FINAL
2023 REMEDIAL ACTION OPERATIONS, LAND USE/INSTITUTIONAL CONTROL REPORT

Port Heiden Radio Relay Station
Sites OT001, WP002, SS006, and LF007

Prepared for:

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January 2025

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2023 REMEDIAL ACTION OPERATIONS, LAND USE/INSTITUTIONAL CONTROL REPORT

Port Heiden Radio Relay Station, Alaska
Sites OT001, WP002, SS006, and LF007

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ACRONYMS AND ABBREVIATIONS

%	percent
µg/L	microgram(s) per liter
AAC	Alaska Administrative Code
ADEC	Alaska Department of Environmental Conservation
AK	Alaska
bgs	below ground surface
BLO	Black Lagoon Outfall
BTEX	benzene, toluene, ethylbenzene, and total xylenes
btoc	below top of casing
CCV	continuing calibration verification
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COC	contaminant of concern
COV	coefficient of variation
CY	cubic yard
DEW	Distant Early Warning
DoD	Department of Defense
DO	dissolved oxygen
DRO	diesel range organics
EPA	U.S. Environmental Protection Agency
ERP	Environmental Restoration Program
FPC	Former Pipeline Corridor
GRO	gasoline range organics
IC	institutional control
ICV	initial calibration verification
LOQ	limit of quantitation
LOD	limit of detection
LTM	Long-term Management
LUC	land use control
LUCMP	Land Use Control Management Plan
MB	method blank
mg/kg	milligram(s) per kilogram
MK	Mann-Kendall

MDL	method detection limit
MNA	monitored natural attenuation
MS/MSD	matrix spike/matrix spike duplicate
NVPH	Native Village of Port Heiden
p	probability
Pace	Pace Analytical National Laboratory
PAH	polycyclic aromatic hydrocarbon
PAL	project action level
PCB	polychlorinated biphenyl
PCE	tetrachloroethene
POL	petroleum, oil, and lubricants
PVC	polyvinyl chloride
QC	quality control
QSM	Quality Systems Manual
RAO	Remedial Action Operation
RI	Remedial Investigation
ROD	Record of Decision
RPD	relative percent difference
RRO	residual range organics
RRS	Radio Relay Station
SDG	sample delivery group
SM	standard method
SVOC	semivolatile organic compound
TCE	trichloroethene
TKN	Total Kjeldahl Nitrogen
TPH	total petroleum hydrocarbons
TSCA	Toxic Substances Control Act
UFP-QAPP	Uniform Federal Policy for Quality Assurance Project Plan
U.S.	United States
USACE	U.S. Army Corps of Engineers
USAF	U.S. Air Force
UST	underground storage tank
VOC	volatile organic compound

EXECUTIVE SUMMARY

This Remedial Action Operation (RAO), Institutional Control (IC) and Land Use Control (LUC) Report summarizes the 2023 IC/LUC and landfill cap inspection activities at Port Heiden Radio Relay Station (RRS) Sites OT001, WP002, LF007, and SS006, and annual groundwater monitoring at Sites OT001, WP002, and SS006. North Wind-EA Joint Venture prepared this report for the U.S. Air Force (USAF) under United States (U.S.) Army Corps of Engineers (USACE) Contract Number W911KB-20-D-0012, Task Order Number W911KB20F0120.

Field activities were conducted from 11 - 16 October 2023. In general, the majority of the LUCs were observed to be functioning as intended with no evidence of activities contradictory to the Land Use Control Management Plan ([LUCMP] USAF 2023a). Sites LF007 and OT001 each had two LUC warning signs present; one LUC warning sign at WP002 was present, and the other sign was missing. Excavated debris and discarded project materials were observed at Sites OT001 and LF007 from previous site remedial action activities. At the LF007 landfill, geotextile fabric that had been placed over areas with remaining polychlorinated biphenyl (PCB) soil contamination and held down with sandbags to reduce migration of contaminants following the 2022 removal action (RA) appeared windblown and may no longer be covering the remaining contamination. Areas of significant erosion were also observed within OT001.

Twelve (12) monitoring wells were sampled at OT001 and WP002. Samples collected from OT001 and WP002 were analyzed for diesel range organics (DRO) by Alaska (AK) Method 102, volatile organic compounds (VOCs) by U.S. Environmental Protection Agency (EPA) Method SW8260D, low-level VOCs by Method SW8260D-LL, and monitored natural attenuation (MNA). MNA parameters included alkalinity (Standard Method [SM] 2320B), iron (SW6010D), manganese (SW6010D), nitrate/nitrite (E353.2), total Kjeldahl nitrogen (TKN) (E351.2), and sulfate (SW9056). Analytical results reported Project Action Level (PAL) exceedances of DRO, naphthalene, trichloroethene (TCE) and manganese at Site WP002 from monitoring well BLO-MW01. At Site OT001, exceedances of TCE were reported at monitoring wells BLO-MW01, DSA-MW01, DSA-MW02 and DSA-MW05. Manganese also exceeded the PAL at DSA-MW06. A Mann-Kendall (MK) statistical analysis of the results indicated decreasing trends of DRO at BLO-MW01, tetrachloroethene (PCE) at DSA-MW06, and TCE at DSA-MW02. No other trends were observed. New combination locks were installed on all monitoring wells sampled at Site OT001/WP002.

Seven (7) monitoring wells were sampled at SS006. Samples collected from SS006 were analyzed for DRO by AK102 and benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method SW8260D. A single PAL exceedance of DRO was reported from monitoring well 066-MW05 with a concentration of 1,650 H, B micrograms per liter (µg/L). Detections of DRO below the PAL was reported from the remaining six (6) monitoring wells sampled, and a single detection of total xylenes was also reported from 215-MW09. All other sample results for BTEX compounds were non-detect. The MK statistical analysis indicated increasing DRO trends at monitoring wells 066-MW06 and 066-MW07, and a decreasing DRO trend at 215-MW09. No other trends were observed. Monument lids, compression caps, and combination locks were installed at Site SS006 FPC-066 and SS006 FPC-215.

Based on these findings, the following activities are recommended:

- Re-cover areas containing PCB contamination at LF007 with geotextile fabric to reduce rain infiltration and migration of remaining contaminants.

- Remove leftover deteriorated materials and litter from previous site activities from OT001 and LF007. Remove drums and metal debris from LF007.
- Repair and maintain fencing across the driveway at LF007 between the LUC warning signs to discourage trespassing and reduce possible exposure.
- Replace monitoring wells DSA-MW04, GLO-MW03, PG1-MW01, and UST-MW02 at OT001/WP002.
- Install new combination locks on monitoring wells 215-MW08, 215-MW09, and 215-MW12 at SS006.
- Replace missing LUC warning sign at WP002.
- Continue annual LUC/IC inspections at Sites OT001, WP002, SS006, and LF007.
- Continue groundwater monitoring at Sites OT001, WP002, and SS006.

1. INTRODUCTION

The United States (U.S.) Army Corps of Engineers (USACE), Alaska District, on behalf of the U.S. Air Force (USAF), has contracted North Wind-EA Joint Venture (North Wind-EA JV) to complete long-term management (LTM), land use control/institutional control (LUC/IC) inspections, and/or remedial action (RA) operations for multiple sites at the Former Port Heiden Radio Relay Station (RRS), located approximately 400 miles southwest of Anchorage, Alaska (Figure 1). This work is conducted under Contract No. W911KB-20-D-0012 for the Air Force Civil Engineering Center (AFCEC).

1.1 Purpose

This report presents the findings of the annual LUC inspections and groundwater monitoring results associated with the 2023 LTM at the former Port Heiden RRS (file No.) for Sites LF007, OT001, WP002, and SS006. LTM activities are conducted to ensure compliance of the Record of Decision ([ROD) USAF 2009a) and the Land Use Control Management Plan ([LUCMP] USAF 2023a) and to ensure that LUCs have been implemented as intended, are enforced, and continue to be protective of human health and the environment. This work was performed under the Alaska Department of Environmental Conservation (ADEC)-approved *Final 2021 Uniform Federal Policy for Quality Assurance Project Plan (UFP-QAPP) for Long-Term Management and Remedial Action Operation Activities Port Heiden Radio Relay Station, Alaska* (USAF 2021a), and the *Final Work Plan Amendment 1* (USAF 2022a).

1.2 Project Background and History

The former Port Heiden RRS is located approximately 1.5 miles east of Bristol Bay and approximately 400 miles southwest of Anchorage, on the north side of the Alaska Peninsula (Figure 1), and within the former Fort Morrow, a World War II Army Corps Air Base. Access to the area is only by air and water. A state-owned runway and limited road system connect the city of Port Heiden and the greater Port Heiden area. The RRS, accessed by Site Road, is located approximately 3.5 miles north of Port Heiden. Site Road extends north from the Port Heiden airport, then northwest into the installation through Environmental Restoration Program (ERP) Site OT001.

The Port Heiden installation was initially one of 12 Distant Early Warning (DEW) line radar stations constructed in Alaska between 1950 and 1959. The Port Heiden RRS was constructed between 1955 and 1960 over a footprint of several square miles. Port Heiden RRS became operational in 1961 to provide reliable communications for the DEW line station. Originally known as White Alice Communications System, the Air Force Alaska Air Command redesignated facilities in the system as RRSs in 1969. The site consisted of a composite building with dormitories, office space, storage space and equipment for standby power generation, four billboard antennas and feed horns (White Alice Arrays), and a heliport. Port Heiden RRS was deactivated in 1978. The buildings and facilities associated with the former Port Heiden RRS have been removed (USAF 2014a).

