenyl	*61.2*			*10.0-130*		*01/28/2023 21:17*	WG1995998
(S) 2,4,6-Tribromophenol	*52.3*			*10.0-155*		*01/28/2023 21:17*	WG1995998
(S) p-Terphenyl-d14	*66.9*			*10.0-128*		*01/28/2023 21:17*	WG1995998

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0113	0.0500	1	01/28/2023 23:15	WG1996320
Benzene	U		0.0000941	0.00100	1	01/28/2023 23:15	WG1996320
Bromodichloromethane	U		0.000136	0.00100	1	01/28/2023 23:15	WG1996320
Bromoform	U		0.000129	0.00100	1	01/28/2023 23:15	WG1996320
Bromomethane	U		0.000605	0.00500	1	01/28/2023 23:15	WG1996320
n-Butylbenzene	U		0.000157	0.00100	1	01/28/2023 23:15	WG1996320
sec-Butylbenzene	U		0.000125	0.00100	1	01/28/2023 23:15	WG1996320
tert-Butylbenzene	U		0.000127	0.00100	1	01/28/2023 23:15	WG1996320
Carbon disulfide	U		0.0000962	0.00100	1	01/28/2023 23:15	WG1996320
Carbon tetrachloride	U		0.000128	0.00100	1	01/28/2023 23:15	WG1996320
Chlorobenzene	U		0.000116	0.00100	1	01/28/2023 23:15	WG1996320
Chlorodibromomethane	U		0.000140	0.00100	1	01/28/2023 23:15	WG1996320
Chloroethane	U		0.000192	0.00500	1	01/28/2023 23:15	WG1996320
Chloroform	U		0.000111	0.00500	1	01/28/2023 23:15	WG1996320
Chloromethane	U		0.000960	0.00250	1	01/28/2023 23:15	WG1996320
1,2-Dibromoethane	U		0.000126	0.00100	1	01/28/2023 23:15	WG1996320
1,1-Dichloroethane	U		0.000100	0.00100	1	01/28/2023 23:15	WG1996320
1,2-Dichloroethane	U		0.0000819	0.00100	1	01/28/2023 23:15	WG1996320
1,1-Dichloroethene	U		0.000188	0.00100	1	01/28/2023 23:15	WG1996320
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	01/28/2023 23:15	WG1996320
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	01/28/2023 23:15	WG1996320
1,2-Dichloropropane	U		0.000149	0.00100	1	01/28/2023 23:15	WG1996320
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	01/28/2023 23:15	WG1996320
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	01/28/2023 23:15	WG1996320
Ethylbenzene	U		0.000137	0.00100	1	01/28/2023 23:15	WG1996320
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	01/28/2023 23:15	WG1996320
2-Hexanone	U		0.000787	0.0100	1	01/28/2023 23:15	WG1996320
Isopropylbenzene	U		0.000105	0.00100	1	01/28/2023 23:15	WG1996320
p-Isopropyltoluene	U		0.000120	0.00100	1	01/28/2023 23:15	WG1996320
2-Butanone (MEK)	U		0.00119	0.0100	1	01/28/2023 23:15	WG1996320
Methylene Chloride	U		0.000430	0.00500	1	01/28/2023 23:15	WG1996320
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	01/28/2023 23:15	WG1996320
Methyl tert-butyl ether	U		0.000101	0.00100	1	01/28/2023 23:15	WG1996320
Naphthalene	U		0.00100	0.00500	1	01/28/2023 23:15	WG1996320
n-Propylbenzene	U		0.0000993	0.00100	1	01/28/2023 23:15	WG1996320
Styrene	U		0.000118	0.00100	1	01/28/2023 23:15	WG1996320
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	01/28/2023 23:15	WG1996320
Tetrachloroethene	U		0.000300	0.00100	1	01/28/2023 23:15	WG1996320
Toluene	U		0.000278	0.00100	1	01/28/2023 23:15	WG1996320
1,1,1-Trichloroethane	U		0.000149	0.00100	1	01/28/2023 23:15	WG1996320
1,1,2-Trichloroethane	U		0.000158	0.00100	1	01/28/2023 23:15	WG1996320
Trichloroethene	U		0.000190	0.00100	1	01/28/2023 23:15	WG1996320
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	01/28/2023 23:15	WG1996320
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	01/28/2023 23:15	WG1996320
Vinyl chloride	U		0.000234	0.00100	1	01/28/2023 23:15	WG1996320
Xylenes, Total	U		0.000174	0.00300	1	01/28/2023 23:15	WG1996320
(S) Toluene-d8	*92.8*			*80.0-120*		*01/28/2023 23:15*	WG1996320
(S) 4-Bromofluorobenzene	*87.6*			*77.0-126*		*01/28/2023 23:15*	WG1996320
(S) 1,2-Dichloroethane-d4	*111*			*70.0-130*		*01/28/2023 23:15*	WG1996320

Method Blank (MB)

(MB) R3885983-1 01/27/23 20:35

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

L1579777-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1579777-01 01/27/23 20:35 • (DUP) R3885983-3 01/27/23 20:35

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	890	900	1	1.12		5

L1579858-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1579858-01 01/27/23 20:35 • (DUP) R3885983-4 01/27/23 20:35

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	303	309	1	1.96		5

Laboratory Control Sample (LCS)

(LCS) R3885983-2 01/27/23 20:35

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8840	100	77.3-123	

Method Blank (MB)

(MB) R3886098-2 01/31/23 10:24

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	U		8.45	20.0

Sample Narrative:
BLANK: Endpoint pH 4.5

L1579789-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1579789-06 01/31/23 10:47 • (DUP) R3886098-4 01/31/23 10:52

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	167	165	1	1.50		20

Sample Narrative:
OS: Endpoint pH 4.5 Headspace
DUP: Endpoint pH 4.5

L1580183-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1580183-01 01/31/23 11:53 • (DUP) R3886098-6 01/31/23 11:58

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	257	266	1	3.16		20

Sample Narrative:
OS: Endpoint pH 4.5 Headspace
DUP: Endpoint pH 4.5

Laboratory Control Sample (LCS)

(LCS) R3886098-1 01/31/23 10:14

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100	101	101	90.0-110	

Sample Narrative:
LCS: Endpoint pH 4.5

Method Blank (MB)

(MB) R3885391-1 01/27/23 09:50

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.379	1.00
Fluoride	U		0.0640	0.150
Nitrate	U		0.0480	0.100
Nitrite	U		0.0420	0.100
Sulfate	U		0.594	5.00

L1579828-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1579828-01 01/27/23 13:10 • (DUP) R3885391-3 01/27/23 13:26

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	47.7	47.7	1	0.175		15
Fluoride	U	U	1	0.000		15
Nitrate	U	U	1	0.000		15
Nitrite	U	U	1	0.000		15
Sulfate	U	U	1	0.000		15

L1579870-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1579870-07 01/27/23 12:22 • (DUP) R3885391-6 01/27/23 18:13

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	138	138	1	0.00639		15
Fluoride	1.23	1.24	1	0.954		15
Nitrate	0.208	0.180	1	14.9		15
Nitrite	U	U	1	0.000		15
Sulfate	14.8	14.8	1	0.0623		15

Laboratory Control Sample (LCS)

(LCS) R3885391-2 01/27/23 10:06

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	40.5	101	80.0-120	
Fluoride	8.00	8.26	103	80.0-120	
Nitrate	8.00	7.88	98.5	80.0-120	
Nitrite	8.00	8.35	104	80.0-120	

Laboratory Control Sample (LCS)

(LCS) R3885391-2 01/27/23 10:06

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfate	40.0	41.0	102	80.0-120	

L1579828-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1579828-01 01/27/23 13:10 • (MS) R3885391-4 01/27/23 13:42 • (MSD) R3885391-5 01/27/23 14:30

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	47.7	96.3	95.5	97.1	95.5	1	80.0-120			0.849	15
Fluoride	5.00	U	5.42	5.39	108	108	1	80.0-120			0.725	15
Nitrate	5.00	U	5.08	5.05	102	101	1	80.0-120			0.637	15
Nitrite	5.00	U	5.28	5.20	106	104	1	80.0-120			1.59	15
Sulfate	50.0	U	51.8	51.0	104	102	1	80.0-120			1.51	15

L1579870-07 Original Sample (OS) • Matrix Spike (MS)

(OS) L1579870-07 01/27/23 12:22 • (MS) R3885391-7 01/27/23 18:29

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	138	181	86.6	1	80.0-120	
Fluoride	5.00	1.23	6.16	98.6	1	80.0-120	
Nitrate	5.00	0.208	5.18	99.4	1	80.0-120	
Nitrite	5.00	U	5.22	104	1	80.0-120	
Sulfate	50.0	14.8	64.3	99.0	1	80.0-120	

Method Blank (MB)

(MB) R3885631-1 01/30/23 09:07

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	U		0.000100	0.000200

Laboratory Control Sample (LCS)

(LCS) R3885631-2 01/30/23 09:09

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.00300	0.00305	102	80.0-120	

L1579832-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1579832-01 01/30/23 09:11 • (MS) R3885631-3 01/30/23 09:13 • (MSD) R3885631-4 01/30/23 09:15

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 %
Mercury	0.00300	U	0.00314	0.00310	105	103	1	75.0-125			1.28	20

Method Blank (MB)

(MB) R3885988-1 01/31/23 08:53

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	U		0.000100	0.000200

Laboratory Control Sample (LCS)

(LCS) R3885988-2 01/31/23 08:55

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.00300	0.00291	97.0	80.0-120	

L1579884-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1579884-01 01/31/23 08:57 • (MS) R3885988-3 01/31/23 08:59 • (MSD) R3885988-4 01/31/23 09:01

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	0.00333	0.00354	111	118	1	75.0-125			6.11	20

Method Blank (MB)

(MB) R3885513-1 01/29/23 19:17

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Boron,Dissolved	U		0.0200	0.200

Laboratory Control Sample (LCS)

(LCS) R3885513-2 01/29/23 19:19

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron,Dissolved	1.00	0.973	97.3	80.0-120	

L1579832-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1579832-03 01/29/23 19:22 • (MS) R3885513-4 01/29/23 19:27 • (MSD) R3885513-5 01/29/23 19:30

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	0.140	1.12	1.13	97.5	98.5	1	75.0-125			0.907	20

Method Blank (MB)

(MB) R3885754-1 01/30/23 01:07

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Aluminum,Dissolved	U		0.0185	0.100
Arsenic,Dissolved	U		0.000180	0.00200
Barium,Dissolved	U		0.000381	0.00200
Cadmium,Dissolved	U		0.000150	0.00100
Chromium,Dissolved	U		0.00124	0.00200
Copper,Dissolved	U		0.00151	0.00500
Cobalt,Dissolved	U		0.0000596	0.00200
Iron,Dissolved	U		0.0281	0.100
Lead,Dissolved	U		0.000849	0.00200
Manganese,Dissolved	U		0.000704	0.00500
Molybdenum,Dissolved	U		0.000348	0.00500
Nickel,Dissolved	U		0.000816	0.00200
Selenium,Dissolved	U		0.000300	0.00200
Silver,Dissolved	U		0.0000700	0.00200
Uranium,Dissolved	U		0.0000700	0.0200
Zinc,Dissolved	U		0.00302	0.0250

Laboratory Control Sample (LCS)

(LCS) R3885754-2 01/30/23 01:11

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aluminum,Dissolved	5.00	4.62	92.4	80.0-120	
Arsenic,Dissolved	0.0500	0.0461	92.2	80.0-120	
Barium,Dissolved	0.0500	0.0460	92.0	80.0-120	
Cadmium,Dissolved	0.0500	0.0484	96.9	80.0-120	
Chromium,Dissolved	0.0500	0.0462	92.4	80.0-120	
Copper,Dissolved	0.0500	0.0484	96.9	80.0-120	
Cobalt,Dissolved	0.0500	0.0474	94.9	80.0-120	
Iron,Dissolved	5.00	4.67	93.4	80.0-120	
Lead,Dissolved	0.0500	0.0465	93.0	80.0-120	
Manganese,Dissolved	0.0500	0.0481	96.2	80.0-120	
Molybdenum,Dissolved	0.0500	0.0478	95.5	80.0-120	
Nickel,Dissolved	0.0500	0.0473	94.6	80.0-120	
Selenium,Dissolved	0.0500	0.0492	98.3	80.0-120	
Silver,Dissolved	0.0500	0.0497	99.3	80.0-120	
Uranium,Dissolved	0.0500	0.0469	93.7	80.0-120	
Zinc,Dissolved	0.0500	0.0449	89.8	80.0-120	

L1579832-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1579832-01 01/30/23 01:14 • (MS) R3885754-4 01/30/23 01:21 • (MSD) R3885754-5 01/30/23 01:24

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	4.74	4.71	94.8	94.3	1	75.0-125			0.578	20
Arsenic,Dissolved	0.0500	0.00196	0.0478	0.0481	91.8	92.3	1	75.0-125			0.590	20
Barium,Dissolved	0.0500	0.0829	0.128	0.130	91.2	93.7	1	75.0-125			0.990	20
Cadmium,Dissolved	0.0500	U	0.0483	0.0496	96.5	99.2	1	75.0-125			2.76	20
Chromium,Dissolved	0.0500	0.00125	0.0465	0.0473	90.5	92.1	1	75.0-125			1.65	20
Copper,Dissolved	0.0500	0.00448	0.0497	0.0506	90.3	92.3	1	75.0-125			1.91	20
Cobalt,Dissolved	0.0500	0.00234	0.0482	0.0488	91.7	92.9	1	75.0-125			1.30	20
Iron,Dissolved	5.00	0.587	5.37	5.37	95.7	95.6	1	75.0-125			0.0709	20
Lead,Dissolved	0.0500	U	0.0486	0.0480	97.1	95.9	1	75.0-125			1.25	20
Manganese,Dissolved	0.0500	0.0460	0.0906	0.0929	89.2	93.8	1	75.0-125			2.51	20
Molybdenum,Dissolved	0.0500	0.00295	0.0511	0.0516	96.3	97.3	1	75.0-125			0.950	20
Nickel,Dissolved	0.0500	0.00117	0.0469	0.0470	91.5	91.7	1	75.0-125			0.191	20
Selenium,Dissolved	0.0500	0.00340	0.0514	0.0537	96.1	101	1	75.0-125			4.22	20
Silver,Dissolved	0.0500	U	0.0500	0.0501	100	100	1	75.0-125			0.199	20
Uranium,Dissolved	0.0500	0.00125	0.0498	0.0498	97.1	97.2	1	75.0-125			0.0642	20
Zinc,Dissolved	0.0500	0.0227	0.0660	0.0660	86.7	86.6	1	75.0-125			0.0746	20

Method Blank (MB)

(MB) R3887213-2 01/30/23 13:08

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TPH (GC/FID) Low Fraction	0.0366	J	0.0314	0.100
(S) a,a,a-Trifluorotoluene(FID)	*96.7*			*78.0-120*

Laboratory Control Sample (LCS)

(LCS) R3887213-1 01/30/23 11:39

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.99	109	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*103*	*78.0-120*	

Method Blank (MB)

(MB) R3885444-3 01/28/23 21:53

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0113	0.0500
Benzene	U		0.0000941	0.00100
Bromodichloromethane	U		0.000136	0.00100
Bromoform	U		0.000129	0.00100
Bromomethane	U		0.000605	0.00500
n-Butylbenzene	U		0.000157	0.00100
sec-Butylbenzene	U		0.000125	0.00100
tert-Butylbenzene	U		0.000127	0.00100
Carbon disulfide	U		0.0000962	0.00100
Carbon tetrachloride	U		0.000128	0.00100
Chlorobenzene	U		0.000116	0.00100
Chlorodibromomethane	U		0.000140	0.00100
Chloroethane	U		0.000192	0.00500
Chloroform	U		0.000111	0.00500
Chloromethane	U		0.000960	0.00250
1,2-Dibromoethane	U		0.000126	0.00100
1,1-Dichloroethane	U		0.000100	0.00100
1,2-Dichloroethane	U		0.0000819	0.00100
1,1-Dichloroethene	U		0.000188	0.00100
cis-1,2-Dichloroethene	U		0.000126	0.00100
trans-1,2-Dichloroethene	U		0.000149	0.00100
1,2-Dichloropropane	U		0.000149	0.00100
cis-1,3-Dichloropropene	U		0.000111	0.00100
trans-1,3-Dichloropropene	U		0.000118	0.00100
Ethylbenzene	U		0.000137	0.00100
Hexachloro-1,3-butadiene	U		0.000337	0.00100
2-Hexanone	U		0.000787	0.0100
Isopropylbenzene	U		0.000105	0.00100
p-Isopropyltoluene	U		0.000120	0.00100
2-Butanone (MEK)	U		0.00119	0.0100
Methylene Chloride	U		0.000430	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100
Methyl tert-butyl ether	U		0.000101	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.0000993	0.00100
Styrene	U		0.000118	0.00100
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100
Tetrachloroethene	U		0.000300	0.00100
Toluene	U		0.000278	0.00100
1,1,1-Trichloroethane	U		0.000149	0.00100

Method Blank (MB)

(MB) R3885444-3 01/28/23 21:53

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,1,2-Trichloroethane	U		0.000158	0.00100
Trichloroethene	U		0.000190	0.00100
1,2,4-Trimethylbenzene	U		0.000322	0.00100
1,3,5-Trimethylbenzene	U		0.000104	0.00100
Vinyl chloride	U		0.000234	0.00100
Xylenes, Total	U		0.000174	0.00300
(S) Toluene-d8	*93.3*			*80.0-120*
(S) 4-Bromofluorobenzene	*87.3*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*

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

(LCS) R3885444-1 01/28/23 20:29 • (LCSD) R3885444-2 01/28/23 20:49

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 %
Acetone	0.0250	0.0207	0.0221	82.8	88.4	19.0-160			6.54	27
Benzene	0.00500	0.00490	0.00509	98.0	102	70.0-123			3.80	20
Bromodichloromethane	0.00500	0.00528	0.00548	106	110	75.0-120			3.72	20
Bromoform	0.00500	0.00461	0.00474	92.2	94.8	68.0-132			2.78	20
Bromomethane	0.00500	0.00557	0.00564	111	113	10.0-160			1.25	25
n-Butylbenzene	0.00500	0.00417	0.00422	83.4	84.4	73.0-125			1.19	20
sec-Butylbenzene	0.00500	0.00434	0.00453	86.8	90.6	75.0-125			4.28	20
tert-Butylbenzene	0.00500	0.00433	0.00442	86.6	88.4	76.0-124			2.06	20
Carbon disulfide	0.00500	0.00466	0.00483	93.2	96.6	61.0-128			3.58	20
Carbon tetrachloride	0.00500	0.00487	0.00502	97.4	100	68.0-126			3.03	20
Chlorobenzene	0.00500	0.00458	0.00469	91.6	93.8	80.0-121			2.37	20
Chlorodibromomethane	0.00500	0.00462	0.00495	92.4	99.0	77.0-125			6.90	20
Chloroethane	0.00500	0.00608	0.00608	122	122	47.0-150			0.000	20
Chloroform	0.00500	0.00536	0.00564	107	113	73.0-120			5.09	20
Chloromethane	0.00500	0.00533	0.00545	107	109	41.0-142			2.23	20
1,2-Dibromoethane	0.00500	0.00482	0.00492	96.4	98.4	80.0-122			2.05	20
1,1-Dichloroethane	0.00500	0.00516	0.00542	103	108	70.0-126			4.91	20
1,2-Dichloroethane	0.00500	0.00549	0.00589	110	118	70.0-128			7.03	20
1,1-Dichloroethene	0.00500	0.00490	0.00491	98.0	98.2	71.0-124			0.204	20
cis-1,2-Dichloroethene	0.00500	0.00490	0.00521	98.0	104	73.0-120			6.13	20
trans-1,2-Dichloroethene	0.00500	0.00497	0.00513	99.4	103	73.0-120			3.17	20
1,2-Dichloropropane	0.00500	0.00518	0.00552	104	110	77.0-125			6.36	20
cis-1,3-Dichloropropene	0.00500	0.00487	0.00483	97.4	96.6	80.0-123			0.825	20
trans-1,3-Dichloropropene	0.00500	0.00459	0.00465	91.8	93.0	78.0-124			1.30	20

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

(LCS) R3885444-1 01/28/23 20:29 • (LCSD) R3885444-2 01/28/23 20:49

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 %
Ethylbenzene	0.00500	0.00463	0.00462	92.6	92.4	79.0-123			0.216	20
Hexachloro-1,3-butadiene	0.00500	0.00521	0.00537	104	107	54.0-138			3.02	20
2-Hexanone	0.0250	0.0236	0.0245	94.4	98.0	67.0-149			3.74	20
Isopropylbenzene	0.00500	0.00428	0.00449	85.6	89.8	76.0-127			4.79	20
p-Isopropyltoluene	0.00500	0.00430	0.00453	86.0	90.6	76.0-125			5.21	20
2-Butanone (MEK)	0.0250	0.0275	0.0283	110	113	44.0-160			2.87	20
Methylene Chloride	0.00500	0.00507	0.00535	101	107	67.0-120			5.37	20
4-Methyl-2-pentanone (MIBK)	0.0250	0.0253	0.0260	101	104	68.0-142			2.73	20
Methyl tert-butyl ether	0.00500	0.00523	0.00547	105	109	68.0-125			4.49	20
Naphthalene	0.00500	0.00386	0.00416	77.2	83.2	54.0-135			7.48	20
n-Propylbenzene	0.00500	0.00411	0.00425	82.2	85.0	77.0-124			3.35	20
Styrene	0.00500	0.00420	0.00432	84.0	86.4	73.0-130			2.82	20
1,1,2,2-Tetrachloroethane	0.00500	0.00458	0.00499	91.6	99.8	65.0-130			8.57	20
Tetrachloroethene	0.00500	0.00488	0.00507	97.6	101	72.0-132			3.82	20
Toluene	0.00500	0.00449	0.00466	89.8	93.2	79.0-120			3.72	20
1,1,1-Trichloroethane	0.00500	0.00536	0.00551	107	110	73.0-124			2.76	20
1,1,2-Trichloroethane	0.00500	0.00471	0.00486	94.2	97.2	80.0-120			3.13	20
Trichloroethene	0.00500	0.00516	0.00482	103	96.4	78.0-124			6.81	20
1,2,4-Trimethylbenzene	0.00500	0.00426	0.00444	85.2	88.8	76.0-121			4.14	20
1,3,5-Trimethylbenzene	0.00500	0.00423	0.00444	84.6	88.8	76.0-122			4.84	20
Vinyl chloride	0.00500	0.00542	0.00539	108	108	67.0-131			0.555	20
Xylenes, Total	0.0150	0.0136	0.0140	90.7	93.3	79.0-123			2.90	20
(S) Toluene-d8				*92.3*	*93.3*	*80.0-120*				
(S) 4-Bromofluorobenzene				*90.3*	*90.8*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*107*	*108*	*70.0-130*				

Method Blank (MB)

(MB) R3885997-1 01/31/23 16:46

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TPH (GC/FID) High Fraction	0.0542	J	0.0247	0.100
(S) o-Terphenyl	*55.0*			*31.0-160*

Laboratory Control Sample (LCS)

(LCS) R3885997-2 01/31/23 17:06

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) High Fraction	1.50	1.46	97.3	50.0-150	
(S) o-Terphenyl			*88.5*	*31.0-160*	

L1579754-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1579754-04 01/31/23 18:45 • (MS) R3885997-3 01/31/23 19:04 • (MSD) R3885997-4 01/31/23 19:24

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	0.0559	0.248	0.484	13.4	29.9	1	50.0-150	J6	J3 J6	64.5	20
(S) o-Terphenyl					*16.1*	*32.5*		*31.0-160*	J2			

Method Blank (MB)

(MB) R3885688-2 01/28/23 18:50

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acenaphthene	U		0.0000886	0.00100
Acenaphthylene	U		0.0000921	0.00100
Acetophenone	U		0.000208	0.0100
Anthracene	U		0.0000804	0.00100
Atrazine	U		0.000255	0.0100
Benzo(a)anthracene	U		0.000199	0.00100
Benzaldehyde	U		0.00169	0.0100
Benzo(b)fluoranthene	U		0.000130	0.00100
Benzo(k)fluoranthene	U		0.000120	0.00100
Benzo(g,h,i)perylene	U		0.000121	0.00100
Benzo(a)pyrene	U		0.0000381	0.000200
Biphenyl	U		0.000790	0.0100
Bis(2-chlorethoxy)methane	U		0.000116	0.0100
Bis(2-chloroethyl)ether	U		0.000137	0.0100
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100
4-Bromophenyl-phenylether	U		0.0000877	0.0100
2-Chloronaphthalene	U		0.0000648	0.00100
4-Chlorophenyl-phenylether	U		0.0000926	0.0100
Caprolactam	U		0.000309	0.0100
Carbazole	U		0.000111	0.0100
Chrysene	U		0.000130	0.00100
Dibenz(a,h)anthracene	U		0.0000644	0.000200
Dibenzofuran	U		0.0000970	0.0100
3,3-Dichlorobenzidine	U		0.000212	0.0100
2,4-Dinitrotoluene	U		0.0000983	0.0100
2,6-Dinitrotoluene	U		0.000250	0.0100
Fluoranthene	U		0.000102	0.00100
Fluorene	U		0.0000844	0.00100
Hexachlorobenzene	U		0.0000755	0.00100
Hexachloro-1,3-butadiene	U		0.0000968	0.0100
Hexachlorocyclopentadiene	U		0.0000598	0.0100
Hexachloroethane	U		0.000127	0.0100
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100
Isophorone	U		0.000143	0.0100
1-Methylnaphthalene	U		0.0000790	0.00100
2-Methylnaphthalene	U		0.000117	0.00100
Naphthalene	U		0.000159	0.00100
Nitrobenzene	U		0.000297	0.0100
n-Nitrosodiphenylamine	U		0.00237	0.0100
n-Nitrosodi-n-propylamine	U		0.000261	0.0100

Received by OCD: 4/15/2024 1:46:20 PM

Method Blank (MB)

(MB) R3885688-2 01/28/23 18:50

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Phenanthrene	U		0.000112	0.00100
Benzylbutyl phthalate	U		0.000765	0.00300
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300
Di-n-butyl phthalate	U		0.000453	0.00300
Diethyl phthalate	U		0.000287	0.00300
Dimethyl phthalate	U		0.000260	0.00300
Di-n-octyl phthalate	U		0.000932	0.00300
Pyrene	U		0.000107	0.00100
1,2,4-Trichlorobenzene	U		0.0000698	0.0100
4-Chloro-3-methylphenol	U		0.000131	0.0100
2-Chlorophenol	U		0.000133	0.0100
2,4-Dichlorophenol	U		0.000102	0.0100
2,4-Dimethylphenol	U		0.0000636	0.0100
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100
2,4-Dinitrophenol	U		0.00593	0.0100
2-Nitrophenol	U		0.000117	0.0100
2-Nitroaniline	U		0.000102	0.0100
2-Methylphenol	U		0.0000929	0.0100
3&4-Methyl Phenol	U		0.000168	0.0100
3-Nitroaniline	U		0.0000869	0.0100
4-Chloroaniline	U		0.000234	0.0100
4-Nitroaniline	U		0.0000910	0.0100
4-Nitrophenol	U		0.000143	0.0100
Pentachlorophenol	U		0.000313	0.0100
Phenol	U		0.00433	0.0100
2,4,5-Trichlorophenol	U		0.000109	0.0100
2,4,6-Trichlorophenol	U		0.000100	0.0100
(S) 2-Fluorophenol	*34.2*			*10.0-120*
(S) Phenol-d5	*21.5*			*10.0-120*
(S) Nitrobenzene-d5	*75.2*			*10.0-127*
(S) 2-Fluorobiphenyl	*80.3*			*10.0-130*
(S) 2,4,6-Tribromophenol	*76.0*			*10.0-155*
(S) p-Terphenyl-d14	*78.9*			*10.0-128*

Released to Imaging: 4/26/2024 10:49:21 AM

Laboratory Control Sample (LCS)

(LCS) R3885688-1 01/28/23 18:29

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0500	0.0411	82.2	41.0-120	
Acenaphthylene	0.0500	0.0440	88.0	43.0-120	
Acetophenone	0.0500	0.0409	81.8	29.0-120	
Anthracene	0.0500	0.0416	83.2	45.0-120	
Atrazine	0.0500	0.0426	85.2	39.0-141	
Benzo(a)anthracene	0.0500	0.0460	92.0	47.0-120	
Benzaldehyde	0.0500	0.122	244	10.0-160	J4
Benzo(b)fluoranthene	0.0500	0.0470	94.0	46.0-120	
Benzo(k)fluoranthene	0.0500	0.0446	89.2	46.0-120	
Benzo(g,h,i)perylene	0.0500	0.0473	94.6	48.0-121	
Benzo(a)pyrene	0.0500	0.0502	100	47.0-120	
Biphenyl	0.0500	0.0423	84.6	38.0-120	
Bis(2-chlorethoxy)methane	0.0500	0.0398	79.6	33.0-120	
Bis(2-chloroethyl)ether	0.0500	0.0429	85.8	23.0-120	
2,2-Oxybis(1-Chloropropane)	0.0500	0.0397	79.4	28.0-120	
4-Bromophenyl-phenylether	0.0500	0.0460	92.0	45.0-120	
2-Chloronaphthalene	0.0500	0.0416	83.2	37.0-120	
4-Chlorophenyl-phenylether	0.0500	0.0439	87.8	44.0-120	
Caprolactam	0.0500	0.00955	19.1	10.0-120	
Carbazole	0.0500	0.0494	98.8	51.0-122	
Chrysene	0.0500	0.0456	91.2	48.0-120	
Dibenz(a,h)anthracene	0.0500	0.0480	96.0	47.0-120	
Dibenzofuran	0.0500	0.0451	90.2	44.0-120	
3,3-Dichlorobenzidine	0.100	0.0878	87.8	44.0-120	
2,4-Dinitrotoluene	0.0500	0.0487	97.4	49.0-124	
2,6-Dinitrotoluene	0.0500	0.0479	95.8	46.0-120	
Fluoranthene	0.0500	0.0507	101	51.0-120	
Fluorene	0.0500	0.0441	88.2	47.0-120	
Hexachlorobenzene	0.0500	0.0437	87.4	44.0-120	
Hexachloro-1,3-butadiene	0.0500	0.0367	73.4	19.0-120	
Hexachlorocyclopentadiene	0.0500	0.0359	71.8	15.0-120	
Hexachloroethane	0.0500	0.0387	77.4	15.0-120	
Indeno(1,2,3-cd)pyrene	0.0500	0.0459	91.8	49.0-122	
Isophorone	0.0500	0.0401	80.2	36.0-120	
1-Methylnaphthalene	0.0500	0.0383	76.6	33.0-120	
2-Methylnaphthalene	0.0500	0.0368	73.6	33.0-120	
Naphthalene	0.0500	0.0356	71.2	27.0-120	
Nitrobenzene	0.0500	0.0399	79.8	27.0-120	
n-Nitrosodiphenylamine	0.0500	0.0385	77.0	47.0-120	
n-Nitrosodi-n-propylamine	0.0500	0.0432	86.4	31.0-120	

Laboratory Control Sample (LCS)

(LCS) R3885688-1 01/28/23 18:29

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Phenanthrene	0.0500	0.0479	95.8	46.0-120	
Benzylbutyl phthalate	0.0500	0.0490	98.0	43.0-121	
Bis(2-ethylhexyl)phthalate	0.0500	0.0469	93.8	43.0-122	
Di-n-butyl phthalate	0.0500	0.0507	101	49.0-121	
Diethyl phthalate	0.0500	0.0465	93.0	48.0-122	
Dimethyl phthalate	0.0500	0.0461	92.2	48.0-120	
Di-n-octyl phthalate	0.0500	0.0520	104	42.0-125	
Pyrene	0.0500	0.0467	93.4	47.0-120	
1,2,4-Trichlorobenzene	0.0500	0.0368	73.6	24.0-120	
4-Chloro-3-methylphenol	0.0500	0.0377	75.4	40.0-120	
2-Chlorophenol	0.0500	0.0306	61.2	25.0-120	
2,4-Dichlorophenol	0.0500	0.0365	73.0	36.0-120	
2,4-Dimethylphenol	0.0500	0.0317	63.4	33.0-120	
4,6-Dinitro-2-methylphenol	0.0500	0.0558	112	38.0-138	
2,4-Dinitrophenol	0.0500	0.0507	101	10.0-120	
2-Nitrophenol	0.0500	0.0370	74.0	31.0-120	
2-Nitroaniline	0.0500	0.0448	89.6	43.0-120	
2-Methylphenol	0.0500	0.0267	53.4	28.0-120	
3&4-Methyl Phenol	0.0500	0.0251	50.2	31.0-120	
3-Nitroaniline	0.0500	0.0416	83.2	38.0-120	
4-Chloroaniline	0.0500	0.0443	88.6	25.0-120	
4-Nitroaniline	0.0500	0.0441	88.2	18.0-160	
4-Nitrophenol	0.0500	0.0153	30.6	10.0-120	
Pentachlorophenol	0.0500	0.0445	89.0	23.0-120	
Phenol	0.0500	0.0131	26.2	10.0-120	
2,4,5-Trichlorophenol	0.0500	0.0456	91.2	44.0-120	
2,4,6-Trichlorophenol	0.0500	0.0435	87.0	42.0-120	
(S) 2-Fluorophenol			*37.9*	*10.0-120*	
(S) Phenol-d5			*24.6*	*10.0-120*	
(S) Nitrobenzene-d5			*74.6*	*10.0-127*	
(S) 2-Fluorobiphenyl			*84.8*	*10.0-130*	
(S) 2,4,6-Tribromophenol			*95.5*	*10.0-155*	
(S) p-Terphenyl-d14			*87.5*	*10.0-128*	

L1579812-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1579812-01 01/28/23 23:12 • (MS) R3885688-3 01/28/23 23:33 • (MSD) R3885688-4 01/28/23 23:54

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 %
Acenaphthene	0.0500	U	0.0232	0.0318	46.4	63.6	1	28.0-120		J3	31.3	25
Acenaphthylene	0.0500	U	0.0247	0.0342	49.4	68.4	1	31.0-121		J3	32.3	25
Acetophenone	0.0500	U	0.0222	0.0315	44.4	63.0	1	20.0-120			34.6	35
Anthracene	0.0500	U	0.0236	0.0316	47.2	63.2	1	36.0-120		J3	29.0	23
Atrazine	0.0500	U	0.0254	0.0342	50.8	68.4	1	39.0-130		J3	29.5	23
Benzo(a)anthracene	0.0500	U	0.0265	0.0362	53.0	72.4	1	39.0-120		J3	30.9	23
Benzaldehyde	0.0500	U	0.0665	0.0904	133	181	1	10.0-160		J5	30.5	40
Benzo(b)fluoranthene	0.0500	U	0.0266	0.0363	53.2	72.6	1	37.0-120		J3	30.8	23
Benzo(k)fluoranthene	0.0500	U	0.0262	0.0346	52.4	69.2	1	37.0-120		J3	27.6	26
Benzo(g,h,i)perylene	0.0500	U	0.0274	0.0368	54.8	73.6	1	37.0-123		J3	29.3	25
Benzo(a)pyrene	0.0500	U	0.0282	0.0378	56.4	75.6	1	37.0-120		J3	29.1	24
Biphenyl	0.0500	U	0.0242	0.0337	48.4	67.4	1	29.0-120			32.8	33
Bis(2-chlorethoxy)methane	0.0500	U	0.0233	0.0317	46.6	63.4	1	17.0-120			30.5	31
Bis(2-chloroethyl)ether	0.0500	U	0.0230	0.0327	46.0	65.4	1	14.0-120		J3	34.8	33
2,2-Oxybis(1-Chloropropane)	0.0500	U	0.0203	0.0287	40.6	57.4	1	18.0-120		J3	34.3	34
4-Bromophenyl-phenylether	0.0500	U	0.0268	0.0353	53.6	70.6	1	37.0-120		J3	27.4	24
2-Chloronaphthalene	0.0500	U	0.0229	0.0318	45.8	63.6	1	29.0-120		J3	32.5	28
4-Chlorophenyl-phenylether	0.0500	U	0.0252	0.0339	50.4	67.8	1	36.0-120		J3	29.4	23
Caprolactam	0.0500	U	0.00816	0.00876	16.3	17.5	1	10.0-120			7.09	40
Carbazole	0.0500	U	0.0285	0.0385	57.0	77.0	1	38.0-127		J3	29.9	21
Chrysene	0.0500	U	0.0267	0.0358	53.4	71.6	1	38.0-120		J3	29.1	23
Dibenz(a,h)anthracene	0.0500	U	0.0282	0.0378	56.4	75.6	1	36.0-121		J3	29.1	24
Dibenzofuran	0.0500	U	0.0255	0.0349	51.0	69.8	1	32.0-120		J3	31.1	26
3,3-Dichlorobenzidine	0.100	U	0.00747	0.00996	7.47	9.96	1	10.0-134	J6	J6	28.6	30
2,4-Dinitrotoluene	0.0500	U	0.0286	0.0382	57.2	76.4	1	39.0-125		J3	28.7	25
2,6-Dinitrotoluene	0.0500	U	0.0274	0.0368	54.8	73.6	1	36.0-120		J3	29.3	27
Fluoranthene	0.0500	U	0.0297	0.0395	59.4	79.0	1	41.0-121		J3	28.3	22
Fluorene	0.0500	U	0.0249	0.0338	49.8	67.6	1	37.0-120		J3	30.3	24
Hexachlorobenzene	0.0500	U	0.0248	0.0335	49.6	67.0	1	35.0-122		J3	29.8	24
Hexachloro-1,3-butadiene	0.0500	U	0.0212	0.0279	42.4	55.8	1	12.0-120			27.3	34
Hexachlorocyclopentadiene	0.0500	U	0.0193	0.0270	38.6	54.0	1	10.0-120		J3	33.3	33
Hexachloroethane	0.0500	U	0.0211	0.0282	42.2	56.4	1	10.0-120			28.8	40
Indeno(1,2,3-cd)pyrene	0.0500	U	0.0266	0.0356	53.2	71.2	1	38.0-125		J3	28.9	24
Isophorone	0.0500	U	0.0234	0.0322	46.8	64.4	1	21.0-120		J3	31.7	27
1-Methylnaphthalene	0.0500	U	0.0218	0.0298	43.6	59.6	1	11.0-120		J3	31.0	27
2-Methylnaphthalene	0.0500	U	0.0214	0.0290	42.8	58.0	1	17.0-120		J3	30.2	28
Naphthalene	0.0500	U	0.0209	0.0274	41.8	54.8	1	10.0-120			26.9	31
Nitrobenzene	0.0500	U	0.0269	0.0367	53.8	73.4	1	12.0-120		J3	30.8	30
n-Nitrosodiphenylamine	0.0500	U	0.0228	0.0310	45.6	62.0	1	37.0-120		J3	30.5	24
n-Nitrosodi-n-propylamine	0.0500	U	0.0236	0.0336	47.2	67.2	1	16.0-120		J3	35.0	30

L1579812-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1579812-01 01/28/23 23:12 • (MS) R3885688-3 01/28/23 23:33 • (MSD) R3885688-4 01/28/23 23:54

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 %
Phenanthrene	0.0500	U	0.0280	0.0373	56.0	74.6	1	33.0-120		J3	28.5	22
Benzylbutyl phthalate	0.0500	U	0.0277	0.0382	55.4	76.4	1	34.0-126		J3	31.9	24
Bis(2-ethylhexyl)phthalate	0.0500	U	0.0254	0.0347	50.8	69.4	1	33.0-126		J3	30.9	25
Di-n-butyl phthalate	0.0500	U	0.0294	0.0391	58.8	78.2	1	35.0-128		J3	28.3	23
Diethyl phthalate	0.0500	U	0.0276	0.0372	55.2	74.4	1	39.0-125		J3	29.6	24
Dimethyl phthalate	0.0500	U	0.0276	0.0367	55.2	73.4	1	37.0-120		J3	28.3	24
Di-n-octyl phthalate	0.0500	U	0.0294	0.0403	58.8	80.6	1	25.0-135		J3	31.3	26
Pyrene	0.0500	U	0.0267	0.0356	53.4	71.2	1	39.0-120		J3	28.6	22
1,2,4-Trichlorobenzene	0.0500	U	0.0209	0.0285	41.8	57.0	1	15.0-120			30.8	31
4-Chloro-3-methylphenol	0.0500	U	0.0259	0.0278	51.8	55.6	1	26.0-120			7.08	27
2-Chlorophenol	0.0500	U	0.0178	0.0202	35.6	40.4	1	18.0-120			12.6	34
2,4-Dichlorophenol	0.0500	U	0.0219	0.0247	43.8	49.4	1	19.0-120			12.0	27
2,4-Dimethylphenol	0.0500	U	0.0203	0.0228	40.6	45.6	1	15.0-120			11.6	28
4,6-Dinitro-2-methylphenol	0.0500	U	0.0318	0.0368	63.6	73.6	1	10.0-144			14.6	39
2,4-Dinitrophenol	0.0500	U	0.0311	0.0347	62.2	69.4	1	10.0-120			10.9	40
2-Nitrophenol	0.0500	U	0.0210	0.0241	42.0	48.2	1	20.0-120			13.7	30
2-Nitroaniline	0.0500	U	0.0207	0.0269	41.4	53.8	1	33.0-120			26.1	27
2-Methylphenol	0.0500	U	0.0166	0.0187	33.2	37.4	1	10.0-120			11.9	30
3&4-Methyl Phenol	0.0500	U	0.0161	0.0179	32.2	35.8	1	10.0-120			10.6	36
3-Nitroaniline	0.0500	U	0.0178	0.0236	35.6	47.2	1	20.0-120		J3	28.0	27
4-Chloroaniline	0.0500	U	0.0266	0.0365	53.2	73.0	1	10.0-120		J3	31.4	31
4-Nitroaniline	0.0500	U	0.0107	0.0132	21.4	26.4	1	10.0-160			20.9	26
4-Nitrophenol	0.0500	U	0.0112	0.0113	22.4	22.6	1	10.0-120			0.889	40
Pentachlorophenol	0.0500	U	0.0263	0.0293	52.6	58.6	1	10.0-128			10.8	37
Phenol	0.0500	U	0.00842	0.00858	16.8	17.2	1	10.0-120			1.88	40
2,4,5-Trichlorophenol	0.0500	U	0.0268	0.0312	53.6	62.4	1	33.0-120			15.2	31
2,4,6-Trichlorophenol	0.0500	U	0.0245	0.0295	49.0	59.0	1	26.0-120			18.5	31
(S) 2-Fluorophenol					*23.8*	*25.5*		*10.0-120*				
(S) Phenol-d5					*15.7*	*16.1*		*10.0-120*				
(S) Nitrobenzene-d5					*40.0*	*56.3*		*10.0-127*				
(S) 2-Fluorobiphenyl					*45.9*	*64.8*		*10.0-130*				
(S) 2,4,6-Tribromophenol					*53.5*	*62.0*		*10.0-155*				
(S) p-Terphenyl-d14					*49.6*	*65.9*		*10.0-128*				

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.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(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 Reporting Limit (or MDL where applicable).
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.
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.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
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	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
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

* 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 Analytical.

Received by OCD: 4/15/2024 1:46:20 PM

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@trccompanies.com;aeljuri@trccompanie

Project Description: **Lovington Lea Refinery**

City/State Collected: Lovington, NM

Please Circle: PT (MT) CT ET

Phone: **512-684-3176**

Client Project # **377274.0000.0000.**

Lab Project # **TRCATX-LOVINGTON NAV**

Collected by (print): Bryan Bayles + HMI Team

Site/Facility ID #

P.O. #

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

Sample ID	Comp	Grab	Matrix *	Depth	Date	Time	No. of Cntrs	**NO3,Cl,NO2,F,SO4** 125mlHDPE-NoPres	8270TX 100ml Amb NoPres	ALK,TDS 500mlHDPE-NoPres	DROLVI 40mlAmb-HCl-BT	GRO 40mlAmb HCl	HG 250mlHDPE-HNO3 <2	NAVAJOMETALSDISS 250mlHDPE HNO3 (Field Filtered)	V8260 40mlAmb-HCl	V8260-TripBlank 40mlAmb-HCl-Blk			
WW-NORTH			GW		1/26/23	1120	13	X	X	X	X	X	X	X	X				-01
WW-SOUTH			GW			1035	13	X	X	X	X	X	X	X	X				-02
WW-EAST			GW			1205	13	X	X	X	X	X	X	X	X				-03
DUP-01			GW			1100	13	X	X	X	X	X	X	X	X				-04
TRIP BLANK		✓	GW		↓	—	1									X			-05

Analysis / Container / Preservative

Chain of Custody

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

L1599832
A227

Acctnum: **TRCATX**
Template: **T118335**
Prelogin: **P971171**
PM: 526 - Chris McCord
PB: 1/26/23
Shipped Via: **FedEX Ground**

Remarks | Sample # (lab only)

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

Remarks:NAVAJOMETALSDISS are Field Filtered.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS ✓ FedEx __ Courier _____

Tracking # 6094 5471 8944

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: __Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Bryan Bayles	1/26/23	1300	
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: 10.4 °C Bottles Received: 52
1.3+0=1.3

Date: 1-27-23 Time: 0845

If preservation required by Login: Date/Time

Hold: Condition: NCF / OK

Released to Imaging: 4/26/2024 10:49:21 AM

ANALYTICAL REPORT

April 04, 2023

TRC Solutions - Austin, TX

Sample Delivery Group:	L1598018
Samples Received:	03/24/2023
Project Number:	
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.



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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Released to Imaging: 4/26/2024 10:49:21 AM

MW-1 L1598018-01 GW

Collected by: SU / HMI Team | Collected date/time: 03/23/23 12:20 | Received date/time: 03/24/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG2029708	1	03/25/23 00:30	03/25/23 00:30	LBR	Mt. Juliet, TN
Mercury by Method 7470A	WG2030405	1	03/27/23 16:32	03/28/23 18:34	AKB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2029742	1	03/26/23 09:51	03/27/23 16:46	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2029747	1	03/28/23 07:13	03/28/23 23:58	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2030988	1	03/28/23 00:55	03/28/23 00:55	ACG	Mt. Juliet, TN

MW-2 L1598018-02 GW

Collected by: SU / HMI Team | Collected date/time: 03/23/23 09:40 | Received date/time: 03/24/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2030988	1	03/28/23 01:16	03/28/23 01:16	ACG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2031044	1	03/29/23 15:20	03/29/23 23:47	DSH	Mt. Juliet, TN

MW-3 L1598018-03 GW

Collected by: SU / HMI Team | Collected date/time: 03/23/23 09:25 | Received date/time: 03/24/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG2029708	1	03/25/23 00:43	03/25/23 00:43	LBR	Mt. Juliet, TN

MW-6 L1598018-04 GW

Collected by: SU / HMI Team | Collected date/time: 03/23/23 11:25 | Received date/time: 03/24/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG2029708	1	03/25/23 00:56	03/25/23 00:56	LBR	Mt. Juliet, TN
Mercury by Method 7470A	WG2030406	1	03/30/23 09:59	03/31/23 11:05	SRT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2029742	1	03/26/23 09:51	03/27/23 16:49	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2029747	1	03/28/23 07:13	03/29/23 00:08	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2030988	1	03/28/23 01:36	03/28/23 01:36	ACG	Mt. Juliet, TN

MW-12R2 L1598018-05 GW

Collected by: SU / HMI Team | Collected date/time: 03/23/23 13:00 | Received date/time: 03/24/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2030626	1	03/27/23 17:22	03/27/23 22:55	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2030702	1	03/28/23 08:37	03/28/23 08:37	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2029428	1	03/24/23 20:07	03/24/23 20:07	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2030406	1	03/30/23 09:59	03/31/23 11:07	SRT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2029742	1	03/26/23 09:51	03/27/23 16:52	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2029747	1	03/28/23 07:13	03/29/23 00:12	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2030988	1	03/28/23 01:56	03/28/23 01:56	ACG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2031044	1	03/29/23 15:20	03/30/23 00:08	DSH	Mt. Juliet, TN

MW-15R L1598018-06 GW

Collected by: SU / HMI Team | Collected date/time: 03/23/23 08:55 | Received date/time: 03/24/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2030626	1	03/27/23 17:22	03/27/23 22:55	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2030702	1	03/28/23 08:48	03/28/23 08:48	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2029708	1	03/25/23 01:09	03/25/23 01:09	LBR	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2029708	10	03/25/23 06:18	03/25/23 06:18	LBR	Mt. Juliet, TN
Mercury by Method 7470A	WG2030406	1	03/30/23 09:59	03/31/23 11:09	SRT	Mt. Juliet, TN

MW-15R L1598018-06 GW

Collected by: SU / HMI Team
Collected date/time: 03/23/23 08:55
Received date/time: 03/24/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010B	WG2029742	1	03/26/23 09:51	03/27/23 16:55	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2029747	1	03/28/23 07:13	03/29/23 00:15	SJM	Mt. Juliet, TN

MW-17R L1598018-07 GW

Collected by: SU / HMI Team
Collected date/time: 03/23/23 08:40
Received date/time: 03/24/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2030626	1	03/27/23 17:22	03/27/23 22:55	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2030702	1	03/28/23 09:06	03/28/23 09:06	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2029708	1	03/25/23 01:22	03/25/23 01:22	LBR	Mt. Juliet, TN
Mercury by Method 7470A	WG2030406	1	03/30/23 09:59	03/31/23 11:11	SRT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2029742	1	03/26/23 09:51	03/27/23 16:58	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2029747	1	03/28/23 07:13	03/29/23 00:18	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2030988	1	03/28/23 02:17	03/28/23 02:17	ACG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2031044	1	03/29/23 15:20	03/30/23 00:30	DSH	Mt. Juliet, TN

MW-19R L1598018-08 GW

Collected by: SU / HMI Team
Collected date/time: 03/23/23 11:25
Received date/time: 03/24/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2030626	1	03/27/23 17:22	03/27/23 22:55	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2030702	1	03/28/23 09:13	03/28/23 09:13	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2029708	1	03/25/23 01:35	03/25/23 01:35	LBR	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2029708	10	03/25/23 06:44	03/25/23 06:44	LBR	Mt. Juliet, TN

MW-30 L1598018-09 GW

Collected by: SU / HMI Team
Collected date/time: 03/23/23 10:15
Received date/time: 03/24/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2030626	1	03/27/23 17:22	03/27/23 22:55	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2030702	1	03/28/23 09:19	03/28/23 09:19	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2029708	1	03/25/23 01:48	03/25/23 01:48	LBR	Mt. Juliet, TN
Mercury by Method 7470A	WG2030406	1	03/30/23 09:59	03/31/23 11:13	SRT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2029742	1	03/26/23 09:51	03/27/23 17:00	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2029747	1	03/28/23 07:13	03/29/23 00:22	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2030988	1	03/28/23 02:37	03/28/23 02:37	ACG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2031044	1	03/29/23 15:20	03/30/23 00:51	DSH	Mt. Juliet, TN

MW-32 L1598018-10 GW

Collected by: SU / HMI Team
Collected date/time: 03/23/23 11:40
Received date/time: 03/24/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2030626	1	03/27/23 17:22	03/27/23 22:55	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2030702	1	03/28/23 09:28	03/28/23 09:28	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2029708	1	03/25/23 02:00	03/25/23 02:00	LBR	Mt. Juliet, TN
Mercury by Method 7470A	WG2030406	1	03/30/23 09:59	03/31/23 11:15	SRT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2029742	1	03/26/23 09:51	03/27/23 17:03	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2029747	1	03/28/23 07:13	03/29/23 00:25	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2030927	1	03/27/23 21:19	03/27/23 21:19	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2030988	1	03/28/23 02:58	03/28/23 02:58	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG2031814	1	03/31/23 08:46	04/01/23 01:55	TJD	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2031044	1	03/29/23 15:20	03/30/23 01:13	DSH	Mt. Juliet, TN

MW-33 L1598018-11 GW

Collected by: SU / HMI Team
Collected date/time: 03/23/23 10:00
Received date/time: 03/24/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2030626	1	03/27/23 17:22	03/27/23 22:55	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2030702	1	03/28/23 09:34	03/28/23 09:34	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2029708	1	03/25/23 02:39	03/25/23 02:39	LBR	Mt. Juliet, TN
Mercury by Method 7470A	WG2030407	1	03/30/23 09:50	03/31/23 09:04	SRT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2029742	1	03/26/23 09:51	03/27/23 16:20	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2029747	1	03/28/23 07:13	03/28/23 23:36	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2030927	1	03/27/23 22:26	03/27/23 22:26	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2030988	1	03/28/23 03:18	03/28/23 03:18	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG2031815	1	03/30/23 08:38	03/30/23 17:14	MWS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2034988	1	03/29/23 07:59	04/04/23 02:12	DSH	Mt. Juliet, TN

WW-NORTH L1598018-12 GW

Collected by: SU / HMI Team
Collected date/time: 03/23/23 10:10
Received date/time: 03/24/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2030626	1	03/27/23 17:22	03/27/23 22:55	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2030702	1	03/28/23 09:42	03/28/23 09:42	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2029708	1	03/25/23 02:52	03/25/23 02:52	LBR	Mt. Juliet, TN
Mercury by Method 7470A	WG2030406	1	03/30/23 09:59	03/31/23 11:17	SRT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2029742	1	03/26/23 09:51	03/27/23 17:06	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2029747	1	03/28/23 07:13	03/29/23 00:28	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2030927	1	03/27/23 23:21	03/27/23 23:21	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2030988	1	03/28/23 03:39	03/28/23 03:39	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG2031815	1	03/30/23 08:38	03/30/23 18:17	MWS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2031044	1	03/29/23 15:20	03/30/23 01:35	DSH	Mt. Juliet, TN

WW-SOUTH L1598018-13 GW

Collected by: SU / HMI Team
Collected date/time: 03/23/23 09:35
Received date/time: 03/24/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2030626	1	03/27/23 17:22	03/27/23 22:55	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2030702	1	03/28/23 09:49	03/28/23 09:49	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2029708	1	03/25/23 03:05	03/25/23 03:05	LBR	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2029708	10	03/25/23 08:53	03/25/23 08:53	LBR	Mt. Juliet, TN
Mercury by Method 7470A	WG2030406	1	03/30/23 09:59	03/31/23 11:19	SRT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2029742	1	03/26/23 09:51	03/27/23 17:09	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2029747	1	03/28/23 07:13	03/29/23 00:31	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2030927	1	03/27/23 23:42	03/27/23 23:42	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2030988	1	03/28/23 03:59	03/28/23 03:59	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG2031815	1	03/30/23 08:38	03/30/23 18:38	MWS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2031044	1	03/29/23 15:20	03/30/23 01:56	DSH	Mt. Juliet, TN

WW-EAST L1598018-14 GW

Collected by: SU / HMI Team
Collected date/time: 03/23/23 09:05
Received date/time: 03/24/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2030626	1	03/27/23 17:22	03/27/23 22:55	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2030702	1	03/28/23 09:56	03/28/23 09:56	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2029708	1	03/25/23 03:18	03/25/23 03:18	LBR	Mt. Juliet, TN
Mercury by Method 7470A	WG2030406	1	03/30/23 09:59	03/31/23 11:21	SRT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2029742	1	03/26/23 09:51	03/27/23 17:11	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2029747	1	03/28/23 07:13	03/29/23 00:35	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2030927	1	03/28/23 00:04	03/28/23 00:04	ADM	Mt. Juliet, TN

WW-EAST L1598018-14 GW

Collected by: SU / HMI Team
Collected date/time: 03/23/23 09:05
Received date/time: 03/24/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2030988	1	03/28/23 04:20	03/28/23 04:20	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG2031815	1	03/30/23 08:38	03/30/23 18:58	MWS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2031044	1	03/29/23 15:20	03/30/23 02:17	DSH	Mt. Juliet, TN

DUP-01 L1598018-15 GW

Collected by: SU / HMI Team
Collected date/time: 03/23/23 12:00
Received date/time: 03/24/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2030626	1	03/27/23 17:22	03/27/23 22:55	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2030702	1	03/28/23 10:18	03/28/23 10:18	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2029708	1	03/25/23 03:31	03/25/23 03:31	LBR	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2029708	10	03/25/23 09:19	03/25/23 09:19	LBR	Mt. Juliet, TN
Mercury by Method 7470A	WG2030406	1	03/30/23 09:59	03/31/23 11:27	SRT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2031073	1	03/28/23 10:06	03/28/23 18:57	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2029747	1	03/28/23 07:13	03/29/23 00:38	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2030927	1	03/28/23 00:25	03/28/23 00:25	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2030988	1	03/28/23 04:41	03/28/23 04:41	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG2031815	1	03/30/23 08:38	03/30/23 19:19	MWS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2031044	1	03/29/23 15:20	03/30/23 02:39	DSH	Mt. Juliet, TN

DUP-02 L1598018-16 GW

Collected by: SU / HMI Team
Collected date/time: 03/23/23 12:40
Received date/time: 03/24/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2030626	1	03/27/23 17:22	03/27/23 22:55	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2030702	1	03/28/23 10:25	03/28/23 10:25	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2029918	1	03/25/23 10:59	03/25/23 10:59	LBR	Mt. Juliet, TN
Mercury by Method 7470A	WG2030406	1	03/30/23 09:59	03/31/23 11:29	SRT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2029742	1	03/26/23 09:51	03/27/23 17:19	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2029747	1	03/28/23 07:13	03/29/23 00:48	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2030927	1	03/28/23 00:47	03/28/23 00:47	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2032183	1	03/29/23 23:32	03/29/23 23:32	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG2031815	1	03/30/23 08:38	03/30/23 19:40	MWS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2031044	1	03/29/23 15:20	03/30/23 06:37	DSH	Mt. Juliet, TN

DUP-03 L1598018-17 GW

Collected by: SU / HMI Team
Collected date/time: 03/23/23 11:00
Received date/time: 03/24/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2030626	1	03/27/23 17:22	03/27/23 22:55	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2030702	1	03/28/23 10:30	03/28/23 10:30	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2029708	1	03/25/23 03:44	03/25/23 03:44	LBR	Mt. Juliet, TN
Mercury by Method 7470A	WG2030406	1	03/30/23 09:59	03/31/23 11:31	SRT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2029742	1	03/26/23 09:51	03/27/23 17:22	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2029747	1	03/28/23 07:13	03/29/23 00:51	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2030927	1	03/28/23 01:08	03/28/23 01:08	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2031008	1	03/28/23 05:14	03/28/23 05:14	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2031174	1	03/28/23 11:32	03/28/23 11:32	JCP	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG2031815	1	03/30/23 08:38	03/30/23 20:01	MWS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2031044	1	03/29/23 15:20	03/30/23 04:05	DSH	Mt. Juliet, TN

SAMPLE SUMMARY

EB-01 L1598018-18 GW

Collected by: SU / HMI Team
Collected date/time: 03/23/23 12:55
Received date/time: 03/24/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2030626	1	03/27/23 17:22	03/27/23 22:55	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2030702	1	03/28/23 10:35	03/28/23 10:35	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2029918	1	03/25/23 11:12	03/25/23 11:12	LBR	Mt. Juliet, TN
Mercury by Method 7470A	WG2030406	1	03/30/23 09:59	03/31/23 11:33	SRT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2029742	1	03/26/23 09:51	03/27/23 17:25	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2029747	1	03/28/23 07:13	03/29/23 00:54	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2030927	1	03/27/23 18:01	03/27/23 18:01	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2031011	1	03/28/23 03:01	03/28/23 03:01	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG2031815	1	03/30/23 08:38	03/30/23 20:22	MWS	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2031044	1	03/29/23 15:20	03/30/23 04:27	DSH	Mt. Juliet, TN

EB-02 L1598018-19 GW

Collected by: SU / HMI Team
Collected date/time: 03/23/23 10:30
Received date/time: 03/24/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2030626	1	03/27/23 17:22	03/27/23 22:55	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2030702	1	03/28/23 10:40	03/28/23 10:40	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2029708	1	03/25/23 03:57	03/25/23 03:57	LBR	Mt. Juliet, TN
Mercury by Method 7470A	WG2030406	1	03/30/23 09:59	03/31/23 11:36	SRT	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2029742	1	03/26/23 09:51	03/27/23 17:28	SPL	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2029747	1	03/28/23 07:13	03/29/23 00:58	SJM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2031011	1	03/28/23 03:23	03/28/23 03:23	JHH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2031044	1	03/29/23 15:20	03/30/23 04:49	DSH	Mt. Juliet, TN

TRIP BLANK-01 L1598018-20 GW

Collected by: SU / HMI Team
Collected date/time: 03/23/23 00:00
Received date/time: 03/24/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2031011	1	03/28/23 02:18	03/28/23 02:18	JHH	Mt. Juliet, TN

TRIP BLANK-02 L1598018-21 GW

Collected by: SU / HMI Team
Collected date/time: 03/23/23 00:00
Received date/time: 03/24/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2031011	1	03/28/23 02:40	03/28/23 02:40	JHH	Mt. Juliet, TN

CASE NARRATIVE

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

Released to Imaging: 4/26/2024 10:49:21 AM

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	67.1		0.379	1.00	1	03/25/2023 00:30	WG2029708
Fluoride	0.873		0.0640	0.150	1	03/25/2023 00:30	WG2029708
Nitrate	3.92		0.0480	0.100	1	03/25/2023 00:30	WG2029708
Nitrite	U		0.0420	0.100	1	03/25/2023 00:30	WG2029708
Sulfate	69.1		0.594	5.00	1	03/25/2023 00:30	WG2029708

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	03/28/2023 18:34	WG2030405

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.167	J	0.0200	0.200	1	03/27/2023 16:46	WG2029742

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		0.0185	0.100	1	03/28/2023 23:58	WG2029747
Arsenic,Dissolved	0.00615		0.000180	0.00200	1	03/28/2023 23:58	WG2029747
Barium,Dissolved	0.163		0.000381	0.00200	1	03/28/2023 23:58	WG2029747
Cadmium,Dissolved	U		0.000150	0.00100	1	03/28/2023 23:58	WG2029747
Chromium,Dissolved	U		0.00124	0.00200	1	03/28/2023 23:58	WG2029747
Copper,Dissolved	0.00436	J	0.00151	0.00500	1	03/28/2023 23:58	WG2029747
Cobalt,Dissolved	U		0.0000596	0.00200	1	03/28/2023 23:58	WG2029747
Iron,Dissolved	U		0.0281	0.100	1	03/28/2023 23:58	WG2029747
Lead,Dissolved	U		0.000849	0.00200	1	03/28/2023 23:58	WG2029747
Manganese,Dissolved	0.00258	J	0.000704	0.00500	1	03/28/2023 23:58	WG2029747
Molybdenum,Dissolved	0.00230	J	0.000348	0.00500	1	03/28/2023 23:58	WG2029747
Nickel,Dissolved	U		0.000816	0.00200	1	03/28/2023 23:58	WG2029747
Selenium,Dissolved	0.00188	J	0.000300	0.00200	1	03/28/2023 23:58	WG2029747
Silver,Dissolved	U		0.0000700	0.00200	1	03/28/2023 23:58	WG2029747
Uranium,Dissolved	0.00196	J	0.0000700	0.0200	1	03/28/2023 23:58	WG2029747
Zinc,Dissolved	0.00442	J	0.00302	0.0250	1	03/28/2023 23:58	WG2029747

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U	J4	0.0113	0.0500	1	03/28/2023 00:55	WG2030988
Benzene	U		0.0000941	0.00100	1	03/28/2023 00:55	WG2030988
Bromodichloromethane	U		0.000136	0.00100	1	03/28/2023 00:55	WG2030988
Bromoform	U		0.000129	0.00100	1	03/28/2023 00:55	WG2030988
Bromomethane	U		0.000605	0.00500	1	03/28/2023 00:55	WG2030988
n-Butylbenzene	U		0.000157	0.00100	1	03/28/2023 00:55	WG2030988
sec-Butylbenzene	U		0.000125	0.00100	1	03/28/2023 00:55	WG2030988
tert-Butylbenzene	U		0.000127	0.00100	1	03/28/2023 00:55	WG2030988
Carbon disulfide	U		0.0000962	0.00100	1	03/28/2023 00:55	WG2030988
Carbon tetrachloride	U		0.000128	0.00100	1	03/28/2023 00:55	WG2030988
Chlorobenzene	U		0.000116	0.00100	1	03/28/2023 00:55	WG2030988
Chlorodibromomethane	U		0.000140	0.00100	1	03/28/2023 00:55	WG2030988
Chloroethane	U		0.000192	0.00500	1	03/28/2023 00:55	WG2030988
Chloroform	0.000620	J	0.000111	0.00500	1	03/28/2023 00:55	WG2030988
Chloromethane	U		0.000960	0.00250	1	03/28/2023 00:55	WG2030988

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
1,2-Dibromoethane	U		0.000126	0.00100	1	03/28/2023 00:55	WG2030988
1,1-Dichloroethane	U		0.000100	0.00100	1	03/28/2023 00:55	WG2030988
1,2-Dichloroethane	U		0.0000819	0.00100	1	03/28/2023 00:55	WG2030988
1,1-Dichloroethene	U		0.000188	0.00100	1	03/28/2023 00:55	WG2030988
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	03/28/2023 00:55	WG2030988
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	03/28/2023 00:55	WG2030988
1,2-Dichloropropane	U		0.000149	0.00100	1	03/28/2023 00:55	WG2030988
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	03/28/2023 00:55	WG2030988
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	03/28/2023 00:55	WG2030988
Ethylbenzene	U		0.000137	0.00100	1	03/28/2023 00:55	WG2030988
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	03/28/2023 00:55	WG2030988
2-Hexanone	U		0.000787	0.0100	1	03/28/2023 00:55	WG2030988
Isopropylbenzene	U		0.000105	0.00100	1	03/28/2023 00:55	WG2030988
p-Isopropyltoluene	U		0.000120	0.00100	1	03/28/2023 00:55	WG2030988
2-Butanone (MEK)	U		0.00119	0.0100	1	03/28/2023 00:55	WG2030988
Methylene Chloride	U		0.000430	0.00500	1	03/28/2023 00:55	WG2030988
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	03/28/2023 00:55	WG2030988
Methyl tert-butyl ether	U		0.000101	0.00100	1	03/28/2023 00:55	WG2030988
Naphthalene	U		0.00100	0.00500	1	03/28/2023 00:55	WG2030988
n-Propylbenzene	U		0.0000993	0.00100	1	03/28/2023 00:55	WG2030988
Styrene	U		0.000118	0.00100	1	03/28/2023 00:55	WG2030988
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	03/28/2023 00:55	WG2030988
Tetrachloroethene	U		0.000300	0.00100	1	03/28/2023 00:55	WG2030988
Toluene	U		0.000278	0.00100	1	03/28/2023 00:55	WG2030988
1,1,1-Trichloroethane	U		0.000149	0.00100	1	03/28/2023 00:55	WG2030988
1,1,2-Trichloroethane	U		0.000158	0.00100	1	03/28/2023 00:55	WG2030988
Trichloroethene	U		0.000190	0.00100	1	03/28/2023 00:55	WG2030988
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	03/28/2023 00:55	WG2030988
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	03/28/2023 00:55	WG2030988
Vinyl chloride	U		0.000234	0.00100	1	03/28/2023 00:55	WG2030988
Xylenes, Total	U		0.000174	0.00300	1	03/28/2023 00:55	WG2030988
(S) Toluene-d8	*113*			*80.0-120*		*03/28/2023 00:55*	WG2030988
(S) 4-Bromofluorobenzene	*83.1*			*77.0-126*		*03/28/2023 00:55*	WG2030988
(S) 1,2-Dichloroethane-d4	*103*			*70.0-130*		*03/28/2023 00:55*	WG2030988

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

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U	J4	0.0113	0.0500	1	03/28/2023 01:16	WG2030988
Benzene	U		0.0000941	0.00100	1	03/28/2023 01:16	WG2030988
Bromodichloromethane	U		0.000136	0.00100	1	03/28/2023 01:16	WG2030988
Bromoform	U		0.000129	0.00100	1	03/28/2023 01:16	WG2030988
Bromomethane	U		0.000605	0.00500	1	03/28/2023 01:16	WG2030988
n-Butylbenzene	U		0.000157	0.00100	1	03/28/2023 01:16	WG2030988
sec-Butylbenzene	U		0.000125	0.00100	1	03/28/2023 01:16	WG2030988
tert-Butylbenzene	U		0.000127	0.00100	1	03/28/2023 01:16	WG2030988
Carbon disulfide	U		0.0000962	0.00100	1	03/28/2023 01:16	WG2030988
Carbon tetrachloride	U		0.000128	0.00100	1	03/28/2023 01:16	WG2030988
Chlorobenzene	U		0.000116	0.00100	1	03/28/2023 01:16	WG2030988
Chlorodibromomethane	U		0.000140	0.00100	1	03/28/2023 01:16	WG2030988
Chloroethane	U		0.000192	0.00500	1	03/28/2023 01:16	WG2030988
Chloroform	0.000171	J	0.000111	0.00500	1	03/28/2023 01:16	WG2030988
Chloromethane	U		0.000960	0.00250	1	03/28/2023 01:16	WG2030988
1,2-Dibromoethane	U		0.000126	0.00100	1	03/28/2023 01:16	WG2030988
1,1-Dichloroethane	U		0.000100	0.00100	1	03/28/2023 01:16	WG2030988
1,2-Dichloroethane	U		0.0000819	0.00100	1	03/28/2023 01:16	WG2030988
1,1-Dichloroethene	U		0.000188	0.00100	1	03/28/2023 01:16	WG2030988
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	03/28/2023 01:16	WG2030988
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	03/28/2023 01:16	WG2030988
1,2-Dichloropropane	U		0.000149	0.00100	1	03/28/2023 01:16	WG2030988
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	03/28/2023 01:16	WG2030988
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	03/28/2023 01:16	WG2030988
Ethylbenzene	U		0.000137	0.00100	1	03/28/2023 01:16	WG2030988
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	03/28/2023 01:16	WG2030988
2-Hexanone	U		0.000787	0.0100	1	03/28/2023 01:16	WG2030988
Isopropylbenzene	U		0.000105	0.00100	1	03/28/2023 01:16	WG2030988
p-Isopropyltoluene	U		0.000120	0.00100	1	03/28/2023 01:16	WG2030988
2-Butanone (MEK)	U		0.00119	0.0100	1	03/28/2023 01:16	WG2030988
Methylene Chloride	U		0.000430	0.00500	1	03/28/2023 01:16	WG2030988
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	03/28/2023 01:16	WG2030988
Methyl tert-butyl ether	U		0.000101	0.00100	1	03/28/2023 01:16	WG2030988
Naphthalene	U		0.00100	0.00500	1	03/28/2023 01:16	WG2030988
n-Propylbenzene	U		0.0000993	0.00100	1	03/28/2023 01:16	WG2030988
Styrene	U		0.000118	0.00100	1	03/28/2023 01:16	WG2030988
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	03/28/2023 01:16	WG2030988
Tetrachloroethene	U		0.000300	0.00100	1	03/28/2023 01:16	WG2030988
Toluene	U		0.000278	0.00100	1	03/28/2023 01:16	WG2030988
1,1,1-Trichloroethane	U		0.000149	0.00100	1	03/28/2023 01:16	WG2030988
1,1,2-Trichloroethane	U		0.000158	0.00100	1	03/28/2023 01:16	WG2030988
Trichloroethene	U		0.000190	0.00100	1	03/28/2023 01:16	WG2030988
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	03/28/2023 01:16	WG2030988
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	03/28/2023 01:16	WG2030988
Vinyl chloride	U		0.000234	0.00100	1	03/28/2023 01:16	WG2030988
Xylenes, Total	U		0.000174	0.00300	1	03/28/2023 01:16	WG2030988
(S) Toluene-d8	*110*			*80.0-120*		*03/28/2023 01:16*	WG2030988
(S) 4-Bromofluorobenzene	*84.9*			*77.0-126*		*03/28/2023 01:16*	WG2030988
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*03/28/2023 01:16*	WG2030988

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Acenaphthene	U		0.0000886	0.00100	1	03/29/2023 23:47	WG2031044
Acenaphthylene	U		0.0000921	0.00100	1	03/29/2023 23:47	WG2031044
Acetophenone	U		0.000208	0.0100	1	03/29/2023 23:47	WG2031044
Anthracene	U		0.0000804	0.00100	1	03/29/2023 23:47	WG2031044
Atrazine	U		0.000255	0.0100	1	03/29/2023 23:47	WG2031044
Benzo(a)anthracene	U		0.000199	0.00100	1	03/29/2023 23:47	WG2031044
Benzaldehyde	U		0.00169	0.0100	1	03/29/2023 23:47	WG2031044
Benzo(b)fluoranthene	U		0.000130	0.00100	1	03/29/2023 23:47	WG2031044
Benzo(k)fluoranthene	U		0.000120	0.00100	1	03/29/2023 23:47	WG2031044
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	03/29/2023 23:47	WG2031044
Benzo(a)pyrene	U		0.0000381	0.000200	1	03/29/2023 23:47	WG2031044
Biphenyl	U		0.000790	0.0100	1	03/29/2023 23:47	WG2031044
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	03/29/2023 23:47	WG2031044
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	03/29/2023 23:47	WG2031044
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	03/29/2023 23:47	WG2031044
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	03/29/2023 23:47	WG2031044
2-Chloronaphthalene	U		0.0000648	0.00100	1	03/29/2023 23:47	WG2031044
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	03/29/2023 23:47	WG2031044
Caprolactam	U		0.000309	0.0100	1	03/29/2023 23:47	WG2031044
Carbazole	U		0.000111	0.0100	1	03/29/2023 23:47	WG2031044
Chrysene	U		0.000130	0.00100	1	03/29/2023 23:47	WG2031044
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	03/29/2023 23:47	WG2031044
Dibenzofuran	U		0.0000970	0.0100	1	03/29/2023 23:47	WG2031044
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	03/29/2023 23:47	WG2031044
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	03/29/2023 23:47	WG2031044
2,6-Dinitrotoluene	U		0.000250	0.0100	1	03/29/2023 23:47	WG2031044
Fluoranthene	U		0.000102	0.00100	1	03/29/2023 23:47	WG2031044
Fluorene	U		0.0000844	0.00100	1	03/29/2023 23:47	WG2031044
Hexachlorobenzene	U		0.0000755	0.00100	1	03/29/2023 23:47	WG2031044
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	03/29/2023 23:47	WG2031044
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	03/29/2023 23:47	WG2031044
Hexachloroethane	U		0.000127	0.0100	1	03/29/2023 23:47	WG2031044
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	03/29/2023 23:47	WG2031044
Isophorone	U		0.000143	0.0100	1	03/29/2023 23:47	WG2031044
1-Methylnaphthalene	U		0.0000790	0.00100	1	03/29/2023 23:47	WG2031044
2-Methylnaphthalene	U		0.000117	0.00100	1	03/29/2023 23:47	WG2031044
Naphthalene	U		0.000159	0.00100	1	03/29/2023 23:47	WG2031044
Nitrobenzene	U		0.000297	0.0100	1	03/29/2023 23:47	WG2031044
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	03/29/2023 23:47	WG2031044
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	03/29/2023 23:47	WG2031044
Phenanthrene	U		0.000112	0.00100	1	03/29/2023 23:47	WG2031044
Benzylbutyl phthalate	U		0.000765	0.00300	1	03/29/2023 23:47	WG2031044
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	03/29/2023 23:47	WG2031044
Di-n-butyl phthalate	U		0.000453	0.00300	1	03/29/2023 23:47	WG2031044
Diethyl phthalate	U		0.000287	0.00300	1	03/29/2023 23:47	WG2031044
Dimethyl phthalate	U		0.000260	0.00300	1	03/29/2023 23:47	WG2031044
Di-n-octyl phthalate	U		0.000932	0.00300	1	03/29/2023 23:47	WG2031044
Pyrene	U		0.000107	0.00100	1	03/29/2023 23:47	WG2031044
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	03/29/2023 23:47	WG2031044
4-Chloro-3-methylphenol	U		0.000131	0.0100	1	03/29/2023 23:47	WG2031044
2-Chlorophenol	U		0.000133	0.0100	1	03/29/2023 23:47	WG2031044
2,4-Dichlorophenol	U		0.000102	0.0100	1	03/29/2023 23:47	WG2031044
2,4-Dimethylphenol	U		0.0000636	0.0100	1	03/29/2023 23:47	WG2031044
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	03/29/2023 23:47	WG2031044
2,4-Dinitrophenol	U		0.00593	0.0100	1	03/29/2023 23:47	WG2031044
2-Nitrophenol	U		0.000117	0.0100	1	03/29/2023 23:47	WG2031044

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
2-Nitroaniline	U		0.000102	0.0100	1	03/29/2023 23:47	WG2031044
2-Methylphenol	U		0.0000929	0.0100	1	03/29/2023 23:47	WG2031044
3&4-Methyl Phenol	U		0.000168	0.0100	1	03/29/2023 23:47	WG2031044
3-Nitroaniline	U		0.0000869	0.0100	1	03/29/2023 23:47	WG2031044
4-Chloroaniline	U		0.000234	0.0100	1	03/29/2023 23:47	WG2031044
4-Nitroaniline	U		0.0000910	0.0100	1	03/29/2023 23:47	WG2031044
4-Nitrophenol	U		0.000143	0.0100	1	03/29/2023 23:47	WG2031044
Pentachlorophenol	U		0.000313	0.0100	1	03/29/2023 23:47	WG2031044
Phenol	U		0.00433	0.0100	1	03/29/2023 23:47	WG2031044
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	03/29/2023 23:47	WG2031044
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	03/29/2023 23:47	WG2031044
(S) 2-Fluorophenol	*37.5*			*10.0-120*		*03/29/2023 23:47*	WG2031044
(S) Phenol-d5	*22.6*			*10.0-120*		*03/29/2023 23:47*	WG2031044
(S) Nitrobenzene-d5	*48.5*			*10.0-127*		*03/29/2023 23:47*	WG2031044
(S) 2-Fluorobiphenyl	*55.2*			*10.0-130*		*03/29/2023 23:47*	WG2031044
(S) 2,4,6-Tribromophenol	*63.2*			*10.0-155*		*03/29/2023 23:47*	WG2031044
(S) p-Terphenyl-d14	*70.4*			*10.0-128*		*03/29/2023 23:47*	WG2031044

MW-3
Collected date/time: 03/23/23 09:25
L1598018

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	27.3		0.379	1.00	1	03/25/2023 00:43	WG2029708
Fluoride	0.276		0.0640	0.150	1	03/25/2023 00:43	WG2029708
Nitrate	1.50		0.0480	0.100	1	03/25/2023 00:43	WG2029708
Nitrite	U		0.0420	0.100	1	03/25/2023 00:43	WG2029708
Sulfate	67.5		0.594	5.00	1	03/25/2023 00:43	WG2029708

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	107		0.379	1.00	1	03/25/2023 00:56	WG2029708
Fluoride	0.722		0.0640	0.150	1	03/25/2023 00:56	WG2029708
Nitrate	5.87		0.0480	0.100	1	03/25/2023 00:56	WG2029708
Nitrite	U		0.0420	0.100	1	03/25/2023 00:56	WG2029708
Sulfate	73.0		0.594	5.00	1	03/25/2023 00:56	WG2029708

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	03/31/2023 11:05	WG2030406

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.197	J	0.0200	0.200	1	03/27/2023 16:49	WG2029742

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		0.0185	0.100	1	03/29/2023 00:08	WG2029747
Arsenic,Dissolved	0.00592		0.000180	0.00200	1	03/29/2023 00:08	WG2029747
Barium,Dissolved	0.188		0.000381	0.00200	1	03/29/2023 00:08	WG2029747
Cadmium,Dissolved	U		0.000150	0.00100	1	03/29/2023 00:08	WG2029747
Chromium,Dissolved	U		0.00124	0.00200	1	03/29/2023 00:08	WG2029747
Copper,Dissolved	0.00500	J	0.00151	0.00500	1	03/29/2023 00:08	WG2029747
Cobalt,Dissolved	0.0000750	J	0.0000596	0.00200	1	03/29/2023 00:08	WG2029747
Iron,Dissolved	U		0.0281	0.100	1	03/29/2023 00:08	WG2029747
Lead,Dissolved	U		0.000849	0.00200	1	03/29/2023 00:08	WG2029747
Manganese,Dissolved	0.00335	J	0.000704	0.00500	1	03/29/2023 00:08	WG2029747
Molybdenum,Dissolved	0.00171	J	0.000348	0.00500	1	03/29/2023 00:08	WG2029747
Nickel,Dissolved	0.00175	J	0.000816	0.00200	1	03/29/2023 00:08	WG2029747
Selenium,Dissolved	0.00298		0.000300	0.00200	1	03/29/2023 00:08	WG2029747
Silver,Dissolved	U		0.0000700	0.00200	1	03/29/2023 00:08	WG2029747
Uranium,Dissolved	0.00343	J	0.0000700	0.0200	1	03/29/2023 00:08	WG2029747
Zinc,Dissolved	0.0755		0.00302	0.0250	1	03/29/2023 00:08	WG2029747

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U	J4	0.0113	0.0500	1	03/28/2023 01:36	WG2030988
Benzene	U		0.0000941	0.00100	1	03/28/2023 01:36	WG2030988
Bromodichloromethane	U		0.000136	0.00100	1	03/28/2023 01:36	WG2030988
Bromoform	U		0.000129	0.00100	1	03/28/2023 01:36	WG2030988
Bromomethane	U		0.000605	0.00500	1	03/28/2023 01:36	WG2030988
n-Butylbenzene	U		0.000157	0.00100	1	03/28/2023 01:36	WG2030988
sec-Butylbenzene	U		0.000125	0.00100	1	03/28/2023 01:36	WG2030988
tert-Butylbenzene	U		0.000127	0.00100	1	03/28/2023 01:36	WG2030988
Carbon disulfide	U		0.0000962	0.00100	1	03/28/2023 01:36	WG2030988
Carbon tetrachloride	U		0.000128	0.00100	1	03/28/2023 01:36	WG2030988
Chlorobenzene	U		0.000116	0.00100	1	03/28/2023 01:36	WG2030988
Chlorodibromomethane	U		0.000140	0.00100	1	03/28/2023 01:36	WG2030988
Chloroethane	U		0.000192	0.00500	1	03/28/2023 01:36	WG2030988
Chloroform	0.000331	J	0.000111	0.00500	1	03/28/2023 01:36	WG2030988
Chloromethane	U		0.000960	0.00250	1	03/28/2023 01:36	WG2030988

Received by OCD: 4/15/2024 1:46:20 PM

MW-6
Collected date/time: 03/23/23 11:25
L1598018

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
1,2-Dibromoethane	U		0.000126	0.00100	1	03/28/2023 01:36	WG2030988
1,1-Dichloroethane	U		0.000100	0.00100	1	03/28/2023 01:36	WG2030988
1,2-Dichloroethane	U		0.0000819	0.00100	1	03/28/2023 01:36	WG2030988
1,1-Dichloroethene	U		0.000188	0.00100	1	03/28/2023 01:36	WG2030988
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	03/28/2023 01:36	WG2030988
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	03/28/2023 01:36	WG2030988
1,2-Dichloropropane	U		0.000149	0.00100	1	03/28/2023 01:36	WG2030988
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	03/28/2023 01:36	WG2030988
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	03/28/2023 01:36	WG2030988
Ethylbenzene	U		0.000137	0.00100	1	03/28/2023 01:36	WG2030988
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	03/28/2023 01:36	WG2030988
2-Hexanone	U		0.000787	0.0100	1	03/28/2023 01:36	WG2030988
Isopropylbenzene	U		0.000105	0.00100	1	03/28/2023 01:36	WG2030988
p-Isopropyltoluene	U		0.000120	0.00100	1	03/28/2023 01:36	WG2030988
2-Butanone (MEK)	U		0.00119	0.0100	1	03/28/2023 01:36	WG2030988
Methylene Chloride	U		0.000430	0.00500	1	03/28/2023 01:36	WG2030988
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	03/28/2023 01:36	WG2030988
Methyl tert-butyl ether	U		0.000101	0.00100	1	03/28/2023 01:36	WG2030988
Naphthalene	U		0.00100	0.00500	1	03/28/2023 01:36	WG2030988
n-Propylbenzene	U		0.0000993	0.00100	1	03/28/2023 01:36	WG2030988
Styrene	U		0.000118	0.00100	1	03/28/2023 01:36	WG2030988
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	03/28/2023 01:36	WG2030988
Tetrachloroethene	U		0.000300	0.00100	1	03/28/2023 01:36	WG2030988
Toluene	U		0.000278	0.00100	1	03/28/2023 01:36	WG2030988
1,1,1-Trichloroethane	U		0.000149	0.00100	1	03/28/2023 01:36	WG2030988
1,1,2-Trichloroethane	U		0.000158	0.00100	1	03/28/2023 01:36	WG2030988
Trichloroethene	U		0.000190	0.00100	1	03/28/2023 01:36	WG2030988
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	03/28/2023 01:36	WG2030988
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	03/28/2023 01:36	WG2030988
Vinyl chloride	U		0.000234	0.00100	1	03/28/2023 01:36	WG2030988
Xylenes, Total	U		0.000174	0.00300	1	03/28/2023 01:36	WG2030988
(S) Toluene-d8	*112*			*80.0-120*		*03/28/2023 01:36*	WG2030988
(S) 4-Bromofluorobenzene	*84.6*			*77.0-126*		*03/28/2023 01:36*	WG2030988
(S) 1,2-Dichloroethane-d4	*106*			*70.0-130*		*03/28/2023 01:36*	WG2030988

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

Released to Imaging: 4/26/2024 10:49:21 AM

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	538		10.0	1	03/27/2023 22:55	WG2030626

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Alkalinity	231		8.45	20.0	1	03/28/2023 08:37	WG2030702

Sample Narrative:

L1598018-05 WG2030702: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	66.6		0.379	1.00	1	03/24/2023 20:07	WG2029428
Fluoride	0.790		0.0640	0.150	1	03/24/2023 20:07	WG2029428
Nitrate	6.98		0.0480	0.100	1	03/24/2023 20:07	WG2029428
Nitrite	U		0.0420	0.100	1	03/24/2023 20:07	WG2029428
Sulfate	79.9		0.594	5.00	1	03/24/2023 20:07	WG2029428

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.000100	0.000200	1	03/31/2023 11:07	WG2030406

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron,Dissolved	0.193	J	0.0200	0.200	1	03/27/2023 16:52	WG2029742

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.0185	0.100	1	03/29/2023 00:12	WG2029747
Arsenic,Dissolved	0.00413		0.000180	0.00200	1	03/29/2023 00:12	WG2029747
Barium,Dissolved	0.121		0.000381	0.00200	1	03/29/2023 00:12	WG2029747
Cadmium,Dissolved	U		0.000150	0.00100	1	03/29/2023 00:12	WG2029747
Chromium,Dissolved	U		0.00124	0.00200	1	03/29/2023 00:12	WG2029747
Copper,Dissolved	0.00365	J	0.00151	0.00500	1	03/29/2023 00:12	WG2029747
Cobalt,Dissolved	0.0000647	J	0.0000596	0.00200	1	03/29/2023 00:12	WG2029747
Iron,Dissolved	U		0.0281	0.100	1	03/29/2023 00:12	WG2029747
Lead,Dissolved	U		0.000849	0.00200	1	03/29/2023 00:12	WG2029747
Manganese,Dissolved	0.00108	J	0.000704	0.00500	1	03/29/2023 00:12	WG2029747
Molybdenum,Dissolved	0.00330	J	0.000348	0.00500	1	03/29/2023 00:12	WG2029747
Nickel,Dissolved	0.00152	J	0.000816	0.00200	1	03/29/2023 00:12	WG2029747
Selenium,Dissolved	0.00296		0.000300	0.00200	1	03/29/2023 00:12	WG2029747
Silver,Dissolved	0.0000741	J	0.0000700	0.00200	1	03/29/2023 00:12	WG2029747
Uranium,Dissolved	0.00246	J	0.0000700	0.0200	1	03/29/2023 00:12	WG2029747
Zinc,Dissolved	0.0149	J	0.00302	0.0250	1	03/29/2023 00:12	WG2029747

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Acetone	U	J4	0.0113	0.0500	1	03/28/2023 01:56	WG2030988
Benzene	U		0.0000941	0.00100	1	03/28/2023 01:56	WG2030988
Bromodichloromethane	U		0.000136	0.00100	1	03/28/2023 01:56	WG2030988
Bromoform	U		0.000129	0.00100	1	03/28/2023 01:56	WG2030988
Bromomethane	U		0.000605	0.00500	1	03/28/2023 01:56	WG2030988
n-Butylbenzene	U		0.000157	0.00100	1	03/28/2023 01:56	WG2030988
sec-Butylbenzene	U		0.000125	0.00100	1	03/28/2023 01:56	WG2030988
tert-Butylbenzene	U		0.000127	0.00100	1	03/28/2023 01:56	WG2030988
Carbon disulfide	U		0.0000962	0.00100	1	03/28/2023 01:56	WG2030988
Carbon tetrachloride	U		0.000128	0.00100	1	03/28/2023 01:56	WG2030988
Chlorobenzene	U		0.000116	0.00100	1	03/28/2023 01:56	WG2030988
Chlorodibromomethane	U		0.000140	0.00100	1	03/28/2023 01:56	WG2030988
Chloroethane	U		0.000192	0.00500	1	03/28/2023 01:56	WG2030988
Chloroform	U		0.000111	0.00500	1	03/28/2023 01:56	WG2030988
Chloromethane	U		0.000960	0.00250	1	03/28/2023 01:56	WG2030988
1,2-Dibromoethane	U		0.000126	0.00100	1	03/28/2023 01:56	WG2030988
1,1-Dichloroethane	U		0.000100	0.00100	1	03/28/2023 01:56	WG2030988
1,2-Dichloroethane	U		0.0000819	0.00100	1	03/28/2023 01:56	WG2030988
1,1-Dichloroethene	U		0.000188	0.00100	1	03/28/2023 01:56	WG2030988
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	03/28/2023 01:56	WG2030988
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	03/28/2023 01:56	WG2030988
1,2-Dichloropropane	U		0.000149	0.00100	1	03/28/2023 01:56	WG2030988
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	03/28/2023 01:56	WG2030988
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	03/28/2023 01:56	WG2030988
Ethylbenzene	U		0.000137	0.00100	1	03/28/2023 01:56	WG2030988
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	03/28/2023 01:56	WG2030988
2-Hexanone	U		0.000787	0.0100	1	03/28/2023 01:56	WG2030988
Isopropylbenzene	U		0.000105	0.00100	1	03/28/2023 01:56	WG2030988
p-Isopropyltoluene	U		0.000120	0.00100	1	03/28/2023 01:56	WG2030988
2-Butanone (MEK)	U		0.00119	0.0100	1	03/28/2023 01:56	WG2030988
Methylene Chloride	U		0.000430	0.00500	1	03/28/2023 01:56	WG2030988
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	03/28/2023 01:56	WG2030988
Methyl tert-butyl ether	U		0.000101	0.00100	1	03/28/2023 01:56	WG2030988
Naphthalene	U		0.00100	0.00500	1	03/28/2023 01:56	WG2030988
n-Propylbenzene	U		0.0000993	0.00100	1	03/28/2023 01:56	WG2030988
Styrene	U		0.000118	0.00100	1	03/28/2023 01:56	WG2030988
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	03/28/2023 01:56	WG2030988
Tetrachloroethene	U		0.000300	0.00100	1	03/28/2023 01:56	WG2030988
Toluene	U		0.000278	0.00100	1	03/28/2023 01:56	WG2030988
1,1,1-Trichloroethane	U		0.000149	0.00100	1	03/28/2023 01:56	WG2030988
1,1,2-Trichloroethane	U		0.000158	0.00100	1	03/28/2023 01:56	WG2030988
Trichloroethene	U		0.000190	0.00100	1	03/28/2023 01:56	WG2030988
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	03/28/2023 01:56	WG2030988
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	03/28/2023 01:56	WG2030988
Vinyl chloride	U		0.000234	0.00100	1	03/28/2023 01:56	WG2030988
Xylenes, Total	U		0.000174	0.00300	1	03/28/2023 01:56	WG2030988
(S) Toluene-d8	*114*			*80.0-120*		*03/28/2023 01:56*	WG2030988
(S) 4-Bromofluorobenzene	*83.8*			*77.0-126*		*03/28/2023 01:56*	WG2030988
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*		*03/28/2023 01:56*	WG2030988

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Acenaphthene	U		0.0000886	0.00100	1	03/30/2023 00:08	WG2031044
Acenaphthylene	U		0.0000921	0.00100	1	03/30/2023 00:08	WG2031044
Acetophenone	U		0.000208	0.0100	1	03/30/2023 00:08	WG2031044
Anthracene	U		0.0000804	0.00100	1	03/30/2023 00:08	WG2031044
Atrazine	U		0.000255	0.0100	1	03/30/2023 00:08	WG2031044
Benzo(a)anthracene	U		0.000199	0.00100	1	03/30/2023 00:08	WG2031044
Benzaldehyde	U		0.00169	0.0100	1	03/30/2023 00:08	WG2031044
Benzo(b)fluoranthene	U		0.000130	0.00100	1	03/30/2023 00:08	WG2031044
Benzo(k)fluoranthene	U		0.000120	0.00100	1	03/30/2023 00:08	WG2031044
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	03/30/2023 00:08	WG2031044
Benzo(a)pyrene	U		0.0000381	0.000200	1	03/30/2023 00:08	WG2031044
Biphenyl	U		0.000790	0.0100	1	03/30/2023 00:08	WG2031044
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	03/30/2023 00:08	WG2031044
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	03/30/2023 00:08	WG2031044
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	03/30/2023 00:08	WG2031044
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	03/30/2023 00:08	WG2031044
2-Chloronaphthalene	U		0.0000648	0.00100	1	03/30/2023 00:08	WG2031044
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	03/30/2023 00:08	WG2031044
Caprolactam	U		0.000309	0.0100	1	03/30/2023 00:08	WG2031044
Carbazole	U		0.000111	0.0100	1	03/30/2023 00:08	WG2031044
Chrysene	U		0.000130	0.00100	1	03/30/2023 00:08	WG2031044
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	03/30/2023 00:08	WG2031044
Dibenzofuran	U		0.0000970	0.0100	1	03/30/2023 00:08	WG2031044
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	03/30/2023 00:08	WG2031044
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	03/30/2023 00:08	WG2031044
2,6-Dinitrotoluene	U		0.000250	0.0100	1	03/30/2023 00:08	WG2031044
Fluoranthene	U		0.000102	0.00100	1	03/30/2023 00:08	WG2031044
Fluorene	U		0.0000844	0.00100	1	03/30/2023 00:08	WG2031044
Hexachlorobenzene	U		0.0000755	0.00100	1	03/30/2023 00:08	WG2031044
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	03/30/2023 00:08	WG2031044
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	03/30/2023 00:08	WG2031044
Hexachloroethane	U		0.000127	0.0100	1	03/30/2023 00:08	WG2031044
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	03/30/2023 00:08	WG2031044
Isophorone	U		0.000143	0.0100	1	03/30/2023 00:08	WG2031044
1-Methylnaphthalene	U		0.0000790	0.00100	1	03/30/2023 00:08	WG2031044
2-Methylnaphthalene	U		0.000117	0.00100	1	03/30/2023 00:08	WG2031044
Naphthalene	U		0.000159	0.00100	1	03/30/2023 00:08	WG2031044
Nitrobenzene	U		0.000297	0.0100	1	03/30/2023 00:08	WG2031044
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	03/30/2023 00:08	WG2031044
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	03/30/2023 00:08	WG2031044
Phenanthrene	U		0.000112	0.00100	1	03/30/2023 00:08	WG2031044
Benzylbutyl phthalate	U		0.000765	0.00300	1	03/30/2023 00:08	WG2031044
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	03/30/2023 00:08	WG2031044
Di-n-butyl phthalate	U		0.000453	0.00300	1	03/30/2023 00:08	WG2031044
Diethyl phthalate	U		0.000287	0.00300	1	03/30/2023 00:08	WG2031044
Dimethyl phthalate	U		0.000260	0.00300	1	03/30/2023 00:08	WG2031044
Di-n-octyl phthalate	U		0.000932	0.00300	1	03/30/2023 00:08	WG2031044
Pyrene	U		0.000107	0.00100	1	03/30/2023 00:08	WG2031044
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	03/30/2023 00:08	WG2031044
4-Chloro-3-methylphenol	U		0.000131	0.0100	1	03/30/2023 00:08	WG2031044
2-Chlorophenol	U		0.000133	0.0100	1	03/30/2023 00:08	WG2031044
2,4-Dichlorophenol	U		0.000102	0.0100	1	03/30/2023 00:08	WG2031044
2,4-Dimethylphenol	U		0.0000636	0.0100	1	03/30/2023 00:08	WG2031044
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	03/30/2023 00:08	WG2031044
2,4-Dinitrophenol	U		0.00593	0.0100	1	03/30/2023 00:08	WG2031044
2-Nitrophenol	U		0.000117	0.0100	1	03/30/2023 00:08	WG2031044

MW-12R2
Collected date/time: 03/23/23 13:00
L1598018

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
2-Nitroaniline	U		0.000102	0.0100	1	03/30/2023 00:08	WG2031044
2-Methylphenol	U		0.0000929	0.0100	1	03/30/2023 00:08	WG2031044
3&4-Methyl Phenol	U		0.000168	0.0100	1	03/30/2023 00:08	WG2031044
3-Nitroaniline	U		0.0000869	0.0100	1	03/30/2023 00:08	WG2031044
4-Chloroaniline	U		0.000234	0.0100	1	03/30/2023 00:08	WG2031044
4-Nitroaniline	U		0.0000910	0.0100	1	03/30/2023 00:08	WG2031044
4-Nitrophenol	U		0.000143	0.0100	1	03/30/2023 00:08	WG2031044
Pentachlorophenol	U		0.000313	0.0100	1	03/30/2023 00:08	WG2031044
Phenol	U		0.00433	0.0100	1	03/30/2023 00:08	WG2031044
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	03/30/2023 00:08	WG2031044
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	03/30/2023 00:08	WG2031044
(S) 2-Fluorophenol	*25.5*			*10.0-120*		*03/30/2023 00:08*	WG2031044
(S) Phenol-d5	*16.4*			*10.0-120*		*03/30/2023 00:08*	WG2031044
(S) Nitrobenzene-d5	*41.1*			*10.0-127*		*03/30/2023 00:08*	WG2031044
(S) 2-Fluorobiphenyl	*46.4*			*10.0-130*		*03/30/2023 00:08*	WG2031044
(S) 2,4,6-Tribromophenol	*52.8*			*10.0-155*		*03/30/2023 00:08*	WG2031044
(S) p-Terphenyl-d14	*55.4*			*10.0-128*		*03/30/2023 00:08*	WG2031044

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1550		20.0	1	03/27/2023 22:55	WG2030626

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Alkalinity	171		8.45	20.0	1	03/28/2023 08:48	WG2030702

Sample Narrative:

L1598018-06 WG2030702: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	436		3.79	10.0	10	03/25/2023 06:18	WG2029708
Fluoride	0.560		0.0640	0.150	1	03/25/2023 01:09	WG2029708
Nitrate	2.93		0.0480	0.100	1	03/25/2023 01:09	WG2029708
Nitrite	U		0.0420	0.100	1	03/25/2023 01:09	WG2029708
Sulfate	92.5		0.594	5.00	1	03/25/2023 01:09	WG2029708

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.000100	0.000200	1	03/31/2023 11:09	WG2030406

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron,Dissolved	0.192	J	0.0200	0.200	1	03/27/2023 16:55	WG2029742

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.0185	0.100	1	03/29/2023 00:15	WG2029747
Arsenic,Dissolved	0.00281		0.000180	0.00200	1	03/29/2023 00:15	WG2029747
Barium,Dissolved	0.114		0.000381	0.00200	1	03/29/2023 00:15	WG2029747
Cadmium,Dissolved	U		0.000150	0.00100	1	03/29/2023 00:15	WG2029747
Chromium,Dissolved	0.0214		0.00124	0.00200	1	03/29/2023 00:15	WG2029747
Copper,Dissolved	0.00488	J	0.00151	0.00500	1	03/29/2023 00:15	WG2029747
Cobalt,Dissolved	U		0.0000596	0.00200	1	03/29/2023 00:15	WG2029747
Iron,Dissolved	U		0.0281	0.100	1	03/29/2023 00:15	WG2029747
Lead,Dissolved	U		0.000849	0.00200	1	03/29/2023 00:15	WG2029747
Manganese,Dissolved	0.00138	J	0.000704	0.00500	1	03/29/2023 00:15	WG2029747
Molybdenum,Dissolved	0.00169	J	0.000348	0.00500	1	03/29/2023 00:15	WG2029747
Nickel,Dissolved	U		0.000816	0.00200	1	03/29/2023 00:15	WG2029747
Selenium,Dissolved	0.00209		0.000300	0.00200	1	03/29/2023 00:15	WG2029747
Silver,Dissolved	U		0.0000700	0.00200	1	03/29/2023 00:15	WG2029747
Uranium,Dissolved	0.00253	J	0.0000700	0.0200	1	03/29/2023 00:15	WG2029747
Zinc,Dissolved	0.0474		0.00302	0.0250	1	03/29/2023 00:15	WG2029747

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	851		13.3	1	03/27/2023 22:55	WG2030626

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Alkalinity	212		8.45	20.0	1	03/28/2023 09:06	WG2030702

Sample Narrative:

L1598018-07 WG2030702: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	184		0.379	1.00	1	03/25/2023 01:22	WG2029708
Fluoride	0.486		0.0640	0.150	1	03/25/2023 01:22	WG2029708
Nitrate	4.43		0.0480	0.100	1	03/25/2023 01:22	WG2029708
Nitrite	U		0.0420	0.100	1	03/25/2023 01:22	WG2029708
Sulfate	71.0		0.594	5.00	1	03/25/2023 01:22	WG2029708

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.000100	0.000200	1	03/31/2023 11:11	WG2030406

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron,Dissolved	0.155	J	0.0200	0.200	1	03/27/2023 16:58	WG2029742

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	0.543		0.0185	0.100	1	03/29/2023 00:18	WG2029747
Arsenic,Dissolved	0.00367		0.000180	0.00200	1	03/29/2023 00:18	WG2029747
Barium,Dissolved	0.179		0.000381	0.00200	1	03/29/2023 00:18	WG2029747
Cadmium,Dissolved	U		0.000150	0.00100	1	03/29/2023 00:18	WG2029747
Chromium,Dissolved	0.00508		0.00124	0.00200	1	03/29/2023 00:18	WG2029747
Copper,Dissolved	0.00219	J	0.00151	0.00500	1	03/29/2023 00:18	WG2029747
Cobalt,Dissolved	0.000364	J	0.0000596	0.00200	1	03/29/2023 00:18	WG2029747
Iron,Dissolved	0.562		0.0281	0.100	1	03/29/2023 00:18	WG2029747
Lead,Dissolved	0.000878	J	0.000849	0.00200	1	03/29/2023 00:18	WG2029747
Manganese,Dissolved	0.0189		0.000704	0.00500	1	03/29/2023 00:18	WG2029747
Molybdenum,Dissolved	0.00182	J	0.000348	0.00500	1	03/29/2023 00:18	WG2029747
Nickel,Dissolved	0.00194	J	0.000816	0.00200	1	03/29/2023 00:18	WG2029747
Selenium,Dissolved	0.00124	J	0.000300	0.00200	1	03/29/2023 00:18	WG2029747
Silver,Dissolved	U		0.0000700	0.00200	1	03/29/2023 00:18	WG2029747
Uranium,Dissolved	0.00270	J	0.0000700	0.0200	1	03/29/2023 00:18	WG2029747
Zinc,Dissolved	0.00795	J	0.00302	0.0250	1	03/29/2023 00:18	WG2029747

MW-17R
Collected date/time: 03/23/23 08:40
L1598018

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Acetone	U	J4	0.0113	0.0500	1	03/28/2023 02:17	WG2030988
Benzene	U		0.0000941	0.00100	1	03/28/2023 02:17	WG2030988
Bromodichloromethane	U		0.000136	0.00100	1	03/28/2023 02:17	WG2030988
Bromoform	U		0.000129	0.00100	1	03/28/2023 02:17	WG2030988
Bromomethane	U		0.000605	0.00500	1	03/28/2023 02:17	WG2030988
n-Butylbenzene	U		0.000157	0.00100	1	03/28/2023 02:17	WG2030988
sec-Butylbenzene	U		0.000125	0.00100	1	03/28/2023 02:17	WG2030988
tert-Butylbenzene	U		0.000127	0.00100	1	03/28/2023 02:17	WG2030988
Carbon disulfide	U		0.0000962	0.00100	1	03/28/2023 02:17	WG2030988
Carbon tetrachloride	U		0.000128	0.00100	1	03/28/2023 02:17	WG2030988
Chlorobenzene	U		0.000116	0.00100	1	03/28/2023 02:17	WG2030988
Chlorodibromomethane	U		0.000140	0.00100	1	03/28/2023 02:17	WG2030988
Chloroethane	U		0.000192	0.00500	1	03/28/2023 02:17	WG2030988
Chloroform	U		0.000111	0.00500	1	03/28/2023 02:17	WG2030988
Chloromethane	U		0.000960	0.00250	1	03/28/2023 02:17	WG2030988
1,2-Dibromoethane	U		0.000126	0.00100	1	03/28/2023 02:17	WG2030988
1,1-Dichloroethane	U		0.000100	0.00100	1	03/28/2023 02:17	WG2030988
1,2-Dichloroethane	U		0.0000819	0.00100	1	03/28/2023 02:17	WG2030988
1,1-Dichloroethene	U		0.000188	0.00100	1	03/28/2023 02:17	WG2030988
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	03/28/2023 02:17	WG2030988
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	03/28/2023 02:17	WG2030988
1,2-Dichloropropane	U		0.000149	0.00100	1	03/28/2023 02:17	WG2030988
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	03/28/2023 02:17	WG2030988
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	03/28/2023 02:17	WG2030988
Ethylbenzene	U		0.000137	0.00100	1	03/28/2023 02:17	WG2030988
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	03/28/2023 02:17	WG2030988
2-Hexanone	U		0.000787	0.0100	1	03/28/2023 02:17	WG2030988
Isopropylbenzene	U		0.000105	0.00100	1	03/28/2023 02:17	WG2030988
p-Isopropyltoluene	U		0.000120	0.00100	1	03/28/2023 02:17	WG2030988
2-Butanone (MEK)	U		0.00119	0.0100	1	03/28/2023 02:17	WG2030988
Methylene Chloride	U		0.000430	0.00500	1	03/28/2023 02:17	WG2030988
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	03/28/2023 02:17	WG2030988
Methyl tert-butyl ether	U		0.000101	0.00100	1	03/28/2023 02:17	WG2030988
Naphthalene	U		0.00100	0.00500	1	03/28/2023 02:17	WG2030988
n-Propylbenzene	U		0.0000993	0.00100	1	03/28/2023 02:17	WG2030988
Styrene	U		0.000118	0.00100	1	03/28/2023 02:17	WG2030988
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	03/28/2023 02:17	WG2030988
Tetrachloroethene	U		0.000300	0.00100	1	03/28/2023 02:17	WG2030988
Toluene	U		0.000278	0.00100	1	03/28/2023 02:17	WG2030988
1,1,1-Trichloroethane	U		0.000149	0.00100	1	03/28/2023 02:17	WG2030988
1,1,2-Trichloroethane	U		0.000158	0.00100	1	03/28/2023 02:17	WG2030988
Trichloroethene	U		0.000190	0.00100	1	03/28/2023 02:17	WG2030988
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	03/28/2023 02:17	WG2030988
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	03/28/2023 02:17	WG2030988
Vinyl chloride	U		0.000234	0.00100	1	03/28/2023 02:17	WG2030988
Xylenes, Total	U		0.000174	0.00300	1	03/28/2023 02:17	WG2030988
(S) Toluene-d8	*114*			*80.0-120*		*03/28/2023 02:17*	WG2030988
(S) 4-Bromofluorobenzene	*86.1*			*77.0-126*		*03/28/2023 02:17*	WG2030988
(S) 1,2-Dichloroethane-d4	*104*			*70.0-130*		*03/28/2023 02:17*	WG2030988

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000886	0.00100	1	03/30/2023 00:30	WG2031044
Acenaphthylene	U		0.0000921	0.00100	1	03/30/2023 00:30	WG2031044
Acetophenone	U		0.000208	0.0100	1	03/30/2023 00:30	WG2031044
Anthracene	U		0.0000804	0.00100	1	03/30/2023 00:30	WG2031044
Atrazine	U		0.000255	0.0100	1	03/30/2023 00:30	WG2031044
Benzo(a)anthracene	U		0.000199	0.00100	1	03/30/2023 00:30	WG2031044
Benzaldehyde	U		0.00169	0.0100	1	03/30/2023 00:30	WG2031044
Benzo(b)fluoranthene	U		0.000130	0.00100	1	03/30/2023 00:30	WG2031044
Benzo(k)fluoranthene	U		0.000120	0.00100	1	03/30/2023 00:30	WG2031044
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	03/30/2023 00:30	WG2031044
Benzo(a)pyrene	U		0.0000381	0.000200	1	03/30/2023 00:30	WG2031044
Biphenyl	U		0.000790	0.0100	1	03/30/2023 00:30	WG2031044
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	03/30/2023 00:30	WG2031044
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	03/30/2023 00:30	WG2031044
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	03/30/2023 00:30	WG2031044
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	03/30/2023 00:30	WG2031044
2-Chloronaphthalene	U		0.0000648	0.00100	1	03/30/2023 00:30	WG2031044
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	03/30/2023 00:30	WG2031044
Caprolactam	0.000374	J	0.000309	0.0100	1	03/30/2023 00:30	WG2031044
Carbazole	U		0.000111	0.0100	1	03/30/2023 00:30	WG2031044
Chrysene	U		0.000130	0.00100	1	03/30/2023 00:30	WG2031044
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	03/30/2023 00:30	WG2031044
Dibenzofuran	U		0.0000970	0.0100	1	03/30/2023 00:30	WG2031044
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	03/30/2023 00:30	WG2031044
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	03/30/2023 00:30	WG2031044
2,6-Dinitrotoluene	U		0.000250	0.0100	1	03/30/2023 00:30	WG2031044
Fluoranthene	U		0.000102	0.00100	1	03/30/2023 00:30	WG2031044
Fluorene	U		0.0000844	0.00100	1	03/30/2023 00:30	WG2031044
Hexachlorobenzene	U		0.0000755	0.00100	1	03/30/2023 00:30	WG2031044
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	03/30/2023 00:30	WG2031044
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	03/30/2023 00:30	WG2031044
Hexachloroethane	U		0.000127	0.0100	1	03/30/2023 00:30	WG2031044
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	03/30/2023 00:30	WG2031044
Isophorone	U		0.000143	0.0100	1	03/30/2023 00:30	WG2031044
1-Methylnaphthalene	U		0.0000790	0.00100	1	03/30/2023 00:30	WG2031044
2-Methylnaphthalene	U		0.000117	0.00100	1	03/30/2023 00:30	WG2031044
Naphthalene	U		0.000159	0.00100	1	03/30/2023 00:30	WG2031044
Nitrobenzene	U		0.000297	0.0100	1	03/30/2023 00:30	WG2031044
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	03/30/2023 00:30	WG2031044
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	03/30/2023 00:30	WG2031044
Phenanthrene	U		0.000112	0.00100	1	03/30/2023 00:30	WG2031044
Benzylbutyl phthalate	U		0.000765	0.00300	1	03/30/2023 00:30	WG2031044
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	03/30/2023 00:30	WG2031044
Di-n-butyl phthalate	U		0.000453	0.00300	1	03/30/2023 00:30	WG2031044
Diethyl phthalate	0.00122	J	0.000287	0.00300	1	03/30/2023 00:30	WG2031044
Dimethyl phthalate	U		0.000260	0.00300	1	03/30/2023 00:30	WG2031044
Di-n-octyl phthalate	U		0.000932	0.00300	1	03/30/2023 00:30	WG2031044
Pyrene	U		0.000107	0.00100	1	03/30/2023 00:30	WG2031044
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	03/30/2023 00:30	WG2031044
4-Chloro-3-methylphenol	U		0.000131	0.0100	1	03/30/2023 00:30	WG2031044
2-Chlorophenol	U		0.000133	0.0100	1	03/30/2023 00:30	WG2031044
2,4-Dichlorophenol	U		0.000102	0.0100	1	03/30/2023 00:30	WG2031044
2,4-Dimethylphenol	U		0.0000636	0.0100	1	03/30/2023 00:30	WG2031044
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	03/30/2023 00:30	WG2031044
2,4-Dinitrophenol	U		0.00593	0.0100	1	03/30/2023 00:30	WG2031044
2-Nitrophenol	U		0.000117	0.0100	1	03/30/2023 00:30	WG2031044

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
2-Nitroaniline	U		0.000102	0.0100	1	03/30/2023 00:30	WG2031044
2-Methylphenol	U		0.0000929	0.0100	1	03/30/2023 00:30	WG2031044
3&4-Methyl Phenol	U		0.000168	0.0100	1	03/30/2023 00:30	WG2031044
3-Nitroaniline	U		0.0000869	0.0100	1	03/30/2023 00:30	WG2031044
4-Chloroaniline	U		0.000234	0.0100	1	03/30/2023 00:30	WG2031044
4-Nitroaniline	U		0.0000910	0.0100	1	03/30/2023 00:30	WG2031044
4-Nitrophenol	U		0.000143	0.0100	1	03/30/2023 00:30	WG2031044
Pentachlorophenol	U		0.000313	0.0100	1	03/30/2023 00:30	WG2031044
Phenol	U		0.00433	0.0100	1	03/30/2023 00:30	WG2031044
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	03/30/2023 00:30	WG2031044
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	03/30/2023 00:30	WG2031044
(S) 2-Fluorophenol	*34.1*			*10.0-120*		*03/30/2023 00:30*	WG2031044
(S) Phenol-d5	*22.1*			*10.0-120*		*03/30/2023 00:30*	WG2031044
(S) Nitrobenzene-d5	*54.4*			*10.0-127*		*03/30/2023 00:30*	WG2031044
(S) 2-Fluorobiphenyl	*60.4*			*10.0-130*		*03/30/2023 00:30*	WG2031044
(S) 2,4,6-Tribromophenol	*69.2*			*10.0-155*		*03/30/2023 00:30*	WG2031044
(S) p-Terphenyl-d14	*64.4*			*10.0-128*		*03/30/2023 00:30*	WG2031044

MW-10R
Collected date/time: 03/23/23 11:25
L1598018

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1290		20.0	1	03/27/2023 22:55	WG2030626

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Alkalinity	195		8.45	20.0	1	03/28/2023 09:13	WG2030702

Sample Narrative:

L1598018-08 WG2030702: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	355		3.79	10.0	10	03/25/2023 06:44	WG2029708
Fluoride	0.484		0.0640	0.150	1	03/25/2023 01:35	WG2029708
Nitrate	2.10		0.0480	0.100	1	03/25/2023 01:35	WG2029708
Nitrite	U		0.0420	0.100	1	03/25/2023 01:35	WG2029708
Sulfate	88.1		0.594	5.00	1	03/25/2023 01:35	WG2029708

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	624		10.0	1	03/27/2023 22:55	WG2030626

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	254		8.45	20.0	1	03/28/2023 09:19	WG2030702

Sample Narrative:

L1598018-09 WG2030702: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	122		0.379	1.00	1	03/25/2023 01:48	WG2029708
Fluoride	0.800		0.0640	0.150	1	03/25/2023 01:48	WG2029708
Nitrate	7.10		0.0480	0.100	1	03/25/2023 01:48	WG2029708
Nitrite	U		0.0420	0.100	1	03/25/2023 01:48	WG2029708
Sulfate	53.1		0.594	5.00	1	03/25/2023 01:48	WG2029708

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	03/31/2023 11:13	WG2030406

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.184	J	0.0200	0.200	1	03/27/2023 17:00	WG2029742

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		0.0185	0.100	1	03/29/2023 00:22	WG2029747
Arsenic,Dissolved	0.00410		0.000180	0.00200	1	03/29/2023 00:22	WG2029747
Barium,Dissolved	0.112		0.000381	0.00200	1	03/29/2023 00:22	WG2029747
Cadmium,Dissolved	0.000286	J	0.000150	0.00100	1	03/29/2023 00:22	WG2029747
Chromium,Dissolved	0.0314		0.00124	0.00200	1	03/29/2023 00:22	WG2029747
Copper,Dissolved	0.00529		0.00151	0.00500	1	03/29/2023 00:22	WG2029747
Cobalt,Dissolved	0.000135	J	0.0000596	0.00200	1	03/29/2023 00:22	WG2029747
Iron,Dissolved	U		0.0281	0.100	1	03/29/2023 00:22	WG2029747
Lead,Dissolved	U		0.000849	0.00200	1	03/29/2023 00:22	WG2029747
Manganese,Dissolved	0.0164		0.000704	0.00500	1	03/29/2023 00:22	WG2029747
Molybdenum,Dissolved	0.00202	J	0.000348	0.00500	1	03/29/2023 00:22	WG2029747
Nickel,Dissolved	0.00238		0.000816	0.00200	1	03/29/2023 00:22	WG2029747
Selenium,Dissolved	0.00196	J	0.000300	0.00200	1	03/29/2023 00:22	WG2029747
Silver,Dissolved	U		0.0000700	0.00200	1	03/29/2023 00:22	WG2029747
Uranium,Dissolved	0.00209	J	0.0000700	0.0200	1	03/29/2023 00:22	WG2029747
Zinc,Dissolved	0.0156	J	0.00302	0.0250	1	03/29/2023 00:22	WG2029747

Received by OCD: 4/15/2024 1:46:20 PM

MW-30
Collected date/time: 03/23/23 10:15
L1598018

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Acetone	U	J4	0.0113	0.0500	1	03/28/2023 02:37	WG2030988
Benzene	U		0.0000941	0.00100	1	03/28/2023 02:37	WG2030988
Bromodichloromethane	0.00832		0.000136	0.00100	1	03/28/2023 02:37	WG2030988
Bromoform	U		0.000129	0.00100	1	03/28/2023 02:37	WG2030988
Bromomethane	U		0.000605	0.00500	1	03/28/2023 02:37	WG2030988
n-Butylbenzene	U		0.000157	0.00100	1	03/28/2023 02:37	WG2030988
sec-Butylbenzene	U		0.000125	0.00100	1	03/28/2023 02:37	WG2030988
tert-Butylbenzene	U		0.000127	0.00100	1	03/28/2023 02:37	WG2030988
Carbon disulfide	U		0.0000962	0.00100	1	03/28/2023 02:37	WG2030988
Carbon tetrachloride	0.000807	J	0.000128	0.00100	1	03/28/2023 02:37	WG2030988
Chlorobenzene	U		0.000116	0.00100	1	03/28/2023 02:37	WG2030988
Chlorodibromomethane	U		0.000140	0.00100	1	03/28/2023 02:37	WG2030988
Chloroethane	U		0.000192	0.00500	1	03/28/2023 02:37	WG2030988
Chloroform	0.0317		0.000111	0.00500	1	03/28/2023 02:37	WG2030988
Chloromethane	U		0.000960	0.00250	1	03/28/2023 02:37	WG2030988
1,2-Dibromoethane	U		0.000126	0.00100	1	03/28/2023 02:37	WG2030988
1,1-Dichloroethane	U		0.000100	0.00100	1	03/28/2023 02:37	WG2030988
1,2-Dichloroethane	U		0.0000819	0.00100	1	03/28/2023 02:37	WG2030988
1,1-Dichloroethene	U		0.000188	0.00100	1	03/28/2023 02:37	WG2030988
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	03/28/2023 02:37	WG2030988
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	03/28/2023 02:37	WG2030988
1,2-Dichloropropane	U		0.000149	0.00100	1	03/28/2023 02:37	WG2030988
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	03/28/2023 02:37	WG2030988
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	03/28/2023 02:37	WG2030988
Ethylbenzene	U		0.000137	0.00100	1	03/28/2023 02:37	WG2030988
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	03/28/2023 02:37	WG2030988
2-Hexanone	U		0.000787	0.0100	1	03/28/2023 02:37	WG2030988
Isopropylbenzene	U		0.000105	0.00100	1	03/28/2023 02:37	WG2030988
p-Isopropyltoluene	U		0.000120	0.00100	1	03/28/2023 02:37	WG2030988
2-Butanone (MEK)	U		0.00119	0.0100	1	03/28/2023 02:37	WG2030988
Methylene Chloride	U		0.000430	0.00500	1	03/28/2023 02:37	WG2030988
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	03/28/2023 02:37	WG2030988
Methyl tert-butyl ether	U		0.000101	0.00100	1	03/28/2023 02:37	WG2030988
Naphthalene	U		0.00100	0.00500	1	03/28/2023 02:37	WG2030988
n-Propylbenzene	U		0.0000993	0.00100	1	03/28/2023 02:37	WG2030988
Styrene	U		0.000118	0.00100	1	03/28/2023 02:37	WG2030988
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	03/28/2023 02:37	WG2030988
Tetrachloroethene	U		0.000300	0.00100	1	03/28/2023 02:37	WG2030988
Toluene	U		0.000278	0.00100	1	03/28/2023 02:37	WG2030988
1,1,1-Trichloroethane	U		0.000149	0.00100	1	03/28/2023 02:37	WG2030988
1,1,2-Trichloroethane	U		0.000158	0.00100	1	03/28/2023 02:37	WG2030988
Trichloroethene	U		0.000190	0.00100	1	03/28/2023 02:37	WG2030988
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	03/28/2023 02:37	WG2030988
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	03/28/2023 02:37	WG2030988
Vinyl chloride	U		0.000234	0.00100	1	03/28/2023 02:37	WG2030988
Xylenes, Total	U		0.000174	0.00300	1	03/28/2023 02:37	WG2030988
(S) Toluene-d8	*110*			*80.0-120*		*03/28/2023 02:37*	WG2030988
(S) 4-Bromofluorobenzene	*84.5*			*77.0-126*		*03/28/2023 02:37*	WG2030988
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*03/28/2023 02:37*	WG2030988

Released to Imaging: 4/26/2024 10:49:21 AM

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000886	0.00100	1	03/30/2023 00:51	WG2031044
Acenaphthylene	U		0.0000921	0.00100	1	03/30/2023 00:51	WG2031044
Acetophenone	U		0.000208	0.0100	1	03/30/2023 00:51	WG2031044
Anthracene	U		0.0000804	0.00100	1	03/30/2023 00:51	WG2031044
Atrazine	U		0.000255	0.0100	1	03/30/2023 00:51	WG2031044
Benzo(a)anthracene	U		0.000199	0.00100	1	03/30/2023 00:51	WG2031044
Benzaldehyde	U		0.00169	0.0100	1	03/30/2023 00:51	WG2031044
Benzo(b)fluoranthene	U		0.000130	0.00100	1	03/30/2023 00:51	WG2031044
Benzo(k)fluoranthene	U		0.000120	0.00100	1	03/30/2023 00:51	WG2031044
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	03/30/2023 00:51	WG2031044
Benzo(a)pyrene	U		0.0000381	0.000200	1	03/30/2023 00:51	WG2031044
Biphenyl	U		0.000790	0.0100	1	03/30/2023 00:51	WG2031044
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	03/30/2023 00:51	WG2031044
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	03/30/2023 00:51	WG2031044
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	03/30/2023 00:51	WG2031044
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	03/30/2023 00:51	WG2031044
2-Chloronaphthalene	U		0.0000648	0.00100	1	03/30/2023 00:51	WG2031044
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	03/30/2023 00:51	WG2031044
Caprolactam	0.00133	J	0.000309	0.0100	1	03/30/2023 00:51	WG2031044
Carbazole	U		0.000111	0.0100	1	03/30/2023 00:51	WG2031044
Chrysene	U		0.000130	0.00100	1	03/30/2023 00:51	WG2031044
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	03/30/2023 00:51	WG2031044
Dibenzofuran	U		0.0000970	0.0100	1	03/30/2023 00:51	WG2031044
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	03/30/2023 00:51	WG2031044
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	03/30/2023 00:51	WG2031044
2,6-Dinitrotoluene	U		0.000250	0.0100	1	03/30/2023 00:51	WG2031044
Fluoranthene	U		0.000102	0.00100	1	03/30/2023 00:51	WG2031044
Fluorene	U		0.0000844	0.00100	1	03/30/2023 00:51	WG2031044
Hexachlorobenzene	U		0.0000755	0.00100	1	03/30/2023 00:51	WG2031044
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	03/30/2023 00:51	WG2031044
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	03/30/2023 00:51	WG2031044
Hexachloroethane	U		0.000127	0.0100	1	03/30/2023 00:51	WG2031044
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	03/30/2023 00:51	WG2031044
Isophorone	U		0.000143	0.0100	1	03/30/2023 00:51	WG2031044
1-Methylnaphthalene	U		0.0000790	0.00100	1	03/30/2023 00:51	WG2031044
2-Methylnaphthalene	U		0.000117	0.00100	1	03/30/2023 00:51	WG2031044
Naphthalene	0.000288	J	0.000159	0.00100	1	03/30/2023 00:51	WG2031044
Nitrobenzene	U		0.000297	0.0100	1	03/30/2023 00:51	WG2031044
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	03/30/2023 00:51	WG2031044
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	03/30/2023 00:51	WG2031044
Phenanthrene	U		0.000112	0.00100	1	03/30/2023 00:51	WG2031044
Benzylbutyl phthalate	U		0.000765	0.00300	1	03/30/2023 00:51	WG2031044
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	03/30/2023 00:51	WG2031044
Di-n-butyl phthalate	U		0.000453	0.00300	1	03/30/2023 00:51	WG2031044
Diethyl phthalate	U		0.000287	0.00300	1	03/30/2023 00:51	WG2031044
Dimethyl phthalate	U		0.000260	0.00300	1	03/30/2023 00:51	WG2031044
Di-n-octyl phthalate	U		0.000932	0.00300	1	03/30/2023 00:51	WG2031044
Pyrene	U		0.000107	0.00100	1	03/30/2023 00:51	WG2031044
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	03/30/2023 00:51	WG2031044
4-Chloro-3-methylphenol	U		0.000131	0.0100	1	03/30/2023 00:51	WG2031044
2-Chlorophenol	U		0.000133	0.0100	1	03/30/2023 00:51	WG2031044
2,4-Dichlorophenol	U		0.000102	0.0100	1	03/30/2023 00:51	WG2031044
2,4-Dimethylphenol	U		0.0000636	0.0100	1	03/30/2023 00:51	WG2031044
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	03/30/2023 00:51	WG2031044
2,4-Dinitrophenol	U		0.00593	0.0100	1	03/30/2023 00:51	WG2031044
2-Nitrophenol	U		0.000117	0.0100	1	03/30/2023 00:51	WG2031044

MW-30
Collected date/time: 03/23/23 10:15
L1598018

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
2-Nitroaniline	U		0.000102	0.0100	1	03/30/2023 00:51	WG2031044
2-Methylphenol	U		0.0000929	0.0100	1	03/30/2023 00:51	WG2031044
3&4-Methyl Phenol	U		0.000168	0.0100	1	03/30/2023 00:51	WG2031044
3-Nitroaniline	U		0.0000869	0.0100	1	03/30/2023 00:51	WG2031044
4-Chloroaniline	U		0.000234	0.0100	1	03/30/2023 00:51	WG2031044
4-Nitroaniline	U		0.0000910	0.0100	1	03/30/2023 00:51	WG2031044
4-Nitrophenol	U		0.000143	0.0100	1	03/30/2023 00:51	WG2031044
Pentachlorophenol	U		0.000313	0.0100	1	03/30/2023 00:51	WG2031044
Phenol	U		0.00433	0.0100	1	03/30/2023 00:51	WG2031044
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	03/30/2023 00:51	WG2031044
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	03/30/2023 00:51	WG2031044
(S) 2-Fluorophenol	*34.7*			*10.0-120*		*03/30/2023 00:51*	WG2031044
(S) Phenol-d5	*22.5*			*10.0-120*		*03/30/2023 00:51*	WG2031044
(S) Nitrobenzene-d5	*54.7*			*10.0-127*		*03/30/2023 00:51*	WG2031044
(S) 2-Fluorobiphenyl	*61.6*			*10.0-130*		*03/30/2023 00:51*	WG2031044
(S) 2,4,6-Tribromophenol	*69.2*			*10.0-155*		*03/30/2023 00:51*	WG2031044
(S) p-Terphenyl-d14	*68.4*			*10.0-128*		*03/30/2023 00:51*	WG2031044

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	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	803		13.3	1	03/27/2023 22:55	WG2030626

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Alkalinity	506		8.45	20.0	1	03/28/2023 09:28	WG2030702

Sample Narrative:

L1598018-10 WG2030702: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	26.7		0.379	1.00	1	03/25/2023 02:00	WG2029708
Fluoride	0.330		0.0640	0.150	1	03/25/2023 02:00	WG2029708
Nitrate	10.3		0.0480	0.100	1	03/25/2023 02:00	WG2029708
Nitrite	0.118		0.0420	0.100	1	03/25/2023 02:00	WG2029708
Sulfate	150		0.594	5.00	1	03/25/2023 02:00	WG2029708

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.000100	0.000200	1	03/31/2023 11:15	WG2030406

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron,Dissolved	0.202		0.0200	0.200	1	03/27/2023 17:03	WG2029742

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.0185	0.100	1	03/29/2023 00:25	WG2029747
Arsenic,Dissolved	0.00281		0.000180	0.00200	1	03/29/2023 00:25	WG2029747
Barium,Dissolved	0.301		0.000381	0.00200	1	03/29/2023 00:25	WG2029747
Cadmium,Dissolved	U		0.000150	0.00100	1	03/29/2023 00:25	WG2029747
Chromium,Dissolved	U		0.00124	0.00200	1	03/29/2023 00:25	WG2029747
Copper,Dissolved	0.00697		0.00151	0.00500	1	03/29/2023 00:25	WG2029747
Cobalt,Dissolved	0.000352	J	0.0000596	0.00200	1	03/29/2023 00:25	WG2029747
Iron,Dissolved	U		0.0281	0.100	1	03/29/2023 00:25	WG2029747
Lead,Dissolved	0.00230		0.000849	0.00200	1	03/29/2023 00:25	WG2029747
Manganese,Dissolved	0.0784		0.000704	0.00500	1	03/29/2023 00:25	WG2029747
Molybdenum,Dissolved	0.00135	J	0.000348	0.00500	1	03/29/2023 00:25	WG2029747
Nickel,Dissolved	0.00222		0.000816	0.00200	1	03/29/2023 00:25	WG2029747
Selenium,Dissolved	0.000645	J	0.000300	0.00200	1	03/29/2023 00:25	WG2029747
Silver,Dissolved	U		0.0000700	0.00200	1	03/29/2023 00:25	WG2029747
Uranium,Dissolved	0.00785	J	0.0000700	0.0200	1	03/29/2023 00:25	WG2029747
Zinc,Dissolved	0.0299		0.00302	0.0250	1	03/29/2023 00:25	WG2029747

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	1	03/27/2023 21:19	WG2030927
(S) a,a,a-Trifluorotoluene(FID)	*110*			*78.0-120*		*03/27/2023 21:19*	WG2030927

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U	J4	0.0113	0.0500	1	03/28/2023 02:58	WG2030988
Benzene	U		0.0000941	0.00100	1	03/28/2023 02:58	WG2030988
Bromodichloromethane	U		0.000136	0.00100	1	03/28/2023 02:58	WG2030988
Bromoform	U		0.000129	0.00100	1	03/28/2023 02:58	WG2030988
Bromomethane	U		0.000605	0.00500	1	03/28/2023 02:58	WG2030988
n-Butylbenzene	U		0.000157	0.00100	1	03/28/2023 02:58	WG2030988
sec-Butylbenzene	U		0.000125	0.00100	1	03/28/2023 02:58	WG2030988
tert-Butylbenzene	U		0.000127	0.00100	1	03/28/2023 02:58	WG2030988
Carbon disulfide	U		0.0000962	0.00100	1	03/28/2023 02:58	WG2030988
Carbon tetrachloride	U		0.000128	0.00100	1	03/28/2023 02:58	WG2030988
Chlorobenzene	U		0.000116	0.00100	1	03/28/2023 02:58	WG2030988
Chlorodibromomethane	U		0.000140	0.00100	1	03/28/2023 02:58	WG2030988
Chloroethane	U		0.000192	0.00500	1	03/28/2023 02:58	WG2030988
Chloroform	U		0.000111	0.00500	1	03/28/2023 02:58	WG2030988
Chloromethane	U		0.000960	0.00250	1	03/28/2023 02:58	WG2030988
1,2-Dibromoethane	U		0.000126	0.00100	1	03/28/2023 02:58	WG2030988
1,1-Dichloroethane	U		0.000100	0.00100	1	03/28/2023 02:58	WG2030988
1,2-Dichloroethane	U		0.0000819	0.00100	1	03/28/2023 02:58	WG2030988
1,1-Dichloroethene	U		0.000188	0.00100	1	03/28/2023 02:58	WG2030988
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	03/28/2023 02:58	WG2030988
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	03/28/2023 02:58	WG2030988
1,2-Dichloropropane	U		0.000149	0.00100	1	03/28/2023 02:58	WG2030988
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	03/28/2023 02:58	WG2030988
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	03/28/2023 02:58	WG2030988
Ethylbenzene	U		0.000137	0.00100	1	03/28/2023 02:58	WG2030988
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	03/28/2023 02:58	WG2030988
2-Hexanone	U		0.000787	0.0100	1	03/28/2023 02:58	WG2030988
Isopropylbenzene	U		0.000105	0.00100	1	03/28/2023 02:58	WG2030988
p-Isopropyltoluene	U		0.000120	0.00100	1	03/28/2023 02:58	WG2030988
2-Butanone (MEK)	U		0.00119	0.0100	1	03/28/2023 02:58	WG2030988
Methylene Chloride	U		0.000430	0.00500	1	03/28/2023 02:58	WG2030988
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	03/28/2023 02:58	WG2030988
Methyl tert-butyl ether	U		0.000101	0.00100	1	03/28/2023 02:58	WG2030988
Naphthalene	U		0.00100	0.00500	1	03/28/2023 02:58	WG2030988
n-Propylbenzene	U		0.0000993	0.00100	1	03/28/2023 02:58	WG2030988
Styrene	U		0.000118	0.00100	1	03/28/2023 02:58	WG2030988
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	03/28/2023 02:58	WG2030988
Tetrachloroethene	U		0.000300	0.00100	1	03/28/2023 02:58	WG2030988
Toluene	U		0.000278	0.00100	1	03/28/2023 02:58	WG2030988
1,1,1-Trichloroethane	U		0.000149	0.00100	1	03/28/2023 02:58	WG2030988
1,1,2-Trichloroethane	U		0.000158	0.00100	1	03/28/2023 02:58	WG2030988
Trichloroethene	U		0.000190	0.00100	1	03/28/2023 02:58	WG2030988
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	03/28/2023 02:58	WG2030988
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	03/28/2023 02:58	WG2030988
Vinyl chloride	U		0.000234	0.00100	1	03/28/2023 02:58	WG2030988
Xylenes, Total	U		0.000174	0.00300	1	03/28/2023 02:58	WG2030988
(S) Toluene-d8	*111*			*80.0-120*		*03/28/2023 02:58*	WG2030988
(S) 4-Bromofluorobenzene	*86.7*			*77.0-126*		*03/28/2023 02:58*	WG2030988
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*		*03/28/2023 02:58*	WG2030988

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

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
TPH (GC/FID) High Fraction	0.546		0.0247	0.100	1	04/01/2023 01:55	WG2031814
(S) o-Terphenyl	*115*			*31.0-160*		*04/01/2023 01:55*	WG2031814

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Acenaphthene	U		0.0000886	0.00100	1	03/30/2023 01:13	WG2031044
Acenaphthylene	U		0.0000921	0.00100	1	03/30/2023 01:13	WG2031044
Acetophenone	U		0.000208	0.0100	1	03/30/2023 01:13	WG2031044
Anthracene	U		0.0000804	0.00100	1	03/30/2023 01:13	WG2031044
Atrazine	U		0.000255	0.0100	1	03/30/2023 01:13	WG2031044
Benzo(a)anthracene	U		0.000199	0.00100	1	03/30/2023 01:13	WG2031044
Benzaldehyde	U		0.00169	0.0100	1	03/30/2023 01:13	WG2031044
Benzo(b)fluoranthene	U		0.000130	0.00100	1	03/30/2023 01:13	WG2031044
Benzo(k)fluoranthene	U		0.000120	0.00100	1	03/30/2023 01:13	WG2031044
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	03/30/2023 01:13	WG2031044
Benzo(a)pyrene	U		0.0000381	0.000200	1	03/30/2023 01:13	WG2031044
Biphenyl	U		0.000790	0.0100	1	03/30/2023 01:13	WG2031044
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	03/30/2023 01:13	WG2031044
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	03/30/2023 01:13	WG2031044
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	03/30/2023 01:13	WG2031044
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	03/30/2023 01:13	WG2031044
2-Chloronaphthalene	U		0.0000648	0.00100	1	03/30/2023 01:13	WG2031044
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	03/30/2023 01:13	WG2031044
Caprolactam	0.000398	J	0.000309	0.0100	1	03/30/2023 01:13	WG2031044
Carbazole	U		0.000111	0.0100	1	03/30/2023 01:13	WG2031044
Chrysene	U		0.000130	0.00100	1	03/30/2023 01:13	WG2031044
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	03/30/2023 01:13	WG2031044
Dibenzofuran	U		0.0000970	0.0100	1	03/30/2023 01:13	WG2031044
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	03/30/2023 01:13	WG2031044
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	03/30/2023 01:13	WG2031044
2,6-Dinitrotoluene	U		0.000250	0.0100	1	03/30/2023 01:13	WG2031044
Fluoranthene	U		0.000102	0.00100	1	03/30/2023 01:13	WG2031044
Fluorene	U		0.0000844	0.00100	1	03/30/2023 01:13	WG2031044
Hexachlorobenzene	U		0.0000755	0.00100	1	03/30/2023 01:13	WG2031044
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	03/30/2023 01:13	WG2031044
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	03/30/2023 01:13	WG2031044
Hexachloroethane	U		0.000127	0.0100	1	03/30/2023 01:13	WG2031044
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	03/30/2023 01:13	WG2031044
Isophorone	U		0.000143	0.0100	1	03/30/2023 01:13	WG2031044
1-Methylnaphthalene	U		0.0000790	0.00100	1	03/30/2023 01:13	WG2031044
2-Methylnaphthalene	U		0.000117	0.00100	1	03/30/2023 01:13	WG2031044
Naphthalene	U		0.000159	0.00100	1	03/30/2023 01:13	WG2031044
Nitrobenzene	U		0.000297	0.0100	1	03/30/2023 01:13	WG2031044
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	03/30/2023 01:13	WG2031044
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	03/30/2023 01:13	WG2031044
Phenanthrene	U		0.000112	0.00100	1	03/30/2023 01:13	WG2031044
Benzylbutyl phthalate	U		0.000765	0.00300	1	03/30/2023 01:13	WG2031044
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	03/30/2023 01:13	WG2031044
Di-n-butyl phthalate	0.000598	J	0.000453	0.00300	1	03/30/2023 01:13	WG2031044
Diethyl phthalate	U		0.000287	0.00300	1	03/30/2023 01:13	WG2031044
Dimethyl phthalate	U		0.000260	0.00300	1	03/30/2023 01:13	WG2031044
Di-n-octyl phthalate	U		0.000932	0.00300	1	03/30/2023 01:13	WG2031044
Pyrene	U		0.000107	0.00100	1	03/30/2023 01:13	WG2031044
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	03/30/2023 01:13	WG2031044
4-Chloro-3-methylphenol	U		0.000131	0.0100	1	03/30/2023 01:13	WG2031044

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
2-Chlorophenol	U		0.000133	0.0100	1	03/30/2023 01:13	WG2031044
2,4-Dichlorophenol	U		0.000102	0.0100	1	03/30/2023 01:13	WG2031044
2,4-Dimethylphenol	U		0.0000636	0.0100	1	03/30/2023 01:13	WG2031044
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	03/30/2023 01:13	WG2031044
2,4-Dinitrophenol	U		0.00593	0.0100	1	03/30/2023 01:13	WG2031044
2-Nitrophenol	U		0.000117	0.0100	1	03/30/2023 01:13	WG2031044
2-Nitroaniline	U		0.000102	0.0100	1	03/30/2023 01:13	WG2031044
2-Methylphenol	U		0.0000929	0.0100	1	03/30/2023 01:13	WG2031044
3&4-Methyl Phenol	U		0.000168	0.0100	1	03/30/2023 01:13	WG2031044
3-Nitroaniline	U		0.0000869	0.0100	1	03/30/2023 01:13	WG2031044
4-Chloroaniline	U		0.000234	0.0100	1	03/30/2023 01:13	WG2031044
4-Nitroaniline	U		0.0000910	0.0100	1	03/30/2023 01:13	WG2031044
4-Nitrophenol	U		0.000143	0.0100	1	03/30/2023 01:13	WG2031044
Pentachlorophenol	U		0.000313	0.0100	1	03/30/2023 01:13	WG2031044
Phenol	U		0.00433	0.0100	1	03/30/2023 01:13	WG2031044
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	03/30/2023 01:13	WG2031044
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	03/30/2023 01:13	WG2031044
(S) 2-Fluorophenol	*30.5*			*10.0-120*		*03/30/2023 01:13*	WG2031044
(S) Phenol-d5	*20.2*			*10.0-120*		*03/30/2023 01:13*	WG2031044
(S) Nitrobenzene-d5	*48.1*			*10.0-127*		*03/30/2023 01:13*	WG2031044
(S) 2-Fluorobiphenyl	*53.7*			*10.0-130*		*03/30/2023 01:13*	WG2031044
(S) 2,4,6-Tribromophenol	*59.9*			*10.0-155*		*03/30/2023 01:13*	WG2031044
(S) p-Terphenyl-d14	*64.3*			*10.0-128*		*03/30/2023 01:13*	WG2031044

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1170		25.0	1	03/27/2023 22:55	WG2030626

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Alkalinity	1030		8.45	20.0	1	03/28/2023 09:34	WG2030702

Sample Narrative:

L1598018-11 WG2030702: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	82.6		0.379	1.00	1	03/25/2023 02:39	WG2029708
Fluoride	0.690		0.0640	0.150	1	03/25/2023 02:39	WG2029708
Nitrate	0.0687	B J P1	0.0480	0.100	1	03/25/2023 02:39	WG2029708
Nitrite	U		0.0420	0.100	1	03/25/2023 02:39	WG2029708
Sulfate	6.12		0.594	5.00	1	03/25/2023 02:39	WG2029708

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.000100	0.000200	1	03/31/2023 09:04	WG2030407

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron,Dissolved	0.163	J	0.0200	0.200	1	03/27/2023 16:20	WG2029742

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.0185	0.100	1	03/28/2023 23:36	WG2029747
Arsenic,Dissolved	0.00603		0.000180	0.00200	1	03/28/2023 23:36	WG2029747
Barium,Dissolved	0.557		0.000381	0.00200	1	03/28/2023 23:36	WG2029747
Cadmium,Dissolved	U		0.000150	0.00100	1	03/28/2023 23:36	WG2029747
Chromium,Dissolved	U		0.00124	0.00200	1	03/28/2023 23:36	WG2029747
Copper,Dissolved	0.00513		0.00151	0.00500	1	03/28/2023 23:36	WG2029747
Cobalt,Dissolved	0.0000794	J	0.0000596	0.00200	1	03/28/2023 23:36	WG2029747
Iron,Dissolved	1.98		0.0281	0.100	1	03/28/2023 23:36	WG2029747
Lead,Dissolved	U		0.000849	0.00200	1	03/28/2023 23:36	WG2029747
Manganese,Dissolved	0.992		0.000704	0.00500	1	03/28/2023 23:36	WG2029747
Molybdenum,Dissolved	0.00220	J	0.000348	0.00500	1	03/28/2023 23:36	WG2029747
Nickel,Dissolved	0.00174	J	0.000816	0.00200	1	03/28/2023 23:36	WG2029747
Selenium,Dissolved	U		0.000300	0.00200	1	03/28/2023 23:36	WG2029747
Silver,Dissolved	U		0.0000700	0.00200	1	03/28/2023 23:36	WG2029747
Uranium,Dissolved	0.0485		0.0000700	0.0200	1	03/28/2023 23:36	WG2029747
Zinc,Dissolved	0.00319	J	0.00302	0.0250	1	03/28/2023 23:36	WG2029747

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	1	03/27/2023 22:26	WG2030927
(S) a,a,a-Trifluorotoluene(FID)	*105*			*78.0-120*		*03/27/2023 22:26*	WG2030927

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U	J4 J5	0.0113	0.0500	1	03/28/2023 03:18	WG2030988
Benzene	0.000285	J	0.0000941	0.00100	1	03/28/2023 03:18	WG2030988
Bromodichloromethane	U		0.000136	0.00100	1	03/28/2023 03:18	WG2030988
Bromoform	U		0.000129	0.00100	1	03/28/2023 03:18	WG2030988
Bromomethane	U		0.000605	0.00500	1	03/28/2023 03:18	WG2030988
n-Butylbenzene	U		0.000157	0.00100	1	03/28/2023 03:18	WG2030988
sec-Butylbenzene	U		0.000125	0.00100	1	03/28/2023 03:18	WG2030988
tert-Butylbenzene	0.000128	J	0.000127	0.00100	1	03/28/2023 03:18	WG2030988
Carbon disulfide	U		0.0000962	0.00100	1	03/28/2023 03:18	WG2030988
Carbon tetrachloride	U		0.000128	0.00100	1	03/28/2023 03:18	WG2030988
Chlorobenzene	U		0.000116	0.00100	1	03/28/2023 03:18	WG2030988
Chlorodibromomethane	U		0.000140	0.00100	1	03/28/2023 03:18	WG2030988
Chloroethane	U		0.000192	0.00500	1	03/28/2023 03:18	WG2030988
Chloroform	U		0.000111	0.00500	1	03/28/2023 03:18	WG2030988
Chloromethane	U		0.000960	0.00250	1	03/28/2023 03:18	WG2030988
1,2-Dibromoethane	U		0.000126	0.00100	1	03/28/2023 03:18	WG2030988
1,1-Dichloroethane	U		0.000100	0.00100	1	03/28/2023 03:18	WG2030988
1,2-Dichloroethane	U		0.0000819	0.00100	1	03/28/2023 03:18	WG2030988
1,1-Dichloroethene	U		0.000188	0.00100	1	03/28/2023 03:18	WG2030988
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	03/28/2023 03:18	WG2030988
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	03/28/2023 03:18	WG2030988
1,2-Dichloropropane	U		0.000149	0.00100	1	03/28/2023 03:18	WG2030988
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	03/28/2023 03:18	WG2030988
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	03/28/2023 03:18	WG2030988
Ethylbenzene	U		0.000137	0.00100	1	03/28/2023 03:18	WG2030988
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	03/28/2023 03:18	WG2030988
2-Hexanone	U		0.000787	0.0100	1	03/28/2023 03:18	WG2030988
Isopropylbenzene	U		0.000105	0.00100	1	03/28/2023 03:18	WG2030988
p-Isopropyltoluene	U		0.000120	0.00100	1	03/28/2023 03:18	WG2030988
2-Butanone (MEK)	U	J5	0.00119	0.0100	1	03/28/2023 03:18	WG2030988
Methylene Chloride	U		0.000430	0.00500	1	03/28/2023 03:18	WG2030988
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	03/28/2023 03:18	WG2030988
Methyl tert-butyl ether	U		0.000101	0.00100	1	03/28/2023 03:18	WG2030988
Naphthalene	U		0.00100	0.00500	1	03/28/2023 03:18	WG2030988
n-Propylbenzene	U		0.0000993	0.00100	1	03/28/2023 03:18	WG2030988
Styrene	U		0.000118	0.00100	1	03/28/2023 03:18	WG2030988
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	03/28/2023 03:18	WG2030988
Tetrachloroethene	U		0.000300	0.00100	1	03/28/2023 03:18	WG2030988
Toluene	U		0.000278	0.00100	1	03/28/2023 03:18	WG2030988
1,1,1-Trichloroethane	U		0.000149	0.00100	1	03/28/2023 03:18	WG2030988
1,1,2-Trichloroethane	U		0.000158	0.00100	1	03/28/2023 03:18	WG2030988
Trichloroethene	U		0.000190	0.00100	1	03/28/2023 03:18	WG2030988
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	03/28/2023 03:18	WG2030988
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	03/28/2023 03:18	WG2030988
Vinyl chloride	U		0.000234	0.00100	1	03/28/2023 03:18	WG2030988
Xylenes, Total	U		0.000174	0.00300	1	03/28/2023 03:18	WG2030988
(S) Toluene-d8	*113*			*80.0-120*		*03/28/2023 03:18*	WG2030988
(S) 4-Bromofluorobenzene	*86.6*			*77.0-126*		*03/28/2023 03:18*	WG2030988
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*03/28/2023 03:18*	WG2030988

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

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	0.198		0.0247	0.100	1	03/30/2023 17:14	WG2031815
(S) o-Terphenyl	*115*			*31.0-160*		*03/30/2023 17:14*	WG2031815

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000886	0.00100	1	04/04/2023 02:12	WG2034988
Acenaphthylene	U		0.0000921	0.00100	1	04/04/2023 02:12	WG2034988
Acetophenone	U		0.000208	0.0100	1	04/04/2023 02:12	WG2034988
Anthracene	U		0.0000804	0.00100	1	04/04/2023 02:12	WG2034988
Atrazine	U		0.000255	0.0100	1	04/04/2023 02:12	WG2034988
Benzo(a)anthracene	U		0.000199	0.00100	1	04/04/2023 02:12	WG2034988
Benzaldehyde	U		0.00169	0.0100	1	04/04/2023 02:12	WG2034988
Benzo(b)fluoranthene	U		0.000130	0.00100	1	04/04/2023 02:12	WG2034988
Benzo(k)fluoranthene	U		0.000120	0.00100	1	04/04/2023 02:12	WG2034988
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	04/04/2023 02:12	WG2034988
Benzo(a)pyrene	U		0.0000381	0.000200	1	04/04/2023 02:12	WG2034988
Biphenyl	U		0.000790	0.0100	1	04/04/2023 02:12	WG2034988
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	04/04/2023 02:12	WG2034988
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	04/04/2023 02:12	WG2034988
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	04/04/2023 02:12	WG2034988
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	04/04/2023 02:12	WG2034988
2-Chloronaphthalene	U		0.0000648	0.00100	1	04/04/2023 02:12	WG2034988
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	04/04/2023 02:12	WG2034988
Caprolactam	U		0.000309	0.0100	1	04/04/2023 02:12	WG2034988
Carbazole	U		0.000111	0.0100	1	04/04/2023 02:12	WG2034988
Chrysene	U		0.000130	0.00100	1	04/04/2023 02:12	WG2034988
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	04/04/2023 02:12	WG2034988
Dibenzofuran	U		0.0000970	0.0100	1	04/04/2023 02:12	WG2034988
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	04/04/2023 02:12	WG2034988
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	04/04/2023 02:12	WG2034988
2,6-Dinitrotoluene	U		0.000250	0.0100	1	04/04/2023 02:12	WG2034988
Fluoranthene	U		0.000102	0.00100	1	04/04/2023 02:12	WG2034988
Fluorene	U		0.0000844	0.00100	1	04/04/2023 02:12	WG2034988
Hexachlorobenzene	U		0.0000755	0.00100	1	04/04/2023 02:12	WG2034988
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	04/04/2023 02:12	WG2034988
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	04/04/2023 02:12	WG2034988
Hexachloroethane	U		0.000127	0.0100	1	04/04/2023 02:12	WG2034988
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	04/04/2023 02:12	WG2034988
Isophorone	U		0.000143	0.0100	1	04/04/2023 02:12	WG2034988
1-Methylnaphthalene	U		0.0000790	0.00100	1	04/04/2023 02:12	WG2034988
2-Methylnaphthalene	U		0.000117	0.00100	1	04/04/2023 02:12	WG2034988
Naphthalene	U		0.000159	0.00100	1	04/04/2023 02:12	WG2034988
Nitrobenzene	U		0.000297	0.0100	1	04/04/2023 02:12	WG2034988
n-Nitrosodiphenylamine	U	J4	0.00237	0.0100	1	04/04/2023 02:12	WG2034988
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	04/04/2023 02:12	WG2034988
Phenanthrene	U		0.000112	0.00100	1	04/04/2023 02:12	WG2034988
Benzylbutyl phthalate	U		0.000765	0.00300	1	04/04/2023 02:12	WG2034988
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	04/04/2023 02:12	WG2034988
Di-n-butyl phthalate	0.000859	B J	0.000453	0.00300	1	04/04/2023 02:12	WG2034988
Diethyl phthalate	U		0.000287	0.00300	1	04/04/2023 02:12	WG2034988
Dimethyl phthalate	U		0.000260	0.00300	1	04/04/2023 02:12	WG2034988
Di-n-octyl phthalate	U		0.000932	0.00300	1	04/04/2023 02:12	WG2034988
Pyrene	U		0.000107	0.00100	1	04/04/2023 02:12	WG2034988
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	04/04/2023 02:12	WG2034988
4-Chloro-3-methylphenol	U		0.000131	0.0100	1	04/04/2023 02:12	WG2034988

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
2-Chlorophenol	U		0.000133	0.0100	1	04/04/2023 02:12	WG2034988
2,4-Dichlorophenol	U		0.000102	0.0100	1	04/04/2023 02:12	WG2034988
2,4-Dimethylphenol	U	J4	0.0000636	0.0100	1	04/04/2023 02:12	WG2034988
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	04/04/2023 02:12	WG2034988
2,4-Dinitrophenol	U		0.00593	0.0100	1	04/04/2023 02:12	WG2034988
2-Nitrophenol	U		0.000117	0.0100	1	04/04/2023 02:12	WG2034988
2-Nitroaniline	U		0.000102	0.0100	1	04/04/2023 02:12	WG2034988
2-Methylphenol	U		0.0000929	0.0100	1	04/04/2023 02:12	WG2034988
3&4-Methyl Phenol	U		0.000168	0.0100	1	04/04/2023 02:12	WG2034988
3-Nitroaniline	U		0.0000869	0.0100	1	04/04/2023 02:12	WG2034988
4-Chloroaniline	U		0.000234	0.0100	1	04/04/2023 02:12	WG2034988
4-Nitroaniline	U		0.0000910	0.0100	1	04/04/2023 02:12	WG2034988
4-Nitrophenol	U		0.000143	0.0100	1	04/04/2023 02:12	WG2034988
Pentachlorophenol	U		0.000313	0.0100	1	04/04/2023 02:12	WG2034988
Phenol	U		0.00433	0.0100	1	04/04/2023 02:12	WG2034988
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	04/04/2023 02:12	WG2034988
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	04/04/2023 02:12	WG2034988
(S) 2-Fluorophenol	*31.3*			*10.0-120*		*04/04/2023 02:12*	WG2034988
(S) Phenol-d5	*20.2*			*10.0-120*		*04/04/2023 02:12*	WG2034988
(S) Nitrobenzene-d5	*53.3*			*10.0-127*		*04/04/2023 02:12*	WG2034988
(S) 2-Fluorobiphenyl	*55.9*			*10.0-130*		*04/04/2023 02:12*	WG2034988
(S) 2,4,6-Tribromophenol	*68.4*			*10.0-155*		*04/04/2023 02:12*	WG2034988
(S) p-Terphenyl-d14	*63.4*			*10.0-128*		*04/04/2023 02:12*	WG2034988

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	549		10.0	1	03/27/2023 22:55	WG2030626

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Alkalinity	183		8.45	20.0	1	03/28/2023 09:42	WG2030702

Sample Narrative:

L1598018-12 WG2030702: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	116		0.379	1.00	1	03/25/2023 02:52	WG2029708
Fluoride	0.830		0.0640	0.150	1	03/25/2023 02:52	WG2029708
Nitrate	2.76		0.0480	0.100	1	03/25/2023 02:52	WG2029708
Nitrite	U		0.0420	0.100	1	03/25/2023 02:52	WG2029708
Sulfate	76.4		0.594	5.00	1	03/25/2023 02:52	WG2029708

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.000100	0.000200	1	03/31/2023 11:17	WG2030406

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron,Dissolved	0.142	J	0.0200	0.200	1	03/27/2023 17:06	WG2029742

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.0185	0.100	1	03/29/2023 00:28	WG2029747
Arsenic,Dissolved	0.00586		0.000180	0.00200	1	03/29/2023 00:28	WG2029747
Barium,Dissolved	0.108		0.000381	0.00200	1	03/29/2023 00:28	WG2029747
Cadmium,Dissolved	U		0.000150	0.00100	1	03/29/2023 00:28	WG2029747
Chromium,Dissolved	0.00244		0.00124	0.00200	1	03/29/2023 00:28	WG2029747
Copper,Dissolved	0.00330	J	0.00151	0.00500	1	03/29/2023 00:28	WG2029747
Cobalt,Dissolved	U		0.0000596	0.00200	1	03/29/2023 00:28	WG2029747
Iron,Dissolved	U		0.0281	0.100	1	03/29/2023 00:28	WG2029747
Lead,Dissolved	U		0.000849	0.00200	1	03/29/2023 00:28	WG2029747
Manganese,Dissolved	0.00157	J	0.000704	0.00500	1	03/29/2023 00:28	WG2029747
Molybdenum,Dissolved	0.00262	J	0.000348	0.00500	1	03/29/2023 00:28	WG2029747
Nickel,Dissolved	U		0.000816	0.00200	1	03/29/2023 00:28	WG2029747
Selenium,Dissolved	0.00346		0.000300	0.00200	1	03/29/2023 00:28	WG2029747
Silver,Dissolved	U		0.0000700	0.00200	1	03/29/2023 00:28	WG2029747
Uranium,Dissolved	0.00174	J	0.0000700	0.0200	1	03/29/2023 00:28	WG2029747
Zinc,Dissolved	0.00994	J	0.00302	0.0250	1	03/29/2023 00:28	WG2029747

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	1	03/27/2023 23:21	WG2030927
(S) a,a,a-Trifluorotoluene(FID)	*111*			*78.0-120*		*03/27/2023 23:21*	WG2030927

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U	J4	0.0113	0.0500	1	03/28/2023 03:39	WG2030988
Benzene	U		0.0000941	0.00100	1	03/28/2023 03:39	WG2030988
Bromodichloromethane	U		0.000136	0.00100	1	03/28/2023 03:39	WG2030988
Bromoform	U		0.000129	0.00100	1	03/28/2023 03:39	WG2030988
Bromomethane	U		0.000605	0.00500	1	03/28/2023 03:39	WG2030988
n-Butylbenzene	U		0.000157	0.00100	1	03/28/2023 03:39	WG2030988
sec-Butylbenzene	U		0.000125	0.00100	1	03/28/2023 03:39	WG2030988
tert-Butylbenzene	U		0.000127	0.00100	1	03/28/2023 03:39	WG2030988
Carbon disulfide	U		0.0000962	0.00100	1	03/28/2023 03:39	WG2030988
Carbon tetrachloride	U		0.000128	0.00100	1	03/28/2023 03:39	WG2030988
Chlorobenzene	U		0.000116	0.00100	1	03/28/2023 03:39	WG2030988
Chlorodibromomethane	U		0.000140	0.00100	1	03/28/2023 03:39	WG2030988
Chloroethane	U		0.000192	0.00500	1	03/28/2023 03:39	WG2030988
Chloroform	U		0.000111	0.00500	1	03/28/2023 03:39	WG2030988
Chloromethane	U		0.000960	0.00250	1	03/28/2023 03:39	WG2030988
1,2-Dibromoethane	U		0.000126	0.00100	1	03/28/2023 03:39	WG2030988
1,1-Dichloroethane	U		0.000100	0.00100	1	03/28/2023 03:39	WG2030988
1,2-Dichloroethane	U		0.0000819	0.00100	1	03/28/2023 03:39	WG2030988
1,1-Dichloroethene	U		0.000188	0.00100	1	03/28/2023 03:39	WG2030988
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	03/28/2023 03:39	WG2030988
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	03/28/2023 03:39	WG2030988
1,2-Dichloropropane	U		0.000149	0.00100	1	03/28/2023 03:39	WG2030988
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	03/28/2023 03:39	WG2030988
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	03/28/2023 03:39	WG2030988
Ethylbenzene	U		0.000137	0.00100	1	03/28/2023 03:39	WG2030988
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	03/28/2023 03:39	WG2030988
2-Hexanone	U		0.000787	0.0100	1	03/28/2023 03:39	WG2030988
Isopropylbenzene	U		0.000105	0.00100	1	03/28/2023 03:39	WG2030988
p-Isopropyltoluene	U		0.000120	0.00100	1	03/28/2023 03:39	WG2030988
2-Butanone (MEK)	U		0.00119	0.0100	1	03/28/2023 03:39	WG2030988
Methylene Chloride	U		0.000430	0.00500	1	03/28/2023 03:39	WG2030988
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	03/28/2023 03:39	WG2030988
Methyl tert-butyl ether	U		0.000101	0.00100	1	03/28/2023 03:39	WG2030988
Naphthalene	U		0.00100	0.00500	1	03/28/2023 03:39	WG2030988
n-Propylbenzene	U		0.0000993	0.00100	1	03/28/2023 03:39	WG2030988
Styrene	U		0.000118	0.00100	1	03/28/2023 03:39	WG2030988
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	03/28/2023 03:39	WG2030988
Tetrachloroethene	U		0.000300	0.00100	1	03/28/2023 03:39	WG2030988
Toluene	U		0.000278	0.00100	1	03/28/2023 03:39	WG2030988
1,1,1-Trichloroethane	U		0.000149	0.00100	1	03/28/2023 03:39	WG2030988
1,1,2-Trichloroethane	U		0.000158	0.00100	1	03/28/2023 03:39	WG2030988
Trichloroethene	U		0.000190	0.00100	1	03/28/2023 03:39	WG2030988
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	03/28/2023 03:39	WG2030988
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	03/28/2023 03:39	WG2030988
Vinyl chloride	U		0.000234	0.00100	1	03/28/2023 03:39	WG2030988
Xylenes, Total	U		0.000174	0.00300	1	03/28/2023 03:39	WG2030988
(S) Toluene-d8	*112*			*80.0-120*		*03/28/2023 03:39*	WG2030988
(S) 4-Bromofluorobenzene	*85.2*			*77.0-126*		*03/28/2023 03:39*	WG2030988
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*03/28/2023 03:39*	WG2030988

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	0.0759	J	0.0247	0.100	1	03/30/2023 18:17	WG2031815
(S) o-Terphenyl	*64.7*			*31.0-160*		*03/30/2023 18:17*	WG2031815

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000886	0.00100	1	03/30/2023 01:35	WG2031044
Acenaphthylene	U		0.0000921	0.00100	1	03/30/2023 01:35	WG2031044
Acetophenone	U		0.000208	0.0100	1	03/30/2023 01:35	WG2031044
Anthracene	U		0.0000804	0.00100	1	03/30/2023 01:35	WG2031044
Atrazine	U		0.000255	0.0100	1	03/30/2023 01:35	WG2031044
Benzo(a)anthracene	U		0.000199	0.00100	1	03/30/2023 01:35	WG2031044
Benzaldehyde	U		0.00169	0.0100	1	03/30/2023 01:35	WG2031044
Benzo(b)fluoranthene	U		0.000130	0.00100	1	03/30/2023 01:35	WG2031044
Benzo(k)fluoranthene	U		0.000120	0.00100	1	03/30/2023 01:35	WG2031044
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	03/30/2023 01:35	WG2031044
Benzo(a)pyrene	U		0.0000381	0.000200	1	03/30/2023 01:35	WG2031044
Biphenyl	U		0.000790	0.0100	1	03/30/2023 01:35	WG2031044
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	03/30/2023 01:35	WG2031044
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	03/30/2023 01:35	WG2031044
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	03/30/2023 01:35	WG2031044
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	03/30/2023 01:35	WG2031044
2-Chloronaphthalene	U		0.0000648	0.00100	1	03/30/2023 01:35	WG2031044
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	03/30/2023 01:35	WG2031044
Caprolactam	U		0.000309	0.0100	1	03/30/2023 01:35	WG2031044
Carbazole	U		0.000111	0.0100	1	03/30/2023 01:35	WG2031044
Chrysene	U		0.000130	0.00100	1	03/30/2023 01:35	WG2031044
Dibenz(a,h)anthracene	0.0000682	J	0.0000644	0.000200	1	03/30/2023 01:35	WG2031044
Dibenzofuran	U		0.0000970	0.0100	1	03/30/2023 01:35	WG2031044
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	03/30/2023 01:35	WG2031044
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	03/30/2023 01:35	WG2031044
2,6-Dinitrotoluene	U		0.000250	0.0100	1	03/30/2023 01:35	WG2031044
Fluoranthene	U		0.000102	0.00100	1	03/30/2023 01:35	WG2031044
Fluorene	U		0.0000844	0.00100	1	03/30/2023 01:35	WG2031044
Hexachlorobenzene	U		0.0000755	0.00100	1	03/30/2023 01:35	WG2031044
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	03/30/2023 01:35	WG2031044
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	03/30/2023 01:35	WG2031044
Hexachloroethane	U		0.000127	0.0100	1	03/30/2023 01:35	WG2031044
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	03/30/2023 01:35	WG2031044
Isophorone	U		0.000143	0.0100	1	03/30/2023 01:35	WG2031044
1-Methylnaphthalene	U		0.0000790	0.00100	1	03/30/2023 01:35	WG2031044
2-Methylnaphthalene	U		0.000117	0.00100	1	03/30/2023 01:35	WG2031044
Naphthalene	U		0.000159	0.00100	1	03/30/2023 01:35	WG2031044
Nitrobenzene	U		0.000297	0.0100	1	03/30/2023 01:35	WG2031044
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	03/30/2023 01:35	WG2031044
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	03/30/2023 01:35	WG2031044
Phenanthrene	U		0.000112	0.00100	1	03/30/2023 01:35	WG2031044
Benzylbutyl phthalate	U		0.000765	0.00300	1	03/30/2023 01:35	WG2031044
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	03/30/2023 01:35	WG2031044
Di-n-butyl phthalate	U		0.000453	0.00300	1	03/30/2023 01:35	WG2031044
Diethyl phthalate	U		0.000287	0.00300	1	03/30/2023 01:35	WG2031044
Dimethyl phthalate	U		0.000260	0.00300	1	03/30/2023 01:35	WG2031044
Di-n-octyl phthalate	U		0.000932	0.00300	1	03/30/2023 01:35	WG2031044
Pyrene	U		0.000107	0.00100	1	03/30/2023 01:35	WG2031044
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	03/30/2023 01:35	WG2031044
4-Chloro-3-methylphenol	U		0.000131	0.0100	1	03/30/2023 01:35	WG2031044

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
2-Chlorophenol	U		0.000133	0.0100	1	03/30/2023 01:35	WG2031044
2,4-Dichlorophenol	U		0.000102	0.0100	1	03/30/2023 01:35	WG2031044
2,4-Dimethylphenol	U		0.0000636	0.0100	1	03/30/2023 01:35	WG2031044
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	03/30/2023 01:35	WG2031044
2,4-Dinitrophenol	U		0.00593	0.0100	1	03/30/2023 01:35	WG2031044
2-Nitrophenol	U		0.000117	0.0100	1	03/30/2023 01:35	WG2031044
2-Nitroaniline	U		0.000102	0.0100	1	03/30/2023 01:35	WG2031044
2-Methylphenol	U		0.0000929	0.0100	1	03/30/2023 01:35	WG2031044
3&4-Methyl Phenol	U		0.000168	0.0100	1	03/30/2023 01:35	WG2031044
3-Nitroaniline	U		0.0000869	0.0100	1	03/30/2023 01:35	WG2031044
4-Chloroaniline	U		0.000234	0.0100	1	03/30/2023 01:35	WG2031044
4-Nitroaniline	U		0.0000910	0.0100	1	03/30/2023 01:35	WG2031044
4-Nitrophenol	U		0.000143	0.0100	1	03/30/2023 01:35	WG2031044
Pentachlorophenol	U		0.000313	0.0100	1	03/30/2023 01:35	WG2031044
Phenol	U		0.00433	0.0100	1	03/30/2023 01:35	WG2031044
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	03/30/2023 01:35	WG2031044
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	03/30/2023 01:35	WG2031044
(S) 2-Fluorophenol	*26.3*			*10.0-120*		*03/30/2023 01:35*	WG2031044
(S) Phenol-d5	*17.3*			*10.0-120*		*03/30/2023 01:35*	WG2031044
(S) Nitrobenzene-d5	*39.5*			*10.0-127*		*03/30/2023 01:35*	WG2031044
(S) 2-Fluorobiphenyl	*44.9*			*10.0-130*		*03/30/2023 01:35*	WG2031044
(S) 2,4,6-Tribromophenol	*49.3*			*10.0-155*		*03/30/2023 01:35*	WG2031044
(S) p-Terphenyl-d14	*56.7*			*10.0-128*		*03/30/2023 01:35*	WG2031044

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	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1190		20.0	1	03/27/2023 22:55	WG2030626

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Alkalinity	178		8.45	20.0	1	03/28/2023 09:49	WG2030702

Sample Narrative:

L1598018-13 WG2030702: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	344		3.79	10.0	10	03/25/2023 08:53	WG2029708
Fluoride	0.687		0.0640	0.150	1	03/25/2023 03:05	WG2029708
Nitrate	2.83		0.0480	0.100	1	03/25/2023 03:05	WG2029708
Nitrite	U		0.0420	0.100	1	03/25/2023 03:05	WG2029708
Sulfate	83.6		0.594	5.00	1	03/25/2023 03:05	WG2029708

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.000100	0.000200	1	03/31/2023 11:19	WG2030406

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron,Dissolved	0.181	J	0.0200	0.200	1	03/27/2023 17:09	WG2029742

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.0185	0.100	1	03/29/2023 00:31	WG2029747
Arsenic,Dissolved	0.00478		0.000180	0.00200	1	03/29/2023 00:31	WG2029747
Barium,Dissolved	0.113		0.000381	0.00200	1	03/29/2023 00:31	WG2029747
Cadmium,Dissolved	U		0.000150	0.00100	1	03/29/2023 00:31	WG2029747
Chromium,Dissolved	0.00131	J	0.00124	0.00200	1	03/29/2023 00:31	WG2029747
Copper,Dissolved	0.00264	J	0.00151	0.00500	1	03/29/2023 00:31	WG2029747
Cobalt,Dissolved	U		0.0000596	0.00200	1	03/29/2023 00:31	WG2029747
Iron,Dissolved	U		0.0281	0.100	1	03/29/2023 00:31	WG2029747
Lead,Dissolved	U		0.000849	0.00200	1	03/29/2023 00:31	WG2029747
Manganese,Dissolved	0.00170	J	0.000704	0.00500	1	03/29/2023 00:31	WG2029747
Molybdenum,Dissolved	0.00201	J	0.000348	0.00500	1	03/29/2023 00:31	WG2029747
Nickel,Dissolved	U		0.000816	0.00200	1	03/29/2023 00:31	WG2029747
Selenium,Dissolved	0.00350		0.000300	0.00200	1	03/29/2023 00:31	WG2029747
Silver,Dissolved	U		0.0000700	0.00200	1	03/29/2023 00:31	WG2029747
Uranium,Dissolved	0.00199	J	0.0000700	0.0200	1	03/29/2023 00:31	WG2029747
Zinc,Dissolved	0.0353		0.00302	0.0250	1	03/29/2023 00:31	WG2029747

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	1	03/27/2023 23:42	WG2030927
(S) a,a,a-Trifluorotoluene(FID)	*111*			*78.0-120*		*03/27/2023 23:42*	WG2030927

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U	J4	0.0113	0.0500	1	03/28/2023 03:59	WG2030988
Benzene	U		0.0000941	0.00100	1	03/28/2023 03:59	WG2030988
Bromodichloromethane	U		0.000136	0.00100	1	03/28/2023 03:59	WG2030988
Bromoform	U		0.000129	0.00100	1	03/28/2023 03:59	WG2030988
Bromomethane	U		0.000605	0.00500	1	03/28/2023 03:59	WG2030988
n-Butylbenzene	U		0.000157	0.00100	1	03/28/2023 03:59	WG2030988
sec-Butylbenzene	U		0.000125	0.00100	1	03/28/2023 03:59	WG2030988
tert-Butylbenzene	U		0.000127	0.00100	1	03/28/2023 03:59	WG2030988
Carbon disulfide	U		0.0000962	0.00100	1	03/28/2023 03:59	WG2030988
Carbon tetrachloride	0.00100	J	0.000128	0.00100	1	03/28/2023 03:59	WG2030988
Chlorobenzene	U		0.000116	0.00100	1	03/28/2023 03:59	WG2030988
Chlorodibromomethane	U		0.000140	0.00100	1	03/28/2023 03:59	WG2030988
Chloroethane	U		0.000192	0.00500	1	03/28/2023 03:59	WG2030988
Chloroform	0.00154	J	0.000111	0.00500	1	03/28/2023 03:59	WG2030988
Chloromethane	U		0.000960	0.00250	1	03/28/2023 03:59	WG2030988
1,2-Dibromoethane	U		0.000126	0.00100	1	03/28/2023 03:59	WG2030988
1,1-Dichloroethane	U		0.000100	0.00100	1	03/28/2023 03:59	WG2030988
1,2-Dichloroethane	U		0.0000819	0.00100	1	03/28/2023 03:59	WG2030988
1,1-Dichloroethene	U		0.000188	0.00100	1	03/28/2023 03:59	WG2030988
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	03/28/2023 03:59	WG2030988
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	03/28/2023 03:59	WG2030988
1,2-Dichloropropane	U		0.000149	0.00100	1	03/28/2023 03:59	WG2030988
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	03/28/2023 03:59	WG2030988
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	03/28/2023 03:59	WG2030988
Ethylbenzene	U		0.000137	0.00100	1	03/28/2023 03:59	WG2030988
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	03/28/2023 03:59	WG2030988
2-Hexanone	U		0.000787	0.0100	1	03/28/2023 03:59	WG2030988
Isopropylbenzene	U		0.000105	0.00100	1	03/28/2023 03:59	WG2030988
p-Isopropyltoluene	U		0.000120	0.00100	1	03/28/2023 03:59	WG2030988
2-Butanone (MEK)	U		0.00119	0.0100	1	03/28/2023 03:59	WG2030988
Methylene Chloride	U		0.000430	0.00500	1	03/28/2023 03:59	WG2030988
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	03/28/2023 03:59	WG2030988
Methyl tert-butyl ether	U		0.000101	0.00100	1	03/28/2023 03:59	WG2030988
Naphthalene	U		0.00100	0.00500	1	03/28/2023 03:59	WG2030988
n-Propylbenzene	U		0.0000993	0.00100	1	03/28/2023 03:59	WG2030988
Styrene	U		0.000118	0.00100	1	03/28/2023 03:59	WG2030988
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	03/28/2023 03:59	WG2030988
Tetrachloroethene	0.000618	J	0.000300	0.00100	1	03/28/2023 03:59	WG2030988
Toluene	U		0.000278	0.00100	1	03/28/2023 03:59	WG2030988
1,1,1-Trichloroethane	U		0.000149	0.00100	1	03/28/2023 03:59	WG2030988
1,1,2-Trichloroethane	U		0.000158	0.00100	1	03/28/2023 03:59	WG2030988
Trichloroethene	0.000436	J	0.000190	0.00100	1	03/28/2023 03:59	WG2030988
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	03/28/2023 03:59	WG2030988
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	03/28/2023 03:59	WG2030988
Vinyl chloride	U		0.000234	0.00100	1	03/28/2023 03:59	WG2030988
Xylenes, Total	U		0.000174	0.00300	1	03/28/2023 03:59	WG2030988
(S) Toluene-d8	*112*			*80.0-120*		*03/28/2023 03:59*	WG2030988
(S) 4-Bromofluorobenzene	*83.9*			*77.0-126*		*03/28/2023 03:59*	WG2030988
(S) 1,2-Dichloroethane-d4	*106*			*70.0-130*		*03/28/2023 03:59*	WG2030988

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	0.0429	J	0.0247	0.100	1	03/30/2023 18:38	WG2031815
(S) o-Terphenyl	*121*			*31.0-160*		*03/30/2023 18:38*	WG2031815

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000886	0.00100	1	03/30/2023 01:56	WG2031044
Acenaphthylene	U		0.0000921	0.00100	1	03/30/2023 01:56	WG2031044
Acetophenone	U		0.000208	0.0100	1	03/30/2023 01:56	WG2031044
Anthracene	U		0.0000804	0.00100	1	03/30/2023 01:56	WG2031044
Atrazine	U		0.000255	0.0100	1	03/30/2023 01:56	WG2031044
Benzo(a)anthracene	U		0.000199	0.00100	1	03/30/2023 01:56	WG2031044
Benzaldehyde	U		0.00169	0.0100	1	03/30/2023 01:56	WG2031044
Benzo(b)fluoranthene	U		0.000130	0.00100	1	03/30/2023 01:56	WG2031044
Benzo(k)fluoranthene	U		0.000120	0.00100	1	03/30/2023 01:56	WG2031044
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	03/30/2023 01:56	WG2031044
Benzo(a)pyrene	U		0.0000381	0.000200	1	03/30/2023 01:56	WG2031044
Biphenyl	U		0.000790	0.0100	1	03/30/2023 01:56	WG2031044
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	03/30/2023 01:56	WG2031044
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	03/30/2023 01:56	WG2031044
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	03/30/2023 01:56	WG2031044
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	03/30/2023 01:56	WG2031044
2-Chloronaphthalene	U		0.0000648	0.00100	1	03/30/2023 01:56	WG2031044
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	03/30/2023 01:56	WG2031044
Caprolactam	U		0.000309	0.0100	1	03/30/2023 01:56	WG2031044
Carbazole	U		0.000111	0.0100	1	03/30/2023 01:56	WG2031044
Chrysene	U		0.000130	0.00100	1	03/30/2023 01:56	WG2031044
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	03/30/2023 01:56	WG2031044
Dibenzofuran	U		0.0000970	0.0100	1	03/30/2023 01:56	WG2031044
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	03/30/2023 01:56	WG2031044
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	03/30/2023 01:56	WG2031044
2,6-Dinitrotoluene	U		0.000250	0.0100	1	03/30/2023 01:56	WG2031044
Fluoranthene	U		0.000102	0.00100	1	03/30/2023 01:56	WG2031044
Fluorene	U		0.0000844	0.00100	1	03/30/2023 01:56	WG2031044
Hexachlorobenzene	U		0.0000755	0.00100	1	03/30/2023 01:56	WG2031044
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	03/30/2023 01:56	WG2031044
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	03/30/2023 01:56	WG2031044
Hexachloroethane	U		0.000127	0.0100	1	03/30/2023 01:56	WG2031044
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	03/30/2023 01:56	WG2031044
Isophorone	U		0.000143	0.0100	1	03/30/2023 01:56	WG2031044
1-Methylnaphthalene	U		0.0000790	0.00100	1	03/30/2023 01:56	WG2031044
2-Methylnaphthalene	U		0.000117	0.00100	1	03/30/2023 01:56	WG2031044
Naphthalene	U		0.000159	0.00100	1	03/30/2023 01:56	WG2031044
Nitrobenzene	U		0.000297	0.0100	1	03/30/2023 01:56	WG2031044
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	03/30/2023 01:56	WG2031044
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	03/30/2023 01:56	WG2031044
Phenanthrene	U		0.000112	0.00100	1	03/30/2023 01:56	WG2031044
Benzylbutyl phthalate	U		0.000765	0.00300	1	03/30/2023 01:56	WG2031044
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	03/30/2023 01:56	WG2031044
Di-n-butyl phthalate	U		0.000453	0.00300	1	03/30/2023 01:56	WG2031044
Diethyl phthalate	U		0.000287	0.00300	1	03/30/2023 01:56	WG2031044
Dimethyl phthalate	U		0.000260	0.00300	1	03/30/2023 01:56	WG2031044
Di-n-octyl phthalate	U		0.000932	0.00300	1	03/30/2023 01:56	WG2031044
Pyrene	U		0.000107	0.00100	1	03/30/2023 01:56	WG2031044
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	03/30/2023 01:56	WG2031044
4-Chloro-3-methylphenol	U		0.000131	0.0100	1	03/30/2023 01:56	WG2031044

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
2-Chlorophenol	U		0.000133	0.0100	1	03/30/2023 01:56	WG2031044
2,4-Dichlorophenol	U		0.000102	0.0100	1	03/30/2023 01:56	WG2031044
2,4-Dimethylphenol	U		0.0000636	0.0100	1	03/30/2023 01:56	WG2031044
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	03/30/2023 01:56	WG2031044
2,4-Dinitrophenol	U		0.00593	0.0100	1	03/30/2023 01:56	WG2031044
2-Nitrophenol	U		0.000117	0.0100	1	03/30/2023 01:56	WG2031044
2-Nitroaniline	U		0.000102	0.0100	1	03/30/2023 01:56	WG2031044
2-Methylphenol	U		0.0000929	0.0100	1	03/30/2023 01:56	WG2031044
3&4-Methyl Phenol	U		0.000168	0.0100	1	03/30/2023 01:56	WG2031044
3-Nitroaniline	U		0.0000869	0.0100	1	03/30/2023 01:56	WG2031044
4-Chloroaniline	U		0.000234	0.0100	1	03/30/2023 01:56	WG2031044
4-Nitroaniline	U		0.0000910	0.0100	1	03/30/2023 01:56	WG2031044
4-Nitrophenol	U		0.000143	0.0100	1	03/30/2023 01:56	WG2031044
Pentachlorophenol	U		0.000313	0.0100	1	03/30/2023 01:56	WG2031044
Phenol	U		0.00433	0.0100	1	03/30/2023 01:56	WG2031044
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	03/30/2023 01:56	WG2031044
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	03/30/2023 01:56	WG2031044
(S) 2-Fluorophenol	*29.6*			*10.0-120*		*03/30/2023 01:56*	WG2031044
(S) Phenol-d5	*18.5*			*10.0-120*		*03/30/2023 01:56*	WG2031044
(S) Nitrobenzene-d5	*44.8*			*10.0-127*		*03/30/2023 01:56*	WG2031044
(S) 2-Fluorobiphenyl	*50.1*			*10.0-130*		*03/30/2023 01:56*	WG2031044
(S) 2,4,6-Tribromophenol	*55.5*			*10.0-155*		*03/30/2023 01:56*	WG2031044
(S) p-Terphenyl-d14	*60.1*			*10.0-128*		*03/30/2023 01:56*	WG2031044

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	511		10.0	1	03/27/2023 22:55	WG2030626

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Alkalinity	175		8.45	20.0	1	03/28/2023 09:56	WG2030702

Sample Narrative:

L1598018-14 WG2030702: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	98.0		0.379	1.00	1	03/25/2023 03:18	WG2029708
Fluoride	0.956		0.0640	0.150	1	03/25/2023 03:18	WG2029708
Nitrate	2.66		0.0480	0.100	1	03/25/2023 03:18	WG2029708
Nitrite	U		0.0420	0.100	1	03/25/2023 03:18	WG2029708
Sulfate	79.3		0.594	5.00	1	03/25/2023 03:18	WG2029708

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.000100	0.000200	1	03/31/2023 11:21	WG2030406

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron,Dissolved	0.144	J	0.0200	0.200	1	03/27/2023 17:11	WG2029742

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.0185	0.100	1	03/29/2023 00:35	WG2029747
Arsenic,Dissolved	0.00511		0.000180	0.00200	1	03/29/2023 00:35	WG2029747
Barium,Dissolved	0.0891		0.000381	0.00200	1	03/29/2023 00:35	WG2029747
Cadmium,Dissolved	U		0.000150	0.00100	1	03/29/2023 00:35	WG2029747
Chromium,Dissolved	0.00338		0.00124	0.00200	1	03/29/2023 00:35	WG2029747
Copper,Dissolved	0.00201	J	0.00151	0.00500	1	03/29/2023 00:35	WG2029747
Cobalt,Dissolved	0.0000632	J	0.0000596	0.00200	1	03/29/2023 00:35	WG2029747
Iron,Dissolved	0.0643	J	0.0281	0.100	1	03/29/2023 00:35	WG2029747
Lead,Dissolved	U		0.000849	0.00200	1	03/29/2023 00:35	WG2029747
Manganese,Dissolved	0.00207	J	0.000704	0.00500	1	03/29/2023 00:35	WG2029747
Molybdenum,Dissolved	0.00255	J	0.000348	0.00500	1	03/29/2023 00:35	WG2029747
Nickel,Dissolved	U		0.000816	0.00200	1	03/29/2023 00:35	WG2029747
Selenium,Dissolved	0.00388		0.000300	0.00200	1	03/29/2023 00:35	WG2029747
Silver,Dissolved	U		0.0000700	0.00200	1	03/29/2023 00:35	WG2029747
Uranium,Dissolved	0.00172	J	0.0000700	0.0200	1	03/29/2023 00:35	WG2029747
Zinc,Dissolved	0.00557	J	0.00302	0.0250	1	03/29/2023 00:35	WG2029747

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	1	03/28/2023 00:04	WG2030927
(S) a,a,a-Trifluorotoluene(FID)	*111*			*78.0-120*		*03/28/2023 00:04*	WG2030927

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U	J4	0.0113	0.0500	1	03/28/2023 04:20	WG2030988
Benzene	U		0.0000941	0.00100	1	03/28/2023 04:20	WG2030988
Bromodichloromethane	U		0.000136	0.00100	1	03/28/2023 04:20	WG2030988
Bromoform	U		0.000129	0.00100	1	03/28/2023 04:20	WG2030988
Bromomethane	U		0.000605	0.00500	1	03/28/2023 04:20	WG2030988
n-Butylbenzene	U		0.000157	0.00100	1	03/28/2023 04:20	WG2030988
sec-Butylbenzene	U		0.000125	0.00100	1	03/28/2023 04:20	WG2030988
tert-Butylbenzene	U		0.000127	0.00100	1	03/28/2023 04:20	WG2030988
Carbon disulfide	U		0.0000962	0.00100	1	03/28/2023 04:20	WG2030988
Carbon tetrachloride	U		0.000128	0.00100	1	03/28/2023 04:20	WG2030988
Chlorobenzene	U		0.000116	0.00100	1	03/28/2023 04:20	WG2030988
Chlorodibromomethane	U		0.000140	0.00100	1	03/28/2023 04:20	WG2030988
Chloroethane	U		0.000192	0.00500	1	03/28/2023 04:20	WG2030988
Chloroform	U		0.000111	0.00500	1	03/28/2023 04:20	WG2030988
Chloromethane	U		0.000960	0.00250	1	03/28/2023 04:20	WG2030988
1,2-Dibromoethane	U		0.000126	0.00100	1	03/28/2023 04:20	WG2030988
1,1-Dichloroethane	U		0.000100	0.00100	1	03/28/2023 04:20	WG2030988
1,2-Dichloroethane	U		0.0000819	0.00100	1	03/28/2023 04:20	WG2030988
1,1-Dichloroethene	U		0.000188	0.00100	1	03/28/2023 04:20	WG2030988
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	03/28/2023 04:20	WG2030988
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	03/28/2023 04:20	WG2030988
1,2-Dichloropropane	U		0.000149	0.00100	1	03/28/2023 04:20	WG2030988
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	03/28/2023 04:20	WG2030988
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	03/28/2023 04:20	WG2030988
Ethylbenzene	U		0.000137	0.00100	1	03/28/2023 04:20	WG2030988
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	03/28/2023 04:20	WG2030988
2-Hexanone	U		0.000787	0.0100	1	03/28/2023 04:20	WG2030988
Isopropylbenzene	U		0.000105	0.00100	1	03/28/2023 04:20	WG2030988
p-Isopropyltoluene	U		0.000120	0.00100	1	03/28/2023 04:20	WG2030988
2-Butanone (MEK)	U		0.00119	0.0100	1	03/28/2023 04:20	WG2030988
Methylene Chloride	U		0.000430	0.00500	1	03/28/2023 04:20	WG2030988
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	03/28/2023 04:20	WG2030988
Methyl tert-butyl ether	U		0.000101	0.00100	1	03/28/2023 04:20	WG2030988
Naphthalene	U		0.00100	0.00500	1	03/28/2023 04:20	WG2030988
n-Propylbenzene	U		0.0000993	0.00100	1	03/28/2023 04:20	WG2030988
Styrene	U		0.000118	0.00100	1	03/28/2023 04:20	WG2030988
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	03/28/2023 04:20	WG2030988
Tetrachloroethene	U		0.000300	0.00100	1	03/28/2023 04:20	WG2030988
Toluene	U		0.000278	0.00100	1	03/28/2023 04:20	WG2030988
1,1,1-Trichloroethane	U		0.000149	0.00100	1	03/28/2023 04:20	WG2030988
1,1,2-Trichloroethane	U		0.000158	0.00100	1	03/28/2023 04:20	WG2030988
Trichloroethene	U		0.000190	0.00100	1	03/28/2023 04:20	WG2030988
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	03/28/2023 04:20	WG2030988
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	03/28/2023 04:20	WG2030988
Vinyl chloride	U		0.000234	0.00100	1	03/28/2023 04:20	WG2030988
Xylenes, Total	U		0.000174	0.00300	1	03/28/2023 04:20	WG2030988
(S) Toluene-d8	*114*			*80.0-120*		*03/28/2023 04:20*	WG2030988
(S) 4-Bromofluorobenzene	*83.3*			*77.0-126*		*03/28/2023 04:20*	WG2030988
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*		*03/28/2023 04:20*	WG2030988

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	0.0579	J	0.0247	0.100	1	03/30/2023 18:58	WG2031815
(S) o-Terphenyl	*126*			*31.0-160*		*03/30/2023 18:58*	WG2031815