Past activities resulting in potential environmental contamination at the Port Heiden RRS include road oiling, transformer use, improper disposal of contaminated waste, drum storage, installation and use of underground storage tanks (USTs), and communications system operations. Remedial activities were initiated as part of the ERP and have occurred at the Port Heiden RRS since an initial site inspection in 1977 (USAF 2017). The investigation of the contamination found at the former Port Heiden RRS was initiated in 1986. Remediation activities at Port Heiden RRS are being conducted pursuant to Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by Superfund Amendments and Reauthorization Act (SARA) and National Oil and Hazardous Substances Contingency Plan (NCP) requirements for LF007 and OT001, and ADEC 18 Alaska Administrative Code

(AAC) 75.325-.370 (ADEC 2023), following guidance from CERCLA for SS006 and WP002. Regulatory oversight is provided by ADEC. Site-specific background and histories are described below.

Three sites (OT001, WP002, and LF007) are ERP sites containing CERCLA hazardous substances identified as contaminants of concern (COCs). Site SS006 is a former pipeline corridor where groundwater was contaminated with petroleum, oil, and lubricants (POLs), contaminants which are not regulated under CERCLA. Because the source areas were identified as ERP/non-CERCLA sites at different times, their numeric site designations were not necessarily established at the time of discussed historic documents and results. As a result, response actions do not refer to the individual ERP site numbers when the action occurred prior to 1995.

1.2.1 Site LF007 – Former Composite Building Landfill

Site LF007, the Former Composite Building Landfill, is located north of Port Heiden RRS and is approximately 350 feet long by 300 feet wide (Figure 5). Approximately 3.5 feet of fill had been placed over the RRS Landfill contents as a cover. Polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbon (PAHs), and pesticide contamination were detected in the soil cover material placed over the landfill (USAF 2014a) and consequently partially removed during the 2016-2018 PCB-contaminated soil removal action (USAF 2019a). No contaminants above screening criteria in surface or subsurface soil around the perimeter of the landfill had been detected (USAF 2014a).

Annual LUC/IC inspections began in 2019. Between 2019 and 2021, the LUC inspections documented the geotextile cover over the landfill was in relatively good condition with two LUC signs posted at the entrance. Exposed areas where the liner material had torn open, piles of metal debris and crushed drums were also documented (USAF 2020, USAF 2021b, USAF 2022b).

In 2022, PCB-contaminated soils were excavated from LF007 in conjunction with soils removed at OT001 (see Section 1.2.2). A total of 208.74 tons of Toxic Substances Control Act (TSCA)-regulated soil was removed from the landfill, which amounted to 104.37% of the contracted total amount for the scope of work. After contracted quantities were met, the excavated grids with PCB concentrations above the 1-milligram per kilogram (mg/kg) cleanup level were covered with geotextile fabric and held down with sandbags to reduce migration of contaminants. Following field activities, the *2022 PCB Contaminated Soil Removal Action Report* (USAF 2023b) concluded that further remedial action would be required to remove both non-TSCA PCB-contaminated and TSCA PCB-contaminated soils at the landfill.

In 2022, observations from the LUC inspection reported stray debris (e.g., metal drum, wooden pallet, pieces of metal, electronics, and cans) was observed around the site that may have been illegally dumped or windblown (USAF 2024).

1.2.2 Site OT001 – Former Composite Building

The Former Composite Building (OT001) is located near the center of the former Port Heiden RRS. The site consists of a gravel pad that contained the former composite building along with four surrounding USTs (Figure 2). The former composite building was constructed of reinforced concrete slabs and contained offices, dormitories, storage space, a garage, and a generator room. Investigations at Site OT001 identified PCBs and chlorinated solvent-contaminated soil around the perimeter of the concrete foundations.

In 1986, soil samples were collected throughout the former Port Heiden RRS and tested for PCBs, metals (e.g., arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver), semivolatile organic compounds (SVOCs), and halogenated volatile organic compounds (VOCs). At the former composite

building, PCBs in soil at concentrations up to 15 mg/kg were found near the automotive shop, and halogenated VOCs and trichlorofluoromethane were detected at a maximum concentration of 84.2 parts per billion outside the generator room (USAF 2006).

In 1987 and 1988, eighty soil samples collected from the north end of the former composite building were analyzed for PCBs, and contaminated soil was identified along the entire northern wall of the former composite building at concentrations up to 190 mg/kg. The highest concentrations were found at the east edge of the concrete slab in front of the large garage doors. The north end of the former composite building was subsequently the focus for soil excavation and removal during the 1990 investigation and restoration (USAF 2006).

In 1990, soils impacted by PCBs and total petroleum hydrocarbons (TPH) were removed from the north side of the former composite building (USAF 2006). The area was first surveyed and then sampled at depths between one to six inches bgs at each grid point. Soil was removed in six-inch lifts in those areas that were above the target cleanup level followed by additional sampling down to 12 inches below the original ground surface. Excavation work progressed in this fashion until field testing showed PCB concentrations were below 10 mg/kg. When the confirmation sample results exceeded the cleanup level, more soil was removed from the vicinity of that sample until all laboratory-analyzed concentrations were below the 25 mg/kg cleanup level. Approximately 170 cubic yards (CY) of PCB-impacted soil removed from the Former Facility Area and from a Federal Aviation Administration site were shipped to an incinerator in Kansas (USAF 2006).

Surface soil with TPH concentrations above 5,000 mg/kg on the north side of the former composite building was removed in 1-foot-thick intervals; the remaining soil was then retested. The cleanup goal of TPH concentrations below 100 mg/kg throughout the excavation area was not achieved. In 1991, ADEC agreed to an alternative cleanup level of 5,000 mg/kg TPH. Soil with TPH concentrations below 5,000 mg/kg and PCB concentrations below 10 mg/kg was used as covers at Landfills A (west of the composite building) and B (south of the runway) (USAF 2006).

During the activities in 1990, an unsuccessful search was conducted for a 30,000-gallon motor gas UST shown to exist on as-built drawings. The tank's absence was confirmed during 2004 Remedial Investigation (RI) work (USAF 2006). Additional USTs previously removed included a 600-gallon ADEC-registered UST and two 20,000-gallon diesel USTs (USAF 2006).

In 1995, soil was excavated along the north wall of the former composite building. The site inspection report concluded that no further action was needed at Site OT001, as analytical results indicated that soil with POL and PCB concentrations above the cleanup levels had been removed (USAF 1996).

In 1999, nine subsurface soil samples were collected beneath vegetation near the composite building and analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX). No BTEX constituents were detected above the laboratory's method detection limits (MDLs) (USAF 2006).

During an RI in 2004, the PCB Aroclor 1260 was detected above the cleanup level (1 mg/kg) in four of the initial nine surface soil samples (USAF 2006). A PAH compound, benzo(a)pyrene, was also found slightly above the cleanup level (1 mg/kg) in one sample and its duplicate. Of the soil samples collected, eight had concentrations of PCBs above the cleanup level (1 mg/kg), with a maximum detected concentration of 6.4 mg/kg (USAF 2014a). Groundwater data showed exceedances of trichloroethene (TCE) at monitoring wells DSA-MW01, DSA-MW02, and PG1-MW01 in concentrations of 5.6 microgram per liter (µg/L), 17 µg/L, 690 µg/L, and 7.8 µg/L, respectively (USAF 2014b).

Groundwater has been sampled nearly every year since 2009. The COCs for groundwater include diesel range organics (DRO) and VOCs (USAF 2021a). The CERCLA COCs identified in the ROD include TCE and benzene (USAF 2009a). The primary constituent that exceeds cleanup levels is TCE, with highest historical concentration at DSA-MW02 (690 µg/L) during the 2004 RI. In 2017, GRO was detected above the 2,000 µg/L cleanup level at DSA-MW04 with a concentration of 2,200 µg/L (USAF 2019b). TCE results from well PG1-MW01 have historically exceeded the cleanup levels, ranging from the lowest concentration of 7.8 µg/L in 2004 to the highest concentration of 44.7 µg/L in 2012 (USAF 2019b).

Annual LUC/IC reporting began in 2019. The 2019 LTM reported recommended replacement of monitoring wells GLO-MW03, PG1-MW01 and UST-MW02 (USAF 2020) as the wells were all damaged or destroyed. During the 2021 inspection, significant surface erosion was observed at GLO-MW03 and DSA-MW-05 (USAF 2022b). Results from the most recent groundwater sampling event in 2022 showed exceedances of TCE at DSA-MW01, DSA-MW02, and DSA-MW05 with concentrations of 10.5 µg/L, 410 µg/L, and 3.30 µg/L, respectively (USAF 2024).

In 2022, an RA was conducted to remove a combined 3200 tons of PCB-contaminated soil from Sites OT001 and LF007. The removal included approximately 200 tons of TSCA-regulated soil with PCB concentrations greater than 50 mg/kg. Most of the soils were shipped to the Chemical Waste Management of the Northwest for disposal. Confirmation samples indicated the remaining PCB concentrations were below the cleanup level of 1 mg/kg. Based on these findings, no further action pertaining to PCB-contaminated soil was recommended at OT001 (USAF 2023b). On 11 August 2023, ADEC concurred that no further action for PCB removal is necessary but due to the presence of naphthalene and trichloroethene that exceeds human health cleanup levels remaining in the groundwater, a "Cleanup Complete" designation cannot be granted as the conditions in the *Contaminated Sites Program Site Closure Memorandum* (ADEC 2020) have not yet been met.

1.2.3 Site SS006 – Former Pipeline Corridor

The Former Pipeline Corridor (FPC) (Site SS006), formerly known as AOCO5, connected the Port Heiden RRS Facility Area to the Marine Terminal Area, south of the Former Facility Area in the village of Meshik (Figure 1). Site SS006 includes the subsites of the aboveground portion of the pipeline from the Marine Terminal Area at the Former Facility Area, and the buried portion within the Former Facility Area (Figure 3 and Figure 4).