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000886	0.00100	1	03/30/2023 02:17	WG2031044
Acenaphthylene	U		0.0000921	0.00100	1	03/30/2023 02:17	WG2031044
Acetophenone	U		0.000208	0.0100	1	03/30/2023 02:17	WG2031044
Anthracene	U		0.0000804	0.00100	1	03/30/2023 02:17	WG2031044
Atrazine	U		0.000255	0.0100	1	03/30/2023 02:17	WG2031044
Benzo(a)anthracene	U		0.000199	0.00100	1	03/30/2023 02:17	WG2031044
Benzaldehyde	U		0.00169	0.0100	1	03/30/2023 02:17	WG2031044
Benzo(b)fluoranthene	U		0.000130	0.00100	1	03/30/2023 02:17	WG2031044
Benzo(k)fluoranthene	U		0.000120	0.00100	1	03/30/2023 02:17	WG2031044
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	03/30/2023 02:17	WG2031044
Benzo(a)pyrene	U		0.0000381	0.000200	1	03/30/2023 02:17	WG2031044
Biphenyl	U		0.000790	0.0100	1	03/30/2023 02:17	WG2031044
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	03/30/2023 02:17	WG2031044
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	03/30/2023 02:17	WG2031044
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	03/30/2023 02:17	WG2031044
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	03/30/2023 02:17	WG2031044
2-Chloronaphthalene	U		0.0000648	0.00100	1	03/30/2023 02:17	WG2031044
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	03/30/2023 02:17	WG2031044
Caprolactam	U		0.000309	0.0100	1	03/30/2023 02:17	WG2031044
Carbazole	U		0.000111	0.0100	1	03/30/2023 02:17	WG2031044
Chrysene	U		0.000130	0.00100	1	03/30/2023 02:17	WG2031044
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	03/30/2023 02:17	WG2031044
Dibenzofuran	U		0.0000970	0.0100	1	03/30/2023 02:17	WG2031044
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	03/30/2023 02:17	WG2031044
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	03/30/2023 02:17	WG2031044
2,6-Dinitrotoluene	U		0.000250	0.0100	1	03/30/2023 02:17	WG2031044
Fluoranthene	U		0.000102	0.00100	1	03/30/2023 02:17	WG2031044
Fluorene	U		0.0000844	0.00100	1	03/30/2023 02:17	WG2031044
Hexachlorobenzene	U		0.0000755	0.00100	1	03/30/2023 02:17	WG2031044
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	03/30/2023 02:17	WG2031044
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	03/30/2023 02:17	WG2031044
Hexachloroethane	U		0.000127	0.0100	1	03/30/2023 02:17	WG2031044
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	03/30/2023 02:17	WG2031044
Isophorone	U		0.000143	0.0100	1	03/30/2023 02:17	WG2031044
1-Methylnaphthalene	U		0.0000790	0.00100	1	03/30/2023 02:17	WG2031044
2-Methylnaphthalene	U		0.000117	0.00100	1	03/30/2023 02:17	WG2031044
Naphthalene	U		0.000159	0.00100	1	03/30/2023 02:17	WG2031044
Nitrobenzene	U		0.000297	0.0100	1	03/30/2023 02:17	WG2031044
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	03/30/2023 02:17	WG2031044
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	03/30/2023 02:17	WG2031044
Phenanthrene	U		0.000112	0.00100	1	03/30/2023 02:17	WG2031044
Benzylbutyl phthalate	U		0.000765	0.00300	1	03/30/2023 02:17	WG2031044
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	03/30/2023 02:17	WG2031044
Di-n-butyl phthalate	U		0.000453	0.00300	1	03/30/2023 02:17	WG2031044
Diethyl phthalate	U		0.000287	0.00300	1	03/30/2023 02:17	WG2031044
Dimethyl phthalate	U		0.000260	0.00300	1	03/30/2023 02:17	WG2031044
Di-n-octyl phthalate	U		0.000932	0.00300	1	03/30/2023 02:17	WG2031044
Pyrene	U		0.000107	0.00100	1	03/30/2023 02:17	WG2031044
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	03/30/2023 02:17	WG2031044
4-Chloro-3-methylphenol	U		0.000131	0.0100	1	03/30/2023 02:17	WG2031044

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
2-Chlorophenol	U		0.000133	0.0100	1	03/30/2023 02:17	WG2031044
2,4-Dichlorophenol	U		0.000102	0.0100	1	03/30/2023 02:17	WG2031044
2,4-Dimethylphenol	U		0.0000636	0.0100	1	03/30/2023 02:17	WG2031044
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	03/30/2023 02:17	WG2031044
2,4-Dinitrophenol	U		0.00593	0.0100	1	03/30/2023 02:17	WG2031044
2-Nitrophenol	U		0.000117	0.0100	1	03/30/2023 02:17	WG2031044
2-Nitroaniline	U		0.000102	0.0100	1	03/30/2023 02:17	WG2031044
2-Methylphenol	U		0.0000929	0.0100	1	03/30/2023 02:17	WG2031044
3&4-Methyl Phenol	U		0.000168	0.0100	1	03/30/2023 02:17	WG2031044
3-Nitroaniline	U		0.0000869	0.0100	1	03/30/2023 02:17	WG2031044
4-Chloroaniline	U		0.000234	0.0100	1	03/30/2023 02:17	WG2031044
4-Nitroaniline	U		0.0000910	0.0100	1	03/30/2023 02:17	WG2031044
4-Nitrophenol	U		0.000143	0.0100	1	03/30/2023 02:17	WG2031044
Pentachlorophenol	U		0.000313	0.0100	1	03/30/2023 02:17	WG2031044
Phenol	U		0.00433	0.0100	1	03/30/2023 02:17	WG2031044
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	03/30/2023 02:17	WG2031044
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	03/30/2023 02:17	WG2031044
(S) 2-Fluorophenol	*29.5*			*10.0-120*		*03/30/2023 02:17*	WG2031044
(S) Phenol-d5	*18.2*			*10.0-120*		*03/30/2023 02:17*	WG2031044
(S) Nitrobenzene-d5	*47.3*			*10.0-127*		*03/30/2023 02:17*	WG2031044
(S) 2-Fluorobiphenyl	*52.9*			*10.0-130*		*03/30/2023 02:17*	WG2031044
(S) 2,4,6-Tribromophenol	*51.4*			*10.0-155*		*03/30/2023 02:17*	WG2031044
(S) p-Terphenyl-d14	*65.4*			*10.0-128*		*03/30/2023 02:17*	WG2031044

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1150	J3	20.0	1	03/27/2023 22:55	WG2030626

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	180		8.45	20.0	1	03/28/2023 10:18	WG2030702

Sample Narrative:

L1598018-15 WG2030702: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	293		3.79	10.0	10	03/25/2023 09:19	WG2029708
Fluoride	0.649		0.0640	0.150	1	03/25/2023 03:31	WG2029708
Nitrate	2.87		0.0480	0.100	1	03/25/2023 03:31	WG2029708
Nitrite	U		0.0420	0.100	1	03/25/2023 03:31	WG2029708
Sulfate	83.7		0.594	5.00	1	03/25/2023 03:31	WG2029708

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	03/31/2023 11:27	WG2030406

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.185	J	0.0200	0.200	1	03/28/2023 18:57	WG2031073

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		0.0185	0.100	1	03/29/2023 00:38	WG2029747
Arsenic,Dissolved	0.00476		0.000180	0.00200	1	03/29/2023 00:38	WG2029747
Barium,Dissolved	0.111		0.000381	0.00200	1	03/29/2023 00:38	WG2029747
Cadmium,Dissolved	U		0.000150	0.00100	1	03/29/2023 00:38	WG2029747
Chromium,Dissolved	0.00125	J	0.00124	0.00200	1	03/29/2023 00:38	WG2029747
Copper,Dissolved	0.00284	J	0.00151	0.00500	1	03/29/2023 00:38	WG2029747
Cobalt,Dissolved	U		0.0000596	0.00200	1	03/29/2023 00:38	WG2029747
Iron,Dissolved	U		0.0281	0.100	1	03/29/2023 00:38	WG2029747
Lead,Dissolved	U		0.000849	0.00200	1	03/29/2023 00:38	WG2029747
Manganese,Dissolved	0.00161	J	0.000704	0.00500	1	03/29/2023 00:38	WG2029747
Molybdenum,Dissolved	0.00198	J	0.000348	0.00500	1	03/29/2023 00:38	WG2029747
Nickel,Dissolved	U		0.000816	0.00200	1	03/29/2023 00:38	WG2029747
Selenium,Dissolved	0.00367		0.000300	0.00200	1	03/29/2023 00:38	WG2029747
Silver,Dissolved	U		0.0000700	0.00200	1	03/29/2023 00:38	WG2029747
Uranium,Dissolved	0.00203	J	0.0000700	0.0200	1	03/29/2023 00:38	WG2029747
Zinc,Dissolved	0.0370		0.00302	0.0250	1	03/29/2023 00:38	WG2029747

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	1	03/28/2023 00:25	WG2030927
(S) a,a,a-Trifluorotoluene(FID)	*111*			*78.0-120*		*03/28/2023 00:25*	WG2030927

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U	J4	0.0113	0.0500	1	03/28/2023 04:41	WG2030988
Benzene	U		0.0000941	0.00100	1	03/28/2023 04:41	WG2030988
Bromodichloromethane	U		0.000136	0.00100	1	03/28/2023 04:41	WG2030988
Bromoform	U		0.000129	0.00100	1	03/28/2023 04:41	WG2030988
Bromomethane	U		0.000605	0.00500	1	03/28/2023 04:41	WG2030988
n-Butylbenzene	U		0.000157	0.00100	1	03/28/2023 04:41	WG2030988
sec-Butylbenzene	U		0.000125	0.00100	1	03/28/2023 04:41	WG2030988
tert-Butylbenzene	U		0.000127	0.00100	1	03/28/2023 04:41	WG2030988
Carbon disulfide	U		0.0000962	0.00100	1	03/28/2023 04:41	WG2030988
Carbon tetrachloride	0.000859	J	0.000128	0.00100	1	03/28/2023 04:41	WG2030988
Chlorobenzene	U		0.000116	0.00100	1	03/28/2023 04:41	WG2030988
Chlorodibromomethane	U		0.000140	0.00100	1	03/28/2023 04:41	WG2030988
Chloroethane	U		0.000192	0.00500	1	03/28/2023 04:41	WG2030988
Chloroform	0.00106	J	0.000111	0.00500	1	03/28/2023 04:41	WG2030988
Chloromethane	U		0.000960	0.00250	1	03/28/2023 04:41	WG2030988
1,2-Dibromoethane	U		0.000126	0.00100	1	03/28/2023 04:41	WG2030988
1,1-Dichloroethane	U		0.000100	0.00100	1	03/28/2023 04:41	WG2030988
1,2-Dichloroethane	U		0.0000819	0.00100	1	03/28/2023 04:41	WG2030988
1,1-Dichloroethene	U		0.000188	0.00100	1	03/28/2023 04:41	WG2030988
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	03/28/2023 04:41	WG2030988
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	03/28/2023 04:41	WG2030988
1,2-Dichloropropane	U		0.000149	0.00100	1	03/28/2023 04:41	WG2030988
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	03/28/2023 04:41	WG2030988
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	03/28/2023 04:41	WG2030988
Ethylbenzene	U		0.000137	0.00100	1	03/28/2023 04:41	WG2030988
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	03/28/2023 04:41	WG2030988
2-Hexanone	U		0.000787	0.0100	1	03/28/2023 04:41	WG2030988
Isopropylbenzene	U		0.000105	0.00100	1	03/28/2023 04:41	WG2030988
p-Isopropyltoluene	U		0.000120	0.00100	1	03/28/2023 04:41	WG2030988
2-Butanone (MEK)	U		0.00119	0.0100	1	03/28/2023 04:41	WG2030988
Methylene Chloride	U		0.000430	0.00500	1	03/28/2023 04:41	WG2030988
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	03/28/2023 04:41	WG2030988
Methyl tert-butyl ether	U		0.000101	0.00100	1	03/28/2023 04:41	WG2030988
Naphthalene	U		0.00100	0.00500	1	03/28/2023 04:41	WG2030988
n-Propylbenzene	U		0.0000993	0.00100	1	03/28/2023 04:41	WG2030988
Styrene	U		0.000118	0.00100	1	03/28/2023 04:41	WG2030988
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	03/28/2023 04:41	WG2030988
Tetrachloroethene	0.000586	J	0.000300	0.00100	1	03/28/2023 04:41	WG2030988
Toluene	U		0.000278	0.00100	1	03/28/2023 04:41	WG2030988
1,1,1-Trichloroethane	U		0.000149	0.00100	1	03/28/2023 04:41	WG2030988
1,1,2-Trichloroethane	U		0.000158	0.00100	1	03/28/2023 04:41	WG2030988
Trichloroethene	U		0.000190	0.00100	1	03/28/2023 04:41	WG2030988
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	03/28/2023 04:41	WG2030988
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	03/28/2023 04:41	WG2030988
Vinyl chloride	U		0.000234	0.00100	1	03/28/2023 04:41	WG2030988
Xylenes, Total	U		0.000174	0.00300	1	03/28/2023 04:41	WG2030988
(S) Toluene-d8	*112*			*80.0-120*		*03/28/2023 04:41*	WG2030988
(S) 4-Bromofluorobenzene	*82.6*			*77.0-126*		*03/28/2023 04:41*	WG2030988
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*03/28/2023 04:41*	WG2030988

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	0.103		0.0247	0.100	1	03/30/2023 19:19	WG2031815
(S) o-Terphenyl	*121*			*31.0-160*		*03/30/2023 19:19*	WG2031815

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000886	0.00100	1	03/30/2023 02:39	WG2031044
Acenaphthylene	U		0.0000921	0.00100	1	03/30/2023 02:39	WG2031044
Acetophenone	U		0.000208	0.0100	1	03/30/2023 02:39	WG2031044
Anthracene	U		0.0000804	0.00100	1	03/30/2023 02:39	WG2031044
Atrazine	U		0.000255	0.0100	1	03/30/2023 02:39	WG2031044
Benzo(a)anthracene	U		0.000199	0.00100	1	03/30/2023 02:39	WG2031044
Benzaldehyde	U		0.00169	0.0100	1	03/30/2023 02:39	WG2031044
Benzo(b)fluoranthene	U		0.000130	0.00100	1	03/30/2023 02:39	WG2031044
Benzo(k)fluoranthene	U		0.000120	0.00100	1	03/30/2023 02:39	WG2031044
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	03/30/2023 02:39	WG2031044
Benzo(a)pyrene	U		0.0000381	0.000200	1	03/30/2023 02:39	WG2031044
Biphenyl	U		0.000790	0.0100	1	03/30/2023 02:39	WG2031044
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	03/30/2023 02:39	WG2031044
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	03/30/2023 02:39	WG2031044
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	03/30/2023 02:39	WG2031044
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	03/30/2023 02:39	WG2031044
2-Chloronaphthalene	U		0.0000648	0.00100	1	03/30/2023 02:39	WG2031044
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	03/30/2023 02:39	WG2031044
Caprolactam	U		0.000309	0.0100	1	03/30/2023 02:39	WG2031044
Carbazole	U		0.000111	0.0100	1	03/30/2023 02:39	WG2031044
Chrysene	U		0.000130	0.00100	1	03/30/2023 02:39	WG2031044
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	03/30/2023 02:39	WG2031044
Dibenzofuran	U		0.0000970	0.0100	1	03/30/2023 02:39	WG2031044
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	03/30/2023 02:39	WG2031044
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	03/30/2023 02:39	WG2031044
2,6-Dinitrotoluene	U		0.000250	0.0100	1	03/30/2023 02:39	WG2031044
Fluoranthene	U		0.000102	0.00100	1	03/30/2023 02:39	WG2031044
Fluorene	U		0.0000844	0.00100	1	03/30/2023 02:39	WG2031044
Hexachlorobenzene	U		0.0000755	0.00100	1	03/30/2023 02:39	WG2031044
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	03/30/2023 02:39	WG2031044
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	03/30/2023 02:39	WG2031044
Hexachloroethane	U		0.000127	0.0100	1	03/30/2023 02:39	WG2031044
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	03/30/2023 02:39	WG2031044
Isophorone	U		0.000143	0.0100	1	03/30/2023 02:39	WG2031044
1-Methylnaphthalene	U		0.0000790	0.00100	1	03/30/2023 02:39	WG2031044
2-Methylnaphthalene	U		0.000117	0.00100	1	03/30/2023 02:39	WG2031044
Naphthalene	U		0.000159	0.00100	1	03/30/2023 02:39	WG2031044
Nitrobenzene	U		0.000297	0.0100	1	03/30/2023 02:39	WG2031044
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	03/30/2023 02:39	WG2031044
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	03/30/2023 02:39	WG2031044
Phenanthrene	U		0.000112	0.00100	1	03/30/2023 02:39	WG2031044
Benzylbutyl phthalate	U		0.000765	0.00300	1	03/30/2023 02:39	WG2031044
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	03/30/2023 02:39	WG2031044
Di-n-butyl phthalate	U		0.000453	0.00300	1	03/30/2023 02:39	WG2031044
Diethyl phthalate	U		0.000287	0.00300	1	03/30/2023 02:39	WG2031044
Dimethyl phthalate	U		0.000260	0.00300	1	03/30/2023 02:39	WG2031044
Di-n-octyl phthalate	U		0.000932	0.00300	1	03/30/2023 02:39	WG2031044
Pyrene	U		0.000107	0.00100	1	03/30/2023 02:39	WG2031044
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	03/30/2023 02:39	WG2031044
4-Chloro-3-methylphenol	U		0.000131	0.0100	1	03/30/2023 02:39	WG2031044

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

DUP-01
Collected date/time: 03/23/23 12:00
L1598018

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
2-Chlorophenol	U		0.000133	0.0100	1	03/30/2023 02:39	WG2031044
2,4-Dichlorophenol	U		0.000102	0.0100	1	03/30/2023 02:39	WG2031044
2,4-Dimethylphenol	U		0.0000636	0.0100	1	03/30/2023 02:39	WG2031044
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	03/30/2023 02:39	WG2031044
2,4-Dinitrophenol	U		0.00593	0.0100	1	03/30/2023 02:39	WG2031044
2-Nitrophenol	U		0.000117	0.0100	1	03/30/2023 02:39	WG2031044
2-Nitroaniline	U		0.000102	0.0100	1	03/30/2023 02:39	WG2031044
2-Methylphenol	U		0.0000929	0.0100	1	03/30/2023 02:39	WG2031044
3&4-Methyl Phenol	U		0.000168	0.0100	1	03/30/2023 02:39	WG2031044
3-Nitroaniline	U		0.0000869	0.0100	1	03/30/2023 02:39	WG2031044
4-Chloroaniline	U		0.000234	0.0100	1	03/30/2023 02:39	WG2031044
4-Nitroaniline	U		0.0000910	0.0100	1	03/30/2023 02:39	WG2031044
4-Nitrophenol	U		0.000143	0.0100	1	03/30/2023 02:39	WG2031044
Pentachlorophenol	U		0.000313	0.0100	1	03/30/2023 02:39	WG2031044
Phenol	U		0.00433	0.0100	1	03/30/2023 02:39	WG2031044
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	03/30/2023 02:39	WG2031044
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	03/30/2023 02:39	WG2031044
(S) 2-Fluorophenol	*28.1*			*10.0-120*		*03/30/2023 02:39*	WG2031044
(S) Phenol-d5	*18.4*			*10.0-120*		*03/30/2023 02:39*	WG2031044
(S) Nitrobenzene-d5	*44.8*			*10.0-127*		*03/30/2023 02:39*	WG2031044
(S) 2-Fluorobiphenyl	*50.8*			*10.0-130*		*03/30/2023 02:39*	WG2031044
(S) 2,4,6-Tribromophenol	*53.7*			*10.0-155*		*03/30/2023 02:39*	WG2031044
(S) p-Terphenyl-d14	*69.2*			*10.0-128*		*03/30/2023 02:39*	WG2031044

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	775	J3	13.3	1	03/27/2023 22:55	WG2030626

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	509		8.45	20.0	1	03/28/2023 10:25	WG2030702

Sample Narrative:

L1598018-16 WG2030702: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	27.1		0.379	1.00	1	03/25/2023 10:59	WG2029918
Fluoride	0.426		0.0640	0.150	1	03/25/2023 10:59	WG2029918
Nitrate	9.78		0.0480	0.100	1	03/25/2023 10:59	WG2029918
Nitrite	0.0892	J	0.0420	0.100	1	03/25/2023 10:59	WG2029918
Sulfate	145		0.594	5.00	1	03/25/2023 10:59	WG2029918

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	03/31/2023 11:29	WG2030406

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.202		0.0200	0.200	1	03/27/2023 17:19	WG2029742

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		0.0185	0.100	1	03/29/2023 00:48	WG2029747
Arsenic,Dissolved	0.00282		0.000180	0.00200	1	03/29/2023 00:48	WG2029747
Barium,Dissolved	0.290		0.000381	0.00200	1	03/29/2023 00:48	WG2029747
Cadmium,Dissolved	U		0.000150	0.00100	1	03/29/2023 00:48	WG2029747
Chromium,Dissolved	U		0.00124	0.00200	1	03/29/2023 00:48	WG2029747
Copper,Dissolved	0.00520		0.00151	0.00500	1	03/29/2023 00:48	WG2029747
Cobalt,Dissolved	0.000330	J	0.0000596	0.00200	1	03/29/2023 00:48	WG2029747
Iron,Dissolved	U		0.0281	0.100	1	03/29/2023 00:48	WG2029747
Lead,Dissolved	U		0.000849	0.00200	1	03/29/2023 00:48	WG2029747
Manganese,Dissolved	0.0768		0.000704	0.00500	1	03/29/2023 00:48	WG2029747
Molybdenum,Dissolved	0.00140	J	0.000348	0.00500	1	03/29/2023 00:48	WG2029747
Nickel,Dissolved	0.00204		0.000816	0.00200	1	03/29/2023 00:48	WG2029747
Selenium,Dissolved	0.000662	J	0.000300	0.00200	1	03/29/2023 00:48	WG2029747
Silver,Dissolved	U		0.0000700	0.00200	1	03/29/2023 00:48	WG2029747
Uranium,Dissolved	0.00771	J	0.0000700	0.0200	1	03/29/2023 00:48	WG2029747
Zinc,Dissolved	0.0290		0.00302	0.0250	1	03/29/2023 00:48	WG2029747

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	1	03/28/2023 00:47	WG2030927
(S) a,a,a-Trifluorotoluene(FID)	*109*			*78.0-120*		*03/28/2023 00:47*	WG2030927

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0113	0.0500	1	03/29/2023 23:32	WG2032183
Benzene	U		0.0000941	0.00100	1	03/29/2023 23:32	WG2032183
Bromodichloromethane	U		0.000136	0.00100	1	03/29/2023 23:32	WG2032183
Bromoform	U		0.000129	0.00100	1	03/29/2023 23:32	WG2032183
Bromomethane	U		0.000605	0.00500	1	03/29/2023 23:32	WG2032183
n-Butylbenzene	U		0.000157	0.00100	1	03/29/2023 23:32	WG2032183
sec-Butylbenzene	U		0.000125	0.00100	1	03/29/2023 23:32	WG2032183
tert-Butylbenzene	U		0.000127	0.00100	1	03/29/2023 23:32	WG2032183
Carbon disulfide	U		0.0000962	0.00100	1	03/29/2023 23:32	WG2032183
Carbon tetrachloride	U		0.000128	0.00100	1	03/29/2023 23:32	WG2032183
Chlorobenzene	U		0.000116	0.00100	1	03/29/2023 23:32	WG2032183
Chlorodibromomethane	U		0.000140	0.00100	1	03/29/2023 23:32	WG2032183
Chloroethane	U		0.000192	0.00500	1	03/29/2023 23:32	WG2032183
Chloroform	U		0.000111	0.00500	1	03/29/2023 23:32	WG2032183
Chloromethane	U		0.000960	0.00250	1	03/29/2023 23:32	WG2032183
1,2-Dibromoethane	U		0.000126	0.00100	1	03/29/2023 23:32	WG2032183
1,1-Dichloroethane	U		0.000100	0.00100	1	03/29/2023 23:32	WG2032183
1,2-Dichloroethane	U		0.0000819	0.00100	1	03/29/2023 23:32	WG2032183
1,1-Dichloroethene	U		0.000188	0.00100	1	03/29/2023 23:32	WG2032183
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	03/29/2023 23:32	WG2032183
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	03/29/2023 23:32	WG2032183
1,2-Dichloropropane	U		0.000149	0.00100	1	03/29/2023 23:32	WG2032183
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	03/29/2023 23:32	WG2032183
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	03/29/2023 23:32	WG2032183
Ethylbenzene	U		0.000137	0.00100	1	03/29/2023 23:32	WG2032183
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	03/29/2023 23:32	WG2032183
2-Hexanone	U		0.000787	0.0100	1	03/29/2023 23:32	WG2032183
Isopropylbenzene	U		0.000105	0.00100	1	03/29/2023 23:32	WG2032183
p-Isopropyltoluene	U		0.000120	0.00100	1	03/29/2023 23:32	WG2032183
2-Butanone (MEK)	U		0.00119	0.0100	1	03/29/2023 23:32	WG2032183
Methylene Chloride	U		0.000430	0.00500	1	03/29/2023 23:32	WG2032183
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	03/29/2023 23:32	WG2032183
Methyl tert-butyl ether	U		0.000101	0.00100	1	03/29/2023 23:32	WG2032183
Naphthalene	U		0.00100	0.00500	1	03/29/2023 23:32	WG2032183
n-Propylbenzene	U		0.0000993	0.00100	1	03/29/2023 23:32	WG2032183
Styrene	U		0.000118	0.00100	1	03/29/2023 23:32	WG2032183
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	03/29/2023 23:32	WG2032183
Tetrachloroethene	U		0.000300	0.00100	1	03/29/2023 23:32	WG2032183
Toluene	U		0.000278	0.00100	1	03/29/2023 23:32	WG2032183
1,1,1-Trichloroethane	U		0.000149	0.00100	1	03/29/2023 23:32	WG2032183
1,1,2-Trichloroethane	U		0.000158	0.00100	1	03/29/2023 23:32	WG2032183
Trichloroethene	U		0.000190	0.00100	1	03/29/2023 23:32	WG2032183
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	03/29/2023 23:32	WG2032183
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	03/29/2023 23:32	WG2032183
Vinyl chloride	U		0.000234	0.00100	1	03/29/2023 23:32	WG2032183
Xylenes, Total	U		0.000174	0.00300	1	03/29/2023 23:32	WG2032183
(S) Toluene-d8	*116*			*80.0-120*		*03/29/2023 23:32*	WG2032183
(S) 4-Bromofluorobenzene	*106*			*77.0-126*		*03/29/2023 23:32*	WG2032183
(S) 1,2-Dichloroethane-d4	*117*			*70.0-130*		*03/29/2023 23:32*	WG2032183

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	0.405		0.0247	0.100	1	03/30/2023 19:40	WG2031815
(S) o-Terphenyl	*108*			*31.0-160*		*03/30/2023 19:40*	WG2031815

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000886	0.00100	1	03/30/2023 06:37	WG2031044
Acenaphthylene	U		0.0000921	0.00100	1	03/30/2023 06:37	WG2031044
Acetophenone	U		0.000208	0.0100	1	03/30/2023 06:37	WG2031044
Anthracene	U		0.0000804	0.00100	1	03/30/2023 06:37	WG2031044
Atrazine	U		0.000255	0.0100	1	03/30/2023 06:37	WG2031044
Benzo(a)anthracene	U		0.000199	0.00100	1	03/30/2023 06:37	WG2031044
Benzaldehyde	U		0.00169	0.0100	1	03/30/2023 06:37	WG2031044
Benzo(b)fluoranthene	U		0.000130	0.00100	1	03/30/2023 06:37	WG2031044
Benzo(k)fluoranthene	U		0.000120	0.00100	1	03/30/2023 06:37	WG2031044
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	03/30/2023 06:37	WG2031044
Benzo(a)pyrene	U		0.0000381	0.000200	1	03/30/2023 06:37	WG2031044
Biphenyl	U		0.000790	0.0100	1	03/30/2023 06:37	WG2031044
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	03/30/2023 06:37	WG2031044
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	03/30/2023 06:37	WG2031044
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	03/30/2023 06:37	WG2031044
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	03/30/2023 06:37	WG2031044
2-Chloronaphthalene	U		0.0000648	0.00100	1	03/30/2023 06:37	WG2031044
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	03/30/2023 06:37	WG2031044
Caprolactam	U		0.000309	0.0100	1	03/30/2023 06:37	WG2031044
Carbazole	U		0.000111	0.0100	1	03/30/2023 06:37	WG2031044
Chrysene	U		0.000130	0.00100	1	03/30/2023 06:37	WG2031044
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	03/30/2023 06:37	WG2031044
Dibenzofuran	U		0.0000970	0.0100	1	03/30/2023 06:37	WG2031044
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	03/30/2023 06:37	WG2031044
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	03/30/2023 06:37	WG2031044
2,6-Dinitrotoluene	U		0.000250	0.0100	1	03/30/2023 06:37	WG2031044
Fluoranthene	U		0.000102	0.00100	1	03/30/2023 06:37	WG2031044
Fluorene	U		0.0000844	0.00100	1	03/30/2023 06:37	WG2031044
Hexachlorobenzene	U		0.0000755	0.00100	1	03/30/2023 06:37	WG2031044
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	03/30/2023 06:37	WG2031044
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	03/30/2023 06:37	WG2031044
Hexachloroethane	U		0.000127	0.0100	1	03/30/2023 06:37	WG2031044
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	03/30/2023 06:37	WG2031044
Isophorone	U		0.000143	0.0100	1	03/30/2023 06:37	WG2031044
1-Methylnaphthalene	U		0.0000790	0.00100	1	03/30/2023 06:37	WG2031044
2-Methylnaphthalene	U		0.000117	0.00100	1	03/30/2023 06:37	WG2031044
Naphthalene	U		0.000159	0.00100	1	03/30/2023 06:37	WG2031044
Nitrobenzene	U		0.000297	0.0100	1	03/30/2023 06:37	WG2031044
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	03/30/2023 06:37	WG2031044
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	03/30/2023 06:37	WG2031044
Phenanthrene	U		0.000112	0.00100	1	03/30/2023 06:37	WG2031044
Benzylbutyl phthalate	U		0.000765	0.00300	1	03/30/2023 06:37	WG2031044
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	03/30/2023 06:37	WG2031044
Di-n-butyl phthalate	0.000674	J	0.000453	0.00300	1	03/30/2023 06:37	WG2031044
Diethyl phthalate	U		0.000287	0.00300	1	03/30/2023 06:37	WG2031044
Dimethyl phthalate	U		0.000260	0.00300	1	03/30/2023 06:37	WG2031044
Di-n-octyl phthalate	U		0.000932	0.00300	1	03/30/2023 06:37	WG2031044
Pyrene	U		0.000107	0.00100	1	03/30/2023 06:37	WG2031044
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	03/30/2023 06:37	WG2031044
4-Chloro-3-methylphenol	U		0.000131	0.0100	1	03/30/2023 06:37	WG2031044

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
2-Chlorophenol	U		0.000133	0.0100	1	03/30/2023 06:37	WG2031044
2,4-Dichlorophenol	U		0.000102	0.0100	1	03/30/2023 06:37	WG2031044
2,4-Dimethylphenol	U		0.0000636	0.0100	1	03/30/2023 06:37	WG2031044
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	03/30/2023 06:37	WG2031044
2,4-Dinitrophenol	U		0.00593	0.0100	1	03/30/2023 06:37	WG2031044
2-Nitrophenol	U		0.000117	0.0100	1	03/30/2023 06:37	WG2031044
2-Nitroaniline	U		0.000102	0.0100	1	03/30/2023 06:37	WG2031044
2-Methylphenol	U		0.0000929	0.0100	1	03/30/2023 06:37	WG2031044
3&4-Methyl Phenol	U		0.000168	0.0100	1	03/30/2023 06:37	WG2031044
3-Nitroaniline	U		0.0000869	0.0100	1	03/30/2023 06:37	WG2031044
4-Chloroaniline	U		0.000234	0.0100	1	03/30/2023 06:37	WG2031044
4-Nitroaniline	U		0.0000910	0.0100	1	03/30/2023 06:37	WG2031044
4-Nitrophenol	U		0.000143	0.0100	1	03/30/2023 06:37	WG2031044
Pentachlorophenol	U		0.000313	0.0100	1	03/30/2023 06:37	WG2031044
Phenol	U		0.00433	0.0100	1	03/30/2023 06:37	WG2031044
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	03/30/2023 06:37	WG2031044
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	03/30/2023 06:37	WG2031044
(S) 2-Fluorophenol	*24.6*			*10.0-120*		*03/30/2023 06:37*	WG2031044
(S) Phenol-d5	*17.4*			*10.0-120*		*03/30/2023 06:37*	WG2031044
(S) Nitrobenzene-d5	*35.9*			*10.0-127*		*03/30/2023 06:37*	WG2031044
(S) 2-Fluorobiphenyl	*42.4*			*10.0-130*		*03/30/2023 06:37*	WG2031044
(S) 2,4,6-Tribromophenol	*45.4*			*10.0-155*		*03/30/2023 06:37*	WG2031044
(S) p-Terphenyl-d14	*66.2*			*10.0-128*		*03/30/2023 06:37*	WG2031044

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1160		25.0	1	03/27/2023 22:55	WG2030626

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Alkalinity	1020		8.45	20.0	1	03/28/2023 10:30	WG2030702

Sample Narrative:

L1598018-17 WG2030702: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	83.0		0.379	1.00	1	03/25/2023 03:44	WG2029708
Fluoride	0.708		0.0640	0.150	1	03/25/2023 03:44	WG2029708
Nitrate	U		0.0480	0.100	1	03/25/2023 03:44	WG2029708
Nitrite	U		0.0420	0.100	1	03/25/2023 03:44	WG2029708
Sulfate	6.03		0.594	5.00	1	03/25/2023 03:44	WG2029708

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.000100	0.000200	1	03/31/2023 11:31	WG2030406

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron,Dissolved	0.158	J	0.0200	0.200	1	03/27/2023 17:22	WG2029742

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.0185	0.100	1	03/29/2023 00:51	WG2029747
Arsenic,Dissolved	0.00594		0.000180	0.00200	1	03/29/2023 00:51	WG2029747
Barium,Dissolved	0.554		0.000381	0.00200	1	03/29/2023 00:51	WG2029747
Cadmium,Dissolved	U		0.000150	0.00100	1	03/29/2023 00:51	WG2029747
Chromium,Dissolved	U		0.00124	0.00200	1	03/29/2023 00:51	WG2029747
Copper,Dissolved	U		0.00151	0.00500	1	03/29/2023 00:51	WG2029747
Cobalt,Dissolved	0.0000761	J	0.0000596	0.00200	1	03/29/2023 00:51	WG2029747
Iron,Dissolved	1.87		0.0281	0.100	1	03/29/2023 00:51	WG2029747
Lead,Dissolved	U		0.000849	0.00200	1	03/29/2023 00:51	WG2029747
Manganese,Dissolved	0.974		0.000704	0.00500	1	03/29/2023 00:51	WG2029747
Molybdenum,Dissolved	0.00213	J	0.000348	0.00500	1	03/29/2023 00:51	WG2029747
Nickel,Dissolved	0.00527		0.000816	0.00200	1	03/29/2023 00:51	WG2029747
Selenium,Dissolved	U		0.000300	0.00200	1	03/29/2023 00:51	WG2029747
Silver,Dissolved	U		0.0000700	0.00200	1	03/29/2023 00:51	WG2029747
Uranium,Dissolved	0.0472		0.0000700	0.0200	1	03/29/2023 00:51	WG2029747
Zinc,Dissolved	U		0.00302	0.0250	1	03/29/2023 00:51	WG2029747

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	1	03/28/2023 01:08	WG2030927
(S) a,a,a-Trifluorotoluene(FID)	*107*			*78.0-120*		*03/28/2023 01:08*	WG2030927

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0113	0.0500	1	03/28/2023 05:14	WG2031008
Benzene	0.000240	J	0.0000941	0.00100	1	03/28/2023 05:14	WG2031008
Bromodichloromethane	U		0.000136	0.00100	1	03/28/2023 05:14	WG2031008
Bromoform	U		0.000129	0.00100	1	03/28/2023 05:14	WG2031008
Bromomethane	U		0.000605	0.00500	1	03/28/2023 05:14	WG2031008
n-Butylbenzene	U		0.000157	0.00100	1	03/28/2023 05:14	WG2031008
sec-Butylbenzene	U		0.000125	0.00100	1	03/28/2023 05:14	WG2031008
tert-Butylbenzene	U		0.000127	0.00100	1	03/28/2023 05:14	WG2031008
Carbon disulfide	U		0.0000962	0.00100	1	03/28/2023 05:14	WG2031008
Carbon tetrachloride	U		0.000128	0.00100	1	03/28/2023 05:14	WG2031008
Chlorobenzene	U		0.000116	0.00100	1	03/28/2023 05:14	WG2031008
Chlorodibromomethane	U		0.000140	0.00100	1	03/28/2023 05:14	WG2031008
Chloroethane	U		0.000192	0.00500	1	03/28/2023 05:14	WG2031008
Chloroform	U		0.000111	0.00500	1	03/28/2023 05:14	WG2031008
Chloromethane	U		0.000960	0.00250	1	03/28/2023 05:14	WG2031008
1,2-Dibromoethane	U		0.000126	0.00100	1	03/28/2023 05:14	WG2031008
1,1-Dichloroethane	U		0.000100	0.00100	1	03/28/2023 05:14	WG2031008
1,2-Dichloroethane	U		0.0000819	0.00100	1	03/28/2023 05:14	WG2031008
1,1-Dichloroethene	U		0.000188	0.00100	1	03/28/2023 05:14	WG2031008
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	03/28/2023 05:14	WG2031008
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	03/28/2023 05:14	WG2031008
1,2-Dichloropropane	U		0.000149	0.00100	1	03/28/2023 05:14	WG2031008
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	03/28/2023 05:14	WG2031008
trans-1,3-Dichloropropene	U	J4	0.000118	0.00100	1	03/28/2023 05:14	WG2031008
Ethylbenzene	U		0.000137	0.00100	1	03/28/2023 05:14	WG2031008
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	03/28/2023 05:14	WG2031008
2-Hexanone	U		0.000787	0.0100	1	03/28/2023 05:14	WG2031008
Isopropylbenzene	U		0.000105	0.00100	1	03/28/2023 05:14	WG2031008
p-Isopropyltoluene	U		0.000120	0.00100	1	03/28/2023 05:14	WG2031008
2-Butanone (MEK)	U		0.00119	0.0100	1	03/28/2023 05:14	WG2031008
Methylene Chloride	U		0.000430	0.00500	1	03/28/2023 05:14	WG2031008
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	03/28/2023 05:14	WG2031008
Methyl tert-butyl ether	U		0.000101	0.00100	1	03/28/2023 05:14	WG2031008
Naphthalene	U		0.00100	0.00500	1	03/28/2023 05:14	WG2031008
n-Propylbenzene	U		0.0000993	0.00100	1	03/28/2023 05:14	WG2031008
Styrene	U		0.000118	0.00100	1	03/28/2023 05:14	WG2031008
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	03/28/2023 05:14	WG2031008
Tetrachloroethene	U		0.000300	0.00100	1	03/28/2023 11:32	WG2031174
Toluene	U		0.000278	0.00100	1	03/28/2023 05:14	WG2031008
1,1,1-Trichloroethane	U		0.000149	0.00100	1	03/28/2023 05:14	WG2031008
1,1,2-Trichloroethane	U		0.000158	0.00100	1	03/28/2023 05:14	WG2031008
Trichloroethene	U		0.000190	0.00100	1	03/28/2023 05:14	WG2031008
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	03/28/2023 05:14	WG2031008
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	03/28/2023 05:14	WG2031008
Vinyl chloride	U		0.000234	0.00100	1	03/28/2023 05:14	WG2031008
Xylenes, Total	U		0.000174	0.00300	1	03/28/2023 05:14	WG2031008
(S) Toluene-d8	*110*			*80.0-120*		*03/28/2023 05:14*	WG2031008
(S) Toluene-d8	*99.6*			*80.0-120*		*03/28/2023 11:32*	WG2031174
(S) 4-Bromofluorobenzene	*98.8*			*77.0-126*		*03/28/2023 05:14*	WG2031008

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
(S) 4-Bromofluorobenzene	*86.4*			*77.0-126*		*03/28/2023 11:32*	WG2031174
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*03/28/2023 05:14*	WG2031008
(S) 1,2-Dichloroethane-d4	*121*			*70.0-130*		*03/28/2023 11:32*	WG2031174

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	0.183		0.0247	0.100	1	03/30/2023 20:01	WG2031815
(S) o-Terphenyl	*112*			*31.0-160*		*03/30/2023 20:01*	WG2031815

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000886	0.00100	1	03/30/2023 04:05	WG2031044
Acenaphthylene	U		0.0000921	0.00100	1	03/30/2023 04:05	WG2031044
Acetophenone	U		0.000208	0.0100	1	03/30/2023 04:05	WG2031044
Anthracene	U		0.0000804	0.00100	1	03/30/2023 04:05	WG2031044
Atrazine	U		0.000255	0.0100	1	03/30/2023 04:05	WG2031044
Benzo(a)anthracene	U		0.000199	0.00100	1	03/30/2023 04:05	WG2031044
Benzaldehyde	U		0.00169	0.0100	1	03/30/2023 04:05	WG2031044
Benzo(b)fluoranthene	U		0.000130	0.00100	1	03/30/2023 04:05	WG2031044
Benzo(k)fluoranthene	U		0.000120	0.00100	1	03/30/2023 04:05	WG2031044
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	03/30/2023 04:05	WG2031044
Benzo(a)pyrene	U		0.0000381	0.000200	1	03/30/2023 04:05	WG2031044
Biphenyl	U		0.000790	0.0100	1	03/30/2023 04:05	WG2031044
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	03/30/2023 04:05	WG2031044
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	03/30/2023 04:05	WG2031044
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	03/30/2023 04:05	WG2031044
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	03/30/2023 04:05	WG2031044
2-Chloronaphthalene	U		0.0000648	0.00100	1	03/30/2023 04:05	WG2031044
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	03/30/2023 04:05	WG2031044
Caprolactam	U		0.000309	0.0100	1	03/30/2023 04:05	WG2031044
Carbazole	U		0.000111	0.0100	1	03/30/2023 04:05	WG2031044
Chrysene	U		0.000130	0.00100	1	03/30/2023 04:05	WG2031044
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	03/30/2023 04:05	WG2031044
Dibenzofuran	U		0.0000970	0.0100	1	03/30/2023 04:05	WG2031044
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	03/30/2023 04:05	WG2031044
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	03/30/2023 04:05	WG2031044
2,6-Dinitrotoluene	U		0.000250	0.0100	1	03/30/2023 04:05	WG2031044
Fluoranthene	U		0.000102	0.00100	1	03/30/2023 04:05	WG2031044
Fluorene	U		0.0000844	0.00100	1	03/30/2023 04:05	WG2031044
Hexachlorobenzene	U		0.0000755	0.00100	1	03/30/2023 04:05	WG2031044
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	03/30/2023 04:05	WG2031044
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	03/30/2023 04:05	WG2031044
Hexachloroethane	U		0.000127	0.0100	1	03/30/2023 04:05	WG2031044
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	03/30/2023 04:05	WG2031044
Isophorone	U		0.000143	0.0100	1	03/30/2023 04:05	WG2031044
1-Methylnaphthalene	U		0.0000790	0.00100	1	03/30/2023 04:05	WG2031044
2-Methylnaphthalene	U		0.000117	0.00100	1	03/30/2023 04:05	WG2031044
Naphthalene	U		0.000159	0.00100	1	03/30/2023 04:05	WG2031044
Nitrobenzene	U		0.000297	0.0100	1	03/30/2023 04:05	WG2031044
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	03/30/2023 04:05	WG2031044
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	03/30/2023 04:05	WG2031044
Phenanthrene	U		0.000112	0.00100	1	03/30/2023 04:05	WG2031044
Benzylbutyl phthalate	U		0.000765	0.00300	1	03/30/2023 04:05	WG2031044

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	03/30/2023 04:05	WG2031044
Di-n-butyl phthalate	U		0.000453	0.00300	1	03/30/2023 04:05	WG2031044
Diethyl phthalate	U		0.000287	0.00300	1	03/30/2023 04:05	WG2031044
Dimethyl phthalate	U		0.000260	0.00300	1	03/30/2023 04:05	WG2031044
Di-n-octyl phthalate	U		0.000932	0.00300	1	03/30/2023 04:05	WG2031044
Pyrene	U		0.000107	0.00100	1	03/30/2023 04:05	WG2031044
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	03/30/2023 04:05	WG2031044
4-Chloro-3-methylphenol	U		0.000131	0.0100	1	03/30/2023 04:05	WG2031044
2-Chlorophenol	U		0.000133	0.0100	1	03/30/2023 04:05	WG2031044
2,4-Dichlorophenol	U		0.000102	0.0100	1	03/30/2023 04:05	WG2031044
2,4-Dimethylphenol	U		0.0000636	0.0100	1	03/30/2023 04:05	WG2031044
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	03/30/2023 04:05	WG2031044
2,4-Dinitrophenol	U		0.00593	0.0100	1	03/30/2023 04:05	WG2031044
2-Nitrophenol	U		0.000117	0.0100	1	03/30/2023 04:05	WG2031044
2-Nitroaniline	U		0.000102	0.0100	1	03/30/2023 04:05	WG2031044
2-Methylphenol	U		0.0000929	0.0100	1	03/30/2023 04:05	WG2031044
3&4-Methyl Phenol	U		0.000168	0.0100	1	03/30/2023 04:05	WG2031044
3-Nitroaniline	U		0.0000869	0.0100	1	03/30/2023 04:05	WG2031044
4-Chloroaniline	U		0.000234	0.0100	1	03/30/2023 04:05	WG2031044
4-Nitroaniline	U		0.0000910	0.0100	1	03/30/2023 04:05	WG2031044
4-Nitrophenol	U		0.000143	0.0100	1	03/30/2023 04:05	WG2031044
Pentachlorophenol	U		0.000313	0.0100	1	03/30/2023 04:05	WG2031044
Phenol	U		0.00433	0.0100	1	03/30/2023 04:05	WG2031044
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	03/30/2023 04:05	WG2031044
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	03/30/2023 04:05	WG2031044
(S) 2-Fluorophenol	*31.0*			*10.0-120*		*03/30/2023 04:05*	WG2031044
(S) Phenol-d5	*20.4*			*10.0-120*		*03/30/2023 04:05*	WG2031044
(S) Nitrobenzene-d5	*50.1*			*10.0-127*		*03/30/2023 04:05*	WG2031044
(S) 2-Fluorobiphenyl	*53.3*			*10.0-130*		*03/30/2023 04:05*	WG2031044
(S) 2,4,6-Tribromophenol	*61.0*			*10.0-155*		*03/30/2023 04:05*	WG2031044
(S) p-Terphenyl-d14	*65.4*			*10.0-128*		*03/30/2023 04:05*	WG2031044

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	ND		10.0	1	03/27/2023 22:55	WG2030626

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Alkalinity	U		8.45	20.0	1	03/28/2023 10:35	WG2030702

Sample Narrative:

L1598018-18 WG2030702: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	U		0.379	1.00	1	03/25/2023 11:12	WG2029918
Fluoride	U		0.0640	0.150	1	03/25/2023 11:12	WG2029918
Nitrate	U		0.0480	0.100	1	03/25/2023 11:12	WG2029918
Nitrite	U		0.0420	0.100	1	03/25/2023 11:12	WG2029918
Sulfate	U		0.594	5.00	1	03/25/2023 11:12	WG2029918

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.000100	0.000200	1	03/31/2023 11:33	WG2030406

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron,Dissolved	U		0.0200	0.200	1	03/27/2023 17:25	WG2029742

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.0185	0.100	1	03/29/2023 00:54	WG2029747
Arsenic,Dissolved	U		0.000180	0.00200	1	03/29/2023 00:54	WG2029747
Barium,Dissolved	0.000427	J	0.000381	0.00200	1	03/29/2023 00:54	WG2029747
Cadmium,Dissolved	U		0.000150	0.00100	1	03/29/2023 00:54	WG2029747
Chromium,Dissolved	U		0.00124	0.00200	1	03/29/2023 00:54	WG2029747
Copper,Dissolved	U		0.00151	0.00500	1	03/29/2023 00:54	WG2029747
Cobalt,Dissolved	U		0.0000596	0.00200	1	03/29/2023 00:54	WG2029747
Iron,Dissolved	U		0.0281	0.100	1	03/29/2023 00:54	WG2029747
Lead,Dissolved	U		0.000849	0.00200	1	03/29/2023 00:54	WG2029747
Manganese,Dissolved	U		0.000704	0.00500	1	03/29/2023 00:54	WG2029747
Molybdenum,Dissolved	U		0.000348	0.00500	1	03/29/2023 00:54	WG2029747
Nickel,Dissolved	U		0.000816	0.00200	1	03/29/2023 00:54	WG2029747
Selenium,Dissolved	U		0.000300	0.00200	1	03/29/2023 00:54	WG2029747
Silver,Dissolved	U		0.0000700	0.00200	1	03/29/2023 00:54	WG2029747
Uranium,Dissolved	U		0.0000700	0.0200	1	03/29/2023 00:54	WG2029747
Zinc,Dissolved	U		0.00302	0.0250	1	03/29/2023 00:54	WG2029747

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	1	03/27/2023 18:01	WG2030927
(S) a,a,a-Trifluorotoluene(FID)	*111*			*78.0-120*		*03/27/2023 18:01*	WG2030927

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U	J4	0.0113	0.0500	1	03/28/2023 03:01	WG2031011
Benzene	U		0.0000941	0.00100	1	03/28/2023 03:01	WG2031011
Bromodichloromethane	U		0.000136	0.00100	1	03/28/2023 03:01	WG2031011
Bromoform	U	J3	0.000129	0.00100	1	03/28/2023 03:01	WG2031011
Bromomethane	U		0.000605	0.00500	1	03/28/2023 03:01	WG2031011
n-Butylbenzene	U		0.000157	0.00100	1	03/28/2023 03:01	WG2031011
sec-Butylbenzene	U		0.000125	0.00100	1	03/28/2023 03:01	WG2031011
tert-Butylbenzene	U		0.000127	0.00100	1	03/28/2023 03:01	WG2031011
Carbon disulfide	U		0.0000962	0.00100	1	03/28/2023 03:01	WG2031011
Carbon tetrachloride	U		0.000128	0.00100	1	03/28/2023 03:01	WG2031011
Chlorobenzene	U		0.000116	0.00100	1	03/28/2023 03:01	WG2031011
Chlorodibromomethane	U		0.000140	0.00100	1	03/28/2023 03:01	WG2031011
Chloroethane	U		0.000192	0.00500	1	03/28/2023 03:01	WG2031011
Chloroform	0.000347	J	0.000111	0.00500	1	03/28/2023 03:01	WG2031011
Chloromethane	U		0.000960	0.00250	1	03/28/2023 03:01	WG2031011
1,2-Dibromoethane	U		0.000126	0.00100	1	03/28/2023 03:01	WG2031011
1,1-Dichloroethane	U		0.000100	0.00100	1	03/28/2023 03:01	WG2031011
1,2-Dichloroethane	U		0.0000819	0.00100	1	03/28/2023 03:01	WG2031011
1,1-Dichloroethene	U	J3	0.000188	0.00100	1	03/28/2023 03:01	WG2031011
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	03/28/2023 03:01	WG2031011
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	03/28/2023 03:01	WG2031011
1,2-Dichloropropane	U		0.000149	0.00100	1	03/28/2023 03:01	WG2031011
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	03/28/2023 03:01	WG2031011
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	03/28/2023 03:01	WG2031011
Ethylbenzene	U		0.000137	0.00100	1	03/28/2023 03:01	WG2031011
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	03/28/2023 03:01	WG2031011
2-Hexanone	U		0.000787	0.0100	1	03/28/2023 03:01	WG2031011
Isopropylbenzene	U		0.000105	0.00100	1	03/28/2023 03:01	WG2031011
p-Isopropyltoluene	U		0.000120	0.00100	1	03/28/2023 03:01	WG2031011
2-Butanone (MEK)	U		0.00119	0.0100	1	03/28/2023 03:01	WG2031011
Methylene Chloride	U		0.000430	0.00500	1	03/28/2023 03:01	WG2031011
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	03/28/2023 03:01	WG2031011
Methyl tert-butyl ether	U		0.000101	0.00100	1	03/28/2023 03:01	WG2031011
Naphthalene	U		0.00100	0.00500	1	03/28/2023 03:01	WG2031011
n-Propylbenzene	U		0.0000993	0.00100	1	03/28/2023 03:01	WG2031011
Styrene	U		0.000118	0.00100	1	03/28/2023 03:01	WG2031011
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	03/28/2023 03:01	WG2031011
Tetrachloroethene	U		0.000300	0.00100	1	03/28/2023 03:01	WG2031011
Toluene	U		0.000278	0.00100	1	03/28/2023 03:01	WG2031011
1,1,1-Trichloroethane	U		0.000149	0.00100	1	03/28/2023 03:01	WG2031011
1,1,2-Trichloroethane	U		0.000158	0.00100	1	03/28/2023 03:01	WG2031011
Trichloroethene	U		0.000190	0.00100	1	03/28/2023 03:01	WG2031011
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	03/28/2023 03:01	WG2031011
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	03/28/2023 03:01	WG2031011
Vinyl chloride	U		0.000234	0.00100	1	03/28/2023 03:01	WG2031011
Xylenes, Total	U		0.000174	0.00300	1	03/28/2023 03:01	WG2031011
(S) Toluene-d8	*102*			*80.0-120*		*03/28/2023 03:01*	WG2031011
(S) 4-Bromofluorobenzene	*97.5*			*77.0-126*		*03/28/2023 03:01*	WG2031011
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*		*03/28/2023 03:01*	WG2031011

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
TPH (GC/FID) High Fraction	U		0.0247	0.100	1	03/30/2023 20:22	WG2031815
(S) o-Terphenyl	*122*			*31.0-160*		*03/30/2023 20:22*	WG2031815

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Acenaphthene	U		0.0000886	0.00100	1	03/30/2023 04:27	WG2031044
Acenaphthylene	U		0.0000921	0.00100	1	03/30/2023 04:27	WG2031044
Acetophenone	U		0.000208	0.0100	1	03/30/2023 04:27	WG2031044
Anthracene	U		0.0000804	0.00100	1	03/30/2023 04:27	WG2031044
Atrazine	U		0.000255	0.0100	1	03/30/2023 04:27	WG2031044
Benzo(a)anthracene	U		0.000199	0.00100	1	03/30/2023 04:27	WG2031044
Benzaldehyde	U		0.00169	0.0100	1	03/30/2023 04:27	WG2031044
Benzo(b)fluoranthene	U		0.000130	0.00100	1	03/30/2023 04:27	WG2031044
Benzo(k)fluoranthene	U		0.000120	0.00100	1	03/30/2023 04:27	WG2031044
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	03/30/2023 04:27	WG2031044
Benzo(a)pyrene	U		0.0000381	0.000200	1	03/30/2023 04:27	WG2031044
Biphenyl	U		0.000790	0.0100	1	03/30/2023 04:27	WG2031044
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	03/30/2023 04:27	WG2031044
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	03/30/2023 04:27	WG2031044
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	03/30/2023 04:27	WG2031044
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	03/30/2023 04:27	WG2031044
2-Chloronaphthalene	U		0.0000648	0.00100	1	03/30/2023 04:27	WG2031044
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	03/30/2023 04:27	WG2031044
Caprolactam	U		0.000309	0.0100	1	03/30/2023 04:27	WG2031044
Carbazole	U		0.000111	0.0100	1	03/30/2023 04:27	WG2031044
Chrysene	U		0.000130	0.00100	1	03/30/2023 04:27	WG2031044
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	03/30/2023 04:27	WG2031044
Dibenzofuran	U		0.0000970	0.0100	1	03/30/2023 04:27	WG2031044
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	03/30/2023 04:27	WG2031044
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	03/30/2023 04:27	WG2031044
2,6-Dinitrotoluene	U		0.000250	0.0100	1	03/30/2023 04:27	WG2031044
Fluoranthene	U		0.000102	0.00100	1	03/30/2023 04:27	WG2031044
Fluorene	U		0.0000844	0.00100	1	03/30/2023 04:27	WG2031044
Hexachlorobenzene	U		0.0000755	0.00100	1	03/30/2023 04:27	WG2031044
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	03/30/2023 04:27	WG2031044
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	03/30/2023 04:27	WG2031044
Hexachloroethane	U		0.000127	0.0100	1	03/30/2023 04:27	WG2031044
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	03/30/2023 04:27	WG2031044
Isophorone	U		0.000143	0.0100	1	03/30/2023 04:27	WG2031044
1-Methylnaphthalene	U		0.0000790	0.00100	1	03/30/2023 04:27	WG2031044
2-Methylnaphthalene	U		0.000117	0.00100	1	03/30/2023 04:27	WG2031044
Naphthalene	U		0.000159	0.00100	1	03/30/2023 04:27	WG2031044
Nitrobenzene	U		0.000297	0.0100	1	03/30/2023 04:27	WG2031044
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	03/30/2023 04:27	WG2031044
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	03/30/2023 04:27	WG2031044
Phenanthrene	U		0.000112	0.00100	1	03/30/2023 04:27	WG2031044
Benzylbutyl phthalate	U		0.000765	0.00300	1	03/30/2023 04:27	WG2031044
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	03/30/2023 04:27	WG2031044
Di-n-butyl phthalate	0.000546	J	0.000453	0.00300	1	03/30/2023 04:27	WG2031044
Diethyl phthalate	U		0.000287	0.00300	1	03/30/2023 04:27	WG2031044
Dimethyl phthalate	U		0.000260	0.00300	1	03/30/2023 04:27	WG2031044
Di-n-octyl phthalate	U		0.000932	0.00300	1	03/30/2023 04:27	WG2031044
Pyrene	U		0.000107	0.00100	1	03/30/2023 04:27	WG2031044
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	03/30/2023 04:27	WG2031044
4-Chloro-3-methylphenol	U		0.000131	0.0100	1	03/30/2023 04:27	WG2031044

LB-01
Collected date/time: 03/23/23 12:55
L1598018

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
2-Chlorophenol	U		0.000133	0.0100	1	03/30/2023 04:27	WG2031044
2,4-Dichlorophenol	U		0.000102	0.0100	1	03/30/2023 04:27	WG2031044
2,4-Dimethylphenol	U		0.0000636	0.0100	1	03/30/2023 04:27	WG2031044
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	03/30/2023 04:27	WG2031044
2,4-Dinitrophenol	U		0.00593	0.0100	1	03/30/2023 04:27	WG2031044
2-Nitrophenol	U		0.000117	0.0100	1	03/30/2023 04:27	WG2031044
2-Nitroaniline	U		0.000102	0.0100	1	03/30/2023 04:27	WG2031044
2-Methylphenol	U		0.0000929	0.0100	1	03/30/2023 04:27	WG2031044
3&4-Methyl Phenol	U		0.000168	0.0100	1	03/30/2023 04:27	WG2031044
3-Nitroaniline	U		0.0000869	0.0100	1	03/30/2023 04:27	WG2031044
4-Chloroaniline	U		0.000234	0.0100	1	03/30/2023 04:27	WG2031044
4-Nitroaniline	U		0.0000910	0.0100	1	03/30/2023 04:27	WG2031044
4-Nitrophenol	U		0.000143	0.0100	1	03/30/2023 04:27	WG2031044
Pentachlorophenol	U		0.000313	0.0100	1	03/30/2023 04:27	WG2031044
Phenol	U		0.00433	0.0100	1	03/30/2023 04:27	WG2031044
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	03/30/2023 04:27	WG2031044
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	03/30/2023 04:27	WG2031044
(S) 2-Fluorophenol	*33.2*			*10.0-120*		*03/30/2023 04:27*	WG2031044
(S) Phenol-d5	*21.4*			*10.0-120*		*03/30/2023 04:27*	WG2031044
(S) Nitrobenzene-d5	*48.3*			*10.0-127*		*03/30/2023 04:27*	WG2031044
(S) 2-Fluorobiphenyl	*52.3*			*10.0-130*		*03/30/2023 04:27*	WG2031044
(S) 2,4,6-Tribromophenol	*56.0*			*10.0-155*		*03/30/2023 04:27*	WG2031044
(S) p-Terphenyl-d14	*70.0*			*10.0-128*		*03/30/2023 04:27*	WG2031044

LB-02
Collected date/time: 03/23/23 10:30
L1598018

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	ND		10.0	1	03/27/2023 22:55	WG2030626

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	U		8.45	20.0	1	03/28/2023 10:40	WG2030702

Sample Narrative:
L1598018-19 WG2030702: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	0.413	B J	0.379	1.00	1	03/25/2023 03:57	WG2029708
Fluoride	U		0.0640	0.150	1	03/25/2023 03:57	WG2029708
Nitrate	U		0.0480	0.100	1	03/25/2023 03:57	WG2029708
Nitrite	U		0.0420	0.100	1	03/25/2023 03:57	WG2029708
Sulfate	U		0.594	5.00	1	03/25/2023 03:57	WG2029708

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	03/31/2023 11:36	WG2030406

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	U		0.0200	0.200	1	03/27/2023 17:28	WG2029742

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		0.0185	0.100	1	03/29/2023 00:58	WG2029747
Arsenic,Dissolved	U		0.000180	0.00200	1	03/29/2023 00:58	WG2029747
Barium,Dissolved	0.000623	J	0.000381	0.00200	1	03/29/2023 00:58	WG2029747
Cadmium,Dissolved	U		0.000150	0.00100	1	03/29/2023 00:58	WG2029747
Chromium,Dissolved	U		0.00124	0.00200	1	03/29/2023 00:58	WG2029747
Copper,Dissolved	U		0.00151	0.00500	1	03/29/2023 00:58	WG2029747
Cobalt,Dissolved	U		0.0000596	0.00200	1	03/29/2023 00:58	WG2029747
Iron,Dissolved	U		0.0281	0.100	1	03/29/2023 00:58	WG2029747
Lead,Dissolved	0.00223		0.000849	0.00200	1	03/29/2023 00:58	WG2029747
Manganese,Dissolved	0.000845	J	0.000704	0.00500	1	03/29/2023 00:58	WG2029747
Molybdenum,Dissolved	U		0.000348	0.00500	1	03/29/2023 00:58	WG2029747
Nickel,Dissolved	U		0.000816	0.00200	1	03/29/2023 00:58	WG2029747
Selenium,Dissolved	U		0.000300	0.00200	1	03/29/2023 00:58	WG2029747
Silver,Dissolved	U		0.0000700	0.00200	1	03/29/2023 00:58	WG2029747
Uranium,Dissolved	U		0.0000700	0.0200	1	03/29/2023 00:58	WG2029747
Zinc,Dissolved	U		0.00302	0.0250	1	03/29/2023 00:58	WG2029747

LB-02
Collected date/time: 03/23/23 10:30
L1598018

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Acetone	U	J4	0.0113	0.0500	1	03/28/2023 03:23	WG2031011
Benzene	U		0.0000941	0.00100	1	03/28/2023 03:23	WG2031011
Bromodichloromethane	U		0.000136	0.00100	1	03/28/2023 03:23	WG2031011
Bromoform	U	J3	0.000129	0.00100	1	03/28/2023 03:23	WG2031011
Bromomethane	U		0.000605	0.00500	1	03/28/2023 03:23	WG2031011
n-Butylbenzene	U		0.000157	0.00100	1	03/28/2023 03:23	WG2031011
sec-Butylbenzene	U		0.000125	0.00100	1	03/28/2023 03:23	WG2031011
tert-Butylbenzene	U		0.000127	0.00100	1	03/28/2023 03:23	WG2031011
Carbon disulfide	U		0.0000962	0.00100	1	03/28/2023 03:23	WG2031011
Carbon tetrachloride	U		0.000128	0.00100	1	03/28/2023 03:23	WG2031011
Chlorobenzene	U		0.000116	0.00100	1	03/28/2023 03:23	WG2031011
Chlorodibromomethane	U		0.000140	0.00100	1	03/28/2023 03:23	WG2031011
Chloroethane	U		0.000192	0.00500	1	03/28/2023 03:23	WG2031011
Chloroform	U		0.000111	0.00500	1	03/28/2023 03:23	WG2031011
Chloromethane	U		0.000960	0.00250	1	03/28/2023 03:23	WG2031011
1,2-Dibromoethane	U		0.000126	0.00100	1	03/28/2023 03:23	WG2031011
1,1-Dichloroethane	U		0.000100	0.00100	1	03/28/2023 03:23	WG2031011
1,2-Dichloroethane	U		0.0000819	0.00100	1	03/28/2023 03:23	WG2031011
1,1-Dichloroethene	U	J3	0.000188	0.00100	1	03/28/2023 03:23	WG2031011
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	03/28/2023 03:23	WG2031011
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	03/28/2023 03:23	WG2031011
1,2-Dichloropropane	U		0.000149	0.00100	1	03/28/2023 03:23	WG2031011
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	03/28/2023 03:23	WG2031011
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	03/28/2023 03:23	WG2031011
Ethylbenzene	U		0.000137	0.00100	1	03/28/2023 03:23	WG2031011
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	03/28/2023 03:23	WG2031011
2-Hexanone	U		0.000787	0.0100	1	03/28/2023 03:23	WG2031011
Isopropylbenzene	U		0.000105	0.00100	1	03/28/2023 03:23	WG2031011
p-Isopropyltoluene	U		0.000120	0.00100	1	03/28/2023 03:23	WG2031011
2-Butanone (MEK)	0.00343	J	0.00119	0.0100	1	03/28/2023 03:23	WG2031011
Methylene Chloride	U		0.000430	0.00500	1	03/28/2023 03:23	WG2031011
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	03/28/2023 03:23	WG2031011
Methyl tert-butyl ether	U		0.000101	0.00100	1	03/28/2023 03:23	WG2031011
Naphthalene	U		0.00100	0.00500	1	03/28/2023 03:23	WG2031011
n-Propylbenzene	U		0.0000993	0.00100	1	03/28/2023 03:23	WG2031011
Styrene	U		0.000118	0.00100	1	03/28/2023 03:23	WG2031011
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	03/28/2023 03:23	WG2031011
Tetrachloroethene	U		0.000300	0.00100	1	03/28/2023 03:23	WG2031011
Toluene	U		0.000278	0.00100	1	03/28/2023 03:23	WG2031011
1,1,1-Trichloroethane	U		0.000149	0.00100	1	03/28/2023 03:23	WG2031011
1,1,2-Trichloroethane	U		0.000158	0.00100	1	03/28/2023 03:23	WG2031011
Trichloroethene	U		0.000190	0.00100	1	03/28/2023 03:23	WG2031011
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	03/28/2023 03:23	WG2031011
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	03/28/2023 03:23	WG2031011
Vinyl chloride	U		0.000234	0.00100	1	03/28/2023 03:23	WG2031011
Xylenes, Total	U		0.000174	0.00300	1	03/28/2023 03:23	WG2031011
(S) Toluene-d8	*100*			*80.0-120*		*03/28/2023 03:23*	WG2031011
(S) 4-Bromofluorobenzene	*97.4*			*77.0-126*		*03/28/2023 03:23*	WG2031011
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*03/28/2023 03:23*	WG2031011

Received by OCD: 4/15/2024 1:46:20 PM

SAMPLE RESULTS - 19

LB-02
Collected date/time: 03/23/23 10:30
L1598018

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000886	0.00100	1	03/30/2023 04:49	WG2031044
Acenaphthylene	U		0.0000921	0.00100	1	03/30/2023 04:49	WG2031044
Acetophenone	U		0.000208	0.0100	1	03/30/2023 04:49	WG2031044
Anthracene	U		0.0000804	0.00100	1	03/30/2023 04:49	WG2031044
Atrazine	U		0.000255	0.0100	1	03/30/2023 04:49	WG2031044
Benzo(a)anthracene	U		0.000199	0.00100	1	03/30/2023 04:49	WG2031044
Benzaldehyde	U		0.00169	0.0100	1	03/30/2023 04:49	WG2031044
Benzo(b)fluoranthene	U		0.000130	0.00100	1	03/30/2023 04:49	WG2031044
Benzo(k)fluoranthene	U		0.000120	0.00100	1	03/30/2023 04:49	WG2031044
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	03/30/2023 04:49	WG2031044
Benzo(a)pyrene	U		0.0000381	0.000200	1	03/30/2023 04:49	WG2031044
Biphenyl	U		0.000790	0.0100	1	03/30/2023 04:49	WG2031044
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	03/30/2023 04:49	WG2031044
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	03/30/2023 04:49	WG2031044
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	03/30/2023 04:49	WG2031044
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	03/30/2023 04:49	WG2031044
2-Chloronaphthalene	U		0.0000648	0.00100	1	03/30/2023 04:49	WG2031044
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	03/30/2023 04:49	WG2031044
Caprolactam	U		0.000309	0.0100	1	03/30/2023 04:49	WG2031044
Carbazole	U		0.000111	0.0100	1	03/30/2023 04:49	WG2031044
Chrysene	U		0.000130	0.00100	1	03/30/2023 04:49	WG2031044
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	03/30/2023 04:49	WG2031044
Dibenzofuran	U		0.0000970	0.0100	1	03/30/2023 04:49	WG2031044
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	03/30/2023 04:49	WG2031044
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	03/30/2023 04:49	WG2031044
2,6-Dinitrotoluene	U		0.000250	0.0100	1	03/30/2023 04:49	WG2031044
Fluoranthene	U		0.000102	0.00100	1	03/30/2023 04:49	WG2031044
Fluorene	U		0.0000844	0.00100	1	03/30/2023 04:49	WG2031044
Hexachlorobenzene	U		0.0000755	0.00100	1	03/30/2023 04:49	WG2031044
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	03/30/2023 04:49	WG2031044
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	03/30/2023 04:49	WG2031044
Hexachloroethane	U		0.000127	0.0100	1	03/30/2023 04:49	WG2031044
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	03/30/2023 04:49	WG2031044
Isophorone	U		0.000143	0.0100	1	03/30/2023 04:49	WG2031044
1-Methylnaphthalene	U		0.0000790	0.00100	1	03/30/2023 04:49	WG2031044
2-Methylnaphthalene	U		0.000117	0.00100	1	03/30/2023 04:49	WG2031044
Naphthalene	U		0.000159	0.00100	1	03/30/2023 04:49	WG2031044
Nitrobenzene	U		0.000297	0.0100	1	03/30/2023 04:49	WG2031044
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	03/30/2023 04:49	WG2031044
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	03/30/2023 04:49	WG2031044
Phenanthrene	U		0.000112	0.00100	1	03/30/2023 04:49	WG2031044
Benzylbutyl phthalate	U		0.000765	0.00300	1	03/30/2023 04:49	WG2031044
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	03/30/2023 04:49	WG2031044
Di-n-butyl phthalate	0.000722	J	0.000453	0.00300	1	03/30/2023 04:49	WG2031044
Diethyl phthalate	U		0.000287	0.00300	1	03/30/2023 04:49	WG2031044
Dimethyl phthalate	U		0.000260	0.00300	1	03/30/2023 04:49	WG2031044
Di-n-octyl phthalate	U		0.000932	0.00300	1	03/30/2023 04:49	WG2031044
Pyrene	U		0.000107	0.00100	1	03/30/2023 04:49	WG2031044
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	03/30/2023 04:49	WG2031044
4-Chloro-3-methylphenol	U		0.000131	0.0100	1	03/30/2023 04:49	WG2031044
2-Chlorophenol	U		0.000133	0.0100	1	03/30/2023 04:49	WG2031044
2,4-Dichlorophenol	U		0.000102	0.0100	1	03/30/2023 04:49	WG2031044
2,4-Dimethylphenol	U		0.0000636	0.0100	1	03/30/2023 04:49	WG2031044
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	03/30/2023 04:49	WG2031044
2,4-Dinitrophenol	U		0.00593	0.0100	1	03/30/2023 04:49	WG2031044
2-Nitrophenol	U		0.000117	0.0100	1	03/30/2023 04:49	WG2031044

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

Released to Imaging: 4/26/2024 10:49:21 AM

LB-02
Collected date/time: 03/23/23 10:30
L1598018

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
2-Nitroaniline	U		0.000102	0.0100	1	03/30/2023 04:49	WG2031044
2-Methylphenol	U		0.0000929	0.0100	1	03/30/2023 04:49	WG2031044
3&4-Methyl Phenol	U		0.000168	0.0100	1	03/30/2023 04:49	WG2031044
3-Nitroaniline	U		0.0000869	0.0100	1	03/30/2023 04:49	WG2031044
4-Chloroaniline	U		0.000234	0.0100	1	03/30/2023 04:49	WG2031044
4-Nitroaniline	U		0.0000910	0.0100	1	03/30/2023 04:49	WG2031044
4-Nitrophenol	U		0.000143	0.0100	1	03/30/2023 04:49	WG2031044
Pentachlorophenol	U		0.000313	0.0100	1	03/30/2023 04:49	WG2031044
Phenol	U		0.00433	0.0100	1	03/30/2023 04:49	WG2031044
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	03/30/2023 04:49	WG2031044
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	03/30/2023 04:49	WG2031044
(S) 2-Fluorophenol	*29.7*			*10.0-120*		*03/30/2023 04:49*	WG2031044
(S) Phenol-d5	*19.3*			*10.0-120*		*03/30/2023 04:49*	WG2031044
(S) Nitrobenzene-d5	*40.4*			*10.0-127*		*03/30/2023 04:49*	WG2031044
(S) 2-Fluorobiphenyl	*45.5*			*10.0-130*		*03/30/2023 04:49*	WG2031044
(S) 2,4,6-Tribromophenol	*48.0*			*10.0-155*		*03/30/2023 04:49*	WG2031044
(S) p-Terphenyl-d14	*57.6*			*10.0-128*		*03/30/2023 04:49*	WG2031044

TRIP BLANK-01
Collected date/time: 03/23/23 00:00
L1598018

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Acetone	U	J4	0.0113	0.0500	1	03/28/2023 02:18	WG2031011
Benzene	U		0.0000941	0.00100	1	03/28/2023 02:18	WG2031011
Bromodichloromethane	U		0.000136	0.00100	1	03/28/2023 02:18	WG2031011
Bromoform	U	J3	0.000129	0.00100	1	03/28/2023 02:18	WG2031011
Bromomethane	U		0.000605	0.00500	1	03/28/2023 02:18	WG2031011
n-Butylbenzene	U		0.000157	0.00100	1	03/28/2023 02:18	WG2031011
sec-Butylbenzene	U		0.000125	0.00100	1	03/28/2023 02:18	WG2031011
tert-Butylbenzene	U		0.000127	0.00100	1	03/28/2023 02:18	WG2031011
Carbon disulfide	U		0.0000962	0.00100	1	03/28/2023 02:18	WG2031011
Carbon tetrachloride	U		0.000128	0.00100	1	03/28/2023 02:18	WG2031011
Chlorobenzene	U		0.000116	0.00100	1	03/28/2023 02:18	WG2031011
Chlorodibromomethane	U		0.000140	0.00100	1	03/28/2023 02:18	WG2031011
Chloroethane	U		0.000192	0.00500	1	03/28/2023 02:18	WG2031011
Chloroform	U		0.000111	0.00500	1	03/28/2023 02:18	WG2031011
Chloromethane	U		0.000960	0.00250	1	03/28/2023 02:18	WG2031011
1,2-Dibromoethane	U		0.000126	0.00100	1	03/28/2023 02:18	WG2031011
1,1-Dichloroethane	U		0.000100	0.00100	1	03/28/2023 02:18	WG2031011
1,2-Dichloroethane	U		0.0000819	0.00100	1	03/28/2023 02:18	WG2031011
1,1-Dichloroethene	U	J3	0.000188	0.00100	1	03/28/2023 02:18	WG2031011
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	03/28/2023 02:18	WG2031011
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	03/28/2023 02:18	WG2031011
1,2-Dichloropropane	U		0.000149	0.00100	1	03/28/2023 02:18	WG2031011
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	03/28/2023 02:18	WG2031011
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	03/28/2023 02:18	WG2031011
Ethylbenzene	U		0.000137	0.00100	1	03/28/2023 02:18	WG2031011
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	03/28/2023 02:18	WG2031011
2-Hexanone	U		0.000787	0.0100	1	03/28/2023 02:18	WG2031011
Isopropylbenzene	U		0.000105	0.00100	1	03/28/2023 02:18	WG2031011
p-Isopropyltoluene	U		0.000120	0.00100	1	03/28/2023 02:18	WG2031011
2-Butanone (MEK)	U		0.00119	0.0100	1	03/28/2023 02:18	WG2031011
Methylene Chloride	U		0.000430	0.00500	1	03/28/2023 02:18	WG2031011
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	03/28/2023 02:18	WG2031011
Methyl tert-butyl ether	U		0.000101	0.00100	1	03/28/2023 02:18	WG2031011
Naphthalene	U		0.00100	0.00500	1	03/28/2023 02:18	WG2031011
n-Propylbenzene	U		0.0000993	0.00100	1	03/28/2023 02:18	WG2031011
Styrene	U		0.000118	0.00100	1	03/28/2023 02:18	WG2031011
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	03/28/2023 02:18	WG2031011
Tetrachloroethene	U		0.000300	0.00100	1	03/28/2023 02:18	WG2031011
Toluene	U		0.000278	0.00100	1	03/28/2023 02:18	WG2031011
1,1,1-Trichloroethane	U		0.000149	0.00100	1	03/28/2023 02:18	WG2031011
1,1,2-Trichloroethane	U		0.000158	0.00100	1	03/28/2023 02:18	WG2031011
Trichloroethene	U		0.000190	0.00100	1	03/28/2023 02:18	WG2031011
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	03/28/2023 02:18	WG2031011
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	03/28/2023 02:18	WG2031011
Vinyl chloride	U		0.000234	0.00100	1	03/28/2023 02:18	WG2031011
Xylenes, Total	U		0.000174	0.00300	1	03/28/2023 02:18	WG2031011
(S) Toluene-d8	*102*			*80.0-120*		*03/28/2023 02:18*	WG2031011
(S) 4-Bromofluorobenzene	*101*			*77.0-126*		*03/28/2023 02:18*	WG2031011
(S) 1,2-Dichloroethane-d4	*109*			*70.0-130*		*03/28/2023 02:18*	WG2031011

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

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U	J4	0.0113	0.0500	1	03/28/2023 02:40	WG2031011
Benzene	U		0.0000941	0.00100	1	03/28/2023 02:40	WG2031011
Bromodichloromethane	U		0.000136	0.00100	1	03/28/2023 02:40	WG2031011
Bromoform	U	J3	0.000129	0.00100	1	03/28/2023 02:40	WG2031011
Bromomethane	U		0.000605	0.00500	1	03/28/2023 02:40	WG2031011
n-Butylbenzene	U		0.000157	0.00100	1	03/28/2023 02:40	WG2031011
sec-Butylbenzene	U		0.000125	0.00100	1	03/28/2023 02:40	WG2031011
tert-Butylbenzene	U		0.000127	0.00100	1	03/28/2023 02:40	WG2031011
Carbon disulfide	U		0.0000962	0.00100	1	03/28/2023 02:40	WG2031011
Carbon tetrachloride	U		0.000128	0.00100	1	03/28/2023 02:40	WG2031011
Chlorobenzene	U		0.000116	0.00100	1	03/28/2023 02:40	WG2031011
Chlorodibromomethane	U		0.000140	0.00100	1	03/28/2023 02:40	WG2031011
Chloroethane	U		0.000192	0.00500	1	03/28/2023 02:40	WG2031011
Chloroform	U		0.000111	0.00500	1	03/28/2023 02:40	WG2031011
Chloromethane	U		0.000960	0.00250	1	03/28/2023 02:40	WG2031011
1,2-Dibromoethane	U		0.000126	0.00100	1	03/28/2023 02:40	WG2031011
1,1-Dichloroethane	U		0.000100	0.00100	1	03/28/2023 02:40	WG2031011
1,2-Dichloroethane	U		0.0000819	0.00100	1	03/28/2023 02:40	WG2031011
1,1-Dichloroethene	U	J3	0.000188	0.00100	1	03/28/2023 02:40	WG2031011
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	03/28/2023 02:40	WG2031011
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	03/28/2023 02:40	WG2031011
1,2-Dichloropropane	U		0.000149	0.00100	1	03/28/2023 02:40	WG2031011
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	03/28/2023 02:40	WG2031011
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	03/28/2023 02:40	WG2031011
Ethylbenzene	U		0.000137	0.00100	1	03/28/2023 02:40	WG2031011
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	03/28/2023 02:40	WG2031011
2-Hexanone	U		0.000787	0.0100	1	03/28/2023 02:40	WG2031011
Isopropylbenzene	U		0.000105	0.00100	1	03/28/2023 02:40	WG2031011
p-Isopropyltoluene	U		0.000120	0.00100	1	03/28/2023 02:40	WG2031011
2-Butanone (MEK)	U		0.00119	0.0100	1	03/28/2023 02:40	WG2031011
Methylene Chloride	U		0.000430	0.00500	1	03/28/2023 02:40	WG2031011
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	03/28/2023 02:40	WG2031011
Methyl tert-butyl ether	U		0.000101	0.00100	1	03/28/2023 02:40	WG2031011
Naphthalene	U		0.00100	0.00500	1	03/28/2023 02:40	WG2031011
n-Propylbenzene	U		0.0000993	0.00100	1	03/28/2023 02:40	WG2031011
Styrene	U		0.000118	0.00100	1	03/28/2023 02:40	WG2031011
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	03/28/2023 02:40	WG2031011
Tetrachloroethene	U		0.000300	0.00100	1	03/28/2023 02:40	WG2031011
Toluene	U		0.000278	0.00100	1	03/28/2023 02:40	WG2031011
1,1,1-Trichloroethane	U		0.000149	0.00100	1	03/28/2023 02:40	WG2031011
1,1,2-Trichloroethane	U		0.000158	0.00100	1	03/28/2023 02:40	WG2031011
Trichloroethene	U		0.000190	0.00100	1	03/28/2023 02:40	WG2031011
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	03/28/2023 02:40	WG2031011
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	03/28/2023 02:40	WG2031011
Vinyl chloride	U		0.000234	0.00100	1	03/28/2023 02:40	WG2031011
Xylenes, Total	U		0.000174	0.00300	1	03/28/2023 02:40	WG2031011
(S) Toluene-d8	*101*			*80.0-120*		*03/28/2023 02:40*	WG2031011
(S) 4-Bromofluorobenzene	*100*			*77.0-126*		*03/28/2023 02:40*	WG2031011
(S) 1,2-Dichloroethane-d4	*103*			*70.0-130*		*03/28/2023 02:40*	WG2031011

Method Blank (MB)

(MB) R3907005-1 03/27/23 22:55

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

L1598018-15 Original Sample (OS) • Duplicate (DUP)

(OS) L1598018-15 03/27/23 22:55 • (DUP) R3907005-3 03/27/23 22:55

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1150	1050	1	9.12	J3	5

L1598018-16 Original Sample (OS) • Duplicate (DUP)

(OS) L1598018-16 03/27/23 22:55 • (DUP) R3907005-4 03/27/23 22:55

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	775	815	1	5.03	J3	5

Laboratory Control Sample (LCS)

(LCS) R3907005-2 03/27/23 22:55

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8160	92.7	77.3-123	

Method Blank (MB)

(MB) R3906230-2 03/28/23 07:44

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	U		8.45	20.0

Sample Narrative:
BLANK: Endpoint pH 4.5

L1598018-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1598018-05 03/28/23 08:37 • (DUP) R3906230-3 03/28/23 08:42

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	231	232	1	0.775		20

Sample Narrative:
OS: Endpoint pH 4.5 Headspace
DUP: Endpoint pH 4.5

L1598018-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1598018-11 03/28/23 09:34 • (DUP) R3906230-4 03/28/23 09:38

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	1030	1020	1	0.508		20

Sample Narrative:
OS: Endpoint pH 4.5 Headspace
DUP: Endpoint pH 4.5

Laboratory Control Sample (LCS)

(LCS) R3906230-1 03/28/23 07:36

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100	105	105	90.0-110	

Sample Narrative:
LCS: Endpoint pH 4.5

Method Blank (MB)

(MB) R3907382-1 03/24/23 10:27

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	0.383	J	0.379	1.00
Fluoride	U		0.0640	0.150
Nitrate	0.0693	J	0.0480	0.100
Nitrite	U		0.0420	0.100
Sulfate	U		0.594	5.00

L1597534-21 Original Sample (OS) • Duplicate (DUP)

(OS) L1597534-21 03/24/23 15:37 • (DUP) R3907382-3 03/24/23 22:34

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	404	405	1	0.0280	E	15
Fluoride	U	U	1	0.000		15
Nitrate	0.0798	0.0739	1	7.68	J	15
Nitrite	U	U	1	0.000		15
Sulfate	40.5	40.6	1	0.277		15

L1598018-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1598018-05 03/24/23 20:07 • (DUP) R3907382-6 03/24/23 23:13

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	66.6	66.9	1	0.383		15
Fluoride	0.790	0.871	1	9.84		15
Nitrate	6.98	7.04	1	0.800		15
Nitrite	U	U	1	0.000		15
Sulfate	79.9	80.6	1	0.805		15

Laboratory Control Sample (LCS)

(LCS) R3907382-2 03/24/23 10:41

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	36.9	92.2	80.0-120	
Fluoride	8.00	7.75	96.8	80.0-120	
Nitrate	8.00	7.26	90.8	80.0-120	
Nitrite	8.00	7.76	97.0	80.0-120	

Laboratory Control Sample (LCS)

(LCS) R3907382-2 03/24/23 10:41

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfate	40.0	36.9	92.3	80.0-120	

L1597534-21 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1597534-21 03/24/23 15:37 • (MS) R3907382-4 03/24/23 22:47 • (MSD) R3907382-5 03/24/23 23:00

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	404	432	435	54.5	61.8	1	80.0-120	E V	E V	0.846	15
Fluoride	5.00	U	3.21	3.75	64.2	75.0	1	80.0-120	J6	J3 J6	15.6	15
Nitrate	5.00	0.0798	4.07	4.74	79.9	93.3	1	80.0-120	J6	J3	15.2	15
Nitrite	5.00	U	4.37	5.16	87.4	103	1	80.0-120		J3	16.5	15
Sulfate	50.0	40.5	82.0	89.7	82.9	98.3	1	80.0-120			8.98	15

L1598018-05 Original Sample (OS) • Matrix Spike (MS)

(OS) L1598018-05 03/24/23 20:07 • (MS) R3907382-7 03/24/23 23:25

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	66.6	112	91.4	1	80.0-120	
Fluoride	5.00	0.790	5.86	101	1	80.0-120	
Nitrate	5.00	6.98	11.6	92.7	1	80.0-120	
Nitrite	5.00	U	5.03	101	1	80.0-120	
Sulfate	50.0	79.9	126	91.8	1	80.0-120	

Method Blank (MB)

(MB) R3908051-1 03/25/23 00:04

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	0.468	J	0.379	1.00
Fluoride	U		0.0640	0.150
Nitrate	0.0772	J	0.0480	0.100
Nitrite	U		0.0420	0.100
Sulfate	U		0.594	5.00

L1598018-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1598018-09 03/25/23 01:48 • (DUP) R3908051-3 03/25/23 06:57

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	122	122	1	0.108		15
Fluoride	0.800	0.823	1	2.82		15
Nitrate	7.10	7.09	1	0.171		15
Nitrite	U	U	1	0.000		15
Sulfate	53.1	53.0	1	0.0880		15

L1598018-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1598018-11 03/25/23 02:39 • (DUP) R3908051-5 03/25/23 08:02

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	82.6	82.7	1	0.152		15
Fluoride	0.690	0.673	1	2.57		15
Nitrate	0.0687	U	1	200	P1	15
Nitrite	U	U	1	0.000		15
Sulfate	6.12	6.09	1	0.487		15

Laboratory Control Sample (LCS)

(LCS) R3908051-2 03/25/23 00:17

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	39.4	98.4	80.0-120	
Fluoride	8.00	8.26	103	80.0-120	
Nitrate	8.00	7.78	97.2	80.0-120	
Nitrite	8.00	8.25	103	80.0-120	

Laboratory Control Sample (LCS)

(LCS) R3908051-2 03/25/23 00:17

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfate	40.0	39.3	98.3	80.0-120	

L1598018-09 Original Sample (OS) • Matrix Spike (MS)

(OS) L1598018-09 03/25/23 01:48 • (MS) R3908051-4 03/25/23 07:10

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	122	166	87.8	1	80.0-120	
Fluoride	5.00	0.800	6.12	106	1	80.0-120	
Nitrate	5.00	7.10	11.8	94.3	1	80.0-120	
Nitrite	5.00	U	5.06	101	1	80.0-120	
Sulfate	50.0	53.1	99.5	92.9	1	80.0-120	

L1598018-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1598018-11 03/25/23 02:39 • (MS) R3908051-6 03/25/23 08:14 • (MSD) R3908051-7 03/25/23 08:27

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	82.6	128	128	90.5	91.7	1	80.0-120			0.458	15
Fluoride	5.00	0.690	5.79	5.78	102	102	1	80.0-120			0.292	15
Nitrate	5.00	0.0687	4.55	4.56	89.6	89.9	1	80.0-120			0.263	15
Nitrite	5.00	U	4.95	4.94	99.1	98.8	1	80.0-120			0.243	15
Sulfate	50.0	6.12	54.4	54.4	96.5	96.6	1	80.0-120			0.103	15

Method Blank (MB)

(MB) R3907549-1 03/25/23 10:10

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.379	1.00
Fluoride	U		0.0640	0.150
Nitrate	U		0.0480	0.100
Nitrite	U		0.0420	0.100
Sulfate	U		0.594	5.00

L1598380-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1598380-12 03/25/23 12:48 • (DUP) R3907549-6 03/25/23 16:50

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	261	268	1	2.57	E	15
Fluoride	5.50	5.97	1	8.12		15
Nitrate	0.140	0.645	1	128	J3	15
Nitrite	U	U	1	0.000		15
Sulfate	309	318	1	2.85	E	15

L1598355-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1598355-01 03/25/23 17:54 • (DUP) R3907549-9 03/25/23 20:28

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	4.44	4.15	1	6.79		15
Fluoride	0.195	0.197	1	1.33		15
Nitrate	1.56	1.54	1	1.55		15
Nitrite	U	U	1	0.000		15
Sulfate	35.5	35.2	1	0.797		15

Laboratory Control Sample (LCS)

(LCS) R3907549-2 03/25/23 10:23

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	39.8	99.4	80.0-120	
Fluoride	8.00	8.16	102	80.0-120	
Nitrate	8.00	7.86	98.3	80.0-120	
Nitrite	8.00	8.11	101	80.0-120	

Laboratory Control Sample (LCS)

(LCS) R3907549-2 03/25/23 10:23

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfate	40.0	39.3	98.3	80.0-120	

L1598380-12 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1598380-12 03/25/23 12:48 • (MS) R3907549-7 03/25/23 17:03 • (MSD) R3907549-8 03/25/23 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 %
Chloride	50.0	261	307	297	92.6	72.4	1	80.0-120	E	E V	3.35	15
Fluoride	5.00	5.50	10.5	10.2	101	94.7	1	80.0-120			2.89	15
Nitrate	5.00	0.140	5.44	5.24	106	102	1	80.0-120			3.80	15
Nitrite	5.00	U	5.14	5.05	103	101	1	80.0-120			1.87	15
Sulfate	50.0	309	351	341	83.6	64.4	1	80.0-120	E	E V	2.77	15

L1598355-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1598355-01 03/25/23 17:54 • (MS) R3907549-10 03/25/23 20:41

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	4.44	54.0	99.1	1	80.0-120	
Fluoride	5.00	0.195	5.44	105	1	80.0-120	
Nitrate	5.00	1.56	6.46	97.9	1	80.0-120	
Nitrite	5.00	U	5.14	103	1	80.0-120	
Sulfate	50.0	35.5	82.5	94.0	1	80.0-120	

Method Blank (MB)

(MB) R3906511-1 03/28/23 17:34

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	U		0.000100	0.000200

Laboratory Control Sample (LCS)

(LCS) R3906511-2 03/28/23 17:36

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.00300	0.00281	93.8	80.0-120	

L1597708-33 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1597708-33 03/28/23 17:38 • (MS) R3906511-3 03/28/23 17:40 • (MSD) R3906511-4 03/28/23 17:42

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	0.00326	0.00327	109	109	1	75.0-125			0.239	20

L1597708-34 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1597708-34 03/28/23 17:45 • (MS) R3906511-5 03/28/23 17:53 • (MSD) R3906511-6 03/28/23 17:55

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	0.00308	0.00294	103	98.1	1	75.0-125			4.55	20

Method Blank (MB)

(MB) R3907841-1 03/31/23 10:50

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	U		0.000100	0.000200

Laboratory Control Sample (LCS)

(LCS) R3907841-2 03/31/23 10:53

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.00300	0.00314	105	80.0-120	

L1597898-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1597898-01 03/31/23 10:55 • (MS) R3907841-3 03/31/23 10:57 • (MSD) R3907841-4 03/31/23 11:03

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	0.00216	0.00296	72.1	98.7	1	75.0-125	J6	J3	31.1	20

Method Blank (MB)

(MB) R3907724-1 03/31/23 09:00

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	U		0.000100	0.000200

Laboratory Control Sample (LCS)

(LCS) R3907724-2 03/31/23 09:02

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.00300	0.00320	107	80.0-120	

L1598018-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1598018-11 03/31/23 09:04 • (MS) R3907724-3 03/31/23 09:06 • (MSD) R3907724-4 03/31/23 09:08

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	0.00231	0.00250	76.9	83.3	1	75.0-125			8.03	20

Method Blank (MB)

(MB) R3905997-1 03/27/23 16:14

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Boron,Dissolved	U		0.0200	0.200

Laboratory Control Sample (LCS)

(LCS) R3905997-2 03/27/23 16:17

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron,Dissolved	1.00	0.963	96.3	80.0-120	

L1598018-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1598018-11 03/27/23 16:20 • (MS) R3905997-4 03/27/23 16:25 • (MSD) R3905997-5 03/27/23 16:28

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 %
Boron,Dissolved	1.00	0.163	1.12	1.10	95.9	94.1	1	75.0-125			1.62	20

Received by OCD: 4/15/2024 1:46:20 PM

Method Blank (MB)

(MB) R3906527-1 03/28/23 18:34

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Boron,Dissolved	U		0.0200	0.200

Laboratory Control Sample (LCS)

(LCS) R3906527-2 03/28/23 18:37

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron,Dissolved	1.00	0.973	97.3	80.0-120	

L1597201-42 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1597201-42 03/28/23 18:40 • (MS) R3906527-4 03/28/23 18:45 • (MSD) R3906527-5 03/28/23 18:48

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	0.332	1.33	1.34	100	101	1	75.0-125			0.412	20

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Method Blank (MB)

(MB) R3906662-1 03/28/23 23:29

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Aluminum,Dissolved	U		0.0185	0.100
Arsenic,Dissolved	U		0.000180	0.00200
Barium,Dissolved	U		0.000381	0.00200
Cadmium,Dissolved	U		0.000150	0.00100
Chromium,Dissolved	U		0.00124	0.00200
Copper,Dissolved	U		0.00151	0.00500
Cobalt,Dissolved	U		0.0000596	0.00200
Iron,Dissolved	U		0.0281	0.100
Lead,Dissolved	U		0.000849	0.00200
Manganese,Dissolved	U		0.000704	0.00500
Molybdenum,Dissolved	U		0.000348	0.00500
Nickel,Dissolved	U		0.000816	0.00200
Selenium,Dissolved	U		0.000300	0.00200
Silver,Dissolved	U		0.0000700	0.00200
Uranium,Dissolved	U		0.0000700	0.0200
Zinc,Dissolved	U		0.00302	0.0250

Laboratory Control Sample (LCS)

(LCS) R3906662-2 03/28/23 23:32

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aluminum,Dissolved	5.00	4.67	93.3	80.0-120	
Arsenic,Dissolved	0.0500	0.0478	95.5	80.0-120	
Barium,Dissolved	0.0500	0.0487	97.3	80.0-120	
Cadmium,Dissolved	0.0500	0.0496	99.1	80.0-120	
Chromium,Dissolved	0.0500	0.0485	96.9	80.0-120	
Copper,Dissolved	0.0500	0.0472	94.5	80.0-120	
Cobalt,Dissolved	0.0500	0.0494	98.8	80.0-120	
Iron,Dissolved	5.00	4.95	98.9	80.0-120	
Lead,Dissolved	0.0500	0.0472	94.5	80.0-120	
Manganese,Dissolved	0.0500	0.0500	100	80.0-120	
Molybdenum,Dissolved	0.0500	0.0498	99.6	80.0-120	
Nickel,Dissolved	0.0500	0.0489	97.9	80.0-120	
Selenium,Dissolved	0.0500	0.0488	97.6	80.0-120	
Silver,Dissolved	0.0500	0.0512	102	80.0-120	
Uranium,Dissolved	0.0500	0.0473	94.5	80.0-120	
Zinc,Dissolved	0.0500	0.0475	95.0	80.0-120	

L1598018-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1598018-11 03/28/23 23:36 • (MS) R3906662-4 03/28/23 23:42 • (MSD) R3906662-5 03/28/23 23:45

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	4.49	4.51	89.8	90.3	1	75.0-125			0.505	20
Arsenic,Dissolved	0.0500	0.00603	0.0535	0.0537	95.0	95.4	1	75.0-125			0.293	20
Barium,Dissolved	0.0500	0.557	0.606	0.607	98.3	99.6	1	75.0-125			0.107	20
Cadmium,Dissolved	0.0500	U	0.0485	0.0487	97.1	97.4	1	75.0-125			0.379	20
Chromium,Dissolved	0.0500	U	0.0474	0.0474	94.8	94.9	1	75.0-125			0.0728	20
Copper,Dissolved	0.0500	0.00513	0.0506	0.0512	91.0	92.1	1	75.0-125			1.07	20
Cobalt,Dissolved	0.0500	0.0000794	0.0476	0.0475	95.2	95.0	1	75.0-125			0.257	20
Iron,Dissolved	5.00	1.98	6.61	6.48	92.5	90.1	1	75.0-125			1.88	20
Lead,Dissolved	0.0500	U	0.0478	0.0462	95.6	92.4	1	75.0-125			3.34	20
Manganese,Dissolved	0.0500	0.992	1.05	1.02	107	61.0	1	75.0-125		V	2.22	20
Molybdenum,Dissolved	0.0500	0.00220	0.0534	0.0531	102	102	1	75.0-125			0.593	20
Nickel,Dissolved	0.0500	0.00174	0.0484	0.0488	93.3	94.2	1	75.0-125			0.946	20
Selenium,Dissolved	0.0500	U	0.0503	0.0512	101	102	1	75.0-125			1.73	20
Silver,Dissolved	0.0500	U	0.0498	0.0507	99.5	101	1	75.0-125			1.89	20
Uranium,Dissolved	0.0500	0.0485	0.0955	0.0955	94.2	94.0	1	75.0-125			0.0922	20
Zinc,Dissolved	0.0500	0.00319	0.0486	0.0483	97.2	96.6	1	75.0-125			0.598	20

L1598083-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1598083-01 03/28/23 23:49 • (MS) R3906662-6 03/28/23 23:52 • (MSD) R3906662-7 03/28/23 23:55

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	4.59	4.59	91.8	91.7	1	75.0-125			0.0633	20
Arsenic,Dissolved	0.0500	0.00678	0.0561	0.0547	98.7	95.9	1	75.0-125			2.48	20
Barium,Dissolved	0.0500	0.215	0.261	0.259	91.7	89.4	1	75.0-125			0.446	20
Cadmium,Dissolved	0.0500	U	0.0471	0.0465	94.3	93.0	1	75.0-125			1.38	20
Chromium,Dissolved	0.0500	U	0.0529	0.0477	106	95.5	1	75.0-125			10.3	20
Copper,Dissolved	0.0500	U	0.0459	0.0448	91.7	89.7	1	75.0-125			2.25	20
Cobalt,Dissolved	0.0500	0.00553	0.0529	0.0510	94.8	91.0	1	75.0-125			3.62	20
Iron,Dissolved	5.00	0.0770	4.90	4.86	96.5	95.6	1	75.0-125			0.879	20
Lead,Dissolved	0.0500	U	0.0469	0.0466	93.8	93.2	1	75.0-125			0.680	20
Manganese,Dissolved	0.0500	7.90	8.01	8.05	221	300	1	75.0-125	V	V	0.492	20
Molybdenum,Dissolved	0.0500	0.00154	0.0551	0.0531	107	103	1	75.0-125			3.70	20
Nickel,Dissolved	0.0500	0.0109	0.0568	0.0552	91.7	88.5	1	75.0-125			2.80	20
Selenium,Dissolved	0.0500	U	0.0538	0.0543	108	109	1	75.0-125			0.920	20
Silver,Dissolved	0.0500	U	0.0498	0.0487	99.6	97.5	1	75.0-125			2.13	20
Uranium,Dissolved	0.0500	0.00323	0.0506	0.0506	101	101	1	75.0-125			0.00546	20
Zinc,Dissolved	0.0500	0.00617	0.0512	0.0486	102	97.1	1	75.0-125			5.24	20

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Method Blank (MB)

(MB) R3906089-2 03/27/23 16:46

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)	*111*			*78.0-120*

Laboratory Control Sample (LCS)

(LCS) R3906089-1 03/27/23 15:53

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.04	110	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*106*	*78.0-120*	

L1598018-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1598018-11 03/27/23 22:26 • (MS) R3906089-3 03/28/23 02:34 • (MSD) R3906089-4 03/28/23 02:56

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 %
TPH (GC/FID) Low Fraction	5.50	U	5.09	5.35	92.5	97.3	1	10.0-160			4.98	22
(S) a,a,a-Trifluorotoluene(FID)					*103*	*105*		*78.0-120*				

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Method Blank (MB)

(MB) R3907135-1 03/27/23 20:03

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0113	0.0500
Benzene	U		0.0000941	0.00100
Bromodichloromethane	U		0.000136	0.00100
Bromoform	U		0.000129	0.00100
Bromomethane	U		0.000605	0.00500
n-Butylbenzene	U		0.000157	0.00100
sec-Butylbenzene	U		0.000125	0.00100
tert-Butylbenzene	U		0.000127	0.00100
Carbon disulfide	U		0.0000962	0.00100
Carbon tetrachloride	U		0.000128	0.00100
Chlorobenzene	U		0.000116	0.00100
Chlorodibromomethane	U		0.000140	0.00100
Chloroethane	U		0.000192	0.00500
Chloroform	U		0.000111	0.00500
Chloromethane	U		0.000960	0.00250
1,2-Dibromoethane	U		0.000126	0.00100
1,1-Dichloroethane	U		0.000100	0.00100
1,2-Dichloroethane	U		0.0000819	0.00100
1,1-Dichloroethene	U		0.000188	0.00100
cis-1,2-Dichloroethene	U		0.000126	0.00100
trans-1,2-Dichloroethene	U		0.000149	0.00100
1,2-Dichloropropane	U		0.000149	0.00100
cis-1,3-Dichloropropene	U		0.000111	0.00100
trans-1,3-Dichloropropene	U		0.000118	0.00100
Ethylbenzene	U		0.000137	0.00100
Hexachloro-1,3-butadiene	U		0.000337	0.00100
2-Hexanone	U		0.000787	0.0100
Isopropylbenzene	U		0.000105	0.00100
p-Isopropyltoluene	U		0.000120	0.00100
2-Butanone (MEK)	U		0.00119	0.0100
Methylene Chloride	U		0.000430	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100
Methyl tert-butyl ether	U		0.000101	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.0000993	0.00100
Styrene	U		0.000118	0.00100
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100
Tetrachloroethene	U		0.000300	0.00100
Toluene	U		0.000278	0.00100
1,1,1-Trichloroethane	U		0.000149	0.00100

Method Blank (MB)

(MB) R3907135-1 03/27/23 20:03

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,1,2-Trichloroethane	U		0.000158	0.00100
Trichloroethene	U		0.000190	0.00100
1,2,4-Trimethylbenzene	U		0.000322	0.00100
1,3,5-Trimethylbenzene	U		0.000104	0.00100
Vinyl chloride	U		0.000234	0.00100
Xylenes, Total	U		0.000174	0.00300
(S) Toluene-d8	*112*			*80.0-120*
(S) 4-Bromofluorobenzene	*85.1*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*104*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3907135-2 03/27/23 20:52

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.0250	0.0518	207	19.0-160	J4
Benzene	0.00500	0.00541	108	70.0-123	
Bromodichloromethane	0.00500	0.00531	106	75.0-120	
Bromoform	0.00500	0.00558	112	68.0-132	
Bromomethane	0.00500	0.00534	107	10.0-160	
n-Butylbenzene	0.00500	0.00426	85.2	73.0-125	
sec-Butylbenzene	0.00500	0.00444	88.8	75.0-125	
tert-Butylbenzene	0.00500	0.00443	88.6	76.0-124	
Carbon disulfide	0.00500	0.00446	89.2	61.0-128	
Carbon tetrachloride	0.00500	0.00489	97.8	68.0-126	
Chlorobenzene	0.00500	0.00571	114	80.0-121	
Chlorodibromomethane	0.00500	0.00559	112	77.0-125	
Chloroethane	0.00500	0.00531	106	47.0-150	
Chloroform	0.00500	0.00505	101	73.0-120	
Chloromethane	0.00500	0.00561	112	41.0-142	
1,2-Dibromoethane	0.00500	0.00530	106	80.0-122	
1,1-Dichloroethane	0.00500	0.00502	100	70.0-126	
1,2-Dichloroethane	0.00500	0.00534	107	70.0-128	
1,1-Dichloroethene	0.00500	0.00488	97.6	71.0-124	
cis-1,2-Dichloroethene	0.00500	0.00503	101	73.0-120	
trans-1,2-Dichloroethene	0.00500	0.00503	101	73.0-120	
1,2-Dichloropropane	0.00500	0.00539	108	77.0-125	
cis-1,3-Dichloropropene	0.00500	0.00513	103	80.0-123	
trans-1,3-Dichloropropene	0.00500	0.00513	103	78.0-124	

Laboratory Control Sample (LCS)

(LCS) R3907135-2 03/27/23 20:52

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Ethylbenzene	0.00500	0.00509	102	79.0-123	
Hexachloro-1,3-butadiene	0.00500	0.00457	91.4	54.0-138	
2-Hexanone	0.0250	0.0267	107	67.0-149	
Isopropylbenzene	0.00500	0.00459	91.8	76.0-127	
p-Isopropyltoluene	0.00500	0.00423	84.6	76.0-125	
2-Butanone (MEK)	0.0250	0.0345	138	44.0-160	
Methylene Chloride	0.00500	0.00545	109	67.0-120	
4-Methyl-2-pentanone (MIBK)	0.0250	0.0308	123	68.0-142	
Methyl tert-butyl ether	0.00500	0.00468	93.6	68.0-125	
Naphthalene	0.00500	0.00337	67.4	54.0-135	
n-Propylbenzene	0.00500	0.00480	96.0	77.0-124	
Styrene	0.00500	0.00475	95.0	73.0-130	
1,1,2,2-Tetrachloroethane	0.00500	0.00547	109	65.0-130	
Tetrachloroethene	0.00500	0.00568	114	72.0-132	
Toluene	0.00500	0.00547	109	79.0-120	
1,1,1-Trichloroethane	0.00500	0.00478	95.6	73.0-124	
1,1,2-Trichloroethane	0.00500	0.00576	115	80.0-120	
Trichloroethene	0.00500	0.00530	106	78.0-124	
1,2,4-Trimethylbenzene	0.00500	0.00449	89.8	76.0-121	
1,3,5-Trimethylbenzene	0.00500	0.00473	94.6	76.0-122	
Vinyl chloride	0.00500	0.00501	100	67.0-131	
Xylenes, Total	0.0150	0.0153	102	79.0-123	
(S) Toluene-d8			*110*	*80.0-120*	
(S) 4-Bromofluorobenzene			*89.5*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*102*	*70.0-130*	

L1597898-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1597898-01 03/28/23 00:35 • (MS) R3907135-3 03/28/23 07:06 • (MSD) R3907135-4 03/28/23 07:27

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	0.0502	0.0523	201	209	1	10.0-160	J5	J5	4.10	35
Benzene	0.00500	U	0.00592	0.00696	118	139	1	17.0-158			16.1	27
Bromodichloromethane	0.00500	U	0.00561	0.00644	112	129	1	31.0-150			13.8	27
Bromoform	0.00500	U	0.00584	0.00634	117	127	1	29.0-150			8.21	29
Bromomethane	0.00500	U	0.00566	0.00658	113	132	1	10.0-160			15.0	38
n-Butylbenzene	0.00500	U	0.00493	0.00542	98.6	108	1	31.0-150			9.47	30
sec-Butylbenzene	0.00500	U	0.00518	0.00565	104	113	1	33.0-155			8.68	29
tert-Butylbenzene	0.00500	U	0.00515	0.00575	103	115	1	34.0-153			11.0	28

L1597898-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1597898-01 03/28/23 00:35 • (MS) R3907135-3 03/28/23 07:06 • (MSD) R3907135-4 03/28/23 07:27

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	0.000903	0.00530	0.00646	87.9	111	1	10.0-156			19.7	28
Carbon tetrachloride	0.00500	U	0.00569	0.00652	114	130	1	23.0-159			13.6	28
Chlorobenzene	0.00500	U	0.00608	0.00672	122	134	1	33.0-152			10.0	27
Chlorodibromomethane	0.00500	U	0.00592	0.00641	118	128	1	37.0-149			7.95	27
Chloroethane	0.00500	U	0.00599	0.00716	120	143	1	10.0-160			17.8	30
Chloroform	0.00500	0.000758	0.00624	0.00712	110	127	1	29.0-154			13.2	28
Chloromethane	0.00500	U	0.00588	0.00705	118	141	1	10.0-160			18.1	29
1,2-Dibromoethane	0.00500	U	0.00568	0.00610	114	122	1	34.0-147			7.13	27
1,1-Dichloroethane	0.00500	U	0.00537	0.00644	107	129	1	25.0-158			18.1	27
1,2-Dichloroethane	0.00500	U	0.00566	0.00645	113	129	1	29.0-151			13.0	27
1,1-Dichloroethene	0.00500	U	0.00432	0.00621	86.4	124	1	11.0-160		J3	35.9	29
cis-1,2-Dichloroethene	0.00500	U	0.00541	0.00627	108	125	1	10.0-160			14.7	27
trans-1,2-Dichloroethene	0.00500	U	0.00556	0.00658	111	132	1	17.0-153			16.8	27
1,2-Dichloropropane	0.00500	U	0.00593	0.00682	119	136	1	30.0-156			14.0	27
cis-1,3-Dichloropropene	0.00500	U	0.00491	0.00568	98.2	114	1	34.0-149			14.5	28
trans-1,3-Dichloropropene	0.00500	U	0.00554	0.00592	111	118	1	32.0-149			6.63	28
Ethylbenzene	0.00500	U	0.00554	0.00616	111	123	1	30.0-155			10.6	27
Hexachloro-1,3-butadiene	0.00500	U	0.00495	0.00499	99.0	99.8	1	20.0-154			0.805	34
2-Hexanone	0.0250	U	0.0286	0.0301	114	120	1	21.0-160			5.11	29
Isopropylbenzene	0.00500	U	0.00500	0.00569	100	114	1	28.0-157			12.9	27
p-Isopropyltoluene	0.00500	U	0.00490	0.00545	98.0	109	1	30.0-154			10.6	29
2-Butanone (MEK)	0.0250	U	0.0355	0.0372	142	149	1	10.0-160			4.68	32
Methylene Chloride	0.00500	U	0.00576	0.00651	115	130	1	23.0-144			12.2	28
4-Methyl-2-pentanone (MIBK)	0.0250	U	0.0335	0.0345	134	138	1	29.0-160			2.94	29
Methyl tert-butyl ether	0.00500	U	0.00489	0.00565	97.8	113	1	28.0-150			14.4	29
Naphthalene	0.00500	U	0.00378	0.00378	75.6	75.6	1	12.0-156			0.000	35
n-Propylbenzene	0.00500	U	0.00549	0.00622	110	124	1	31.0-154			12.5	28
Styrene	0.00500	U	0.00519	0.00590	104	118	1	33.0-155			12.8	28
1,1,2,2-Tetrachloroethane	0.00500	U	0.00649	0.00662	130	132	1	33.0-150			1.98	28
Tetrachloroethene	0.00500	U	0.00633	0.00694	127	139	1	10.0-160			9.19	27
Toluene	0.00500	U	0.00591	0.00668	118	134	1	26.0-154			12.2	28
1,1,1-Trichloroethane	0.00500	U	0.00538	0.00627	108	125	1	23.0-160			15.3	28
1,1,2-Trichloroethane	0.00500	U	0.00612	0.00670	122	134	1	35.0-147			9.05	27
Trichloroethene	0.00500	U	0.00564	0.00644	113	129	1	10.0-160			13.2	25
1,2,4-Trimethylbenzene	0.00500	U	0.00503	0.00565	101	113	1	26.0-154			11.6	27
1,3,5-Trimethylbenzene	0.00500	U	0.00551	0.00610	110	122	1	28.0-153			10.2	27
Vinyl chloride	0.00500	U	0.00534	0.00649	107	130	1	10.0-160			19.4	27
Xylenes, Total	0.0150	U	0.0162	0.0186	108	124	1	29.0-154			13.8	28
(S) Toluene-d8					*108*	*106*		*80.0-120*				
(S) 4-Bromofluorobenzene					*87.9*	*87.6*		*77.0-126*				

L1597898-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1597898-01 03/28/23 00:35 • (MS) R3907135-3 03/28/23 07:06 • (MSD) R3907135-4 03/28/23 07:27

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					*102*	*105*		*70.0-130*				

L1598018-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1598018-11 03/28/23 03:18 • (MS) R3907135-5 03/28/23 07:48 • (MSD) R3907135-6 03/28/23 08:08

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	0.0504	0.0511	202	204	1	10.0-160	J5	J5	1.38	35
Benzene	0.00500	0.000285	0.00700	0.00726	134	140	1	17.0-158			3.65	27
Bromodichloromethane	0.00500	U	0.00637	0.00667	127	133	1	31.0-150			4.60	27
Bromoform	0.00500	U	0.00642	0.00681	128	136	1	29.0-150			5.90	29
Bromomethane	0.00500	U	0.00646	0.00685	129	137	1	10.0-160			5.86	38
n-Butylbenzene	0.00500	U	0.00565	0.00576	113	115	1	31.0-150			1.93	30
sec-Butylbenzene	0.00500	U	0.00578	0.00606	116	121	1	33.0-155			4.73	29
tert-Butylbenzene	0.00500	0.000128	0.00607	0.00653	119	128	1	34.0-153			7.30	28
Carbon disulfide	0.00500	U	0.00580	0.00565	116	113	1	10.0-156			2.62	28
Carbon tetrachloride	0.00500	U	0.00632	0.00670	126	134	1	23.0-159			5.84	28
Chlorobenzene	0.00500	U	0.00682	0.00709	136	142	1	33.0-152			3.88	27
Chlorodibromomethane	0.00500	U	0.00643	0.00701	129	140	1	37.0-149			8.63	27
Chloroethane	0.00500	U	0.00685	0.00724	137	145	1	10.0-160			5.54	30
Chloroform	0.00500	U	0.00635	0.00663	127	133	1	29.0-154			4.31	28
Chloromethane	0.00500	U	0.00691	0.00714	138	143	1	10.0-160			3.27	29
1,2-Dibromoethane	0.00500	U	0.00620	0.00672	124	134	1	34.0-147			8.05	27
1,1-Dichloroethane	0.00500	U	0.00624	0.00656	125	131	1	25.0-158			5.00	27
1,2-Dichloroethane	0.00500	U	0.00649	0.00674	130	135	1	29.0-151			3.78	27
1,1-Dichloroethene	0.00500	U	0.00508	0.00613	102	123	1	11.0-160			18.7	29
cis-1,2-Dichloroethene	0.00500	U	0.00629	0.00655	126	131	1	10.0-160			4.05	27
trans-1,2-Dichloroethene	0.00500	U	0.00655	0.00664	131	133	1	17.0-153			1.36	27
1,2-Dichloropropane	0.00500	U	0.00678	0.00721	136	144	1	30.0-156			6.15	27
cis-1,3-Dichloropropene	0.00500	U	0.00567	0.00588	113	118	1	34.0-149			3.64	28
trans-1,3-Dichloropropene	0.00500	U	0.00587	0.00636	117	127	1	32.0-149			8.01	28
Ethylbenzene	0.00500	U	0.00627	0.00648	125	130	1	30.0-155			3.29	27
Hexachloro-1,3-butadiene	0.00500	U	0.00535	0.00539	107	108	1	20.0-154			0.745	34
2-Hexanone	0.0250	U	0.0319	0.0344	128	138	1	21.0-160			7.54	29
Isopropylbenzene	0.00500	U	0.00579	0.00614	116	123	1	28.0-157			5.87	27
p-Isopropyltoluene	0.00500	U	0.00565	0.00584	113	117	1	30.0-154			3.31	29
2-Butanone (MEK)	0.0250	U	0.0392	0.0412	157	165	1	10.0-160		J5	4.98	32
Methylene Chloride	0.00500	U	0.00625	0.00651	125	130	1	23.0-144			4.08	28
4-Methyl-2-pentanone (MIBK)	0.0250	U	0.0362	0.0386	145	154	1	29.0-160			6.42	29

Received by OCD: 4/15/2024 1:46:20 PM

L1598018-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1598018-11 03/28/23 03:18 • (MS) R3907135-5 03/28/23 07:48 • (MSD) R3907135-6 03/28/23 08:08

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 %
Methyl tert-butyl ether	0.00500	U	0.00579	0.00619	116	124	1	28.0-150			6.68	29
Naphthalene	0.00500	U	0.00408	0.00405	81.6	81.0	1	12.0-156			0.738	35
n-Propylbenzene	0.00500	U	0.00647	0.00682	129	136	1	31.0-154			5.27	28
Styrene	0.00500	U	0.00587	0.00611	117	122	1	33.0-155			4.01	28
1,1,2,2-Tetrachloroethane	0.00500	U	0.00696	0.00747	139	149	1	33.0-150			7.07	28
Tetrachloroethene	0.00500	U	0.00700	0.00741	140	148	1	10.0-160			5.69	27
Toluene	0.00500	U	0.00671	0.00700	134	140	1	26.0-154			4.23	28
1,1,1-Trichloroethane	0.00500	U	0.00609	0.00637	122	127	1	23.0-160			4.49	28
1,1,2-Trichloroethane	0.00500	U	0.00687	0.00713	137	143	1	35.0-147			3.71	27
Trichloroethene	0.00500	U	0.00648	0.00657	130	131	1	10.0-160			1.38	25
1,2,4-Trimethylbenzene	0.00500	U	0.00576	0.00611	115	122	1	26.0-154			5.90	27
1,3,5-Trimethylbenzene	0.00500	U	0.00639	0.00666	128	133	1	28.0-153			4.14	27
Vinyl chloride	0.00500	U	0.00630	0.00649	126	130	1	10.0-160			2.97	27
Xylenes, Total	0.0150	U	0.0188	0.0196	125	131	1	29.0-154			4.17	28
(S) Toluene-d8					*108*	*109*		*80.0-120*				
(S) 4-Bromofluorobenzene					*87.6*	*88.5*		*77.0-126*				
(S) 1,2-Dichloroethane-d4					*102*	*104*		*70.0-130*				

Released to Imaging: 4/26/2024 10:49:21 AM

Method Blank (MB)

(MB) R3906135-2 03/27/23 21:11

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0113	0.0500
Benzene	U		0.0000941	0.00100
Bromodichloromethane	U		0.000136	0.00100
Bromoform	U		0.000129	0.00100
Bromomethane	U		0.000605	0.00500
n-Butylbenzene	U		0.000157	0.00100
sec-Butylbenzene	U		0.000125	0.00100
tert-Butylbenzene	U		0.000127	0.00100
Carbon disulfide	U		0.0000962	0.00100
Carbon tetrachloride	U		0.000128	0.00100
Chlorobenzene	U		0.000116	0.00100
Chlorodibromomethane	U		0.000140	0.00100
Chloroethane	U		0.000192	0.00500
Chloroform	U		0.000111	0.00500
Chloromethane	U		0.000960	0.00250
1,2-Dibromoethane	U		0.000126	0.00100
1,1-Dichloroethane	U		0.000100	0.00100
1,2-Dichloroethane	U		0.0000819	0.00100
1,1-Dichloroethene	U		0.000188	0.00100
cis-1,2-Dichloroethene	U		0.000126	0.00100
trans-1,2-Dichloroethene	U		0.000149	0.00100
1,2-Dichloropropane	U		0.000149	0.00100
cis-1,3-Dichloropropene	U		0.000111	0.00100
trans-1,3-Dichloropropene	U		0.000118	0.00100
Ethylbenzene	U		0.000137	0.00100
Hexachloro-1,3-butadiene	U		0.000337	0.00100
2-Hexanone	U		0.000787	0.0100
Isopropylbenzene	U		0.000105	0.00100
p-Isopropyltoluene	U		0.000120	0.00100
2-Butanone (MEK)	U		0.00119	0.0100
Methylene Chloride	U		0.000430	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100
Methyl tert-butyl ether	U		0.000101	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.0000993	0.00100
Styrene	U		0.000118	0.00100
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100
Toluene	U		0.000278	0.00100
1,1,1-Trichloroethane	U		0.000149	0.00100
1,1,2-Trichloroethane	U		0.000158	0.00100

Method Blank (MB)

(MB) R3906135-2 03/27/23 21:11

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Trichloroethene	U		0.000190	0.00100
1,2,4-Trimethylbenzene	U		0.000322	0.00100
1,3,5-Trimethylbenzene	U		0.000104	0.00100
Vinyl chloride	U		0.000234	0.00100
Xylenes, Total	U		0.000174	0.00300
(S) Toluene-d8	*107*			*80.0-120*
(S) 4-Bromofluorobenzene	*95.3*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*111*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3906135-1 03/27/23 20:28

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.0250	0.0375	150	19.0-160	
Benzene	0.00500	0.00503	101	70.0-123	
Bromodichloromethane	0.00500	0.00493	98.6	75.0-120	
Bromoform	0.00500	0.00435	87.0	68.0-132	
Bromomethane	0.00500	0.00455	91.0	10.0-160	
n-Butylbenzene	0.00500	0.00421	84.2	73.0-125	
sec-Butylbenzene	0.00500	0.00469	93.8	75.0-125	
tert-Butylbenzene	0.00500	0.00458	91.6	76.0-124	
Carbon disulfide	0.00500	0.00582	116	61.0-128	
Carbon tetrachloride	0.00500	0.00521	104	68.0-126	
Chlorobenzene	0.00500	0.00526	105	80.0-121	
Chlorodibromomethane	0.00500	0.00472	94.4	77.0-125	
Chloroethane	0.00500	0.00558	112	47.0-150	
Chloroform	0.00500	0.00498	99.6	73.0-120	
Chloromethane	0.00500	0.00690	138	41.0-142	
1,2-Dibromoethane	0.00500	0.00502	100	80.0-122	
1,1-Dichloroethane	0.00500	0.00520	104	70.0-126	
1,2-Dichloroethane	0.00500	0.00498	99.6	70.0-128	
1,1-Dichloroethene	0.00500	0.00597	119	71.0-124	
cis-1,2-Dichloroethene	0.00500	0.00490	98.0	73.0-120	
trans-1,2-Dichloroethene	0.00500	0.00553	111	73.0-120	
1,2-Dichloropropane	0.00500	0.00483	96.6	77.0-125	
cis-1,3-Dichloropropene	0.00500	0.00492	98.4	80.0-123	
trans-1,3-Dichloropropene	0.00500	0.00374	74.8	78.0-124	J4
Ethylbenzene	0.00500	0.00478	95.6	79.0-123	

Laboratory Control Sample (LCS)

(LCS) R3906135-1 03/27/23 20:28

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Hexachloro-1,3-butadiene	0.00500	0.00603	121	54.0-138	
2-Hexanone	0.0250	0.0248	99.2	67.0-149	
Isopropylbenzene	0.00500	0.00463	92.6	76.0-127	
p-Isopropyltoluene	0.00500	0.00467	93.4	76.0-125	
2-Butanone (MEK)	0.0250	0.0245	98.0	44.0-160	
Methylene Chloride	0.00500	0.00581	116	67.0-120	
4-Methyl-2-pentanone (MIBK)	0.0250	0.0179	71.6	68.0-142	
Methyl tert-butyl ether	0.00500	0.00473	94.6	68.0-125	
Naphthalene	0.00500	0.00294	58.8	54.0-135	
n-Propylbenzene	0.00500	0.00478	95.6	77.0-124	
Styrene	0.00500	0.00446	89.2	73.0-130	
1,1,2,2-Tetrachloroethane	0.00500	0.00479	95.8	65.0-130	
Toluene	0.00500	0.00412	82.4	79.0-120	
1,1,1-Trichloroethane	0.00500	0.00526	105	73.0-124	
1,1,2-Trichloroethane	0.00500	0.00478	95.6	80.0-120	
Trichloroethene	0.00500	0.00552	110	78.0-124	
1,2,4-Trimethylbenzene	0.00500	0.00477	95.4	76.0-121	
1,3,5-Trimethylbenzene	0.00500	0.00481	96.2	76.0-122	
Vinyl chloride	0.00500	0.00568	114	67.0-131	
Xylenes, Total	0.0150	0.0144	96.0	79.0-123	
(S) Toluene-d8			*86.4*	*80.0-120*	
(S) 4-Bromofluorobenzene			*95.6*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*97.6*	*70.0-130*	

Method Blank (MB)

(MB) R3906189-3 03/27/23 22:49

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0113	0.0500
Benzene	U		0.0000941	0.00100
Bromodichloromethane	U		0.000136	0.00100
Bromoform	U		0.000129	0.00100
Bromomethane	U		0.000605	0.00500
n-Butylbenzene	U		0.000157	0.00100
sec-Butylbenzene	U		0.000125	0.00100
tert-Butylbenzene	U		0.000127	0.00100
Carbon disulfide	U		0.0000962	0.00100
Carbon tetrachloride	U		0.000128	0.00100
Chlorobenzene	U		0.000116	0.00100
Chlorodibromomethane	U		0.000140	0.00100
Chloroethane	U		0.000192	0.00500
Chloroform	U		0.000111	0.00500
Chloromethane	U		0.000960	0.00250
1,2-Dibromoethane	U		0.000126	0.00100
1,1-Dichloroethane	U		0.000100	0.00100
1,2-Dichloroethane	U		0.0000819	0.00100
1,1-Dichloroethene	U		0.000188	0.00100
cis-1,2-Dichloroethene	U		0.000126	0.00100
trans-1,2-Dichloroethene	U		0.000149	0.00100
1,2-Dichloropropane	U		0.000149	0.00100
cis-1,3-Dichloropropene	U		0.000111	0.00100
trans-1,3-Dichloropropene	U		0.000118	0.00100
Ethylbenzene	U		0.000137	0.00100
Hexachloro-1,3-butadiene	U		0.000337	0.00100
2-Hexanone	U		0.000787	0.0100
Isopropylbenzene	U		0.000105	0.00100
p-Isopropyltoluene	U		0.000120	0.00100
2-Butanone (MEK)	U		0.00119	0.0100
Methylene Chloride	U		0.000430	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100
Methyl tert-butyl ether	U		0.000101	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.0000993	0.00100
Styrene	U		0.000118	0.00100
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100
Tetrachloroethene	U		0.000300	0.00100
Toluene	U		0.000278	0.00100
1,1,1-Trichloroethane	U		0.000149	0.00100

Method Blank (MB)

(MB) R3906189-3 03/27/23 22:49

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,1,2-Trichloroethane	U		0.000158	0.00100
Trichloroethene	U		0.000190	0.00100
1,2,4-Trimethylbenzene	U		0.000322	0.00100
1,3,5-Trimethylbenzene	U		0.000104	0.00100
Vinyl chloride	U		0.000234	0.00100
Xylenes, Total	U		0.000174	0.00300
(S) Toluene-d8	*98.9*			*80.0-120*
(S) 4-Bromofluorobenzene	*96.9*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*

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

(LCS) R3906189-1 03/27/23 20:59 • (LCSD) R3906189-4 03/27/23 23:43

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	0.0250	0.0608	0.0529	243	212	19.0-160	J4	J4	13.9	27
Benzene	0.00500	0.00510	0.00432	102	86.4	70.0-123			16.6	20
Bromodichloromethane	0.00500	0.00528	0.00447	106	89.4	75.0-120			16.6	20
Bromoform	0.00500	0.00613	0.00469	123	93.8	68.0-132		J3	26.6	20
Bromomethane	0.00500	0.00531	0.00421	106	84.2	10.0-160			23.1	25
n-Butylbenzene	0.00500	0.00603	0.00558	121	112	73.0-125			7.75	20
sec-Butylbenzene	0.00500	0.00510	0.00469	102	93.8	75.0-125			8.38	20
tert-Butylbenzene	0.00500	0.00525	0.00465	105	93.0	76.0-124			12.1	20
Carbon disulfide	0.00500	0.00489	0.00412	97.8	82.4	61.0-128			17.1	20
Carbon tetrachloride	0.00500	0.00625	0.00530	125	106	68.0-126			16.5	20
Chlorobenzene	0.00500	0.00491	0.00455	98.2	91.0	80.0-121			7.61	20
Chlorodibromomethane	0.00500	0.00517	0.00472	103	94.4	77.0-125			9.10	20
Chloroethane	0.00500	0.00513	0.00452	103	90.4	47.0-150			12.6	20
Chloroform	0.00500	0.00531	0.00445	106	89.0	73.0-120			17.6	20
Chloromethane	0.00500	0.00425	0.00403	85.0	80.6	41.0-142			5.31	20
1,2-Dibromoethane	0.00500	0.00575	0.00482	115	96.4	80.0-122			17.6	20
1,1-Dichloroethane	0.00500	0.00414	0.00355	82.8	71.0	70.0-126			15.3	20
1,2-Dichloroethane	0.00500	0.00524	0.00430	105	86.0	70.0-128			19.7	20
1,1-Dichloroethene	0.00500	0.00530	0.00417	106	83.4	71.0-124		J3	23.9	20
cis-1,2-Dichloroethene	0.00500	0.00473	0.00424	94.6	84.8	73.0-120			10.9	20
trans-1,2-Dichloroethene	0.00500	0.00477	0.00431	95.4	86.2	73.0-120			10.1	20
1,2-Dichloropropane	0.00500	0.00456	0.00393	91.2	78.6	77.0-125			14.8	20
cis-1,3-Dichloropropene	0.00500	0.00485	0.00429	97.0	85.8	80.0-123			12.3	20
trans-1,3-Dichloropropene	0.00500	0.00464	0.00399	92.8	79.8	78.0-124			15.1	20

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

(LCS) R3906189-1 03/27/23 20:59 • (LCSD) R3906189-4 03/27/23 23:43

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	0.00500	0.00577	0.00516	115	103	79.0-123			11.2	20
Hexachloro-1,3-butadiene	0.00500	0.00563	0.00540	113	108	54.0-138			4.17	20
2-Hexanone	0.0250	0.0270	0.0247	108	98.8	67.0-149			8.90	20
Isopropylbenzene	0.00500	0.00556	0.00530	111	106	76.0-127			4.79	20
p-Isopropyltoluene	0.00500	0.00540	0.00480	108	96.0	76.0-125			11.8	20
2-Butanone (MEK)	0.0250	0.0304	0.0255	122	102	44.0-160			17.5	20
Methylene Chloride	0.00500	0.00518	0.00433	104	86.6	67.0-120			17.9	20
4-Methyl-2-pentanone (MIBK)	0.0250	0.0288	0.0249	115	99.6	68.0-142			14.5	20
Methyl tert-butyl ether	0.00500	0.00549	0.00457	110	91.4	68.0-125			18.3	20
Naphthalene	0.00500	0.00511	0.00437	102	87.4	54.0-135			15.6	20
n-Propylbenzene	0.00500	0.00444	0.00417	88.8	83.4	77.0-124			6.27	20
Styrene	0.00500	0.00538	0.00508	108	102	73.0-130			5.74	20
1,1,2,2-Tetrachloroethane	0.00500	0.00473	0.00404	94.6	80.8	65.0-130			15.7	20
Tetrachloroethene	0.00500	0.00550	0.00506	110	101	72.0-132			8.33	20
Toluene	0.00500	0.00495	0.00446	99.0	89.2	79.0-120			10.4	20
1,1,1-Trichloroethane	0.00500	0.00553	0.00480	111	96.0	73.0-124			14.1	20
1,1,2-Trichloroethane	0.00500	0.00516	0.00439	103	87.8	80.0-120			16.1	20
Trichloroethene	0.00500	0.00524	0.00489	105	97.8	78.0-124			6.91	20
1,2,4-Trimethylbenzene	0.00500	0.00533	0.00481	107	96.2	76.0-121			10.3	20
1,3,5-Trimethylbenzene	0.00500	0.00501	0.00461	100	92.2	76.0-122			8.32	20
Vinyl chloride	0.00500	0.00475	0.00451	95.0	90.2	67.0-131			5.18	20
Xylenes, Total	0.0150	0.0169	0.0147	113	98.0	79.0-123			13.9	20
(S) Toluene-d8				*96.7*	*102*	*80.0-120*				
(S) 4-Bromofluorobenzene				*104*	*103*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*111*	*108*	*70.0-130*				

Method Blank (MB)

(MB) R3907477-3 03/28/23 07:52

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Tetrachloroethene	U		0.000300	0.00100
(S) Toluene-d8	*99.6*			*80.0-120*
(S) 4-Bromofluorobenzene	*90.1*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*126*			*70.0-130*

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

(LCS) R3907477-1 03/28/23 06:35 • (LCSD) R3907477-2 03/28/23 06:54

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 %
Tetrachloroethene	0.00500	0.00514	0.00518	103	104	72.0-132			0.775	20
(S) Toluene-d8				*95.3*	*98.3*	*80.0-120*				
(S) 4-Bromofluorobenzene				*88.5*	*90.3*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*124*	*123*	*70.0-130*				

Method Blank (MB)

(MB) R3907913-2 03/29/23 18:49

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0113	0.0500
Benzene	U		0.0000941	0.00100
Bromodichloromethane	U		0.000136	0.00100
Bromoform	U		0.000129	0.00100
Bromomethane	U		0.000605	0.00500
n-Butylbenzene	U		0.000157	0.00100
sec-Butylbenzene	U		0.000125	0.00100
tert-Butylbenzene	U		0.000127	0.00100
Carbon disulfide	U		0.0000962	0.00100
Carbon tetrachloride	U		0.000128	0.00100
Chlorobenzene	U		0.000116	0.00100
Chlorodibromomethane	U		0.000140	0.00100
Chloroethane	U		0.000192	0.00500
Chloroform	U		0.000111	0.00500
Chloromethane	U		0.000960	0.00250
1,2-Dibromoethane	U		0.000126	0.00100
1,1-Dichloroethane	U		0.000100	0.00100
1,2-Dichloroethane	U		0.0000819	0.00100
1,1-Dichloroethene	U		0.000188	0.00100
cis-1,2-Dichloroethene	U		0.000126	0.00100
trans-1,2-Dichloroethene	U		0.000149	0.00100
1,2-Dichloropropane	U		0.000149	0.00100
cis-1,3-Dichloropropene	U		0.000111	0.00100
trans-1,3-Dichloropropene	U		0.000118	0.00100
Ethylbenzene	U		0.000137	0.00100
Hexachloro-1,3-butadiene	U		0.000337	0.00100
2-Hexanone	U		0.000787	0.0100
Isopropylbenzene	U		0.000105	0.00100
p-Isopropyltoluene	U		0.000120	0.00100
2-Butanone (MEK)	U		0.00119	0.0100
Methylene Chloride	U		0.000430	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100
Methyl tert-butyl ether	U		0.000101	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.0000993	0.00100
Styrene	U		0.000118	0.00100
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100
Tetrachloroethene	U		0.000300	0.00100
Toluene	U		0.000278	0.00100
1,1,1-Trichloroethane	U		0.000149	0.00100

Method Blank (MB)

(MB) R3907913-2 03/29/23 18:49

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,1,2-Trichloroethane	U		0.000158	0.00100
Trichloroethene	U		0.000190	0.00100
1,2,4-Trimethylbenzene	U		0.000322	0.00100
1,3,5-Trimethylbenzene	U		0.000104	0.00100
Vinyl chloride	U		0.000234	0.00100
Xylenes, Total	U		0.000174	0.00300
(S) Toluene-d8	*108*			*80.0-120*
(S) 4-Bromofluorobenzene	*101*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3907913-1 03/29/23 18:02

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.0250	0.0299	120	19.0-160	
Benzene	0.00500	0.00467	93.4	70.0-123	
Bromodichloromethane	0.00500	0.00506	101	75.0-120	
Bromoform	0.00500	0.00427	85.4	68.0-132	
Bromomethane	0.00500	0.00122	24.4	10.0-160	
n-Butylbenzene	0.00500	0.00540	108	73.0-125	
sec-Butylbenzene	0.00500	0.00541	108	75.0-125	
tert-Butylbenzene	0.00500	0.00523	105	76.0-124	
Carbon disulfide	0.00500	0.00429	85.8	61.0-128	
Carbon tetrachloride	0.00500	0.00543	109	68.0-126	
Chlorobenzene	0.00500	0.00497	99.4	80.0-121	
Chlorodibromomethane	0.00500	0.00527	105	77.0-125	
Chloroethane	0.00500	0.00537	107	47.0-150	
Chloroform	0.00500	0.00552	110	73.0-120	
Chloromethane	0.00500	0.00444	88.8	41.0-142	
1,2-Dibromoethane	0.00500	0.00483	96.6	80.0-122	
1,1-Dichloroethane	0.00500	0.00504	101	70.0-126	
1,2-Dichloroethane	0.00500	0.00556	111	70.0-128	
1,1-Dichloroethene	0.00500	0.00471	94.2	71.0-124	
cis-1,2-Dichloroethene	0.00500	0.00513	103	73.0-120	
trans-1,2-Dichloroethene	0.00500	0.00483	96.6	73.0-120	
1,2-Dichloropropane	0.00500	0.00408	81.6	77.0-125	
cis-1,3-Dichloropropene	0.00500	0.00449	89.8	80.0-123	
trans-1,3-Dichloropropene	0.00500	0.00509	102	78.0-124	

Received by OCD: 4/15/2024 1:46:20 PM

Laboratory Control Sample (LCS)

(LCS) R3907913-1 03/29/23 18:02

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Ethylbenzene	0.00500	0.00512	102	79.0-123	
Hexachloro-1,3-butadiene	0.00500	0.00558	112	54.0-138	
2-Hexanone	0.0250	0.0262	105	67.0-149	
Isopropylbenzene	0.00500	0.00518	104	76.0-127	
p-Isopropyltoluene	0.00500	0.00547	109	76.0-125	
2-Butanone (MEK)	0.0250	0.0264	106	44.0-160	
Methylene Chloride	0.00500	0.00486	97.2	67.0-120	
4-Methyl-2-pentanone (MIBK)	0.0250	0.0262	105	68.0-142	
Methyl tert-butyl ether	0.00500	0.00504	101	68.0-125	
Naphthalene	0.00500	0.00410	82.0	54.0-135	
n-Propylbenzene	0.00500	0.00516	103	77.0-124	
Styrene	0.00500	0.00486	97.2	73.0-130	
1,1,2,2-Tetrachloroethane	0.00500	0.00496	99.2	65.0-130	
Tetrachloroethene	0.00500	0.00525	105	72.0-132	
Toluene	0.00500	0.00508	102	79.0-120	
1,1,1-Trichloroethane	0.00500	0.00587	117	73.0-124	
1,1,2-Trichloroethane	0.00500	0.00505	101	80.0-120	
Trichloroethene	0.00500	0.00500	100	78.0-124	
1,2,4-Trimethylbenzene	0.00500	0.00531	106	76.0-121	
1,3,5-Trimethylbenzene	0.00500	0.00543	109	76.0-122	
Vinyl chloride	0.00500	0.00539	108	67.0-131	
Xylenes, Total	0.0150	0.0150	100	79.0-123	
(S) Toluene-d8			*109*	*80.0-120*	
(S) 4-Bromofluorobenzene			*104*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*110*	*70.0-130*	

Released to Imaging: 4/26/2024 10:49:21 AM

Method Blank (MB)

(MB) R3908392-1 03/31/23 21:57

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TPH (GC/FID) High Fraction	0.0428	J	0.0247	0.100
(S) o-Terphenyl	*112*			*31.0-160*

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

(LCS) R3908392-2 03/31/23 22:17 • (LCSD) R3908392-3 03/31/23 22:38

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	1.51	1.71	101	114	50.0-150			12.4	20
(S) o-Terphenyl				*123*	*121*	*31.0-160*				

Method Blank (MB)

(MB) R3907606-1 03/30/23 15:30

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	*109*			*31.0-160*

Laboratory Control Sample (LCS)

(LCS) R3907606-2 03/30/23 15:51

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) High Fraction	1.50	1.64	109	50.0-150	
(S) o-Terphenyl			*116*	*31.0-160*	

L1598018-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1598018-11 03/30/23 17:14 • (MS) R3907606-3 03/30/23 17:35 • (MSD) R3907606-4 03/30/23 17:56

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 %
TPH (GC/FID) High Fraction	1.50	0.198	1.94	1.93	116	115	1	50.0-150			0.517	20
(S) o-Terphenyl					*118*	*114*		*31.0-160*				

Method Blank (MB)

(MB) R3907454-2 03/29/23 23:25

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acenaphthene	U		0.0000886	0.00100
Acenaphthylene	U		0.0000921	0.00100
Acetophenone	U		0.000208	0.0100
Anthracene	U		0.0000804	0.00100
Atrazine	U		0.000255	0.0100
Benzo(a)anthracene	U		0.000199	0.00100
Benzaldehyde	U		0.00169	0.0100
Benzo(b)fluoranthene	U		0.000130	0.00100
Benzo(k)fluoranthene	U		0.000120	0.00100
Benzo(g,h,i)perylene	U		0.000121	0.00100
Benzo(a)pyrene	U		0.0000381	0.000200
Biphenyl	U		0.000790	0.0100
Bis(2-chlorethoxy)methane	U		0.000116	0.0100
Bis(2-chloroethyl)ether	U		0.000137	0.0100
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100
4-Bromophenyl-phenylether	U		0.0000877	0.0100
2-Chloronaphthalene	U		0.0000648	0.00100
4-Chlorophenyl-phenylether	U		0.0000926	0.0100
Caprolactam	U		0.000309	0.0100
Carbazole	U		0.000111	0.0100
Chrysene	U		0.000130	0.00100
Dibenz(a,h)anthracene	U		0.0000644	0.000200
Dibenzofuran	U		0.0000970	0.0100
3,3-Dichlorobenzidine	U		0.000212	0.0100
2,4-Dinitrotoluene	U		0.0000983	0.0100
2,6-Dinitrotoluene	U		0.000250	0.0100
Fluoranthene	U		0.000102	0.00100
Fluorene	U		0.0000844	0.00100
Hexachlorobenzene	U		0.0000755	0.00100
Hexachloro-1,3-butadiene	U		0.0000968	0.0100
Hexachlorocyclopentadiene	U		0.0000598	0.0100
Hexachloroethane	U		0.000127	0.0100
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100
Isophorone	U		0.000143	0.0100
1-Methylnaphthalene	U		0.0000790	0.00100
2-Methylnaphthalene	U		0.000117	0.00100
Naphthalene	U		0.000159	0.00100
Nitrobenzene	U		0.000297	0.0100
n-Nitrosodiphenylamine	U		0.00237	0.0100
n-Nitrosodi-n-propylamine	U		0.000261	0.0100

Method Blank (MB)

(MB) R3907454-2 03/29/23 23:25

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Phenanthrene	U		0.000112	0.00100
Benzylbutyl phthalate	U		0.000765	0.00300
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300
Di-n-butyl phthalate	U		0.000453	0.00300
Diethyl phthalate	U		0.000287	0.00300
Dimethyl phthalate	U		0.000260	0.00300
Di-n-octyl phthalate	U		0.000932	0.00300
Pyrene	U		0.000107	0.00100
1,2,4-Trichlorobenzene	U		0.0000698	0.0100
4-Chloro-3-methylphenol	U		0.000131	0.0100
2-Chlorophenol	U		0.000133	0.0100
2,4-Dichlorophenol	U		0.000102	0.0100
2,4-Dimethylphenol	U		0.0000636	0.0100
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100
2,4-Dinitrophenol	U		0.00593	0.0100
2-Nitrophenol	U		0.000117	0.0100
2-Nitroaniline	U		0.000102	0.0100
2-Methylphenol	U		0.0000929	0.0100
3&4-Methyl Phenol	U		0.000168	0.0100
3-Nitroaniline	U		0.0000869	0.0100
4-Chloroaniline	U		0.000234	0.0100
4-Nitroaniline	U		0.0000910	0.0100
4-Nitrophenol	U		0.000143	0.0100
Pentachlorophenol	U		0.000313	0.0100
Phenol	U		0.00433	0.0100
2,4,5-Trichlorophenol	U		0.000109	0.0100
2,4,6-Trichlorophenol	U		0.000100	0.0100
(S) 2-Fluorophenol	*28.8*			*10.0-120*
(S) Phenol-d5	*17.8*			*10.0-120*
(S) Nitrobenzene-d5	*44.3*			*10.0-127*
(S) 2-Fluorobiphenyl	*48.5*			*10.0-130*
(S) 2,4,6-Tribromophenol	*50.5*			*10.0-155*
(S) p-Terphenyl-d14	*62.2*			*10.0-128*

Laboratory Control Sample (LCS)

(LCS) R3907454-1 03/29/23 23:04

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0500	0.0239	47.8	41.0-120	
Acenaphthylene	0.0500	0.0234	46.8	43.0-120	
Acetophenone	0.0500	0.0210	42.0	29.0-120	
Anthracene	0.0500	0.0251	50.2	45.0-120	
Atrazine	0.0500	0.0289	57.8	39.0-141	
Benzo(a)anthracene	0.0500	0.0281	56.2	47.0-120	
Benzaldehyde	0.0500	0.0580	116	10.0-160	
Benzo(b)fluoranthene	0.0500	0.0275	55.0	46.0-120	
Benzo(k)fluoranthene	0.0500	0.0270	54.0	46.0-120	
Benzo(g,h,i)perylene	0.0500	0.0284	56.8	48.0-121	
Benzo(a)pyrene	0.0500	0.0272	54.4	47.0-120	
Biphenyl	0.0500	0.0240	48.0	38.0-120	
Bis(2-chlorethoxy)methane	0.0500	0.0221	44.2	33.0-120	
Bis(2-chloroethyl)ether	0.0500	0.0211	42.2	23.0-120	
2,2-Oxybis(1-Chloropropane)	0.0500	0.0202	40.4	28.0-120	
4-Bromophenyl-phenylether	0.0500	0.0273	54.6	45.0-120	
2-Chloronaphthalene	0.0500	0.0232	46.4	37.0-120	
4-Chlorophenyl-phenylether	0.0500	0.0258	51.6	44.0-120	
Caprolactam	0.0500	0.00849	17.0	10.0-120	
Carbazole	0.0500	0.0258	51.6	51.0-122	
Chrysene	0.0500	0.0281	56.2	48.0-120	
Dibenz(a,h)anthracene	0.0500	0.0293	58.6	47.0-120	
Dibenzofuran	0.0500	0.0244	48.8	44.0-120	
3,3-Dichlorobenzidine	0.100	0.0504	50.4	44.0-120	
2,4-Dinitrotoluene	0.0500	0.0275	55.0	49.0-124	
2,6-Dinitrotoluene	0.0500	0.0265	53.0	46.0-120	
Fluoranthene	0.0500	0.0269	53.8	51.0-120	
Fluorene	0.0500	0.0247	49.4	47.0-120	
Hexachlorobenzene	0.0500	0.0277	55.4	44.0-120	
Hexachloro-1,3-butadiene	0.0500	0.0215	43.0	19.0-120	
Hexachlorocyclopentadiene	0.0500	0.0153	30.6	15.0-120	
Hexachloroethane	0.0500	0.0178	35.6	15.0-120	
Indeno(1,2,3-cd)pyrene	0.0500	0.0264	52.8	49.0-122	
Isophorone	0.0500	0.0214	42.8	36.0-120	
1-Methylnaphthalene	0.0500	0.0212	42.4	33.0-120	
2-Methylnaphthalene	0.0500	0.0213	42.6	33.0-120	
Naphthalene	0.0500	0.0200	40.0	27.0-120	
Nitrobenzene	0.0500	0.0200	40.0	27.0-120	
n-Nitrosodiphenylamine	0.0500	0.0243	48.6	47.0-120	
n-Nitrosodi-n-propylamine	0.0500	0.0206	41.2	31.0-120	

Laboratory Control Sample (LCS)

(LCS) R3907454-1 03/29/23 23:04

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Phenanthrene	0.0500	0.0251	50.2	46.0-120	
Benzylbutyl phthalate	0.0500	0.0279	55.8	43.0-121	
Bis(2-ethylhexyl)phthalate	0.0500	0.0295	59.0	43.0-122	
Di-n-butyl phthalate	0.0500	0.0286	57.2	49.0-121	
Diethyl phthalate	0.0500	0.0257	51.4	48.0-122	
Dimethyl phthalate	0.0500	0.0256	51.2	48.0-120	
Di-n-octyl phthalate	0.0500	0.0292	58.4	42.0-125	
Pyrene	0.0500	0.0269	53.8	47.0-120	
1,2,4-Trichlorobenzene	0.0500	0.0205	41.0	24.0-120	
4-Chloro-3-methylphenol	0.0500	0.0214	42.8	40.0-120	
2-Chlorophenol	0.0500	0.0187	37.4	25.0-120	
2,4-Dichlorophenol	0.0500	0.0218	43.6	36.0-120	
2,4-Dimethylphenol	0.0500	0.0205	41.0	33.0-120	
4,6-Dinitro-2-methylphenol	0.0500	0.0347	69.4	38.0-138	
2,4-Dinitrophenol	0.0500	0.0319	63.8	10.0-120	
2-Nitrophenol	0.0500	0.0238	47.6	31.0-120	
2-Nitroaniline	0.0500	0.0272	54.4	43.0-120	
2-Methylphenol	0.0500	0.0169	33.8	28.0-120	
3&4-Methyl Phenol	0.0500	0.0184	36.8	31.0-120	
3-Nitroaniline	0.0500	0.0237	47.4	38.0-120	
4-Chloroaniline	0.0500	0.0196	39.2	25.0-120	
4-Nitroaniline	0.0500	0.0256	51.2	18.0-160	
4-Nitrophenol	0.0500	0.0124	24.8	10.0-120	
Pentachlorophenol	0.0500	0.0244	48.8	23.0-120	
Phenol	0.0500	0.00945	18.9	10.0-120	
2,4,5-Trichlorophenol	0.0500	0.0267	53.4	44.0-120	
2,4,6-Trichlorophenol	0.0500	0.0258	51.6	42.0-120	
(S) 2-Fluorophenol			*28.1*	*10.0-120*	
(S) Phenol-d5			*18.2*	*10.0-120*	
(S) Nitrobenzene-d5			*39.4*	*10.0-127*	
(S) 2-Fluorobiphenyl			*51.1*	*10.0-130*	
(S) 2,4,6-Tribromophenol			*59.0*	*10.0-155*	
(S) p-Terphenyl-d14			*60.0*	*10.0-128*	

L1597898-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1597898-01 03/30/23 03:01 • (MS) R3907454-3 03/30/23 03:22 • (MSD) R3907454-4 03/30/23 03:44

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 %
Acenaphthene	0.0455	U	0.0227	0.0264	49.9	58.0	1	28.0-120			15.1	25
Acenaphthylene	0.0455	U	0.0230	0.0264	50.5	58.0	1	31.0-121			13.8	25
Acetophenone	0.0455	U	0.0208	0.0248	45.7	54.5	1	20.0-120			17.5	35
Anthracene	0.0455	U	0.0240	0.0277	52.7	60.9	1	36.0-120			14.3	23
Atrazine	0.0455	U	0.0267	0.0300	58.7	65.9	1	39.0-130			11.6	23
Benzo(a)anthracene	0.0455	U	0.0271	0.0304	59.6	66.8	1	39.0-120			11.5	23
Benzaldehyde	0.0455	U	0.0577	0.0665	127	146	1	10.0-160			14.2	40
Benzo(b)fluoranthene	0.0455	U	0.0255	0.0289	56.0	63.5	1	37.0-120			12.5	23
Benzo(k)fluoranthene	0.0455	U	0.0253	0.0289	55.6	63.5	1	37.0-120			13.3	26
Benzo(g,h,i)perylene	0.0455	U	0.0296	0.0333	65.1	73.2	1	37.0-123			11.8	25
Benzo(a)pyrene	0.0455	U	0.0271	0.0306	59.6	67.3	1	37.0-120			12.1	24
Biphenyl	0.0455	U	0.0226	0.0262	49.7	57.6	1	29.0-120			14.8	33
Bis(2-chlorethoxy)methane	0.0455	U	0.0201	0.0235	44.2	51.6	1	17.0-120			15.6	31
Bis(2-chloroethyl)ether	0.0455	U	0.0215	0.0242	47.3	53.2	1	14.0-120			11.8	33
2,2-Oxybis(1-Chloropropane)	0.0455	U	0.0202	0.0235	44.4	51.6	1	18.0-120			15.1	34
4-Bromophenyl-phenylether	0.0455	U	0.0268	0.0311	58.9	68.4	1	37.0-120			14.9	24
2-Chloronaphthalene	0.0455	U	0.0218	0.0253	47.9	55.6	1	29.0-120			14.9	28
4-Chlorophenyl-phenylether	0.0455	U	0.0248	0.0289	54.5	63.5	1	36.0-120			15.3	23
Caprolactam	0.0455	U	0.00824	0.0100	18.1	22.0	1	10.0-120			19.3	40
Carbazole	0.0455	U	0.0247	0.0282	54.3	62.0	1	38.0-127			13.2	21
Chrysene	0.0455	U	0.0272	0.0306	59.8	67.3	1	38.0-120			11.8	23
Dibenz(a,h)anthracene	0.0455	U	0.0301	0.0344	66.2	75.6	1	36.0-121			13.3	24
Dibenzofuran	0.0455	U	0.0232	0.0272	51.0	59.8	1	32.0-120			15.9	26
3,3-Dichlorobenzidine	0.0910	U	0.0510	0.0564	56.0	62.0	1	10.0-134			10.1	30
2,4-Dinitrotoluene	0.0455	U	0.0267	0.0306	58.7	67.3	1	39.0-125			13.6	25
2,6-Dinitrotoluene	0.0455	U	0.0253	0.0296	55.6	65.1	1	36.0-120			15.7	27
Fluoranthene	0.0455	U	0.0262	0.0291	57.6	64.0	1	41.0-121			10.5	22
Fluorene	0.0455	U	0.0233	0.0274	51.2	60.2	1	37.0-120			16.2	24
Hexachlorobenzene	0.0455	U	0.0265	0.0309	58.2	67.9	1	35.0-122			15.3	24
Hexachloro-1,3-butadiene	0.0455	U	0.0207	0.0226	45.5	49.7	1	12.0-120			8.78	34
Hexachlorocyclopentadiene	0.0455	U	0.0173	0.0181	38.0	39.8	1	10.0-120			4.52	33
Hexachloroethane	0.0455	U	0.0183	0.0209	40.2	45.9	1	10.0-120			13.3	40
Indeno(1,2,3-cd)pyrene	0.0455	U	0.0263	0.0301	57.8	66.2	1	38.0-125			13.5	24
Isophorone	0.0455	U	0.0195	0.0232	42.9	51.0	1	21.0-120			17.3	27
1-Methylnaphthalene	0.0455	U	0.0199	0.0236	43.7	51.9	1	11.0-120			17.0	27
2-Methylnaphthalene	0.0455	U	0.0201	0.0235	44.2	51.6	1	17.0-120			15.6	28
Naphthalene	0.0455	U	0.0191	0.0220	42.0	48.4	1	10.0-120			14.1	31
Nitrobenzene	0.0455	U	0.0194	0.0214	42.6	47.0	1	12.0-120			9.80	30
n-Nitrosodiphenylamine	0.0455	U	0.0244	0.0278	53.6	61.1	1	37.0-120			13.0	24
n-Nitrosodi-n-propylamine	0.0455	U	0.0200	0.0241	44.0	53.0	1	16.0-120			18.6	30

L1597898-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1597898-01 03/30/23 03:01 • (MS) R3907454-3 03/30/23 03:22 • (MSD) R3907454-4 03/30/23 03:44

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 %
Phenanthrene	0.0455	U	0.0242	0.0282	53.2	62.0	1	33.0-120			15.3	22
Benzylbutyl phthalate	0.0455	U	0.0267	0.0310	58.7	68.1	1	34.0-126			14.9	24
Bis(2-ethylhexyl)phthalate	0.0455	U	0.0256	0.0295	56.3	64.8	1	33.0-126			14.2	25
Di-n-butyl phthalate	0.0455	U	0.0270	0.0309	59.3	67.9	1	35.0-128			13.5	23
Diethyl phthalate	0.0455	U	0.0248	0.0288	54.5	63.3	1	39.0-125			14.9	24
Dimethyl phthalate	0.0455	U	0.0244	0.0281	53.6	61.8	1	37.0-120			14.1	24
Di-n-octyl phthalate	0.0455	U	0.0258	0.0290	56.7	63.7	1	25.0-135			11.7	26
Pyrene	0.0455	U	0.0259	0.0306	56.9	67.3	1	39.0-120			16.6	22
1,2,4-Trichlorobenzene	0.0455	U	0.0200	0.0223	44.0	49.0	1	15.0-120			10.9	31
4-Chloro-3-methylphenol	0.0455	U	0.0190	0.0209	41.8	45.9	1	26.0-120			9.52	27
2-Chlorophenol	0.0455	U	0.0178	0.0178	39.1	39.1	1	18.0-120			0.000	34
2,4-Dichlorophenol	0.0455	U	0.0198	0.0213	43.5	46.8	1	19.0-120			7.30	27
2,4-Dimethylphenol	0.0455	U	0.0186	0.0201	40.9	44.2	1	15.0-120			7.75	28
4,6-Dinitro-2-methylphenol	0.0455	U	0.0327	0.0364	71.9	80.0	1	10.0-144			10.7	39
2,4-Dinitrophenol	0.0455	U	0.0336	0.0359	73.8	78.9	1	10.0-120			6.62	40
2-Nitrophenol	0.0455	U	0.0224	0.0247	49.2	54.3	1	20.0-120			9.77	30
2-Nitroaniline	0.0455	U	0.0260	0.0304	57.1	66.8	1	33.0-120			15.6	27
2-Methylphenol	0.0455	U	0.0160	0.0171	35.2	37.6	1	10.0-120			6.65	30
3&4-Methyl Phenol	0.0455	U	0.0169	0.0184	37.1	40.4	1	10.0-120			8.50	36
3-Nitroaniline	0.0455	U	0.0231	0.0264	50.8	58.0	1	20.0-120			13.3	27
4-Chloroaniline	0.0455	U	0.0179	0.0217	39.3	47.7	1	10.0-120			19.2	31
4-Nitroaniline	0.0455	U	0.0256	0.0286	56.3	62.9	1	10.0-160			11.1	26
4-Nitrophenol	0.0455	U	0.0116	0.0123	25.5	27.0	1	10.0-120			5.86	40
Pentachlorophenol	0.0455	U	0.0272	0.0300	59.8	65.9	1	10.0-128			9.79	37
Phenol	0.0455	U	0.00913	0.0102	20.1	22.4	1	10.0-120			11.1	40
2,4,5-Trichlorophenol	0.0455	U	0.0254	0.0279	55.8	61.3	1	33.0-120			9.38	31
2,4,6-Trichlorophenol	0.0455	U	0.0243	0.0269	53.4	59.1	1	26.0-120			10.2	31
(S) 2-Fluorophenol					*28.0*	*28.0*		*10.0-120*				
(S) Phenol-d5					*19.2*	*20.4*		*10.0-120*				
(S) Nitrobenzene-d5					*41.4*	*46.0*		*10.0-127*				
(S) 2-Fluorobiphenyl					*52.5*	*59.9*		*10.0-130*				
(S) 2,4,6-Tribromophenol					*63.5*	*70.6*		*10.0-155*				
(S) p-Terphenyl-d14					*62.6*	*74.2*		*10.0-128*				

Method Blank (MB)

(MB) R3909209-2 04/03/23 19:22

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acenaphthene	U		0.0000886	0.00100
Acenaphthylene	U		0.0000921	0.00100
Acetophenone	U		0.000208	0.0100
Anthracene	U		0.0000804	0.00100
Atrazine	U		0.000255	0.0100
Benzo(a)anthracene	U		0.000199	0.00100
Benzaldehyde	U		0.00169	0.0100
Benzo(b)fluoranthene	U		0.000130	0.00100
Benzo(k)fluoranthene	U		0.000120	0.00100
Benzo(g,h,i)perylene	U		0.000121	0.00100
Benzo(a)pyrene	U		0.0000381	0.000200
Biphenyl	U		0.000790	0.0100
Bis(2-chlorethoxy)methane	U		0.000116	0.0100
Bis(2-chloroethyl)ether	U		0.000137	0.0100
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100
4-Bromophenyl-phenylether	U		0.0000877	0.0100
2-Chloronaphthalene	U		0.0000648	0.00100
4-Chlorophenyl-phenylether	U		0.0000926	0.0100
Caprolactam	U		0.000309	0.0100
Carbazole	U		0.000111	0.0100
Chrysene	U		0.000130	0.00100
Dibenz(a,h)anthracene	U		0.0000644	0.000200
Dibenzofuran	U		0.0000970	0.0100
3,3-Dichlorobenzidine	U		0.000212	0.0100
2,4-Dinitrotoluene	U		0.0000983	0.0100
2,6-Dinitrotoluene	U		0.000250	0.0100
Fluoranthene	U		0.000102	0.00100
Fluorene	U		0.0000844	0.00100
Hexachlorobenzene	U		0.0000755	0.00100
Hexachloro-1,3-butadiene	U		0.0000968	0.0100
Hexachlorocyclopentadiene	U		0.0000598	0.0100
Hexachloroethane	U		0.000127	0.0100
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100
Isophorone	U		0.000143	0.0100
1-Methylnaphthalene	U		0.0000790	0.00100
2-Methylnaphthalene	U		0.000117	0.00100
Naphthalene	U		0.000159	0.00100
Nitrobenzene	U		0.000297	0.0100
n-Nitrosodiphenylamine	U		0.00237	0.0100
n-Nitrosodi-n-propylamine	U		0.000261	0.0100

Received by OCD: 4/15/2024 1:46:20 PM

Method Blank (MB)

(MB) R3909209-2 04/03/23 19:22

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Phenanthrene	U		0.000112	0.00100
Benzylbutyl phthalate	U		0.000765	0.00300
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300
Di-n-butyl phthalate	0.000656	J	0.000453	0.00300
Diethyl phthalate	U		0.000287	0.00300
Dimethyl phthalate	U		0.000260	0.00300
Di-n-octyl phthalate	U		0.000932	0.00300
Pyrene	U		0.000107	0.00100
1,2,4-Trichlorobenzene	U		0.0000698	0.0100
4-Chloro-3-methylphenol	U		0.000131	0.0100
2-Chlorophenol	U		0.000133	0.0100
2,4-Dichlorophenol	U		0.000102	0.0100
2,4-Dimethylphenol	U		0.0000636	0.0100
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100
2,4-Dinitrophenol	U		0.00593	0.0100
2-Nitrophenol	U		0.000117	0.0100
2-Nitroaniline	U		0.000102	0.0100
2-Methylphenol	U		0.0000929	0.0100
3&4-Methyl Phenol	U		0.000168	0.0100
3-Nitroaniline	U		0.0000869	0.0100
4-Chloroaniline	U		0.000234	0.0100
4-Nitroaniline	U		0.0000910	0.0100
4-Nitrophenol	U		0.000143	0.0100
Pentachlorophenol	U		0.000313	0.0100
Phenol	U		0.00433	0.0100
2,4,5-Trichlorophenol	U		0.000109	0.0100
2,4,6-Trichlorophenol	U		0.000100	0.0100
(S) 2-Fluorophenol	*15.4*			*10.0-120*
(S) Phenol-d5	*9.45*	J2		*10.0-120*
(S) Nitrobenzene-d5	*43.2*			*10.0-127*
(S) 2-Fluorobiphenyl	*45.8*			*10.0-130*
(S) 2,4,6-Tribromophenol	*35.4*			*10.0-155*
(S) p-Terphenyl-d14	*52.4*			*10.0-128*

Released to Imaging: 4/26/2024 10:49:21 AM

Laboratory Control Sample (LCS)

(LCS) R3909209-1 04/03/23 19:00

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0500	0.0224	44.8	41.0-120	
Acenaphthylene	0.0500	0.0231	46.2	43.0-120	
Acetophenone	0.0500	0.0221	44.2	29.0-120	
Anthracene	0.0500	0.0253	50.6	45.0-120	
Atrazine	0.0500	0.0358	71.6	39.0-141	
Benzo(a)anthracene	0.0500	0.0294	58.8	47.0-120	
Benzaldehyde	0.0500	0.0613	123	10.0-160	
Benzo(b)fluoranthene	0.0500	0.0284	56.8	46.0-120	
Benzo(k)fluoranthene	0.0500	0.0274	54.8	46.0-120	
Benzo(g,h,i)perylene	0.0500	0.0312	62.4	48.0-121	
Benzo(a)pyrene	0.0500	0.0297	59.4	47.0-120	
Biphenyl	0.0500	0.0220	44.0	38.0-120	
Bis(2-chlorethoxy)methane	0.0500	0.0218	43.6	33.0-120	
Bis(2-chloroethyl)ether	0.0500	0.0210	42.0	23.0-120	
2,2-Oxybis(1-Chloropropane)	0.0500	0.0210	42.0	28.0-120	
4-Bromophenyl-phenylether	0.0500	0.0256	51.2	45.0-120	
2-Chloronaphthalene	0.0500	0.0212	42.4	37.0-120	
4-Chlorophenyl-phenylether	0.0500	0.0263	52.6	44.0-120	
Caprolactam	0.0500	0.00822	16.4	10.0-120	
Carbazole	0.0500	0.0276	55.2	51.0-122	
Chrysene	0.0500	0.0295	59.0	48.0-120	
Dibenz(a,h)anthracene	0.0500	0.0324	64.8	47.0-120	
Dibenzofuran	0.0500	0.0237	47.4	44.0-120	
3,3-Dichlorobenzidine	0.100	0.0547	54.7	44.0-120	
2,4-Dinitrotoluene	0.0500	0.0314	62.8	49.0-124	
2,6-Dinitrotoluene	0.0500	0.0274	54.8	46.0-120	
Fluoranthene	0.0500	0.0308	61.6	51.0-120	
Fluorene	0.0500	0.0249	49.8	47.0-120	
Hexachlorobenzene	0.0500	0.0261	52.2	44.0-120	
Hexachloro-1,3-butadiene	0.0500	0.0190	38.0	19.0-120	
Hexachlorocyclopentadiene	0.0500	0.0148	29.6	15.0-120	
Hexachloroethane	0.0500	0.0168	33.6	15.0-120	
Indeno(1,2,3-cd)pyrene	0.0500	0.0291	58.2	49.0-122	
Isophorone	0.0500	0.0220	44.0	36.0-120	
1-Methylnaphthalene	0.0500	0.0213	42.6	33.0-120	
2-Methylnaphthalene	0.0500	0.0214	42.8	33.0-120	
Naphthalene	0.0500	0.0195	39.0	27.0-120	
Nitrobenzene	0.0500	0.0201	40.2	27.0-120	
n-Nitrosodiphenylamine	0.0500	0.0227	45.4	47.0-120	J4
n-Nitrosodi-n-propylamine	0.0500	0.0219	43.8	31.0-120	

Laboratory Control Sample (LCS)

(LCS) R3909209-1 04/03/23 19:00

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Phenanthrene	0.0500	0.0253	50.6	46.0-120	
Benzylbutyl phthalate	0.0500	0.0287	57.4	43.0-121	
Bis(2-ethylhexyl)phthalate	0.0500	0.0297	59.4	43.0-122	
Di-n-butyl phthalate	0.0500	0.0308	61.6	49.0-121	
Diethyl phthalate	0.0500	0.0292	58.4	48.0-122	
Dimethyl phthalate	0.0500	0.0274	54.8	48.0-120	
Di-n-octyl phthalate	0.0500	0.0314	62.8	42.0-125	
Pyrene	0.0500	0.0252	50.4	47.0-120	
1,2,4-Trichlorobenzene	0.0500	0.0202	40.4	24.0-120	
4-Chloro-3-methylphenol	0.0500	0.0221	44.2	40.0-120	
2-Chlorophenol	0.0500	0.0181	36.2	25.0-120	
2,4-Dichlorophenol	0.0500	0.0212	42.4	36.0-120	
2,4-Dimethylphenol	0.0500	0.0150	30.0	33.0-120	J4
4,6-Dinitro-2-methylphenol	0.0500	0.0372	74.4	38.0-138	
2,4-Dinitrophenol	0.0500	0.0396	79.2	10.0-120	
2-Nitrophenol	0.0500	0.0232	46.4	31.0-120	
2-Nitroaniline	0.0500	0.0269	53.8	43.0-120	
2-Methylphenol	0.0500	0.0150	30.0	28.0-120	
3&4-Methyl Phenol	0.0500	0.0163	32.6	31.0-120	
3-Nitroaniline	0.0500	0.0234	46.8	38.0-120	
4-Chloroaniline	0.0500	0.0184	36.8	25.0-120	
4-Nitroaniline	0.0500	0.0289	57.8	18.0-160	
4-Nitrophenol	0.0500	0.0126	25.2	10.0-120	
Pentachlorophenol	0.0500	0.0268	53.6	23.0-120	
Phenol	0.0500	0.00747	14.9	10.0-120	
2,4,5-Trichlorophenol	0.0500	0.0260	52.0	44.0-120	
2,4,6-Trichlorophenol	0.0500	0.0242	48.4	42.0-120	
(S) 2-Fluorophenol			*22.7*	*10.0-120*	
(S) Phenol-d5			*14.5*	*10.0-120*	
(S) Nitrobenzene-d5			*37.7*	*10.0-127*	
(S) 2-Fluorobiphenyl			*44.4*	*10.0-130*	
(S) 2,4,6-Tribromophenol			*53.5*	*10.0-155*	
(S) p-Terphenyl-d14			*56.4*	*10.0-128*	

L1598018-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1598018-11 04/04/23 02:12 • (MS) R3909209-3 04/04/23 02:34 • (MSD) R3909209-4 04/04/23 02:55

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	0.0476	U	0.0218	0.0228	45.8	45.6	1	28.0-120			4.48	25
Acenaphthylene	0.0476	U	0.0221	0.0226	46.4	45.2	1	31.0-121			2.24	25
Acetophenone	0.0476	U	0.0208	0.0214	43.7	42.8	1	20.0-120			2.84	35
Anthracene	0.0476	U	0.0250	0.0275	52.5	55.0	1	36.0-120			9.52	23
Atrazine	0.0476	U	0.0347	0.0377	72.9	75.4	1	39.0-130			8.29	23
Benzo(a)anthracene	0.0476	U	0.0278	0.0317	58.4	63.4	1	39.0-120			13.1	23
Benzaldehyde	0.0476	U	0.0598	0.0601	126	120	1	10.0-160			0.500	40
Benzo(b)fluoranthene	0.0476	U	0.0261	0.0297	54.8	59.4	1	37.0-120			12.9	23
Benzo(k)fluoranthene	0.0476	U	0.0262	0.0298	55.0	59.6	1	37.0-120			12.9	26
Benzo(g,h,i)perylene	0.0476	U	0.0299	0.0346	62.8	69.2	1	37.0-123			14.6	25
Benzo(a)pyrene	0.0476	U	0.0275	0.0317	57.8	63.4	1	37.0-120			14.2	24
Biphenyl	0.0476	U	0.0210	0.0217	44.1	43.4	1	29.0-120			3.28	33
Bis(2-chlorethoxy)methane	0.0476	U	0.0205	0.0210	43.1	42.0	1	17.0-120			2.41	31
Bis(2-chloroethyl)ether	0.0476	U	0.0199	0.0208	41.8	41.6	1	14.0-120			4.42	33
2,2-Oxybis(1-Chloropropane)	0.0476	U	0.0201	0.0204	42.2	40.8	1	18.0-120			1.48	34
4-Bromophenyl-phenylether	0.0476	U	0.0265	0.0287	55.7	57.4	1	37.0-120			7.97	24
2-Chloronaphthalene	0.0476	U	0.0204	0.0211	42.9	42.2	1	29.0-120			3.37	28
4-Chlorophenyl-phenylether	0.0476	U	0.0259	0.0273	54.4	54.6	1	36.0-120			5.26	23
Caprolactam	0.0476	U	0.00906	0.00948	19.0	19.0	1	10.0-120			4.53	40
Carbazole	0.0476	U	0.0280	0.0308	58.8	61.6	1	38.0-127			9.52	21
Chrysene	0.0476	U	0.0275	0.0318	57.8	63.6	1	38.0-120			14.5	23
Dibenz(a,h)anthracene	0.0476	U	0.0316	0.0353	66.4	70.6	1	36.0-121			11.1	24
Dibenzofuran	0.0476	U	0.0234	0.0245	49.2	49.0	1	32.0-120			4.59	26
3,3-Dichlorobenzidine	0.0952	U	0.0486	0.0607	51.1	60.7	1	10.0-134			22.1	30
2,4-Dinitrotoluene	0.0476	U	0.0309	0.0334	64.9	66.8	1	39.0-125			7.78	25
2,6-Dinitrotoluene	0.0476	U	0.0274	0.0298	57.6	59.6	1	36.0-120			8.39	27
Fluoranthene	0.0476	U	0.0303	0.0334	63.7	66.8	1	41.0-121			9.73	22
Fluorene	0.0476	U	0.0243	0.0260	51.1	52.0	1	37.0-120			6.76	24
Hexachlorobenzene	0.0476	U	0.0263	0.0290	55.3	58.0	1	35.0-122			9.76	24
Hexachloro-1,3-butadiene	0.0476	U	0.0200	0.0200	42.0	40.0	1	12.0-120			0.000	34
Hexachlorocyclopentadiene	0.0476	U	0.0144	0.0160	30.3	32.0	1	10.0-120			10.5	33
Hexachloroethane	0.0476	U	0.0176	0.0178	37.0	35.6	1	10.0-120			1.13	40
Indeno(1,2,3-cd)pyrene	0.0476	U	0.0281	0.0325	59.0	65.0	1	38.0-125			14.5	24
Isophorone	0.0476	U	0.0213	0.0223	44.7	44.6	1	21.0-120			4.59	27
1-Methylnaphthalene	0.0476	U	0.0203	0.0205	42.6	41.0	1	11.0-120			0.980	27
2-Methylnaphthalene	0.0476	U	0.0202	0.0207	42.4	41.4	1	17.0-120			2.44	28
Naphthalene	0.0476	U	0.0187	0.0193	39.3	38.6	1	10.0-120			3.16	31
Nitrobenzene	0.0476	U	0.0186	0.0194	39.1	38.8	1	12.0-120			4.21	30
n-Nitrosodiphenylamine	0.0476	U	0.0213	0.0250	44.7	50.0	1	37.0-120			16.0	24
n-Nitrosodi-n-propylamine	0.0476	U	0.0211	0.0220	44.3	44.0	1	16.0-120			4.18	30

L1598018-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1598018-11 04/04/23 02:12 • (MS) R3909209-3 04/04/23 02:34 • (MSD) R3909209-4 04/04/23 02:55

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 %
Phenanthrene	0.0476	U	0.0253	0.0278	53.2	55.6	1	33.0-120			9.42	22
Benzylbutyl phthalate	0.0476	U	0.0265	0.0292	55.7	58.4	1	34.0-126			9.69	24
Bis(2-ethylhexyl)phthalate	0.0476	U	0.0258	0.0293	54.2	58.6	1	33.0-126			12.7	25
Di-n-butyl phthalate	0.0476	0.000859	0.0306	0.0327	62.5	63.7	1	35.0-128			6.64	23
Diethyl phthalate	0.0476	U	0.0285	0.0309	59.9	61.8	1	39.0-125			8.08	24
Dimethyl phthalate	0.0476	U	0.0272	0.0297	57.1	59.4	1	37.0-120			8.79	24
Di-n-octyl phthalate	0.0476	U	0.0279	0.0314	58.6	62.8	1	25.0-135			11.8	26
Pyrene	0.0476	U	0.0241	0.0267	50.6	53.4	1	39.0-120			10.2	22
1,2,4-Trichlorobenzene	0.0476	U	0.0201	0.0202	42.2	40.4	1	15.0-120			0.496	31
4-Chloro-3-methylphenol	0.0476	U	0.0188	0.0211	39.5	42.2	1	26.0-120			11.5	27
2-Chlorophenol	0.0476	U	0.0147	0.0164	30.9	32.8	1	18.0-120			10.9	34
2,4-Dichlorophenol	0.0476	U	0.0184	0.0199	38.7	39.8	1	19.0-120			7.83	27
2,4-Dimethylphenol	0.0476	U	0.0130	0.0162	27.3	32.4	1	15.0-120			21.9	28
4,6-Dinitro-2-methylphenol	0.0476	U	0.0358	0.0366	75.2	73.2	1	10.0-144			2.21	39
2,4-Dinitrophenol	0.0476	U	0.0366	0.0374	76.9	74.8	1	10.0-120			2.16	40
2-Nitrophenol	0.0476	U	0.0211	0.0227	44.3	45.4	1	20.0-120			7.31	30
2-Nitroaniline	0.0476	U	0.0275	0.0299	57.8	59.8	1	33.0-120			8.36	27
2-Methylphenol	0.0476	U	0.0121	0.0140	25.4	28.0	1	10.0-120			14.6	30
3&4-Methyl Phenol	0.0476	U	0.0131	0.0152	27.5	30.4	1	10.0-120			14.8	36
3-Nitroaniline	0.0476	U	0.0232	0.0264	48.7	52.8	1	20.0-120			12.9	27
4-Chloroaniline	0.0476	U	0.0177	0.0207	37.2	41.4	1	10.0-120			15.6	31
4-Nitroaniline	0.0476	U	0.0280	0.0312	58.8	62.4	1	10.0-160			10.8	26
4-Nitrophenol	0.0476	U	0.0107	0.0116	22.5	23.2	1	10.0-120			8.07	40
Pentachlorophenol	0.0476	U	0.0281	0.0279	59.0	55.8	1	10.0-128			0.714	37
Phenol	0.0476	U	0.00805	0.00868	16.9	17.4	1	10.0-120			7.53	40
2,4,5-Trichlorophenol	0.0476	U	0.0250	0.0267	52.5	53.4	1	33.0-120			6.58	31
2,4,6-Trichlorophenol	0.0476	U	0.0233	0.0246	48.9	49.2	1	26.0-120			5.43	31
(S) 2-Fluorophenol					*19.3*	*20.3*		*10.0-120*				
(S) Phenol-d5					*13.0*	*13.6*		*10.0-120*				
(S) Nitrobenzene-d5					*38.1*	*36.7*		*10.0-127*				
(S) 2-Fluorobiphenyl					*45.4*	*44.2*		*10.0-130*				
(S) 2,4,6-Tribromophenol					*59.5*	*57.5*		*10.0-155*				
(S) p-Terphenyl-d14					*52.8*	*59.1*		*10.0-128*				

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.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(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 Reporting Limit (or MDL where applicable).
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.
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.

Released to Imaging: 4/26/2024 10:49:21 AM

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
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	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
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

* 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 Analytical.

TRC Solutions - Austin, TX
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Austin, TX 78752

Billing Information:
Accounts Payable
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Windsor, CT 06095
apinvoiceapproval@trcsolutions.com

Pres Chk

Report to: **Julie Speer**

Email To: **jspeer@trccompanies.com;aeljuri@trccompanies.com**

Project Description: **Lovington Lea Refinery**

City/State Collected: **Lovington, NM**

Phone: **512-684-3170**
Fax:

Client Project #

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 1 of 3

Pace Analytical® National Center for Testing & Innovation

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L # L1597019

J196

Acctnum: **TRCATX**
Template: **T206205**
Prelogin: **P985102**
TSR: **526**
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	*WetChem-48hr HT* 125mlHDPE-NoPres	8270TX - 100mlAmb No Pres	ALK 250mlHDPE-NoPres	ALK, TDS 500mlHDPE-NoPres	DROLVI 40mlAmb-HCl-BT	GRO 40mlAmb-HCl	HG 250mlHDPE-HNO3	NAVAJOMETALSDISS-FF 250mlHDPE-HNO	TDS 500mlHDPE-NoPres	V8260 40mlAmb-HCl	Remarks	Sample # (lab only)
MW-1	Grab	GW		3/23/23	1220	6	x						x	x		x		01
MW-2	Grab	GW		3/23/23	940	5		x								x		02
MW-3	Grab	GW		3/23/23	925	1	x											03
MW-6	Grab	GW		3/23/23	1125	6	x						x	x		x		04
~~MW-8~~	~~Grab~~	~~GW~~	operations	prohibited	access!	~~5~~	x								x	x		
~~MW-11R~~	~~Grab~~	~~GW~~	operations	prohibited	access!	8		x		x			x	x		x		
MW-12R2	Grab	GW		3/23/23	1300	9	x	x		x			x	x		x		05
~~MW-13R~~	~~Grab~~	GW	operations	prohibited	access!	7	x						x	x	x	x		
MW-15R	Grab	GW		3/23/23	855	4	x			x			x	x				06
MW-17R	Grab	GW		3/23/23	840	9	x	x		x			x	x		x		07

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

Remarks: Wet Chem - 48 hr TAT ** = Nitrate, Nitrite, Chloride, Fluoride, Sulfate
Diss. Metals are Field Filtered

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS ✓ FedEx __ Courier __ _____

Tracking # 5163 7720 4643

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓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)	Trip Blank Received: Yes / No HCl / MeoH TBR	If preservation required by Login: Date/Time
Scott Ude	3/23/23	1600		2	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.5 +0.1 °C = 1.6	Bottles Received: 19
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) (12)	Date: 3/24/23	Time: 0900

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@trccompanies.com;aeljuri@trccompanies.com**

Project Description: **Lovington Lea Refinery**

City/State Collected: **Lovington, NM**

Phone: **512-684-3170**
Fax:

Client Project #

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

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# L1598019

Table #

Acctnum: **TRCATX**
Template: **T206205**
Prelogin: **P985102**
TSR: **526**
PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	*WetChem-48hr HT* 125mlHDPE-NoPres	8270TX - 100mlAmb No Pres	ALK 250mlHDPE-NoPres	ALK ,TDS 500mlHDPE-NoPres	DROLVI 40mlAmb-HCl-BT	GRO 40mlAmb-HCl	HG 250mlHDPE-HNO3	NAVAJOMETALSDISS-FF 250mlHDPE-HNC	TDS 500mlHDPE-NoPres	V8260 40mlAmb-HCl	Remarks	Sample # (lab only)
MW-19R	Grab	GW		3/23/23	1125	2	x			x								08
~~MW-27~~	~~Grab~~	~~GW~~	operations prohibited access !			~~3~~										x		
~~MW-28~~	~~Grab~~	~~GW~~		Well dry		~~2~~	x		x									
~~MW-29~~	~~Grab~~	~~GW~~		Well dry		~~5~~							x	x		x		
MW-30	Grab	GW		3/23/23	1015	9	x	x		x			x	x		x		09
~~MW-31~~	~~Grab~~	~~GW~~				~~13~~	x	x		x	x	x	x	x		x	LNAPL	Sys. Recovery
MW-32	Grab	GW		3/23/23	1140	13	x	x		x	x	x	x	x		x		10
MW-33	Grab	GW		3/23/23	1000	~~33~~ 13	x	x		x	x	x	x	x		x	MS/MSD vol. provided	11
WW-NORTH	Grab	GW		3/23/23	1010	13	x	x		x	x	x	x	x		x		12
WW-SOUTH	Grab	GW		3/23/23	935	13	x	x		x	x	x	x	x		x		13

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

Remarks: See p. 1

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)	Trip Blank Received: Yes / No HCl / MeoH TBR	If preservation required by Login: Date/Time
Scott Ude	3/23/23	1600		2	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: ~~NSAO~~ °C 1.6 to 2.6 Bottles Received: 19	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) (12)	Date: 3/24/23 Time: 0900	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@trccompanies.com;aeljuri@trccompanies.com

Project Description: Lovington Lea Refinery

City/State Collected: Lovington, NM

Phone: 512-684-3170
Fax:

Client Project #

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 # L1598018

Table #

Acctnum: TRCATX

Template: T206205

Prelogin: P985102

TSR: 526

PB:

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	*WetChem-48hr HT* 125mlHDPE-NoPres	8270TX - 100mlAmb No Pres	ALK 250mlHDPE-NoPres	ALK ,TDS 500mlHDPE-NoPres	DROLVI 40mlAmb-HCl-BT	GRO 40mlAmb-HCl	HG 250mlHDPE-HNO3	NAVAJOMETALSDISS-FF 250mlHDPE-HNC	TDS 500mlHDPE-NoPres	V8260 40mlAmb-HCl	Remarks	Sample # (lab only)
WW-EAST	Grab	GW		3/23/23	905	13	x	x		x	x	x	x	x		x		14
DUP-01	Grab	GW		3/23/23	1200	13	x	x		x	x	x	x	x		x		15
DUP-02	Grab	GW		3/23/23	1240	13	x	x		x	x	x	x	x		x		16
DUP-03	Grab	GW		3/23/23	1100	13	x	x		x	x	x	x	x		x		17
EB-01	Grab	GW		3/23/23	1255	13	x	x		x	x	x	x	x		x		18
EB-02	Grab	GW		3/23/23	1030	9	x	x		x			x	x		x		19
✓ TRIP BLANK-01	Grab	GW		3/23/23	—	1										x		20
✓ TRIP BLANK-02	Grab	GW		3/23/23	—	1										x		21

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

Remarks: See P-1

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	3/23/23	1600	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) 12

Trip Blank Received: Yes / No
2 HCL / MeoH TBR

Temp: 0.3+0.6 °C Bottles Received: 19

Date: 3/24/23 Time: 0900

If preservation required by Login: Date/Time

Hold: Condition: NCF / OK

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Tracking Numbers	NSAB Temperature
5163 7720 4643	1.6 +0=1.6
5163 7720 2570	1.9+0=1.9
5163 7720 2581	3.4+0=3.4
6357 9918 9827	0+0=n/
5163 7720 4632	3.0+0=3.0

Received by OCD: 4/15/2024 1:46:20 PM

Released to Imaging: 4/26/2024 10:49:21 AM

ANALYTICAL REPORT

August 10, 2023

TRC Solutions - Austin, TX

Sample Delivery Group:	L1639912
Samples Received:	07/28/2023
Project Number:	527021
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.



Pace Analytical National
12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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WW-NORTH L1639912-01 GW

Collected by: Bryan Bayles | Collected date/time: 07/27/23 10:05 | Received date/time: 07/28/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2108737	1	08/07/23 09:31	08/07/23 12:17	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2105391	1	08/03/23 09:52	08/03/23 09:52	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2103516	1	07/28/23 19:49	07/28/23 19:49	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2105454	1	08/01/23 17:28	08/01/23 17:28	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2104376	1	07/31/23 14:33	08/01/23 11:29	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2105462	1	08/03/23 19:04	08/07/23 11:56	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2105922	1	08/03/23 20:37	08/04/23 19:33	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2109443	1	08/08/23 08:47	08/08/23 13:06	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2107720	1	08/04/23 17:05	08/04/23 17:05	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2104489	1	07/31/23 09:41	07/31/23 09:41	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2104920	1	07/31/23 18:34	07/31/23 18:34	DYW	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG2106030	1	08/02/23 19:05	08/03/23 21:03	DMG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2103497	1	07/30/23 07:38	07/30/23 17:25	MBE	Mt. Juliet, TN

WW-SOUTH L1639912-02 GW

Collected by: Bryan Bayles | Collected date/time: 07/27/23 09:20 | Received date/time: 07/28/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2106172	1	08/02/23 10:29	08/02/23 12:36	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2105391	1	08/03/23 09:56	08/03/23 09:56	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2103516	1	07/28/23 20:29	07/28/23 20:29	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2103516	5	07/28/23 20:43	07/28/23 20:43	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2105454	1	08/01/23 18:09	08/01/23 18:09	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2104376	1	07/31/23 14:33	08/01/23 11:31	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2105462	1	08/03/23 19:04	08/07/23 11:59	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2105922	1	08/03/23 20:37	08/04/23 19:36	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2107720	1	08/04/23 17:27	08/04/23 17:27	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2104489	1	07/31/23 10:02	07/31/23 10:02	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2104920	1	07/31/23 18:56	07/31/23 18:56	DYW	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG2106030	1	08/02/23 19:05	08/03/23 21:23	DMG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2103497	1	07/30/23 07:38	07/30/23 17:47	MBE	Mt. Juliet, TN

WW-EAST L1639912-03 GW

Collected by: Bryan Bayles | Collected date/time: 07/27/23 10:40 | Received date/time: 07/28/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2106172	1	08/02/23 10:29	08/02/23 12:36	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2105391	1	08/03/23 10:09	08/03/23 10:09	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2103516	1	07/28/23 20:57	07/28/23 20:57	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2105454	1	08/01/23 18:50	08/01/23 18:50	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2104376	1	07/31/23 14:33	08/01/23 11:33	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2105462	1	08/03/23 19:04	08/07/23 12:01	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2105922	1	08/03/23 20:37	08/04/23 19:40	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2107720	1	08/04/23 17:48	08/04/23 17:48	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2104649	1	07/31/23 09:54	07/31/23 09:54	DYW	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG2106030	1	08/02/23 19:05	08/03/23 21:43	DMG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2103497	1	07/30/23 07:38	07/30/23 18:08	MBE	Mt. Juliet, TN

DUP-01 L1639912-04 GW

Collected by: Bryan Bayles
Collected date/time: 07/27/23 12:00
Received date/time: 07/28/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2106172	1	08/02/23 10:29	08/02/23 12:36	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2105391	1	08/03/23 10:13	08/03/23 10:13	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2103516	1	07/28/23 21:10	07/28/23 21:10	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2103516	5	07/28/23 21:24	07/28/23 21:24	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2105454	1	08/01/23 19:04	08/01/23 19:04	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2104376	1	07/31/23 14:33	08/01/23 11:35	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2105462	1	08/03/23 19:04	08/07/23 12:04	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2105922	1	08/03/23 20:37	08/04/23 19:43	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2107720	1	08/04/23 18:11	08/04/23 18:11	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2104649	1	07/31/23 10:16	07/31/23 10:16	DYW	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG2106030	1	08/02/23 19:05	08/03/23 22:03	DMG	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2104569	1	08/02/23 13:29	08/03/23 04:35	DSH	Mt. Juliet, TN

TRIP BLANK L1639912-05 GW

Collected by: Bryan Bayles
Collected date/time: 07/27/23 00:00
Received date/time: 07/28/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2104649	1	07/31/23 09:32	07/31/23 09:32	DYW	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 mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	533	Q	10.0	1	08/07/2023 12:17	WG2108737

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	179		8.45	20.0	1	08/03/2023 09:52	WG2105391

Sample Narrative:

L1639912-01 WG2105391: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	111		0.379	1.00	1	07/28/2023 19:49	WG2103516
Fluoride	0.923		0.0640	0.150	1	08/01/2023 17:28	WG2105454
Nitrate	2.51		0.0480	0.100	1	07/28/2023 19:49	WG2103516
Nitrite	U		0.0420	0.100	1	07/28/2023 19:49	WG2103516
Sulfate	70.3		0.594	5.00	1	07/28/2023 19:49	WG2103516

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	08/01/2023 11:29	WG2104376

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.170	B J	0.0200	0.200	1	08/07/2023 11:56	WG2105462

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		0.0185	0.100	1	08/04/2023 19:33	WG2105922
Arsenic,Dissolved	0.00589		0.000180	0.00200	1	08/04/2023 19:33	WG2105922
Barium,Dissolved	0.105		0.000381	0.00200	1	08/04/2023 19:33	WG2105922
Cadmium,Dissolved	U		0.000150	0.00100	1	08/04/2023 19:33	WG2105922
Chromium,Dissolved	0.00241		0.00124	0.00200	1	08/04/2023 19:33	WG2105922
Copper,Dissolved	0.00563		0.00151	0.00500	1	08/08/2023 13:06	WG2109443
Cobalt,Dissolved	0.000145	J	0.0000596	0.00200	1	08/04/2023 19:33	WG2105922
Iron,Dissolved	U		0.0281	0.100	1	08/04/2023 19:33	WG2105922
Lead,Dissolved	U		0.000849	0.00200	1	08/04/2023 19:33	WG2105922
Manganese,Dissolved	0.00168	J	0.000704	0.00500	1	08/04/2023 19:33	WG2105922
Molybdenum,Dissolved	0.00266	B J	0.000348	0.00500	1	08/04/2023 19:33	WG2105922
Nickel,Dissolved	0.00193	J	0.000816	0.00200	1	08/04/2023 19:33	WG2105922
Selenium,Dissolved	0.00369		0.000300	0.00200	1	08/04/2023 19:33	WG2105922
Silver,Dissolved	U		0.0000700	0.00200	1	08/04/2023 19:33	WG2105922
Uranium,Dissolved	0.00161	J	0.0000700	0.0200	1	08/04/2023 19:33	WG2105922
Zinc,Dissolved	0.0217	J	0.00302	0.0250	1	08/04/2023 19:33	WG2105922

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	1	08/04/2023 17:05	WG2107720
(S) a,a,a-Trifluorotoluene(FID)	*104*			*78.0-120*		*08/04/2023 17:05*	WG2107720

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0113	0.0500	1	07/31/2023 09:41	WG2104489
Benzene	U		0.0000941	0.00100	1	07/31/2023 09:41	WG2104489
Bromodichloromethane	U		0.000136	0.00100	1	07/31/2023 09:41	WG2104489
Bromoform	U		0.000129	0.00100	1	07/31/2023 09:41	WG2104489
Bromomethane	U		0.000605	0.00500	1	07/31/2023 09:41	WG2104489
n-Butylbenzene	U		0.000157	0.00100	1	07/31/2023 09:41	WG2104489
sec-Butylbenzene	U		0.000125	0.00100	1	07/31/2023 09:41	WG2104489
tert-Butylbenzene	U		0.000127	0.00100	1	07/31/2023 09:41	WG2104489
Carbon disulfide	U		0.0000962	0.00100	1	07/31/2023 09:41	WG2104489
Carbon tetrachloride	U		0.000128	0.00100	1	07/31/2023 09:41	WG2104489
Chlorobenzene	U		0.000116	0.00100	1	07/31/2023 09:41	WG2104489
Chlorodibromomethane	U		0.000140	0.00100	1	07/31/2023 09:41	WG2104489
Chloroethane	U		0.000192	0.00500	1	07/31/2023 09:41	WG2104489
Chloroform	U		0.000111	0.00500	1	07/31/2023 09:41	WG2104489
Chloromethane	U		0.000960	0.00250	1	07/31/2023 09:41	WG2104489
1,2-Dibromoethane	U		0.000126	0.00100	1	07/31/2023 09:41	WG2104489
1,1-Dichloroethane	U		0.000100	0.00100	1	07/31/2023 09:41	WG2104489
1,2-Dichloroethane	U		0.0000819	0.00100	1	07/31/2023 09:41	WG2104489
1,1-Dichloroethene	U		0.000188	0.00100	1	07/31/2023 09:41	WG2104489
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	07/31/2023 18:34	WG2104920
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	07/31/2023 09:41	WG2104489
1,2-Dichloropropane	U		0.000149	0.00100	1	07/31/2023 09:41	WG2104489
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	07/31/2023 09:41	WG2104489
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	07/31/2023 09:41	WG2104489
Ethylbenzene	U		0.000137	0.00100	1	07/31/2023 09:41	WG2104489
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	07/31/2023 09:41	WG2104489
2-Hexanone	U		0.000787	0.0100	1	07/31/2023 09:41	WG2104489
Isopropylbenzene	U		0.000105	0.00100	1	07/31/2023 09:41	WG2104489
p-Isopropyltoluene	U		0.000120	0.00100	1	07/31/2023 09:41	WG2104489
2-Butanone (MEK)	U		0.00119	0.0100	1	07/31/2023 09:41	WG2104489
Methylene Chloride	U		0.000430	0.00500	1	07/31/2023 09:41	WG2104489
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	07/31/2023 09:41	WG2104489
Methyl tert-butyl ether	U		0.000101	0.00100	1	07/31/2023 09:41	WG2104489
Naphthalene	U		0.00100	0.00500	1	07/31/2023 09:41	WG2104489
n-Propylbenzene	U		0.0000993	0.00100	1	07/31/2023 09:41	WG2104489
Styrene	U		0.000118	0.00100	1	07/31/2023 09:41	WG2104489
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	07/31/2023 09:41	WG2104489
Tetrachloroethene	U		0.000300	0.00100	1	07/31/2023 18:34	WG2104920
Toluene	U		0.000278	0.00100	1	07/31/2023 09:41	WG2104489
1,1,1-Trichloroethane	U		0.000149	0.00100	1	07/31/2023 09:41	WG2104489
1,1,2-Trichloroethane	U		0.000158	0.00100	1	07/31/2023 09:41	WG2104489
Trichloroethene	U		0.000190	0.00100	1	07/31/2023 18:34	WG2104920
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	07/31/2023 09:41	WG2104489
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	07/31/2023 09:41	WG2104489
Vinyl chloride	U		0.000234	0.00100	1	07/31/2023 09:41	WG2104489
Xylenes, Total	U		0.000174	0.00300	1	07/31/2023 09:41	WG2104489
(S) Toluene-d8	*98.1*			*80.0-120*		*07/31/2023 09:41*	WG2104489
(S) Toluene-d8	*96.4*			*80.0-120*		*07/31/2023 18:34*	WG2104920
(S) 4-Bromofluorobenzene	*94.3*			*77.0-126*		*07/31/2023 09:41*	WG2104489

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
(S) 4-Bromofluorobenzene	*95.4*			*77.0-126*		*07/31/2023 18:34*	WG2104920
(S) 1,2-Dichloroethane-d4	*106*			*70.0-130*		*07/31/2023 09:41*	WG2104489
(S) 1,2-Dichloroethane-d4	*106*			*70.0-130*		*07/31/2023 18:34*	WG2104920

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	U		0.0247	0.100	1	08/03/2023 21:03	WG2106030
(S) o-Terphenyl	*84.0*			*31.0-160*		*08/03/2023 21:03*	WG2106030

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000886	0.00100	1	07/30/2023 17:25	WG2103497
Acenaphthylene	U		0.0000921	0.00100	1	07/30/2023 17:25	WG2103497
Acetophenone	U		0.000208	0.0100	1	07/30/2023 17:25	WG2103497
Anthracene	U		0.0000804	0.00100	1	07/30/2023 17:25	WG2103497
Atrazine	U		0.000255	0.0100	1	07/30/2023 17:25	WG2103497
Benzo(a)anthracene	U		0.000199	0.00100	1	07/30/2023 17:25	WG2103497
Benzaldehyde	U		0.00169	0.0100	1	07/30/2023 17:25	WG2103497
Benzo(b)fluoranthene	U		0.000130	0.00100	1	07/30/2023 17:25	WG2103497
Benzo(k)fluoranthene	U		0.000120	0.00100	1	07/30/2023 17:25	WG2103497
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	07/30/2023 17:25	WG2103497
Benzo(a)pyrene	U		0.0000381	0.000200	1	07/30/2023 17:25	WG2103497
Biphenyl	U		0.000790	0.0100	1	07/30/2023 17:25	WG2103497
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	07/30/2023 17:25	WG2103497
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	07/30/2023 17:25	WG2103497
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	07/30/2023 17:25	WG2103497
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	07/30/2023 17:25	WG2103497
2-Chloronaphthalene	U		0.0000648	0.00100	1	07/30/2023 17:25	WG2103497
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	07/30/2023 17:25	WG2103497
Caprolactam	U		0.000309	0.0100	1	07/30/2023 17:25	WG2103497
Carbazole	U		0.000111	0.0100	1	07/30/2023 17:25	WG2103497
Chrysene	U		0.000130	0.00100	1	07/30/2023 17:25	WG2103497
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	07/30/2023 17:25	WG2103497
Dibenzofuran	U		0.0000970	0.0100	1	07/30/2023 17:25	WG2103497
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	07/30/2023 17:25	WG2103497
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	07/30/2023 17:25	WG2103497
2,6-Dinitrotoluene	U		0.000250	0.0100	1	07/30/2023 17:25	WG2103497
Fluoranthene	U		0.000102	0.00100	1	07/30/2023 17:25	WG2103497
Fluorene	U		0.0000844	0.00100	1	07/30/2023 17:25	WG2103497
Hexachlorobenzene	U		0.0000755	0.00100	1	07/30/2023 17:25	WG2103497
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	07/30/2023 17:25	WG2103497
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	07/30/2023 17:25	WG2103497
Hexachloroethane	U		0.000127	0.0100	1	07/30/2023 17:25	WG2103497
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	07/30/2023 17:25	WG2103497
Isophorone	U		0.000143	0.0100	1	07/30/2023 17:25	WG2103497
1-Methylnaphthalene	U		0.0000790	0.00100	1	07/30/2023 17:25	WG2103497
2-Methylnaphthalene	U		0.000117	0.00100	1	07/30/2023 17:25	WG2103497
Naphthalene	U		0.000159	0.00100	1	07/30/2023 17:25	WG2103497
Nitrobenzene	U		0.000297	0.0100	1	07/30/2023 17:25	WG2103497
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	07/30/2023 17:25	WG2103497
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	07/30/2023 17:25	WG2103497
Phenanthrene	U		0.000112	0.00100	1	07/30/2023 17:25	WG2103497
Benzylbutyl phthalate	U		0.000765	0.00300	1	07/30/2023 17:25	WG2103497

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	07/30/2023 17:25	WG2103497
Di-n-butyl phthalate	U		0.000453	0.00300	1	07/30/2023 17:25	WG2103497
Diethyl phthalate	U		0.000287	0.00300	1	07/30/2023 17:25	WG2103497
Dimethyl phthalate	U		0.000260	0.00300	1	07/30/2023 17:25	WG2103497
Di-n-octyl phthalate	U		0.000932	0.00300	1	07/30/2023 17:25	WG2103497
Pyrene	U		0.000107	0.00100	1	07/30/2023 17:25	WG2103497
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	07/30/2023 17:25	WG2103497
4-Chloro-3-methylphenol	U		0.000131	0.0100	1	07/30/2023 17:25	WG2103497
2-Chlorophenol	U		0.000133	0.0100	1	07/30/2023 17:25	WG2103497
2,4-Dichlorophenol	U		0.000102	0.0100	1	07/30/2023 17:25	WG2103497
2,4-Dimethylphenol	U		0.0000636	0.0100	1	07/30/2023 17:25	WG2103497
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	07/30/2023 17:25	WG2103497
2,4-Dinitrophenol	U		0.00593	0.0100	1	07/30/2023 17:25	WG2103497
2-Nitrophenol	U		0.000117	0.0100	1	07/30/2023 17:25	WG2103497
2-Nitroaniline	U		0.000102	0.0100	1	07/30/2023 17:25	WG2103497
2-Methylphenol	U		0.0000929	0.0100	1	07/30/2023 17:25	WG2103497
3&4-Methyl Phenol	U		0.000168	0.0100	1	07/30/2023 17:25	WG2103497
3-Nitroaniline	U		0.0000869	0.0100	1	07/30/2023 17:25	WG2103497
4-Chloroaniline	U		0.000234	0.0100	1	07/30/2023 17:25	WG2103497
4-Nitroaniline	U		0.0000910	0.0100	1	07/30/2023 17:25	WG2103497
4-Nitrophenol	U		0.000143	0.0100	1	07/30/2023 17:25	WG2103497
Pentachlorophenol	U		0.000313	0.0100	1	07/30/2023 17:25	WG2103497
Phenol	U		0.00433	0.0100	1	07/30/2023 17:25	WG2103497
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	07/30/2023 17:25	WG2103497
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	07/30/2023 17:25	WG2103497
(S) 2-Fluorophenol	*32.0*			*10.0-120*		*07/30/2023 17:25*	WG2103497
(S) Phenol-d5	*20.6*			*10.0-120*		*07/30/2023 17:25*	WG2103497
(S) Nitrobenzene-d5	*56.3*			*10.0-127*		*07/30/2023 17:25*	WG2103497
(S) 2-Fluorobiphenyl	*61.1*			*10.0-130*		*07/30/2023 17:25*	WG2103497
(S) 2,4,6-Tribromophenol	*74.2*			*10.0-155*		*07/30/2023 17:25*	WG2103497
(S) p-Terphenyl-d14	*69.2*			*10.0-128*		*07/30/2023 17:25*	WG2103497

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	878		20.0	1	08/02/2023 12:36	WG2106172

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Alkalinity	190		8.45	20.0	1	08/03/2023 09:56	WG2105391

Sample Narrative:

L1639912-02 WG2105391: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	244		1.90	5.00	5	07/28/2023 20:43	WG2103516
Fluoride	0.702		0.0640	0.150	1	08/01/2023 18:09	WG2105454
Nitrate	2.84		0.0480	0.100	1	07/28/2023 20:29	WG2103516
Nitrite	U		0.0420	0.100	1	07/28/2023 20:29	WG2103516
Sulfate	79.6		0.594	5.00	1	07/28/2023 20:29	WG2103516

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.000100	0.000200	1	08/01/2023 11:31	WG2104376

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron,Dissolved	0.208	B	0.0200	0.200	1	08/07/2023 11:59	WG2105462

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.0185	0.100	1	08/04/2023 19:36	WG2105922
Arsenic,Dissolved	0.00454		0.000180	0.00200	1	08/04/2023 19:36	WG2105922
Barium,Dissolved	0.127		0.000381	0.00200	1	08/04/2023 19:36	WG2105922
Cadmium,Dissolved	U		0.000150	0.00100	1	08/04/2023 19:36	WG2105922
Chromium,Dissolved	0.00143	J	0.00124	0.00200	1	08/04/2023 19:36	WG2105922
Copper,Dissolved	0.00267	B J	0.00151	0.00500	1	08/04/2023 19:36	WG2105922
Cobalt,Dissolved	0.000125	J	0.0000596	0.00200	1	08/04/2023 19:36	WG2105922
Iron,Dissolved	0.336		0.0281	0.100	1	08/04/2023 19:36	WG2105922
Lead,Dissolved	0.00250		0.000849	0.00200	1	08/04/2023 19:36	WG2105922
Manganese,Dissolved	0.00394	J	0.000704	0.00500	1	08/04/2023 19:36	WG2105922
Molybdenum,Dissolved	0.00368	B J	0.000348	0.00500	1	08/04/2023 19:36	WG2105922
Nickel,Dissolved	0.00741		0.000816	0.00200	1	08/04/2023 19:36	WG2105922
Selenium,Dissolved	0.00376		0.000300	0.00200	1	08/04/2023 19:36	WG2105922
Silver,Dissolved	U		0.0000700	0.00200	1	08/04/2023 19:36	WG2105922
Uranium,Dissolved	0.00206	J	0.0000700	0.0200	1	08/04/2023 19:36	WG2105922
Zinc,Dissolved	0.123		0.00302	0.0250	1	08/04/2023 19:36	WG2105922

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	1	08/04/2023 17:27	WG2107720
(S) a,a,a-Trifluorotoluene(FID)	*105*			*78.0-120*		*08/04/2023 17:27*	WG2107720

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0113	0.0500	1	07/31/2023 10:02	WG2104489
Benzene	U		0.0000941	0.00100	1	07/31/2023 10:02	WG2104489
Bromodichloromethane	U		0.000136	0.00100	1	07/31/2023 10:02	WG2104489
Bromoform	U		0.000129	0.00100	1	07/31/2023 10:02	WG2104489
Bromomethane	U		0.000605	0.00500	1	07/31/2023 10:02	WG2104489
n-Butylbenzene	U		0.000157	0.00100	1	07/31/2023 10:02	WG2104489
sec-Butylbenzene	U		0.000125	0.00100	1	07/31/2023 10:02	WG2104489
tert-Butylbenzene	U		0.000127	0.00100	1	07/31/2023 10:02	WG2104489
Carbon disulfide	U		0.0000962	0.00100	1	07/31/2023 10:02	WG2104489
Carbon tetrachloride	0.000208	J	0.000128	0.00100	1	07/31/2023 10:02	WG2104489
Chlorobenzene	U		0.000116	0.00100	1	07/31/2023 10:02	WG2104489
Chlorodibromomethane	U		0.000140	0.00100	1	07/31/2023 10:02	WG2104489
Chloroethane	U		0.000192	0.00500	1	07/31/2023 10:02	WG2104489
Chloroform	0.000763	J	0.000111	0.00500	1	07/31/2023 10:02	WG2104489
Chloromethane	U		0.000960	0.00250	1	07/31/2023 10:02	WG2104489
1,2-Dibromoethane	U		0.000126	0.00100	1	07/31/2023 10:02	WG2104489
1,1-Dichloroethane	U		0.000100	0.00100	1	07/31/2023 10:02	WG2104489
1,2-Dichloroethane	U		0.0000819	0.00100	1	07/31/2023 10:02	WG2104489
1,1-Dichloroethene	U		0.000188	0.00100	1	07/31/2023 10:02	WG2104489
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	07/31/2023 18:56	WG2104920
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	07/31/2023 10:02	WG2104489
1,2-Dichloropropane	U		0.000149	0.00100	1	07/31/2023 10:02	WG2104489
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	07/31/2023 10:02	WG2104489
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	07/31/2023 10:02	WG2104489
Ethylbenzene	U		0.000137	0.00100	1	07/31/2023 10:02	WG2104489
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	07/31/2023 10:02	WG2104489
2-Hexanone	U		0.000787	0.0100	1	07/31/2023 10:02	WG2104489
Isopropylbenzene	U		0.000105	0.00100	1	07/31/2023 10:02	WG2104489
p-Isopropyltoluene	U		0.000120	0.00100	1	07/31/2023 10:02	WG2104489
2-Butanone (MEK)	U		0.00119	0.0100	1	07/31/2023 10:02	WG2104489
Methylene Chloride	U		0.000430	0.00500	1	07/31/2023 10:02	WG2104489
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	07/31/2023 10:02	WG2104489
Methyl tert-butyl ether	U		0.000101	0.00100	1	07/31/2023 10:02	WG2104489
Naphthalene	U		0.00100	0.00500	1	07/31/2023 10:02	WG2104489
n-Propylbenzene	U		0.0000993	0.00100	1	07/31/2023 10:02	WG2104489
Styrene	U		0.000118	0.00100	1	07/31/2023 10:02	WG2104489
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	07/31/2023 10:02	WG2104489
Tetrachloroethene	U		0.000300	0.00100	1	07/31/2023 18:56	WG2104920
Toluene	U		0.000278	0.00100	1	07/31/2023 10:02	WG2104489
1,1,1-Trichloroethane	U		0.000149	0.00100	1	07/31/2023 10:02	WG2104489
1,1,2-Trichloroethane	U		0.000158	0.00100	1	07/31/2023 10:02	WG2104489
Trichloroethene	U		0.000190	0.00100	1	07/31/2023 18:56	WG2104920
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	07/31/2023 10:02	WG2104489
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	07/31/2023 10:02	WG2104489
Vinyl chloride	U		0.000234	0.00100	1	07/31/2023 10:02	WG2104489
Xylenes, Total	U		0.000174	0.00300	1	07/31/2023 10:02	WG2104489
(S) Toluene-d8	*99.5*			*80.0-120*		*07/31/2023 10:02*	WG2104489
(S) Toluene-d8	*97.5*			*80.0-120*		*07/31/2023 18:56*	WG2104920
(S) 4-Bromofluorobenzene	*94.4*			*77.0-126*		*07/31/2023 10:02*	WG2104489

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
(S) 4-Bromofluorobenzene	*91.8*			*77.0-126*		*07/31/2023 18:56*	WG2104920
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*07/31/2023 10:02*	WG2104489
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*07/31/2023 18:56*	WG2104920

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	U		0.0247	0.100	1	08/03/2023 21:23	WG2106030
(S) o-Terphenyl	*81.5*			*31.0-160*		*08/03/2023 21:23*	WG2106030

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000886	0.00100	1	07/30/2023 17:47	WG2103497
Acenaphthylene	U		0.0000921	0.00100	1	07/30/2023 17:47	WG2103497
Acetophenone	U		0.000208	0.0100	1	07/30/2023 17:47	WG2103497
Anthracene	U		0.0000804	0.00100	1	07/30/2023 17:47	WG2103497
Atrazine	U		0.000255	0.0100	1	07/30/2023 17:47	WG2103497
Benzo(a)anthracene	U		0.000199	0.00100	1	07/30/2023 17:47	WG2103497
Benzaldehyde	U		0.00169	0.0100	1	07/30/2023 17:47	WG2103497
Benzo(b)fluoranthene	U		0.000130	0.00100	1	07/30/2023 17:47	WG2103497
Benzo(k)fluoranthene	U		0.000120	0.00100	1	07/30/2023 17:47	WG2103497
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	07/30/2023 17:47	WG2103497
Benzo(a)pyrene	U		0.0000381	0.000200	1	07/30/2023 17:47	WG2103497
Biphenyl	U		0.000790	0.0100	1	07/30/2023 17:47	WG2103497
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	07/30/2023 17:47	WG2103497
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	07/30/2023 17:47	WG2103497
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	07/30/2023 17:47	WG2103497
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	07/30/2023 17:47	WG2103497
2-Chloronaphthalene	U		0.0000648	0.00100	1	07/30/2023 17:47	WG2103497
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	07/30/2023 17:47	WG2103497
Caprolactam	U		0.000309	0.0100	1	07/30/2023 17:47	WG2103497
Carbazole	U		0.000111	0.0100	1	07/30/2023 17:47	WG2103497
Chrysene	U		0.000130	0.00100	1	07/30/2023 17:47	WG2103497
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	07/30/2023 17:47	WG2103497
Dibenzofuran	U		0.0000970	0.0100	1	07/30/2023 17:47	WG2103497
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	07/30/2023 17:47	WG2103497
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	07/30/2023 17:47	WG2103497
2,6-Dinitrotoluene	U		0.000250	0.0100	1	07/30/2023 17:47	WG2103497
Fluoranthene	U		0.000102	0.00100	1	07/30/2023 17:47	WG2103497
Fluorene	U		0.0000844	0.00100	1	07/30/2023 17:47	WG2103497
Hexachlorobenzene	U		0.0000755	0.00100	1	07/30/2023 17:47	WG2103497
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	07/30/2023 17:47	WG2103497
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	07/30/2023 17:47	WG2103497
Hexachloroethane	U		0.000127	0.0100	1	07/30/2023 17:47	WG2103497
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	07/30/2023 17:47	WG2103497
Isophorone	U		0.000143	0.0100	1	07/30/2023 17:47	WG2103497
1-Methylnaphthalene	U		0.0000790	0.00100	1	07/30/2023 17:47	WG2103497
2-Methylnaphthalene	U		0.000117	0.00100	1	07/30/2023 17:47	WG2103497
Naphthalene	U		0.000159	0.00100	1	07/30/2023 17:47	WG2103497
Nitrobenzene	U		0.000297	0.0100	1	07/30/2023 17:47	WG2103497
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	07/30/2023 17:47	WG2103497
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	07/30/2023 17:47	WG2103497
Phenanthrene	U		0.000112	0.00100	1	07/30/2023 17:47	WG2103497
Benzylbutyl phthalate	U		0.000765	0.00300	1	07/30/2023 17:47	WG2103497

Received by OCD: 4/15/2024 1:46:20 PM

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	07/30/2023 17:47	WG2103497
Di-n-butyl phthalate	U		0.000453	0.00300	1	07/30/2023 17:47	WG2103497
Diethyl phthalate	U		0.000287	0.00300	1	07/30/2023 17:47	WG2103497
Dimethyl phthalate	U		0.000260	0.00300	1	07/30/2023 17:47	WG2103497
Di-n-octyl phthalate	U		0.000932	0.00300	1	07/30/2023 17:47	WG2103497
Pyrene	U		0.000107	0.00100	1	07/30/2023 17:47	WG2103497
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	07/30/2023 17:47	WG2103497
4-Chloro-3-methylphenol	U		0.000131	0.0100	1	07/30/2023 17:47	WG2103497
2-Chlorophenol	U		0.000133	0.0100	1	07/30/2023 17:47	WG2103497
2,4-Dichlorophenol	U		0.000102	0.0100	1	07/30/2023 17:47	WG2103497
2,4-Dimethylphenol	U		0.0000636	0.0100	1	07/30/2023 17:47	WG2103497
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	07/30/2023 17:47	WG2103497
2,4-Dinitrophenol	U		0.00593	0.0100	1	07/30/2023 17:47	WG2103497
2-Nitrophenol	U		0.000117	0.0100	1	07/30/2023 17:47	WG2103497
2-Nitroaniline	U		0.000102	0.0100	1	07/30/2023 17:47	WG2103497
2-Methylphenol	U		0.0000929	0.0100	1	07/30/2023 17:47	WG2103497
3&4-Methyl Phenol	U		0.000168	0.0100	1	07/30/2023 17:47	WG2103497
3-Nitroaniline	U		0.0000869	0.0100	1	07/30/2023 17:47	WG2103497
4-Chloroaniline	U		0.000234	0.0100	1	07/30/2023 17:47	WG2103497
4-Nitroaniline	U		0.0000910	0.0100	1	07/30/2023 17:47	WG2103497
4-Nitrophenol	U		0.000143	0.0100	1	07/30/2023 17:47	WG2103497
Pentachlorophenol	U		0.000313	0.0100	1	07/30/2023 17:47	WG2103497
Phenol	U		0.00433	0.0100	1	07/30/2023 17:47	WG2103497
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	07/30/2023 17:47	WG2103497
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	07/30/2023 17:47	WG2103497
(S) 2-Fluorophenol	*29.2*			*10.0-120*		*07/30/2023 17:47*	WG2103497
(S) Phenol-d5	*19.1*			*10.0-120*		*07/30/2023 17:47*	WG2103497
(S) Nitrobenzene-d5	*56.0*			*10.0-127*		*07/30/2023 17:47*	WG2103497
(S) 2-Fluorobiphenyl	*56.7*			*10.0-130*		*07/30/2023 17:47*	WG2103497
(S) 2,4,6-Tribromophenol	*71.1*			*10.0-155*		*07/30/2023 17:47*	WG2103497
(S) p-Terphenyl-d14	*63.2*			*10.0-128*		*07/30/2023 17:47*	WG2103497

Released to Imaging: 4/26/2024 10:49:21 AM

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	503		10.0	1	08/02/2023 12:36	WG2106172

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Alkalinity	175		8.45	20.0	1	08/03/2023 10:09	WG2105391

Sample Narrative:

L1639912-03 WG2105391: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	93.3		0.379	1.00	1	07/28/2023 20:57	WG2103516
Fluoride	1.05		0.0640	0.150	1	08/01/2023 18:50	WG2105454
Nitrate	2.45		0.0480	0.100	1	07/28/2023 20:57	WG2103516
Nitrite	U		0.0420	0.100	1	07/28/2023 20:57	WG2103516
Sulfate	75.7		0.594	5.00	1	07/28/2023 20:57	WG2103516

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.000100	0.000200	1	08/01/2023 11:33	WG2104376

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron,Dissolved	0.164	B J	0.0200	0.200	1	08/07/2023 12:01	WG2105462

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.0185	0.100	1	08/04/2023 19:40	WG2105922
Arsenic,Dissolved	0.00525		0.000180	0.00200	1	08/04/2023 19:40	WG2105922
Barium,Dissolved	0.0878		0.000381	0.00200	1	08/04/2023 19:40	WG2105922
Cadmium,Dissolved	U		0.000150	0.00100	1	08/04/2023 19:40	WG2105922
Chromium,Dissolved	0.00402		0.00124	0.00200	1	08/04/2023 19:40	WG2105922
Copper,Dissolved	0.00265	B J	0.00151	0.00500	1	08/04/2023 19:40	WG2105922
Cobalt,Dissolved	0.000160	J	0.0000596	0.00200	1	08/04/2023 19:40	WG2105922
Iron,Dissolved	0.0444	J	0.0281	0.100	1	08/04/2023 19:40	WG2105922
Lead,Dissolved	U		0.000849	0.00200	1	08/04/2023 19:40	WG2105922
Manganese,Dissolved	0.00143	J	0.000704	0.00500	1	08/04/2023 19:40	WG2105922
Molybdenum,Dissolved	0.00274	B J	0.000348	0.00500	1	08/04/2023 19:40	WG2105922
Nickel,Dissolved	0.000821	J	0.000816	0.00200	1	08/04/2023 19:40	WG2105922
Selenium,Dissolved	0.00431		0.000300	0.00200	1	08/04/2023 19:40	WG2105922
Silver,Dissolved	U		0.0000700	0.00200	1	08/04/2023 19:40	WG2105922
Uranium,Dissolved	0.00175	J	0.0000700	0.0200	1	08/04/2023 19:40	WG2105922
Zinc,Dissolved	U		0.00302	0.0250	1	08/04/2023 19:40	WG2105922

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	1	08/04/2023 17:48	WG2107720
(S) a,a,a-Trifluorotoluene(FID)	*104*			*78.0-120*		*08/04/2023 17:48*	WG2107720

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0113	0.0500	1	07/31/2023 09:54	WG2104649
Benzene	U		0.0000941	0.00100	1	07/31/2023 09:54	WG2104649
Bromodichloromethane	U		0.000136	0.00100	1	07/31/2023 09:54	WG2104649
Bromoform	U		0.000129	0.00100	1	07/31/2023 09:54	WG2104649
Bromomethane	U		0.000605	0.00500	1	07/31/2023 09:54	WG2104649
n-Butylbenzene	U		0.000157	0.00100	1	07/31/2023 09:54	WG2104649
sec-Butylbenzene	U		0.000125	0.00100	1	07/31/2023 09:54	WG2104649
tert-Butylbenzene	U		0.000127	0.00100	1	07/31/2023 09:54	WG2104649
Carbon disulfide	U		0.0000962	0.00100	1	07/31/2023 09:54	WG2104649
Carbon tetrachloride	U		0.000128	0.00100	1	07/31/2023 09:54	WG2104649
Chlorobenzene	U		0.000116	0.00100	1	07/31/2023 09:54	WG2104649
Chlorodibromomethane	U		0.000140	0.00100	1	07/31/2023 09:54	WG2104649
Chloroethane	U		0.000192	0.00500	1	07/31/2023 09:54	WG2104649
Chloroform	U		0.000111	0.00500	1	07/31/2023 09:54	WG2104649
Chloromethane	U		0.000960	0.00250	1	07/31/2023 09:54	WG2104649
1,2-Dibromoethane	U		0.000126	0.00100	1	07/31/2023 09:54	WG2104649
1,1-Dichloroethane	U		0.000100	0.00100	1	07/31/2023 09:54	WG2104649
1,2-Dichloroethane	U		0.0000819	0.00100	1	07/31/2023 09:54	WG2104649
1,1-Dichloroethene	U		0.000188	0.00100	1	07/31/2023 09:54	WG2104649
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	07/31/2023 09:54	WG2104649
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	07/31/2023 09:54	WG2104649
1,2-Dichloropropane	U		0.000149	0.00100	1	07/31/2023 09:54	WG2104649
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	07/31/2023 09:54	WG2104649
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	07/31/2023 09:54	WG2104649
Ethylbenzene	U		0.000137	0.00100	1	07/31/2023 09:54	WG2104649
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	07/31/2023 09:54	WG2104649
2-Hexanone	U		0.000787	0.0100	1	07/31/2023 09:54	WG2104649
Isopropylbenzene	U		0.000105	0.00100	1	07/31/2023 09:54	WG2104649
p-Isopropyltoluene	U		0.000120	0.00100	1	07/31/2023 09:54	WG2104649
2-Butanone (MEK)	U		0.00119	0.0100	1	07/31/2023 09:54	WG2104649
Methylene Chloride	U		0.000430	0.00500	1	07/31/2023 09:54	WG2104649
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	07/31/2023 09:54	WG2104649
Methyl tert-butyl ether	U		0.000101	0.00100	1	07/31/2023 09:54	WG2104649
Naphthalene	U		0.00100	0.00500	1	07/31/2023 09:54	WG2104649
n-Propylbenzene	U		0.0000993	0.00100	1	07/31/2023 09:54	WG2104649
Styrene	U		0.000118	0.00100	1	07/31/2023 09:54	WG2104649
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	07/31/2023 09:54	WG2104649
Tetrachloroethene	U		0.000300	0.00100	1	07/31/2023 09:54	WG2104649
Toluene	U		0.000278	0.00100	1	07/31/2023 09:54	WG2104649
1,1,1-Trichloroethane	U		0.000149	0.00100	1	07/31/2023 09:54	WG2104649
1,1,2-Trichloroethane	U		0.000158	0.00100	1	07/31/2023 09:54	WG2104649
Trichloroethene	U		0.000190	0.00100	1	07/31/2023 09:54	WG2104649
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	07/31/2023 09:54	WG2104649
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	07/31/2023 09:54	WG2104649
Vinyl chloride	U		0.000234	0.00100	1	07/31/2023 09:54	WG2104649
Xylenes, Total	U		0.000174	0.00300	1	07/31/2023 09:54	WG2104649
(S) Toluene-d8	*105*			*80.0-120*		*07/31/2023 09:54*	WG2104649
(S) 4-Bromofluorobenzene	*89.1*			*77.0-126*		*07/31/2023 09:54*	WG2104649
(S) 1,2-Dichloroethane-d4	*96.6*			*70.0-130*		*07/31/2023 09:54*	WG2104649

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	U		0.0247	0.100	1	08/03/2023 21:43	WG2106030
(S) o-Terphenyl	*84.5*			*31.0-160*		*08/03/2023 21:43*	WG2106030

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000886	0.00100	1	07/30/2023 18:08	WG2103497
Acenaphthylene	U		0.0000921	0.00100	1	07/30/2023 18:08	WG2103497
Acetophenone	0.000225	J	0.000208	0.0100	1	07/30/2023 18:08	WG2103497
Anthracene	U		0.0000804	0.00100	1	07/30/2023 18:08	WG2103497
Atrazine	U		0.000255	0.0100	1	07/30/2023 18:08	WG2103497
Benzo(a)anthracene	U		0.000199	0.00100	1	07/30/2023 18:08	WG2103497
Benzaldehyde	U		0.00169	0.0100	1	07/30/2023 18:08	WG2103497
Benzo(b)fluoranthene	U		0.000130	0.00100	1	07/30/2023 18:08	WG2103497
Benzo(k)fluoranthene	U		0.000120	0.00100	1	07/30/2023 18:08	WG2103497
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	07/30/2023 18:08	WG2103497
Benzo(a)pyrene	U		0.0000381	0.000200	1	07/30/2023 18:08	WG2103497
Biphenyl	U		0.000790	0.0100	1	07/30/2023 18:08	WG2103497
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	07/30/2023 18:08	WG2103497
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	07/30/2023 18:08	WG2103497
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	07/30/2023 18:08	WG2103497
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	07/30/2023 18:08	WG2103497
2-Chloronaphthalene	U		0.0000648	0.00100	1	07/30/2023 18:08	WG2103497
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	07/30/2023 18:08	WG2103497
Caprolactam	U		0.000309	0.0100	1	07/30/2023 18:08	WG2103497
Carbazole	U		0.000111	0.0100	1	07/30/2023 18:08	WG2103497
Chrysene	U		0.000130	0.00100	1	07/30/2023 18:08	WG2103497
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	07/30/2023 18:08	WG2103497
Dibenzofuran	U		0.0000970	0.0100	1	07/30/2023 18:08	WG2103497
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	07/30/2023 18:08	WG2103497
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	07/30/2023 18:08	WG2103497
2,6-Dinitrotoluene	U		0.000250	0.0100	1	07/30/2023 18:08	WG2103497
Fluoranthene	U		0.000102	0.00100	1	07/30/2023 18:08	WG2103497
Fluorene	U		0.0000844	0.00100	1	07/30/2023 18:08	WG2103497
Hexachlorobenzene	U		0.0000755	0.00100	1	07/30/2023 18:08	WG2103497
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	07/30/2023 18:08	WG2103497
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	07/30/2023 18:08	WG2103497
Hexachloroethane	U		0.000127	0.0100	1	07/30/2023 18:08	WG2103497
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	07/30/2023 18:08	WG2103497
Isophorone	U		0.000143	0.0100	1	07/30/2023 18:08	WG2103497
1-Methylnaphthalene	U		0.0000790	0.00100	1	07/30/2023 18:08	WG2103497
2-Methylnaphthalene	U		0.000117	0.00100	1	07/30/2023 18:08	WG2103497
Naphthalene	U		0.000159	0.00100	1	07/30/2023 18:08	WG2103497
Nitrobenzene	U		0.000297	0.0100	1	07/30/2023 18:08	WG2103497
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	07/30/2023 18:08	WG2103497
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	07/30/2023 18:08	WG2103497
Phenanthrene	U		0.000112	0.00100	1	07/30/2023 18:08	WG2103497
Benzylbutyl phthalate	U		0.000765	0.00300	1	07/30/2023 18:08	WG2103497
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	07/30/2023 18:08	WG2103497
Di-n-butyl phthalate	U		0.000453	0.00300	1	07/30/2023 18:08	WG2103497
Diethyl phthalate	U		0.000287	0.00300	1	07/30/2023 18:08	WG2103497
Dimethyl phthalate	U		0.000260	0.00300	1	07/30/2023 18:08	WG2103497
Di-n-octyl phthalate	U		0.000932	0.00300	1	07/30/2023 18:08	WG2103497
Pyrene	U		0.000107	0.00100	1	07/30/2023 18:08	WG2103497
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	07/30/2023 18:08	WG2103497
4-Chloro-3-methylphenol	U		0.000131	0.0100	1	07/30/2023 18:08	WG2103497

Received by OCD: 4/15/2024 1:46:20 PM

WW-EAST
Collected date/time: 07/27/23 10:40
L1639912

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
2-Chlorophenol	U		0.000133	0.0100	1	07/30/2023 18:08	WG2103497
2,4-Dichlorophenol	U		0.000102	0.0100	1	07/30/2023 18:08	WG2103497
2,4-Dimethylphenol	U		0.0000636	0.0100	1	07/30/2023 18:08	WG2103497
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	07/30/2023 18:08	WG2103497
2,4-Dinitrophenol	U		0.00593	0.0100	1	07/30/2023 18:08	WG2103497
2-Nitrophenol	U		0.000117	0.0100	1	07/30/2023 18:08	WG2103497
2-Nitroaniline	U		0.000102	0.0100	1	07/30/2023 18:08	WG2103497
2-Methylphenol	U		0.0000929	0.0100	1	07/30/2023 18:08	WG2103497
3&4-Methyl Phenol	U		0.000168	0.0100	1	07/30/2023 18:08	WG2103497
3-Nitroaniline	U		0.0000869	0.0100	1	07/30/2023 18:08	WG2103497
4-Chloroaniline	U		0.000234	0.0100	1	07/30/2023 18:08	WG2103497
4-Nitroaniline	U		0.0000910	0.0100	1	07/30/2023 18:08	WG2103497
4-Nitrophenol	U		0.000143	0.0100	1	07/30/2023 18:08	WG2103497
Pentachlorophenol	U		0.000313	0.0100	1	07/30/2023 18:08	WG2103497
Phenol	U		0.00433	0.0100	1	07/30/2023 18:08	WG2103497
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	07/30/2023 18:08	WG2103497
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	07/30/2023 18:08	WG2103497
(S) 2-Fluorophenol	*27.9*			*10.0-120*		*07/30/2023 18:08*	WG2103497
(S) Phenol-d5	*18.4*			*10.0-120*		*07/30/2023 18:08*	WG2103497
(S) Nitrobenzene-d5	*56.2*			*10.0-127*		*07/30/2023 18:08*	WG2103497
(S) 2-Fluorobiphenyl	*58.7*			*10.0-130*		*07/30/2023 18:08*	WG2103497
(S) 2,4,6-Tribromophenol	*71.1*			*10.0-155*		*07/30/2023 18:08*	WG2103497
(S) p-Terphenyl-d14	*70.0*			*10.0-128*		*07/30/2023 18:08*	WG2103497

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

Released to Imaging: 4/26/2024 10:49:21 AM

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	988		20.0	1	08/02/2023 12:36	WG2106172

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	190		8.45	20.0	1	08/03/2023 10:13	WG2105391

Sample Narrative:

L1639912-04 WG2105391: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	256		1.90	5.00	5	07/28/2023 21:24	WG2103516
Fluoride	0.849		0.0640	0.150	1	08/01/2023 19:04	WG2105454
Nitrate	2.85		0.0480	0.100	1	07/28/2023 21:10	WG2103516
Nitrite	U		0.0420	0.100	1	07/28/2023 21:10	WG2103516
Sulfate	79.6		0.594	5.00	1	07/28/2023 21:10	WG2103516

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	08/01/2023 11:35	WG2104376

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.197	B J	0.0200	0.200	1	08/07/2023 12:04	WG2105462

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		0.0185	0.100	1	08/04/2023 19:43	WG2105922
Arsenic,Dissolved	0.00500		0.000180	0.00200	1	08/04/2023 19:43	WG2105922
Barium,Dissolved	0.113		0.000381	0.00200	1	08/04/2023 19:43	WG2105922
Cadmium,Dissolved	0.000243	J	0.000150	0.00100	1	08/04/2023 19:43	WG2105922
Chromium,Dissolved	0.00142	J	0.00124	0.00200	1	08/04/2023 19:43	WG2105922
Copper,Dissolved	0.00172	B J	0.00151	0.00500	1	08/04/2023 19:43	WG2105922
Cobalt,Dissolved	0.000371	J	0.0000596	0.00200	1	08/04/2023 19:43	WG2105922
Iron,Dissolved	U		0.0281	0.100	1	08/04/2023 19:43	WG2105922
Lead,Dissolved	0.00218		0.000849	0.00200	1	08/04/2023 19:43	WG2105922
Manganese,Dissolved	0.00134	J	0.000704	0.00500	1	08/04/2023 19:43	WG2105922
Molybdenum,Dissolved	0.00222	B J	0.000348	0.00500	1	08/04/2023 19:43	WG2105922
Nickel,Dissolved	0.00152	J	0.000816	0.00200	1	08/04/2023 19:43	WG2105922
Selenium,Dissolved	0.00382		0.000300	0.00200	1	08/04/2023 19:43	WG2105922
Silver,Dissolved	U		0.0000700	0.00200	1	08/04/2023 19:43	WG2105922
Uranium,Dissolved	0.00240	J	0.0000700	0.0200	1	08/04/2023 19:43	WG2105922
Zinc,Dissolved	0.0254		0.00302	0.0250	1	08/04/2023 19:43	WG2105922

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	1	08/04/2023 18:11	WG2107720
(S) a,a,a-Trifluorotoluene(FID)	*105*			*78.0-120*		*08/04/2023 18:11*	WG2107720

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0113	0.0500	1	07/31/2023 10:16	WG2104649
Benzene	U		0.0000941	0.00100	1	07/31/2023 10:16	WG2104649
Bromodichloromethane	U		0.000136	0.00100	1	07/31/2023 10:16	WG2104649
Bromoform	U		0.000129	0.00100	1	07/31/2023 10:16	WG2104649
Bromomethane	U		0.000605	0.00500	1	07/31/2023 10:16	WG2104649
n-Butylbenzene	U		0.000157	0.00100	1	07/31/2023 10:16	WG2104649
sec-Butylbenzene	U		0.000125	0.00100	1	07/31/2023 10:16	WG2104649
tert-Butylbenzene	U		0.000127	0.00100	1	07/31/2023 10:16	WG2104649
Carbon disulfide	U		0.0000962	0.00100	1	07/31/2023 10:16	WG2104649
Carbon tetrachloride	0.000164	J	0.000128	0.00100	1	07/31/2023 10:16	WG2104649
Chlorobenzene	U		0.000116	0.00100	1	07/31/2023 10:16	WG2104649
Chlorodibromomethane	U		0.000140	0.00100	1	07/31/2023 10:16	WG2104649
Chloroethane	U		0.000192	0.00500	1	07/31/2023 10:16	WG2104649
Chloroform	0.000619	J	0.000111	0.00500	1	07/31/2023 10:16	WG2104649
Chloromethane	U		0.000960	0.00250	1	07/31/2023 10:16	WG2104649
1,2-Dibromoethane	U		0.000126	0.00100	1	07/31/2023 10:16	WG2104649
1,1-Dichloroethane	U		0.000100	0.00100	1	07/31/2023 10:16	WG2104649
1,2-Dichloroethane	U		0.0000819	0.00100	1	07/31/2023 10:16	WG2104649
1,1-Dichloroethene	U		0.000188	0.00100	1	07/31/2023 10:16	WG2104649
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	07/31/2023 10:16	WG2104649
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	07/31/2023 10:16	WG2104649
1,2-Dichloropropane	U		0.000149	0.00100	1	07/31/2023 10:16	WG2104649
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	07/31/2023 10:16	WG2104649
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	07/31/2023 10:16	WG2104649
Ethylbenzene	U		0.000137	0.00100	1	07/31/2023 10:16	WG2104649
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	07/31/2023 10:16	WG2104649
2-Hexanone	U		0.000787	0.0100	1	07/31/2023 10:16	WG2104649
Isopropylbenzene	U		0.000105	0.00100	1	07/31/2023 10:16	WG2104649
p-Isopropyltoluene	U		0.000120	0.00100	1	07/31/2023 10:16	WG2104649
2-Butanone (MEK)	U		0.00119	0.0100	1	07/31/2023 10:16	WG2104649
Methylene Chloride	U		0.000430	0.00500	1	07/31/2023 10:16	WG2104649
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	07/31/2023 10:16	WG2104649
Methyl tert-butyl ether	U		0.000101	0.00100	1	07/31/2023 10:16	WG2104649
Naphthalene	U		0.00100	0.00500	1	07/31/2023 10:16	WG2104649
n-Propylbenzene	U		0.0000993	0.00100	1	07/31/2023 10:16	WG2104649
Styrene	U		0.000118	0.00100	1	07/31/2023 10:16	WG2104649
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	07/31/2023 10:16	WG2104649
Tetrachloroethene	U		0.000300	0.00100	1	07/31/2023 10:16	WG2104649
Toluene	U		0.000278	0.00100	1	07/31/2023 10:16	WG2104649
1,1,1-Trichloroethane	U		0.000149	0.00100	1	07/31/2023 10:16	WG2104649
1,1,2-Trichloroethane	U		0.000158	0.00100	1	07/31/2023 10:16	WG2104649
Trichloroethene	U		0.000190	0.00100	1	07/31/2023 10:16	WG2104649
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	07/31/2023 10:16	WG2104649
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	07/31/2023 10:16	WG2104649
Vinyl chloride	U		0.000234	0.00100	1	07/31/2023 10:16	WG2104649
Xylenes, Total	U		0.000174	0.00300	1	07/31/2023 10:16	WG2104649
(S) Toluene-d8	*106*			*80.0-120*		*07/31/2023 10:16*	WG2104649
(S) 4-Bromofluorobenzene	*87.1*			*77.0-126*		*07/31/2023 10:16*	WG2104649
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*07/31/2023 10:16*	WG2104649

DUP-01
Collected date/time: 07/27/23 12:00
L1639912

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
TPH (GC/FID) High Fraction	U		0.0247	0.100	1	08/03/2023 22:03	WG2106030
(S) o-Terphenyl	*85.5*			*31.0-160*		*08/03/2023 22:03*	WG2106030

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Acenaphthene	U		0.0000886	0.00100	1	08/03/2023 04:35	WG2104569
Acenaphthylene	U		0.0000921	0.00100	1	08/03/2023 04:35	WG2104569
Acetophenone	U		0.000208	0.0100	1	08/03/2023 04:35	WG2104569
Anthracene	U		0.0000804	0.00100	1	08/03/2023 04:35	WG2104569
Atrazine	U		0.000255	0.0100	1	08/03/2023 04:35	WG2104569
Benzo(a)anthracene	U		0.000199	0.00100	1	08/03/2023 04:35	WG2104569
Benzaldehyde	U		0.00169	0.0100	1	08/03/2023 04:35	WG2104569
Benzo(b)fluoranthene	U		0.000130	0.00100	1	08/03/2023 04:35	WG2104569
Benzo(k)fluoranthene	U		0.000120	0.00100	1	08/03/2023 04:35	WG2104569
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	08/03/2023 04:35	WG2104569
Benzo(a)pyrene	U		0.0000381	0.000200	1	08/03/2023 04:35	WG2104569
Biphenyl	U		0.000790	0.0100	1	08/03/2023 04:35	WG2104569
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	08/03/2023 04:35	WG2104569
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	08/03/2023 04:35	WG2104569
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	08/03/2023 04:35	WG2104569
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	08/03/2023 04:35	WG2104569
2-Chloronaphthalene	U		0.0000648	0.00100	1	08/03/2023 04:35	WG2104569
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	08/03/2023 04:35	WG2104569
Caprolactam	U		0.000309	0.0100	1	08/03/2023 04:35	WG2104569
Carbazole	U		0.000111	0.0100	1	08/03/2023 04:35	WG2104569
Chrysene	U		0.000130	0.00100	1	08/03/2023 04:35	WG2104569
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	08/03/2023 04:35	WG2104569
Dibenzofuran	U		0.0000970	0.0100	1	08/03/2023 04:35	WG2104569
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	08/03/2023 04:35	WG2104569
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	08/03/2023 04:35	WG2104569
2,6-Dinitrotoluene	U		0.000250	0.0100	1	08/03/2023 04:35	WG2104569
Fluoranthene	U		0.000102	0.00100	1	08/03/2023 04:35	WG2104569
Fluorene	U		0.0000844	0.00100	1	08/03/2023 04:35	WG2104569
Hexachlorobenzene	U		0.0000755	0.00100	1	08/03/2023 04:35	WG2104569
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	08/03/2023 04:35	WG2104569
Hexachlorocyclopentadiene	U	J3	0.0000598	0.0100	1	08/03/2023 04:35	WG2104569
Hexachloroethane	U		0.000127	0.0100	1	08/03/2023 04:35	WG2104569
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	08/03/2023 04:35	WG2104569
Isophorone	U		0.000143	0.0100	1	08/03/2023 04:35	WG2104569
1-Methylnaphthalene	U		0.0000790	0.00100	1	08/03/2023 04:35	WG2104569
2-Methylnaphthalene	U		0.000117	0.00100	1	08/03/2023 04:35	WG2104569
Naphthalene	U		0.000159	0.00100	1	08/03/2023 04:35	WG2104569
Nitrobenzene	U		0.000297	0.0100	1	08/03/2023 04:35	WG2104569
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	08/03/2023 04:35	WG2104569
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	08/03/2023 04:35	WG2104569
Phenanthrene	U		0.000112	0.00100	1	08/03/2023 04:35	WG2104569
Benzylbutyl phthalate	U		0.000765	0.00300	1	08/03/2023 04:35	WG2104569
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	08/03/2023 04:35	WG2104569
Di-n-butyl phthalate	U		0.000453	0.00300	1	08/03/2023 04:35	WG2104569
Diethyl phthalate	U		0.000287	0.00300	1	08/03/2023 04:35	WG2104569
Dimethyl phthalate	U		0.000260	0.00300	1	08/03/2023 04:35	WG2104569
Di-n-octyl phthalate	U		0.000932	0.00300	1	08/03/2023 04:35	WG2104569
Pyrene	U		0.000107	0.00100	1	08/03/2023 04:35	WG2104569
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	08/03/2023 04:35	WG2104569
4-Chloro-3-methylphenol	U	J4	0.000131	0.0100	1	08/03/2023 04:35	WG2104569

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
2-Chlorophenol	U	J4	0.000133	0.0100	1	08/03/2023 04:35	WG2104569
2,4-Dichlorophenol	U	J3 J4	0.000102	0.0100	1	08/03/2023 04:35	WG2104569
2,4-Dimethylphenol	U	J3 J4	0.0000636	0.0100	1	08/03/2023 04:35	WG2104569
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	08/03/2023 04:35	WG2104569
2,4-Dinitrophenol	U		0.00593	0.0100	1	08/03/2023 04:35	WG2104569
2-Nitrophenol	U	J4	0.000117	0.0100	1	08/03/2023 04:35	WG2104569
2-Nitroaniline	U		0.000102	0.0100	1	08/03/2023 04:35	WG2104569
2-Methylphenol	U	J4	0.0000929	0.0100	1	08/03/2023 04:35	WG2104569
3&4-Methyl Phenol	U	J4	0.000168	0.0100	1	08/03/2023 04:35	WG2104569
3-Nitroaniline	U		0.0000869	0.0100	1	08/03/2023 04:35	WG2104569
4-Chloroaniline	U		0.000234	0.0100	1	08/03/2023 04:35	WG2104569
4-Nitroaniline	U		0.0000910	0.0100	1	08/03/2023 04:35	WG2104569
4-Nitrophenol	U		0.000143	0.0100	1	08/03/2023 04:35	WG2104569
Pentachlorophenol	U		0.000313	0.0100	1	08/03/2023 04:35	WG2104569
Phenol	U		0.00433	0.0100	1	08/03/2023 04:35	WG2104569
2,4,5-Trichlorophenol	U	J4	0.000109	0.0100	1	08/03/2023 04:35	WG2104569
2,4,6-Trichlorophenol	U	J4	0.000100	0.0100	1	08/03/2023 04:35	WG2104569
(S) 2-Fluorophenol	*7.32*	J2		*10.0-120*		*08/03/2023 04:35*	WG2104569
(S) Phenol-d5	*6.16*	J2		*10.0-120*		*08/03/2023 04:35*	WG2104569
(S) Nitrobenzene-d5	*37.5*			*10.0-127*		*08/03/2023 04:35*	WG2104569
(S) 2-Fluorobiphenyl	*41.8*			*10.0-130*		*08/03/2023 04:35*	WG2104569
(S) 2,4,6-Tribromophenol	*14.9*			*10.0-155*		*08/03/2023 04:35*	WG2104569
(S) p-Terphenyl-d14	*38.7*			*10.0-128*		*08/03/2023 04:35*	WG2104569

Sample Narrative:

L1639912-04 WG2104569: Duplicate Analysis performed due to QC failure. Results confirm; reporting in hold data.

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0113	0.0500	1	07/31/2023 09:32	WG2104649
Benzene	U		0.0000941	0.00100	1	07/31/2023 09:32	WG2104649
Bromodichloromethane	U		0.000136	0.00100	1	07/31/2023 09:32	WG2104649
Bromoform	U		0.000129	0.00100	1	07/31/2023 09:32	WG2104649
Bromomethane	U		0.000605	0.00500	1	07/31/2023 09:32	WG2104649
n-Butylbenzene	U		0.000157	0.00100	1	07/31/2023 09:32	WG2104649
sec-Butylbenzene	U		0.000125	0.00100	1	07/31/2023 09:32	WG2104649
tert-Butylbenzene	U		0.000127	0.00100	1	07/31/2023 09:32	WG2104649
Carbon disulfide	0.000274	J	0.0000962	0.00100	1	07/31/2023 09:32	WG2104649
Carbon tetrachloride	U		0.000128	0.00100	1	07/31/2023 09:32	WG2104649
Chlorobenzene	U		0.000116	0.00100	1	07/31/2023 09:32	WG2104649
Chlorodibromomethane	U		0.000140	0.00100	1	07/31/2023 09:32	WG2104649
Chloroethane	U		0.000192	0.00500	1	07/31/2023 09:32	WG2104649
Chloroform	U		0.000111	0.00500	1	07/31/2023 09:32	WG2104649
Chloromethane	U		0.000960	0.00250	1	07/31/2023 09:32	WG2104649
1,2-Dibromoethane	U		0.000126	0.00100	1	07/31/2023 09:32	WG2104649
1,1-Dichloroethane	U		0.000100	0.00100	1	07/31/2023 09:32	WG2104649
1,2-Dichloroethane	U		0.0000819	0.00100	1	07/31/2023 09:32	WG2104649
1,1-Dichloroethene	U		0.000188	0.00100	1	07/31/2023 09:32	WG2104649
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	07/31/2023 09:32	WG2104649
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	07/31/2023 09:32	WG2104649
1,2-Dichloropropane	U		0.000149	0.00100	1	07/31/2023 09:32	WG2104649
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	07/31/2023 09:32	WG2104649
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	07/31/2023 09:32	WG2104649
Ethylbenzene	U		0.000137	0.00100	1	07/31/2023 09:32	WG2104649
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	07/31/2023 09:32	WG2104649
2-Hexanone	U		0.000787	0.0100	1	07/31/2023 09:32	WG2104649
Isopropylbenzene	U		0.000105	0.00100	1	07/31/2023 09:32	WG2104649
p-Isopropyltoluene	U		0.000120	0.00100	1	07/31/2023 09:32	WG2104649
2-Butanone (MEK)	U		0.00119	0.0100	1	07/31/2023 09:32	WG2104649
Methylene Chloride	U		0.000430	0.00500	1	07/31/2023 09:32	WG2104649
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	07/31/2023 09:32	WG2104649
Methyl tert-butyl ether	U		0.000101	0.00100	1	07/31/2023 09:32	WG2104649
Naphthalene	U		0.00100	0.00500	1	07/31/2023 09:32	WG2104649
n-Propylbenzene	U		0.0000993	0.00100	1	07/31/2023 09:32	WG2104649
Styrene	U		0.000118	0.00100	1	07/31/2023 09:32	WG2104649
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	07/31/2023 09:32	WG2104649
Tetrachloroethene	U		0.000300	0.00100	1	07/31/2023 09:32	WG2104649
Toluene	0.000373	J	0.000278	0.00100	1	07/31/2023 09:32	WG2104649
1,1,1-Trichloroethane	U		0.000149	0.00100	1	07/31/2023 09:32	WG2104649
1,1,2-Trichloroethane	U		0.000158	0.00100	1	07/31/2023 09:32	WG2104649
Trichloroethene	U		0.000190	0.00100	1	07/31/2023 09:32	WG2104649
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	07/31/2023 09:32	WG2104649
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	07/31/2023 09:32	WG2104649
Vinyl chloride	U		0.000234	0.00100	1	07/31/2023 09:32	WG2104649
Xylenes, Total	0.000293	J	0.000174	0.00300	1	07/31/2023 09:32	WG2104649
(S) Toluene-d8	*105*			*80.0-120*		*07/31/2023 09:32*	WG2104649
(S) 4-Bromofluorobenzene	*92.5*			*77.0-126*		*07/31/2023 09:32*	WG2104649
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*		*07/31/2023 09:32*	WG2104649

Method Blank (MB)

(MB) R3956653-1 08/02/23 12:36

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

L1639965-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1639965-01 08/02/23 12:36 • (DUP) R3956653-3 08/02/23 12:36

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	2630	3110	1	16.9	J3	5

L1639966-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1639966-01 08/02/23 12:36 • (DUP) R3956653-4 08/02/23 12:36

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1490	1710	1	14.1	J3	5

Laboratory Control Sample (LCS)

(LCS) R3956653-2 08/02/23 12:36

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8310	94.4	77.3-123	

Method Blank (MB)

(MB) R3958220-1 08/07/23 12:17

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

L1639912-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1639912-01 08/07/23 12:17 • (DUP) R3958220-3 08/07/23 12:17

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	533	557	1	4.40		5

L1641102-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1641102-01 08/07/23 12:17 • (DUP) R3958220-4 08/07/23 12:17

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	206	215	1	4.28		5

Laboratory Control Sample (LCS)

(LCS) R3958220-2 08/07/23 12:17

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8800	100	77.3-123	

Method Blank (MB)

(MB) R3956322-2 08/03/23 07:54

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	U		8.45	20.0

Sample Narrative:
BLANK: Endpoint pH 4.5

L1640437-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1640437-01 08/03/23 08:32 • (DUP) R3956322-3 08/03/23 08:36

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	16.3	17.0	1	3.90	J	20

Sample Narrative:
OS: Endpoint pH 4.5 Headspace
DUP: Endpoint pH 4.5

L1639912-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1639912-04 08/03/23 10:13 • (DUP) R3956322-4 08/03/23 10:17

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	190	189	1	0.744		20

Sample Narrative:
OS: Endpoint pH 4.5 Headspace
DUP: Endpoint pH 4.5

Laboratory Control Sample (LCS)

(LCS) R3956322-1 08/03/23 07:50

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100	102	102	90.0-110	

Sample Narrative:
LCS: Endpoint pH 4.5

Method Blank (MB)

(MB) R3955056-3 07/28/23 10:45

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.379	1.00
Nitrate	U		0.0480	0.100
Nitrite	U		0.0420	0.100
Sulfate	U		0.594	5.00

L1639624-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1639624-01 07/28/23 17:33 • (DUP) R3955056-7 07/28/23 18:27

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	1.26	1.03	1	20.0	P1	15
Nitrate	0.0605	U	1	200	P1	15
Nitrite	U	U	1	0.000		15
Sulfate	138	139	1	0.461		15

L1639912-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1639912-01 07/28/23 19:49 • (DUP) R3955056-9 07/28/23 20:02

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	111	111	1	0.124		15
Nitrate	2.51	2.49	1	1.14		15
Nitrite	U	U	1	0.000		15
Sulfate	70.3	70.4	1	0.109		15

Laboratory Control Sample (LCS)

(LCS) R3955056-4 07/28/23 10:58

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	
Nitrate	8.00	7.66	95.7	80.0-120	
Nitrite	8.00	7.86	98.3	80.0-120	
Sulfate	40.0	38.6	96.5	80.0-120	

L1639624-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1639624-01 07/28/23 17:33 • (MS) R3955056-5 07/28/23 18:00 • (MSD) R3955056-6 07/28/23 18:14

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	1.26	49.3	49.3	96.0	96.2	1	80.0-120			0.124	15
Nitrate	5.00	0.0605	5.17	5.16	102	102	1	80.0-120			0.200	15
Nitrite	5.00	U	4.86	4.91	97.3	98.2	1	80.0-120			0.892	15
Sulfate	50.0	138	181	181	85.8	86.3	1	80.0-120			0.134	15

L1639912-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1639912-01 07/28/23 19:49 • (MS) R3955056-10 07/28/23 20:16

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	111	158	94.4	1	80.0-120	
Nitrate	5.00	2.51	8.31	116	1	80.0-120	
Nitrite	5.00	U	5.57	111	1	80.0-120	
Sulfate	50.0	70.3	121	101	1	80.0-120	

Method Blank (MB)

(MB) R3956623-1 08/01/23 15:59

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Fluoride	U		0.0640	0.150

L1639912-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1639912-01 08/01/23 17:28 • (DUP) R3956623-3 08/01/23 17:41

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Fluoride	0.923	0.945	1	2.39		15

Laboratory Control Sample (LCS)

(LCS) R3956623-2 08/01/23 16:13

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Fluoride	8.00	8.41	105	80.0-120	

L1639912-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1639912-01 08/01/23 17:28 • (MS) R3956623-4 08/01/23 17:55

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Fluoride	5.00	0.923	6.10	104	1	80.0-120	

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

Method Blank (MB)

(MB) R3955313-1 08/01/23 10:59

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	U		0.000100	0.000200

Laboratory Control Sample (LCS)

(LCS) R3955313-2 08/01/23 11:01

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.00300	0.00324	108	80.0-120	

L1639877-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1639877-02 08/01/23 11:04 • (MS) R3955313-3 08/01/23 11:06 • (MSD) R3955313-4 08/01/23 11:08

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	0.00305	0.00305	102	102	1	75.0-125			0.0605	20

Method Blank (MB)

(MB) R3957620-1 08/07/23 11:18

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Boron,Dissolved	0.152	J	0.0200	0.200

Laboratory Control Sample (LCS)

(LCS) R3957620-2 08/07/23 11:21

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron,Dissolved	1.00	1.09	109	80.0-120	

L1639807-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1639807-01 08/07/23 11:24 • (MS) R3957620-4 08/07/23 11:29 • (MSD) R3957620-5 08/07/23 11:31

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 %
Boron,Dissolved	1.00	0.299	1.24	1.21	93.8	90.9	1	75.0-125			2.41	20

Method Blank (MB)

(MB) R3957132-1 08/04/23 18:01

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Aluminum,Dissolved	U		0.0185	0.100
Arsenic,Dissolved	U		0.000180	0.00200
Barium,Dissolved	U		0.000381	0.00200
Cadmium,Dissolved	U		0.000150	0.00100
Chromium,Dissolved	U		0.00124	0.00200
Copper,Dissolved	0.00523		0.00151	0.00500
Cobalt,Dissolved	U		0.0000596	0.00200
Iron,Dissolved	U		0.0281	0.100
Lead,Dissolved	U		0.000849	0.00200
Manganese,Dissolved	U		0.000704	0.00500
Molybdenum,Dissolved	0.000565	J	0.000348	0.00500
Nickel,Dissolved	U		0.000816	0.00200
Selenium,Dissolved	U		0.000300	0.00200
Silver,Dissolved	U		0.0000700	0.00200
Uranium,Dissolved	U		0.0000700	0.0200
Zinc,Dissolved	U		0.00302	0.0250

Laboratory Control Sample (LCS)

(LCS) R3957132-2 08/04/23 18:04

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aluminum,Dissolved	1.00	0.954	95.4	80.0-120	
Arsenic,Dissolved	0.0500	0.0487	97.3	80.0-120	
Barium,Dissolved	0.0500	0.0458	91.6	80.0-120	
Cadmium,Dissolved	0.0500	0.0511	102	80.0-120	
Chromium,Dissolved	0.0500	0.0482	96.4	80.0-120	
Copper,Dissolved	0.0500	0.0445	88.9	80.0-120	
Cobalt,Dissolved	0.0500	0.0475	95.0	80.0-120	
Iron,Dissolved	1.00	0.954	95.4	80.0-120	
Lead,Dissolved	0.0500	0.0477	95.4	80.0-120	
Manganese,Dissolved	0.0500	0.0482	96.5	80.0-120	
Molybdenum,Dissolved	0.0500	0.0490	98.0	80.0-120	
Nickel,Dissolved	0.0500	0.0480	96.0	80.0-120	
Selenium,Dissolved	0.0500	0.0490	98.0	80.0-120	
Silver,Dissolved	0.0500	0.0505	101	80.0-120	
Uranium,Dissolved	0.0500	0.0472	94.4	80.0-120	
Zinc,Dissolved	0.0500	0.0478	95.7	80.0-120	

L1639807-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1639807-02 08/04/23 18:07 • (MS) R3957132-4 08/04/23 18:14 • (MSD) R3957132-5 08/04/23 18:17

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 %
Aluminum,Dissolved	1.00	U	0.965	0.959	96.5	95.9	1	75.0-125			0.587	20
Arsenic,Dissolved	0.0500	0.0117	0.0602	0.0608	97.0	98.2	1	75.0-125			0.965	20
Barium,Dissolved	0.0500	0.00489	0.0515	0.0510	93.1	92.3	1	75.0-125			0.829	20
Cadmium,Dissolved	0.0500	U	0.0519	0.0501	104	100	1	75.0-125			3.47	20
Chromium,Dissolved	0.0500	0.00126	0.0484	0.0495	94.3	96.5	1	75.0-125			2.24	20
Copper,Dissolved	0.0500	0.00152	0.0452	0.0454	87.3	87.7	1	75.0-125			0.431	20
Cobalt,Dissolved	0.0500	0.0000715	0.0483	0.0488	96.5	97.5	1	75.0-125			1.10	20
Iron,Dissolved	1.00	0.0676	1.03	1.04	96.7	97.4	1	75.0-125			0.677	20
Lead,Dissolved	0.0500	U	0.0465	0.0456	93.0	91.3	1	75.0-125			1.86	20
Manganese,Dissolved	0.0500	0.00243	0.0507	0.0517	96.5	98.6	1	75.0-125			2.01	20
Molybdenum,Dissolved	0.0500	U	0.0483	0.0488	96.7	97.7	1	75.0-125			1.01	20
Nickel,Dissolved	0.0500	0.00606	0.0544	0.0542	96.7	96.2	1	75.0-125			0.403	20
Selenium,Dissolved	0.0500	U	0.0514	0.0497	103	99.5	1	75.0-125			3.30	20
Silver,Dissolved	0.0500	U	0.0517	0.0500	103	100	1	75.0-125			3.41	20
Uranium,Dissolved	0.0500	U	0.0469	0.0466	93.8	93.3	1	75.0-125			0.584	20
Zinc,Dissolved	0.0500	0.00343	0.0497	0.0513	92.5	95.7	1	75.0-125			3.24	20

Method Blank (MB)

(MB) R3958059-1 08/08/23 12:59

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Copper,Dissolved	U		0.00151	0.00500

Laboratory Control Sample (LCS)

(LCS) R3958059-2 08/08/23 13:02

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Copper,Dissolved	0.0500	0.0474	94.9	80.0-120	

L1639912-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1639912-01 08/08/23 13:06 • (MS) R3958059-4 08/08/23 13:12 • (MSD) R3958059-5 08/08/23 13:15

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 %
Copper,Dissolved	0.0500	0.00563	0.0532	0.0526	95.1	94.0	1	75.0-125			1.04	20

Method Blank (MB)

(MB) R3957717-2 08/04/23 12:32

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)	*103*			*78.0-120*

Laboratory Control Sample (LCS)

(LCS) R3957717-1 08/04/23 11:38

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.28	96.0	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*97.8*	*78.0-120*	

Method Blank (MB)

(MB) R3954783-4 07/31/23 01:31

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0113	0.0500
Benzene	U		0.0000941	0.00100
Bromodichloromethane	U		0.000136	0.00100
Bromoform	U		0.000129	0.00100
Bromomethane	U		0.000605	0.00500
n-Butylbenzene	U		0.000157	0.00100
sec-Butylbenzene	U		0.000125	0.00100
tert-Butylbenzene	U		0.000127	0.00100
Carbon disulfide	U		0.0000962	0.00100
Carbon tetrachloride	U		0.000128	0.00100
Chlorobenzene	U		0.000116	0.00100
Chlorodibromomethane	U		0.000140	0.00100
Chloroethane	U		0.000192	0.00500
Chloroform	U		0.000111	0.00500
Chloromethane	U		0.000960	0.00250
1,2-Dibromoethane	U		0.000126	0.00100
1,1-Dichloroethane	U		0.000100	0.00100
1,2-Dichloroethane	U		0.0000819	0.00100
1,1-Dichloroethene	U		0.000188	0.00100
trans-1,2-Dichloroethene	U		0.000149	0.00100
1,2-Dichloropropane	U		0.000149	0.00100
cis-1,3-Dichloropropene	U		0.000111	0.00100
trans-1,3-Dichloropropene	U		0.000118	0.00100
Ethylbenzene	U		0.000137	0.00100
Hexachloro-1,3-butadiene	U		0.000337	0.00100
2-Hexanone	U		0.000787	0.0100
Isopropylbenzene	U		0.000105	0.00100
p-Isopropyltoluene	U		0.000120	0.00100
2-Butanone (MEK)	U		0.00119	0.0100
Methylene Chloride	U		0.000430	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100
Methyl tert-butyl ether	U		0.000101	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.0000993	0.00100
Styrene	U		0.000118	0.00100
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100
Toluene	U		0.000278	0.00100
1,1,1-Trichloroethane	U		0.000149	0.00100
1,1,2-Trichloroethane	U		0.000158	0.00100
1,2,4-Trimethylbenzene	U		0.000322	0.00100

Method Blank (MB)

(MB) R3954783-4 07/31/23 01:31

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,3,5-Trimethylbenzene	U		0.000104	0.00100
Vinyl chloride	U		0.000234	0.00100
Xylenes, Total	U		0.000174	0.00300
(S) Toluene-d8	*101*			*80.0-120*
(S) 4-Bromofluorobenzene	*98.2*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*99.4*			*70.0-130*

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

(LCS) R3954783-1 07/30/23 23:44 • (LCSD) R3954783-2 07/31/23 00:06

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 %
Acetone	0.0250	0.0281	0.0280	112	112	19.0-160			0.357	27
Benzene	0.00500	0.00498	0.00489	99.6	97.8	70.0-123			1.82	20
Bromodichloromethane	0.00500	0.00462	0.00439	92.4	87.8	75.0-120			5.11	20
Bromoform	0.00500	0.00379	0.00382	75.8	76.4	68.0-132			0.788	20
Bromomethane	0.00500	0.00551	0.00547	110	109	10.0-160			0.729	25
n-Butylbenzene	0.00500	0.00425	0.00407	85.0	81.4	73.0-125			4.33	20
sec-Butylbenzene	0.00500	0.00451	0.00428	90.2	85.6	75.0-125			5.23	20
tert-Butylbenzene	0.00500	0.00425	0.00402	85.0	80.4	76.0-124			5.56	20
Carbon disulfide	0.00500	0.00456	0.00384	91.2	76.8	61.0-128			17.1	20
Carbon tetrachloride	0.00500	0.00440	0.00422	88.0	84.4	68.0-126			4.18	20
Chlorobenzene	0.00500	0.00464	0.00441	92.8	88.2	80.0-121			5.08	20
Chlorodibromomethane	0.00500	0.00412	0.00414	82.4	82.8	77.0-125			0.484	20
Chloroethane	0.00500	0.00503	0.00485	101	97.0	47.0-150			3.64	20
Chloroform	0.00500	0.00500	0.00483	100	96.6	73.0-120			3.46	20
Chloromethane	0.00500	0.00461	0.00411	92.2	82.2	41.0-142			11.5	20
1,2-Dibromoethane	0.00500	0.00433	0.00437	86.6	87.4	80.0-122			0.920	20
1,1-Dichloroethane	0.00500	0.00481	0.00457	96.2	91.4	70.0-126			5.12	20
1,2-Dichloroethane	0.00500	0.00445	0.00435	89.0	87.0	70.0-128			2.27	20
1,1-Dichloroethene	0.00500	0.00438	0.00381	87.6	76.2	71.0-124			13.9	20
trans-1,2-Dichloroethene	0.00500	0.00518	0.00472	104	94.4	73.0-120			9.29	20
1,2-Dichloropropane	0.00500	0.00434	0.00431	86.8	86.2	77.0-125			0.694	20
cis-1,3-Dichloropropene	0.00500	0.00470	0.00470	94.0	94.0	80.0-123			0.000	20
trans-1,3-Dichloropropene	0.00500	0.00442	0.00422	88.4	84.4	78.0-124			4.63	20
Ethylbenzene	0.00500	0.00465	0.00457	93.0	91.4	79.0-123			1.74	20
Hexachloro-1,3-butadiene	0.00500	0.00429	0.00440	85.8	88.0	54.0-138			2.53	20
2-Hexanone	0.0250	0.0191	0.0194	76.4	77.6	67.0-149			1.56	20
Isopropylbenzene	0.00500	0.00452	0.00451	90.4	90.2	76.0-127			0.221	20

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

(LCS) R3954783-1 07/30/23 23:44 • (LCSD) R3954783-2 07/31/23 00:06

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 %
p-Isopropyltoluene	0.00500	0.00456	0.00423	91.2	84.6	76.0-125			7.51	20
2-Butanone (MEK)	0.0250	0.0234	0.0243	93.6	97.2	44.0-160			3.77	20
Methylene Chloride	0.00500	0.00504	0.00483	101	96.6	67.0-120			4.26	20
4-Methyl-2-pentanone (MIBK)	0.0250	0.0214	0.0216	85.6	86.4	68.0-142			0.930	20
Methyl tert-butyl ether	0.00500	0.00480	0.00461	96.0	92.2	68.0-125			4.04	20
Naphthalene	0.00500	0.00341	0.00365	68.2	73.0	54.0-135			6.80	20
n-Propylbenzene	0.00500	0.00446	0.00431	89.2	86.2	77.0-124			3.42	20
Styrene	0.00500	0.00482	0.00457	96.4	91.4	73.0-130			5.32	20
1,1,2,2-Tetrachloroethane	0.00500	0.00509	0.00479	102	95.8	65.0-130			6.07	20
Toluene	0.00500	0.00454	0.00452	90.8	90.4	79.0-120			0.442	20
1,1,1-Trichloroethane	0.00500	0.00467	0.00447	93.4	89.4	73.0-124			4.38	20
1,1,2-Trichloroethane	0.00500	0.00453	0.00454	90.6	90.8	80.0-120			0.221	20
1,2,4-Trimethylbenzene	0.00500	0.00446	0.00431	89.2	86.2	76.0-121			3.42	20
1,3,5-Trimethylbenzene	0.00500	0.00405	0.00393	81.0	78.6	76.0-122			3.01	20
Vinyl chloride	0.00500	0.00448	0.00426	89.6	85.2	67.0-131			5.03	20
Xylenes, Total	0.0150	0.0137	0.0138	91.3	92.0	79.0-123			0.727	20
(S) Toluene-d8				*97.1*	*96.7*	*80.0-120*				
(S) 4-Bromofluorobenzene				*93.1*	*94.4*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*101*	*97.3*	*70.0-130*				

Method Blank (MB)

(MB) R3955424-4 07/31/23 03:29

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0113	0.0500
Benzene	U		0.0000941	0.00100
Bromodichloromethane	U		0.000136	0.00100
Bromoform	U		0.000129	0.00100
Bromomethane	U		0.000605	0.00500
n-Butylbenzene	U		0.000157	0.00100
sec-Butylbenzene	U		0.000125	0.00100
tert-Butylbenzene	U		0.000127	0.00100
Carbon disulfide	U		0.0000962	0.00100
Carbon tetrachloride	U		0.000128	0.00100
Chlorobenzene	U		0.000116	0.00100
Chlorodibromomethane	U		0.000140	0.00100
Chloroethane	U		0.000192	0.00500
Chloroform	U		0.000111	0.00500
Chloromethane	U		0.000960	0.00250
1,2-Dibromoethane	U		0.000126	0.00100
1,1-Dichloroethane	U		0.000100	0.00100
1,2-Dichloroethane	U		0.0000819	0.00100
1,1-Dichloroethene	U		0.000188	0.00100
cis-1,2-Dichloroethene	U		0.000126	0.00100
trans-1,2-Dichloroethene	U		0.000149	0.00100
1,2-Dichloropropane	U		0.000149	0.00100
cis-1,3-Dichloropropene	U		0.000111	0.00100
trans-1,3-Dichloropropene	U		0.000118	0.00100
Ethylbenzene	U		0.000137	0.00100
Hexachloro-1,3-butadiene	U		0.000337	0.00100
2-Hexanone	U		0.000787	0.0100
Isopropylbenzene	U		0.000105	0.00100
p-Isopropyltoluene	U		0.000120	0.00100
2-Butanone (MEK)	U		0.00119	0.0100
Methylene Chloride	U		0.000430	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100
Methyl tert-butyl ether	U		0.000101	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.0000993	0.00100
Styrene	U		0.000118	0.00100
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100
Tetrachloroethene	U		0.000300	0.00100
Toluene	U		0.000278	0.00100
1,1,1-Trichloroethane	U		0.000149	0.00100

Received by OCD: 4/15/2024 1:46:20 PM

Method Blank (MB)

(MB) R3955424-4 07/31/23 03:29

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,1,2-Trichloroethane	U		0.000158	0.00100
Trichloroethene	U		0.000190	0.00100
1,2,4-Trimethylbenzene	U		0.000322	0.00100
1,3,5-Trimethylbenzene	U		0.000104	0.00100
Vinyl chloride	U		0.000234	0.00100
Xylenes, Total	U		0.000174	0.00300
(S) Toluene-d8	*108*			*80.0-120*
(S) 4-Bromofluorobenzene	*85.5*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*99.3*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3955424-1 07/31/23 02:02

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.0250	0.0199	79.6	19.0-160	
Benzene	0.00500	0.00423	84.6	70.0-123	
Bromodichloromethane	0.00500	0.00411	82.2	75.0-120	
Bromoform	0.00500	0.00426	85.2	68.0-132	
Bromomethane	0.00500	0.00410	82.0	10.0-160	
n-Butylbenzene	0.00500	0.00392	78.4	73.0-125	
sec-Butylbenzene	0.00500	0.00410	82.0	75.0-125	
tert-Butylbenzene	0.00500	0.00420	84.0	76.0-124	
Carbon disulfide	0.00500	0.00389	77.8	61.0-128	
Carbon tetrachloride	0.00500	0.00412	82.4	68.0-126	
Chlorobenzene	0.00500	0.00466	93.2	80.0-121	
Chlorodibromomethane	0.00500	0.00435	87.0	77.0-125	
Chloroethane	0.00500	0.00420	84.0	47.0-150	
Chloroform	0.00500	0.00406	81.2	73.0-120	
Chloromethane	0.00500	0.00579	116	41.0-142	
1,2-Dibromoethane	0.00500	0.00454	90.8	80.0-122	
1,1-Dichloroethane	0.00500	0.00425	85.0	70.0-126	
1,2-Dichloroethane	0.00500	0.00461	92.2	70.0-128	
1,1-Dichloroethene	0.00500	0.00403	80.6	71.0-124	
cis-1,2-Dichloroethene	0.00500	0.00371	74.2	73.0-120	
trans-1,2-Dichloroethene	0.00500	0.00377	75.4	73.0-120	
1,2-Dichloropropane	0.00500	0.00453	90.6	77.0-125	
cis-1,3-Dichloropropene	0.00500	0.00400	80.0	80.0-123	
trans-1,3-Dichloropropene	0.00500	0.00429	85.8	78.0-124	

Released to Imaging: 4/26/2024 10:49:21 AM

Laboratory Control Sample (LCS)

(LCS) R3955424-1 07/31/23 02:02

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Ethylbenzene	0.00500	0.00454	90.8	79.0-123	
Hexachloro-1,3-butadiene	0.00500	0.00421	84.2	54.0-138	
2-Hexanone	0.0250	0.0248	99.2	67.0-149	
Isopropylbenzene	0.00500	0.00412	82.4	76.0-127	
p-Isopropyltoluene	0.00500	0.00404	80.8	76.0-125	
2-Butanone (MEK)	0.0250	0.0200	80.0	44.0-160	
Methylene Chloride	0.00500	0.00357	71.4	67.0-120	
4-Methyl-2-pentanone (MIBK)	0.0250	0.0209	83.6	68.0-142	
Methyl tert-butyl ether	0.00500	0.00365	73.0	68.0-125	
Naphthalene	0.00500	0.00329	65.8	54.0-135	
n-Propylbenzene	0.00500	0.00399	79.8	77.0-124	
Styrene	0.00500	0.00400	80.0	73.0-130	
1,1,2,2-Tetrachloroethane	0.00500	0.00410	82.0	65.0-130	
Tetrachloroethene	0.00500	0.00538	108	72.0-132	
Toluene	0.00500	0.00457	91.4	79.0-120	
1,1,1-Trichloroethane	0.00500	0.00432	86.4	73.0-124	
1,1,2-Trichloroethane	0.00500	0.00435	87.0	80.0-120	
Trichloroethene	0.00500	0.00470	94.0	78.0-124	
1,2,4-Trimethylbenzene	0.00500	0.00410	82.0	76.0-121	
1,3,5-Trimethylbenzene	0.00500	0.00413	82.6	76.0-122	
Vinyl chloride	0.00500	0.00488	97.6	67.0-131	
Xylenes, Total	0.0150	0.0129	86.0	79.0-123	
(S) Toluene-d8			*102*	*80.0-120*	
(S) 4-Bromofluorobenzene			*88.1*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*97.5*	*70.0-130*	

L1639984-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1639984-01 07/31/23 12:47 • (MS) R3955424-5 07/31/23 13:09 • (MSD) R3955424-6 07/31/23 13:31

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 %
Acetone	0.125	0.0865	0.132	0.129	36.4	34.0	5	10.0-160			2.30	35
Benzene	0.0250	0.243	0.274	0.281	124	152	5	17.0-158			2.52	27
Bromodichloromethane	0.0250	U	0.0198	0.0226	79.2	90.4	5	31.0-150			13.2	27
Bromoform	0.0250	U	0.0209	0.0235	83.6	94.0	5	29.0-150			11.7	29
Bromomethane	0.0250	U	0.0146	0.0174	58.4	69.6	5	10.0-160			17.5	38
n-Butylbenzene	0.0250	U	0.0184	0.0217	73.6	86.8	5	31.0-150			16.5	30
sec-Butylbenzene	0.0250	U	0.0194	0.0227	77.6	90.8	5	33.0-155			15.7	29
tert-Butylbenzene	0.0250	U	0.0204	0.0224	81.6	89.6	5	34.0-153			9.35	28

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L1639984-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1639984-01 07/31/23 12:47 • (MS) R3955424-5 07/31/23 13:09 • (MSD) R3955424-6 07/31/23 13:31

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 %
Carbon disulfide	0.0250	U	0.0121	0.0148	48.4	59.2	5	10.0-156			20.1	28
Carbon tetrachloride	0.0250	U	0.0186	0.0222	74.4	88.8	5	23.0-159			17.6	28
Chlorobenzene	0.0250	U	0.0232	0.0263	92.8	105	5	33.0-152			12.5	27
Chlorodibromomethane	0.0250	U	0.0217	0.0248	86.8	99.2	5	37.0-149			13.3	27
Chloroethane	0.0250	U	0.0306	0.0345	122	138	5	10.0-160			12.0	30
Chloroform	0.0250	U	0.0192	0.0216	76.8	86.4	5	29.0-154			11.8	28
Chloromethane	0.0250	U	0.0173	0.0197	69.2	78.8	5	10.0-160			13.0	29
1,2-Dibromoethane	0.0250	U	0.0216	0.0246	86.4	98.4	5	34.0-147			13.0	27
1,1-Dichloroethane	0.0250	U	0.0198	0.0230	79.2	92.0	5	25.0-158			15.0	27
1,2-Dichloroethane	0.0250	U	0.0211	0.0236	84.4	94.4	5	29.0-151			11.2	27
1,1-Dichloroethene	0.0250	0.00163	0.0192	0.0228	70.3	84.7	5	11.0-160			17.1	29
cis-1,2-Dichloroethene	0.0250	1.20	1.26	1.33	240	520	5	10.0-160	E V	E V	5.41	27
trans-1,2-Dichloroethene	0.0250	0.160	0.182	0.192	88.0	128	5	17.0-153			5.35	27
1,2-Dichloropropane	0.0250	U	0.0219	0.0246	87.6	98.4	5	30.0-156			11.6	27
cis-1,3-Dichloropropene	0.0250	U	0.0200	0.0218	80.0	87.2	5	34.0-149			8.61	28
trans-1,3-Dichloropropene	0.0250	U	0.0211	0.0238	84.4	95.2	5	32.0-149			12.0	28
Ethylbenzene	0.0250	0.00755	0.0294	0.0333	87.4	103	5	30.0-155			12.4	27
Hexachloro-1,3-butadiene	0.0250	U	0.0230	0.0253	92.0	101	5	20.0-154			9.52	34
2-Hexanone	0.125	0.0117	0.137	0.146	100	107	5	21.0-160			6.36	29
Isopropylbenzene	0.0250	U	0.0223	0.0272	89.2	109	5	28.0-157			19.8	27
p-Isopropyltoluene	0.0250	U	0.0188	0.0220	75.2	88.0	5	30.0-154			15.7	29
2-Butanone (MEK)	0.125	0.0565	0.139	0.138	66.0	65.2	5	10.0-160			0.722	32
Methylene Chloride	0.0250	U	0.0149	0.0173	59.6	69.2	5	23.0-144			14.9	28
4-Methyl-2-pentanone (MIBK)	0.125	U	0.101	0.117	80.8	93.6	5	29.0-160			14.7	29
Methyl tert-butyl ether	0.0250	U	0.0157	0.0181	62.8	72.4	5	28.0-150			14.2	29
Naphthalene	0.0250	U	0.0175	0.0229	70.0	91.6	5	12.0-156			26.7	35
n-Propylbenzene	0.0250	U	0.0202	0.0231	80.8	92.4	5	31.0-154			13.4	28
Styrene	0.0250	U	0.0208	0.0239	83.2	95.6	5	33.0-155			13.9	28
1,1,2,2-Tetrachloroethane	0.0250	U	0.0212	0.0239	84.8	95.6	5	33.0-150			12.0	28
Tetrachloroethene	0.0250	0.00232	0.0276	0.0315	101	117	5	10.0-160			13.2	27
Toluene	0.0250	0.0314	0.0541	0.0573	90.8	104	5	26.0-154			5.75	28
1,1,1-Trichloroethane	0.0250	U	0.0196	0.0238	78.4	95.2	5	23.0-160			19.4	28
1,1,2-Trichloroethane	0.0250	U	0.0230	0.0256	92.0	102	5	35.0-147			10.7	27
Trichloroethene	0.0250	0.00229	0.0236	0.0263	85.2	96.0	5	10.0-160			10.8	25
1,2,4-Trimethylbenzene	0.0250	U	0.0188	0.0214	75.2	85.6	5	26.0-154			12.9	27
1,3,5-Trimethylbenzene	0.0250	U	0.0199	0.0230	79.6	92.0	5	28.0-153			14.5	27
Vinyl chloride	0.0250	12.8	12.6	13.0	0.000	800	5	10.0-160	E V	E V	3.12	27
Xylenes, Total	0.0750	0.0579	0.124	0.137	88.1	105	5	29.0-154			9.96	28
(S) Toluene-d8					*107*	*106*		*80.0-120*				
(S) 4-Bromofluorobenzene					*91.2*	*93.1*		*77.0-126*				

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L1639984-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1639984-01 07/31/23 12:47 • (MS) R3955424-5 07/31/23 13:09 • (MSD) R3955424-6 07/31/23 13:31

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 %
(S) 1,2-Dichloroethane-d4					*99.4*	*98.1*		*70.0-130*				

Released to Imaging: 4/26/2024 10:49:21 AM

Received by OCD: 4/15/2024 1:46:20 PM

Method Blank (MB)

(MB) R3955909-2 07/31/23 16:43

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
cis-1,2-Dichloroethene	U		0.000126	0.00100
Tetrachloroethene	U		0.000300	0.00100
Trichloroethene	U		0.000190	0.00100
(S) Toluene-d8	*97.7*			*80.0-120*
(S) 4-Bromofluorobenzene	*90.4*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*104*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3955909-1 07/31/23 15:18

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
cis-1,2-Dichloroethene	0.00500	0.00519	104	73.0-120	
Tetrachloroethene	0.00500	0.00538	108	72.0-132	
Trichloroethene	0.00500	0.00497	99.4	78.0-124	
(S) Toluene-d8			*96.4*	*80.0-120*	
(S) 4-Bromofluorobenzene			*94.6*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*106*	*70.0-130*	

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Method Blank (MB)

(MB) R3956819-1 08/03/23 09:32

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	*78.5*			*31.0-160*

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

(LCS) R3956819-2 08/03/23 09:52 • (LCSD) R3956819-3 08/03/23 10:12

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	1.11	1.22	74.0	81.3	50.0-150			9.44	20
(S) o-Terphenyl				*68.5*	*69.0*	*31.0-160*				

Method Blank (MB)

(MB) R3955074-2 07/30/23 16:42

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acenaphthene	U		0.0000886	0.00100
Acenaphthylene	U		0.0000921	0.00100
Acetophenone	U		0.000208	0.0100
Anthracene	U		0.0000804	0.00100
Atrazine	U		0.000255	0.0100
Benzo(a)anthracene	U		0.000199	0.00100
Benzaldehyde	U		0.00169	0.0100
Benzo(b)fluoranthene	U		0.000130	0.00100
Benzo(k)fluoranthene	U		0.000120	0.00100
Benzo(g,h,i)perylene	U		0.000121	0.00100
Benzo(a)pyrene	U		0.0000381	0.000200
Biphenyl	U		0.000790	0.0100
Bis(2-chlorethoxy)methane	U		0.000116	0.0100
Bis(2-chloroethyl)ether	U		0.000137	0.0100
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100
4-Bromophenyl-phenylether	U		0.0000877	0.0100
2-Chloronaphthalene	U		0.0000648	0.00100
4-Chlorophenyl-phenylether	U		0.0000926	0.0100
Caprolactam	U		0.000309	0.0100
Carbazole	U		0.000111	0.0100
Chrysene	U		0.000130	0.00100
Dibenz(a,h)anthracene	U		0.0000644	0.000200
Dibenzofuran	U		0.0000970	0.0100
3,3-Dichlorobenzidine	U		0.000212	0.0100
2,4-Dinitrotoluene	U		0.0000983	0.0100
2,6-Dinitrotoluene	U		0.000250	0.0100
Fluoranthene	U		0.000102	0.00100
Fluorene	U		0.0000844	0.00100
Hexachlorobenzene	U		0.0000755	0.00100
Hexachloro-1,3-butadiene	U		0.0000968	0.0100
Hexachlorocyclopentadiene	U		0.0000598	0.0100
Hexachloroethane	U		0.000127	0.0100
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100
Isophorone	U		0.000143	0.0100
1-Methylnaphthalene	U		0.0000790	0.00100
2-Methylnaphthalene	U		0.000117	0.00100
Naphthalene	U		0.000159	0.00100
Nitrobenzene	U		0.000297	0.0100
n-Nitrosodiphenylamine	U		0.00237	0.0100
n-Nitrosodi-n-propylamine	U		0.000261	0.0100

Method Blank (MB)

(MB) R3955074-2 07/30/23 16:42

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Phenanthrene	U		0.000112	0.00100
Benzylbutyl phthalate	U		0.000765	0.00300
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300
Di-n-butyl phthalate	U		0.000453	0.00300
Diethyl phthalate	U		0.000287	0.00300
Dimethyl phthalate	U		0.000260	0.00300
Di-n-octyl phthalate	U		0.000932	0.00300
Pyrene	U		0.000107	0.00100
1,2,4-Trichlorobenzene	U		0.0000698	0.0100
4-Chloro-3-methylphenol	U		0.000131	0.0100
2-Chlorophenol	U		0.000133	0.0100
2,4-Dichlorophenol	U		0.000102	0.0100
2,4-Dimethylphenol	U		0.0000636	0.0100
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100
2,4-Dinitrophenol	U		0.00593	0.0100
2-Nitrophenol	U		0.000117	0.0100
2-Nitroaniline	U		0.000102	0.0100
2-Methylphenol	U		0.0000929	0.0100
3&4-Methyl Phenol	U		0.000168	0.0100
3-Nitroaniline	U		0.0000869	0.0100
4-Chloroaniline	U		0.000234	0.0100
4-Nitroaniline	U		0.0000910	0.0100
4-Nitrophenol	U		0.000143	0.0100
Pentachlorophenol	U		0.000313	0.0100
Phenol	U		0.00433	0.0100
2,4,5-Trichlorophenol	U		0.000109	0.0100
2,4,6-Trichlorophenol	U		0.000100	0.0100
(S) 2-Fluorophenol	*27.6*			*10.0-120*
(S) Phenol-d5	*19.8*			*10.0-120*
(S) Nitrobenzene-d5	*44.1*			*10.0-127*
(S) 2-Fluorobiphenyl	*46.6*			*10.0-130*
(S) 2,4,6-Tribromophenol	*60.5*			*10.0-155*
(S) p-Terphenyl-d14	*64.3*			*10.0-128*

Laboratory Control Sample (LCS)

(LCS) R3955074-1 07/30/23 16:21

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0500	0.0306	61.2	41.0-120	
Acenaphthylene	0.0500	0.0305	61.0	43.0-120	
Acetophenone	0.0500	0.0312	62.4	29.0-120	
Anthracene	0.0500	0.0309	61.8	45.0-120	
Atrazine	0.0500	0.0409	81.8	39.0-141	
Benzo(a)anthracene	0.0500	0.0327	65.4	47.0-120	
Benzaldehyde	0.0500	0.0730	146	10.0-160	
Benzo(b)fluoranthene	0.0500	0.0344	68.8	46.0-120	
Benzo(k)fluoranthene	0.0500	0.0343	68.6	46.0-120	
Benzo(g,h,i)perylene	0.0500	0.0340	68.0	48.0-121	
Benzo(a)pyrene	0.0500	0.0354	70.8	47.0-120	
Biphenyl	0.0500	0.0292	58.4	38.0-120	
Bis(2-chlorethoxy)methane	0.0500	0.0258	51.6	33.0-120	
Bis(2-chloroethyl)ether	0.0500	0.0215	43.0	23.0-120	
2,2-Oxybis(1-Chloropropane)	0.0500	0.0255	51.0	28.0-120	
4-Bromophenyl-phenylether	0.0500	0.0353	70.6	45.0-120	
2-Chloronaphthalene	0.0500	0.0287	57.4	37.0-120	
4-Chlorophenyl-phenylether	0.0500	0.0363	72.6	44.0-120	
Caprolactam	0.0500	0.0112	22.4	10.0-120	
Carbazole	0.0500	0.0307	61.4	51.0-122	
Chrysene	0.0500	0.0332	66.4	48.0-120	
Dibenz(a,h)anthracene	0.0500	0.0363	72.6	47.0-120	
Dibenzofuran	0.0500	0.0324	64.8	44.0-120	
3,3-Dichlorobenzidine	0.100	0.0537	53.7	44.0-120	
2,4-Dinitrotoluene	0.0500	0.0397	79.4	49.0-124	
2,6-Dinitrotoluene	0.0500	0.0340	68.0	46.0-120	
Fluoranthene	0.0500	0.0340	68.0	51.0-120	
Fluorene	0.0500	0.0331	66.2	47.0-120	
Hexachlorobenzene	0.0500	0.0353	70.6	44.0-120	
Hexachloro-1,3-butadiene	0.0500	0.0355	71.0	19.0-120	
Hexachlorocyclopentadiene	0.0500	0.0220	44.0	15.0-120	
Hexachloroethane	0.0500	0.0262	52.4	15.0-120	
Indeno(1,2,3-cd)pyrene	0.0500	0.0326	65.2	49.0-122	
Isophorone	0.0500	0.0276	55.2	36.0-120	
1-Methylnaphthalene	0.0500	0.0279	55.8	33.0-120	
2-Methylnaphthalene	0.0500	0.0289	57.8	33.0-120	
Naphthalene	0.0500	0.0252	50.4	27.0-120	
Nitrobenzene	0.0500	0.0277	55.4	27.0-120	
n-Nitrosodiphenylamine	0.0500	0.0262	52.4	47.0-120	
n-Nitrosodi-n-propylamine	0.0500	0.0279	55.8	31.0-120	

Laboratory Control Sample (LCS)

(LCS) R3955074-1 07/30/23 16:21

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Phenanthrene	0.0500	0.0305	61.0	46.0-120	
Benzylbutyl phthalate	0.0500	0.0337	67.4	43.0-121	
Bis(2-ethylhexyl)phthalate	0.0500	0.0358	71.6	43.0-122	
Di-n-butyl phthalate	0.0500	0.0341	68.2	49.0-121	
Diethyl phthalate	0.0500	0.0360	72.0	48.0-122	
Dimethyl phthalate	0.0500	0.0338	67.6	48.0-120	
Di-n-octyl phthalate	0.0500	0.0312	62.4	42.0-125	
Pyrene	0.0500	0.0319	63.8	47.0-120	
1,2,4-Trichlorobenzene	0.0500	0.0297	59.4	24.0-120	
4-Chloro-3-methylphenol	0.0500	0.0321	64.2	40.0-120	
2-Chlorophenol	0.0500	0.0238	47.6	25.0-120	
2,4-Dichlorophenol	0.0500	0.0297	59.4	36.0-120	
2,4-Dimethylphenol	0.0500	0.0299	59.8	33.0-120	
4,6-Dinitro-2-methylphenol	0.0500	0.0399	79.8	38.0-138	
2,4-Dinitrophenol	0.0500	0.0386	77.2	10.0-120	
2-Nitrophenol	0.0500	0.0310	62.0	31.0-120	
2-Nitroaniline	0.0500	0.0315	63.0	43.0-120	
2-Methylphenol	0.0500	0.0196	39.2	28.0-120	
3&4-Methyl Phenol	0.0500	0.0219	43.8	31.0-120	
3-Nitroaniline	0.0500	0.0278	55.6	38.0-120	
4-Chloroaniline	0.0500	0.0244	48.8	25.0-120	
4-Nitroaniline	0.0500	0.0327	65.4	18.0-160	
4-Nitrophenol	0.0500	0.0144	28.8	10.0-120	
Pentachlorophenol	0.0500	0.0342	68.4	23.0-120	
Phenol	0.0500	0.0103	20.6	10.0-120	
2,4,5-Trichlorophenol	0.0500	0.0355	71.0	44.0-120	
2,4,6-Trichlorophenol	0.0500	0.0336	67.2	42.0-120	
(S) 2-Fluorophenol			*30.0*	*10.0-120*	
(S) Phenol-d5			*19.3*	*10.0-120*	
(S) Nitrobenzene-d5			*53.0*	*10.0-127*	
(S) 2-Fluorobiphenyl			*64.7*	*10.0-130*	
(S) 2,4,6-Tribromophenol			*75.5*	*10.0-155*	
(S) p-Terphenyl-d14			*70.0*	*10.0-128*	

L1639537-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1639537-03 07/30/23 19:13 • (MS) R3955074-3 07/30/23 19:35 • (MSD) R3955074-4 07/30/23 19:56

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 %
Acenaphthene	0.0500	U	0.0255	0.0290	51.0	58.0	1	28.0-120			12.8	25
Acenaphthylene	0.0500	U	0.0254	0.0287	50.8	57.4	1	31.0-121			12.2	25
Acetophenone	0.0500	U	0.0261	0.0302	52.2	60.4	1	20.0-120			14.6	35
Anthracene	0.0500	U	0.0290	0.0306	58.0	61.2	1	36.0-120			5.37	23
Atrazine	0.0500	U	0.0403	0.0427	80.6	85.4	1	39.0-130			5.78	23
Benzo(a)anthracene	0.0500	U	0.0307	0.0330	61.4	66.0	1	39.0-120			7.22	23
Benzaldehyde	0.0500	0.00438	0.0693	0.0770	130	145	1	10.0-160			10.5	40
Benzo(b)fluoranthene	0.0500	U	0.0326	0.0354	65.2	70.8	1	37.0-120			8.24	23
Benzo(k)fluoranthene	0.0500	U	0.0334	0.0352	66.8	70.4	1	37.0-120			5.25	26
Benzo(g,h,i)perylene	0.0500	U	0.0310	0.0331	62.0	66.2	1	37.0-123			6.55	25
Benzo(a)pyrene	0.0500	U	0.0329	0.0353	65.8	70.6	1	37.0-120			7.04	24
Biphenyl	0.0500	U	0.0236	0.0273	47.2	54.6	1	29.0-120			14.5	33
Bis(2-chlorethoxy)methane	0.0500	U	0.0231	0.0249	46.2	49.8	1	17.0-120			7.50	31
Bis(2-chloroethyl)ether	0.0500	U	0.0200	0.0233	40.0	46.6	1	14.0-120			15.2	33
2,2-Oxybis(1-Chloropropane)	0.0500	U	0.0200	0.0249	40.0	49.8	1	18.0-120			21.8	34
4-Bromophenyl-phenylether	0.0500	U	0.0318	0.0339	63.6	67.8	1	37.0-120			6.39	24
2-Chloronaphthalene	0.0500	U	0.0223	0.0261	44.6	52.2	1	29.0-120			15.7	28
4-Chlorophenyl-phenylether	0.0500	U	0.0317	0.0353	63.4	70.6	1	36.0-120			10.7	23
Caprolactam	0.0500	U	0.0125	0.0132	25.0	26.4	1	10.0-120			5.45	40
Carbazole	0.0500	U	0.0301	0.0316	60.2	63.2	1	38.0-127			4.86	21
Chrysene	0.0500	U	0.0322	0.0332	64.4	66.4	1	38.0-120			3.06	23
Dibenz(a,h)anthracene	0.0500	U	0.0335	0.0354	67.0	70.8	1	36.0-121			5.52	24
Dibenzofuran	0.0500	U	0.0269	0.0304	53.8	60.8	1	32.0-120			12.2	26
3,3-Dichlorobenzidine	0.100	U	0.0625	0.0714	62.5	71.4	1	10.0-134			13.3	30
2,4-Dinitrotoluene	0.0500	U	0.0376	0.0390	75.2	78.0	1	39.0-125			3.66	25
2,6-Dinitrotoluene	0.0500	U	0.0321	0.0333	64.2	66.6	1	36.0-120			3.67	27
Fluoranthene	0.0500	U	0.0322	0.0347	64.4	69.4	1	41.0-121			7.47	22
Fluorene	0.0500	U	0.0291	0.0316	58.2	63.2	1	37.0-120			8.24	24
Hexachlorobenzene	0.0500	U	0.0329	0.0348	65.8	69.6	1	35.0-122			5.61	24
Hexachloro-1,3-butadiene	0.0500	U	0.0244	0.0301	48.8	60.2	1	12.0-120			20.9	34
Hexachlorocyclopentadiene	0.0500	U	0.0137	0.0173	27.4	34.6	1	10.0-120			23.2	33
Hexachloroethane	0.0500	U	0.0180	0.0211	36.0	42.2	1	10.0-120			15.9	40
Indeno(1,2,3-cd)pyrene	0.0500	U	0.0302	0.0319	60.4	63.8	1	38.0-125			5.48	24
Isophorone	0.0500	U	0.0249	0.0274	49.8	54.8	1	21.0-120			9.56	27
1-Methylnaphthalene	0.0500	U	0.0223	0.0263	44.6	52.6	1	11.0-120			16.5	27
2-Methylnaphthalene	0.0500	U	0.0231	0.0268	46.2	53.6	1	17.0-120			14.8	28
Naphthalene	0.0500	U	0.0202	0.0238	40.4	47.6	1	10.0-120			16.4	31
Nitrobenzene	0.0500	U	0.0229	0.0263	45.8	52.6	1	12.0-120			13.8	30
n-Nitrosodiphenylamine	0.0500	U	0.0269	0.0283	53.8	56.6	1	37.0-120			5.07	24
n-Nitrosodi-n-propylamine	0.0500	U	0.0238	0.0274	47.6	54.8	1	16.0-120			14.1	30

L1639537-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1639537-03 07/30/23 19:13 • (MS) R3955074-3 07/30/23 19:35 • (MSD) R3955074-4 07/30/23 19:56

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 %
Phenanthrene	0.0500	U	0.0276	0.0297	55.2	59.4	1	33.0-120			7.33	22
Benzylbutyl phthalate	0.0500	U	0.0312	0.0342	62.4	68.4	1	34.0-126			9.17	24
Bis(2-ethylhexyl)phthalate	0.0500	U	0.0340	0.0362	68.0	72.4	1	33.0-126			6.27	25
Di-n-butyl phthalate	0.0500	U	0.0318	0.0347	63.6	69.4	1	35.0-128			8.72	23
Diethyl phthalate	0.0500	U	0.0338	0.0355	67.6	71.0	1	39.0-125			4.91	24
Dimethyl phthalate	0.0500	U	0.0325	0.0336	65.0	67.2	1	37.0-120			3.33	24
Di-n-octyl phthalate	0.0500	U	0.0297	0.0314	59.4	62.8	1	25.0-135			5.56	26
Pyrene	0.0500	U	0.0299	0.0322	59.8	64.4	1	39.0-120			7.41	22
1,2,4-Trichlorobenzene	0.0500	U	0.0215	0.0261	43.0	52.2	1	15.0-120			19.3	31
4-Chloro-3-methylphenol	0.0500	U	0.0307	0.0342	61.4	68.4	1	26.0-120			10.8	27
2-Chlorophenol	0.0500	U	0.0196	0.0238	39.2	47.6	1	18.0-120			19.4	34
2,4-Dichlorophenol	0.0500	U	0.0263	0.0303	52.6	60.6	1	19.0-120			14.1	27
2,4-Dimethylphenol	0.0500	U	0.0311	0.0329	62.2	65.8	1	15.0-120			5.63	28
4,6-Dinitro-2-methylphenol	0.0500	U	0.0380	0.0397	76.0	79.4	1	10.0-144			4.38	39
2,4-Dinitrophenol	0.0500	U	0.0384	0.0394	76.8	78.8	1	10.0-120			2.57	40
2-Nitrophenol	0.0500	U	0.0264	0.0306	52.8	61.2	1	20.0-120			14.7	30
2-Nitroaniline	0.0500	U	0.0305	0.0310	61.0	62.0	1	33.0-120			1.63	27
2-Methylphenol	0.0500	U	0.0202	0.0235	40.4	47.0	1	10.0-120			15.1	30
3&4-Methyl Phenol	0.0500	U	0.0234	0.0262	46.8	52.4	1	10.0-120			11.3	36
3-Nitroaniline	0.0500	U	0.0276	0.0280	55.2	56.0	1	20.0-120			1.44	27
4-Chloroaniline	0.0500	U	0.0237	0.0248	47.4	49.6	1	10.0-120			4.54	31
4-Nitroaniline	0.0500	U	0.0312	0.0332	62.4	66.4	1	10.0-160			6.21	26
4-Nitrophenol	0.0500	U	0.0149	0.0157	29.8	31.4	1	10.0-120			5.23	40
Pentachlorophenol	0.0500	U	0.0339	0.0358	67.8	71.6	1	10.0-128			5.45	37
Phenol	0.0500	U	0.0107	0.0119	21.4	23.8	1	10.0-120			10.6	40
2,4,5-Trichlorophenol	0.0500	U	0.0327	0.0352	65.4	70.4	1	33.0-120			7.36	31
2,4,6-Trichlorophenol	0.0500	U	0.0304	0.0335	60.8	67.0	1	26.0-120			9.70	31
(S) 2-Fluorophenol					*22.9*	*29.9*		*10.0-120*				
(S) Phenol-d5					*21.4*	*22.3*		*10.0-120*				
(S) Nitrobenzene-d5					*43.0*	*51.8*		*10.0-127*				
(S) 2-Fluorobiphenyl					*48.9*	*56.9*		*10.0-130*				
(S) 2,4,6-Tribromophenol					*75.5*	*78.0*		*10.0-155*				
(S) p-Terphenyl-d14					*65.3*	*69.7*		*10.0-128*				

L1639877-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1639877-02 08/03/23 12:27 • (MS) R3956590-1 08/03/23 12:49 • (MSD) R3956590-2 08/03/23 13:10

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	0.0272	0.0283	54.4	59.5	1	28.0-120			3.96	25
Acenaphthylene	0.0500	U	0.0269	0.0289	53.8	60.7	1	31.0-121			7.17	25
Acetophenone	0.0500	U	0.0289	0.0316	57.8	66.4	1	20.0-120			8.93	35
Anthracene	0.0500	U	0.0273	0.0253	54.6	53.2	1	36.0-120			7.60	23
Atrazine	0.0500	U	0.0320	0.0318	64.0	66.8	1	39.0-130			0.627	23
Benzo(a)anthracene	0.0500	U	0.0310	0.0292	62.0	61.3	1	39.0-120			5.98	23
Benzaldehyde	0.0500	U	0.0687	0.0777	137	163	1	10.0-160		J5	12.3	40
Benzo(b)fluoranthene	0.0500	U	0.0331	0.0323	66.2	67.9	1	37.0-120			2.45	23
Benzo(k)fluoranthene	0.0500	U	0.0331	0.0326	66.2	68.5	1	37.0-120			1.52	26
Benzo(g,h,i)perylene	0.0500	U	0.0310	0.0288	62.0	60.5	1	37.0-123			7.36	25
Benzo(a)pyrene	0.0500	U	0.0333	0.0324	66.6	68.1	1	37.0-120			2.74	24
Biphenyl	0.0500	U	0.0263	0.0279	52.6	58.6	1	29.0-120			5.90	33
Bis(2-chlorethoxy)methane	0.0500	U	0.0264	0.0276	52.8	58.0	1	17.0-120			4.44	31
Bis(2-chloroethyl)ether	0.0500	U	0.0240	0.0261	48.0	54.8	1	14.0-120			8.38	33
2,2-Oxybis(1-Chloropropane)	0.0500	U	0.0234	0.0272	46.8	57.1	1	18.0-120			15.0	34
4-Bromophenyl-phenylether	0.0500	U	0.0294	0.0299	58.8	62.8	1	37.0-120			1.69	24
2-Chloronaphthalene	0.0500	U	0.0247	0.0270	49.4	56.7	1	29.0-120			8.90	28
4-Chlorophenyl-phenylether	0.0500	U	0.0294	0.0301	58.8	63.2	1	36.0-120			2.35	23
Caprolactam	0.0500	U	0.0116	0.0111	23.2	23.3	1	10.0-120			4.41	40
Carbazole	0.0500	U	0.0308	0.0299	61.6	62.8	1	38.0-127			2.97	21
Chrysene	0.0500	U	0.0321	0.0297	64.2	62.4	1	38.0-120			7.77	23
Dibenz(a,h)anthracene	0.0500	U	0.0323	0.0298	64.6	62.6	1	36.0-121			8.05	24
Dibenzofuran	0.0500	U	0.0279	0.0292	55.8	61.3	1	32.0-120			4.55	26
3,3-Dichlorobenzidine	0.100	U	0.0591	0.0558	59.1	58.6	1	10.0-134			5.74	30
2,4-Dinitrotoluene	0.0500	U	0.0346	0.0344	69.2	72.3	1	39.0-125			0.580	25
2,6-Dinitrotoluene	0.0500	U	0.0313	0.0313	62.6	65.8	1	36.0-120			0.000	27
Fluoranthene	0.0500	U	0.0310	0.0297	62.0	62.4	1	41.0-121			4.28	22
Fluorene	0.0500	U	0.0295	0.0300	59.0	63.0	1	37.0-120			1.68	24
Hexachlorobenzene	0.0500	U	0.0286	0.0278	57.2	58.4	1	35.0-122			2.84	24
Hexachloro-1,3-butadiene	0.0500	U	0.0207	0.0240	41.4	50.4	1	12.0-120			14.8	34
Hexachlorocyclopentadiene	0.0500	U	0.00956	0.0111	19.1	23.3	1	10.0-120			14.9	33
Hexachloroethane	0.0500	U	0.0199	0.0225	39.8	47.3	1	10.0-120			12.3	40
Indeno(1,2,3-cd)pyrene	0.0500	U	0.0300	0.0274	60.0	57.6	1	38.0-125			9.06	24
Isophorone	0.0500	U	0.0267	0.0283	53.4	59.5	1	21.0-120			5.82	27
1-Methylnaphthalene	0.0500	U	0.0239	0.0254	47.8	53.4	1	11.0-120			6.09	27
2-Methylnaphthalene	0.0500	U	0.0244	0.0258	48.8	54.2	1	17.0-120			5.58	28
Naphthalene	0.0500	U	0.0221	0.0249	44.2	52.3	1	10.0-120			11.9	31
Nitrobenzene	0.0500	U	0.0244	0.0272	48.8	57.1	1	12.0-120			10.9	30
n-Nitrosodiphenylamine	0.0500	U	0.0280	0.0271	56.0	56.9	1	37.0-120			3.27	24
n-Nitrosodi-n-propylamine	0.0500	U	0.0279	0.0291	55.8	61.1	1	16.0-120			4.21	30

L1639877-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1639877-02 08/03/23 12:27 • (MS) R3956590-1 08/03/23 12:49 • (MSD) R3956590-2 08/03/23 13:10

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 %
Phenanthrene	0.0500	U	0.0290	0.0281	58.0	59.0	1	33.0-120			3.15	22
Benzylbutyl phthalate	0.0500	U	0.0369	0.0347	73.8	72.9	1	34.0-126			6.15	24
Bis(2-ethylhexyl)phthalate	0.0500	U	0.0377	0.0358	75.4	75.2	1	33.0-126			5.17	25
Di-n-butyl phthalate	0.0500	U	0.0348	0.0326	69.6	68.5	1	35.0-128			6.53	23
Diethyl phthalate	0.0500	U	0.0320	0.0311	64.0	65.3	1	39.0-125			2.85	24
Dimethyl phthalate	0.0500	U	0.0304	0.0297	60.8	62.4	1	37.0-120			2.33	24
Di-n-octyl phthalate	0.0500	U	0.0335	0.0319	67.0	67.0	1	25.0-135			4.89	26
Pyrene	0.0500	U	0.0331	0.0316	66.2	66.4	1	39.0-120			4.64	22
1,2,4-Trichlorobenzene	0.0500	U	0.0216	0.0241	43.2	50.6	1	15.0-120			10.9	31
4-Chloro-3-methylphenol	0.0500	U	0.0252	0.0259	50.4	54.4	1	26.0-120			2.74	27
2-Chlorophenol	0.0500	U	0.0204	0.0232	40.8	48.7	1	18.0-120			12.8	34
2,4-Dichlorophenol	0.0500	U	0.0229	0.0261	45.8	54.8	1	19.0-120			13.1	27
2,4-Dimethylphenol	0.0500	U	0.0265	0.0283	53.0	59.5	1	15.0-120			6.57	28
4,6-Dinitro-2-methylphenol	0.0500	U	0.0337	0.0343	67.4	72.1	1	10.0-144			1.76	39
2,4-Dinitrophenol	0.0500	U	0.0308	0.0323	61.6	67.9	1	10.0-120			4.75	40
2-Nitrophenol	0.0500	U	0.0262	0.0296	52.4	62.2	1	20.0-120			12.2	30
2-Nitroaniline	0.0500	U	0.0317	0.0322	63.4	67.6	1	33.0-120			1.56	27
2-Methylphenol	0.0500	U	0.0191	0.0208	38.2	43.7	1	10.0-120			8.52	30
3&4-Methyl Phenol	0.0500	U	0.0207	0.0215	41.4	45.2	1	10.0-120			3.79	36
3-Nitroaniline	0.0500	U	0.0269	0.0268	53.8	56.3	1	20.0-120			0.372	27
4-Chloroaniline	0.0500	U	0.0201	0.0206	40.2	43.3	1	10.0-120			2.46	31
4-Nitroaniline	0.0500	U	0.0309	0.0305	61.8	64.1	1	10.0-160			1.30	26
4-Nitrophenol	0.0500	U	0.0131	0.0127	26.2	26.7	1	10.0-120			3.10	40
Pentachlorophenol	0.0500	U	0.0272	0.0266	54.4	55.9	1	10.0-128			2.23	37
Phenol	0.0500	U	0.0103	0.0115	20.6	24.2	1	10.0-120			11.0	40
2,4,5-Trichlorophenol	0.0500	U	0.0290	0.0300	58.0	63.0	1	33.0-120			3.39	31
2,4,6-Trichlorophenol	0.0500	U	0.0280	0.0302	56.0	63.4	1	26.0-120			7.56	31
(S) 2-Fluorophenol					*26.7*	*31.1*		*10.0-120*				
(S) Phenol-d5					*18.6*	*20.6*		*10.0-120*				
(S) Nitrobenzene-d5					*46.1*	*52.7*		*10.0-127*				
(S) 2-Fluorobiphenyl					*50.8*	*57.4*		*10.0-130*				
(S) 2,4,6-Tribromophenol					*54.5*	*57.9*		*10.0-155*				
(S) p-Terphenyl-d14					*63.9*	*63.3*		*10.0-128*				

Method Blank (MB)

(MB) R3957567-3 08/03/23 04:13

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acenaphthene	U		0.0000886	0.00100
Acenaphthylene	U		0.0000921	0.00100
Acetophenone	U		0.000208	0.0100
Anthracene	U		0.0000804	0.00100
Atrazine	U		0.000255	0.0100
Benzo(a)anthracene	U		0.000199	0.00100
Benzaldehyde	U		0.00169	0.0100
Benzo(b)fluoranthene	U		0.000130	0.00100
Benzo(k)fluoranthene	U		0.000120	0.00100
Benzo(g,h,i)perylene	U		0.000121	0.00100
Benzo(a)pyrene	U		0.0000381	0.000200
Biphenyl	U		0.000790	0.0100
Bis(2-chlorethoxy)methane	U		0.000116	0.0100
Bis(2-chloroethyl)ether	U		0.000137	0.0100
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100
4-Bromophenyl-phenylether	U		0.0000877	0.0100
2-Chloronaphthalene	U		0.0000648	0.00100
4-Chlorophenyl-phenylether	U		0.0000926	0.0100
Caprolactam	U		0.000309	0.0100
Carbazole	U		0.000111	0.0100
Chrysene	U		0.000130	0.00100
Dibenz(a,h)anthracene	U		0.0000644	0.000200
Dibenzofuran	U		0.0000970	0.0100
3,3-Dichlorobenzidine	U		0.000212	0.0100
2,4-Dinitrotoluene	U		0.0000983	0.0100
2,6-Dinitrotoluene	U		0.000250	0.0100
Fluoranthene	U		0.000102	0.00100
Fluorene	U		0.0000844	0.00100
Hexachlorobenzene	U		0.0000755	0.00100
Hexachloro-1,3-butadiene	U		0.0000968	0.0100
Hexachlorocyclopentadiene	U		0.0000598	0.0100
Hexachloroethane	U		0.000127	0.0100
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100
Isophorone	U		0.000143	0.0100
1-Methylnaphthalene	U		0.0000790	0.00100
2-Methylnaphthalene	U		0.000117	0.00100
Naphthalene	U		0.000159	0.00100
Nitrobenzene	U		0.000297	0.0100
n-Nitrosodiphenylamine	U		0.00237	0.0100
n-Nitrosodi-n-propylamine	U		0.000261	0.0100

Received by OCD: 4/15/2024 1:46:20 PM

Method Blank (MB)

(MB) R3957567-3 08/03/23 04:13

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Phenanthrene	U		0.000112	0.00100
Benzylbutyl phthalate	U		0.000765	0.00300
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300
Di-n-butyl phthalate	U		0.000453	0.00300
Diethyl phthalate	U		0.000287	0.00300
Dimethyl phthalate	U		0.000260	0.00300
Di-n-octyl phthalate	U		0.000932	0.00300
Pyrene	U		0.000107	0.00100
1,2,4-Trichlorobenzene	U		0.0000698	0.0100
4-Chloro-3-methylphenol	U		0.000131	0.0100
2-Chlorophenol	U		0.000133	0.0100
2,4-Dichlorophenol	U		0.000102	0.0100
2,4-Dimethylphenol	U		0.0000636	0.0100
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100
2,4-Dinitrophenol	U		0.00593	0.0100
2-Nitrophenol	U		0.000117	0.0100
2-Nitroaniline	U		0.000102	0.0100
2-Methylphenol	U		0.0000929	0.0100
3&4-Methyl Phenol	U		0.000168	0.0100
3-Nitroaniline	U		0.0000869	0.0100
4-Chloroaniline	U		0.000234	0.0100
4-Nitroaniline	U		0.0000910	0.0100
4-Nitrophenol	U		0.000143	0.0100
Pentachlorophenol	U		0.000313	0.0100
Phenol	U		0.00433	0.0100
2,4,5-Trichlorophenol	U		0.000109	0.0100
2,4,6-Trichlorophenol	U		0.000100	0.0100
(S) 2-Fluorophenol	*20.1*			*10.0-120*
(S) Phenol-d5	*13.7*			*10.0-120*
(S) Nitrobenzene-d5	*48.4*			*10.0-127*
(S) 2-Fluorobiphenyl	*54.6*			*10.0-130*
(S) 2,4,6-Tribromophenol	*55.0*			*10.0-155*
(S) p-Terphenyl-d14	*73.7*			*10.0-128*

Released to Imaging: 4/26/2024 10:49:21 AM

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

(LCS) R3957567-1 08/03/23 03:31 • (LCSD) R3957567-2 08/03/23 03:52

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	0.0222	0.0238	44.4	47.6	41.0-120			6.96	22
Acenaphthylene	0.0500	0.0220	0.0229	44.0	45.8	43.0-120			4.01	22
Acetophenone	0.0500	0.0222	0.0247	44.4	49.4	29.0-120			10.7	28
Anthracene	0.0500	0.0284	0.0307	56.8	61.4	45.0-120			7.78	20
Atrazine	0.0500	0.0304	0.0357	60.8	71.4	39.0-141			16.0	20
Benzo(a)anthracene	0.0500	0.0309	0.0342	61.8	68.4	47.0-120			10.1	20
Benzaldehyde	0.0500	0.0516	0.0609	103	122	10.0-160			16.5	40
Benzo(b)fluoranthene	0.0500	0.0338	0.0377	67.6	75.4	46.0-120			10.9	20
Benzo(k)fluoranthene	0.0500	0.0330	0.0376	66.0	75.2	46.0-120			13.0	21
Benzo(g,h,i)perylene	0.0500	0.0333	0.0360	66.6	72.0	48.0-121			7.79	20
Benzo(a)pyrene	0.0500	0.0349	0.0373	69.8	74.6	47.0-120			6.65	20
Biphenyl	0.0500	0.0216	0.0220	43.2	44.0	38.0-120			1.83	27
Bis(2-chlorethoxy)methane	0.0500	0.0213	0.0232	42.6	46.4	33.0-120			8.54	24
Bis(2-chloroethyl)ether	0.0500	0.0190	0.0198	38.0	39.6	23.0-120			4.12	33
2,2-Oxybis(1-Chloropropane)	0.0500	0.0190	0.0202	38.0	40.4	28.0-120			6.12	31
4-Bromophenyl-phenylether	0.0500	0.0279	0.0297	55.8	59.4	45.0-120			6.25	20
2-Chloronaphthalene	0.0500	0.0204	0.0207	40.8	41.4	37.0-120			1.46	25
4-Chlorophenyl-phenylether	0.0500	0.0273	0.0276	54.6	55.2	44.0-120			1.09	20
Caprolactam	0.0500	0.00791	0.00949	15.8	19.0	10.0-120			18.2	26
Carbazole	0.0500	0.0294	0.0337	58.8	67.4	51.0-122			13.6	20
Chrysene	0.0500	0.0316	0.0355	63.2	71.0	48.0-120			11.6	20
Dibenz(a,h)anthracene	0.0500	0.0341	0.0378	68.2	75.6	47.0-120			10.3	20
Dibenzofuran	0.0500	0.0245	0.0253	49.0	50.6	44.0-120			3.21	22
3,3-Dichlorobenzidine	0.100	0.0581	0.0666	58.1	66.6	44.0-120			13.6	20
2,4-Dinitrotoluene	0.0500	0.0317	0.0361	63.4	72.2	49.0-124			13.0	20
2,6-Dinitrotoluene	0.0500	0.0271	0.0313	54.2	62.6	46.0-120			14.4	21
Fluoranthene	0.0500	0.0298	0.0337	59.6	67.4	51.0-120			12.3	20
Fluorene	0.0500	0.0255	0.0268	51.0	53.6	47.0-120			4.97	20
Hexachlorobenzene	0.0500	0.0277	0.0305	55.4	61.0	44.0-120			9.62	20
Hexachloro-1,3-butadiene	0.0500	0.0174	0.0172	34.8	34.4	19.0-120			1.16	32
Hexachlorocyclopentadiene	0.0500	0.0141	0.00960	28.2	19.2	15.0-120		J3	38.0	31
Hexachloroethane	0.0500	0.0165	0.0165	33.0	33.0	15.0-120			0.000	37
Indeno(1,2,3-cd)pyrene	0.0500	0.0313	0.0331	62.6	66.2	49.0-122			5.59	20
Isophorone	0.0500	0.0215	0.0233	43.0	46.6	36.0-120			8.04	23
1-Methylnaphthalene	0.0500	0.0181	0.0186	36.2	37.2	33.0-120			2.72	24
2-Methylnaphthalene	0.0500	0.0186	0.0188	37.2	37.6	33.0-120			1.07	25
Naphthalene	0.0500	0.0171	0.0175	34.2	35.0	27.0-120			2.31	27
Nitrobenzene	0.0500	0.0191	0.0202	38.2	40.4	27.0-120			5.60	29
n-Nitrosodiphenylamine	0.0500	0.0250	0.0266	50.0	53.2	47.0-120			6.20	20
n-Nitrosodi-n-propylamine	0.0500	0.0223	0.0238	44.6	47.6	31.0-120			6.51	28

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

(LCS) R3957567-1 08/03/23 03:31 • (LCSD) R3957567-2 08/03/23 03:52

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 %
Phenanthrene	0.0500	0.0270	0.0298	54.0	59.6	46.0-120			9.86	20
Benzylbutyl phthalate	0.0500	0.0333	0.0380	66.6	76.0	43.0-121			13.2	20
Bis(2-ethylhexyl)phthalate	0.0500	0.0347	0.0392	69.4	78.4	43.0-122			12.2	20
Di-n-butyl phthalate	0.0500	0.0313	0.0373	62.6	74.6	49.0-121			17.5	20
Diethyl phthalate	0.0500	0.0296	0.0336	59.2	67.2	48.0-122			12.7	20
Dimethyl phthalate	0.0500	0.0278	0.0300	55.6	60.0	48.0-120			7.61	20
Di-n-octyl phthalate	0.0500	0.0308	0.0349	61.6	69.8	42.0-125			12.5	20
Pyrene	0.0500	0.0319	0.0354	63.8	70.8	47.0-120			10.4	20
1,2,4-Trichlorobenzene	0.0500	0.0177	0.0172	35.4	34.4	24.0-120			2.87	29
4-Chloro-3-methylphenol	0.0500	0.0152	0.0126	30.4	25.2	40.0-120	J4	J4	18.7	21
2-Chlorophenol	0.0500	0.0115	0.00828	23.0	16.6	25.0-120	J4	J4	32.6	35
2,4-Dichlorophenol	0.0500	0.0139	0.0101	27.8	20.2	36.0-120	J4	J3 J4	31.7	26
2,4-Dimethylphenol	0.0500	0.0168	0.0126	33.6	25.2	33.0-120		J3 J4	28.6	26
4,6-Dinitro-2-methylphenol	0.0500	0.0301	0.0262	60.2	52.4	38.0-138			13.9	25
2,4-Dinitrophenol	0.0500	0.0236	0.0204	47.2	40.8	10.0-120			14.5	39
2-Nitrophenol	0.0500	0.0161	0.0126	32.2	25.2	31.0-120		J4	24.4	29
2-Nitroaniline	0.0500	0.0283	0.0319	56.6	63.8	43.0-120			12.0	22
2-Methylphenol	0.0500	0.0107	0.00859	21.4	17.2	28.0-120	J4	J4	21.9	29
3&4-Methyl Phenol	0.0500	0.0116	0.00976	23.2	19.5	31.0-120	J4	J4	17.2	30
3-Nitroaniline	0.0500	0.0222	0.0260	44.4	52.0	38.0-120			15.8	21
4-Chloroaniline	0.0500	0.0190	0.0243	38.0	48.6	25.0-120			24.5	25
4-Nitroaniline	0.0500	0.0259	0.0292	51.8	58.4	18.0-160			12.0	21
4-Nitrophenol	0.0500	0.00875	0.00793	17.5	15.9	10.0-120			9.83	33
Pentachlorophenol	0.0500	0.0245	0.0225	49.0	45.0	23.0-120			8.51	25
Phenol	0.0500	0.00577	0.00595	11.5	11.9	10.0-120			3.07	36
2,4,5-Trichlorophenol	0.0500	0.0204	0.0169	40.8	33.8	44.0-120	J4	J4	18.8	22
2,4,6-Trichlorophenol	0.0500	0.0199	0.0160	39.8	32.0	42.0-120	J4	J4	21.7	23
(S) 2-Fluorophenol				*14.4*	*11.7*	*10.0-120*				
(S) Phenol-d5				*10.8*	*11.0*	*10.0-120*				
(S) Nitrobenzene-d5				*36.7*	*39.7*	*10.0-127*				
(S) 2-Fluorobiphenyl				*45.3*	*43.9*	*10.0-130*				
(S) 2,4,6-Tribromophenol				*48.2*	*43.5*	*10.0-155*				
(S) p-Terphenyl-d14				*61.7*	*70.8*	*10.0-128*				

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.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(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 Reporting Limit (or MDL where applicable).
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.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
Q	Sample was prepared and/or analyzed past holding time as defined in the method. Concentrations should be considered minimum values.
V	The sample concentration is too high to evaluate accurate spike recoveries.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
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	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
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

* 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 Analytical.

Received by OCD: 4/15/2024 1:46:20 PM

Company Name/Address:
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@trccompanies.com;aeljuri@trccompanie**

Project Description: **Lovington Lea Refinery**

City/State Collected: **Lovington, NM**

Please Circle: PT MT CT ET

Phone: **512-684-3176**

Client Project # **377274.0000.0000.**

Lab Project # **TRCATX-LOVINGTON NAV**

Collected by (print): **Bryan Bayles + 4th Team**

Site/Facility ID #

P.O. #

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	**NO3,Cl,NO2,F,SO4** 125mlHDPE-NoPres	8270TX 100ml Amb NoPres	ALK,TDS 500mlHDPE-NoPres	DROLVI 40mlAmb-HCl-BT	GRO 40mlAmb HCl	HG 250mlHDPE-HNO3	NAVAJOMETALSDISS-FF 250mlHDPE HNO3	V8260 40mlAmb-HCl	V8260-TripBlank 40mlAmb-HCl-Blk	Remarks	Sample # (lab only)
WW-NORTH		GW		7/27/23	1005	13	X	X	X	X	X	X	X	X			-01
WW-SOUTH		GW			920	13	X	X	X	X	X	X	X	X			-02
WW-EAST		GW			1040	13	X	X	X	X	X	X	X	X			-03
DUP-01		GW			1200	13	X	X	X	X	X	X	X	X			-04
TRIP BLANK		GW			—	1									X		-05

Chain of Custody Page ___ of ___

Pace PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1639912

J109

Acctnum: TRCATX
Template: T118335
Prelogin: P1009840
PM: 526 - Chris McCord
PB: 6-30-2023 6m
Shipped Via: FedEx Ground

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

Remarks: NAVAJOMETALSDISS are Field Filtered.
** Nitrate/Nitrite reported separately; Short hold time/ must ship same day.

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __ UPS ✓ FedEx __ Courier _____

Tracking # 6337 2258 1812

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: ✓Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Bryan Bayles	7/27/23	1230	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Jamen

Trip Blank Received: (Yes) / No
1
(HCl) / MeoH
TBR

Temp: °C Bottles Received:
GBAS 1.6+0=1.6 52

Date: 7/28/23 Time: 0845

If preservation required by Login: Date/Time

Hold:

Condition: NCF / (OK)

Released to Imaging: 4/26/2024 10:49:21 AM

ANALYTICAL REPORT

December 07, 2023

Revised Report

TRC Solutions - Austin, TX

Sample Delivery Group:	L1663622
Samples Received:	10/06/2023
Project Number:	377274.0000.0000.
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

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MW-1 L1663622-01 GW

Collected by: BH/HMI Team | Collected date/time: 10/05/23 10:55 | Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2149548	1	10/11/23 18:54	10/12/23 12:22	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146682	1	10/06/23 22:27	10/06/23 22:27	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2147174	1	10/11/23 20:29	10/12/23 11:49	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2146826	1	10/10/23 09:10	10/12/23 22:42	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2146834	1	10/09/23 09:22	10/20/23 12:27	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2148083	1	10/09/23 22:10	10/09/23 22:10	JAH	Mt. Juliet, TN

MW-2 L1663622-02 GW

Collected by: BH/HMI Team | Collected date/time: 10/05/23 09:40 | Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2148629	1	10/10/23 16:04	10/11/23 12:39	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146649	1	10/06/23 22:35	10/06/23 22:35	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2147174	1	10/11/23 20:29	10/12/23 11:57	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2146826	1	10/10/23 09:10	10/12/23 23:17	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2146834	1	10/09/23 09:22	10/20/23 12:31	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2148083	1	10/09/23 22:30	10/09/23 22:30	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2148857	1	10/11/23 05:50	10/12/23 06:23	AED	Mt. Juliet, TN

MW-3 L1663622-03 GW

Collected by: BH/HMI Team | Collected date/time: 10/05/23 10:15 | Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG2146682	1	10/06/23 22:44	10/06/23 22:44	GEB	Mt. Juliet, TN

MW-4 L1663622-04 GW

Collected by: BH/HMI Team | Collected date/time: 10/05/23 09:45 | Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2148629	1	10/10/23 16:04	10/11/23 12:39	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146649	1	10/06/23 22:51	10/06/23 22:51	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2147174	1	10/11/23 20:29	10/12/23 11:59	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2146826	1	10/10/23 09:10	10/12/23 23:20	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2146834	1	10/09/23 09:22	10/20/23 12:34	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2148083	1	10/09/23 22:49	10/09/23 22:49	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2148857	1.05	10/11/23 05:50	10/13/23 06:01	AMG	Mt. Juliet, TN

MW-5 L1663622-05 GW

Collected by: BH/HMI Team | Collected date/time: 10/05/23 11:30 | Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2149849	1	10/12/23 09:04	10/12/23 18:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2147741	1	10/10/23 13:29	10/10/23 13:29	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146535	1	10/07/23 02:19	10/07/23 02:19	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2147174	1	10/11/23 20:29	10/12/23 12:01	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2146826	1	10/10/23 09:10	10/12/23 23:23	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2146834	1	10/09/23 09:22	10/20/23 12:37	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2149400	1	10/11/23 20:37	10/11/23 20:37	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2148083	1	10/09/23 23:09	10/09/23 23:09	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG2150507	1	10/14/23 08:15	10/16/23 08:20	MAA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2148857	1.05	10/11/23 05:50	10/13/23 06:22	AMG	Mt. Juliet, TN

MW-6 L1663622-06 GW

Collected by: BH/HMI Team | Collected date/time: 10/05/23 11:55 | Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2149548	1	10/11/23 18:54	10/12/23 12:22	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146535	1	10/07/23 02:31	10/07/23 02:31	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2147174	1	10/11/23 20:29	10/12/23 12:03	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2146826	1	10/10/23 09:10	10/12/23 23:26	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2146834	1	10/09/23 09:22	10/20/23 12:14	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2148083	1	10/09/23 23:29	10/09/23 23:29	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2148857	1	10/11/23 05:50	10/13/23 06:43	AMG	Mt. Juliet, TN

MW-8 L1663622-07 GW

Collected by: BH/HMI Team | Collected date/time: 10/05/23 11:05 | Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2149548	1	10/11/23 18:54	10/12/23 12:22	MMF	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146682	1	10/06/23 23:35	10/06/23 23:35	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146682	10	10/07/23 05:30	10/07/23 05:30	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2147174	1	10/11/23 20:29	10/12/23 12:06	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2146826	1	10/10/23 09:10	10/12/23 23:30	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2146834	1	10/09/23 09:22	10/20/23 12:52	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2146834	5	10/09/23 09:22	10/20/23 13:56	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2148083	1	10/09/23 23:48	10/09/23 23:48	JAH	Mt. Juliet, TN

MW-9 L1663622-08 GW

Collected by: BH/HMI Team | Collected date/time: 10/05/23 10:15 | Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG2146682	1	10/06/23 23:52	10/06/23 23:52	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146682	10	10/07/23 06:21	10/07/23 06:21	GEB	Mt. Juliet, TN

MW-10 L1663622-09 GW

Collected by: BH/HMI Team | Collected date/time: 10/05/23 09:25 | Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG2146649	1	10/06/23 23:07	10/06/23 23:07	GEB	Mt. Juliet, TN

MW-11R L1663622-10 GW

Collected by: BH/HMI Team | Collected date/time: 10/05/23 09:10 | Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2149849	1	10/12/23 09:04	10/12/23 18:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2147741	1	10/10/23 13:35	10/10/23 13:35	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146649	1	10/06/23 23:23	10/06/23 23:23	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146649	10	10/07/23 05:30	10/07/23 05:30	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2147174	1	10/11/23 20:29	10/12/23 12:13	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2146826	1	10/10/23 09:10	10/12/23 23:33	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2146834	1	10/09/23 09:22	10/20/23 12:55	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2146834	5	10/09/23 09:22	10/20/23 14:00	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2148083	1	10/10/23 00:08	10/10/23 00:08	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2148857	1	10/11/23 05:50	10/13/23 18:06	JNJ	Mt. Juliet, TN

MW-12R2 L1663622-11 GW

Collected by: BH/HMI Team | Collected date/time: 10/05/23 12:25 | Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2149849	1	10/12/23 09:04	10/12/23 18:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2147741	1	10/10/23 13:39	10/10/23 13:39	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146535	1	10/07/23 02:44	10/07/23 02:44	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2147174	1	10/11/23 20:29	10/12/23 12:15	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2146826	1	10/10/23 09:10	10/12/23 23:36	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2146834	1	10/09/23 09:22	10/20/23 12:58	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2148083	1	10/10/23 00:27	10/10/23 00:27	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2148857	1	10/11/23 05:50	10/13/23 18:28	JNJ	Mt. Juliet, TN

MW-13R L1663622-12 GW

Collected by: BH/HMI Team | Collected date/time: 10/05/23 08:55 | Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2148629	1	10/10/23 16:04	10/11/23 12:39	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146649	1	10/06/23 23:39	10/06/23 23:39	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146649	10	10/07/23 05:46	10/07/23 05:46	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2147174	1	10/11/23 20:29	10/12/23 12:17	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2146826	1	10/10/23 09:10	10/12/23 23:39	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2146834	1	10/09/23 09:22	10/20/23 13:01	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2148083	1	10/10/23 00:47	10/10/23 00:47	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2148857	1	10/11/23 05:50	10/13/23 18:50	JNJ	Mt. Juliet, TN

MW-14R L1663622-13 GW

Collected by: BH/HMI Team | Collected date/time: 10/05/23 11:15 | Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2148629	1	10/10/23 16:04	10/11/23 12:39	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146682	1	10/07/23 00:09	10/07/23 00:09	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2147174	1	10/11/23 20:29	10/12/23 12:20	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2146826	1	10/10/23 09:10	10/12/23 23:57	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2146834	1	10/09/23 09:22	10/20/23 13:05	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2148083	1	10/10/23 01:07	10/10/23 01:07	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2148857	1	10/11/23 05:50	10/13/23 19:12	JNJ	Mt. Juliet, TN

MW-15R L1663622-14 GW

Collected by: BH/HMI Team | Collected date/time: 10/05/23 11:05 | Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2150228	1	10/12/23 14:34	10/13/23 00:00	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2147741	1	10/10/23 13:45	10/10/23 13:45	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146682	1	10/07/23 00:25	10/07/23 00:25	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146682	10	10/07/23 06:37	10/07/23 06:37	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2147174	1	10/11/23 20:29	10/12/23 12:22	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2146826	1	10/10/23 09:10	10/13/23 00:00	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2146834	1	10/09/23 09:22	10/20/23 13:08	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2148083	1	10/10/23 01:27	10/10/23 01:27	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2148857	1	10/11/23 05:50	10/13/23 19:33	JNJ	Mt. Juliet, TN

MW-16R L1663622-15 GW

Collected by: BH/HMI Team | Collected date/time: 10/05/23 10:30 | Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2148629	1	10/10/23 16:04	10/11/23 12:39	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146682	1	10/07/23 00:42	10/07/23 00:42	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2147174	1	10/11/23 20:29	10/12/23 12:24	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2146826	1	10/10/23 09:10	10/13/23 00:03	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2146834	1	10/09/23 09:22	10/20/23 13:11	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2148083	1	10/10/23 01:46	10/10/23 01:46	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2148857	1	10/11/23 05:50	10/13/23 19:55	JNJ	Mt. Juliet, TN

MW-18R L1663622-16 GW

Collected by: BH/HMI Team | Collected date/time: 10/05/23 10:10 | Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2148629	1	10/10/23 16:04	10/11/23 12:39	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146682	1	10/07/23 00:59	10/07/23 00:59	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2147174	1	10/11/23 20:29	10/12/23 12:26	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2146826	1	10/10/23 09:10	10/13/23 00:06	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2146834	1	10/09/23 09:22	10/20/23 13:15	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2148083	1	10/10/23 02:06	10/10/23 02:06	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2148857	1.05	10/11/23 05:50	10/13/23 20:17	JNJ	Mt. Juliet, TN

MW-19R L1663622-17 GW

Collected by: BH/HMI Team | Collected date/time: 10/05/23 10:30 | Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2149849	1	10/12/23 09:04	10/12/23 18:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2147741	1	10/10/23 13:50	10/10/23 13:50	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146682	1	10/07/23 01:16	10/07/23 01:16	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146682	10	10/07/23 06:54	10/07/23 06:54	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2147174	1	10/11/23 20:29	10/12/23 12:29	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2146826	1	10/10/23 09:10	10/13/23 00:09	DJS	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2146834	1	10/09/23 09:22	10/20/23 13:18	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2148083	1	10/10/23 02:26	10/10/23 02:26	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2148857	1	10/11/23 05:50	10/17/23 04:59	AMG	Mt. Juliet, TN

MW-20R L1663622-18 GW

Collected by: BH/HMI Team | Collected date/time: 10/05/23 11:30 | Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2148629	1	10/10/23 16:04	10/11/23 12:39	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146535	1	10/07/23 03:09	10/07/23 03:09	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2147174	1	10/11/23 20:29	10/12/23 12:31	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2146828	1	10/13/23 12:09	10/15/23 18:41	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2146834	1	10/09/23 09:22	10/20/23 13:21	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2148083	1	10/10/23 02:45	10/10/23 02:45	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2148873	1	10/11/23 14:00	10/12/23 12:17	AMG	Mt. Juliet, TN

MW-23R L1663622-19 GW

Collected by: BH/HMI Team | Collected date/time: 10/05/23 09:45 | Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2148629	1	10/10/23 16:04	10/11/23 12:39	JAC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146649	1	10/06/23 23:55	10/06/23 23:55	GEB	Mt. Juliet, TN

MW-24R L1663622-20 GW

Collected by: BH/HMI Team | Collected date/time: 10/05/23 12:35 | Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2149849	1	10/12/23 09:04	10/12/23 18:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2147741	1	10/10/23 13:55	10/10/23 13:55	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146535	1	10/07/23 03:22	10/07/23 03:22	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2147174	1	10/11/23 20:29	10/12/23 12:33	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2146828	1	10/13/23 12:09	10/15/23 18:44	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2146834	1	10/09/23 09:22	10/20/23 13:32	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2148083	1	10/10/23 03:05	10/10/23 03:05	JAH	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2148873	1	10/11/23 14:00	10/12/23 12:38	AMG	Mt. Juliet, TN

MW-26R L1663622-21 GW

Collected by: BH/HMI Team | Collected date/time: 10/05/23 09:40 | Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 9056A	WG2146649	1	10/07/23 00:42	10/07/23 00:42	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146649	10	10/07/23 06:02	10/07/23 06:02	GEB	Mt. Juliet, TN

MW-32 L1663622-22 GW

Collected by: BH/HMI Team | Collected date/time: 10/05/23 09:00 | Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2149849	1	10/12/23 09:04	10/12/23 18:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2147741	1	10/10/23 14:00	10/10/23 14:00	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146649	1	10/07/23 00:58	10/07/23 00:58	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2147174	1	10/11/23 20:29	10/12/23 12:42	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2146828	1	10/13/23 12:09	10/15/23 18:46	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2146834	1	10/09/23 09:22	10/20/23 13:36	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2149400	1	10/11/23 21:00	10/11/23 21:00	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2148083	1	10/10/23 03:25	10/10/23 03:25	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG2150507	1	10/14/23 08:15	10/16/23 08:39	MAA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2148873	1	10/11/23 14:00	10/12/23 13:00	AMG	Mt. Juliet, TN

MW-33 L1663622-23 GW

Collected by: BH/HMI Team | Collected date/time: 10/05/23 10:00 | Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2148629	1	10/10/23 16:04	10/11/23 12:39	JAC	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2147741	1	10/10/23 14:04	10/10/23 14:04	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146682	1	10/07/23 01:33	10/07/23 01:33	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2147174	1	10/11/23 20:29	10/12/23 12:45	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2146828	1	10/13/23 12:09	10/15/23 18:30	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2146834	1	10/09/23 09:22	10/20/23 13:39	JPD	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2146834	5	10/09/23 09:22	10/20/23 14:03	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2149400	1	10/11/23 21:23	10/11/23 21:23	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2148083	1	10/10/23 03:45	10/10/23 03:45	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG2150507	3	10/14/23 08:15	10/16/23 08:59	MAA	Mt. Juliet, TN

MW-33 L1663622-23 GW

Collected by: BH/HMI Team | Collected date/time: 10/05/23 10:00 | Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2148873	1	10/11/23 14:00	10/12/23 13:22	AMG	Mt. Juliet, TN

WW-NORTH L1663622-24 GW

Collected by: BH/HMI Team | Collected date/time: 10/05/23 10:35 | Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2149849	1	10/12/23 09:04	10/12/23 18:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2147741	1	10/10/23 14:08	10/10/23 14:08	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146682	1	10/07/23 01:50	10/07/23 01:50	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2147174	1	10/11/23 20:29	10/12/23 12:47	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2146828	1	10/13/23 12:09	10/15/23 18:49	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2146834	1	10/09/23 09:22	10/20/23 13:42	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2149400	1	10/11/23 21:45	10/11/23 21:45	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2148083	1	10/10/23 04:04	10/10/23 04:04	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG2150507	1	10/14/23 08:15	10/16/23 09:19	MAA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2148873	1	10/11/23 14:00	10/12/23 15:20	AMG	Mt. Juliet, TN

WW-SOUTH L1663622-25 GW

Collected by: BH/HMI Team | Collected date/time: 10/05/23 09:50 | Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2149849	1	10/12/23 09:04	10/12/23 18:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2147741	1	10/10/23 14:22	10/10/23 14:22	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146649	1	10/07/23 01:14	10/07/23 01:14	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146649	10	10/07/23 07:05	10/07/23 07:05	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2147174	1	10/11/23 20:29	10/12/23 12:53	NDL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2146828	1	10/13/23 12:09	10/15/23 18:57	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2146834	1	10/09/23 09:22	10/20/23 13:45	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2149400	1	10/11/23 22:08	10/11/23 22:08	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2148083	1	10/10/23 04:24	10/10/23 04:24	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG2150507	1	10/14/23 08:15	10/16/23 09:38	MAA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2148873	1	10/11/23 14:00	10/12/23 15:42	AMG	Mt. Juliet, TN

WW-EAST L1663622-26 GW

Collected by: BH/HMI Team | Collected date/time: 10/05/23 11:20 | Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2149849	1	10/12/23 09:04	10/12/23 18:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2147741	1	10/10/23 14:33	10/10/23 14:33	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146682	1	10/07/23 02:07	10/07/23 02:07	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2147175	1	10/10/23 14:19	10/11/23 11:05	LAS	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2146828	1	10/13/23 12:15	10/15/23 19:00	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2146835	1	10/09/23 10:08	10/13/23 16:33	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2149400	1	10/11/23 22:30	10/11/23 22:30	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2148090	1	10/10/23 05:06	10/10/23 05:06	DYW	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG2150507	1	10/14/23 08:15	10/16/23 09:58	MAA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2148873	1	10/11/23 14:00	10/12/23 16:03	AMG	Mt. Juliet, TN

DUP-01 L1663622-27 GW

Collected by: BH/HMI Team | Collected date/time: 10/05/23 10:00 | Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2149849	1	10/12/23 09:04	10/12/23 18:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2147742	1	10/10/23 13:22	10/10/23 13:22	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146682	1	10/07/23 02:58	10/07/23 02:58	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146682	10	10/07/23 08:02	10/07/23 08:02	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2147175	1	10/10/23 14:19	10/11/23 11:07	LAS	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2146828	1	10/13/23 12:15	10/15/23 19:03	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2146835	1	10/09/23 10:08	10/13/23 16:37	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2148697	1	10/11/23 19:01	10/11/23 19:01	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2148114	1	10/10/23 02:48	10/10/23 02:48	DYW	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG2150507	1	10/14/23 08:15	10/16/23 10:18	MAA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2148873	1	10/11/23 14:00	10/12/23 16:25	AMG	Mt. Juliet, TN

DUP-02 L1663622-28 GW

Collected by: BH/HMI Team | Collected date/time: 10/05/23 10:00 | Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2149849	1	10/12/23 09:04	10/12/23 18:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2147742	1	10/10/23 13:37	10/10/23 13:37	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146649	1	10/07/23 01:32	10/07/23 01:32	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2147175	1	10/10/23 14:19	10/11/23 11:10	LAS	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2146828	1	10/13/23 12:09	10/15/23 19:06	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2146835	1	10/09/23 10:08	10/13/23 16:40	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2148697	1	10/11/23 19:24	10/11/23 19:24	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2148114	1	10/10/23 03:09	10/10/23 03:09	DYW	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG2150507	1	10/14/23 08:15	10/16/23 10:37	MAA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2148873	1	10/11/23 14:00	10/12/23 16:47	AMG	Mt. Juliet, TN

DUP-03 L1663622-29 GW

Collected by: BH/HMI Team | Collected date/time: 10/05/23 11:00 | Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2149849	1	10/12/23 09:04	10/12/23 18:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2147742	1	10/10/23 13:43	10/10/23 13:43	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146682	1	10/07/23 03:15	10/07/23 03:15	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2147175	1	10/10/23 14:19	10/11/23 11:12	LAS	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2146828	1	10/13/23 12:09	10/15/23 19:09	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2146835	1	10/09/23 10:08	10/13/23 16:50	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2148697	1	10/11/23 19:47	10/11/23 19:47	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2148114	1	10/10/23 03:31	10/10/23 03:31	DYW	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG2150507	2.5	10/14/23 08:15	10/16/23 10:57	MAA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2148874	1	10/12/23 11:39	10/13/23 11:55	JNJ	Mt. Juliet, TN

EB-01 L1663622-31 GW

Collected by: BH/HMI Team | Collected date/time: 10/05/23 11:45 | Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2149849	1	10/12/23 09:04	10/12/23 18:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2147742	1	10/10/23 13:49	10/10/23 13:49	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2167736	1	11/09/23 13:43	11/09/23 13:43	KMC	Mt. Juliet, TN
Mercury by Method 7470A	WG2147175	1	10/10/23 14:19	10/11/23 11:14	LAS	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2146828	1	10/13/23 12:09	10/15/23 19:14	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2146835	1	10/09/23 10:08	10/13/23 16:53	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2148697	1	10/11/23 18:15	10/11/23 18:15	DWR	Mt. Juliet, TN

EB-01 L1663622-31 GW

Collected by: BH/HMI Team
Collected date/time: 10/05/23 11:45
Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2148114	1	10/10/23 02:04	10/10/23 02:04	DYW	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 3511/8015	WG2150507	1	10/14/23 08:15	10/16/23 11:17	MAA	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2148874	1	10/12/23 11:39	10/13/23 12:39	JNJ	Mt. Juliet, TN

EB-02 L1663622-32 GW

Collected by: BH/HMI Team
Collected date/time: 10/05/23 10:45
Received date/time: 10/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2149849	1	10/12/23 09:04	10/12/23 18:33	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2147742	1	10/10/23 15:19	10/10/23 15:19	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2146682	1	10/07/23 03:31	10/07/23 03:31	GEB	Mt. Juliet, TN
Mercury by Method 7470A	WG2147175	1	10/10/23 14:19	10/11/23 11:17	LAS	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2146828	1	10/13/23 12:09	10/15/23 19:17	ZSA	Mt. Juliet, TN
Metals (ICPMS) by Method 6020	WG2146835	1	10/09/23 10:08	10/13/23 16:57	JPD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2148114	1	10/10/23 02:26	10/10/23 02:26	DYW	Mt. Juliet, TN
Semi Volatile Organic Compounds (GC/MS) by Method 8270C	WG2148874	1.05	10/12/23 11:39	10/13/23 13:00	JNJ	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

Report Revision History

Level II Report - Version 1: 10/23/23 18:32
Level II Report - Version 2: 10/27/23 15:59
Level II Report - Version 3: 11/12/23 20:05
Level II Report - Version 4: 11/21/23 10:59
Level II Report - Version 5: 12/01/23 10:38

Project Narrative

10/27/23: Revised report to remove sample data that should not have been reported.

11/12/23: Revised report with updated data for Anions on EB-01.

11/21/23: Revised QC to reflect updated EB-01 run.

12/6/23: Reran to correct QC issue.

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	507		10.0	1	10/12/2023 12:22	WG2149548

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	91.7	J6	0.379	1.00	1	10/06/2023 22:27	WG2146682
Fluoride	0.809		0.0640	0.150	1	10/06/2023 22:27	WG2146682
Nitrate	5.21		0.0480	0.100	1	10/06/2023 22:27	WG2146682
Nitrite	0.0657	J	0.0420	0.100	1	10/06/2023 22:27	WG2146682
Sulfate	71.1	J6	0.594	5.00	1	10/06/2023 22:27	WG2146682

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	10/12/2023 11:49	WG2147174

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.179	J	0.0200	0.200	1	10/12/2023 22:42	WG2146826

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		0.0185	0.100	1	10/20/2023 12:27	WG2146834
Arsenic,Dissolved	0.00567		0.000180	0.00200	1	10/20/2023 12:27	WG2146834
Barium,Dissolved	0.175		0.000381	0.00200	1	10/20/2023 12:27	WG2146834
Cadmium,Dissolved	U		0.000150	0.00100	1	10/20/2023 12:27	WG2146834
Chromium,Dissolved	0.00134	J	0.00124	0.00200	1	10/20/2023 12:27	WG2146834
Copper,Dissolved	0.00189	J	0.00151	0.00500	1	10/20/2023 12:27	WG2146834
Cobalt,Dissolved	U		0.0000596	0.00200	1	10/20/2023 12:27	WG2146834
Iron,Dissolved	U		0.0281	0.100	1	10/20/2023 12:27	WG2146834
Lead,Dissolved	U		0.000849	0.00200	1	10/20/2023 12:27	WG2146834
Manganese,Dissolved	U		0.000704	0.00500	1	10/20/2023 12:27	WG2146834
Molybdenum,Dissolved	0.00205	J	0.000348	0.00500	1	10/20/2023 12:27	WG2146834
Nickel,Dissolved	U		0.000816	0.00200	1	10/20/2023 12:27	WG2146834
Selenium,Dissolved	0.00186	J	0.000300	0.00200	1	10/20/2023 12:27	WG2146834
Silver,Dissolved	U		0.0000700	0.00200	1	10/20/2023 12:27	WG2146834
Uranium,Dissolved	0.00206	J	0.0000700	0.0200	1	10/20/2023 12:27	WG2146834
Zinc,Dissolved	U		0.00302	0.0250	1	10/20/2023 12:27	WG2146834

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0113	0.0500	1	10/09/2023 22:10	WG2148083
Benzene	U		0.0000941	0.00100	1	10/09/2023 22:10	WG2148083
Bromodichloromethane	0.000169	J	0.000136	0.00100	1	10/09/2023 22:10	WG2148083
Bromoform	U		0.000129	0.00100	1	10/09/2023 22:10	WG2148083
Bromomethane	U		0.000605	0.00500	1	10/09/2023 22:10	WG2148083
n-Butylbenzene	U		0.000157	0.00100	1	10/09/2023 22:10	WG2148083
sec-Butylbenzene	U		0.000125	0.00100	1	10/09/2023 22:10	WG2148083
tert-Butylbenzene	U		0.000127	0.00100	1	10/09/2023 22:10	WG2148083
Carbon disulfide	0.0000980	J	0.0000962	0.00100	1	10/09/2023 22:10	WG2148083

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Carbon tetrachloride	U		0.000128	0.00100	1	10/09/2023 22:10	WG2148083
Chlorobenzene	U	J4	0.000116	0.00100	1	10/09/2023 22:10	WG2148083
Chlorodibromomethane	U		0.000140	0.00100	1	10/09/2023 22:10	WG2148083
Chloroethane	U		0.000192	0.00500	1	10/09/2023 22:10	WG2148083
Chloroform	0.00162	J	0.000111	0.00500	1	10/09/2023 22:10	WG2148083
Chloromethane	U		0.000960	0.00250	1	10/09/2023 22:10	WG2148083
1,2-Dibromoethane	U		0.000126	0.00100	1	10/09/2023 22:10	WG2148083
1,1-Dichloroethane	U		0.000100	0.00100	1	10/09/2023 22:10	WG2148083
1,2-Dichloroethane	U		0.0000819	0.00100	1	10/09/2023 22:10	WG2148083
1,1-Dichloroethene	U		0.000188	0.00100	1	10/09/2023 22:10	WG2148083
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	10/09/2023 22:10	WG2148083
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	10/09/2023 22:10	WG2148083
1,2-Dichloropropane	U		0.000149	0.00100	1	10/09/2023 22:10	WG2148083
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	10/09/2023 22:10	WG2148083
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	10/09/2023 22:10	WG2148083
Ethylbenzene	U		0.000137	0.00100	1	10/09/2023 22:10	WG2148083
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	10/09/2023 22:10	WG2148083
2-Hexanone	U		0.000787	0.0100	1	10/09/2023 22:10	WG2148083
Isopropylbenzene	U		0.000105	0.00100	1	10/09/2023 22:10	WG2148083
p-Isopropyltoluene	U		0.000120	0.00100	1	10/09/2023 22:10	WG2148083
2-Butanone (MEK)	U		0.00119	0.0100	1	10/09/2023 22:10	WG2148083
Methylene Chloride	U		0.000430	0.00500	1	10/09/2023 22:10	WG2148083
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	10/09/2023 22:10	WG2148083
Methyl tert-butyl ether	U		0.000101	0.00100	1	10/09/2023 22:10	WG2148083
Naphthalene	U		0.00100	0.00500	1	10/09/2023 22:10	WG2148083
n-Propylbenzene	U		0.0000993	0.00100	1	10/09/2023 22:10	WG2148083
Styrene	U		0.000118	0.00100	1	10/09/2023 22:10	WG2148083
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	10/09/2023 22:10	WG2148083
Tetrachloroethene	U		0.000300	0.00100	1	10/09/2023 22:10	WG2148083
Toluene	U		0.000278	0.00100	1	10/09/2023 22:10	WG2148083
1,1,1-Trichloroethane	U		0.000149	0.00100	1	10/09/2023 22:10	WG2148083
1,1,2-Trichloroethane	U		0.000158	0.00100	1	10/09/2023 22:10	WG2148083
Trichloroethene	U		0.000190	0.00100	1	10/09/2023 22:10	WG2148083
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	10/09/2023 22:10	WG2148083
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	10/09/2023 22:10	WG2148083
Vinyl chloride	U		0.000234	0.00100	1	10/09/2023 22:10	WG2148083
Xylenes, Total	U		0.000174	0.00300	1	10/09/2023 22:10	WG2148083
(S) Toluene-d8	*98.4*			*80.0-120*		*10/09/2023 22:10*	WG2148083
(S) 4-Bromofluorobenzene	*109*			*77.0-126*		*10/09/2023 22:10*	WG2148083
(S) 1,2-Dichloroethane-d4	*88.8*			*70.0-130*		*10/09/2023 22:10*	WG2148083

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	704		13.3	1	10/11/2023 12:39	WG2148629

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	195		0.379	1.00	1	10/06/2023 22:35	WG2146649
Fluoride	0.878		0.0640	0.150	1	10/06/2023 22:35	WG2146649
Nitrate	4.32		0.0480	0.100	1	10/06/2023 22:35	WG2146649
Nitrite	U		0.0420	0.100	1	10/06/2023 22:35	WG2146649
Sulfate	62.3		0.594	5.00	1	10/06/2023 22:35	WG2146649

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	10/12/2023 11:57	WG2147174

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.211		0.0200	0.200	1	10/12/2023 23:17	WG2146826

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		0.0185	0.100	1	10/20/2023 12:31	WG2146834
Arsenic,Dissolved	0.00357		0.000180	0.00200	1	10/20/2023 12:31	WG2146834
Barium,Dissolved	0.109		0.000381	0.00200	1	10/20/2023 12:31	WG2146834
Cadmium,Dissolved	U		0.000150	0.00100	1	10/20/2023 12:31	WG2146834
Chromium,Dissolved	0.00135	J	0.00124	0.00200	1	10/20/2023 12:31	WG2146834
Copper,Dissolved	0.00774		0.00151	0.00500	1	10/20/2023 12:31	WG2146834
Cobalt,Dissolved	U		0.0000596	0.00200	1	10/20/2023 12:31	WG2146834
Iron,Dissolved	U		0.0281	0.100	1	10/20/2023 12:31	WG2146834
Lead,Dissolved	U		0.000849	0.00200	1	10/20/2023 12:31	WG2146834
Manganese,Dissolved	U		0.000704	0.00500	1	10/20/2023 12:31	WG2146834
Molybdenum,Dissolved	0.00243	J	0.000348	0.00500	1	10/20/2023 12:31	WG2146834
Nickel,Dissolved	0.00112	J	0.000816	0.00200	1	10/20/2023 12:31	WG2146834
Selenium,Dissolved	0.00224		0.000300	0.00200	1	10/20/2023 12:31	WG2146834
Silver,Dissolved	U		0.0000700	0.00200	1	10/20/2023 12:31	WG2146834
Uranium,Dissolved	0.00262	J	0.0000700	0.0200	1	10/20/2023 12:31	WG2146834
Zinc,Dissolved	0.0371		0.00302	0.0250	1	10/20/2023 12:31	WG2146834

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0113	0.0500	1	10/09/2023 22:30	WG2148083
Benzene	U		0.0000941	0.00100	1	10/09/2023 22:30	WG2148083
Bromodichloromethane	U		0.000136	0.00100	1	10/09/2023 22:30	WG2148083
Bromoform	U		0.000129	0.00100	1	10/09/2023 22:30	WG2148083
Bromomethane	U		0.000605	0.00500	1	10/09/2023 22:30	WG2148083
n-Butylbenzene	U		0.000157	0.00100	1	10/09/2023 22:30	WG2148083
sec-Butylbenzene	U		0.000125	0.00100	1	10/09/2023 22:30	WG2148083
tert-Butylbenzene	U		0.000127	0.00100	1	10/09/2023 22:30	WG2148083
Carbon disulfide	U		0.0000962	0.00100	1	10/09/2023 22:30	WG2148083

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Carbon tetrachloride	U		0.000128	0.00100	1	10/09/2023 22:30	WG2148083
Chlorobenzene	U	J4	0.000116	0.00100	1	10/09/2023 22:30	WG2148083
Chlorodibromomethane	U		0.000140	0.00100	1	10/09/2023 22:30	WG2148083
Chloroethane	U		0.000192	0.00500	1	10/09/2023 22:30	WG2148083
Chloroform	0.000178	J	0.000111	0.00500	1	10/09/2023 22:30	WG2148083
Chloromethane	U		0.000960	0.00250	1	10/09/2023 22:30	WG2148083
1,2-Dibromoethane	U		0.000126	0.00100	1	10/09/2023 22:30	WG2148083
1,1-Dichloroethane	U		0.000100	0.00100	1	10/09/2023 22:30	WG2148083
1,2-Dichloroethane	U		0.0000819	0.00100	1	10/09/2023 22:30	WG2148083
1,1-Dichloroethene	U		0.000188	0.00100	1	10/09/2023 22:30	WG2148083
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	10/09/2023 22:30	WG2148083
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	10/09/2023 22:30	WG2148083
1,2-Dichloropropane	U		0.000149	0.00100	1	10/09/2023 22:30	WG2148083
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	10/09/2023 22:30	WG2148083
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	10/09/2023 22:30	WG2148083
Ethylbenzene	U		0.000137	0.00100	1	10/09/2023 22:30	WG2148083
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	10/09/2023 22:30	WG2148083
2-Hexanone	U		0.000787	0.0100	1	10/09/2023 22:30	WG2148083
Isopropylbenzene	U		0.000105	0.00100	1	10/09/2023 22:30	WG2148083
p-Isopropyltoluene	U		0.000120	0.00100	1	10/09/2023 22:30	WG2148083
2-Butanone (MEK)	U		0.00119	0.0100	1	10/09/2023 22:30	WG2148083
Methylene Chloride	U		0.000430	0.00500	1	10/09/2023 22:30	WG2148083
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	10/09/2023 22:30	WG2148083
Methyl tert-butyl ether	U		0.000101	0.00100	1	10/09/2023 22:30	WG2148083
Naphthalene	U		0.00100	0.00500	1	10/09/2023 22:30	WG2148083
n-Propylbenzene	U		0.0000993	0.00100	1	10/09/2023 22:30	WG2148083
Styrene	U		0.000118	0.00100	1	10/09/2023 22:30	WG2148083
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	10/09/2023 22:30	WG2148083
Tetrachloroethene	U		0.000300	0.00100	1	10/09/2023 22:30	WG2148083
Toluene	U		0.000278	0.00100	1	10/09/2023 22:30	WG2148083
1,1,1-Trichloroethane	U		0.000149	0.00100	1	10/09/2023 22:30	WG2148083
1,1,2-Trichloroethane	U		0.000158	0.00100	1	10/09/2023 22:30	WG2148083
Trichloroethene	U		0.000190	0.00100	1	10/09/2023 22:30	WG2148083
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	10/09/2023 22:30	WG2148083
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	10/09/2023 22:30	WG2148083
Vinyl chloride	U		0.000234	0.00100	1	10/09/2023 22:30	WG2148083
Xylenes, Total	U		0.000174	0.00300	1	10/09/2023 22:30	WG2148083
(S) Toluene-d8	*99.0*			*80.0-120*		*10/09/2023 22:30*	WG2148083
(S) 4-Bromofluorobenzene	*97.6*			*77.0-126*		*10/09/2023 22:30*	WG2148083
(S) 1,2-Dichloroethane-d4	*86.2*			*70.0-130*		*10/09/2023 22:30*	WG2148083

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000886	0.00100	1	10/12/2023 06:23	WG2148857
Acenaphthylene	U		0.0000921	0.00100	1	10/12/2023 06:23	WG2148857
Acetophenone	U		0.000208	0.0100	1	10/12/2023 06:23	WG2148857
Anthracene	U		0.0000804	0.00100	1	10/12/2023 06:23	WG2148857
Atrazine	U		0.000255	0.0100	1	10/12/2023 06:23	WG2148857
Benzo(a)anthracene	U		0.000199	0.00100	1	10/12/2023 06:23	WG2148857
Benzaldehyde	U	J4	0.00169	0.0100	1	10/12/2023 06:23	WG2148857
Benzo(b)fluoranthene	U		0.000130	0.00100	1	10/12/2023 06:23	WG2148857
Benzo(k)fluoranthene	U		0.000120	0.00100	1	10/12/2023 06:23	WG2148857
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	10/12/2023 06:23	WG2148857
Benzo(a)pyrene	U		0.0000381	0.000200	1	10/12/2023 06:23	WG2148857
Biphenyl	U		0.000790	0.0100	1	10/12/2023 06:23	WG2148857

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	10/12/2023 06:23	WG2148857
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	10/12/2023 06:23	WG2148857
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	10/12/2023 06:23	WG2148857
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	10/12/2023 06:23	WG2148857
2-Chloronaphthalene	U		0.0000648	0.00100	1	10/12/2023 06:23	WG2148857
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	10/12/2023 06:23	WG2148857
Caprolactam	U		0.000309	0.0100	1	10/12/2023 06:23	WG2148857
Carbazole	U		0.000111	0.0100	1	10/12/2023 06:23	WG2148857
Chrysene	U		0.000130	0.00100	1	10/12/2023 06:23	WG2148857
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	10/12/2023 06:23	WG2148857
Dibenzofuran	U		0.0000970	0.0100	1	10/12/2023 06:23	WG2148857
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	10/12/2023 06:23	WG2148857
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	10/12/2023 06:23	WG2148857
2,6-Dinitrotoluene	U		0.000250	0.0100	1	10/12/2023 06:23	WG2148857
Fluoranthene	U		0.000102	0.00100	1	10/12/2023 06:23	WG2148857
Fluorene	U		0.0000844	0.00100	1	10/12/2023 06:23	WG2148857
Hexachlorobenzene	U		0.0000755	0.00100	1	10/12/2023 06:23	WG2148857
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	10/12/2023 06:23	WG2148857
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	10/12/2023 06:23	WG2148857
Hexachloroethane	U		0.000127	0.0100	1	10/12/2023 06:23	WG2148857
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	10/12/2023 06:23	WG2148857
Isophorone	U		0.000143	0.0100	1	10/12/2023 06:23	WG2148857
1-Methylnaphthalene	U		0.0000790	0.00100	1	10/12/2023 06:23	WG2148857
2-Methylnaphthalene	U		0.000117	0.00100	1	10/12/2023 06:23	WG2148857
Naphthalene	U		0.000159	0.00100	1	10/12/2023 06:23	WG2148857
Nitrobenzene	U		0.000297	0.0100	1	10/12/2023 06:23	WG2148857
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	10/12/2023 06:23	WG2148857
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	10/12/2023 06:23	WG2148857
Phenanthrene	U		0.000112	0.00100	1	10/12/2023 06:23	WG2148857
Benzylbutyl phthalate	U		0.000765	0.00300	1	10/12/2023 06:23	WG2148857
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	10/12/2023 06:23	WG2148857
Di-n-butyl phthalate	U		0.000453	0.00300	1	10/12/2023 06:23	WG2148857
Diethyl phthalate	U		0.000287	0.00300	1	10/12/2023 06:23	WG2148857
Dimethyl phthalate	U		0.000260	0.00300	1	10/12/2023 06:23	WG2148857
Di-n-octyl phthalate	U		0.000932	0.00300	1	10/12/2023 06:23	WG2148857
Pyrene	U		0.000107	0.00100	1	10/12/2023 06:23	WG2148857
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	10/12/2023 06:23	WG2148857
4-Chloro-3-methylphenol	U	J4	0.000131	0.0100	1	10/12/2023 06:23	WG2148857
2-Chlorophenol	U		0.000133	0.0100	1	10/12/2023 06:23	WG2148857
2,4-Dichlorophenol	U		0.000102	0.0100	1	10/12/2023 06:23	WG2148857
2,4-Dimethylphenol	U		0.0000636	0.0100	1	10/12/2023 06:23	WG2148857
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	10/12/2023 06:23	WG2148857
2,4-Dinitrophenol	U		0.00593	0.0100	1	10/12/2023 06:23	WG2148857
2-Nitrophenol	U		0.000117	0.0100	1	10/12/2023 06:23	WG2148857
2-Nitroaniline	U		0.000102	0.0100	1	10/12/2023 06:23	WG2148857
2-Methylphenol	U		0.0000929	0.0100	1	10/12/2023 06:23	WG2148857
3&4-Methyl Phenol	U		0.000168	0.0100	1	10/12/2023 06:23	WG2148857
3-Nitroaniline	U		0.0000869	0.0100	1	10/12/2023 06:23	WG2148857
4-Chloroaniline	U		0.000234	0.0100	1	10/12/2023 06:23	WG2148857
4-Nitroaniline	U		0.0000910	0.0100	1	10/12/2023 06:23	WG2148857
4-Nitrophenol	U		0.000143	0.0100	1	10/12/2023 06:23	WG2148857
Pentachlorophenol	U		0.000313	0.0100	1	10/12/2023 06:23	WG2148857
Phenol	U		0.00433	0.0100	1	10/12/2023 06:23	WG2148857
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	10/12/2023 06:23	WG2148857
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	10/12/2023 06:23	WG2148857
(S) 2-Fluorophenol	*16.2*			*10.0-120*		*10/12/2023 06:23*	WG2148857

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
(S) Phenol-d5	*9.84*	J2		*10.0-120*		*10/12/2023 06:23*	WG2148857
(S) Nitrobenzene-d5	*45.3*			*10.0-127*		*10/12/2023 06:23*	WG2148857
(S) 2-Fluorobiphenyl	*47.4*			*10.0-130*		*10/12/2023 06:23*	WG2148857
(S) 2,4,6-Tribromophenol	*36.2*			*10.0-155*		*10/12/2023 06:23*	WG2148857
(S) p-Terphenyl-d14	*55.2*			*10.0-128*		*10/12/2023 06:23*	WG2148857

Sample Narrative:

L1663622-02 WG2148857: Duplicate Analysis performed due to surrogate failure. Results confirm; reporting in hold data.