The POL distribution system which consisted of two large aboveground storage tanks, a pumphouse, and piping was operated by the USAF until the Former Facility Area was abandoned in 1978. Historically fuel would be delivered by barge and then distributed through pipes along the beach that extended to the tanks. Fuel was distributed from the tank farm pumphouse to the Former Facility Area through a 2-inch pipeline over approximately 5.8 miles. The pipeline was primarily aboveground, except where it intersected driveways and was buried. The pipeline was also buried from the eastern margin of the Former Facility Area pad to the former USTs northeast of the Former Composite Building. The aboveground portion of the pipeline between the airport and the former composite building was dismantled in 1990. Parts of SS006 were transferred to Reeves Aleutian Airways in 1989, and the two POL tanks and fuel pipeline to the airport were sold by the USAF to Reeve Aleutian Airways in 1989 under a USACE contract sale invitation for bids No. 88-1 and No. 88-3 (USAF 2009b).

The Former Pipeline Corridor was investigated during the 2004 RI (USAF 2006). Surface and subsurface soil, surface water, and groundwater samples were collected at intervals along the length of the pipeline. Soil and water samples were analyzed for GRO, DRO, RRO, VOCs, pesticides, herbicides, metals, PCBs, and PAHs. Fuel constituents (DRO and GRO) were detected above screening criteria in soils along the

Former Pipeline. Groundwater and surface water contamination along the pipeline were linked to contaminated source soils (USAF 2009b).

A 2008 soil removal action addressed most soil and groundwater contamination, and natural attenuation mechanisms were expected to continue to eliminate residual contamination (USAF 2010). In 2009, a hydrogeological study characterized the groundwater contamination identified during the 2008 removal action (USAF 2009b). The study concluded that TPH contamination was not widespread on the surface but extended down to the water table. The study recommended annual monitoring at Subareas FPC-066 and FPC-215, and additional soil investigation at FPC-086. In 2012, additional soil samples were collected in the FPC-086 area, north of FPC-066 along the road. Results were below cleanup levels (Native Village of Port Heiden [NVPH 2012]). No further actions were recommended for FPC-029 and FPC-074 (USAF 2009b).

Groundwater monitoring began at Site SS006 in 2009. Eleven temporary monitoring points and four permanent wells were initially installed at FPC-066 and eight temporary well points and three permanent wells were installed at FPC-215. At FPC-066, detections of GRO concentrations have historically ranged from 43.6 µg/L to 886 µg/L. Detected RRO concentrations ranged from 171 µg/L to 534 µg/L. Benzene, toluene, ethylbenzene, and total xylenes were detected at maximum concentrations of 1.2 µg/L, 87.5 µg/L, 36.6 µg/L, and 215 µg/L, respectively. At FPC-215, DRO was detected at 066-MW05 formerly (MW-5) and former WP-14 with concentrations of 2,250 µg/L and 37,900 µg/L, respectively. No detected concentrations of GRO, RRO, or BTEX constituents have exceeded applicable ADEC cleanup levels (USAF 2010). Historically, DRO has been detected in concentrations above the project action level (PAL) at both FPC-066 and FPC-215 in monitoring wells 066-MW05 and 215-MW09.

In 2022, the DRO concentration at 066-MW05 was 2,410 µg/L whereas all other samples at SS006 were not detected above the limit of detection (LOD). Results from the Mann-Kendall (MK) statistical analysis indicated the DRO trend was increasing at monitoring well 066-MW06, decreasing at 215-MW09, and stable at 066-MW-05. No other trends were observed (USAF 2024). The 2022 LUC findings also included repairs were needed for monitoring wells (215-MW09, 066-MW04, and 066-MW06) (USAF 2024).

1.2.4 Site WP002 – Black Lagoon Outfall

The Black Lagoon Outfall (BLO) is located southwest of OT001. The site was historically the location of a series of holding ponds at the outfall of a pipe (Figure 2). POL wastes were reported to have been disposed of in a floor drain connecting the automotive shop to the composite building, flowing into the BLO 500 feet to the east (USAF 2014a).

In 1987, four samples were collected from the BLO, two from each of the ponds and two from the distressed vegetation area soils. Fuels, PCBs, and chlorinated solvents were detected at concentrations below ADEC. In 1988, sixteen samples were tested for metals; no samples contained detectable concentrations (USAF 2006). A review of the analytical results from soil samples collected in 1987 and 1988 showed concentrations of TPH, PCBs, and SVOCs exceeded action levels.

In 1990, surface samples were analyzed for TPH and PCBs, and four trenches were excavated to delineate the extent of impacted soil. PCBs were not detected in any of the samples. Soil with TPH concentrations greater than 5,000 mg/kg was found between 0 to 12 feet below ground surface (bgs). Approximately 4,000 cubic yards of soil with concentrations above 5,000 mg/kg TPH was estimated to remain at the site (USAF 2006).

During the 2004 RI, DRO, residual range organics (RRO), metals, PCBs, VOCs, gasoline range organics (GRO), PAHs, and herbicides were identified as potential COCs within surface and subsurface soil samples (USAF 2006). Tetrachloroethene (PCE) and DRO were the only contaminants identified with concentrations above cleanup levels (USAF 2015). From the 2004 results, two plumes were identified in the aquifer underlying the Port Heiden RRS. They include a TCE plume (approximately 700 feet long, 400 feet wide, and at a depth of 50 feet bgs) underlying the former pad and a smaller benzene and TCE plume (approximately 100 feet long, 100 feet wide, and at a depth of 50 to 60 feet bgs) underlying the BLO (USAF 2014a).

In 2009, DRO and PCE concentrations above ADEC Method Two migration to groundwater cleanup levels were detected in soils at several locations (USAF 2015). In 2011, DRO, PCE, and TCE were detected at maximum concentrations of 4,250 mg/kg, 0.622 mg/kg, and 3.83 mg/kg, respectively. Consistent with the 2004 RI, all PCE and TCE detections were co-located with DRO exceedances; however, not all DRO exceedances were associated with detectable PCE and TCE (USAF 2015). In 2013 and 2014, PCB-contaminated soil was excavated (USAF 2015). In 2014, PCE- and fuel-contaminated soil was also excavated and used to construct two passively ventilated biopiles to investigate biopiles as a remediation technique for PCE-contaminated soil. In 2015, sample results demonstrated a significant reduction in concentrations of the three analytes; PCE concentrations had fallen below ADEC cleanup levels in all but two samples, and TCE concentrations were all below cleanup levels. DRO concentrations decreased; however, 13 of the 15 samples remained above ADEC cleanup levels (USAF 2016). In 2017, the soil from the biopiles was placed in soil landspreading areas and land farmed (USAF 2019a).

Groundwater sampling at WP002 coincides with the annual monitored natural attenuation (MNA) sampling at Site OT001. The groundwater flow direction is from east to west from Site WP002 towards the Composite Building in OT001 (USAF 2019b). DRO and RRO have historically exceeded PALs in monitoring well BLO-MW-01. Concentrations of DRO in monitoring well BLO-MW-01 have ranged from 17,000 µg/L to 15,600,000 µg/L; however, free product was detected at a thickness of 0.65 feet in 2013 (USAF 2014b) and 0.4 feet in 2017. RRO concentrations have ranged from 2.3 mg/L in 2004 to 1,890 mg/L in 2010. In 2016, the RRO concentration was 4.2 mg/L however the well was not sampled in 2017 due to the presence of free product (USAF 2019b). In 2017, GRO was detected above the 2,000 µg/L with a concentration of 2,400 µg/L (USAF 2019b).

Annual LUC/IC inspections began in conjunction with the groundwater monitoring in 2019. In September 2022, analytical cleanup level exceedances included DRO at monitoring well BLO-MW-01, and manganese at BLO-MW-01 and BLO-MW-05. Results from the MK trend analysis indicated DRO concentrations were significantly decreasing at one well (BLO-MW-01), and TCE was stable at BLO-MW-07. Two new LUC signs were installed at WP002. Observations from LUC inspected included minor erosion and ponding around the site (USAF 2024).

1.3 Project Objectives

The overall objectives of the former Port Heiden RRS environmental site restoration are to ensure that conditions at each site are protective of human health and the environment and to comply with state and federal regulations. The selected remedies established for soil at Sites OT001, LF007, and WP002 (groundwater remedy only) by the 2009 ROD (USAF 2009a) and in the 2023 LUCMP (Sites LF007 and OT001) (USAF 2023a) consists of the following:

- Excavation of soil containing PCBs greater than or equal to 10 mg/Kg (soil may contain incidental pesticides and PAHs).

- Alcohol based washing of the excavated soil containing PCBs greater than or equal to 10 mg/kg to reduce the PCB concentration to less than 10 mg/Kg. Recalcitrant soil that cannot be treated using soil washing to meet required PCB concentration (<10 mg/kg) will be barged offsite for proper disposal.

- Excavation of soil containing greater than 1 mg/Kg of PCBs but less than 10 mg/Kg and pesticides/PAHs over their respective cleanup levels.

- Offsite disposal of washed or unwashed soil in a permitted Class III landfill in the vicinity of the Village of Port Heiden.

The selected groundwater remedy consists of the following:

- Natural attenuation of groundwater contaminated with TCE and benzene.

- Periodic groundwater monitoring would be performed at the facility to assess changes in groundwater contaminant concentrations over time.

- A notice placed on the property records to inform current and future property owners of the presence of the groundwater contamination. These institutional controls (ICs) would remain in-place until groundwater cleanup levels were achieved through natural attenuation.

LUCs identified in the 2009 ROD include signs to warn the public of the presence of contaminated soil, and landfill cover maintenance to prevent contaminated soil from coming into contact with water, although signs are not specified in the 2023 LUCMP (USAF 2023a). Soil excavation is restricted and ADEC approval is required prior to moving or disposing of soil subject to the cleanup rules in 18 AAC 75.325-.370 (ADEC 2023). If soil is removed from the sites, it must be characterized.