MW-3
Collected date/time: 10/05/23 10:15

L1663622

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	30.7		0.379	1.00	1	10/06/2023 22:44	WG2146682
Fluoride	0.322		0.0640	0.150	1	10/06/2023 22:44	WG2146682
Nitrate	1.69		0.0480	0.100	1	10/06/2023 22:44	WG2146682
Nitrite	U		0.0420	0.100	1	10/06/2023 22:44	WG2146682
Sulfate	68.0		0.594	5.00	1	10/06/2023 22:44	WG2146682

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	520		10.0	1	10/11/2023 12:39	WG2148629

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	97.7		0.379	1.00	1	10/06/2023 22:51	WG2146649
Fluoride	0.917		0.0640	0.150	1	10/06/2023 22:51	WG2146649
Nitrate	4.24		0.0480	0.100	1	10/06/2023 22:51	WG2146649
Nitrite	U		0.0420	0.100	1	10/06/2023 22:51	WG2146649
Sulfate	55.2		0.594	5.00	1	10/06/2023 22:51	WG2146649

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	10/12/2023 11:59	WG2147174

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.177	J	0.0200	0.200	1	10/12/2023 23:20	WG2146826

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		0.0185	0.100	1	10/20/2023 12:34	WG2146834
Arsenic,Dissolved	0.00438		0.000180	0.00200	1	10/20/2023 12:34	WG2146834
Barium,Dissolved	0.111		0.000381	0.00200	1	10/20/2023 12:34	WG2146834
Cadmium,Dissolved	U		0.000150	0.00100	1	10/20/2023 12:34	WG2146834
Chromium,Dissolved	0.0100		0.00124	0.00200	1	10/20/2023 12:34	WG2146834
Copper,Dissolved	0.00181	J	0.00151	0.00500	1	10/20/2023 12:34	WG2146834
Cobalt,Dissolved	U		0.0000596	0.00200	1	10/20/2023 12:34	WG2146834
Iron,Dissolved	U		0.0281	0.100	1	10/20/2023 12:34	WG2146834
Lead,Dissolved	U		0.000849	0.00200	1	10/20/2023 12:34	WG2146834
Manganese,Dissolved	U		0.000704	0.00500	1	10/20/2023 12:34	WG2146834
Molybdenum,Dissolved	0.00265	J	0.000348	0.00500	1	10/20/2023 12:34	WG2146834
Nickel,Dissolved	0.00202		0.000816	0.00200	1	10/20/2023 12:34	WG2146834
Selenium,Dissolved	0.00132	J	0.000300	0.00200	1	10/20/2023 12:34	WG2146834
Silver,Dissolved	U		0.0000700	0.00200	1	10/20/2023 12:34	WG2146834
Uranium,Dissolved	0.00180	J	0.0000700	0.0200	1	10/20/2023 12:34	WG2146834
Zinc,Dissolved	0.0134	J	0.00302	0.0250	1	10/20/2023 12:34	WG2146834

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0113	0.0500	1	10/09/2023 22:49	WG2148083
Benzene	U		0.0000941	0.00100	1	10/09/2023 22:49	WG2148083
Bromodichloromethane	0.00167		0.000136	0.00100	1	10/09/2023 22:49	WG2148083
Bromoform	U		0.000129	0.00100	1	10/09/2023 22:49	WG2148083
Bromomethane	U		0.000605	0.00500	1	10/09/2023 22:49	WG2148083
n-Butylbenzene	U		0.000157	0.00100	1	10/09/2023 22:49	WG2148083
sec-Butylbenzene	U		0.000125	0.00100	1	10/09/2023 22:49	WG2148083
tert-Butylbenzene	U		0.000127	0.00100	1	10/09/2023 22:49	WG2148083
Carbon disulfide	U		0.0000962	0.00100	1	10/09/2023 22:49	WG2148083

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Carbon tetrachloride	U		0.000128	0.00100	1	10/09/2023 22:49	WG2148083
Chlorobenzene	U	J4	0.000116	0.00100	1	10/09/2023 22:49	WG2148083
Chlorodibromomethane	U		0.000140	0.00100	1	10/09/2023 22:49	WG2148083
Chloroethane	U		0.000192	0.00500	1	10/09/2023 22:49	WG2148083
Chloroform	0.0104		0.000111	0.00500	1	10/09/2023 22:49	WG2148083
Chloromethane	U		0.000960	0.00250	1	10/09/2023 22:49	WG2148083
1,2-Dibromoethane	U		0.000126	0.00100	1	10/09/2023 22:49	WG2148083
1,1-Dichloroethane	U		0.000100	0.00100	1	10/09/2023 22:49	WG2148083
1,2-Dichloroethane	U		0.0000819	0.00100	1	10/09/2023 22:49	WG2148083
1,1-Dichloroethene	U		0.000188	0.00100	1	10/09/2023 22:49	WG2148083
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	10/09/2023 22:49	WG2148083
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	10/09/2023 22:49	WG2148083
1,2-Dichloropropane	U		0.000149	0.00100	1	10/09/2023 22:49	WG2148083
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	10/09/2023 22:49	WG2148083
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	10/09/2023 22:49	WG2148083
Ethylbenzene	U		0.000137	0.00100	1	10/09/2023 22:49	WG2148083
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	10/09/2023 22:49	WG2148083
2-Hexanone	U		0.000787	0.0100	1	10/09/2023 22:49	WG2148083
Isopropylbenzene	U		0.000105	0.00100	1	10/09/2023 22:49	WG2148083
p-Isopropyltoluene	U		0.000120	0.00100	1	10/09/2023 22:49	WG2148083
2-Butanone (MEK)	U		0.00119	0.0100	1	10/09/2023 22:49	WG2148083
Methylene Chloride	U		0.000430	0.00500	1	10/09/2023 22:49	WG2148083
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	10/09/2023 22:49	WG2148083
Methyl tert-butyl ether	U		0.000101	0.00100	1	10/09/2023 22:49	WG2148083
Naphthalene	U		0.00100	0.00500	1	10/09/2023 22:49	WG2148083
n-Propylbenzene	U		0.0000993	0.00100	1	10/09/2023 22:49	WG2148083
Styrene	U		0.000118	0.00100	1	10/09/2023 22:49	WG2148083
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	10/09/2023 22:49	WG2148083
Tetrachloroethene	U		0.000300	0.00100	1	10/09/2023 22:49	WG2148083
Toluene	U		0.000278	0.00100	1	10/09/2023 22:49	WG2148083
1,1,1-Trichloroethane	U		0.000149	0.00100	1	10/09/2023 22:49	WG2148083
1,1,2-Trichloroethane	U		0.000158	0.00100	1	10/09/2023 22:49	WG2148083
Trichloroethene	U		0.000190	0.00100	1	10/09/2023 22:49	WG2148083
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	10/09/2023 22:49	WG2148083
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	10/09/2023 22:49	WG2148083
Vinyl chloride	U		0.000234	0.00100	1	10/09/2023 22:49	WG2148083
Xylenes, Total	U		0.000174	0.00300	1	10/09/2023 22:49	WG2148083
(S) Toluene-d8	*99.9*			*80.0-120*		*10/09/2023 22:49*	WG2148083
(S) 4-Bromofluorobenzene	*103*			*77.0-126*		*10/09/2023 22:49*	WG2148083
(S) 1,2-Dichloroethane-d4	*89.0*			*70.0-130*		*10/09/2023 22:49*	WG2148083

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000930	0.00105	1.05	10/13/2023 06:01	WG2148857
Acenaphthylene	U		0.0000967	0.00105	1.05	10/13/2023 06:01	WG2148857
Acetophenone	U		0.000218	0.0105	1.05	10/13/2023 06:01	WG2148857
Anthracene	U		0.0000844	0.00105	1.05	10/13/2023 06:01	WG2148857
Atrazine	U		0.000268	0.0105	1.05	10/13/2023 06:01	WG2148857
Benzo(a)anthracene	U		0.000209	0.00105	1.05	10/13/2023 06:01	WG2148857
Benzaldehyde	U	J4	0.00177	0.0105	1.05	10/13/2023 06:01	WG2148857
Benzo(b)fluoranthene	U		0.000136	0.00105	1.05	10/13/2023 06:01	WG2148857
Benzo(k)fluoranthene	U		0.000126	0.00105	1.05	10/13/2023 06:01	WG2148857
Benzo(g,h,i)perylene	U		0.000127	0.00105	1.05	10/13/2023 06:01	WG2148857
Benzo(a)pyrene	U		0.0000400	0.000210	1.05	10/13/2023 06:01	WG2148857
Biphenyl	U		0.000829	0.0105	1.05	10/13/2023 06:01	WG2148857

Received by OCD: 4/15/2024 1:46:20 PM

MW-4
Collected date/time: 10/05/23 09:45
L1663622

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Bis(2-chlorethoxy)methane	U		0.000122	0.0105	1.05	10/13/2023 06:01	WG2148857
Bis(2-chloroethyl)ether	U		0.000144	0.0105	1.05	10/13/2023 06:01	WG2148857
2,2-Oxybis(1-Chloropropane)	U		0.000221	0.0105	1.05	10/13/2023 06:01	WG2148857
4-Bromophenyl-phenylether	U		0.0000921	0.0105	1.05	10/13/2023 06:01	WG2148857
2-Chloronaphthalene	U		0.0000680	0.00105	1.05	10/13/2023 06:01	WG2148857
4-Chlorophenyl-phenylether	U		0.0000972	0.0105	1.05	10/13/2023 06:01	WG2148857
Caprolactam	U		0.000324	0.0105	1.05	10/13/2023 06:01	WG2148857
Carbazole	U		0.000117	0.0105	1.05	10/13/2023 06:01	WG2148857
Chrysene	U		0.000136	0.00105	1.05	10/13/2023 06:01	WG2148857
Dibenz(a,h)anthracene	U		0.0000676	0.000210	1.05	10/13/2023 06:01	WG2148857
Dibenzofuran	U		0.000102	0.0105	1.05	10/13/2023 06:01	WG2148857
3,3-Dichlorobenzidine	U		0.000223	0.0105	1.05	10/13/2023 06:01	WG2148857
2,4-Dinitrotoluene	U		0.000103	0.0105	1.05	10/13/2023 06:01	WG2148857
2,6-Dinitrotoluene	U		0.000263	0.0105	1.05	10/13/2023 06:01	WG2148857
Fluoranthene	U		0.000107	0.00105	1.05	10/13/2023 06:01	WG2148857
Fluorene	U		0.0000886	0.00105	1.05	10/13/2023 06:01	WG2148857
Hexachlorobenzene	U		0.0000793	0.00105	1.05	10/13/2023 06:01	WG2148857
Hexachloro-1,3-butadiene	U		0.000102	0.0105	1.05	10/13/2023 06:01	WG2148857
Hexachlorocyclopentadiene	U		0.0000628	0.0105	1.05	10/13/2023 06:01	WG2148857
Hexachloroethane	U		0.000133	0.0105	1.05	10/13/2023 06:01	WG2148857
Indeno(1,2,3-cd)pyrene	U		0.000293	0.00105	1.05	10/13/2023 06:01	WG2148857
Isophorone	U		0.000150	0.0105	1.05	10/13/2023 06:01	WG2148857
1-Methylnaphthalene	U		0.0000829	0.00105	1.05	10/13/2023 06:01	WG2148857
2-Methylnaphthalene	U		0.000123	0.00105	1.05	10/13/2023 06:01	WG2148857
Naphthalene	U		0.000167	0.00105	1.05	10/13/2023 06:01	WG2148857
Nitrobenzene	U		0.000312	0.0105	1.05	10/13/2023 06:01	WG2148857
n-Nitrosodiphenylamine	U		0.00249	0.0105	1.05	10/13/2023 06:01	WG2148857
n-Nitrosodi-n-propylamine	U		0.000274	0.0105	1.05	10/13/2023 06:01	WG2148857
Phenanthrene	U		0.000118	0.00105	1.05	10/13/2023 06:01	WG2148857
Benzylbutyl phthalate	U		0.000803	0.00315	1.05	10/13/2023 06:01	WG2148857
Bis(2-ethylhexyl)phthalate	U		0.000940	0.00315	1.05	10/13/2023 06:01	WG2148857
Di-n-butyl phthalate	U		0.000476	0.00315	1.05	10/13/2023 06:01	WG2148857
Diethyl phthalate	U		0.000301	0.00315	1.05	10/13/2023 06:01	WG2148857
Dimethyl phthalate	U		0.000273	0.00315	1.05	10/13/2023 06:01	WG2148857
Di-n-octyl phthalate	U		0.000979	0.00315	1.05	10/13/2023 06:01	WG2148857
Pyrene	U		0.000112	0.00105	1.05	10/13/2023 06:01	WG2148857
1,2,4-Trichlorobenzene	U		0.0000733	0.0105	1.05	10/13/2023 06:01	WG2148857
4-Chloro-3-methylphenol	U	J4	0.000138	0.0105	1.05	10/13/2023 06:01	WG2148857
2-Chlorophenol	U		0.000140	0.0105	1.05	10/13/2023 06:01	WG2148857
2,4-Dichlorophenol	U		0.000107	0.0105	1.05	10/13/2023 06:01	WG2148857
2,4-Dimethylphenol	U		0.0000668	0.0105	1.05	10/13/2023 06:01	WG2148857
4,6-Dinitro-2-methylphenol	U		0.00118	0.0105	1.05	10/13/2023 06:01	WG2148857
2,4-Dinitrophenol	U		0.00623	0.0105	1.05	10/13/2023 06:01	WG2148857
2-Nitrophenol	U		0.000123	0.0105	1.05	10/13/2023 06:01	WG2148857
2-Nitroaniline	U		0.000107	0.0105	1.05	10/13/2023 06:01	WG2148857
2-Methylphenol	U		0.0000975	0.0105	1.05	10/13/2023 06:01	WG2148857
3&4-Methyl Phenol	U		0.000176	0.0105	1.05	10/13/2023 06:01	WG2148857
3-Nitroaniline	U		0.0000912	0.0105	1.05	10/13/2023 06:01	WG2148857
4-Chloroaniline	U		0.000246	0.0105	1.05	10/13/2023 06:01	WG2148857
4-Nitroaniline	U		0.0000956	0.0105	1.05	10/13/2023 06:01	WG2148857
4-Nitrophenol	U		0.000150	0.0105	1.05	10/13/2023 06:01	WG2148857
Pentachlorophenol	U		0.000329	0.0105	1.05	10/13/2023 06:01	WG2148857
Phenol	U		0.00455	0.0105	1.05	10/13/2023 06:01	WG2148857
2,4,5-Trichlorophenol	U		0.000114	0.0105	1.05	10/13/2023 06:01	WG2148857
2,4,6-Trichlorophenol	U		0.000105	0.0105	1.05	10/13/2023 06:01	WG2148857
(S) 2-Fluorophenol	*39.9*			*10.0-120*		*10/13/2023 06:01*	WG2148857

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

Released to Imaging: 4/26/2024 10:49:21 AM

MW-4
Collected date/time: 10/05/23 09:45
L1663622

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
(S) Phenol-d5	*24.4*			*10.0-120*		*10/13/2023 06:01*	WG2148857
(S) Nitrobenzene-d5	*83.0*			*10.0-127*		*10/13/2023 06:01*	WG2148857
(S) 2-Fluorobiphenyl	*75.2*			*10.0-130*		*10/13/2023 06:01*	WG2148857
(S) 2,4,6-Tribromophenol	*72.9*			*10.0-155*		*10/13/2023 06:01*	WG2148857
(S) p-Terphenyl-d14	*88.5*			*10.0-128*		*10/13/2023 06:01*	WG2148857

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	366		10.0	1	10/12/2023 18:33	WG2149849

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	290		8.45	20.0	1	10/10/2023 13:29	WG2147741

Sample Narrative:

L1663622-05 WG2147741: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	9.92		0.379	1.00	1	10/07/2023 02:19	WG2146535
Fluoride	0.951		0.0640	0.150	1	10/07/2023 02:19	WG2146535
Nitrate	2.98		0.0480	0.100	1	10/07/2023 02:19	WG2146535
Nitrite	U		0.0420	0.100	1	10/07/2023 02:19	WG2146535
Sulfate	24.2		0.594	5.00	1	10/07/2023 02:19	WG2146535

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	10/12/2023 12:01	WG2147174

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.0774	J	0.0200	0.200	1	10/12/2023 23:23	WG2146826

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		0.0185	0.100	1	10/20/2023 12:37	WG2146834
Arsenic,Dissolved	0.00233		0.000180	0.00200	1	10/20/2023 12:37	WG2146834
Barium,Dissolved	0.106		0.000381	0.00200	1	10/20/2023 12:37	WG2146834
Cadmium,Dissolved	U		0.000150	0.00100	1	10/20/2023 12:37	WG2146834
Chromium,Dissolved	U		0.00124	0.00200	1	10/20/2023 12:37	WG2146834
Copper,Dissolved	0.00759		0.00151	0.00500	1	10/20/2023 12:37	WG2146834
Cobalt,Dissolved	U		0.0000596	0.00200	1	10/20/2023 12:37	WG2146834
Iron,Dissolved	U		0.0281	0.100	1	10/20/2023 12:37	WG2146834
Lead,Dissolved	U		0.000849	0.00200	1	10/20/2023 12:37	WG2146834
Manganese,Dissolved	U		0.000704	0.00500	1	10/20/2023 12:37	WG2146834
Molybdenum,Dissolved	0.00174	J	0.000348	0.00500	1	10/20/2023 12:37	WG2146834
Nickel,Dissolved	0.00179	J	0.000816	0.00200	1	10/20/2023 12:37	WG2146834
Selenium,Dissolved	0.000583	J	0.000300	0.00200	1	10/20/2023 12:37	WG2146834
Silver,Dissolved	U		0.0000700	0.00200	1	10/20/2023 12:37	WG2146834
Uranium,Dissolved	0.00199	J	0.0000700	0.0200	1	10/20/2023 12:37	WG2146834
Zinc,Dissolved	0.0217	J	0.00302	0.0250	1	10/20/2023 12:37	WG2146834

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	1	10/11/2023 20:37	WG2149400
(S) a,a,a-Trifluorotoluene(FID)	*109*			*78.0-120*		*10/11/2023 20:37*	WG2149400

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0113	0.0500	1	10/09/2023 23:09	WG2148083
Benzene	U		0.0000941	0.00100	1	10/09/2023 23:09	WG2148083
Bromodichloromethane	U		0.000136	0.00100	1	10/09/2023 23:09	WG2148083
Bromoform	U		0.000129	0.00100	1	10/09/2023 23:09	WG2148083
Bromomethane	U		0.000605	0.00500	1	10/09/2023 23:09	WG2148083
n-Butylbenzene	U		0.000157	0.00100	1	10/09/2023 23:09	WG2148083
sec-Butylbenzene	U		0.000125	0.00100	1	10/09/2023 23:09	WG2148083
tert-Butylbenzene	U		0.000127	0.00100	1	10/09/2023 23:09	WG2148083
Carbon disulfide	U		0.0000962	0.00100	1	10/09/2023 23:09	WG2148083
Carbon tetrachloride	U		0.000128	0.00100	1	10/09/2023 23:09	WG2148083
Chlorobenzene	U	J4	0.000116	0.00100	1	10/09/2023 23:09	WG2148083
Chlorodibromomethane	U		0.000140	0.00100	1	10/09/2023 23:09	WG2148083
Chloroethane	U		0.000192	0.00500	1	10/09/2023 23:09	WG2148083
Chloroform	U		0.000111	0.00500	1	10/09/2023 23:09	WG2148083
Chloromethane	U		0.000960	0.00250	1	10/09/2023 23:09	WG2148083
1,2-Dibromoethane	U		0.000126	0.00100	1	10/09/2023 23:09	WG2148083
1,1-Dichloroethane	U		0.000100	0.00100	1	10/09/2023 23:09	WG2148083
1,2-Dichloroethane	U		0.0000819	0.00100	1	10/09/2023 23:09	WG2148083
1,1-Dichloroethene	U		0.000188	0.00100	1	10/09/2023 23:09	WG2148083
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	10/09/2023 23:09	WG2148083
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	10/09/2023 23:09	WG2148083
1,2-Dichloropropane	U		0.000149	0.00100	1	10/09/2023 23:09	WG2148083
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	10/09/2023 23:09	WG2148083
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	10/09/2023 23:09	WG2148083
Ethylbenzene	U		0.000137	0.00100	1	10/09/2023 23:09	WG2148083
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	10/09/2023 23:09	WG2148083
2-Hexanone	U		0.000787	0.0100	1	10/09/2023 23:09	WG2148083
Isopropylbenzene	U		0.000105	0.00100	1	10/09/2023 23:09	WG2148083
p-Isopropyltoluene	U		0.000120	0.00100	1	10/09/2023 23:09	WG2148083
2-Butanone (MEK)	U		0.00119	0.0100	1	10/09/2023 23:09	WG2148083
Methylene Chloride	U		0.000430	0.00500	1	10/09/2023 23:09	WG2148083
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	10/09/2023 23:09	WG2148083
Methyl tert-butyl ether	U		0.000101	0.00100	1	10/09/2023 23:09	WG2148083
Naphthalene	U		0.00100	0.00500	1	10/09/2023 23:09	WG2148083
n-Propylbenzene	U		0.0000993	0.00100	1	10/09/2023 23:09	WG2148083
Styrene	U		0.000118	0.00100	1	10/09/2023 23:09	WG2148083
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	10/09/2023 23:09	WG2148083
Tetrachloroethene	U		0.000300	0.00100	1	10/09/2023 23:09	WG2148083
Toluene	U		0.000278	0.00100	1	10/09/2023 23:09	WG2148083
1,1,1-Trichloroethane	U		0.000149	0.00100	1	10/09/2023 23:09	WG2148083
1,1,2-Trichloroethane	U		0.000158	0.00100	1	10/09/2023 23:09	WG2148083
Trichloroethene	U		0.000190	0.00100	1	10/09/2023 23:09	WG2148083
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	10/09/2023 23:09	WG2148083
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	10/09/2023 23:09	WG2148083
Vinyl chloride	U		0.000234	0.00100	1	10/09/2023 23:09	WG2148083
Xylenes, Total	U		0.000174	0.00300	1	10/09/2023 23:09	WG2148083
(S) Toluene-d8	*101*			*80.0-120*		*10/09/2023 23:09*	WG2148083
(S) 4-Bromofluorobenzene	*102*			*77.0-126*		*10/09/2023 23:09*	WG2148083
(S) 1,2-Dichloroethane-d4	*91.0*			*70.0-130*		*10/09/2023 23:09*	WG2148083

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	0.0420	J	0.0247	0.100	1	10/16/2023 08:20	WG2150507
(S) o-Terphenyl	*91.1*			*31.0-160*		*10/16/2023 08:20*	WG2150507

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000930	0.00105	1.05	10/13/2023 06:22	WG2148857
Acenaphthylene	U		0.0000967	0.00105	1.05	10/13/2023 06:22	WG2148857
Acetophenone	U		0.000218	0.0105	1.05	10/13/2023 06:22	WG2148857
Anthracene	U		0.0000844	0.00105	1.05	10/13/2023 06:22	WG2148857
Atrazine	U		0.000268	0.0105	1.05	10/13/2023 06:22	WG2148857
Benzo(a)anthracene	U		0.000209	0.00105	1.05	10/13/2023 06:22	WG2148857
Benzaldehyde	U	J4	0.00177	0.0105	1.05	10/13/2023 06:22	WG2148857
Benzo(b)fluoranthene	U		0.000136	0.00105	1.05	10/13/2023 06:22	WG2148857
Benzo(k)fluoranthene	U		0.000126	0.00105	1.05	10/13/2023 06:22	WG2148857
Benzo(g,h,i)perylene	U		0.000127	0.00105	1.05	10/13/2023 06:22	WG2148857
Benzo(a)pyrene	U		0.0000400	0.000210	1.05	10/13/2023 06:22	WG2148857
Biphenyl	U		0.000829	0.0105	1.05	10/13/2023 06:22	WG2148857
Bis(2-chlorethoxy)methane	U		0.000122	0.0105	1.05	10/13/2023 06:22	WG2148857
Bis(2-chloroethyl)ether	U		0.000144	0.0105	1.05	10/13/2023 06:22	WG2148857
2,2-Oxybis(1-Chloropropane)	U		0.000221	0.0105	1.05	10/13/2023 06:22	WG2148857
4-Bromophenyl-phenylether	U		0.0000921	0.0105	1.05	10/13/2023 06:22	WG2148857
2-Chloronaphthalene	U		0.0000680	0.00105	1.05	10/13/2023 06:22	WG2148857
4-Chlorophenyl-phenylether	U		0.0000972	0.0105	1.05	10/13/2023 06:22	WG2148857
Caprolactam	U		0.000324	0.0105	1.05	10/13/2023 06:22	WG2148857
Carbazole	U		0.000117	0.0105	1.05	10/13/2023 06:22	WG2148857
Chrysene	U		0.000136	0.00105	1.05	10/13/2023 06:22	WG2148857
Dibenz(a,h)anthracene	U		0.0000676	0.000210	1.05	10/13/2023 06:22	WG2148857
Dibenzofuran	U		0.000102	0.0105	1.05	10/13/2023 06:22	WG2148857
3,3-Dichlorobenzidine	U		0.000223	0.0105	1.05	10/13/2023 06:22	WG2148857
2,4-Dinitrotoluene	U		0.000103	0.0105	1.05	10/13/2023 06:22	WG2148857
2,6-Dinitrotoluene	U		0.000263	0.0105	1.05	10/13/2023 06:22	WG2148857
Fluoranthene	U		0.000107	0.00105	1.05	10/13/2023 06:22	WG2148857
Fluorene	U		0.0000886	0.00105	1.05	10/13/2023 06:22	WG2148857
Hexachlorobenzene	U		0.0000793	0.00105	1.05	10/13/2023 06:22	WG2148857
Hexachloro-1,3-butadiene	U		0.000102	0.0105	1.05	10/13/2023 06:22	WG2148857
Hexachlorocyclopentadiene	U		0.0000628	0.0105	1.05	10/13/2023 06:22	WG2148857
Hexachloroethane	U		0.000133	0.0105	1.05	10/13/2023 06:22	WG2148857
Indeno(1,2,3-cd)pyrene	U		0.000293	0.00105	1.05	10/13/2023 06:22	WG2148857
Isophorone	U		0.000150	0.0105	1.05	10/13/2023 06:22	WG2148857
1-Methylnaphthalene	U		0.0000829	0.00105	1.05	10/13/2023 06:22	WG2148857
2-Methylnaphthalene	U		0.000123	0.00105	1.05	10/13/2023 06:22	WG2148857
Naphthalene	U		0.000167	0.00105	1.05	10/13/2023 06:22	WG2148857
Nitrobenzene	U		0.000312	0.0105	1.05	10/13/2023 06:22	WG2148857
n-Nitrosodiphenylamine	U		0.00249	0.0105	1.05	10/13/2023 06:22	WG2148857
n-Nitrosodi-n-propylamine	U		0.000274	0.0105	1.05	10/13/2023 06:22	WG2148857
Phenanthrene	U		0.000118	0.00105	1.05	10/13/2023 06:22	WG2148857
Benzylbutyl phthalate	U		0.000803	0.00315	1.05	10/13/2023 06:22	WG2148857
Bis(2-ethylhexyl)phthalate	U		0.000940	0.00315	1.05	10/13/2023 06:22	WG2148857
Di-n-butyl phthalate	U		0.000476	0.00315	1.05	10/13/2023 06:22	WG2148857
Diethyl phthalate	0.000726	J	0.000301	0.00315	1.05	10/13/2023 06:22	WG2148857
Dimethyl phthalate	U		0.000273	0.00315	1.05	10/13/2023 06:22	WG2148857
Di-n-octyl phthalate	U		0.000979	0.00315	1.05	10/13/2023 06:22	WG2148857
Pyrene	U		0.000112	0.00105	1.05	10/13/2023 06:22	WG2148857
1,2,4-Trichlorobenzene	U		0.0000733	0.0105	1.05	10/13/2023 06:22	WG2148857
4-Chloro-3-methylphenol	U	J4	0.000138	0.0105	1.05	10/13/2023 06:22	WG2148857

MW-3
Collected date/time: 10/05/23 11:30
L1663622

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
2-Chlorophenol	U		0.000140	0.0105	1.05	10/13/2023 06:22	WG2148857
2,4-Dichlorophenol	U		0.000107	0.0105	1.05	10/13/2023 06:22	WG2148857
2,4-Dimethylphenol	U		0.0000668	0.0105	1.05	10/13/2023 06:22	WG2148857
4,6-Dinitro-2-methylphenol	U		0.00118	0.0105	1.05	10/13/2023 06:22	WG2148857
2,4-Dinitrophenol	U		0.00623	0.0105	1.05	10/13/2023 06:22	WG2148857
2-Nitrophenol	U		0.000123	0.0105	1.05	10/13/2023 06:22	WG2148857
2-Nitroaniline	U		0.000107	0.0105	1.05	10/13/2023 06:22	WG2148857
2-Methylphenol	U		0.0000975	0.0105	1.05	10/13/2023 06:22	WG2148857
3&4-Methyl Phenol	U		0.000176	0.0105	1.05	10/13/2023 06:22	WG2148857
3-Nitroaniline	U		0.0000912	0.0105	1.05	10/13/2023 06:22	WG2148857
4-Chloroaniline	U		0.000246	0.0105	1.05	10/13/2023 06:22	WG2148857
4-Nitroaniline	U		0.0000956	0.0105	1.05	10/13/2023 06:22	WG2148857
4-Nitrophenol	U		0.000150	0.0105	1.05	10/13/2023 06:22	WG2148857
Pentachlorophenol	U		0.000329	0.0105	1.05	10/13/2023 06:22	WG2148857
Phenol	U		0.00455	0.0105	1.05	10/13/2023 06:22	WG2148857
2,4,5-Trichlorophenol	U		0.000114	0.0105	1.05	10/13/2023 06:22	WG2148857
2,4,6-Trichlorophenol	U		0.000105	0.0105	1.05	10/13/2023 06:22	WG2148857
(S) 2-Fluorophenol	*36.6*			*10.0-120*		*10/13/2023 06:22*	WG2148857
(S) Phenol-d5	*22.3*			*10.0-120*		*10/13/2023 06:22*	WG2148857
(S) Nitrobenzene-d5	*73.0*			*10.0-127*		*10/13/2023 06:22*	WG2148857
(S) 2-Fluorobiphenyl	*66.8*			*10.0-130*		*10/13/2023 06:22*	WG2148857
(S) 2,4,6-Tribromophenol	*59.0*			*10.0-155*		*10/13/2023 06:22*	WG2148857
(S) p-Terphenyl-d14	*80.1*			*10.0-128*		*10/13/2023 06:22*	WG2148857

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	635		13.3	1	10/12/2023 12:22	WG2149548

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	120		0.379	1.00	1	10/07/2023 02:31	WG2146535
Fluoride	0.827		0.0640	0.150	1	10/07/2023 02:31	WG2146535
Nitrate	8.82		0.0480	0.100	1	10/07/2023 02:31	WG2146535
Nitrite	U		0.0420	0.100	1	10/07/2023 02:31	WG2146535
Sulfate	80.9		0.594	5.00	1	10/07/2023 02:31	WG2146535

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	10/12/2023 12:03	WG2147174

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.188	J	0.0200	0.200	1	10/12/2023 23:26	WG2146826

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		0.0185	0.100	1	10/20/2023 12:14	WG2146834
Arsenic,Dissolved	0.00529		0.000180	0.00200	1	10/20/2023 12:14	WG2146834
Barium,Dissolved	0.188		0.000381	0.00200	1	10/20/2023 12:14	WG2146834
Cadmium,Dissolved	U		0.000150	0.00100	1	10/20/2023 12:14	WG2146834
Chromium,Dissolved	0.00132	J	0.00124	0.00200	1	10/20/2023 12:14	WG2146834
Copper,Dissolved	0.00792		0.00151	0.00500	1	10/20/2023 12:14	WG2146834
Cobalt,Dissolved	0.0000667	J	0.0000596	0.00200	1	10/20/2023 12:14	WG2146834
Iron,Dissolved	U		0.0281	0.100	1	10/20/2023 12:14	WG2146834
Lead,Dissolved	U		0.000849	0.00200	1	10/20/2023 12:14	WG2146834
Manganese,Dissolved	0.00340	J	0.000704	0.00500	1	10/20/2023 12:14	WG2146834
Molybdenum,Dissolved	0.00197	J	0.000348	0.00500	1	10/20/2023 12:14	WG2146834
Nickel,Dissolved	0.00203		0.000816	0.00200	1	10/20/2023 12:14	WG2146834
Selenium,Dissolved	0.00242		0.000300	0.00200	1	10/20/2023 12:14	WG2146834
Silver,Dissolved	U		0.0000700	0.00200	1	10/20/2023 12:14	WG2146834
Uranium,Dissolved	0.00310	J	0.0000700	0.0200	1	10/20/2023 12:14	WG2146834
Zinc,Dissolved	0.0995		0.00302	0.0250	1	10/20/2023 12:14	WG2146834

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0113	0.0500	1	10/09/2023 23:29	WG2148083
Benzene	U		0.0000941	0.00100	1	10/09/2023 23:29	WG2148083
Bromodichloromethane	U		0.000136	0.00100	1	10/09/2023 23:29	WG2148083
Bromoform	U		0.000129	0.00100	1	10/09/2023 23:29	WG2148083
Bromomethane	U		0.000605	0.00500	1	10/09/2023 23:29	WG2148083
n-Butylbenzene	U		0.000157	0.00100	1	10/09/2023 23:29	WG2148083
sec-Butylbenzene	U		0.000125	0.00100	1	10/09/2023 23:29	WG2148083
tert-Butylbenzene	U		0.000127	0.00100	1	10/09/2023 23:29	WG2148083
Carbon disulfide	U		0.0000962	0.00100	1	10/09/2023 23:29	WG2148083

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Carbon tetrachloride	U		0.000128	0.00100	1	10/09/2023 23:29	WG2148083
Chlorobenzene	U	J4	0.000116	0.00100	1	10/09/2023 23:29	WG2148083
Chlorodibromomethane	U		0.000140	0.00100	1	10/09/2023 23:29	WG2148083
Chloroethane	U		0.000192	0.00500	1	10/09/2023 23:29	WG2148083
Chloroform	0.000265	J	0.000111	0.00500	1	10/09/2023 23:29	WG2148083
Chloromethane	U		0.000960	0.00250	1	10/09/2023 23:29	WG2148083
1,2-Dibromoethane	U		0.000126	0.00100	1	10/09/2023 23:29	WG2148083
1,1-Dichloroethane	U		0.000100	0.00100	1	10/09/2023 23:29	WG2148083
1,2-Dichloroethane	U		0.0000819	0.00100	1	10/09/2023 23:29	WG2148083
1,1-Dichloroethene	U		0.000188	0.00100	1	10/09/2023 23:29	WG2148083
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	10/09/2023 23:29	WG2148083
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	10/09/2023 23:29	WG2148083
1,2-Dichloropropane	U		0.000149	0.00100	1	10/09/2023 23:29	WG2148083
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	10/09/2023 23:29	WG2148083
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	10/09/2023 23:29	WG2148083
Ethylbenzene	U		0.000137	0.00100	1	10/09/2023 23:29	WG2148083
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	10/09/2023 23:29	WG2148083
2-Hexanone	U		0.000787	0.0100	1	10/09/2023 23:29	WG2148083
Isopropylbenzene	U		0.000105	0.00100	1	10/09/2023 23:29	WG2148083
p-Isopropyltoluene	U		0.000120	0.00100	1	10/09/2023 23:29	WG2148083
2-Butanone (MEK)	U		0.00119	0.0100	1	10/09/2023 23:29	WG2148083
Methylene Chloride	U		0.000430	0.00500	1	10/09/2023 23:29	WG2148083
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	10/09/2023 23:29	WG2148083
Methyl tert-butyl ether	U		0.000101	0.00100	1	10/09/2023 23:29	WG2148083
Naphthalene	U		0.00100	0.00500	1	10/09/2023 23:29	WG2148083
n-Propylbenzene	U		0.0000993	0.00100	1	10/09/2023 23:29	WG2148083
Styrene	U		0.000118	0.00100	1	10/09/2023 23:29	WG2148083
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	10/09/2023 23:29	WG2148083
Tetrachloroethene	U		0.000300	0.00100	1	10/09/2023 23:29	WG2148083
Toluene	U		0.000278	0.00100	1	10/09/2023 23:29	WG2148083
1,1,1-Trichloroethane	U		0.000149	0.00100	1	10/09/2023 23:29	WG2148083
1,1,2-Trichloroethane	U		0.000158	0.00100	1	10/09/2023 23:29	WG2148083
Trichloroethene	U		0.000190	0.00100	1	10/09/2023 23:29	WG2148083
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	10/09/2023 23:29	WG2148083
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	10/09/2023 23:29	WG2148083
Vinyl chloride	U		0.000234	0.00100	1	10/09/2023 23:29	WG2148083
Xylenes, Total	U		0.000174	0.00300	1	10/09/2023 23:29	WG2148083
(S) Toluene-d8	*102*			*80.0-120*		*10/09/2023 23:29*	WG2148083
(S) 4-Bromofluorobenzene	*103*			*77.0-126*		*10/09/2023 23:29*	WG2148083
(S) 1,2-Dichloroethane-d4	*90.9*			*70.0-130*		*10/09/2023 23:29*	WG2148083

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000886	0.00100	1	10/13/2023 06:43	WG2148857
Acenaphthylene	U		0.0000921	0.00100	1	10/13/2023 06:43	WG2148857
Acetophenone	U		0.000208	0.0100	1	10/13/2023 06:43	WG2148857
Anthracene	U		0.0000804	0.00100	1	10/13/2023 06:43	WG2148857
Atrazine	U		0.000255	0.0100	1	10/13/2023 06:43	WG2148857
Benzo(a)anthracene	U		0.000199	0.00100	1	10/13/2023 06:43	WG2148857
Benzaldehyde	U	J4	0.00169	0.0100	1	10/13/2023 06:43	WG2148857
Benzo(b)fluoranthene	U		0.000130	0.00100	1	10/13/2023 06:43	WG2148857
Benzo(k)fluoranthene	U		0.000120	0.00100	1	10/13/2023 06:43	WG2148857
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	10/13/2023 06:43	WG2148857
Benzo(a)pyrene	U		0.0000381	0.000200	1	10/13/2023 06:43	WG2148857
Biphenyl	U		0.000790	0.0100	1	10/13/2023 06:43	WG2148857

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	10/13/2023 06:43	WG2148857
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	10/13/2023 06:43	WG2148857
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	10/13/2023 06:43	WG2148857
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	10/13/2023 06:43	WG2148857
2-Chloronaphthalene	U		0.0000648	0.00100	1	10/13/2023 06:43	WG2148857
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	10/13/2023 06:43	WG2148857
Caprolactam	U		0.000309	0.0100	1	10/13/2023 06:43	WG2148857
Carbazole	U		0.000111	0.0100	1	10/13/2023 06:43	WG2148857
Chrysene	U		0.000130	0.00100	1	10/13/2023 06:43	WG2148857
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	10/13/2023 06:43	WG2148857
Dibenzofuran	U		0.0000970	0.0100	1	10/13/2023 06:43	WG2148857
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	10/13/2023 06:43	WG2148857
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	10/13/2023 06:43	WG2148857
2,6-Dinitrotoluene	U		0.000250	0.0100	1	10/13/2023 06:43	WG2148857
Fluoranthene	U		0.000102	0.00100	1	10/13/2023 06:43	WG2148857
Fluorene	U		0.0000844	0.00100	1	10/13/2023 06:43	WG2148857
Hexachlorobenzene	U		0.0000755	0.00100	1	10/13/2023 06:43	WG2148857
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	10/13/2023 06:43	WG2148857
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	10/13/2023 06:43	WG2148857
Hexachloroethane	U		0.000127	0.0100	1	10/13/2023 06:43	WG2148857
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	10/13/2023 06:43	WG2148857
Isophorone	U		0.000143	0.0100	1	10/13/2023 06:43	WG2148857
1-Methylnaphthalene	U		0.0000790	0.00100	1	10/13/2023 06:43	WG2148857
2-Methylnaphthalene	U		0.000117	0.00100	1	10/13/2023 06:43	WG2148857
Naphthalene	U		0.000159	0.00100	1	10/13/2023 06:43	WG2148857
Nitrobenzene	U		0.000297	0.0100	1	10/13/2023 06:43	WG2148857
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	10/13/2023 06:43	WG2148857
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	10/13/2023 06:43	WG2148857
Phenanthrene	U		0.000112	0.00100	1	10/13/2023 06:43	WG2148857
Benzylbutyl phthalate	U		0.000765	0.00300	1	10/13/2023 06:43	WG2148857
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	10/13/2023 06:43	WG2148857
Di-n-butyl phthalate	U		0.000453	0.00300	1	10/13/2023 06:43	WG2148857
Diethyl phthalate	U		0.000287	0.00300	1	10/13/2023 06:43	WG2148857
Dimethyl phthalate	U		0.000260	0.00300	1	10/13/2023 06:43	WG2148857
Di-n-octyl phthalate	U		0.000932	0.00300	1	10/13/2023 06:43	WG2148857
Pyrene	U		0.000107	0.00100	1	10/13/2023 06:43	WG2148857
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	10/13/2023 06:43	WG2148857
4-Chloro-3-methylphenol	U	J4	0.000131	0.0100	1	10/13/2023 06:43	WG2148857
2-Chlorophenol	U		0.000133	0.0100	1	10/13/2023 06:43	WG2148857
2,4-Dichlorophenol	U		0.000102	0.0100	1	10/13/2023 06:43	WG2148857
2,4-Dimethylphenol	U		0.0000636	0.0100	1	10/13/2023 06:43	WG2148857
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	10/13/2023 06:43	WG2148857
2,4-Dinitrophenol	U		0.00593	0.0100	1	10/13/2023 06:43	WG2148857
2-Nitrophenol	U		0.000117	0.0100	1	10/13/2023 06:43	WG2148857
2-Nitroaniline	U		0.000102	0.0100	1	10/13/2023 06:43	WG2148857
2-Methylphenol	U		0.0000929	0.0100	1	10/13/2023 06:43	WG2148857
3&4-Methyl Phenol	U		0.000168	0.0100	1	10/13/2023 06:43	WG2148857
3-Nitroaniline	U		0.0000869	0.0100	1	10/13/2023 06:43	WG2148857
4-Chloroaniline	U		0.000234	0.0100	1	10/13/2023 06:43	WG2148857
4-Nitroaniline	U		0.0000910	0.0100	1	10/13/2023 06:43	WG2148857
4-Nitrophenol	U		0.000143	0.0100	1	10/13/2023 06:43	WG2148857
Pentachlorophenol	U		0.000313	0.0100	1	10/13/2023 06:43	WG2148857
Phenol	U		0.00433	0.0100	1	10/13/2023 06:43	WG2148857
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	10/13/2023 06:43	WG2148857
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	10/13/2023 06:43	WG2148857
(S) 2-Fluorophenol	*27.7*			*10.0-120*		*10/13/2023 06:43*	WG2148857

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

MW-6
Collected date/time: 10/05/23 11:55
L1663622

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
(S) Phenol-d5	*18.1*			*10.0-120*		*10/13/2023 06:43*	WG2148857
(S) Nitrobenzene-d5	*69.8*			*10.0-127*		*10/13/2023 06:43*	WG2148857
(S) 2-Fluorobiphenyl	*65.3*			*10.0-130*		*10/13/2023 06:43*	WG2148857
(S) 2,4,6-Tribromophenol	*32.7*			*10.0-155*		*10/13/2023 06:43*	WG2148857
(S) p-Terphenyl-d14	*61.0*			*10.0-128*		*10/13/2023 06:43*	WG2148857

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1240		25.0	1	10/12/2023 12:22	WG2149548

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	311		3.79	10.0	10	10/07/2023 05:30	WG2146682
Fluoride	0.484		0.0640	0.150	1	10/06/2023 23:35	WG2146682
Nitrate	1.59		0.0480	0.100	1	10/06/2023 23:35	WG2146682
Nitrite	0.441		0.0420	0.100	1	10/06/2023 23:35	WG2146682
Sulfate	35.2		0.594	5.00	1	10/06/2023 23:35	WG2146682

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.000100	0.000200	1	10/12/2023 12:06	WG2147174

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron,Dissolved	0.696		0.0200	0.200	1	10/12/2023 23:30	WG2146826

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.0185	0.100	1	10/20/2023 12:52	WG2146834
Arsenic,Dissolved	0.00614		0.000180	0.00200	1	10/20/2023 12:52	WG2146834
Barium,Dissolved	0.324		0.00190	0.0100	5	10/20/2023 13:56	WG2146834
Cadmium,Dissolved	U		0.000150	0.00100	1	10/20/2023 12:52	WG2146834
Chromium,Dissolved	U		0.00124	0.00200	1	10/20/2023 12:52	WG2146834
Copper,Dissolved	0.00299	J	0.00151	0.00500	1	10/20/2023 12:52	WG2146834
Cobalt,Dissolved	0.000549	J	0.0000596	0.00200	1	10/20/2023 12:52	WG2146834
Iron,Dissolved	U		0.0281	0.100	1	10/20/2023 12:52	WG2146834
Lead,Dissolved	U		0.000849	0.00200	1	10/20/2023 12:52	WG2146834
Manganese,Dissolved	0.0124		0.000704	0.00500	1	10/20/2023 12:52	WG2146834
Molybdenum,Dissolved	0.000931	J	0.000348	0.00500	1	10/20/2023 12:52	WG2146834
Nickel,Dissolved	0.00420		0.000816	0.00200	1	10/20/2023 12:52	WG2146834
Selenium,Dissolved	U		0.000300	0.00200	1	10/20/2023 12:52	WG2146834
Silver,Dissolved	U		0.0000700	0.00200	1	10/20/2023 12:52	WG2146834
Uranium,Dissolved	0.00919	J	0.0000700	0.0200	1	10/20/2023 12:52	WG2146834
Zinc,Dissolved	0.00552	J	0.00302	0.0250	1	10/20/2023 12:52	WG2146834

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Acetone	U		0.0113	0.0500	1	10/09/2023 23:48	WG2148083
Benzene	U		0.0000941	0.00100	1	10/09/2023 23:48	WG2148083
Bromodichloromethane	U		0.000136	0.00100	1	10/09/2023 23:48	WG2148083
Bromoform	U		0.000129	0.00100	1	10/09/2023 23:48	WG2148083
Bromomethane	U		0.000605	0.00500	1	10/09/2023 23:48	WG2148083
n-Butylbenzene	U		0.000157	0.00100	1	10/09/2023 23:48	WG2148083
sec-Butylbenzene	U		0.000125	0.00100	1	10/09/2023 23:48	WG2148083
tert-Butylbenzene	U		0.000127	0.00100	1	10/09/2023 23:48	WG2148083
Carbon disulfide	U		0.0000962	0.00100	1	10/09/2023 23:48	WG2148083

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Carbon tetrachloride	U		0.000128	0.00100	1	10/09/2023 23:48	WG2148083
Chlorobenzene	U	J4	0.000116	0.00100	1	10/09/2023 23:48	WG2148083
Chlorodibromomethane	U		0.000140	0.00100	1	10/09/2023 23:48	WG2148083
Chloroethane	U		0.000192	0.00500	1	10/09/2023 23:48	WG2148083
Chloroform	U		0.000111	0.00500	1	10/09/2023 23:48	WG2148083
Chloromethane	U		0.000960	0.00250	1	10/09/2023 23:48	WG2148083
1,2-Dibromoethane	U		0.000126	0.00100	1	10/09/2023 23:48	WG2148083
1,1-Dichloroethane	U		0.000100	0.00100	1	10/09/2023 23:48	WG2148083
1,2-Dichloroethane	U		0.0000819	0.00100	1	10/09/2023 23:48	WG2148083
1,1-Dichloroethene	U		0.000188	0.00100	1	10/09/2023 23:48	WG2148083
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	10/09/2023 23:48	WG2148083
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	10/09/2023 23:48	WG2148083
1,2-Dichloropropane	U		0.000149	0.00100	1	10/09/2023 23:48	WG2148083
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	10/09/2023 23:48	WG2148083
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	10/09/2023 23:48	WG2148083
Ethylbenzene	U		0.000137	0.00100	1	10/09/2023 23:48	WG2148083
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	10/09/2023 23:48	WG2148083
2-Hexanone	U		0.000787	0.0100	1	10/09/2023 23:48	WG2148083
Isopropylbenzene	U		0.000105	0.00100	1	10/09/2023 23:48	WG2148083
p-Isopropyltoluene	U		0.000120	0.00100	1	10/09/2023 23:48	WG2148083
2-Butanone (MEK)	U		0.00119	0.0100	1	10/09/2023 23:48	WG2148083
Methylene Chloride	U		0.000430	0.00500	1	10/09/2023 23:48	WG2148083
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	10/09/2023 23:48	WG2148083
Methyl tert-butyl ether	U		0.000101	0.00100	1	10/09/2023 23:48	WG2148083
Naphthalene	U		0.00100	0.00500	1	10/09/2023 23:48	WG2148083
n-Propylbenzene	U		0.0000993	0.00100	1	10/09/2023 23:48	WG2148083
Styrene	U		0.000118	0.00100	1	10/09/2023 23:48	WG2148083
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	10/09/2023 23:48	WG2148083
Tetrachloroethene	U		0.000300	0.00100	1	10/09/2023 23:48	WG2148083
Toluene	U		0.000278	0.00100	1	10/09/2023 23:48	WG2148083
1,1,1-Trichloroethane	U		0.000149	0.00100	1	10/09/2023 23:48	WG2148083
1,1,2-Trichloroethane	U		0.000158	0.00100	1	10/09/2023 23:48	WG2148083
Trichloroethene	U		0.000190	0.00100	1	10/09/2023 23:48	WG2148083
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	10/09/2023 23:48	WG2148083
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	10/09/2023 23:48	WG2148083
Vinyl chloride	U		0.000234	0.00100	1	10/09/2023 23:48	WG2148083
Xylenes, Total	U		0.000174	0.00300	1	10/09/2023 23:48	WG2148083
(S) Toluene-d8	*102*			*80.0-120*		*10/09/2023 23:48*	WG2148083
(S) 4-Bromofluorobenzene	*104*			*77.0-126*		*10/09/2023 23:48*	WG2148083
(S) 1,2-Dichloroethane-d4	*89.1*			*70.0-130*		*10/09/2023 23:48*	WG2148083

MW-9
Collected date/time: 10/05/23 10:15
L1663622

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	209		3.79	10.0	10	10/07/2023 06:21	WG2146682
Fluoride	0.291		0.0640	0.150	1	10/06/2023 23:52	WG2146682
Nitrate	9.76		0.0480	0.100	1	10/06/2023 23:52	WG2146682
Nitrite	0.633		0.0420	0.100	1	10/06/2023 23:52	WG2146682
Sulfate	126		0.594	5.00	1	10/06/2023 23:52	WG2146682

MW-10
Collected date/time: 10/05/23 09:25
L1663622

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	28.5		0.379	1.00	1	10/06/2023 23:07	WG2146649
Fluoride	0.875		0.0640	0.150	1	10/06/2023 23:07	WG2146649
Nitrate	2.08		0.0480	0.100	1	10/06/2023 23:07	WG2146649
Nitrite	U		0.0420	0.100	1	10/06/2023 23:07	WG2146649
Sulfate	54.2		0.594	5.00	1	10/06/2023 23:07	WG2146649

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1190		20.0	1	10/12/2023 18:33	WG2149849

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	367		8.45	20.0	1	10/10/2023 13:35	WG2147741

Sample Narrative:

L1663622-10 WG2147741: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	285		3.79	10.0	10	10/07/2023 05:30	WG2146649
Fluoride	0.425		0.0640	0.150	1	10/06/2023 23:23	WG2146649
Nitrate	0.932		0.0480	0.100	1	10/06/2023 23:23	WG2146649
Nitrite	U		0.0420	0.100	1	10/06/2023 23:23	WG2146649
Sulfate	64.8		0.594	5.00	1	10/06/2023 23:23	WG2146649

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	10/12/2023 12:13	WG2147174

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.273		0.0200	0.200	1	10/12/2023 23:33	WG2146826

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		0.0185	0.100	1	10/20/2023 12:55	WG2146834
Arsenic,Dissolved	0.00292		0.000180	0.00200	1	10/20/2023 12:55	WG2146834
Barium,Dissolved	0.218		0.00190	0.0100	5	10/20/2023 14:00	WG2146834
Cadmium,Dissolved	U		0.000150	0.00100	1	10/20/2023 12:55	WG2146834
Chromium,Dissolved	U		0.00124	0.00200	1	10/20/2023 12:55	WG2146834
Copper,Dissolved	0.0126		0.00151	0.00500	1	10/20/2023 12:55	WG2146834
Cobalt,Dissolved	0.00114	J	0.0000596	0.00200	1	10/20/2023 12:55	WG2146834
Iron,Dissolved	U		0.0281	0.100	1	10/20/2023 12:55	WG2146834
Lead,Dissolved	0.000966	J	0.000849	0.00200	1	10/20/2023 12:55	WG2146834
Manganese,Dissolved	0.205		0.000704	0.00500	1	10/20/2023 12:55	WG2146834
Molybdenum,Dissolved	0.00118	J	0.000348	0.00500	1	10/20/2023 12:55	WG2146834
Nickel,Dissolved	0.00470		0.000816	0.00200	1	10/20/2023 12:55	WG2146834
Selenium,Dissolved	0.000546	J	0.000300	0.00200	1	10/20/2023 12:55	WG2146834
Silver,Dissolved	U		0.0000700	0.00200	1	10/20/2023 12:55	WG2146834
Uranium,Dissolved	0.00718	J	0.0000700	0.0200	1	10/20/2023 12:55	WG2146834
Zinc,Dissolved	0.0184	J	0.00302	0.0250	1	10/20/2023 12:55	WG2146834

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0113	0.0500	1	10/10/2023 00:08	WG2148083
Benzene	0.000170	J	0.0000941	0.00100	1	10/10/2023 00:08	WG2148083
Bromodichloromethane	0.000232	J	0.000136	0.00100	1	10/10/2023 00:08	WG2148083
Bromoform	U		0.000129	0.00100	1	10/10/2023 00:08	WG2148083
Bromomethane	U		0.000605	0.00500	1	10/10/2023 00:08	WG2148083
n-Butylbenzene	0.000250	J	0.000157	0.00100	1	10/10/2023 00:08	WG2148083
sec-Butylbenzene	0.00165		0.000125	0.00100	1	10/10/2023 00:08	WG2148083
tert-Butylbenzene	0.000186	J	0.000127	0.00100	1	10/10/2023 00:08	WG2148083
Carbon disulfide	U		0.0000962	0.00100	1	10/10/2023 00:08	WG2148083
Carbon tetrachloride	U		0.000128	0.00100	1	10/10/2023 00:08	WG2148083
Chlorobenzene	U	J4	0.000116	0.00100	1	10/10/2023 00:08	WG2148083
Chlorodibromomethane	U		0.000140	0.00100	1	10/10/2023 00:08	WG2148083
Chloroethane	U		0.000192	0.00500	1	10/10/2023 00:08	WG2148083
Chloroform	0.00346	J	0.000111	0.00500	1	10/10/2023 00:08	WG2148083
Chloromethane	U		0.000960	0.00250	1	10/10/2023 00:08	WG2148083
1,2-Dibromoethane	U		0.000126	0.00100	1	10/10/2023 00:08	WG2148083
1,1-Dichloroethane	U		0.000100	0.00100	1	10/10/2023 00:08	WG2148083
1,2-Dichloroethane	U		0.0000819	0.00100	1	10/10/2023 00:08	WG2148083
1,1-Dichloroethene	U		0.000188	0.00100	1	10/10/2023 00:08	WG2148083
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	10/10/2023 00:08	WG2148083
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	10/10/2023 00:08	WG2148083
1,2-Dichloropropane	U		0.000149	0.00100	1	10/10/2023 00:08	WG2148083
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	10/10/2023 00:08	WG2148083
trans-1,3-Dichloropropene	0.000285	J	0.000118	0.00100	1	10/10/2023 00:08	WG2148083
Ethylbenzene	U		0.000137	0.00100	1	10/10/2023 00:08	WG2148083
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	10/10/2023 00:08	WG2148083
2-Hexanone	U		0.000787	0.0100	1	10/10/2023 00:08	WG2148083
Isopropylbenzene	0.00902		0.000105	0.00100	1	10/10/2023 00:08	WG2148083
p-Isopropyltoluene	0.000276	J	0.000120	0.00100	1	10/10/2023 00:08	WG2148083
2-Butanone (MEK)	U		0.00119	0.0100	1	10/10/2023 00:08	WG2148083
Methylene Chloride	U		0.000430	0.00500	1	10/10/2023 00:08	WG2148083
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	10/10/2023 00:08	WG2148083
Methyl tert-butyl ether	U		0.000101	0.00100	1	10/10/2023 00:08	WG2148083
Naphthalene	U		0.00100	0.00500	1	10/10/2023 00:08	WG2148083
n-Propylbenzene	0.00230		0.0000993	0.00100	1	10/10/2023 00:08	WG2148083
Styrene	U		0.000118	0.00100	1	10/10/2023 00:08	WG2148083
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	10/10/2023 00:08	WG2148083
Tetrachloroethene	U		0.000300	0.00100	1	10/10/2023 00:08	WG2148083
Toluene	U		0.000278	0.00100	1	10/10/2023 00:08	WG2148083
1,1,1-Trichloroethane	U		0.000149	0.00100	1	10/10/2023 00:08	WG2148083
1,1,2-Trichloroethane	U		0.000158	0.00100	1	10/10/2023 00:08	WG2148083
Trichloroethene	U		0.000190	0.00100	1	10/10/2023 00:08	WG2148083
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	10/10/2023 00:08	WG2148083
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	10/10/2023 00:08	WG2148083
Vinyl chloride	U		0.000234	0.00100	1	10/10/2023 00:08	WG2148083
Xylenes, Total	U		0.000174	0.00300	1	10/10/2023 00:08	WG2148083
(S) Toluene-d8	*97.7*			*80.0-120*		*10/10/2023 00:08*	WG2148083
(S) 4-Bromofluorobenzene	*99.1*			*77.0-126*		*10/10/2023 00:08*	WG2148083
(S) 1,2-Dichloroethane-d4	*90.9*			*70.0-130*		*10/10/2023 00:08*	WG2148083

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Acenaphthene	U		0.0000886	0.00100	1	10/13/2023 18:06	WG2148857
Acenaphthylene	U		0.0000921	0.00100	1	10/13/2023 18:06	WG2148857
Acetophenone	U		0.000208	0.0100	1	10/13/2023 18:06	WG2148857
Anthracene	U		0.0000804	0.00100	1	10/13/2023 18:06	WG2148857
Atrazine	U		0.000255	0.0100	1	10/13/2023 18:06	WG2148857
Benzo(a)anthracene	U		0.000199	0.00100	1	10/13/2023 18:06	WG2148857
Benzaldehyde	U	J4	0.00169	0.0100	1	10/13/2023 18:06	WG2148857
Benzo(b)fluoranthene	U		0.000130	0.00100	1	10/13/2023 18:06	WG2148857
Benzo(k)fluoranthene	U		0.000120	0.00100	1	10/13/2023 18:06	WG2148857
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	10/13/2023 18:06	WG2148857
Benzo(a)pyrene	U		0.0000381	0.000200	1	10/13/2023 18:06	WG2148857
Biphenyl	U		0.000790	0.0100	1	10/13/2023 18:06	WG2148857
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	10/13/2023 18:06	WG2148857
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	10/13/2023 18:06	WG2148857
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	10/13/2023 18:06	WG2148857
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	10/13/2023 18:06	WG2148857
2-Chloronaphthalene	U		0.0000648	0.00100	1	10/13/2023 18:06	WG2148857
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	10/13/2023 18:06	WG2148857
Caprolactam	U		0.000309	0.0100	1	10/13/2023 18:06	WG2148857
Carbazole	U		0.000111	0.0100	1	10/13/2023 18:06	WG2148857
Chrysene	U		0.000130	0.00100	1	10/13/2023 18:06	WG2148857
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	10/13/2023 18:06	WG2148857
Dibenzofuran	U		0.0000970	0.0100	1	10/13/2023 18:06	WG2148857
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	10/13/2023 18:06	WG2148857
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	10/13/2023 18:06	WG2148857
2,6-Dinitrotoluene	U		0.000250	0.0100	1	10/13/2023 18:06	WG2148857
Fluoranthene	U		0.000102	0.00100	1	10/13/2023 18:06	WG2148857
Fluorene	U		0.0000844	0.00100	1	10/13/2023 18:06	WG2148857
Hexachlorobenzene	U		0.0000755	0.00100	1	10/13/2023 18:06	WG2148857
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	10/13/2023 18:06	WG2148857
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	10/13/2023 18:06	WG2148857
Hexachloroethane	U		0.000127	0.0100	1	10/13/2023 18:06	WG2148857
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	10/13/2023 18:06	WG2148857
Isophorone	U		0.000143	0.0100	1	10/13/2023 18:06	WG2148857
1-Methylnaphthalene	U		0.0000790	0.00100	1	10/13/2023 18:06	WG2148857
2-Methylnaphthalene	U		0.000117	0.00100	1	10/13/2023 18:06	WG2148857
Naphthalene	U		0.000159	0.00100	1	10/13/2023 18:06	WG2148857
Nitrobenzene	U		0.000297	0.0100	1	10/13/2023 18:06	WG2148857
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	10/13/2023 18:06	WG2148857
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	10/13/2023 18:06	WG2148857
Phenanthrene	U		0.000112	0.00100	1	10/13/2023 18:06	WG2148857
Benzylbutyl phthalate	U		0.000765	0.00300	1	10/13/2023 18:06	WG2148857
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	10/13/2023 18:06	WG2148857
Di-n-butyl phthalate	U		0.000453	0.00300	1	10/13/2023 18:06	WG2148857
Diethyl phthalate	U		0.000287	0.00300	1	10/13/2023 18:06	WG2148857
Dimethyl phthalate	U		0.000260	0.00300	1	10/13/2023 18:06	WG2148857
Di-n-octyl phthalate	U		0.000932	0.00300	1	10/13/2023 18:06	WG2148857
Pyrene	U		0.000107	0.00100	1	10/13/2023 18:06	WG2148857
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	10/13/2023 18:06	WG2148857
4-Chloro-3-methylphenol	U	J4	0.000131	0.0100	1	10/13/2023 18:06	WG2148857
2-Chlorophenol	U		0.000133	0.0100	1	10/13/2023 18:06	WG2148857
2,4-Dichlorophenol	U		0.000102	0.0100	1	10/13/2023 18:06	WG2148857
2,4-Dimethylphenol	U		0.0000636	0.0100	1	10/13/2023 18:06	WG2148857
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	10/13/2023 18:06	WG2148857
2,4-Dinitrophenol	U		0.00593	0.0100	1	10/13/2023 18:06	WG2148857
2-Nitrophenol	U		0.000117	0.0100	1	10/13/2023 18:06	WG2148857

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	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
2-Nitroaniline	U		0.000102	0.0100	1	10/13/2023 18:06	WG2148857
2-Methylphenol	U		0.0000929	0.0100	1	10/13/2023 18:06	WG2148857
3&4-Methyl Phenol	U		0.000168	0.0100	1	10/13/2023 18:06	WG2148857
3-Nitroaniline	U		0.0000869	0.0100	1	10/13/2023 18:06	WG2148857
4-Chloroaniline	U		0.000234	0.0100	1	10/13/2023 18:06	WG2148857
4-Nitroaniline	U		0.0000910	0.0100	1	10/13/2023 18:06	WG2148857
4-Nitrophenol	U		0.000143	0.0100	1	10/13/2023 18:06	WG2148857
Pentachlorophenol	U		0.000313	0.0100	1	10/13/2023 18:06	WG2148857
Phenol	U		0.00433	0.0100	1	10/13/2023 18:06	WG2148857
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	10/13/2023 18:06	WG2148857
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	10/13/2023 18:06	WG2148857
(S) 2-Fluorophenol	*26.1*			*10.0-120*		*10/13/2023 18:06*	WG2148857
(S) Phenol-d5	*17.3*			*10.0-120*		*10/13/2023 18:06*	WG2148857
(S) Nitrobenzene-d5	*66.6*			*10.0-127*		*10/13/2023 18:06*	WG2148857
(S) 2-Fluorobiphenyl	*59.6*			*10.0-130*		*10/13/2023 18:06*	WG2148857
(S) 2,4,6-Tribromophenol	*64.7*			*10.0-155*		*10/13/2023 18:06*	WG2148857
(S) p-Terphenyl-d14	*68.0*			*10.0-128*		*10/13/2023 18:06*	WG2148857

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	600		10.0	1	10/12/2023 18:33	WG2149849

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	319		8.45	20.0	1	10/10/2023 13:39	WG2147741

Sample Narrative:

L1663622-11 WG2147741: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	38.7		0.379	1.00	1	10/07/2023 02:44	WG2146535
Fluoride	0.729		0.0640	0.150	1	10/07/2023 02:44	WG2146535
Nitrate	6.98		0.0480	0.100	1	10/07/2023 02:44	WG2146535
Nitrite	U		0.0420	0.100	1	10/07/2023 02:44	WG2146535
Sulfate	110		0.594	5.00	1	10/07/2023 02:44	WG2146535

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	10/12/2023 12:15	WG2147174

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.278		0.0200	0.200	1	10/12/2023 23:36	WG2146826

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	0.0207	J	0.0185	0.100	1	10/20/2023 12:58	WG2146834
Arsenic,Dissolved	0.00392		0.000180	0.00200	1	10/20/2023 12:58	WG2146834
Barium,Dissolved	0.113		0.000381	0.00200	1	10/20/2023 12:58	WG2146834
Cadmium,Dissolved	U		0.000150	0.00100	1	10/20/2023 12:58	WG2146834
Chromium,Dissolved	U		0.00124	0.00200	1	10/20/2023 12:58	WG2146834
Copper,Dissolved	0.00567		0.00151	0.00500	1	10/20/2023 12:58	WG2146834
Cobalt,Dissolved	0.0000604	J	0.0000596	0.00200	1	10/20/2023 12:58	WG2146834
Iron,Dissolved	U		0.0281	0.100	1	10/20/2023 12:58	WG2146834
Lead,Dissolved	U		0.000849	0.00200	1	10/20/2023 12:58	WG2146834
Manganese,Dissolved	U		0.000704	0.00500	1	10/20/2023 12:58	WG2146834
Molybdenum,Dissolved	0.00213	J	0.000348	0.00500	1	10/20/2023 12:58	WG2146834
Nickel,Dissolved	0.00601		0.000816	0.00200	1	10/20/2023 12:58	WG2146834
Selenium,Dissolved	0.00318		0.000300	0.00200	1	10/20/2023 12:58	WG2146834
Silver,Dissolved	U		0.0000700	0.00200	1	10/20/2023 12:58	WG2146834
Uranium,Dissolved	0.00459	J	0.0000700	0.0200	1	10/20/2023 12:58	WG2146834
Zinc,Dissolved	0.0409		0.00302	0.0250	1	10/20/2023 12:58	WG2146834

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Acetone	U		0.0113	0.0500	1	10/10/2023 00:27	WG2148083
Benzene	U		0.0000941	0.00100	1	10/10/2023 00:27	WG2148083
Bromodichloromethane	U		0.000136	0.00100	1	10/10/2023 00:27	WG2148083
Bromoform	U		0.000129	0.00100	1	10/10/2023 00:27	WG2148083
Bromomethane	U		0.000605	0.00500	1	10/10/2023 00:27	WG2148083
n-Butylbenzene	U		0.000157	0.00100	1	10/10/2023 00:27	WG2148083
sec-Butylbenzene	U		0.000125	0.00100	1	10/10/2023 00:27	WG2148083
tert-Butylbenzene	U		0.000127	0.00100	1	10/10/2023 00:27	WG2148083
Carbon disulfide	U		0.0000962	0.00100	1	10/10/2023 00:27	WG2148083
Carbon tetrachloride	U		0.000128	0.00100	1	10/10/2023 00:27	WG2148083
Chlorobenzene	U	J4	0.000116	0.00100	1	10/10/2023 00:27	WG2148083
Chlorodibromomethane	U		0.000140	0.00100	1	10/10/2023 00:27	WG2148083
Chloroethane	U		0.000192	0.00500	1	10/10/2023 00:27	WG2148083
Chloroform	U		0.000111	0.00500	1	10/10/2023 00:27	WG2148083
Chloromethane	U		0.000960	0.00250	1	10/10/2023 00:27	WG2148083
1,2-Dibromoethane	U		0.000126	0.00100	1	10/10/2023 00:27	WG2148083
1,1-Dichloroethane	U		0.000100	0.00100	1	10/10/2023 00:27	WG2148083
1,2-Dichloroethane	U		0.0000819	0.00100	1	10/10/2023 00:27	WG2148083
1,1-Dichloroethene	U		0.000188	0.00100	1	10/10/2023 00:27	WG2148083
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	10/10/2023 00:27	WG2148083
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	10/10/2023 00:27	WG2148083
1,2-Dichloropropane	U		0.000149	0.00100	1	10/10/2023 00:27	WG2148083
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	10/10/2023 00:27	WG2148083
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	10/10/2023 00:27	WG2148083
Ethylbenzene	U		0.000137	0.00100	1	10/10/2023 00:27	WG2148083
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	10/10/2023 00:27	WG2148083
2-Hexanone	U		0.000787	0.0100	1	10/10/2023 00:27	WG2148083
Isopropylbenzene	U		0.000105	0.00100	1	10/10/2023 00:27	WG2148083
p-Isopropyltoluene	U		0.000120	0.00100	1	10/10/2023 00:27	WG2148083
2-Butanone (MEK)	U		0.00119	0.0100	1	10/10/2023 00:27	WG2148083
Methylene Chloride	U		0.000430	0.00500	1	10/10/2023 00:27	WG2148083
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	10/10/2023 00:27	WG2148083
Methyl tert-butyl ether	U		0.000101	0.00100	1	10/10/2023 00:27	WG2148083
Naphthalene	U		0.00100	0.00500	1	10/10/2023 00:27	WG2148083
n-Propylbenzene	U		0.0000993	0.00100	1	10/10/2023 00:27	WG2148083
Styrene	U		0.000118	0.00100	1	10/10/2023 00:27	WG2148083
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	10/10/2023 00:27	WG2148083
Tetrachloroethene	U		0.000300	0.00100	1	10/10/2023 00:27	WG2148083
Toluene	U		0.000278	0.00100	1	10/10/2023 00:27	WG2148083
1,1,1-Trichloroethane	U		0.000149	0.00100	1	10/10/2023 00:27	WG2148083
1,1,2-Trichloroethane	U		0.000158	0.00100	1	10/10/2023 00:27	WG2148083
Trichloroethene	U		0.000190	0.00100	1	10/10/2023 00:27	WG2148083
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	10/10/2023 00:27	WG2148083
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	10/10/2023 00:27	WG2148083
Vinyl chloride	U		0.000234	0.00100	1	10/10/2023 00:27	WG2148083
Xylenes, Total	U		0.000174	0.00300	1	10/10/2023 00:27	WG2148083
(S) Toluene-d8	*101*			*80.0-120*		*10/10/2023 00:27*	WG2148083
(S) 4-Bromofluorobenzene	*101*			*77.0-126*		*10/10/2023 00:27*	WG2148083
(S) 1,2-Dichloroethane-d4	*90.3*			*70.0-130*		*10/10/2023 00:27*	WG2148083

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000886	0.00100	1	10/13/2023 18:28	WG2148857
Acenaphthylene	U		0.0000921	0.00100	1	10/13/2023 18:28	WG2148857
Acetophenone	U		0.000208	0.0100	1	10/13/2023 18:28	WG2148857
Anthracene	U		0.0000804	0.00100	1	10/13/2023 18:28	WG2148857
Atrazine	U		0.000255	0.0100	1	10/13/2023 18:28	WG2148857
Benzo(a)anthracene	U		0.000199	0.00100	1	10/13/2023 18:28	WG2148857
Benzaldehyde	U	J4	0.00169	0.0100	1	10/13/2023 18:28	WG2148857
Benzo(b)fluoranthene	U		0.000130	0.00100	1	10/13/2023 18:28	WG2148857
Benzo(k)fluoranthene	U		0.000120	0.00100	1	10/13/2023 18:28	WG2148857
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	10/13/2023 18:28	WG2148857
Benzo(a)pyrene	U		0.0000381	0.000200	1	10/13/2023 18:28	WG2148857
Biphenyl	U		0.000790	0.0100	1	10/13/2023 18:28	WG2148857
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	10/13/2023 18:28	WG2148857
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	10/13/2023 18:28	WG2148857
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	10/13/2023 18:28	WG2148857
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	10/13/2023 18:28	WG2148857
2-Chloronaphthalene	U		0.0000648	0.00100	1	10/13/2023 18:28	WG2148857
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	10/13/2023 18:28	WG2148857
Caprolactam	U		0.000309	0.0100	1	10/13/2023 18:28	WG2148857
Carbazole	U		0.000111	0.0100	1	10/13/2023 18:28	WG2148857
Chrysene	U		0.000130	0.00100	1	10/13/2023 18:28	WG2148857
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	10/13/2023 18:28	WG2148857
Dibenzofuran	U		0.0000970	0.0100	1	10/13/2023 18:28	WG2148857
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	10/13/2023 18:28	WG2148857
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	10/13/2023 18:28	WG2148857
2,6-Dinitrotoluene	U		0.000250	0.0100	1	10/13/2023 18:28	WG2148857
Fluoranthene	U		0.000102	0.00100	1	10/13/2023 18:28	WG2148857
Fluorene	U		0.0000844	0.00100	1	10/13/2023 18:28	WG2148857
Hexachlorobenzene	U		0.0000755	0.00100	1	10/13/2023 18:28	WG2148857
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	10/13/2023 18:28	WG2148857
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	10/13/2023 18:28	WG2148857
Hexachloroethane	U		0.000127	0.0100	1	10/13/2023 18:28	WG2148857
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	10/13/2023 18:28	WG2148857
Isophorone	U		0.000143	0.0100	1	10/13/2023 18:28	WG2148857
1-Methylnaphthalene	U		0.0000790	0.00100	1	10/13/2023 18:28	WG2148857
2-Methylnaphthalene	U		0.000117	0.00100	1	10/13/2023 18:28	WG2148857
Naphthalene	U		0.000159	0.00100	1	10/13/2023 18:28	WG2148857
Nitrobenzene	U		0.000297	0.0100	1	10/13/2023 18:28	WG2148857
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	10/13/2023 18:28	WG2148857
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	10/13/2023 18:28	WG2148857
Phenanthrene	U		0.000112	0.00100	1	10/13/2023 18:28	WG2148857
Benzylbutyl phthalate	U		0.000765	0.00300	1	10/13/2023 18:28	WG2148857
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	10/13/2023 18:28	WG2148857
Di-n-butyl phthalate	U		0.000453	0.00300	1	10/13/2023 18:28	WG2148857
Diethyl phthalate	U		0.000287	0.00300	1	10/13/2023 18:28	WG2148857
Dimethyl phthalate	U		0.000260	0.00300	1	10/13/2023 18:28	WG2148857
Di-n-octyl phthalate	U		0.000932	0.00300	1	10/13/2023 18:28	WG2148857
Pyrene	U		0.000107	0.00100	1	10/13/2023 18:28	WG2148857
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	10/13/2023 18:28	WG2148857
4-Chloro-3-methylphenol	U	J4	0.000131	0.0100	1	10/13/2023 18:28	WG2148857
2-Chlorophenol	U		0.000133	0.0100	1	10/13/2023 18:28	WG2148857
2,4-Dichlorophenol	U		0.000102	0.0100	1	10/13/2023 18:28	WG2148857
2,4-Dimethylphenol	U		0.0000636	0.0100	1	10/13/2023 18:28	WG2148857
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	10/13/2023 18:28	WG2148857
2,4-Dinitrophenol	U		0.00593	0.0100	1	10/13/2023 18:28	WG2148857
2-Nitrophenol	U		0.000117	0.0100	1	10/13/2023 18:28	WG2148857

MW-12R2
Collected date/time: 10/05/23 12:25
L1663622

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
2-Nitroaniline	U		0.000102	0.0100	1	10/13/2023 18:28	WG2148857
2-Methylphenol	U		0.0000929	0.0100	1	10/13/2023 18:28	WG2148857
3&4-Methyl Phenol	U		0.000168	0.0100	1	10/13/2023 18:28	WG2148857
3-Nitroaniline	U		0.0000869	0.0100	1	10/13/2023 18:28	WG2148857
4-Chloroaniline	U		0.000234	0.0100	1	10/13/2023 18:28	WG2148857
4-Nitroaniline	U		0.0000910	0.0100	1	10/13/2023 18:28	WG2148857
4-Nitrophenol	U		0.000143	0.0100	1	10/13/2023 18:28	WG2148857
Pentachlorophenol	U		0.000313	0.0100	1	10/13/2023 18:28	WG2148857
Phenol	U		0.00433	0.0100	1	10/13/2023 18:28	WG2148857
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	10/13/2023 18:28	WG2148857
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	10/13/2023 18:28	WG2148857
(S) 2-Fluorophenol	*31.6*			*10.0-120*		*10/13/2023 18:28*	WG2148857
(S) Phenol-d5	*16.9*			*10.0-120*		*10/13/2023 18:28*	WG2148857
(S) Nitrobenzene-d5	*65.0*			*10.0-127*		*10/13/2023 18:28*	WG2148857
(S) 2-Fluorobiphenyl	*64.0*			*10.0-130*		*10/13/2023 18:28*	WG2148857
(S) 2,4,6-Tribromophenol	*85.5*			*10.0-155*		*10/13/2023 18:28*	WG2148857
(S) p-Terphenyl-d14	*90.8*			*10.0-128*		*10/13/2023 18:28*	WG2148857

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1120		20.0	1	10/11/2023 12:39	WG2148629

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	244		3.79	10.0	10	10/07/2023 05:46	WG2146649
Fluoride	0.345		0.0640	0.150	1	10/06/2023 23:39	WG2146649
Nitrate	5.42		0.0480	0.100	1	10/06/2023 23:39	WG2146649
Nitrite	U		0.0420	0.100	1	10/06/2023 23:39	WG2146649
Sulfate	110		0.594	5.00	1	10/06/2023 23:39	WG2146649

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.000100	0.000200	1	10/12/2023 12:17	WG2147174

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron,Dissolved	0.312		0.0200	0.200	1	10/12/2023 23:39	WG2146826

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.0185	0.100	1	10/20/2023 13:01	WG2146834
Arsenic,Dissolved	0.00274		0.000180	0.00200	1	10/20/2023 13:01	WG2146834
Barium,Dissolved	0.149		0.000381	0.00200	1	10/20/2023 13:01	WG2146834
Cadmium,Dissolved	U		0.000150	0.00100	1	10/20/2023 13:01	WG2146834
Chromium,Dissolved	0.00294		0.00124	0.00200	1	10/20/2023 13:01	WG2146834
Copper,Dissolved	0.00635		0.00151	0.00500	1	10/20/2023 13:01	WG2146834
Cobalt,Dissolved	0.000479	J	0.0000596	0.00200	1	10/20/2023 13:01	WG2146834
Iron,Dissolved	U		0.0281	0.100	1	10/20/2023 13:01	WG2146834
Lead,Dissolved	U		0.000849	0.00200	1	10/20/2023 13:01	WG2146834
Manganese,Dissolved	0.00900		0.000704	0.00500	1	10/20/2023 13:01	WG2146834
Molybdenum,Dissolved	0.000668	J	0.000348	0.00500	1	10/20/2023 13:01	WG2146834
Nickel,Dissolved	0.00854		0.000816	0.00200	1	10/20/2023 13:01	WG2146834
Selenium,Dissolved	0.000861	J	0.000300	0.00200	1	10/20/2023 13:01	WG2146834
Silver,Dissolved	U		0.0000700	0.00200	1	10/20/2023 13:01	WG2146834
Uranium,Dissolved	0.0113	J	0.0000700	0.0200	1	10/20/2023 13:01	WG2146834
Zinc,Dissolved	0.00442	J	0.00302	0.0250	1	10/20/2023 13:01	WG2146834

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Acetone	U		0.0113	0.0500	1	10/10/2023 00:47	WG2148083
Benzene	U		0.0000941	0.00100	1	10/10/2023 00:47	WG2148083
Bromodichloromethane	U		0.000136	0.00100	1	10/10/2023 00:47	WG2148083
Bromoform	U		0.000129	0.00100	1	10/10/2023 00:47	WG2148083
Bromomethane	U		0.000605	0.00500	1	10/10/2023 00:47	WG2148083
n-Butylbenzene	U		0.000157	0.00100	1	10/10/2023 00:47	WG2148083
sec-Butylbenzene	U		0.000125	0.00100	1	10/10/2023 00:47	WG2148083
tert-Butylbenzene	U		0.000127	0.00100	1	10/10/2023 00:47	WG2148083
Carbon disulfide	U		0.0000962	0.00100	1	10/10/2023 00:47	WG2148083

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Carbon tetrachloride	U		0.000128	0.00100	1	10/10/2023 00:47	WG2148083
Chlorobenzene	U	J4	0.000116	0.00100	1	10/10/2023 00:47	WG2148083
Chlorodibromomethane	U		0.000140	0.00100	1	10/10/2023 00:47	WG2148083
Chloroethane	U		0.000192	0.00500	1	10/10/2023 00:47	WG2148083
Chloroform	0.000233	J	0.000111	0.00500	1	10/10/2023 00:47	WG2148083
Chloromethane	U		0.000960	0.00250	1	10/10/2023 00:47	WG2148083
1,2-Dibromoethane	U		0.000126	0.00100	1	10/10/2023 00:47	WG2148083
1,1-Dichloroethane	U		0.000100	0.00100	1	10/10/2023 00:47	WG2148083
1,2-Dichloroethane	U		0.0000819	0.00100	1	10/10/2023 00:47	WG2148083
1,1-Dichloroethene	U		0.000188	0.00100	1	10/10/2023 00:47	WG2148083
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	10/10/2023 00:47	WG2148083
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	10/10/2023 00:47	WG2148083
1,2-Dichloropropane	U		0.000149	0.00100	1	10/10/2023 00:47	WG2148083
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	10/10/2023 00:47	WG2148083
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	10/10/2023 00:47	WG2148083
Ethylbenzene	U		0.000137	0.00100	1	10/10/2023 00:47	WG2148083
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	10/10/2023 00:47	WG2148083
2-Hexanone	U		0.000787	0.0100	1	10/10/2023 00:47	WG2148083
Isopropylbenzene	U		0.000105	0.00100	1	10/10/2023 00:47	WG2148083
p-Isopropyltoluene	U		0.000120	0.00100	1	10/10/2023 00:47	WG2148083
2-Butanone (MEK)	U		0.00119	0.0100	1	10/10/2023 00:47	WG2148083
Methylene Chloride	U		0.000430	0.00500	1	10/10/2023 00:47	WG2148083
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	10/10/2023 00:47	WG2148083
Methyl tert-butyl ether	U		0.000101	0.00100	1	10/10/2023 00:47	WG2148083
Naphthalene	U		0.00100	0.00500	1	10/10/2023 00:47	WG2148083
n-Propylbenzene	U		0.0000993	0.00100	1	10/10/2023 00:47	WG2148083
Styrene	U		0.000118	0.00100	1	10/10/2023 00:47	WG2148083
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	10/10/2023 00:47	WG2148083
Tetrachloroethene	U		0.000300	0.00100	1	10/10/2023 00:47	WG2148083
Toluene	U		0.000278	0.00100	1	10/10/2023 00:47	WG2148083
1,1,1-Trichloroethane	U		0.000149	0.00100	1	10/10/2023 00:47	WG2148083
1,1,2-Trichloroethane	U		0.000158	0.00100	1	10/10/2023 00:47	WG2148083
Trichloroethene	U		0.000190	0.00100	1	10/10/2023 00:47	WG2148083
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	10/10/2023 00:47	WG2148083
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	10/10/2023 00:47	WG2148083
Vinyl chloride	U		0.000234	0.00100	1	10/10/2023 00:47	WG2148083
Xylenes, Total	U		0.000174	0.00300	1	10/10/2023 00:47	WG2148083
(S) Toluene-d8	*101*			*80.0-120*		*10/10/2023 00:47*	WG2148083
(S) 4-Bromofluorobenzene	*101*			*77.0-126*		*10/10/2023 00:47*	WG2148083
(S) 1,2-Dichloroethane-d4	*88.6*			*70.0-130*		*10/10/2023 00:47*	WG2148083

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000886	0.00100	1	10/13/2023 18:50	WG2148857
Acenaphthylene	U		0.0000921	0.00100	1	10/13/2023 18:50	WG2148857
Acetophenone	U		0.000208	0.0100	1	10/13/2023 18:50	WG2148857
Anthracene	U		0.0000804	0.00100	1	10/13/2023 18:50	WG2148857
Atrazine	U		0.000255	0.0100	1	10/13/2023 18:50	WG2148857
Benzo(a)anthracene	U		0.000199	0.00100	1	10/13/2023 18:50	WG2148857
Benzaldehyde	U	J4	0.00169	0.0100	1	10/13/2023 18:50	WG2148857
Benzo(b)fluoranthene	U		0.000130	0.00100	1	10/13/2023 18:50	WG2148857
Benzo(k)fluoranthene	U		0.000120	0.00100	1	10/13/2023 18:50	WG2148857
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	10/13/2023 18:50	WG2148857
Benzo(a)pyrene	U		0.0000381	0.000200	1	10/13/2023 18:50	WG2148857
Biphenyl	U		0.000790	0.0100	1	10/13/2023 18:50	WG2148857

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	10/13/2023 18:50	WG2148857
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	10/13/2023 18:50	WG2148857
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	10/13/2023 18:50	WG2148857
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	10/13/2023 18:50	WG2148857
2-Chloronaphthalene	U		0.0000648	0.00100	1	10/13/2023 18:50	WG2148857
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	10/13/2023 18:50	WG2148857
Caprolactam	U		0.000309	0.0100	1	10/13/2023 18:50	WG2148857
Carbazole	U		0.000111	0.0100	1	10/13/2023 18:50	WG2148857
Chrysene	U		0.000130	0.00100	1	10/13/2023 18:50	WG2148857
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	10/13/2023 18:50	WG2148857
Dibenzofuran	U		0.0000970	0.0100	1	10/13/2023 18:50	WG2148857
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	10/13/2023 18:50	WG2148857
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	10/13/2023 18:50	WG2148857
2,6-Dinitrotoluene	U		0.000250	0.0100	1	10/13/2023 18:50	WG2148857
Fluoranthene	U		0.000102	0.00100	1	10/13/2023 18:50	WG2148857
Fluorene	U		0.0000844	0.00100	1	10/13/2023 18:50	WG2148857
Hexachlorobenzene	U		0.0000755	0.00100	1	10/13/2023 18:50	WG2148857
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	10/13/2023 18:50	WG2148857
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	10/13/2023 18:50	WG2148857
Hexachloroethane	U		0.000127	0.0100	1	10/13/2023 18:50	WG2148857
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	10/13/2023 18:50	WG2148857
Isophorone	U		0.000143	0.0100	1	10/13/2023 18:50	WG2148857
1-Methylnaphthalene	U		0.0000790	0.00100	1	10/13/2023 18:50	WG2148857
2-Methylnaphthalene	U		0.000117	0.00100	1	10/13/2023 18:50	WG2148857
Naphthalene	U		0.000159	0.00100	1	10/13/2023 18:50	WG2148857
Nitrobenzene	U		0.000297	0.0100	1	10/13/2023 18:50	WG2148857
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	10/13/2023 18:50	WG2148857
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	10/13/2023 18:50	WG2148857
Phenanthrene	U		0.000112	0.00100	1	10/13/2023 18:50	WG2148857
Benzylbutyl phthalate	U		0.000765	0.00300	1	10/13/2023 18:50	WG2148857
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	10/13/2023 18:50	WG2148857
Di-n-butyl phthalate	U		0.000453	0.00300	1	10/13/2023 18:50	WG2148857
Diethyl phthalate	U		0.000287	0.00300	1	10/13/2023 18:50	WG2148857
Dimethyl phthalate	U		0.000260	0.00300	1	10/13/2023 18:50	WG2148857
Di-n-octyl phthalate	U		0.000932	0.00300	1	10/13/2023 18:50	WG2148857
Pyrene	U		0.000107	0.00100	1	10/13/2023 18:50	WG2148857
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	10/13/2023 18:50	WG2148857
4-Chloro-3-methylphenol	U	J4	0.000131	0.0100	1	10/13/2023 18:50	WG2148857
2-Chlorophenol	U		0.000133	0.0100	1	10/13/2023 18:50	WG2148857
2,4-Dichlorophenol	U		0.000102	0.0100	1	10/13/2023 18:50	WG2148857
2,4-Dimethylphenol	U		0.0000636	0.0100	1	10/13/2023 18:50	WG2148857
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	10/13/2023 18:50	WG2148857
2,4-Dinitrophenol	U		0.00593	0.0100	1	10/13/2023 18:50	WG2148857
2-Nitrophenol	U		0.000117	0.0100	1	10/13/2023 18:50	WG2148857
2-Nitroaniline	U		0.000102	0.0100	1	10/13/2023 18:50	WG2148857
2-Methylphenol	U		0.0000929	0.0100	1	10/13/2023 18:50	WG2148857
3&4-Methyl Phenol	U		0.000168	0.0100	1	10/13/2023 18:50	WG2148857
3-Nitroaniline	U		0.0000869	0.0100	1	10/13/2023 18:50	WG2148857
4-Chloroaniline	U		0.000234	0.0100	1	10/13/2023 18:50	WG2148857
4-Nitroaniline	U		0.0000910	0.0100	1	10/13/2023 18:50	WG2148857
4-Nitrophenol	U		0.000143	0.0100	1	10/13/2023 18:50	WG2148857
Pentachlorophenol	U		0.000313	0.0100	1	10/13/2023 18:50	WG2148857
Phenol	U		0.00433	0.0100	1	10/13/2023 18:50	WG2148857
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	10/13/2023 18:50	WG2148857
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	10/13/2023 18:50	WG2148857
(S) 2-Fluorophenol	*25.3*			*10.0-120*		*10/13/2023 18:50*	WG2148857

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

MW-13R
Collected date/time: 10/05/23 08:55
L1663622

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
(S) Phenol-d5	*15.9*			*10.0-120*		*10/13/2023 18:50*	WG2148857
(S) Nitrobenzene-d5	*68.7*			*10.0-127*		*10/13/2023 18:50*	WG2148857
(S) 2-Fluorobiphenyl	*61.0*			*10.0-130*		*10/13/2023 18:50*	WG2148857
(S) 2,4,6-Tribromophenol	*59.3*			*10.0-155*		*10/13/2023 18:50*	WG2148857
(S) p-Terphenyl-d14	*38.6*			*10.0-128*		*10/13/2023 18:50*	WG2148857

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	731		13.3	1	10/11/2023 12:39	WG2148629

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	170		0.379	1.00	1	10/07/2023 00:09	WG2146682
Fluoride	0.861		0.0640	0.150	1	10/07/2023 00:09	WG2146682
Nitrate	2.71		0.0480	0.100	1	10/07/2023 00:09	WG2146682
Nitrite	U		0.0420	0.100	1	10/07/2023 00:09	WG2146682
Sulfate	45.2		0.594	5.00	1	10/07/2023 00:09	WG2146682

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	10/12/2023 12:20	WG2147174

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.221		0.0200	0.200	1	10/12/2023 23:57	WG2146826

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		0.0185	0.100	1	10/20/2023 13:05	WG2146834
Arsenic,Dissolved	0.00288		0.000180	0.00200	1	10/20/2023 13:05	WG2146834
Barium,Dissolved	0.157		0.000381	0.00200	1	10/20/2023 13:05	WG2146834
Cadmium,Dissolved	U		0.000150	0.00100	1	10/20/2023 13:05	WG2146834
Chromium,Dissolved	U		0.00124	0.00200	1	10/20/2023 13:05	WG2146834
Copper,Dissolved	U		0.00151	0.00500	1	10/20/2023 13:05	WG2146834
Cobalt,Dissolved	U		0.0000596	0.00200	1	10/20/2023 13:05	WG2146834
Iron,Dissolved	U		0.0281	0.100	1	10/20/2023 13:05	WG2146834
Lead,Dissolved	U		0.000849	0.00200	1	10/20/2023 13:05	WG2146834
Manganese,Dissolved	U		0.000704	0.00500	1	10/20/2023 13:05	WG2146834
Molybdenum,Dissolved	0.00260	J	0.000348	0.00500	1	10/20/2023 13:05	WG2146834
Nickel,Dissolved	U		0.000816	0.00200	1	10/20/2023 13:05	WG2146834
Selenium,Dissolved	0.00162	J	0.000300	0.00200	1	10/20/2023 13:05	WG2146834
Silver,Dissolved	U		0.0000700	0.00200	1	10/20/2023 13:05	WG2146834
Uranium,Dissolved	0.00488	J	0.0000700	0.0200	1	10/20/2023 13:05	WG2146834
Zinc,Dissolved	U		0.00302	0.0250	1	10/20/2023 13:05	WG2146834

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0113	0.0500	1	10/10/2023 01:07	WG2148083
Benzene	U		0.0000941	0.00100	1	10/10/2023 01:07	WG2148083
Bromodichloromethane	U		0.000136	0.00100	1	10/10/2023 01:07	WG2148083
Bromoform	U		0.000129	0.00100	1	10/10/2023 01:07	WG2148083
Bromomethane	U		0.000605	0.00500	1	10/10/2023 01:07	WG2148083
n-Butylbenzene	U		0.000157	0.00100	1	10/10/2023 01:07	WG2148083
sec-Butylbenzene	U		0.000125	0.00100	1	10/10/2023 01:07	WG2148083
tert-Butylbenzene	U		0.000127	0.00100	1	10/10/2023 01:07	WG2148083
Carbon disulfide	U		0.0000962	0.00100	1	10/10/2023 01:07	WG2148083

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Carbon tetrachloride	U		0.000128	0.00100	1	10/10/2023 01:07	WG2148083
Chlorobenzene	U	J4	0.000116	0.00100	1	10/10/2023 01:07	WG2148083
Chlorodibromomethane	U		0.000140	0.00100	1	10/10/2023 01:07	WG2148083
Chloroethane	U		0.000192	0.00500	1	10/10/2023 01:07	WG2148083
Chloroform	U		0.000111	0.00500	1	10/10/2023 01:07	WG2148083
Chloromethane	U		0.000960	0.00250	1	10/10/2023 01:07	WG2148083
1,2-Dibromoethane	U		0.000126	0.00100	1	10/10/2023 01:07	WG2148083
1,1-Dichloroethane	U		0.000100	0.00100	1	10/10/2023 01:07	WG2148083
1,2-Dichloroethane	U		0.0000819	0.00100	1	10/10/2023 01:07	WG2148083
1,1-Dichloroethene	U		0.000188	0.00100	1	10/10/2023 01:07	WG2148083
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	10/10/2023 01:07	WG2148083
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	10/10/2023 01:07	WG2148083
1,2-Dichloropropane	U		0.000149	0.00100	1	10/10/2023 01:07	WG2148083
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	10/10/2023 01:07	WG2148083
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	10/10/2023 01:07	WG2148083
Ethylbenzene	U		0.000137	0.00100	1	10/10/2023 01:07	WG2148083
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	10/10/2023 01:07	WG2148083
2-Hexanone	U		0.000787	0.0100	1	10/10/2023 01:07	WG2148083
Isopropylbenzene	U		0.000105	0.00100	1	10/10/2023 01:07	WG2148083
p-Isopropyltoluene	U		0.000120	0.00100	1	10/10/2023 01:07	WG2148083
2-Butanone (MEK)	U		0.00119	0.0100	1	10/10/2023 01:07	WG2148083
Methylene Chloride	U		0.000430	0.00500	1	10/10/2023 01:07	WG2148083
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	10/10/2023 01:07	WG2148083
Methyl tert-butyl ether	U		0.000101	0.00100	1	10/10/2023 01:07	WG2148083
Naphthalene	U		0.00100	0.00500	1	10/10/2023 01:07	WG2148083
n-Propylbenzene	U		0.0000993	0.00100	1	10/10/2023 01:07	WG2148083
Styrene	U		0.000118	0.00100	1	10/10/2023 01:07	WG2148083
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	10/10/2023 01:07	WG2148083
Tetrachloroethene	U		0.000300	0.00100	1	10/10/2023 01:07	WG2148083
Toluene	U		0.000278	0.00100	1	10/10/2023 01:07	WG2148083
1,1,1-Trichloroethane	U		0.000149	0.00100	1	10/10/2023 01:07	WG2148083
1,1,2-Trichloroethane	U		0.000158	0.00100	1	10/10/2023 01:07	WG2148083
Trichloroethene	U		0.000190	0.00100	1	10/10/2023 01:07	WG2148083
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	10/10/2023 01:07	WG2148083
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	10/10/2023 01:07	WG2148083
Vinyl chloride	U		0.000234	0.00100	1	10/10/2023 01:07	WG2148083
Xylenes, Total	U		0.000174	0.00300	1	10/10/2023 01:07	WG2148083
(S) Toluene-d8	*101*			*80.0-120*		*10/10/2023 01:07*	WG2148083
(S) 4-Bromofluorobenzene	*102*			*77.0-126*		*10/10/2023 01:07*	WG2148083
(S) 1,2-Dichloroethane-d4	*91.1*			*70.0-130*		*10/10/2023 01:07*	WG2148083

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000886	0.00100	1	10/13/2023 19:12	WG2148857
Acenaphthylene	U		0.0000921	0.00100	1	10/13/2023 19:12	WG2148857
Acetophenone	U		0.000208	0.0100	1	10/13/2023 19:12	WG2148857
Anthracene	U		0.0000804	0.00100	1	10/13/2023 19:12	WG2148857
Atrazine	U		0.000255	0.0100	1	10/13/2023 19:12	WG2148857
Benzo(a)anthracene	U		0.000199	0.00100	1	10/13/2023 19:12	WG2148857
Benzaldehyde	U	J4	0.00169	0.0100	1	10/13/2023 19:12	WG2148857
Benzo(b)fluoranthene	U		0.000130	0.00100	1	10/13/2023 19:12	WG2148857
Benzo(k)fluoranthene	U		0.000120	0.00100	1	10/13/2023 19:12	WG2148857
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	10/13/2023 19:12	WG2148857
Benzo(a)pyrene	U		0.0000381	0.000200	1	10/13/2023 19:12	WG2148857
Biphenyl	U		0.000790	0.0100	1	10/13/2023 19:12	WG2148857

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	10/13/2023 19:12	WG2148857
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	10/13/2023 19:12	WG2148857
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	10/13/2023 19:12	WG2148857
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	10/13/2023 19:12	WG2148857
2-Chloronaphthalene	U		0.0000648	0.00100	1	10/13/2023 19:12	WG2148857
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	10/13/2023 19:12	WG2148857
Caprolactam	U		0.000309	0.0100	1	10/13/2023 19:12	WG2148857
Carbazole	U		0.000111	0.0100	1	10/13/2023 19:12	WG2148857
Chrysene	U		0.000130	0.00100	1	10/13/2023 19:12	WG2148857
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	10/13/2023 19:12	WG2148857
Dibenzofuran	U		0.0000970	0.0100	1	10/13/2023 19:12	WG2148857
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	10/13/2023 19:12	WG2148857
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	10/13/2023 19:12	WG2148857
2,6-Dinitrotoluene	U		0.000250	0.0100	1	10/13/2023 19:12	WG2148857
Fluoranthene	U		0.000102	0.00100	1	10/13/2023 19:12	WG2148857
Fluorene	U		0.0000844	0.00100	1	10/13/2023 19:12	WG2148857
Hexachlorobenzene	U		0.0000755	0.00100	1	10/13/2023 19:12	WG2148857
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	10/13/2023 19:12	WG2148857
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	10/13/2023 19:12	WG2148857
Hexachloroethane	U		0.000127	0.0100	1	10/13/2023 19:12	WG2148857
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	10/13/2023 19:12	WG2148857
Isophorone	U		0.000143	0.0100	1	10/13/2023 19:12	WG2148857
1-Methylnaphthalene	U		0.0000790	0.00100	1	10/13/2023 19:12	WG2148857
2-Methylnaphthalene	U		0.000117	0.00100	1	10/13/2023 19:12	WG2148857
Naphthalene	U		0.000159	0.00100	1	10/13/2023 19:12	WG2148857
Nitrobenzene	U		0.000297	0.0100	1	10/13/2023 19:12	WG2148857
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	10/13/2023 19:12	WG2148857
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	10/13/2023 19:12	WG2148857
Phenanthrene	U		0.000112	0.00100	1	10/13/2023 19:12	WG2148857
Benzylbutyl phthalate	U		0.000765	0.00300	1	10/13/2023 19:12	WG2148857
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	10/13/2023 19:12	WG2148857
Di-n-butyl phthalate	U		0.000453	0.00300	1	10/13/2023 19:12	WG2148857
Diethyl phthalate	U		0.000287	0.00300	1	10/13/2023 19:12	WG2148857
Dimethyl phthalate	U		0.000260	0.00300	1	10/13/2023 19:12	WG2148857
Di-n-octyl phthalate	U		0.000932	0.00300	1	10/13/2023 19:12	WG2148857
Pyrene	U		0.000107	0.00100	1	10/13/2023 19:12	WG2148857
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	10/13/2023 19:12	WG2148857
4-Chloro-3-methylphenol	U	J4	0.000131	0.0100	1	10/13/2023 19:12	WG2148857
2-Chlorophenol	U		0.000133	0.0100	1	10/13/2023 19:12	WG2148857
2,4-Dichlorophenol	U		0.000102	0.0100	1	10/13/2023 19:12	WG2148857
2,4-Dimethylphenol	U		0.0000636	0.0100	1	10/13/2023 19:12	WG2148857
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	10/13/2023 19:12	WG2148857
2,4-Dinitrophenol	U		0.00593	0.0100	1	10/13/2023 19:12	WG2148857
2-Nitrophenol	U		0.000117	0.0100	1	10/13/2023 19:12	WG2148857
2-Nitroaniline	U		0.000102	0.0100	1	10/13/2023 19:12	WG2148857
2-Methylphenol	U		0.0000929	0.0100	1	10/13/2023 19:12	WG2148857
3&4-Methyl Phenol	U		0.000168	0.0100	1	10/13/2023 19:12	WG2148857
3-Nitroaniline	U		0.0000869	0.0100	1	10/13/2023 19:12	WG2148857
4-Chloroaniline	U		0.000234	0.0100	1	10/13/2023 19:12	WG2148857
4-Nitroaniline	U		0.0000910	0.0100	1	10/13/2023 19:12	WG2148857
4-Nitrophenol	U		0.000143	0.0100	1	10/13/2023 19:12	WG2148857
Pentachlorophenol	U		0.000313	0.0100	1	10/13/2023 19:12	WG2148857
Phenol	U		0.00433	0.0100	1	10/13/2023 19:12	WG2148857
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	10/13/2023 19:12	WG2148857
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	10/13/2023 19:12	WG2148857
(S) 2-Fluorophenol	*24.8*			*10.0-120*		*10/13/2023 19:12*	WG2148857

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

MW-14R
Collected date/time: 10/05/23 11:15
L1663622

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
(S) Phenol-d5	*15.6*			*10.0-120*		*10/13/2023 19:12*	WG2148857
(S) Nitrobenzene-d5	*66.3*			*10.0-127*		*10/13/2023 19:12*	WG2148857
(S) 2-Fluorobiphenyl	*61.1*			*10.0-130*		*10/13/2023 19:12*	WG2148857
(S) 2,4,6-Tribromophenol	*60.0*			*10.0-155*		*10/13/2023 19:12*	WG2148857
(S) p-Terphenyl-d14	*65.7*			*10.0-128*		*10/13/2023 19:12*	WG2148857

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1550	Q	20.0	1	10/13/2023 00:00	WG2150228

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	166		8.45	20.0	1	10/10/2023 13:45	WG2147741

Sample Narrative:

L1663622-14 WG2147741: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	454		3.79	10.0	10	10/07/2023 06:37	WG2146682
Fluoride	0.529		0.0640	0.150	1	10/07/2023 00:25	WG2146682
Nitrate	2.96		0.0480	0.100	1	10/07/2023 00:25	WG2146682
Nitrite	U		0.0420	0.100	1	10/07/2023 00:25	WG2146682
Sulfate	91.0		0.594	5.00	1	10/07/2023 00:25	WG2146682

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	10/12/2023 12:22	WG2147174

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.203		0.0200	0.200	1	10/13/2023 00:00	WG2146826

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		0.0185	0.100	1	10/20/2023 13:08	WG2146834
Arsenic,Dissolved	0.00288		0.000180	0.00200	1	10/20/2023 13:08	WG2146834
Barium,Dissolved	0.128		0.000381	0.00200	1	10/20/2023 13:08	WG2146834
Cadmium,Dissolved	U		0.000150	0.00100	1	10/20/2023 13:08	WG2146834
Chromium,Dissolved	0.0215		0.00124	0.00200	1	10/20/2023 13:08	WG2146834
Copper,Dissolved	0.00437	J	0.00151	0.00500	1	10/20/2023 13:08	WG2146834
Cobalt,Dissolved	U		0.0000596	0.00200	1	10/20/2023 13:08	WG2146834
Iron,Dissolved	U		0.0281	0.100	1	10/20/2023 13:08	WG2146834
Lead,Dissolved	U		0.000849	0.00200	1	10/20/2023 13:08	WG2146834
Manganese,Dissolved	U		0.000704	0.00500	1	10/20/2023 13:08	WG2146834
Molybdenum,Dissolved	0.00182	J	0.000348	0.00500	1	10/20/2023 13:08	WG2146834
Nickel,Dissolved	0.00174	J	0.000816	0.00200	1	10/20/2023 13:08	WG2146834
Selenium,Dissolved	0.00174	J	0.000300	0.00200	1	10/20/2023 13:08	WG2146834
Silver,Dissolved	U		0.0000700	0.00200	1	10/20/2023 13:08	WG2146834
Uranium,Dissolved	0.00215	J	0.0000700	0.0200	1	10/20/2023 13:08	WG2146834
Zinc,Dissolved	0.0674		0.00302	0.0250	1	10/20/2023 13:08	WG2146834

MW-15R
Collected date/time: 10/05/23 11:05
L1663622

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Acetone	U		0.0113	0.0500	1	10/10/2023 01:27	WG2148083
Benzene	U		0.0000941	0.00100	1	10/10/2023 01:27	WG2148083
Bromodichloromethane	0.00419		0.000136	0.00100	1	10/10/2023 01:27	WG2148083
Bromoform	U		0.000129	0.00100	1	10/10/2023 01:27	WG2148083
Bromomethane	U		0.000605	0.00500	1	10/10/2023 01:27	WG2148083
n-Butylbenzene	U		0.000157	0.00100	1	10/10/2023 01:27	WG2148083
sec-Butylbenzene	U		0.000125	0.00100	1	10/10/2023 01:27	WG2148083
tert-Butylbenzene	U		0.000127	0.00100	1	10/10/2023 01:27	WG2148083
Carbon disulfide	U		0.0000962	0.00100	1	10/10/2023 01:27	WG2148083
Carbon tetrachloride	0.000279	J	0.000128	0.00100	1	10/10/2023 01:27	WG2148083
Chlorobenzene	U	J4	0.000116	0.00100	1	10/10/2023 01:27	WG2148083
Chlorodibromomethane	U		0.000140	0.00100	1	10/10/2023 01:27	WG2148083
Chloroethane	U		0.000192	0.00500	1	10/10/2023 01:27	WG2148083
Chloroform	0.0173		0.000111	0.00500	1	10/10/2023 01:27	WG2148083
Chloromethane	U		0.000960	0.00250	1	10/10/2023 01:27	WG2148083
1,2-Dibromoethane	U		0.000126	0.00100	1	10/10/2023 01:27	WG2148083
1,1-Dichloroethane	U		0.000100	0.00100	1	10/10/2023 01:27	WG2148083
1,2-Dichloroethane	U		0.0000819	0.00100	1	10/10/2023 01:27	WG2148083
1,1-Dichloroethene	U		0.000188	0.00100	1	10/10/2023 01:27	WG2148083
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	10/10/2023 01:27	WG2148083
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	10/10/2023 01:27	WG2148083
1,2-Dichloropropane	U		0.000149	0.00100	1	10/10/2023 01:27	WG2148083
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	10/10/2023 01:27	WG2148083
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	10/10/2023 01:27	WG2148083
Ethylbenzene	U		0.000137	0.00100	1	10/10/2023 01:27	WG2148083
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	10/10/2023 01:27	WG2148083
2-Hexanone	U		0.000787	0.0100	1	10/10/2023 01:27	WG2148083
Isopropylbenzene	U		0.000105	0.00100	1	10/10/2023 01:27	WG2148083
p-Isopropyltoluene	U		0.000120	0.00100	1	10/10/2023 01:27	WG2148083
2-Butanone (MEK)	U		0.00119	0.0100	1	10/10/2023 01:27	WG2148083
Methylene Chloride	U		0.000430	0.00500	1	10/10/2023 01:27	WG2148083
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	10/10/2023 01:27	WG2148083
Methyl tert-butyl ether	U		0.000101	0.00100	1	10/10/2023 01:27	WG2148083
Naphthalene	U		0.00100	0.00500	1	10/10/2023 01:27	WG2148083
n-Propylbenzene	U		0.0000993	0.00100	1	10/10/2023 01:27	WG2148083
Styrene	U		0.000118	0.00100	1	10/10/2023 01:27	WG2148083
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	10/10/2023 01:27	WG2148083
Tetrachloroethene	U		0.000300	0.00100	1	10/10/2023 01:27	WG2148083
Toluene	U		0.000278	0.00100	1	10/10/2023 01:27	WG2148083
1,1,1-Trichloroethane	U		0.000149	0.00100	1	10/10/2023 01:27	WG2148083
1,1,2-Trichloroethane	U		0.000158	0.00100	1	10/10/2023 01:27	WG2148083
Trichloroethene	U		0.000190	0.00100	1	10/10/2023 01:27	WG2148083
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	10/10/2023 01:27	WG2148083
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	10/10/2023 01:27	WG2148083
Vinyl chloride	U		0.000234	0.00100	1	10/10/2023 01:27	WG2148083
Xylenes, Total	U		0.000174	0.00300	1	10/10/2023 01:27	WG2148083
(S) Toluene-d8	*101*			*80.0-120*		*10/10/2023 01:27*	WG2148083
(S) 4-Bromofluorobenzene	*104*			*77.0-126*		*10/10/2023 01:27*	WG2148083
(S) 1,2-Dichloroethane-d4	*90.6*			*70.0-130*		*10/10/2023 01:27*	WG2148083

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Acenaphthene	U		0.0000886	0.00100	1	10/13/2023 19:33	WG2148857
Acenaphthylene	U		0.0000921	0.00100	1	10/13/2023 19:33	WG2148857
Acetophenone	U		0.000208	0.0100	1	10/13/2023 19:33	WG2148857
Anthracene	U		0.0000804	0.00100	1	10/13/2023 19:33	WG2148857
Atrazine	U		0.000255	0.0100	1	10/13/2023 19:33	WG2148857
Benzo(a)anthracene	U		0.000199	0.00100	1	10/13/2023 19:33	WG2148857
Benzaldehyde	U	J4	0.00169	0.0100	1	10/13/2023 19:33	WG2148857
Benzo(b)fluoranthene	U		0.000130	0.00100	1	10/13/2023 19:33	WG2148857
Benzo(k)fluoranthene	U		0.000120	0.00100	1	10/13/2023 19:33	WG2148857
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	10/13/2023 19:33	WG2148857
Benzo(a)pyrene	U		0.0000381	0.000200	1	10/13/2023 19:33	WG2148857
Biphenyl	U		0.000790	0.0100	1	10/13/2023 19:33	WG2148857
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	10/13/2023 19:33	WG2148857
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	10/13/2023 19:33	WG2148857
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	10/13/2023 19:33	WG2148857
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	10/13/2023 19:33	WG2148857
2-Chloronaphthalene	U		0.0000648	0.00100	1	10/13/2023 19:33	WG2148857
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	10/13/2023 19:33	WG2148857
Caprolactam	U		0.000309	0.0100	1	10/13/2023 19:33	WG2148857
Carbazole	U		0.000111	0.0100	1	10/13/2023 19:33	WG2148857
Chrysene	U		0.000130	0.00100	1	10/13/2023 19:33	WG2148857
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	10/13/2023 19:33	WG2148857
Dibenzofuran	U		0.0000970	0.0100	1	10/13/2023 19:33	WG2148857
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	10/13/2023 19:33	WG2148857
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	10/13/2023 19:33	WG2148857
2,6-Dinitrotoluene	U		0.000250	0.0100	1	10/13/2023 19:33	WG2148857
Fluoranthene	U		0.000102	0.00100	1	10/13/2023 19:33	WG2148857
Fluorene	U		0.0000844	0.00100	1	10/13/2023 19:33	WG2148857
Hexachlorobenzene	U		0.0000755	0.00100	1	10/13/2023 19:33	WG2148857
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	10/13/2023 19:33	WG2148857
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	10/13/2023 19:33	WG2148857
Hexachloroethane	U		0.000127	0.0100	1	10/13/2023 19:33	WG2148857
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	10/13/2023 19:33	WG2148857
Isophorone	U		0.000143	0.0100	1	10/13/2023 19:33	WG2148857
1-Methylnaphthalene	U		0.0000790	0.00100	1	10/13/2023 19:33	WG2148857
2-Methylnaphthalene	U		0.000117	0.00100	1	10/13/2023 19:33	WG2148857
Naphthalene	U		0.000159	0.00100	1	10/13/2023 19:33	WG2148857
Nitrobenzene	U		0.000297	0.0100	1	10/13/2023 19:33	WG2148857
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	10/13/2023 19:33	WG2148857
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	10/13/2023 19:33	WG2148857
Phenanthrene	U		0.000112	0.00100	1	10/13/2023 19:33	WG2148857
Benzylbutyl phthalate	U		0.000765	0.00300	1	10/13/2023 19:33	WG2148857
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	10/13/2023 19:33	WG2148857
Di-n-butyl phthalate	U		0.000453	0.00300	1	10/13/2023 19:33	WG2148857
Diethyl phthalate	U		0.000287	0.00300	1	10/13/2023 19:33	WG2148857
Dimethyl phthalate	U		0.000260	0.00300	1	10/13/2023 19:33	WG2148857
Di-n-octyl phthalate	U		0.000932	0.00300	1	10/13/2023 19:33	WG2148857
Pyrene	U		0.000107	0.00100	1	10/13/2023 19:33	WG2148857
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	10/13/2023 19:33	WG2148857
4-Chloro-3-methylphenol	U	J4	0.000131	0.0100	1	10/13/2023 19:33	WG2148857
2-Chlorophenol	U		0.000133	0.0100	1	10/13/2023 19:33	WG2148857
2,4-Dichlorophenol	U		0.000102	0.0100	1	10/13/2023 19:33	WG2148857
2,4-Dimethylphenol	U		0.0000636	0.0100	1	10/13/2023 19:33	WG2148857
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	10/13/2023 19:33	WG2148857
2,4-Dinitrophenol	U		0.00593	0.0100	1	10/13/2023 19:33	WG2148857
2-Nitrophenol	U		0.000117	0.0100	1	10/13/2023 19:33	WG2148857

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
2-Nitroaniline	U		0.000102	0.0100	1	10/13/2023 19:33	WG2148857
2-Methylphenol	U		0.0000929	0.0100	1	10/13/2023 19:33	WG2148857
3&4-Methyl Phenol	U		0.000168	0.0100	1	10/13/2023 19:33	WG2148857
3-Nitroaniline	U		0.0000869	0.0100	1	10/13/2023 19:33	WG2148857
4-Chloroaniline	U		0.000234	0.0100	1	10/13/2023 19:33	WG2148857
4-Nitroaniline	U		0.0000910	0.0100	1	10/13/2023 19:33	WG2148857
4-Nitrophenol	U		0.000143	0.0100	1	10/13/2023 19:33	WG2148857
Pentachlorophenol	U		0.000313	0.0100	1	10/13/2023 19:33	WG2148857
Phenol	U		0.00433	0.0100	1	10/13/2023 19:33	WG2148857
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	10/13/2023 19:33	WG2148857
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	10/13/2023 19:33	WG2148857
(S) 2-Fluorophenol	*38.1*			*10.0-120*		*10/13/2023 19:33*	WG2148857
(S) Phenol-d5	*20.1*			*10.0-120*		*10/13/2023 19:33*	WG2148857
(S) Nitrobenzene-d5	*71.7*			*10.0-127*		*10/13/2023 19:33*	WG2148857
(S) 2-Fluorobiphenyl	*69.6*			*10.0-130*		*10/13/2023 19:33*	WG2148857
(S) 2,4,6-Tribromophenol	*86.0*			*10.0-155*		*10/13/2023 19:33*	WG2148857
(S) p-Terphenyl-d14	*75.3*			*10.0-128*		*10/13/2023 19:33*	WG2148857

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 mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	376		10.0	1	10/11/2023 12:39	WG2148629

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	36.8		0.379	1.00	1	10/07/2023 00:42	WG2146682
Fluoride	0.884		0.0640	0.150	1	10/07/2023 00:42	WG2146682
Nitrate	2.76		0.0480	0.100	1	10/07/2023 00:42	WG2146682
Nitrite	U		0.0420	0.100	1	10/07/2023 00:42	WG2146682
Sulfate	56.3		0.594	5.00	1	10/07/2023 00:42	WG2146682

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	10/12/2023 12:24	WG2147174

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.170	J	0.0200	0.200	1	10/13/2023 00:03	WG2146826

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		0.0185	0.100	1	10/20/2023 13:11	WG2146834
Arsenic,Dissolved	0.00535		0.000180	0.00200	1	10/20/2023 13:11	WG2146834
Barium,Dissolved	0.0895		0.000381	0.00200	1	10/20/2023 13:11	WG2146834
Cadmium,Dissolved	U		0.000150	0.00100	1	10/20/2023 13:11	WG2146834
Chromium,Dissolved	0.00169	J	0.00124	0.00200	1	10/20/2023 13:11	WG2146834
Copper,Dissolved	0.00475	J	0.00151	0.00500	1	10/20/2023 13:11	WG2146834
Cobalt,Dissolved	U		0.0000596	0.00200	1	10/20/2023 13:11	WG2146834
Iron,Dissolved	U		0.0281	0.100	1	10/20/2023 13:11	WG2146834
Lead,Dissolved	U		0.000849	0.00200	1	10/20/2023 13:11	WG2146834
Manganese,Dissolved	U		0.000704	0.00500	1	10/20/2023 13:11	WG2146834
Molybdenum,Dissolved	0.00276	J	0.000348	0.00500	1	10/20/2023 13:11	WG2146834
Nickel,Dissolved	0.00273		0.000816	0.00200	1	10/20/2023 13:11	WG2146834
Selenium,Dissolved	0.00237		0.000300	0.00200	1	10/20/2023 13:11	WG2146834
Silver,Dissolved	U		0.0000700	0.00200	1	10/20/2023 13:11	WG2146834
Uranium,Dissolved	0.00172	J	0.0000700	0.0200	1	10/20/2023 13:11	WG2146834
Zinc,Dissolved	0.0188	J	0.00302	0.0250	1	10/20/2023 13:11	WG2146834

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0113	0.0500	1	10/10/2023 01:46	WG2148083
Benzene	U		0.0000941	0.00100	1	10/10/2023 01:46	WG2148083
Bromodichloromethane	U		0.000136	0.00100	1	10/10/2023 01:46	WG2148083
Bromoform	U		0.000129	0.00100	1	10/10/2023 01:46	WG2148083
Bromomethane	U		0.000605	0.00500	1	10/10/2023 01:46	WG2148083
n-Butylbenzene	U		0.000157	0.00100	1	10/10/2023 01:46	WG2148083
sec-Butylbenzene	U		0.000125	0.00100	1	10/10/2023 01:46	WG2148083
tert-Butylbenzene	U		0.000127	0.00100	1	10/10/2023 01:46	WG2148083
Carbon disulfide	U		0.0000962	0.00100	1	10/10/2023 01:46	WG2148083

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Carbon tetrachloride	U		0.000128	0.00100	1	10/10/2023 01:46	WG2148083
Chlorobenzene	U	J4	0.000116	0.00100	1	10/10/2023 01:46	WG2148083
Chlorodibromomethane	U		0.000140	0.00100	1	10/10/2023 01:46	WG2148083
Chloroethane	U		0.000192	0.00500	1	10/10/2023 01:46	WG2148083
Chloroform	0.00181	J	0.000111	0.00500	1	10/10/2023 01:46	WG2148083
Chloromethane	U		0.000960	0.00250	1	10/10/2023 01:46	WG2148083
1,2-Dibromoethane	U		0.000126	0.00100	1	10/10/2023 01:46	WG2148083
1,1-Dichloroethane	U		0.000100	0.00100	1	10/10/2023 01:46	WG2148083
1,2-Dichloroethane	U		0.0000819	0.00100	1	10/10/2023 01:46	WG2148083
1,1-Dichloroethene	U		0.000188	0.00100	1	10/10/2023 01:46	WG2148083
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	10/10/2023 01:46	WG2148083
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	10/10/2023 01:46	WG2148083
1,2-Dichloropropane	U		0.000149	0.00100	1	10/10/2023 01:46	WG2148083
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	10/10/2023 01:46	WG2148083
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	10/10/2023 01:46	WG2148083
Ethylbenzene	U		0.000137	0.00100	1	10/10/2023 01:46	WG2148083
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	10/10/2023 01:46	WG2148083
2-Hexanone	U		0.000787	0.0100	1	10/10/2023 01:46	WG2148083
Isopropylbenzene	U		0.000105	0.00100	1	10/10/2023 01:46	WG2148083
p-Isopropyltoluene	U		0.000120	0.00100	1	10/10/2023 01:46	WG2148083
2-Butanone (MEK)	U		0.00119	0.0100	1	10/10/2023 01:46	WG2148083
Methylene Chloride	U		0.000430	0.00500	1	10/10/2023 01:46	WG2148083
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	10/10/2023 01:46	WG2148083
Methyl tert-butyl ether	U		0.000101	0.00100	1	10/10/2023 01:46	WG2148083
Naphthalene	U		0.00100	0.00500	1	10/10/2023 01:46	WG2148083
n-Propylbenzene	U		0.0000993	0.00100	1	10/10/2023 01:46	WG2148083
Styrene	U		0.000118	0.00100	1	10/10/2023 01:46	WG2148083
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	10/10/2023 01:46	WG2148083
Tetrachloroethene	U		0.000300	0.00100	1	10/10/2023 01:46	WG2148083
Toluene	U		0.000278	0.00100	1	10/10/2023 01:46	WG2148083
1,1,1-Trichloroethane	U		0.000149	0.00100	1	10/10/2023 01:46	WG2148083
1,1,2-Trichloroethane	U		0.000158	0.00100	1	10/10/2023 01:46	WG2148083
Trichloroethene	U		0.000190	0.00100	1	10/10/2023 01:46	WG2148083
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	10/10/2023 01:46	WG2148083
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	10/10/2023 01:46	WG2148083
Vinyl chloride	U		0.000234	0.00100	1	10/10/2023 01:46	WG2148083
Xylenes, Total	U		0.000174	0.00300	1	10/10/2023 01:46	WG2148083
(S) Toluene-d8	*99.6*			*80.0-120*		*10/10/2023 01:46*	WG2148083
(S) 4-Bromofluorobenzene	*98.6*			*77.0-126*		*10/10/2023 01:46*	WG2148083
(S) 1,2-Dichloroethane-d4	*90.1*			*70.0-130*		*10/10/2023 01:46*	WG2148083

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000886	0.00100	1	10/13/2023 19:55	WG2148857
Acenaphthylene	U		0.0000921	0.00100	1	10/13/2023 19:55	WG2148857
Acetophenone	U		0.000208	0.0100	1	10/13/2023 19:55	WG2148857
Anthracene	U		0.0000804	0.00100	1	10/13/2023 19:55	WG2148857
Atrazine	U		0.000255	0.0100	1	10/13/2023 19:55	WG2148857
Benzo(a)anthracene	U		0.000199	0.00100	1	10/13/2023 19:55	WG2148857
Benzaldehyde	U	J4	0.00169	0.0100	1	10/13/2023 19:55	WG2148857
Benzo(b)fluoranthene	U		0.000130	0.00100	1	10/13/2023 19:55	WG2148857
Benzo(k)fluoranthene	U		0.000120	0.00100	1	10/13/2023 19:55	WG2148857
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	10/13/2023 19:55	WG2148857
Benzo(a)pyrene	U		0.0000381	0.000200	1	10/13/2023 19:55	WG2148857
Biphenyl	U		0.000790	0.0100	1	10/13/2023 19:55	WG2148857

Received by OCD: 4/15/2024 1:46:20 PM

MW-10R
Collected date/time: 10/05/23 10:30
L1663622

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	10/13/2023 19:55	WG2148857
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	10/13/2023 19:55	WG2148857
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	10/13/2023 19:55	WG2148857
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	10/13/2023 19:55	WG2148857
2-Chloronaphthalene	U		0.0000648	0.00100	1	10/13/2023 19:55	WG2148857
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	10/13/2023 19:55	WG2148857
Caprolactam	U		0.000309	0.0100	1	10/13/2023 19:55	WG2148857
Carbazole	U		0.000111	0.0100	1	10/13/2023 19:55	WG2148857
Chrysene	U		0.000130	0.00100	1	10/13/2023 19:55	WG2148857
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	10/13/2023 19:55	WG2148857
Dibenzofuran	U		0.0000970	0.0100	1	10/13/2023 19:55	WG2148857
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	10/13/2023 19:55	WG2148857
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	10/13/2023 19:55	WG2148857
2,6-Dinitrotoluene	U		0.000250	0.0100	1	10/13/2023 19:55	WG2148857
Fluoranthene	U		0.000102	0.00100	1	10/13/2023 19:55	WG2148857
Fluorene	U		0.0000844	0.00100	1	10/13/2023 19:55	WG2148857
Hexachlorobenzene	U		0.0000755	0.00100	1	10/13/2023 19:55	WG2148857
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	10/13/2023 19:55	WG2148857
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	10/13/2023 19:55	WG2148857
Hexachloroethane	U		0.000127	0.0100	1	10/13/2023 19:55	WG2148857
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	10/13/2023 19:55	WG2148857
Isophorone	U		0.000143	0.0100	1	10/13/2023 19:55	WG2148857
1-Methylnaphthalene	U		0.0000790	0.00100	1	10/13/2023 19:55	WG2148857
2-Methylnaphthalene	U		0.000117	0.00100	1	10/13/2023 19:55	WG2148857
Naphthalene	U		0.000159	0.00100	1	10/13/2023 19:55	WG2148857
Nitrobenzene	U		0.000297	0.0100	1	10/13/2023 19:55	WG2148857
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	10/13/2023 19:55	WG2148857
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	10/13/2023 19:55	WG2148857
Phenanthrene	U		0.000112	0.00100	1	10/13/2023 19:55	WG2148857
Benzylbutyl phthalate	U		0.000765	0.00300	1	10/13/2023 19:55	WG2148857
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	10/13/2023 19:55	WG2148857
Di-n-butyl phthalate	U		0.000453	0.00300	1	10/13/2023 19:55	WG2148857
Diethyl phthalate	U		0.000287	0.00300	1	10/13/2023 19:55	WG2148857
Dimethyl phthalate	U		0.000260	0.00300	1	10/13/2023 19:55	WG2148857
Di-n-octyl phthalate	U		0.000932	0.00300	1	10/13/2023 19:55	WG2148857
Pyrene	U		0.000107	0.00100	1	10/13/2023 19:55	WG2148857
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	10/13/2023 19:55	WG2148857
4-Chloro-3-methylphenol	U	J4	0.000131	0.0100	1	10/13/2023 19:55	WG2148857
2-Chlorophenol	U		0.000133	0.0100	1	10/13/2023 19:55	WG2148857
2,4-Dichlorophenol	U		0.000102	0.0100	1	10/13/2023 19:55	WG2148857
2,4-Dimethylphenol	U		0.0000636	0.0100	1	10/13/2023 19:55	WG2148857
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	10/13/2023 19:55	WG2148857
2,4-Dinitrophenol	U		0.00593	0.0100	1	10/13/2023 19:55	WG2148857
2-Nitrophenol	U		0.000117	0.0100	1	10/13/2023 19:55	WG2148857
2-Nitroaniline	U		0.000102	0.0100	1	10/13/2023 19:55	WG2148857
2-Methylphenol	U		0.0000929	0.0100	1	10/13/2023 19:55	WG2148857
3&4-Methyl Phenol	U		0.000168	0.0100	1	10/13/2023 19:55	WG2148857
3-Nitroaniline	U		0.0000869	0.0100	1	10/13/2023 19:55	WG2148857
4-Chloroaniline	U		0.000234	0.0100	1	10/13/2023 19:55	WG2148857
4-Nitroaniline	U		0.0000910	0.0100	1	10/13/2023 19:55	WG2148857
4-Nitrophenol	U		0.000143	0.0100	1	10/13/2023 19:55	WG2148857
Pentachlorophenol	U		0.000313	0.0100	1	10/13/2023 19:55	WG2148857
Phenol	U		0.00433	0.0100	1	10/13/2023 19:55	WG2148857
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	10/13/2023 19:55	WG2148857
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	10/13/2023 19:55	WG2148857
(S) 2-Fluorophenol	*35.7*			*10.0-120*		*10/13/2023 19:55*	WG2148857

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

Released to Imaging: 4/26/2024 10:49:21 AM

MW-10R
Collected date/time: 10/05/23 10:30
L1663622

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
(S) Phenol-d5	*18.2*			*10.0-120*		*10/13/2023 19:55*	WG2148857
(S) Nitrobenzene-d5	*63.9*			*10.0-127*		*10/13/2023 19:55*	WG2148857
(S) 2-Fluorobiphenyl	*63.6*			*10.0-130*		*10/13/2023 19:55*	WG2148857
(S) 2,4,6-Tribromophenol	*70.5*			*10.0-155*		*10/13/2023 19:55*	WG2148857
(S) p-Terphenyl-d14	*76.2*			*10.0-128*		*10/13/2023 19:55*	WG2148857

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	419		10.0	1	10/11/2023 12:39	WG2148629

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	83.3		0.379	1.00	1	10/07/2023 00:59	WG2146682
Fluoride	0.791		0.0640	0.150	1	10/07/2023 00:59	WG2146682
Nitrate	1.73		0.0480	0.100	1	10/07/2023 00:59	WG2146682
Nitrite	U		0.0420	0.100	1	10/07/2023 00:59	WG2146682
Sulfate	42.2		0.594	5.00	1	10/07/2023 00:59	WG2146682

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	10/12/2023 12:26	WG2147174

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.167	J	0.0200	0.200	1	10/13/2023 00:06	WG2146826

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		0.0185	0.100	1	10/20/2023 13:15	WG2146834
Arsenic,Dissolved	0.00598		0.000180	0.00200	1	10/20/2023 13:15	WG2146834
Barium,Dissolved	0.0859		0.000381	0.00200	1	10/20/2023 13:15	WG2146834
Cadmium,Dissolved	U		0.000150	0.00100	1	10/20/2023 13:15	WG2146834
Chromium,Dissolved	0.00131	J	0.00124	0.00200	1	10/20/2023 13:15	WG2146834
Copper,Dissolved	0.00155	J	0.00151	0.00500	1	10/20/2023 13:15	WG2146834
Cobalt,Dissolved	U		0.0000596	0.00200	1	10/20/2023 13:15	WG2146834
Iron,Dissolved	U		0.0281	0.100	1	10/20/2023 13:15	WG2146834
Lead,Dissolved	U		0.000849	0.00200	1	10/20/2023 13:15	WG2146834
Manganese,Dissolved	0.00161	J	0.000704	0.00500	1	10/20/2023 13:15	WG2146834
Molybdenum,Dissolved	0.00321	J	0.000348	0.00500	1	10/20/2023 13:15	WG2146834
Nickel,Dissolved	0.00640		0.000816	0.00200	1	10/20/2023 13:15	WG2146834
Selenium,Dissolved	0.00220		0.000300	0.00200	1	10/20/2023 13:15	WG2146834
Silver,Dissolved	U		0.0000700	0.00200	1	10/20/2023 13:15	WG2146834
Uranium,Dissolved	0.00132	J	0.0000700	0.0200	1	10/20/2023 13:15	WG2146834
Zinc,Dissolved	0.0738		0.00302	0.0250	1	10/20/2023 13:15	WG2146834

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0113	0.0500	1	10/10/2023 02:06	WG2148083
Benzene	U		0.0000941	0.00100	1	10/10/2023 02:06	WG2148083
Bromodichloromethane	U		0.000136	0.00100	1	10/10/2023 02:06	WG2148083
Bromoform	U		0.000129	0.00100	1	10/10/2023 02:06	WG2148083
Bromomethane	U		0.000605	0.00500	1	10/10/2023 02:06	WG2148083
n-Butylbenzene	U		0.000157	0.00100	1	10/10/2023 02:06	WG2148083
sec-Butylbenzene	U		0.000125	0.00100	1	10/10/2023 02:06	WG2148083
tert-Butylbenzene	U		0.000127	0.00100	1	10/10/2023 02:06	WG2148083
Carbon disulfide	U		0.0000962	0.00100	1	10/10/2023 02:06	WG2148083

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Carbon tetrachloride	U		0.000128	0.00100	1	10/10/2023 02:06	WG2148083
Chlorobenzene	U	J4	0.000116	0.00100	1	10/10/2023 02:06	WG2148083
Chlorodibromomethane	U		0.000140	0.00100	1	10/10/2023 02:06	WG2148083
Chloroethane	U		0.000192	0.00500	1	10/10/2023 02:06	WG2148083
Chloroform	U		0.000111	0.00500	1	10/10/2023 02:06	WG2148083
Chloromethane	U		0.000960	0.00250	1	10/10/2023 02:06	WG2148083
1,2-Dibromoethane	U		0.000126	0.00100	1	10/10/2023 02:06	WG2148083
1,1-Dichloroethane	U		0.000100	0.00100	1	10/10/2023 02:06	WG2148083
1,2-Dichloroethane	U		0.0000819	0.00100	1	10/10/2023 02:06	WG2148083
1,1-Dichloroethene	U		0.000188	0.00100	1	10/10/2023 02:06	WG2148083
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	10/10/2023 02:06	WG2148083
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	10/10/2023 02:06	WG2148083
1,2-Dichloropropane	U		0.000149	0.00100	1	10/10/2023 02:06	WG2148083
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	10/10/2023 02:06	WG2148083
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	10/10/2023 02:06	WG2148083
Ethylbenzene	U		0.000137	0.00100	1	10/10/2023 02:06	WG2148083
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	10/10/2023 02:06	WG2148083
2-Hexanone	U		0.000787	0.0100	1	10/10/2023 02:06	WG2148083
Isopropylbenzene	U		0.000105	0.00100	1	10/10/2023 02:06	WG2148083
p-Isopropyltoluene	U		0.000120	0.00100	1	10/10/2023 02:06	WG2148083
2-Butanone (MEK)	U		0.00119	0.0100	1	10/10/2023 02:06	WG2148083
Methylene Chloride	U		0.000430	0.00500	1	10/10/2023 02:06	WG2148083
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	10/10/2023 02:06	WG2148083
Methyl tert-butyl ether	U		0.000101	0.00100	1	10/10/2023 02:06	WG2148083
Naphthalene	U		0.00100	0.00500	1	10/10/2023 02:06	WG2148083
n-Propylbenzene	U		0.0000993	0.00100	1	10/10/2023 02:06	WG2148083
Styrene	U		0.000118	0.00100	1	10/10/2023 02:06	WG2148083
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	10/10/2023 02:06	WG2148083
Tetrachloroethene	U		0.000300	0.00100	1	10/10/2023 02:06	WG2148083
Toluene	U		0.000278	0.00100	1	10/10/2023 02:06	WG2148083
1,1,1-Trichloroethane	U		0.000149	0.00100	1	10/10/2023 02:06	WG2148083
1,1,2-Trichloroethane	U		0.000158	0.00100	1	10/10/2023 02:06	WG2148083
Trichloroethene	U		0.000190	0.00100	1	10/10/2023 02:06	WG2148083
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	10/10/2023 02:06	WG2148083
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	10/10/2023 02:06	WG2148083
Vinyl chloride	U		0.000234	0.00100	1	10/10/2023 02:06	WG2148083
Xylenes, Total	U		0.000174	0.00300	1	10/10/2023 02:06	WG2148083
(S) Toluene-d8	*102*			*80.0-120*		*10/10/2023 02:06*	WG2148083
(S) 4-Bromofluorobenzene	*100*			*77.0-126*		*10/10/2023 02:06*	WG2148083
(S) 1,2-Dichloroethane-d4	*89.7*			*70.0-130*		*10/10/2023 02:06*	WG2148083

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000930	0.00105	1.05	10/13/2023 20:17	WG2148857
Acenaphthylene	U		0.0000967	0.00105	1.05	10/13/2023 20:17	WG2148857
Acetophenone	U		0.000218	0.0105	1.05	10/13/2023 20:17	WG2148857
Anthracene	U		0.0000844	0.00105	1.05	10/13/2023 20:17	WG2148857
Atrazine	U		0.000268	0.0105	1.05	10/13/2023 20:17	WG2148857
Benzo(a)anthracene	U		0.000209	0.00105	1.05	10/13/2023 20:17	WG2148857
Benzaldehyde	U	J4	0.00177	0.0105	1.05	10/13/2023 20:17	WG2148857
Benzo(b)fluoranthene	U		0.000136	0.00105	1.05	10/13/2023 20:17	WG2148857
Benzo(k)fluoranthene	U		0.000126	0.00105	1.05	10/13/2023 20:17	WG2148857
Benzo(g,h,i)perylene	U		0.000127	0.00105	1.05	10/13/2023 20:17	WG2148857
Benzo(a)pyrene	U		0.0000400	0.000210	1.05	10/13/2023 20:17	WG2148857
Biphenyl	U		0.000829	0.0105	1.05	10/13/2023 20:17	WG2148857

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Bis(2-chlorethoxy)methane	U		0.000122	0.0105	1.05	10/13/2023 20:17	WG2148857
Bis(2-chloroethyl)ether	U		0.000144	0.0105	1.05	10/13/2023 20:17	WG2148857
2,2-Oxybis(1-Chloropropane)	U		0.000221	0.0105	1.05	10/13/2023 20:17	WG2148857
4-Bromophenyl-phenylether	U		0.0000921	0.0105	1.05	10/13/2023 20:17	WG2148857
2-Chloronaphthalene	U		0.0000680	0.00105	1.05	10/13/2023 20:17	WG2148857
4-Chlorophenyl-phenylether	U		0.0000972	0.0105	1.05	10/13/2023 20:17	WG2148857
Caprolactam	U		0.000324	0.0105	1.05	10/13/2023 20:17	WG2148857
Carbazole	U		0.000117	0.0105	1.05	10/13/2023 20:17	WG2148857
Chrysene	U		0.000136	0.00105	1.05	10/13/2023 20:17	WG2148857
Dibenz(a,h)anthracene	U		0.0000676	0.000210	1.05	10/13/2023 20:17	WG2148857
Dibenzofuran	U		0.000102	0.0105	1.05	10/13/2023 20:17	WG2148857
3,3-Dichlorobenzidine	U		0.000223	0.0105	1.05	10/13/2023 20:17	WG2148857
2,4-Dinitrotoluene	U		0.000103	0.0105	1.05	10/13/2023 20:17	WG2148857
2,6-Dinitrotoluene	U		0.000263	0.0105	1.05	10/13/2023 20:17	WG2148857
Fluoranthene	U		0.000107	0.00105	1.05	10/13/2023 20:17	WG2148857
Fluorene	U		0.0000886	0.00105	1.05	10/13/2023 20:17	WG2148857
Hexachlorobenzene	U		0.0000793	0.00105	1.05	10/13/2023 20:17	WG2148857
Hexachloro-1,3-butadiene	U		0.000102	0.0105	1.05	10/13/2023 20:17	WG2148857
Hexachlorocyclopentadiene	U		0.0000628	0.0105	1.05	10/13/2023 20:17	WG2148857
Hexachloroethane	U		0.000133	0.0105	1.05	10/13/2023 20:17	WG2148857
Indeno(1,2,3-cd)pyrene	U		0.000293	0.00105	1.05	10/13/2023 20:17	WG2148857
Isophorone	U		0.000150	0.0105	1.05	10/13/2023 20:17	WG2148857
1-Methylnaphthalene	U		0.0000829	0.00105	1.05	10/13/2023 20:17	WG2148857
2-Methylnaphthalene	U		0.000123	0.00105	1.05	10/13/2023 20:17	WG2148857
Naphthalene	U		0.000167	0.00105	1.05	10/13/2023 20:17	WG2148857
Nitrobenzene	U		0.000312	0.0105	1.05	10/13/2023 20:17	WG2148857
n-Nitrosodiphenylamine	U		0.00249	0.0105	1.05	10/13/2023 20:17	WG2148857
n-Nitrosodi-n-propylamine	U		0.000274	0.0105	1.05	10/13/2023 20:17	WG2148857
Phenanthrene	U		0.000118	0.00105	1.05	10/13/2023 20:17	WG2148857
Benzylbutyl phthalate	U		0.000803	0.00315	1.05	10/13/2023 20:17	WG2148857
Bis(2-ethylhexyl)phthalate	U		0.000940	0.00315	1.05	10/13/2023 20:17	WG2148857
Di-n-butyl phthalate	U		0.000476	0.00315	1.05	10/13/2023 20:17	WG2148857
Diethyl phthalate	U		0.000301	0.00315	1.05	10/13/2023 20:17	WG2148857
Dimethyl phthalate	U		0.000273	0.00315	1.05	10/13/2023 20:17	WG2148857
Di-n-octyl phthalate	U		0.000979	0.00315	1.05	10/13/2023 20:17	WG2148857
Pyrene	U		0.000112	0.00105	1.05	10/13/2023 20:17	WG2148857
1,2,4-Trichlorobenzene	U		0.0000733	0.0105	1.05	10/13/2023 20:17	WG2148857
4-Chloro-3-methylphenol	U	J4	0.000138	0.0105	1.05	10/13/2023 20:17	WG2148857
2-Chlorophenol	U		0.000140	0.0105	1.05	10/13/2023 20:17	WG2148857
2,4-Dichlorophenol	U		0.000107	0.0105	1.05	10/13/2023 20:17	WG2148857
2,4-Dimethylphenol	U		0.0000668	0.0105	1.05	10/13/2023 20:17	WG2148857
4,6-Dinitro-2-methylphenol	U		0.00118	0.0105	1.05	10/13/2023 20:17	WG2148857
2,4-Dinitrophenol	U		0.00623	0.0105	1.05	10/13/2023 20:17	WG2148857
2-Nitrophenol	U		0.000123	0.0105	1.05	10/13/2023 20:17	WG2148857
2-Nitroaniline	U		0.000107	0.0105	1.05	10/13/2023 20:17	WG2148857
2-Methylphenol	U		0.0000975	0.0105	1.05	10/13/2023 20:17	WG2148857
3&4-Methyl Phenol	U		0.000176	0.0105	1.05	10/13/2023 20:17	WG2148857
3-Nitroaniline	U		0.0000912	0.0105	1.05	10/13/2023 20:17	WG2148857
4-Chloroaniline	U		0.000246	0.0105	1.05	10/13/2023 20:17	WG2148857
4-Nitroaniline	U		0.0000956	0.0105	1.05	10/13/2023 20:17	WG2148857
4-Nitrophenol	U		0.000150	0.0105	1.05	10/13/2023 20:17	WG2148857
Pentachlorophenol	U		0.000329	0.0105	1.05	10/13/2023 20:17	WG2148857
Phenol	U		0.00455	0.0105	1.05	10/13/2023 20:17	WG2148857
2,4,5-Trichlorophenol	U		0.000114	0.0105	1.05	10/13/2023 20:17	WG2148857
2,4,6-Trichlorophenol	U		0.000105	0.0105	1.05	10/13/2023 20:17	WG2148857
(S) 2-Fluorophenol	*35.1*			*10.0-120*		*10/13/2023 20:17*	WG2148857

MW-10R
Collected date/time: 10/05/23 10:10
L1663622

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
(S) Phenol-d5	*20.8*			*10.0-120*		*10/13/2023 20:17*	WG2148857
(S) Nitrobenzene-d5	*68.7*			*10.0-127*		*10/13/2023 20:17*	WG2148857
(S) 2-Fluorobiphenyl	*63.0*			*10.0-130*		*10/13/2023 20:17*	WG2148857
(S) 2,4,6-Tribromophenol	*78.6*			*10.0-155*		*10/13/2023 20:17*	WG2148857
(S) p-Terphenyl-d14	*71.5*			*10.0-128*		*10/13/2023 20:17*	WG2148857

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1380		20.0	1	10/12/2023 18:33	WG2149849

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	182		8.45	20.0	1	10/10/2023 13:50	WG2147741

Sample Narrative:

L1663622-17 WG2147741: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	382		3.79	10.0	10	10/07/2023 06:54	WG2146682
Fluoride	0.459		0.0640	0.150	1	10/07/2023 01:16	WG2146682
Nitrate	1.98		0.0480	0.100	1	10/07/2023 01:16	WG2146682
Nitrite	U		0.0420	0.100	1	10/07/2023 01:16	WG2146682
Sulfate	82.9		0.594	5.00	1	10/07/2023 01:16	WG2146682

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	10/12/2023 12:29	WG2147174

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.183	J	0.0200	0.200	1	10/13/2023 00:09	WG2146826

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		0.0185	0.100	1	10/20/2023 13:18	WG2146834
Arsenic,Dissolved	0.00319		0.000180	0.00200	1	10/20/2023 13:18	WG2146834
Barium,Dissolved	0.169		0.000381	0.00200	1	10/20/2023 13:18	WG2146834
Cadmium,Dissolved	U		0.000150	0.00100	1	10/20/2023 13:18	WG2146834
Chromium,Dissolved	0.00175	J	0.00124	0.00200	1	10/20/2023 13:18	WG2146834
Copper,Dissolved	0.00198	J	0.00151	0.00500	1	10/20/2023 13:18	WG2146834
Cobalt,Dissolved	0.0000642	J	0.0000596	0.00200	1	10/20/2023 13:18	WG2146834
Iron,Dissolved	U		0.0281	0.100	1	10/20/2023 13:18	WG2146834
Lead,Dissolved	U		0.000849	0.00200	1	10/20/2023 13:18	WG2146834
Manganese,Dissolved	U		0.000704	0.00500	1	10/20/2023 13:18	WG2146834
Molybdenum,Dissolved	0.00265	J	0.000348	0.00500	1	10/20/2023 13:18	WG2146834
Nickel,Dissolved	0.00203		0.000816	0.00200	1	10/20/2023 13:18	WG2146834
Selenium,Dissolved	0.00121	J	0.000300	0.00200	1	10/20/2023 13:18	WG2146834
Silver,Dissolved	U		0.0000700	0.00200	1	10/20/2023 13:18	WG2146834
Uranium,Dissolved	0.00264	J	0.0000700	0.0200	1	10/20/2023 13:18	WG2146834
Zinc,Dissolved	0.0285		0.00302	0.0250	1	10/20/2023 13:18	WG2146834

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0113	0.0500	1	10/10/2023 02:26	WG2148083
Benzene	U		0.0000941	0.00100	1	10/10/2023 02:26	WG2148083
Bromodichloromethane	U		0.000136	0.00100	1	10/10/2023 02:26	WG2148083
Bromoform	U		0.000129	0.00100	1	10/10/2023 02:26	WG2148083
Bromomethane	U		0.000605	0.00500	1	10/10/2023 02:26	WG2148083
n-Butylbenzene	U		0.000157	0.00100	1	10/10/2023 02:26	WG2148083
sec-Butylbenzene	U		0.000125	0.00100	1	10/10/2023 02:26	WG2148083
tert-Butylbenzene	U		0.000127	0.00100	1	10/10/2023 02:26	WG2148083
Carbon disulfide	U		0.0000962	0.00100	1	10/10/2023 02:26	WG2148083
Carbon tetrachloride	U		0.000128	0.00100	1	10/10/2023 02:26	WG2148083
Chlorobenzene	U	J4	0.000116	0.00100	1	10/10/2023 02:26	WG2148083
Chlorodibromomethane	U		0.000140	0.00100	1	10/10/2023 02:26	WG2148083
Chloroethane	U		0.000192	0.00500	1	10/10/2023 02:26	WG2148083
Chloroform	U		0.000111	0.00500	1	10/10/2023 02:26	WG2148083
Chloromethane	U		0.000960	0.00250	1	10/10/2023 02:26	WG2148083
1,2-Dibromoethane	U		0.000126	0.00100	1	10/10/2023 02:26	WG2148083
1,1-Dichloroethane	U		0.000100	0.00100	1	10/10/2023 02:26	WG2148083
1,2-Dichloroethane	U		0.0000819	0.00100	1	10/10/2023 02:26	WG2148083
1,1-Dichloroethene	U		0.000188	0.00100	1	10/10/2023 02:26	WG2148083
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	10/10/2023 02:26	WG2148083
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	10/10/2023 02:26	WG2148083
1,2-Dichloropropane	U		0.000149	0.00100	1	10/10/2023 02:26	WG2148083
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	10/10/2023 02:26	WG2148083
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	10/10/2023 02:26	WG2148083
Ethylbenzene	U		0.000137	0.00100	1	10/10/2023 02:26	WG2148083
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	10/10/2023 02:26	WG2148083
2-Hexanone	U		0.000787	0.0100	1	10/10/2023 02:26	WG2148083
Isopropylbenzene	U		0.000105	0.00100	1	10/10/2023 02:26	WG2148083
p-Isopropyltoluene	U		0.000120	0.00100	1	10/10/2023 02:26	WG2148083
2-Butanone (MEK)	U		0.00119	0.0100	1	10/10/2023 02:26	WG2148083
Methylene Chloride	U		0.000430	0.00500	1	10/10/2023 02:26	WG2148083
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	10/10/2023 02:26	WG2148083
Methyl tert-butyl ether	U		0.000101	0.00100	1	10/10/2023 02:26	WG2148083
Naphthalene	U		0.00100	0.00500	1	10/10/2023 02:26	WG2148083
n-Propylbenzene	U		0.0000993	0.00100	1	10/10/2023 02:26	WG2148083
Styrene	U		0.000118	0.00100	1	10/10/2023 02:26	WG2148083
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	10/10/2023 02:26	WG2148083
Tetrachloroethene	U		0.000300	0.00100	1	10/10/2023 02:26	WG2148083
Toluene	U		0.000278	0.00100	1	10/10/2023 02:26	WG2148083
1,1,1-Trichloroethane	U		0.000149	0.00100	1	10/10/2023 02:26	WG2148083
1,1,2-Trichloroethane	U		0.000158	0.00100	1	10/10/2023 02:26	WG2148083
Trichloroethene	U		0.000190	0.00100	1	10/10/2023 02:26	WG2148083
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	10/10/2023 02:26	WG2148083
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	10/10/2023 02:26	WG2148083
Vinyl chloride	U		0.000234	0.00100	1	10/10/2023 02:26	WG2148083
Xylenes, Total	U		0.000174	0.00300	1	10/10/2023 02:26	WG2148083
(S) Toluene-d8	*101*			*80.0-120*		*10/10/2023 02:26*	WG2148083
(S) 4-Bromofluorobenzene	*101*			*77.0-126*		*10/10/2023 02:26*	WG2148083
(S) 1,2-Dichloroethane-d4	*93.0*			*70.0-130*		*10/10/2023 02:26*	WG2148083

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000886	0.00100	1	10/17/2023 04:59	WG2148857
Acenaphthylene	U		0.0000921	0.00100	1	10/17/2023 04:59	WG2148857
Acetophenone	U		0.000208	0.0100	1	10/17/2023 04:59	WG2148857
Anthracene	U		0.0000804	0.00100	1	10/17/2023 04:59	WG2148857
Atrazine	U		0.000255	0.0100	1	10/17/2023 04:59	WG2148857
Benzo(a)anthracene	U		0.000199	0.00100	1	10/17/2023 04:59	WG2148857
Benzaldehyde	U	J4	0.00169	0.0100	1	10/17/2023 04:59	WG2148857
Benzo(b)fluoranthene	U		0.000130	0.00100	1	10/17/2023 04:59	WG2148857
Benzo(k)fluoranthene	U		0.000120	0.00100	1	10/17/2023 04:59	WG2148857
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	10/17/2023 04:59	WG2148857
Benzo(a)pyrene	U		0.0000381	0.000200	1	10/17/2023 04:59	WG2148857
Biphenyl	U		0.000790	0.0100	1	10/17/2023 04:59	WG2148857
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	10/17/2023 04:59	WG2148857
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	10/17/2023 04:59	WG2148857
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	10/17/2023 04:59	WG2148857
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	10/17/2023 04:59	WG2148857
2-Chloronaphthalene	U		0.0000648	0.00100	1	10/17/2023 04:59	WG2148857
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	10/17/2023 04:59	WG2148857
Caprolactam	U		0.000309	0.0100	1	10/17/2023 04:59	WG2148857
Carbazole	U		0.000111	0.0100	1	10/17/2023 04:59	WG2148857
Chrysene	U		0.000130	0.00100	1	10/17/2023 04:59	WG2148857
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	10/17/2023 04:59	WG2148857
Dibenzofuran	U		0.0000970	0.0100	1	10/17/2023 04:59	WG2148857
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	10/17/2023 04:59	WG2148857
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	10/17/2023 04:59	WG2148857
2,6-Dinitrotoluene	U		0.000250	0.0100	1	10/17/2023 04:59	WG2148857
Fluoranthene	U		0.000102	0.00100	1	10/17/2023 04:59	WG2148857
Fluorene	U		0.0000844	0.00100	1	10/17/2023 04:59	WG2148857
Hexachlorobenzene	U		0.0000755	0.00100	1	10/17/2023 04:59	WG2148857
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	10/17/2023 04:59	WG2148857
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	10/17/2023 04:59	WG2148857
Hexachloroethane	U		0.000127	0.0100	1	10/17/2023 04:59	WG2148857
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	10/17/2023 04:59	WG2148857
Isophorone	U		0.000143	0.0100	1	10/17/2023 04:59	WG2148857
1-Methylnaphthalene	U		0.0000790	0.00100	1	10/17/2023 04:59	WG2148857
2-Methylnaphthalene	U		0.000117	0.00100	1	10/17/2023 04:59	WG2148857
Naphthalene	U		0.000159	0.00100	1	10/17/2023 04:59	WG2148857
Nitrobenzene	U		0.000297	0.0100	1	10/17/2023 04:59	WG2148857
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	10/17/2023 04:59	WG2148857
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	10/17/2023 04:59	WG2148857
Phenanthrene	U		0.000112	0.00100	1	10/17/2023 04:59	WG2148857
Benzylbutyl phthalate	U		0.000765	0.00300	1	10/17/2023 04:59	WG2148857
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	10/17/2023 04:59	WG2148857
Di-n-butyl phthalate	U		0.000453	0.00300	1	10/17/2023 04:59	WG2148857
Diethyl phthalate	U		0.000287	0.00300	1	10/17/2023 04:59	WG2148857
Dimethyl phthalate	U		0.000260	0.00300	1	10/17/2023 04:59	WG2148857
Di-n-octyl phthalate	U		0.000932	0.00300	1	10/17/2023 04:59	WG2148857
Pyrene	U		0.000107	0.00100	1	10/17/2023 04:59	WG2148857
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	10/17/2023 04:59	WG2148857
4-Chloro-3-methylphenol	U	J4	0.000131	0.0100	1	10/17/2023 04:59	WG2148857
2-Chlorophenol	U		0.000133	0.0100	1	10/17/2023 04:59	WG2148857
2,4-Dichlorophenol	U		0.000102	0.0100	1	10/17/2023 04:59	WG2148857
2,4-Dimethylphenol	U		0.0000636	0.0100	1	10/17/2023 04:59	WG2148857
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	10/17/2023 04:59	WG2148857
2,4-Dinitrophenol	U		0.00593	0.0100	1	10/17/2023 04:59	WG2148857
2-Nitrophenol	U		0.000117	0.0100	1	10/17/2023 04:59	WG2148857

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
2-Nitroaniline	U		0.000102	0.0100	1	10/17/2023 04:59	WG2148857
2-Methylphenol	U		0.0000929	0.0100	1	10/17/2023 04:59	WG2148857
3&4-Methyl Phenol	U		0.000168	0.0100	1	10/17/2023 04:59	WG2148857
3-Nitroaniline	U		0.0000869	0.0100	1	10/17/2023 04:59	WG2148857
4-Chloroaniline	U		0.000234	0.0100	1	10/17/2023 04:59	WG2148857
4-Nitroaniline	U		0.0000910	0.0100	1	10/17/2023 04:59	WG2148857
4-Nitrophenol	U		0.000143	0.0100	1	10/17/2023 04:59	WG2148857
Pentachlorophenol	U		0.000313	0.0100	1	10/17/2023 04:59	WG2148857
Phenol	U		0.00433	0.0100	1	10/17/2023 04:59	WG2148857
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	10/17/2023 04:59	WG2148857
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	10/17/2023 04:59	WG2148857
(S) 2-Fluorophenol	*31.9*			*10.0-120*		*10/17/2023 04:59*	WG2148857
(S) Phenol-d5	*23.2*			*10.0-120*		*10/17/2023 04:59*	WG2148857
(S) Nitrobenzene-d5	*75.3*			*10.0-127*		*10/17/2023 04:59*	WG2148857
(S) 2-Fluorobiphenyl	*66.2*			*10.0-130*		*10/17/2023 04:59*	WG2148857
(S) 2,4,6-Tribromophenol	*35.1*			*10.0-155*		*10/17/2023 04:59*	WG2148857
(S) p-Terphenyl-d14	*53.6*			*10.0-128*		*10/17/2023 04:59*	WG2148857

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	663		10.0	1	10/11/2023 12:39	WG2148629

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	122		0.379	1.00	1	10/07/2023 03:09	WG2146535
Fluoride	0.788		0.0640	0.150	1	10/07/2023 03:09	WG2146535
Nitrate	10.0		0.0480	0.100	1	10/07/2023 03:09	WG2146535
Nitrite	U		0.0420	0.100	1	10/07/2023 03:09	WG2146535
Sulfate	69.1		0.594	5.00	1	10/07/2023 03:09	WG2146535

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	10/12/2023 12:31	WG2147174

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.181	J	0.0200	0.200	1	10/15/2023 18:41	WG2146828

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		0.0185	0.100	1	10/20/2023 13:21	WG2146834
Arsenic,Dissolved	0.00380		0.000180	0.00200	1	10/20/2023 13:21	WG2146834
Barium,Dissolved	0.117		0.000381	0.00200	1	10/20/2023 13:21	WG2146834
Cadmium,Dissolved	U		0.000150	0.00100	1	10/20/2023 13:21	WG2146834
Chromium,Dissolved	0.00181	J	0.00124	0.00200	1	10/20/2023 13:21	WG2146834
Copper,Dissolved	0.00268	J	0.00151	0.00500	1	10/20/2023 13:21	WG2146834
Cobalt,Dissolved	0.000101	J	0.0000596	0.00200	1	10/20/2023 13:21	WG2146834
Iron,Dissolved	U		0.0281	0.100	1	10/20/2023 13:21	WG2146834
Lead,Dissolved	U		0.000849	0.00200	1	10/20/2023 13:21	WG2146834
Manganese,Dissolved	0.000965	J	0.000704	0.00500	1	10/20/2023 13:21	WG2146834
Molybdenum,Dissolved	0.00571		0.000348	0.00500	1	10/20/2023 13:21	WG2146834
Nickel,Dissolved	0.00282		0.000816	0.00200	1	10/20/2023 13:21	WG2146834
Selenium,Dissolved	0.00206		0.000300	0.00200	1	10/20/2023 13:21	WG2146834
Silver,Dissolved	U		0.0000700	0.00200	1	10/20/2023 13:21	WG2146834
Uranium,Dissolved	0.00254	J	0.0000700	0.0200	1	10/20/2023 13:21	WG2146834
Zinc,Dissolved	0.0677		0.00302	0.0250	1	10/20/2023 13:21	WG2146834

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0113	0.0500	1	10/10/2023 02:45	WG2148083
Benzene	U		0.0000941	0.00100	1	10/10/2023 02:45	WG2148083
Bromodichloromethane	U		0.000136	0.00100	1	10/10/2023 02:45	WG2148083
Bromoform	U		0.000129	0.00100	1	10/10/2023 02:45	WG2148083
Bromomethane	U		0.000605	0.00500	1	10/10/2023 02:45	WG2148083
n-Butylbenzene	U		0.000157	0.00100	1	10/10/2023 02:45	WG2148083
sec-Butylbenzene	U		0.000125	0.00100	1	10/10/2023 02:45	WG2148083
tert-Butylbenzene	U		0.000127	0.00100	1	10/10/2023 02:45	WG2148083
Carbon disulfide	U		0.0000962	0.00100	1	10/10/2023 02:45	WG2148083

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Carbon tetrachloride	U		0.000128	0.00100	1	10/10/2023 02:45	WG2148083
Chlorobenzene	U	J4	0.000116	0.00100	1	10/10/2023 02:45	WG2148083
Chlorodibromomethane	U		0.000140	0.00100	1	10/10/2023 02:45	WG2148083
Chloroethane	U		0.000192	0.00500	1	10/10/2023 02:45	WG2148083
Chloroform	U		0.000111	0.00500	1	10/10/2023 02:45	WG2148083
Chloromethane	U		0.000960	0.00250	1	10/10/2023 02:45	WG2148083
1,2-Dibromoethane	U		0.000126	0.00100	1	10/10/2023 02:45	WG2148083
1,1-Dichloroethane	U		0.000100	0.00100	1	10/10/2023 02:45	WG2148083
1,2-Dichloroethane	U		0.0000819	0.00100	1	10/10/2023 02:45	WG2148083
1,1-Dichloroethene	U		0.000188	0.00100	1	10/10/2023 02:45	WG2148083
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	10/10/2023 02:45	WG2148083
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	10/10/2023 02:45	WG2148083
1,2-Dichloropropane	U		0.000149	0.00100	1	10/10/2023 02:45	WG2148083
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	10/10/2023 02:45	WG2148083
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	10/10/2023 02:45	WG2148083
Ethylbenzene	U		0.000137	0.00100	1	10/10/2023 02:45	WG2148083
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	10/10/2023 02:45	WG2148083
2-Hexanone	U		0.000787	0.0100	1	10/10/2023 02:45	WG2148083
Isopropylbenzene	U		0.000105	0.00100	1	10/10/2023 02:45	WG2148083
p-Isopropyltoluene	U		0.000120	0.00100	1	10/10/2023 02:45	WG2148083
2-Butanone (MEK)	U		0.00119	0.0100	1	10/10/2023 02:45	WG2148083
Methylene Chloride	U		0.000430	0.00500	1	10/10/2023 02:45	WG2148083
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	10/10/2023 02:45	WG2148083
Methyl tert-butyl ether	U		0.000101	0.00100	1	10/10/2023 02:45	WG2148083
Naphthalene	U		0.00100	0.00500	1	10/10/2023 02:45	WG2148083
n-Propylbenzene	U		0.0000993	0.00100	1	10/10/2023 02:45	WG2148083
Styrene	U		0.000118	0.00100	1	10/10/2023 02:45	WG2148083
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	10/10/2023 02:45	WG2148083
Tetrachloroethene	U		0.000300	0.00100	1	10/10/2023 02:45	WG2148083
Toluene	U		0.000278	0.00100	1	10/10/2023 02:45	WG2148083
1,1,1-Trichloroethane	U		0.000149	0.00100	1	10/10/2023 02:45	WG2148083
1,1,2-Trichloroethane	U		0.000158	0.00100	1	10/10/2023 02:45	WG2148083
Trichloroethene	U		0.000190	0.00100	1	10/10/2023 02:45	WG2148083
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	10/10/2023 02:45	WG2148083
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	10/10/2023 02:45	WG2148083
Vinyl chloride	U		0.000234	0.00100	1	10/10/2023 02:45	WG2148083
Xylenes, Total	U		0.000174	0.00300	1	10/10/2023 02:45	WG2148083
(S) Toluene-d8	*98.7*			*80.0-120*		*10/10/2023 02:45*	WG2148083
(S) 4-Bromofluorobenzene	*98.7*			*77.0-126*		*10/10/2023 02:45*	WG2148083
(S) 1,2-Dichloroethane-d4	*90.8*			*70.0-130*		*10/10/2023 02:45*	WG2148083

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000886	0.00100	1	10/12/2023 12:17	WG2148873
Acenaphthylene	U		0.0000921	0.00100	1	10/12/2023 12:17	WG2148873
Acetophenone	U		0.000208	0.0100	1	10/12/2023 12:17	WG2148873
Anthracene	U		0.0000804	0.00100	1	10/12/2023 12:17	WG2148873
Atrazine	U		0.000255	0.0100	1	10/12/2023 12:17	WG2148873
Benzo(a)anthracene	U		0.000199	0.00100	1	10/12/2023 12:17	WG2148873
Benzaldehyde	U		0.00169	0.0100	1	10/12/2023 12:17	WG2148873
Benzo(b)fluoranthene	U		0.000130	0.00100	1	10/12/2023 12:17	WG2148873
Benzo(k)fluoranthene	U		0.000120	0.00100	1	10/12/2023 12:17	WG2148873
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	10/12/2023 12:17	WG2148873
Benzo(a)pyrene	U		0.0000381	0.000200	1	10/12/2023 12:17	WG2148873
Biphenyl	U		0.000790	0.0100	1	10/12/2023 12:17	WG2148873

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	10/12/2023 12:17	WG2148873
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	10/12/2023 12:17	WG2148873
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	10/12/2023 12:17	WG2148873
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	10/12/2023 12:17	WG2148873
2-Chloronaphthalene	U		0.0000648	0.00100	1	10/12/2023 12:17	WG2148873
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	10/12/2023 12:17	WG2148873
Caprolactam	0.000416	J	0.000309	0.0100	1	10/12/2023 12:17	WG2148873
Carbazole	U		0.000111	0.0100	1	10/12/2023 12:17	WG2148873
Chrysene	U		0.000130	0.00100	1	10/12/2023 12:17	WG2148873
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	10/12/2023 12:17	WG2148873
Dibenzofuran	U		0.0000970	0.0100	1	10/12/2023 12:17	WG2148873
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	10/12/2023 12:17	WG2148873
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	10/12/2023 12:17	WG2148873
2,6-Dinitrotoluene	U		0.000250	0.0100	1	10/12/2023 12:17	WG2148873
Fluoranthene	U		0.000102	0.00100	1	10/12/2023 12:17	WG2148873
Fluorene	U		0.0000844	0.00100	1	10/12/2023 12:17	WG2148873
Hexachlorobenzene	U		0.0000755	0.00100	1	10/12/2023 12:17	WG2148873
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	10/12/2023 12:17	WG2148873
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	10/12/2023 12:17	WG2148873
Hexachloroethane	U		0.000127	0.0100	1	10/12/2023 12:17	WG2148873
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	10/12/2023 12:17	WG2148873
Isophorone	U		0.000143	0.0100	1	10/12/2023 12:17	WG2148873
1-Methylnaphthalene	U		0.0000790	0.00100	1	10/12/2023 12:17	WG2148873
2-Methylnaphthalene	U		0.000117	0.00100	1	10/12/2023 12:17	WG2148873
Naphthalene	U		0.000159	0.00100	1	10/12/2023 12:17	WG2148873
Nitrobenzene	U		0.000297	0.0100	1	10/12/2023 12:17	WG2148873
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	10/12/2023 12:17	WG2148873
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	10/12/2023 12:17	WG2148873
Phenanthrene	U		0.000112	0.00100	1	10/12/2023 12:17	WG2148873
Benzylbutyl phthalate	U		0.000765	0.00300	1	10/12/2023 12:17	WG2148873
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	10/12/2023 12:17	WG2148873
Di-n-butyl phthalate	U		0.000453	0.00300	1	10/12/2023 12:17	WG2148873
Diethyl phthalate	U		0.000287	0.00300	1	10/12/2023 12:17	WG2148873
Dimethyl phthalate	U		0.000260	0.00300	1	10/12/2023 12:17	WG2148873
Di-n-octyl phthalate	U		0.000932	0.00300	1	10/12/2023 12:17	WG2148873
Pyrene	U		0.000107	0.00100	1	10/12/2023 12:17	WG2148873
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	10/12/2023 12:17	WG2148873
4-Chloro-3-methylphenol	U		0.000131	0.0100	1	10/12/2023 12:17	WG2148873
2-Chlorophenol	U		0.000133	0.0100	1	10/12/2023 12:17	WG2148873
2,4-Dichlorophenol	U		0.000102	0.0100	1	10/12/2023 12:17	WG2148873
2,4-Dimethylphenol	U		0.0000636	0.0100	1	10/12/2023 12:17	WG2148873
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	10/12/2023 12:17	WG2148873
2,4-Dinitrophenol	U		0.00593	0.0100	1	10/12/2023 12:17	WG2148873
2-Nitrophenol	U		0.000117	0.0100	1	10/12/2023 12:17	WG2148873
2-Nitroaniline	U		0.000102	0.0100	1	10/12/2023 12:17	WG2148873
2-Methylphenol	U		0.0000929	0.0100	1	10/12/2023 12:17	WG2148873
3&4-Methyl Phenol	U		0.000168	0.0100	1	10/12/2023 12:17	WG2148873
3-Nitroaniline	U		0.0000869	0.0100	1	10/12/2023 12:17	WG2148873
4-Chloroaniline	U		0.000234	0.0100	1	10/12/2023 12:17	WG2148873
4-Nitroaniline	U		0.0000910	0.0100	1	10/12/2023 12:17	WG2148873
4-Nitrophenol	U		0.000143	0.0100	1	10/12/2023 12:17	WG2148873
Pentachlorophenol	U		0.000313	0.0100	1	10/12/2023 12:17	WG2148873
Phenol	U		0.00433	0.0100	1	10/12/2023 12:17	WG2148873
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	10/12/2023 12:17	WG2148873
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	10/12/2023 12:17	WG2148873
(S) 2-Fluorophenol	*21.6*			*10.0-120*		*10/12/2023 12:17*	WG2148873

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	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
(S) Phenol-d5	*16.4*			*10.0-120*		*10/12/2023 12:17*	WG2148873
(S) Nitrobenzene-d5	*50.2*			*10.0-127*		*10/12/2023 12:17*	WG2148873
(S) 2-Fluorobiphenyl	*50.5*			*10.0-130*		*10/12/2023 12:17*	WG2148873
(S) 2,4,6-Tribromophenol	*34.2*			*10.0-155*		*10/12/2023 12:17*	WG2148873
(S) p-Terphenyl-d14	*47.8*			*10.0-128*		*10/12/2023 12:17*	WG2148873

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	737		13.3	1	10/11/2023 12:39	WG2148629

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	172		0.379	1.00	1	10/06/2023 23:55	WG2146649
Fluoride	1.17		0.0640	0.150	1	10/06/2023 23:55	WG2146649
Nitrate	3.66		0.0480	0.100	1	10/06/2023 23:55	WG2146649
Nitrite	U		0.0420	0.100	1	10/06/2023 23:55	WG2146649
Sulfate	87.9		0.594	5.00	1	10/06/2023 23:55	WG2146649

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	427		10.0	1	10/12/2023 18:33	WG2149849

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	209		8.45	20.0	1	10/10/2023 13:55	WG2147741

Sample Narrative:

L1663622-20 WG2147741: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	53.9		0.379	1.00	1	10/07/2023 03:22	WG2146535
Fluoride	2.41		0.0640	0.150	1	10/07/2023 03:22	WG2146535
Nitrate	4.36		0.0480	0.100	1	10/07/2023 03:22	WG2146535
Nitrite	U		0.0420	0.100	1	10/07/2023 03:22	WG2146535
Sulfate	59.6		0.594	5.00	1	10/07/2023 03:22	WG2146535

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	10/12/2023 12:33	WG2147174

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.131	J	0.0200	0.200	1	10/15/2023 18:44	WG2146828

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	0.0190	J	0.0185	0.100	1	10/20/2023 13:32	WG2146834
Arsenic,Dissolved	0.00532		0.000180	0.00200	1	10/20/2023 13:32	WG2146834
Barium,Dissolved	0.0813		0.000381	0.00200	1	10/20/2023 13:32	WG2146834
Cadmium,Dissolved	U		0.000150	0.00100	1	10/20/2023 13:32	WG2146834
Chromium,Dissolved	0.00665		0.00124	0.00200	1	10/20/2023 13:32	WG2146834
Copper,Dissolved	0.00199	J	0.00151	0.00500	1	10/20/2023 13:32	WG2146834
Cobalt,Dissolved	0.0000597	J	0.0000596	0.00200	1	10/20/2023 13:32	WG2146834
Iron,Dissolved	U		0.0281	0.100	1	10/20/2023 13:32	WG2146834
Lead,Dissolved	U		0.000849	0.00200	1	10/20/2023 13:32	WG2146834
Manganese,Dissolved	U		0.000704	0.00500	1	10/20/2023 13:32	WG2146834
Molybdenum,Dissolved	0.00246	J	0.000348	0.00500	1	10/20/2023 13:32	WG2146834
Nickel,Dissolved	0.00195	J	0.000816	0.00200	1	10/20/2023 13:32	WG2146834
Selenium,Dissolved	0.00138	J	0.000300	0.00200	1	10/20/2023 13:32	WG2146834
Silver,Dissolved	U		0.0000700	0.00200	1	10/20/2023 13:32	WG2146834
Uranium,Dissolved	0.00277	J	0.0000700	0.0200	1	10/20/2023 13:32	WG2146834
Zinc,Dissolved	0.0436		0.00302	0.0250	1	10/20/2023 13:32	WG2146834

MW-24R
Collected date/time: 10/05/23 12:35
L1663622

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Acetone	U		0.0113	0.0500	1	10/10/2023 03:05	WG2148083
Benzene	U		0.0000941	0.00100	1	10/10/2023 03:05	WG2148083
Bromodichloromethane	U		0.000136	0.00100	1	10/10/2023 03:05	WG2148083
Bromoform	U		0.000129	0.00100	1	10/10/2023 03:05	WG2148083
Bromomethane	U		0.000605	0.00500	1	10/10/2023 03:05	WG2148083
n-Butylbenzene	U		0.000157	0.00100	1	10/10/2023 03:05	WG2148083
sec-Butylbenzene	U		0.000125	0.00100	1	10/10/2023 03:05	WG2148083
tert-Butylbenzene	U		0.000127	0.00100	1	10/10/2023 03:05	WG2148083
Carbon disulfide	U		0.0000962	0.00100	1	10/10/2023 03:05	WG2148083
Carbon tetrachloride	U		0.000128	0.00100	1	10/10/2023 03:05	WG2148083
Chlorobenzene	U	J4	0.000116	0.00100	1	10/10/2023 03:05	WG2148083
Chlorodibromomethane	U		0.000140	0.00100	1	10/10/2023 03:05	WG2148083
Chloroethane	U		0.000192	0.00500	1	10/10/2023 03:05	WG2148083
Chloroform	U		0.000111	0.00500	1	10/10/2023 03:05	WG2148083
Chloromethane	U		0.000960	0.00250	1	10/10/2023 03:05	WG2148083
1,2-Dibromoethane	U		0.000126	0.00100	1	10/10/2023 03:05	WG2148083
1,1-Dichloroethane	U		0.000100	0.00100	1	10/10/2023 03:05	WG2148083
1,2-Dichloroethane	U		0.0000819	0.00100	1	10/10/2023 03:05	WG2148083
1,1-Dichloroethene	U		0.000188	0.00100	1	10/10/2023 03:05	WG2148083
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	10/10/2023 03:05	WG2148083
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	10/10/2023 03:05	WG2148083
1,2-Dichloropropane	U		0.000149	0.00100	1	10/10/2023 03:05	WG2148083
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	10/10/2023 03:05	WG2148083
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	10/10/2023 03:05	WG2148083
Ethylbenzene	U		0.000137	0.00100	1	10/10/2023 03:05	WG2148083
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	10/10/2023 03:05	WG2148083
2-Hexanone	U		0.000787	0.0100	1	10/10/2023 03:05	WG2148083
Isopropylbenzene	U		0.000105	0.00100	1	10/10/2023 03:05	WG2148083
p-Isopropyltoluene	U		0.000120	0.00100	1	10/10/2023 03:05	WG2148083
2-Butanone (MEK)	U		0.00119	0.0100	1	10/10/2023 03:05	WG2148083
Methylene Chloride	U		0.000430	0.00500	1	10/10/2023 03:05	WG2148083
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	10/10/2023 03:05	WG2148083
Methyl tert-butyl ether	U		0.000101	0.00100	1	10/10/2023 03:05	WG2148083
Naphthalene	U		0.00100	0.00500	1	10/10/2023 03:05	WG2148083
n-Propylbenzene	U		0.0000993	0.00100	1	10/10/2023 03:05	WG2148083
Styrene	U		0.000118	0.00100	1	10/10/2023 03:05	WG2148083
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	10/10/2023 03:05	WG2148083
Tetrachloroethene	U		0.000300	0.00100	1	10/10/2023 03:05	WG2148083
Toluene	U		0.000278	0.00100	1	10/10/2023 03:05	WG2148083
1,1,1-Trichloroethane	U		0.000149	0.00100	1	10/10/2023 03:05	WG2148083
1,1,2-Trichloroethane	U		0.000158	0.00100	1	10/10/2023 03:05	WG2148083
Trichloroethene	U		0.000190	0.00100	1	10/10/2023 03:05	WG2148083
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	10/10/2023 03:05	WG2148083
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	10/10/2023 03:05	WG2148083
Vinyl chloride	U		0.000234	0.00100	1	10/10/2023 03:05	WG2148083
Xylenes, Total	U		0.000174	0.00300	1	10/10/2023 03:05	WG2148083
(S) Toluene-d8	*101*			*80.0-120*		*10/10/2023 03:05*	WG2148083
(S) 4-Bromofluorobenzene	*105*			*77.0-126*		*10/10/2023 03:05*	WG2148083
(S) 1,2-Dichloroethane-d4	*92.1*			*70.0-130*		*10/10/2023 03:05*	WG2148083

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000886	0.00100	1	10/12/2023 12:38	WG2148873
Acenaphthylene	U		0.0000921	0.00100	1	10/12/2023 12:38	WG2148873
Acetophenone	U		0.000208	0.0100	1	10/12/2023 12:38	WG2148873
Anthracene	U		0.0000804	0.00100	1	10/12/2023 12:38	WG2148873
Atrazine	U		0.000255	0.0100	1	10/12/2023 12:38	WG2148873
Benzo(a)anthracene	U		0.000199	0.00100	1	10/12/2023 12:38	WG2148873
Benzaldehyde	U		0.00169	0.0100	1	10/12/2023 12:38	WG2148873
Benzo(b)fluoranthene	U		0.000130	0.00100	1	10/12/2023 12:38	WG2148873
Benzo(k)fluoranthene	U		0.000120	0.00100	1	10/12/2023 12:38	WG2148873
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	10/12/2023 12:38	WG2148873
Benzo(a)pyrene	U		0.0000381	0.000200	1	10/12/2023 12:38	WG2148873
Biphenyl	U		0.000790	0.0100	1	10/12/2023 12:38	WG2148873
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	10/12/2023 12:38	WG2148873
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	10/12/2023 12:38	WG2148873
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	10/12/2023 12:38	WG2148873
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	10/12/2023 12:38	WG2148873
2-Chloronaphthalene	U		0.0000648	0.00100	1	10/12/2023 12:38	WG2148873
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	10/12/2023 12:38	WG2148873
Caprolactam	U		0.000309	0.0100	1	10/12/2023 12:38	WG2148873
Carbazole	U		0.000111	0.0100	1	10/12/2023 12:38	WG2148873
Chrysene	U		0.000130	0.00100	1	10/12/2023 12:38	WG2148873
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	10/12/2023 12:38	WG2148873
Dibenzofuran	U		0.0000970	0.0100	1	10/12/2023 12:38	WG2148873
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	10/12/2023 12:38	WG2148873
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	10/12/2023 12:38	WG2148873
2,6-Dinitrotoluene	U		0.000250	0.0100	1	10/12/2023 12:38	WG2148873
Fluoranthene	U		0.000102	0.00100	1	10/12/2023 12:38	WG2148873
Fluorene	U		0.0000844	0.00100	1	10/12/2023 12:38	WG2148873
Hexachlorobenzene	U		0.0000755	0.00100	1	10/12/2023 12:38	WG2148873
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	10/12/2023 12:38	WG2148873
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	10/12/2023 12:38	WG2148873
Hexachloroethane	U		0.000127	0.0100	1	10/12/2023 12:38	WG2148873
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	10/12/2023 12:38	WG2148873
Isophorone	U		0.000143	0.0100	1	10/12/2023 12:38	WG2148873
1-Methylnaphthalene	U		0.0000790	0.00100	1	10/12/2023 12:38	WG2148873
2-Methylnaphthalene	U		0.000117	0.00100	1	10/12/2023 12:38	WG2148873
Naphthalene	U		0.000159	0.00100	1	10/12/2023 12:38	WG2148873
Nitrobenzene	U		0.000297	0.0100	1	10/12/2023 12:38	WG2148873
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	10/12/2023 12:38	WG2148873
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	10/12/2023 12:38	WG2148873
Phenanthrene	U		0.000112	0.00100	1	10/12/2023 12:38	WG2148873
Benzylbutyl phthalate	U		0.000765	0.00300	1	10/12/2023 12:38	WG2148873
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	10/12/2023 12:38	WG2148873
Di-n-butyl phthalate	U		0.000453	0.00300	1	10/12/2023 12:38	WG2148873
Diethyl phthalate	U		0.000287	0.00300	1	10/12/2023 12:38	WG2148873
Dimethyl phthalate	U		0.000260	0.00300	1	10/12/2023 12:38	WG2148873
Di-n-octyl phthalate	U		0.000932	0.00300	1	10/12/2023 12:38	WG2148873
Pyrene	U		0.000107	0.00100	1	10/12/2023 12:38	WG2148873
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	10/12/2023 12:38	WG2148873
4-Chloro-3-methylphenol	U		0.000131	0.0100	1	10/12/2023 12:38	WG2148873
2-Chlorophenol	U		0.000133	0.0100	1	10/12/2023 12:38	WG2148873
2,4-Dichlorophenol	U		0.000102	0.0100	1	10/12/2023 12:38	WG2148873
2,4-Dimethylphenol	U		0.0000636	0.0100	1	10/12/2023 12:38	WG2148873
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	10/12/2023 12:38	WG2148873
2,4-Dinitrophenol	U		0.00593	0.0100	1	10/12/2023 12:38	WG2148873
2-Nitrophenol	U		0.000117	0.0100	1	10/12/2023 12:38	WG2148873

MW-24R
Collected date/time: 10/05/23 12:35
L1663622

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
2-Nitroaniline	U		0.000102	0.0100	1	10/12/2023 12:38	WG2148873
2-Methylphenol	U		0.0000929	0.0100	1	10/12/2023 12:38	WG2148873
3&4-Methyl Phenol	U		0.000168	0.0100	1	10/12/2023 12:38	WG2148873
3-Nitroaniline	U		0.0000869	0.0100	1	10/12/2023 12:38	WG2148873
4-Chloroaniline	U		0.000234	0.0100	1	10/12/2023 12:38	WG2148873
4-Nitroaniline	U		0.0000910	0.0100	1	10/12/2023 12:38	WG2148873
4-Nitrophenol	U		0.000143	0.0100	1	10/12/2023 12:38	WG2148873
Pentachlorophenol	U		0.000313	0.0100	1	10/12/2023 12:38	WG2148873
Phenol	U		0.00433	0.0100	1	10/12/2023 12:38	WG2148873
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	10/12/2023 12:38	WG2148873
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	10/12/2023 12:38	WG2148873
(S) 2-Fluorophenol	*31.5*			*10.0-120*		*10/12/2023 12:38*	WG2148873
(S) Phenol-d5	*21.0*			*10.0-120*		*10/12/2023 12:38*	WG2148873
(S) Nitrobenzene-d5	*54.3*			*10.0-127*		*10/12/2023 12:38*	WG2148873
(S) 2-Fluorobiphenyl	*56.7*			*10.0-130*		*10/12/2023 12:38*	WG2148873
(S) 2,4,6-Tribromophenol	*53.0*			*10.0-155*		*10/12/2023 12:38*	WG2148873
(S) p-Terphenyl-d14	*69.6*			*10.0-128*		*10/12/2023 12:38*	WG2148873

MW-20R
Collected date/time: 10/05/23 09:40
L1663622

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	209		3.79	10.0	10	10/07/2023 06:02	WG2146649
Fluoride	0.448		0.0640	0.150	1	10/07/2023 00:42	WG2146649
Nitrate	4.24		0.0480	0.100	1	10/07/2023 00:42	WG2146649
Nitrite	U		0.0420	0.100	1	10/07/2023 00:42	WG2146649
Sulfate	138		0.594	5.00	1	10/07/2023 00:42	WG2146649

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	552		10.0	1	10/12/2023 18:33	WG2149849

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	436		8.45	20.0	1	10/10/2023 14:00	WG2147741

Sample Narrative:

L1663622-22 WG2147741: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	26.5		0.379	1.00	1	10/07/2023 00:58	WG2146649
Fluoride	0.487		0.0640	0.150	1	10/07/2023 00:58	WG2146649
Nitrate	3.87		0.0480	0.100	1	10/07/2023 00:58	WG2146649
Nitrite	0.234		0.0420	0.100	1	10/07/2023 00:58	WG2146649
Sulfate	78.7		0.594	5.00	1	10/07/2023 00:58	WG2146649

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	10/12/2023 12:42	WG2147174

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.110	J	0.0200	0.200	1	10/15/2023 18:46	WG2146828

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		0.0185	0.100	1	10/20/2023 13:36	WG2146834
Arsenic,Dissolved	0.00420		0.000180	0.00200	1	10/20/2023 13:36	WG2146834
Barium,Dissolved	0.185		0.000381	0.00200	1	10/20/2023 13:36	WG2146834
Cadmium,Dissolved	U		0.000150	0.00100	1	10/20/2023 13:36	WG2146834
Chromium,Dissolved	U		0.00124	0.00200	1	10/20/2023 13:36	WG2146834
Copper,Dissolved	0.00767		0.00151	0.00500	1	10/20/2023 13:36	WG2146834
Cobalt,Dissolved	0.000200	J	0.0000596	0.00200	1	10/20/2023 13:36	WG2146834
Iron,Dissolved	U		0.0281	0.100	1	10/20/2023 13:36	WG2146834
Lead,Dissolved	U		0.000849	0.00200	1	10/20/2023 13:36	WG2146834
Manganese,Dissolved	0.0402		0.000704	0.00500	1	10/20/2023 13:36	WG2146834
Molybdenum,Dissolved	0.00433	J	0.000348	0.00500	1	10/20/2023 13:36	WG2146834
Nickel,Dissolved	0.00177	J	0.000816	0.00200	1	10/20/2023 13:36	WG2146834
Selenium,Dissolved	0.000773	J	0.000300	0.00200	1	10/20/2023 13:36	WG2146834
Silver,Dissolved	U		0.0000700	0.00200	1	10/20/2023 13:36	WG2146834
Uranium,Dissolved	0.00446	J	0.0000700	0.0200	1	10/20/2023 13:36	WG2146834
Zinc,Dissolved	0.0194	J	0.00302	0.0250	1	10/20/2023 13:36	WG2146834

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	1	10/11/2023 21:00	WG2149400
(S) a,a,a-Trifluorotoluene(FID)	*110*			*78.0-120*		*10/11/2023 21:00*	WG2149400

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0113	0.0500	1	10/10/2023 03:25	WG2148083
Benzene	U		0.0000941	0.00100	1	10/10/2023 03:25	WG2148083
Bromodichloromethane	U		0.000136	0.00100	1	10/10/2023 03:25	WG2148083
Bromoform	U		0.000129	0.00100	1	10/10/2023 03:25	WG2148083
Bromomethane	U		0.000605	0.00500	1	10/10/2023 03:25	WG2148083
n-Butylbenzene	U		0.000157	0.00100	1	10/10/2023 03:25	WG2148083
sec-Butylbenzene	U		0.000125	0.00100	1	10/10/2023 03:25	WG2148083
tert-Butylbenzene	U		0.000127	0.00100	1	10/10/2023 03:25	WG2148083
Carbon disulfide	U		0.0000962	0.00100	1	10/10/2023 03:25	WG2148083
Carbon tetrachloride	U		0.000128	0.00100	1	10/10/2023 03:25	WG2148083
Chlorobenzene	U	J4	0.000116	0.00100	1	10/10/2023 03:25	WG2148083
Chlorodibromomethane	U		0.000140	0.00100	1	10/10/2023 03:25	WG2148083
Chloroethane	U		0.000192	0.00500	1	10/10/2023 03:25	WG2148083
Chloroform	U		0.000111	0.00500	1	10/10/2023 03:25	WG2148083
Chloromethane	U		0.000960	0.00250	1	10/10/2023 03:25	WG2148083
1,2-Dibromoethane	U		0.000126	0.00100	1	10/10/2023 03:25	WG2148083
1,1-Dichloroethane	U		0.000100	0.00100	1	10/10/2023 03:25	WG2148083
1,2-Dichloroethane	U		0.0000819	0.00100	1	10/10/2023 03:25	WG2148083
1,1-Dichloroethene	U		0.000188	0.00100	1	10/10/2023 03:25	WG2148083
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	10/10/2023 03:25	WG2148083
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	10/10/2023 03:25	WG2148083
1,2-Dichloropropane	U		0.000149	0.00100	1	10/10/2023 03:25	WG2148083
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	10/10/2023 03:25	WG2148083
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	10/10/2023 03:25	WG2148083
Ethylbenzene	U		0.000137	0.00100	1	10/10/2023 03:25	WG2148083
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	10/10/2023 03:25	WG2148083
2-Hexanone	U		0.000787	0.0100	1	10/10/2023 03:25	WG2148083
Isopropylbenzene	U		0.000105	0.00100	1	10/10/2023 03:25	WG2148083
p-Isopropyltoluene	U		0.000120	0.00100	1	10/10/2023 03:25	WG2148083
2-Butanone (MEK)	U		0.00119	0.0100	1	10/10/2023 03:25	WG2148083
Methylene Chloride	U		0.000430	0.00500	1	10/10/2023 03:25	WG2148083
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	10/10/2023 03:25	WG2148083
Methyl tert-butyl ether	U		0.000101	0.00100	1	10/10/2023 03:25	WG2148083
Naphthalene	U		0.00100	0.00500	1	10/10/2023 03:25	WG2148083
n-Propylbenzene	U		0.0000993	0.00100	1	10/10/2023 03:25	WG2148083
Styrene	U		0.000118	0.00100	1	10/10/2023 03:25	WG2148083
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	10/10/2023 03:25	WG2148083
Tetrachloroethene	U		0.000300	0.00100	1	10/10/2023 03:25	WG2148083
Toluene	U		0.000278	0.00100	1	10/10/2023 03:25	WG2148083
1,1,1-Trichloroethane	U		0.000149	0.00100	1	10/10/2023 03:25	WG2148083
1,1,2-Trichloroethane	U		0.000158	0.00100	1	10/10/2023 03:25	WG2148083
Trichloroethene	U		0.000190	0.00100	1	10/10/2023 03:25	WG2148083
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	10/10/2023 03:25	WG2148083
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	10/10/2023 03:25	WG2148083
Vinyl chloride	U		0.000234	0.00100	1	10/10/2023 03:25	WG2148083
Xylenes, Total	U		0.000174	0.00300	1	10/10/2023 03:25	WG2148083
(S) Toluene-d8	*103*			*80.0-120*		*10/10/2023 03:25*	WG2148083
(S) 4-Bromofluorobenzene	*102*			*77.0-126*		*10/10/2023 03:25*	WG2148083
(S) 1,2-Dichloroethane-d4	*88.2*			*70.0-130*		*10/10/2023 03:25*	WG2148083

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
TPH (GC/FID) High Fraction	0.334		0.0247	0.100	1	10/16/2023 08:39	WG2150507
(S) o-Terphenyl	*73.7*			*31.0-160*		*10/16/2023 08:39*	WG2150507

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Acenaphthene	U		0.0000886	0.00100	1	10/12/2023 13:00	WG2148873
Acenaphthylene	U		0.0000921	0.00100	1	10/12/2023 13:00	WG2148873
Acetophenone	U		0.000208	0.0100	1	10/12/2023 13:00	WG2148873
Anthracene	U		0.0000804	0.00100	1	10/12/2023 13:00	WG2148873
Atrazine	U		0.000255	0.0100	1	10/12/2023 13:00	WG2148873
Benzo(a)anthracene	U		0.000199	0.00100	1	10/12/2023 13:00	WG2148873
Benzaldehyde	U		0.00169	0.0100	1	10/12/2023 13:00	WG2148873
Benzo(b)fluoranthene	U		0.000130	0.00100	1	10/12/2023 13:00	WG2148873
Benzo(k)fluoranthene	U		0.000120	0.00100	1	10/12/2023 13:00	WG2148873
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	10/12/2023 13:00	WG2148873
Benzo(a)pyrene	U		0.0000381	0.000200	1	10/12/2023 13:00	WG2148873
Biphenyl	U		0.000790	0.0100	1	10/12/2023 13:00	WG2148873
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	10/12/2023 13:00	WG2148873
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	10/12/2023 13:00	WG2148873
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	10/12/2023 13:00	WG2148873
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	10/12/2023 13:00	WG2148873
2-Chloronaphthalene	U		0.0000648	0.00100	1	10/12/2023 13:00	WG2148873
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	10/12/2023 13:00	WG2148873
Caprolactam	U		0.000309	0.0100	1	10/12/2023 13:00	WG2148873
Carbazole	U		0.000111	0.0100	1	10/12/2023 13:00	WG2148873
Chrysene	U		0.000130	0.00100	1	10/12/2023 13:00	WG2148873
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	10/12/2023 13:00	WG2148873
Dibenzofuran	U		0.0000970	0.0100	1	10/12/2023 13:00	WG2148873
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	10/12/2023 13:00	WG2148873
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	10/12/2023 13:00	WG2148873
2,6-Dinitrotoluene	U		0.000250	0.0100	1	10/12/2023 13:00	WG2148873
Fluoranthene	U		0.000102	0.00100	1	10/12/2023 13:00	WG2148873
Fluorene	U		0.0000844	0.00100	1	10/12/2023 13:00	WG2148873
Hexachlorobenzene	U		0.0000755	0.00100	1	10/12/2023 13:00	WG2148873
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	10/12/2023 13:00	WG2148873
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	10/12/2023 13:00	WG2148873
Hexachloroethane	U		0.000127	0.0100	1	10/12/2023 13:00	WG2148873
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	10/12/2023 13:00	WG2148873
Isophorone	U		0.000143	0.0100	1	10/12/2023 13:00	WG2148873
1-Methylnaphthalene	U		0.0000790	0.00100	1	10/12/2023 13:00	WG2148873
2-Methylnaphthalene	U		0.000117	0.00100	1	10/12/2023 13:00	WG2148873
Naphthalene	U		0.000159	0.00100	1	10/12/2023 13:00	WG2148873
Nitrobenzene	U		0.000297	0.0100	1	10/12/2023 13:00	WG2148873
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	10/12/2023 13:00	WG2148873
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	10/12/2023 13:00	WG2148873
Phenanthrene	U		0.000112	0.00100	1	10/12/2023 13:00	WG2148873
Benzylbutyl phthalate	U		0.000765	0.00300	1	10/12/2023 13:00	WG2148873
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	10/12/2023 13:00	WG2148873
Di-n-butyl phthalate	U		0.000453	0.00300	1	10/12/2023 13:00	WG2148873
Diethyl phthalate	U		0.000287	0.00300	1	10/12/2023 13:00	WG2148873
Dimethyl phthalate	U		0.000260	0.00300	1	10/12/2023 13:00	WG2148873
Di-n-octyl phthalate	U		0.000932	0.00300	1	10/12/2023 13:00	WG2148873
Pyrene	U		0.000107	0.00100	1	10/12/2023 13:00	WG2148873
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	10/12/2023 13:00	WG2148873
4-Chloro-3-methylphenol	U		0.000131	0.0100	1	10/12/2023 13:00	WG2148873

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

MW-32
Collected date/time: 10/05/23 09:00
L1663622

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
2-Chlorophenol	U		0.000133	0.0100	1	10/12/2023 13:00	WG2148873
2,4-Dichlorophenol	U		0.000102	0.0100	1	10/12/2023 13:00	WG2148873
2,4-Dimethylphenol	U		0.0000636	0.0100	1	10/12/2023 13:00	WG2148873
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	10/12/2023 13:00	WG2148873
2,4-Dinitrophenol	U		0.00593	0.0100	1	10/12/2023 13:00	WG2148873
2-Nitrophenol	U		0.000117	0.0100	1	10/12/2023 13:00	WG2148873
2-Nitroaniline	U		0.000102	0.0100	1	10/12/2023 13:00	WG2148873
2-Methylphenol	U		0.0000929	0.0100	1	10/12/2023 13:00	WG2148873
3&4-Methyl Phenol	U		0.000168	0.0100	1	10/12/2023 13:00	WG2148873
3-Nitroaniline	U		0.0000869	0.0100	1	10/12/2023 13:00	WG2148873
4-Chloroaniline	U		0.000234	0.0100	1	10/12/2023 13:00	WG2148873
4-Nitroaniline	U		0.0000910	0.0100	1	10/12/2023 13:00	WG2148873
4-Nitrophenol	U		0.000143	0.0100	1	10/12/2023 13:00	WG2148873
Pentachlorophenol	U		0.000313	0.0100	1	10/12/2023 13:00	WG2148873
Phenol	U		0.00433	0.0100	1	10/12/2023 13:00	WG2148873
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	10/12/2023 13:00	WG2148873
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	10/12/2023 13:00	WG2148873
(S) 2-Fluorophenol	*19.2*			*10.0-120*		*10/12/2023 13:00*	WG2148873
(S) Phenol-d5	*14.2*			*10.0-120*		*10/12/2023 13:00*	WG2148873
(S) Nitrobenzene-d5	*43.4*			*10.0-127*		*10/12/2023 13:00*	WG2148873
(S) 2-Fluorobiphenyl	*35.1*			*10.0-130*		*10/12/2023 13:00*	WG2148873
(S) 2,4,6-Tribromophenol	*25.8*			*10.0-155*		*10/12/2023 13:00*	WG2148873
(S) p-Terphenyl-d14	*17.6*			*10.0-128*		*10/12/2023 13:00*	WG2148873

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	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1180		13.3	1	10/11/2023 12:39	WG2148629

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Alkalinity	1030		8.45	20.0	1	10/10/2023 14:04	WG2147741

Sample Narrative:

L1663622-23 WG2147741: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	93.0	J6	0.379	1.00	1	10/07/2023 01:33	WG2146682
Fluoride	0.681		0.0640	0.150	1	10/07/2023 01:33	WG2146682
Nitrate	0.127		0.0480	0.100	1	10/07/2023 01:33	WG2146682
Nitrite	U		0.0420	0.100	1	10/07/2023 01:33	WG2146682
Sulfate	6.45	B	0.594	5.00	1	10/07/2023 01:33	WG2146682

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.000100	0.000200	1	10/12/2023 12:45	WG2147174

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron,Dissolved	0.157	J	0.0200	0.200	1	10/15/2023 18:30	WG2146828

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.0185	0.100	1	10/20/2023 13:39	WG2146834
Arsenic,Dissolved	0.00483		0.000180	0.00200	1	10/20/2023 13:39	WG2146834
Barium,Dissolved	0.566		0.00190	0.0100	5	10/20/2023 14:03	WG2146834
Cadmium,Dissolved	U		0.000150	0.00100	1	10/20/2023 13:39	WG2146834
Chromium,Dissolved	0.00128	J	0.00124	0.00200	1	10/20/2023 13:39	WG2146834
Copper,Dissolved	U		0.00151	0.00500	1	10/20/2023 13:39	WG2146834
Cobalt,Dissolved	0.0000684	J	0.0000596	0.00200	1	10/20/2023 13:39	WG2146834
Iron,Dissolved	1.71		0.0281	0.100	1	10/20/2023 13:39	WG2146834
Lead,Dissolved	U		0.000849	0.00200	1	10/20/2023 13:39	WG2146834
Manganese,Dissolved	0.947		0.000704	0.00500	1	10/20/2023 13:39	WG2146834
Molybdenum,Dissolved	0.00215	J	0.000348	0.00500	1	10/20/2023 13:39	WG2146834
Nickel,Dissolved	0.00157	J	0.000816	0.00200	1	10/20/2023 13:39	WG2146834
Selenium,Dissolved	U		0.000300	0.00200	1	10/20/2023 13:39	WG2146834
Silver,Dissolved	U		0.0000700	0.00200	1	10/20/2023 13:39	WG2146834
Uranium,Dissolved	0.0491		0.0000700	0.0200	1	10/20/2023 13:39	WG2146834
Zinc,Dissolved	U		0.00302	0.0250	1	10/20/2023 13:39	WG2146834

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0842	J	0.0314	0.100	1	10/11/2023 21:23	WG2149400
(S) a,a,a-Trifluorotoluene(FID)	*107*			*78.0-120*		*10/11/2023 21:23*	WG2149400

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0113	0.0500	1	10/10/2023 03:45	WG2148083
Benzene	0.000281	J	0.0000941	0.00100	1	10/10/2023 03:45	WG2148083
Bromodichloromethane	U		0.000136	0.00100	1	10/10/2023 03:45	WG2148083
Bromoform	U		0.000129	0.00100	1	10/10/2023 03:45	WG2148083
Bromomethane	U		0.000605	0.00500	1	10/10/2023 03:45	WG2148083
n-Butylbenzene	U		0.000157	0.00100	1	10/10/2023 03:45	WG2148083
sec-Butylbenzene	U		0.000125	0.00100	1	10/10/2023 03:45	WG2148083
tert-Butylbenzene	0.000134	J	0.000127	0.00100	1	10/10/2023 03:45	WG2148083
Carbon disulfide	U		0.0000962	0.00100	1	10/10/2023 03:45	WG2148083
Carbon tetrachloride	U		0.000128	0.00100	1	10/10/2023 03:45	WG2148083
Chlorobenzene	U	J4	0.000116	0.00100	1	10/10/2023 03:45	WG2148083
Chlorodibromomethane	U		0.000140	0.00100	1	10/10/2023 03:45	WG2148083
Chloroethane	U		0.000192	0.00500	1	10/10/2023 03:45	WG2148083
Chloroform	U		0.000111	0.00500	1	10/10/2023 03:45	WG2148083
Chloromethane	U		0.000960	0.00250	1	10/10/2023 03:45	WG2148083
1,2-Dibromoethane	U		0.000126	0.00100	1	10/10/2023 03:45	WG2148083
1,1-Dichloroethane	U		0.000100	0.00100	1	10/10/2023 03:45	WG2148083
1,2-Dichloroethane	U		0.0000819	0.00100	1	10/10/2023 03:45	WG2148083
1,1-Dichloroethene	U		0.000188	0.00100	1	10/10/2023 03:45	WG2148083
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	10/10/2023 03:45	WG2148083
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	10/10/2023 03:45	WG2148083
1,2-Dichloropropane	U		0.000149	0.00100	1	10/10/2023 03:45	WG2148083
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	10/10/2023 03:45	WG2148083
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	10/10/2023 03:45	WG2148083
Ethylbenzene	U		0.000137	0.00100	1	10/10/2023 03:45	WG2148083
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	10/10/2023 03:45	WG2148083
2-Hexanone	U		0.000787	0.0100	1	10/10/2023 03:45	WG2148083
Isopropylbenzene	U		0.000105	0.00100	1	10/10/2023 03:45	WG2148083
p-Isopropyltoluene	U		0.000120	0.00100	1	10/10/2023 03:45	WG2148083
2-Butanone (MEK)	U		0.00119	0.0100	1	10/10/2023 03:45	WG2148083
Methylene Chloride	U		0.000430	0.00500	1	10/10/2023 03:45	WG2148083
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	10/10/2023 03:45	WG2148083
Methyl tert-butyl ether	U		0.000101	0.00100	1	10/10/2023 03:45	WG2148083
Naphthalene	U		0.00100	0.00500	1	10/10/2023 03:45	WG2148083
n-Propylbenzene	U		0.0000993	0.00100	1	10/10/2023 03:45	WG2148083
Styrene	U		0.000118	0.00100	1	10/10/2023 03:45	WG2148083
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	10/10/2023 03:45	WG2148083
Tetrachloroethene	U		0.000300	0.00100	1	10/10/2023 03:45	WG2148083
Toluene	U		0.000278	0.00100	1	10/10/2023 03:45	WG2148083
1,1,1-Trichloroethane	U		0.000149	0.00100	1	10/10/2023 03:45	WG2148083
1,1,2-Trichloroethane	U		0.000158	0.00100	1	10/10/2023 03:45	WG2148083
Trichloroethene	U		0.000190	0.00100	1	10/10/2023 03:45	WG2148083
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	10/10/2023 03:45	WG2148083
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	10/10/2023 03:45	WG2148083
Vinyl chloride	U		0.000234	0.00100	1	10/10/2023 03:45	WG2148083
Xylenes, Total	U		0.000174	0.00300	1	10/10/2023 03:45	WG2148083
(S) Toluene-d8	*102*			*80.0-120*		*10/10/2023 03:45*	WG2148083
(S) 4-Bromofluorobenzene	*101*			*77.0-126*		*10/10/2023 03:45*	WG2148083
(S) 1,2-Dichloroethane-d4	*89.9*			*70.0-130*		*10/10/2023 03:45*	WG2148083

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	0.478		0.0741	0.300	3	10/16/2023 08:59	WG2150507
(S) o-Terphenyl	*262*	J1		*31.0-160*		*10/16/2023 08:59*	WG2150507

Sample Narrative:

L1663622-23 WG2150507: Sample produced emulsion during Extraction process, low surr/spike recoveries due to matrix.

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000886	0.00100	1	10/12/2023 13:22	WG2148873
Acenaphthylene	U		0.0000921	0.00100	1	10/12/2023 13:22	WG2148873
Acetophenone	U		0.000208	0.0100	1	10/12/2023 13:22	WG2148873
Anthracene	U		0.0000804	0.00100	1	10/12/2023 13:22	WG2148873
Atrazine	U		0.000255	0.0100	1	10/12/2023 13:22	WG2148873
Benzo(a)anthracene	U		0.000199	0.00100	1	10/12/2023 13:22	WG2148873
Benzaldehyde	U		0.00169	0.0100	1	10/12/2023 13:22	WG2148873
Benzo(b)fluoranthene	U		0.000130	0.00100	1	10/12/2023 13:22	WG2148873
Benzo(k)fluoranthene	U		0.000120	0.00100	1	10/12/2023 13:22	WG2148873
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	10/12/2023 13:22	WG2148873
Benzo(a)pyrene	U		0.0000381	0.000200	1	10/12/2023 13:22	WG2148873
Biphenyl	U		0.000790	0.0100	1	10/12/2023 13:22	WG2148873
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	10/12/2023 13:22	WG2148873
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	10/12/2023 13:22	WG2148873
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	10/12/2023 13:22	WG2148873
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	10/12/2023 13:22	WG2148873
2-Chloronaphthalene	U		0.0000648	0.00100	1	10/12/2023 13:22	WG2148873
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	10/12/2023 13:22	WG2148873
Caprolactam	U		0.000309	0.0100	1	10/12/2023 13:22	WG2148873
Carbazole	U		0.000111	0.0100	1	10/12/2023 13:22	WG2148873
Chrysene	U		0.000130	0.00100	1	10/12/2023 13:22	WG2148873
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	10/12/2023 13:22	WG2148873
Dibenzofuran	U		0.0000970	0.0100	1	10/12/2023 13:22	WG2148873
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	10/12/2023 13:22	WG2148873
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	10/12/2023 13:22	WG2148873
2,6-Dinitrotoluene	U		0.000250	0.0100	1	10/12/2023 13:22	WG2148873
Fluoranthene	U		0.000102	0.00100	1	10/12/2023 13:22	WG2148873
Fluorene	U		0.0000844	0.00100	1	10/12/2023 13:22	WG2148873
Hexachlorobenzene	U		0.0000755	0.00100	1	10/12/2023 13:22	WG2148873
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	10/12/2023 13:22	WG2148873
Hexachlorocyclopentadiene	U	J3	0.0000598	0.0100	1	10/12/2023 13:22	WG2148873
Hexachloroethane	U		0.000127	0.0100	1	10/12/2023 13:22	WG2148873
Indeno(1,2,3-cd)pyrene	U	J6	0.000279	0.00100	1	10/12/2023 13:22	WG2148873
Isophorone	U		0.000143	0.0100	1	10/12/2023 13:22	WG2148873
1-Methylnaphthalene	U		0.0000790	0.00100	1	10/12/2023 13:22	WG2148873
2-Methylnaphthalene	U		0.000117	0.00100	1	10/12/2023 13:22	WG2148873
Naphthalene	U		0.000159	0.00100	1	10/12/2023 13:22	WG2148873
Nitrobenzene	U		0.000297	0.0100	1	10/12/2023 13:22	WG2148873
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	10/12/2023 13:22	WG2148873
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	10/12/2023 13:22	WG2148873
Phenanthrene	U		0.000112	0.00100	1	10/12/2023 13:22	WG2148873
Benzylbutyl phthalate	U		0.000765	0.00300	1	10/12/2023 13:22	WG2148873
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	10/12/2023 13:22	WG2148873
Di-n-butyl phthalate	U		0.000453	0.00300	1	10/12/2023 13:22	WG2148873
Diethyl phthalate	U		0.000287	0.00300	1	10/12/2023 13:22	WG2148873
Dimethyl phthalate	U		0.000260	0.00300	1	10/12/2023 13:22	WG2148873
Di-n-octyl phthalate	U		0.000932	0.00300	1	10/12/2023 13:22	WG2148873

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Pyrene	U		0.000107	0.00100	1	10/12/2023 13:22	WG2148873
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	10/12/2023 13:22	WG2148873
4-Chloro-3-methylphenol	U	J3	0.000131	0.0100	1	10/12/2023 13:22	WG2148873
2-Chlorophenol	U		0.000133	0.0100	1	10/12/2023 13:22	WG2148873
2,4-Dichlorophenol	U	J3	0.000102	0.0100	1	10/12/2023 13:22	WG2148873
2,4-Dimethylphenol	U	J3	0.0000636	0.0100	1	10/12/2023 13:22	WG2148873
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	10/12/2023 13:22	WG2148873
2,4-Dinitrophenol	U		0.00593	0.0100	1	10/12/2023 13:22	WG2148873
2-Nitrophenol	U		0.000117	0.0100	1	10/12/2023 13:22	WG2148873
2-Nitroaniline	U		0.000102	0.0100	1	10/12/2023 13:22	WG2148873
2-Methylphenol	U	J3	0.0000929	0.0100	1	10/12/2023 13:22	WG2148873
3&4-Methyl Phenol	U		0.000168	0.0100	1	10/12/2023 13:22	WG2148873
3-Nitroaniline	U		0.0000869	0.0100	1	10/12/2023 13:22	WG2148873
4-Chloroaniline	U		0.000234	0.0100	1	10/12/2023 13:22	WG2148873
4-Nitroaniline	U		0.0000910	0.0100	1	10/12/2023 13:22	WG2148873
4-Nitrophenol	U		0.000143	0.0100	1	10/12/2023 13:22	WG2148873
Pentachlorophenol	U		0.000313	0.0100	1	10/12/2023 13:22	WG2148873
Phenol	U		0.00433	0.0100	1	10/12/2023 13:22	WG2148873
2,4,5-Trichlorophenol	U	J3	0.000109	0.0100	1	10/12/2023 13:22	WG2148873
2,4,6-Trichlorophenol	U	J3	0.000100	0.0100	1	10/12/2023 13:22	WG2148873
(S) 2-Fluorophenol	*21.8*			*10.0-120*		*10/12/2023 13:22*	WG2148873
(S) Phenol-d5	*16.6*			*10.0-120*		*10/12/2023 13:22*	WG2148873
(S) Nitrobenzene-d5	*57.6*			*10.0-127*		*10/12/2023 13:22*	WG2148873
(S) 2-Fluorobiphenyl	*56.7*			*10.0-130*		*10/12/2023 13:22*	WG2148873
(S) 2,4,6-Tribromophenol	*41.4*			*10.0-155*		*10/12/2023 13:22*	WG2148873
(S) p-Terphenyl-d14	*61.8*			*10.0-128*		*10/12/2023 13:22*	WG2148873

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	527		10.0	1	10/12/2023 18:33	WG2149849

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	179		8.45	20.0	1	10/10/2023 14:08	WG2147741

Sample Narrative:

L1663622-24 WG2147741: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	115		0.379	1.00	1	10/07/2023 01:50	WG2146682
Fluoride	0.791		0.0640	0.150	1	10/07/2023 01:50	WG2146682
Nitrate	2.74		0.0480	0.100	1	10/07/2023 01:50	WG2146682
Nitrite	U		0.0420	0.100	1	10/07/2023 01:50	WG2146682
Sulfate	75.2		0.594	5.00	1	10/07/2023 01:50	WG2146682

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	10/12/2023 12:47	WG2147174

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.142	J	0.0200	0.200	1	10/15/2023 18:49	WG2146828

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		0.0185	0.100	1	10/20/2023 13:42	WG2146834
Arsenic,Dissolved	0.00584		0.000180	0.00200	1	10/20/2023 13:42	WG2146834
Barium,Dissolved	0.106		0.000381	0.00200	1	10/20/2023 13:42	WG2146834
Cadmium,Dissolved	U		0.000150	0.00100	1	10/20/2023 13:42	WG2146834
Chromium,Dissolved	0.00272		0.00124	0.00200	1	10/20/2023 13:42	WG2146834
Copper,Dissolved	0.00375	J	0.00151	0.00500	1	10/20/2023 13:42	WG2146834
Cobalt,Dissolved	0.0000681	J	0.0000596	0.00200	1	10/20/2023 13:42	WG2146834
Iron,Dissolved	U		0.0281	0.100	1	10/20/2023 13:42	WG2146834
Lead,Dissolved	U		0.000849	0.00200	1	10/20/2023 13:42	WG2146834
Manganese,Dissolved	0.000971	J	0.000704	0.00500	1	10/20/2023 13:42	WG2146834
Molybdenum,Dissolved	0.00275	J	0.000348	0.00500	1	10/20/2023 13:42	WG2146834
Nickel,Dissolved	0.00145	J	0.000816	0.00200	1	10/20/2023 13:42	WG2146834
Selenium,Dissolved	0.00344		0.000300	0.00200	1	10/20/2023 13:42	WG2146834
Silver,Dissolved	U		0.0000700	0.00200	1	10/20/2023 13:42	WG2146834
Uranium,Dissolved	0.00166	J	0.0000700	0.0200	1	10/20/2023 13:42	WG2146834
Zinc,Dissolved	0.0118	J	0.00302	0.0250	1	10/20/2023 13:42	WG2146834

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	1	10/11/2023 21:45	WG2149400
(S) a,a,a-Trifluorotoluene(FID)	*109*			*78.0-120*		*10/11/2023 21:45*	WG2149400

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0113	0.0500	1	10/10/2023 04:04	WG2148083
Benzene	U		0.0000941	0.00100	1	10/10/2023 04:04	WG2148083
Bromodichloromethane	U		0.000136	0.00100	1	10/10/2023 04:04	WG2148083
Bromoform	U		0.000129	0.00100	1	10/10/2023 04:04	WG2148083
Bromomethane	U		0.000605	0.00500	1	10/10/2023 04:04	WG2148083
n-Butylbenzene	U		0.000157	0.00100	1	10/10/2023 04:04	WG2148083
sec-Butylbenzene	U		0.000125	0.00100	1	10/10/2023 04:04	WG2148083
tert-Butylbenzene	U		0.000127	0.00100	1	10/10/2023 04:04	WG2148083
Carbon disulfide	U		0.0000962	0.00100	1	10/10/2023 04:04	WG2148083
Carbon tetrachloride	U		0.000128	0.00100	1	10/10/2023 04:04	WG2148083
Chlorobenzene	U	J4	0.000116	0.00100	1	10/10/2023 04:04	WG2148083
Chlorodibromomethane	U		0.000140	0.00100	1	10/10/2023 04:04	WG2148083
Chloroethane	U		0.000192	0.00500	1	10/10/2023 04:04	WG2148083
Chloroform	U		0.000111	0.00500	1	10/10/2023 04:04	WG2148083
Chloromethane	U		0.000960	0.00250	1	10/10/2023 04:04	WG2148083
1,2-Dibromoethane	U		0.000126	0.00100	1	10/10/2023 04:04	WG2148083
1,1-Dichloroethane	U		0.000100	0.00100	1	10/10/2023 04:04	WG2148083
1,2-Dichloroethane	U		0.0000819	0.00100	1	10/10/2023 04:04	WG2148083
1,1-Dichloroethene	U		0.000188	0.00100	1	10/10/2023 04:04	WG2148083
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	10/10/2023 04:04	WG2148083
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	10/10/2023 04:04	WG2148083
1,2-Dichloropropane	U		0.000149	0.00100	1	10/10/2023 04:04	WG2148083
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	10/10/2023 04:04	WG2148083
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	10/10/2023 04:04	WG2148083
Ethylbenzene	U		0.000137	0.00100	1	10/10/2023 04:04	WG2148083
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	10/10/2023 04:04	WG2148083
2-Hexanone	U		0.000787	0.0100	1	10/10/2023 04:04	WG2148083
Isopropylbenzene	U		0.000105	0.00100	1	10/10/2023 04:04	WG2148083
p-Isopropyltoluene	U		0.000120	0.00100	1	10/10/2023 04:04	WG2148083
2-Butanone (MEK)	U		0.00119	0.0100	1	10/10/2023 04:04	WG2148083
Methylene Chloride	U		0.000430	0.00500	1	10/10/2023 04:04	WG2148083
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	10/10/2023 04:04	WG2148083
Methyl tert-butyl ether	U		0.000101	0.00100	1	10/10/2023 04:04	WG2148083
Naphthalene	U		0.00100	0.00500	1	10/10/2023 04:04	WG2148083
n-Propylbenzene	U		0.0000993	0.00100	1	10/10/2023 04:04	WG2148083
Styrene	U		0.000118	0.00100	1	10/10/2023 04:04	WG2148083
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	10/10/2023 04:04	WG2148083
Tetrachloroethene	U		0.000300	0.00100	1	10/10/2023 04:04	WG2148083
Toluene	U		0.000278	0.00100	1	10/10/2023 04:04	WG2148083
1,1,1-Trichloroethane	U		0.000149	0.00100	1	10/10/2023 04:04	WG2148083
1,1,2-Trichloroethane	U		0.000158	0.00100	1	10/10/2023 04:04	WG2148083
Trichloroethene	U		0.000190	0.00100	1	10/10/2023 04:04	WG2148083
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	10/10/2023 04:04	WG2148083
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	10/10/2023 04:04	WG2148083
Vinyl chloride	U		0.000234	0.00100	1	10/10/2023 04:04	WG2148083
Xylenes, Total	U		0.000174	0.00300	1	10/10/2023 04:04	WG2148083
(S) Toluene-d8	*99.4*			*80.0-120*		*10/10/2023 04:04*	WG2148083
(S) 4-Bromofluorobenzene	*98.8*			*77.0-126*		*10/10/2023 04:04*	WG2148083
(S) 1,2-Dichloroethane-d4	*90.8*			*70.0-130*		*10/10/2023 04:04*	WG2148083

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	0.0572	J	0.0247	0.100	1	10/16/2023 09:19	WG2150507
(S) o-Terphenyl	*82.6*			*31.0-160*		*10/16/2023 09:19*	WG2150507

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000886	0.00100	1	10/12/2023 15:20	WG2148873
Acenaphthylene	U		0.0000921	0.00100	1	10/12/2023 15:20	WG2148873
Acetophenone	U		0.000208	0.0100	1	10/12/2023 15:20	WG2148873
Anthracene	U		0.0000804	0.00100	1	10/12/2023 15:20	WG2148873
Atrazine	U		0.000255	0.0100	1	10/12/2023 15:20	WG2148873
Benzo(a)anthracene	U		0.000199	0.00100	1	10/12/2023 15:20	WG2148873
Benzaldehyde	U		0.00169	0.0100	1	10/12/2023 15:20	WG2148873
Benzo(b)fluoranthene	U		0.000130	0.00100	1	10/12/2023 15:20	WG2148873
Benzo(k)fluoranthene	U		0.000120	0.00100	1	10/12/2023 15:20	WG2148873
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	10/12/2023 15:20	WG2148873
Benzo(a)pyrene	U		0.0000381	0.000200	1	10/12/2023 15:20	WG2148873
Biphenyl	U		0.000790	0.0100	1	10/12/2023 15:20	WG2148873
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	10/12/2023 15:20	WG2148873
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	10/12/2023 15:20	WG2148873
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	10/12/2023 15:20	WG2148873
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	10/12/2023 15:20	WG2148873
2-Chloronaphthalene	U		0.0000648	0.00100	1	10/12/2023 15:20	WG2148873
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	10/12/2023 15:20	WG2148873
Caprolactam	U		0.000309	0.0100	1	10/12/2023 15:20	WG2148873
Carbazole	U		0.000111	0.0100	1	10/12/2023 15:20	WG2148873
Chrysene	U		0.000130	0.00100	1	10/12/2023 15:20	WG2148873
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	10/12/2023 15:20	WG2148873
Dibenzofuran	U		0.0000970	0.0100	1	10/12/2023 15:20	WG2148873
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	10/12/2023 15:20	WG2148873
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	10/12/2023 15:20	WG2148873
2,6-Dinitrotoluene	U		0.000250	0.0100	1	10/12/2023 15:20	WG2148873
Fluoranthene	U		0.000102	0.00100	1	10/12/2023 15:20	WG2148873
Fluorene	U		0.0000844	0.00100	1	10/12/2023 15:20	WG2148873
Hexachlorobenzene	U		0.0000755	0.00100	1	10/12/2023 15:20	WG2148873
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	10/12/2023 15:20	WG2148873
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	10/12/2023 15:20	WG2148873
Hexachloroethane	U		0.000127	0.0100	1	10/12/2023 15:20	WG2148873
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	10/12/2023 15:20	WG2148873
Isophorone	U		0.000143	0.0100	1	10/12/2023 15:20	WG2148873
1-Methylnaphthalene	U		0.0000790	0.00100	1	10/12/2023 15:20	WG2148873
2-Methylnaphthalene	U		0.000117	0.00100	1	10/12/2023 15:20	WG2148873
Naphthalene	U		0.000159	0.00100	1	10/12/2023 15:20	WG2148873
Nitrobenzene	U		0.000297	0.0100	1	10/12/2023 15:20	WG2148873
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	10/12/2023 15:20	WG2148873
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	10/12/2023 15:20	WG2148873
Phenanthrene	U		0.000112	0.00100	1	10/12/2023 15:20	WG2148873
Benzylbutyl phthalate	U		0.000765	0.00300	1	10/12/2023 15:20	WG2148873
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	10/12/2023 15:20	WG2148873
Di-n-butyl phthalate	U		0.000453	0.00300	1	10/12/2023 15:20	WG2148873
Diethyl phthalate	U		0.000287	0.00300	1	10/12/2023 15:20	WG2148873
Dimethyl phthalate	U		0.000260	0.00300	1	10/12/2023 15:20	WG2148873
Di-n-octyl phthalate	U		0.000932	0.00300	1	10/12/2023 15:20	WG2148873
Pyrene	U		0.000107	0.00100	1	10/12/2023 15:20	WG2148873
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	10/12/2023 15:20	WG2148873
4-Chloro-3-methylphenol	U		0.000131	0.0100	1	10/12/2023 15:20	WG2148873

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
2-Chlorophenol	U		0.000133	0.0100	1	10/12/2023 15:20	WG2148873
2,4-Dichlorophenol	U		0.000102	0.0100	1	10/12/2023 15:20	WG2148873
2,4-Dimethylphenol	U		0.0000636	0.0100	1	10/12/2023 15:20	WG2148873
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	10/12/2023 15:20	WG2148873
2,4-Dinitrophenol	U		0.00593	0.0100	1	10/12/2023 15:20	WG2148873
2-Nitrophenol	U		0.000117	0.0100	1	10/12/2023 15:20	WG2148873
2-Nitroaniline	U		0.000102	0.0100	1	10/12/2023 15:20	WG2148873
2-Methylphenol	U		0.0000929	0.0100	1	10/12/2023 15:20	WG2148873
3&4-Methyl Phenol	U		0.000168	0.0100	1	10/12/2023 15:20	WG2148873
3-Nitroaniline	U		0.0000869	0.0100	1	10/12/2023 15:20	WG2148873
4-Chloroaniline	U		0.000234	0.0100	1	10/12/2023 15:20	WG2148873
4-Nitroaniline	U		0.0000910	0.0100	1	10/12/2023 15:20	WG2148873
4-Nitrophenol	U		0.000143	0.0100	1	10/12/2023 15:20	WG2148873
Pentachlorophenol	U		0.000313	0.0100	1	10/12/2023 15:20	WG2148873
Phenol	U		0.00433	0.0100	1	10/12/2023 15:20	WG2148873
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	10/12/2023 15:20	WG2148873
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	10/12/2023 15:20	WG2148873
(S) 2-Fluorophenol	*24.5*			*10.0-120*		*10/12/2023 15:20*	WG2148873
(S) Phenol-d5	*17.9*			*10.0-120*		*10/12/2023 15:20*	WG2148873
(S) Nitrobenzene-d5	*56.5*			*10.0-127*		*10/12/2023 15:20*	WG2148873
(S) 2-Fluorobiphenyl	*57.0*			*10.0-130*		*10/12/2023 15:20*	WG2148873
(S) 2,4,6-Tribromophenol	*47.3*			*10.0-155*		*10/12/2023 15:20*	WG2148873
(S) p-Terphenyl-d14	*64.6*			*10.0-128*		*10/12/2023 15:20*	WG2148873

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1040		20.0	1	10/12/2023 18:33	WG2149849

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	180		8.45	20.0	1	10/10/2023 14:22	WG2147741

Sample Narrative:

L1663622-25 WG2147741: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	292		3.79	10.0	10	10/07/2023 07:05	WG2146649
Fluoride	0.696		0.0640	0.150	1	10/07/2023 01:14	WG2146649
Nitrate	3.12		0.0480	0.100	1	10/07/2023 01:14	WG2146649
Nitrite	U		0.0420	0.100	1	10/07/2023 01:14	WG2146649
Sulfate	80.1		0.594	5.00	1	10/07/2023 01:14	WG2146649

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	10/12/2023 12:53	WG2147174

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.172	J	0.0200	0.200	1	10/15/2023 18:57	WG2146828

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		0.0185	0.100	1	10/20/2023 13:45	WG2146834
Arsenic,Dissolved	0.00453		0.000180	0.00200	1	10/20/2023 13:45	WG2146834
Barium,Dissolved	0.117		0.000381	0.00200	1	10/20/2023 13:45	WG2146834
Cadmium,Dissolved	U		0.000150	0.00100	1	10/20/2023 13:45	WG2146834
Chromium,Dissolved	0.00197	J	0.00124	0.00200	1	10/20/2023 13:45	WG2146834
Copper,Dissolved	0.00248	J	0.00151	0.00500	1	10/20/2023 13:45	WG2146834
Cobalt,Dissolved	0.0000795	J	0.0000596	0.00200	1	10/20/2023 13:45	WG2146834
Iron,Dissolved	0.0662	J	0.0281	0.100	1	10/20/2023 13:45	WG2146834
Lead,Dissolved	0.00237		0.000849	0.00200	1	10/20/2023 13:45	WG2146834
Manganese,Dissolved	0.00343	J	0.000704	0.00500	1	10/20/2023 13:45	WG2146834
Molybdenum,Dissolved	0.00227	J	0.000348	0.00500	1	10/20/2023 13:45	WG2146834
Nickel,Dissolved	0.00717		0.000816	0.00200	1	10/20/2023 13:45	WG2146834
Selenium,Dissolved	0.00356		0.000300	0.00200	1	10/20/2023 13:45	WG2146834
Silver,Dissolved	U		0.0000700	0.00200	1	10/20/2023 13:45	WG2146834
Uranium,Dissolved	0.00193	J	0.0000700	0.0200	1	10/20/2023 13:45	WG2146834
Zinc,Dissolved	0.0702		0.00302	0.0250	1	10/20/2023 13:45	WG2146834

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	1	10/11/2023 22:08	WG2149400
(S) a,a,a-Trifluorotoluene(FID)	*109*			*78.0-120*		*10/11/2023 22:08*	WG2149400

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0113	0.0500	1	10/10/2023 04:24	WG2148083
Benzene	U		0.0000941	0.00100	1	10/10/2023 04:24	WG2148083
Bromodichloromethane	U		0.000136	0.00100	1	10/10/2023 04:24	WG2148083
Bromoform	U		0.000129	0.00100	1	10/10/2023 04:24	WG2148083
Bromomethane	U		0.000605	0.00500	1	10/10/2023 04:24	WG2148083
n-Butylbenzene	U		0.000157	0.00100	1	10/10/2023 04:24	WG2148083
sec-Butylbenzene	U		0.000125	0.00100	1	10/10/2023 04:24	WG2148083
tert-Butylbenzene	U		0.000127	0.00100	1	10/10/2023 04:24	WG2148083
Carbon disulfide	U		0.0000962	0.00100	1	10/10/2023 04:24	WG2148083
Carbon tetrachloride	0.000404	J	0.000128	0.00100	1	10/10/2023 04:24	WG2148083
Chlorobenzene	U	J4	0.000116	0.00100	1	10/10/2023 04:24	WG2148083
Chlorodibromomethane	U		0.000140	0.00100	1	10/10/2023 04:24	WG2148083
Chloroethane	U		0.000192	0.00500	1	10/10/2023 04:24	WG2148083
Chloroform	0.00113	J	0.000111	0.00500	1	10/10/2023 04:24	WG2148083
Chloromethane	U		0.000960	0.00250	1	10/10/2023 04:24	WG2148083
1,2-Dibromoethane	U		0.000126	0.00100	1	10/10/2023 04:24	WG2148083
1,1-Dichloroethane	U		0.000100	0.00100	1	10/10/2023 04:24	WG2148083
1,2-Dichloroethane	U		0.0000819	0.00100	1	10/10/2023 04:24	WG2148083
1,1-Dichloroethene	U		0.000188	0.00100	1	10/10/2023 04:24	WG2148083
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	10/10/2023 04:24	WG2148083
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	10/10/2023 04:24	WG2148083
1,2-Dichloropropane	U		0.000149	0.00100	1	10/10/2023 04:24	WG2148083
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	10/10/2023 04:24	WG2148083
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	10/10/2023 04:24	WG2148083
Ethylbenzene	U		0.000137	0.00100	1	10/10/2023 04:24	WG2148083
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	10/10/2023 04:24	WG2148083
2-Hexanone	U		0.000787	0.0100	1	10/10/2023 04:24	WG2148083
Isopropylbenzene	U		0.000105	0.00100	1	10/10/2023 04:24	WG2148083
p-Isopropyltoluene	U		0.000120	0.00100	1	10/10/2023 04:24	WG2148083
2-Butanone (MEK)	U		0.00119	0.0100	1	10/10/2023 04:24	WG2148083
Methylene Chloride	U		0.000430	0.00500	1	10/10/2023 04:24	WG2148083
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	10/10/2023 04:24	WG2148083
Methyl tert-butyl ether	U		0.000101	0.00100	1	10/10/2023 04:24	WG2148083
Naphthalene	U		0.00100	0.00500	1	10/10/2023 04:24	WG2148083
n-Propylbenzene	U		0.0000993	0.00100	1	10/10/2023 04:24	WG2148083
Styrene	U		0.000118	0.00100	1	10/10/2023 04:24	WG2148083
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	10/10/2023 04:24	WG2148083
Tetrachloroethene	U		0.000300	0.00100	1	10/10/2023 04:24	WG2148083
Toluene	U		0.000278	0.00100	1	10/10/2023 04:24	WG2148083
1,1,1-Trichloroethane	U		0.000149	0.00100	1	10/10/2023 04:24	WG2148083
1,1,2-Trichloroethane	U		0.000158	0.00100	1	10/10/2023 04:24	WG2148083
Trichloroethene	U		0.000190	0.00100	1	10/10/2023 04:24	WG2148083
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	10/10/2023 04:24	WG2148083
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	10/10/2023 04:24	WG2148083
Vinyl chloride	U		0.000234	0.00100	1	10/10/2023 04:24	WG2148083
Xylenes, Total	U		0.000174	0.00300	1	10/10/2023 04:24	WG2148083
(S) Toluene-d8	*102*			*80.0-120*		*10/10/2023 04:24*	WG2148083
(S) 4-Bromofluorobenzene	*102*			*77.0-126*		*10/10/2023 04:24*	WG2148083
(S) 1,2-Dichloroethane-d4	*88.4*			*70.0-130*		*10/10/2023 04:24*	WG2148083

Received by OCD: 4/15/2024 1:46:20 PM

WW-SOUTH
Collected date/time: 10/05/23 09:50
L1663622

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	0.0524	J	0.0247	0.100	1	10/16/2023 09:38	WG2150507
(S) o-Terphenyl	*80.5*			*31.0-160*		*10/16/2023 09:38*	WG2150507

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000886	0.00100	1	10/12/2023 15:42	WG2148873
Acenaphthylene	U		0.0000921	0.00100	1	10/12/2023 15:42	WG2148873
Acetophenone	U		0.000208	0.0100	1	10/12/2023 15:42	WG2148873
Anthracene	U		0.0000804	0.00100	1	10/12/2023 15:42	WG2148873
Atrazine	U		0.000255	0.0100	1	10/12/2023 15:42	WG2148873
Benzo(a)anthracene	U		0.000199	0.00100	1	10/12/2023 15:42	WG2148873
Benzaldehyde	U		0.00169	0.0100	1	10/12/2023 15:42	WG2148873
Benzo(b)fluoranthene	U		0.000130	0.00100	1	10/12/2023 15:42	WG2148873
Benzo(k)fluoranthene	U		0.000120	0.00100	1	10/12/2023 15:42	WG2148873
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	10/12/2023 15:42	WG2148873
Benzo(a)pyrene	U		0.0000381	0.000200	1	10/12/2023 15:42	WG2148873
Biphenyl	U		0.000790	0.0100	1	10/12/2023 15:42	WG2148873
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	10/12/2023 15:42	WG2148873
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	10/12/2023 15:42	WG2148873
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	10/12/2023 15:42	WG2148873
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	10/12/2023 15:42	WG2148873
2-Chloronaphthalene	U		0.0000648	0.00100	1	10/12/2023 15:42	WG2148873
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	10/12/2023 15:42	WG2148873
Caprolactam	U		0.000309	0.0100	1	10/12/2023 15:42	WG2148873
Carbazole	U		0.000111	0.0100	1	10/12/2023 15:42	WG2148873
Chrysene	U		0.000130	0.00100	1	10/12/2023 15:42	WG2148873
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	10/12/2023 15:42	WG2148873
Dibenzofuran	U		0.0000970	0.0100	1	10/12/2023 15:42	WG2148873
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	10/12/2023 15:42	WG2148873
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	10/12/2023 15:42	WG2148873
2,6-Dinitrotoluene	U		0.000250	0.0100	1	10/12/2023 15:42	WG2148873
Fluoranthene	U		0.000102	0.00100	1	10/12/2023 15:42	WG2148873
Fluorene	U		0.0000844	0.00100	1	10/12/2023 15:42	WG2148873
Hexachlorobenzene	U		0.0000755	0.00100	1	10/12/2023 15:42	WG2148873
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	10/12/2023 15:42	WG2148873
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	10/12/2023 15:42	WG2148873
Hexachloroethane	U		0.000127	0.0100	1	10/12/2023 15:42	WG2148873
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	10/12/2023 15:42	WG2148873
Isophorone	U		0.000143	0.0100	1	10/12/2023 15:42	WG2148873
1-Methylnaphthalene	U		0.0000790	0.00100	1	10/12/2023 15:42	WG2148873
2-Methylnaphthalene	U		0.000117	0.00100	1	10/12/2023 15:42	WG2148873
Naphthalene	U		0.000159	0.00100	1	10/12/2023 15:42	WG2148873
Nitrobenzene	U		0.000297	0.0100	1	10/12/2023 15:42	WG2148873
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	10/12/2023 15:42	WG2148873
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	10/12/2023 15:42	WG2148873
Phenanthrene	U		0.000112	0.00100	1	10/12/2023 15:42	WG2148873
Benzylbutyl phthalate	U		0.000765	0.00300	1	10/12/2023 15:42	WG2148873
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	10/12/2023 15:42	WG2148873
Di-n-butyl phthalate	U		0.000453	0.00300	1	10/12/2023 15:42	WG2148873
Diethyl phthalate	U		0.000287	0.00300	1	10/12/2023 15:42	WG2148873
Dimethyl phthalate	U		0.000260	0.00300	1	10/12/2023 15:42	WG2148873
Di-n-octyl phthalate	U		0.000932	0.00300	1	10/12/2023 15:42	WG2148873
Pyrene	U		0.000107	0.00100	1	10/12/2023 15:42	WG2148873
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	10/12/2023 15:42	WG2148873
4-Chloro-3-methylphenol	U		0.000131	0.0100	1	10/12/2023 15:42	WG2148873

Released to Imaging: 4/26/2024 10:49:21 AM

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
2-Chlorophenol	U		0.000133	0.0100	1	10/12/2023 15:42	WG2148873
2,4-Dichlorophenol	U		0.000102	0.0100	1	10/12/2023 15:42	WG2148873
2,4-Dimethylphenol	U		0.0000636	0.0100	1	10/12/2023 15:42	WG2148873
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	10/12/2023 15:42	WG2148873
2,4-Dinitrophenol	U		0.00593	0.0100	1	10/12/2023 15:42	WG2148873
2-Nitrophenol	U		0.000117	0.0100	1	10/12/2023 15:42	WG2148873
2-Nitroaniline	U		0.000102	0.0100	1	10/12/2023 15:42	WG2148873
2-Methylphenol	U		0.0000929	0.0100	1	10/12/2023 15:42	WG2148873
3&4-Methyl Phenol	U		0.000168	0.0100	1	10/12/2023 15:42	WG2148873
3-Nitroaniline	U		0.0000869	0.0100	1	10/12/2023 15:42	WG2148873
4-Chloroaniline	U		0.000234	0.0100	1	10/12/2023 15:42	WG2148873
4-Nitroaniline	U		0.0000910	0.0100	1	10/12/2023 15:42	WG2148873
4-Nitrophenol	U		0.000143	0.0100	1	10/12/2023 15:42	WG2148873
Pentachlorophenol	U		0.000313	0.0100	1	10/12/2023 15:42	WG2148873
Phenol	U		0.00433	0.0100	1	10/12/2023 15:42	WG2148873
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	10/12/2023 15:42	WG2148873
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	10/12/2023 15:42	WG2148873
(S) 2-Fluorophenol	*22.4*			*10.0-120*		*10/12/2023 15:42*	WG2148873
(S) Phenol-d5	*16.8*			*10.0-120*		*10/12/2023 15:42*	WG2148873
(S) Nitrobenzene-d5	*57.4*			*10.0-127*		*10/12/2023 15:42*	WG2148873
(S) 2-Fluorobiphenyl	*59.7*			*10.0-130*		*10/12/2023 15:42*	WG2148873
(S) 2,4,6-Tribromophenol	*39.8*			*10.0-155*		*10/12/2023 15:42*	WG2148873
(S) p-Terphenyl-d14	*62.6*			*10.0-128*		*10/12/2023 15:42*	WG2148873

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	500		10.0	1	10/12/2023 18:33	WG2149849

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	176		8.45	20.0	1	10/10/2023 14:33	WG2147741

Sample Narrative:

L1663622-26 WG2147741: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	96.4		0.379	1.00	1	10/07/2023 02:07	WG2146682
Fluoride	0.898		0.0640	0.150	1	10/07/2023 02:07	WG2146682
Nitrate	2.66		0.0480	0.100	1	10/07/2023 02:07	WG2146682
Nitrite	U		0.0420	0.100	1	10/07/2023 02:07	WG2146682
Sulfate	80.3		0.594	5.00	1	10/07/2023 02:07	WG2146682

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	10/11/2023 11:05	WG2147175

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.144	J	0.0200	0.200	1	10/15/2023 19:00	WG2146828

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		0.0185	0.100	1	10/13/2023 16:33	WG2146835
Arsenic,Dissolved	0.00547		0.000180	0.00200	1	10/13/2023 16:33	WG2146835
Barium,Dissolved	0.0874		0.000381	0.00200	1	10/13/2023 16:33	WG2146835
Cadmium,Dissolved	U		0.000150	0.00100	1	10/13/2023 16:33	WG2146835
Chromium,Dissolved	0.00354		0.00124	0.00200	1	10/13/2023 16:33	WG2146835
Copper,Dissolved	0.00279	J	0.00151	0.00500	1	10/13/2023 16:33	WG2146835
Cobalt,Dissolved	U		0.0000596	0.00200	1	10/13/2023 16:33	WG2146835
Iron,Dissolved	0.0427	J	0.0281	0.100	1	10/13/2023 16:33	WG2146835
Lead,Dissolved	U		0.000849	0.00200	1	10/13/2023 16:33	WG2146835
Manganese,Dissolved	0.00271	J	0.000704	0.00500	1	10/13/2023 16:33	WG2146835
Molybdenum,Dissolved	0.00276	J	0.000348	0.00500	1	10/13/2023 16:33	WG2146835
Nickel,Dissolved	0.00224		0.000816	0.00200	1	10/13/2023 16:33	WG2146835
Selenium,Dissolved	0.00425		0.000300	0.00200	1	10/13/2023 16:33	WG2146835
Silver,Dissolved	U		0.0000700	0.00200	1	10/13/2023 16:33	WG2146835
Uranium,Dissolved	0.00191	J	0.0000700	0.0200	1	10/13/2023 16:33	WG2146835
Zinc,Dissolved	0.00692	J	0.00302	0.0250	1	10/13/2023 16:33	WG2146835

Received by OCD: 4/15/2024 1:46:20 PM

WW-EAST
Collected date/time: 10/05/23 11:20
L1663622

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	1	10/11/2023 22:30	WG2149400
(S) a,a,a-Trifluorotoluene(FID)	*109*			*78.0-120*		*10/11/2023 22:30*	WG2149400

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U		0.0113	0.0500	1	10/10/2023 05:06	WG2148090
Benzene	U		0.0000941	0.00100	1	10/10/2023 05:06	WG2148090
Bromodichloromethane	U		0.000136	0.00100	1	10/10/2023 05:06	WG2148090
Bromoform	U		0.000129	0.00100	1	10/10/2023 05:06	WG2148090
Bromomethane	U		0.000605	0.00500	1	10/10/2023 05:06	WG2148090
n-Butylbenzene	U		0.000157	0.00100	1	10/10/2023 05:06	WG2148090
sec-Butylbenzene	U		0.000125	0.00100	1	10/10/2023 05:06	WG2148090
tert-Butylbenzene	U		0.000127	0.00100	1	10/10/2023 05:06	WG2148090
Carbon disulfide	U		0.0000962	0.00100	1	10/10/2023 05:06	WG2148090
Carbon tetrachloride	U		0.000128	0.00100	1	10/10/2023 05:06	WG2148090
Chlorobenzene	U		0.000116	0.00100	1	10/10/2023 05:06	WG2148090
Chlorodibromomethane	U		0.000140	0.00100	1	10/10/2023 05:06	WG2148090
Chloroethane	U		0.000192	0.00500	1	10/10/2023 05:06	WG2148090
Chloroform	U		0.000111	0.00500	1	10/10/2023 05:06	WG2148090
Chloromethane	U	J4	0.000960	0.00250	1	10/10/2023 05:06	WG2148090
1,2-Dibromoethane	U		0.000126	0.00100	1	10/10/2023 05:06	WG2148090
1,1-Dichloroethane	U		0.000100	0.00100	1	10/10/2023 05:06	WG2148090
1,2-Dichloroethane	U		0.0000819	0.00100	1	10/10/2023 05:06	WG2148090
1,1-Dichloroethene	U		0.000188	0.00100	1	10/10/2023 05:06	WG2148090
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	10/10/2023 05:06	WG2148090
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	10/10/2023 05:06	WG2148090
1,2-Dichloropropane	U		0.000149	0.00100	1	10/10/2023 05:06	WG2148090
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	10/10/2023 05:06	WG2148090
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	10/10/2023 05:06	WG2148090
Ethylbenzene	U		0.000137	0.00100	1	10/10/2023 05:06	WG2148090
Hexachloro-1,3-butadiene	U	J4	0.000337	0.00100	1	10/10/2023 05:06	WG2148090
2-Hexanone	U		0.000787	0.0100	1	10/10/2023 05:06	WG2148090
Isopropylbenzene	U		0.000105	0.00100	1	10/10/2023 05:06	WG2148090
p-Isopropyltoluene	U		0.000120	0.00100	1	10/10/2023 05:06	WG2148090
2-Butanone (MEK)	U		0.00119	0.0100	1	10/10/2023 05:06	WG2148090
Methylene Chloride	U		0.000430	0.00500	1	10/10/2023 05:06	WG2148090
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	10/10/2023 05:06	WG2148090
Methyl tert-butyl ether	U		0.000101	0.00100	1	10/10/2023 05:06	WG2148090
Naphthalene	U		0.00100	0.00500	1	10/10/2023 05:06	WG2148090
n-Propylbenzene	U		0.0000993	0.00100	1	10/10/2023 05:06	WG2148090
Styrene	U		0.000118	0.00100	1	10/10/2023 05:06	WG2148090
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	10/10/2023 05:06	WG2148090
Tetrachloroethene	U		0.000300	0.00100	1	10/10/2023 05:06	WG2148090
Toluene	U		0.000278	0.00100	1	10/10/2023 05:06	WG2148090
1,1,1-Trichloroethane	U		0.000149	0.00100	1	10/10/2023 05:06	WG2148090
1,1,2-Trichloroethane	U		0.000158	0.00100	1	10/10/2023 05:06	WG2148090
Trichloroethene	U		0.000190	0.00100	1	10/10/2023 05:06	WG2148090
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	10/10/2023 05:06	WG2148090
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	10/10/2023 05:06	WG2148090
Vinyl chloride	U		0.000234	0.00100	1	10/10/2023 05:06	WG2148090
Xylenes, Total	U		0.000174	0.00300	1	10/10/2023 05:06	WG2148090
(S) Toluene-d8	*112*			*80.0-120*		*10/10/2023 05:06*	WG2148090
(S) 4-Bromofluorobenzene	*90.9*			*77.0-126*		*10/10/2023 05:06*	WG2148090
(S) 1,2-Dichloroethane-d4	*98.9*			*70.0-130*		*10/10/2023 05:06*	WG2148090

Released to Imaging: 4/26/2024 10:49:21 AM

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	0.0298	J	0.0247	0.100	1	10/16/2023 09:58	WG2150507
(S) o-Terphenyl	*80.0*			*31.0-160*		*10/16/2023 09:58*	WG2150507

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000886	0.00100	1	10/12/2023 16:03	WG2148873
Acenaphthylene	U		0.0000921	0.00100	1	10/12/2023 16:03	WG2148873
Acetophenone	U		0.000208	0.0100	1	10/12/2023 16:03	WG2148873
Anthracene	U		0.0000804	0.00100	1	10/12/2023 16:03	WG2148873
Atrazine	U		0.000255	0.0100	1	10/12/2023 16:03	WG2148873
Benzo(a)anthracene	U		0.000199	0.00100	1	10/12/2023 16:03	WG2148873
Benzaldehyde	U		0.00169	0.0100	1	10/12/2023 16:03	WG2148873
Benzo(b)fluoranthene	U		0.000130	0.00100	1	10/12/2023 16:03	WG2148873
Benzo(k)fluoranthene	U		0.000120	0.00100	1	10/12/2023 16:03	WG2148873
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	10/12/2023 16:03	WG2148873
Benzo(a)pyrene	U		0.0000381	0.000200	1	10/12/2023 16:03	WG2148873
Biphenyl	U		0.000790	0.0100	1	10/12/2023 16:03	WG2148873
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	10/12/2023 16:03	WG2148873
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	10/12/2023 16:03	WG2148873
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	10/12/2023 16:03	WG2148873
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	10/12/2023 16:03	WG2148873
2-Chloronaphthalene	U		0.0000648	0.00100	1	10/12/2023 16:03	WG2148873
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	10/12/2023 16:03	WG2148873
Caprolactam	U		0.000309	0.0100	1	10/12/2023 16:03	WG2148873
Carbazole	U		0.000111	0.0100	1	10/12/2023 16:03	WG2148873
Chrysene	U		0.000130	0.00100	1	10/12/2023 16:03	WG2148873
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	10/12/2023 16:03	WG2148873
Dibenzofuran	U		0.0000970	0.0100	1	10/12/2023 16:03	WG2148873
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	10/12/2023 16:03	WG2148873
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	10/12/2023 16:03	WG2148873
2,6-Dinitrotoluene	U		0.000250	0.0100	1	10/12/2023 16:03	WG2148873
Fluoranthene	U		0.000102	0.00100	1	10/12/2023 16:03	WG2148873
Fluorene	U		0.0000844	0.00100	1	10/12/2023 16:03	WG2148873
Hexachlorobenzene	U		0.0000755	0.00100	1	10/12/2023 16:03	WG2148873
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	10/12/2023 16:03	WG2148873
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	10/12/2023 16:03	WG2148873
Hexachloroethane	U		0.000127	0.0100	1	10/12/2023 16:03	WG2148873
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	10/12/2023 16:03	WG2148873
Isophorone	U		0.000143	0.0100	1	10/12/2023 16:03	WG2148873
1-Methylnaphthalene	U		0.0000790	0.00100	1	10/12/2023 16:03	WG2148873
2-Methylnaphthalene	U		0.000117	0.00100	1	10/12/2023 16:03	WG2148873
Naphthalene	U		0.000159	0.00100	1	10/12/2023 16:03	WG2148873
Nitrobenzene	U		0.000297	0.0100	1	10/12/2023 16:03	WG2148873
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	10/12/2023 16:03	WG2148873
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	10/12/2023 16:03	WG2148873
Phenanthrene	U		0.000112	0.00100	1	10/12/2023 16:03	WG2148873
Benzylbutyl phthalate	U		0.000765	0.00300	1	10/12/2023 16:03	WG2148873
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	10/12/2023 16:03	WG2148873
Di-n-butyl phthalate	U		0.000453	0.00300	1	10/12/2023 16:03	WG2148873
Diethyl phthalate	U		0.000287	0.00300	1	10/12/2023 16:03	WG2148873
Dimethyl phthalate	U		0.000260	0.00300	1	10/12/2023 16:03	WG2148873
Di-n-octyl phthalate	U		0.000932	0.00300	1	10/12/2023 16:03	WG2148873
Pyrene	U		0.000107	0.00100	1	10/12/2023 16:03	WG2148873
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	10/12/2023 16:03	WG2148873
4-Chloro-3-methylphenol	U		0.000131	0.0100	1	10/12/2023 16:03	WG2148873

WW-EAST
Collected date/time: 10/05/23 11:20
L1663622

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
2-Chlorophenol	U		0.000133	0.0100	1	10/12/2023 16:03	WG2148873
2,4-Dichlorophenol	U		0.000102	0.0100	1	10/12/2023 16:03	WG2148873
2,4-Dimethylphenol	U		0.0000636	0.0100	1	10/12/2023 16:03	WG2148873
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	10/12/2023 16:03	WG2148873
2,4-Dinitrophenol	U		0.00593	0.0100	1	10/12/2023 16:03	WG2148873
2-Nitrophenol	U		0.000117	0.0100	1	10/12/2023 16:03	WG2148873
2-Nitroaniline	U		0.000102	0.0100	1	10/12/2023 16:03	WG2148873
2-Methylphenol	U		0.0000929	0.0100	1	10/12/2023 16:03	WG2148873
3&4-Methyl Phenol	U		0.000168	0.0100	1	10/12/2023 16:03	WG2148873
3-Nitroaniline	U		0.0000869	0.0100	1	10/12/2023 16:03	WG2148873
4-Chloroaniline	U		0.000234	0.0100	1	10/12/2023 16:03	WG2148873
4-Nitroaniline	U		0.0000910	0.0100	1	10/12/2023 16:03	WG2148873
4-Nitrophenol	U		0.000143	0.0100	1	10/12/2023 16:03	WG2148873
Pentachlorophenol	U		0.000313	0.0100	1	10/12/2023 16:03	WG2148873
Phenol	U		0.00433	0.0100	1	10/12/2023 16:03	WG2148873
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	10/12/2023 16:03	WG2148873
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	10/12/2023 16:03	WG2148873
(S) 2-Fluorophenol	*25.8*			*10.0-120*		*10/12/2023 16:03*	WG2148873
(S) Phenol-d5	*19.3*			*10.0-120*		*10/12/2023 16:03*	WG2148873
(S) Nitrobenzene-d5	*61.6*			*10.0-127*		*10/12/2023 16:03*	WG2148873
(S) 2-Fluorobiphenyl	*61.4*			*10.0-130*		*10/12/2023 16:03*	WG2148873
(S) 2,4,6-Tribromophenol	*44.6*			*10.0-155*		*10/12/2023 16:03*	WG2148873
(S) p-Terphenyl-d14	*68.6*			*10.0-128*		*10/12/2023 16:03*	WG2148873

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	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Dissolved Solids	1000		20.0	1	10/12/2023 18:33	WG2149849

Wet Chemistry by Method 2320 B-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Alkalinity	182		8.45	20.0	1	10/10/2023 13:22	WG2147742

Sample Narrative:

L1663622-27 WG2147742: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Chloride	296		3.79	10.0	10	10/07/2023 08:02	WG2146682
Fluoride	0.666		0.0640	0.150	1	10/07/2023 02:58	WG2146682
Nitrate	2.97		0.0480	0.100	1	10/07/2023 02:58	WG2146682
Nitrite	U		0.0420	0.100	1	10/07/2023 02:58	WG2146682
Sulfate	85.1		0.594	5.00	1	10/07/2023 02:58	WG2146682

Mercury by Method 7470A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Mercury	U		0.000100	0.000200	1	10/11/2023 11:07	WG2147175

Metals (ICP) by Method 6010B

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Boron,Dissolved	0.179	J	0.0200	0.200	1	10/15/2023 19:03	WG2146828

Metals (ICPMS) by Method 6020

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Aluminum,Dissolved	U		0.0185	0.100	1	10/13/2023 16:37	WG2146835
Arsenic,Dissolved	0.00480		0.000180	0.00200	1	10/13/2023 16:37	WG2146835
Barium,Dissolved	0.113		0.000381	0.00200	1	10/13/2023 16:37	WG2146835
Cadmium,Dissolved	U		0.000150	0.00100	1	10/13/2023 16:37	WG2146835
Chromium,Dissolved	0.00145	J	0.00124	0.00200	1	10/13/2023 16:37	WG2146835
Copper,Dissolved	U		0.00151	0.00500	1	10/13/2023 16:37	WG2146835
Cobalt,Dissolved	U		0.0000596	0.00200	1	10/13/2023 16:37	WG2146835
Iron,Dissolved	U		0.0281	0.100	1	10/13/2023 16:37	WG2146835
Lead,Dissolved	0.00199	J	0.000849	0.00200	1	10/13/2023 16:37	WG2146835
Manganese,Dissolved	0.00159	J	0.000704	0.00500	1	10/13/2023 16:37	WG2146835
Molybdenum,Dissolved	0.00222	J	0.000348	0.00500	1	10/13/2023 16:37	WG2146835
Nickel,Dissolved	0.00302		0.000816	0.00200	1	10/13/2023 16:37	WG2146835
Selenium,Dissolved	0.00388		0.000300	0.00200	1	10/13/2023 16:37	WG2146835
Silver,Dissolved	U		0.0000700	0.00200	1	10/13/2023 16:37	WG2146835
Uranium,Dissolved	0.00217	J	0.0000700	0.0200	1	10/13/2023 16:37	WG2146835
Zinc,Dissolved	0.0438		0.00302	0.0250	1	10/13/2023 16:37	WG2146835

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	1	10/11/2023 19:01	WG2148697
(S) a,a,a-Trifluorotoluene(FID)	*88.9*			*78.0-120*		*10/11/2023 19:01*	WG2148697

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U	J4	0.0113	0.0500	1	10/10/2023 02:48	WG2148114
Benzene	U		0.0000941	0.00100	1	10/10/2023 02:48	WG2148114
Bromodichloromethane	U		0.000136	0.00100	1	10/10/2023 02:48	WG2148114
Bromoform	U		0.000129	0.00100	1	10/10/2023 02:48	WG2148114
Bromomethane	U		0.000605	0.00500	1	10/10/2023 02:48	WG2148114
n-Butylbenzene	U		0.000157	0.00100	1	10/10/2023 02:48	WG2148114
sec-Butylbenzene	U		0.000125	0.00100	1	10/10/2023 02:48	WG2148114
tert-Butylbenzene	U		0.000127	0.00100	1	10/10/2023 02:48	WG2148114
Carbon disulfide	0.000208	J	0.0000962	0.00100	1	10/10/2023 02:48	WG2148114
Carbon tetrachloride	0.000503	J	0.000128	0.00100	1	10/10/2023 02:48	WG2148114
Chlorobenzene	U		0.000116	0.00100	1	10/10/2023 02:48	WG2148114
Chlorodibromomethane	U		0.000140	0.00100	1	10/10/2023 02:48	WG2148114
Chloroethane	U		0.000192	0.00500	1	10/10/2023 02:48	WG2148114
Chloroform	0.00125	J	0.000111	0.00500	1	10/10/2023 02:48	WG2148114
Chloromethane	U		0.000960	0.00250	1	10/10/2023 02:48	WG2148114
1,2-Dibromoethane	U		0.000126	0.00100	1	10/10/2023 02:48	WG2148114
1,1-Dichloroethane	U		0.000100	0.00100	1	10/10/2023 02:48	WG2148114
1,2-Dichloroethane	U		0.0000819	0.00100	1	10/10/2023 02:48	WG2148114
1,1-Dichloroethene	U		0.000188	0.00100	1	10/10/2023 02:48	WG2148114
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	10/10/2023 02:48	WG2148114
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	10/10/2023 02:48	WG2148114
1,2-Dichloropropane	U		0.000149	0.00100	1	10/10/2023 02:48	WG2148114
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	10/10/2023 02:48	WG2148114
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	10/10/2023 02:48	WG2148114
Ethylbenzene	U		0.000137	0.00100	1	10/10/2023 02:48	WG2148114
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	10/10/2023 02:48	WG2148114
2-Hexanone	U		0.000787	0.0100	1	10/10/2023 02:48	WG2148114
Isopropylbenzene	U		0.000105	0.00100	1	10/10/2023 02:48	WG2148114
p-Isopropyltoluene	U		0.000120	0.00100	1	10/10/2023 02:48	WG2148114
2-Butanone (MEK)	U		0.00119	0.0100	1	10/10/2023 02:48	WG2148114
Methylene Chloride	U		0.000430	0.00500	1	10/10/2023 02:48	WG2148114
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	10/10/2023 02:48	WG2148114
Methyl tert-butyl ether	U		0.000101	0.00100	1	10/10/2023 02:48	WG2148114
Naphthalene	U		0.00100	0.00500	1	10/10/2023 02:48	WG2148114
n-Propylbenzene	U		0.0000993	0.00100	1	10/10/2023 02:48	WG2148114
Styrene	U		0.000118	0.00100	1	10/10/2023 02:48	WG2148114
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	10/10/2023 02:48	WG2148114
Tetrachloroethene	U		0.000300	0.00100	1	10/10/2023 02:48	WG2148114
Toluene	U		0.000278	0.00100	1	10/10/2023 02:48	WG2148114
1,1,1-Trichloroethane	U		0.000149	0.00100	1	10/10/2023 02:48	WG2148114
1,1,2-Trichloroethane	U		0.000158	0.00100	1	10/10/2023 02:48	WG2148114
Trichloroethene	U		0.000190	0.00100	1	10/10/2023 02:48	WG2148114
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	10/10/2023 02:48	WG2148114
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	10/10/2023 02:48	WG2148114
Vinyl chloride	U		0.000234	0.00100	1	10/10/2023 02:48	WG2148114
Xylenes, Total	U		0.000174	0.00300	1	10/10/2023 02:48	WG2148114
(S) Toluene-d8	*91.9*			*80.0-120*		*10/10/2023 02:48*	WG2148114
(S) 4-Bromofluorobenzene	*101*			*77.0-126*		*10/10/2023 02:48*	WG2148114
(S) 1,2-Dichloroethane-d4	*111*			*70.0-130*		*10/10/2023 02:48*	WG2148114

DUP-01
Collected date/time: 10/05/23 10:00
L1663622

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	0.0533	J	0.0247	0.100	1	10/16/2023 10:18	WG2150507
(S) o-Terphenyl	*81.6*			*31.0-160*		*10/16/2023 10:18*	WG2150507

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000886	0.00100	1	10/12/2023 16:25	WG2148873
Acenaphthylene	U		0.0000921	0.00100	1	10/12/2023 16:25	WG2148873
Acetophenone	U		0.000208	0.0100	1	10/12/2023 16:25	WG2148873
Anthracene	U		0.0000804	0.00100	1	10/12/2023 16:25	WG2148873
Atrazine	U		0.000255	0.0100	1	10/12/2023 16:25	WG2148873
Benzo(a)anthracene	U		0.000199	0.00100	1	10/12/2023 16:25	WG2148873
Benzaldehyde	U		0.00169	0.0100	1	10/12/2023 16:25	WG2148873
Benzo(b)fluoranthene	U		0.000130	0.00100	1	10/12/2023 16:25	WG2148873
Benzo(k)fluoranthene	U		0.000120	0.00100	1	10/12/2023 16:25	WG2148873
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	10/12/2023 16:25	WG2148873
Benzo(a)pyrene	U		0.0000381	0.000200	1	10/12/2023 16:25	WG2148873
Biphenyl	U		0.000790	0.0100	1	10/12/2023 16:25	WG2148873
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	10/12/2023 16:25	WG2148873
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	10/12/2023 16:25	WG2148873
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	10/12/2023 16:25	WG2148873
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	10/12/2023 16:25	WG2148873
2-Chloronaphthalene	U		0.0000648	0.00100	1	10/12/2023 16:25	WG2148873
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	10/12/2023 16:25	WG2148873
Caprolactam	U		0.000309	0.0100	1	10/12/2023 16:25	WG2148873
Carbazole	U		0.000111	0.0100	1	10/12/2023 16:25	WG2148873
Chrysene	U		0.000130	0.00100	1	10/12/2023 16:25	WG2148873
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	10/12/2023 16:25	WG2148873
Dibenzofuran	U		0.0000970	0.0100	1	10/12/2023 16:25	WG2148873
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	10/12/2023 16:25	WG2148873
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	10/12/2023 16:25	WG2148873
2,6-Dinitrotoluene	U		0.000250	0.0100	1	10/12/2023 16:25	WG2148873
Fluoranthene	U		0.000102	0.00100	1	10/12/2023 16:25	WG2148873
Fluorene	U		0.0000844	0.00100	1	10/12/2023 16:25	WG2148873
Hexachlorobenzene	U		0.0000755	0.00100	1	10/12/2023 16:25	WG2148873
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	10/12/2023 16:25	WG2148873
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	10/12/2023 16:25	WG2148873
Hexachloroethane	U		0.000127	0.0100	1	10/12/2023 16:25	WG2148873
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	10/12/2023 16:25	WG2148873
Isophorone	U		0.000143	0.0100	1	10/12/2023 16:25	WG2148873
1-Methylnaphthalene	U		0.0000790	0.00100	1	10/12/2023 16:25	WG2148873
2-Methylnaphthalene	U		0.000117	0.00100	1	10/12/2023 16:25	WG2148873
Naphthalene	U		0.000159	0.00100	1	10/12/2023 16:25	WG2148873
Nitrobenzene	U		0.000297	0.0100	1	10/12/2023 16:25	WG2148873
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	10/12/2023 16:25	WG2148873
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	10/12/2023 16:25	WG2148873
Phenanthrene	U		0.000112	0.00100	1	10/12/2023 16:25	WG2148873
Benzylbutyl phthalate	U		0.000765	0.00300	1	10/12/2023 16:25	WG2148873
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	10/12/2023 16:25	WG2148873
Di-n-butyl phthalate	U		0.000453	0.00300	1	10/12/2023 16:25	WG2148873
Diethyl phthalate	U		0.000287	0.00300	1	10/12/2023 16:25	WG2148873
Dimethyl phthalate	U		0.000260	0.00300	1	10/12/2023 16:25	WG2148873
Di-n-octyl phthalate	U		0.000932	0.00300	1	10/12/2023 16:25	WG2148873
Pyrene	U		0.000107	0.00100	1	10/12/2023 16:25	WG2148873
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	10/12/2023 16:25	WG2148873
4-Chloro-3-methylphenol	U		0.000131	0.0100	1	10/12/2023 16:25	WG2148873

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
2-Chlorophenol	U		0.000133	0.0100	1	10/12/2023 16:25	WG2148873
2,4-Dichlorophenol	U		0.000102	0.0100	1	10/12/2023 16:25	WG2148873
2,4-Dimethylphenol	U		0.0000636	0.0100	1	10/12/2023 16:25	WG2148873
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	10/12/2023 16:25	WG2148873
2,4-Dinitrophenol	U		0.00593	0.0100	1	10/12/2023 16:25	WG2148873
2-Nitrophenol	U		0.000117	0.0100	1	10/12/2023 16:25	WG2148873
2-Nitroaniline	U		0.000102	0.0100	1	10/12/2023 16:25	WG2148873
2-Methylphenol	U		0.0000929	0.0100	1	10/12/2023 16:25	WG2148873
3&4-Methyl Phenol	U		0.000168	0.0100	1	10/12/2023 16:25	WG2148873
3-Nitroaniline	U		0.0000869	0.0100	1	10/12/2023 16:25	WG2148873
4-Chloroaniline	U		0.000234	0.0100	1	10/12/2023 16:25	WG2148873
4-Nitroaniline	U		0.0000910	0.0100	1	10/12/2023 16:25	WG2148873
4-Nitrophenol	U		0.000143	0.0100	1	10/12/2023 16:25	WG2148873
Pentachlorophenol	U		0.000313	0.0100	1	10/12/2023 16:25	WG2148873
Phenol	U		0.00433	0.0100	1	10/12/2023 16:25	WG2148873
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	10/12/2023 16:25	WG2148873
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	10/12/2023 16:25	WG2148873
(S) 2-Fluorophenol	*21.3*			*10.0-120*		*10/12/2023 16:25*	WG2148873
(S) Phenol-d5	*16.7*			*10.0-120*		*10/12/2023 16:25*	WG2148873
(S) Nitrobenzene-d5	*48.1*			*10.0-127*		*10/12/2023 16:25*	WG2148873
(S) 2-Fluorobiphenyl	*46.7*			*10.0-130*		*10/12/2023 16:25*	WG2148873
(S) 2,4,6-Tribromophenol	*39.6*			*10.0-155*		*10/12/2023 16:25*	WG2148873
(S) p-Terphenyl-d14	*63.3*			*10.0-128*		*10/12/2023 16:25*	WG2148873

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	548		10.0	1	10/12/2023 18:33	WG2149849

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	435		8.45	20.0	1	10/10/2023 13:37	WG2147742

Sample Narrative:

L1663622-28 WG2147742: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	26.5		0.379	1.00	1	10/07/2023 01:32	WG2146649
Fluoride	0.482		0.0640	0.150	1	10/07/2023 01:32	WG2146649
Nitrate	3.84		0.0480	0.100	1	10/07/2023 01:32	WG2146649
Nitrite	0.241		0.0420	0.100	1	10/07/2023 01:32	WG2146649
Sulfate	78.6		0.594	5.00	1	10/07/2023 01:32	WG2146649

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	10/11/2023 11:10	WG2147175

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.114	J	0.0200	0.200	1	10/15/2023 19:06	WG2146828

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		0.0185	0.100	1	10/13/2023 16:40	WG2146835
Arsenic,Dissolved	0.00434		0.000180	0.00200	1	10/13/2023 16:40	WG2146835
Barium,Dissolved	0.183		0.000381	0.00200	1	10/13/2023 16:40	WG2146835
Cadmium,Dissolved	U		0.000150	0.00100	1	10/13/2023 16:40	WG2146835
Chromium,Dissolved	U		0.00124	0.00200	1	10/13/2023 16:40	WG2146835
Copper,Dissolved	0.00761		0.00151	0.00500	1	10/13/2023 16:40	WG2146835
Cobalt,Dissolved	0.000225	J	0.0000596	0.00200	1	10/13/2023 16:40	WG2146835
Iron,Dissolved	U		0.0281	0.100	1	10/13/2023 16:40	WG2146835
Lead,Dissolved	U		0.000849	0.00200	1	10/13/2023 16:40	WG2146835
Manganese,Dissolved	0.0424		0.000704	0.00500	1	10/13/2023 16:40	WG2146835
Molybdenum,Dissolved	0.00451	J	0.000348	0.00500	1	10/13/2023 16:40	WG2146835
Nickel,Dissolved	0.00176	J	0.000816	0.00200	1	10/13/2023 16:40	WG2146835
Selenium,Dissolved	0.000573	J	0.000300	0.00200	1	10/13/2023 16:40	WG2146835
Silver,Dissolved	U		0.0000700	0.00200	1	10/13/2023 16:40	WG2146835
Uranium,Dissolved	0.00472	J	0.0000700	0.0200	1	10/13/2023 16:40	WG2146835
Zinc,Dissolved	0.0208	J	0.00302	0.0250	1	10/13/2023 16:40	WG2146835

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	1	10/11/2023 19:24	WG2148697
(S) a,a,a-Trifluorotoluene(FID)	*88.9*			*78.0-120*		*10/11/2023 19:24*	WG2148697

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U	J4	0.0113	0.0500	1	10/10/2023 03:09	WG2148114
Benzene	U		0.0000941	0.00100	1	10/10/2023 03:09	WG2148114
Bromodichloromethane	U		0.000136	0.00100	1	10/10/2023 03:09	WG2148114
Bromoform	U		0.000129	0.00100	1	10/10/2023 03:09	WG2148114
Bromomethane	U		0.000605	0.00500	1	10/10/2023 03:09	WG2148114
n-Butylbenzene	U		0.000157	0.00100	1	10/10/2023 03:09	WG2148114
sec-Butylbenzene	U		0.000125	0.00100	1	10/10/2023 03:09	WG2148114
tert-Butylbenzene	U		0.000127	0.00100	1	10/10/2023 03:09	WG2148114
Carbon disulfide	0.000211	J	0.0000962	0.00100	1	10/10/2023 03:09	WG2148114
Carbon tetrachloride	U		0.000128	0.00100	1	10/10/2023 03:09	WG2148114
Chlorobenzene	U		0.000116	0.00100	1	10/10/2023 03:09	WG2148114
Chlorodibromomethane	U		0.000140	0.00100	1	10/10/2023 03:09	WG2148114
Chloroethane	U		0.000192	0.00500	1	10/10/2023 03:09	WG2148114
Chloroform	U		0.000111	0.00500	1	10/10/2023 03:09	WG2148114
Chloromethane	U		0.000960	0.00250	1	10/10/2023 03:09	WG2148114
1,2-Dibromoethane	U		0.000126	0.00100	1	10/10/2023 03:09	WG2148114
1,1-Dichloroethane	U		0.000100	0.00100	1	10/10/2023 03:09	WG2148114
1,2-Dichloroethane	U		0.0000819	0.00100	1	10/10/2023 03:09	WG2148114
1,1-Dichloroethene	U		0.000188	0.00100	1	10/10/2023 03:09	WG2148114
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	10/10/2023 03:09	WG2148114
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	10/10/2023 03:09	WG2148114
1,2-Dichloropropane	U		0.000149	0.00100	1	10/10/2023 03:09	WG2148114
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	10/10/2023 03:09	WG2148114
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	10/10/2023 03:09	WG2148114
Ethylbenzene	U		0.000137	0.00100	1	10/10/2023 03:09	WG2148114
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	10/10/2023 03:09	WG2148114
2-Hexanone	U		0.000787	0.0100	1	10/10/2023 03:09	WG2148114
Isopropylbenzene	U		0.000105	0.00100	1	10/10/2023 03:09	WG2148114
p-Isopropyltoluene	U		0.000120	0.00100	1	10/10/2023 03:09	WG2148114
2-Butanone (MEK)	U		0.00119	0.0100	1	10/10/2023 03:09	WG2148114
Methylene Chloride	U		0.000430	0.00500	1	10/10/2023 03:09	WG2148114
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	10/10/2023 03:09	WG2148114
Methyl tert-butyl ether	U		0.000101	0.00100	1	10/10/2023 03:09	WG2148114
Naphthalene	U		0.00100	0.00500	1	10/10/2023 03:09	WG2148114
n-Propylbenzene	U		0.0000993	0.00100	1	10/10/2023 03:09	WG2148114
Styrene	U		0.000118	0.00100	1	10/10/2023 03:09	WG2148114
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	10/10/2023 03:09	WG2148114
Tetrachloroethene	U		0.000300	0.00100	1	10/10/2023 03:09	WG2148114
Toluene	U		0.000278	0.00100	1	10/10/2023 03:09	WG2148114
1,1,1-Trichloroethane	U		0.000149	0.00100	1	10/10/2023 03:09	WG2148114
1,1,2-Trichloroethane	U		0.000158	0.00100	1	10/10/2023 03:09	WG2148114
Trichloroethene	U		0.000190	0.00100	1	10/10/2023 03:09	WG2148114
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	10/10/2023 03:09	WG2148114
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	10/10/2023 03:09	WG2148114
Vinyl chloride	U		0.000234	0.00100	1	10/10/2023 03:09	WG2148114
Xylenes, Total	U		0.000174	0.00300	1	10/10/2023 03:09	WG2148114
(S) Toluene-d8	*93.3*			*80.0-120*		*10/10/2023 03:09*	WG2148114
(S) 4-Bromofluorobenzene	*96.6*			*77.0-126*		*10/10/2023 03:09*	WG2148114
(S) 1,2-Dichloroethane-d4	*113*			*70.0-130*		*10/10/2023 03:09*	WG2148114

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
TPH (GC/FID) High Fraction	0.316		0.0247	0.100	1	10/16/2023 10:37	WG2150507
(S) o-Terphenyl	*72.1*			*31.0-160*		*10/16/2023 10:37*	WG2150507

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Acenaphthene	U		0.0000886	0.00100	1	10/12/2023 16:47	WG2148873
Acenaphthylene	U		0.0000921	0.00100	1	10/12/2023 16:47	WG2148873
Acetophenone	U		0.000208	0.0100	1	10/12/2023 16:47	WG2148873
Anthracene	U		0.0000804	0.00100	1	10/12/2023 16:47	WG2148873
Atrazine	U		0.000255	0.0100	1	10/12/2023 16:47	WG2148873
Benzo(a)anthracene	U		0.000199	0.00100	1	10/12/2023 16:47	WG2148873
Benzaldehyde	U		0.00169	0.0100	1	10/12/2023 16:47	WG2148873
Benzo(b)fluoranthene	U		0.000130	0.00100	1	10/12/2023 16:47	WG2148873
Benzo(k)fluoranthene	U		0.000120	0.00100	1	10/12/2023 16:47	WG2148873
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	10/12/2023 16:47	WG2148873
Benzo(a)pyrene	U		0.0000381	0.000200	1	10/12/2023 16:47	WG2148873
Biphenyl	U		0.000790	0.0100	1	10/12/2023 16:47	WG2148873
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	10/12/2023 16:47	WG2148873
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	10/12/2023 16:47	WG2148873
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	10/12/2023 16:47	WG2148873
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	10/12/2023 16:47	WG2148873
2-Chloronaphthalene	U		0.0000648	0.00100	1	10/12/2023 16:47	WG2148873
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	10/12/2023 16:47	WG2148873
Caprolactam	U		0.000309	0.0100	1	10/12/2023 16:47	WG2148873
Carbazole	U		0.000111	0.0100	1	10/12/2023 16:47	WG2148873
Chrysene	U		0.000130	0.00100	1	10/12/2023 16:47	WG2148873
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	10/12/2023 16:47	WG2148873
Dibenzofuran	U		0.0000970	0.0100	1	10/12/2023 16:47	WG2148873
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	10/12/2023 16:47	WG2148873
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	10/12/2023 16:47	WG2148873
2,6-Dinitrotoluene	U		0.000250	0.0100	1	10/12/2023 16:47	WG2148873
Fluoranthene	U		0.000102	0.00100	1	10/12/2023 16:47	WG2148873
Fluorene	U		0.0000844	0.00100	1	10/12/2023 16:47	WG2148873
Hexachlorobenzene	U		0.0000755	0.00100	1	10/12/2023 16:47	WG2148873
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	10/12/2023 16:47	WG2148873
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	10/12/2023 16:47	WG2148873
Hexachloroethane	U		0.000127	0.0100	1	10/12/2023 16:47	WG2148873
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	10/12/2023 16:47	WG2148873
Isophorone	U		0.000143	0.0100	1	10/12/2023 16:47	WG2148873
1-Methylnaphthalene	U		0.0000790	0.00100	1	10/12/2023 16:47	WG2148873
2-Methylnaphthalene	U		0.000117	0.00100	1	10/12/2023 16:47	WG2148873
Naphthalene	U		0.000159	0.00100	1	10/12/2023 16:47	WG2148873
Nitrobenzene	U		0.000297	0.0100	1	10/12/2023 16:47	WG2148873
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	10/12/2023 16:47	WG2148873
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	10/12/2023 16:47	WG2148873
Phenanthrene	U		0.000112	0.00100	1	10/12/2023 16:47	WG2148873
Benzylbutyl phthalate	U		0.000765	0.00300	1	10/12/2023 16:47	WG2148873
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	10/12/2023 16:47	WG2148873
Di-n-butyl phthalate	U		0.000453	0.00300	1	10/12/2023 16:47	WG2148873
Diethyl phthalate	U		0.000287	0.00300	1	10/12/2023 16:47	WG2148873
Dimethyl phthalate	U		0.000260	0.00300	1	10/12/2023 16:47	WG2148873
Di-n-octyl phthalate	U		0.000932	0.00300	1	10/12/2023 16:47	WG2148873
Pyrene	U		0.000107	0.00100	1	10/12/2023 16:47	WG2148873
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	10/12/2023 16:47	WG2148873
4-Chloro-3-methylphenol	U		0.000131	0.0100	1	10/12/2023 16:47	WG2148873

DUP-02
Collected date/time: 10/05/23 10:00
L1663622

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
2-Chlorophenol	U		0.000133	0.0100	1	10/12/2023 16:47	WG2148873
2,4-Dichlorophenol	U		0.000102	0.0100	1	10/12/2023 16:47	WG2148873
2,4-Dimethylphenol	U		0.0000636	0.0100	1	10/12/2023 16:47	WG2148873
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	10/12/2023 16:47	WG2148873
2,4-Dinitrophenol	U		0.00593	0.0100	1	10/12/2023 16:47	WG2148873
2-Nitrophenol	U		0.000117	0.0100	1	10/12/2023 16:47	WG2148873
2-Nitroaniline	U		0.000102	0.0100	1	10/12/2023 16:47	WG2148873
2-Methylphenol	U		0.0000929	0.0100	1	10/12/2023 16:47	WG2148873
3&4-Methyl Phenol	U		0.000168	0.0100	1	10/12/2023 16:47	WG2148873
3-Nitroaniline	U		0.0000869	0.0100	1	10/12/2023 16:47	WG2148873
4-Chloroaniline	U		0.000234	0.0100	1	10/12/2023 16:47	WG2148873
4-Nitroaniline	U		0.0000910	0.0100	1	10/12/2023 16:47	WG2148873
4-Nitrophenol	U		0.000143	0.0100	1	10/12/2023 16:47	WG2148873
Pentachlorophenol	U		0.000313	0.0100	1	10/12/2023 16:47	WG2148873
Phenol	U		0.00433	0.0100	1	10/12/2023 16:47	WG2148873
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	10/12/2023 16:47	WG2148873
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	10/12/2023 16:47	WG2148873
(S) 2-Fluorophenol	*22.7*			*10.0-120*		*10/12/2023 16:47*	WG2148873
(S) Phenol-d5	*16.8*			*10.0-120*		*10/12/2023 16:47*	WG2148873
(S) Nitrobenzene-d5	*47.9*			*10.0-127*		*10/12/2023 16:47*	WG2148873
(S) 2-Fluorobiphenyl	*36.5*			*10.0-130*		*10/12/2023 16:47*	WG2148873
(S) 2,4,6-Tribromophenol	*28.9*			*10.0-155*		*10/12/2023 16:47*	WG2148873
(S) p-Terphenyl-d14	*17.9*			*10.0-128*		*10/12/2023 16:47*	WG2148873

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1210		20.0	1	10/12/2023 18:33	WG2149849

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	1030		8.45	20.0	1	10/10/2023 13:43	WG2147742

Sample Narrative:

L1663622-29 WG2147742: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	93.0		0.379	1.00	1	10/07/2023 03:15	WG2146682
Fluoride	0.671		0.0640	0.150	1	10/07/2023 03:15	WG2146682
Nitrate	0.125		0.0480	0.100	1	10/07/2023 03:15	WG2146682
Nitrite	U		0.0420	0.100	1	10/07/2023 03:15	WG2146682
Sulfate	6.44	B	0.594	5.00	1	10/07/2023 03:15	WG2146682

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	10/11/2023 11:12	WG2147175

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.155	J	0.0200	0.200	1	10/15/2023 19:09	WG2146828

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		0.0185	0.100	1	10/13/2023 16:50	WG2146835
Arsenic,Dissolved	0.00554		0.000180	0.00200	1	10/13/2023 16:50	WG2146835
Barium,Dissolved	0.600		0.000381	0.00200	1	10/13/2023 16:50	WG2146835
Cadmium,Dissolved	U		0.000150	0.00100	1	10/13/2023 16:50	WG2146835
Chromium,Dissolved	U		0.00124	0.00200	1	10/13/2023 16:50	WG2146835
Copper,Dissolved	U		0.00151	0.00500	1	10/13/2023 16:50	WG2146835
Cobalt,Dissolved	0.0000859	J	0.0000596	0.00200	1	10/13/2023 16:50	WG2146835
Iron,Dissolved	1.79		0.0281	0.100	1	10/13/2023 16:50	WG2146835
Lead,Dissolved	U		0.000849	0.00200	1	10/13/2023 16:50	WG2146835
Manganese,Dissolved	0.995		0.000704	0.00500	1	10/13/2023 16:50	WG2146835
Molybdenum,Dissolved	0.00212	J	0.000348	0.00500	1	10/13/2023 16:50	WG2146835
Nickel,Dissolved	0.00113	J	0.000816	0.00200	1	10/13/2023 16:50	WG2146835
Selenium,Dissolved	U		0.000300	0.00200	1	10/13/2023 16:50	WG2146835
Silver,Dissolved	U		0.0000700	0.00200	1	10/13/2023 16:50	WG2146835
Uranium,Dissolved	0.0558		0.0000700	0.0200	1	10/13/2023 16:50	WG2146835
Zinc,Dissolved	U		0.00302	0.0250	1	10/13/2023 16:50	WG2146835

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0509	J	0.0314	0.100	1	10/11/2023 19:47	WG2148697
(S) a,a,a-Trifluorotoluene(FID)	*87.9*			*78.0-120*		*10/11/2023 19:47*	WG2148697

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U	J4	0.0113	0.0500	1	10/10/2023 03:31	WG2148114
Benzene	0.000285	J	0.0000941	0.00100	1	10/10/2023 03:31	WG2148114
Bromodichloromethane	U		0.000136	0.00100	1	10/10/2023 03:31	WG2148114
Bromoform	U		0.000129	0.00100	1	10/10/2023 03:31	WG2148114
Bromomethane	U		0.000605	0.00500	1	10/10/2023 03:31	WG2148114
n-Butylbenzene	U		0.000157	0.00100	1	10/10/2023 03:31	WG2148114
sec-Butylbenzene	U		0.000125	0.00100	1	10/10/2023 03:31	WG2148114
tert-Butylbenzene	U		0.000127	0.00100	1	10/10/2023 03:31	WG2148114
Carbon disulfide	U		0.0000962	0.00100	1	10/10/2023 03:31	WG2148114
Carbon tetrachloride	U		0.000128	0.00100	1	10/10/2023 03:31	WG2148114
Chlorobenzene	U		0.000116	0.00100	1	10/10/2023 03:31	WG2148114
Chlorodibromomethane	U		0.000140	0.00100	1	10/10/2023 03:31	WG2148114
Chloroethane	U		0.000192	0.00500	1	10/10/2023 03:31	WG2148114
Chloroform	U		0.000111	0.00500	1	10/10/2023 03:31	WG2148114
Chloromethane	U		0.000960	0.00250	1	10/10/2023 03:31	WG2148114
1,2-Dibromoethane	U		0.000126	0.00100	1	10/10/2023 03:31	WG2148114
1,1-Dichloroethane	U		0.000100	0.00100	1	10/10/2023 03:31	WG2148114
1,2-Dichloroethane	U		0.0000819	0.00100	1	10/10/2023 03:31	WG2148114
1,1-Dichloroethene	U		0.000188	0.00100	1	10/10/2023 03:31	WG2148114
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	10/10/2023 03:31	WG2148114
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	10/10/2023 03:31	WG2148114
1,2-Dichloropropane	U		0.000149	0.00100	1	10/10/2023 03:31	WG2148114
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	10/10/2023 03:31	WG2148114
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	10/10/2023 03:31	WG2148114
Ethylbenzene	U		0.000137	0.00100	1	10/10/2023 03:31	WG2148114
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	10/10/2023 03:31	WG2148114
2-Hexanone	U		0.000787	0.0100	1	10/10/2023 03:31	WG2148114
Isopropylbenzene	U		0.000105	0.00100	1	10/10/2023 03:31	WG2148114
p-Isopropyltoluene	U		0.000120	0.00100	1	10/10/2023 03:31	WG2148114
2-Butanone (MEK)	U		0.00119	0.0100	1	10/10/2023 03:31	WG2148114
Methylene Chloride	U		0.000430	0.00500	1	10/10/2023 03:31	WG2148114
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	10/10/2023 03:31	WG2148114
Methyl tert-butyl ether	U		0.000101	0.00100	1	10/10/2023 03:31	WG2148114
Naphthalene	U		0.00100	0.00500	1	10/10/2023 03:31	WG2148114
n-Propylbenzene	U		0.0000993	0.00100	1	10/10/2023 03:31	WG2148114
Styrene	U		0.000118	0.00100	1	10/10/2023 03:31	WG2148114
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	10/10/2023 03:31	WG2148114
Tetrachloroethene	U		0.000300	0.00100	1	10/10/2023 03:31	WG2148114
Toluene	U		0.000278	0.00100	1	10/10/2023 03:31	WG2148114
1,1,1-Trichloroethane	U		0.000149	0.00100	1	10/10/2023 03:31	WG2148114
1,1,2-Trichloroethane	U		0.000158	0.00100	1	10/10/2023 03:31	WG2148114
Trichloroethene	U		0.000190	0.00100	1	10/10/2023 03:31	WG2148114
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	10/10/2023 03:31	WG2148114
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	10/10/2023 03:31	WG2148114
Vinyl chloride	U		0.000234	0.00100	1	10/10/2023 03:31	WG2148114
Xylenes, Total	U		0.000174	0.00300	1	10/10/2023 03:31	WG2148114
(S) Toluene-d8	*93.9*			*80.0-120*		*10/10/2023 03:31*	WG2148114
(S) 4-Bromofluorobenzene	*97.1*			*77.0-126*		*10/10/2023 03:31*	WG2148114
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*10/10/2023 03:31*	WG2148114

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) High Fraction	0.483		0.0617	0.250	2.5	10/16/2023 10:57	WG2150507
(S) o-Terphenyl	*241*	J1		*31.0-160*		*10/16/2023 10:57*	WG2150507

Sample Narrative:

L1663622-29 WG2150507: Sample produced emulsion during Extraction process, low surr/spike recoveries due to matrix.

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000886	0.00100	1	10/13/2023 11:55	WG2148874
Acenaphthylene	U		0.0000921	0.00100	1	10/13/2023 11:55	WG2148874
Acetophenone	U		0.000208	0.0100	1	10/13/2023 11:55	WG2148874
Anthracene	U		0.0000804	0.00100	1	10/13/2023 11:55	WG2148874
Atrazine	U		0.000255	0.0100	1	10/13/2023 11:55	WG2148874
Benzo(a)anthracene	U		0.000199	0.00100	1	10/13/2023 11:55	WG2148874
Benzaldehyde	U		0.00169	0.0100	1	10/13/2023 11:55	WG2148874
Benzo(b)fluoranthene	U		0.000130	0.00100	1	10/13/2023 11:55	WG2148874
Benzo(k)fluoranthene	U		0.000120	0.00100	1	10/13/2023 11:55	WG2148874
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	10/13/2023 11:55	WG2148874
Benzo(a)pyrene	U		0.0000381	0.000200	1	10/13/2023 11:55	WG2148874
Biphenyl	U		0.000790	0.0100	1	10/13/2023 11:55	WG2148874
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	10/13/2023 11:55	WG2148874
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	10/13/2023 11:55	WG2148874
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	10/13/2023 11:55	WG2148874
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	10/13/2023 11:55	WG2148874
2-Chloronaphthalene	U		0.0000648	0.00100	1	10/13/2023 11:55	WG2148874
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	10/13/2023 11:55	WG2148874
Caprolactam	U		0.000309	0.0100	1	10/13/2023 11:55	WG2148874
Carbazole	U		0.000111	0.0100	1	10/13/2023 11:55	WG2148874
Chrysene	U		0.000130	0.00100	1	10/13/2023 11:55	WG2148874
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	10/13/2023 11:55	WG2148874
Dibenzofuran	U		0.0000970	0.0100	1	10/13/2023 11:55	WG2148874
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	10/13/2023 11:55	WG2148874
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	10/13/2023 11:55	WG2148874
2,6-Dinitrotoluene	U		0.000250	0.0100	1	10/13/2023 11:55	WG2148874
Fluoranthene	U		0.000102	0.00100	1	10/13/2023 11:55	WG2148874
Fluorene	U		0.0000844	0.00100	1	10/13/2023 11:55	WG2148874
Hexachlorobenzene	U		0.0000755	0.00100	1	10/13/2023 11:55	WG2148874
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	10/13/2023 11:55	WG2148874
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	10/13/2023 11:55	WG2148874
Hexachloroethane	U		0.000127	0.0100	1	10/13/2023 11:55	WG2148874
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	10/13/2023 11:55	WG2148874
Isophorone	U		0.000143	0.0100	1	10/13/2023 11:55	WG2148874
1-Methylnaphthalene	U		0.0000790	0.00100	1	10/13/2023 11:55	WG2148874
2-Methylnaphthalene	U		0.000117	0.00100	1	10/13/2023 11:55	WG2148874
Naphthalene	U		0.000159	0.00100	1	10/13/2023 11:55	WG2148874
Nitrobenzene	U		0.000297	0.0100	1	10/13/2023 11:55	WG2148874
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	10/13/2023 11:55	WG2148874
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	10/13/2023 11:55	WG2148874
Phenanthrene	U		0.000112	0.00100	1	10/13/2023 11:55	WG2148874
Benzylbutyl phthalate	U		0.000765	0.00300	1	10/13/2023 11:55	WG2148874
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	10/13/2023 11:55	WG2148874
Di-n-butyl phthalate	U		0.000453	0.00300	1	10/13/2023 11:55	WG2148874
Diethyl phthalate	U		0.000287	0.00300	1	10/13/2023 11:55	WG2148874
Dimethyl phthalate	U		0.000260	0.00300	1	10/13/2023 11:55	WG2148874
Di-n-octyl phthalate	U		0.000932	0.00300	1	10/13/2023 11:55	WG2148874

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Pyrene	U		0.000107	0.00100	1	10/13/2023 11:55	WG2148874
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	10/13/2023 11:55	WG2148874
4-Chloro-3-methylphenol	U		0.000131	0.0100	1	10/13/2023 11:55	WG2148874
2-Chlorophenol	U		0.000133	0.0100	1	10/13/2023 11:55	WG2148874
2,4-Dichlorophenol	U		0.000102	0.0100	1	10/13/2023 11:55	WG2148874
2,4-Dimethylphenol	U		0.0000636	0.0100	1	10/13/2023 11:55	WG2148874
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	10/13/2023 11:55	WG2148874
2,4-Dinitrophenol	U		0.00593	0.0100	1	10/13/2023 11:55	WG2148874
2-Nitrophenol	U		0.000117	0.0100	1	10/13/2023 11:55	WG2148874
2-Nitroaniline	U		0.000102	0.0100	1	10/13/2023 11:55	WG2148874
2-Methylphenol	U		0.0000929	0.0100	1	10/13/2023 11:55	WG2148874
3&4-Methyl Phenol	U		0.000168	0.0100	1	10/13/2023 11:55	WG2148874
3-Nitroaniline	U		0.0000869	0.0100	1	10/13/2023 11:55	WG2148874
4-Chloroaniline	U		0.000234	0.0100	1	10/13/2023 11:55	WG2148874
4-Nitroaniline	U		0.0000910	0.0100	1	10/13/2023 11:55	WG2148874
4-Nitrophenol	U		0.000143	0.0100	1	10/13/2023 11:55	WG2148874
Pentachlorophenol	U		0.000313	0.0100	1	10/13/2023 11:55	WG2148874
Phenol	U		0.00433	0.0100	1	10/13/2023 11:55	WG2148874
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	10/13/2023 11:55	WG2148874
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	10/13/2023 11:55	WG2148874
(S) 2-Fluorophenol	*31.1*			*10.0-120*		*10/13/2023 11:55*	WG2148874
(S) Phenol-d5	*20.5*			*10.0-120*		*10/13/2023 11:55*	WG2148874
(S) Nitrobenzene-d5	*59.4*			*10.0-127*		*10/13/2023 11:55*	WG2148874
(S) 2-Fluorobiphenyl	*55.8*			*10.0-130*		*10/13/2023 11:55*	WG2148874
(S) 2,4,6-Tribromophenol	*75.0*			*10.0-155*		*10/13/2023 11:55*	WG2148874
(S) p-Terphenyl-d14	*69.5*			*10.0-128*		*10/13/2023 11:55*	WG2148874

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	ND		10.0	1	10/12/2023 18:33	WG2149849

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	U		8.45	20.0	1	10/10/2023 13:49	WG2147742

Sample Narrative:

L1663622-31 WG2147742: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	0.438	B J	0.379	1.00	1	11/09/2023 13:43	WG2167736
Fluoride	U		0.0640	0.150	1	11/09/2023 13:43	WG2167736
Nitrate	0.0704	J Q	0.0480	0.100	1	11/09/2023 13:43	WG2167736
Nitrite	0.0695	J Q	0.0420	0.100	1	11/09/2023 13:43	WG2167736
Sulfate	U		0.594	5.00	1	11/09/2023 13:43	WG2167736

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	10/11/2023 11:14	WG2147175

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	U		0.0200	0.200	1	10/15/2023 19:14	WG2146828

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		0.0185	0.100	1	10/13/2023 16:53	WG2146835
Arsenic,Dissolved	U		0.000180	0.00200	1	10/13/2023 16:53	WG2146835
Barium,Dissolved	U		0.000381	0.00200	1	10/13/2023 16:53	WG2146835
Cadmium,Dissolved	U		0.000150	0.00100	1	10/13/2023 16:53	WG2146835
Chromium,Dissolved	U		0.00124	0.00200	1	10/13/2023 16:53	WG2146835
Copper,Dissolved	U		0.00151	0.00500	1	10/13/2023 16:53	WG2146835
Cobalt,Dissolved	U		0.0000596	0.00200	1	10/13/2023 16:53	WG2146835
Iron,Dissolved	U		0.0281	0.100	1	10/13/2023 16:53	WG2146835
Lead,Dissolved	U		0.000849	0.00200	1	10/13/2023 16:53	WG2146835
Manganese,Dissolved	U		0.000704	0.00500	1	10/13/2023 16:53	WG2146835
Molybdenum,Dissolved	U		0.000348	0.00500	1	10/13/2023 16:53	WG2146835
Nickel,Dissolved	U		0.000816	0.00200	1	10/13/2023 16:53	WG2146835
Selenium,Dissolved	U		0.000300	0.00200	1	10/13/2023 16:53	WG2146835
Silver,Dissolved	U		0.0000700	0.00200	1	10/13/2023 16:53	WG2146835
Uranium,Dissolved	U		0.0000700	0.0200	1	10/13/2023 16:53	WG2146835
Zinc,Dissolved	U		0.00302	0.0250	1	10/13/2023 16:53	WG2146835

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	1	10/11/2023 18:15	WG2148697
(S) a,a,a-Trifluorotoluene(FID)	*88.9*			*78.0-120*		*10/11/2023 18:15*	WG2148697

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U	J4	0.0113	0.0500	1	10/10/2023 02:04	WG2148114
Benzene	U		0.0000941	0.00100	1	10/10/2023 02:04	WG2148114
Bromodichloromethane	U		0.000136	0.00100	1	10/10/2023 02:04	WG2148114
Bromoform	U		0.000129	0.00100	1	10/10/2023 02:04	WG2148114
Bromomethane	U		0.000605	0.00500	1	10/10/2023 02:04	WG2148114
n-Butylbenzene	U		0.000157	0.00100	1	10/10/2023 02:04	WG2148114
sec-Butylbenzene	U		0.000125	0.00100	1	10/10/2023 02:04	WG2148114
tert-Butylbenzene	U		0.000127	0.00100	1	10/10/2023 02:04	WG2148114
Carbon disulfide	U		0.0000962	0.00100	1	10/10/2023 02:04	WG2148114
Carbon tetrachloride	U		0.000128	0.00100	1	10/10/2023 02:04	WG2148114
Chlorobenzene	U		0.000116	0.00100	1	10/10/2023 02:04	WG2148114
Chlorodibromomethane	U		0.000140	0.00100	1	10/10/2023 02:04	WG2148114
Chloroethane	U		0.000192	0.00500	1	10/10/2023 02:04	WG2148114
Chloroform	U		0.000111	0.00500	1	10/10/2023 02:04	WG2148114
Chloromethane	U		0.000960	0.00250	1	10/10/2023 02:04	WG2148114
1,2-Dibromoethane	U		0.000126	0.00100	1	10/10/2023 02:04	WG2148114
1,1-Dichloroethane	U		0.000100	0.00100	1	10/10/2023 02:04	WG2148114
1,2-Dichloroethane	U		0.0000819	0.00100	1	10/10/2023 02:04	WG2148114
1,1-Dichloroethene	U		0.000188	0.00100	1	10/10/2023 02:04	WG2148114
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	10/10/2023 02:04	WG2148114
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	10/10/2023 02:04	WG2148114
1,2-Dichloropropane	U		0.000149	0.00100	1	10/10/2023 02:04	WG2148114
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	10/10/2023 02:04	WG2148114
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	10/10/2023 02:04	WG2148114
Ethylbenzene	U		0.000137	0.00100	1	10/10/2023 02:04	WG2148114
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	10/10/2023 02:04	WG2148114
2-Hexanone	U		0.000787	0.0100	1	10/10/2023 02:04	WG2148114
Isopropylbenzene	U		0.000105	0.00100	1	10/10/2023 02:04	WG2148114
p-Isopropyltoluene	U		0.000120	0.00100	1	10/10/2023 02:04	WG2148114
2-Butanone (MEK)	U		0.00119	0.0100	1	10/10/2023 02:04	WG2148114
Methylene Chloride	U		0.000430	0.00500	1	10/10/2023 02:04	WG2148114
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	10/10/2023 02:04	WG2148114
Methyl tert-butyl ether	U		0.000101	0.00100	1	10/10/2023 02:04	WG2148114
Naphthalene	U		0.00100	0.00500	1	10/10/2023 02:04	WG2148114
n-Propylbenzene	U		0.0000993	0.00100	1	10/10/2023 02:04	WG2148114
Styrene	U		0.000118	0.00100	1	10/10/2023 02:04	WG2148114
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	10/10/2023 02:04	WG2148114
Tetrachloroethene	U		0.000300	0.00100	1	10/10/2023 02:04	WG2148114
Toluene	U		0.000278	0.00100	1	10/10/2023 02:04	WG2148114
1,1,1-Trichloroethane	U		0.000149	0.00100	1	10/10/2023 02:04	WG2148114
1,1,2-Trichloroethane	U		0.000158	0.00100	1	10/10/2023 02:04	WG2148114
Trichloroethene	U		0.000190	0.00100	1	10/10/2023 02:04	WG2148114
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	10/10/2023 02:04	WG2148114
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	10/10/2023 02:04	WG2148114
Vinyl chloride	U		0.000234	0.00100	1	10/10/2023 02:04	WG2148114
Xylenes, Total	U		0.000174	0.00300	1	10/10/2023 02:04	WG2148114
(S) Toluene-d8	*94.4*			*80.0-120*		*10/10/2023 02:04*	WG2148114
(S) 4-Bromofluorobenzene	*98.4*			*77.0-126*		*10/10/2023 02:04*	WG2148114
(S) 1,2-Dichloroethane-d4	*110*			*70.0-130*		*10/10/2023 02:04*	WG2148114

LB-01
Collected date/time: 10/05/23 11:45
L1663622

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
TPH (GC/FID) High Fraction	U		0.0247	0.100	1	10/16/2023 11:17	WG2150507
(S) o-Terphenyl	*85.3*			*31.0-160*		*10/16/2023 11:17*	WG2150507

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
Acenaphthene	U		0.0000886	0.00100	1	10/13/2023 12:39	WG2148874
Acenaphthylene	U		0.0000921	0.00100	1	10/13/2023 12:39	WG2148874
Acetophenone	U		0.000208	0.0100	1	10/13/2023 12:39	WG2148874
Anthracene	U		0.0000804	0.00100	1	10/13/2023 12:39	WG2148874
Atrazine	U		0.000255	0.0100	1	10/13/2023 12:39	WG2148874
Benzo(a)anthracene	U		0.000199	0.00100	1	10/13/2023 12:39	WG2148874
Benzaldehyde	U		0.00169	0.0100	1	10/13/2023 12:39	WG2148874
Benzo(b)fluoranthene	U		0.000130	0.00100	1	10/13/2023 12:39	WG2148874
Benzo(k)fluoranthene	U		0.000120	0.00100	1	10/13/2023 12:39	WG2148874
Benzo(g,h,i)perylene	U		0.000121	0.00100	1	10/13/2023 12:39	WG2148874
Benzo(a)pyrene	U		0.0000381	0.000200	1	10/13/2023 12:39	WG2148874
Biphenyl	U		0.000790	0.0100	1	10/13/2023 12:39	WG2148874
Bis(2-chlorethoxy)methane	U		0.000116	0.0100	1	10/13/2023 12:39	WG2148874
Bis(2-chloroethyl)ether	U		0.000137	0.0100	1	10/13/2023 12:39	WG2148874
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100	1	10/13/2023 12:39	WG2148874
4-Bromophenyl-phenylether	U		0.0000877	0.0100	1	10/13/2023 12:39	WG2148874
2-Chloronaphthalene	U		0.0000648	0.00100	1	10/13/2023 12:39	WG2148874
4-Chlorophenyl-phenylether	U		0.0000926	0.0100	1	10/13/2023 12:39	WG2148874
Caprolactam	U		0.000309	0.0100	1	10/13/2023 12:39	WG2148874
Carbazole	U		0.000111	0.0100	1	10/13/2023 12:39	WG2148874
Chrysene	U		0.000130	0.00100	1	10/13/2023 12:39	WG2148874
Dibenz(a,h)anthracene	U		0.0000644	0.000200	1	10/13/2023 12:39	WG2148874
Dibenzofuran	U		0.0000970	0.0100	1	10/13/2023 12:39	WG2148874
3,3-Dichlorobenzidine	U		0.000212	0.0100	1	10/13/2023 12:39	WG2148874
2,4-Dinitrotoluene	U		0.0000983	0.0100	1	10/13/2023 12:39	WG2148874
2,6-Dinitrotoluene	U		0.000250	0.0100	1	10/13/2023 12:39	WG2148874
Fluoranthene	U		0.000102	0.00100	1	10/13/2023 12:39	WG2148874
Fluorene	U		0.0000844	0.00100	1	10/13/2023 12:39	WG2148874
Hexachlorobenzene	U		0.0000755	0.00100	1	10/13/2023 12:39	WG2148874
Hexachloro-1,3-butadiene	U		0.0000968	0.0100	1	10/13/2023 12:39	WG2148874
Hexachlorocyclopentadiene	U		0.0000598	0.0100	1	10/13/2023 12:39	WG2148874
Hexachloroethane	U		0.000127	0.0100	1	10/13/2023 12:39	WG2148874
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100	1	10/13/2023 12:39	WG2148874
Isophorone	U		0.000143	0.0100	1	10/13/2023 12:39	WG2148874
1-Methylnaphthalene	U		0.0000790	0.00100	1	10/13/2023 12:39	WG2148874
2-Methylnaphthalene	U		0.000117	0.00100	1	10/13/2023 12:39	WG2148874
Naphthalene	U		0.000159	0.00100	1	10/13/2023 12:39	WG2148874
Nitrobenzene	U		0.000297	0.0100	1	10/13/2023 12:39	WG2148874
n-Nitrosodiphenylamine	U		0.00237	0.0100	1	10/13/2023 12:39	WG2148874
n-Nitrosodi-n-propylamine	U		0.000261	0.0100	1	10/13/2023 12:39	WG2148874
Phenanthrene	U		0.000112	0.00100	1	10/13/2023 12:39	WG2148874
Benzylbutyl phthalate	U		0.000765	0.00300	1	10/13/2023 12:39	WG2148874
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300	1	10/13/2023 12:39	WG2148874
Di-n-butyl phthalate	U		0.000453	0.00300	1	10/13/2023 12:39	WG2148874
Diethyl phthalate	U		0.000287	0.00300	1	10/13/2023 12:39	WG2148874
Dimethyl phthalate	U		0.000260	0.00300	1	10/13/2023 12:39	WG2148874
Di-n-octyl phthalate	U		0.000932	0.00300	1	10/13/2023 12:39	WG2148874
Pyrene	U		0.000107	0.00100	1	10/13/2023 12:39	WG2148874
1,2,4-Trichlorobenzene	U		0.0000698	0.0100	1	10/13/2023 12:39	WG2148874
4-Chloro-3-methylphenol	U		0.000131	0.0100	1	10/13/2023 12:39	WG2148874

LB-01
Collected date/time: 10/05/23 11:45
L1663622

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
2-Chlorophenol	U		0.000133	0.0100	1	10/13/2023 12:39	WG2148874
2,4-Dichlorophenol	U		0.000102	0.0100	1	10/13/2023 12:39	WG2148874
2,4-Dimethylphenol	U		0.0000636	0.0100	1	10/13/2023 12:39	WG2148874
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100	1	10/13/2023 12:39	WG2148874
2,4-Dinitrophenol	U		0.00593	0.0100	1	10/13/2023 12:39	WG2148874
2-Nitrophenol	U		0.000117	0.0100	1	10/13/2023 12:39	WG2148874
2-Nitroaniline	U		0.000102	0.0100	1	10/13/2023 12:39	WG2148874
2-Methylphenol	U		0.0000929	0.0100	1	10/13/2023 12:39	WG2148874
3&4-Methyl Phenol	U		0.000168	0.0100	1	10/13/2023 12:39	WG2148874
3-Nitroaniline	U		0.0000869	0.0100	1	10/13/2023 12:39	WG2148874
4-Chloroaniline	U		0.000234	0.0100	1	10/13/2023 12:39	WG2148874
4-Nitroaniline	U		0.0000910	0.0100	1	10/13/2023 12:39	WG2148874
4-Nitrophenol	U		0.000143	0.0100	1	10/13/2023 12:39	WG2148874
Pentachlorophenol	U		0.000313	0.0100	1	10/13/2023 12:39	WG2148874
Phenol	U		0.00433	0.0100	1	10/13/2023 12:39	WG2148874
2,4,5-Trichlorophenol	U		0.000109	0.0100	1	10/13/2023 12:39	WG2148874
2,4,6-Trichlorophenol	U		0.000100	0.0100	1	10/13/2023 12:39	WG2148874
(S) 2-Fluorophenol	*31.8*			*10.0-120*		*10/13/2023 12:39*	WG2148874
(S) Phenol-d5	*18.5*			*10.0-120*		*10/13/2023 12:39*	WG2148874
(S) Nitrobenzene-d5	*59.2*			*10.0-127*		*10/13/2023 12:39*	WG2148874
(S) 2-Fluorobiphenyl	*55.0*			*10.0-130*		*10/13/2023 12:39*	WG2148874
(S) 2,4,6-Tribromophenol	*71.5*			*10.0-155*		*10/13/2023 12:39*	WG2148874
(S) p-Terphenyl-d14	*80.0*			*10.0-128*		*10/13/2023 12:39*	WG2148874

LB-02
Collected date/time: 10/05/23 10:45
L1663622

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	ND		10.0	1	10/12/2023 18:33	WG2149849

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity	9.01	J	8.45	20.0	1	10/10/2023 15:19	WG2147742

Sample Narrative:
L1663622-32 WG2147742: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	0.481	B J	0.379	1.00	1	10/07/2023 03:31	WG2146682
Fluoride	U		0.0640	0.150	1	10/07/2023 03:31	WG2146682
Nitrate	0.0863	J	0.0480	0.100	1	10/07/2023 03:31	WG2146682
Nitrite	0.0660	J	0.0420	0.100	1	10/07/2023 03:31	WG2146682
Sulfate	0.622	B J	0.594	5.00	1	10/07/2023 03:31	WG2146682

Mercury by Method 7470A

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Mercury	U		0.000100	0.000200	1	10/11/2023 11:17	WG2147175

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Boron,Dissolved	0.0258	J	0.0200	0.200	1	10/15/2023 19:17	WG2146828

Metals (ICPMS) by Method 6020

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Aluminum,Dissolved	U		0.0185	0.100	1	10/13/2023 16:57	WG2146835
Arsenic,Dissolved	U		0.000180	0.00200	1	10/13/2023 16:57	WG2146835
Barium,Dissolved	0.000990	J	0.000381	0.00200	1	10/13/2023 16:57	WG2146835
Cadmium,Dissolved	U		0.000150	0.00100	1	10/13/2023 16:57	WG2146835
Chromium,Dissolved	U		0.00124	0.00200	1	10/13/2023 16:57	WG2146835
Copper,Dissolved	U		0.00151	0.00500	1	10/13/2023 16:57	WG2146835
Cobalt,Dissolved	U		0.0000596	0.00200	1	10/13/2023 16:57	WG2146835
Iron,Dissolved	U		0.0281	0.100	1	10/13/2023 16:57	WG2146835
Lead,Dissolved	U		0.000849	0.00200	1	10/13/2023 16:57	WG2146835
Manganese,Dissolved	U		0.000704	0.00500	1	10/13/2023 16:57	WG2146835
Molybdenum,Dissolved	U		0.000348	0.00500	1	10/13/2023 16:57	WG2146835
Nickel,Dissolved	U		0.000816	0.00200	1	10/13/2023 16:57	WG2146835
Selenium,Dissolved	U		0.000300	0.00200	1	10/13/2023 16:57	WG2146835
Silver,Dissolved	U		0.0000700	0.00200	1	10/13/2023 16:57	WG2146835
Uranium,Dissolved	U		0.0000700	0.0200	1	10/13/2023 16:57	WG2146835
Zinc,Dissolved	U		0.00302	0.0250	1	10/13/2023 16:57	WG2146835

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acetone	U	J4	0.0113	0.0500	1	10/10/2023 02:26	WG2148114
Benzene	U		0.0000941	0.00100	1	10/10/2023 02:26	WG2148114
Bromodichloromethane	U		0.000136	0.00100	1	10/10/2023 02:26	WG2148114
Bromoform	U		0.000129	0.00100	1	10/10/2023 02:26	WG2148114
Bromomethane	U		0.000605	0.00500	1	10/10/2023 02:26	WG2148114
n-Butylbenzene	U		0.000157	0.00100	1	10/10/2023 02:26	WG2148114
sec-Butylbenzene	U		0.000125	0.00100	1	10/10/2023 02:26	WG2148114
tert-Butylbenzene	U		0.000127	0.00100	1	10/10/2023 02:26	WG2148114
Carbon disulfide	U		0.0000962	0.00100	1	10/10/2023 02:26	WG2148114
Carbon tetrachloride	U		0.000128	0.00100	1	10/10/2023 02:26	WG2148114
Chlorobenzene	U		0.000116	0.00100	1	10/10/2023 02:26	WG2148114
Chlorodibromomethane	U		0.000140	0.00100	1	10/10/2023 02:26	WG2148114
Chloroethane	U		0.000192	0.00500	1	10/10/2023 02:26	WG2148114
Chloroform	0.000428	J	0.000111	0.00500	1	10/10/2023 02:26	WG2148114
Chloromethane	U		0.000960	0.00250	1	10/10/2023 02:26	WG2148114
1,2-Dibromoethane	U		0.000126	0.00100	1	10/10/2023 02:26	WG2148114
1,1-Dichloroethane	U		0.000100	0.00100	1	10/10/2023 02:26	WG2148114
1,2-Dichloroethane	U		0.0000819	0.00100	1	10/10/2023 02:26	WG2148114
1,1-Dichloroethene	U		0.000188	0.00100	1	10/10/2023 02:26	WG2148114
cis-1,2-Dichloroethene	U		0.000126	0.00100	1	10/10/2023 02:26	WG2148114
trans-1,2-Dichloroethene	U		0.000149	0.00100	1	10/10/2023 02:26	WG2148114
1,2-Dichloropropane	U		0.000149	0.00100	1	10/10/2023 02:26	WG2148114
cis-1,3-Dichloropropene	U		0.000111	0.00100	1	10/10/2023 02:26	WG2148114
trans-1,3-Dichloropropene	U		0.000118	0.00100	1	10/10/2023 02:26	WG2148114
Ethylbenzene	U		0.000137	0.00100	1	10/10/2023 02:26	WG2148114
Hexachloro-1,3-butadiene	U		0.000337	0.00100	1	10/10/2023 02:26	WG2148114
2-Hexanone	U		0.000787	0.0100	1	10/10/2023 02:26	WG2148114
Isopropylbenzene	U		0.000105	0.00100	1	10/10/2023 02:26	WG2148114
p-Isopropyltoluene	U		0.000120	0.00100	1	10/10/2023 02:26	WG2148114
2-Butanone (MEK)	U		0.00119	0.0100	1	10/10/2023 02:26	WG2148114
Methylene Chloride	U		0.000430	0.00500	1	10/10/2023 02:26	WG2148114
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100	1	10/10/2023 02:26	WG2148114
Methyl tert-butyl ether	U		0.000101	0.00100	1	10/10/2023 02:26	WG2148114
Naphthalene	U		0.00100	0.00500	1	10/10/2023 02:26	WG2148114
n-Propylbenzene	U		0.0000993	0.00100	1	10/10/2023 02:26	WG2148114
Styrene	U		0.000118	0.00100	1	10/10/2023 02:26	WG2148114
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100	1	10/10/2023 02:26	WG2148114
Tetrachloroethene	U		0.000300	0.00100	1	10/10/2023 02:26	WG2148114
Toluene	U		0.000278	0.00100	1	10/10/2023 02:26	WG2148114
1,1,1-Trichloroethane	U		0.000149	0.00100	1	10/10/2023 02:26	WG2148114
1,1,2-Trichloroethane	U		0.000158	0.00100	1	10/10/2023 02:26	WG2148114
Trichloroethene	U		0.000190	0.00100	1	10/10/2023 02:26	WG2148114
1,2,4-Trimethylbenzene	U		0.000322	0.00100	1	10/10/2023 02:26	WG2148114
1,3,5-Trimethylbenzene	U		0.000104	0.00100	1	10/10/2023 02:26	WG2148114
Vinyl chloride	U		0.000234	0.00100	1	10/10/2023 02:26	WG2148114
Xylenes, Total	U		0.000174	0.00300	1	10/10/2023 02:26	WG2148114
(S) Toluene-d8	*89.9*			*80.0-120*		*10/10/2023 02:26*	WG2148114
(S) 4-Bromofluorobenzene	*96.6*			*77.0-126*		*10/10/2023 02:26*	WG2148114
(S) 1,2-Dichloroethane-d4	*113*			*70.0-130*		*10/10/2023 02:26*	WG2148114

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

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Acenaphthene	U		0.0000930	0.00105	1.05	10/13/2023 13:00	WG2148874
Acenaphthylene	U		0.0000967	0.00105	1.05	10/13/2023 13:00	WG2148874
Acetophenone	U		0.000218	0.0105	1.05	10/13/2023 13:00	WG2148874
Anthracene	U		0.0000844	0.00105	1.05	10/13/2023 13:00	WG2148874
Atrazine	U		0.000268	0.0105	1.05	10/13/2023 13:00	WG2148874
Benzo(a)anthracene	U		0.000209	0.00105	1.05	10/13/2023 13:00	WG2148874
Benzaldehyde	U		0.00177	0.0105	1.05	10/13/2023 13:00	WG2148874
Benzo(b)fluoranthene	0.000166	B J	0.000136	0.00105	1.05	10/13/2023 13:00	WG2148874
Benzo(k)fluoranthene	0.000149	B J	0.000126	0.00105	1.05	10/13/2023 13:00	WG2148874
Benzo(g,h,i)perylene	0.000143	B J	0.000127	0.00105	1.05	10/13/2023 13:00	WG2148874
Benzo(a)pyrene	U		0.0000400	0.000210	1.05	10/13/2023 13:00	WG2148874
Biphenyl	U		0.000829	0.0105	1.05	10/13/2023 13:00	WG2148874
Bis(2-chlorethoxy)methane	U		0.000122	0.0105	1.05	10/13/2023 13:00	WG2148874
Bis(2-chloroethyl)ether	U		0.000144	0.0105	1.05	10/13/2023 13:00	WG2148874
2,2-Oxybis(1-Chloropropane)	U		0.000221	0.0105	1.05	10/13/2023 13:00	WG2148874
4-Bromophenyl-phenylether	U		0.0000921	0.0105	1.05	10/13/2023 13:00	WG2148874
2-Chloronaphthalene	U		0.0000680	0.00105	1.05	10/13/2023 13:00	WG2148874
4-Chlorophenyl-phenylether	U		0.0000972	0.0105	1.05	10/13/2023 13:00	WG2148874
Caprolactam	U		0.000324	0.0105	1.05	10/13/2023 13:00	WG2148874
Carbazole	U		0.000117	0.0105	1.05	10/13/2023 13:00	WG2148874
Chrysene	U		0.000136	0.00105	1.05	10/13/2023 13:00	WG2148874
Dibenz(a,h)anthracene	0.000354	B	0.0000676	0.000210	1.05	10/13/2023 13:00	WG2148874
Dibenzofuran	U		0.000102	0.0105	1.05	10/13/2023 13:00	WG2148874
3,3-Dichlorobenzidine	U		0.000223	0.0105	1.05	10/13/2023 13:00	WG2148874
2,4-Dinitrotoluene	U		0.000103	0.0105	1.05	10/13/2023 13:00	WG2148874
2,6-Dinitrotoluene	U		0.000263	0.0105	1.05	10/13/2023 13:00	WG2148874
Fluoranthene	U		0.000107	0.00105	1.05	10/13/2023 13:00	WG2148874
Fluorene	U		0.0000886	0.00105	1.05	10/13/2023 13:00	WG2148874
Hexachlorobenzene	U		0.0000793	0.00105	1.05	10/13/2023 13:00	WG2148874
Hexachloro-1,3-butadiene	U		0.000102	0.0105	1.05	10/13/2023 13:00	WG2148874
Hexachlorocyclopentadiene	U		0.0000628	0.0105	1.05	10/13/2023 13:00	WG2148874
Hexachloroethane	U		0.000133	0.0105	1.05	10/13/2023 13:00	WG2148874
Indeno(1,2,3-cd)pyrene	0.000358	J	0.000293	0.00105	1.05	10/13/2023 13:00	WG2148874
Isophorone	U		0.000150	0.0105	1.05	10/13/2023 13:00	WG2148874
1-Methylnaphthalene	U		0.0000829	0.00105	1.05	10/13/2023 13:00	WG2148874
2-Methylnaphthalene	U		0.000123	0.00105	1.05	10/13/2023 13:00	WG2148874
Naphthalene	U		0.000167	0.00105	1.05	10/13/2023 13:00	WG2148874
Nitrobenzene	U		0.000312	0.0105	1.05	10/13/2023 13:00	WG2148874
n-Nitrosodiphenylamine	U		0.00249	0.0105	1.05	10/13/2023 13:00	WG2148874
n-Nitrosodi-n-propylamine	U		0.000274	0.0105	1.05	10/13/2023 13:00	WG2148874
Phenanthrene	U		0.000118	0.00105	1.05	10/13/2023 13:00	WG2148874
Benzylbutyl phthalate	U		0.000803	0.00315	1.05	10/13/2023 13:00	WG2148874
Bis(2-ethylhexyl)phthalate	U		0.000940	0.00315	1.05	10/13/2023 13:00	WG2148874
Di-n-butyl phthalate	U		0.000476	0.00315	1.05	10/13/2023 13:00	WG2148874
Diethyl phthalate	U		0.000301	0.00315	1.05	10/13/2023 13:00	WG2148874
Dimethyl phthalate	U		0.000273	0.00315	1.05	10/13/2023 13:00	WG2148874
Di-n-octyl phthalate	U		0.000979	0.00315	1.05	10/13/2023 13:00	WG2148874
Pyrene	U		0.000112	0.00105	1.05	10/13/2023 13:00	WG2148874
1,2,4-Trichlorobenzene	U		0.0000733	0.0105	1.05	10/13/2023 13:00	WG2148874
4-Chloro-3-methylphenol	U		0.000138	0.0105	1.05	10/13/2023 13:00	WG2148874
2-Chlorophenol	U		0.000140	0.0105	1.05	10/13/2023 13:00	WG2148874
2,4-Dichlorophenol	U		0.000107	0.0105	1.05	10/13/2023 13:00	WG2148874
2,4-Dimethylphenol	U		0.0000668	0.0105	1.05	10/13/2023 13:00	WG2148874
4,6-Dinitro-2-methylphenol	U		0.00118	0.0105	1.05	10/13/2023 13:00	WG2148874
2,4-Dinitrophenol	U		0.00623	0.0105	1.05	10/13/2023 13:00	WG2148874
2-Nitrophenol	U		0.000123	0.0105	1.05	10/13/2023 13:00	WG2148874

LB-02
Collected date/time: 10/05/23 10:45
L1663622

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	mg/l		mg/l	mg/l		date / time	
2-Nitroaniline	U		0.000107	0.0105	1.05	10/13/2023 13:00	WG2148874
2-Methylphenol	U		0.0000975	0.0105	1.05	10/13/2023 13:00	WG2148874
3&4-Methyl Phenol	U		0.000176	0.0105	1.05	10/13/2023 13:00	WG2148874
3-Nitroaniline	U		0.0000912	0.0105	1.05	10/13/2023 13:00	WG2148874
4-Chloroaniline	U		0.000246	0.0105	1.05	10/13/2023 13:00	WG2148874
4-Nitroaniline	U		0.0000956	0.0105	1.05	10/13/2023 13:00	WG2148874
4-Nitrophenol	U		0.000150	0.0105	1.05	10/13/2023 13:00	WG2148874
Pentachlorophenol	U		0.000329	0.0105	1.05	10/13/2023 13:00	WG2148874
Phenol	U		0.00455	0.0105	1.05	10/13/2023 13:00	WG2148874
2,4,5-Trichlorophenol	U		0.000114	0.0105	1.05	10/13/2023 13:00	WG2148874
2,4,6-Trichlorophenol	U		0.000105	0.0105	1.05	10/13/2023 13:00	WG2148874
(S) 2-Fluorophenol	*37.3*			*10.0-120*		*10/13/2023 13:00*	WG2148874
(S) Phenol-d5	*20.7*			*10.0-120*		*10/13/2023 13:00*	WG2148874
(S) Nitrobenzene-d5	*63.0*			*10.0-127*		*10/13/2023 13:00*	WG2148874
(S) 2-Fluorobiphenyl	*59.7*			*10.0-130*		*10/13/2023 13:00*	WG2148874
(S) 2,4,6-Tribromophenol	*72.9*			*10.0-155*		*10/13/2023 13:00*	WG2148874
(S) p-Terphenyl-d14	*73.2*			*10.0-128*		*10/13/2023 13:00*	WG2148874

Method Blank (MB)

(MB) R3985960-1 10/11/23 12:39

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

L1663619-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1663619-01 10/11/23 12:39 • (DUP) R3985960-3 10/12/23 16:07

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	676	703	1	3.87		5

L1663619-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1663619-02 10/11/23 12:39 • (DUP) R3985960-4 10/12/23 16:07

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	676	667	1	1.39		5

Laboratory Control Sample (LCS)

(LCS) R3985960-2 10/11/23 12:39

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8300	94.3	77.3-123	

Method Blank (MB)

(MB) R3986737-1 10/12/23 12:22

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

L1663610-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1663610-04 10/12/23 12:22 • (DUP) R3986737-3 10/12/23 12:22

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	331	346	1	4.43		5

L1663622-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1663622-01 10/12/23 12:22 • (DUP) R3986737-4 10/12/23 12:22

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	507	508	1	0.197		5

Laboratory Control Sample (LCS)

(LCS) R3986737-2 10/12/23 12:22

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8090	91.9	77.3-123	

Method Blank (MB)

(MB) R3986754-1 10/12/23 18:33

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

L1663108-29 Original Sample (OS) • Duplicate (DUP)

(OS) L1663108-29 10/12/23 18:33 • (DUP) R3986754-3 10/12/23 18:33

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	257	256	1	0.390		5

L1663108-30 Original Sample (OS) • Duplicate (DUP)

(OS) L1663108-30 10/12/23 18:33 • (DUP) R3986754-4 10/12/23 18:33

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	355	365	1	2.78		5

Laboratory Control Sample (LCS)

(LCS) R3986754-2 10/12/23 18:33

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8380	95.2	77.3-123	

Method Blank (MB)

(MB) R3986723-1 10/13/23 00:00

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

L1663622-14 Original Sample (OS) • Duplicate (DUP)

(OS) L1663622-14 10/13/23 00:00 • (DUP) R3986723-3 10/13/23 00:00

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	1550	1570	1	1.15		5

L1664648-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1664648-09 10/13/23 00:00 • (DUP) R3986723-4 10/13/23 00:00

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	608	609	1	0.164		5

Laboratory Control Sample (LCS)

(LCS) R3986723-2 10/13/23 00:00

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8520	96.8	77.3-123	

Method Blank (MB)

(MB) R3984336-2 10/10/23 12:08

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	U		8.45	20.0

Sample Narrative:
BLANK: Endpoint pH 4.5

L1663575-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1663575-01 10/10/23 12:41 • (DUP) R3984336-3 10/10/23 12:46

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	U	U	1	0.000		20

Sample Narrative:
OS: Endpoint pH 4.5 Headspace
DUP: Endpoint pH 4.5

L1663622-25 Original Sample (OS) • Duplicate (DUP)

(OS) L1663622-25 10/10/23 14:22 • (DUP) R3984336-4 10/10/23 14:28

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	180	175	1	2.60		20

Sample Narrative:
OS: Endpoint pH 4.5 Headspace
DUP: Endpoint pH 4.5

Laboratory Control Sample (LCS)

(LCS) R3984336-1 10/10/23 12:03

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100	97.4	97.4	90.0-110	

Sample Narrative:
LCS: Endpoint pH 4.5

Method Blank (MB)

(MB) R3984388-2 10/10/23 13:13

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity	U		8.45	20.0

Sample Narrative:
BLANK: Endpoint pH 4.5

L1663622-27 Original Sample (OS) • Duplicate (DUP)

(OS) L1663622-27 10/10/23 13:22 • (DUP) R3984388-3 10/10/23 13:30

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	182	181	1	0.566		20

Sample Narrative:
OS: Endpoint pH 4.5 Headspace
DUP: Endpoint pH 4.5

L1663622-32 Original Sample (OS) • Duplicate (DUP)

(OS) L1663622-32 10/10/23 15:19 • (DUP) R3984388-4 10/10/23 15:22

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	9.01	9.17	1	1.83	J	20

Sample Narrative:
OS: Endpoint pH 4.5 Headspace
DUP: Endpoint pH 4.5

Laboratory Control Sample (LCS)

(LCS) R3984388-1 10/10/23 13:03

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100	102	102	90.0-110	

Sample Narrative:
LCS: Endpoint pH 4.5

Method Blank (MB)

(MB) R3985866-1 10/06/23 15:04

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.379	1.00
Fluoride	U		0.0640	0.150
Nitrate	U		0.0480	0.100
Nitrite	U		0.0420	0.100
Sulfate	U		0.594	5.00

L1663108-23 Original Sample (OS) • Duplicate (DUP)

(OS) L1663108-23 10/06/23 20:10 • (DUP) R3985866-3 10/06/23 20:22

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	U	U	1	0.000		15
Nitrate	0.0659	0.0724	1	9.40	J	15

Laboratory Control Sample (LCS)

(LCS) R3985866-2 10/06/23 15:18

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	39.7	99.2	80.0-120	
Fluoride	8.00	8.04	101	80.0-120	
Nitrate	8.00	7.79	97.3	80.0-120	
Nitrite	8.00	8.09	101	80.0-120	
Sulfate	40.0	39.5	98.8	80.0-120	

L1663108-23 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1663108-23 10/06/23 20:10 • (MS) R3985866-4 10/06/23 20:35 • (MSD) R3985866-5 10/06/23 20:47

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 %
Chloride	40.0	U	40.4	40.3	101	101	1	80.0-120			0.147	15
Nitrate	8.00	0.0659	7.98	7.98	98.9	98.9	1	80.0-120			0.0840	15

Method Blank (MB)

(MB) R3985778-1 10/06/23 09:39

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.379	1.00
Fluoride	U		0.0640	0.150
Nitrate	0.0566	J	0.0480	0.100
Nitrite	U		0.0420	0.100
Sulfate	0.631	J	0.594	5.00

L1663557-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1663557-01 10/06/23 20:12 • (DUP) R3985778-3 10/07/23 02:35

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	17.4	17.4	1	0.0753		15
Fluoride	0.142	0.130	1	8.96	J	15
Nitrate	0.187	0.204	1	8.75		15
Nitrite	U	U	1	0.000		15
Sulfate	36.8	36.8	1	0.110		15

L1663601-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1663601-01 10/06/23 22:19 • (DUP) R3985778-6 10/07/23 04:42

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	5.39	5.36	1	0.557		15
Fluoride	0.463	0.463	1	0.151		15
Nitrate	3.23	3.23	1	0.00620		15
Nitrite	U	U	1	0.000		15
Sulfate	32.8	32.8	1	0.0759		15

Laboratory Control Sample (LCS)

(LCS) R3985778-2 10/06/23 09:55

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	39.5	98.7	80.0-120	
Fluoride	8.00	8.14	102	80.0-120	
Nitrate	8.00	7.76	97.0	80.0-120	
Nitrite	8.00	8.31	104	80.0-120	

Laboratory Control Sample (LCS)

(LCS) R3985778-2 10/06/23 09:55

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfate	40.0	38.3	95.9	80.0-120	

L1663557-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1663557-01 10/06/23 20:12 • (MS) R3985778-4 10/07/23 02:51 • (MSD) R3985778-5 10/07/23 03:07

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	40.0	17.4	54.3	54.3	92.3	92.2	1	80.0-120			0.0742	15
Fluoride	8.00	0.142	7.99	7.98	98.1	98.0	1	80.0-120			0.141	15
Nitrate	8.00	0.187	7.92	7.86	96.7	95.9	1	80.0-120			0.837	15
Nitrite	8.00	U	8.31	8.25	104	103	1	80.0-120			0.710	15
Sulfate	40.0	36.8	69.6	69.4	82.0	81.7	1	80.0-120			0.197	15

L1663601-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1663601-01 10/06/23 22:19 • (MS) R3985778-7 10/07/23 04:58

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40.0	5.39	44.3	97.4	1	80.0-120	
Fluoride	8.00	0.463	8.31	98.1	1	80.0-120	
Nitrate	8.00	3.23	10.5	90.7	1	80.0-120	
Nitrite	8.00	U	8.27	103	1	80.0-120	
Sulfate	40.0	32.8	66.1	83.1	1	80.0-120	

Method Blank (MB)

(MB) R3985821-1 10/06/23 19:35

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	0.475	J	0.379	1.00
Fluoride	U		0.0640	0.150
Nitrate	U		0.0480	0.100
Nitrite	U		0.0420	0.100
Sulfate	0.726	J	0.594	5.00

L1663622-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1663622-01 10/06/23 22:27 • (DUP) R3985821-3 10/07/23 04:56

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	91.7	91.6	1	0.0716		15
Fluoride	0.809	0.800	1	1.09		15
Nitrate	5.21	5.21	1	0.0768		15
Nitrite	0.0657	0.0656	1	0.152	J	15
Sulfate	71.1	71.2	1	0.0797		15

L1663622-23 Original Sample (OS) • Duplicate (DUP)

(OS) L1663622-23 10/07/23 01:33 • (DUP) R3985821-5 10/07/23 07:11

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	93.0	93.0	1	0.0660		15
Fluoride	0.681	0.670	1	1.75		15
Nitrate	0.127	0.127	1	0.236		15
Nitrite	U	U	1	0.000		15
Sulfate	6.45	6.39	1	0.962		15

Laboratory Control Sample (LCS)

(LCS) R3985821-2 10/06/23 19:52

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	39.5	98.6	80.0-120	
Fluoride	8.00	7.92	99.0	80.0-120	
Nitrate	8.00	7.76	97.0	80.0-120	
Nitrite	8.00	8.18	102	80.0-120	

Laboratory Control Sample (LCS)

(LCS) R3985821-2 10/06/23 19:52

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfate	40.0	38.7	96.7	80.0-120	

L1663622-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1663622-01 10/06/23 22:27 • (MS) R3985821-4 10/07/23 05:13

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40.0	91.7	114	56.3	1	80.0-120	J6
Fluoride	8.00	0.809	8.76	99.4	1	80.0-120	
Nitrate	8.00	5.21	12.5	91.2	1	80.0-120	
Nitrite	8.00	0.0657	8.20	102	1	80.0-120	
Sulfate	40.0	71.1	98.3	67.9	1	80.0-120	J6

L1663622-23 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1663622-23 10/07/23 01:33 • (MS) R3985821-6 10/07/23 07:28 • (MSD) R3985821-7 10/07/23 07:45

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	40.0	93.0	115	115	55.8	55.7	1	80.0-120	J6	J6	0.0243	15
Fluoride	8.00	0.681	8.60	8.58	99.0	98.8	1	80.0-120			0.256	15
Nitrate	8.00	0.127	7.86	7.53	96.7	92.6	1	80.0-120			4.30	15
Nitrite	8.00	U	8.11	8.10	101	101	1	80.0-120			0.159	15
Sulfate	40.0	6.45	43.7	42.5	93.2	90.2	1	80.0-120			2.76	15

Method Blank (MB)

(MB) R3998168-1 11/09/23 13:16

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	0.428	J	0.379	1.00
Fluoride	U		0.0640	0.150
Nitrate	U		0.0480	0.100
Nitrite	U		0.0420	0.100
Sulfate	U		0.594	5.00

L1673687-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1673687-01 11/09/23 14:09 • (DUP) R3998168-3 11/09/23 14:22

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	17.9	18.0	1	0.231		15
Nitrate	0.0701	0.0701	1	0.000	J	15
Nitrite	0.0751	0.0741	1	1.34	J	15
Sulfate	0.624	U	1	200	P1	15

L1673913-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1673913-07 11/09/23 19:06 • (DUP) R3998168-6 11/09/23 19:19

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	16.2	16.1	1	0.558		15
Nitrate	0.0718	0.0706	1	1.69	J	15
Nitrite	0.0706	0.0711	1	0.706	J	15
Sulfate	18.2	18.2	1	0.344		15

Laboratory Control Sample (LCS)

(LCS) R3998168-2 11/09/23 13:30

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	41.1	103	80.0-120	
Fluoride	8.00	8.59	107	80.0-120	
Nitrate	8.00	8.04	100	80.0-120	
Nitrite	8.00	8.38	105	80.0-120	
Sulfate	40.0	40.0	100	80.0-120	

L1673687-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1673687-01 11/09/23 14:09 • (MS) R3998168-4 11/09/23 14:35 • (MSD) R3998168-5 11/09/23 14:47

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 %
Chloride	40.0	17.9	54.7	54.7	91.8	91.9	1	80.0-120			0.0227	15
Nitrate	8.00	0.0701	7.69	7.65	95.2	94.7	1	80.0-120			0.486	15
Nitrite	8.00	0.0751	8.68	8.69	108	108	1	80.0-120			0.0955	15
Sulfate	40.0	0.624	38.9	38.9	95.6	95.6	1	80.0-120			0.0139	15

L1673913-07 Original Sample (OS) • Matrix Spike (MS)

(OS) L1673913-07 11/09/23 19:06 • (MS) R3998168-7 11/09/23 19:33

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	40.0	16.2	53.4	93.1	1	80.0-120	
Nitrate	8.00	0.0718	7.83	97.0	1	80.0-120	
Nitrite	8.00	0.0706	8.64	107	1	80.0-120	
Sulfate	40.0	18.2	55.1	92.1	1	80.0-120	

Method Blank (MB)

(MB) R3985343-1 10/12/23 11:45

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	U		0.000100	0.000200

Laboratory Control Sample (LCS)

(LCS) R3985343-2 10/12/23 11:47

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.00300	0.00311	104	80.0-120	

L1663622-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1663622-01 10/12/23 11:49 • (MS) R3985343-3 10/12/23 11:52 • (MSD) R3985343-4 10/12/23 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 %
Mercury	0.00300	U	0.00305	0.00297	102	98.9	1	75.0-125			2.66	20

Method Blank (MB)

(MB) R3984751-1 10/11/23 10:42

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Mercury	U		0.000100	0.000200

Laboratory Control Sample (LCS)

(LCS) R3984751-2 10/11/23 10:44

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Mercury	0.00300	0.00304	101	80.0-120	

L1663763-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1663763-07 10/11/23 10:47 • (MS) R3984751-3 10/11/23 10:49 • (MSD) R3984751-4 10/11/23 10:51

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 %
Mercury	0.00300	U	0.00309	0.00308	103	103	1	75.0-125			0.310	20

Method Blank (MB)

(MB) R3985703-1 10/12/23 22:36

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Boron,Dissolved	U		0.0200	0.200

Laboratory Control Sample (LCS)

(LCS) R3985703-2 10/12/23 22:39

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron,Dissolved	1.00	1.03	103	80.0-120	

L1663622-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1663622-01 10/12/23 22:42 • (MS) R3985703-4 10/12/23 22:48 • (MSD) R3985703-5 10/12/23 22:51

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 %
Boron,Dissolved	1.00	0.179	1.23	1.24	105	106	1	75.0-125			0.459	20

Method Blank (MB)

(MB) R3986480-1 10/15/23 18:24

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Boron,Dissolved	U		0.0200	0.200

Laboratory Control Sample (LCS)

(LCS) R3986480-2 10/15/23 18:27

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Boron,Dissolved	1.00	0.956	95.6	80.0-120	

L1663622-23 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1663622-23 10/15/23 18:30 • (MS) R3986480-4 10/15/23 18:35 • (MSD) R3986480-5 10/15/23 18:38

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 %
Boron,Dissolved	1.00	0.157	1.14	1.14	98.5	97.9	1	75.0-125			0.534	20

Method Blank (MB)

(MB) R3988971-1 10/20/23 12:08

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Aluminum,Dissolved	U		0.0185	0.100
Arsenic,Dissolved	U		0.000180	0.00200
Barium,Dissolved	U		0.000381	0.00200
Cadmium,Dissolved	U		0.000150	0.00100
Chromium,Dissolved	U		0.00124	0.00200
Copper,Dissolved	U		0.00151	0.00500
Cobalt,Dissolved	U		0.0000596	0.00200
Iron,Dissolved	U		0.0281	0.100
Lead,Dissolved	U		0.000849	0.00200
Manganese,Dissolved	U		0.000704	0.00500
Molybdenum,Dissolved	U		0.000348	0.00500
Nickel,Dissolved	U		0.000816	0.00200
Selenium,Dissolved	U		0.000300	0.00200
Silver,Dissolved	U		0.0000700	0.00200
Uranium,Dissolved	U		0.0000700	0.0200
Zinc,Dissolved	U		0.00302	0.0250

Laboratory Control Sample (LCS)

(LCS) R3988971-2 10/20/23 12:11

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aluminum,Dissolved	1.00	0.988	98.8	80.0-120	
Arsenic,Dissolved	0.0500	0.0542	108	80.0-120	
Barium,Dissolved	0.0500	0.0492	98.4	80.0-120	
Cadmium,Dissolved	0.0500	0.0541	108	80.0-120	
Chromium,Dissolved	0.0500	0.0547	109	80.0-120	
Copper,Dissolved	0.0500	0.0489	97.7	80.0-120	
Cobalt,Dissolved	0.0500	0.0540	108	80.0-120	
Iron,Dissolved	1.00	1.09	109	80.0-120	
Lead,Dissolved	0.0500	0.0501	100	80.0-120	
Manganese,Dissolved	0.0500	0.0549	110	80.0-120	
Molybdenum,Dissolved	0.0500	0.0502	100	80.0-120	
Nickel,Dissolved	0.0500	0.0539	108	80.0-120	
Selenium,Dissolved	0.0500	0.0560	112	80.0-120	
Silver,Dissolved	0.0500	0.0526	105	80.0-120	
Uranium,Dissolved	0.0500	0.0498	99.6	80.0-120	
Zinc,Dissolved	0.0500	0.0517	103	80.0-120	

L1663622-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1663622-06 10/20/23 12:14 • (MS) R3988971-4 10/20/23 12:21 • (MSD) R3988971-5 10/20/23 12:24

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	1.00	U	1.02	1.02	102	102	1	75.0-125			0.171	20
Arsenic,Dissolved	0.0500	0.00529	0.0572	0.0572	104	104	1	75.0-125			0.0829	20
Barium,Dissolved	0.0500	0.188	0.243	0.239	108	101	1	75.0-125	E	E	1.38	20
Cadmium,Dissolved	0.0500	U	0.0545	0.0544	109	109	1	75.0-125			0.188	20
Chromium,Dissolved	0.0500	0.00132	0.0528	0.0517	103	101	1	75.0-125			2.20	20
Copper,Dissolved	0.0500	0.00792	0.0558	0.0546	95.7	93.3	1	75.0-125			2.12	20
Cobalt,Dissolved	0.0500	0.0000667	0.0513	0.0505	102	101	1	75.0-125			1.46	20
Iron,Dissolved	1.00	U	1.04	1.02	104	102	1	75.0-125			1.61	20
Lead,Dissolved	0.0500	U	0.0505	0.0498	101	99.6	1	75.0-125			1.48	20
Manganese,Dissolved	0.0500	0.00340	0.0554	0.0553	104	104	1	75.0-125			0.208	20
Molybdenum,Dissolved	0.0500	0.00197	0.0546	0.0534	105	103	1	75.0-125			2.24	20
Nickel,Dissolved	0.0500	0.00203	0.0529	0.0529	102	102	1	75.0-125			0.0156	20
Selenium,Dissolved	0.0500	0.00242	0.0591	0.0556	113	106	1	75.0-125			6.22	20
Silver,Dissolved	0.0500	U	0.0530	0.0523	106	105	1	75.0-125			1.24	20
Uranium,Dissolved	0.0500	0.00310	0.0543	0.0533	102	100	1	75.0-125			1.89	20
Zinc,Dissolved	0.0500	0.0995	0.147	0.145	95.7	91.3	1	75.0-125			1.51	20

Method Blank (MB)

(MB) R3986148-1 10/13/23 16:10

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Aluminum,Dissolved	U		0.0185	0.100
Arsenic,Dissolved	U		0.000180	0.00200
Barium,Dissolved	U		0.000381	0.00200
Cadmium,Dissolved	U		0.000150	0.00100
Chromium,Dissolved	U		0.00124	0.00200
Copper,Dissolved	U		0.00151	0.00500
Cobalt,Dissolved	U		0.0000596	0.00200
Iron,Dissolved	U		0.0281	0.100
Lead,Dissolved	U		0.000849	0.00200
Manganese,Dissolved	U		0.000704	0.00500
Molybdenum,Dissolved	U		0.000348	0.00500
Nickel,Dissolved	U		0.000816	0.00200
Selenium,Dissolved	U		0.000300	0.00200
Silver,Dissolved	U		0.0000700	0.00200
Uranium,Dissolved	U		0.0000700	0.0200
Zinc,Dissolved	U		0.00302	0.0250

Laboratory Control Sample (LCS)

(LCS) R3986148-2 10/13/23 16:13

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Aluminum,Dissolved	1.00	0.985	98.5	80.0-120	
Arsenic,Dissolved	0.0500	0.0537	107	80.0-120	
Barium,Dissolved	0.0500	0.0486	97.1	80.0-120	
Cadmium,Dissolved	0.0500	0.0544	109	80.0-120	
Chromium,Dissolved	0.0500	0.0542	108	80.0-120	
Copper,Dissolved	0.0500	0.0488	97.6	80.0-120	
Cobalt,Dissolved	0.0500	0.0534	107	80.0-120	
Iron,Dissolved	1.00	1.03	103	80.0-120	
Lead,Dissolved	0.0500	0.0530	106	80.0-120	
Manganese,Dissolved	0.0500	0.0542	108	80.0-120	
Molybdenum,Dissolved	0.0500	0.0508	102	80.0-120	
Nickel,Dissolved	0.0500	0.0542	108	80.0-120	
Selenium,Dissolved	0.0500	0.0535	107	80.0-120	
Silver,Dissolved	0.0500	0.0511	102	80.0-120	
Uranium,Dissolved	0.0500	0.0526	105	80.0-120	
Zinc,Dissolved	0.0500	0.0532	106	80.0-120	

L1663622-30 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1663622-30 10/13/23 16:17 • (MS) R3986148-4 10/13/23 16:23 • (MSD) R3986148-5 10/13/23 16:27

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	1.00	U	0.982	0.994	98.2	99.4	1	75.0-125			1.18	20
Arsenic,Dissolved	0.0500	0.00314	0.0576	0.0574	109	109	1	75.0-125			0.315	20
Barium,Dissolved	0.0500	0.147	0.197	0.198	100	102	1	75.0-125			0.466	20
Cadmium,Dissolved	0.0500	U	0.0551	0.0551	110	110	1	75.0-125			0.126	20
Chromium,Dissolved	0.0500	0.00235	0.0560	0.0565	107	108	1	75.0-125			0.949	20
Copper,Dissolved	0.0500	0.00718	0.0542	0.0532	94.0	92.1	1	75.0-125			1.81	20
Cobalt,Dissolved	0.0500	0.000484	0.0522	0.0523	104	104	1	75.0-125			0.185	20
Iron,Dissolved	1.00	U	1.05	1.03	105	103	1	75.0-125			1.48	20
Lead,Dissolved	0.0500	U	0.0539	0.0514	108	103	1	75.0-125			4.80	20
Manganese,Dissolved	0.0500	0.00987	0.0617	0.0632	104	107	1	75.0-125			2.52	20
Molybdenum,Dissolved	0.0500	0.000780	0.0558	0.0558	110	110	1	75.0-125			0.0918	20
Nickel,Dissolved	0.0500	0.00818	0.0600	0.0602	104	104	1	75.0-125			0.438	20
Selenium,Dissolved	0.0500	0.000941	0.0580	0.0573	114	113	1	75.0-125			1.25	20
Silver,Dissolved	0.0500	U	0.0520	0.0518	104	104	1	75.0-125			0.382	20
Uranium,Dissolved	0.0500	0.0125	0.0700	0.0675	115	110	1	75.0-125			3.72	20
Zinc,Dissolved	0.0500	0.00676	0.0568	0.0588	100	104	1	75.0-125			3.55	20

Method Blank (MB)

(MB) R3985974-3 10/11/23 11:29

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)	*88.9*			*78.0-120*

Laboratory Control Sample (LCS)

(LCS) R3985974-1 10/11/23 09:36

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.87	107	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*100*	*78.0-120*	

L1663749-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1663749-01 10/11/23 20:10 • (MS) R3985974-4 10/11/23 22:34 • (MSD) R3985974-5 10/11/23 22:57

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 %
TPH (GC/FID) Low Fraction	5.50	U	4.30	4.60	78.2	83.6	1	10.0-160			6.74	22
(S) a,a,a-Trifluorotoluene(FID)					*94.0*	*94.4*		*78.0-120*				

Method Blank (MB)

(MB) R3985942-2 10/11/23 14:47

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)	*110*			*78.0-120*

Laboratory Control Sample (LCS)

(LCS) R3985942-1 10/11/23 14:02

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.21	94.7	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			*116*	*78.0-120*	

L1663622-23 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1663622-23 10/11/23 21:23 • (MS) R3985942-3 10/12/23 00:00 • (MSD) R3985942-4 10/12/23 00:23

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	0.0842	4.38	4.80	78.1	85.7	1	10.0-160			9.15	22
(S) a,a,a-Trifluorotoluene(FID)					*112*	*112*		*78.0-120*				

Method Blank (MB)

(MB) R3986840-2 10/09/23 20:43

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0113	0.0500
Benzene	U		0.0000941	0.00100
Bromodichloromethane	U		0.000136	0.00100
Bromoform	U		0.000129	0.00100
Bromomethane	U		0.000605	0.00500
n-Butylbenzene	U		0.000157	0.00100
sec-Butylbenzene	U		0.000125	0.00100
tert-Butylbenzene	U		0.000127	0.00100
Carbon disulfide	U		0.0000962	0.00100
Carbon tetrachloride	U		0.000128	0.00100
Chlorobenzene	U		0.000116	0.00100
Chlorodibromomethane	U		0.000140	0.00100
Chloroethane	U		0.000192	0.00500
Chloroform	U		0.000111	0.00500
Chloromethane	U		0.000960	0.00250
1,2-Dibromoethane	U		0.000126	0.00100
1,1-Dichloroethane	U		0.000100	0.00100
1,2-Dichloroethane	U		0.0000819	0.00100
1,1-Dichloroethene	U		0.000188	0.00100
cis-1,2-Dichloroethene	U		0.000126	0.00100
trans-1,2-Dichloroethene	U		0.000149	0.00100
1,2-Dichloropropane	U		0.000149	0.00100
cis-1,3-Dichloropropene	U		0.000111	0.00100
trans-1,3-Dichloropropene	U		0.000118	0.00100
Ethylbenzene	U		0.000137	0.00100
Hexachloro-1,3-butadiene	U		0.000337	0.00100
2-Hexanone	U		0.000787	0.0100
Isopropylbenzene	U		0.000105	0.00100
p-Isopropyltoluene	U		0.000120	0.00100
2-Butanone (MEK)	U		0.00119	0.0100
Methylene Chloride	U		0.000430	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100
Methyl tert-butyl ether	U		0.000101	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.0000993	0.00100
Styrene	U		0.000118	0.00100
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100
Tetrachloroethene	U		0.000300	0.00100
Toluene	U		0.000278	0.00100
1,1,1-Trichloroethane	U		0.000149	0.00100

Method Blank (MB)

(MB) R3986840-2 10/09/23 20:43

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,1,2-Trichloroethane	U		0.000158	0.00100
Trichloroethene	U		0.000190	0.00100
1,2,4-Trimethylbenzene	U		0.000322	0.00100
1,3,5-Trimethylbenzene	U		0.000104	0.00100
Vinyl chloride	U		0.000234	0.00100
Xylenes, Total	U		0.000174	0.00300
(S) Toluene-d8	*100*			*80.0-120*
(S) 4-Bromofluorobenzene	*100*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*91.3*			*70.0-130*

Laboratory Control Sample (LCS)

(LCS) R3986840-1 10/09/23 19:44

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acetone	0.0250	0.0201	80.4	19.0-160	
Benzene	0.00500	0.00575	115	70.0-123	
Bromodichloromethane	0.00500	0.00569	114	75.0-120	
Bromoform	0.00500	0.00554	111	68.0-132	
Bromomethane	0.00500	0.00548	110	10.0-160	
n-Butylbenzene	0.00500	0.00535	107	73.0-125	
sec-Butylbenzene	0.00500	0.00565	113	75.0-125	
tert-Butylbenzene	0.00500	0.00576	115	76.0-124	
Carbon disulfide	0.00500	0.00549	110	61.0-128	
Carbon tetrachloride	0.00500	0.00566	113	68.0-126	
Chlorobenzene	0.00500	0.00613	123	80.0-121	J4
Chlorodibromomethane	0.00500	0.00574	115	77.0-125	
Chloroethane	0.00500	0.00514	103	47.0-150	
Chloroform	0.00500	0.00555	111	73.0-120	
Chloromethane	0.00500	0.00515	103	41.0-142	
1,2-Dibromoethane	0.00500	0.00577	115	80.0-122	
1,1-Dichloroethane	0.00500	0.00526	105	70.0-126	
1,2-Dichloroethane	0.00500	0.00539	108	70.0-128	
1,1-Dichloroethene	0.00500	0.00525	105	71.0-124	
cis-1,2-Dichloroethene	0.00500	0.00584	117	73.0-120	
trans-1,2-Dichloroethene	0.00500	0.00576	115	73.0-120	
1,2-Dichloropropane	0.00500	0.00567	113	77.0-125	
cis-1,3-Dichloropropene	0.00500	0.00554	111	80.0-123	
trans-1,3-Dichloropropene	0.00500	0.00595	119	78.0-124	

Laboratory Control Sample (LCS)

(LCS) R3986840-1 10/09/23 19:44

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Ethylbenzene	0.00500	0.00585	117	79.0-123	
Hexachloro-1,3-butadiene	0.00500	0.00474	94.8	54.0-138	
2-Hexanone	0.0250	0.0279	112	67.0-149	
Isopropylbenzene	0.00500	0.00571	114	76.0-127	
p-Isopropyltoluene	0.00500	0.00551	110	76.0-125	
2-Butanone (MEK)	0.0250	0.0289	116	44.0-160	
Methylene Chloride	0.00500	0.00552	110	67.0-120	
4-Methyl-2-pentanone (MIBK)	0.0250	0.0278	111	68.0-142	
Methyl tert-butyl ether	0.00500	0.00526	105	68.0-125	
Naphthalene	0.00500	0.00551	110	54.0-135	
n-Propylbenzene	0.00500	0.00573	115	77.0-124	
Styrene	0.00500	0.00578	116	73.0-130	
1,1,2,2-Tetrachloroethane	0.00500	0.00536	107	65.0-130	
Tetrachloroethene	0.00500	0.00646	129	72.0-132	
Toluene	0.00500	0.00600	120	79.0-120	
1,1,1-Trichloroethane	0.00500	0.00571	114	73.0-124	
1,1,2-Trichloroethane	0.00500	0.00572	114	80.0-120	
Trichloroethene	0.00500	0.00603	121	78.0-124	
1,2,4-Trimethylbenzene	0.00500	0.00576	115	76.0-121	
1,3,5-Trimethylbenzene	0.00500	0.00584	117	76.0-122	
Vinyl chloride	0.00500	0.00481	96.2	67.0-131	
Xylenes, Total	0.0150	0.0178	119	79.0-123	
(S) Toluene-d8			*99.4*	*80.0-120*	
(S) 4-Bromofluorobenzene			*99.1*	*77.0-126*	
(S) 1,2-Dichloroethane-d4			*93.3*	*70.0-130*	

L1663622-23 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1663622-23 10/10/23 03:45 • (MS) R3986840-3 10/10/23 04:44 • (MSD) R3986840-4 10/10/23 05:04

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 %
Acetone	0.0250	U	0.0265	0.0274	106	110	1	10.0-160			3.34	35
Benzene	0.00500	0.000281	0.00604	0.00602	115	115	1	17.0-158			0.332	27
Bromodichloromethane	0.00500	U	0.00612	0.00584	122	117	1	31.0-150			4.68	27
Bromoform	0.00500	U	0.00592	0.00589	118	118	1	29.0-150			0.508	29
Bromomethane	0.00500	U	0.00575	0.00543	115	109	1	10.0-160			5.72	38
n-Butylbenzene	0.00500	U	0.00532	0.00600	106	120	1	31.0-150			12.0	30
sec-Butylbenzene	0.00500	U	0.00588	0.00599	118	120	1	33.0-155			1.85	29
tert-Butylbenzene	0.00500	0.000134	0.00599	0.00605	117	118	1	34.0-153			0.997	28

Received by OCD: 4/15/2024 1:46:20 PM

L1663622-23 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1663622-23 10/10/23 03:45 • (MS) R3986840-3 10/10/23 04:44 • (MSD) R3986840-4 10/10/23 05:04

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 %
Carbon disulfide	0.00500	U	0.00453	0.00426	90.6	85.2	1	10.0-156			6.14	28
Carbon tetrachloride	0.00500	U	0.00658	0.00654	132	131	1	23.0-159			0.610	28
Chlorobenzene	0.00500	U	0.00601	0.00604	120	121	1	33.0-152			0.498	27
Chlorodibromomethane	0.00500	U	0.00591	0.00607	118	121	1	37.0-149			2.67	27
Chloroethane	0.00500	U	0.00588	0.00560	118	112	1	10.0-160			4.88	30
Chloroform	0.00500	U	0.00627	0.00614	125	123	1	29.0-154			2.10	28
Chloromethane	0.00500	U	0.00439	0.00438	87.8	87.6	1	10.0-160			0.228	29
1,2-Dibromoethane	0.00500	U	0.00551	0.00545	110	109	1	34.0-147			1.09	27
1,1-Dichloroethane	0.00500	U	0.00564	0.00576	113	115	1	25.0-158			2.11	27
1,2-Dichloroethane	0.00500	U	0.00563	0.00584	113	117	1	29.0-151			3.66	27
1,1-Dichloroethene	0.00500	U	0.00573	0.00573	115	115	1	11.0-160			0.000	29
cis-1,2-Dichloroethene	0.00500	U	0.00611	0.00597	122	119	1	10.0-160			2.32	27
trans-1,2-Dichloroethene	0.00500	U	0.00567	0.00573	113	115	1	17.0-153			1.05	27
1,2-Dichloropropane	0.00500	U	0.00571	0.00577	114	115	1	30.0-156			1.05	27
cis-1,3-Dichloropropene	0.00500	U	0.00527	0.00525	105	105	1	34.0-149			0.380	28
trans-1,3-Dichloropropene	0.00500	U	0.00542	0.00516	108	103	1	32.0-149			4.91	28
Ethylbenzene	0.00500	U	0.00605	0.00602	121	120	1	30.0-155			0.497	27
Hexachloro-1,3-butadiene	0.00500	U	0.00586	0.00626	117	125	1	20.0-154			6.60	34
2-Hexanone	0.0250	U	0.0276	0.0272	110	109	1	21.0-160			1.46	29
Isopropylbenzene	0.00500	U	0.00617	0.00629	123	126	1	28.0-157			1.93	27
p-Isopropyltoluene	0.00500	U	0.00563	0.00579	113	116	1	30.0-154			2.80	29
2-Butanone (MEK)	0.0250	U	0.0265	0.0260	106	104	1	10.0-160			1.90	32
Methylene Chloride	0.00500	U	0.00595	0.00567	119	113	1	23.0-144			4.82	28
4-Methyl-2-pentanone (MIBK)	0.0250	U	0.0286	0.0286	114	114	1	29.0-160			0.000	29
Methyl tert-butyl ether	0.00500	U	0.00585	0.00596	117	119	1	28.0-150			1.86	29
Naphthalene	0.00500	U	0.00522	0.00546	104	109	1	12.0-156			4.49	35
n-Propylbenzene	0.00500	U	0.00570	0.00589	114	118	1	31.0-154			3.28	28
Styrene	0.00500	U	0.00590	0.00606	118	121	1	33.0-155			2.68	28
1,1,2,2-Tetrachloroethane	0.00500	U	0.00558	0.00578	112	116	1	33.0-150			3.52	28
Tetrachloroethene	0.00500	U	0.00614	0.00619	123	124	1	10.0-160			0.811	27
Toluene	0.00500	U	0.00574	0.00581	115	116	1	26.0-154			1.21	28
1,1,1-Trichloroethane	0.00500	U	0.00650	0.00652	130	130	1	23.0-160			0.307	28
1,1,2-Trichloroethane	0.00500	U	0.00608	0.00586	122	117	1	35.0-147			3.69	27
Trichloroethene	0.00500	U	0.00579	0.00587	116	117	1	10.0-160			1.37	25
1,2,4-Trimethylbenzene	0.00500	U	0.00558	0.00577	112	115	1	26.0-154			3.35	27
1,3,5-Trimethylbenzene	0.00500	U	0.00560	0.00555	112	111	1	28.0-153			0.897	27
Vinyl chloride	0.00500	U	0.00560	0.00531	112	106	1	10.0-160			5.32	27
Xylenes, Total	0.0150	U	0.0175	0.0175	117	117	1	29.0-154			0.000	28
(S) Toluene-d8					*96.3*	*96.3*		*80.0-120*				
(S) 4-Bromofluorobenzene					*99.1*	*99.0*		*77.0-126*				

Released to Imaging: 4/26/2024 10:49:21 AM

Received by OCD: 4/15/2024 1:46:20 PM

L1663622-23 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1663622-23 10/10/23 03:45 • (MS) R3986840-3 10/10/23 04:44 • (MSD) R3986840-4 10/10/23 05:04

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 %
(S) 1,2-Dichloroethane-d4					*95.3*	*95.9*		*70.0-130*				

Released to Imaging: 4/26/2024 10:49:21 AM

Method Blank (MB)

(MB) R3984295-3 10/09/23 20:23

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0113	0.0500
Benzene	U		0.0000941	0.00100
Bromodichloromethane	U		0.000136	0.00100
Bromoform	U		0.000129	0.00100
Bromomethane	U		0.000605	0.00500
n-Butylbenzene	U		0.000157	0.00100
sec-Butylbenzene	U		0.000125	0.00100
tert-Butylbenzene	U		0.000127	0.00100
Carbon disulfide	U		0.0000962	0.00100
Carbon tetrachloride	U		0.000128	0.00100
Chlorobenzene	U		0.000116	0.00100
Chlorodibromomethane	U		0.000140	0.00100
Chloroethane	U		0.000192	0.00500
Chloroform	U		0.000111	0.00500
Chloromethane	U		0.000960	0.00250
1,2-Dibromoethane	U		0.000126	0.00100
1,1-Dichloroethane	U		0.000100	0.00100
1,2-Dichloroethane	U		0.0000819	0.00100
1,1-Dichloroethene	U		0.000188	0.00100
cis-1,2-Dichloroethene	U		0.000126	0.00100
trans-1,2-Dichloroethene	U		0.000149	0.00100
1,2-Dichloropropane	U		0.000149	0.00100
cis-1,3-Dichloropropene	U		0.000111	0.00100
trans-1,3-Dichloropropene	U		0.000118	0.00100
Ethylbenzene	U		0.000137	0.00100
Hexachloro-1,3-butadiene	U		0.000337	0.00100
2-Hexanone	U		0.000787	0.0100
Isopropylbenzene	U		0.000105	0.00100
p-Isopropyltoluene	U		0.000120	0.00100
2-Butanone (MEK)	U		0.00119	0.0100
Methylene Chloride	U		0.000430	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100
Methyl tert-butyl ether	U		0.000101	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.0000993	0.00100
Styrene	U		0.000118	0.00100
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100
Tetrachloroethene	U		0.000300	0.00100
Toluene	U		0.000278	0.00100
1,1,1-Trichloroethane	U		0.000149	0.00100

Method Blank (MB)

(MB) R3984295-3 10/09/23 20:23

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,1,2-Trichloroethane	U		0.000158	0.00100
Trichloroethene	U		0.000190	0.00100
1,2,4-Trimethylbenzene	U		0.000322	0.00100
1,3,5-Trimethylbenzene	U		0.000104	0.00100
Vinyl chloride	U		0.000234	0.00100
Xylenes, Total	U		0.000174	0.00300
(S) Toluene-d8	*114*			*80.0-120*
(S) 4-Bromofluorobenzene	*92.1*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*97.6*			*70.0-130*

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

(LCS) R3984295-1 10/09/23 19:26 • (LCSD) R3984295-2 10/09/23 19:45

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 %
Acetone	0.0250	0.0253	0.0244	101	97.6	19.0-160			3.62	27
Benzene	0.00500	0.00435	0.00414	87.0	82.8	70.0-123			4.95	20
Bromodichloromethane	0.00500	0.00470	0.00464	94.0	92.8	75.0-120			1.28	20
Bromoform	0.00500	0.00612	0.00592	122	118	68.0-132			3.32	20
Bromomethane	0.00500	0.00439	0.00411	87.8	82.2	10.0-160			6.59	25
n-Butylbenzene	0.00500	0.00506	0.00456	101	91.2	73.0-125			10.4	20
sec-Butylbenzene	0.00500	0.00524	0.00482	105	96.4	75.0-125			8.35	20
tert-Butylbenzene	0.00500	0.00526	0.00481	105	96.2	76.0-124			8.94	20
Carbon disulfide	0.00500	0.00451	0.00419	90.2	83.8	61.0-128			7.36	20
Carbon tetrachloride	0.00500	0.00511	0.00455	102	91.0	68.0-126			11.6	20
Chlorobenzene	0.00500	0.00537	0.00519	107	104	80.0-121			3.41	20
Chlorodibromomethane	0.00500	0.00576	0.00555	115	111	77.0-125			3.71	20
Chloroethane	0.00500	0.00409	0.00359	81.8	71.8	47.0-150			13.0	20
Chloroform	0.00500	0.00475	0.00447	95.0	89.4	73.0-120			6.07	20
Chloromethane	0.00500	0.00740	0.00703	148	141	41.0-142	J4		5.13	20
1,2-Dibromoethane	0.00500	0.00530	0.00520	106	104	80.0-122			1.90	20
1,1-Dichloroethane	0.00500	0.00488	0.00466	97.6	93.2	70.0-126			4.61	20
1,2-Dichloroethane	0.00500	0.00447	0.00459	89.4	91.8	70.0-128			2.65	20
1,1-Dichloroethene	0.00500	0.00488	0.00442	97.6	88.4	71.0-124			9.89	20
cis-1,2-Dichloroethene	0.00500	0.00447	0.00430	89.4	86.0	73.0-120			3.88	20
trans-1,2-Dichloroethene	0.00500	0.00473	0.00428	94.6	85.6	73.0-120			9.99	20
1,2-Dichloropropane	0.00500	0.00497	0.00465	99.4	93.0	77.0-125			6.65	20
cis-1,3-Dichloropropene	0.00500	0.00425	0.00412	85.0	82.4	80.0-123			3.11	20
trans-1,3-Dichloropropene	0.00500	0.00486	0.00488	97.2	97.6	78.0-124			0.411	20

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

(LCS) R3984295-1 10/09/23 19:26 • (LCSD) R3984295-2 10/09/23 19:45

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 %
Ethylbenzene	0.00500	0.00497	0.00469	99.4	93.8	79.0-123			5.80	20
Hexachloro-1,3-butadiene	0.00500	0.00748	0.00640	150	128	54.0-138	J4		15.6	20
2-Hexanone	0.0250	0.0265	0.0263	106	105	67.0-149			0.758	20
Isopropylbenzene	0.00500	0.00492	0.00465	98.4	93.0	76.0-127			5.64	20
p-Isopropyltoluene	0.00500	0.00530	0.00484	106	96.8	76.0-125			9.07	20
2-Butanone (MEK)	0.0250	0.0237	0.0236	94.8	94.4	44.0-160			0.423	20
Methylene Chloride	0.00500	0.00455	0.00439	91.0	87.8	67.0-120			3.58	20
4-Methyl-2-pentanone (MIBK)	0.0250	0.0300	0.0297	120	119	68.0-142			1.01	20
Methyl tert-butyl ether	0.00500	0.00385	0.00397	77.0	79.4	68.0-125			3.07	20
Naphthalene	0.00500	0.00417	0.00354	83.4	70.8	54.0-135			16.3	20
n-Propylbenzene	0.00500	0.00496	0.00462	99.2	92.4	77.0-124			7.10	20
Styrene	0.00500	0.00461	0.00453	92.2	90.6	73.0-130			1.75	20
1,1,2,2-Tetrachloroethane	0.00500	0.00548	0.00528	110	106	65.0-130			3.72	20
Tetrachloroethene	0.00500	0.00607	0.00589	121	118	72.0-132			3.01	20
Toluene	0.00500	0.00507	0.00491	101	98.2	79.0-120			3.21	20
1,1,1-Trichloroethane	0.00500	0.00498	0.00435	99.6	87.0	73.0-124			13.5	20
1,1,2-Trichloroethane	0.00500	0.00549	0.00521	110	104	80.0-120			5.23	20
Trichloroethene	0.00500	0.00457	0.00436	91.4	87.2	78.0-124			4.70	20
1,2,4-Trimethylbenzene	0.00500	0.00482	0.00448	96.4	89.6	76.0-121			7.31	20
1,3,5-Trimethylbenzene	0.00500	0.00508	0.00473	102	94.6	76.0-122			7.14	20
Vinyl chloride	0.00500	0.00537	0.00497	107	99.4	67.0-131			7.74	20
Xylenes, Total	0.0150	0.0148	0.0141	98.7	94.0	79.0-123			4.84	20
(S) Toluene-d8				*113*	*113*	*80.0-120*				
(S) 4-Bromofluorobenzene				*92.3*	*95.3*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*98.4*	*98.1*	*70.0-130*				

Method Blank (MB)

(MB) R3984779-3 10/09/23 22:51

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acetone	U		0.0113	0.0500
Benzene	U		0.0000941	0.00100
Bromodichloromethane	U		0.000136	0.00100
Bromoform	U		0.000129	0.00100
Bromomethane	U		0.000605	0.00500
n-Butylbenzene	U		0.000157	0.00100
sec-Butylbenzene	U		0.000125	0.00100
tert-Butylbenzene	U		0.000127	0.00100
Carbon disulfide	U		0.0000962	0.00100
Carbon tetrachloride	U		0.000128	0.00100
Chlorobenzene	U		0.000116	0.00100
Chlorodibromomethane	U		0.000140	0.00100
Chloroethane	U		0.000192	0.00500
Chloroform	U		0.000111	0.00500
Chloromethane	U		0.000960	0.00250
1,2-Dibromoethane	U		0.000126	0.00100
1,1-Dichloroethane	U		0.000100	0.00100
1,2-Dichloroethane	U		0.0000819	0.00100
1,1-Dichloroethene	U		0.000188	0.00100
cis-1,2-Dichloroethene	U		0.000126	0.00100
trans-1,2-Dichloroethene	U		0.000149	0.00100
1,2-Dichloropropane	U		0.000149	0.00100
cis-1,3-Dichloropropene	U		0.000111	0.00100
trans-1,3-Dichloropropene	U		0.000118	0.00100
Ethylbenzene	U		0.000137	0.00100
Hexachloro-1,3-butadiene	U		0.000337	0.00100
2-Hexanone	U		0.000787	0.0100
Isopropylbenzene	U		0.000105	0.00100
p-Isopropyltoluene	U		0.000120	0.00100
2-Butanone (MEK)	U		0.00119	0.0100
Methylene Chloride	U		0.000430	0.00500
4-Methyl-2-pentanone (MIBK)	U		0.000478	0.0100
Methyl tert-butyl ether	U		0.000101	0.00100
Naphthalene	U		0.00100	0.00500
n-Propylbenzene	U		0.0000993	0.00100
Styrene	U		0.000118	0.00100
1,1,2,2-Tetrachloroethane	U		0.000133	0.00100
Tetrachloroethene	U		0.000300	0.00100
Toluene	U		0.000278	0.00100
1,1,1-Trichloroethane	U		0.000149	0.00100

Method Blank (MB)

(MB) R3984779-3 10/09/23 22:51

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
1,1,2-Trichloroethane	U		0.000158	0.00100
Trichloroethene	U		0.000190	0.00100
1,2,4-Trimethylbenzene	U		0.000322	0.00100
1,3,5-Trimethylbenzene	U		0.000104	0.00100
Vinyl chloride	U		0.000234	0.00100
Xylenes, Total	U		0.000174	0.00300
(S) Toluene-d8	*91.4*			*80.0-120*
(S) 4-Bromofluorobenzene	*99.4*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*

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

(LCS) R3984779-1 10/09/23 21:46 • (LCSD) R3984779-2 10/09/23 22:07

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 %
Acetone	0.0250	0.0450	0.0489	180	196	19.0-160	J4	J4	8.31	27
Benzene	0.00500	0.00541	0.00547	108	109	70.0-123			1.10	20
Bromodichloromethane	0.00500	0.00571	0.00573	114	115	75.0-120			0.350	20
Bromoform	0.00500	0.00451	0.00462	90.2	92.4	68.0-132			2.41	20
Bromomethane	0.00500	0.00481	0.00512	96.2	102	10.0-160			6.24	25
n-Butylbenzene	0.00500	0.00394	0.00401	78.8	80.2	73.0-125			1.76	20
sec-Butylbenzene	0.00500	0.00441	0.00446	88.2	89.2	75.0-125			1.13	20
tert-Butylbenzene	0.00500	0.00416	0.00428	83.2	85.6	76.0-124			2.84	20
Carbon disulfide	0.00500	0.00479	0.00504	95.8	101	61.0-128			5.09	20
Carbon tetrachloride	0.00500	0.00538	0.00587	108	117	68.0-126			8.71	20
Chlorobenzene	0.00500	0.00461	0.00480	92.2	96.0	80.0-121			4.04	20
Chlorodibromomethane	0.00500	0.00465	0.00489	93.0	97.8	77.0-125			5.03	20
Chloroethane	0.00500	0.00478	0.00533	95.6	107	47.0-150			10.9	20
Chloroform	0.00500	0.00563	0.00586	113	117	73.0-120			4.00	20
Chloromethane	0.00500	0.00632	0.00687	126	137	41.0-142			8.34	20
1,2-Dibromoethane	0.00500	0.00464	0.00456	92.8	91.2	80.0-122			1.74	20
1,1-Dichloroethane	0.00500	0.00529	0.00570	106	114	70.0-126			7.46	20
1,2-Dichloroethane	0.00500	0.00607	0.00641	121	128	70.0-128			5.45	20
1,1-Dichloroethene	0.00500	0.00487	0.00536	97.4	107	71.0-124			9.58	20
cis-1,2-Dichloroethene	0.00500	0.00524	0.00560	105	112	73.0-120			6.64	20
trans-1,2-Dichloroethene	0.00500	0.00519	0.00542	104	108	73.0-120			4.34	20
1,2-Dichloropropane	0.00500	0.00535	0.00558	107	112	77.0-125			4.21	20
cis-1,3-Dichloropropene	0.00500	0.00521	0.00550	104	110	80.0-123			5.42	20
trans-1,3-Dichloropropene	0.00500	0.00464	0.00473	92.8	94.6	78.0-124			1.92	20

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

(LCS) R3984779-1 10/09/23 21:46 • (LCSD) R3984779-2 10/09/23 22:07

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 %
Ethylbenzene	0.00500	0.00458	0.00459	91.6	91.8	79.0-123			0.218	20
Hexachloro-1,3-butadiene	0.00500	0.00487	0.00430	97.4	86.0	54.0-138			12.4	20
2-Hexanone	0.0250	0.0250	0.0248	100	99.2	67.0-149			0.803	20
Isopropylbenzene	0.00500	0.00451	0.00473	90.2	94.6	76.0-127			4.76	20
p-Isopropyltoluene	0.00500	0.00434	0.00458	86.8	91.6	76.0-125			5.38	20
2-Butanone (MEK)	0.0250	0.0353	0.0366	141	146	44.0-160			3.62	20
Methylene Chloride	0.00500	0.00473	0.00503	94.6	101	67.0-120			6.15	20
4-Methyl-2-pentanone (MIBK)	0.0250	0.0280	0.0280	112	112	68.0-142			0.000	20
Methyl tert-butyl ether	0.00500	0.00527	0.00554	105	111	68.0-125			5.00	20
Naphthalene	0.00500	0.00300	0.00316	60.0	63.2	54.0-135			5.19	20
n-Propylbenzene	0.00500	0.00437	0.00462	87.4	92.4	77.0-124			5.56	20
Styrene	0.00500	0.00421	0.00446	84.2	89.2	73.0-130			5.77	20
1,1,2,2-Tetrachloroethane	0.00500	0.00477	0.00489	95.4	97.8	65.0-130			2.48	20
Tetrachloroethene	0.00500	0.00443	0.00507	88.6	101	72.0-132			13.5	20
Toluene	0.00500	0.00435	0.00469	87.0	93.8	79.0-120			7.52	20
1,1,1-Trichloroethane	0.00500	0.00571	0.00588	114	118	73.0-124			2.93	20
1,1,2-Trichloroethane	0.00500	0.00459	0.00504	91.8	101	80.0-120			9.35	20
Trichloroethene	0.00500	0.00500	0.00513	100	103	78.0-124			2.57	20
1,2,4-Trimethylbenzene	0.00500	0.00434	0.00437	86.8	87.4	76.0-121			0.689	20
1,3,5-Trimethylbenzene	0.00500	0.00445	0.00465	89.0	93.0	76.0-122			4.40	20
Vinyl chloride	0.00500	0.00506	0.00532	101	106	67.0-131			5.01	20
Xylenes, Total	0.0150	0.0137	0.0145	91.3	96.7	79.0-123			5.67	20
(S) Toluene-d8				*90.3*	*91.8*	*80.0-120*				
(S) 4-Bromofluorobenzene				*100*	*101*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*109*	*108*	*70.0-130*				

Method Blank (MB)

(MB) R3986643-3 10/15/23 07:56

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	*103*			*31.0-160*

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

(LCS) R3986643-2 10/15/23 07:35 • (LCSD) R3986643-1 10/15/23 07:15

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	1.58	1.64	105	109	50.0-150			3.73	20
(S) o-Terphenyl				*107*	*103*	*31.0-160*				

Method Blank (MB)

(MB) R3985218-2 10/11/23 21:42

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acenaphthene	U		0.0000886	0.00100
Acenaphthylene	U		0.0000921	0.00100
Acetophenone	U		0.000208	0.0100
Anthracene	U		0.0000804	0.00100
Atrazine	U		0.000255	0.0100
Benzo(a)anthracene	U		0.000199	0.00100
Benzaldehyde	U		0.00169	0.0100
Benzo(b)fluoranthene	U		0.000130	0.00100
Benzo(k)fluoranthene	U		0.000120	0.00100
Benzo(g,h,i)perylene	U		0.000121	0.00100
Benzo(a)pyrene	U		0.0000381	0.000200
Biphenyl	U		0.000790	0.0100
Bis(2-chlorethoxy)methane	U		0.000116	0.0100
Bis(2-chloroethyl)ether	U		0.000137	0.0100
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100
4-Bromophenyl-phenylether	U		0.0000877	0.0100
2-Chloronaphthalene	U		0.0000648	0.00100
4-Chlorophenyl-phenylether	U		0.0000926	0.0100
Caprolactam	U		0.000309	0.0100
Carbazole	U		0.000111	0.0100
Chrysene	U		0.000130	0.00100
Dibenz(a,h)anthracene	U		0.0000644	0.000200
Dibenzofuran	U		0.0000970	0.0100
3,3-Dichlorobenzidine	U		0.000212	0.0100
2,4-Dinitrotoluene	U		0.0000983	0.0100
2,6-Dinitrotoluene	U		0.000250	0.0100
Fluoranthene	U		0.000102	0.00100
Fluorene	U		0.0000844	0.00100
Hexachlorobenzene	U		0.0000755	0.00100
Hexachloro-1,3-butadiene	U		0.0000968	0.0100
Hexachlorocyclopentadiene	U		0.0000598	0.0100
Hexachloroethane	U		0.000127	0.0100
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100
Isophorone	U		0.000143	0.0100
1-Methylnaphthalene	U		0.0000790	0.00100
2-Methylnaphthalene	U		0.000117	0.00100
Naphthalene	U		0.000159	0.00100
Nitrobenzene	U		0.000297	0.0100
n-Nitrosodiphenylamine	U		0.00237	0.0100
n-Nitrosodi-n-propylamine	U		0.000261	0.0100

Method Blank (MB)

(MB) R3985218-2 10/11/23 21:42

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Phenanthrene	U		0.000112	0.00100
Benzylbutyl phthalate	U		0.000765	0.00300
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300
Di-n-butyl phthalate	U		0.000453	0.00300
Diethyl phthalate	U		0.000287	0.00300
Dimethyl phthalate	U		0.000260	0.00300
Di-n-octyl phthalate	U		0.000932	0.00300
Pyrene	U		0.000107	0.00100
1,2,4-Trichlorobenzene	U		0.0000698	0.0100
4-Chloro-3-methylphenol	U		0.000131	0.0100
2-Chlorophenol	U		0.000133	0.0100
2,4-Dichlorophenol	U		0.000102	0.0100
2,4-Dimethylphenol	U		0.0000636	0.0100
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100
2,4-Dinitrophenol	U		0.00593	0.0100
2-Nitrophenol	U		0.000117	0.0100
2-Nitroaniline	U		0.000102	0.0100
2-Methylphenol	U		0.0000929	0.0100
3&4-Methyl Phenol	U		0.000168	0.0100
3-Nitroaniline	U		0.0000869	0.0100
4-Chloroaniline	U		0.000234	0.0100
4-Nitroaniline	U		0.0000910	0.0100
4-Nitrophenol	U		0.000143	0.0100
Pentachlorophenol	U		0.000313	0.0100
Phenol	U		0.00433	0.0100
2,4,5-Trichlorophenol	U		0.000109	0.0100
2,4,6-Trichlorophenol	U		0.000100	0.0100
(S) 2-Fluorophenol	*34.9*			*10.0-120*
(S) Phenol-d5	*21.7*			*10.0-120*
(S) Nitrobenzene-d5	*79.7*			*10.0-127*
(S) 2-Fluorobiphenyl	*76.3*			*10.0-130*
(S) 2,4,6-Tribromophenol	*65.0*			*10.0-155*
(S) p-Terphenyl-d14	*88.1*			*10.0-128*

Laboratory Control Sample (LCS)

(LCS) R3985218-1 10/11/23 21:21

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0500	0.0319	63.8	41.0-120	
Acenaphthylene	0.0500	0.0327	65.4	43.0-120	
Acetophenone	0.0500	0.0333	66.6	29.0-120	
Anthracene	0.0500	0.0376	75.2	45.0-120	
Atrazine	0.0500	0.0335	67.0	39.0-141	
Benzo(a)anthracene	0.0500	0.0433	86.6	47.0-120	
Benzaldehyde	0.0500	0.0819	164	10.0-160	J4
Benzo(b)fluoranthene	0.0500	0.0424	84.8	46.0-120	
Benzo(k)fluoranthene	0.0500	0.0415	83.0	46.0-120	
Benzo(g,h,i)perylene	0.0500	0.0376	75.2	48.0-121	
Benzo(a)pyrene	0.0500	0.0414	82.8	47.0-120	
Biphenyl	0.0500	0.0332	66.4	38.0-120	
Bis(2-chlorethoxy)methane	0.0500	0.0294	58.8	33.0-120	
Bis(2-chloroethyl)ether	0.0500	0.0352	70.4	23.0-120	
2,2-Oxybis(1-Chloropropane)	0.0500	0.0306	61.2	28.0-120	
4-Bromophenyl-phenylether	0.0500	0.0402	80.4	45.0-120	
2-Chloronaphthalene	0.0500	0.0325	65.0	37.0-120	
4-Chlorophenyl-phenylether	0.0500	0.0326	65.2	44.0-120	
Caprolactam	0.0500	0.00774	15.5	10.0-120	
Carbazole	0.0500	0.0398	79.6	51.0-122	
Chrysene	0.0500	0.0420	84.0	48.0-120	
Dibenz(a,h)anthracene	0.0500	0.0395	79.0	47.0-120	
Dibenzofuran	0.0500	0.0319	63.8	44.0-120	
3,3-Dichlorobenzidine	0.100	0.0905	90.5	44.0-120	
2,4-Dinitrotoluene	0.0500	0.0352	70.4	49.0-124	
2,6-Dinitrotoluene	0.0500	0.0345	69.0	46.0-120	
Fluoranthene	0.0500	0.0390	78.0	51.0-120	
Fluorene	0.0500	0.0315	63.0	47.0-120	
Hexachlorobenzene	0.0500	0.0398	79.6	44.0-120	
Hexachloro-1,3-butadiene	0.0500	0.0267	53.4	19.0-120	
Hexachlorocyclopentadiene	0.0500	0.0241	48.2	15.0-120	
Hexachloroethane	0.0500	0.0314	62.8	15.0-120	
Indeno(1,2,3-cd)pyrene	0.0500	0.0373	74.6	49.0-122	
Isophorone	0.0500	0.0273	54.6	36.0-120	
1-Methylnaphthalene	0.0500	0.0265	53.0	33.0-120	
2-Methylnaphthalene	0.0500	0.0251	50.2	33.0-120	
Naphthalene	0.0500	0.0267	53.4	27.0-120	
Nitrobenzene	0.0500	0.0304	60.8	27.0-120	
n-Nitrosodiphenylamine	0.0500	0.0391	78.2	47.0-120	
n-Nitrosodi-n-propylamine	0.0500	0.0322	64.4	31.0-120	

Laboratory Control Sample (LCS)

(LCS) R3985218-1 10/11/23 21:21

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Phenanthrene	0.0500	0.0382	76.4	46.0-120	
Benzylbutyl phthalate	0.0500	0.0499	99.8	43.0-121	
Bis(2-ethylhexyl)phthalate	0.0500	0.0430	86.0	43.0-122	
Di-n-butyl phthalate	0.0500	0.0443	88.6	49.0-121	
Diethyl phthalate	0.0500	0.0357	71.4	48.0-122	
Dimethyl phthalate	0.0500	0.0349	69.8	48.0-120	
Di-n-octyl phthalate	0.0500	0.0441	88.2	42.0-125	
Pyrene	0.0500	0.0418	83.6	47.0-120	
1,2,4-Trichlorobenzene	0.0500	0.0247	49.4	24.0-120	
4-Chloro-3-methylphenol	0.0500	0.0194	38.8	40.0-120	J4
2-Chlorophenol	0.0500	0.0225	45.0	25.0-120	
2,4-Dichlorophenol	0.0500	0.0217	43.4	36.0-120	
2,4-Dimethylphenol	0.0500	0.0230	46.0	33.0-120	
4,6-Dinitro-2-methylphenol	0.0500	0.0408	81.6	38.0-138	
2,4-Dinitrophenol	0.0500	0.0348	69.6	10.0-120	
2-Nitrophenol	0.0500	0.0292	58.4	31.0-120	
2-Nitroaniline	0.0500	0.0364	72.8	43.0-120	
2-Methylphenol	0.0500	0.0195	39.0	28.0-120	
3&4-Methyl Phenol	0.0500	0.0187	37.4	31.0-120	
3-Nitroaniline	0.0500	0.0327	65.4	38.0-120	
4-Chloroaniline	0.0500	0.0227	45.4	25.0-120	
4-Nitroaniline	0.0500	0.0302	60.4	18.0-160	
4-Nitrophenol	0.0500	0.00774	15.5	10.0-120	
Pentachlorophenol	0.0500	0.0286	57.2	23.0-120	
Phenol	0.0500	0.0106	21.2	10.0-120	
2,4,5-Trichlorophenol	0.0500	0.0296	59.2	44.0-120	
2,4,6-Trichlorophenol	0.0500	0.0304	60.8	42.0-120	
(S) 2-Fluorophenol			*29.3*	*10.0-120*	
(S) Phenol-d5			*20.1*	*10.0-120*	
(S) Nitrobenzene-d5			*59.0*	*10.0-127*	
(S) 2-Fluorobiphenyl			*63.6*	*10.0-130*	
(S) 2,4,6-Tribromophenol			*68.5*	*10.0-155*	
(S) p-Terphenyl-d14			*83.6*	*10.0-128*	

Method Blank (MB)

(MB) R3986579-2 10/12/23 11:55

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acenaphthene	U		0.0000886	0.00100
Acenaphthylene	U		0.0000921	0.00100
Acetophenone	U		0.000208	0.0100
Anthracene	U		0.0000804	0.00100
Atrazine	U		0.000255	0.0100
Benzo(a)anthracene	U		0.000199	0.00100
Benzaldehyde	U		0.00169	0.0100
Benzo(b)fluoranthene	U		0.000130	0.00100
Benzo(k)fluoranthene	U		0.000120	0.00100
Benzo(g,h,i)perylene	U		0.000121	0.00100
Benzo(a)pyrene	U		0.0000381	0.000200
Biphenyl	U		0.000790	0.0100
Bis(2-chlorethoxy)methane	U		0.000116	0.0100
Bis(2-chloroethyl)ether	U		0.000137	0.0100
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100
4-Bromophenyl-phenylether	U		0.0000877	0.0100
2-Chloronaphthalene	U		0.0000648	0.00100
4-Chlorophenyl-phenylether	U		0.0000926	0.0100
Caprolactam	U		0.000309	0.0100
Carbazole	U		0.000111	0.0100
Chrysene	U		0.000130	0.00100
Dibenz(a,h)anthracene	U		0.0000644	0.000200
Dibenzofuran	U		0.0000970	0.0100
3,3-Dichlorobenzidine	U		0.000212	0.0100
2,4-Dinitrotoluene	U		0.0000983	0.0100
2,6-Dinitrotoluene	U		0.000250	0.0100
Fluoranthene	U		0.000102	0.00100
Fluorene	U		0.0000844	0.00100
Hexachlorobenzene	U		0.0000755	0.00100
Hexachloro-1,3-butadiene	U		0.0000968	0.0100
Hexachlorocyclopentadiene	U		0.0000598	0.0100
Hexachloroethane	U		0.000127	0.0100
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100
Isophorone	U		0.000143	0.0100
1-Methylnaphthalene	U		0.0000790	0.00100
2-Methylnaphthalene	U		0.000117	0.00100
Naphthalene	U		0.000159	0.00100
Nitrobenzene	U		0.000297	0.0100
n-Nitrosodiphenylamine	U		0.00237	0.0100
n-Nitrosodi-n-propylamine	U		0.000261	0.0100

Method Blank (MB)

(MB) R3986579-2 10/12/23 11:55

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Phenanthrene	U		0.000112	0.00100
Benzylbutyl phthalate	U		0.000765	0.00300
Bis(2-ethylhexyl)phthalate	U		0.000895	0.00300
Di-n-butyl phthalate	U		0.000453	0.00300
Diethyl phthalate	U		0.000287	0.00300
Dimethyl phthalate	U		0.000260	0.00300
Di-n-octyl phthalate	U		0.000932	0.00300
Pyrene	U		0.000107	0.00100
1,2,4-Trichlorobenzene	U		0.0000698	0.0100
4-Chloro-3-methylphenol	U		0.000131	0.0100
2-Chlorophenol	U		0.000133	0.0100
2,4-Dichlorophenol	U		0.000102	0.0100
2,4-Dimethylphenol	U		0.0000636	0.0100
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100
2,4-Dinitrophenol	U		0.00593	0.0100
2-Nitrophenol	U		0.000117	0.0100
2-Nitroaniline	U		0.000102	0.0100
2-Methylphenol	U		0.0000929	0.0100
3&4-Methyl Phenol	U		0.000168	0.0100
3-Nitroaniline	U		0.0000869	0.0100
4-Chloroaniline	U		0.000234	0.0100
4-Nitroaniline	U		0.0000910	0.0100
4-Nitrophenol	U		0.000143	0.0100
Pentachlorophenol	U		0.000313	0.0100
Phenol	U		0.00433	0.0100
2,4,5-Trichlorophenol	U		0.000109	0.0100
2,4,6-Trichlorophenol	U		0.000100	0.0100
(S) 2-Fluorophenol	*28.1*			*10.0-120*
(S) Phenol-d5	*18.9*			*10.0-120*
(S) Nitrobenzene-d5	*53.8*			*10.0-127*
(S) 2-Fluorobiphenyl	*55.1*			*10.0-130*
(S) 2,4,6-Tribromophenol	*46.8*			*10.0-155*
(S) p-Terphenyl-d14	*64.9*			*10.0-128*

Laboratory Control Sample (LCS)

(LCS) R3986579-1 10/12/23 11:34

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Acenaphthene	0.0500	0.0307	61.4	41.0-120	
Acenaphthylene	0.0500	0.0296	59.2	43.0-120	
Acetophenone	0.0500	0.0335	67.0	29.0-120	
Anthracene	0.0500	0.0327	65.4	45.0-120	
Atrazine	0.0500	0.0329	65.8	39.0-141	
Benzo(a)anthracene	0.0500	0.0350	70.0	47.0-120	
Benzaldehyde	0.0500	0.0761	152	10.0-160	
Benzo(b)fluoranthene	0.0500	0.0343	68.6	46.0-120	
Benzo(k)fluoranthene	0.0500	0.0339	67.8	46.0-120	
Benzo(g,h,i)perylene	0.0500	0.0292	58.4	48.0-121	
Benzo(a)pyrene	0.0500	0.0327	65.4	47.0-120	
Biphenyl	0.0500	0.0307	61.4	38.0-120	
Bis(2-chlorethoxy)methane	0.0500	0.0285	57.0	33.0-120	
Bis(2-chloroethyl)ether	0.0500	0.0308	61.6	23.0-120	
2,2-Oxybis(1-Chloropropane)	0.0500	0.0295	59.0	28.0-120	
4-Bromophenyl-phenylether	0.0500	0.0350	70.0	45.0-120	
2-Chloronaphthalene	0.0500	0.0293	58.6	37.0-120	
4-Chlorophenyl-phenylether	0.0500	0.0321	64.2	44.0-120	
Caprolactam	0.0500	0.00936	18.7	10.0-120	
Carbazole	0.0500	0.0340	68.0	51.0-122	
Chrysene	0.0500	0.0336	67.2	48.0-120	
Dibenz(a,h)anthracene	0.0500	0.0318	63.6	47.0-120	
Dibenzofuran	0.0500	0.0296	59.2	44.0-120	
3,3-Dichlorobenzidine	0.100	0.0654	65.4	44.0-120	
2,4-Dinitrotoluene	0.0500	0.0340	68.0	49.0-124	
2,6-Dinitrotoluene	0.0500	0.0344	68.8	46.0-120	
Fluoranthene	0.0500	0.0344	68.8	51.0-120	
Fluorene	0.0500	0.0316	63.2	47.0-120	
Hexachlorobenzene	0.0500	0.0333	66.6	44.0-120	
Hexachloro-1,3-butadiene	0.0500	0.0231	46.2	19.0-120	
Hexachlorocyclopentadiene	0.0500	0.0200	40.0	15.0-120	
Hexachloroethane	0.0500	0.0284	56.8	15.0-120	
Indeno(1,2,3-cd)pyrene	0.0500	0.0292	58.4	49.0-122	
Isophorone	0.0500	0.0278	55.6	36.0-120	
1-Methylnaphthalene	0.0500	0.0259	51.8	33.0-120	
2-Methylnaphthalene	0.0500	0.0251	50.2	33.0-120	
Naphthalene	0.0500	0.0249	49.8	27.0-120	
Nitrobenzene	0.0500	0.0278	55.6	27.0-120	
n-Nitrosodiphenylamine	0.0500	0.0314	62.8	47.0-120	
n-Nitrosodi-n-propylamine	0.0500	0.0339	67.8	31.0-120	

Laboratory Control Sample (LCS)

(LCS) R3986579-1 10/12/23 11:34

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Phenanthrene	0.0500	0.0334	66.8	46.0-120	
Benzylbutyl phthalate	0.0500	0.0397	79.4	43.0-121	
Bis(2-ethylhexyl)phthalate	0.0500	0.0359	71.8	43.0-122	
Di-n-butyl phthalate	0.0500	0.0406	81.2	49.0-121	
Diethyl phthalate	0.0500	0.0346	69.2	48.0-122	
Dimethyl phthalate	0.0500	0.0329	65.8	48.0-120	
Di-n-octyl phthalate	0.0500	0.0357	71.4	42.0-125	
Pyrene	0.0500	0.0348	69.6	47.0-120	
1,2,4-Trichlorobenzene	0.0500	0.0217	43.4	24.0-120	
4-Chloro-3-methylphenol	0.0500	0.0234	46.8	40.0-120	
2-Chlorophenol	0.0500	0.0241	48.2	25.0-120	
2,4-Dichlorophenol	0.0500	0.0232	46.4	36.0-120	
2,4-Dimethylphenol	0.0500	0.0251	50.2	33.0-120	
4,6-Dinitro-2-methylphenol	0.0500	0.0385	77.0	38.0-138	
2,4-Dinitrophenol	0.0500	0.0369	73.8	10.0-120	
2-Nitrophenol	0.0500	0.0307	61.4	31.0-120	
2-Nitroaniline	0.0500	0.0332	66.4	43.0-120	
2-Methylphenol	0.0500	0.0219	43.8	28.0-120	
3&4-Methyl Phenol	0.0500	0.0223	44.6	31.0-120	
3-Nitroaniline	0.0500	0.0309	61.8	38.0-120	
4-Chloroaniline	0.0500	0.0222	44.4	25.0-120	
4-Nitroaniline	0.0500	0.0301	60.2	18.0-160	
4-Nitrophenol	0.0500	0.0103	20.6	10.0-120	
Pentachlorophenol	0.0500	0.0252	50.4	23.0-120	
Phenol	0.0500	0.0120	24.0	10.0-120	
2,4,5-Trichlorophenol	0.0500	0.0298	59.6	44.0-120	
2,4,6-Trichlorophenol	0.0500	0.0294	58.8	42.0-120	
(S) 2-Fluorophenol			*29.6*	*10.0-120*	
(S) Phenol-d5			*22.0*	*10.0-120*	
(S) Nitrobenzene-d5			*51.8*	*10.0-127*	
(S) 2-Fluorobiphenyl			*54.6*	*10.0-130*	
(S) 2,4,6-Tribromophenol			*61.5*	*10.0-155*	
(S) p-Terphenyl-d14			*66.9*	*10.0-128*	

Received by OCD: 4/15/2024 1:46:20 PM

L1663622-23 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1663622-23 10/12/23 13:22 • (MS) R3986579-3 10/12/23 13:44 • (MSD) R3986579-4 10/12/23 14:06

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 %
Acenaphthene	0.0455	U	0.0234	0.0266	51.4	55.9	1	28.0-120			12.8	25
Acenaphthylene	0.0455	U	0.0231	0.0257	50.8	54.0	1	31.0-121			10.7	25
Acetophenone	0.0455	U	0.0270	0.0302	59.3	63.4	1	20.0-120			11.2	35
Anthracene	0.0455	U	0.0262	0.0276	57.6	58.0	1	36.0-120			5.20	23
Atrazine	0.0455	U	0.0266	0.0287	58.5	60.3	1	39.0-130			7.59	23
Benzo(a)anthracene	0.0455	U	0.0248	0.0284	54.5	59.7	1	39.0-120			13.5	23
Benzaldehyde	0.0455	U	0.0618	0.0682	136	143	1	10.0-160			9.85	40
Benzo(b)fluoranthene	0.0455	U	0.0222	0.0264	48.8	55.5	1	37.0-120			17.3	23
Benzo(k)fluoranthene	0.0455	U	0.0221	0.0261	48.6	54.8	1	37.0-120			16.6	26
Benzo(g,h,i)perylene	0.0455	U	0.0176	0.0217	38.7	45.6	1	37.0-123			20.9	25
Benzo(a)pyrene	0.0455	U	0.0210	0.0254	46.2	53.4	1	37.0-120			19.0	24
Biphenyl	0.0455	U	0.0235	0.0267	51.6	56.1	1	29.0-120			12.7	33
Bis(2-chlorethoxy)methane	0.0455	U	0.0233	0.0256	51.2	53.8	1	17.0-120			9.41	31
Bis(2-chloroethyl)ether	0.0455	U	0.0275	0.0316	60.4	66.4	1	14.0-120			13.9	33
2,2-Oxybis(1-Chloropropane)	0.0455	U	0.0242	0.0264	53.2	55.5	1	18.0-120			8.70	34
4-Bromophenyl-phenylether	0.0455	U	0.0263	0.0293	57.8	61.6	1	37.0-120			10.8	24
2-Chloronaphthalene	0.0455	U	0.0226	0.0252	49.7	52.9	1	29.0-120			10.9	28
4-Chlorophenyl-phenylether	0.0455	U	0.0242	0.0266	53.2	55.9	1	36.0-120			9.45	23
Caprolactam	0.0455	U	0.00871	0.00890	19.1	18.7	1	10.0-120			2.16	40
Carbazole	0.0455	U	0.0297	0.0293	65.3	61.6	1	38.0-127			1.36	21
Chrysene	0.0455	U	0.0239	0.0273	52.5	57.4	1	38.0-120			13.3	23
Dibenz(a,h)anthracene	0.0455	U	0.0188	0.0235	41.3	49.4	1	36.0-121			22.2	24
Dibenzofuran	0.0455	U	0.0229	0.0259	50.3	54.4	1	32.0-120			12.3	26
3,3-Dichlorobenzidine	0.0910	U	0.0526	0.0561	57.8	58.9	1	10.0-134			6.44	30
2,4-Dinitrotoluene	0.0455	U	0.0276	0.0292	60.7	61.3	1	39.0-125			5.63	25
2,6-Dinitrotoluene	0.0455	U	0.0279	0.0294	61.3	61.8	1	36.0-120			5.24	27
Fluoranthene	0.0455	U	0.0275	0.0285	60.4	59.9	1	41.0-121			3.57	22
Fluorene	0.0455	U	0.0234	0.0261	51.4	54.8	1	37.0-120			10.9	24
Hexachlorobenzene	0.0455	U	0.0253	0.0281	55.6	59.0	1	35.0-122			10.5	24
Hexachloro-1,3-butadiene	0.0455	U	0.0173	0.0196	38.0	41.2	1	12.0-120			12.5	34
Hexachlorocyclopentadiene	0.0455	U	0.0110	0.0176	24.2	37.0	1	10.0-120		J3	46.2	33
Hexachloroethane	0.0455	U	0.0220	0.0242	48.4	50.8	1	10.0-120			9.52	40
Indeno(1,2,3-cd)pyrene	0.0455	U	0.0172	0.0215	37.8	45.2	1	38.0-125	J6		22.2	24
Isophorone	0.0455	U	0.0218	0.0244	47.9	51.3	1	21.0-120			11.3	27
1-Methylnaphthalene	0.0455	U	0.0205	0.0233	45.1	48.9	1	11.0-120			12.8	27
2-Methylnaphthalene	0.0455	U	0.0189	0.0210	41.5	44.1	1	17.0-120			10.5	28
Naphthalene	0.0455	U	0.0192	0.0212	42.2	44.5	1	10.0-120			9.90	31
Nitrobenzene	0.0455	U	0.0226	0.0241	49.7	50.6	1	12.0-120			6.42	30
n-Nitrosodiphenylamine	0.0455	U	0.0260	0.0266	57.1	55.9	1	37.0-120			2.28	24
n-Nitrosodi-n-propylamine	0.0455	U	0.0267	0.0306	58.7	64.3	1	16.0-120			13.6	30

Released to Imaging: 4/26/2024 10:49:21 AM

L1663622-23 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1663622-23 10/12/23 13:22 • (MS) R3986579-3 10/12/23 13:44 • (MSD) R3986579-4 10/12/23 14:06

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 %
Phenanthrene	0.0455	U	0.0261	0.0278	57.4	58.4	1	33.0-120			6.31	22
Benzylbutyl phthalate	0.0455	U	0.0310	0.0343	68.1	72.1	1	34.0-126			10.1	24
Bis(2-ethylhexyl)phthalate	0.0455	U	0.0217	0.0265	47.7	55.7	1	33.0-126			19.9	25
Di-n-butyl phthalate	0.0455	U	0.0322	0.0335	70.8	70.4	1	35.0-128			3.96	23
Diethyl phthalate	0.0455	U	0.0293	0.0301	64.4	63.2	1	39.0-125			2.69	24
Dimethyl phthalate	0.0455	U	0.0261	0.0284	57.4	59.7	1	37.0-120			8.44	24
Di-n-octyl phthalate	0.0455	U	0.0212	0.0260	46.6	54.6	1	25.0-135			20.3	26
Pyrene	0.0455	U	0.0280	0.0301	61.5	63.2	1	39.0-120			7.23	22
1,2,4-Trichlorobenzene	0.0455	U	0.0171	0.0188	37.6	39.5	1	15.0-120			9.47	31
4-Chloro-3-methylphenol	0.0455	U	0.0137	0.0197	30.1	41.4	1	26.0-120		J3	35.9	27
2-Chlorophenol	0.0455	U	0.0150	0.0203	33.0	42.6	1	18.0-120			30.0	34
2,4-Dichlorophenol	0.0455	U	0.0132	0.0187	29.0	39.3	1	19.0-120		J3	34.5	27
2,4-Dimethylphenol	0.0455	U	0.0118	0.0209	25.9	43.9	1	15.0-120		J3	55.7	28
4,6-Dinitro-2-methylphenol	0.0455	U	0.0278	0.0327	61.1	68.7	1	10.0-144			16.2	39
2,4-Dinitrophenol	0.0455	U	0.0255	0.0324	56.0	68.1	1	10.0-120			23.8	40
2-Nitrophenol	0.0455	U	0.0184	0.0242	40.4	50.8	1	20.0-120			27.2	30
2-Nitroaniline	0.0455	U	0.0277	0.0300	60.9	63.0	1	33.0-120			7.97	27
2-Methylphenol	0.0455	U	0.0135	0.0189	29.7	39.7	1	10.0-120		J3	33.3	30
3&4-Methyl Phenol	0.0455	U	0.0141	0.0192	31.0	40.3	1	10.0-120			30.6	36
3-Nitroaniline	0.0455	U	0.0249	0.0282	54.7	59.2	1	20.0-120			12.4	27
4-Chloroaniline	0.0455	U	0.0157	0.0187	34.5	39.3	1	10.0-120			17.4	31
4-Nitroaniline	0.0455	U	0.0234	0.0267	51.4	56.1	1	10.0-160			13.2	26
4-Nitrophenol	0.0455	U	0.00787	0.00836	17.3	17.6	1	10.0-120			6.04	40
Pentachlorophenol	0.0455	U	0.0193	0.0227	42.4	47.7	1	10.0-128			16.2	37
Phenol	0.0455	U	0.0114	0.0106	25.1	22.3	1	10.0-120			7.27	40
2,4,5-Trichlorophenol	0.0455	U	0.0186	0.0256	40.9	53.8	1	33.0-120		J3	31.7	31
2,4,6-Trichlorophenol	0.0455	U	0.0173	0.0243	38.0	51.1	1	26.0-120		J3	33.7	31
(S) 2-Fluorophenol					*23.3*	*27.2*		*10.0-120*				
(S) Phenol-d5					*18.6*	*20.0*		*10.0-120*				
(S) Nitrobenzene-d5					*45.8*	*46.5*		*10.0-127*				
(S) 2-Fluorobiphenyl					*47.3*	*48.6*		*10.0-130*				
(S) 2,4,6-Tribromophenol					*43.7*	*53.2*		*10.0-155*				
(S) p-Terphenyl-d14					*50.8*	*56.9*		*10.0-128*				

Method Blank (MB)

(MB) R3986118-3 10/13/23 10:42

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Acenaphthene	U		0.0000886	0.00100
Acenaphthylene	U		0.0000921	0.00100
Acetophenone	U		0.000208	0.0100
Anthracene	U		0.0000804	0.00100
Atrazine	U		0.000255	0.0100
Benzo(a)anthracene	U		0.000199	0.00100
Benzaldehyde	U		0.00169	0.0100
Benzo(b)fluoranthene	0.000185	J	0.000130	0.00100
Benzo(k)fluoranthene	0.000138	J	0.000120	0.00100
Benzo(g,h,i)perylene	0.000138	J	0.000121	0.00100
Benzo(a)pyrene	U		0.0000381	0.000200
Biphenyl	U		0.000790	0.0100
Bis(2-chlorethoxy)methane	U		0.000116	0.0100
Bis(2-chloroethyl)ether	U		0.000137	0.0100
2,2-Oxybis(1-Chloropropane)	U		0.000210	0.0100
4-Bromophenyl-phenylether	U		0.0000877	0.0100
2-Chloronaphthalene	U		0.0000648	0.00100
4-Chlorophenyl-phenylether	U		0.0000926	0.0100
Caprolactam	U		0.000309	0.0100
Carbazole	U		0.000111	0.0100
Chrysene	U		0.000130	0.00100
Dibenz(a,h)anthracene	0.000342		0.0000644	0.000200
Dibenzofuran	U		0.0000970	0.0100
3,3-Dichlorobenzidine	U		0.000212	0.0100
2,4-Dinitrotoluene	U		0.0000983	0.0100
2,6-Dinitrotoluene	U		0.000250	0.0100
Fluoranthene	U		0.000102	0.00100
Fluorene	U		0.0000844	0.00100
Hexachlorobenzene	U		0.0000755	0.00100
Hexachloro-1,3-butadiene	U		0.0000968	0.0100
Hexachlorocyclopentadiene	U		0.0000598	0.0100
Hexachloroethane	U		0.000127	0.0100
Indeno(1,2,3-cd)pyrene	U		0.000279	0.00100
Isophorone	U		0.000143	0.0100
1-Methylnaphthalene	U		0.0000790	0.00100
2-Methylnaphthalene	U		0.000117	0.00100
Naphthalene	U		0.000159	0.00100
Nitrobenzene	U		0.000297	0.0100
n-Nitrosodiphenylamine	U		0.00237	0.0100
n-Nitrosodi-n-propylamine	U		0.000261	0.0100

Method Blank (MB)

(MB) R3986118-3 10/13/23 10:42

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Phenanthrene	U		0.000112	0.00100
Benzylbutyl phthalate	U		0.000765	0.00300
Bis(2-ethylhexyl)phthalate	0.00110	J	0.000895	0.00300
Di-n-butyl phthalate	U		0.000453	0.00300
Diethyl phthalate	U		0.000287	0.00300
Dimethyl phthalate	U		0.000260	0.00300
Di-n-octyl phthalate	U		0.000932	0.00300
Pyrene	U		0.000107	0.00100
1,2,4-Trichlorobenzene	U		0.0000698	0.0100
4-Chloro-3-methylphenol	U		0.000131	0.0100
2-Chlorophenol	U		0.000133	0.0100
2,4-Dichlorophenol	U		0.000102	0.0100
2,4-Dimethylphenol	U		0.0000636	0.0100
4,6-Dinitro-2-methylphenol	U		0.00112	0.0100
2,4-Dinitrophenol	U		0.00593	0.0100
2-Nitrophenol	U		0.000117	0.0100
2-Nitroaniline	U		0.000102	0.0100
2-Methylphenol	U		0.0000929	0.0100
3&4-Methyl Phenol	U		0.000168	0.0100
3-Nitroaniline	U		0.0000869	0.0100
4-Chloroaniline	U		0.000234	0.0100
4-Nitroaniline	U		0.0000910	0.0100
4-Nitrophenol	U		0.000143	0.0100
Pentachlorophenol	U		0.000313	0.0100
Phenol	U		0.00433	0.0100
2,4,5-Trichlorophenol	U		0.000109	0.0100
2,4,6-Trichlorophenol	U		0.000100	0.0100
(S) 2-Fluorophenol	*33.5*			*10.0-120*
(S) Phenol-d5	*19.7*			*10.0-120*
(S) Nitrobenzene-d5	*55.6*			*10.0-127*
(S) 2-Fluorobiphenyl	*53.3*			*10.0-130*
(S) 2,4,6-Tribromophenol	*64.0*			*10.0-155*
(S) p-Terphenyl-d14	*65.3*			*10.0-128*

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

(LCS) R3986118-1 10/13/23 09:58 • (LCSD) R3986118-2 10/13/23 10:20

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	0.0341	0.0309	68.2	61.8	41.0-120			9.85	22
Acenaphthylene	0.0500	0.0363	0.0313	72.6	62.6	43.0-120			14.8	22
Acetophenone	0.0500	0.0343	0.0310	68.6	62.0	29.0-120			10.1	28
Anthracene	0.0500	0.0377	0.0341	75.4	68.2	45.0-120			10.0	20
Atrazine	0.0500	0.0360	0.0315	72.0	63.0	39.0-141			13.3	20
Benzo(a)anthracene	0.0500	0.0399	0.0358	79.8	71.6	47.0-120			10.8	20
Benzaldehyde	0.0500	0.0770	0.0705	154	141	10.0-160			8.81	40
Benzo(b)fluoranthene	0.0500	0.0394	0.0398	78.8	79.6	46.0-120			1.01	20
Benzo(k)fluoranthene	0.0500	0.0389	0.0400	77.8	80.0	46.0-120			2.79	21
Benzo(g,h,i)perylene	0.0500	0.0361	0.0361	72.2	72.2	48.0-121			0.000	20
Benzo(a)pyrene	0.0500	0.0362	0.0337	72.4	67.4	47.0-120			7.15	20
Biphenyl	0.0500	0.0346	0.0310	69.2	62.0	38.0-120			11.0	27
Bis(2-chlorethoxy)methane	0.0500	0.0300	0.0287	60.0	57.4	33.0-120			4.43	24
Bis(2-chloroethyl)ether	0.0500	0.0347	0.0302	69.4	60.4	23.0-120			13.9	33
2,2-Oxybis(1-Chloropropane)	0.0500	0.0315	0.0272	63.0	54.4	28.0-120			14.7	31
4-Bromophenyl-phenylether	0.0500	0.0394	0.0375	78.8	75.0	45.0-120			4.94	20
2-Chloronaphthalene	0.0500	0.0345	0.0318	69.0	63.6	37.0-120			8.14	25
4-Chlorophenyl-phenylether	0.0500	0.0353	0.0343	70.6	68.6	44.0-120			2.87	20
Caprolactam	0.0500	0.0120	0.0113	24.0	22.6	10.0-120			6.01	26
Carbazole	0.0500	0.0382	0.0337	76.4	67.4	51.0-122			12.5	20
Chrysene	0.0500	0.0384	0.0353	76.8	70.6	48.0-120			8.41	20
Dibenz(a,h)anthracene	0.0500	0.0308	0.0313	61.6	62.6	47.0-120			1.61	20
Dibenzofuran	0.0500	0.0353	0.0319	70.6	63.8	44.0-120			10.1	22
3,3-Dichlorobenzidine	0.100	0.0921	0.0823	92.1	82.3	44.0-120			11.2	20
2,4-Dinitrotoluene	0.0500	0.0386	0.0333	77.2	66.6	49.0-124			14.7	20
2,6-Dinitrotoluene	0.0500	0.0362	0.0326	72.4	65.2	46.0-120			10.5	21
Fluoranthene	0.0500	0.0402	0.0350	80.4	70.0	51.0-120			13.8	20
Fluorene	0.0500	0.0349	0.0326	69.8	65.2	47.0-120			6.81	20
Hexachlorobenzene	0.0500	0.0374	0.0389	74.8	77.8	44.0-120			3.93	20
Hexachloro-1,3-butadiene	0.0500	0.0295	0.0269	59.0	53.8	19.0-120			9.22	32
Hexachlorocyclopentadiene	0.0500	0.0292	0.0283	58.4	56.6	15.0-120			3.13	31
Hexachloroethane	0.0500	0.0305	0.0275	61.0	55.0	15.0-120			10.3	37
Indeno(1,2,3-cd)pyrene	0.0500	0.0313	0.0315	62.6	63.0	49.0-122			0.637	20
Isophorone	0.0500	0.0300	0.0292	60.0	58.4	36.0-120			2.70	23
1-Methylnaphthalene	0.0500	0.0295	0.0256	59.0	51.2	33.0-120			14.2	24
2-Methylnaphthalene	0.0500	0.0277	0.0245	55.4	49.0	33.0-120			12.3	25
Naphthalene	0.0500	0.0280	0.0257	56.0	51.4	27.0-120			8.57	27
Nitrobenzene	0.0500	0.0300	0.0291	60.0	58.2	27.0-120			3.05	29
n-Nitrosodiphenylamine	0.0500	0.0354	0.0322	70.8	64.4	47.0-120			9.47	20
n-Nitrosodi-n-propylamine	0.0500	0.0341	0.0310	68.2	62.0	31.0-120			9.52	28

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

(LCS) R3986118-1 10/13/23 09:58 • (LCSD) R3986118-2 10/13/23 10:20

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 %
Phenanthrene	0.0500	0.0367	0.0331	73.4	66.2	46.0-120			10.3	20
Benzylbutyl phthalate	0.0500	0.0353	0.0314	70.6	62.8	43.0-121			11.7	20
Bis(2-ethylhexyl)phthalate	0.0500	0.0340	0.0304	68.0	60.8	43.0-122			11.2	20
Di-n-butyl phthalate	0.0500	0.0402	0.0348	80.4	69.6	49.0-121			14.4	20
Diethyl phthalate	0.0500	0.0355	0.0324	71.0	64.8	48.0-122			9.13	20
Dimethyl phthalate	0.0500	0.0370	0.0338	74.0	67.6	48.0-120			9.04	20
Di-n-octyl phthalate	0.0500	0.0373	0.0353	74.6	70.6	42.0-125			5.51	20
Pyrene	0.0500	0.0392	0.0331	78.4	66.2	47.0-120			16.9	20
1,2,4-Trichlorobenzene	0.0500	0.0289	0.0257	57.8	51.4	24.0-120			11.7	29
4-Chloro-3-methylphenol	0.0500	0.0301	0.0278	60.2	55.6	40.0-120			7.94	21
2-Chlorophenol	0.0500	0.0280	0.0251	56.0	50.2	25.0-120			10.9	35
2,4-Dichlorophenol	0.0500	0.0299	0.0280	59.8	56.0	36.0-120			6.56	26
2,4-Dimethylphenol	0.0500	0.0326	0.0329	65.2	65.8	33.0-120			0.916	26
4,6-Dinitro-2-methylphenol	0.0500	0.0351	0.0326	70.2	65.2	38.0-138			7.39	25
2,4-Dinitrophenol	0.0500	0.0309	0.0276	61.8	55.2	10.0-120			11.3	39
2-Nitrophenol	0.0500	0.0282	0.0269	56.4	53.8	31.0-120			4.72	29
2-Nitroaniline	0.0500	0.0355	0.0330	71.0	66.0	43.0-120			7.30	22
2-Methylphenol	0.0500	0.0271	0.0242	54.2	48.4	28.0-120			11.3	29
3&4-Methyl Phenol	0.0500	0.0294	0.0270	58.8	54.0	31.0-120			8.51	30
3-Nitroaniline	0.0500	0.0355	0.0298	71.0	59.6	38.0-120			17.5	21
4-Chloroaniline	0.0500	0.0331	0.0293	66.2	58.6	25.0-120			12.2	25
4-Nitroaniline	0.0500	0.0313	0.0282	62.6	56.4	18.0-160			10.4	21
4-Nitrophenol	0.0500	0.0161	0.0123	32.2	24.6	10.0-120			26.8	33
Pentachlorophenol	0.0500	0.0278	0.0243	55.6	48.6	23.0-120			13.4	25
Phenol	0.0500	0.0149	0.0136	29.8	27.2	10.0-120			9.12	36
2,4,5-Trichlorophenol	0.0500	0.0362	0.0341	72.4	68.2	44.0-120			5.97	22
2,4,6-Trichlorophenol	0.0500	0.0334	0.0343	66.8	68.6	42.0-120			2.66	23
(S) 2-Fluorophenol				*45.8*	*40.2*	*10.0-120*				
(S) Phenol-d5				*27.0*	*25.8*	*10.0-120*				
(S) Nitrobenzene-d5				*60.7*	*61.1*	*10.0-127*				
(S) 2-Fluorobiphenyl				*73.9*	*70.3*	*10.0-130*				
(S) 2,4,6-Tribromophenol				*95.0*	*91.5*	*10.0-155*				
(S) p-Terphenyl-d14				*84.8*	*73.5*	*10.0-128*				

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.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(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 Reporting Limit (or MDL where applicable).
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.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
Q	Sample was prepared and/or analyzed past holding time as defined in the method. Concentrations should be considered minimum values.