Planned groundwater use must be approved by ADEC, and groundwater removed from the site in the future must be characterized. ICs will be evaluated every five (5) years. Monitoring was required annually for first five (5) years and will continue until groundwater contamination is no longer a threat to human health and the environment, as verified by a minimum of two (2) years of consecutive sampling events with COC concentrations below ADEC Table C groundwater cleanup levels, and concentrations of daughter products below federal minimum cleanup levels and state groundwater cleanup levels. Remedial Action Operations (RAOs) have not been established for Site SS006, though monitoring of natural attenuation is ongoing (USAF 2019d).

2. 2023 SITE ACTIVITIES AND OBSERVATIONS

The 2023 LTM and LUC/IC field activities were conducted at the Port Heiden RRS sites in accordance with the approved UFP-QAPP (USAF 2021a) and the Final Work Plan Amendment 1 (USAF 2022a). The field effort was conducted from 11 - 16 October 2023. Site activities included groundwater monitoring at OT001, WP002, and SS006, and visual LUC inspections at OT001, WP002, LF007, and SS006. Travel to the village of Port Heiden was by way of commercial flight from Anchorage, AK. The Port Heiden RRS site was accessed by a vehicle rented from the community.

All environmental field activities were overseen by an ADEC-qualified Environmental Professional in accordance with 18 AAC 75.333 (ADEC 2023). Pace Analytical National Laboratory (Pace) – Mount Juliet, Tennessee, was retained to conduct laboratory analysis for the groundwater samples from site SS006. Pace maintains current U.S. Department of Defense (DoD) Environmental Laboratory Accreditation Program accreditation and ADEC Contaminated Sites Program laboratory certification, which are both provided as attachments to the UFP-QAPP (USAF 2021a). Selected photographs collected during site inspections are included in Appendix A. Field notes, forms for groundwater monitoring, and site inspections are provided in Appendix B. The summary of site activities completed in 2023 are tabulated in Table 2-1.

Table 2-1. 2023 Summary of Project Activities

LTM Site	Data Collection Activities	Inspection	Additional Activities
OT001	Groundwater sampling at eight (8) associated monitoring wells. Photograph and document results of IC/LUC inspections.	√	—
WP002	Groundwater sampling at four (4) associated monitoring wells. Photograph and document results of IC/LUC inspections.	√	Reinstallation of fallen LUC sign.
LF007	Photograph and document results of IC/LUC inspections.	√	Repairs to monitoring wells and installation of combination locks.
SS006	Groundwater sampling at seven (7) monitoring wells. Photograph and document results of IC/LUC inspections.	√	Repairs to monitoring wells and installation of combination locks.

Notes:
Definitions provided in the list of acronyms and abbreviations.

2.1 LUC/IC Inspections

North Wind-EA JV personnel conducted site inspections, including observations of sign conditions, surface soil and vegetation, erosion, debris, and land use conditions at each of the following sites: OT001, WP002, LF007, and SS006. Site inspections were conducted on 11th, 15th and 16th October 2023.

2.1.1 Site LF007

Site LF007 is a semi-contained site with a single entrance located northeast to Site OT001. Visual estimation of the vegetation cover on the cap surface was 20 percent (%) and 90% on the side slopes. Two LUC warning signs were observed at the site. Both signs are located at the entrance of the site on either side of the driveway. Both signs were noted to be in good condition. Wire fencing was observed to be piled up next to one of the signs. The fence appeared to have been previously stretched across the road to inhibit vehicle traffic but was presumed to be left open during the 2022 PCB soil removal action.

Exposed soil was observed in areas throughout the site. Vegetation was relatively sparse on the within the landfill area since the RA in 2022. The landfill was observed to be more of an open excavation with piles of drums and metal debris, geotextile fabric, sandbags, survey lath, and a poly overpack drum scattered around the area. The geotextile fabric that was covering areas of remaining PCB contamination following the 2022 RA appeared scattered and windblown. Unused rolls of geotextile fabric were left on the south side of the site. Trash noted to have been illegally dumped during the 2022 inspection (USAF 2024) was not observed in 2023.

Areas on the sidewalls show evidence of erosion where water infiltrates from road area into the excavation. A total of four monitoring wells were observed within the site area. One well was located near the center of the landfill and three wells were located downgradient from the landfill on the north side of the site. The wells were unnamed and in poor condition as the monuments were loose presumably from frostjacking. A large piece of plastic sheeting was found away from the site in the tundra. The trash had presumably blown away from one of the trash piles observed within the excavation area during the inspection.

Based on the visual inspection conducted in October 2023, there was no indication of unauthorized soil or groundwater use or off-site transportation. The 2023 site conditions are shown in Photographs 001 – 010 in Appendix A.

2.1.2 Site OT001

Most of the land within the Site OT001 boundary is covered in packed gravel with light vegetation. Various open excavations remain around the perimeter of the site. Visual estimation of the vegetation coverage across the site ranged from approximately 40-90%. Two LUC warning signs were observed at the site. One sign was located near the east entrance to the site and one adjacent to the stockpile towards the east. Both signs were noted to be in fair condition though the eastern sign has been shot at with a firearm.

Surface water is ponding in various areas throughout the site that have been compacted by vehicle traffic. Some areas the gravel was inundated and too soft to drive on. Several areas of erosion were observed where rain has runoff from the gravel pad into areas formerly excavated/revegetated. The most notable erosion observed was near monitoring wells DSA-01/DSA-05 and DSA-06/DSA-07. A patch of possibly distressed vegetation was also observed along the road near DSA-06.

Various materials from previous activities remain on site. Materials include plastic construction fencing, metal fence posts, traffic cones, geotextile fabric, supersacks, overpack drums, and several shipping containers. The site looks to be frequently visited gauging by the amount of tire tracks observed throughout the site. Vehicles from the community were seen within the site on several occasions during the field effort.

The conditions of the monitoring wells associated with site OT001 ranged from good to poor. The four damaged wells (GLO-MW-03, DSA-MW-04, PG1-MW-01, and UST-MW-02) previously documented in past reports will need to be reinstalled in order to sample at these locations. All monitoring wells visited during the 2023 field effort had new combination locks installed on the monument lids. Further details pertaining to the monitoring well conditions are provided in Section 2.3.

Based on the visual inspection, there was no indication of unauthorized soil or groundwater use or off-site transportation. The 2023 site conditions are presented in Photographs 011 – 038 in Appendix A.

2.1.3 Site SS006

Visual estimation of the vegetation coverage across the subsite at FPC-066 was approximately 90%. No LUC signs were associated with this subsite. No evidence of ponding or erosion were observed. A total of six monitoring wells were observed, four of which are included in the LTM program. The flush mount monuments for the other two wells (unnamed) had been frostjacked out of the ground. Repairs were made to monitoring wells 066-MW04, 066-MW05, 066-MW06, and 066-MW07. The details pertaining to the well repairs are summarized in Section 2.3. No issues warranting action were noted. The 2023 site conditions at SS006-FPC-066 are presented in Photographs 039 – 050 in Appendix A.

Visual estimation of the vegetation coverage across the subsite at FPC-0215 ranged from approximately 70-90%. No LUC signs were associated with this subsite. No evidence of ponding or erosion were observed. A total of five monitoring wells were observed, three of which are included in the LTM program. All wells were observed to be in fair condition. Repairs were made to monitoring wells 215-MW08 and 215-MW09. The details pertaining to the well repairs are summarized in Section 2.3. No issues warranting action were noted. The 2023 site conditions at SS006-FPC-215 are presented in Photographs 051 – 060 in Appendix A.

2.1.4 Site WP002

Site WP002 is located adjacent to OT001. Visual estimation of the vegetation coverage across the site ranged from approximately 60-90%. Signposts for two LUC signs were observed at the site. Both signs had blown off the signposts and one was later found in the grass and reinstalled. Vegetation is sparse in areas that look to be previously excavated. No evidence of ponding or erosion were observed. A new combination lock was installed on monitoring well BLO-MW01. No issues warranting action were noted. The 2023 site conditions are presented in Photographs 029 – 038 in Appendix A.

2.2 LUC Signs

There was a total of six LUC signs were identified as associated with sites at Port Heiden RRS. Two signs at each of Sites LF007, OT001, and WP002. The signs at the entrance of LF007 were in good condition. The signs at OT001 ranged between fair in good as one sign had holes from being shot at with a firearm. The two WP002 signs were missing from the signposts which had presumably blown away from high winds and not being securely attached. Both signposts were intact. One of the missing signs was later found and reattached to the signpost with the tools that the field team had on hand. The sign will require a hole drilled into the lower left corner and additional hardware to firmly affix to the signpost. Details pertaining to the LUC signs associated with the Port Heiden RRS LTM program are summarized in Table 2-2.

Table 2-2. LUC Sign Information Summary

Site	Number of signs	Location of each sign	Coordinates	Condition/notes
LF007	2	East side of driveway	56° 58' 45.79" N, 158° 39' 25.10" W	Good.
		West side of driveway	56° 58' 45.82" N, 158° 39 '25.59" W	Good.
OT001	2	East	56° 58' 35.76" N, 158° 39' 13.79" W	Good.
		West	56° 58' 37.53" N, 158° 39' 23.87" W	Fair. Bullet holes in sign.
WP002	2	South	56° 58' 36.64" N, 158° 39' 28.73" W	Fair. Reinstalled in 2023.
		North	56° 58' 38.25" N, 158° 39' 31.13" W	Sign missing.

Notes:
Coordinates in Degrees, Minutes, Seconds format

2.3 Monitoring Wells

New combination locks were installed at almost all monitoring wells in service with the LTM program. Other well repair tasks included replacing locking monument lids and compression caps. The combination was set to 0911 at all locations. Due to the corrosive environment, the serviceable life of these locks should be expected for only a couple of years. The locks installed at SS006-215 in 2022 were functional during the 2023 field event but will likely need to be replaced during the next effort in 2024. Monitoring well SS006-066-MW04 was observed to be frost jacked and required a flexible polyvinyl chloride (PVC) cap so that the monument lid would fit on top of the monument.