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
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	LA000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
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

* 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 Analytical.

Company Name/Address:
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@trccompanies.com;aeljuri@trccompanie**

Project Description: **Lovington Lea Refinery**

City/State Collected: Lovington, NM

Please Circle: PT (MT) CT ET

Phone: **512-684-3176**

Client Project # **377274.0000.0000.**

Lab Project # **TRCATX-LOVINGTON NAV**

Collected by (print): Brian Hillin/HmI Team

Site/Facility ID #

P.O. # **197162**

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

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	**WetChem-48hr HT** 125mlHDPE-NoPres	8270TX 100ml Amb NoPres	ALK,TDS 500mlHDPE-NoPres	DROLVI 40mlAmb-HCl-BT	Dissolved Metals-FF 250mlHDPE HNO3 <2	GRO 40mlAmb HCl	TDS 500mlHDPE-NoPres	Total Mercury 250mlHDPE-HNO3 <2	V8260 40mlAmb-HCl	V8260-Trip Blank 40mlAmb-HCl-Blk	Remarks	Sample # (lab only)
MW-1	G	GW		10-5-23	1055	7	X				X		X	X	X			-01
MW-2		GW			940	9	X	X			X		X	X	X			-02
MW-3		GW			1015	1	X											-03
MW-4		GW			945	9	X	X			X		X	X	X			-04
MW-5		GW			1130	13	X	X	X	X	X	X		X	X			-05
MW-6		GW			1155	9	X	X			X		X	X	X			-06
MW-8		GW			1105	7	X				X		X	X	X			-07
MW-9		GW			1015	1	X											-08
MW-10		GW			925	1	X											-09
MW-11R	↓	GW		↓	910	9	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: WetChem-48HT** needs to analyze NITRATE, NITRITE.** must sample & ship same-day.
HMI Filtered all Diss. Metals in the field (FF).

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __ UPS ✓ FedEx __ Courier _____

Tracking #

Relinquished by : (Signature) — Date: 10-5-23 — Time: 1500

Received by: (Signature)

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

Relinquished by : (Signature) — Date: — Time:

Received by: (Signature)

Temp: °C Bottles Received: 307

If preservation required by Login: Date/Time

Relinquished by : (Signature) — Date: — Time:

Received for lab by: (Signature)

Date: 10/6/23 Time: 0900

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
RAD Screen <0.5 mR/hr: __Y __N

Chain of Custody Page 1 of 5

Pace PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1663622

J071

Acctnum: **TRCATX**
Template:**T217047**
Prelogin: **P1027455**
PM: **526 - Chris McCord**
PB:

Shipped Via: **FedEx Ground**

Company Name/Address:
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@trccompanies.com;aeljuri@trccompanie**

Project Description: **Lovington Lea Refinery**

City/State Collected: Lovington, NM

Please Circle: PT (MT) CT ET

Phone: **512-684-3176**

Client Project # **377274.0000.0000.**

Lab Project # **TRCATX-LOVINGTON NAV**

Collected by (print): Brian Hillin/HmI Team

Site/Facility ID #

P.O. # **197162**

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

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	**WetChem-48hr HT** 125mlHDPE-NoPres	8270TX 100ml Amb NoPres	ALK,TDS 500mlHDPE-NoPres	DROLVI 40mlAmb-HCl-BT	Dissolved Metals-FF 250mlHDPE HNO3	GRO 40mlAmb HCl	TDS 500mlHDPE-NoPres	Total Mercury 250mlHDPE-HNO3	V8260 40mlAmb-HCl	V8260-Trip Blank 40mlAmb-HCl-Blk	Remarks	Sample # (lab only)
MW-12R2	G	GW		10-5-23	1225	9	X	X	X		X			X	X			-11
MW-13R		GW			855	9	X	X			X		X	X	X			-12
MW-14R		GW			1115	9	X	X			X		X	X	X			-13
MW-15R		GW			1105	9	X	X	X		X			X	X			-14
MW-16R		GW		↓	1030	9	X	X			X		X	X	X			-15
~~MW-17R~~		~~GW~~				9	X	X	X		X			X	X	Dry - not sampled		
MW-18R		GW		10-5-23	1010	9	X	X			X		X	X	X			-16
MW-19R		GW		↓	1030	9	X	X	X		X			X	X			-17
MW-20R		GW		↓	1130	9	X	X			X		X	X	X			-18
~~MW-21~~		~~GW~~				6		X		X		X				Dry - not sampled		

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

Remarks: WetChem-48HT** needs to analyze NITRATE, NITRITE.**

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS ✓ FedEx __ Courier _____

Tracking #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
	10-5-23	1500	
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: °C Bottles Received: 307

Date: 10/6/23 Time: 0900

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
RAD Screen <0.5 mR/hr:		✓Y __N

Chain of Custody Page 1 of 5

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L1663622

Table #

Acctnum: **TRCATX**

Template:**T217047**

Prelogin: **P1027455**

PM: **526 - Chris McCord**

PB:

Shipped Via: **FedEX Ground**

Company Name/Address:
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@trccompanies.com;aeljuri@trccompanie**

Project Description: **Lovington Lea Refinery**

City/State Collected: Lovington, NM

Please Circle: PT (MT) CT ET

Phone: **512-684-3176**

Client Project # **377274.0000.0000.**

Lab Project # **TRCATX-LOVINGTON NAV**

Collected by (print): Brian Hillin / HMI Team

Site/Facility ID #

P.O. # **197162**

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

Analysis / Container / Preservative

Chain of Custody Page 3 of 5

Pace
PEOPLE ADVANCING SCIENCE

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SDG # L1663622

Table #

Acctnum: **TRCATX**
Template: **T217047**
Prelogin: **P1027455**
PM: **526 - Chris McCord**
PB:

Shipped Via: **FedEx Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	**WetChem-48hr HT** 125mlHDPE-NoPres	8270TX 100ml Amb NoPres	ALK,TDS 500mlHDPE-NoPres	DROLVI 40mlAmb-HCl-BT	Dissolved Metals-FF 250mlHDPE HNO3	GRO 40mlAmb HCl	TDS 500mlHDPE-NoPres	Total Mercury 250mlHDPE-HNO3	V8260 40mlAmb-HCl	V8260-Trip Blank 40mlAmb-HCl-Blk	Remarks	Sample # (lab only)
~~MW-22~~	G	GW				13	X	X		X	X	X	X	X	X	DRY	Y; not sampled	
MW-23R		GW		10-5-23	945	2	X						X					-19
MW-24R		GW			1235	9	X	X	X		X			X	X			-20
MW-26R		GW		↓	940	1	X											-21
~~MW-27~~		GW				5		X							X	Dry	; not sampled	
~~MW-28~~		GW				9	X	X	X		X			X	X	Dry	; not sampled	
~~MW-29~~		GW				9	X	X			X		X	X	X	Dry	; not sampled	
~~MW-30~~		GW				9	X	X	X		X			X	X	Dry	; not sampled	
~~MW-31~~		GW				13	X	X	X	X	X	X		X	X	No Sample; LNAPL Recovery		
MW-32		GW		10-5-23	900	13	X	X	X	X	X	X		X	X			-22

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

Remarks: WetChem-48HT** needs to analyze NITRATE, NITRITE.**

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
RAD Screen <0.5 mR/hr: ✓Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	If preservation required by Login: Date/Time
	10-5-23	1500			
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 307	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 10/6/23 Time: 0900	Hold: / Condition: NCF / OK

Company Name/Address:
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@trccompanies.com;aeljuri@trccompanie**

Project Description: **Lovington Lea Refinery**

City/State Collected: Lovington, NM

Please Circle: PT (MT) CT ET

Phone: **512-684-3176**

Client Project # **377274.0000.0000.**

Lab Project # **TRCATX-LOVINGTON NAV**

Collected by (print): Brian Hillin/HMI Team

Site/Facility ID #

P.O. # **197162**

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

Analysis / Container / Preservative

Chain of Custody Page 4 of 5

Pace
PEOPLE ADVANCING SCIENCE

MT JULIET, TN
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SDG # L1663622

Table #

Acctnum: **TRCATX**
Template:**T217047**
Prelogin: **P1027455**
PM: **526 - Chris McCord**
PB:

Shipped Via: **FedEX Ground**

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	**WetChem-48hr HT** 125mlHDPE-NoPres	8270TX 100ml Amb NoPres	ALK,TDS 500mlHDPE-NoPres	DROLVI 40mlAmb-HCl-BT	Dissolved Metals-FF 250mlHDPE HNO3	GRO 40mlAmb HCl	TDS 500mlHDPE-NoPres	Total Mercury 250mlHDPE-HNO3	V8260 40mlAmb-HCl	V8260-Trip Blank 40mlAmb-HCl-Blk	Remarks	Sample # (lab only)
MW-33	G	GW		10-5-23	1000	13	X	X	X	X	X	X		X	X			-23
WW-NORTH		GW			1035	13	X	X	X	X	X	X		X	X			-24
WW-SOUTH		GW			950	13	X	X	X	X	X	X		X	X			-25
WW-EAST		GW			1120	13	X	X	X	X	X	X		X	X			-26
DUP-01		GW			1000	13	X	X	X	X	X	X		X	X			-27
DUP-02		GW			1000	13	X	X	X	X	X	X		X	X			-28
DUP-03		GW			1100	13	X	X	X	X	X	X		X	X			-29
DUP-04		GW			930	9	X	X			X		X	X	X			-30
EB-01		GW			1145	13	X	X	X	X	X	X		X	X			-31
EB-02		GW			1045	9	X	X	X		X			X	X			-32

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

Remarks: WetChem-48HT** needs to analyze NITRATE, NITRITE.**

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
__ UPS ✓ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

COC Seal Present/Intact:	NP	✓ N
COC Signed/Accurate:		✓ N
Bottles arrive intact:		✓ N
Correct bottles used:		✓ N
Sufficient volume sent:		✓ N
If Applicable		
VOA Zero Headspace:		Y N
Preservation Correct/Checked:		✓ N
RAD Screen <0.5 mR/hr:		✓ N

Relinquished by : (Signature)	Date: 10-5-23	Time: 1500	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 307
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 10/6/23 Time: 0900

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Company Name/Address:
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@trccompanies.com;aeljuri@trccompanie**

Project Description: **Lovington Lea Refinery**

City/State Collected: Lovington, NM

Please Circle: PT (MT) CT ET

Phone: **512-684-3176**

Client Project # **377274.0000.0000.**

Lab Project # **TRCATX-LOVINGTON NAV**

Collected by (print): Brian Hillin/HnI Team

Site/Facility ID #

P.O. # **197162**

Collected by (signature):

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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Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	**WetChem-48hr HT** 125mlHDPE-NoPres	8270TX 100ml Amb NoPres	ALK,TDS 500mlHDPE-NoPres	DROLVI 40mlAmb-HCl-BT	Dissolved Metals-FF 250mlHDPE HNO3	GRO 40mlAmb HCl	TDS 500mlHDPE-NoPres	Total Mercury 250mlHDPE-HNO3	V8260 40mlAmb-HCl	V8260-Trip Blank 40mlAmb-HCl-Blk	Remarks	Sample # (lab only)
MS/MSD @ MW-33	G	GW		10-5-23	1000	22	X	X	X	X	X	X		X	X			
~~EXTRAS~~		~~GW~~				~~13~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		~~X~~	~~X~~			
TRIP BLANK-01	↓	GW		10-5-23	—	1										X		
TRIP BLANK-02	↓	GW		↓	—	1										X		

Analysis / Container / Preservative

Chain of Custody Page 5 of 5

Pace PEOPLE ADVANCING SCIENCE

MT JULIET, TN
12065 Lebanon Rd Mount Juliet, TN 37122
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SDG # L1662622

Table #

Acctnum: **TRCATX**
Template:**T217047**
Prelogin: **P1027455**
PM: **526 - Chris McCord**
PB:

Shipped Via: **FedEX Ground**

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

Remarks: WetChem-48HT** needs to analyze NITRATE, NITRITE.**

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
RAD Screen <0.5 mR/hr:		✓Y N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
	10-5-23	1500		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received: 30
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 10/6/23 Time: 0900

If preservation required by Login: Date/Time

Hold: Condition: NCF / (OK)

Released to Imaging: 4/26/2024 10:49:21 AM
Received by OCD: 4/15/2024 1:46:20 PM

U663622

Tracking Numbers	CCAS Temperature
6357 9917 7867	2.0 + 0 = 2.0
6357 9917 7890	0.3 + 0 = 0.3
6357 9917 7856	1.9 + 0 = 1.9
6357 9917 7845	1.4 + 0 = 1.4
6357 9917 7878	1.1 + 0 = 1.1
6357 9917 7889	2.0 + 0 = 2.0

Name

Date

Released to Imaging: 4/26/2024 10:49:21 AM

Received by OCD: 4/15/2024 1:46:20 PM

10/6-NCF-L1663622 TRCATX TD

R5

Time estimate: oh **Time spent:** oh

Members

Troy Dunlap (responsible) Christopher McCord

- [x] Login Clarification needed
- [ ] Chain of custody is incomplete
- [ ] Please specify Metals requested
- [ ] Please specify TCLP requested
- [ ] Received additional samples not listed on COC
- [ ] Sample IDs on containers do not match IDs on COC
- [ ] Client did not "X" analysis
- [ ] Chain of Custody is missing
- [ ] If no COC: Received by:_____
- [ ] If no COC: Date/Time:_____
- [ ] If no COC: Temp./Cont.Rec./pH:_____
- [ ] If no COC: Carrier:_____
- [ ] If no COC: Tracking #:_____
- [ ] Client informed by call
- [ ] Client informed by Email
- [ ] Client informed by Voicemail
- [x] Date/Time: 10/6/23 15:35
- [x] PM initials: CM
- [ ] Client Contact:_____

Comments

Troy Dunlap — *6 October 2023 3:18 PM*

Did not receive Tripblanks.

Christopher McCord — *6 October 2023 3:26 PM*

Please double check all of the coolers. We normally receive a TB in each cooler than can be used.

Troy Dunlap — *6 October 2023 3:28 PM*

I already had the unpacker double check.

Christopher McCord — *6 October 2023 3:35 PM*

Client notified about missing Trip Blanks.

Troy Dunlap — *6 October 2023 5:06 PM*

Done.

Page 513 of 684

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

August 25, 2022

JASON ROBERTS

HOLLYFRONTIER NAVAJO REFINING

501 EAST MAIN STREET

ARTESIA, NM 88210

RE: LOVINGTON FIRE WATER POND DISCHARGE

Enclosed are the results of analyses for samples received by the laboratory on 08/22/22 12:14.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-22-15. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

HOLLYFRONTIER NAVAJO REFINING 501 EAST MAIN STREET ARTESIA NM, 88210	Project: LOVINGTON FIRE WATER POND D Project Number: 1 Project Manager: JASON ROBERTS Fax To: NONE	Reported: 25-Aug-22 13:56

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
1 LA	H223833-01	Water	19-Aug-22 12:15	22-Aug-22 12:14
2 LA	H223833-02	Water	19-Aug-22 12:15	22-Aug-22 12:14

Cardinal Laboratories *=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence ar any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damage including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether su claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

HOLLYFRONTIER NAVAJO REFINING 501 EAST MAIN STREET ARTESIA NM, 88210	Project: LOVINGTON FIRE WATER POND D Project Number: 1 Project Manager: JASON ROBERTS Fax To: NONE	Reported: 25-Aug-22 13:56

1 LA

H223833-01 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride*	**236**		4.00	mg/L	1	2081611	AC	23-Aug-22	4500-Cl-B	
TDS*	**705**		5.00	mg/L	1	2081633	AC	25-Aug-22	160.1	

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

HOLLYFRONTIER NAVAJO REFINING 501 EAST MAIN STREET ARTESIA NM, 88210	Project: LOVINGTON FIRE WATER POND D Project Number: 1 Project Manager: JASON ROBERTS Fax To: NONE	Reported: 25-Aug-22 13:56

2 LA

H223833-02 (Water)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride*	**240**		4.00	mg/L	1	2081611	AC	23-Aug-22	4500-Cl-B	
TDS*	**775**		5.00	mg/L	1	2081633	AC	24-Aug-22	160.1	

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Analytical Results For:

HOLLYFRONTIER NAVAJO REFINING 501 EAST MAIN STREET ARTESIA NM, 88210	Project: LOVINGTON FIRE WATER POND D Project Number: 1 Project Manager: JASON ROBERTS Fax To: NONE	Reported: 25-Aug-22 13:56

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2081611 - General Prep - Wet Chem										
Blank (2081611-BLK1)				Prepared & Analyzed: 17-Aug-22						
Chloride	ND	4.00	mg/L							
LCS (2081611-BS1)				Prepared & Analyzed: 17-Aug-22						
Chloride	100	4.00	mg/L	100		100	80-120			
LCS Dup (2081611-BSD1)				Prepared & Analyzed: 17-Aug-22						
Chloride	104	4.00	mg/L	100		104	80-120	3.92	20	
Duplicate (2081611-DUP1)		**Source: H223705-01**		Prepared & Analyzed: 17-Aug-22						
Chloride	360	4.00	mg/L		356			1.12	20	
Matrix Spike (2081611-MS1)		**Source: H223705-01**		Prepared & Analyzed: 17-Aug-22						
Chloride	610	4.00	mg/L	250	356	102	80-120			
Batch 2081633 - Filtration										
Blank (2081633-BLK1)				Prepared: 17-Aug-22 Analyzed: 18-Aug-22						
TDS	ND	5.00	mg/L							
LCS (2081633-BS1)				Prepared: 17-Aug-22 Analyzed: 18-Aug-22						
TDS	833		mg/L	1000		83.3	80-120			
Duplicate (2081633-DUP1)		**Source: H223697-01**		Prepared: 17-Aug-22 Analyzed: 18-Aug-22						
TDS	3090	5.00	mg/L		3160			2.21	20	

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

Page 520 of 684

CARDINAL Laboratories

101 East Marland, Hobbs, NM 88240
(575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

		BILL TO	
Company Name:	Navajo Refining	P.O. #:	
Project Manager:	Jason Roberts	Company:	NRC
Address:	501 E Main	Attn:	Jason Roberts
City:	Artesia State: NM Zip: 88210	Address:	501 E Main
Phone #:	575-703-6164 Fax #:	City:	Artesia
Project #:	1 Project Owner: Jason Robert	State:	NM Zip: 88210
Project Name:	Lovington Fire Water Pond Discharge	Phone #:	575-703-6164
Project Location:	Lovington, NM	Fax #:	
Sampler Name:	James Sipes		

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	PRESERV.: ACID/BASE:	ICE / COOL	OTHER :	SAMPLING: DATE	TIME	ANALYSIS REQUEST: TDS, Chlorides
H223833															
1	1LA	G							X				8.19.22	1215	X
2	2LA	G							X				8.19.22	1215	X

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Please email results:

Relinquished By: James Sipes	Date: 8.22.22 Time: 1214	Received By:	Verbal Result: ☑ Yes ☐ No Add'l Phone #: 575-703-6164
Relinquished By:	Date: Time:	Received By:	All Results are emailed. Please provide Email address: jason.roberts@hfsinclair.com
			REMARKS:

Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Observed Temp. °C 1.4 Corrected Temp. °C 0.8	Sample Condition Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	CHECKED BY: (Initials) SQZ	Turnaround Time: Standard ☐ Rush ☐ Thermometer ID #113 Correction Factor -0.5°C

Bacteria (only) Sample Condition: Cool ☐ Yes ☐ No Intact ☐ Yes ☐ No Observed Temp. °C Corrected Temp. °C

FORM-006 R 3.2 10/07/21

† Cardinal cannot accept verbal changes. Please email changes to celey.keene@cardinallabsnm.com

Received by OCD: 4/15/2024 1:46:20 PM

Released to Imaging: 4/26/2024 10:49:21 AM

eurofins | Environment Testing

Eurofins Environment Testing South Central, LLC
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 19, 2023

Nat Paengpongsavanh
HF Sinclair Asphalt Navajo Refining LLC
P.O. Box 159
Artesia, NM 88211-0159
TEL: (575) 748-3311
FAX:

RE: LOV Firewater OrderNo.: 2311981

Dear Nat Paengpongsavanh:

Eurofins Environment Testing South Central, LLC received 1 sample(s) on 11/17/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please do not hesitate to contact Eurofins Albuquerque for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **2311981**
Date Reported: **12/19/2023**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: HF Sinclair Asphalt Navajo Refining LL
Client Sample ID: Firewater
Project: LOV Firewater
Collection Date: 11/15/2023 1:00:00 PM
Lab ID: 2311981-001 **Matrix:** AQUEOUS **Received Date:** 11/17/2023 7:45:00 AM

Analyses	Result	MDL	RL	Qual	Units	DF	Date Analyzed	Batch ID
EPA METHOD 8082A: PCB'S							Analyst: **SB**	
Aroclor 1016	ND	1.0	1.0		µg/L	1	11/30/2023 6:20:15 PM	78953
Aroclor 1221	ND	1.0	1.0		µg/L	1	11/30/2023 6:20:15 PM	78953
Aroclor 1232	ND	1.0	1.0		µg/L	1	11/30/2023 6:20:15 PM	78953
Aroclor 1242	ND	1.0	1.0		µg/L	1	11/30/2023 6:20:15 PM	78953
Aroclor 1248	ND	1.0	1.0		µg/L	1	11/30/2023 6:20:15 PM	78953
Aroclor 1254	ND	1.0	1.0		µg/L	1	11/30/2023 6:20:15 PM	78953
Aroclor 1260	ND	1.0	1.0		µg/L	1	11/30/2023 6:20:15 PM	78953
Surr: Decachlorobiphenyl	84.0	0	15-175		%Rec	1	11/30/2023 6:20:15 PM	78953
Surr: Tetrachloro-m-xylene	58.4	0	15-137		%Rec	1	11/30/2023 6:20:15 PM	78953
EPA METHOD 8021B: VOLATILES							Analyst: **JJP**	
Methyl tert-butyl ether (MTBE)	ND	0.43	2.5		µg/L	1	11/21/2023 5:54:06 PM	BA1013
Benzene	ND	0.18	1.0		µg/L	1	11/21/2023 5:54:06 PM	BA1013
Toluene	ND	0.21	1.0		µg/L	1	11/21/2023 5:54:06 PM	BA1013
Ethylbenzene	ND	0.14	1.0		µg/L	1	11/21/2023 5:54:06 PM	BA1013
Xylenes, Total	ND	0.31	2.0		µg/L	1	11/21/2023 5:54:06 PM	BA1013
1,2,4-Trimethylbenzene	ND	0.20	1.0		µg/L	1	11/21/2023 5:54:06 PM	BA1013
1,3,5-Trimethylbenzene	ND	0.15	1.0		µg/L	1	11/21/2023 5:54:06 PM	BA1013
Surr: 4-Bromofluorobenzene	91.8	0	52.4-148		%Rec	1	11/21/2023 5:54:06 PM	BA1013
EPA METHOD 300.0: ANIONS							Analyst: **JMT**	
Chloride	120	5.0	10		mg/L	20	11/18/2023 12:51:04 AM	A10129
EPA METHOD 6020A: TOTAL METALS							Analyst: **ELS**	
Arsenic	0.0063	0.00050	0.0010		mg/L	1	12/4/2023 4:30:05 PM	79067
Lead	0.0011	0.00060	0.0010		mg/L	1	12/4/2023 4:30:05 PM	79067
Selenium	0.0037	0.00080	0.0010		mg/L	1	12/15/2023 10:52:30 AM	79067
EPA METHOD 7470A: MERCURY							Analyst: **tem**	
Mercury	ND	0.000081	0.00020		mg/L	1	12/12/2023 12:35:21 PM	79294
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: **VP**	
Barium	0.10	0.00044	0.0020		mg/L	1	12/6/2023 5:16:22 PM	79067
Cadmium	ND	0.0012	0.0020		mg/L	1	12/6/2023 5:16:22 PM	79067
Chromium	0.0017	0.0012	0.0060	J	mg/L	1	12/6/2023 5:16:22 PM	79067
Silver	0.0028	0.0013	0.0050	J	mg/L	1	12/6/2023 5:16:22 PM	79067
SM 9223B TOTAL COLIFORM							Analyst: **ejn**	
Total Coliform	Absent	0	0	H	P/A	1	11/18/2023 12:20:00 AM	78888
E. Coli	Absent	0	0	H	P/A	1	11/18/2023 12:20:00 AM	78888

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

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix
E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit
P	Sample pH Not In Range
PQL	Practical Quanitative Limit
RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311981**

19-Dec-23

Client: HF Sinclair Asphalt Navajo Refining LLC

Project: LOV Firewater

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A101299**	RunNo: **101299**
Prep Date:	Analysis Date: **11/17/2023**	SeqNo: **3725812** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A101299**	RunNo: **101299**
Prep Date:	Analysis Date: **11/17/2023**	SeqNo: **3725813** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	97.1	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311981**

19-Dec-23

Client: HF Sinclair Asphalt Navajo Refining LLC

Project: LOV Firewater

Sample ID: **MB-79067**	SampType: **MBLK**	TestCode: **EPA Method 6020A: Total Metals**
Client ID: **PBW**	Batch ID: **79067**	RunNo: **101585**
Prep Date: **11/30/2023**	Analysis Date: **12/4/2023**	SeqNo: **3740888** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.0010								
Selenium	ND	0.0010								

Sample ID: **MSLCSLL-79067**	SampType: **LCSLL**	TestCode: **EPA Method 6020A: Total Metals**
Client ID: **BatchQC**	Batch ID: **79067**	RunNo: **101585**
Prep Date: **11/30/2023**	Analysis Date: **12/4/2023**	SeqNo: **3740889** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0012	0.0010	0.001000	0	119	70	130			
Lead	0.00093	0.0010	0.001000	0	92.9	70	130			J
Selenium	0.0011	0.0010	0.001000	0	112	70	130			

Sample ID: **MSLCS-79067**	SampType: **LCS**	TestCode: **EPA Method 6020A: Total Metals**
Client ID: **LCSW**	Batch ID: **79067**	RunNo: **101585**
Prep Date: **11/30/2023**	Analysis Date: **12/4/2023**	SeqNo: **3740890** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.049	0.0010	0.05000	0	97.9	80	120			
Lead	0.050	0.0010	0.05000	0	101	80	120			
Selenium	0.051	0.0010	0.05000	0	101	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311981**

19-Dec-23

Client: HF Sinclair Asphalt Navajo Refining LLC

Project: LOV Firewater

Sample ID: **100NG BTEX LCS** SampType: **LCS** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **LCSW** Batch ID: **BA101345** RunNo: **101345**

Prep Date: Analysis Date: **11/21/2023** SeqNo: **3727731** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	17	2.5	20.00	0	85.3	70	130			
Benzene	20	1.0	20.00	0	101	70	130			
Toluene	20	1.0	20.00	0	100	70	130			
Ethylbenzene	20	1.0	20.00	0	99.1	70	130			
Xylenes, Total	60	2.0	60.00	0	99.3	70	130			
1,2,4-Trimethylbenzene	19	1.0	20.00	0	94.2	70	130			
1,3,5-Trimethylbenzene	19	1.0	20.00	0	93.2	70	130			
Surr: 4-Bromofluorobenzene	19		20.00		95.6	52.4	148			

Sample ID: **mb** SampType: **MBLK** TestCode: **EPA Method 8021B: Volatiles**

Client ID: **PBW** Batch ID: **BA101345** RunNo: **101345**

Prep Date: Analysis Date: **11/21/2023** SeqNo: **3727732** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Methyl tert-butyl ether (MTBE)	ND	2.5								
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	2.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
Surr: 4-Bromofluorobenzene	19		20.00		95.9	52.4	148			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311981**

19-Dec-23

Client: HF Sinclair Asphalt Navajo Refining LLC

Project: LOV Firewater

Sample ID: **MB-78953**	SampType: **MBLK**	TestCode: **EPA Method 8082A: PCB's**
Client ID: **PBW**	Batch ID: **78953**	RunNo: **101512**
Prep Date: **11/22/2023**	Analysis Date: **11/30/2023**	SeqNo: **3736659** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	ND	1.0								
Aroclor 1221	ND	1.0								
Aroclor 1232	ND	1.0								
Aroclor 1242	ND	1.0								
Aroclor 1248	ND	1.0								
Aroclor 1254	ND	1.0								
Aroclor 1260	ND	1.0								
Surr: Decachlorobiphenyl	1.9		2.500		75.6	15	175			
Surr: Tetrachloro-m-xylene	1.4		2.500		56.4	15	137			

Sample ID: **LCS-78953**	SampType: **LCS**	TestCode: **EPA Method 8082A: PCB's**
Client ID: **LCSW**	Batch ID: **78953**	RunNo: **101512**
Prep Date: **11/22/2023**	Analysis Date: **11/30/2023**	SeqNo: **3736660** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	3.6	1.0	5.000	0	71.8	29.8	83.7			
Aroclor 1260	4.4	1.0	5.000	0	88.4	63.2	107			
Surr: Decachlorobiphenyl	1.9		2.500		74.4	15	175			
Surr: Tetrachloro-m-xylene	1.6		2.500		63.2	15	137			

Sample ID: **LCSD-78953**	SampType: **LCSD**	TestCode: **EPA Method 8082A: PCB's**
Client ID: **LCSS02**	Batch ID: **78953**	RunNo: **101512**
Prep Date: **11/22/2023**	Analysis Date: **11/30/2023**	SeqNo: **3736661** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	3.6	1.0	5.000	0	71.4	29.8	83.7	0.559	34.4	
Aroclor 1260	4.3	1.0	5.000	0	86.6	63.2	107	2.06	21	
Surr: Decachlorobiphenyl	1.9		2.500		76.4	15	175	0	0	
Surr: Tetrachloro-m-xylene	1.7		2.500		67.6	15	137	0	0	

Sample ID: **MB-78953**	SampType: **MBLK**	TestCode: **EPA Method 8082A: PCB's**
Client ID: **PBW**	Batch ID: **78953**	RunNo: **101512**
Prep Date: **11/22/2023**	Analysis Date: **11/30/2023**	SeqNo: **3736663** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	ND	1.0								
Aroclor 1221	ND	1.0								
Aroclor 1232	ND	1.0								
Aroclor 1242	ND	1.0								
Aroclor 1248	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311981**

19-Dec-23

Client: HF Sinclair Asphalt Navajo Refining LLC

Project: LOV Firewater

Sample ID: **MB-78953**	SampType: **MBLK**	TestCode: **EPA Method 8082A: PCB's**
Client ID: **PBW**	Batch ID: **78953**	RunNo: **101512**
Prep Date: **11/22/2023**	Analysis Date: **11/30/2023**	SeqNo: **3736663** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1254	ND	1.0								
Aroclor 1260	ND	1.0								
Surr: Decachlorobiphenyl	1.9		2.500		76.4	15	175			
Surr: Tetrachloro-m-xylene	1.3		2.500		53.6	15	137			

Sample ID: **LCS-78953**	SampType: **LCS**	TestCode: **EPA Method 8082A: PCB's**
Client ID: **LCSW**	Batch ID: **78953**	RunNo: **101512**
Prep Date: **11/22/2023**	Analysis Date: **11/30/2023**	SeqNo: **3736664** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	3.4	1.0	5.000	0	67.4	29.8	83.7			
Aroclor 1260	4.5	1.0	5.000	0	90.2	63.2	107			
Surr: Decachlorobiphenyl	1.9		2.500		77.6	15	175			
Surr: Tetrachloro-m-xylene	1.5		2.500		60.0	15	137			

Sample ID: **LCSD-78953**	SampType: **LCSD**	TestCode: **EPA Method 8082A: PCB's**
Client ID: **LCSS02**	Batch ID: **78953**	RunNo: **101512**
Prep Date: **11/22/2023**	Analysis Date: **11/30/2023**	SeqNo: **3736665** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aroclor 1016	3.4	1.0	5.000	0	67.0	29.8	83.7	0.595	34.4	
Aroclor 1260	4.4	1.0	5.000	0	88.4	63.2	107	2.02	21	
Surr: Decachlorobiphenyl	2.0		2.500		80.0	15	175	0	0	
Surr: Tetrachloro-m-xylene	1.6		2.500		64.0	15	137	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311981**

19-Dec-23

Client: HF Sinclair Asphalt Navajo Refining LLC

Project: LOV Firewater

Sample ID: **MB-78888**	SampType: **MBLK**	TestCode: **SM 9223B Total Coliform**
Client ID: **PBW**	Batch ID: **78888**	RunNo: **101296**
Prep Date: **11/17/2023**	Analysis Date: **11/18/2023**	SeqNo: **3725406** Units: **P/A**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Coliform	Absent	0								
E. Coli	Absent	0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311981**

19-Dec-23

Client: HF Sinclair Asphalt Navajo Refining LLC

Project: LOV Firewater

Sample ID: **MB-79294**	SampType: **MBLK**	TestCode: **EPA Method 7470A: Mercury**
Client ID: **PBW**	Batch ID: **79294**	RunNo: **101790**
Prep Date: **12/11/2023**	Analysis Date: **12/12/2023**	SeqNo: **3751639** Units: **mg/L**

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

Sample ID: **LCSLL-79294**	SampType: **LCSLL**	TestCode: **EPA Method 7470A: Mercury**
Client ID: **BatchQC**	Batch ID: **79294**	RunNo: **101790**
Prep Date: **12/11/2023**	Analysis Date: **12/12/2023**	SeqNo: **3751640** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.00014	0.00020	0.0001500	0	90.6	50	150			J

Sample ID: **LCS-79294**	SampType: **LCS**	TestCode: **EPA Method 7470A: Mercury**
Client ID: **LCSW**	Batch ID: **79294**	RunNo: **101790**
Prep Date: **12/11/2023**	Analysis Date: **12/12/2023**	SeqNo: **3751641** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0049	0.00020	0.005000	0	97.6	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2311981**

19-Dec-23

Client: HF Sinclair Asphalt Navajo Refining LLC

Project: LOV Firewater

Sample ID: **MB-79067**	SampType: **MBLK**	TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **PBW**	Batch ID: **79067**	RunNo: **101646**
Prep Date: **11/30/2023**	Analysis Date: **12/6/2023**	SeqNo: **3743753** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Silver	ND	0.0050								

Sample ID: **LCS-79067**	SampType: **LCS**	TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **LCSW**	Batch ID: **79067**	RunNo: **101646**
Prep Date: **11/30/2023**	Analysis Date: **12/6/2023**	SeqNo: **3743755** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.47	0.0020	0.5000	0	93.5	80	120			
Cadmium	0.46	0.0020	0.5000	0	91.4	80	120			
Chromium	0.45	0.0060	0.5000	0	89.0	80	120			
Silver	0.092	0.0050	0.1000	0	92.0	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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eurofins Environment Testing

Eurofins Environment Testing South Central, LLC
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: HF Sinclair Asphalt Work Order Number: 2311981 RcptNo: 1

Received By: Tracy Casarrubias 11/17/2023 7:45:00 AM

Completed By: Tracy Casarrubias 11/17/2023 1:39:08 PM

Reviewed By: SCM 11/17/23 @ 1530

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☐	No ☑	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☐	No ☑	
8. Was preservative added to bottles?	Yes ☑	No ☐	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☑	No ☐	NA ☐ HNO3
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 1
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	(<2 or >12 unless noted) Adjusted? 4g
13. Is it clear what analyses were requested?	Yes ☐	No ☑	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☐	No ☑	Checked by: YM 11/17/23

Special Handling (if applicable)

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

Person Notified: Jace Ragland Date: 11/17/2023

By Whom: Tracy Casarrubias Via: ☑ eMail ☑ Phone ☐ Fax ☐ In Person

Regarding: Improper container, hold time, and analysis request.

Client Instructions: Got the approval from the client to analyse "Coliform" out of hold and is aware that we will

16. Additional remarks:

From original volume provided in HDPE plastic bottles, ~80mL was poured off into 2xVOAS, ~750mL was poured off into 1Liter glass Amber, ~125mL was poured off into 250mL HDPE plastic bottle, ~300mL was poured off into 500mL HDPE plastic bottle, and ~120mL was poured off into 120 mL NA2S2O3 preserved bottle to fulfil all analysis requested on COC. Added ~.40ml of HNO3 (Chem#7342) to sample 001E for proper pH/ metals analysis- YM 11/17/23

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.3	Good	Yes	Yogi		

Received by OCD: 4/15/2024 1:46:20 PM

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Chain-of-Custody Record

Client: HF Sinclair Navajo Refining LLC

Mailing Address: P.O. Box 159
Artesia, NM, 88211

Phone #: 775-340-4698

email or Fax#: Jace.Ragland@hfsinclair.com

QA/QC Package:
■ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
■ Standard ☐ Rush

Project Name:
LOV firewater

Project #:
Firewater

Project Manager:
Nat Paengpongsavanh, Jace Ragland, Eric Flores

Sampler: Jace Ragland, Eric Flores

On Ice: ☒ Yes ☐ No 4 0g

# of Coolers: 1

Cooler Temp(including CF): 3.3 - 0 = 3.3 °C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2311981
11/15/2023	13:00	Liquid	Firewater	3x Clear Jar	N/A	001

Analysis Request

BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	RCI
■		■			■	■	Per Client TMC 11/17/23		■	

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
11/15/2023						
11/16/23	1900			courier	11/17/23	7:45

Remarks:
* Did not send coliform in proper bottle.
-TMC 11/17/23

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

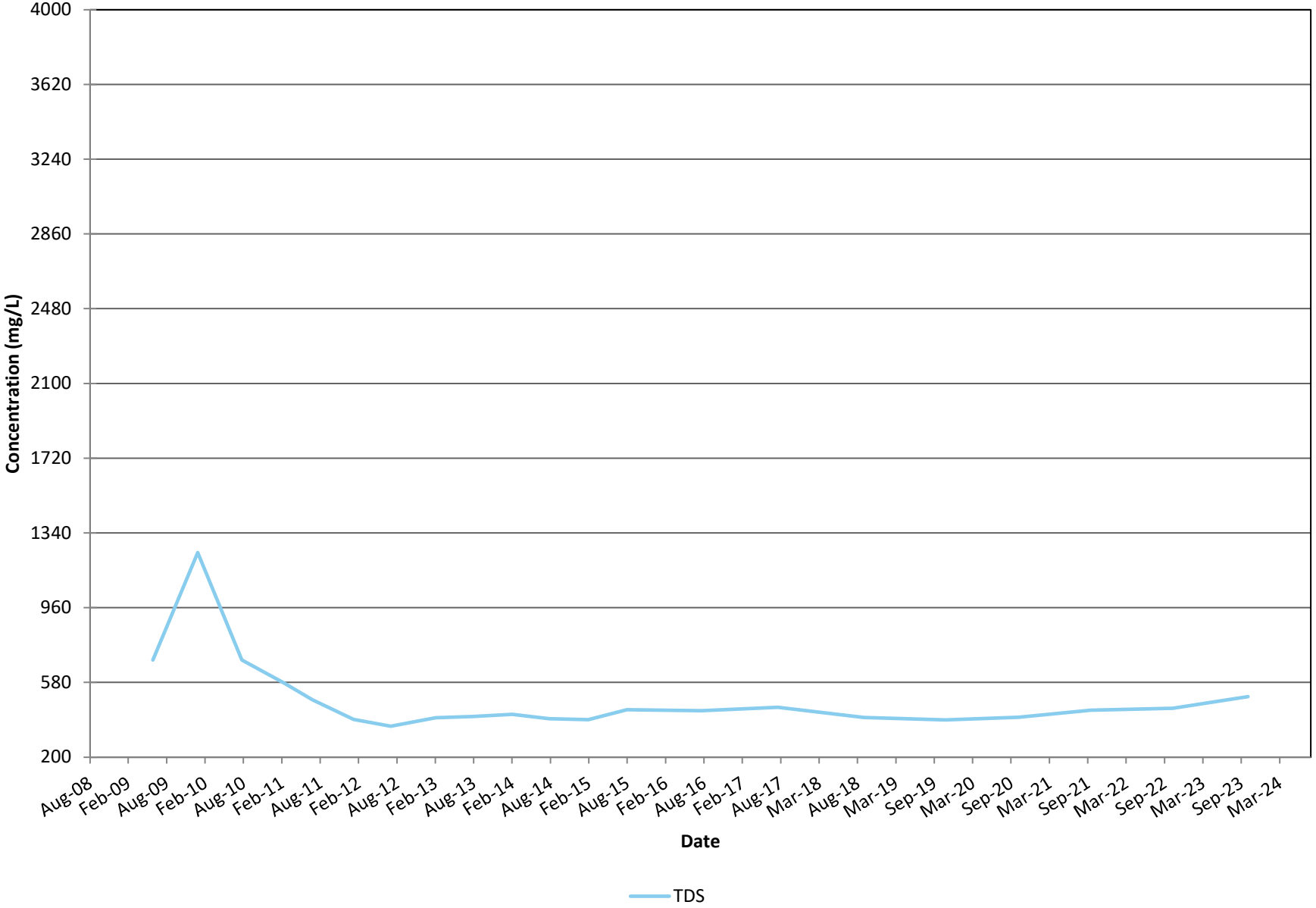
APPENDIX C

PLOTS OF GROUNDWATER CONCENTRATIONS OVER TIME

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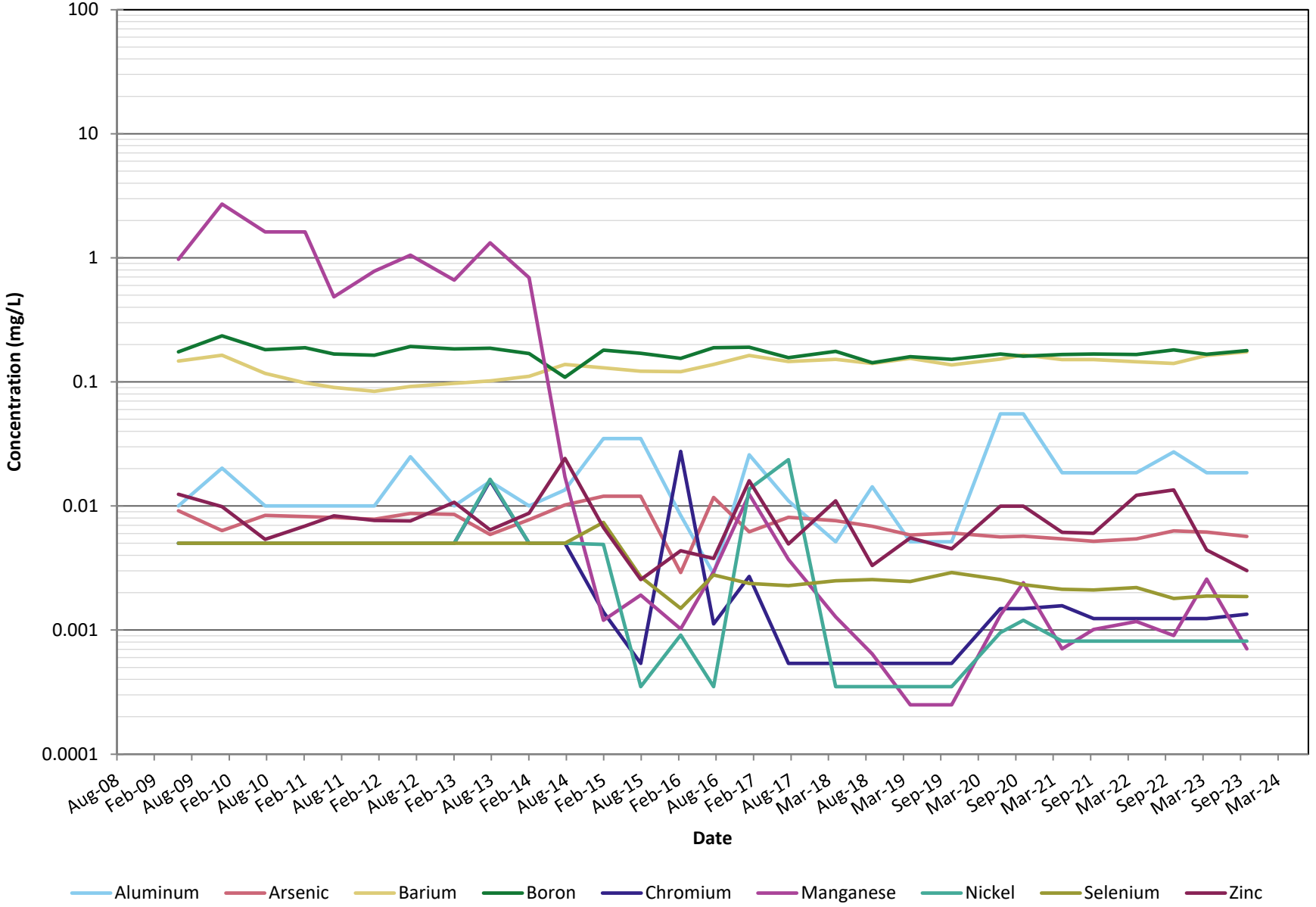
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MW-1 TDS CONCENTRATIONS OVER TIME



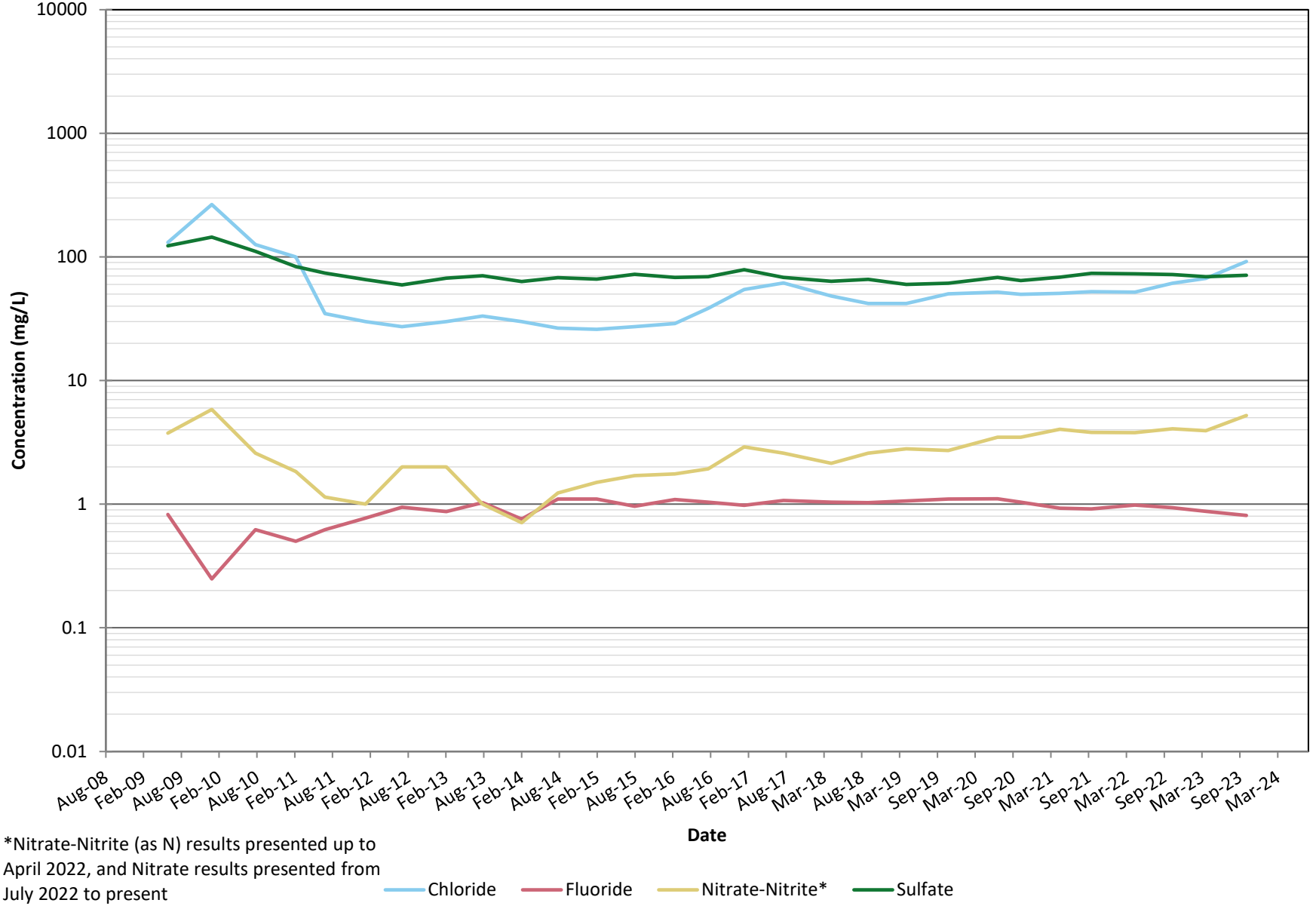
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MW-1 Metals CONCENTRATIONS OVER TIME



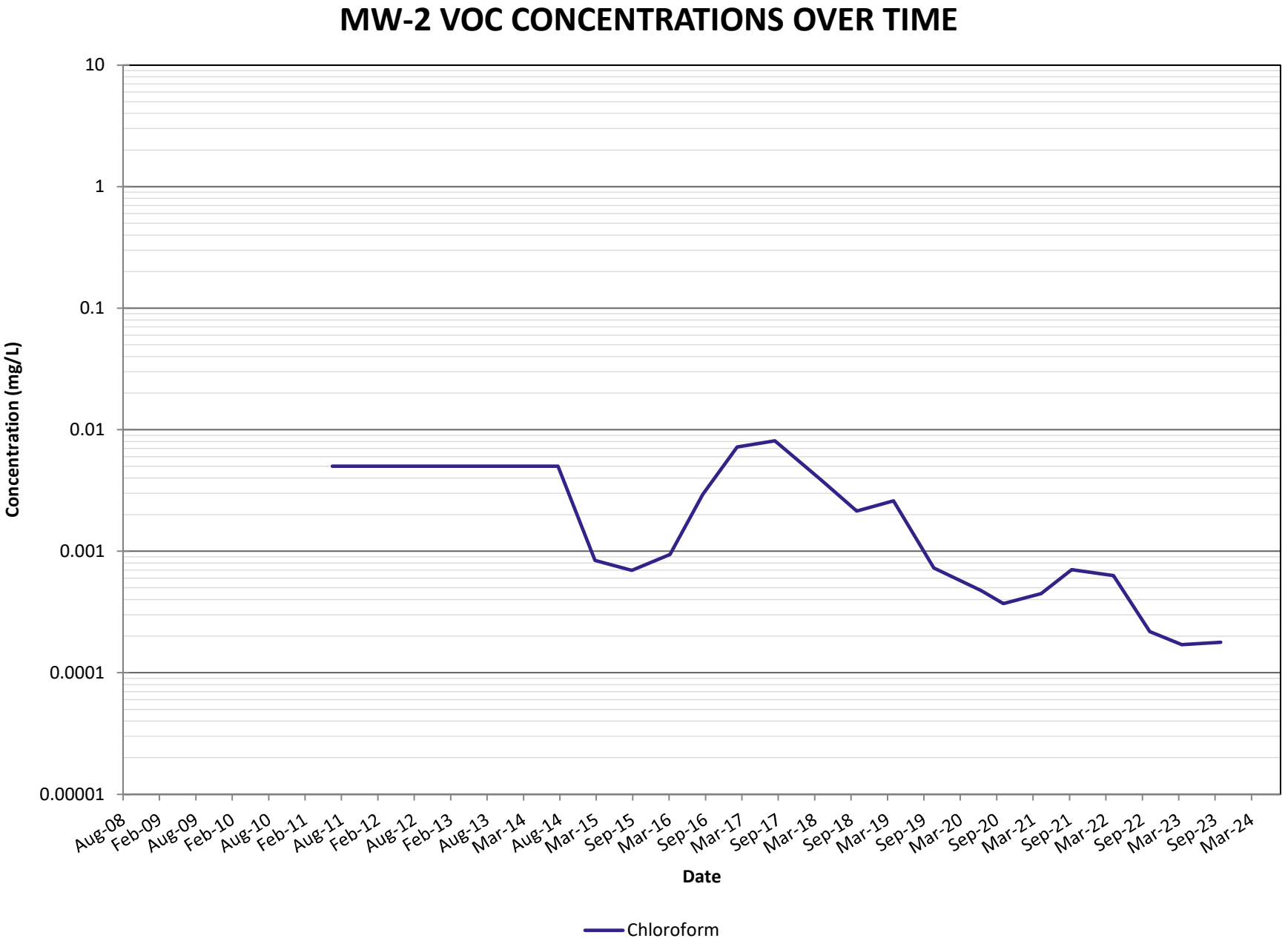
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MW-1 Anions CONCENTRATIONS OVER TIME



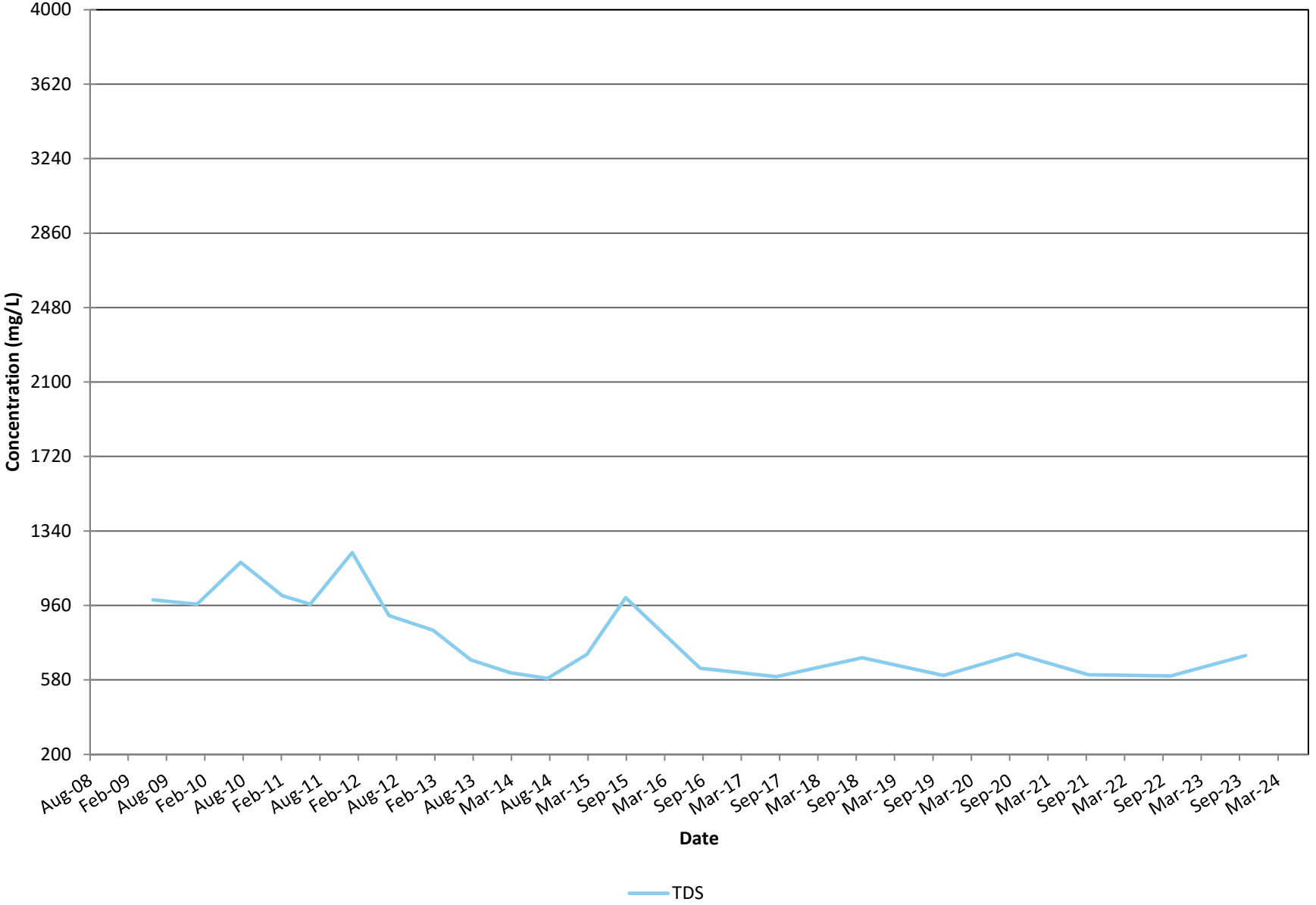
*Nitrate-Nitrite (as N) results presented up to April 2022, and Nitrate results presented from July 2022 to present

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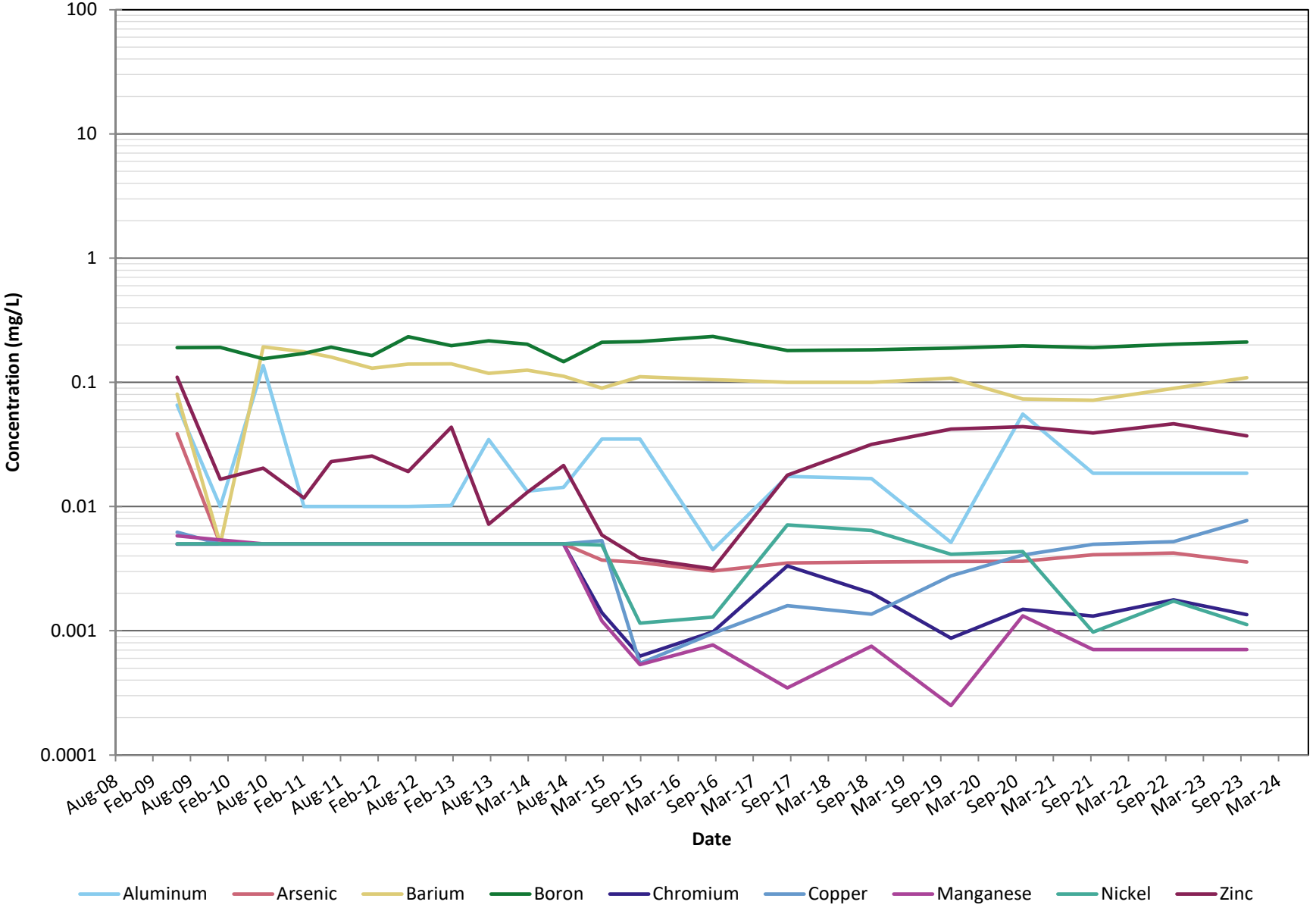
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MW-2 TDS CONCENTRATIONS OVER TIME



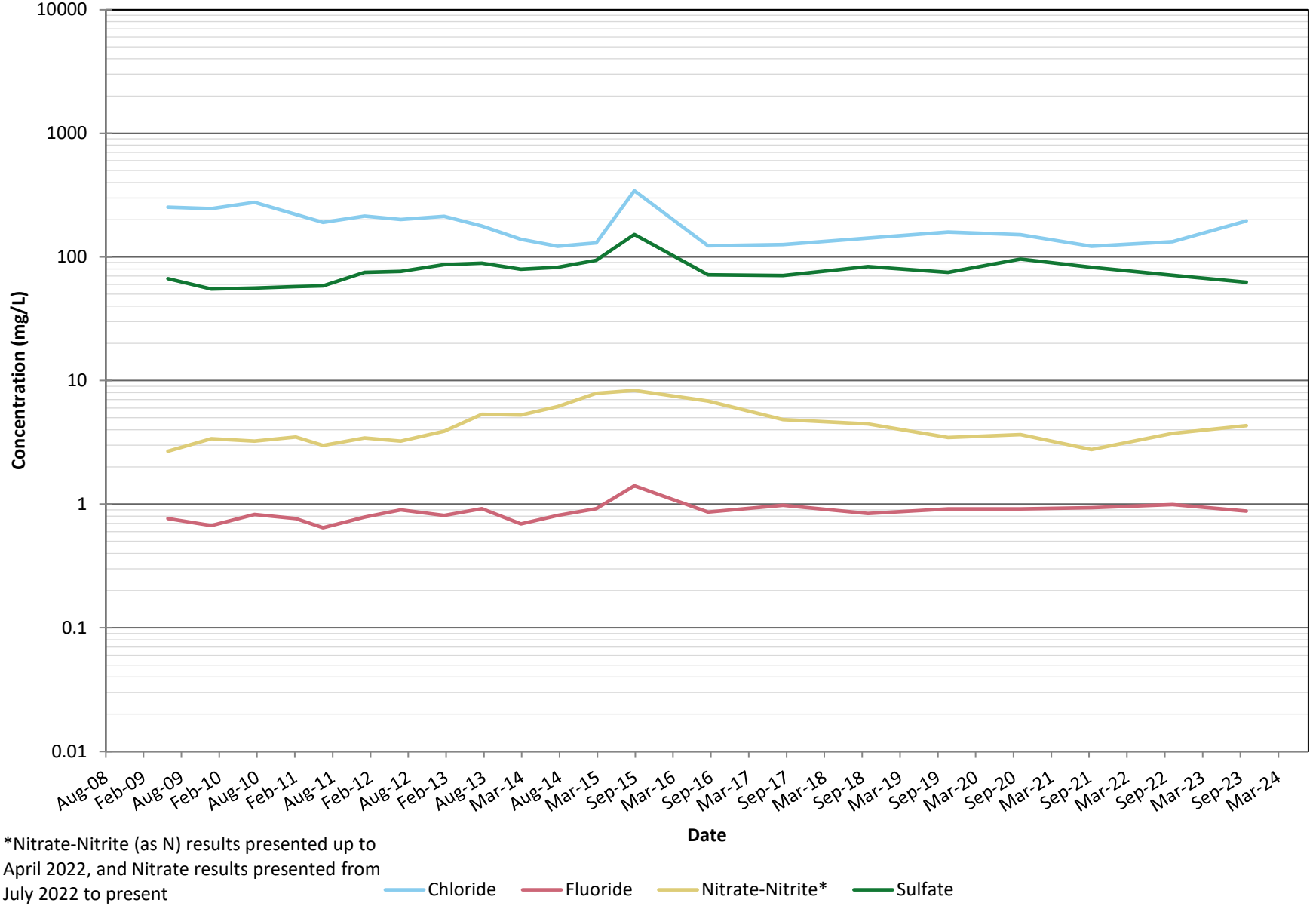
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Received by OCD: 4/15/2024 1:46:20 PM

MW-2 Metals CONCENTRATIONS OVER TIME



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Received by OCD: 4/15/2024 1:46:20 PM

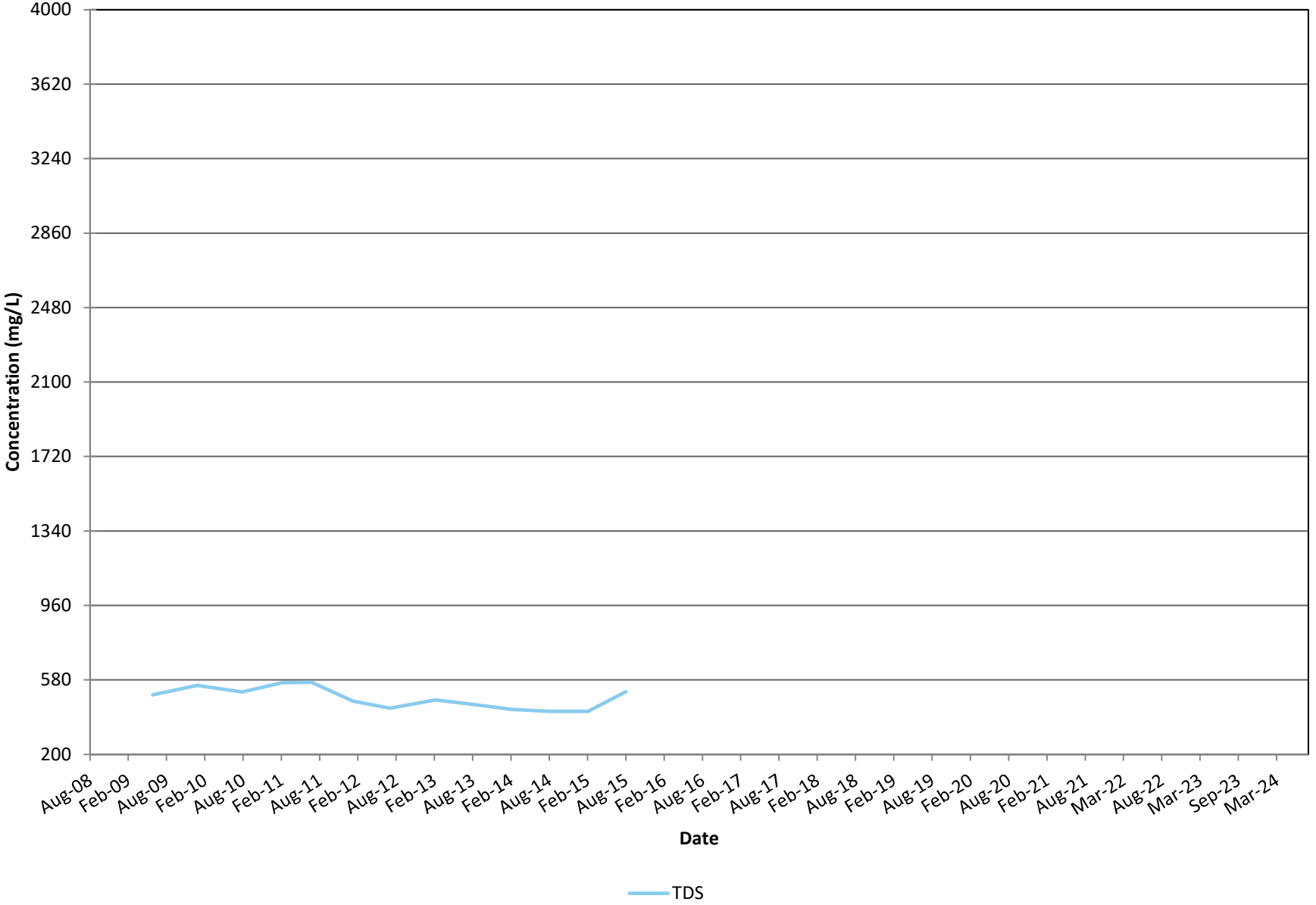
MW-2 Anions CONCENTRATIONS OVER TIME



*Nitrate-Nitrite (as N) results presented up to April 2022, and Nitrate results presented from July 2022 to present

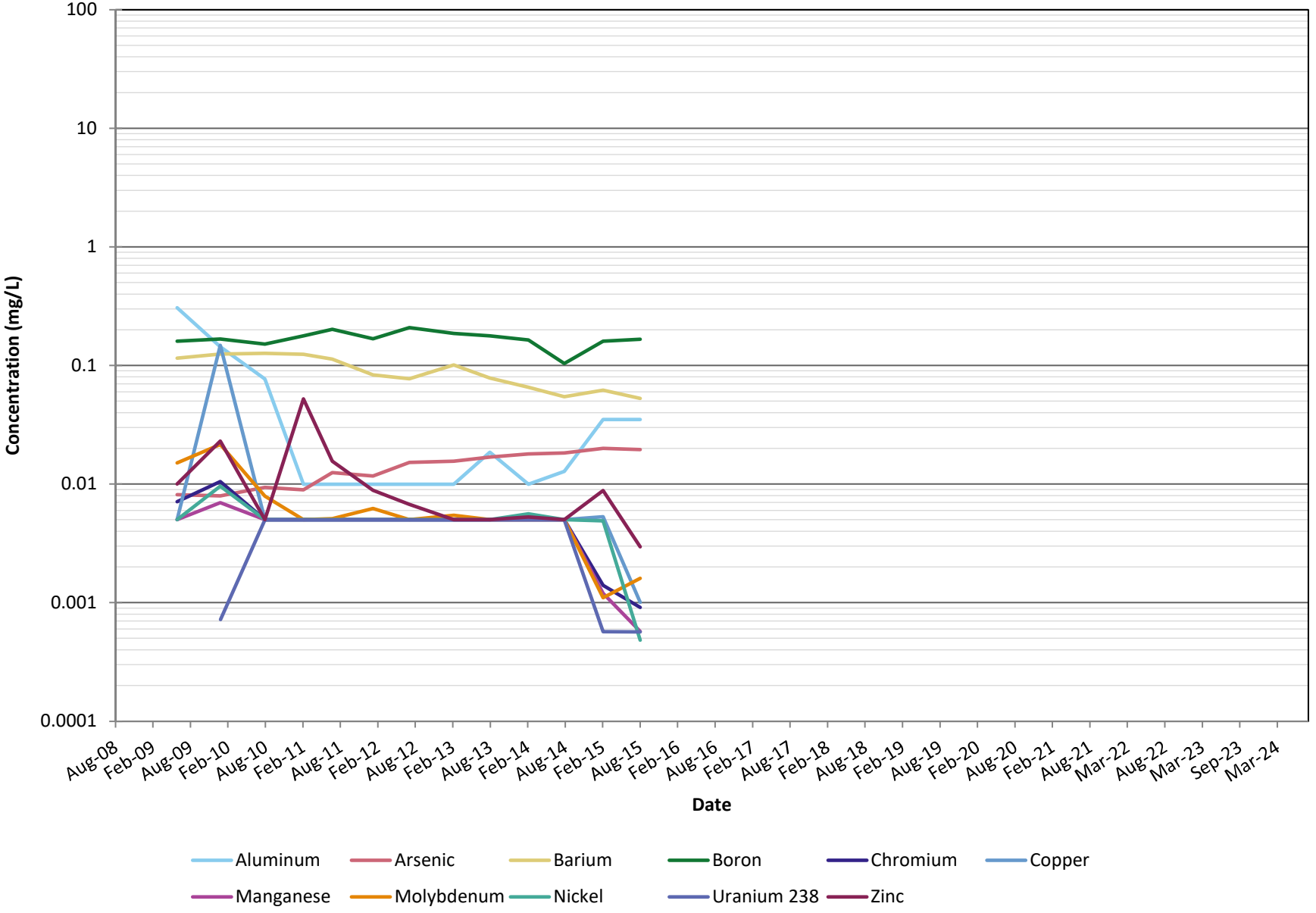
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Received by OCD: 4/15/2024 1:46:20 PM

MW-3 TDS CONCENTRATIONS OVER TIME



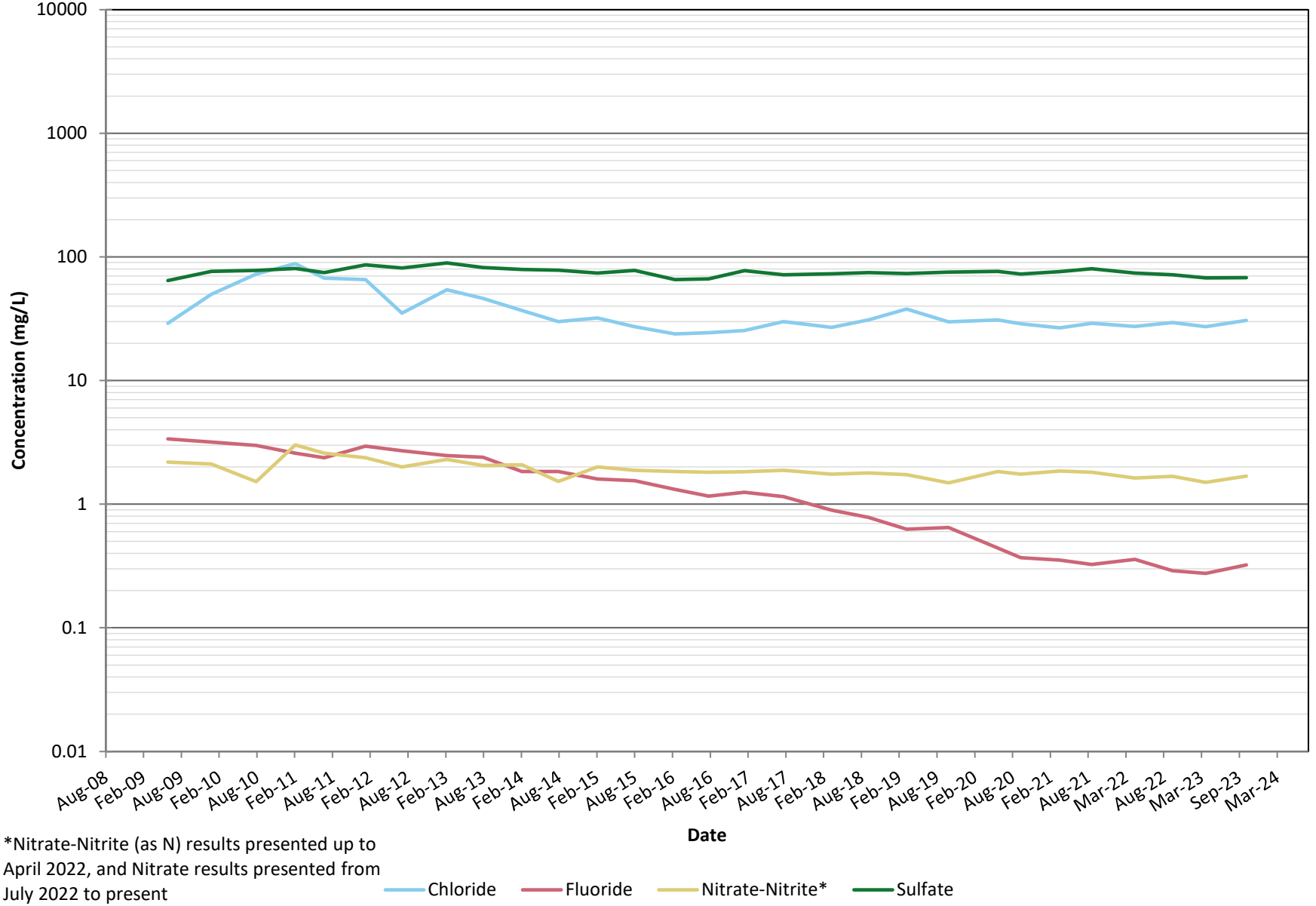
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Received by OCD: 4/15/2024 1:46:20 PM

MW-3 Metals CONCENTRATIONS OVER TIME



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Received by OCD: 4/15/2024 1:46:20 PM

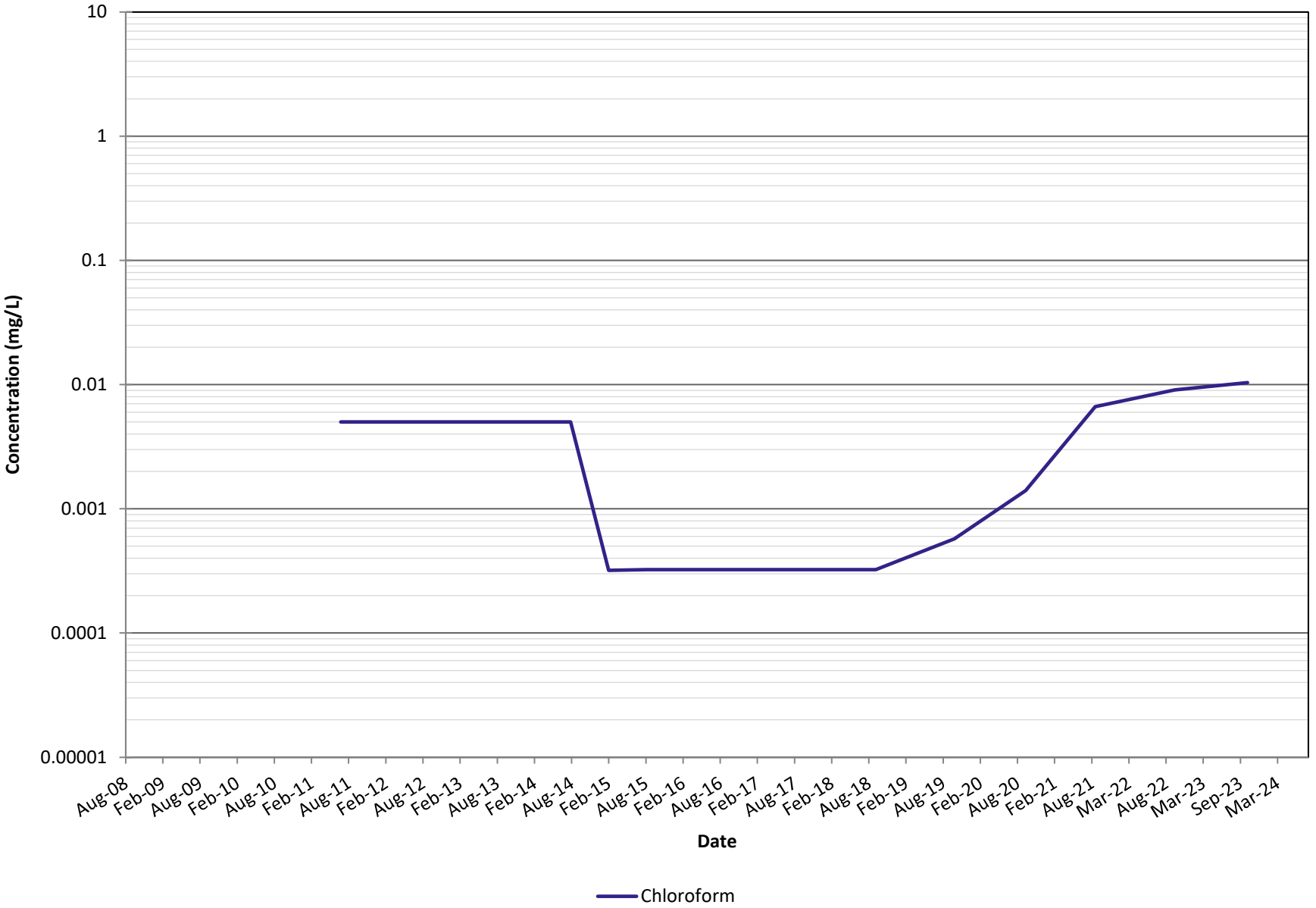
MW-3 Anions CONCENTRATIONS OVER TIME



*Nitrate-Nitrite (as N) results presented up to April 2022, and Nitrate results presented from July 2022 to present

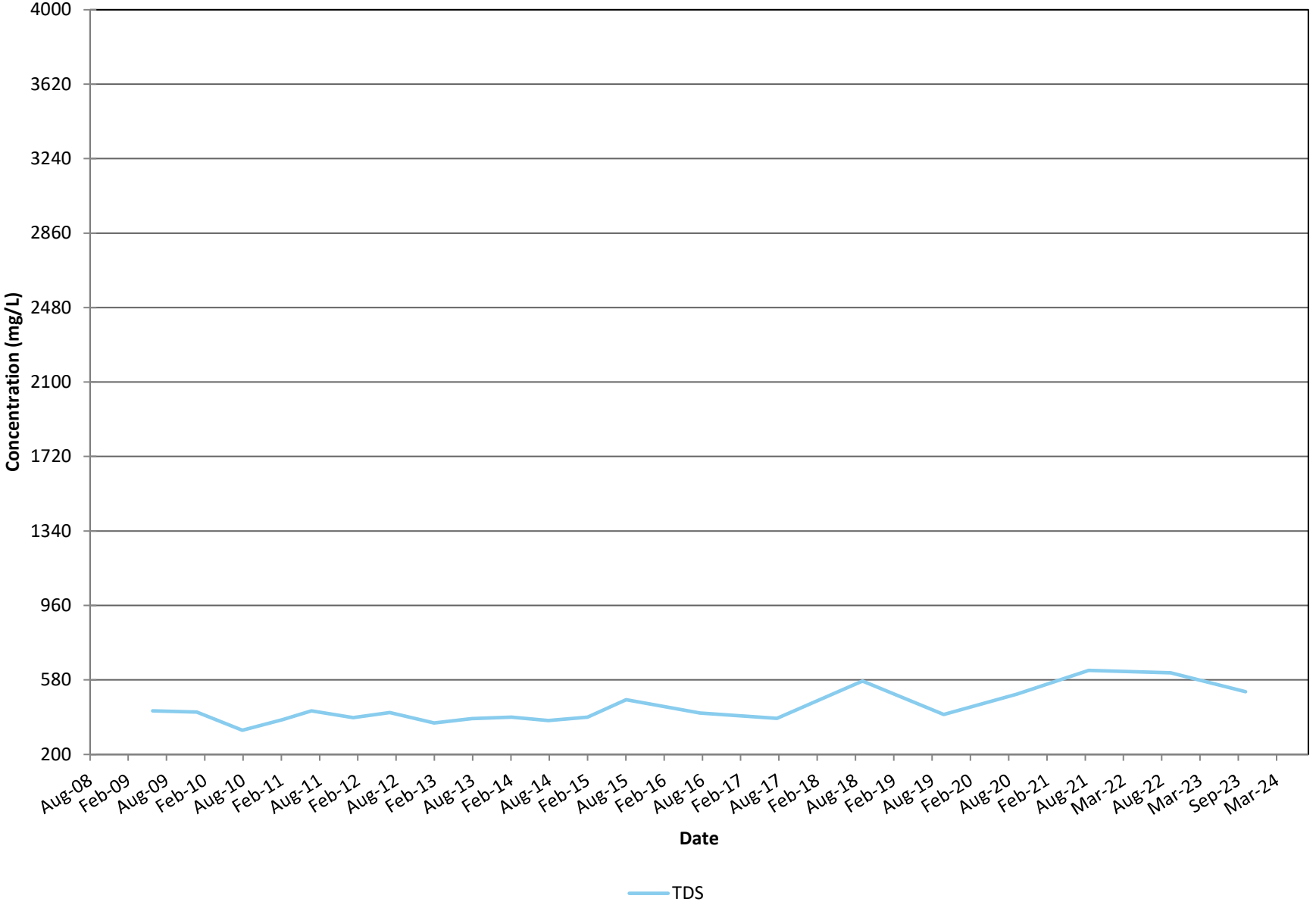
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MW-4 VOC CONCENTRATIONS OVER TIME

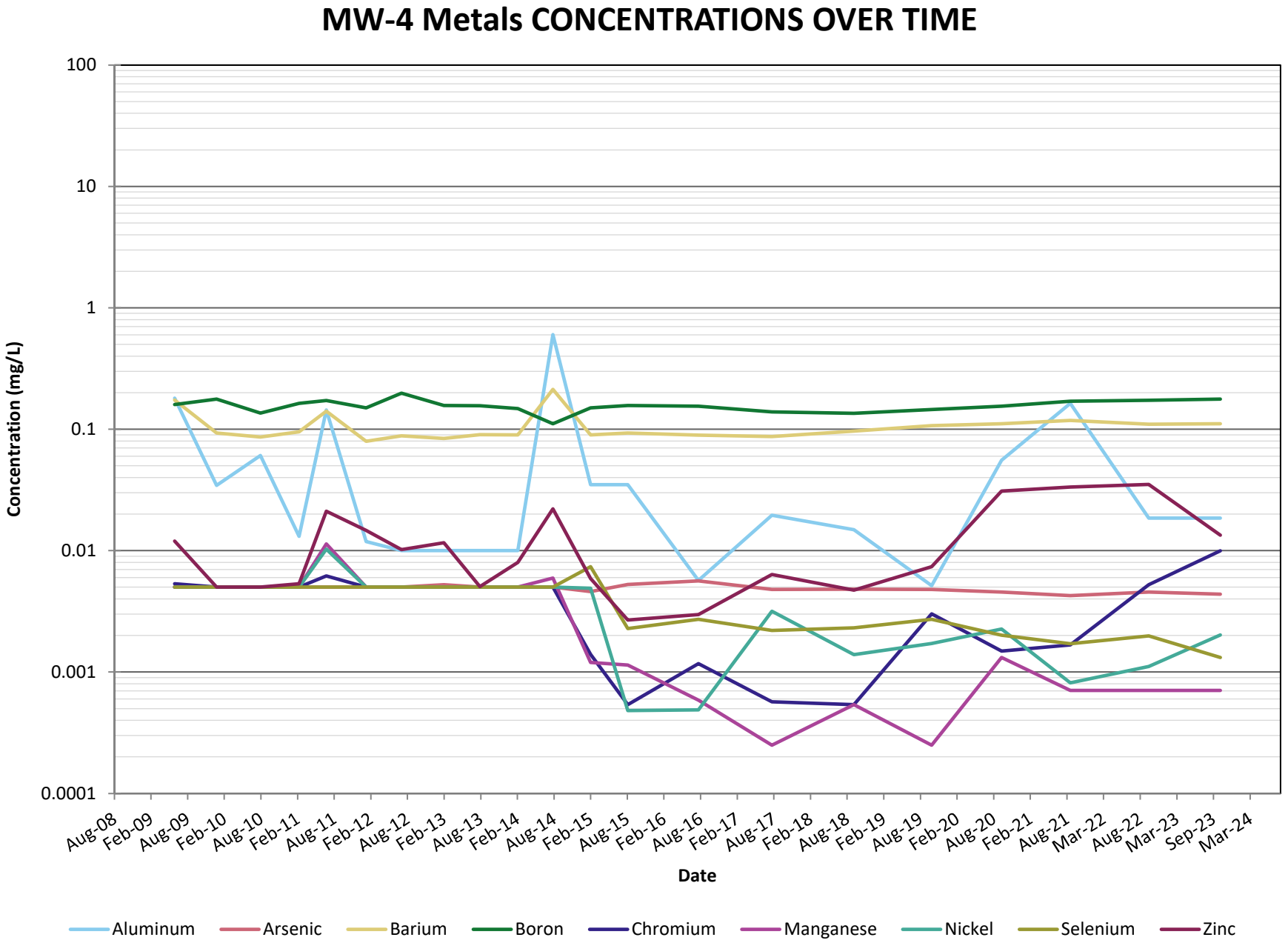


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MW-4 TDS CONCENTRATIONS OVER TIME

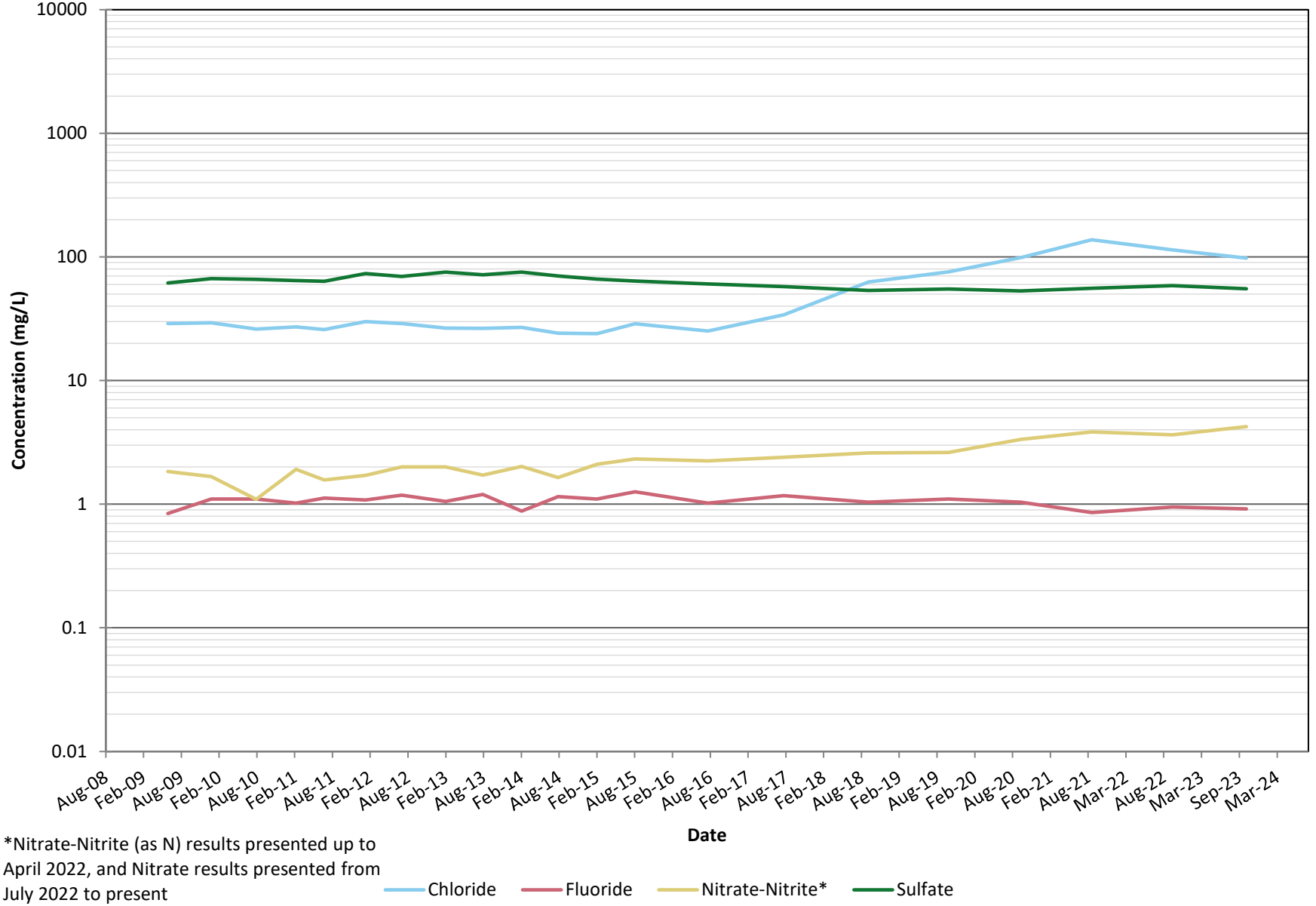


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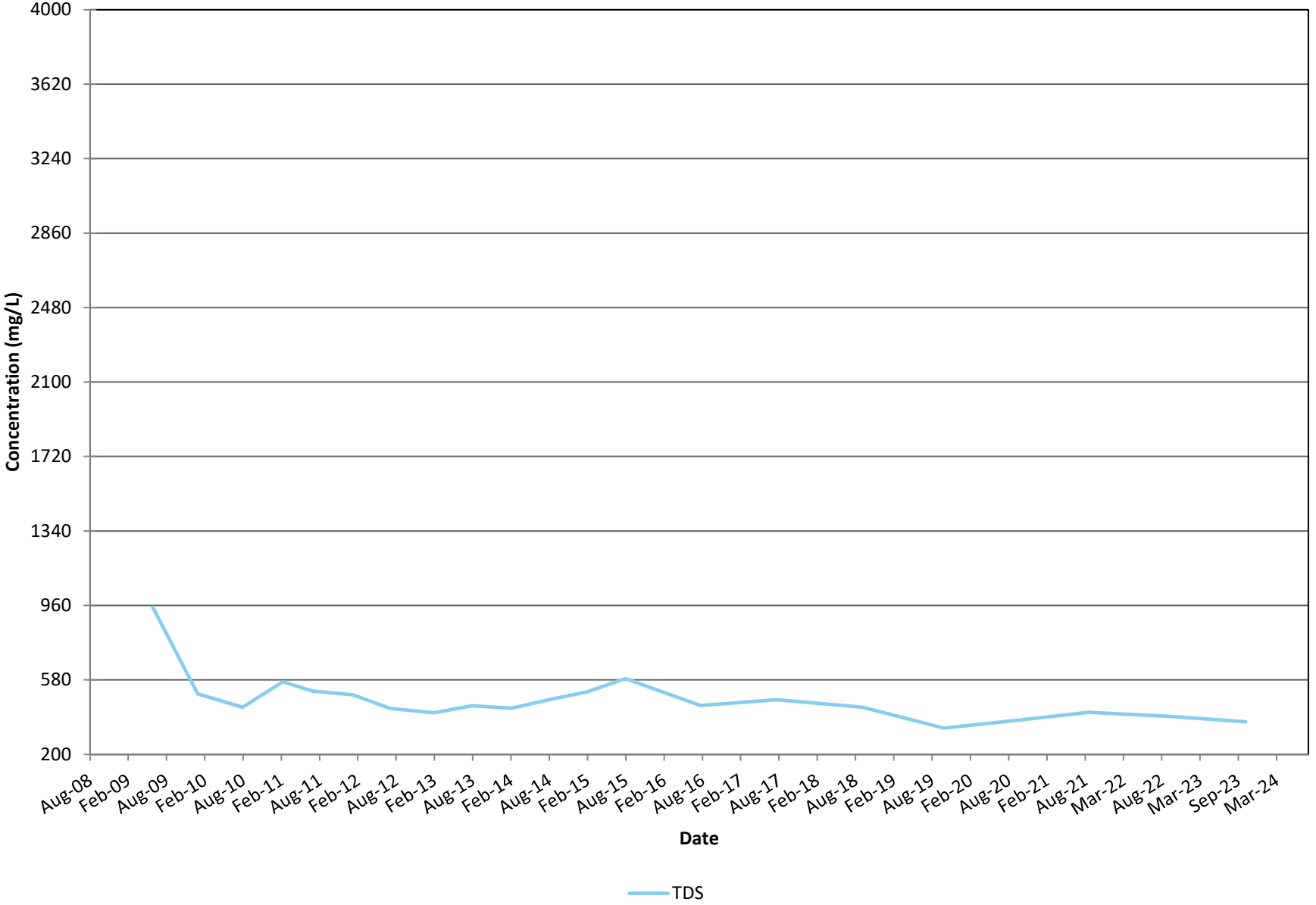
MW-4 Anions CONCENTRATIONS OVER TIME



*Nitrate-Nitrite (as N) results presented up to April 2022, and Nitrate results presented from July 2022 to present

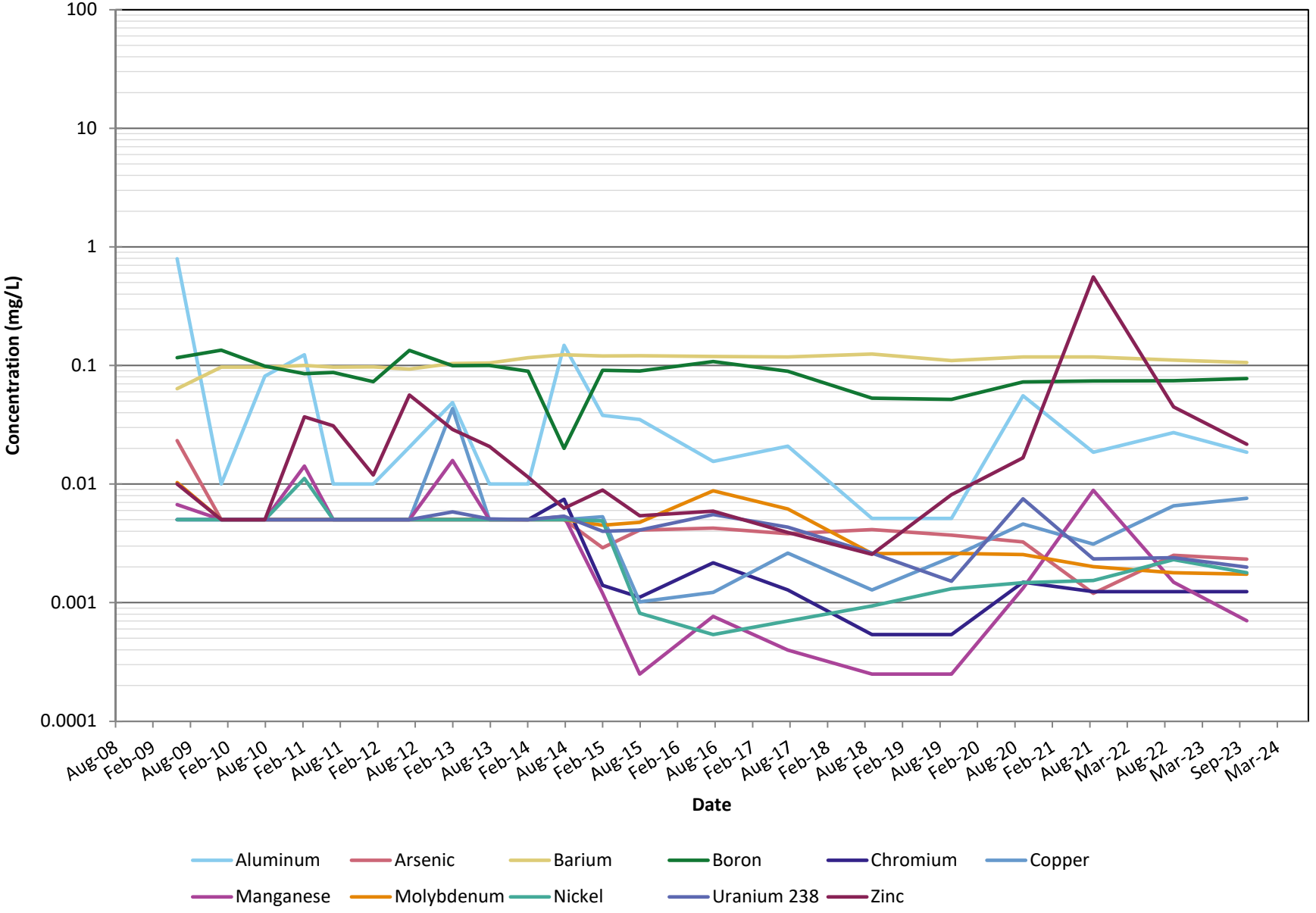
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Received by OCD: 4/15/2024 1:46:20 PM

MW-5 TDS CONCENTRATIONS OVER TIME



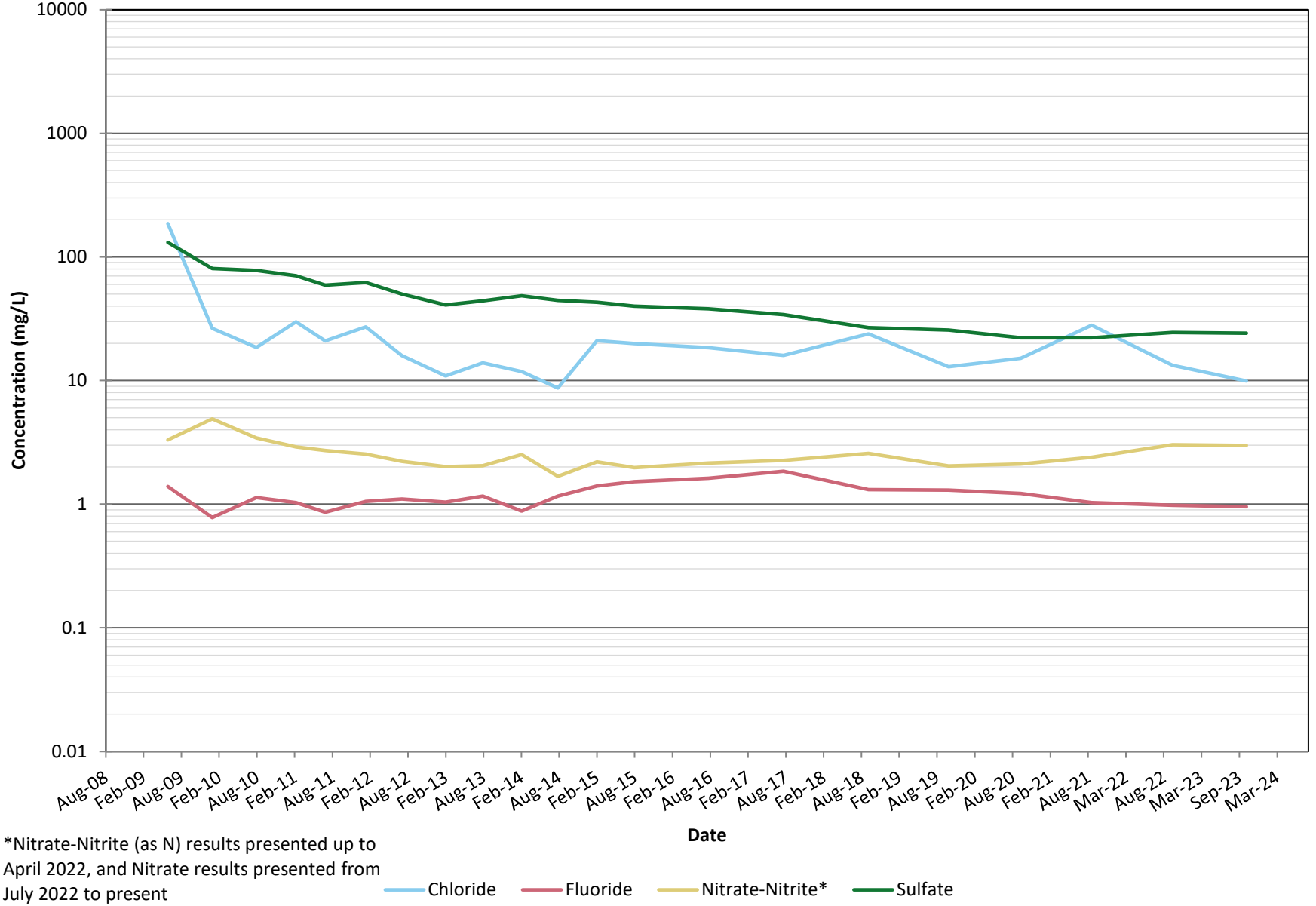
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Received by OCD: 4/15/2024 1:46:20 PM

MW-5 Metals CONCENTRATIONS OVER TIME



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Received by OCD: 4/15/2024 1:46:20 PM

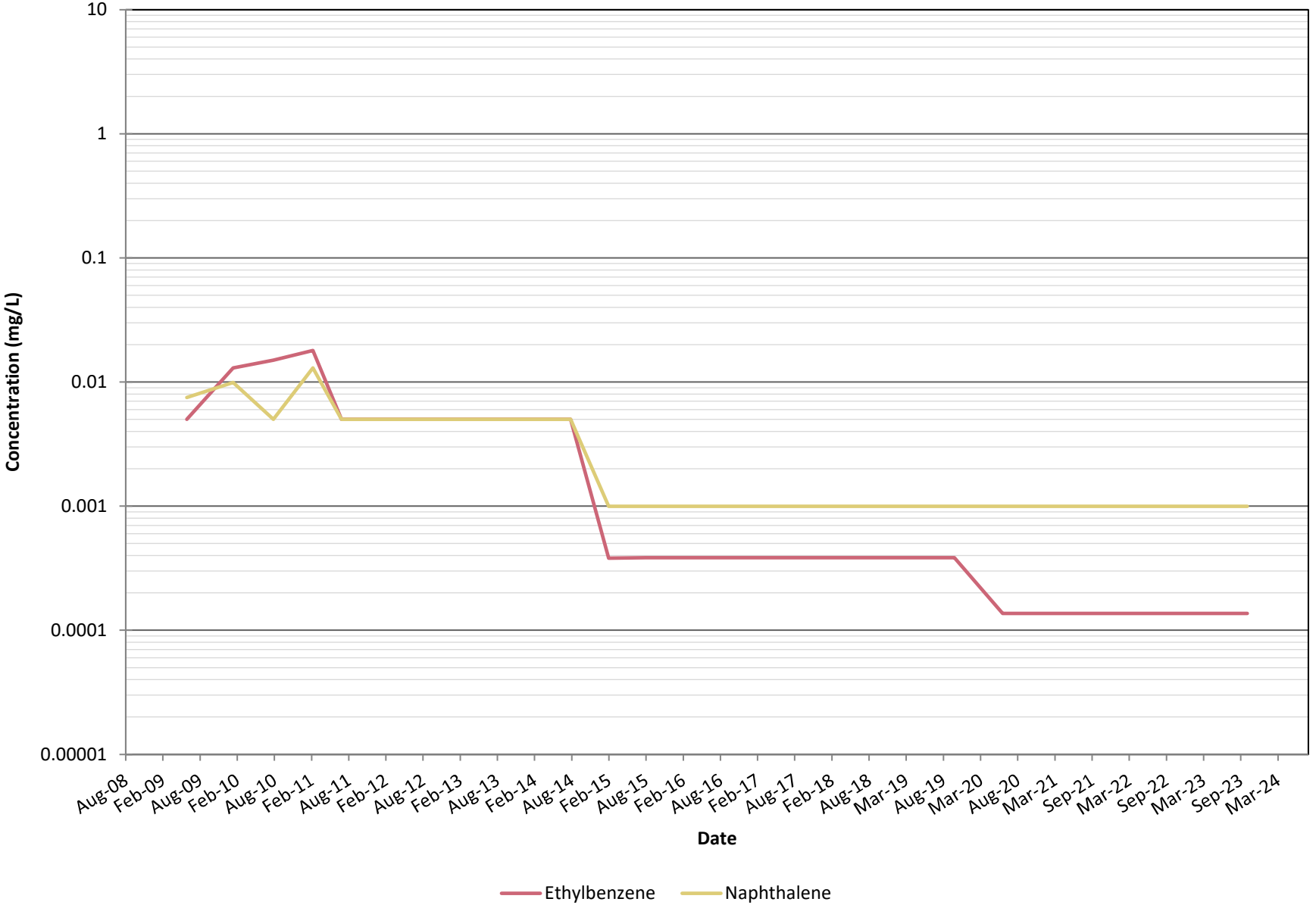
MW-5 Anions CONCENTRATIONS OVER TIME



*Nitrate-Nitrite (as N) results presented up to April 2022, and Nitrate results presented from July 2022 to present

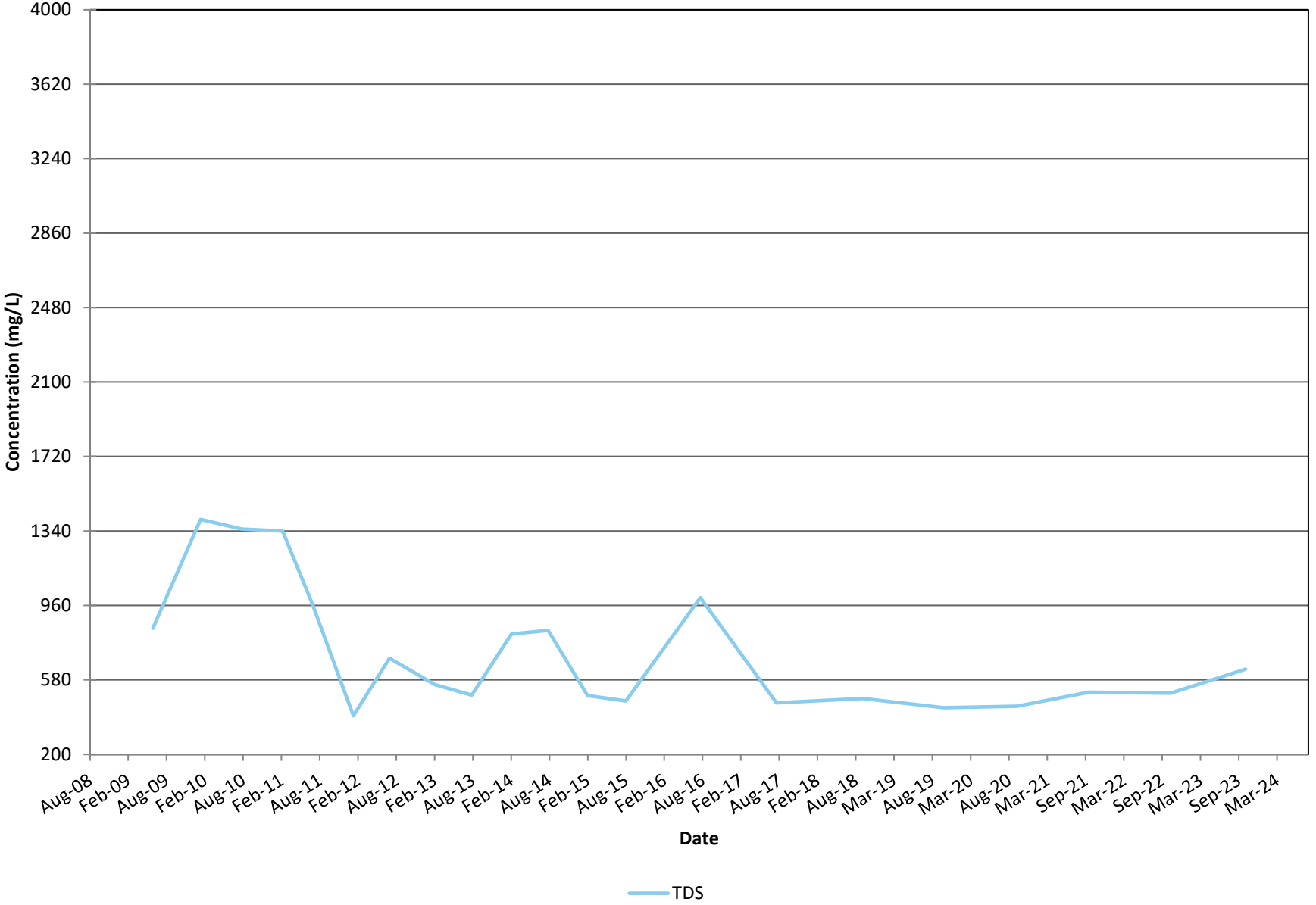
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Received by OCD: 4/15/2024 1:46:20 PM

MW-6 VOC CONCENTRATIONS OVER TIME



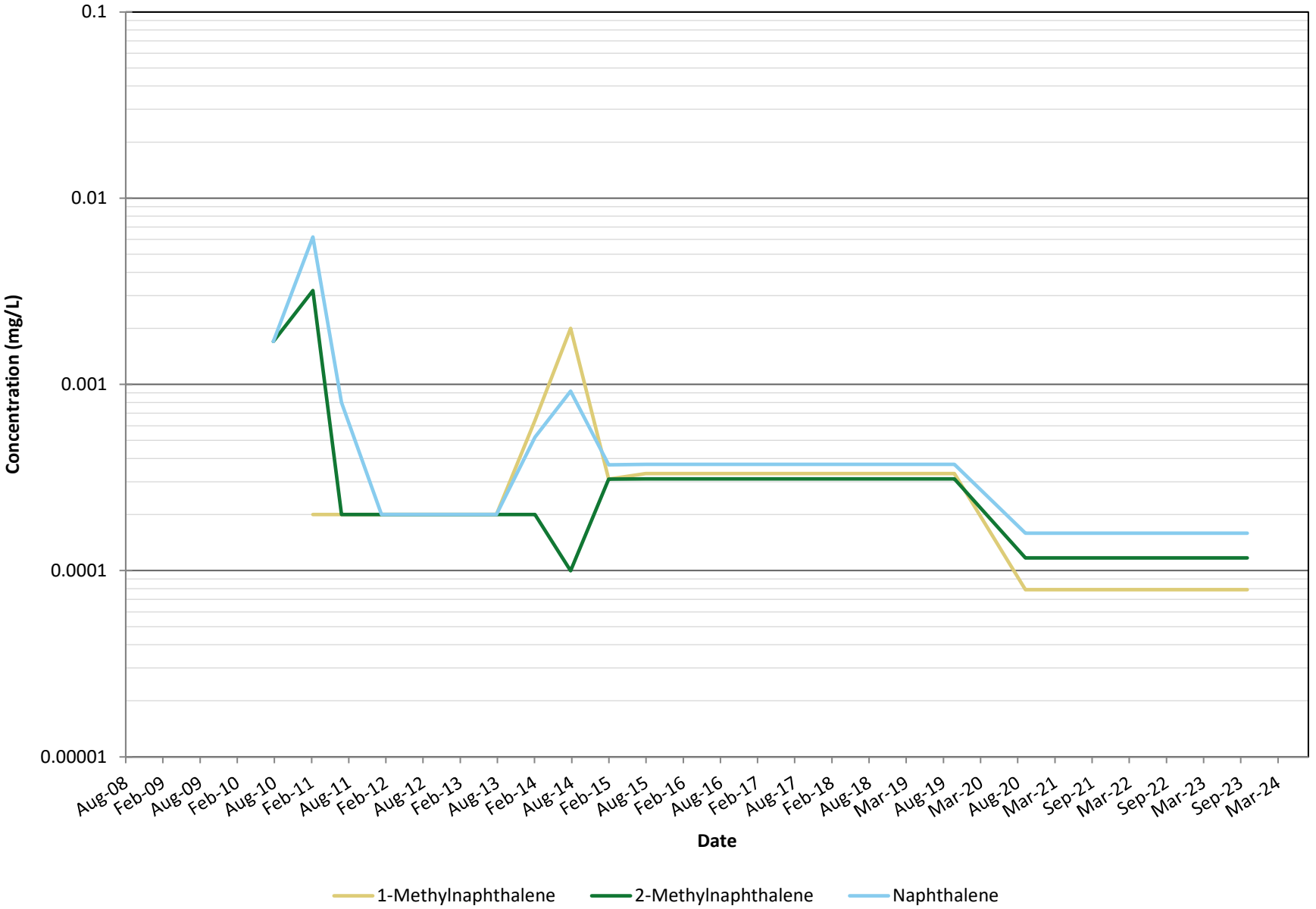
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MW-6 TDS CONCENTRATIONS OVER TIME



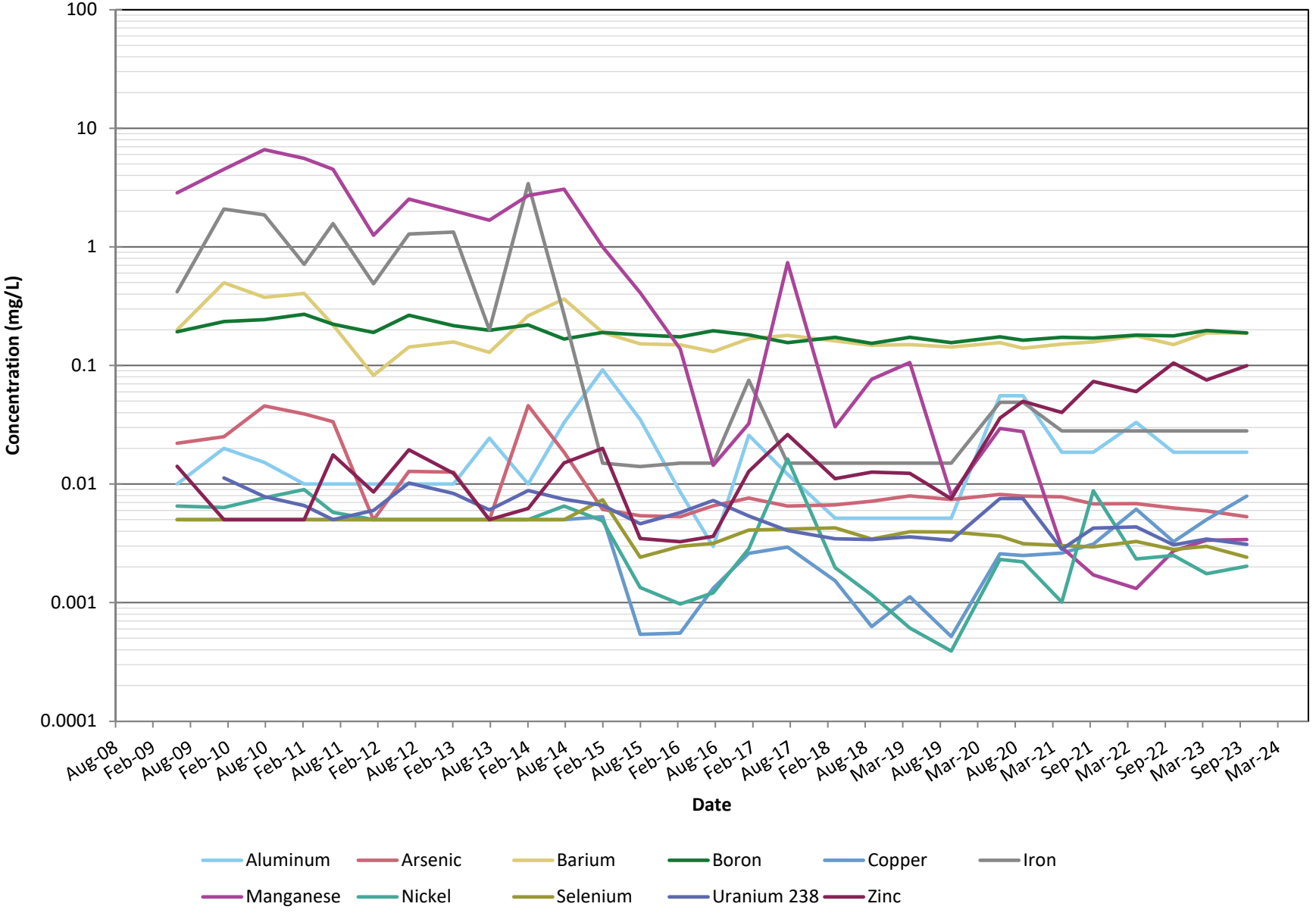
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MW-6 SVOC CONCENTRATIONS OVER TIME



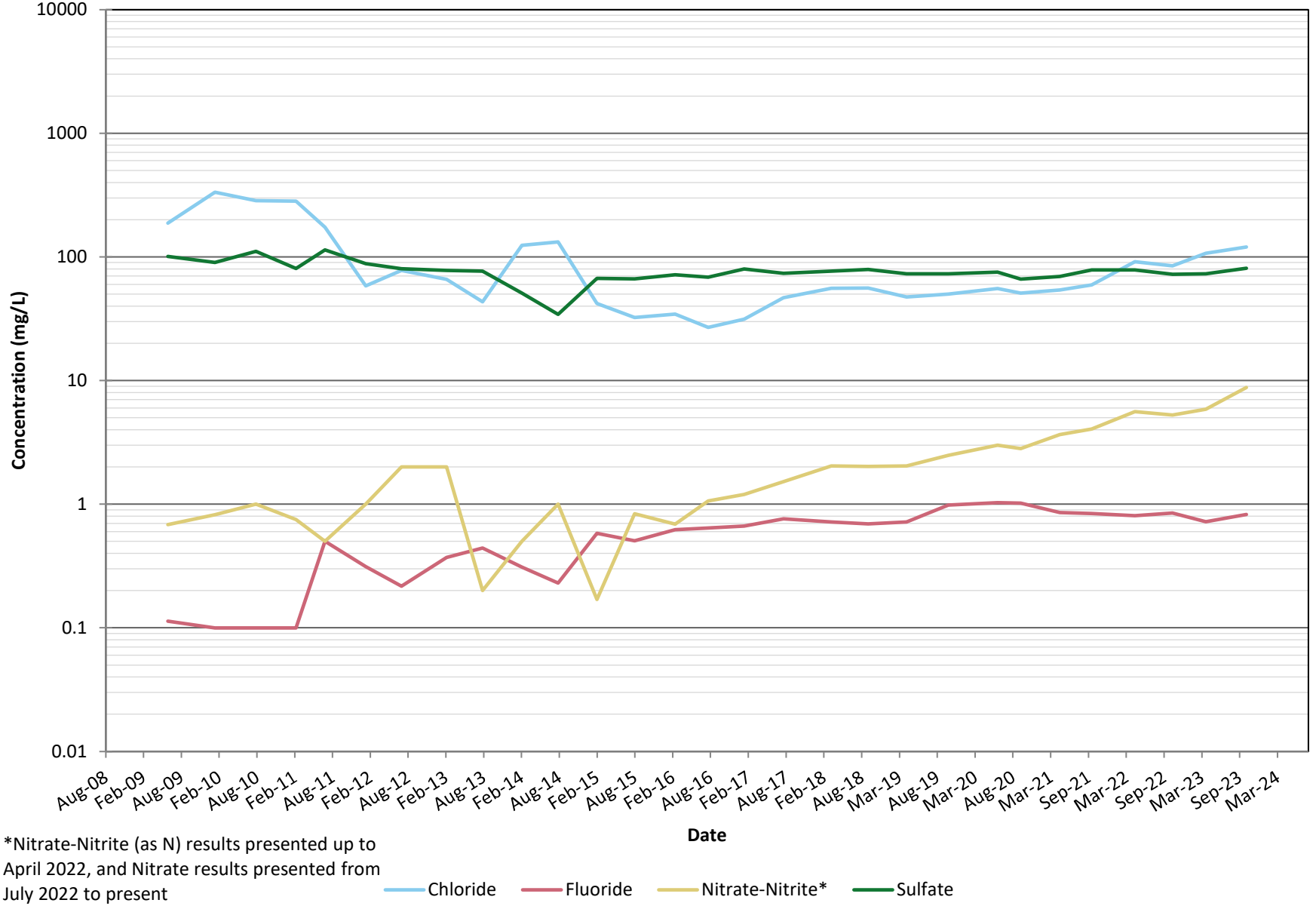
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MW-6 Metals CONCENTRATIONS OVER TIME



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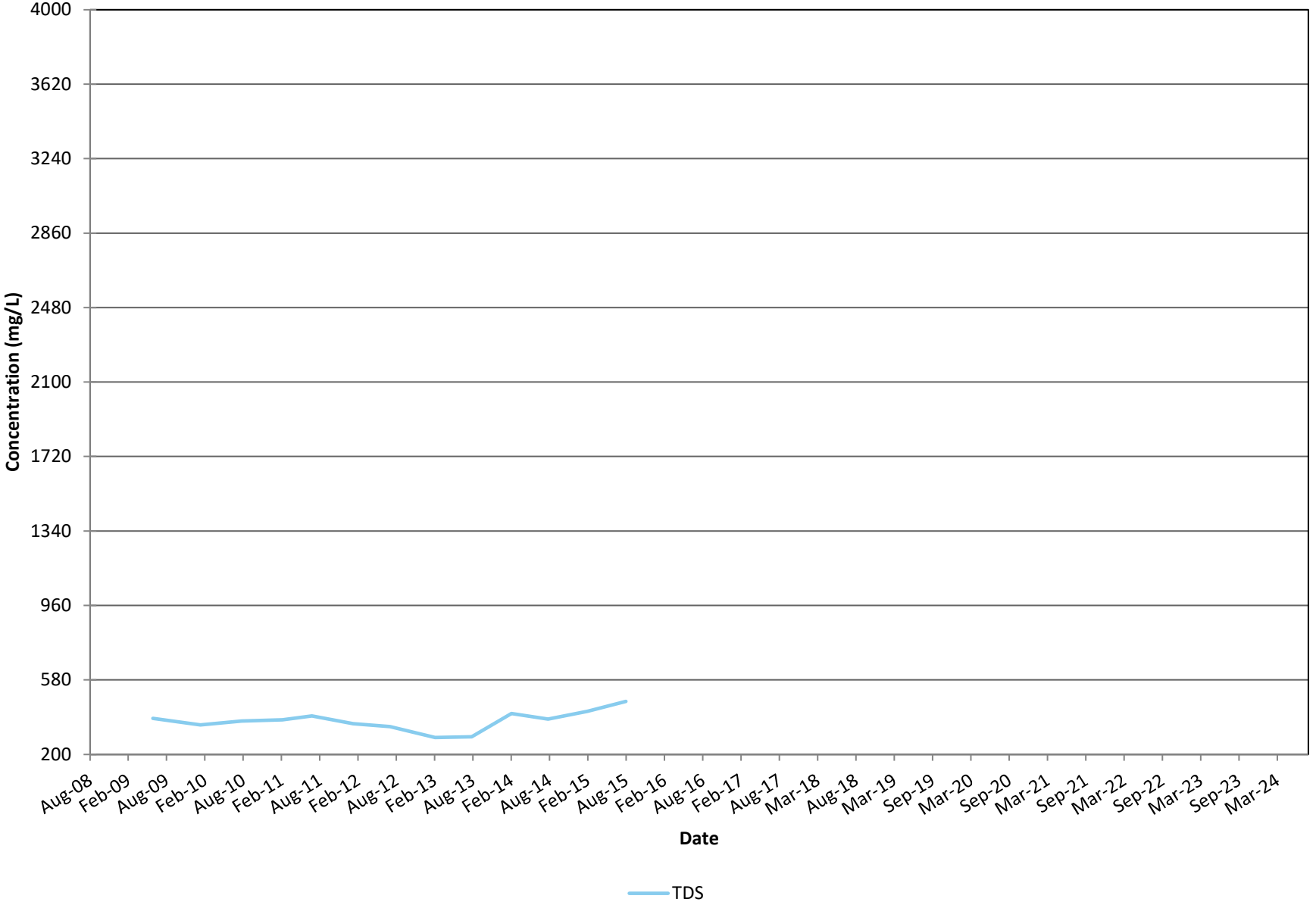
MW-6 Anions CONCENTRATIONS OVER TIME



*Nitrate-Nitrite (as N) results presented up to April 2022, and Nitrate results presented from July 2022 to present

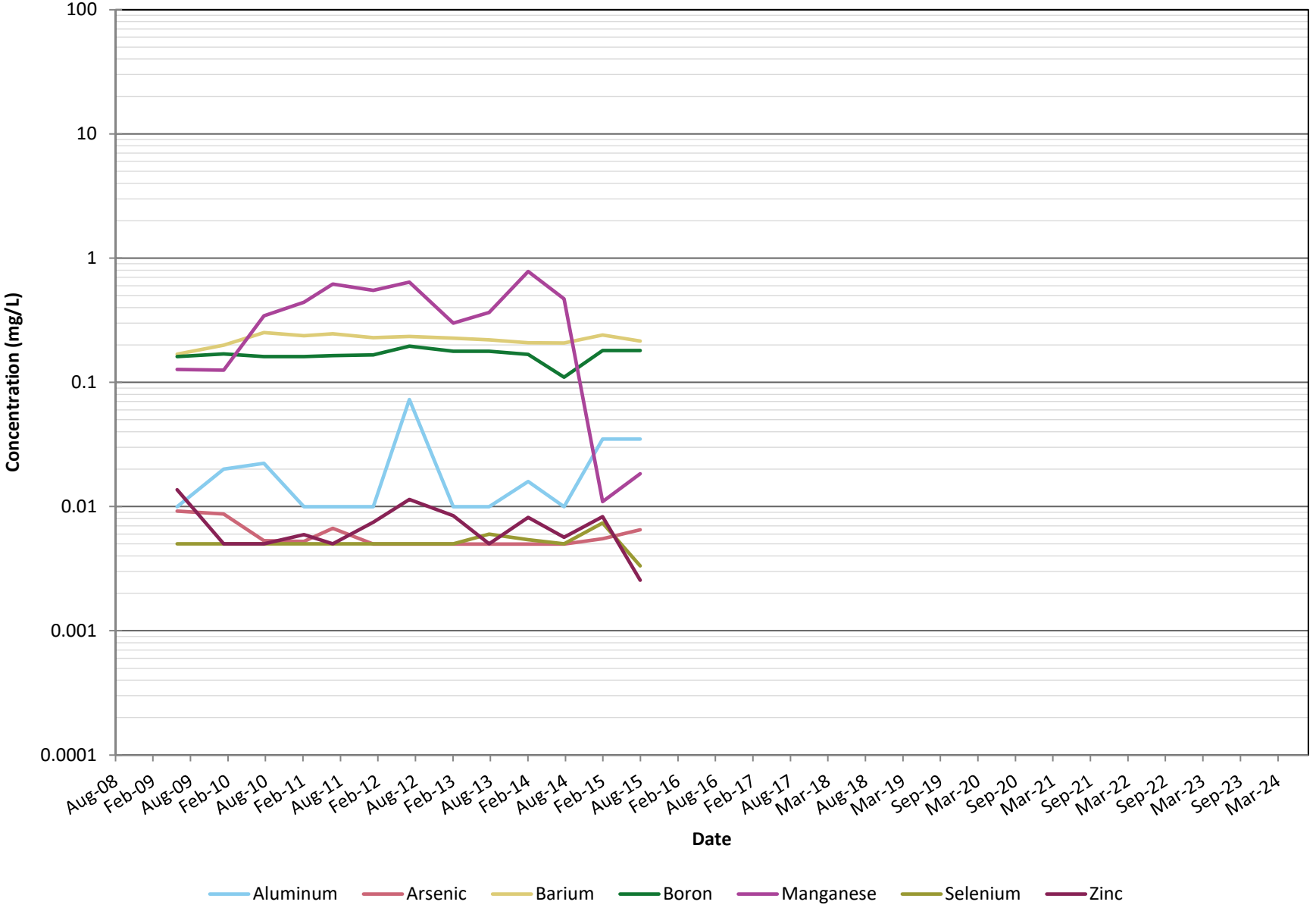
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MW-7 TDS CONCENTRATIONS OVER TIME



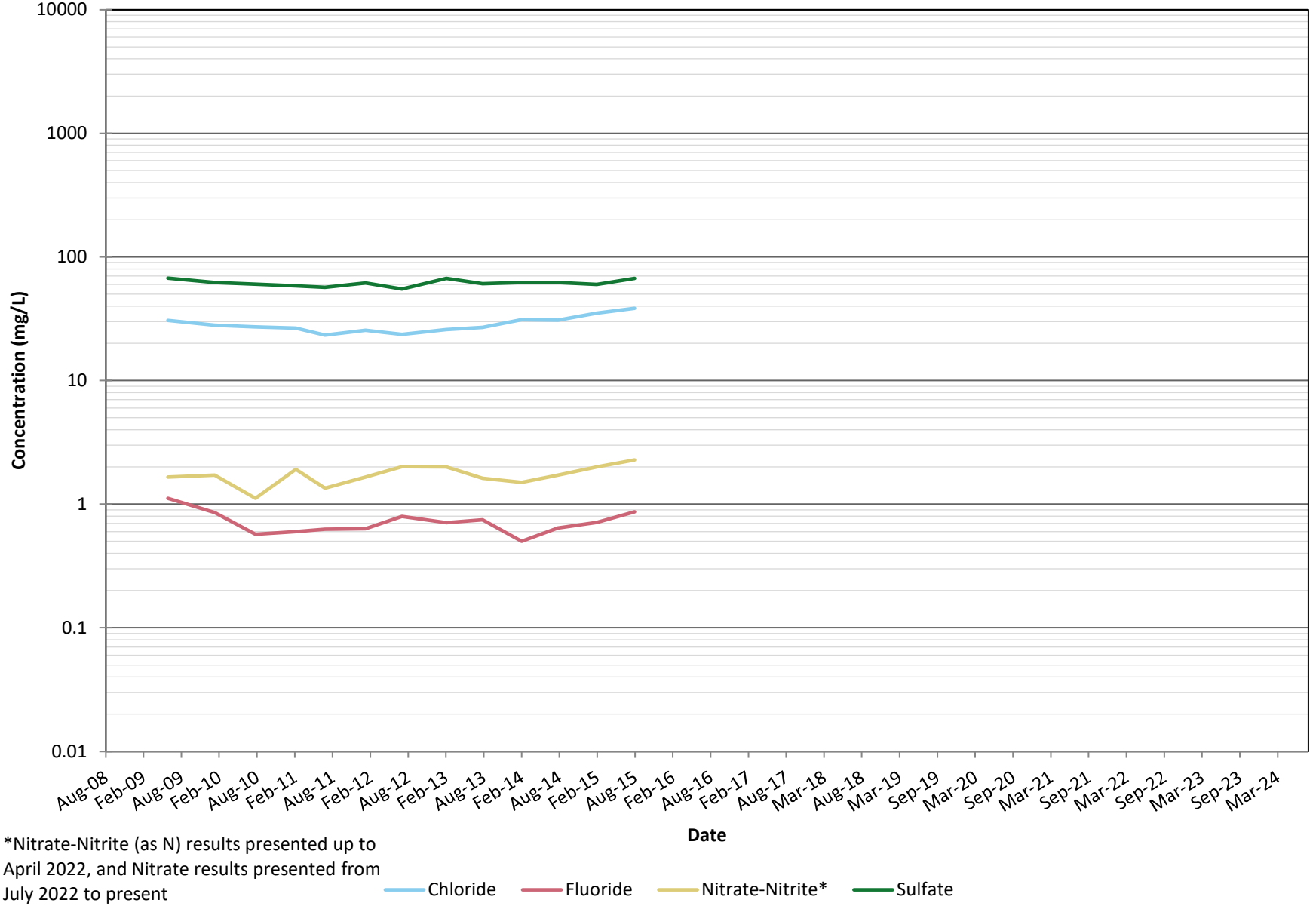
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MW-7 Metals CONCENTRATIONS OVER TIME



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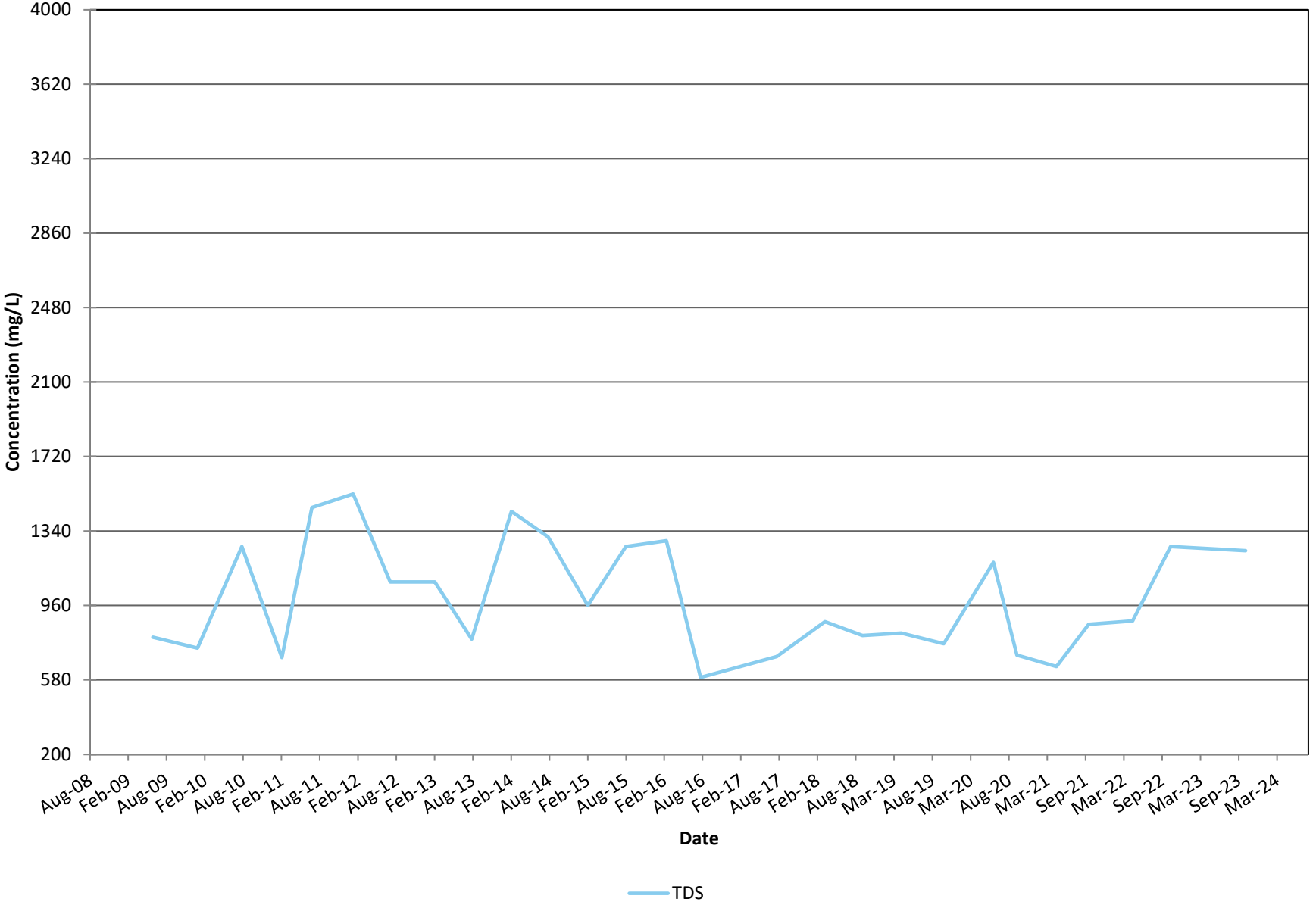
MW-7 Anions CONCENTRATIONS OVER TIME



*Nitrate-Nitrite (as N) results presented up to April 2022, and Nitrate results presented from July 2022 to present

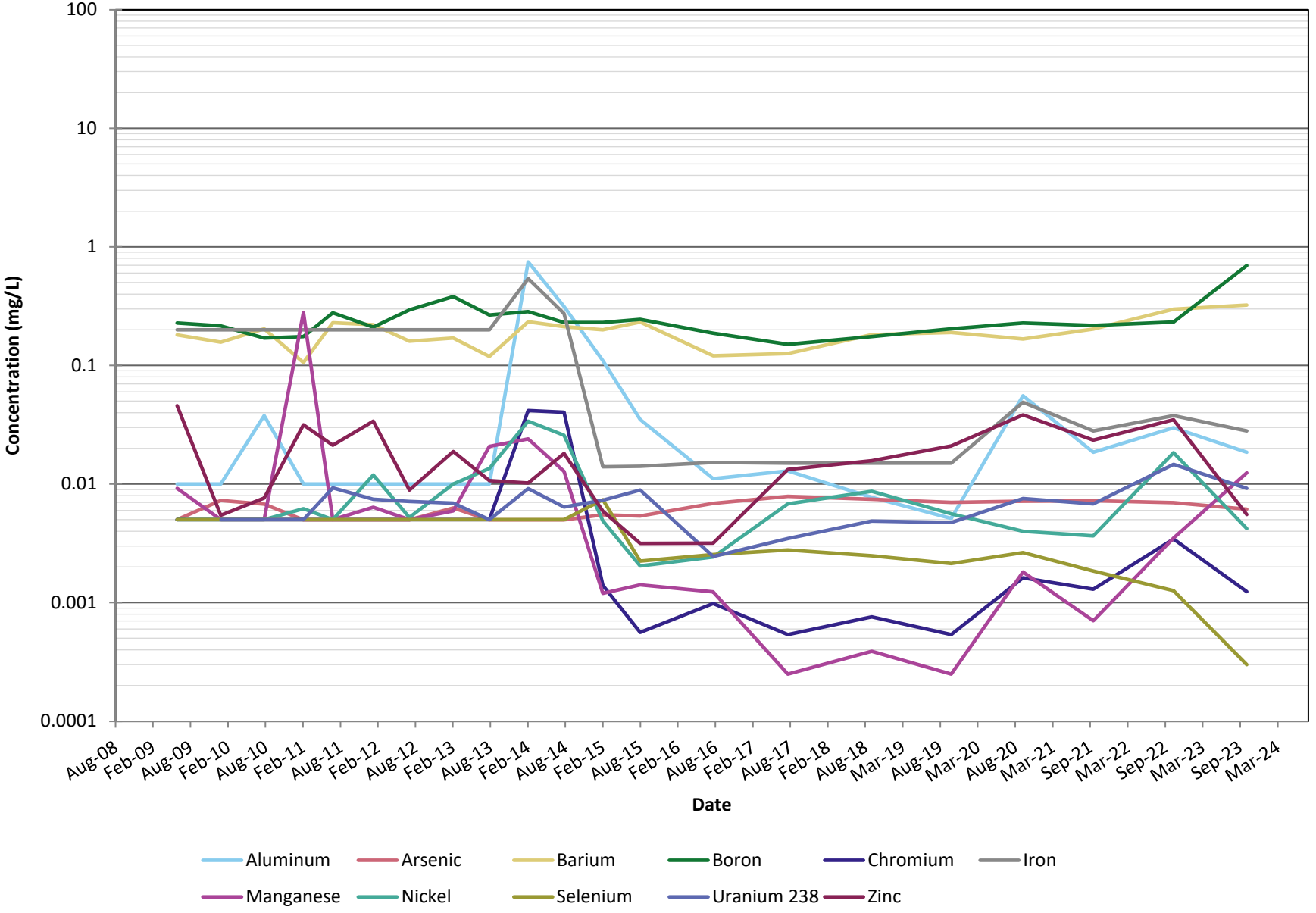
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MW-8 TDS CONCENTRATIONS OVER TIME



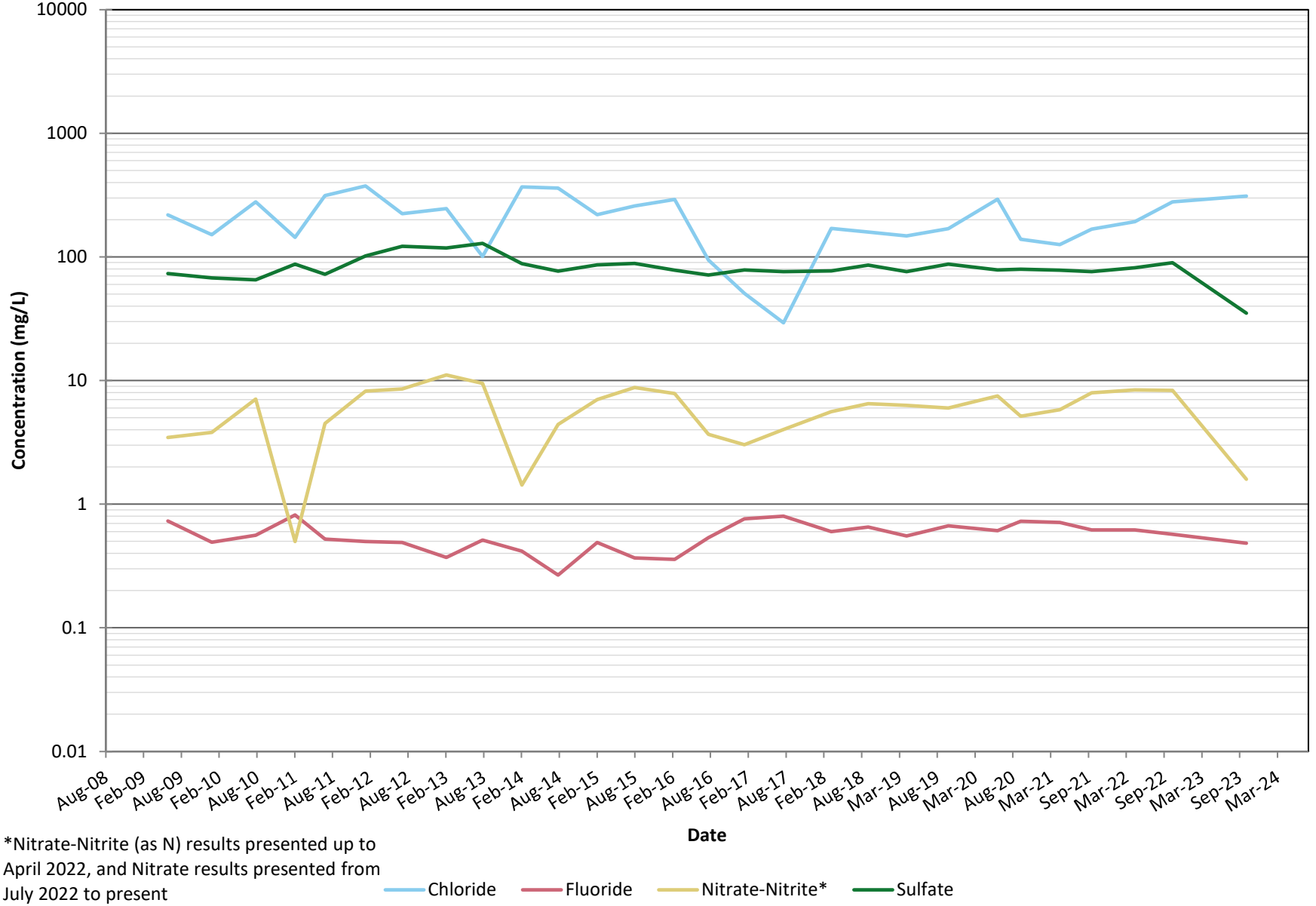
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MW-8 Metals CONCENTRATIONS OVER TIME



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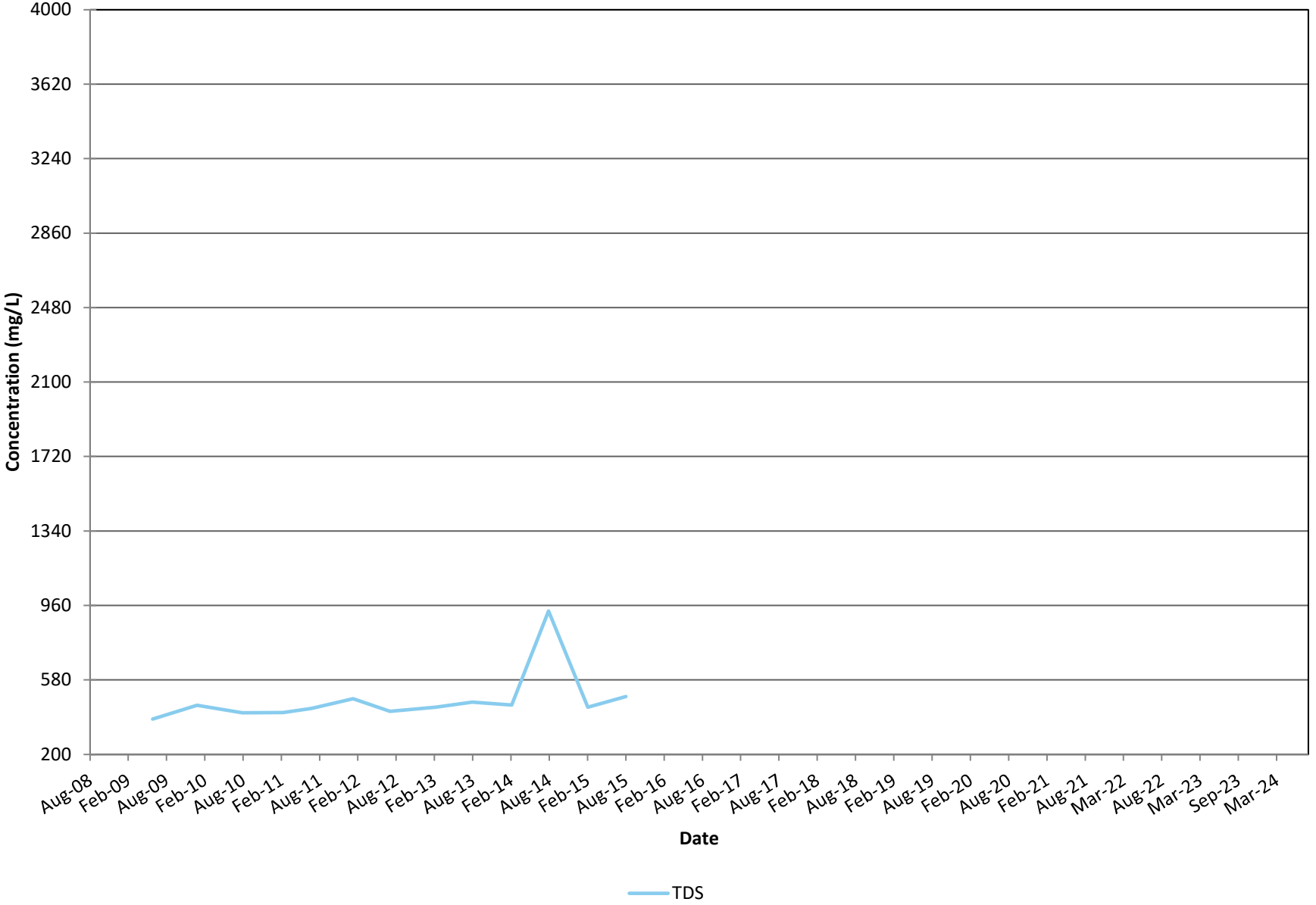
MW-8 Anions CONCENTRATIONS OVER TIME



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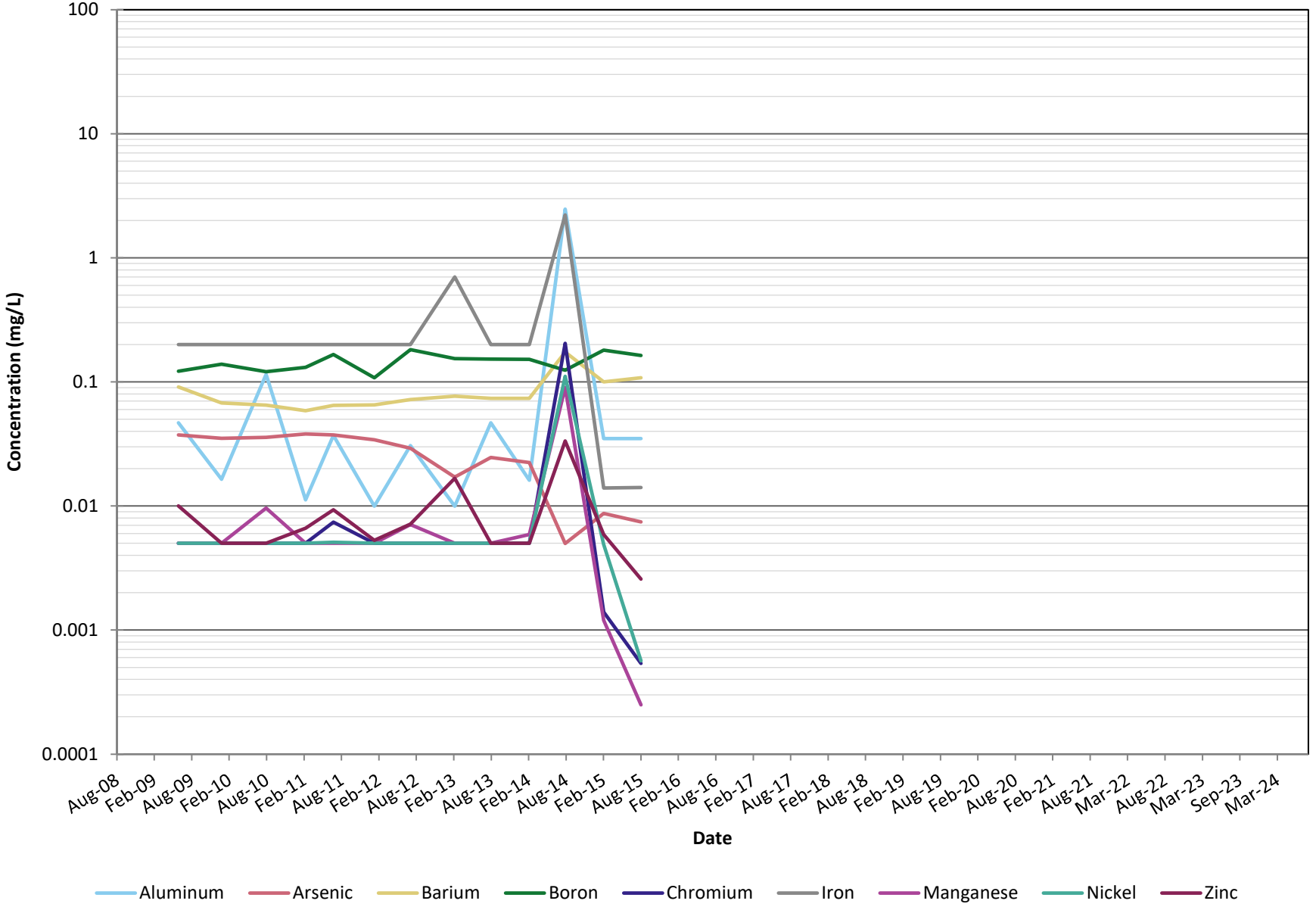
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MW-9 TDS CONCENTRATIONS OVER TIME



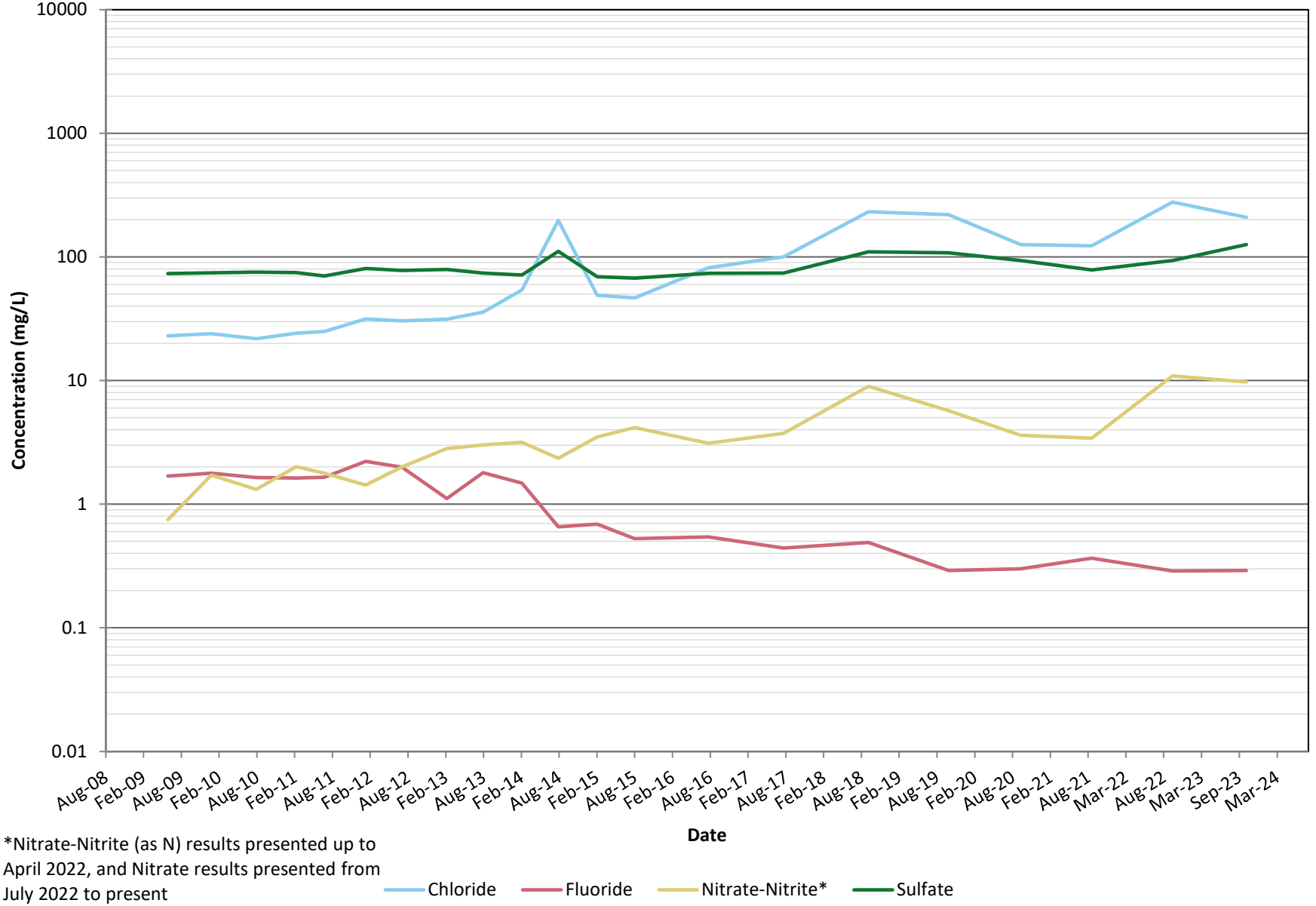
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MW-9 Metals CONCENTRATIONS OVER TIME



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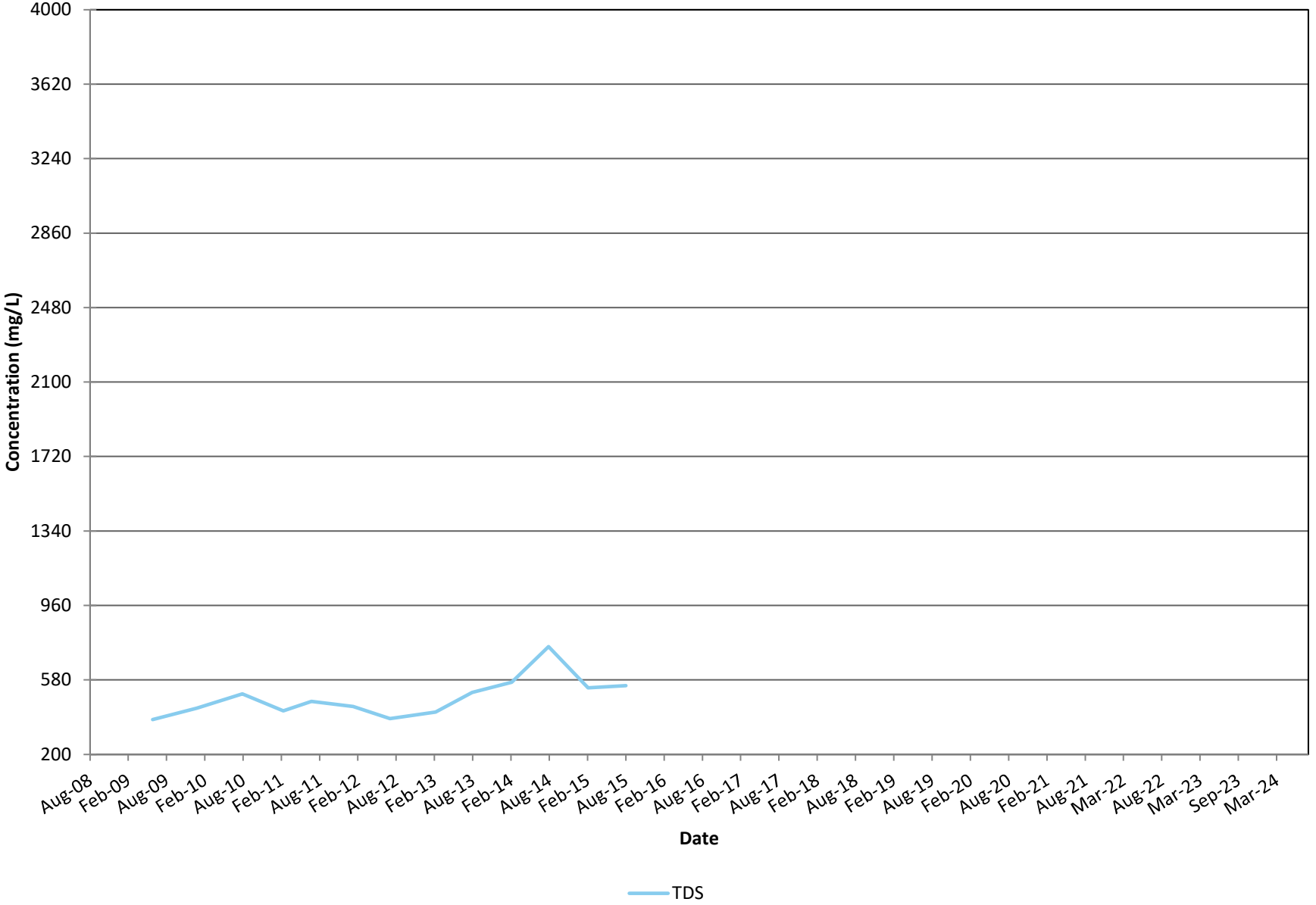
MW-9 Anions CONCENTRATIONS OVER TIME



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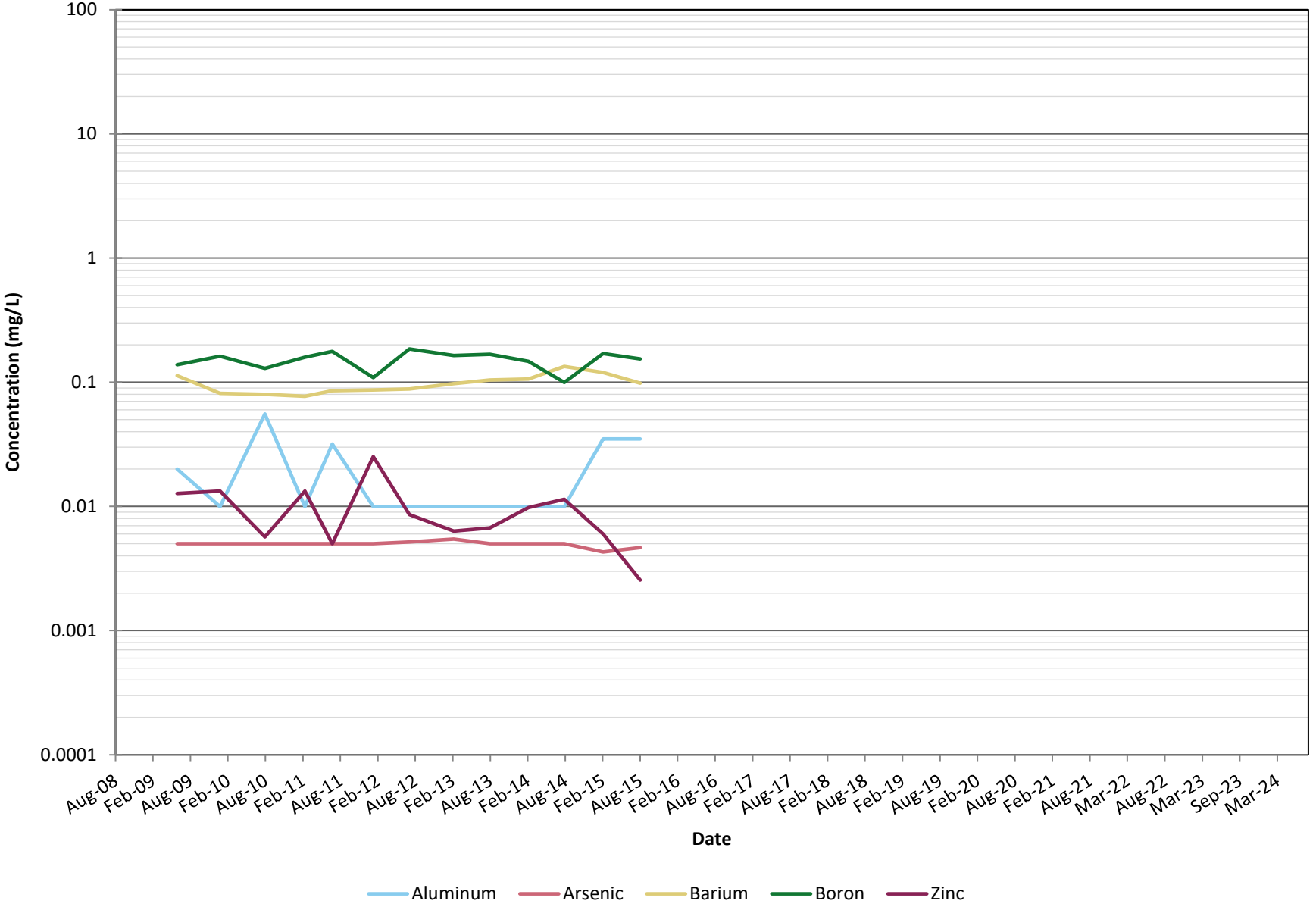
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MW-10 TDS CONCENTRATIONS OVER TIME



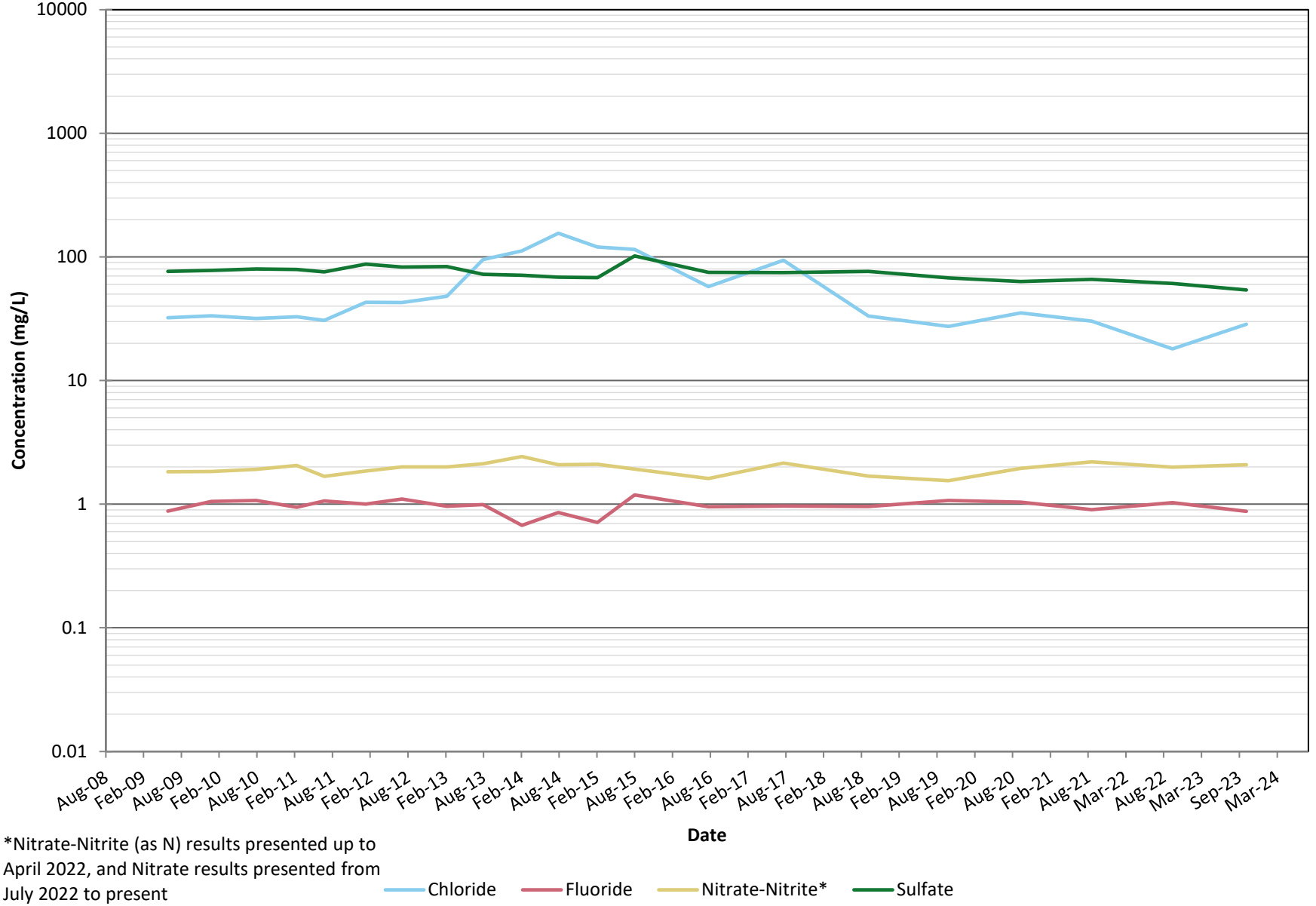
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MW-10 Metals CONCENTRATIONS OVER TIME



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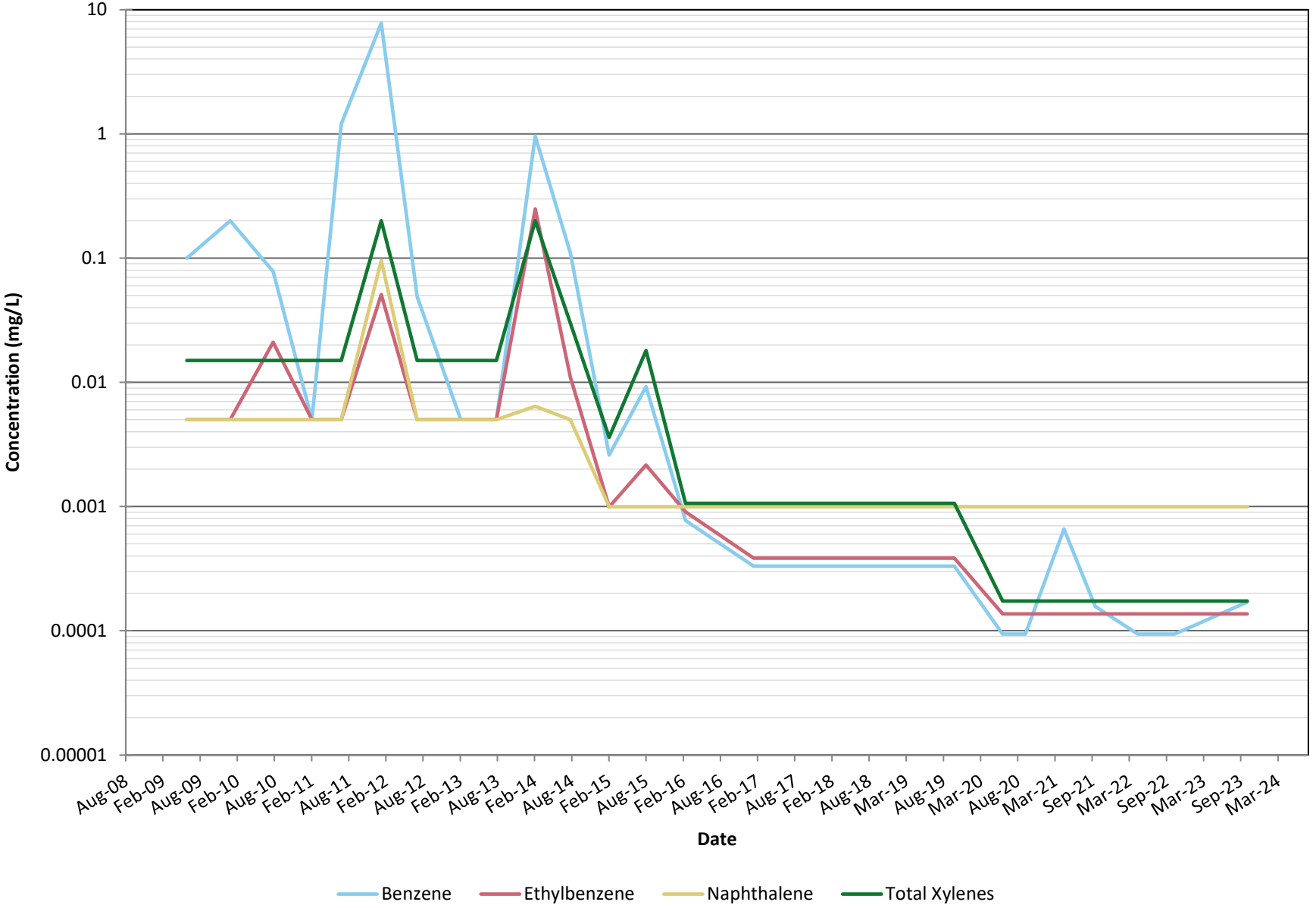
MW-10 Anions CONCENTRATIONS OVER TIME



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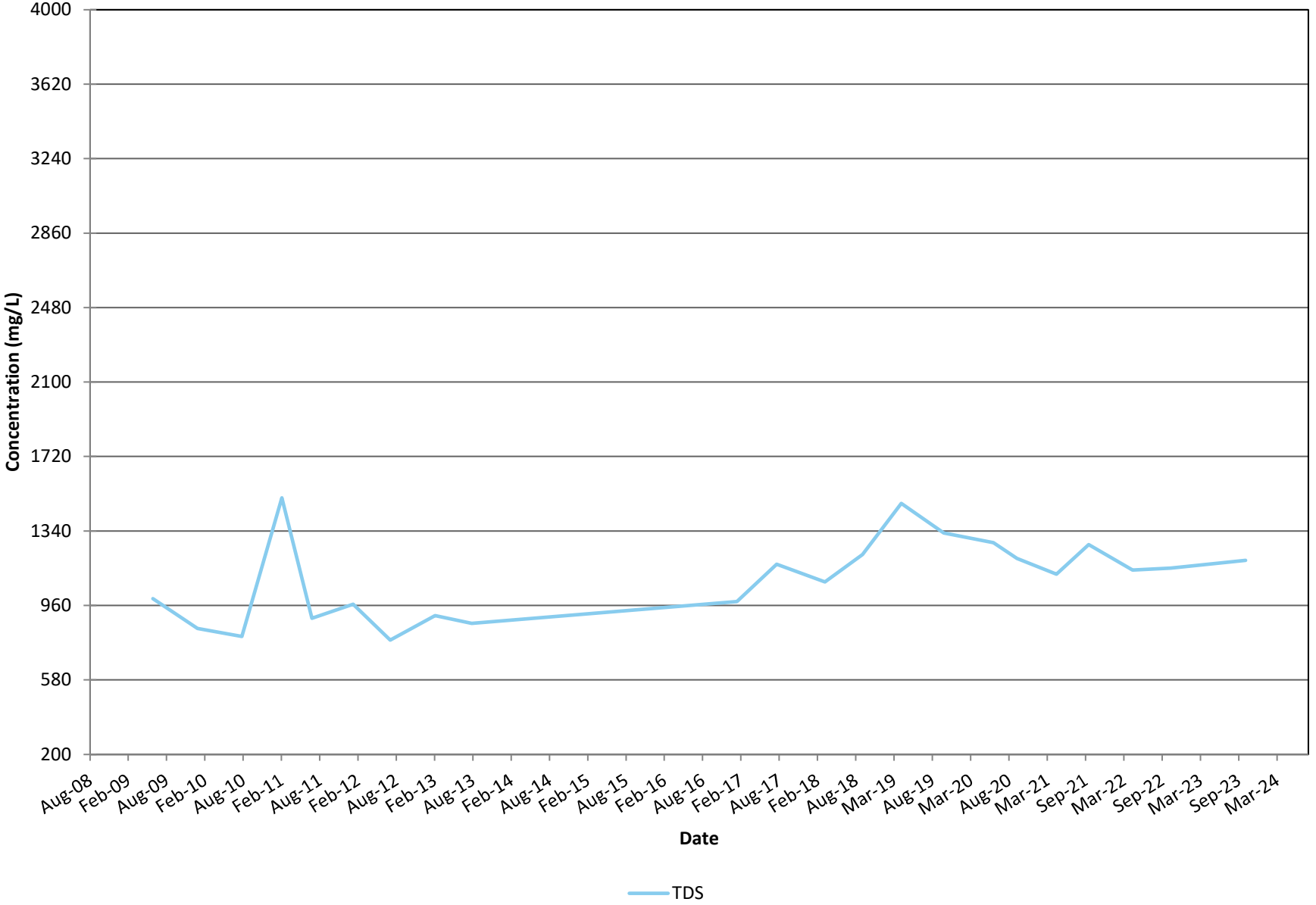
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MW-11/MW-11R VOC CONCENTRATIONS OVER TIME



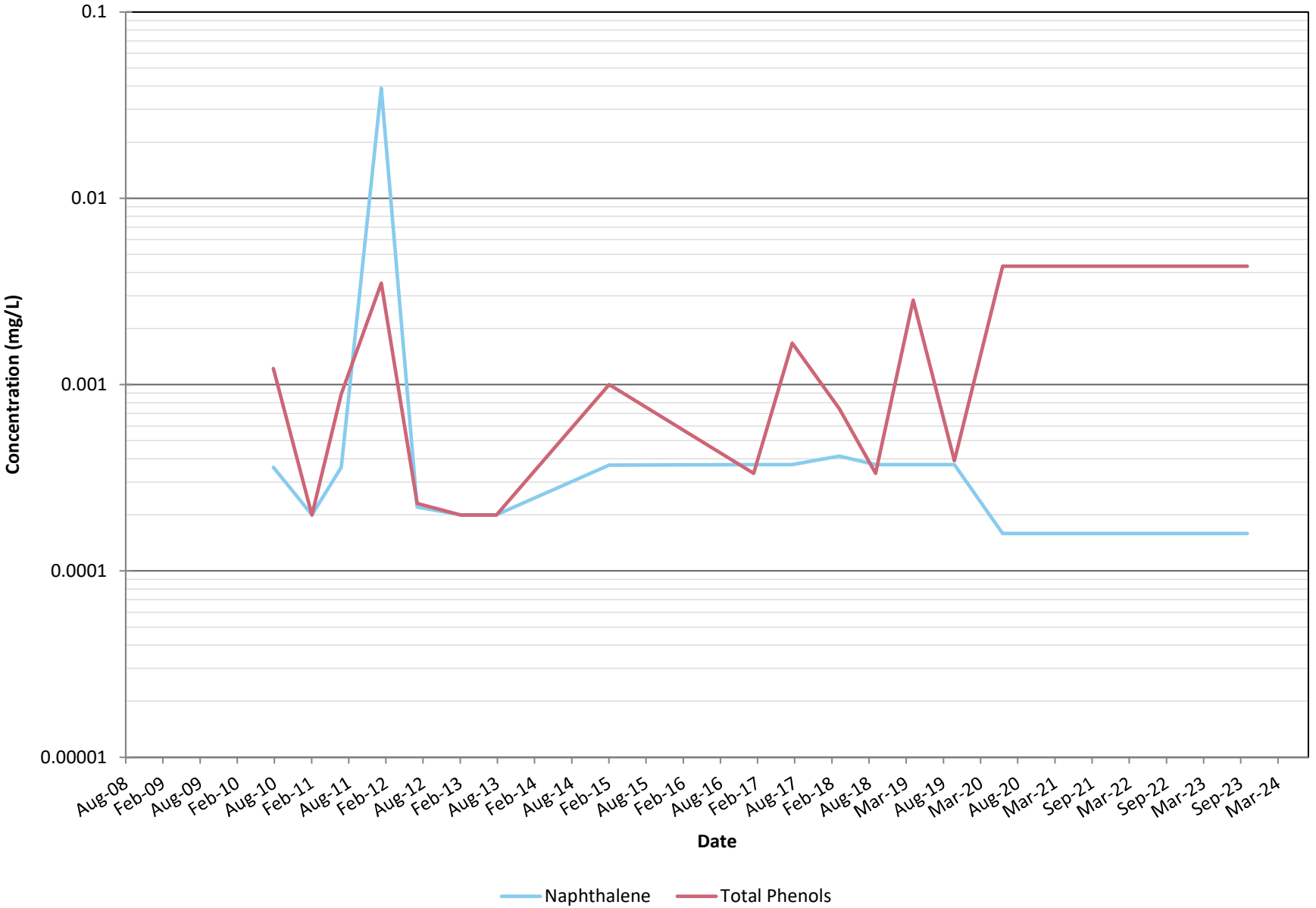
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MW-11/MW-11R TDS CONCENTRATIONS OVER TIME



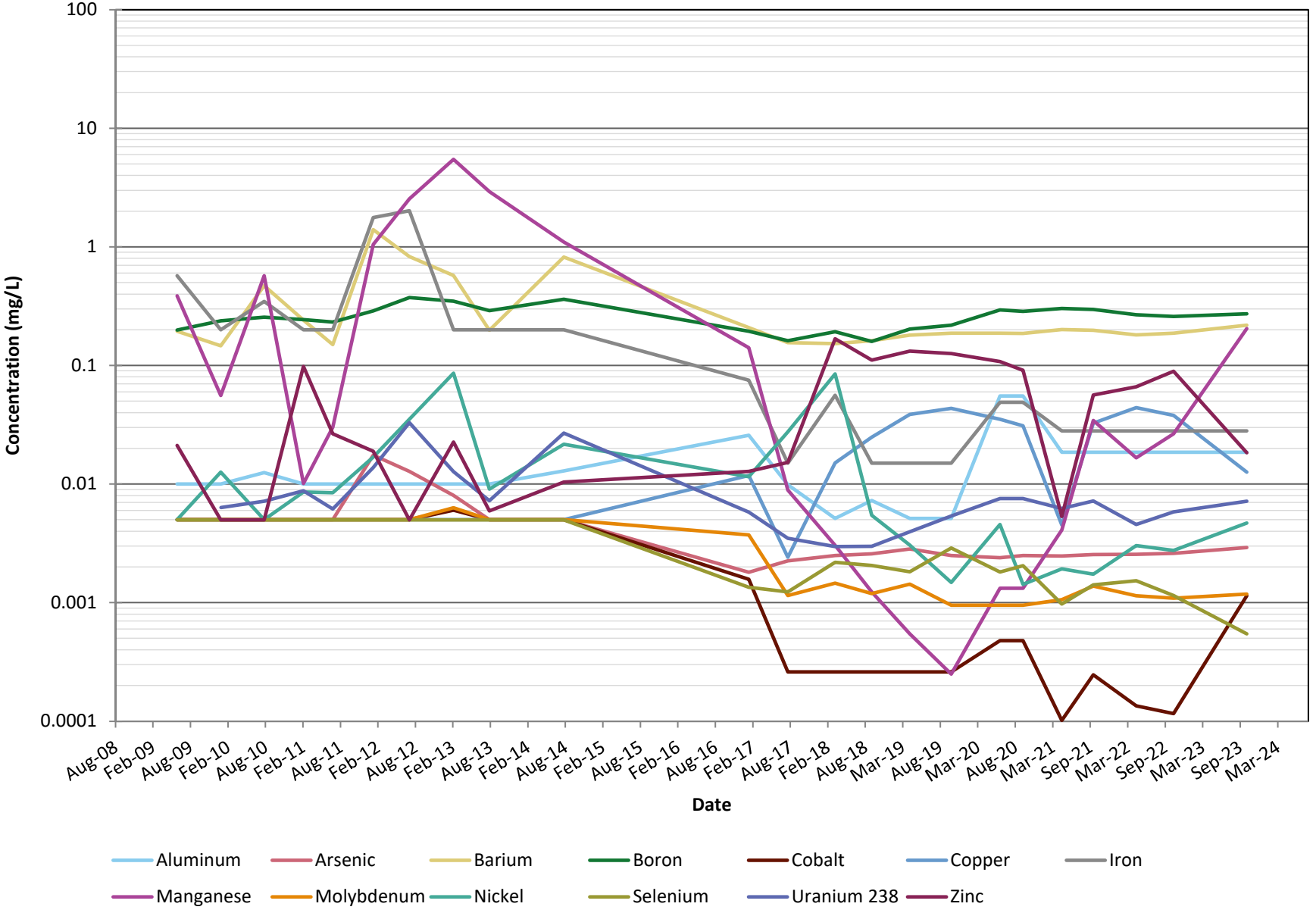
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MW-11/MW-11R SVOC CONCENTRATIONS OVER TIME



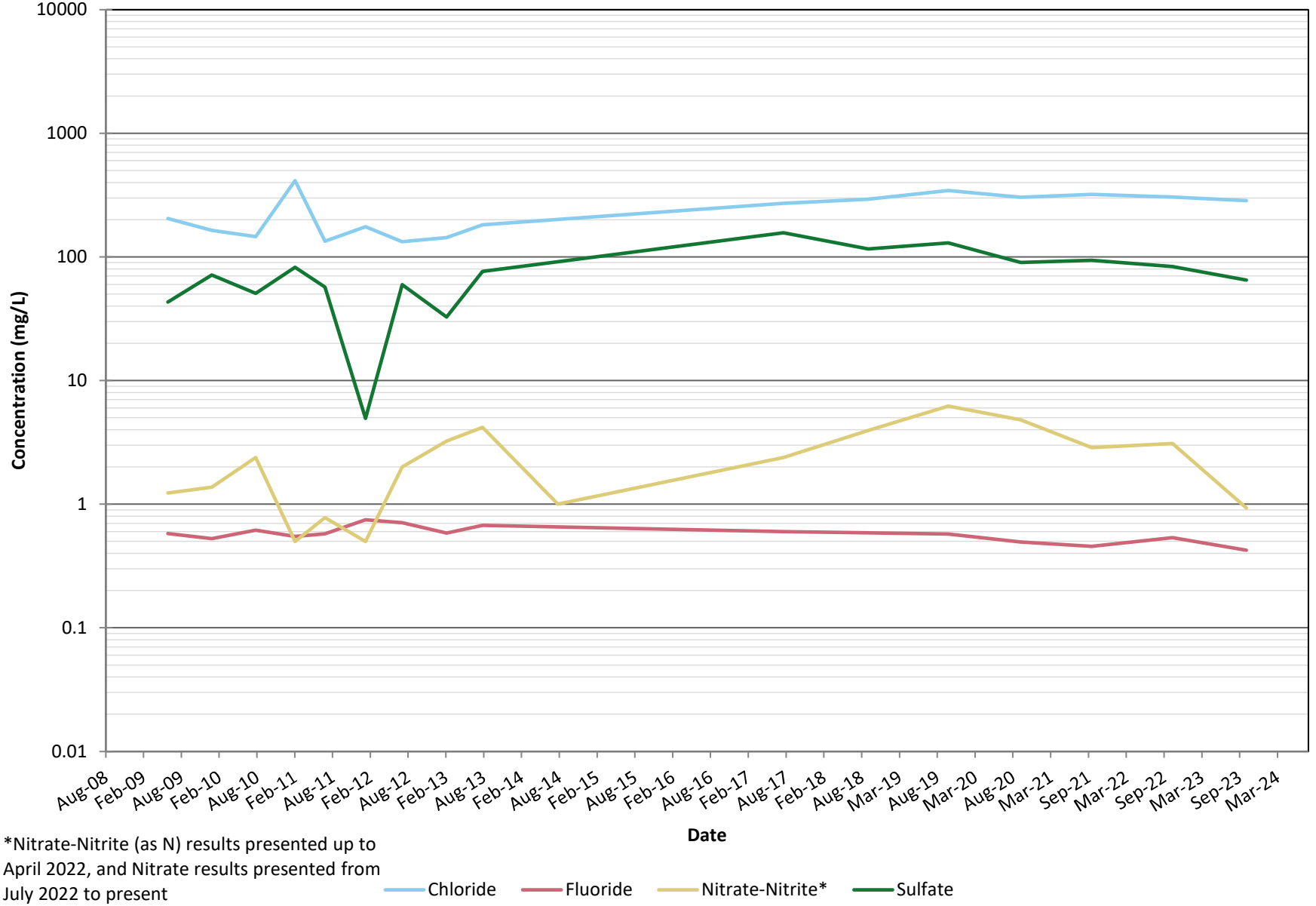
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MW-11/MW-11R Metals CONCENTRATIONS OVER TIME



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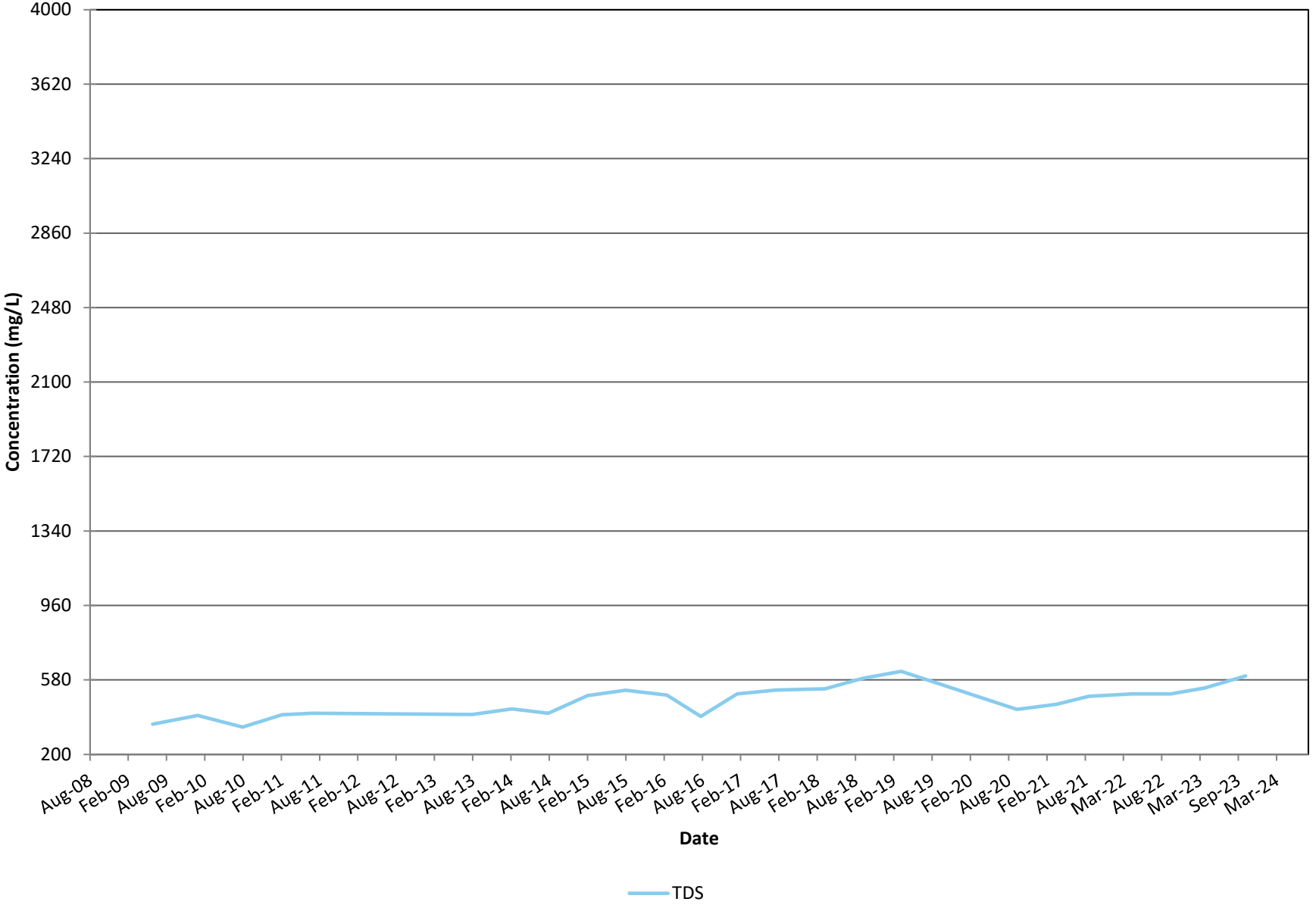
MW-11/MW-11R Anions CONCENTRATIONS OVER TIME



*Nitrate-Nitrite (as N) results presented up to April 2022, and Nitrate results presented from July 2022 to present

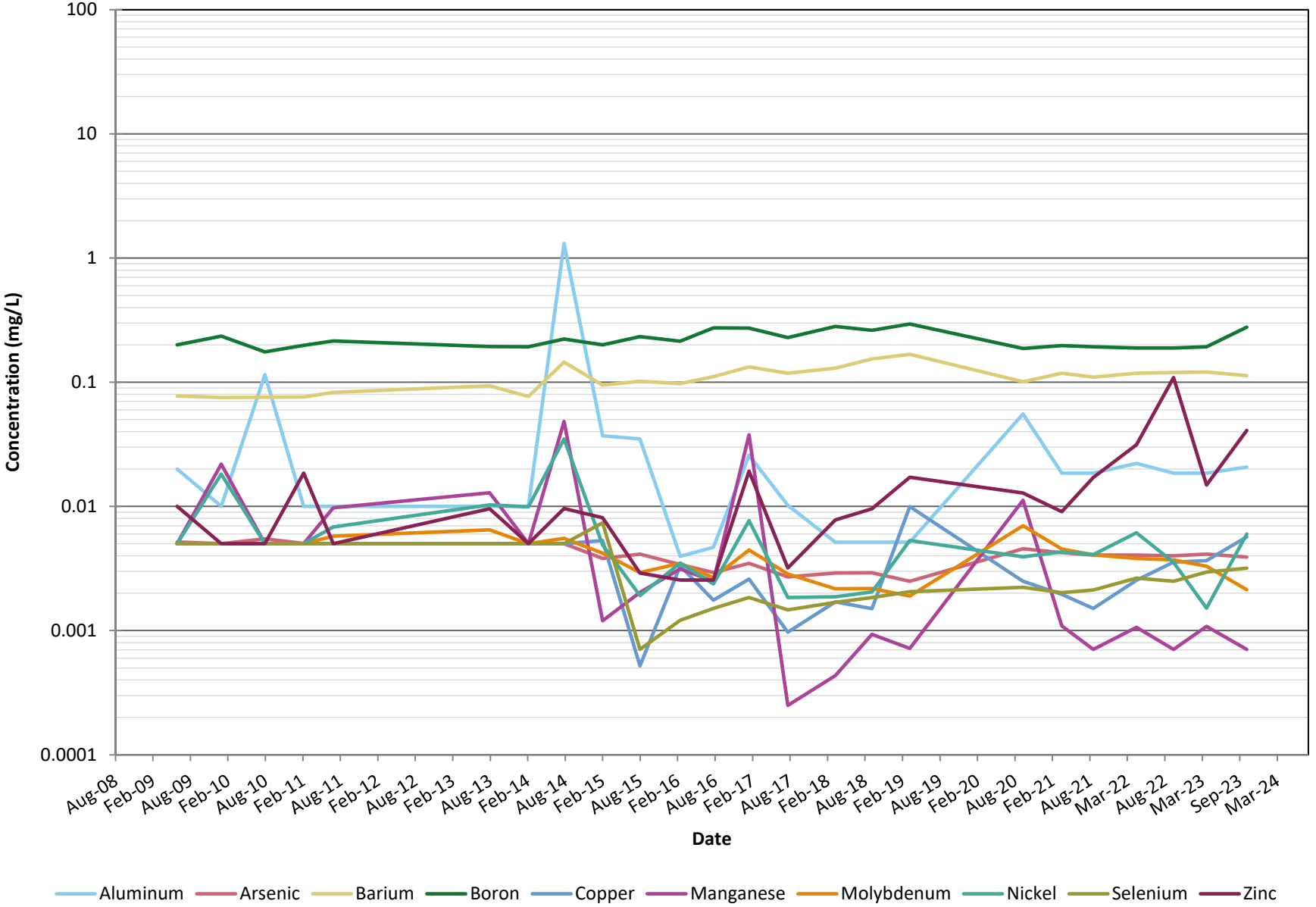
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MW-12/MW-12R/MW-12R2 TDS CONCENTRATIONS OVER TIME



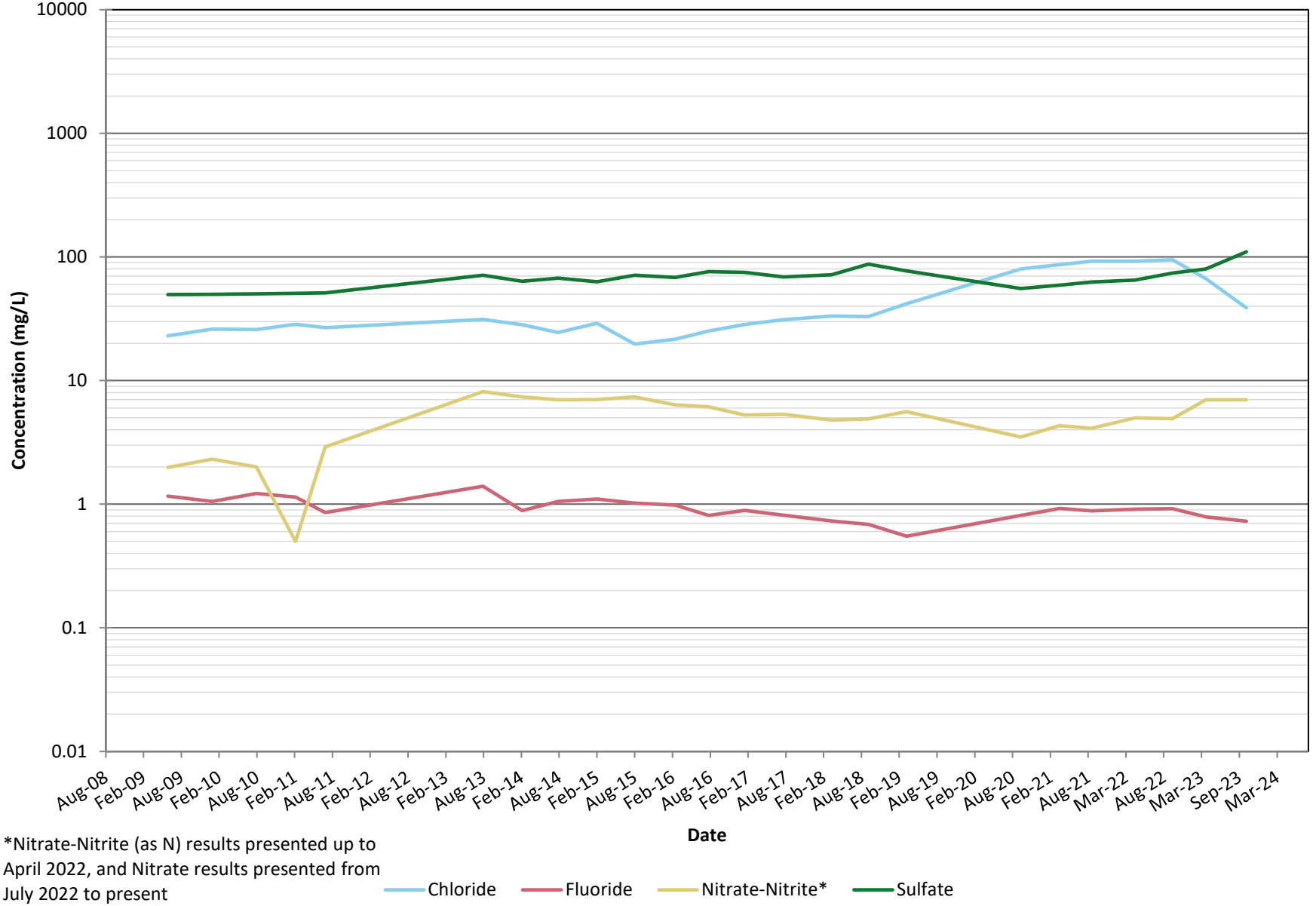
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MW-12/MW-12R/MW-12R2 Metals CONCENTRATIONS OVER TIME



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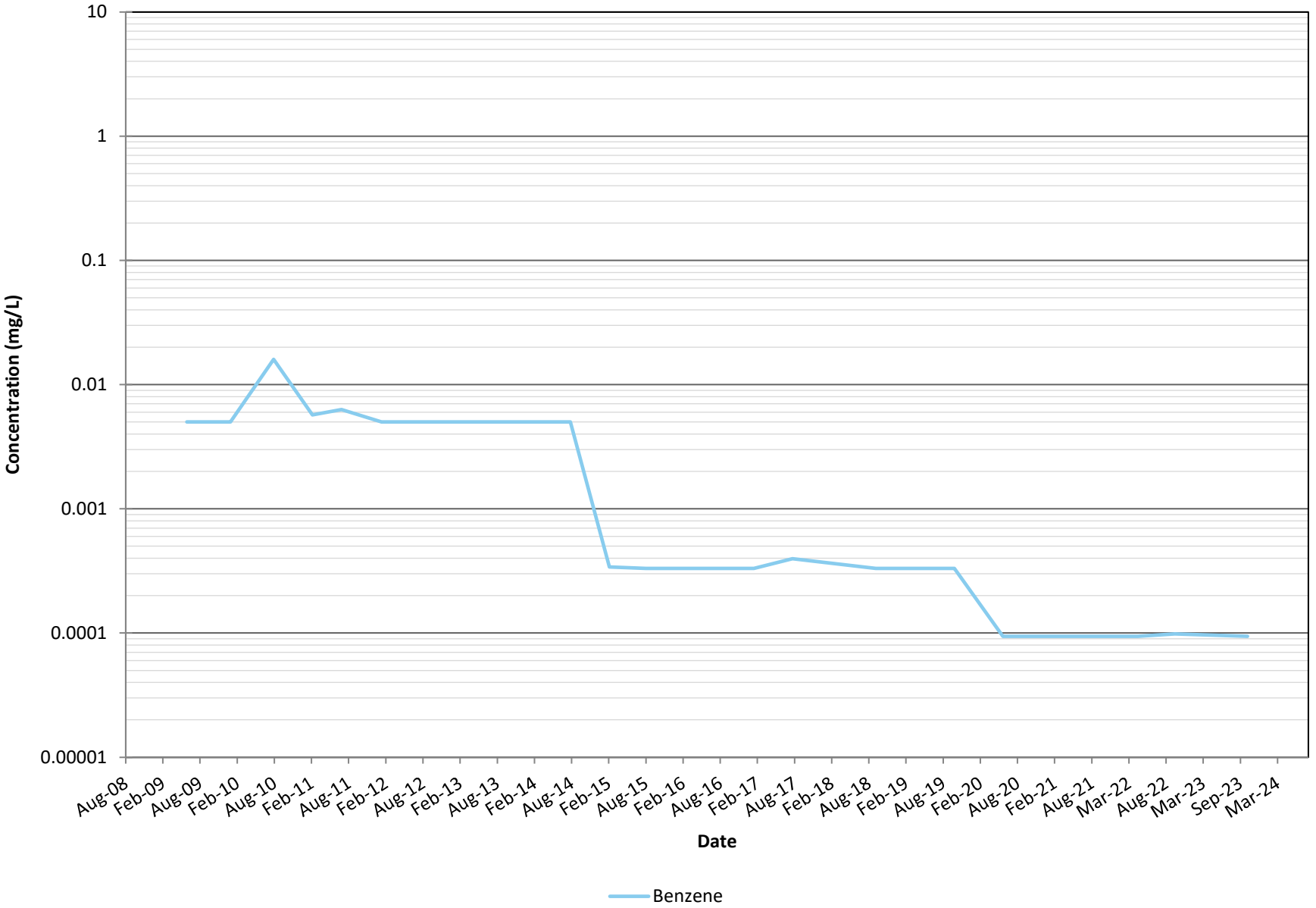
MW-12/MW-12R/MW-12R2 Anions CONCENTRATIONS OVER TIME



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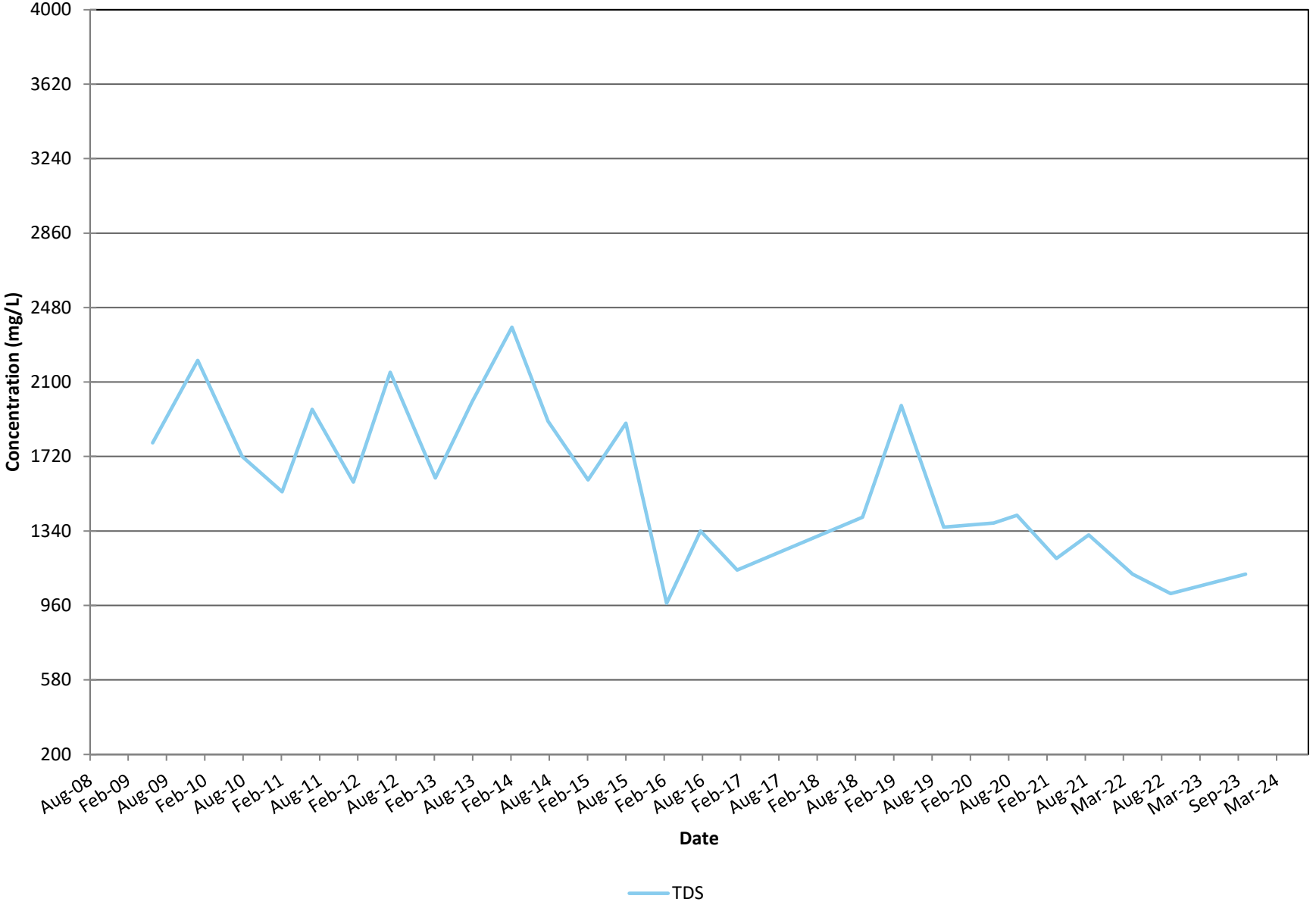
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MW-13/MW-13R VOC CONCENTRATIONS OVER TIME



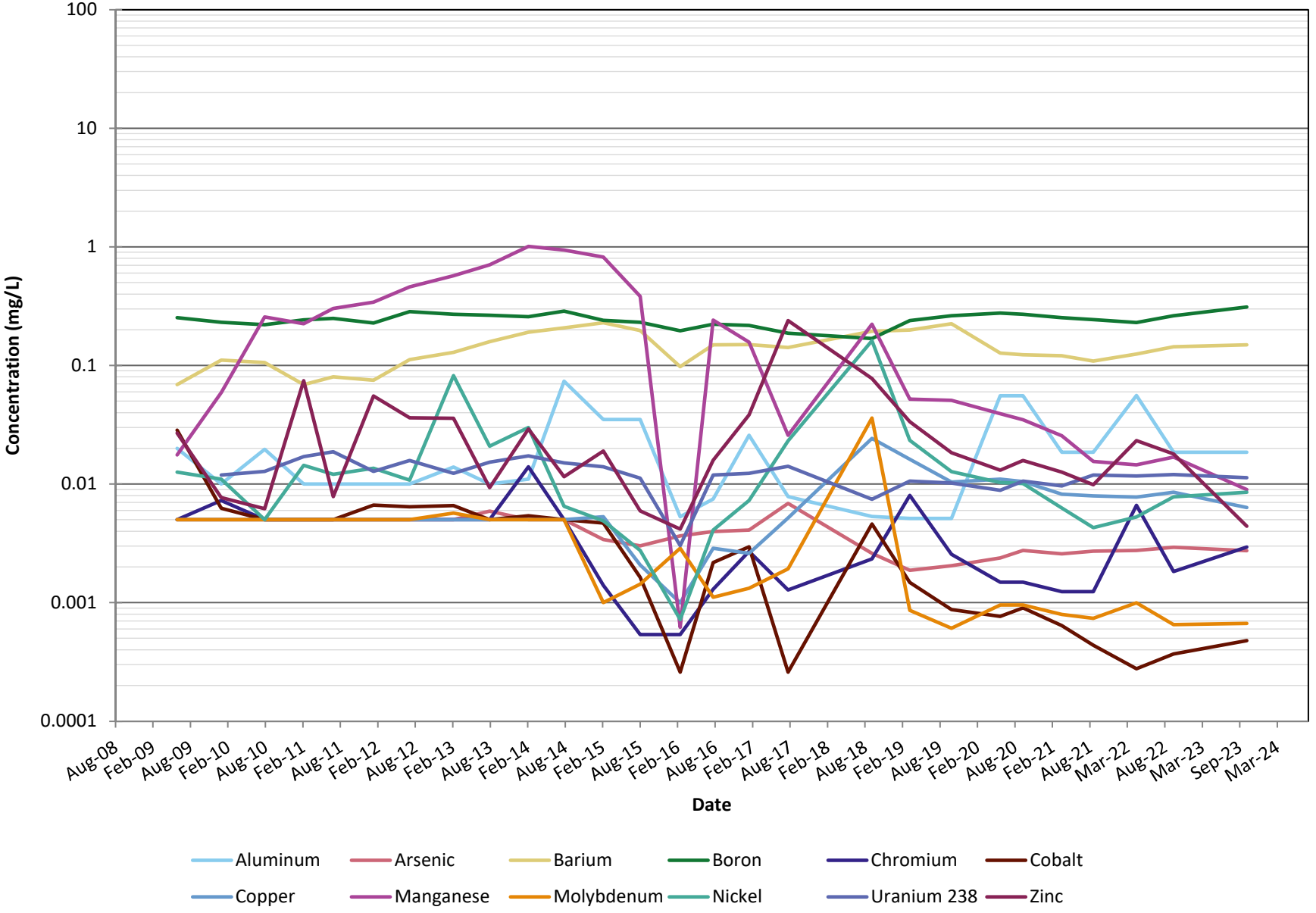
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MW-13/MW-13R TDS CONCENTRATIONS OVER TIME



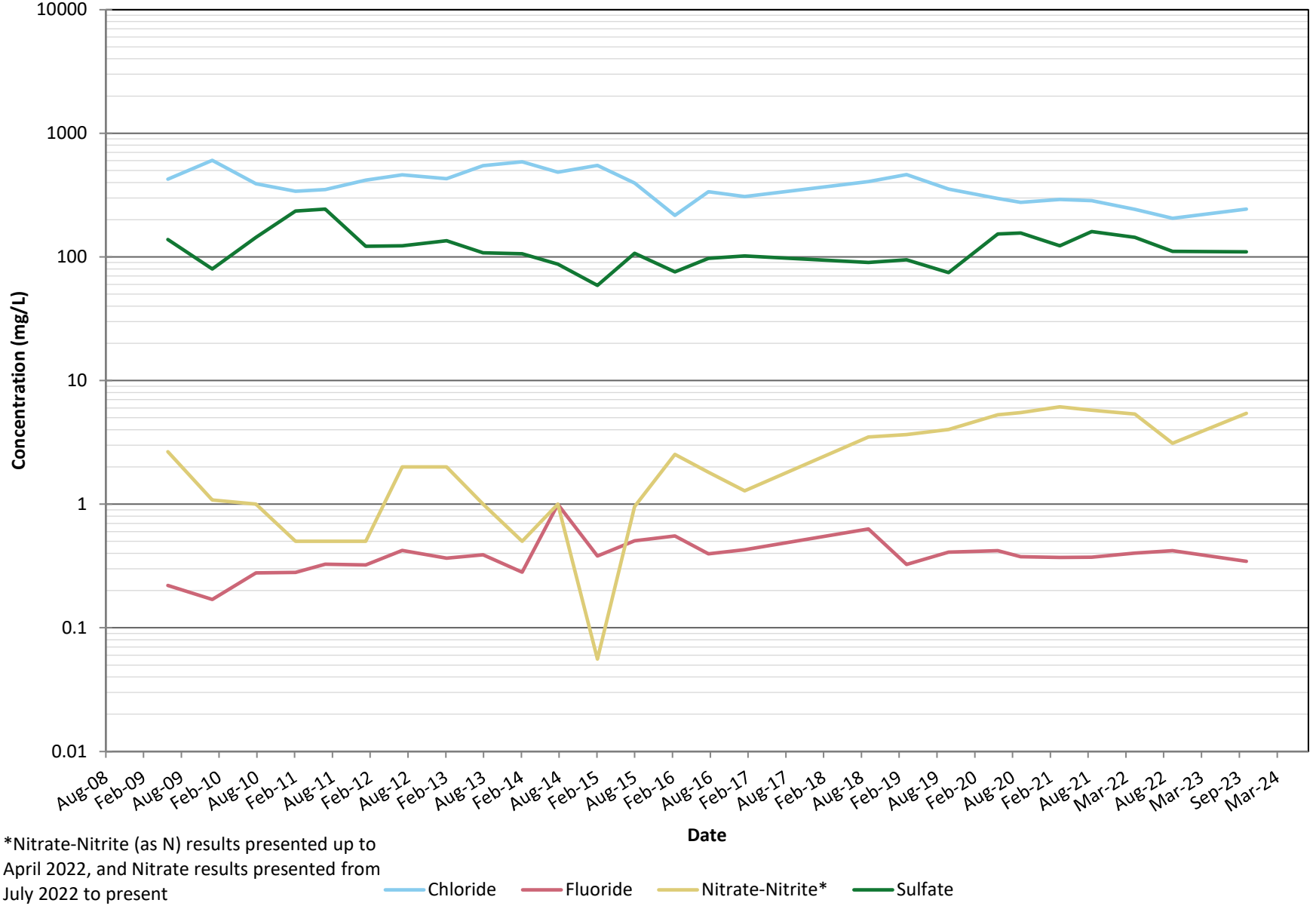
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MW-13/MW-13R Metals CONCENTRATIONS OVER TIME



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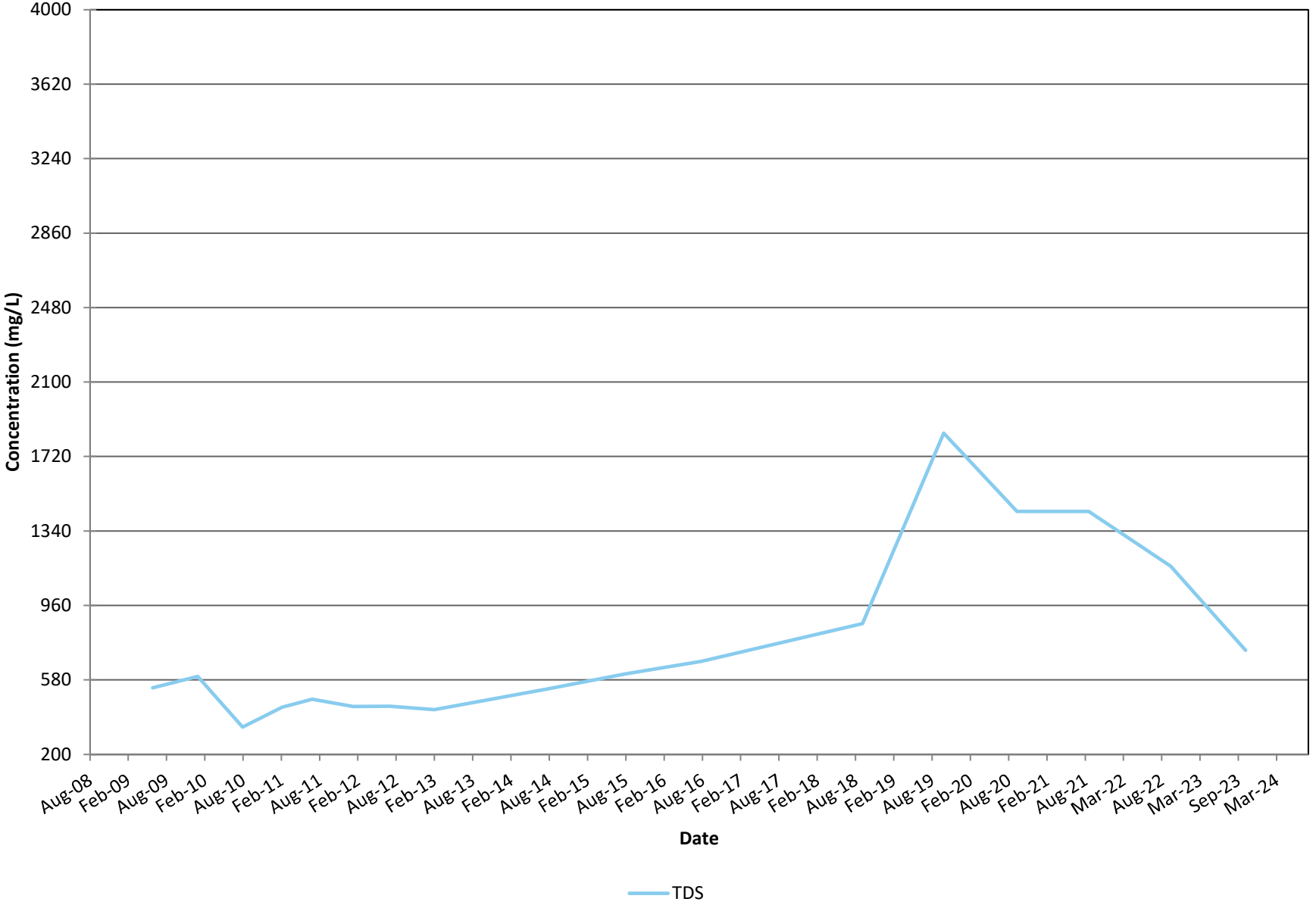
MW-13/MW-13R Anions CONCENTRATIONS OVER TIME



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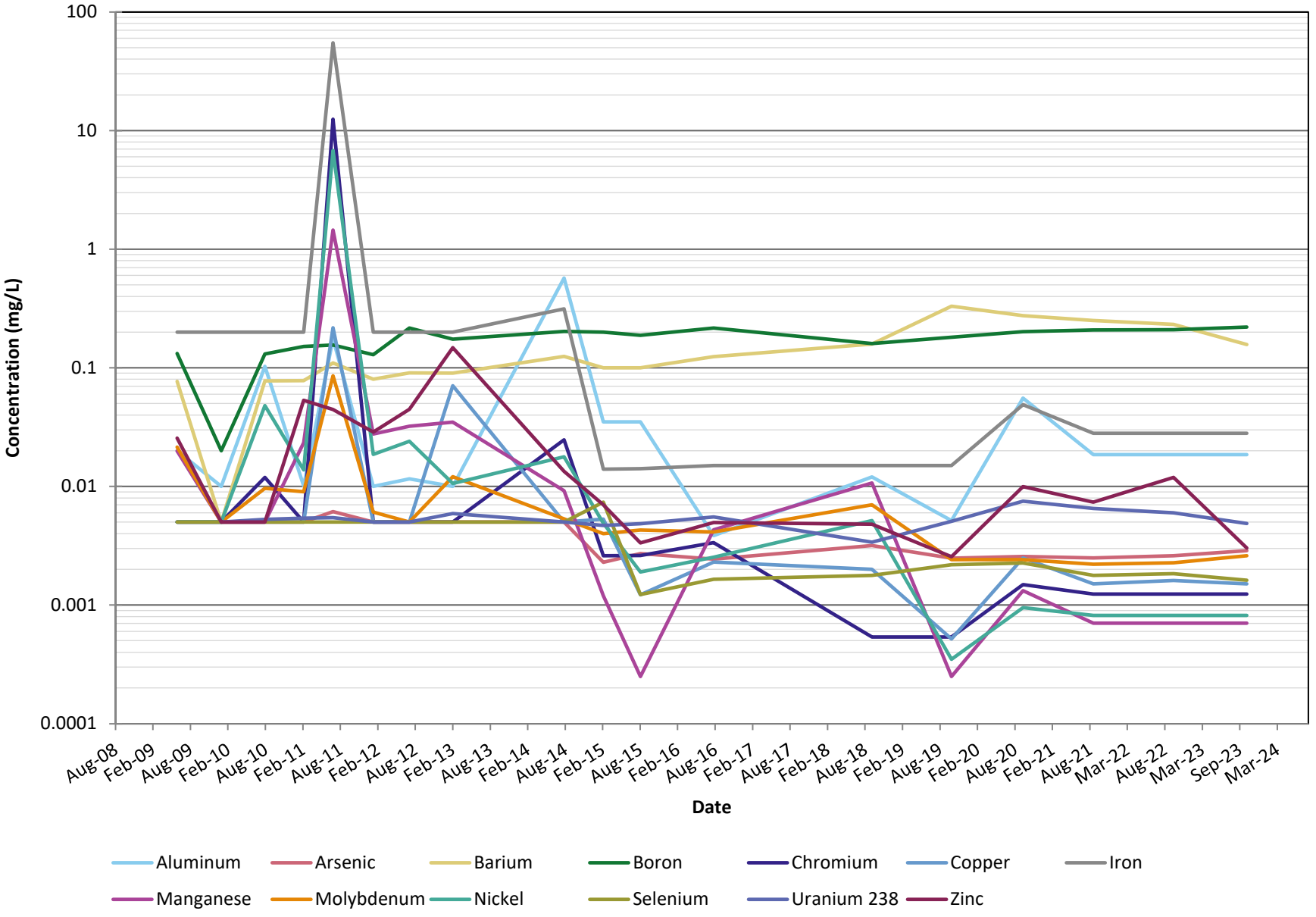
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MW-14/MW-14R TDS CONCENTRATIONS OVER TIME



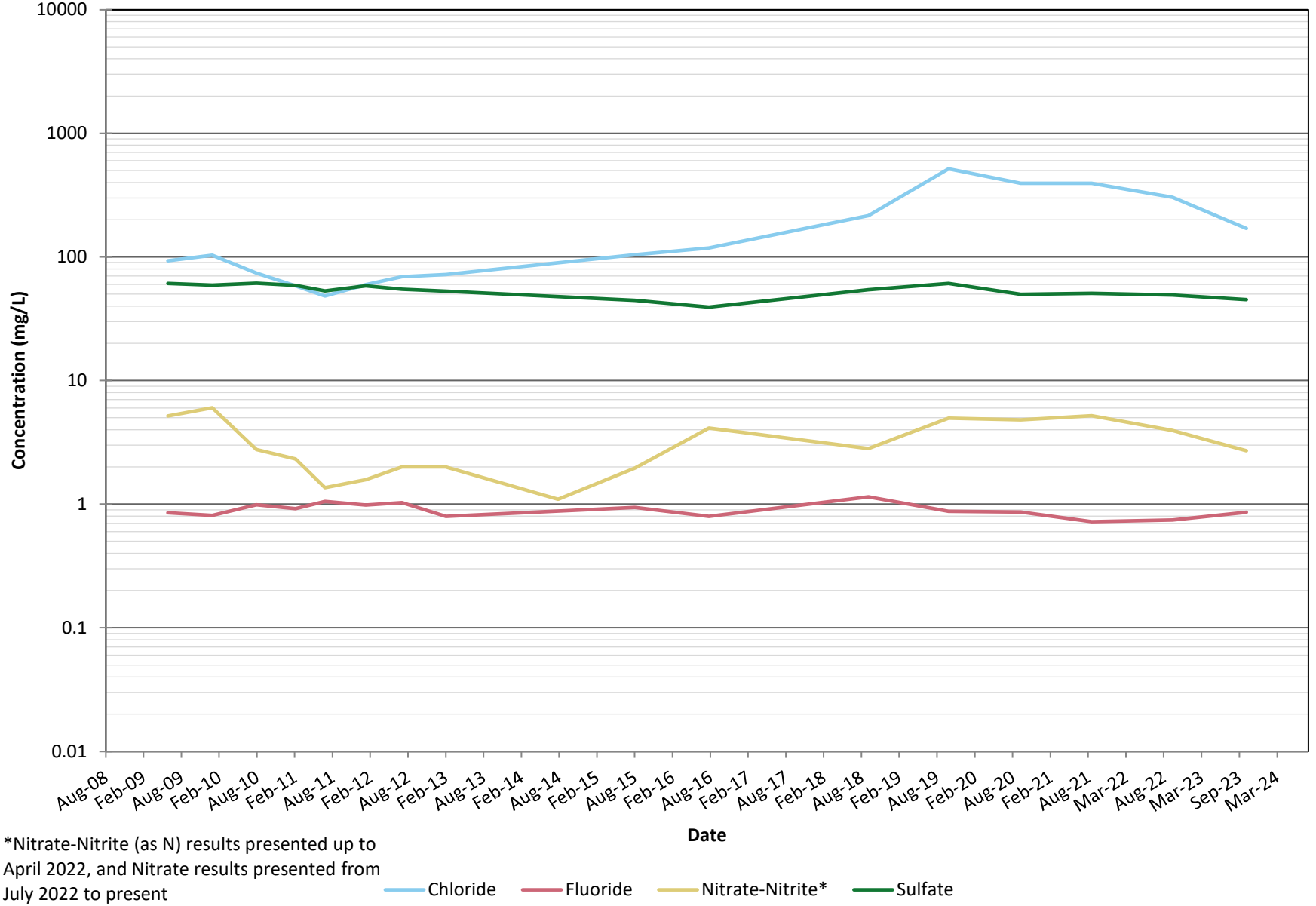
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MW-14/MW-14R Metals CONCENTRATIONS OVER TIME



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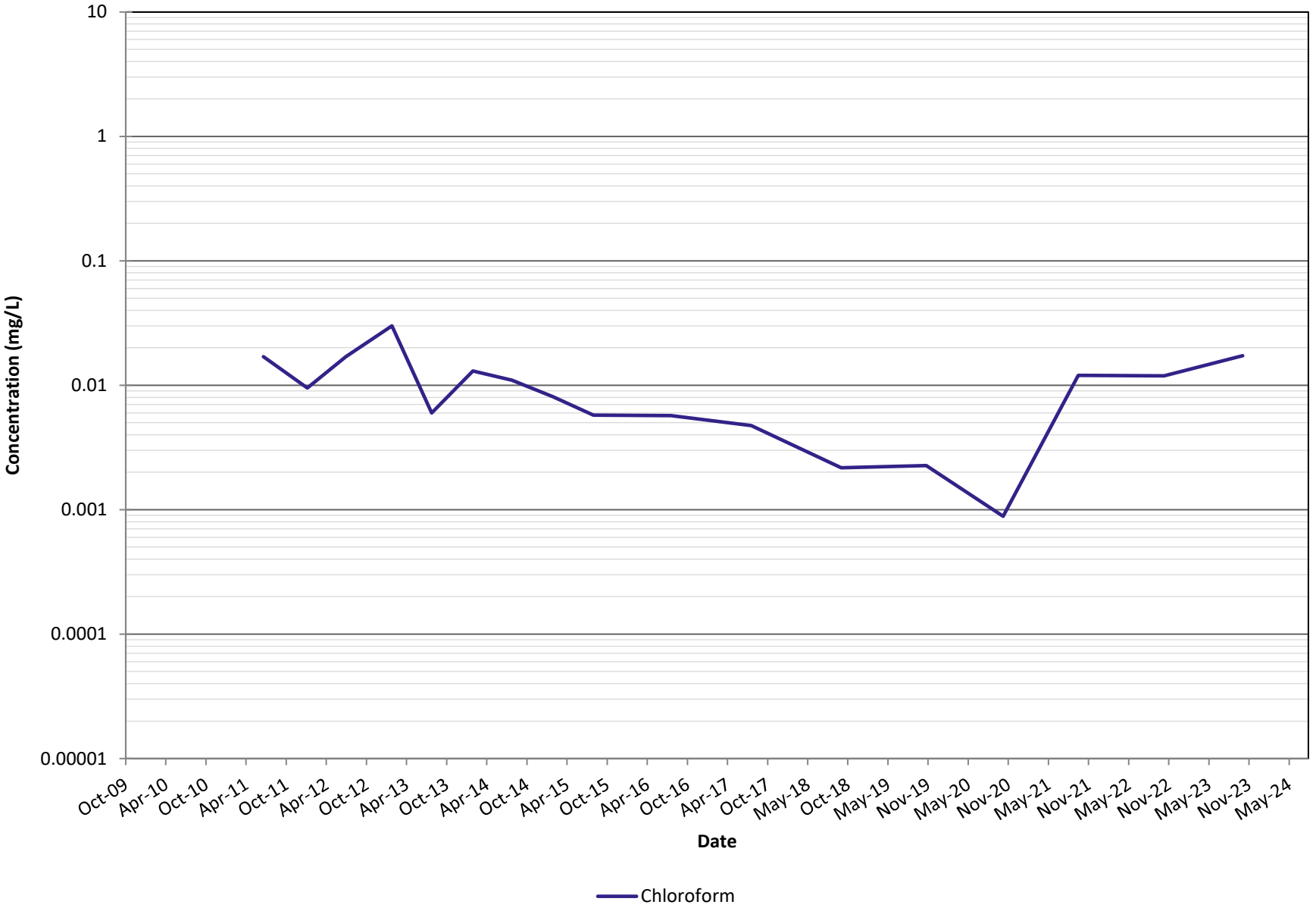
MW-14/MW-14R Anions CONCENTRATIONS OVER TIME



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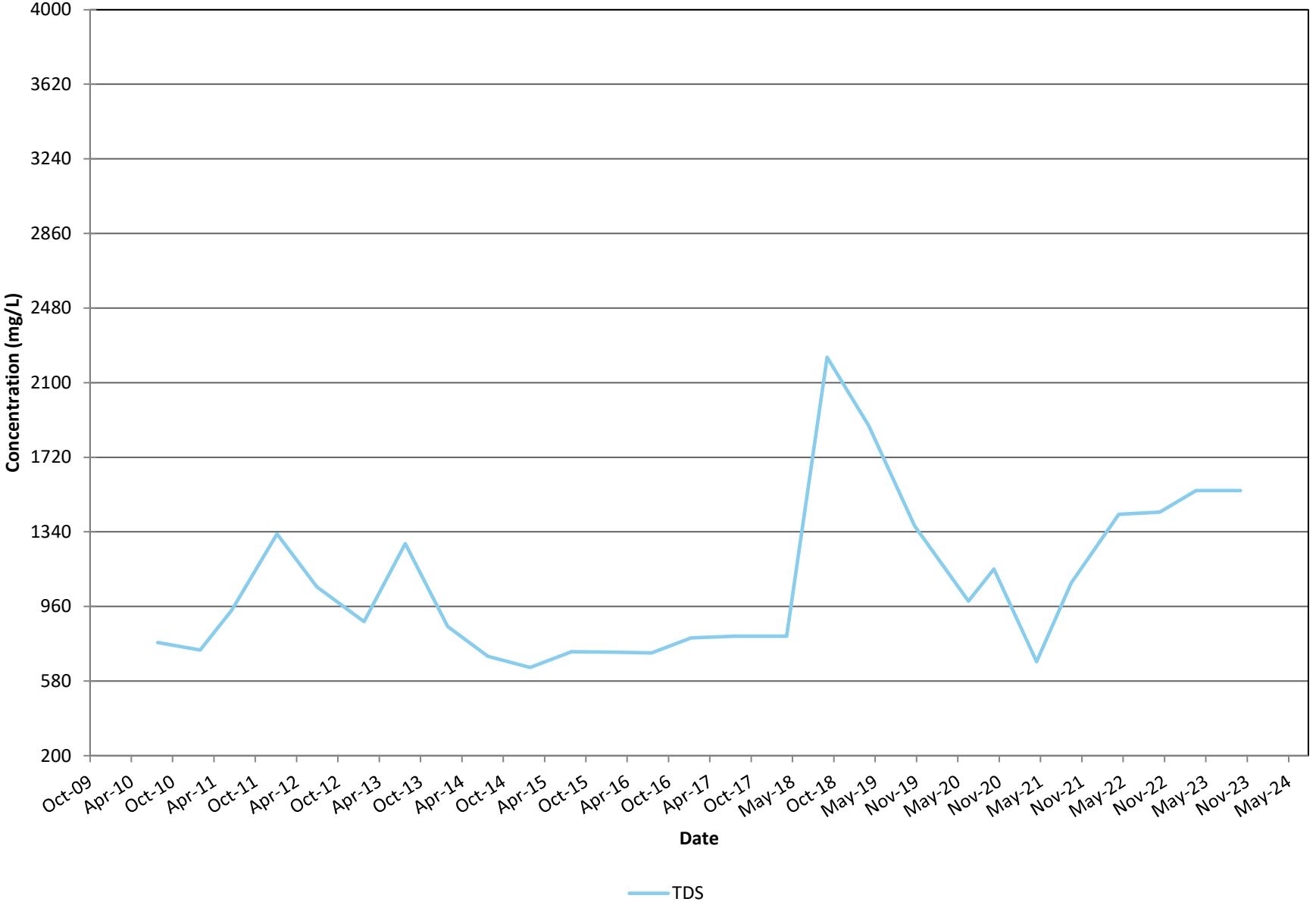
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MW-15/MW-15R VOC CONCENTRATIONS OVER TIME



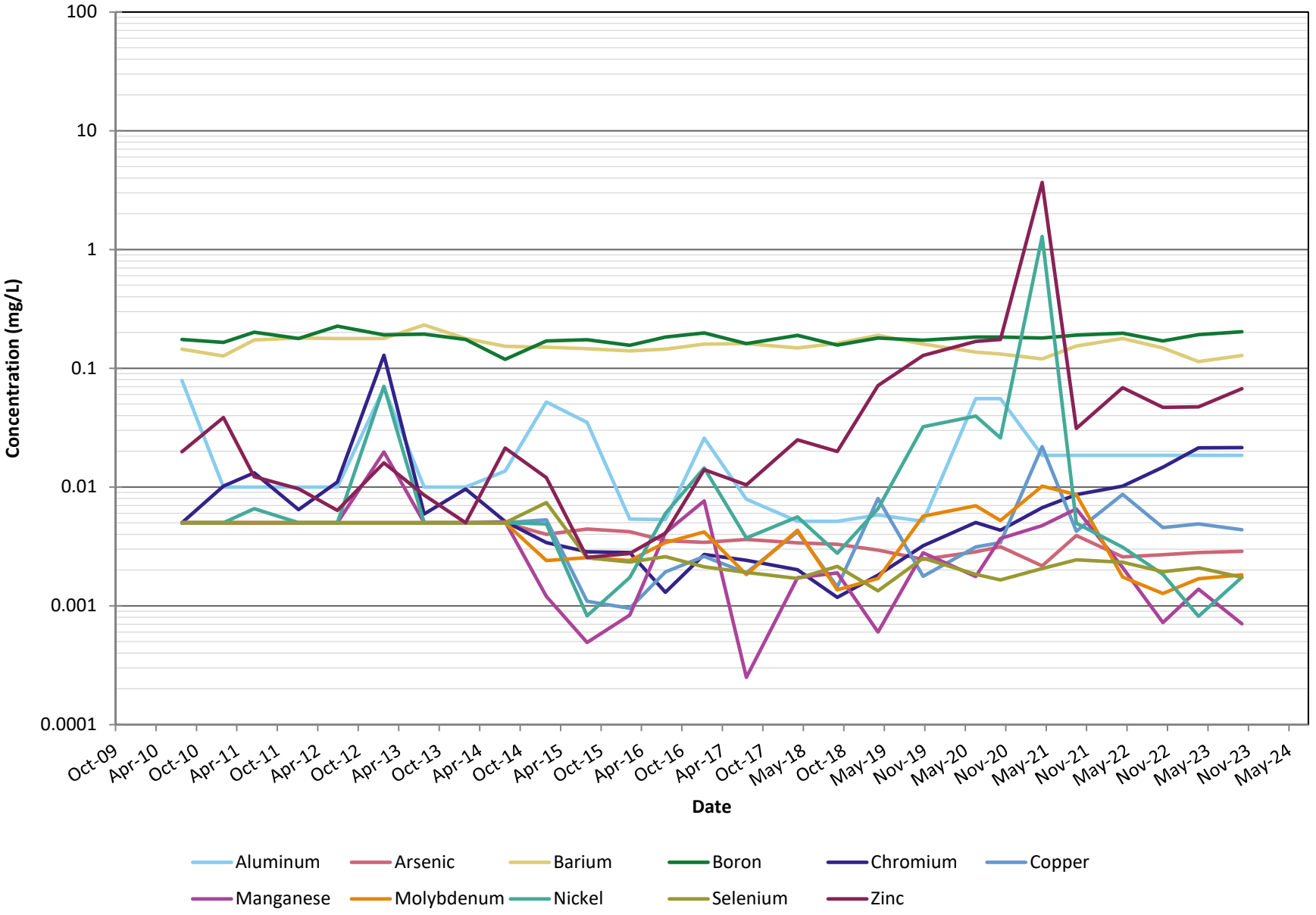
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MW-15/MW-15R TDS CONCENTRATIONS OVER TIME



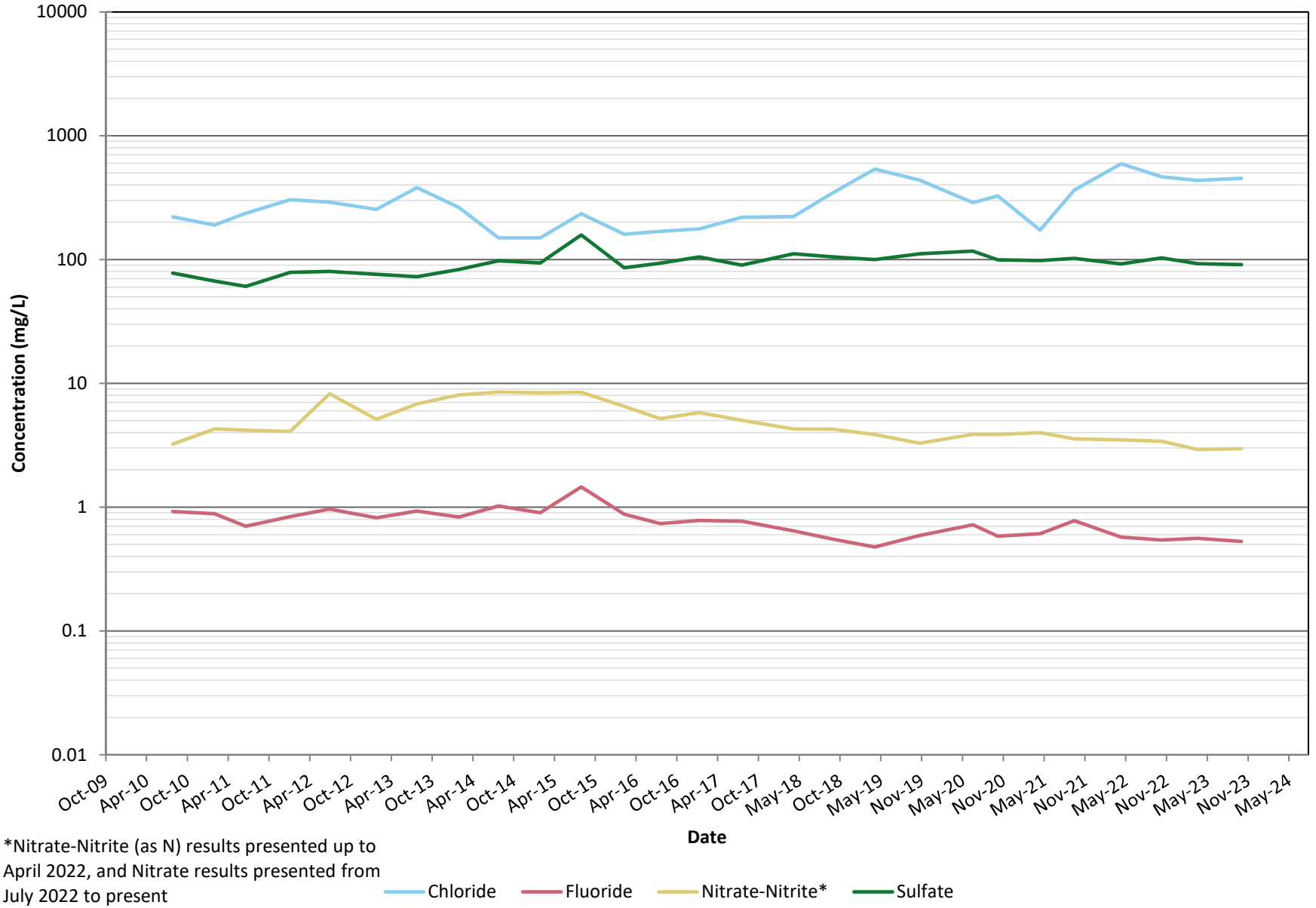
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MW-15/MW-15R Metals CONCENTRATIONS OVER TIME



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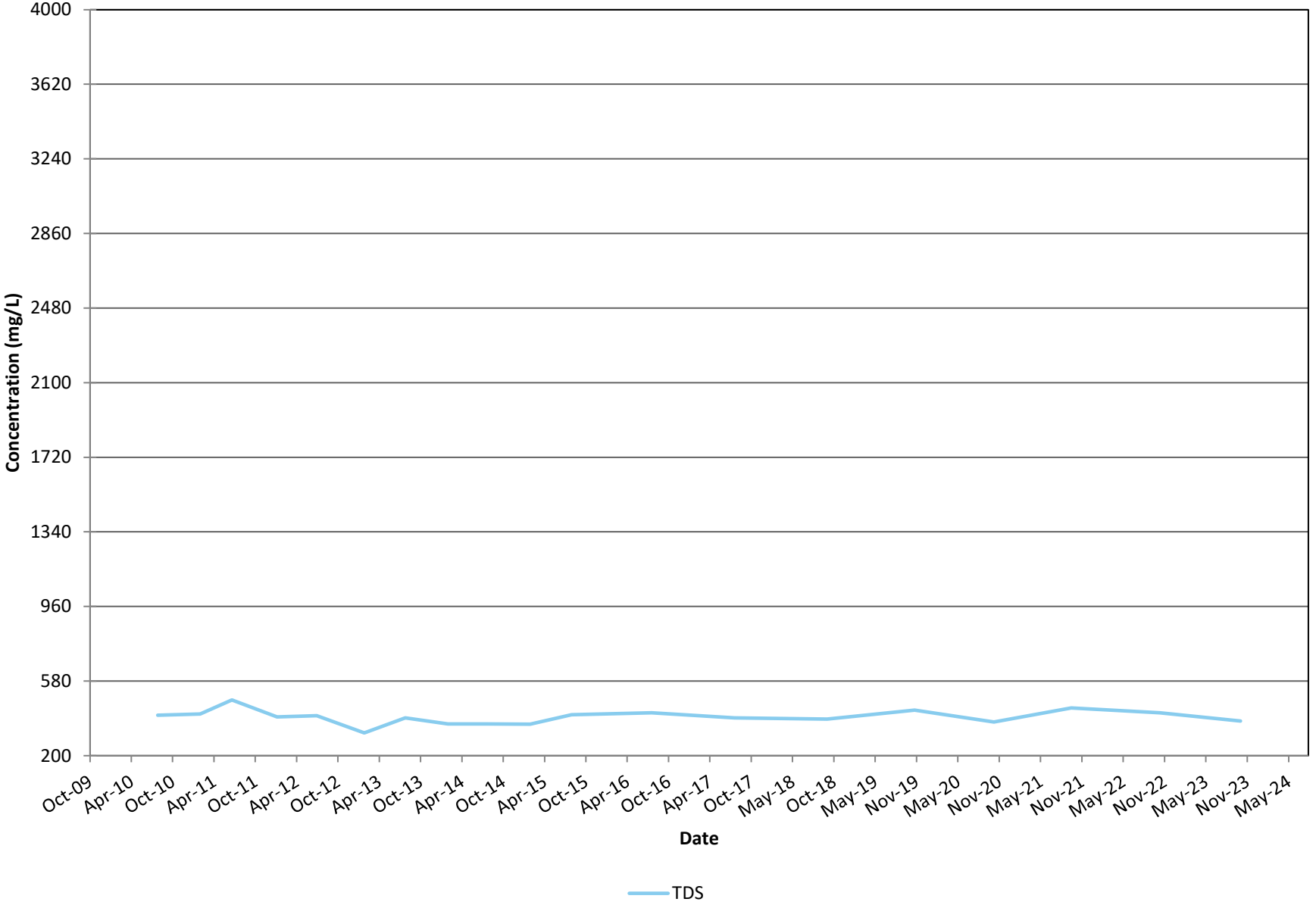
MW-15/MW-15R Anions CONCENTRATIONS OVER TIME



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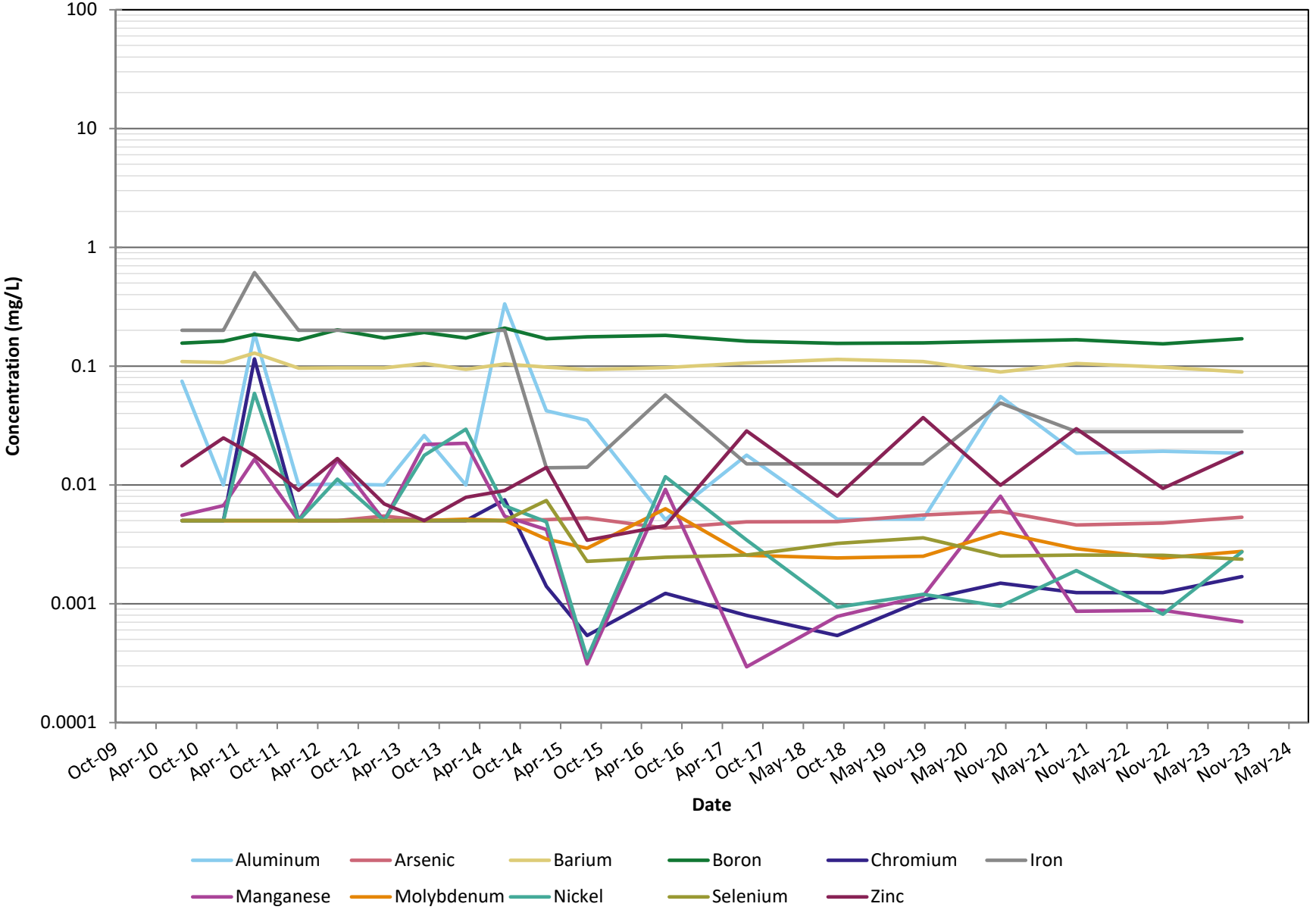
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MW-16/MW-16R TDS CONCENTRATIONS OVER TIME



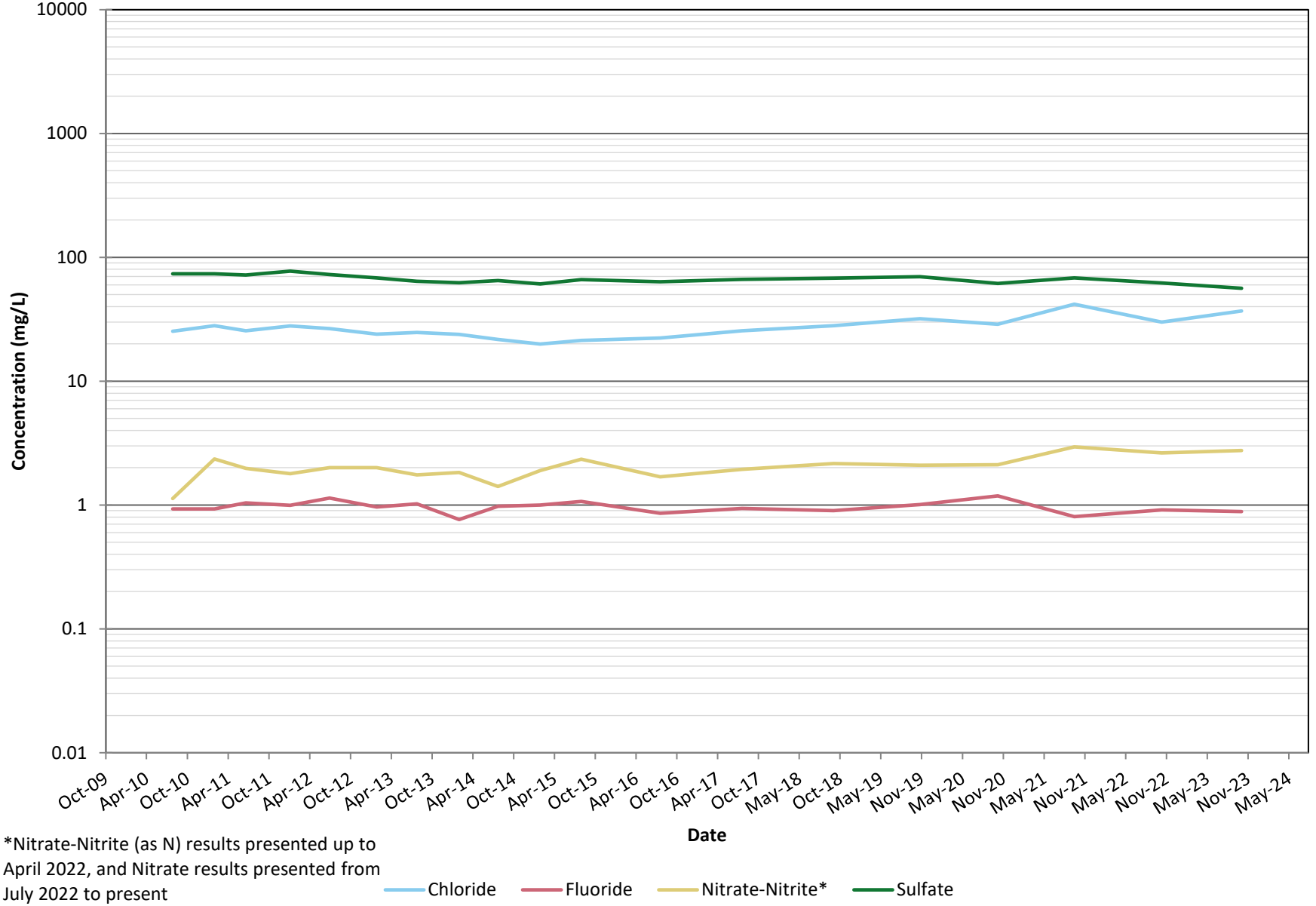
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MW-16/MW-16R Metals CONCENTRATIONS OVER TIME



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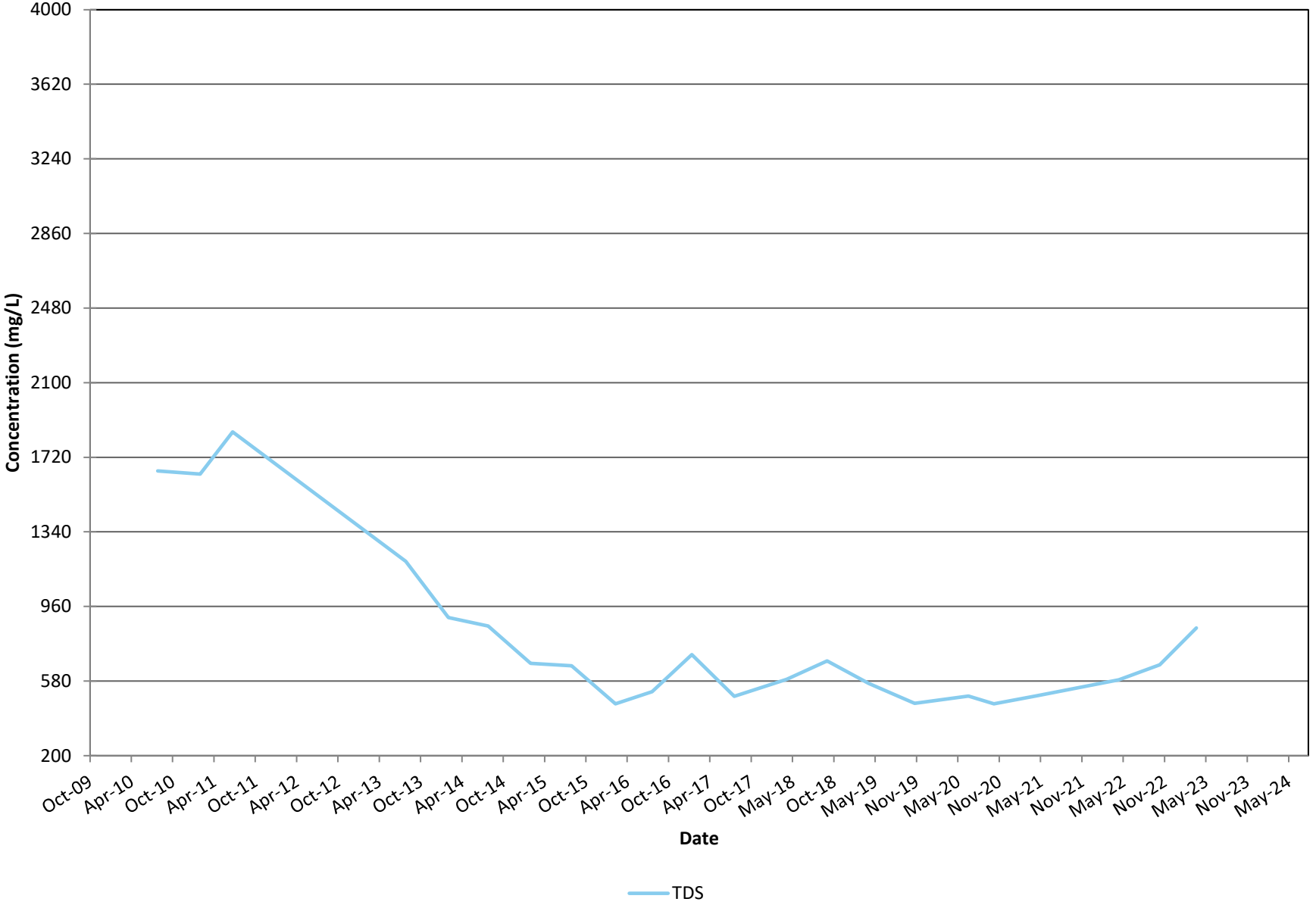
MW-16/MW-16R Anions CONCENTRATIONS OVER TIME



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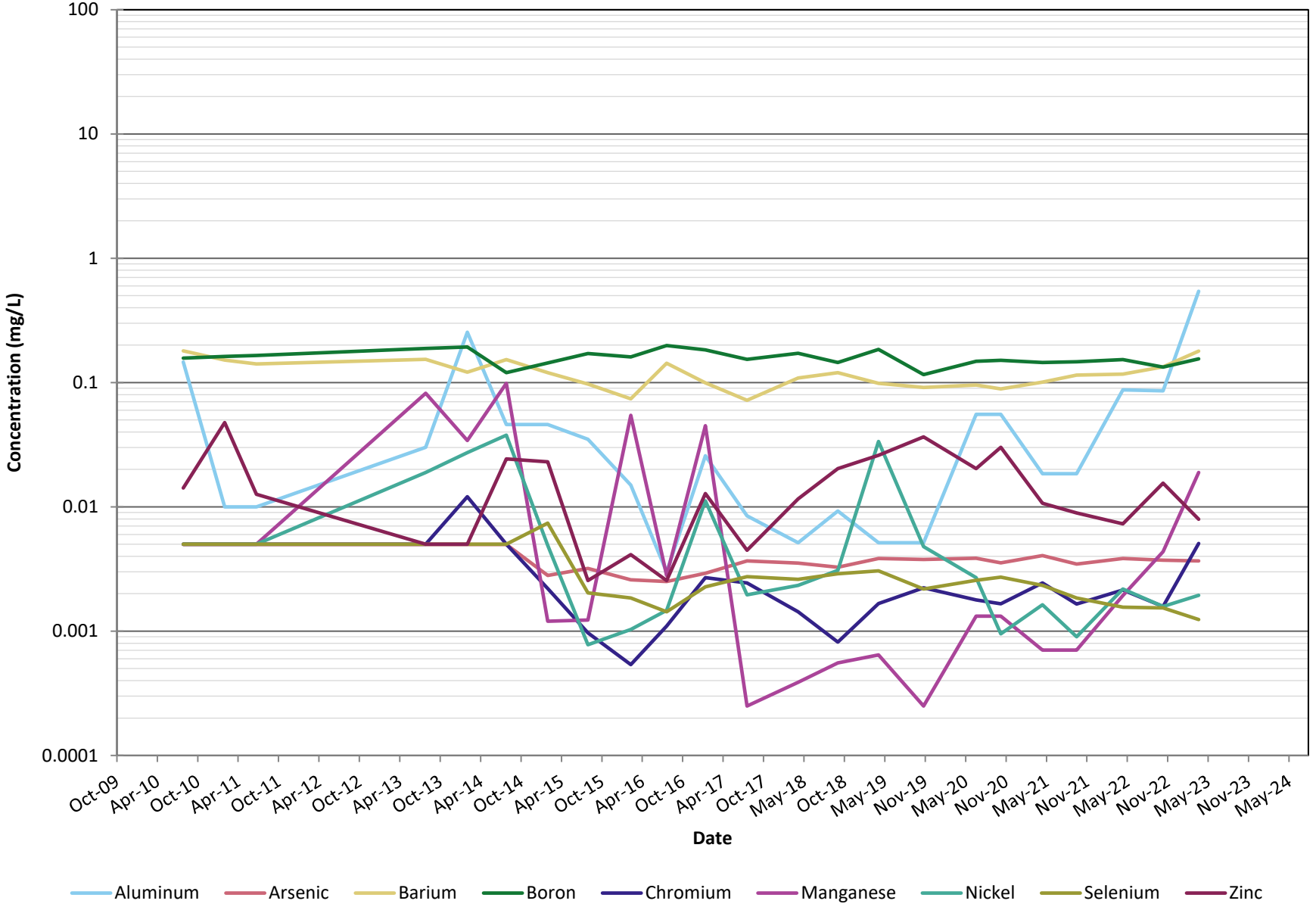
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MW-17/MW-17R TDS CONCENTRATIONS OVER TIME



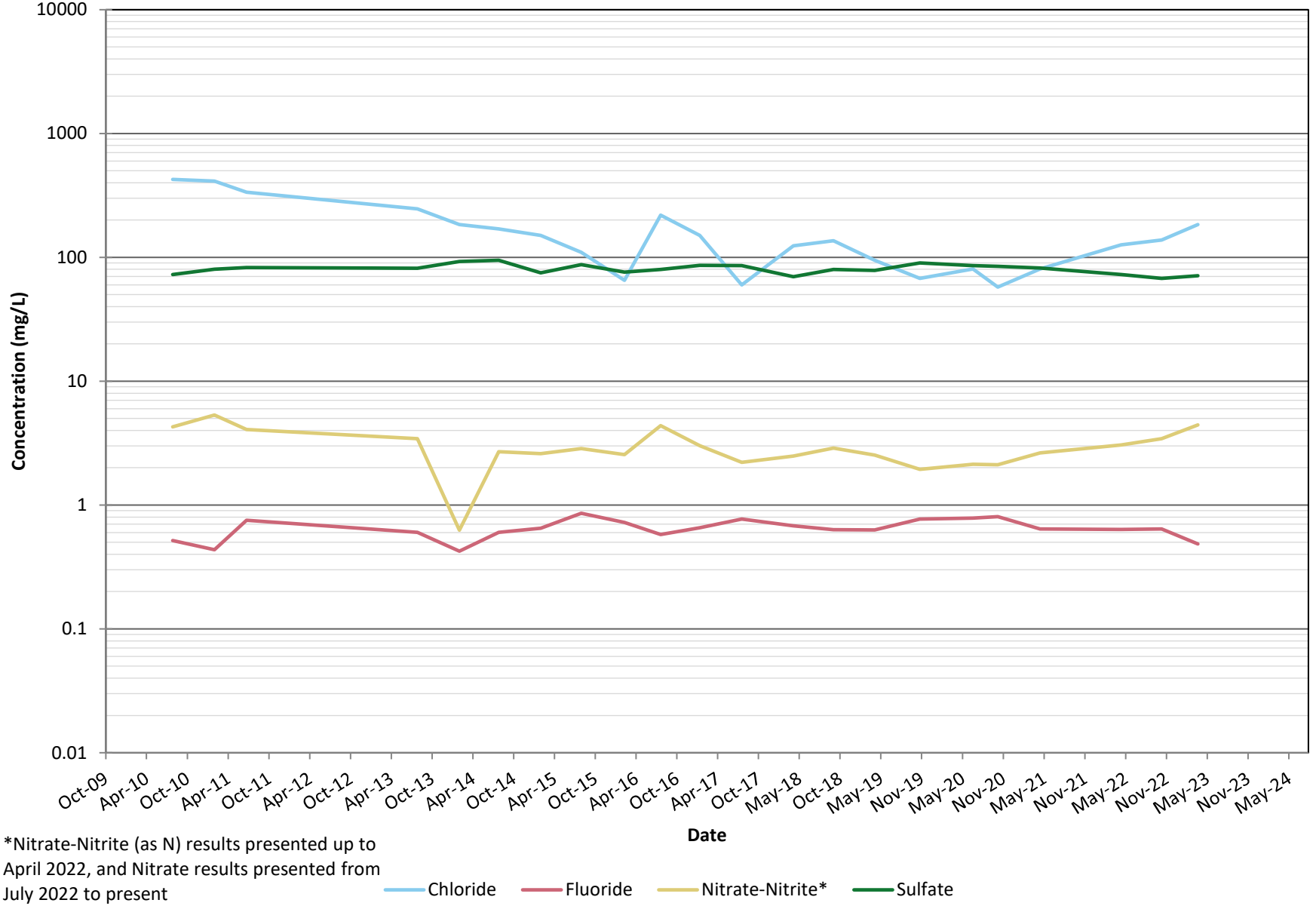
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MW-17/MW-17R Metals CONCENTRATIONS OVER TIME



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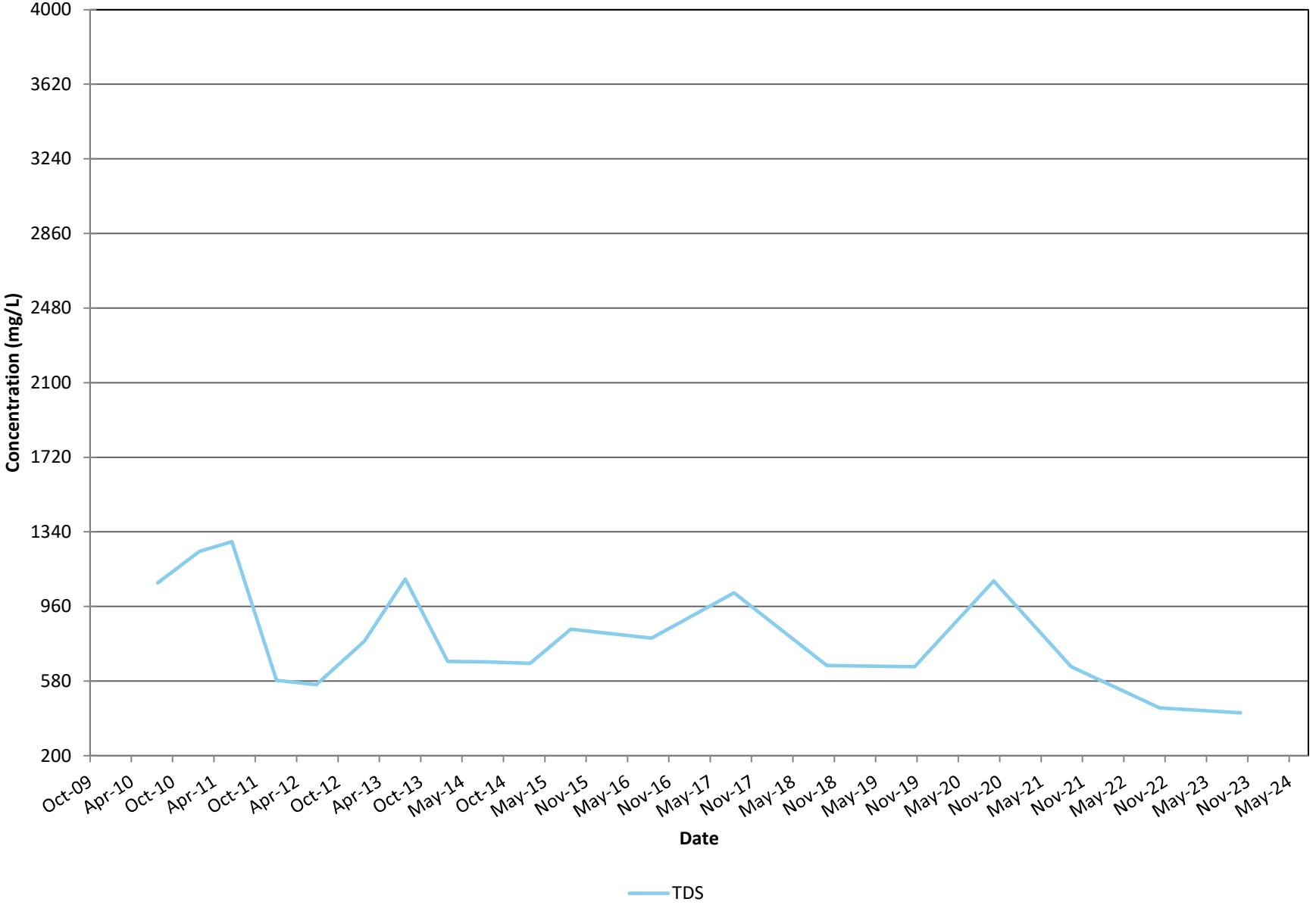
MW-17/MW-17R Anions CONCENTRATIONS OVER TIME



*Nitrate-Nitrite (as N) results presented up to April 2022, and Nitrate results presented from July 2022 to present

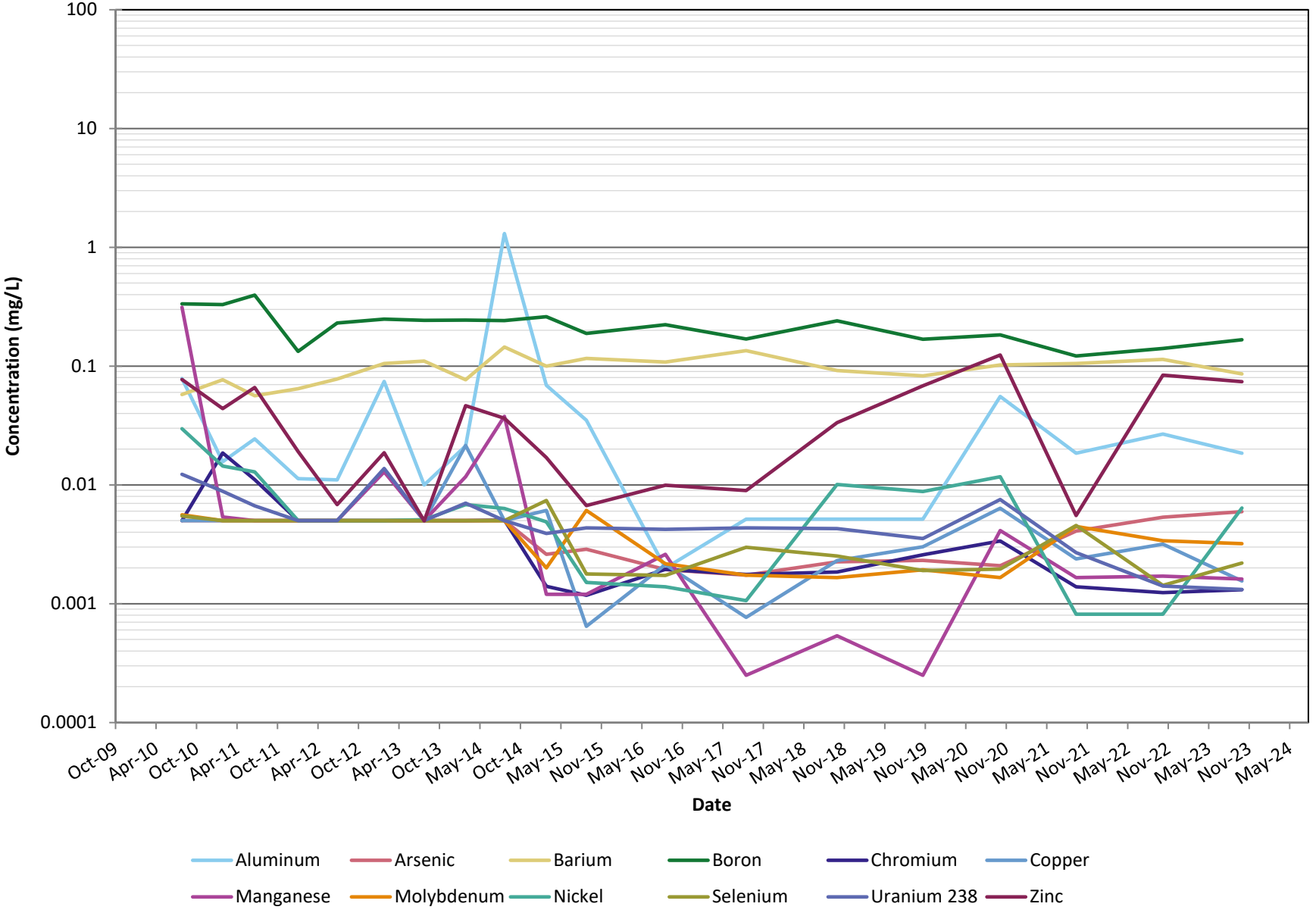
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MW-18/MW-18R TDS CONCENTRATIONS OVER TIME



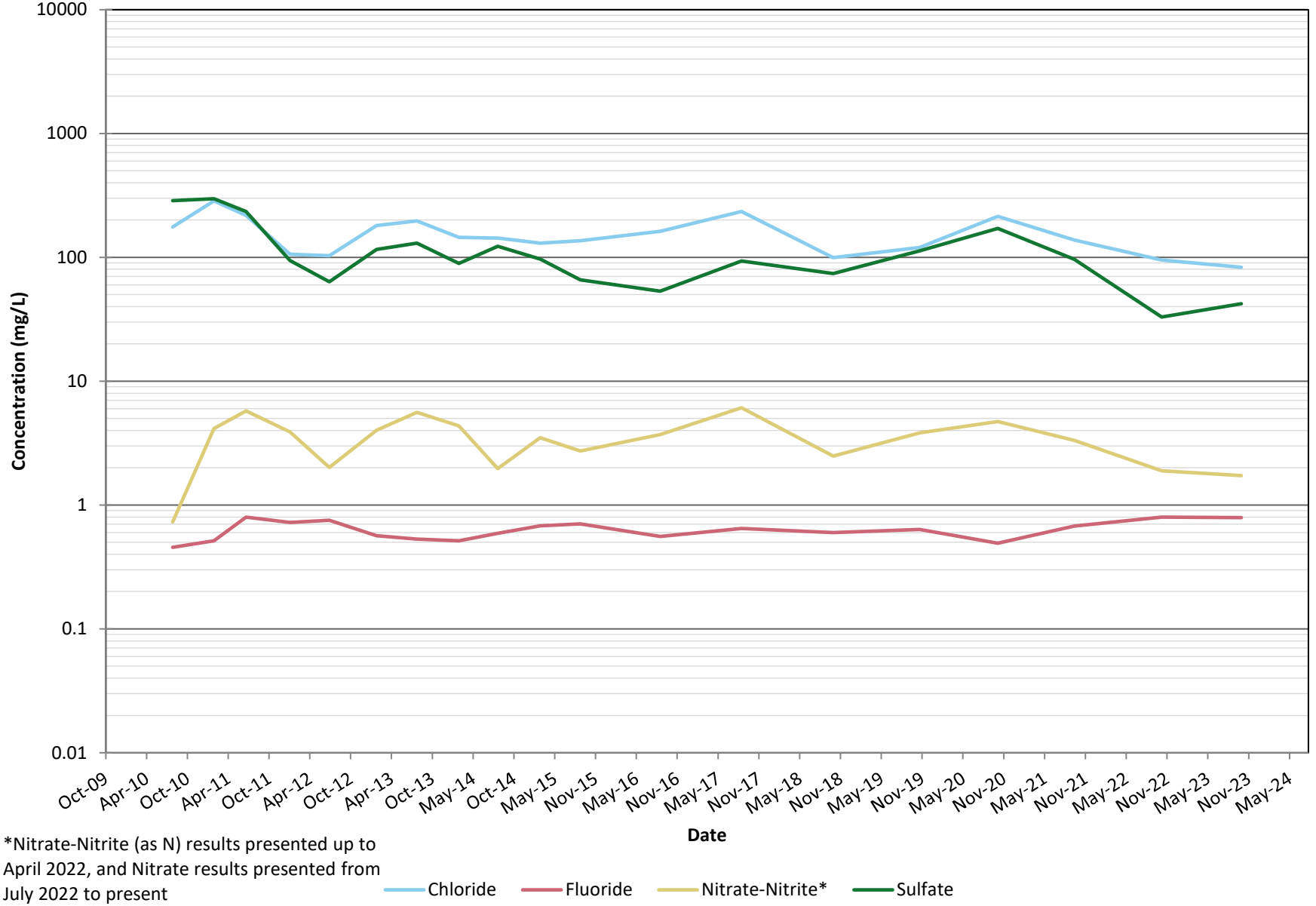
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MW-18/MW-18R Metals CONCENTRATIONS OVER TIME



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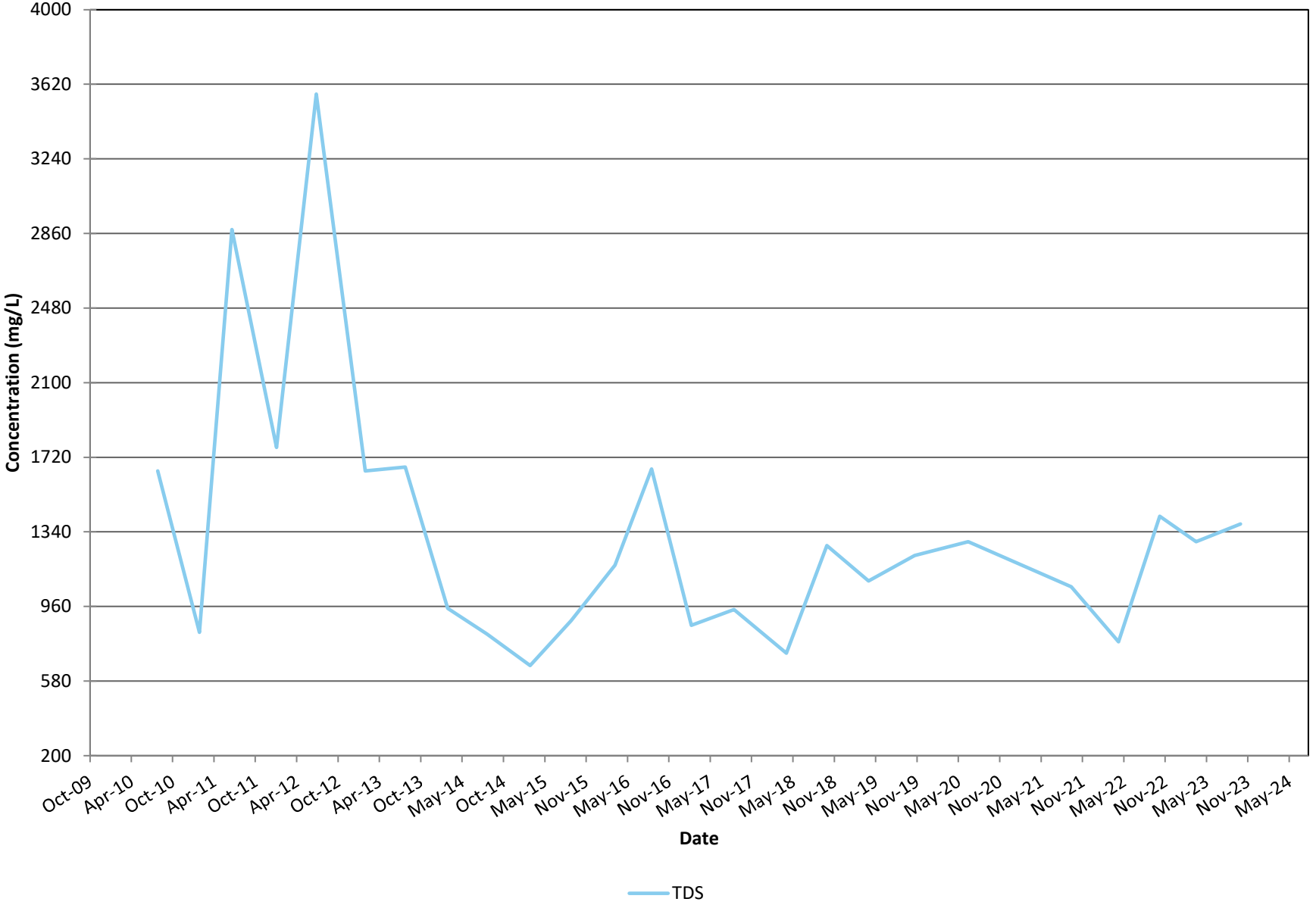
MW-18/MW-18R Anions CONCENTRATIONS OVER TIME



*Nitrate-Nitrite (as N) results presented up to April 2022, and Nitrate results presented from July 2022 to present

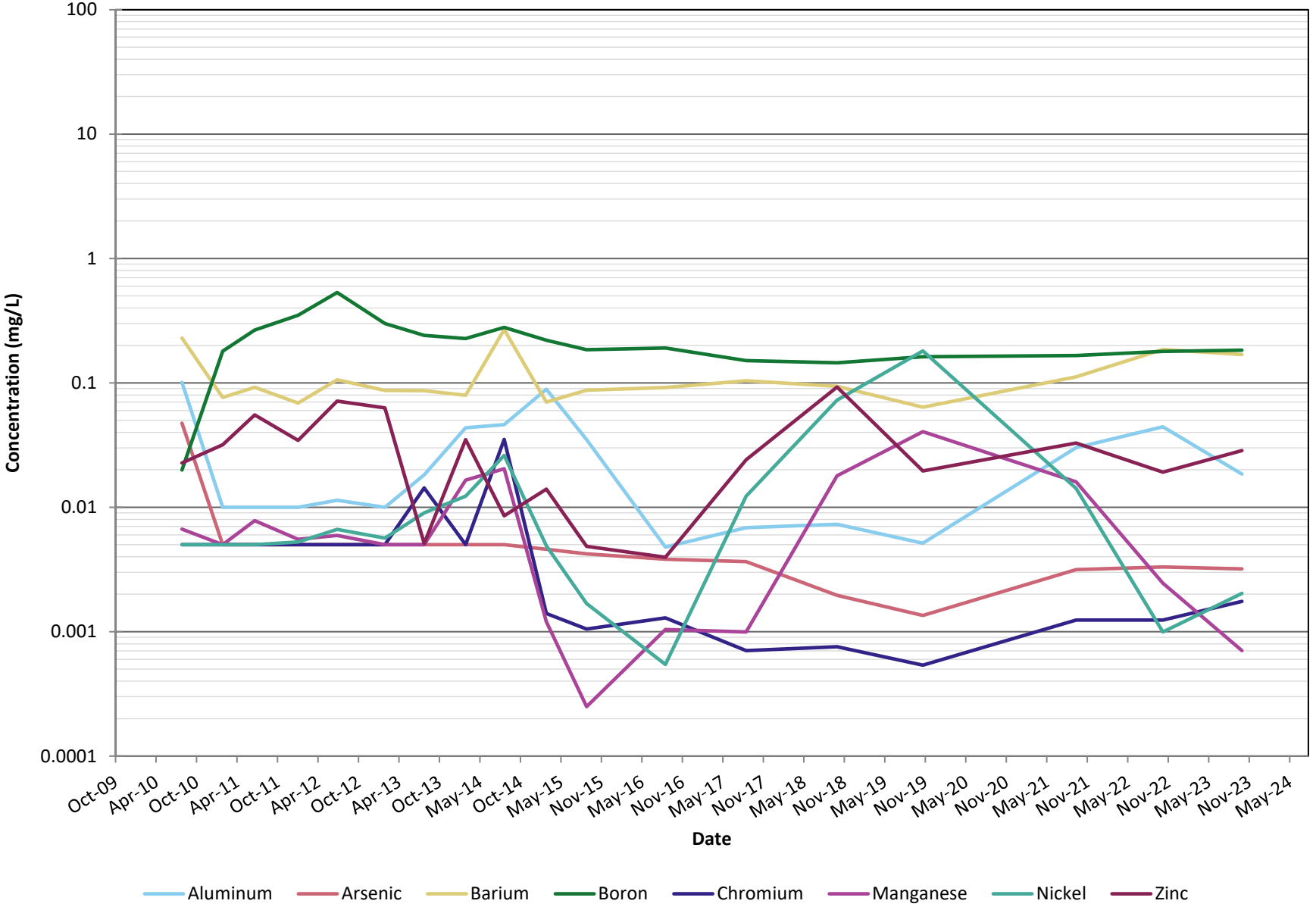
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MW-19/MW-19R TDS CONCENTRATIONS OVER TIME



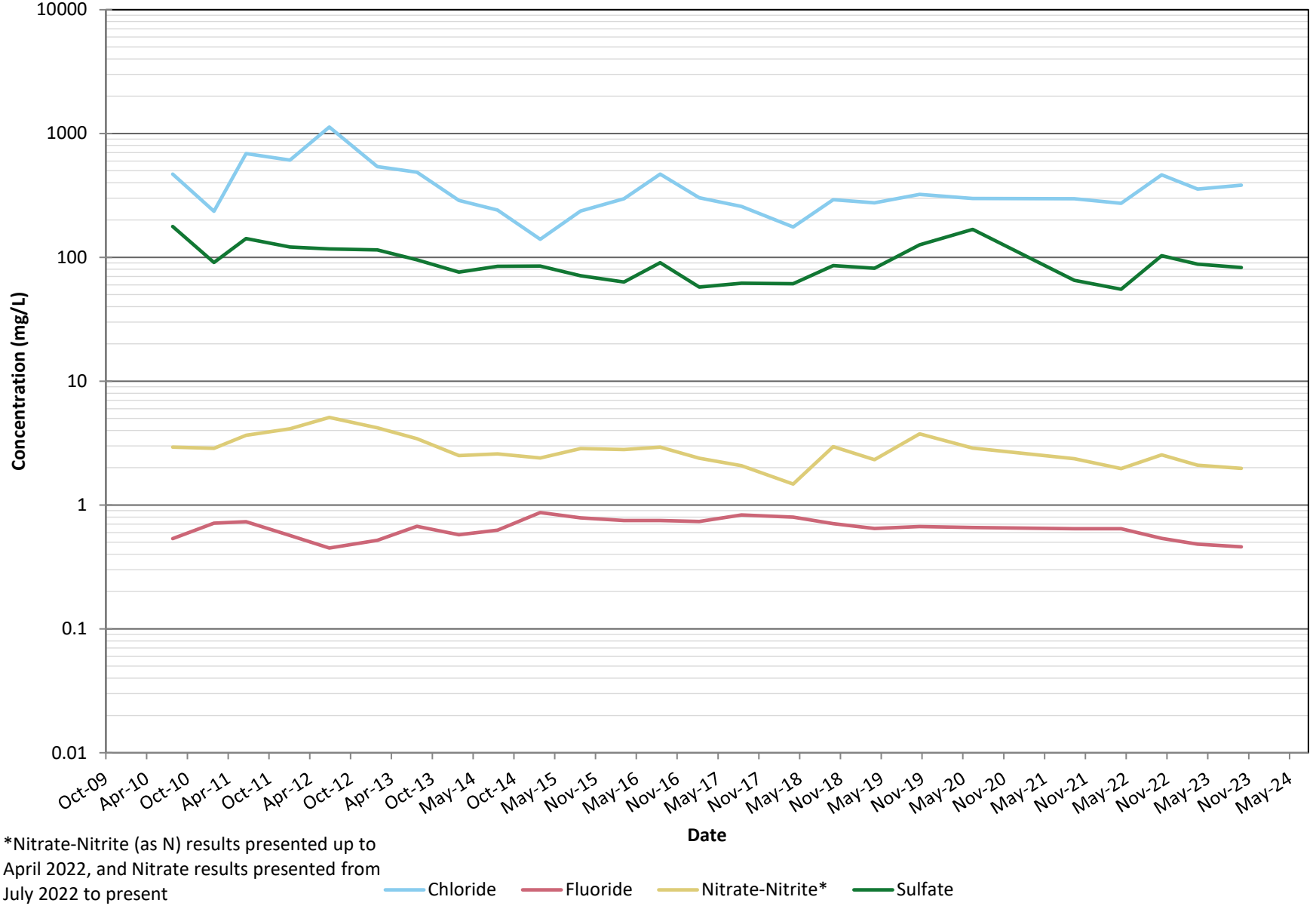
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MW-19/MW-19R Metals CONCENTRATIONS OVER TIME



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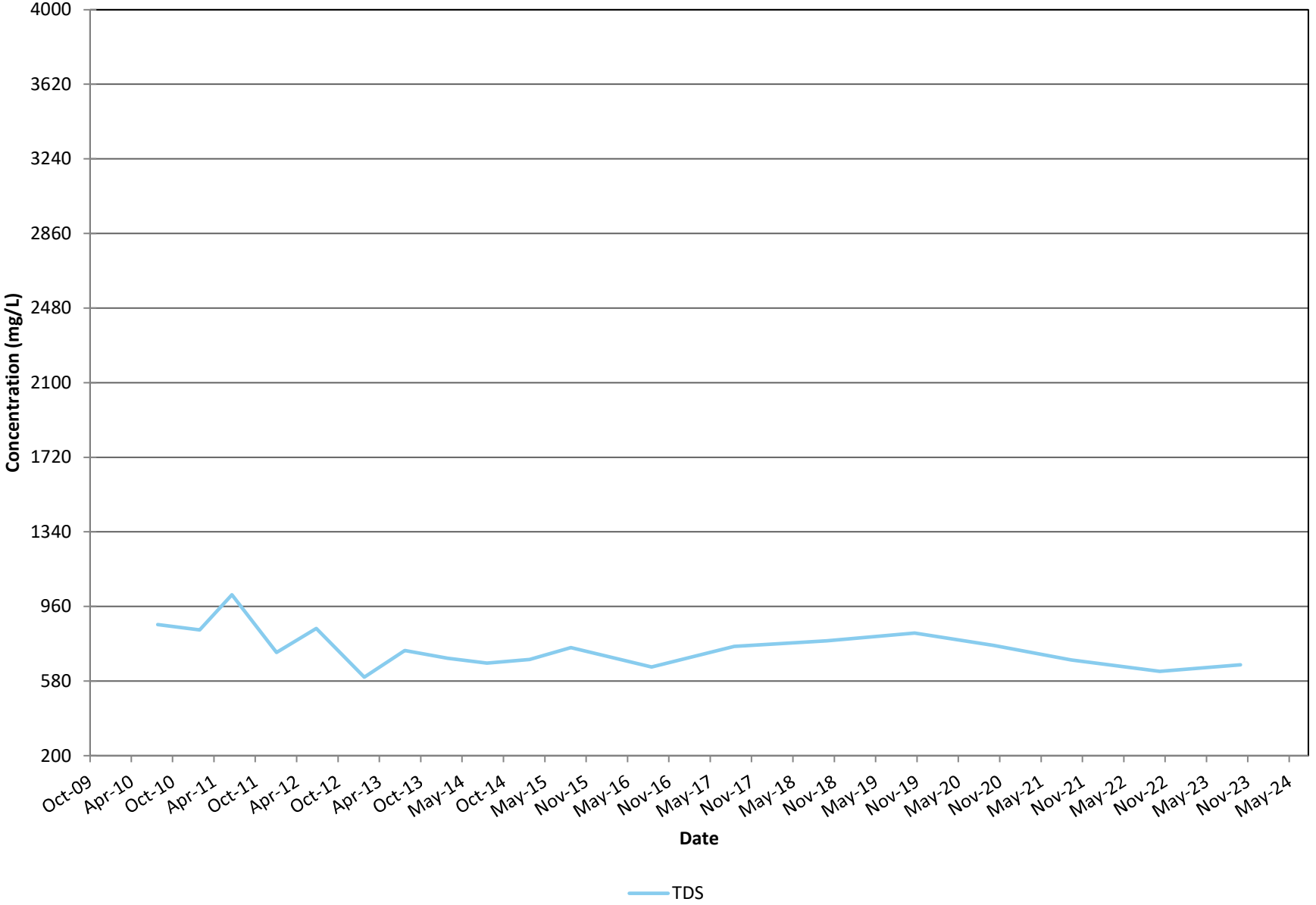
MW-19/MW-19R Anions CONCENTRATIONS OVER TIME



*Nitrate-Nitrite (as N) results presented up to April 2022, and Nitrate results presented from July 2022 to present

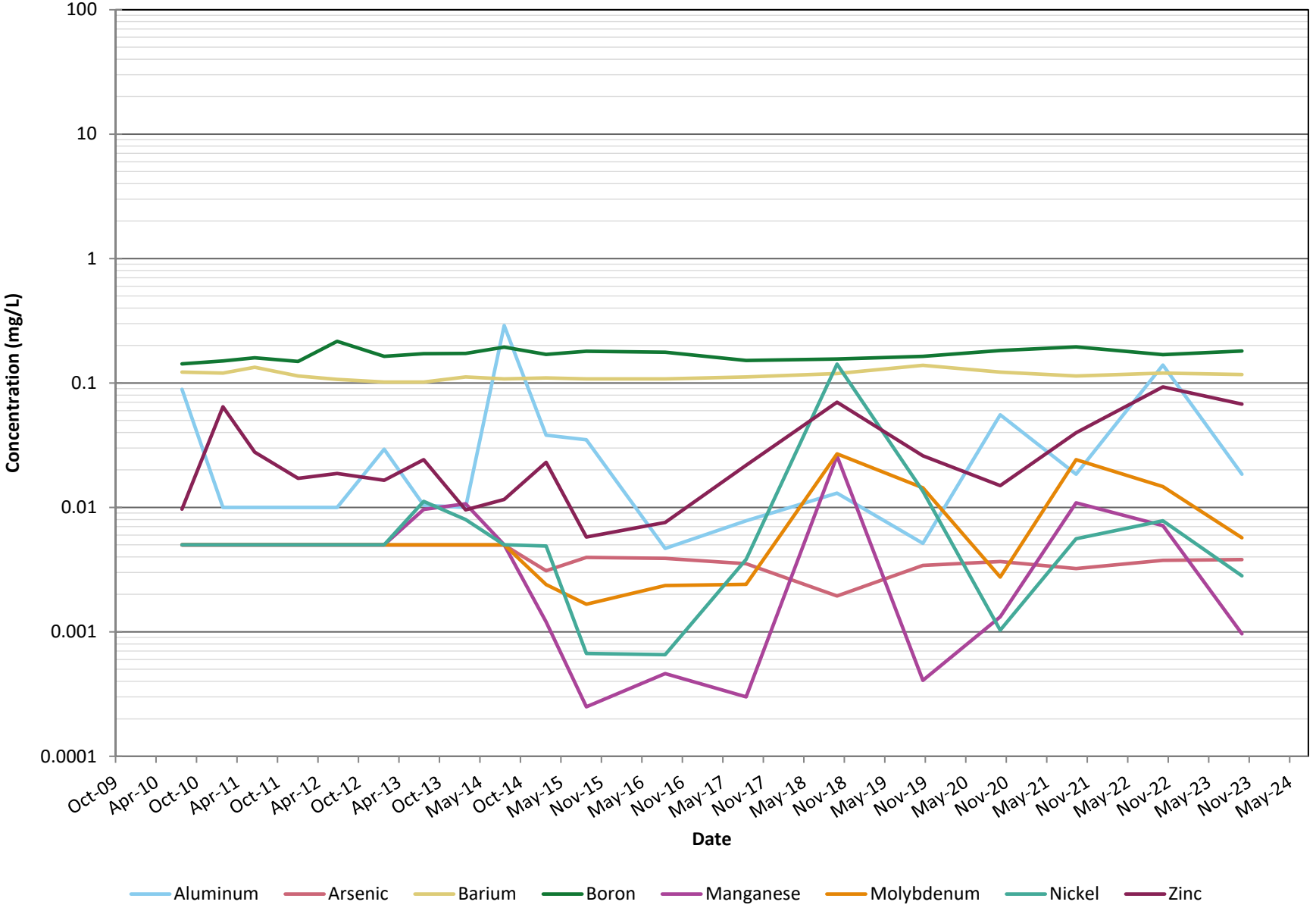
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MW-20/MW-20R TDS CONCENTRATIONS OVER TIME



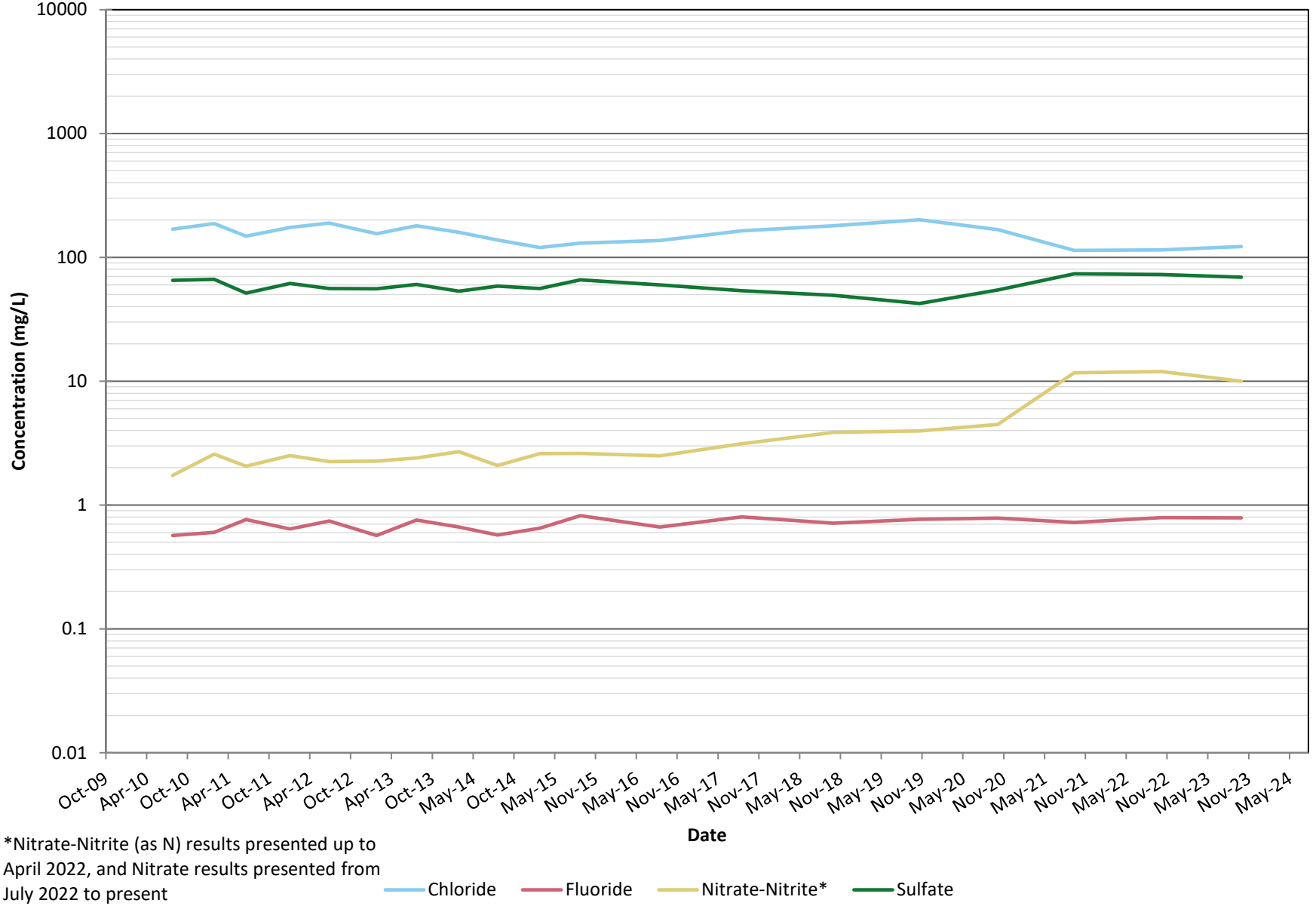
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MW-20/MW-20R Metals CONCENTRATIONS OVER TIME



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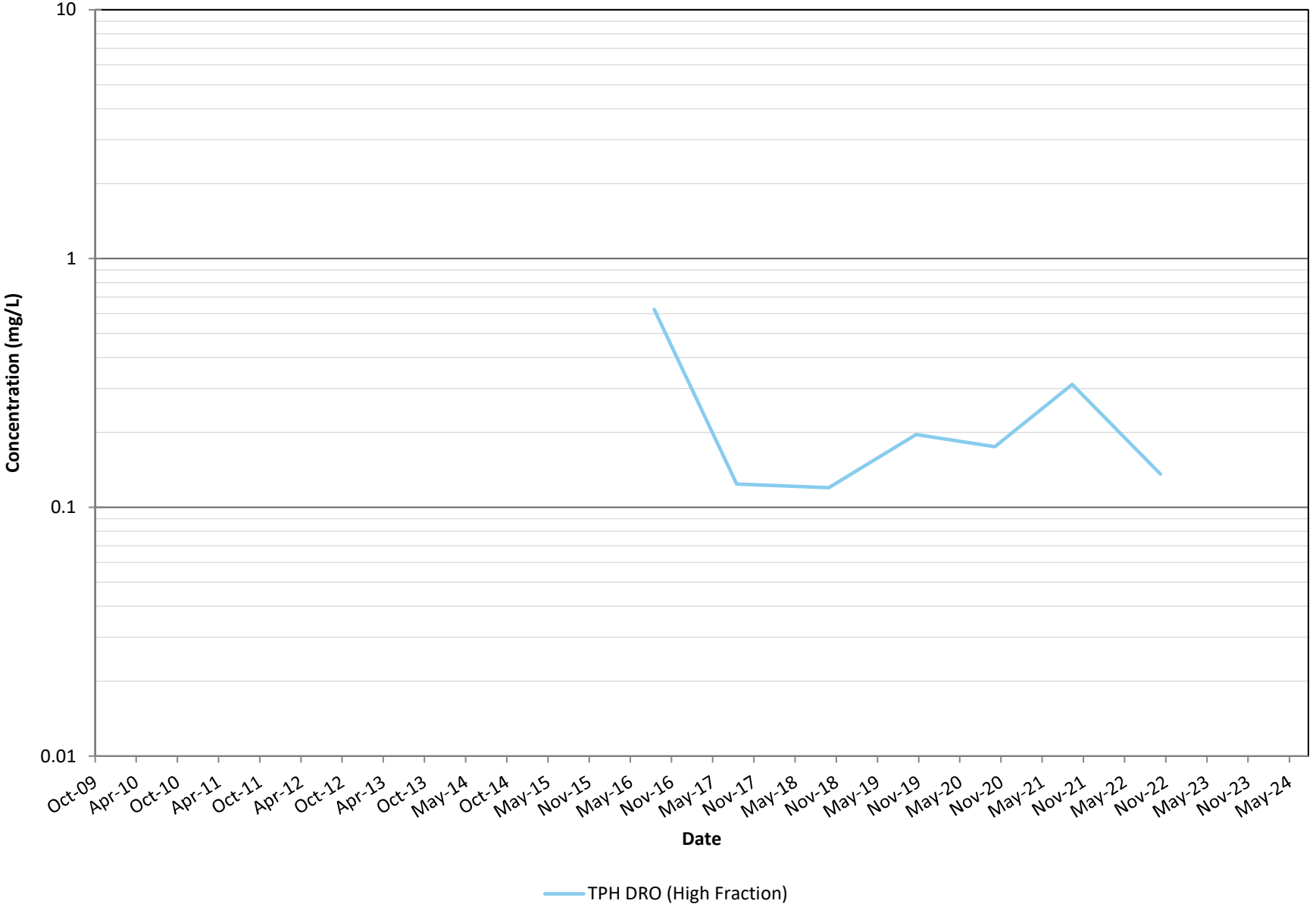
MW-20/MW-20R Anions CONCENTRATIONS OVER TIME



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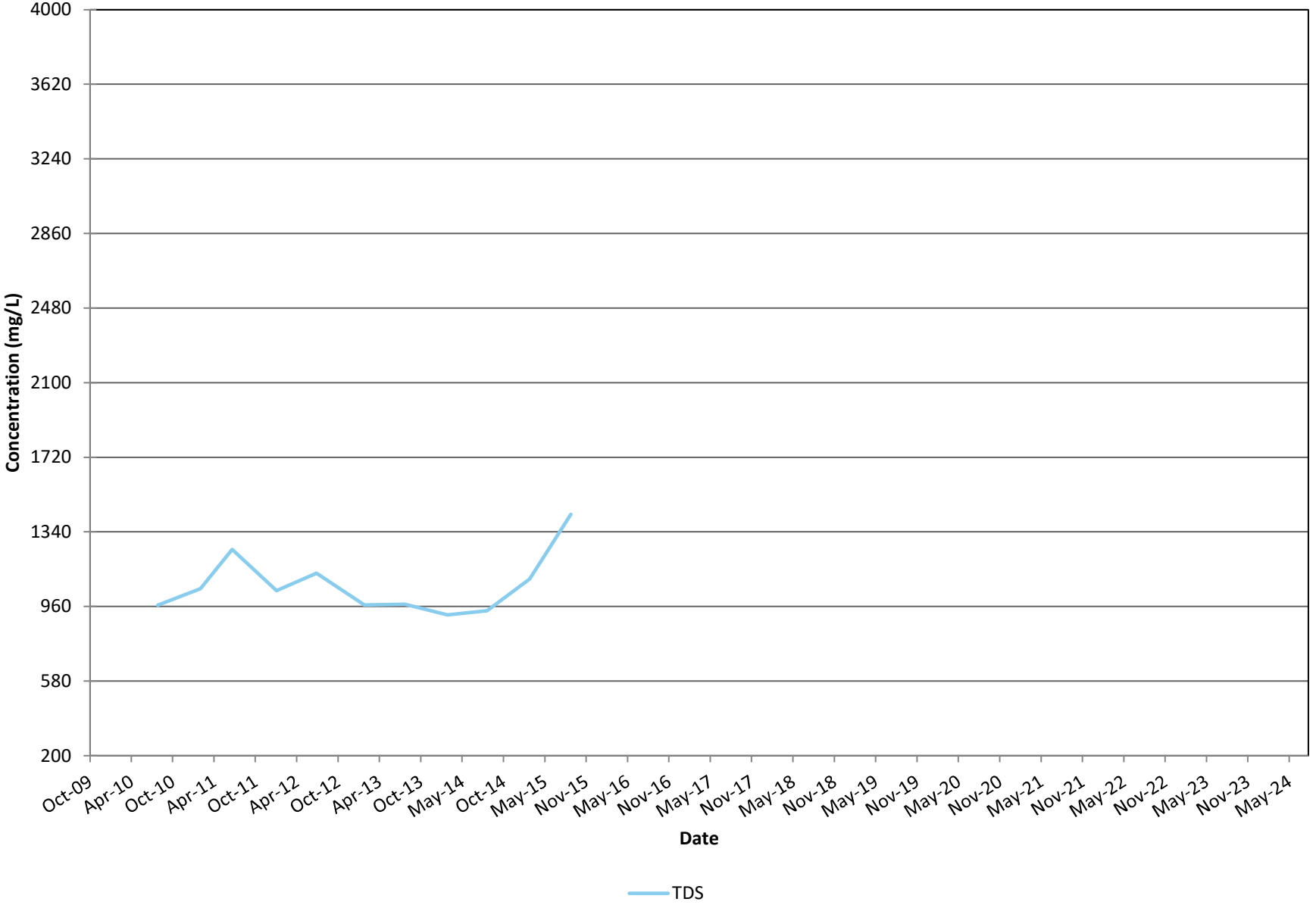
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MW-21 TPH CONCENTRATIONS OVER TIME



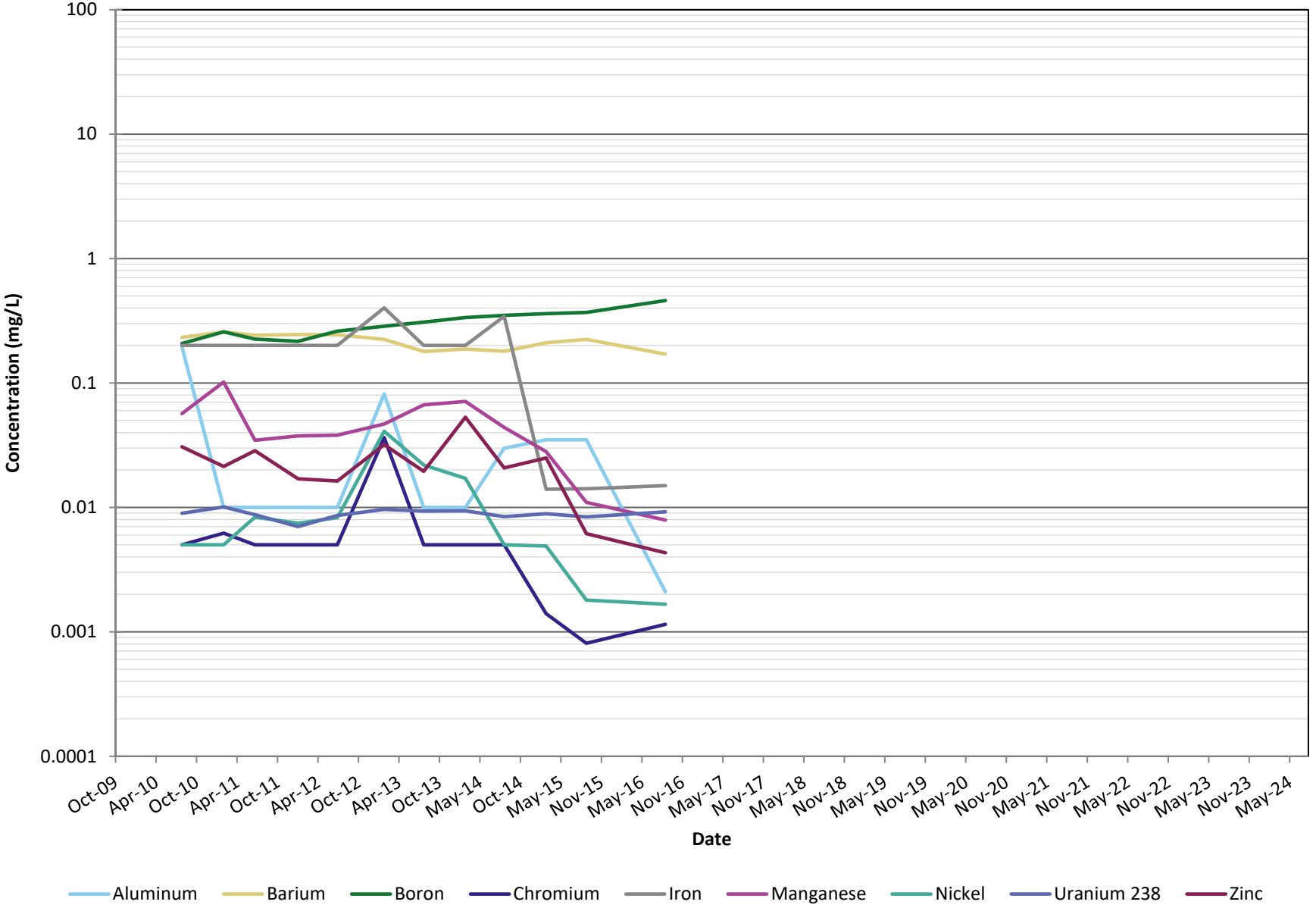
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MW-21 TDS CONCENTRATIONS OVER TIME



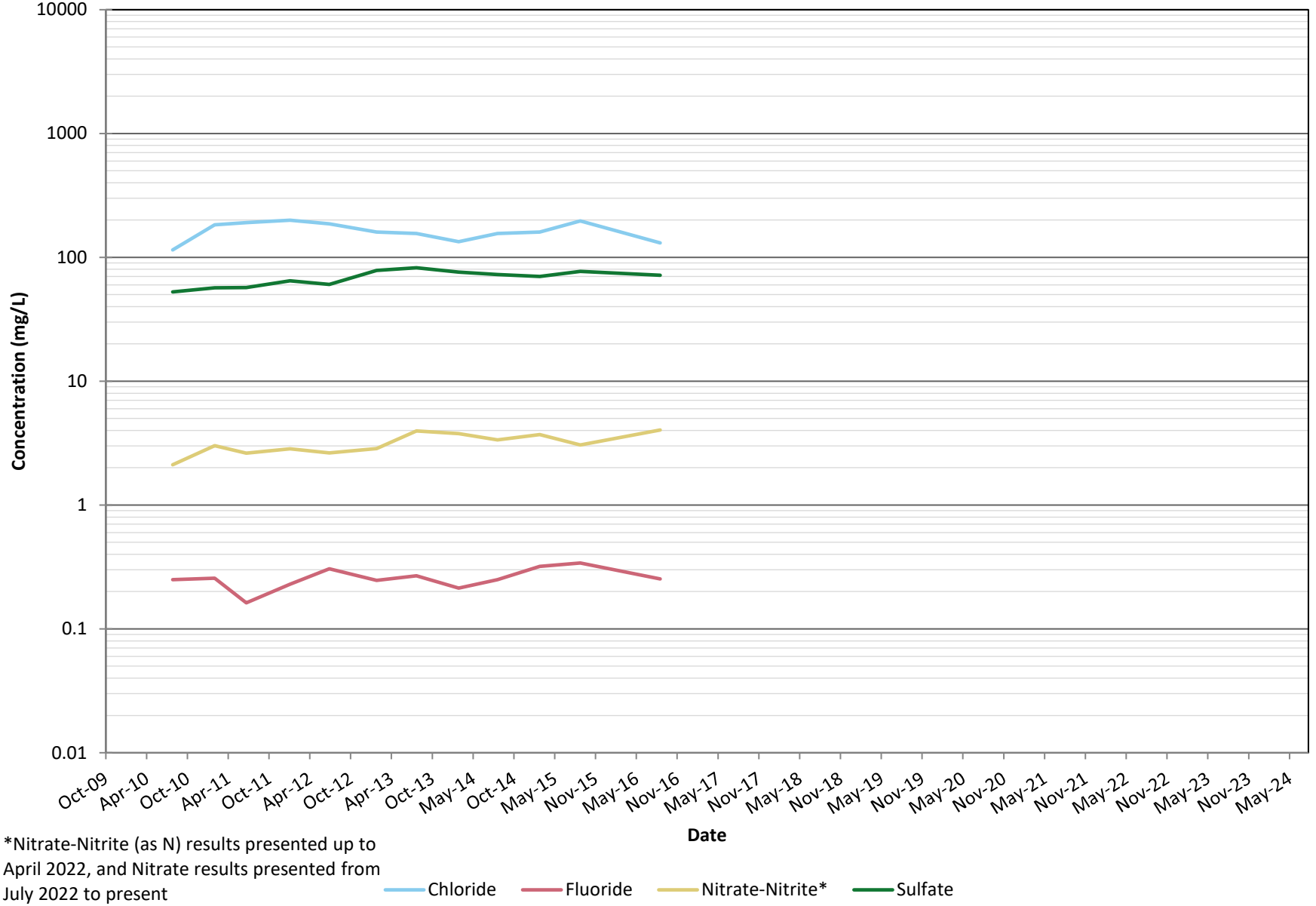
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MW-21 Metals CONCENTRATIONS OVER TIME



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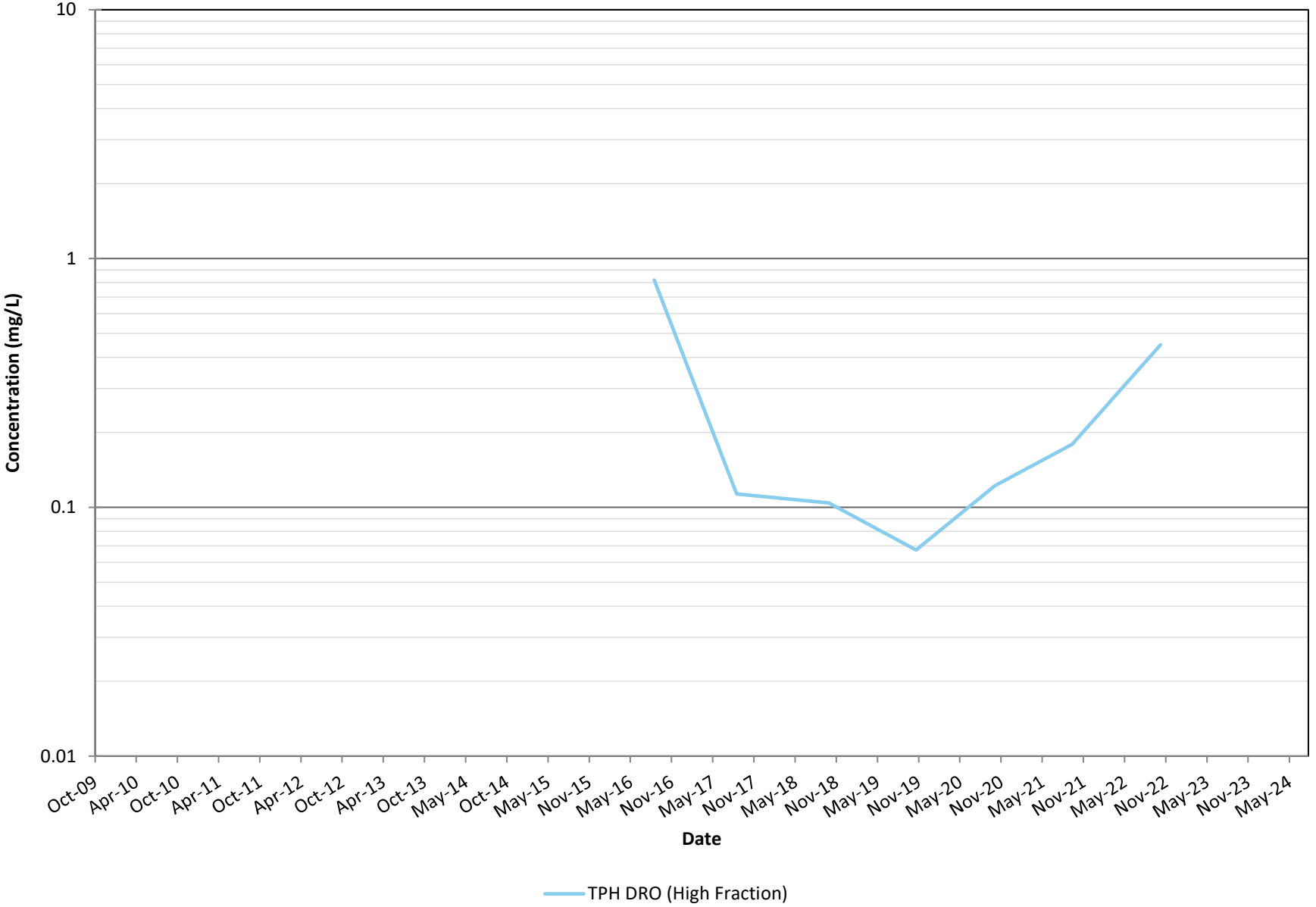
MW-21 Anions CONCENTRATIONS OVER TIME



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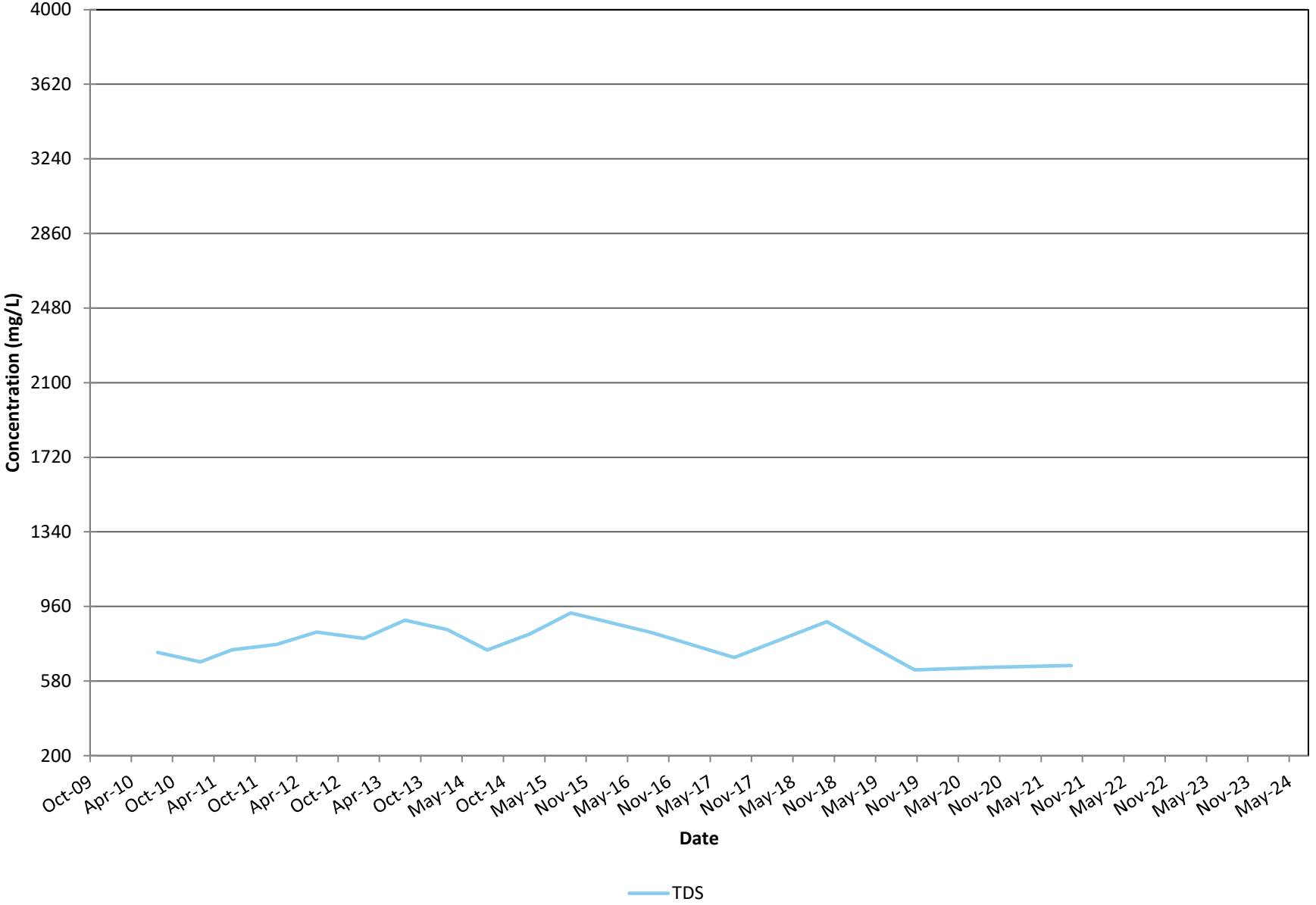
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MW-22 TPH CONCENTRATIONS OVER TIME



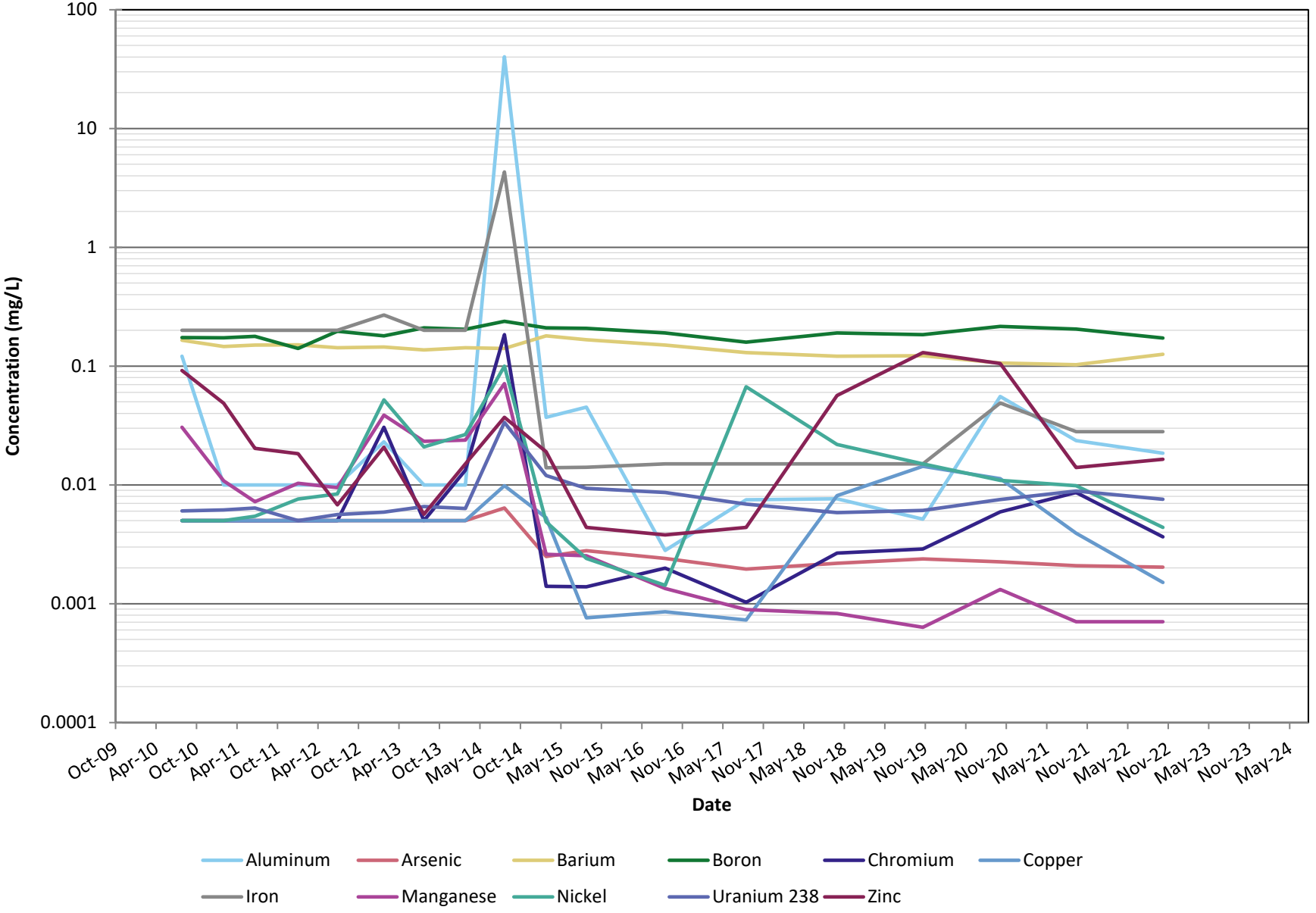
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MW-22 TDS CONCENTRATIONS OVER TIME



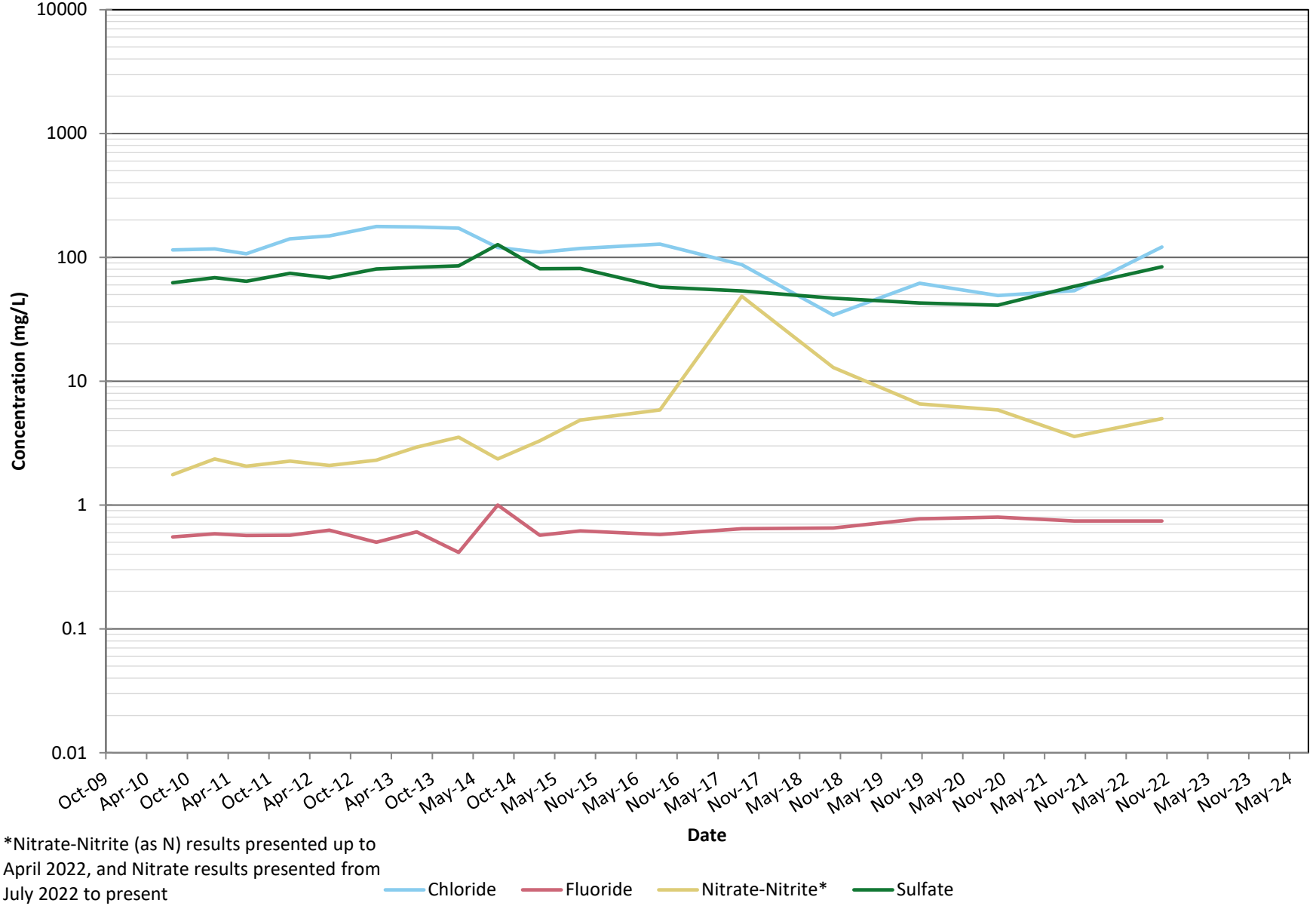
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MW-22 Metals CONCENTRATIONS OVER TIME



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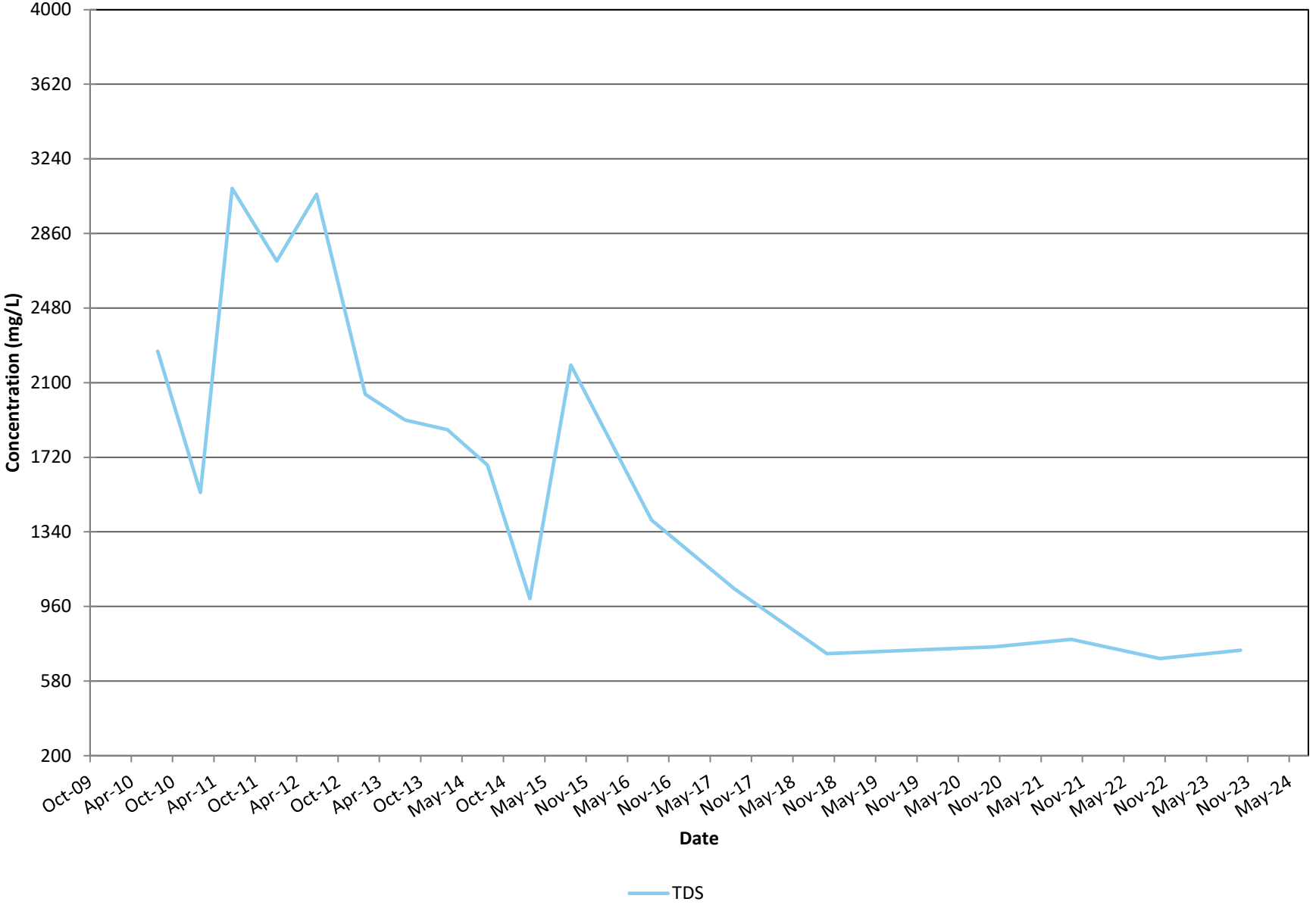
MW-22 Anions CONCENTRATIONS OVER TIME



*Nitrate-Nitrite (as N) results presented up to April 2022, and Nitrate results presented from July 2022 to present

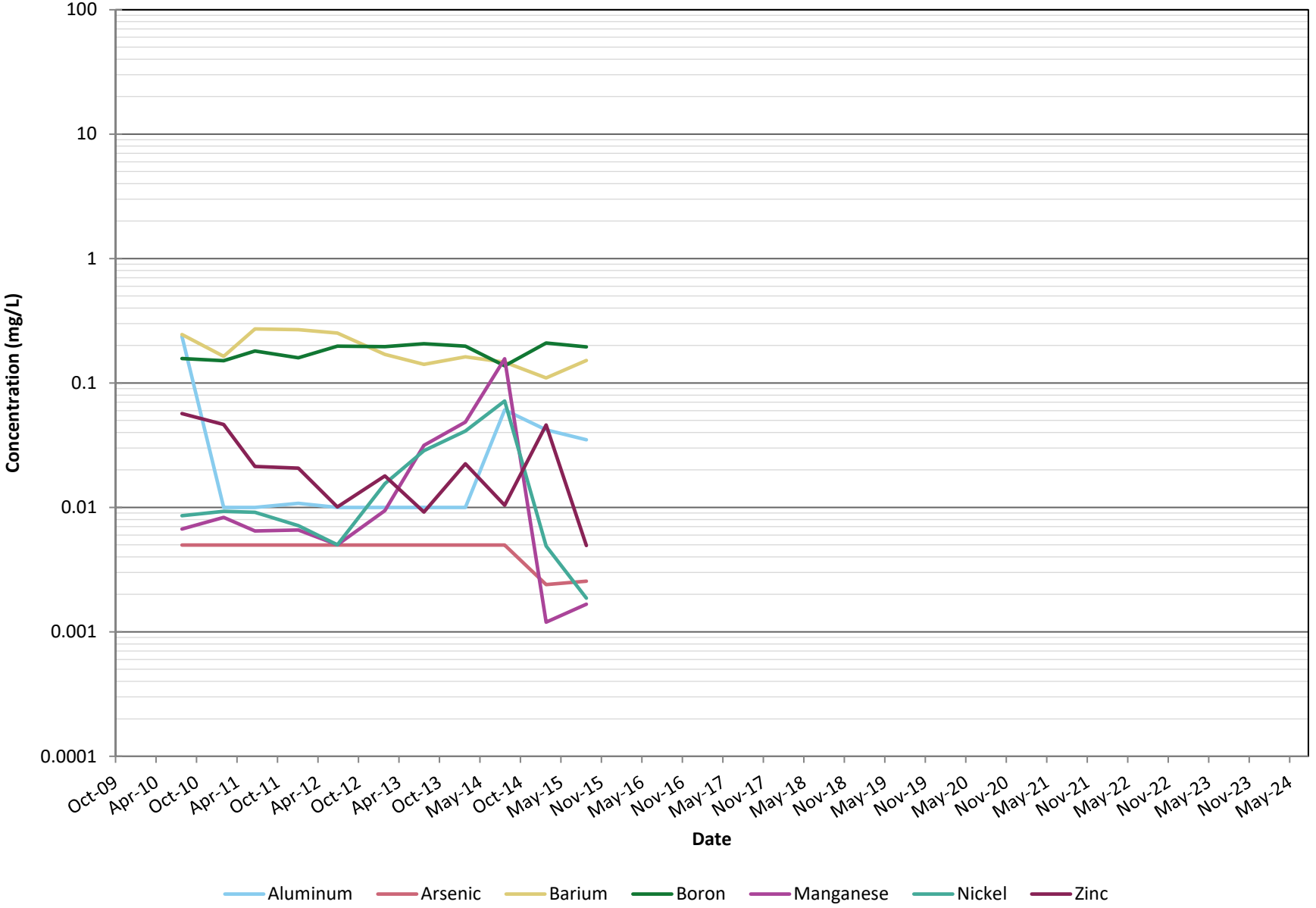
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MW-23/MW-23R TDS CONCENTRATIONS OVER TIME



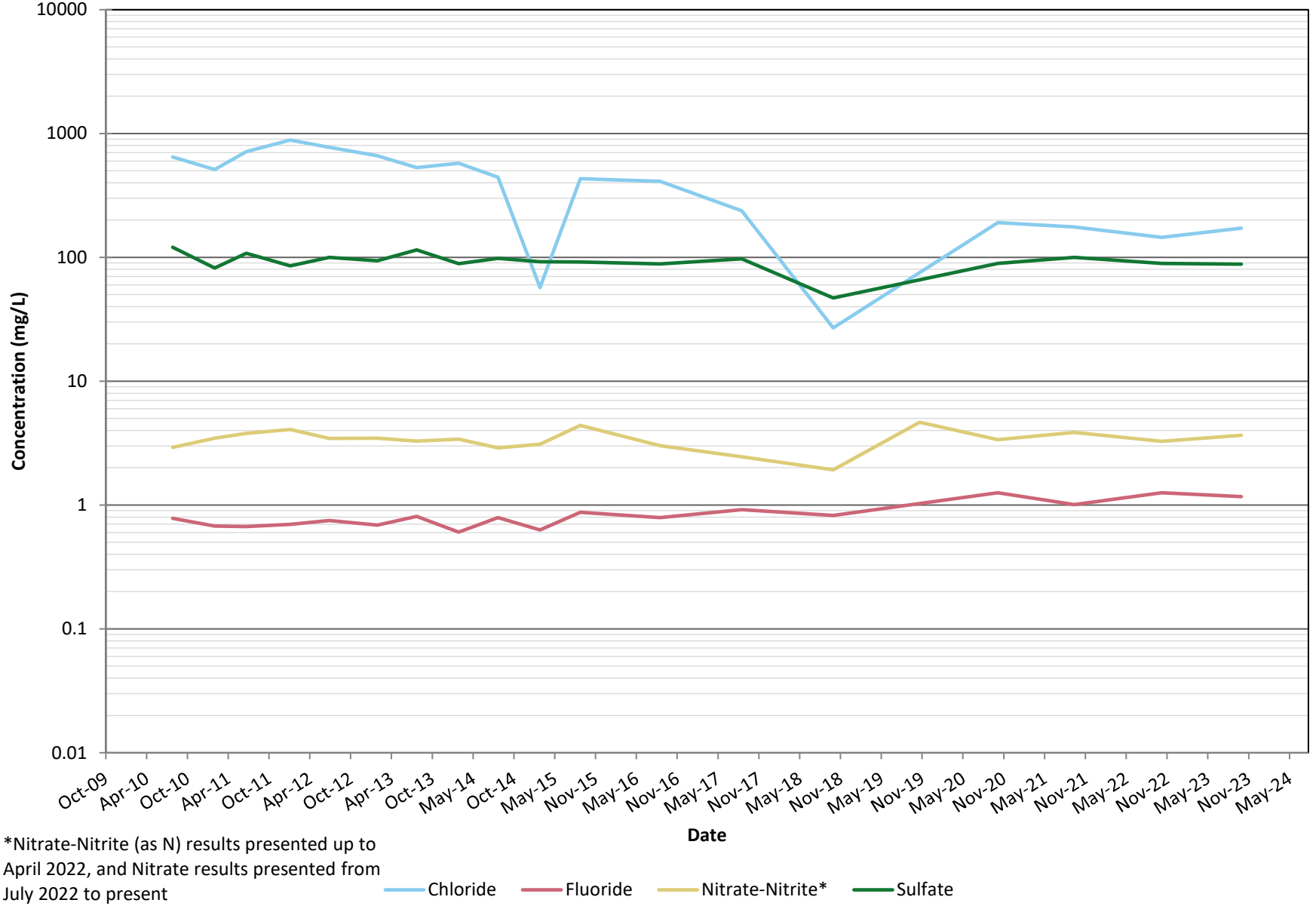
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MW-23/MW-23R Metals CONCENTRATIONS OVER TIME



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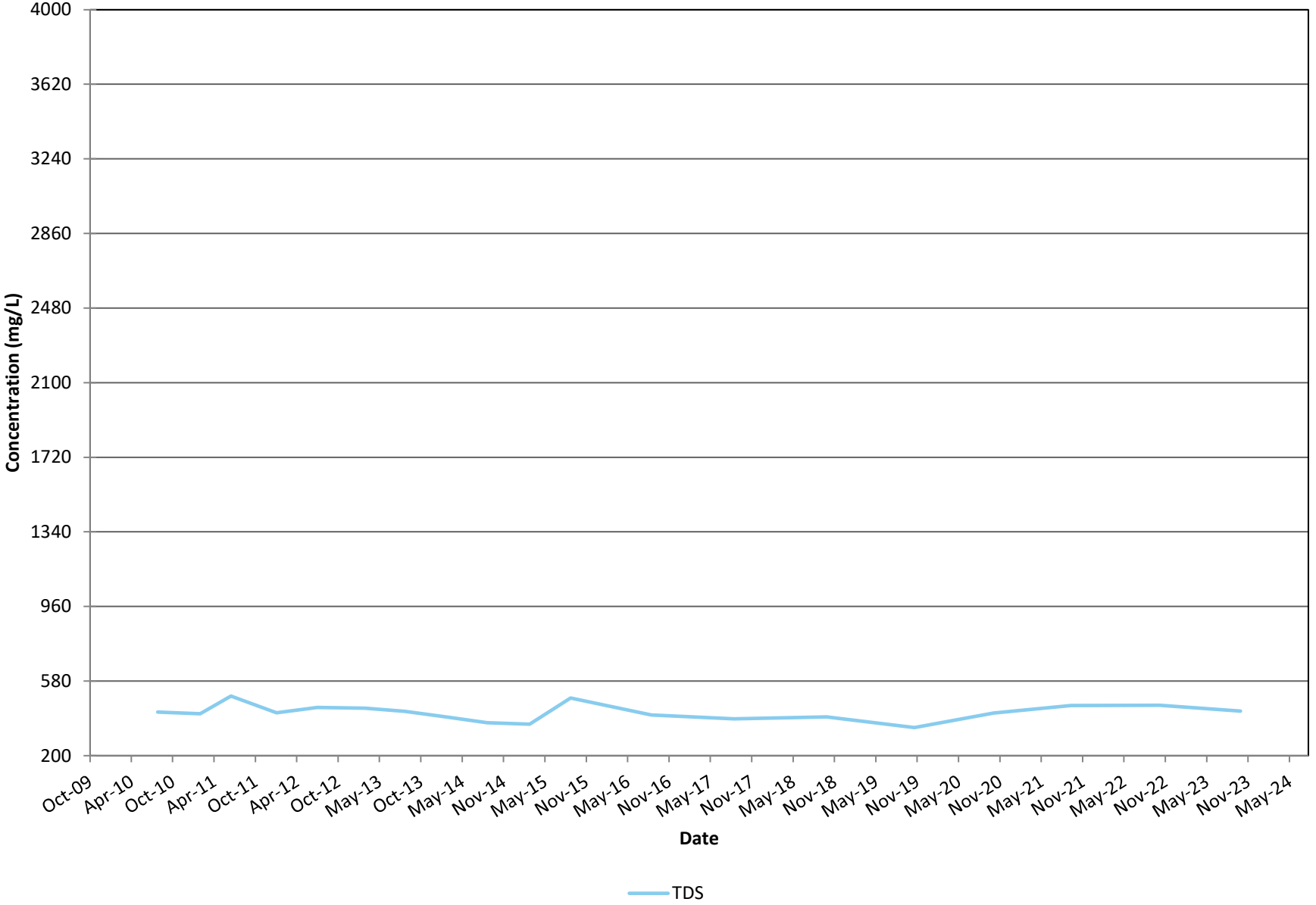
MW-23/MW-23R Anions CONCENTRATIONS OVER TIME



*Nitrate-Nitrite (as N) results presented up to April 2022, and Nitrate results presented from July 2022 to present

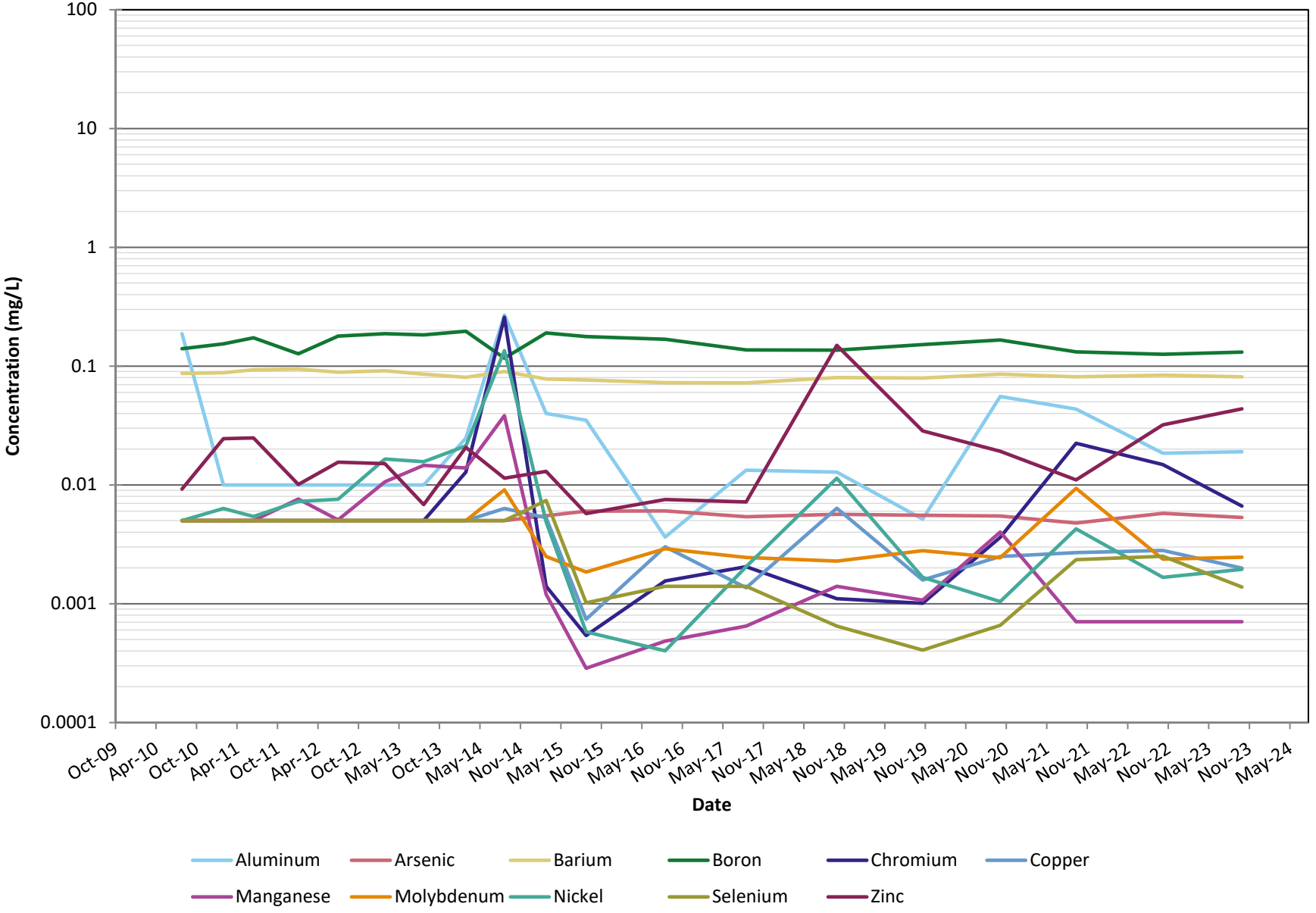
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MW-24/MW-24R TDS CONCENTRATIONS OVER TIME



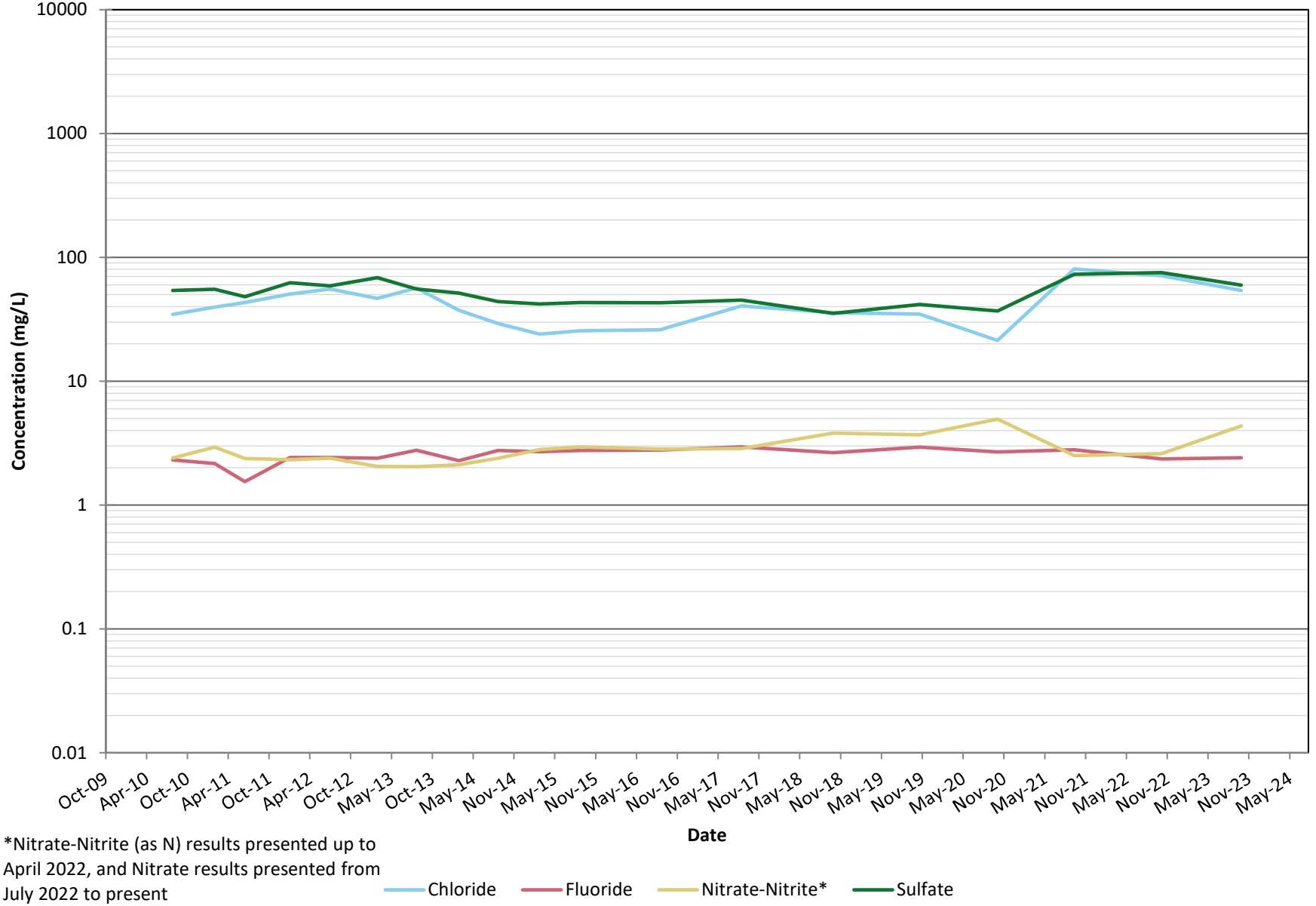
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MW-24/MW-24R Metals CONCENTRATIONS OVER TIME



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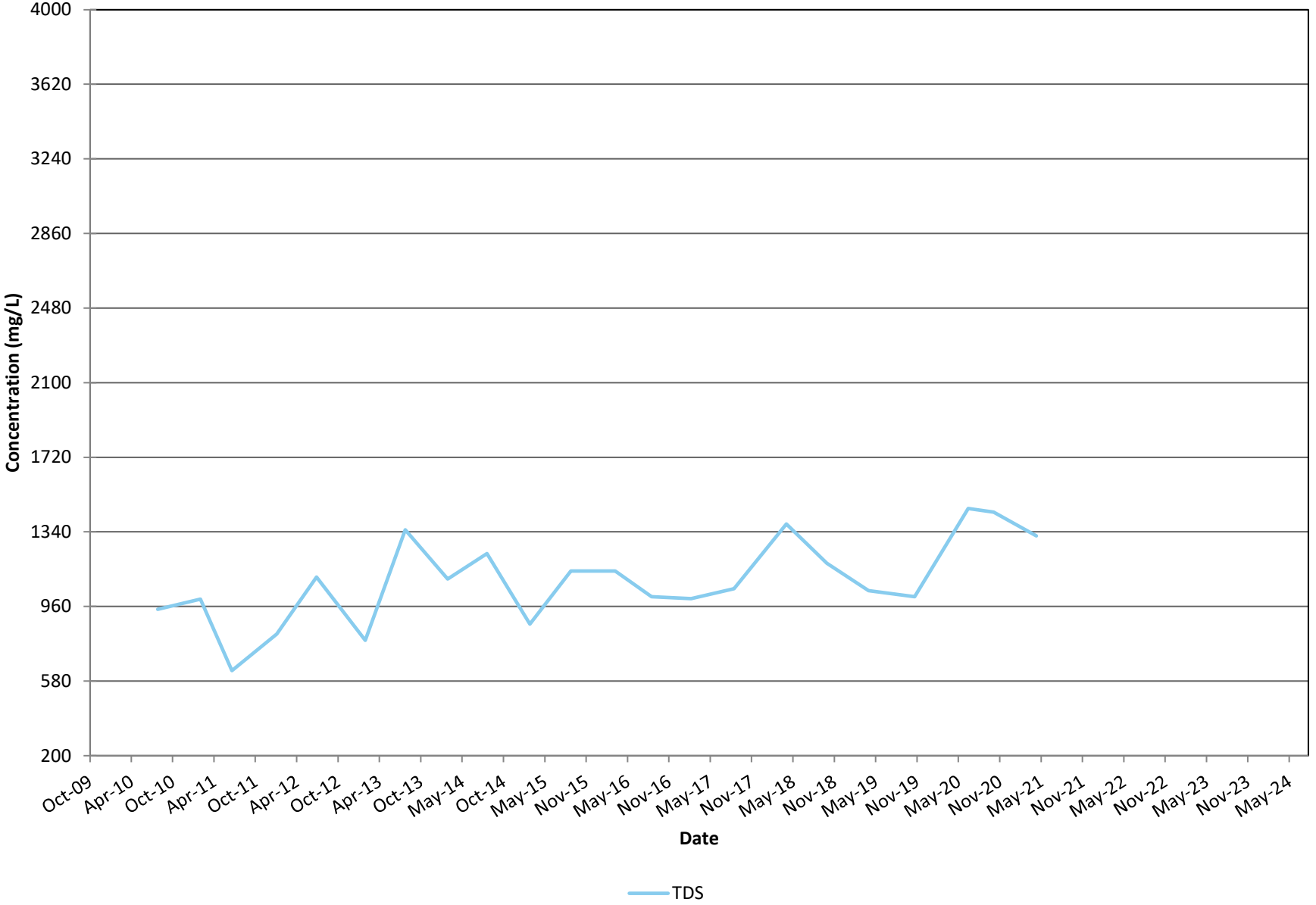
MW-24/MW-24R Anions CONCENTRATIONS OVER TIME



*Nitrate-Nitrite (as N) results presented up to April 2022, and Nitrate results presented from July 2022 to present

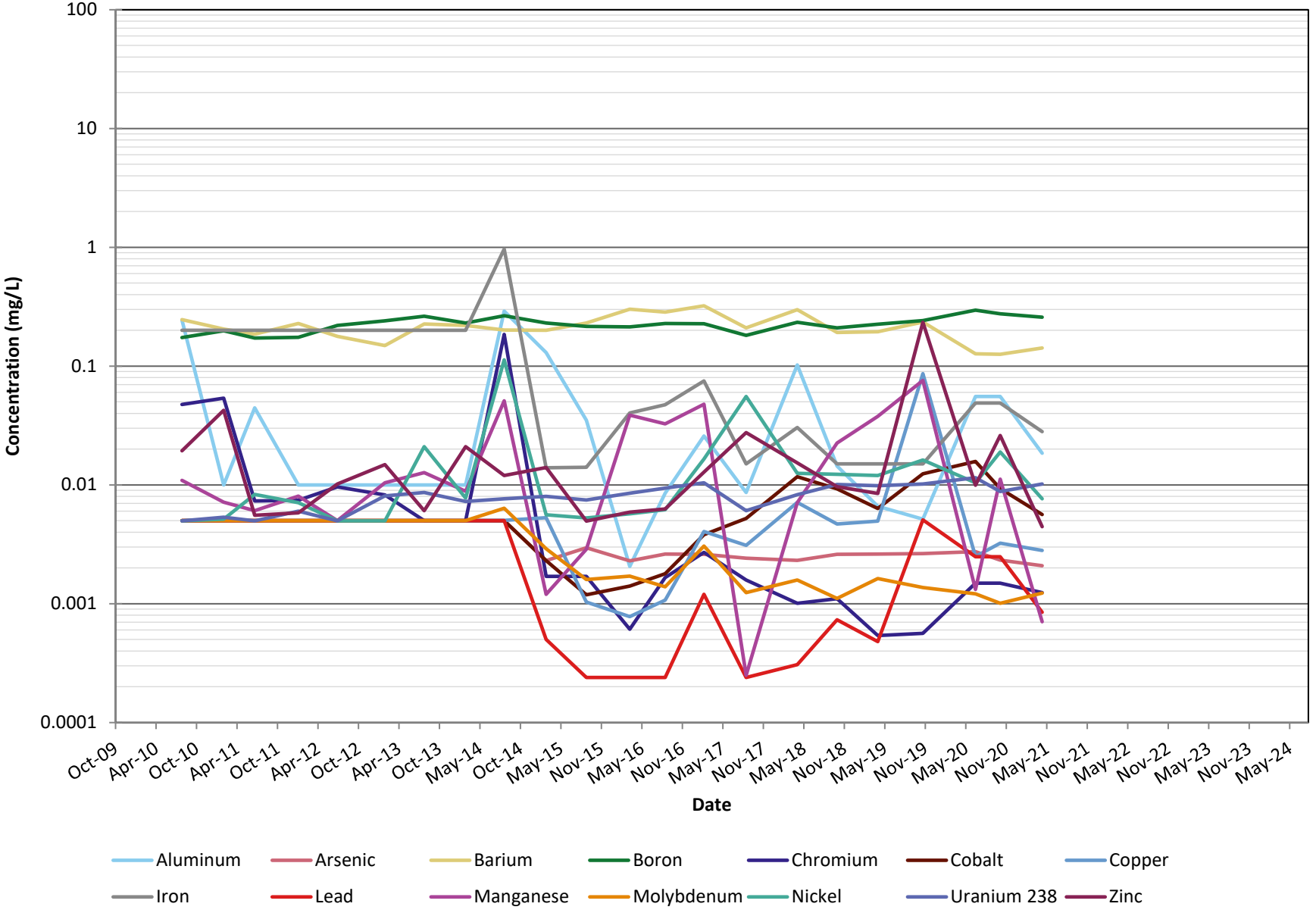
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MW-25 TDS CONCENTRATIONS OVER TIME



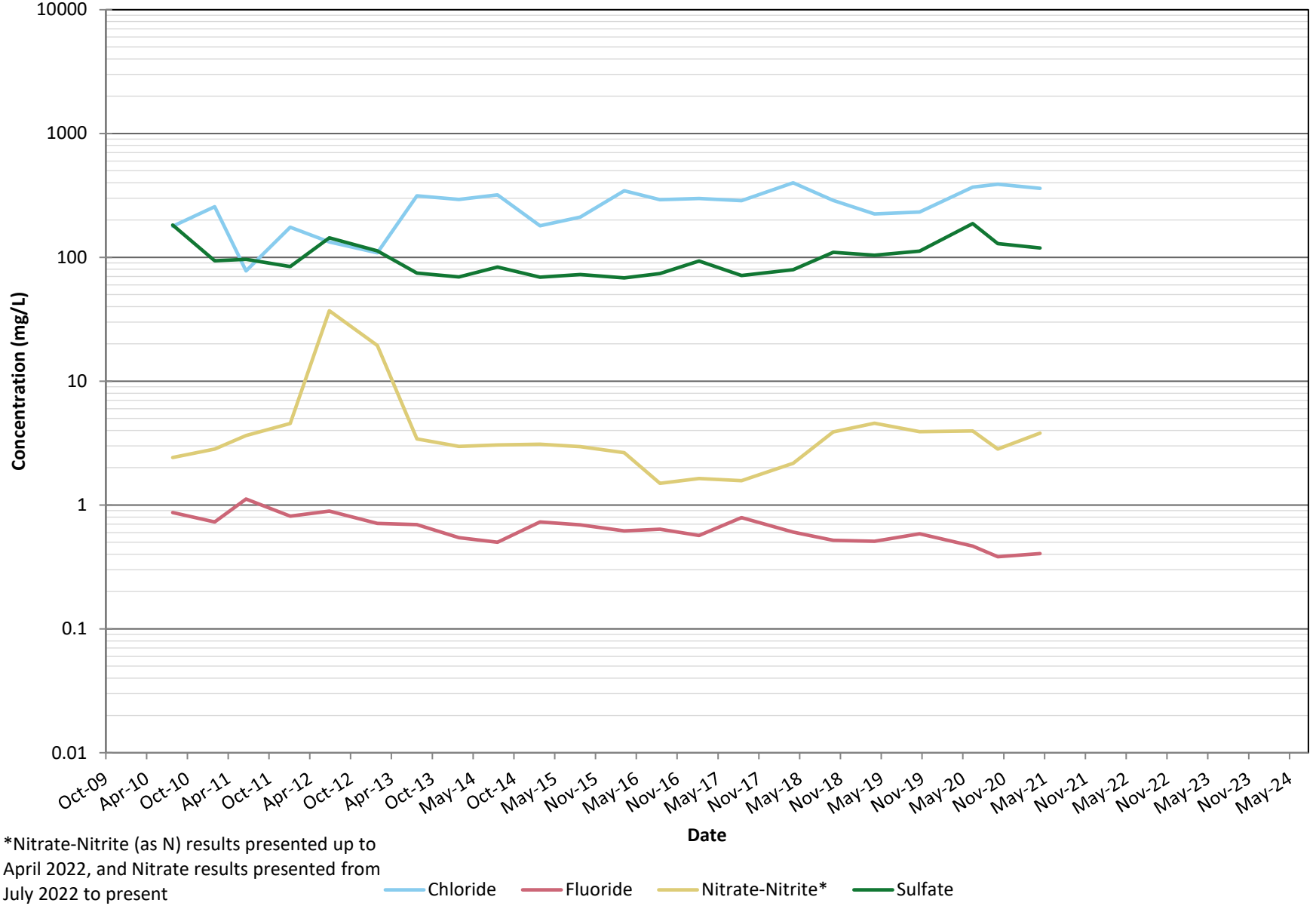
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MW-25 Metals CONCENTRATIONS OVER TIME