Monitoring wells BLO-MW05, BLO-MW06, BLO-MW07, DSA-MW05, and RRS-MW05 had slow recharge/excessive drawdown while purging during the groundwater sampling event. Four damaged monitoring wells at Site OT001 appeared damaged beyond use or repair: DSA-MW04, GLO-MW03, PG1-MW01, and UST-MW02 (USAF 2024). GLO-MW-03 was obstructed at 56.10 feet below top of casing (btoc) which prevented the submersible pump from reaching ground water. The obstruction may be a kink in the well casing. DSA-MW-04 was obstructed at 12.81 feet btoc by grout or bentonite in the well casing and could not be sampled. PG1-MW-01 had been destroyed during excavation activities in 2020. UST-MW-02 was not sampled due to an obstruction in the well. As noted by the previous contractor, the pump encountered a kink in the PVC pipe and became stuck. The pump was abandoned inside the well, as it could not be removed. Gauging data, observed conditions, and repairs made and recommended are summarized in Table 2-3.

Table 2-3. 2023 Well Condition and Gauging Results.

Well Identification	Depth to Water (ft btoc)	Total Depth (ft btoc)	Well Diameter (inches)	Condition	Repairs Made in 2023	Repairs Recommended
OT001 and WP002						
BLO-MW01	45.67	53.6	2	Good	New lock	
BLO-MW05	47.8	56.11	2	Poor recharge	Compression cap New lock	
BLO-MW06	41.71	50.89	2	Poor recharge	New lock	
BLO-MW07	38.53	47.00	2	Poor recharge	New lock	
DSA-MW01	52.45	58.43	2	Good	New lock	
DSA-MW02	62.14	69.30	2	Good	New lock	
DSA-MW04*	—	—	2	Not serviceable		Consider replacing
DSA-MW05	56.85	88.14	2	Poor recharge	New lock	
DSA-MW06	56.04	90.83	2	Good	New lock	
DSA-MW07	47.42	56.68	2	Good	New lock	
GLO-MW03*	56	60.26	2	Not serviceable		Consider replacing
GLO-MW04	57.9	60.5	2	Good	New lock	

Table 2-3. 2023 Well Condition and Gauging Results, continued.

Well Identification	Depth to Water (ft btoc)	Total Depth (ft btoc)	Well Diameter (inches)	Condition	Repairs Made in 2023	Repairs Recommended
OT001 and WP002, continued						
PG1-MW01*	—	—	—	Destroyed	Destroyed during excavation	Consider replacing
RRS-MW05	50.45	58.2	2	Poor recharge	New lock	
RRS-MW06	57.05	67.12	2	Good	New lock	
UST-MW02*	—	—	—	Not serviceable	Sub pump obstructing well	Consider replacing
SS006-066						
066-MW04	6.50	15.00	1.5	Good	Flexible pipe cap New lock	
066-MW-05	8.01	15.02	1.5	Good	New bottom part of monument lid New lock	
066-MW-06	4.67	12.3	1.5	Good	New monument lid New lock	
066-MW-07	5.68	12.88	1.5	Good	New lock	
SS006-215						
215-MW-08	10.27	20.03	1.5	Good		New lock
215-MW-09	11.70	20.63	1.5	Good	Installed set screws on monument lid	New lock
215-MW-12	12.20	19.90	2	Good		New lock

Notes
* Monitoring well damaged beyond repair.
btoc = below top of casing
ft = feet

2.4 Groundwater Monitoring Activities

Groundwater sampling was conducted 12 – 15 October 2023. Samples were collected from a combined nineteen (19) monitoring wells between sites OT001, WP002, and SS006. All wells were completed with a stickup monument.

Groundwater samples were collected using low-flow sampling techniques in accordance with the Field Sampling Guidance (ADEC 2022), UFP-QAPP (USAF 2021a) and the *Final Work Plan Amendment 1* (USAF 2022a). Monitoring wells associated with sites OT001 and WP002 were sampled utilizing a submersible pump (Proactive, Pro Series Stainless Steel Mega-Monsoon Pump w/ Proactive, Low Flow Power Booster Controller). Monitoring wells at SS006 were sampled using a Geotech small-diameter bladder pump to fit the 1.5 inch well casings. The pump was lowered into the well slowly and carefully to a depth as close as possible to the water table surface and set to a flow rate of 0.1 to 0.5 liters per minute that ensured minimal drawdown. The water level was monitored during the sampling event measuring drawdown during purging.

Field stabilization parameters included potential hydrogen, temperature, conductivity, dissolved oxygen, oxidation-reduction potential, and turbidity. Parameters were measured with a Horiba U-50 Series

handheld multiparameter flow-thru cell and meter which was calibrated prior to sampling. Calibration forms, groundwater sampling data sheets, and field logbook notes are presented in Appendix B. Purge water was filtered through a 5-gallon granulated activated carbon filter and discharged over 100 feet away from the nearest surface water, as described in the UFP-QAPP (USAF 2021a) and per current regulatory guidance (ADEC 2022).

Groundwater samples were placed into the containers appropriate for the targeted analyte and placed in coolers that were packed with gel ice. One set of field duplicates was collected for each day of sampling; duplicate samples were noted as such per the UFP-QAPP (USAF 2021a) and the Final Work Plan Amendment 1 (USAF 2022a). Additional aliquots for preparation of matrix spike/matrix spike duplicate (MS/MSD) samples by the laboratory were also submitted. Trip blanks were included in sample shipments for samples intended for VOC analysis to verify that no contamination occurred in transit. Samples were packed in a sealed cooler with chain-of-custody documentation and shipped to Pace in Mt. Juliet, Tennessee for analysis.

2.4.1 Sites OT001 and WP002

Twelve (12) monitoring wells associated with Sites OT001 and WP002 (Figure 2) were sampled. The wells sampled in 2023 included BLO-MW-01, BLO-MW-05, BLO-MW-06, BLO-MW-07, DSA-MW-01, DSA-MW-02, DSA-MW-05, DSA-MW-06, DSA-MW-07, GLO-MW-04, RRS-MW-05, and RRS-MW-06. Field duplicate samples were collected at BLO-MW07 and DSA-MW01. Additional aliquots for MS/MSD samples were collected from BLO-MW01. All samples were analyzed for DRO by Alaska (AK) Method 102, VOCs by U.S. Environmental Protection Agency (EPA) Method SW8260D, and low-level VOCs by EPA Method SW8260D-LL.

All sampled monitoring wells were sampled for MNA parameters which are used to assess the potential for biodegradation and natural attenuation of contaminants in the groundwater. MNA parameters included alkalinity (SM2320B), iron (SW6010D), manganese (SW6010D), nitrate/nitrite (E353.2), total Kjeldahl nitrogen (TKN) (E351.2), and sulfate (SW9056). The summary of the samples collected, and container type is presented in Table C- 1.

2.4.2 Site SS006

A total of seven (7) monitoring wells associated with subareas FPC-215 (Figure 3) and FPC-066 (Figure 4) were sampled. The wells sampled in 2023 included 215-MW-08, 215-MW09, 215-MW-12, 066-MW-04, 066-MW-05, 066-MW-06, and 066-MW-07. A duplicate sample was collected at 066-MW07. Additional aliquots for MS/MSD samples were collected from 215-MW12. All samples were analyzed for DRO by AK 102 and BTEX by EPA Method SW8260D. The summary of the samples collected, and container type is presented in Table C- 1.

2.5 Investigation Derived Waste

Decontamination and well purge water were processed through a granular activated carbon filter unit prior to being discharged to the ground adjacent to the monitoring well point from which it was produced in accordance with the UFP-QAPP (USAF 2021a) and the Final Work Plan Amendment 1 (USAF 2022a). Miscellaneous solid waste generated during the sampling, such as sample tubing, nitrile gloves, paper towels, and plastic was disposed as solid waste in the community dump/trash incineration area for the village of Port Heiden.

2.6 Work Plan Deviations

Deviations from the UFP-QAPP (USAF 2021a) and the Work Plan Amendment 1 (USAF 2022a) are presented below.

- Low-level VOCs by EPA 8260D (DODV8260ULL) replaced the VOC analysis by EPA 8260 for the wells sampled at OT001/WP002 to ensure the limits of detection (LODs) are below groundwater cleanup levels for subsequent monitoring events.

3. 2023 GROUNDWATER SAMPLE RESULTS

Groundwater samples were collected from 12 through 15 October 2023. Groundwater monitoring results were compared to the PALs which are provided in ADEC groundwater cleanup levels in 18 AAC 75.345 Table C (ADEC 2023) The PALs are the final remedial action objectives per the site-specific ROD for OT001, LF007, and WP002 (USAF 2009a).

3.1 OT001 and WP002 Analytical Results

A single exceedance for DRO was reported from monitoring well BLO-MW01. Exceedances of naphthalene were also reported at monitoring well BLO-MW01 by methods SW8260D-LL and SW8260D. Exceedances of TCE were reported from monitoring wells BLO-MW01, DSA-MW01, DSA-MW02, and DSA-MW05 by both methods 8260 D-LL and SW8260D. The highest detection of TCE was reported at DSA-MW02 with a concentration of 380 µg/L. All other exceedances of TCE ranged in concentrations of 3.82 µg/L (DSA-MW01) to 4.21 µg/L (BLO-MW01).

All other contaminant target analytes at the OT001 and WP002 were either detected at concentrations below cleanup levels or were reported as non-detect. Most detections were from near the source area at monitoring well BLO-MW01.

Cleanup level exceedances between Sites OT001 and WP002 are summarized below in Table 3-1 and Figure 6. The complete summary of the chemical data is provided in Table C- 2 in Appendix C. The complete laboratory reports are included in Appendix E.

Table 3-1. Analytical Groundwater Exceedances at OT001/WP002.

Location	Analyte	Method	Cleanup Level[1] (µg/L)	Results (µg/L)
BLO-MW01 (WP002)	DRO	AK102	1500	7860 [420] QL
	Naphthalene	8260 D-LL	1.7	50.7 [0.250]
	TCE	8260 D-LL	2.8	4.21 [0.0400] H, QH
	TCE	SW8260D	2.8	4.21 [0.500]
	Naphthalene	SW8260D	1.7	41.7 [2.00]
DSA-MW01 (OT001)	TCE	8260 D-LL	2.8	4.04 [0.0400]
	TCE*	8260 D-LL	2.8	3.92 [0.0400] QN
	TCE	SW8260D	2.8	3.82 [0.500]
	TCE*	SW8260D	2.8	3.96 [0.500]
DSA-MW02	TCE	8260 D-LL	2.8	380 [0.800]
	TCE	SW8260D	2.8	380 [10.0]
DSA-MW05	TCE	8260 D-LL	2.8	3.91 [0.0400]
	TCE	SW8260D	2.8	3.99 [0.500]

Table 3-1. Analytical Groundwater Exceedances at OT001/WP002, Continued.

Notes:
***** = Field duplicate sample
[420] = Laboratory Limit of Detection (LOD)
[1] = ADEC 18 AAC 75 Table C Groundwater Cleanup Level (ADEC 2023)
µg/L = micrograms per liter
DRO = Diesel range organics
TCE = Trichloroethene

Laboratory Qualifiers
H = Analyte result is considered a low estimate due to holding time exceedance.
QL = Analyte result is considered an estimated value biased low due to a quality control failure.
QN = Analyte result is considered an estimated value with unknown bias due to a quality control failure.
QH = Analyte result is considered an estimated value biased high due to a quality control.
Flags may be combined when more than one quality deficiency exists.

3.2 OT001 and WP002 Monitored Natural Attenuation

Sample results for MNA parameters collected during the 2024 groundwater sampling event are summarized below in Table 3-2 and Table C- 3 in Appendix C. Sample results for MNA parameters were used to assess the potential for biodegradation of contaminants in the groundwater, primarily PCE and TCE. Chlorinated solvents biodegrade primarily via reductive dechlorination, which occurs under anaerobic conditions. As shown in Table 3-2, the elevated levels of dissolved oxygen and continued presence of nitrate/nitrite and sulfate may suggest aerobic conditions in the groundwater which could be impeding dechlorination across the site.

Table 3-2. MNA Parameters at OT001/WP002.

Location	DO (mg/L)	pH	ORP (mV)	Total Alkalinity (µg/L)	Iron (µg/L)	Manganese (Cleanup Level 430 µg/L)[1]	Nitrate-Nitrite (µg/L)	TKN (µg/L)	Sulfate (µg/L)
BLO-MW01	0.56	6.41	-91	988000 [10000]	3840 [50.0]	**12900 [25.0] QL**	ND [100]	846 [300] QH, J	4690 [2500] QL, J
BLO-MW05	12.57	6.61	106	60200 [10000]	2330 [50.0]	122 [5.00]	1290 [100]	ND [300]	2380 [2500] J
BLO-MW06	12.22	6.83	122	47200 [10000]	5250 [50.0]	218 [5.00]	60.3 [100] J	ND [300]	3800 [2500] J
BLO-MW07	11.94	6.62	148	45300 [10000]	412 [50.0] QN	18.8 [5.00] QN	ND [100]	ND [300]	2450 [2500] J
BLO-MW07	11.94	6.62	148	44900 [10000]	1620 [50.0] QN	83.7 [5.00] QN	ND [100]	ND [300]	2240 [2500] J
DSA-MW01	12.72	7.07	111	102000 [10000]	43.0 [50.0] J	1.42 [5.00] J	995 [100]	ND [300]	5780 [2500]
DSA-MW01	12.72	7.07	111	105000 [10000]	38.5 [50.0] J	1.38 [5.00] J	979 [100]	ND [300]	5710 [2500]
DSA-MW02	13.26	6.54	140	125000 [10000]	5760 [50.0]	153 [5.00] QL	2220 [100]	ND [300] QH	8920 [2500] QL
DSA-MW05	5.48	6.59	125	69400 [10000]	1690 [50.0]	113 [5.00] QL	1110 [100]	183 [300] QH, J	10100 [2500] QL
DSA-MW06	0.74	6.98	-123	75800 [10000]	2430 [50.0]	**478 [5.00]**	ND [100]	ND [300]	4940 [2500] J
DSA-MW07	10.90	6.70	83	78200 [10000]	308 [50.0]	7.62 [5.00] J	264 [100]	177 [300] J	3630 [2500] J
GLO-MW04	9.48	5.86	180	69300 [10000]	112 [50.0]	6.16 [5.00] J	382 [100]	ND [300]	3870 [2500] J
RRS-MW05	16.83	6.36	157	57500 [10000]	4460 [50.0]	99.5 [5.00]	123 [100] J	ND [300]	3640 [2500] J
RRS-MW06	11.23	6.24	153	110000 [10000]	247 [50.0]	7.75 [5.00] J	1360 [100]	ND [300]	3740 [2500] J

Notes:
[1] = ADEC 18 AAC 75 Table C Groundwater Cleanup Level (ADEC 2023)
[50.0] = Laboratory Limit of Detection (LOD)
BOLD = Sample exceeds groundwater cleanup criteria
DO = Dissolved oxygen
µg/L = Microgram per liter
mL = Milliliter
mV = Millivolt
ND = Not detected above LOD
ORP = Oxidation-Reduction Potential
pH = Potential of Hydrogen
TKN = Total Kjeldahl Nitrogen

Laboratory Qualifiers
J = Result is detected below the reporting limit and/or is an estimated concentration based on data assessment
H = Analyte result is considered a low estimate due to holding time exceedance.
QH = Analyte result is considered an estimated value biased high due to a quality control.
QL = Analyte result is considered an estimated value biased low due to a quality control failure.
QN = Analyte result is considered an estimated value with unknown bias due to a quality control failure.
Flags may be combined when more than one quality deficiency exists.

3.3 SS006 Analytical Results

Analytical results for detections above the LOD at SS006 FPC-066 and SS006 FPC-215 are presented in Table 3-3 and shown on Figure 7. The complete summary of chemical data is provided in tables in Appendix C. The complete laboratory reports are included in Appendix E. Discussion of the analytical results are presented in the following sections.

3.3.1 SS006 FPC-066

A single exceedance of DRO was reported at monitoring well 066-MW05 with a concentration of 1,650 H, B µg/L. All other monitoring wells reported detectable concentrations of DRO below PAL of 1,500 µg/L. Reported DRO concentrations ranged from 310 B, J, QL µg/L (duplicate sample to 066-MW07) to 458 B, J, QL µg/L (066-MW04). The data result values for DRO from samples collected at 066-MW04, 066-MW06, 066-MW07 are flagged with qualifiers "B, J, QL" and are an estimated low due to a quality control (QC) failure and the analyte having been found in the method blank (MB). All sample results for BTEX compounds were not detected above LOD.

When compared against historical data, the analytical results for DRO detections at 066-MW05 are within historical ranges of 1,600 µg/L to 3,700 µg/L. Analytical results for monitoring well locations 066-MW04, 066-MW06, and 066-MW07 all reported anomalously high concentrations compared to previous sample results whereas results at these locations between 2017 and 2022 have been historically below 200 µg/L.

3.3.2 SS006 FPC-215

Detectable concentrations of DRO below the PAL were reported at all three monitoring wells associated with SS006 FPC-215. Concentrations ranged from 261 B, J, QL µg/L (215-MW08) to 609 B, J, QL µg/L (215-MW09). A single BTEX compound (Total Xylenes) was also reported at 215-MW09 at a concentration of 2.31 B, J, QH µg/L, well below the PAL of 1,100 µg/L. All other sample results for BTEX compounds were not detected above the LOD.

DRO has been historically detected above the PAL at monitoring well 215-MW09, although analytical results over the past two years have shown diminished concentrations at this location. Between 2009 and 2021, DRO concentrations at this location ranged between 14,000 µg/L (USAF 2019b, 2019c) to 3,430 µg/L (USAF 2022b). In 2022, DRO was not detected above the LOD. In 2023, the concentration of DRO detected at 215-MW09 was 609 B, J, QL µg/L. Overall, the data from 2023 are within expected ranges and comparable to previous sample results.

Table 3-3. Analytical Groundwater Detections at SS006.

Site	Location	Analyte	Method	Cleanup Level[1] (µg/L)	Results (µg/L)
FPC-066	066-MW04	DRO	AK102	1,500	458 [404] B, J, QL
	066-MW05	DRO	AK102	1,500	**1650 [420] H, B**
	066-MW06	DRO	AK102	1,500	391 [400] B, J, QL
	066-MW07	DRO	AK102	1,500	420 [408] B, J, QL
	066-MW07 (Field Duplicate)	DRO	AK102	1,500	310 [400] B, J, QL
FPC-215	215-MW08	DRO	AK102	1,500	261 [400] B, J, QL
	215-MW09	DRO	AK102	1,500	609 [416] B, J, QL
		Xylenes (Total)	SW8260D	190	2.31 [1.50] B, J, QH
	215-MW12	DRO	AK102	1,500	388 [412] B, J, QL

Table 3-3. Analytical Groundwater Detections at SS006, continued.

Notes:
[404] = Laboratory Limit of Detection (LOD)
[1] = ADEC 18 AAC 75 Table C Groundwater Cleanup Level (ADEC 2023)
DRO = Diesel range organics
BOLD = Sample exceeds groundwater cleanup criteria
µg/L = micrograms per liter

Laboratory Qualifiers
B = Analyte is found in the associated blank.
J = The identification of the analyte is acceptable; the reported value is an estimate.
H = Analyte result is considered a low estimate due to holding time exceedance.
QH = Analyte result is considered an estimated value biased high due to a quality control failure.
QL = Analyte result is considered an estimated value biased low due to a quality control failure.