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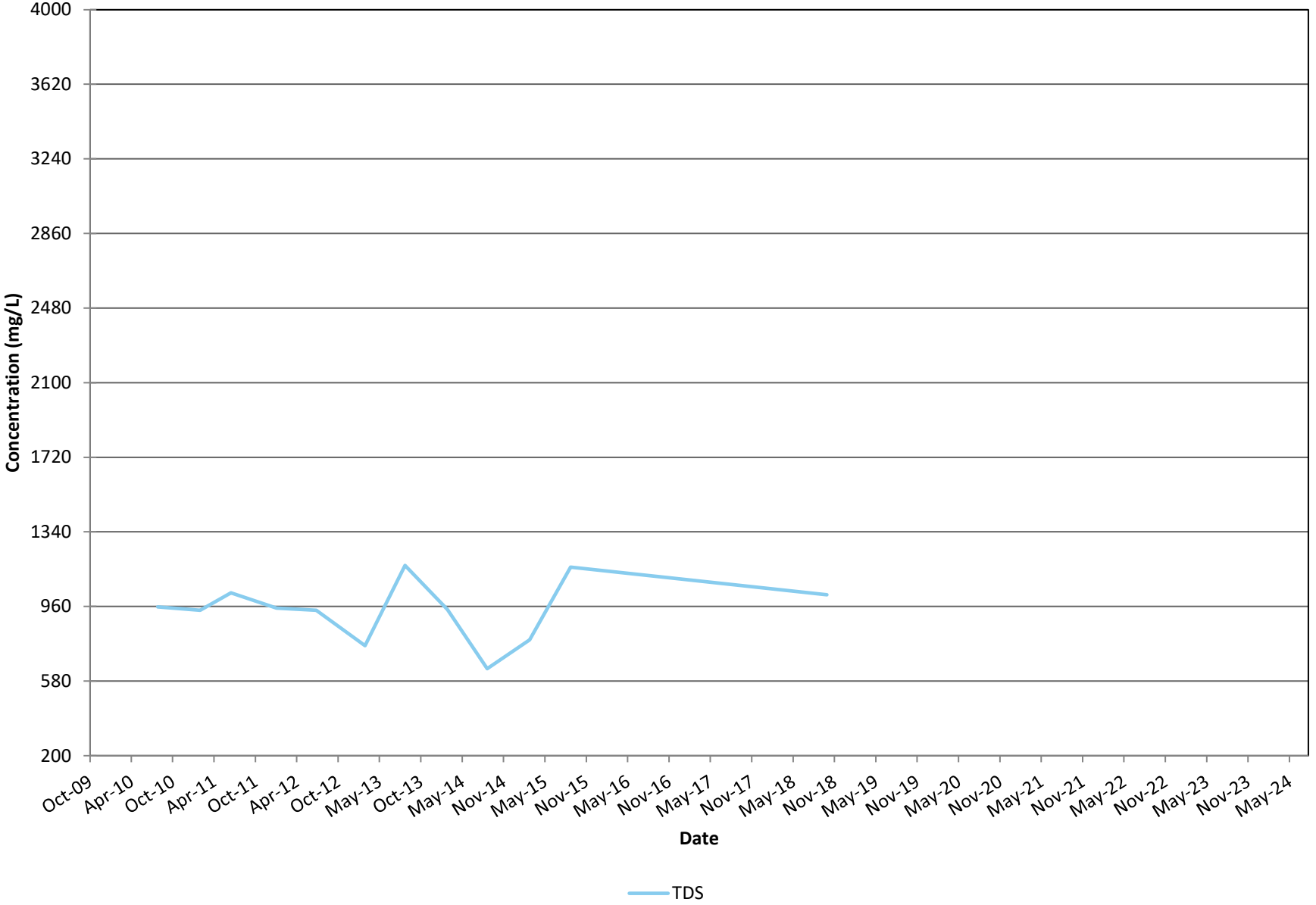
MW-25 Anions CONCENTRATIONS OVER TIME



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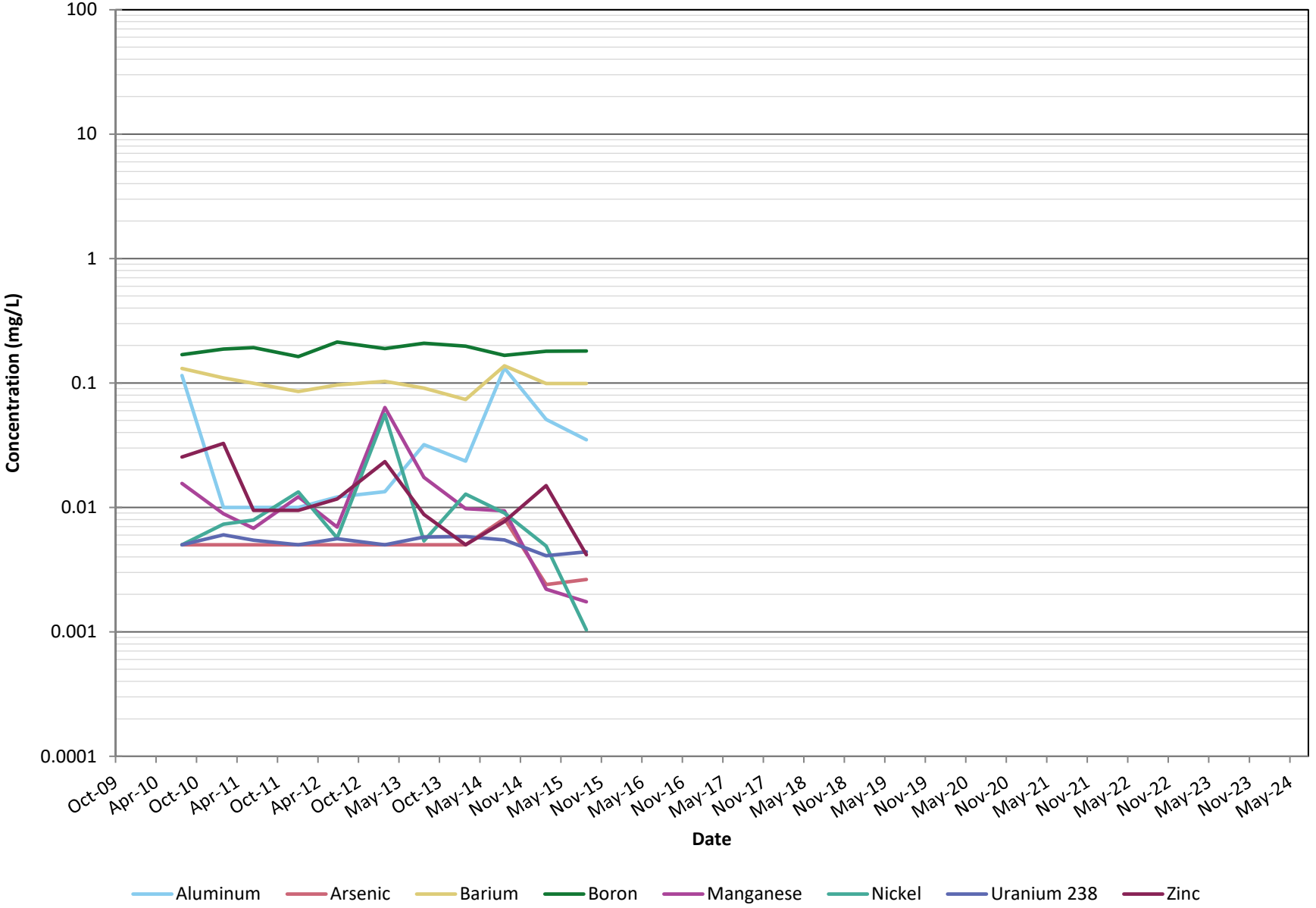
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MW-26/MW-26R TDS CONCENTRATIONS OVER TIME



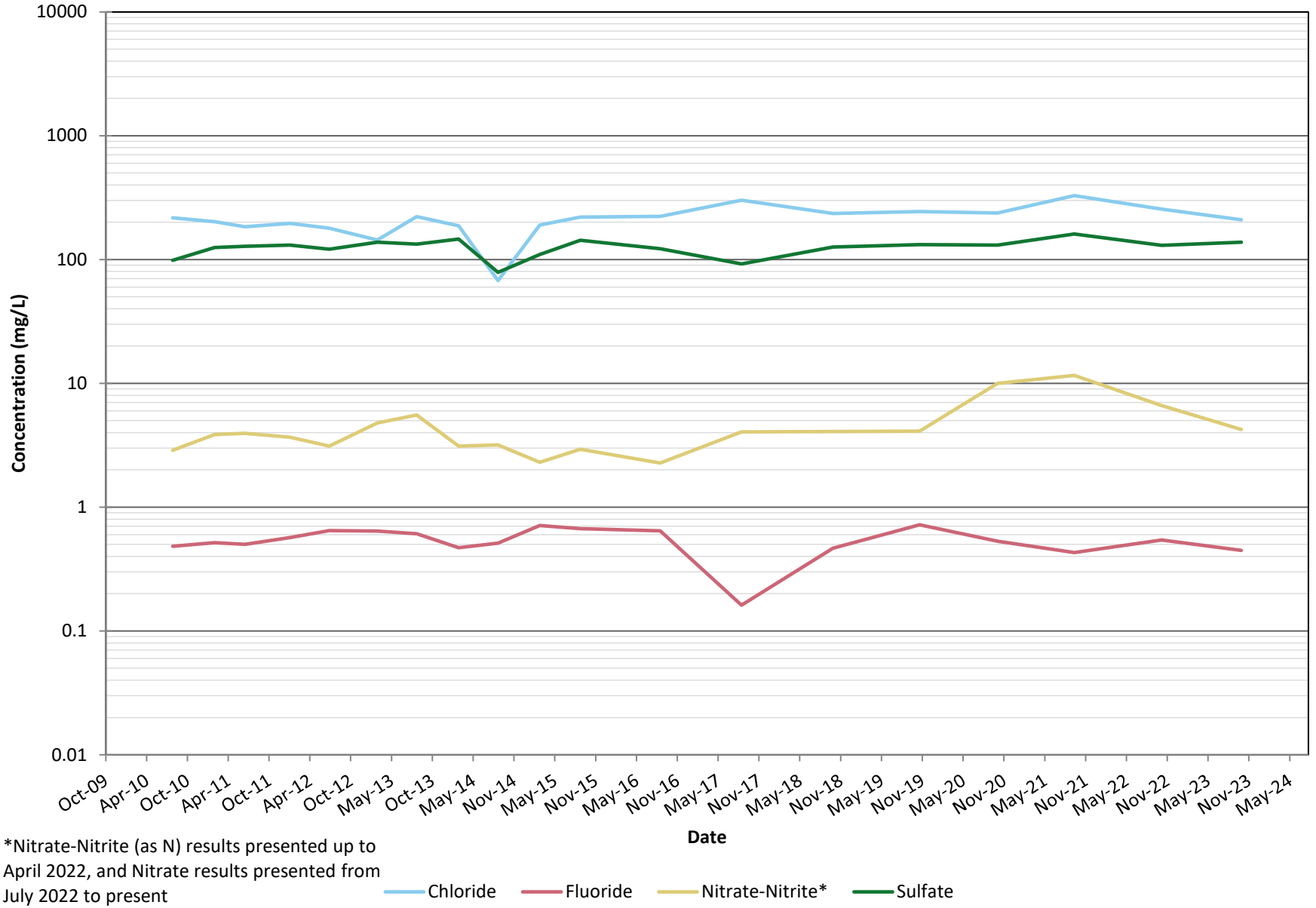
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MW-26/MW-26R Metals CONCENTRATIONS OVER TIME



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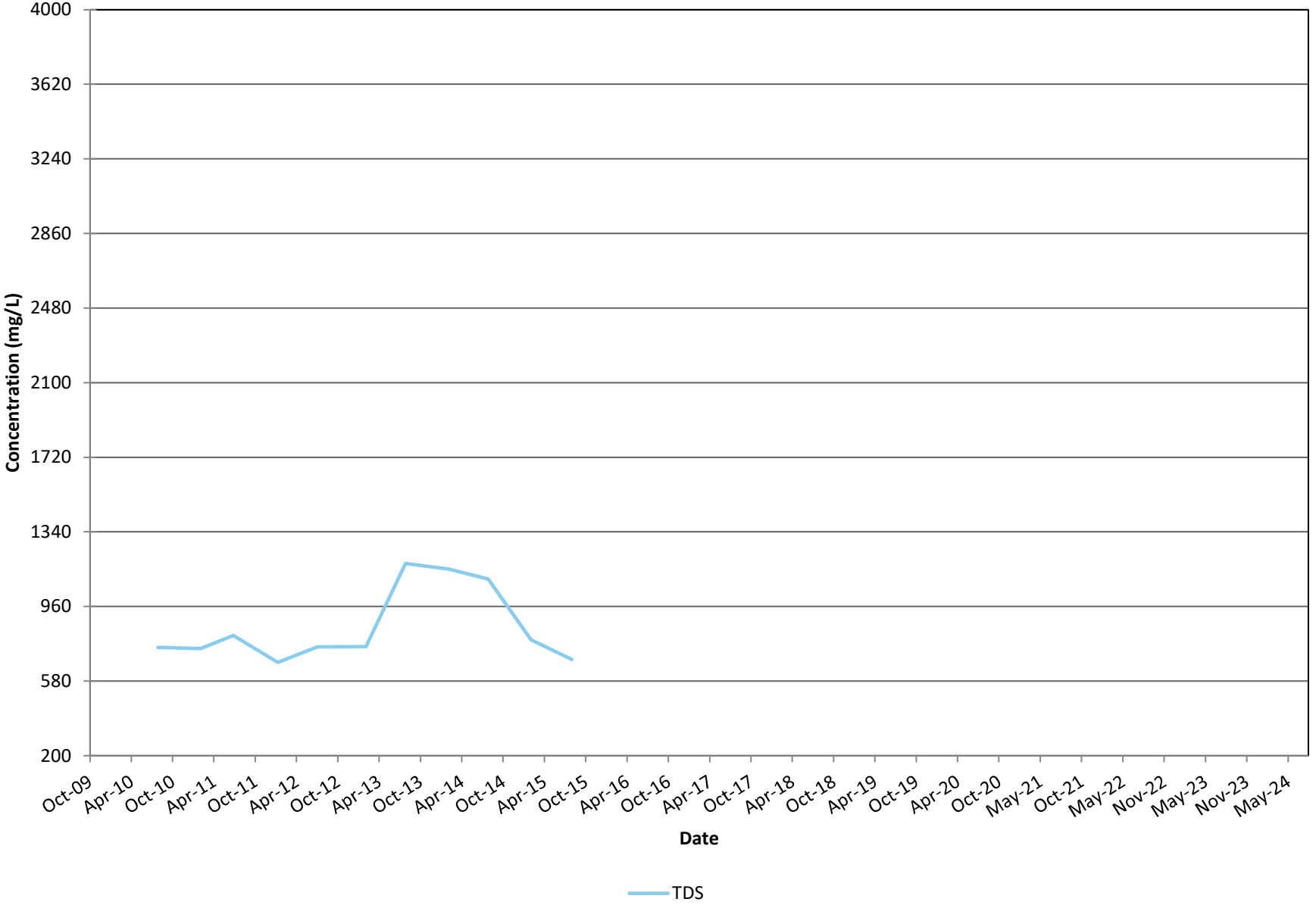
MW-26/MW-26R Anions CONCENTRATIONS OVER TIME



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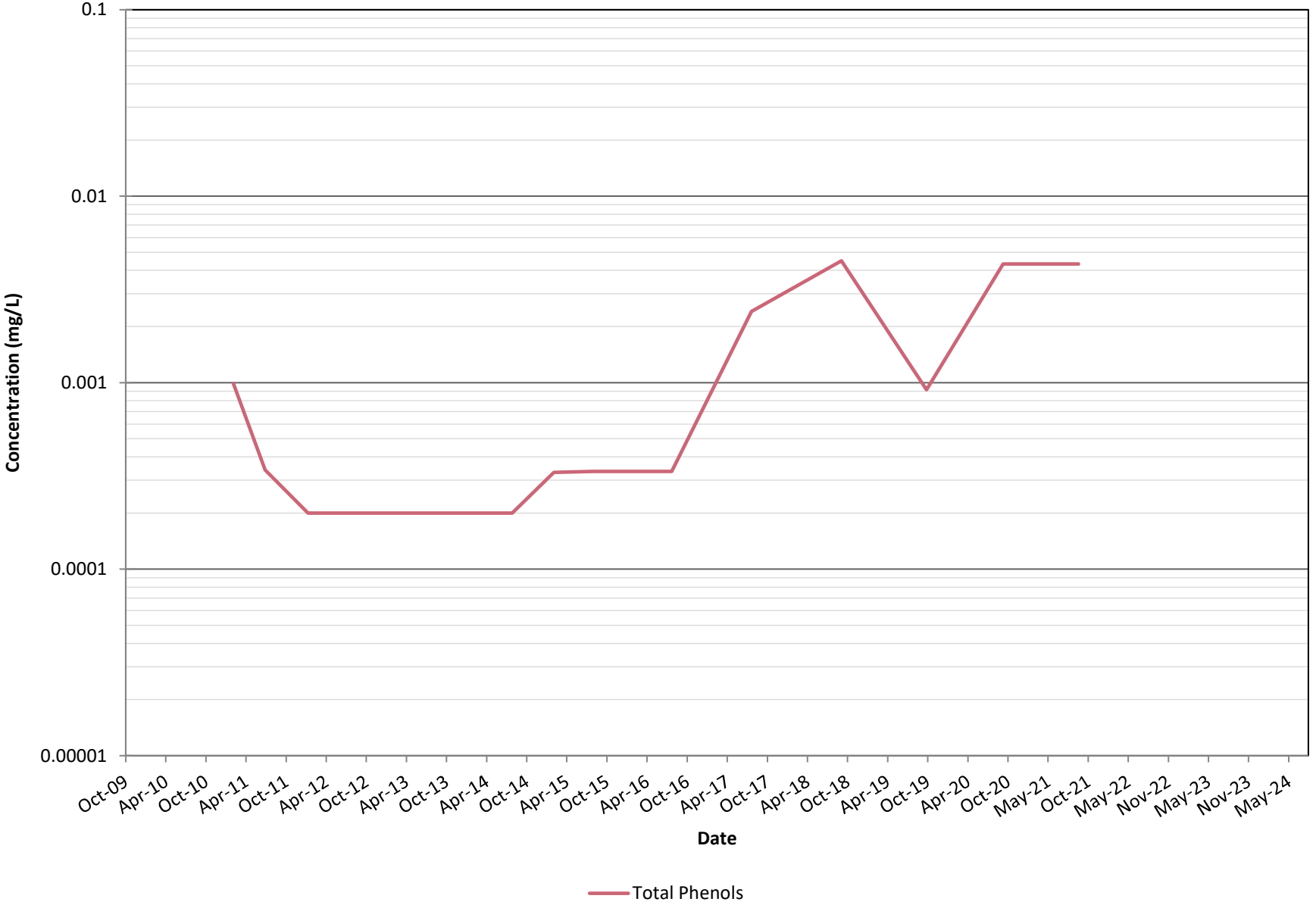
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MW-27 TDS CONCENTRATIONS OVER TIME



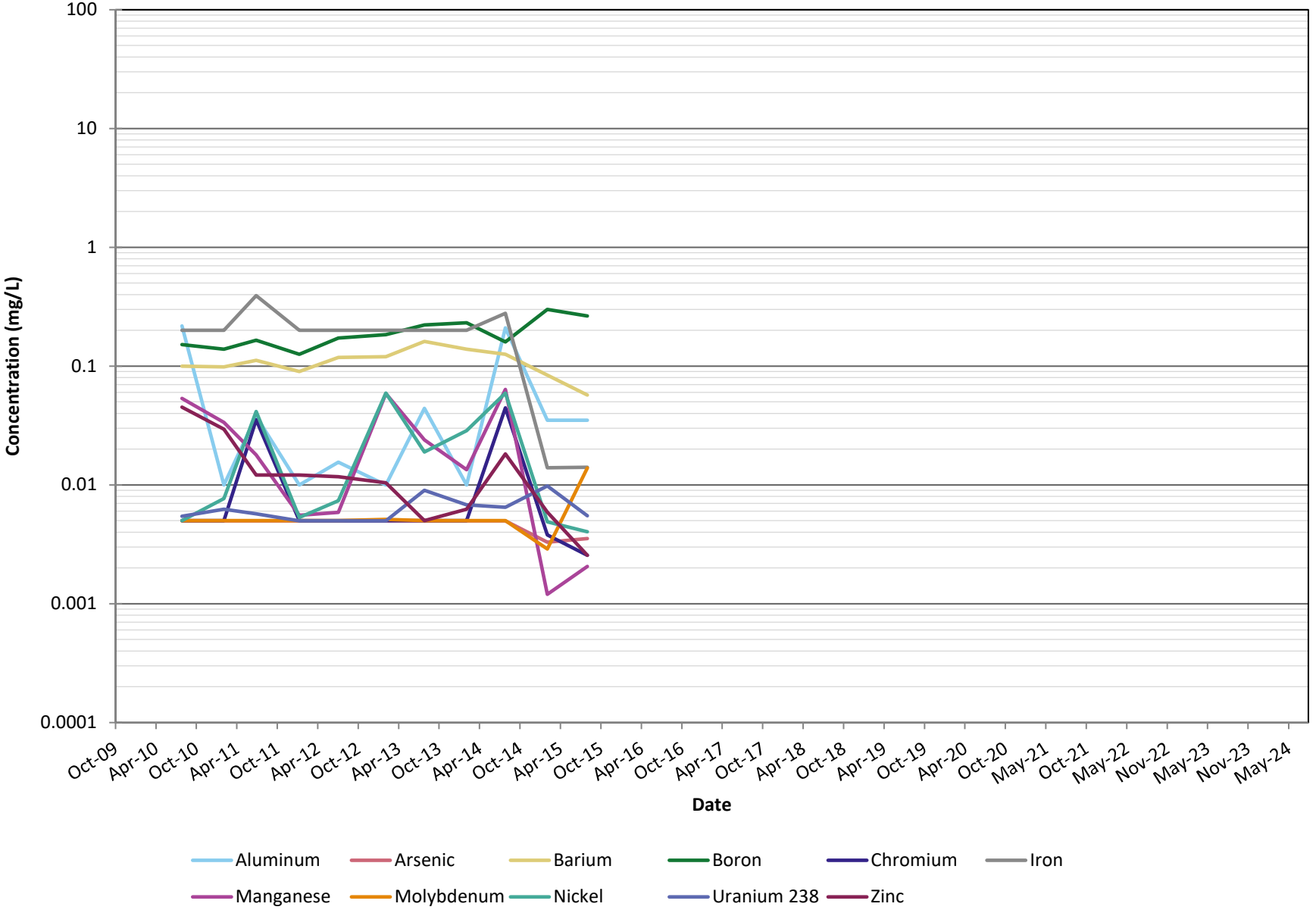
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MW-27 SVOC CONCENTRATIONS OVER TIME



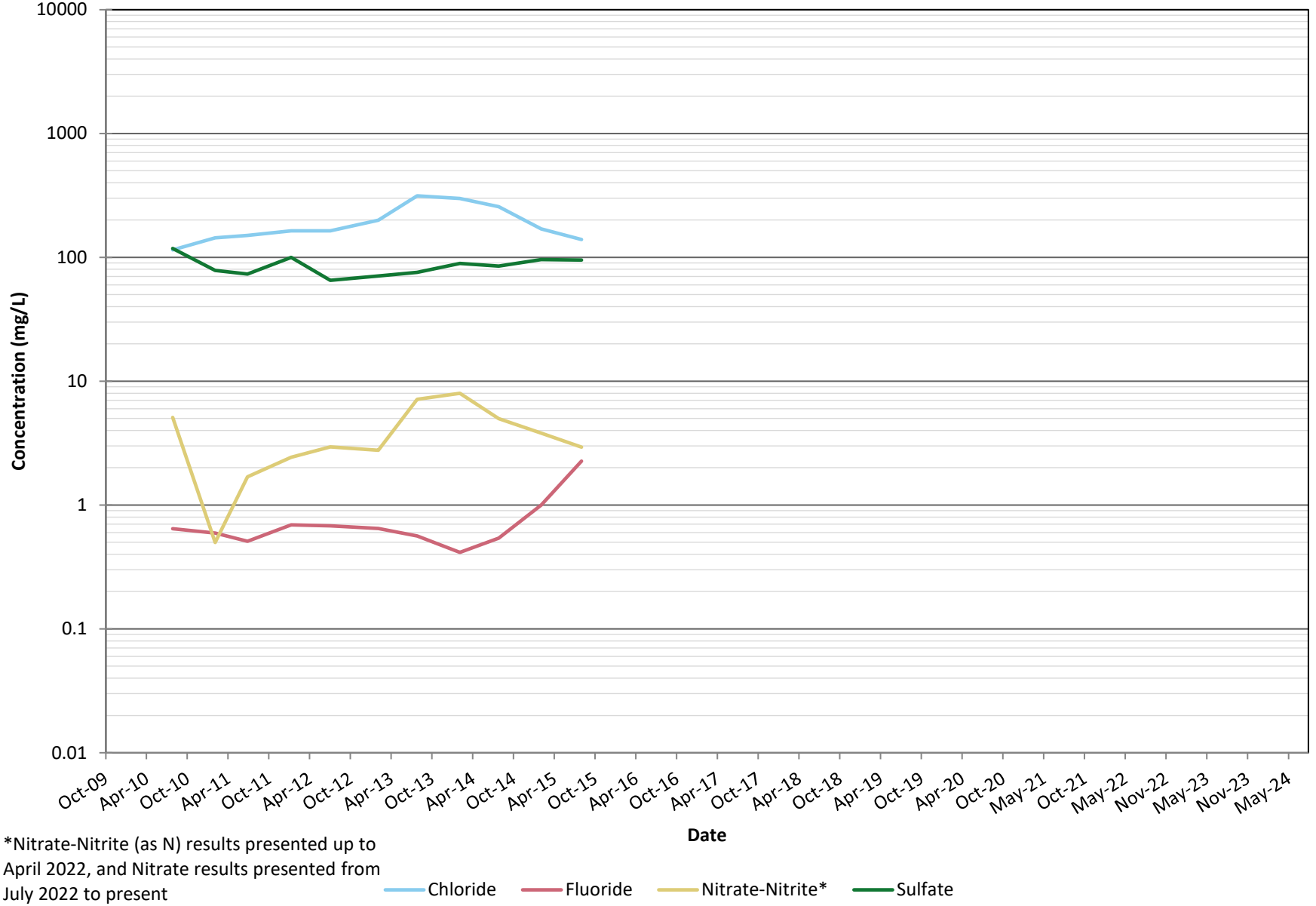
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MW-27 Metals CONCENTRATIONS OVER TIME



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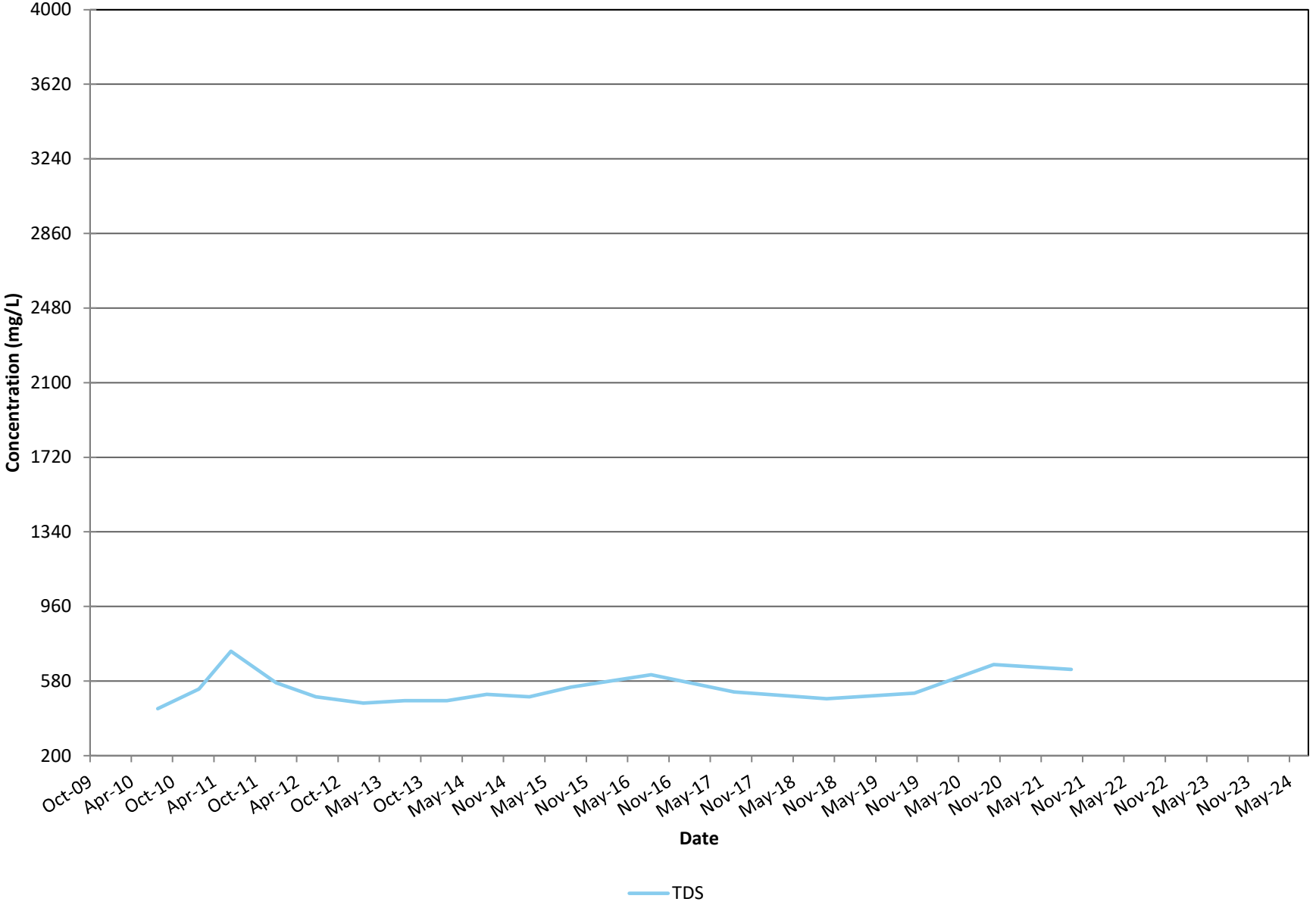
MW-27 Anions CONCENTRATIONS OVER TIME



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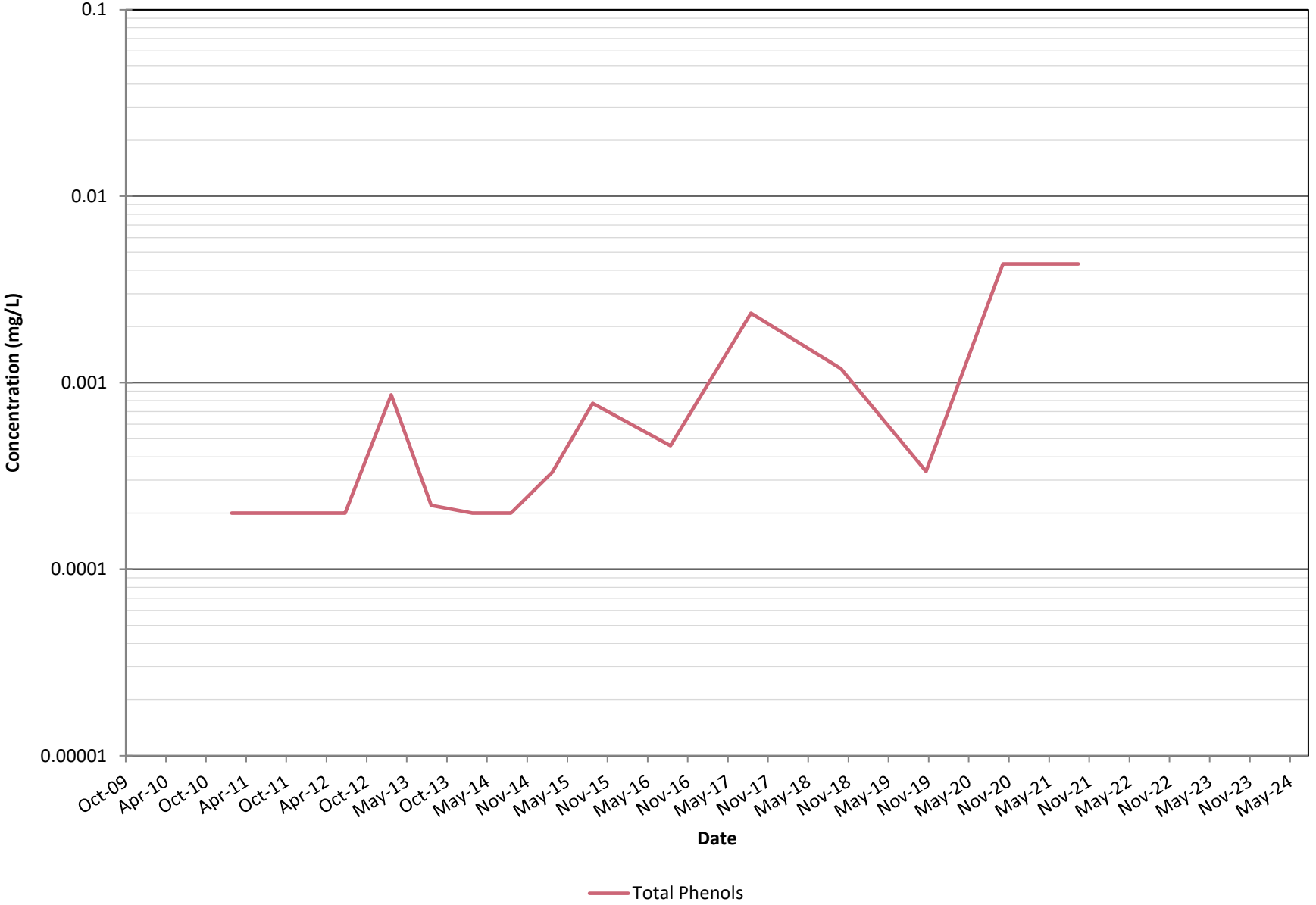
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MW-28 TDS CONCENTRATIONS OVER TIME



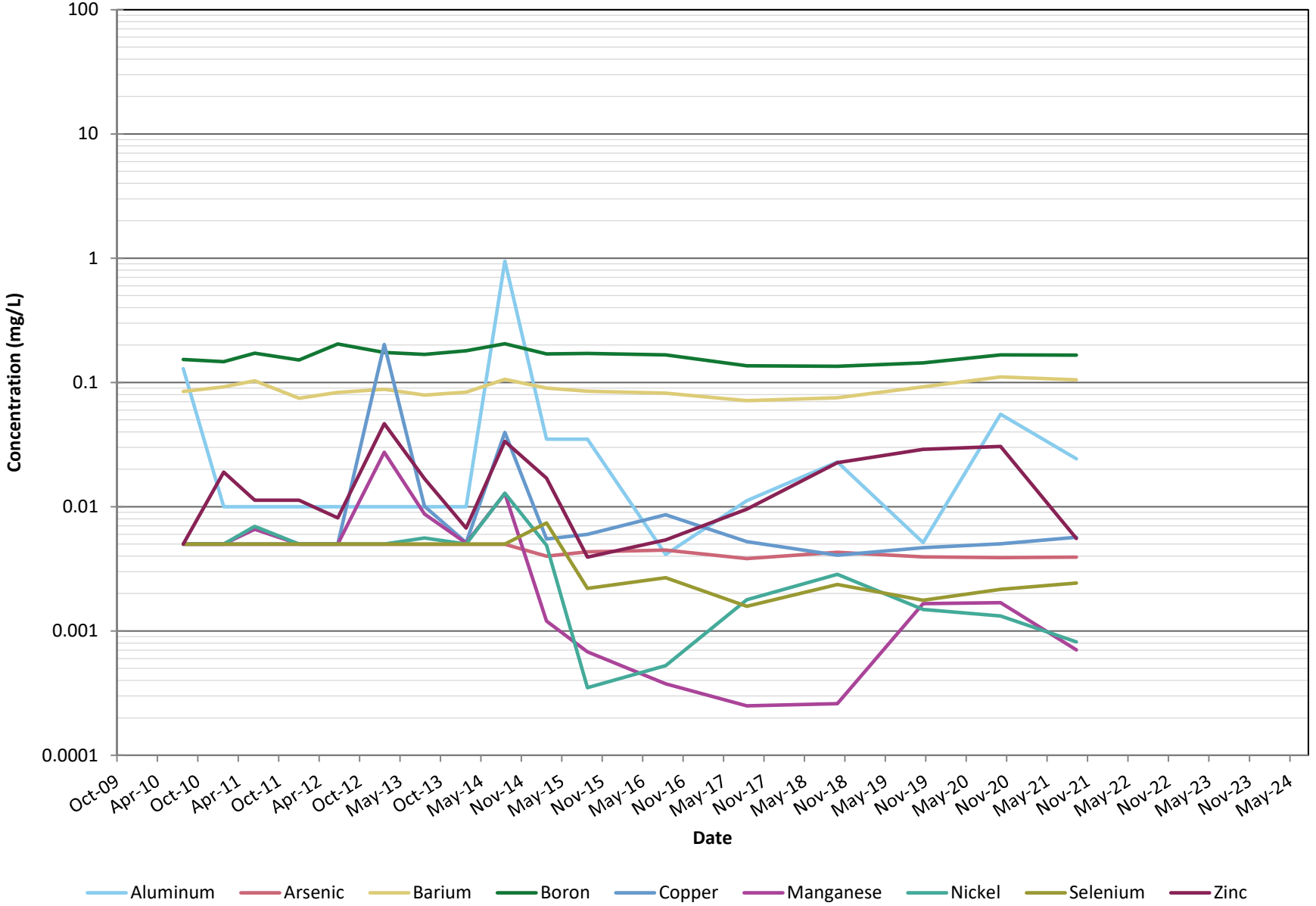
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MW-28 SVOC CONCENTRATIONS OVER TIME



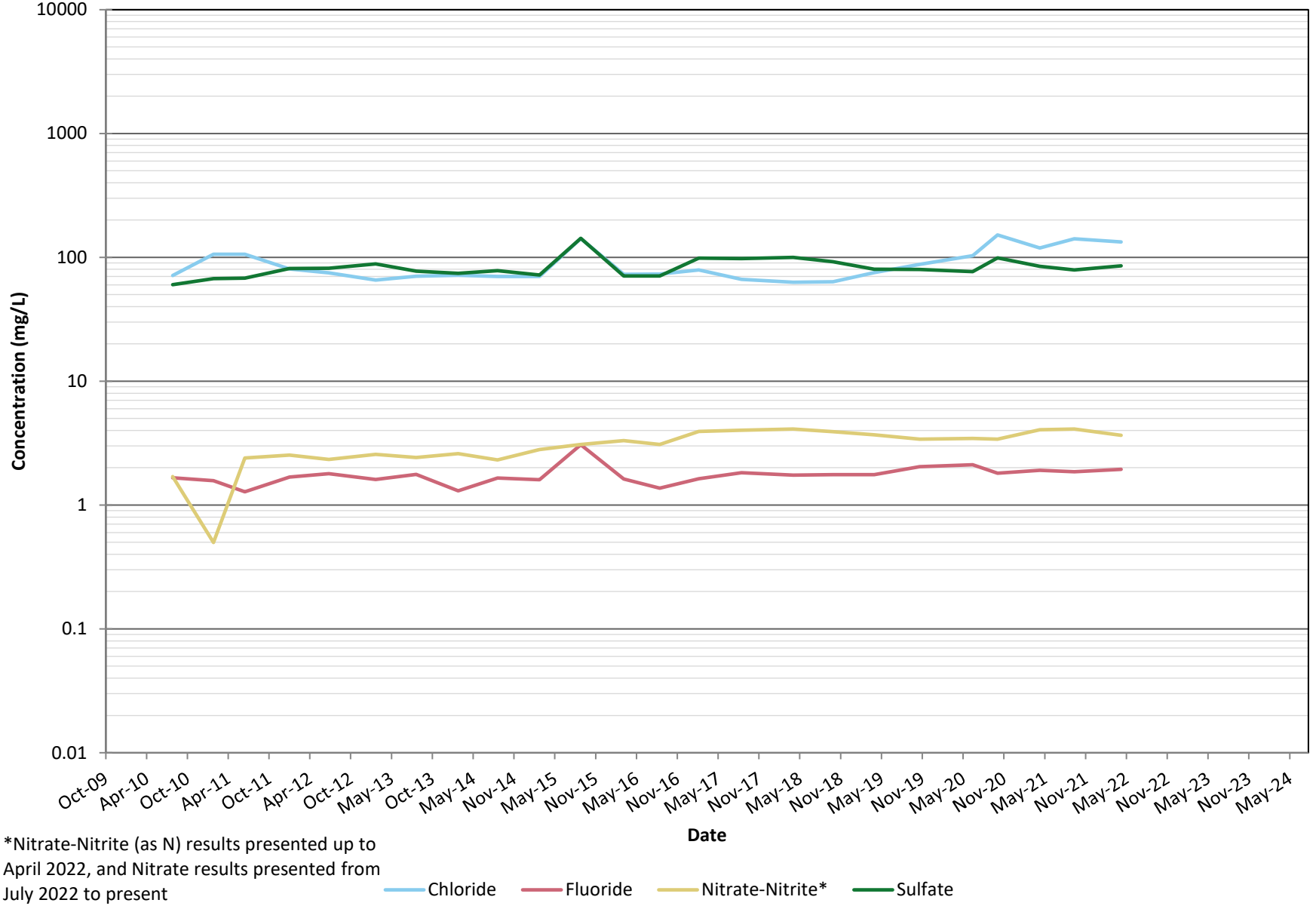
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MW-28 Metals CONCENTRATIONS OVER TIME



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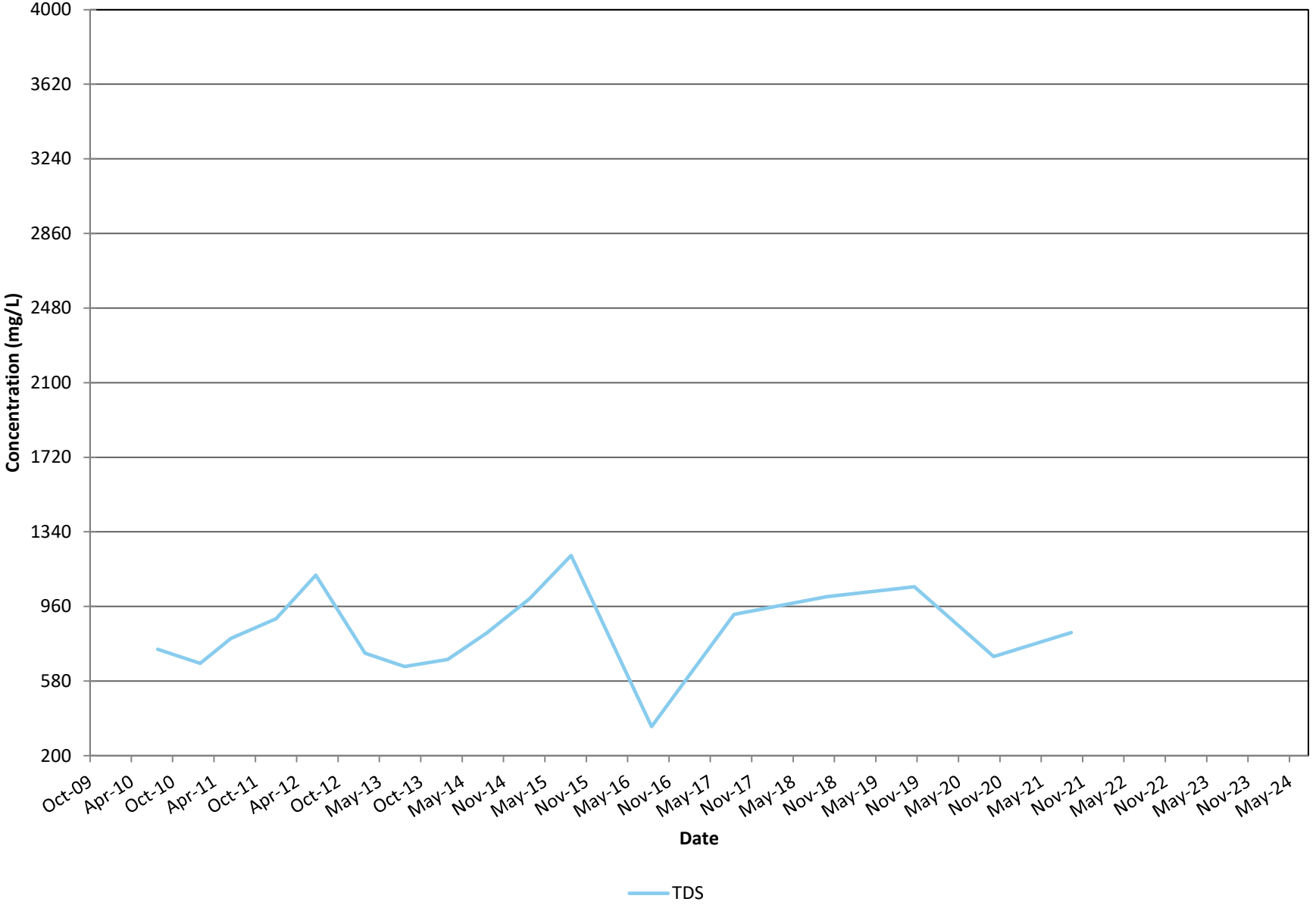
MW-28 Anions CONCENTRATIONS OVER TIME



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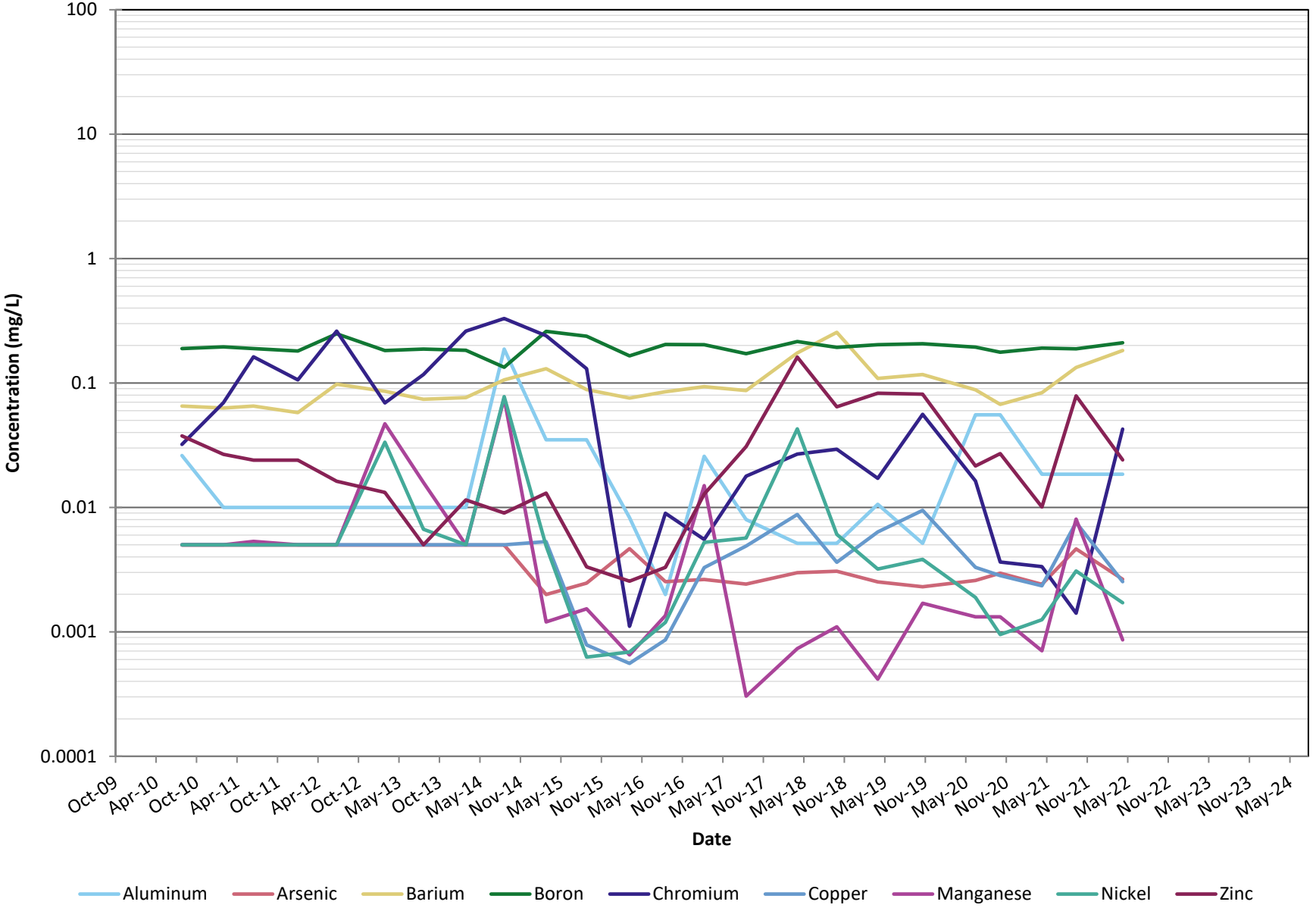
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MW-29 TDS CONCENTRATIONS OVER TIME



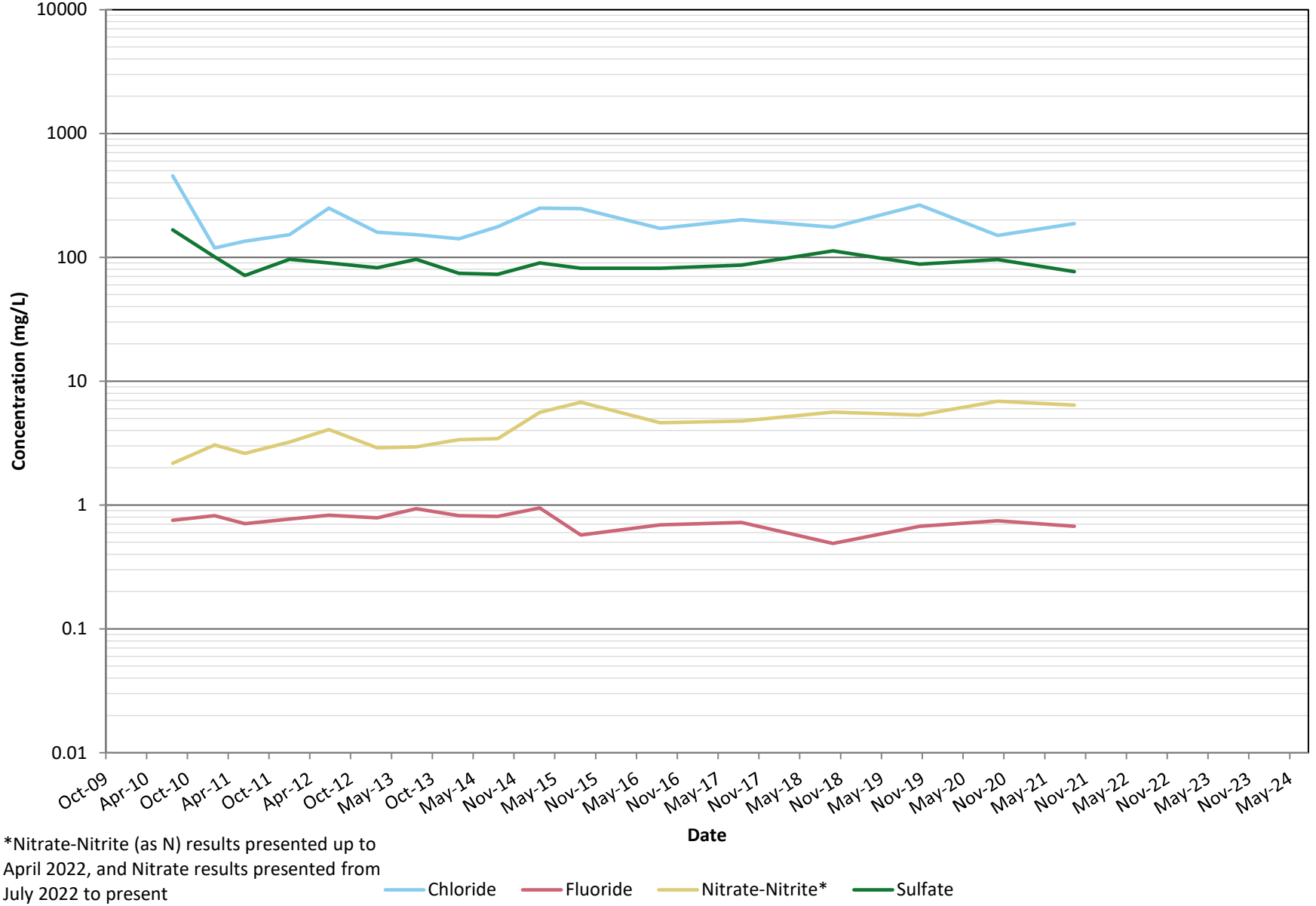
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MW-29 Metals CONCENTRATIONS OVER TIME



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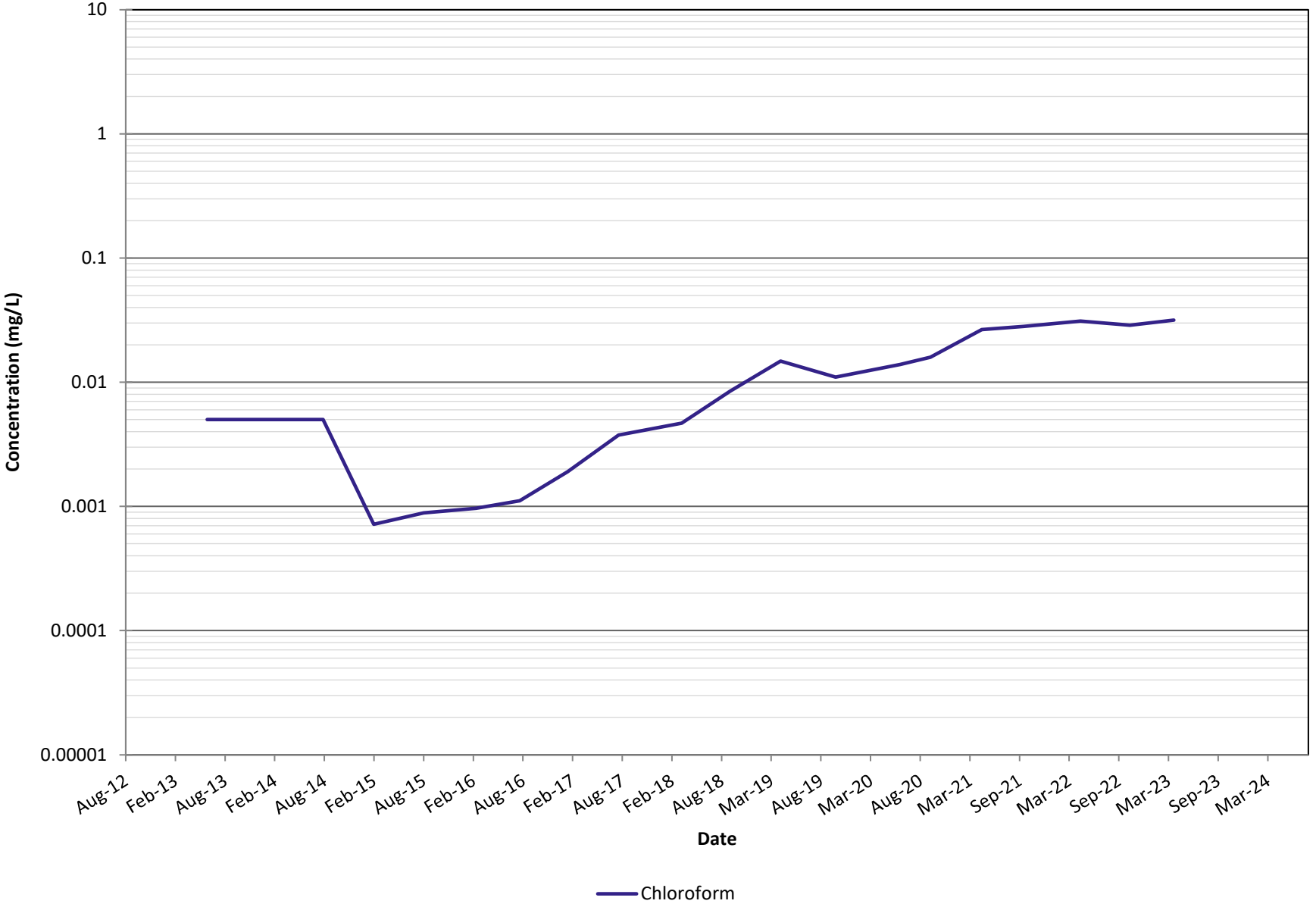
MW-29 Anions CONCENTRATIONS OVER TIME



*Nitrate-Nitrite (as N) results presented up to April 2022, and Nitrate results presented from July 2022 to present

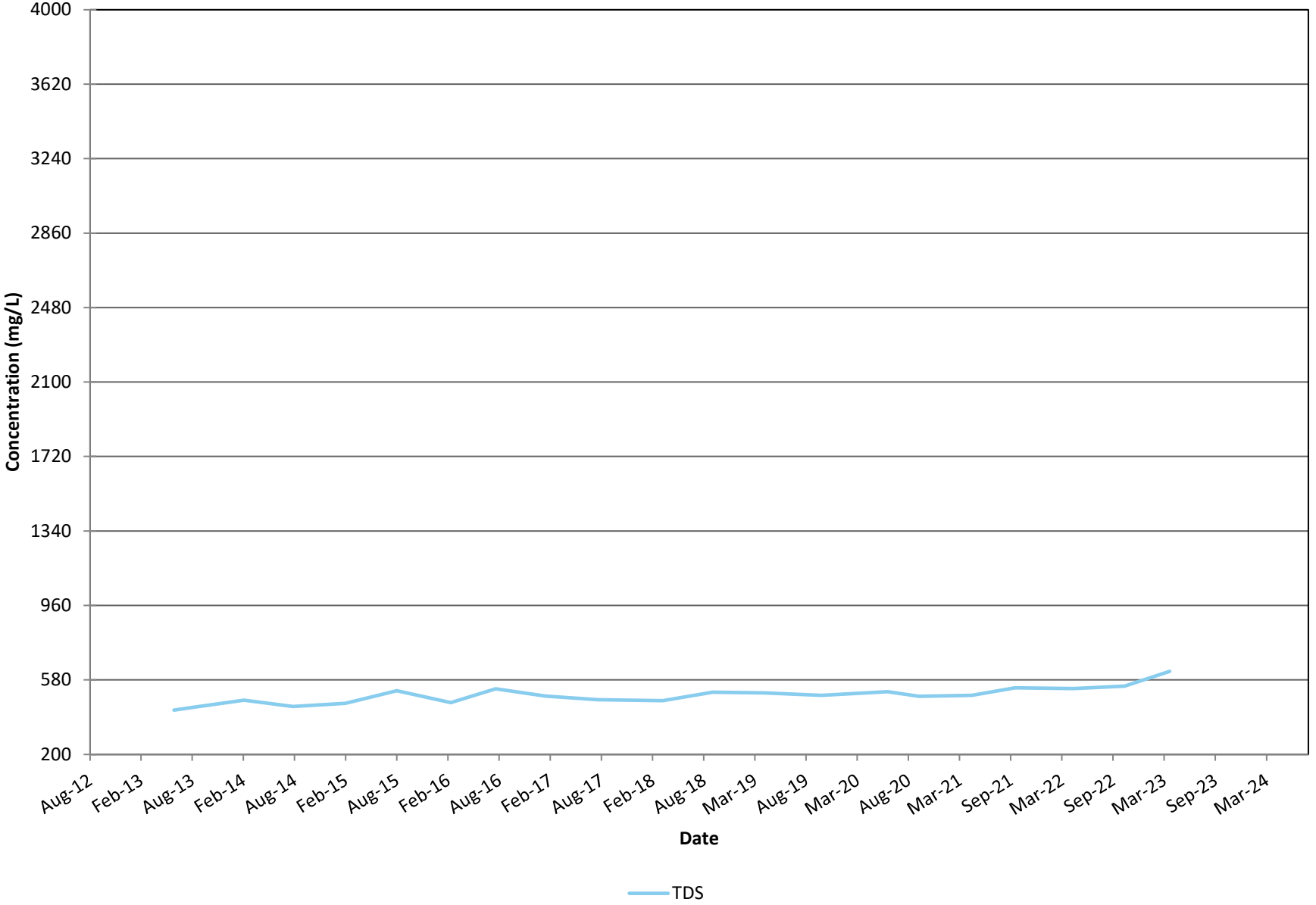
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MW-30 VOC CONCENTRATIONS OVER TIME



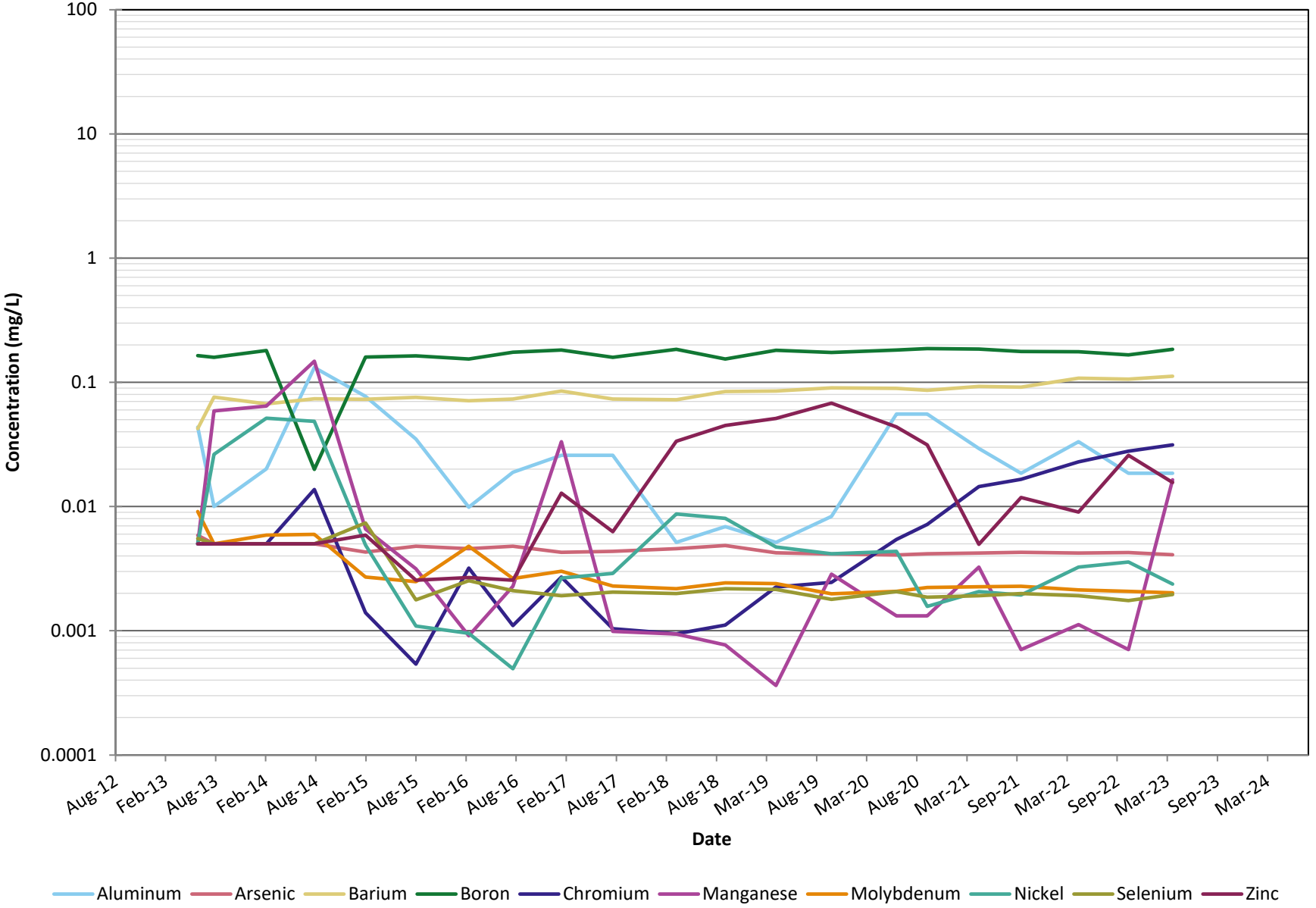
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MW-30 TDS CONCENTRATIONS OVER TIME



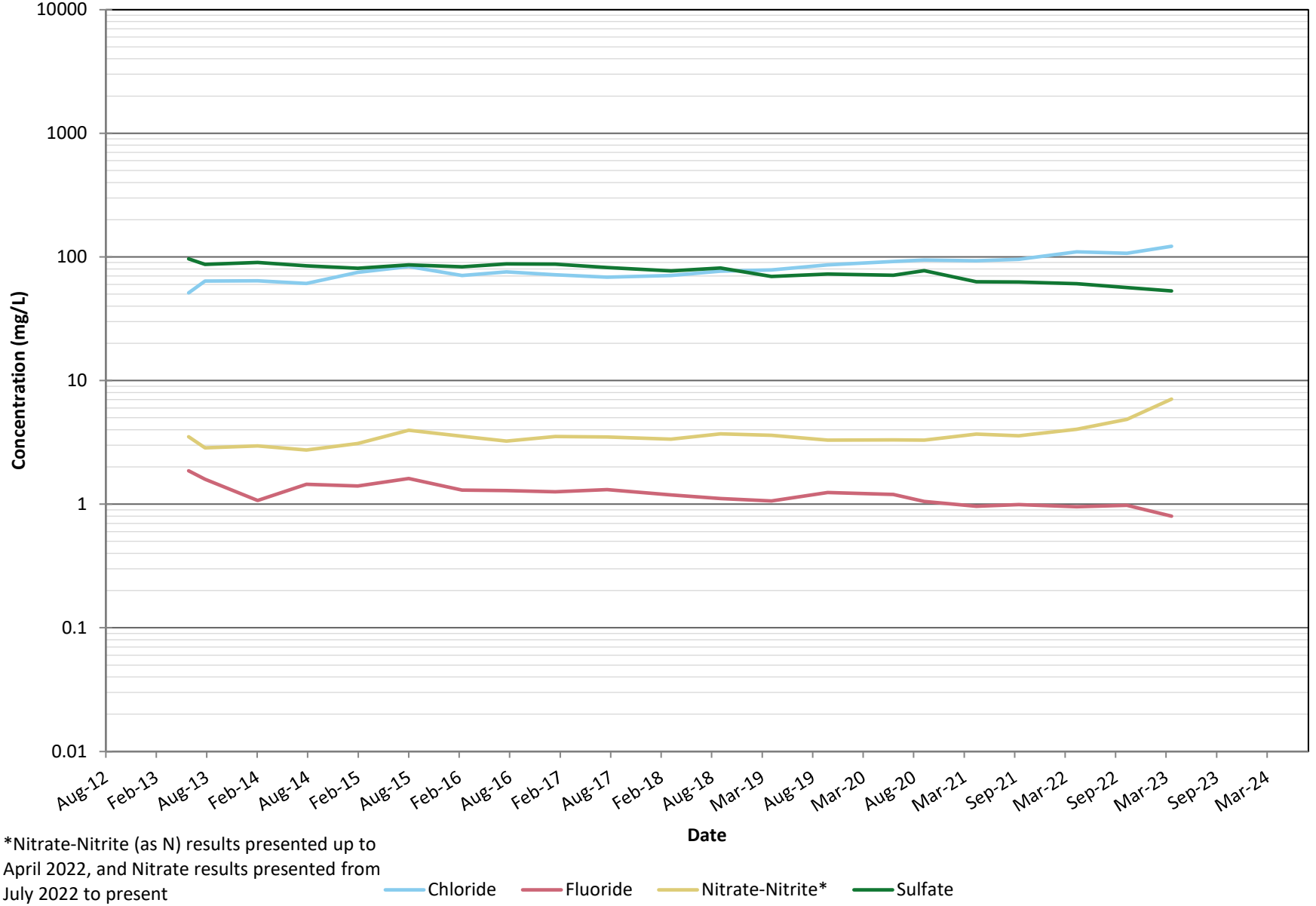
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MW-30 Metals CONCENTRATIONS OVER TIME



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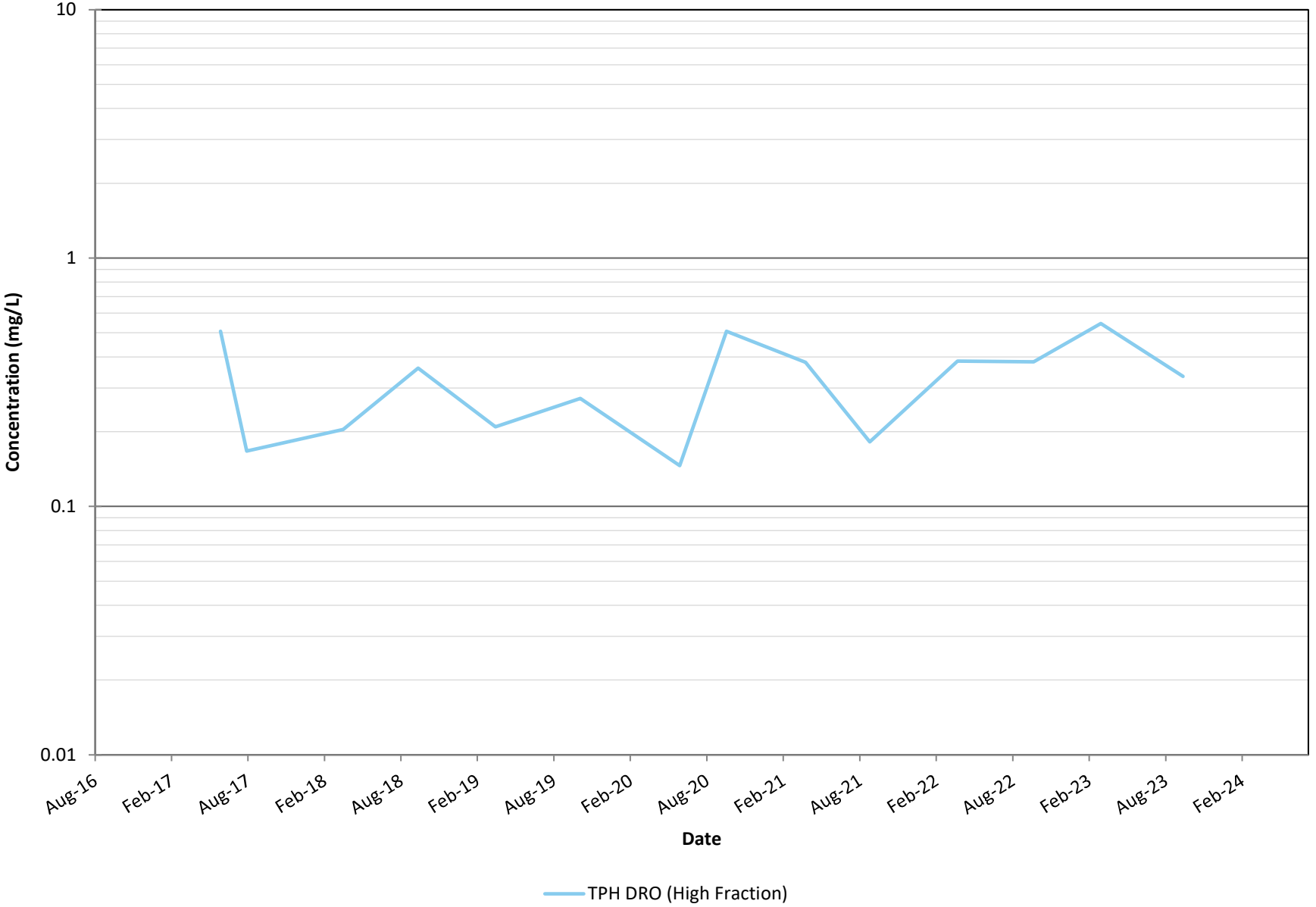
MW-30 Anions CONCENTRATIONS OVER TIME



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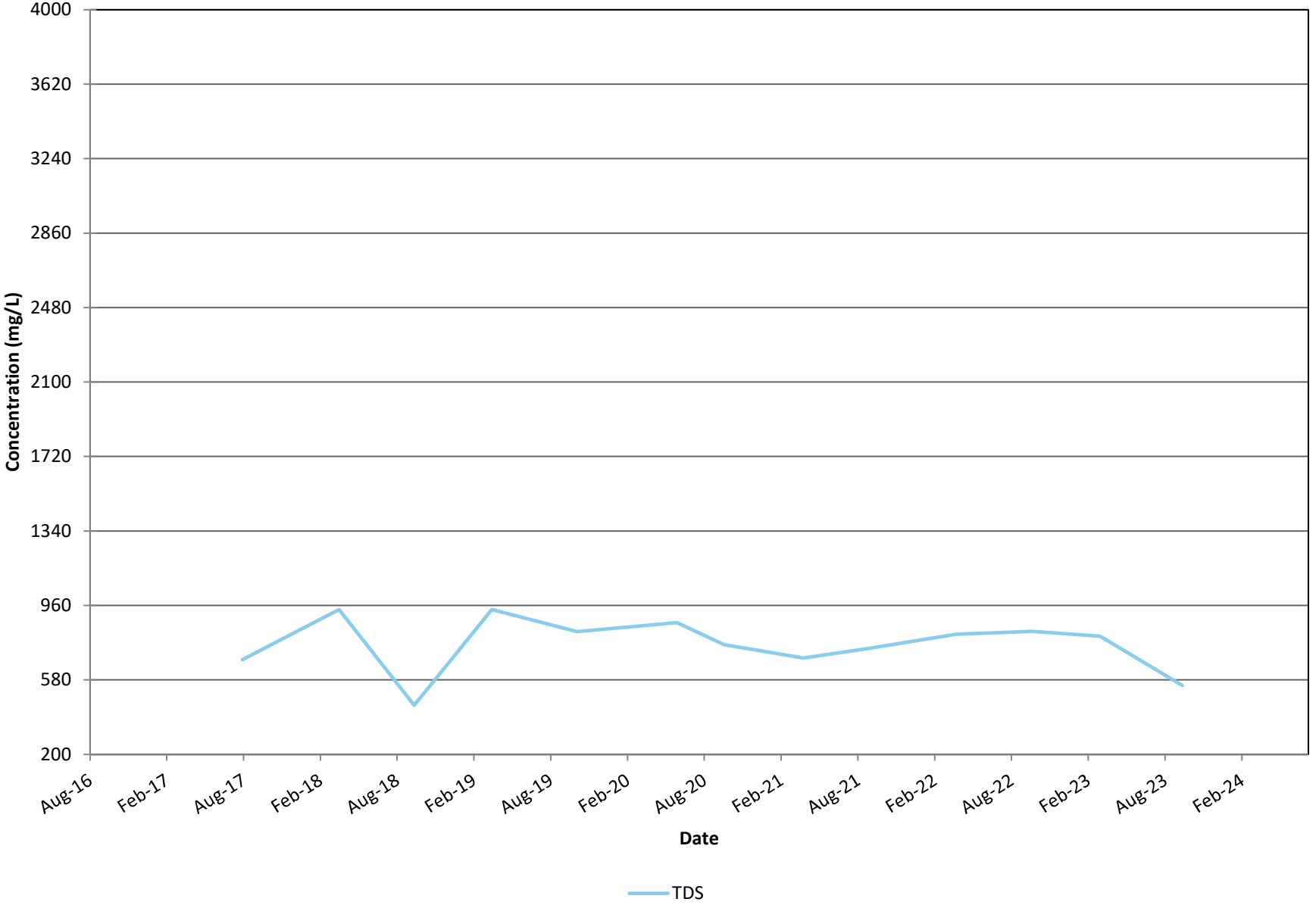
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MW-32 TPH CONCENTRATIONS OVER TIME



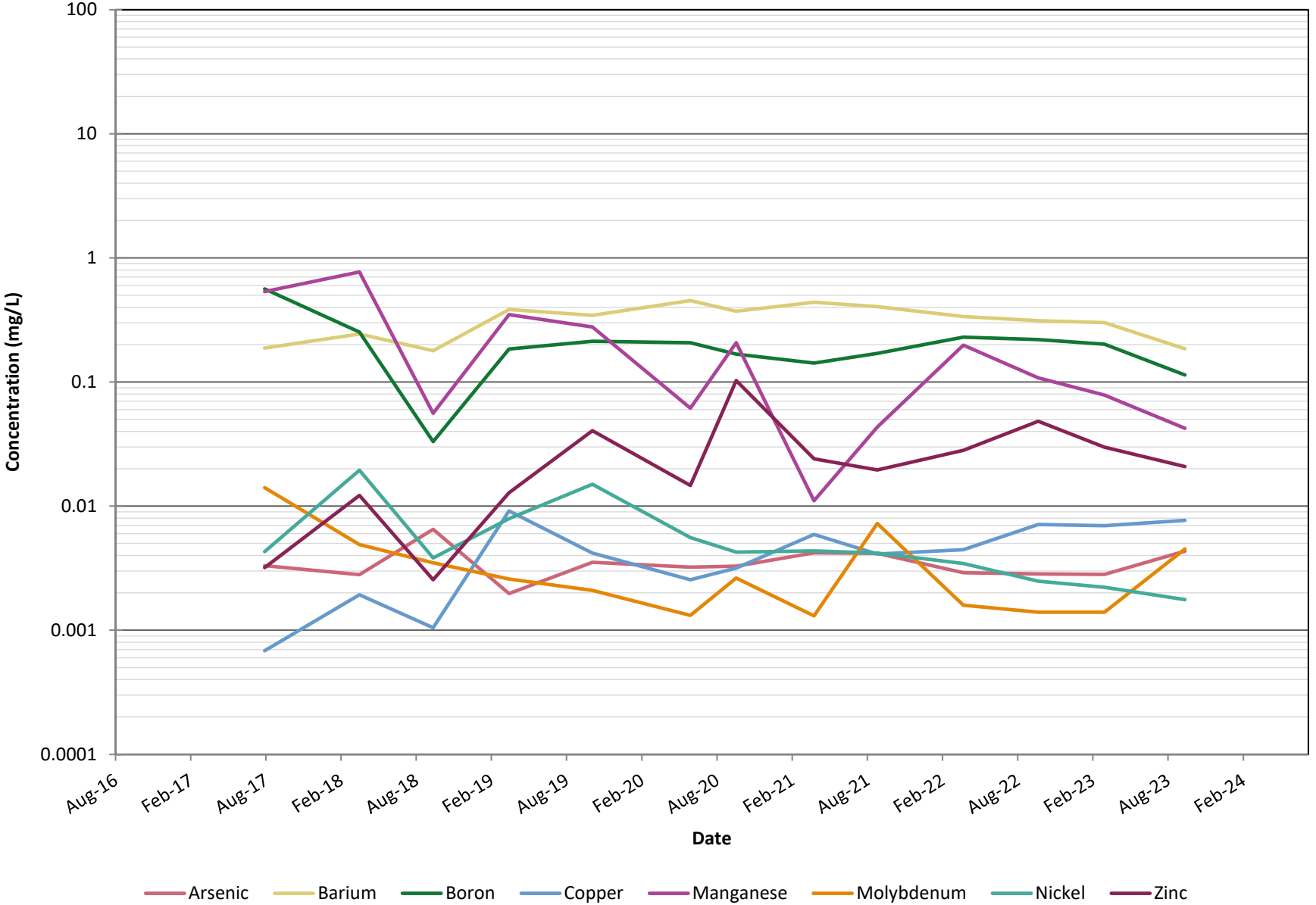
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MW-32 TDS CONCENTRATIONS OVER TIME



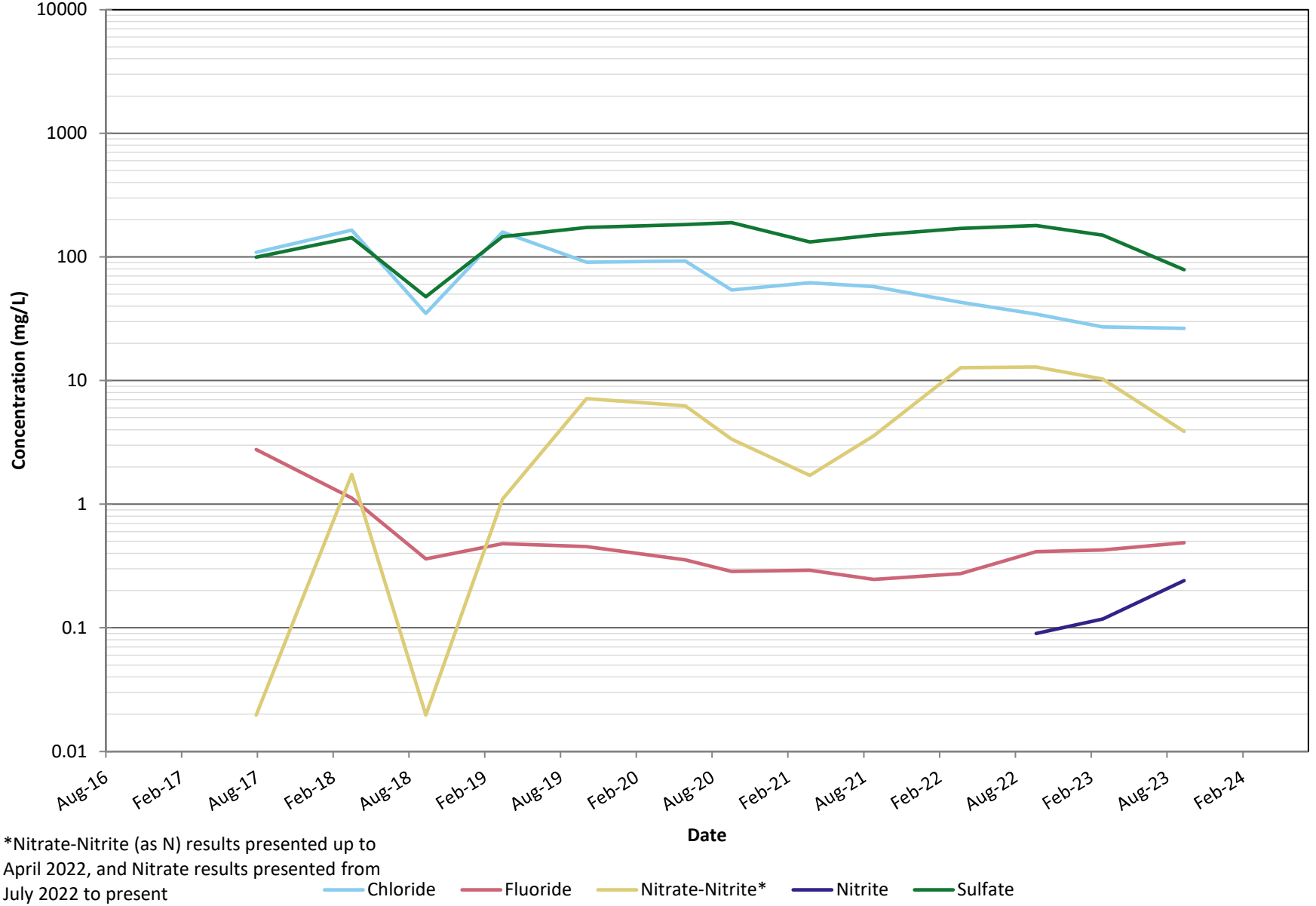
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MW-32 Metals CONCENTRATIONS OVER TIME



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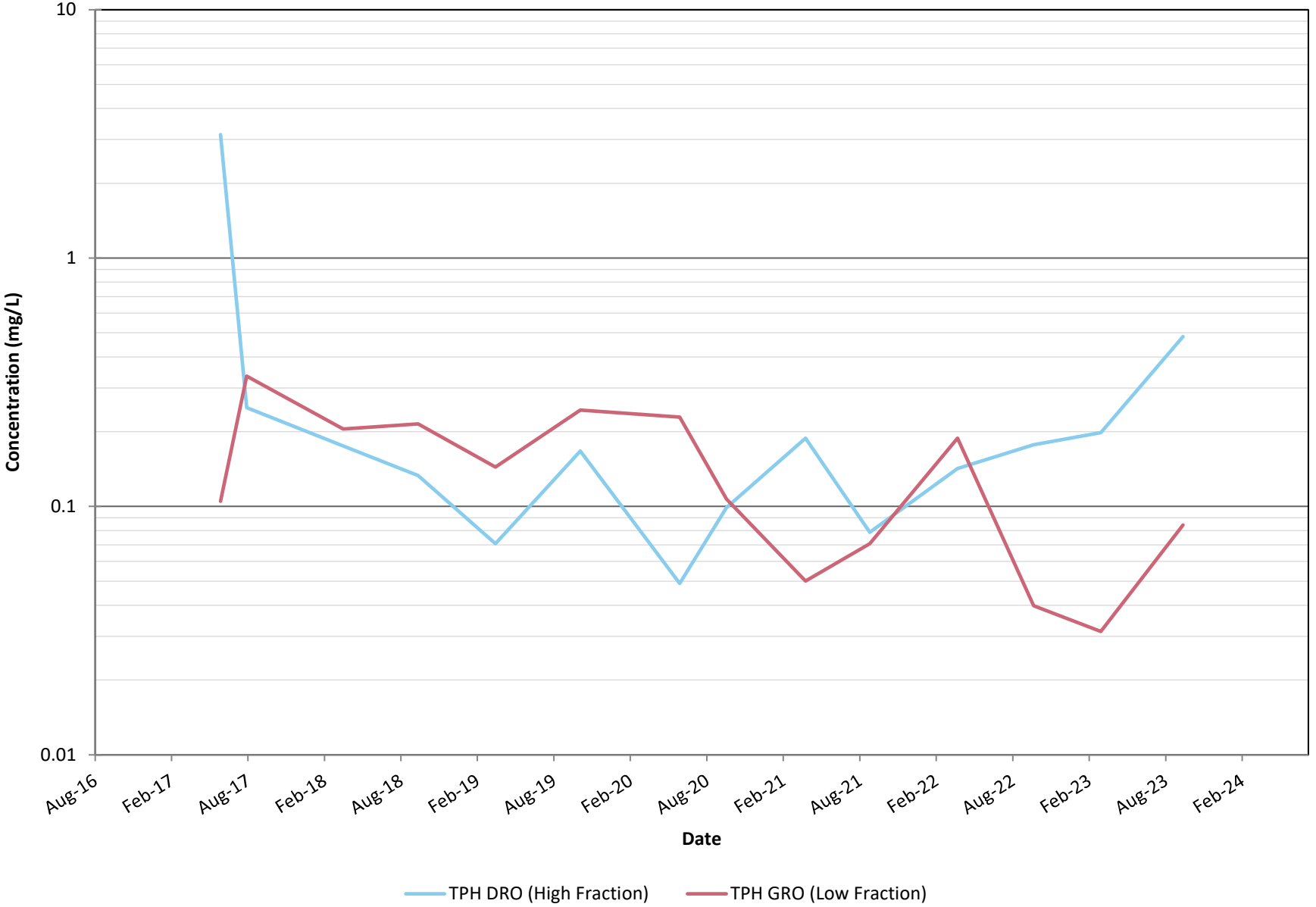
MW-32 Anions CONCENTRATIONS OVER TIME



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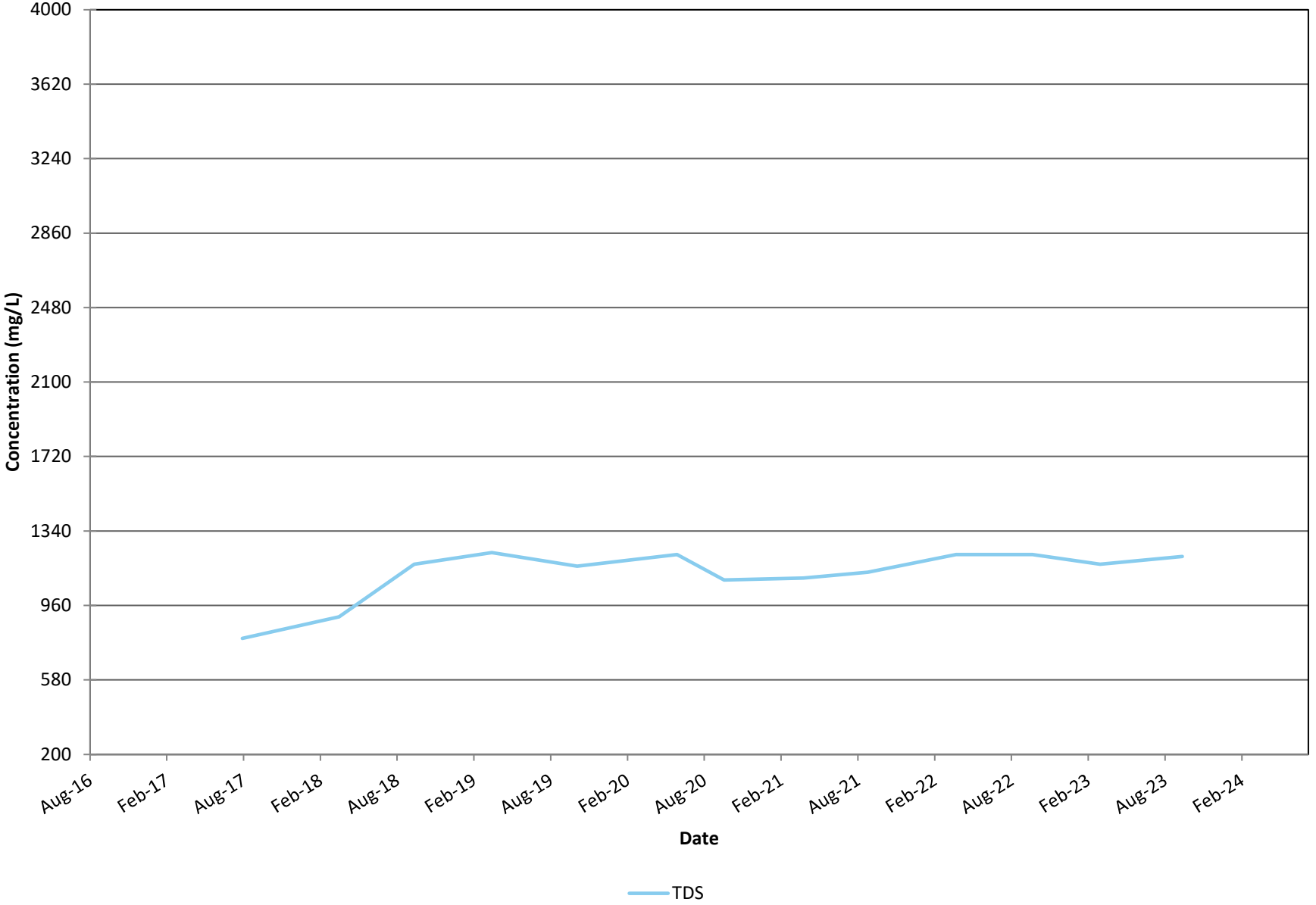
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MW-33 TPH CONCENTRATIONS OVER TIME



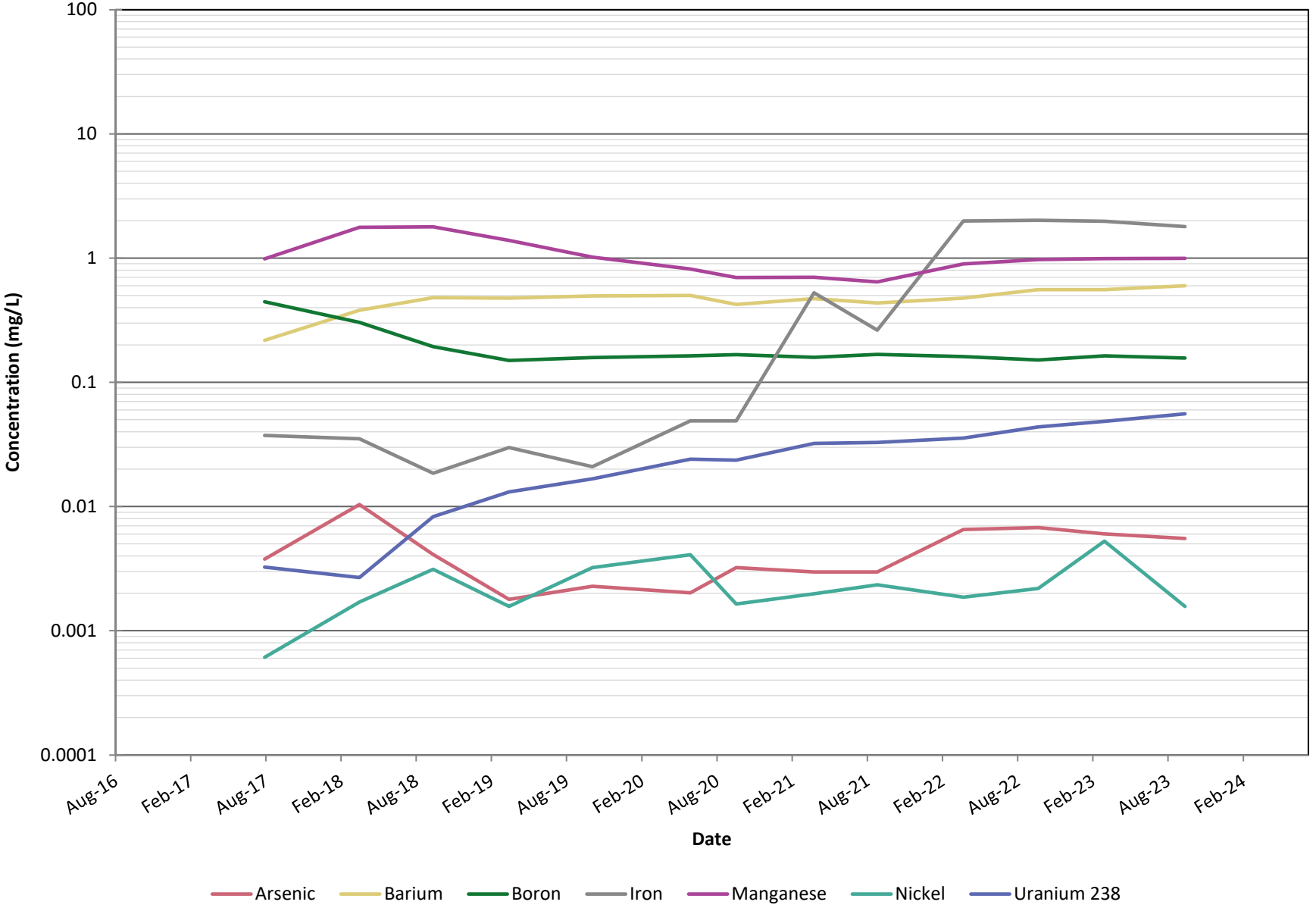
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MW-33 TDS CONCENTRATIONS OVER TIME



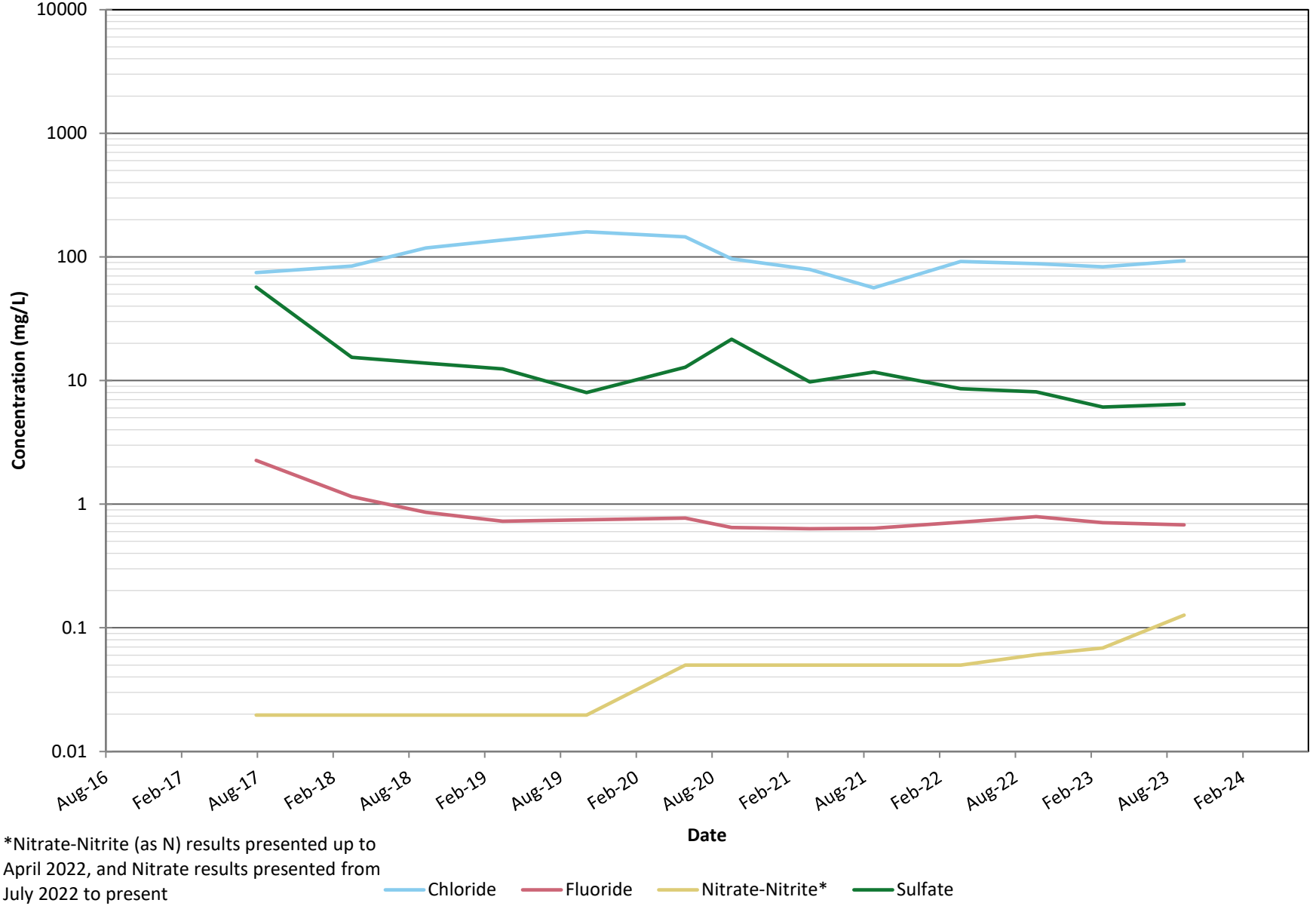
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MW-33 Metals CONCENTRATIONS OVER TIME



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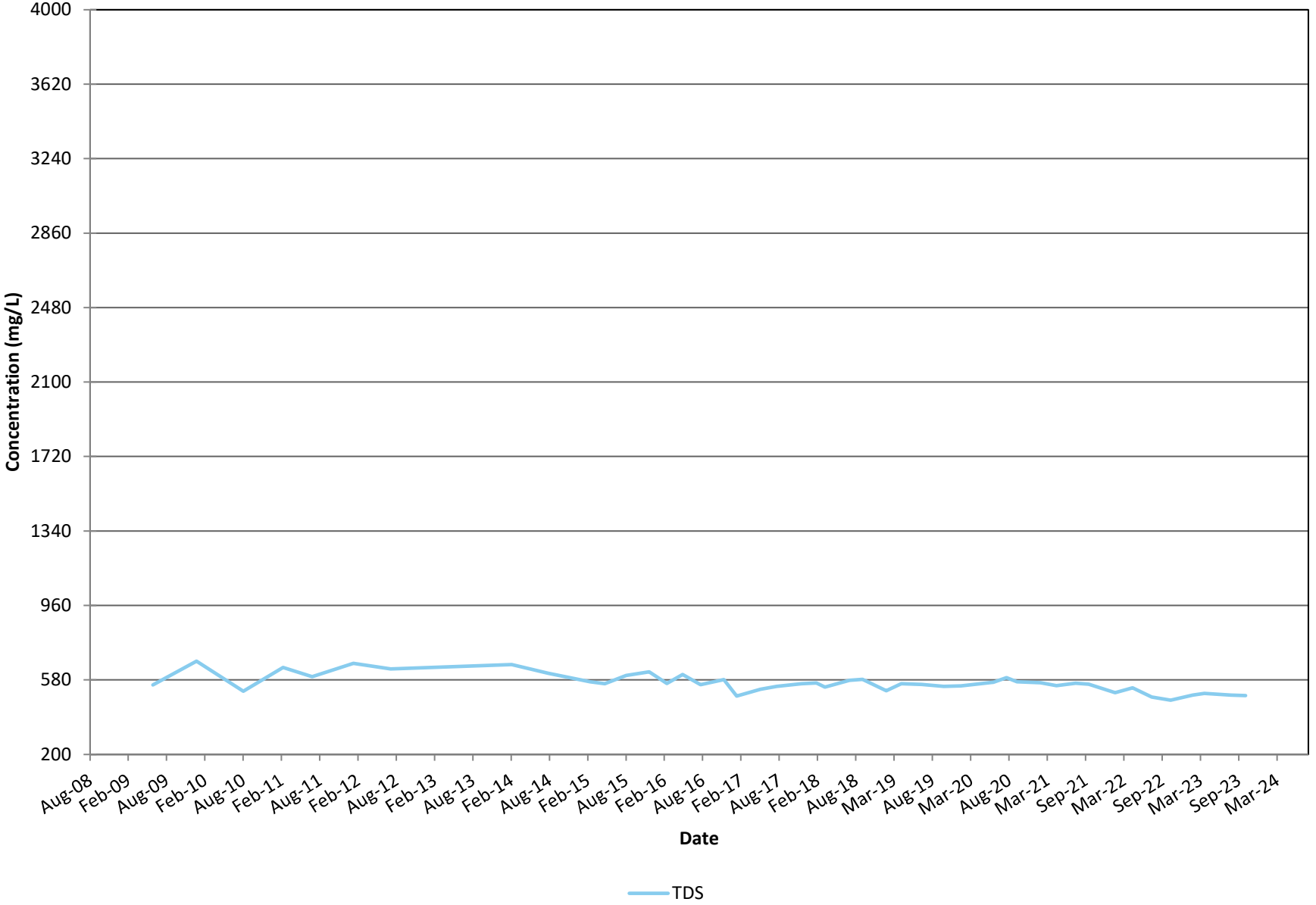
MW-33 Anions CONCENTRATIONS OVER TIME



*Nitrate-Nitrite (as N) results presented up to April 2022, and Nitrate results presented from July 2022 to present

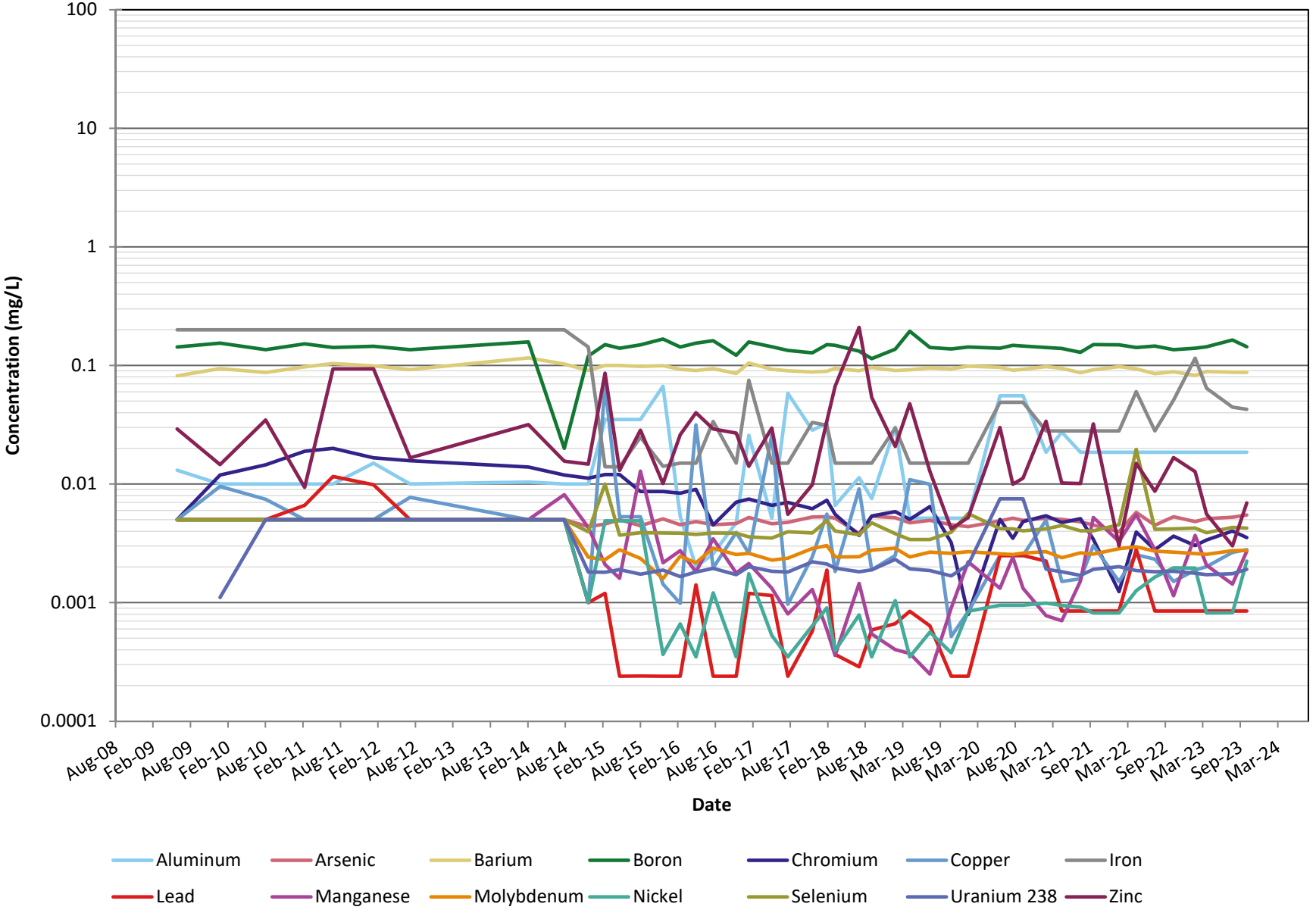
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WW-East TDS CONCENTRATIONS OVER TIME



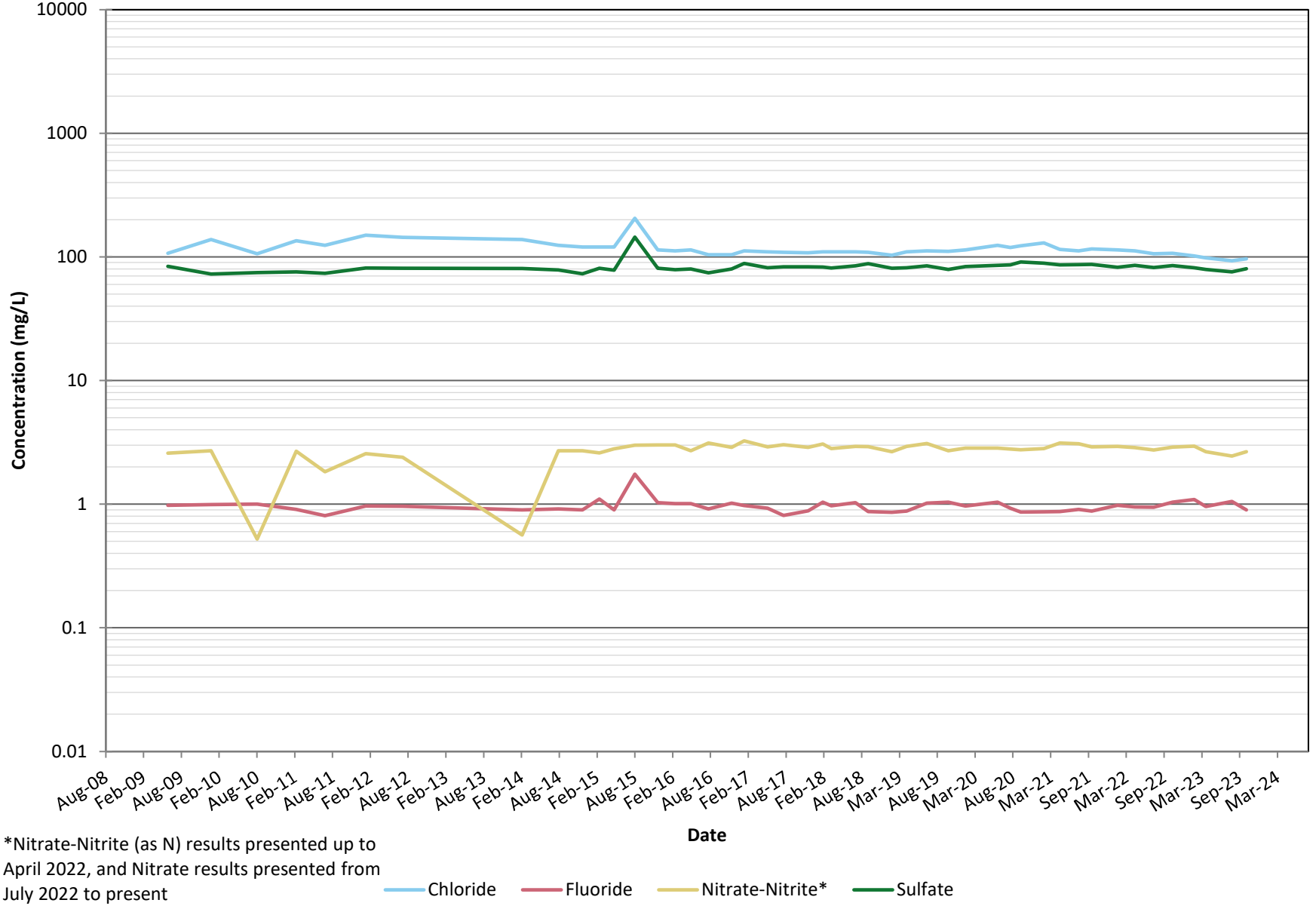
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WW-East Metals CONCENTRATIONS OVER TIME



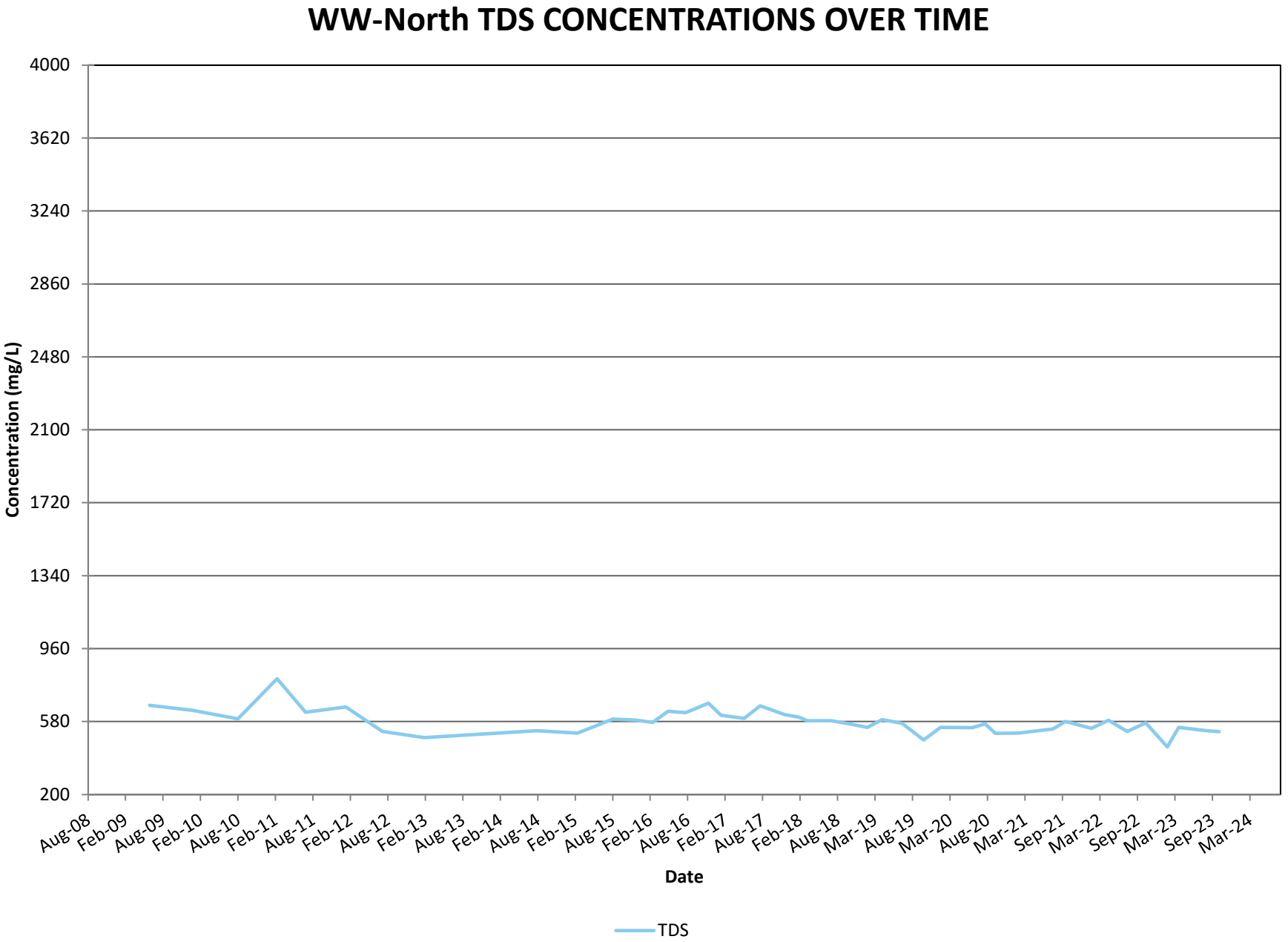
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WW-East Anions CONCENTRATIONS OVER TIME



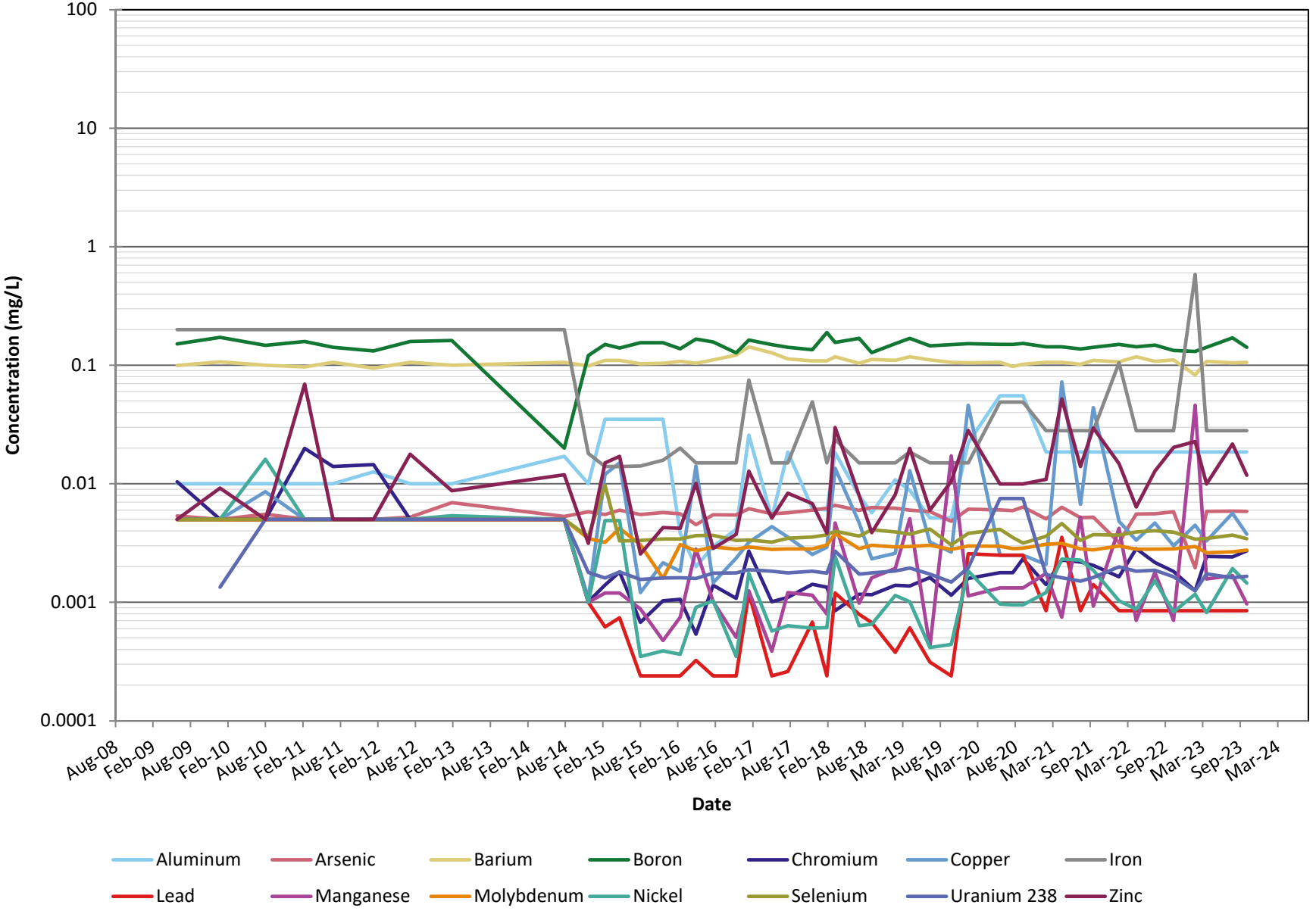
*Nitrate-Nitrite (as N) results presented up to April 2022, and Nitrate results presented from July 2022 to present

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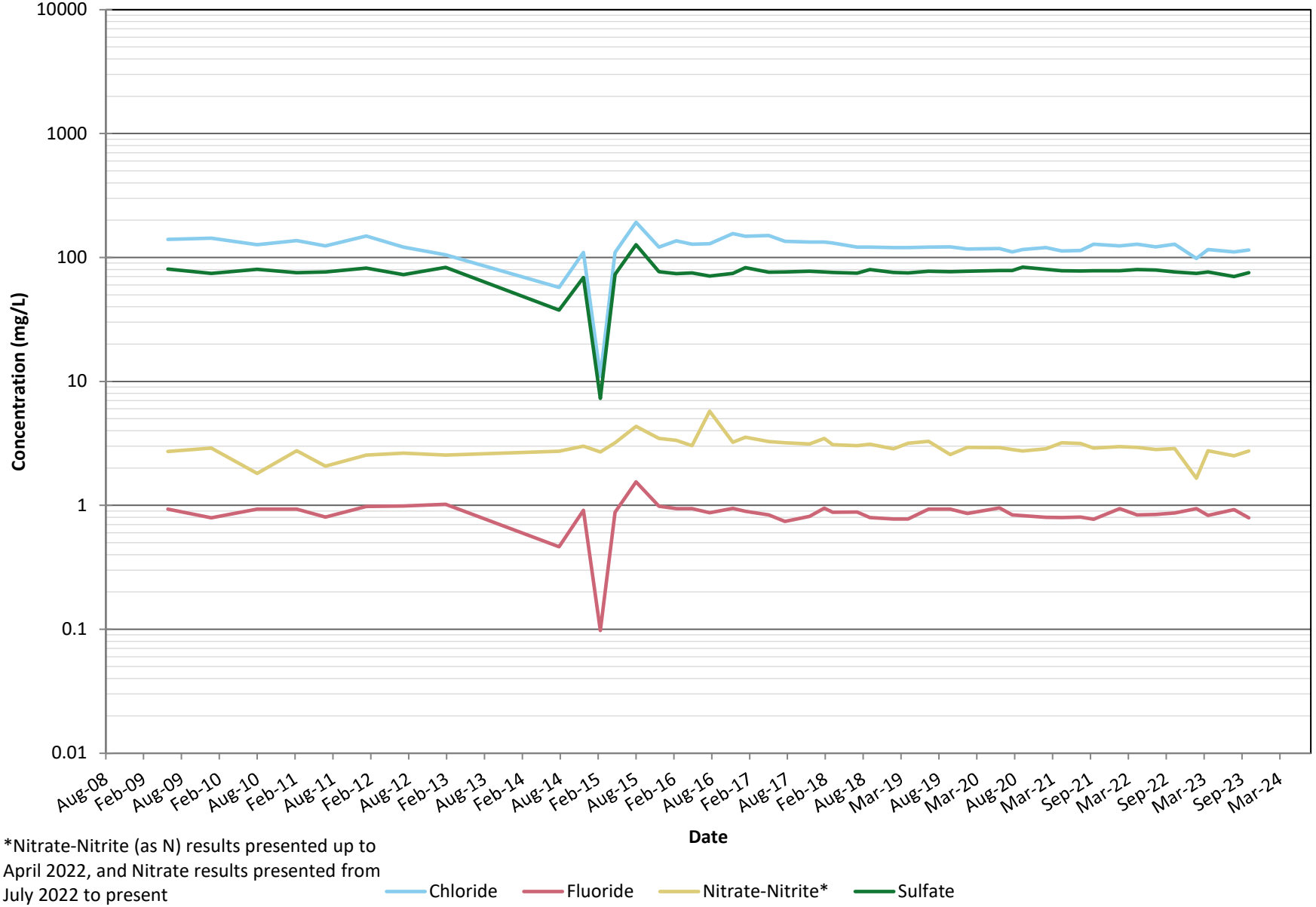
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WW-North Metals CONCENTRATIONS OVER TIME



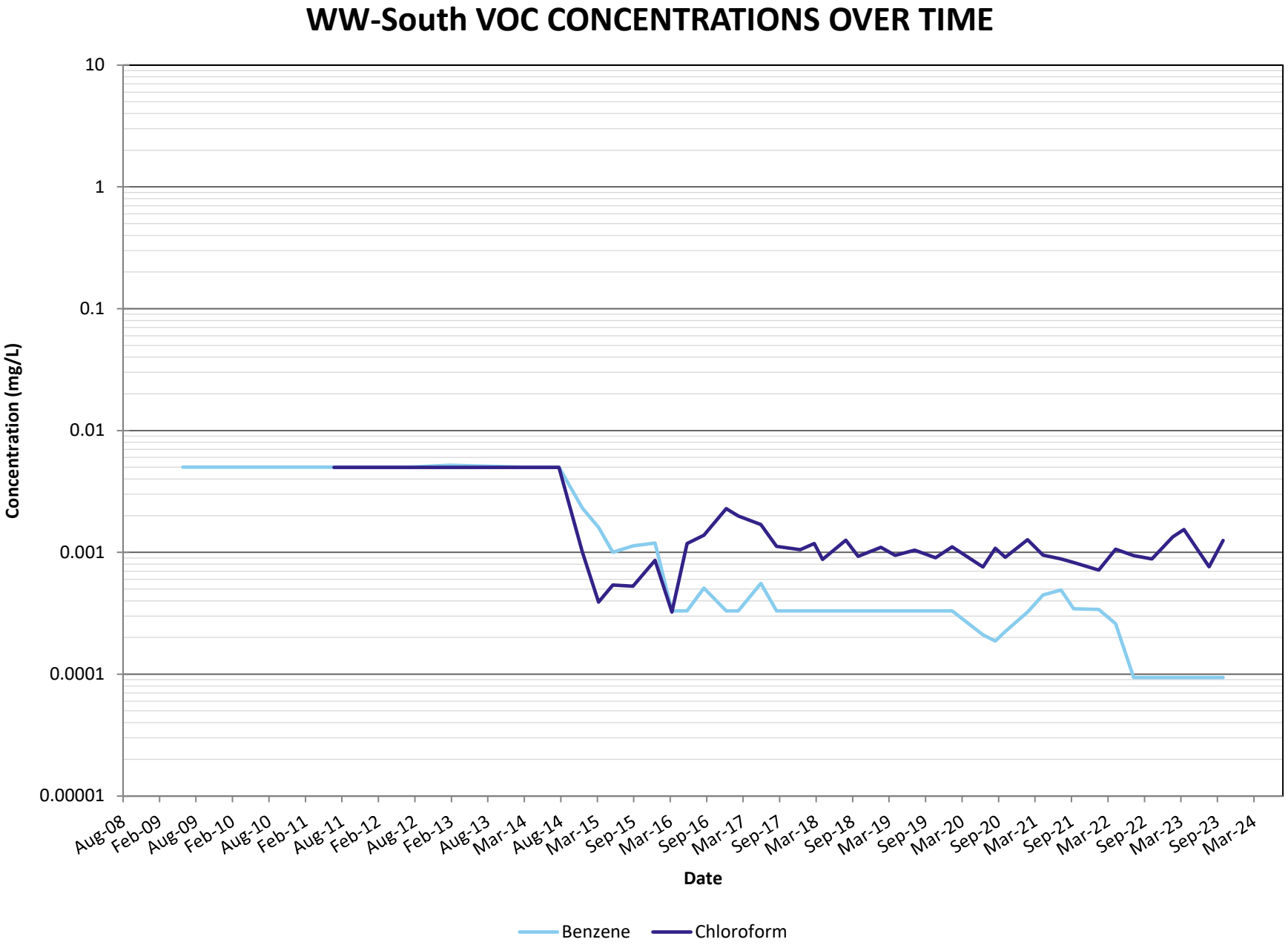
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WW-North Anions CONCENTRATIONS OVER TIME



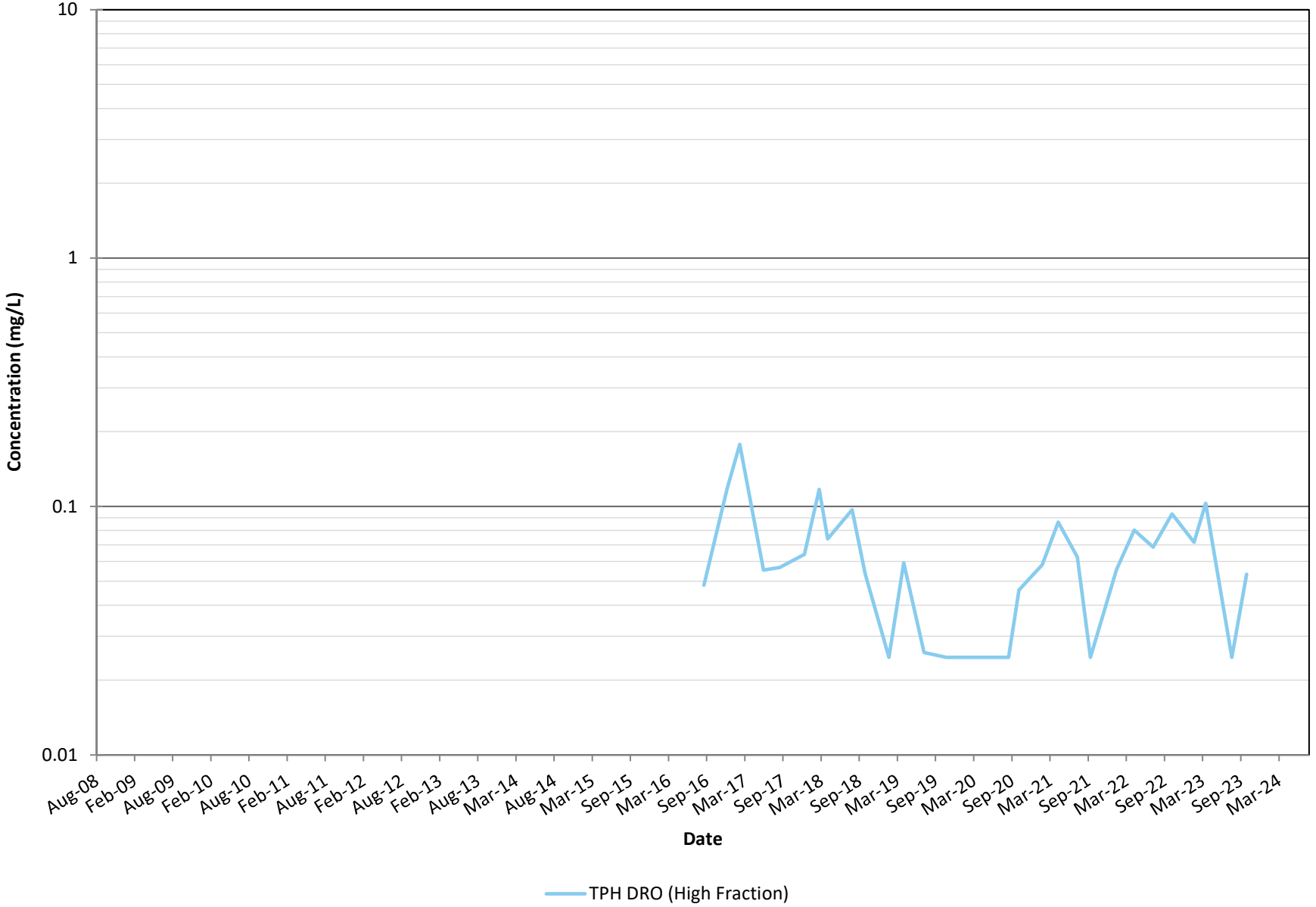
*Nitrate-Nitrite (as N) results presented up to April 2022, and Nitrate results presented from July 2022 to present

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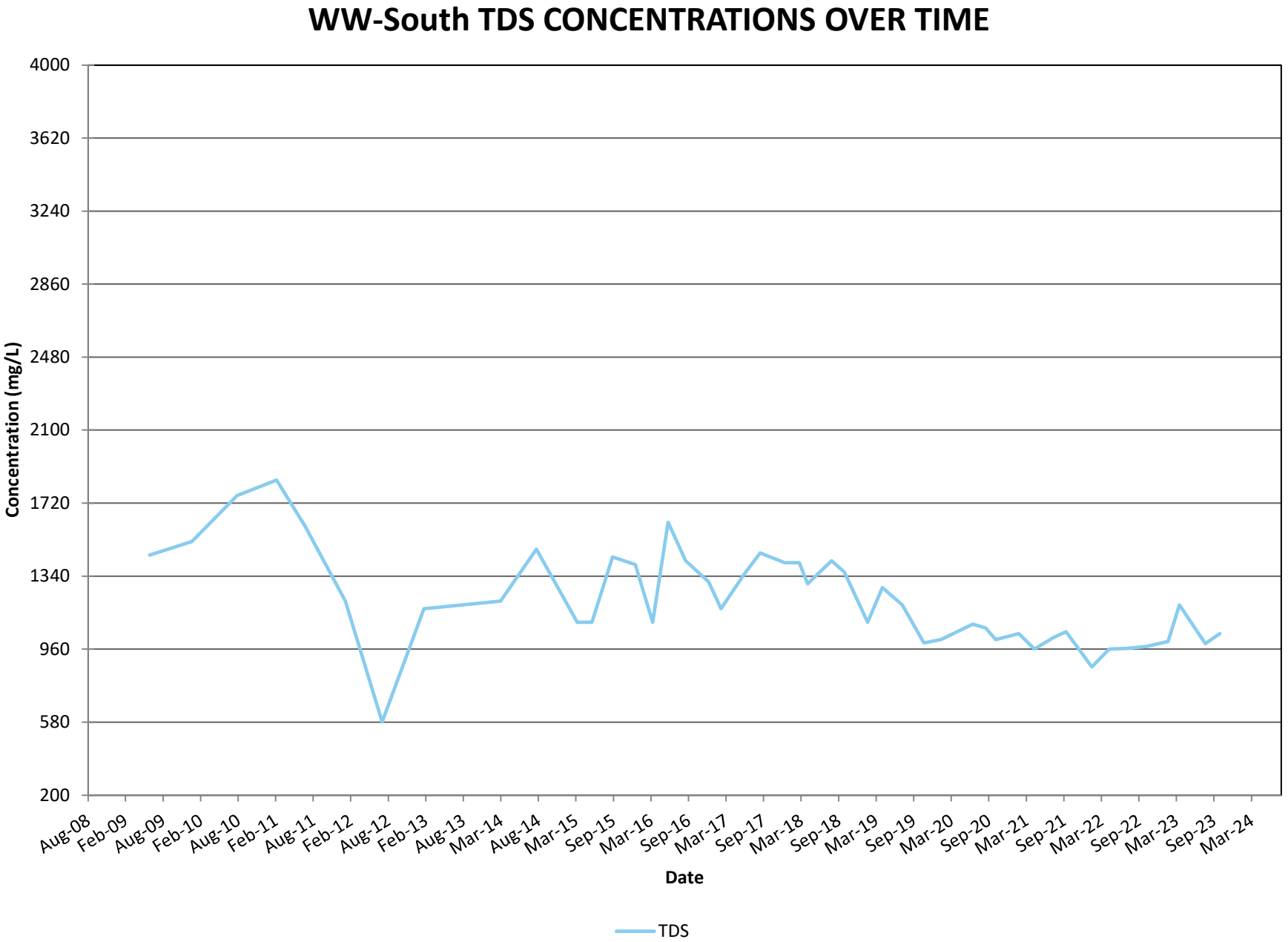


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WW-South TPH CONCENTRATIONS OVER TIME

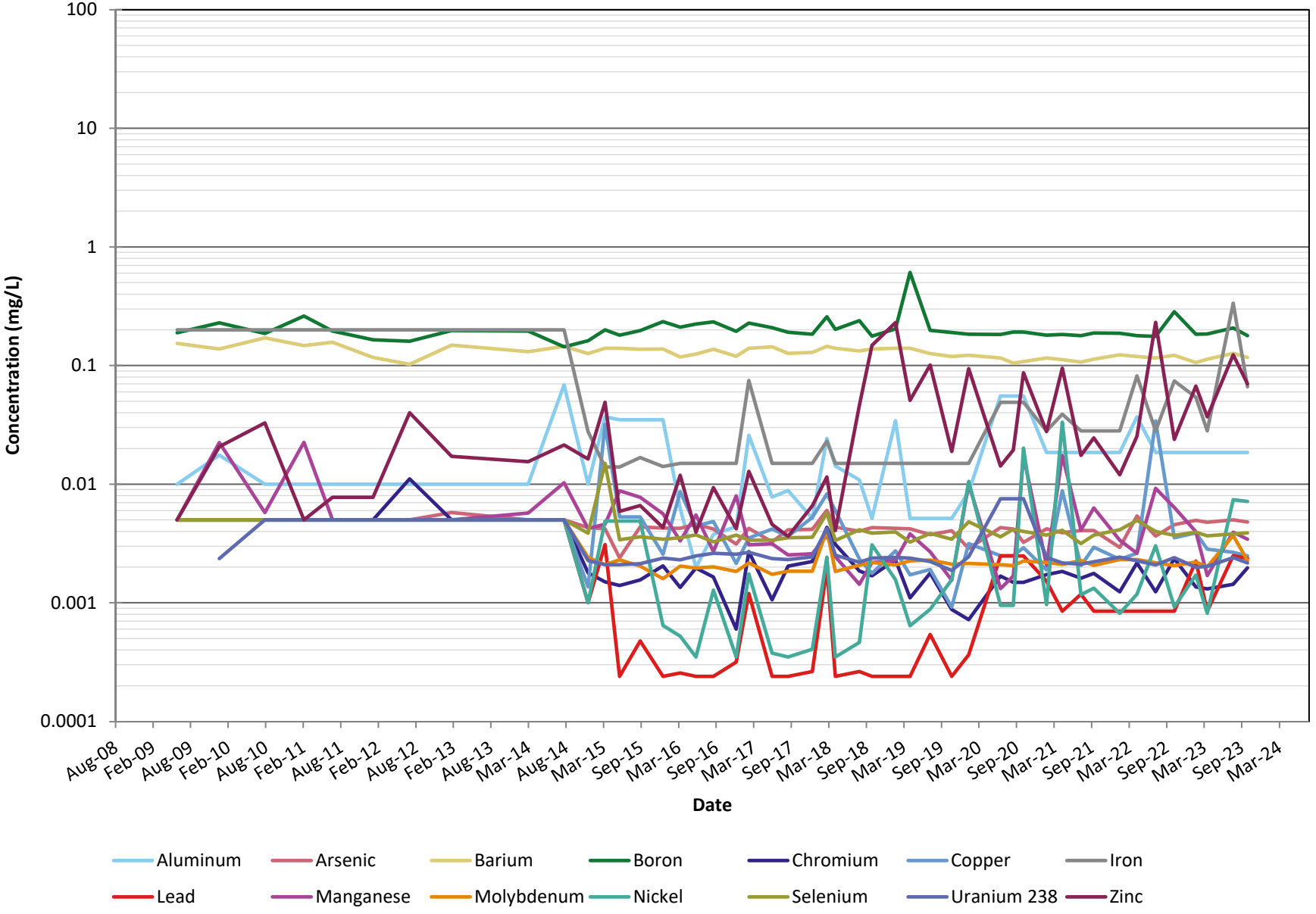


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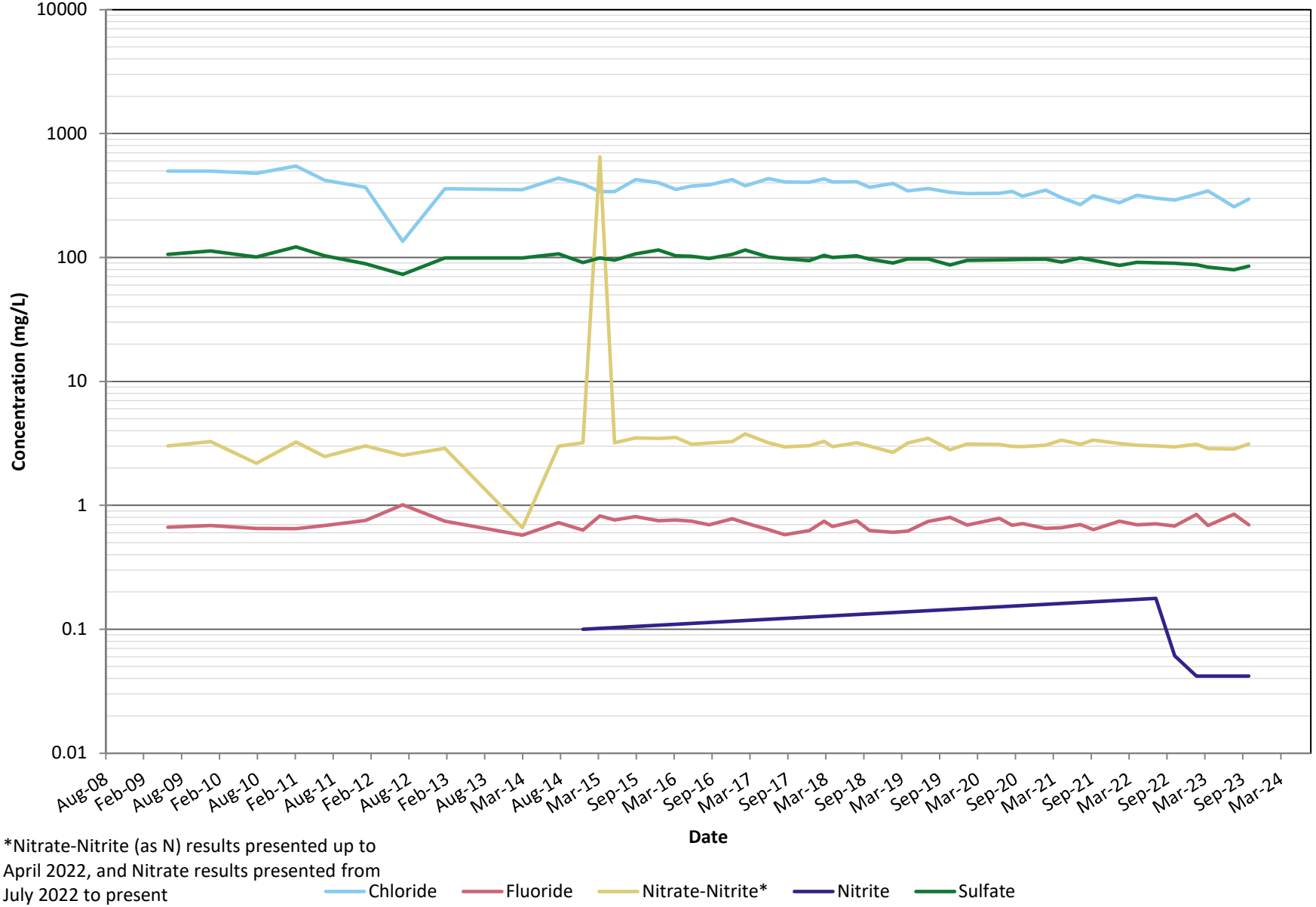
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WW-South Metals CONCENTRATIONS OVER TIME



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WW-South Anions CONCENTRATIONS OVER TIME



*Nitrate-Nitrite (as N) results presented up to April 2022, and Nitrate results presented from July 2022 to present

APPENDIX D

QUALITY ASSURANCE/QUALITY CONTROL DATA SUMMARY

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APPENDIX D – QUALITY ASSURANCE/QUALITY CONTROL DATA SUMMARY

1.1 Semi-Annual and Quarterly Groundwater Samples

Data reported by Pace Analytical in Mount Juliet, Tennessee for the groundwater samples collected in January, March, July, and October 2023 were reviewed in accordance with the United States Environmental Protection Agency (USEPA) *National Functional Guidelines for Organic Superfund Methods Data Review* (USEPA, November 2020), and *National Functional Guidelines for Inorganic Superfund Methods Data Review* (USEPA, November 2020), modified for the individual methods, as applicable. Three water samples, one duplicate, and one trip blank were collected on January 26, 2023. Fourteen water samples, three field duplicates, two equipment blanks, and two trip blanks were collected on March 23, 2023. Three water samples, one field duplicate, and one trip blank were collected on July 27, 2023. Twenty-six water samples, three field duplicates, and two equipment blanks were collected on October 5, 2023. Samples were analyzed for one or more of the following parameters:

- Dissolved solids by Standard Method (SM) 2540C-2011
- Alkalinity by SM 2320B-2011
- Chloride, fluoride, sulfate, nitrate, and/or nitrite by SW-846 Method 9056A
- Total mercury by SW-846 Method 7470A
- Dissolved boron by SW-846 Method 6010B
- 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 Methods 3511/8015
- Semi-volatile organic compounds (SVOCs) by SW-846 Method 8270C

TRC Quality Assurance (QA) staff reviewed the data. Four data packages identified as L1579832, L1598018, L1639912, and L1663622 (revised 12/07/2023) 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

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- 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 laboratory duplicate results
- Sample documentation

Data interpretation issues are identified in the following subsections. Alkalinity was analyzed in select samples but is not discussed in this summary other than in Section 1.1 above since the analyte is not required to be reported per the approved *Revised Facility-Wide Groundwater Monitoring Work Plan* (November 2017). 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 one exception. Due to significantly low (<10%) SVOC acid surrogate recoveries, the nondetect results for 4-chloro-3-methylphenol, 2-chlorophenol, 2,4-dichlorophenol, 2,4-dimethylphenol, 4,6-dinitro-2-methylphenol, 2,4-dinitrophenol, 2-nitrophenol, 2-methylphenol, 3&4-methyl phenol, 4-nitrophenol, pentachlorophenol, phenol, 2,4,5-trichlorophenol, and 2,4,6-trichlorophenol in sample DUP-01 collected in July 2023 and MW-2 collected in October 2023 are not usable for project objectives. It should be noted that all SVOC results are usable for project objectives in the parent sample of DUP-01, WW-SOUTH, collected in July 2023. Also, nitrate and nitrite were analyzed grossly outside of the 48-hour hold time for equipment blank EB-01 collected in October 2023 due to a laboratory error and therefore were not usable for project objectives. It should be noted that the nitrate and nitrite results are usable for project objectives in the second equipment blank, EB-02, collected in October 2023.

Several dilutions and/or reduced volumes were performed by the laboratory on select samples likely due to elevated concentrations of target and/or non-target analytes or matrix interferences; therefore, reported method detection limits (MDL) and method quantitation limits (MQL) (also referred to as reporting detection limit [RDL]) may be elevated in some cases.

1.1.1 *Sample Integrity, Preservation, and Holding Times*

Samples were received at the laboratory properly preserved and in good condition. Samples were prepared and/or analyzed within the required holding times with the following exceptions:

- In July 2023, sample WW-NORTH was prepared for dissolved solids analysis four days after the 7-day holding time expired. Therefore, the dissolved solids result for sample WW-NORTH may be biased low.
- In October 2023, samples MW-15R and MW-32 (and its duplicate DUP-02) were prepared and/or analyzed for dissolved solids analysis between approximately 4 minutes and 14 hours after the 7-day holding time expired. There is no adverse impact on the data usability due to this issue since these samples were prepared for dissolved solids on the 7th but before the 8th day after collection.
- In October 2023, after communication with the laboratory during this review, it was determined that the original Method 9056A results reported for equipment blank EB-01 were from a different sample. Therefore, the laboratory re-analyzed sample EB-01 for Method 9056A out of holding time using the correct sample container. Sulfate, chloride, and fluoride were analyzed seven days outside of the 28-day holding time and results may be biased low. Nitrate and nitrite were analyzed approximately 33 days outside of the 48-hour hold time and therefore were not used for project objectives due to the significant holding time exceedance.

1.1.2 *Surrogates*

Except as noted below, in January, March, July, and October 2023, there were no surrogate recovery nonconformances in the VOC, SVOC, TPH Low Fraction, and/or TPH High Fraction analyses.

- In July 2023, the recoveries for two of the SVOC acid surrogates, phenol-d5 (6.16%) and 2-fluorophenol (7.32%), in sample DUP-01 (WW-SOUTH) were significantly low (<10%). Therefore, the following nondetect acid results should not be used for project objectives: 4-chloro-3-methylphenol, 2-chlorophenol, 2,4-dichlorophenol, 2,4-dimethylphenol, 4,6-dinitro-2-methylphenol, 2,4-dinitrophenol, 2-nitrophenol, 2-methylphenol, 3&4-methyl phenol, 4-nitrophenol, pentachlorophenol, phenol, 2,4,5-trichlorophenol, and 2,4,6-trichlorophenol. It should be noted that all SVOC results are usable for project objectives in the parent sample of DUP-01, WW-SOUTH, collected in July 2023.
- In October 2023, the recovery for one of the SVOC acid surrogates, phenol-d5 (9.84%), in sample MW-2 was significantly low (<10%). Therefore, the following nondetect acid results should not be used for project objectives: 4-chloro-3-

methylphenol, 2-chlorophenol, 2,4-dichlorophenol, 2,4-dimethylphenol, 4,6-dinitro-2-methylphenol, 2,4-dinitrophenol, 2-nitrophenol, 2-methylphenol, 3&4-methyl phenol, 4-nitrophenol, pentachlorophenol, phenol, 2,4,5-trichlorophenol, and 2,4,6-trichlorophenol.

- In October 2023, the recoveries for the TPH High Fraction surrogate, o-terphenyl (262% and 241%), in samples MW-33 and DUP-03 (MW-33), respectively, recovered above the laboratory-defined limits. Therefore, the detected TPH High Fraction result in samples MW-33 and DUP-03 (MW-33) may be biased high.

1.1.3 Laboratory Method Blanks

Sample results were compared to associated blank results using a five times rule rather than the applicable USEPA guidance in order to remain consistent with historical evaluations.

- In January 2023, TPH Low Fraction and TPH High Fraction were detected in the laboratory method blank at concentrations of 0.0366 J mg/L in QC batch WG1997027 and 0.0542 J mg/L in QC batch WG1996649, respectively. The detected TPH Low Fraction results in associated samples WW-NORTH, WW-EAST, and DUP-01 (WW-SOUTH) and TPH High Fraction results in associated samples WW-NORTH, WW-SOUTH, WW-EAST, and DUP-01 (WW-SOUTH) were less than five times the method blank concentration. Therefore, these sample results may include measurement contributions from laboratory sources. TPH Low Fraction was not detected in WW-SOUTH; therefore, no data interpretation issues were noted for TPH Low Fraction in this sample.

- In March 2023, chloride and nitrate were detected in the laboratory method blank at concentrations of 0.383 J mg/L and 0.0693 J mg/L, respectively, in QC batch WG2029428. The detected chloride and nitrate results in associated sample MW-12R2 were greater than five times the method blank concentrations; therefore, no data interpretation issues were noted due to this nonconformance.

- In March 2023, chloride and nitrate were detected in the laboratory method blank at concentrations of 0.0468 J mg/L and 0.0772 J mg/L in QC batch WG2029708. The detected chloride result in associated sample EB-02 and the detected nitrate result in associated sample MW-33 were less than five times the method blank concentrations. Therefore, these two results may include measurement contributions from laboratory sources. The remaining results were either greater

than five times the method blank concentrations or not detected in the associated samples; therefore, no further data interpretation issues were noted due to this nonconformance.

- In March 2023, TPH High Fraction was detected in the laboratory method blank at a concentration of 0.0428 J mg/L in QC batch WG2031814. TPH High Fraction was detected in the associated sample (MW-32) greater than five times the method blank concentration; therefore, no data interpretation issues were noted due to this nonconformance.

- In March 2023, di-n-butyl phthalate was detected in the laboratory method blank at a concentration of 0.000656 J mg/L in QC batch WG2034988. Di-n-butyl phthalate was detected in associated sample MW-33 less than five times the method blank concentration; therefore, this result may include measurement contributions from laboratory sources.

- In July 2023, dissolved boron was detected in the laboratory method blank at a concentration of 0.152 J mg/L in QC batch WG2105462, and dissolved copper and dissolved molybdenum were detected in the laboratory method blank at concentrations of 0.00523 mg/L and 0.000565 J mg/L, respectively, in QC batch WG2105922. Dissolved boron in associated samples WW-SOUTH, WW-NORTH, WW-EAST, and DUP-01, dissolved copper in associated samples WW-SOUTH, WW-EAST, and DUP-01, and dissolved molybdenum in associated samples WW-NORTH, WW-EAST, and DUP-01 were detected less than five times their method blank concentrations; therefore, these results may include measurement contributions from laboratory sources.

- In October 2023, nitrate and sulfate were detected in the laboratory method blank at concentrations of 0.0566 J mg/L and 0.631 J mg/L, respectively, in QC batch WG2146649. The associated results were either greater than five times the method blank concentrations or not detected in the associated samples; therefore, no data interpretation issues were noted due to this nonconformance.

- In October 2023, chloride and sulfate were detected in the laboratory method blank at concentrations of 0.475 J mg/L and 0.726 J mg/L, respectively, in QC batch WG2146682. Chloride and sulfate in associated sample EB-02 were detected less than five times the method blank concentrations; therefore, these results may include measurement contributions from laboratory sources. The remaining associated results were greater than five times the method blank concentrations in

the associated samples; therefore, no further data interpretation issues were noted due to this nonconformance.

- In October 2023, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, dibenz(a,h)anthracene, and bis(2-ethylhexyl)phthalate were detected in the laboratory method blank at concentrations of 0.000185 J mg/L, 0.000138 J mg/L, 0.000138 J mg/L, 0.000342 mg/L, 0.00110 J mg/L, respectively, in QC batch WG2148874. Benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, and dibenz(a,h)anthracene in associated sample EB-02 were detected less than five times the method blank concentrations; therefore, these results may include measurement contributions from laboratory sources. The remaining results were not detected in the associated samples; therefore, no further data interpretation issues were noted due to this nonconformance.

- In October 2023, chloride was detected in the laboratory method blank at a concentration of 0.428 J mg/L in QC batch WG2167736. Chloride in associated sample EB-01 was detected less than five times the method blank concentration; therefore, this result may include measurement contributions from laboratory sources.

1.1.4 Equipment Blanks

Sample results were compared to associated equipment blank results using a five times rule rather than the applicable USEPA guidance in order to remain consistent with historical evaluations. Sample results for analytes that were either greater than five times the equipment blank concentration or nondetect were not impacted by the equipment blank results and therefore are not discussed below. Samples collected from the water wells (WW-SOUTH, WW-NORTH, or WW-EAST) are not associated with equipment blanks.

- In March 2023, dissolved barium, chloroform, and di-n-butyl phthalate were detected in equipment blank EB-01 at concentrations of 0.000427 J mg/L, 0.000347 J mg/L, and 0.000546 J mg/L, respectively. Chloride, dissolved barium, dissolved lead, dissolved manganese, 2-butanone, and di-n-butyl phthalate were detected in equipment blank EB-02 at concentrations of 0.413 J mg/L, 0.000623 J mg/L, 0.00223 mg/L, 0.000845 J mg/L, 0.00343 J mg/L, and 0.000722 J mg/L, respectively. As discussed in Section 1.1.3, chloride in EB-02 was detected at a concentration less than five times the associated method blank sample concentration; therefore, the presence of chloride in EB-02 was not used to evaluate the associated field sample

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results. Note that sample results for analytes that were either greater than five times the maximum equipment blank concentration or nondetect were not impacted by the equipment blank results and therefore are not discussed below. The following results were detected at concentrations less than five times the maximum equipment blank concentration, as applicable:

  - Chloroform: MW-1, MW-2, and MW-6;
  - Di-n-butyl phthalate: MW-32, MW-33, and DUP-02 (MW-32);
  - Dissolved lead: MW-17R and MW-32; and
  - Dissolved manganese: MW-1, MW-6, MW-12R2, and MW-15R.

- In October 2023, chloride, nitrate, and nitrite were detected in EB-01 at concentrations of 0.438 J mg/L, 0.0704 J mg/L, and 0.0695 J mg/L, respectively. As discussed in Section 1.1.1, the nitrate and nitrite results in EB-01 were not used to evaluate the associated field sample results since they were analyzed grossly outside of their hold time of 48 hours; field samples were evaluated using the nitrite and nitrate detections in sample EB-02 instead, as discussed below. As discussed in Section 1.1.3, chloride in EB-01 was detected at a concentration less than five times the associated method blank sample concentration; therefore, the presence of chloride in EB-01 was not used to evaluate the associated field sample results.
- In October 2023, chloride, nitrate, nitrite, sulfate, dissolved boron, dissolve barium, chloroform, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene were detected in EB-02 at concentrations of 0.481 J mg/L, 0.0863 J mg/L, 0.0660 J mg/L, 0.622 J mg/L, 0.0258 J mg/L, 0.000990 J mg/L, 0.000428 J mg/L, 0.000166 J mg/L, 0.000149 mg/L, 0.000143 J mg/L, 0.000354 mg/L, and 0.000358 J mg/L, respectively. As discussed in Section 1.1.3, chloride, sulfate, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, and dibenz(a,h)anthracene in EB-02 were detected at concentrations less than five times the associated method blank sample concentrations; therefore, the presence of chloride, sulfate, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, and dibenz(a,h)anthracene in EB-02 were not used to evaluate the associated field sample results. Note that sample results for analytes that were either greater than five times the equipment blank concentration or nondetect were not impacted by the equipment blank results and therefore are not discussed below. The following results were detected at

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concentrations less than five times the maximum equipment blank concentration, as applicable:

- Nitrate: MW-33 and DUP-03 (MW-33);
- Nitrite: MW-1, MW-32, and DUP-02 (MW-32);
- Dissolved boron: MW-5, MW-32, DUP-02 (MW-32); and
- Chloroform: MW-1, MW-2, MW-6, MW-13R, and MW-16R.

1.1.5 Trip Blanks

In January and March 2023, there were no detections in the trip blank samples. The two trip blanks from October 2023, though listed on the chain-of-custody (COC), did not arrive at the laboratory and therefore, could not be evaluated.

- In July 2023, carbon disulfide, toluene, and total xylenes were detected in the trip blank (0.000274 J mg/L, 0.000373 J mg/L, and 0.000293 J mg/L, respectively). Carbon disulfide, toluene, and total xylenes were not detected in the associated samples; therefore, there are no data interpretation issues due to the trip blank detections.

1.1.6 LCS/LCSDs

- In January 2023, the LCS recovery for benzaldehyde (244%) was above the laboratory-defined limits (10.0-160%) in QC batch WG1995998. Benzaldehyde was not detected in the associated samples; therefore, there are no data interpretation issues due to this nonconformance.
- In March 2023, the LCS recovery for acetone (207%) was above the laboratory-defined limits (19.0-160%) in QC batch WG2030988. Acetone was not detected in the associated samples; therefore, there are no data interpretation issues due to this nonconformance.
- In March 2023, the LCS recovery for trans-1,3-dichloropropene (74.8%) was below the laboratory-defined limits (78.0-124%) in QC batch WG2031008. Trans-1,3-dichloropropene was not detected in associated sample, DUP-03 (MW-33); therefore, the nondetect result for trans-1,3-dichloropropene in associated sample DUP-03 (MW-33) may be biased low.
- In March 2023, the LCS/LCSD recoveries for acetone (243%/212%) were above the laboratory-defined limits (19.0-160%) and the LCS/LCSD RPDs for bromoform

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(26.6%) and 1,1-dichloroethene (23.9%) were above the laboratory-defined limit (20%) in QC batch WG2031011. Acetone, bromoform, and 1,1-dichloroethene were not detected in the associated samples; therefore, there are no data interpretation issues due to this nonconformance.

- In March 2023, the LCS recoveries for n-nitrosodiphenylamine (45.4%) and 2,4-dimethylphenol (30.0%) were below the laboratory-defined limits (47.0-120% and 33.0-120%, respectively) in QC batch WG2034988. N-nitrosodiphenylamine and 2,4-dimethylphenol were not detected in the associated sample, MW-33; therefore, the nondetect results for n-nitrosodiphenylamine and 2,4-dimethylphenol in sample MW-33 may be biased low.

- In July 2023, the LCS and/or LCSD recoveries were below the laboratory-defined limits in QC batch WG2104569 for the following analytes: 4-chloro-3-methylphenol (30.4%/25.2%), 2-chlorophenol (23.0%/16.6%), 2,4-dichlorophenol (27.8%/20.2%), 2,4-dimethylphenol (ok/25.2%), 2-nitrophenol (ok/25.2%), 2-methylphenol (21.4%/17.2%), 3&4-methyl phenol (23.2%/19.5%), 2,4,5-trichlorophenol (40.8%/33.8%), and 2,4,6-trichlorophenol (39.8%/32.0%). The laboratory-defined limits for these LCS/LCSD recoveries are 40.0-120%, 25.0-120%, 36.0-120%, 33.0-120%, 31.0-120%, 28.0-120%, 31.0-120%, 44.0-120%, and 42.0-120%, respectively. The LCS/LCSD RPDs for hexachlorocyclopentadiene (38.0%), 2,4-dichlorophenol (31.7%), and 2,4-dimethylphenol (28.6%) were also above the laboratory-defined limits (31%, 26%, and 26%, respectively) in the same QC batch. As discussed above, the 4-chloro-3-methylphenol, 2-chlorophenol, 2,4-dichlorophenol, 2,4-dimethylphenol, 2-nitrophenol, 2-methylphenol, 3&4-methyl phenol, 2,4,5-trichlorophenol, and 2,4,6-trichlorophenol results in the associated sample, DUP-01, are not usable for project objectives due to significantly low surrogate recoveries (<10%); therefore, there are no additional data interpretation issues due to the LCS/LCSD recovery and/or RPD issues. Hexachlorocyclopentadiene was not detected in the associated sample, DUP-01; therefore, there are no data interpretation issues due to the LCS/LCSD RPD issue.

- In October 2023, the LCS recovery for chlorobenzene (123%) was above the laboratory-defined limits (80.0-121%) in QC batch WG2148083. Chlorobenzene was not detected in the associated samples; therefore, there are no data interpretation issues due to this nonconformance.

- In October 2023, the LCS recoveries for chloromethane (148%) and hexachloro-1,3-butadiene (150%) were above the laboratory-defined limits (41.0-142% and 54.0-

138%, respectively) in QC batch WG2148090. Chloromethane and hexachloro-1,3-butadiene were not detected in the associated sample; therefore, there are no data interpretation issues due to this nonconformance.

- In October 2023, the LCS/LCSD recoveries for acetone (180%/196%) were above the laboratory-defined limits (19.0-160%) in QC batch WG2148114. Acetone was not detected in the associated samples; therefore, there are no data interpretation issues due to this nonconformance.

- In October 2023, the LCS recoveries for benzaldehyde (164%) and 4-chloro-3-methylphenol (38.8%) were outside the laboratory-defined limits (10.0-160% and 40.0-120%, respectively) in QC batch WG2148857. Benzaldehyde was not detected in the associated samples; therefore, there are no data interpretation issues due to this nonconformance. 4-Chloro-3-methylphenol was also not detected in the associated samples; therefore, the nondetect 4-chloro-3-methylphenol results in associated samples, MW-2, MW-4, MW-5, MW-6, MW-11R, MW-12R2, MW-13R, MW-14R, MW-15R, MW-16R, MW-18R, and MW-19R, may be biased low.

1.1.7 MS/MSDs

The following table summarizes the MS and/or MSD analyses performed on samples in these data sets.

Sample ID	Analytical Parameters
January 2023	
WW-NORTH	Total Mercury, Dissolved Metals (Except Boron)
WW-EAST	Dissolved Boron
March 2023	
MW-12R2	Chloride, Fluoride, Sulfate, Nitrate, Nitrite
MW-30	Chloride, Fluoride, Sulfate, Nitrate, Nitrite
MW-32	Chloride, Fluoride, Sulfate, Nitrate, Nitrite
MW-33	VOCs, SVOCs, TPH Low Fraction, TPH High Fraction, Total Mercury, Dissolved Metals
July 2023	
WW-NORTH	Chloride, Fluoride, Sulfate, Nitrate, Nitrite, Dissolved Copper
October 2023	
MW-1	Chloride, Sulfate, Fluoride, Nitrate, Nitrite, Total Mercury, Dissolved Boron
MW-6	Dissolved Metals (except Dissolved Boron)
MW-33	VOCs, SVOCs, TPH Low Fraction, Chloride, Sulfate, Fluoride, Nitrate, Nitrite, Dissolved Boron

- In March 2023, the recovery for dissolved manganese in the MSD analysis performed on sample MW-33 was below the laboratory-specified limits. However,

the concentration of dissolved manganese in the unspiked sample was greater than four times the concentration spiked; therefore, the recovery of dissolved manganese was not used to evaluate potential matrix effects.

- In March 2023, the MS/MSD recoveries for acetone (202%/204%) and the MSD recovery for 2-butanone (165%) in the MS and/or MSD analyses performed on sample MW-33 were above laboratory-defined limits (10.0-160% for both compounds) in QC batch WG2030988. Acetone and 2-butanone were not detected in the parent sample; therefore, there are no data interpretation issues due to this nonconformance.

- In October 2023, the MS recovery for chloride (56.3%) and sulfate (67.9%) in the MS analysis performed on sample MW-1, and chloride (55.8%/55.7%) in the MS/MSD analyses performed on sample MW-33 were below laboratory-defined limits (80.0-120%) in QC batch WG2146682. Therefore, the detected chloride and sulfate results in all field samples collected in October 2023 may be biased low.

- In October 2023, the MS recovery for indeno(1,2,3-cd)pyrene (37.8%) was below laboratory-defined limits (38.0-125%), and the RPDs for hexachlorocyclopentadiene (46.2%), 4-chloro-3-methylphenol (35.9%), 2,4-dichloropehnol (34.5%), 2,4-dimethylphenol (55.7%), 2-methylphenol (33.3%), 2,4,5-trichlorophenol (31.7%), and 2,4,6-trichlorophenol (33.7%) were outside laboratory-defined limits (33%, 27%, 27%, 28%, 30%, 31%, and 31%, respectively) in the MS/MSD analyses performed on sample MW-33 in QC batch WG2148873. The nondetect indeno(1,2,3-cd)pyrene results in samples MW-33 and DUP-03 (MW-33) may be biased low. Hexachlorocyclopentadiene, 4-chloro-3-methylphenol, 2,4-dichloropehnol, 2,4-dimethylphenol, 2-methylphenol, 2,4,5-trichlorophenol, and 2,4,6-trichlorophenol were not detected in the associated samples, MW-33 and DUP-03 (MW-33); therefore, there are no data interpretation issues due to this nonconformance.

1.1.8 Laboratory Duplicates

The following table summarizes the laboratory duplicate analyses performed with these data sets.

Sample ID	Analytical Parameters
January 2023	
None	
March 2023	
MW-12R2	Chloride, Fluoride, Sulfate, Nitrate, Nitrite

Sample ID	Analytical Parameters
MW-30	Chloride, Fluoride, Sulfate, Nitrate, Nitrite
MW-33	Chloride, Fluoride, Sulfate, Nitrate, Nitrite
DUP-01	Dissolved Solids
DUP-02	Dissolved Solids
July 2023	
WW-NORTH	Dissolved Solids, Chloride, Fluoride, Sulfate, Nitrate, Nitrite
October 2023	
MW-1	Dissolved Solids, Chloride, Sulfate, Fluoride, Nitrate, Nitrite
MW-15R	Dissolved Solids
MW-33	Chloride, Sulfate, Fluoride, Nitrate, Nitrite

- In March 2023, the RPD for dissolved solids (9.12% and 5.03%) in the laboratory duplicate analyses performed on samples DUP-01 and DUP-02, respectively, were above laboratory-defined limit (5%) in QC batch WG2030626. Therefore, the detected dissolved solids results in all field samples collected in March 2023 may be considered estimated.

- In March 2023, the RPD for nitrate (200%) in the laboratory duplicate analysis performed on sample MW-33 was above laboratory-defined limit (15%) in QC batch WG2029708. However, the results for nitrate in the parent and duplicate samples were either nondetect or <5x the RDL and the absolute difference was < the RDL; therefore, no data interpretation issues were noted due to this nonconformance.

1.1.9 Field Duplicates

The following table lists the original sample and duplicate pairs for each data set.

Sample ID	Duplicate Sample ID
January 2023	
WW-SOUTH	DUP-01
March 2023	
WW-SOUTH	DUP-01
MW-32	DUP-02
MW-33	DUP-03
July 2023	
WW-SOUTH	DUP-01
October 2023*	
WW-SOUTH	DUP-01
MW-32	DUP-02
MW-33	DUP-03

*DUP-04 was inadvertently collected and listed on the COC but was not required to be reported.

Field duplicate acceptance criteria are as follows: RPD is <30% when both results are >5x the MQL; when one or both the original and duplicate results are <5x the MQL, then the absolute difference must be < the MQL. Field duplicate data that did not meet acceptance criteria are discussed below:

- In January 2023, the original and duplicate results for dissolved zinc in the field duplicate pair WW-SOUTH/DUP-01 are <5x the MQL and the absolute value (0.0431 mg/L) is > the MQL (0.025 mg/L). Therefore, the results for dissolved zinc in samples WW-SOUTH, WW-NORTH, WW-EAST, and DUP-01 may be considered estimated.
- In March 2023, the original result for TPH (GC/FID) High Fraction was >5x the MQL and the duplicate result was <5x the MQL in the field duplicate pair MW-32/DUP-02; the absolute difference (0.141 mg/L) is > the MQL (0.100 mg/L). Therefore, the results for TPH (GC/FID) High Fraction in samples MW-32 and DUP-02 may be considered estimated.
- In March 2023, the original and duplicate results for dissolved nickel in the field duplicate pair MW-33/DUP-03 are <5x the MQL and have an absolute difference (0.00353 mg/L) is > the MQL (0.002 mg/L). Therefore, the results for dissolved nickel in samples MW-1, MW-6, MW-12R2, MW-15R, MW-17R, MW-30, MW-33, WW-NORTH, WW-EAST, and DUP-03 may be considered estimated.
- In July 2023, the original and duplicate results for dissolved iron, dissolved nickel, and dissolved zinc in the field duplicate pair WW-SOUTH and DUP-01 are <5x the MQL and have an absolute difference (0.236 mg/L, 0.00589 mg/L, and 0.0976 mg/L, respectively) greater than their MQLs (0.100 mg/L, 0.00200 mg/L, and 0.0250 mg/L, respectively). Therefore, the results for dissolved iron, dissolved nickel, and dissolved zinc in samples WW-NORTH, WW-SOUTH, WW-EAST, and DUP-01 may be considered estimated.
- In October 2023, the original and duplicate results for dissolved nickel and dissolved zinc in the field duplicate pair WW-SOUTH and DUP-01 are <5x the MQL and have an absolute difference (0.00415 mg/L and 0.0264 mg/L, respectively) greater than their MQLs (0.002 mg/L and 0.025 mg/L, respectively). Therefore, the detected results for dissolved nickel and dissolved zinc in samples MW-2, MW-4, MW-5, MW-6, MW-8, MW-11R, MW-12R2, MW-13R, MW-15R, MW-16R, MW-18R, MW-19R, MW-20R, MW-24R, WW-NORTH, WW-SOUTH, WW-EAST, and DUP-01 (WW-SOUTH) may be considered estimated.

APPENDIX E

LNAPL GAUGING AND RECOVERY RESULTS, MONITORING WELL MW-31

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Appendix E - LNAPL Gauging and Recovery Results, Monitoring Well MW-31
HF Sinclair Navajo Refining LLC, GW-014, 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
HF Sinclair Navajo Refining LLC, GW-014, 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
HF Sinclair Navajo Refining LLC, GW-014, 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
HF Sinclair Navajo Refining LLC, GW-014, 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

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HF Sinclair Navajo Refining LLC, GW-014, 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
9/12/2019	--	--	--	--	--	--	--	--	(4)	(4)
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

Appendix E - LNAPL Gauging and Recovery Results, Monitoring Well MW-31
HF Sinclair Navajo Refining LLC, GW-014, 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)		
10/14/2019	--	--	--	--	--	--	--	--	19.0	803
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
12/13/2109	--	--	--	--	--	--	--	--	(4)	(4)
12/20/2019	--	--	--	--	--	--	--	--	(4)	(4)
12/23/2019	--	--	--	--	--	--	--	--	12.0	834
12/26/2019	--	--	--	--	--	--	--	--	3.00	837
1/6/2020	--	--	--	--	--	--	--	--	12.00	849
1/10/2020	--	--	--	--	--	--	--	--	7.00	856
1/13/2020	--	--	--	--	--	--	--	--	1.50	858
1/15/2020	104.87	104.51	0.36	3,714.60	--	--	--	--	2.50	860
1/20/2020	--	--	--	--	--	--	--	--	3.00	863
1/31/2020	--	--	--	--	--	--	--	--	9.00	872
2/4/2020	--	--	--	--	--	--	--	--	3.00	875
2/6/2020	--	--	--	--	--	--	--	--	2.00	877
2/12/2020	--	--	--	--	--	--	--	--	4.50	882
2/14/2020	--	--	--	--	--	--	--	--	1.00	883
2/17/2020	--	--	--	--	--	--	--	--	3.00	886
2/21/2020	--	--	--	--	--	--	--	--	3.00	889
2/24/2020	--	--	--	--	--	--	--	--	2.50	891
2/28/2020	--	--	--	--	--	--	--	--	3.50	895
3/2/2020	--	--	--	--	--	--	--	--	1.50	896
3/6/2020	--	--	--	--	--	--	--	--	2.00	898
3/9/2020	--	--	--	--	--	--	--	--	3.00	901
3/13/2020	--	--	--	--	--	--	--	--	3.00	904
3/17/2020	--	--	--	--	--	--	--	--	3.00	907
3/20/2020	--	--	--	--	--	--	--	--	2.00	909
3/30/2020	--	--	--	--	--	--	--	--	8.00	917
4/2/2020	--	--	--	--	--	--	--	--	2.00	919
4/7/2020	--	--	--	--	--	--	--	--	3.00	922
4/9/2020	--	--	--	--	--	--	--	--	1.00	923
4/13/2020	--	--	--	--	--	--	--	--	2.00	925
4/16/2020	--	--	--	--	--	--	--	--	2.00	927
4/20/2020	--	--	--	--	--	--	--	--	6.00	933

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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)		
4/24/2020	--	--	--	--	--	--	--	--	2.00	935
4/27/2020	--	--	--	--	--	--	--	--	3.00	938
5/1/2020	--	--	--	--	--	--	--	--	4.00	942
5/4/2020	--	--	--	--	--	--	--	--	3.00	945
5/8/2020	--	--	--	--	--	--	--	--	3.00	948
5/12/2020	--	--	--	--	--	--	--	--	4.00	952
5/15/2020	--	--	--	--	--	--	--	--	2.00	954
5/18/2020	--	--	--	--	--	--	--	--	4.00	958
5/22/2020	--	--	--	--	--	--	--	--	2.00	960
5/26/2020	--	--	--	--	--	--	--	--	3.00	963
5/29/2020	--	--	--	--	--	--	--	--	4.00	967
6/1/2020	--	--	--	--	--	--	--	--	2.00	969
6/5/2020	--	--	--	--	--	--	--	--	3.00	972
6/8/2020	--	--	--	--	--	--	--	--	2.00	974
6/15/2020	--	--	--	--	--	--	--	--	6.00	980
6/18/2020	107.28	104.41	2.87	3,714.28	--	--	--	--	3.00	983
6/23/2020	--	--	--	--	--	--	--	--	0.00	983
6/26/2020	--	--	--	--	--	--	--	--	1.00	984
6/29/2020	--	--	--	--	--	--	--	--	2.00	986
7/2/2020	--	--	--	--	--	--	--	--	3.00	989
7/7/2020	--	--	--	--	--	--	--	--	3.00	992
7/10/2020	--	--	--	--	--	--	--	--	2.00	994
7/13/2020	--	--	--	--	--	--	--	--	2.00	996
7/17/2020	--	--	--	--	--	--	--	--	(4)	(4)
7/20/2020	--	--	--	--	--	--	--	--	(4)	(4)
7/24/2020	--	--	--	--	--	--	--	--	(4)	(4)
7/27/2020	--	--	--	--	--	--	--	--	(4)	(4)
8/4/2020	--	--	--	--	--	--	--	--	(4)	(4)
8/11/2020	--	--	--	--	--	--	--	--	(4)	(4)
8/14/2020	--	--	--	--	--	--	--	--	(4)	(4)
8/17/2020	--	--	--	--	--	--	--	--	(4)	(4)
8/19/2020	109.32	104.43	4.89	3,713.92	--	--	--	--	(4)	(4)
8/24/2020	--	--	--	--	--	--	--	--	27.0	1,023
9/14/2020	--	--	--	--	--	--	--	--	26.0	1,049
9/23/2020	--	--	--	--	--	--	--	--	9.00	1,058
10/8/2020	108.59	105.09	3.50	3,713.49	--	--	--	--	27.0	1,085
10/12/2020	--	--	--	--	--	--	--	--	0.00	1,085
10/19/2020	--	--	--	--	--	--	--	--	5.00	1,090
10/26/2020	--	--	--	--	--	--	--	--	4.00	1,094
11/2/2020	--	--	--	--	--	--	--	--	4.00	1,098
11/10/2020	--	--	--	--	--	--	--	--	4.00	1,102
11/16/2020	--	--	--	--	--	--	--	--	6.00	1,108
11/24/2020	--	--	--	--	--	--	--	--	6.00	1,114

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	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)		
11/30/2020	--	--	--	--	--	--	--	--	2.00	1,116
12/7/2020	--	--	--	--	--	--	--	--	4.00	1,120
12/14/2020	--	--	--	--	--	--	--	--	6.00	1,126
12/21/2020	--	--	--	--	--	--	--	--	6.00	1,132
12/29/2020	--	--	--	--	--	--	--	--	5.00	1,137
1/4/2021	--	--	--	--	--	--	--	--	6.00	1,143
1/11/2021	--	--	--	--	--	--	--	--	4.00	1,147
1/18/2021	--	--	--	--	--	--	--	--	3.00	1,150
1/26/2021	--	--	--	--	--	--	--	--	5.00	1,155
1/28/2021	109.98	105.02	4.96	3,713.32	--	--	--	--	0.00	1,155
2/2/2021	--	--	--	--	--	--	--	--	9.00	1,164
2/8/2021	--	--	--	--	--	--	--	--	6.00	1,170
2/16/2021	--	--	--	--	--	--	--	--	[4]	[4]
2/22/2021	--	--	--	--	--	--	--	--	[4]	[4]
3/1/2021	--	--	--	--	--	--	--	--	7.00	1,177
3/9/2021	--	--	--	--	--	--	--	--	6.00	1,183
3/15/2021	--	--	--	--	--	--	--	--	6.00	1,189
3/22/2021	--	--	--	--	--	--	--	--	8.00	1,197
3/29/2021	--	--	--	--	--	--	--	--	7.00	1,204
4/5/2021	--	--	--	--	--	--	--	--	7.00	1,211
4/12/2021	--	--	--	--	--	--	--	--	7.00	1,218
4/15/2021	109.53	105.34	4.19	3,713.12	--	--	--	--	4.00	1,222
4/19/2021	--	--	--	--	--	--	--	--	4.00	1,226
4/26/2021	--	--	--	--	--	--	--	--	7.00	1,233
5/3/2021	--	--	--	--	--	--	--	--	7.00	1,240
5/10/2021	--	--	--	--	--	--	--	--	7.00	1,247
5/17/2021	--	--	--	--	--	--	--	--	7.00	1,254
5/24/2021	--	--	--	--	--	--	--	--	7.00	1,261
6/1/2021	--	--	--	--	--	--	--	--	6.00	1,267
6/8/2021	--	--	--	--	--	--	--	--	7.00	1,274
6/14/2021	--	--	--	--	--	--	--	--	5.00	1,279
6/21/2021	--	--	--	--	--	--	--	--	5.00	1,284
6/28/2021	--	--	--	--	--	--	--	--	6.00	1,290
7/6/2021	--	--	--	--	--	--	--	--	8.00	1,298
7/12/2021	--	--	--	--	--	--	--	--	8.00	1,306
7/15/2021	110.04	105.54	4.50	3712.87	--	--	--	--	1.00	1,307
7/19/2021	--	--	--	--	--	--	--	--	2.00	1,309
7/26/2021	--	--	--	--	--	--	--	--	5.00	1,314
8/2/2021	--	--	--	--	--	--	--	--	9.00	1,323
8/10/2021	--	--	--	--	--	--	--	--	8.00	1,331
8/16/2021	--	--	--	--	--	--	--	--	[4]	[4]
8/24/2021	--	--	--	--	--	--	--	--	[4]	[4]
8/30/2021	--	--	--	--	--	--	--	--	2.00	1,333

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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)		
9/8/2021	--	--	--	--	--	--	--	--	9.00	1,342
9/14/2021	--	--	--	--	--	--	--	--	7.00	1,349
9/16/2021	111.52	105.73	5.79	3712.47	--	--	--	--	3.00	1,352
9/21/2021	--	--	--	--	--	--	--	--	4.00	1,356
9/28/2021	--	--	--	--	--	--	--	--	5.00	1,361
10/13/2021	--	--	--	--	--	--	--	--	7.00	1,368
10/19/2021	--	--	--	--	--	--	--	--	5.00	1,373
10/27/2021	--	--	--	--	--	--	--	--	7.00	1,380
11/2/2021	--	--	--	--	--	--	--	--	6.00	1,386
11/8/2021	--	--	--	--	--	--	--	--	6.00	1,392
11/16/2021	--	--	--	--	--	--	--	--	7.00	1,399
11/22/2021	--	--	--	--	--	--	--	--	7.00	1,406
11/30/2021	--	--	--	--	--	--	--	--	8.00	1,414
12/6/2021	--	--	--	--	--	--	--	--	6.00	1,420
12/14/2021	--	--	--	--	--	--	--	--	8.00	1,428
12/21/2021	--	--	--	--	--	--	--	--	7.00	1,435
12/28/2021	--	--	--	--	--	--	--	--	8.00	1,443
1/4/2022	--	--	--	--	--	--	--	--	8.00	1,451
1/11/2022	--	--	--	--	--	--	--	--	7.00	1,458
1/18/2022	--	--	--	--	--	--	--	--	3.00	1,461
1/20/2022	110.78	105.78	5.00	3712.55	--	--	--	--	4.00	1,465
1/25/2022	--	--	--	--	--	--	--	--	6.00	1,471
2/1/2022	--	--	--	--	--	--	--	--	6.00	1,477
2/8/2022	--	--	--	--	--	--	--	--	8.00	1,485
2/15/2022	--	--	--	--	--	--	--	--	5.00	1,490
2/22/2022	--	--	--	--	--	--	--	--	7.00	1,497
3/1/2022	--	--	--	--	--	--	--	--	4.00	1,501
3/8/2022	--	--	--	--	--	--	--	--	0.00	1,501
3/15/2022	--	--	--	--	--	--	--	--	5.00	1,506
3/22/2022	--	--	--	--	--	--	--	--	5.00	1,511
3/29/2022	--	--	--	--	--	--	--	--	2.00	1,513
4/12/2022	--	--	--	--	--	--	--	--	3.00	1,516
4/14/2022	111.72	105.96	5.76	3712.24	--	--	--	--	0.00	1,516
4/29/2022	--	--	--	--	--	--	--	--	4.00	1,520
5/3/2022	--	--	--	--	--	--	--	--	11.00	1,531
5/10/2022	--	--	--	--	--	--	--	--	0.00	1,531
5/17/2022	--	--	--	--	--	--	--	--	0.00	1,531
7/5/2022	--	--	--	--	--	--	--	--	5.00	1,536
7/12/2022	--	--	--	--	--	--	--	--	9.00	1,545
7/14/2022	110.04	106.24	3.80	3712.29	--	--	--	--	0.00	1,545
7/19/2022	--	--	--	--	--	--	--	--	8.00	1,553
7/26/2022	--	--	--	--	--	--	--	--	5.00	1,558
8/2/2022	--	--	--	--	--	--	--	--	9.00	1,567

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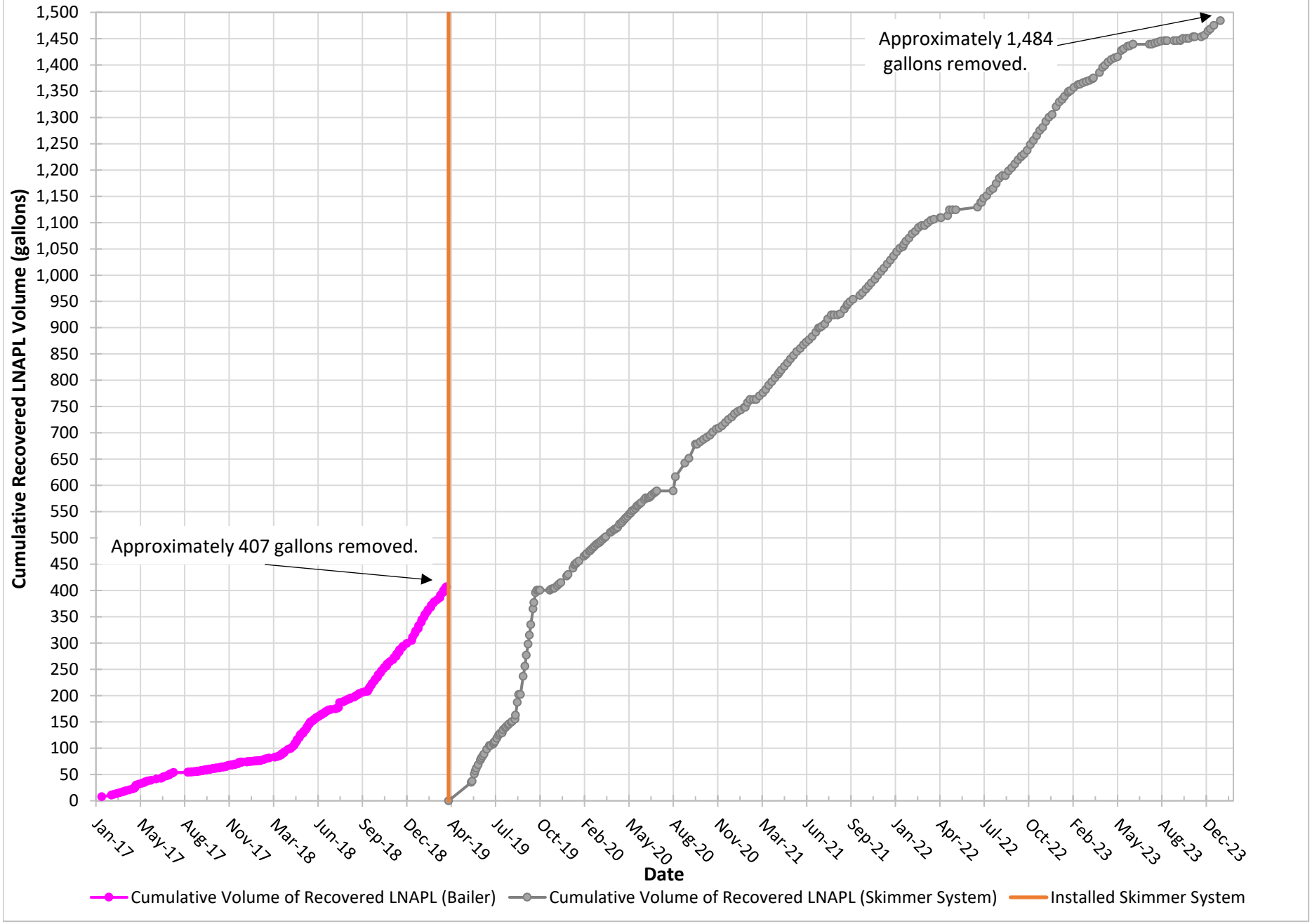
Date	Prior to Bailing or After Removing Skimmer[1,3]				After Bailing				LNAPL Volume Recovered (gal)	Cumulative LNAPL Recovered (gal)
	Initial Depth to Water (ft btoc)	Initial Depth to LNAPL (ft btoc)	Initial Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation[2] (ft amsl)	Final Depth to Water (ft btoc)	Final Depth to LNAPL (ft btoc)	Final Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation[2] (ft amsl)		
8/9/2022	--	--	--	--	--	--	--	--	4.00	1,571
8/16/2022	--	--	--	--	--	--	--	--	10.00	1,581
8/23/2022	--	--	--	--	--	--	--	--	10.00	1,591
8/30/2022	--	--	--	--	--	--	--	--	5.00	1,596
9/6/2022	--	--	--	--	--	--	--	--	0.00	1,596
9/13/2022	--	--	--	--	--	--	--	--	9.00	1,605
9/20/2022	--	--	--	--	--	--	--	--	6.00	1,611
9/27/2022	--	--	--	--	--	--	--	--	7.00	1,618
10/4/2022	--	--	--	--	--	--	--	--	8.00	1,626
10/11/2022	--	--	--	--	--	--	--	--	6.00	1,632
10/12/2022	112.32	106.41	5.91	3811.77	--	--	--	--	1.00	1,633
10/18/2022	--	--	--	--	--	--	--	--	4.00	1,637
10/25/2022	--	--	--	--	--	--	--	--	7.00	1,644
11/1/2022	--	--	--	--	--	--	--	--	11.00	1,655
11/8/2022	--	--	--	--	--	--	--	--	8.00	1,663
11/15/2022	--	--	--	--	--	--	--	--	9.00	1,672
11/22/2022	--	--	--	--	--	--	--	--	10.00	1,682
11/29/2022	--	--	--	--	--	--	--	--	6.00	1,688
12/6/2022	--	--	--	--	--	--	--	--	11.00	1,699
12/13/2022	--	--	--	--	--	--	--	--	8.00	1,707
12/20/2022	--	--	--	--	--	--	--	--	5.00	1,712
12/29/2022	--	--	--	--	--	--	--	--	15.00	1,727
1/5/2023	--	--	--	--	--	--	--	--	9.00	1,736
1/12/2023	--	--	--	--	--	--	--	--	5.00	1,741
1/17/2023	--	--	--	--	--	--	--	--	6.00	1,747
1/25/2023	--	--	--	--	--	--	--	--	7.00	1,754
1/26/2023	111.06	105.87	5.19	3712.43	--	--	--	--	2.00	1,756
1/31/2023	--	--	--	--	--	--	--	--	2.00	1,758
2/7/2023	--	--	--	--	--	--	--	--	6.00	1,764
2/16/2023	--	--	--	--	--	--	--	--	5.00	1,769
2/21/2023	--	--	--	--	--	--	--	--	1.00	1,770
2/28/2023	--	--	--	--	--	--	--	--	3.00	1,773
3/7/2023	--	--	--	--	--	--	--	--	2.00	1,775
3/14/2023	--	--	--	--	--	--	--	--	2.00	1,777
3/21/2023	--	--	--	--	--	--	--	--	3.00	1,780
3/23/2023	114.05	107.50	6.55	3710.57	--	--	--	--	2.00	1,782
4/6/2023	--	--	--	--	--	--	--	--	10.00	1,792
4/13/2023	--	--	--	--	--	--	--	--	10.00	1,802
4/18/2023	--	--	--	--	--	--	--	--	4.00	1,806
4/25/2023	--	--	--	--	--	--	--	--	6.00	1,812
5/2/2023	--	--	--	--	--	--	--	--	5.00	1,817
5/9/2023	--	--	--	--	--	--	--	--	3.00	1,820
5/16/2023	--	--	--	--	--	--	--	--	2.00	1,822

Appendix E - LNAPL Gauging and Recovery Results, Monitoring Well MW-31
HF Sinclair Navajo Refining LLC, GW-014, 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)		
5/25/2023	--	--	--	--	--	--	--	--	12.00	1,834
5/30/2023	--	--	--	--	--	--	--	--	3.00	1,837
6/8/2023	--	--	--	--	--	--	--	--	5.00	1,842
6/13/2023	--	--	--	--	--	--	--	--	1.00	1,843
6/20/2023	--	--	--	--	--	--	--	--	3.00	1,846
6/20/2023	--	--	--	--	--	--	--	--	0.00	1,846
7/27/2023	110.81	108.24	2.57	3710.50	--	--	--	--	0.00	1,846
8/1/2023	--	--	--	--	--	--	--	--	0.00	1,846
8/8/2023	--	--	--	--	--	--	--	--	2.00	1,848
8/15/2023	--	--	--	--	--	--	--	--	2.00	1,850
8/22/2023	--	--	--	--	--	--	--	--	2.00	1,852
8/31/2023	--	--	--	--	--	--	--	--	1.00	1,853
9/5/2023	--	--	--	--	--	--	--	--	0.00	1,853
9/20/2023	--	--	--	--	--	--	--	--	0.00	1,853
9/26/2023	--	--	--	--	--	--	--	--	0.00	1,853
10/5/2023	114.79	108.20	6.59	3709.86	--	--	--	--	0.00	1,853
10/5/2023	--	--	--	--	--	--	--	--	1.00	1,854
10/11/2023	--	--	--	--	--	--	--	--	3.00	1,857
10/18/2023	--	--	--	--	--	--	--	--	0.00	1,857
10/24/2023	--	--	--	--	--	--	--	--	0.00	1,857
11/2/2023	--	--	--	--	--	--	--	--	3.00	1,860
11/6/2023	--	--	--	--	--	--	--	--	0.00	1,860
11/21/2023	--	--	--	--	--	--	--	--	0.00	1,860
11/28/2023	--	--	--	--	--	--	--	--	3.00	1,863
12/6/2023	--	--	--	--	--	--	--	--	8.00	1,871
12/11/2023	--	--	--	--	--	--	--	--	4.00	1,875
12/19/2023	--	--	--	--	--	--	--	--	7.00	1,882
1/3/2024	--	--	--	--	--	--	--	--	9.00	1,891

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.
[4] LNAPL volume recovered in tote too low to provide accurate estimate.
[5] Pneumatic skimmer pump system noted not operating from September 28, 2021, until October 8, 2021, from May 19, 2022, until June 29, 2022, from September 5 until October 5, 2023, and periodically between October 18 until November 28, 2023, when the system was repaired.

Graph E.1: Cumulative Volume of Recovered LNAPL at MW-31



District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 333431

CONDITIONS

Operator: HF Sinclair Navajo Refining LLC ATTN: GENERAL COUNSEL Dallas, TX 75201	OGRID: 15694
	Action Number: 333431
	Action Type: [UF-DP] Discharge Permit (DISCHARGE PERMIT)

CONDITIONS

Created By	Condition	Condition Date
joel.stone	None	4/26/2024