4. DATA QUALITY REVIEW

All laboratory results, including laboratory QC sample results, were reviewed and evaluated for quality, validity, and usability. For the 2023 LTM activities, 100% of the data was validated to a level 2B. The data validation was performed in accordance with the following documents:

- *DoD General Validation Guidelines* (DoD 2019)
- *DoD Data Validation Guidelines Module 1: Data Validation Procedure for Organic Analysis by GC/MS* (DoD 2020)
- *DoD Data Validation Guidelines Module 4: Data Validation Procedure for Organic Analysis by GC* (DoD 2021a)
- *DoD Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.4* (DoD 2021b)
- EPA *National Functional Guidelines for Organic and Inorganic Superfund Methods Data Review* (2017)
- EPA SW 846, Third Edition, *Test Methods for Evaluation Solid Waste* (EPA 2018)
- Method AK102, *Determination of Diesel Range Organics*, Version 12/21/16
- *Final UFP-QAPP for Port Heiden RRS* (USAF 2021a)
- *Final Work Plan Amendment 1* (USAF 2022a)

Where specific guidance was not available, the data was evaluated in a conservative manner consistent with industry standards using professional judgment. For the 2023 LTM activities at the Port Heiden RRS, four sample delivery groups (SDGs), L1667387, L1667742, L1667791 and L1667912, were generated by Pace. A detailed summary of the chemical data is provided in tables in Appendix C. A summary of the data quality assessment review and ADEC checklists are provided in Appendix D. The complete laboratory reports are included in Appendix E.

4.1 Metals

Metals were analyzed using USEPA Method 6010D. For all sample sets, the initial calibration verification (ICV) recovery results for iron (122%) exceeded the 90-110% acceptance criteria; however, no data qualifications were required as no sample results were bracketed by the ICV. Low MS/MSD recovery for manganese resulted in "QL" (estimated biased low) qualifications on samples OT001-DSAMW04, OT001-DSAMW02, WP002-BLOMW01, and the associated equipment blank OT001-EQBK01-101523. Field duplicate relative percent differences (RPDs) for the iron and manganese results in sample OT001-BLOMW07-101323 and OT001-BLOMW99-101323 were qualified "QN" (estimated bias uncertain) as the precision of the results was >30%; however, the AK102, volatiles, and wet chemistry RPD for these two samples met method acceptance criteria. As a result, it is unlikely that the field sampling procedures resulted in the RPD exceedance for the field duplicate sample.

4.2 Volatiles

Volatiles were analyzed using USEPA Method 8260D and 8260D-LL. Multiple data sets were qualified with QN as a result of continuing calibration verification (CCV) exceedances. However, CCV exceedances were within method acceptance criteria and data is considered usable. In addition, multiple data sets were qualified "B" to indicate the presence of specific analytes within either the laboratory's MB or field equipment blank; however, these blank detections were often estimated (J) values and are not viewed to have negatively impacted the usability of the data.

4.3 Diesel Range Organics

DRO samples were analyzed using Alaska Method AK102. MB detections were present in all SDGs; however, most MB detections were less than the laboratory's limit of quantitation (LOQ) and flagged as estimated values. There were also detections in the equipment blanks associated with SDG L1667387 and L1667791. Due to the presence of contamination in the MBs, the analyte presence in the equipment blanks may be directly related to the MBs, rather than a result of insufficient equipment decontamination. Only one DRO sample result, for SS006-066MW05-101223 (extracted on 10/25/23) was marked as "do not use" during validation as a result of MB contamination. All remaining samples affected by MB contamination were appropriately flagged with a "B" during validation.

Additionally, samples in SDG L1667387 and L1667791 were also flagged as potentially biased low (QL) as a result of low laboratory control spike/control spike duplicate recoveries; however, these low recoveries were within the allowable deviation for usable data, per the method acceptance criteria.

4.4 Wet Chemistry

The following wet chemistry methods were used: SM 2320B for alkalinity, USEPA Method 351.2 for TKN, USEPA Method 353.2 for nitrate/nitrite, and USEPA Method 9056A for sulfate. For SDGs L1667742 and L1667791, the ICV recovery results for sulfate (133%) exceeded the 90-110% acceptance criteria; however, no data qualifications were required as no sample results were bracketed by the ICV. Various J (estimate) flags were applied during validation to indicate sample results that were between the MDL and LOQ. In SDG L1667791, all four samples were flagged "QH" for high MS/MSD recovery of TKN; conversely, all four samples were flagged "QL" for low MS/MSD recovery of sulfate. However, all validation flags applied were within acceptable method criteria deviation standards and data is considered usable.

4.5 Data Usability Assessment

The results of data verification and validation processes, known collectively as the data usability assessment, indicate that the data generated from the samples collected during the 2023 field activities are of sufficient quality and quantity necessary to accomplish project objectives. Sample results are representative of site conditions at the time of collection. Results obtained are comparable to industry standards in that collection and analytical techniques followed approved, documented procedures. Although multiple data were qualified, data are complete, and the results are usable for project objectives.

It should be noted that the data qualifiers used in this assessment, specifically "J", "B", "H", and "QH, QL, QN", were used to provide an overall assessment of the quality of the data within allowable method criteria and do not negatively impact the usability of the data. These qualifiers provide insight into potential bias as they may relate to QC, calibration, or field data (such as equipment blanks), and are utilized only when sample results are reported within acceptable method deviation limits. In contrast, data

reported outside acceptable method deviation limits is qualified "R" and is recommended for rejection. It should be noted, however, no data for this event warranted an "R" qualification.

The overall completeness of the data indicates that the quality of the analytical program and the laboratory and field procedures were sufficient to meet the data quality objectives. Sample results accurately indicate the presence and/or absence of target analyte concentrations at sampled locations. The overall quality of the data was acceptable. No results were rejected, and the project completeness goal of 95 percent (%) was met.

5. MANN-KENDALL TREND ANALYSIS

The MK statistical trend analysis was used to evaluate the site concentration trends. The EPA ProUCL program (EPA 2022) was used to complete the statistical analyses. The MK test is well-suited for environmental data because it can be used on small sample sizes (e.g., $n \geq 4$) and does not assume any underlying distribution for the data (e.g., it is nonparametric). The output of the MK test is the S statistic. Positive and negative S statistics are indicators of increasing and decreasing concentration trends, respectively. To differentiate whether a trend finding from the S-statistic is statistically significant, ProUCL was used to develop a decision matrix based on the S-statistic, the confidence in the trend, and the coefficient of variation (COV). The confidence level, expressed as a percentage, is calculated by subtracting the probability (p) from 1 (e.g., confidence = [1-p] x 100). The p-value indicates whether or not the association between the response and predictor (analyte concentration vs. time) is statistically significant at the given level of confidence. The COV is defined as the standard deviation of the sample set divided by the average of the sample set. Based on the results of calculating these three statistics, the concentration trend indicated by the S-statistic as listed in the decision matrix presented in Table 5-1. Appendix F provides the ProUCL output for the MK analyses for DRO, TCE and manganese.

Table 5-1. Mann-Kendall Statistical Trend Analysis Decision Matrix.

Mann-Kendall Statistic	Confidence in Trend	Statistical Trend
S > 0	> 95%	Increasing
	90 - 95%	Likely Increasing
	< 90%	No Trend
S ≤ 0	< 90% and COV ≥ 1	No Trend
	< 90% and COV < 1	Stable
S < 0	90 - 95%	Likely Decreasing
	> 95%	Decreasing

Acronyms:
> = greater than; ≥ greater or equal to; < less than
COV = Coefficient of Variation

The results of the MK tests are summarized in Table 5-2 for DRO, Table 5-3 for PCE, Table 5-4 for TCE, and Table 5-5 for manganese. A summary from the trend analysis is presented below:

- The MK results for DRO show an increasing trend within Site SS006-066 monitoring wells 066-MW06 and 066-MW07, whereas DRO concentrations are decreasing at monitoring well 215-MW09. The trend analysis also shows reduced DRO concentrations at Site WP002 at monitoring well BLO-MW01.

- The MK results for PCE show a single trend of decreasing concentrations at Site OT001 from monitoring well DSA-MW06. No data trends were identified from the remaining sample locations.

- The MK results for TCE show a single trend of decreasing concentrations at Site OT001 from monitoring well DSA-MW02. No data trends were identified from the remaining sample locations.

- No trends were identified for manganese at any of the sample locations.

Table 5-2. DRO Mann-Kendall Statistical Trend Analysis.

Site ID	Well ID	Analyte	Mann-Kendall Statistic (S)	p-Value	Confidence Factor (%)	COV	Mann-Kendall Trend
SS006	066-MW04	DRO	8	0.233	76.7	0.696	No Trend
	066-MW05	DRO	-16	0.18	82	0.43	No Trend
	066-MW06	DRO	24	0.00824	99.17	1.016	Increasing
	066-MW07	DRO	13	0.0358	96.42	1.189	Increasing
	215-MW08	DRO	6	0.342	65.8	2.128	No Trend
	215-MW09	DRO	-41	0.007	99.3	0.656	Decreasing
	215-MW12	DRO	7	0.184	81.6	0.71	No Trend
WP002	BLO-MW01	DRO	-39	0.001	99.9	2.103	Decreasing
	BLO-MW05	DRO	-7	0.431	56.9	1.191	No Trend
	BLO-MW06	DRO	-5	0.381	61.9	1.348	No Trend
	BLO-MW07	DRO	6	0.224	77.6	0.976	No Trend
OT001	DSA-MW01	DRO	6	0.169	83.1	0.58	No Trend
	DSA-MW02	DRO	5	0.337	66.3	1.022	No Trend
	DSA-MW05	DRO	4	0.231	76.9	0.687	No Trend
	DSA-MW06	DRO	1	0.5	50	0.617	No Trend
	DSA-MW07	DRO	4	0.231	76.9	0.625	No Trend
	GLO-MW04	DRO	2	0.408	59.2	0.817	No Trend
	RRS-MW05	DRO	4	0.231	76.9	0.622	No Trend
	RRS-MW06	DRO	6	0.11	89	0.722	No Trend

Acronyms:
COV = Coefficient of Variation
DRO = Diesel Range Organics
NA = Not Applicable

Table 5-3. PCE Mann-Kendall Statistical Trend Analysis.

Site ID	Well ID	Analyte	Mann-Kendall Statistic (S)	p-Value	Confidence Factor (%)	COV	Mann-Kendall Trend
WP002	BLO-MW01	PCE	-4	0.231	76.9	2.232	No Trend
	BLO-MW05	PCE	3	0.307	69.3	0.837	No Trend
	BLO-MW06	PCE	3	0.307	69.3	0.831	No Trend
	BLO-MW07	PCE	-4	0.231	76.9	2.228	No Trend
OT001	DSA-MW01	PCE	1	0.5	50	1.86	No Trend
	DSA-MW02	PCE	-4	0.231	76.9	2.219	No Trend
	DSA-MW05	PCE	1	0.5	50	0.729	No Trend
	DSA-MW06	PCE	-8	0.0432	95.68	1.231	Decreasing
	DSA-MW07	PCE	-3	0.354	64.6	2.394	No Trend
	GLO-MW04	PCE	1	0.5	50	0.783	No Trend
	RRS-MW05	PCE	3	0.307	69.3	0.839	No Trend
	RRS-MW06	PCE	4	0.217	78.3	0.33	No Trend

Acronyms:
COV = Coefficient of Variation
PCE = Tetrachloroethene

Table 5-4. TCE Mann-Kendall Statistical Trend Analysis.

Site ID	Well ID	Analyte	Mann-Kendall Statistic (S)	p-Value	Confidence Factor (%)	COV	Mann-Kendall Trend
WP002	BLO-MW01	TCE	8	0.292	70.8	3.26	No Trend
	BLO-MW05	TCE	7	0.227	77.3	0.854	No Trend
	BLO-MW06	TCE	-2	0.44	56	1.126	No Trend
	BLO-MW07	TCE	-2	0.448	55.2	0.492	No Trend
OT001	DSA-MW01	TCE	-12	0.251	74.9	2.964	No Trend
	DSA-MW02	TCE	-49	0.00167	99.833	0.2	Decreasing
	DSA-MW05	TCE	1	0.5	50	0.504	No Trend
	DSA-MW06	TCE	-4	0.281	71.9	0.794	No Trend
	DSA-MW07	TCE	-3	0.354	64.6	2.394	No Trend
	GLO-MW04	TCE	1	0.5	50	0.879	No Trend
	RRS-MW05	TCE	4	0.283	71.7	1.115	No Trend
	RRS-MW06	TCE	3	0.307	69.3	1.047	No Trend

Acronyms:
COV = Coefficient of Variation
TCE = Trichloroethene

Table 5-5. Manganese Mann-Kendall Statistical Trend Analysis.

Site ID	Well ID	Analyte	Mann-Kendall Statistic (S)	p-Value	Confidence Factor (%)	COV	Mann-Kendall Trend
WP002	BLO-MW01	Manganese	7	0.184	81.6	1.308	No Trend
	BLO-MW05	Manganese	10	0.133	86.7	0.942	No Trend
	BLO-MW06	Manganese	7	0.227	77.3	0.823	No Trend
	BLO-MW07	Manganese	0	N/A	N/A	1.231	No Trend
OT001	DSA-MW01	Manganese	-10	0.133	86.7	0.848	No Trend
	DSA-MW02	Manganese	2	0.451	54.9	1.84	No Trend
	DSA-MW05	Manganese	-8	0.193	80.7	0.508	No Trend
	DSA-MW06	Manganese	0	N/A	N/A	0.235	No Trend
	DSA-MW07	Manganese	-10	0.138	86.2	1.715	No Trend
	GLO-MW04	Manganese	-8	0.193	80.7	1.998	No Trend
	RRS-MW05	Manganese	-10	0.133	86.7	0.79	No Trend
	RRS-MW06	Manganese	-10	0.133	86.7	2	No Trend

Acronyms:
COV = Coefficient of Variation

6. SUMMARY AND RECOMMENDATIONS

The following conclusions and recommendations are made based on the visual observations and analytical results of the 2023 LTM activities conducted at Port Heiden RRS in October 2023. Site activities included IC inspections at four (4) sites and groundwater sampling at three sites.

IC inspections were completed at four sites listed below. Most LUCs appeared to be in good condition with no evidence of activities prohibited under the LUCMP (USAF 2023a). Specific findings from the visual site inspections and groundwater monitoring results are presented below.

6.1 LF007

The following summarizes the findings at Site LF007:

- Two LUC signs were in observed in good condition at the entrance to the landfill.
- Wire fencing at the site's entrance was observed to be pulled to one side of the driveway so that vehicles may access the site.
- Exposed soil was observed in areas throughout the site.
- The landfill was observed to be more of an open excavation with piles of drums and metal debris, geotextile fabric, sandbags, survey lath, and a poly overpack drum scattered around the area. The geotextile fabric that had been covering areas with remaining PCB contamination appeared to be strewn about the site and are no longer functioning as intended. Areas along the sidewalls show evidence of water infiltration and erosion. Unused rolls of geotextile fabric were left on the south side of the site.

The following site-specific actions are recommended based on the 2023 site inspection observations:

- Repair and maintain the fencing across the driveway between the LUC notification signs to discourage trespassing at the landfill.
- Cover areas in the landfill with geotextile liner material to reduce rain infiltration and migration of remaining contaminants.
- Remove trash and project materials from previous removal actions following completion of remediation activities at LF007.
- Continue annual LUC/IC inspections at LF007.

6.2 OT001 and WP002

The following summarizes the findings at Sites OT001 and WP002:

- Two LUC signs associated with OT001 were observed to be in fair condition. The eastern sign had approximately half a dozen bullet holes.
- The two LUC signs for WP002 had been blown off the signposts. One sign was located and reinstalled while the other sign will need to be replaced.

- Combination locks were installed on all 12 monitoring wells sampled. Well caps were also installed on BLO-MW05 and RRS-MW05. Monitoring wells BLO-MW05, BLO-MW06, BLO-MW07, DSA-MW05, and RRS-MW05 had poor recharge/excessive drawdown when purging for groundwater sampling. Monitoring wells DSA-MW04, GLO-MW03, PG1-MW01, and UST-MW02 are either destroyed or cannot be sampled.

- The gravel areas were saturated as puddling was observed in areas compacted by vehicular traffic and other areas were too soft to drive on. Several areas of erosion where rain has runoff from the gravel pad into areas formerly excavated/revegetated. The most notable areas of erosion were in a revegetated area in the vicinity of monitoring wells DSA-MW01, DSA-MW05, DSA-MW06, and DSA-MW07. A patch of possibly distressed vegetation was also observed along the road near DSA-MW06. Various materials from previous site activities remain on site. Materials include plastic construction fencing, metal fence posts, traffic cones, geotextile fabric, supersacks, overpack drums, and several shipping containers.

The following exceedances of the ADEC Table C human health cleanup levels were reported in groundwater samples collected in 2023:

- DRO, naphthalene, and TCE at monitoring well BLO-MW01.

- TCE in three wells: DSA-MW01, DSA-MW02, and DSA-MW05, the greatest of which was detected in DSA-MW02 with a concentration of 380 µg/L.

- Manganese in two wells: BLO-MW01 and DSA-MW06.

The 2023 MNA results suggest limited anaerobic activity in the groundwater based on the elevated levels of dissolved oxygen and electron acceptors (nitrate and sulfate). Low dissolved oxygen concentrations and reduced oxidation reduction potential are favorable to TCE breakdown. Over time, the current aerobic conditions actively reducing DRO concentrations are anticipated to transform to anerobic conditions, and become more effective at reducing TCE, PCE and related chlorinated daughter products.

The 2023 MK statistical analysis showed decreasing trends of DRO at monitoring well BLO-MW01, PCE at DSA-MW06, and TCE at DSA-MW02. The DRO trend mainly corresponds with the results from 2022 which also indicated a single significantly decreasing trend at BLO-MW01. However, the trend analysis for TCE shows a slight departure when compared to the 2022 MK results which formerly indicated a stable trend at DSA-MW05 and likely increasing trends at GLO-MW04, RRS-MW05, and RRS-MW06 (USAF 2024).

The following site-specific actions are recommended based on the 2023 site inspection observations and sampling results:

- Replace missing LUC sign at Site WP002.
- Install new locks on monitoring wells 215-MW08, 215-MW09, and 215-MW12.
- Trash and project materials from previous removal actions should be removed following completion of remediation activities at OT001.
- Replace the following wells: DSA-MW-04, PG1-MW-01, UST-MW-02, and GLO-MW-03.
- Continue groundwater monitoring at OT001 and WP002.
- Continue annual LUC/IC inspections at Sites OT001 and WP002.

6.3 SS006

The following summarizes the findings at Site SS006 at areas FPC-066 and FPC-215:

- Minor repairs were made to made to multiple wells at FPC-066. New locks were installed at the four wells associated with FPC-066.
- Repairs were made to monitoring wells 215-MW08 and 215-MW09 at FPC-215. A new monument lid was installed on monitoring well 215-MW08, and a lid was repaired with new set screws at 215-MW09.

The following summarizes the 2023 groundwater monitoring results at FPC-066 and FPC-215:

- Well 066-MW05 had a concentration of DRO (1,650 H, B µg/L) that exceeded the ADEC Table C human health cleanup level of 1,500 µg/L. The well is located in the center of the interpolated groundwater plume. Concentrations of DRO below the PAL were detected at 066-MW04, 066-MW06, and 066-MW07; these concentrations, which ranged between 391 B, J, QL µg/L to 458 B, J, QL µg/L, increased since 2022. No BTEX constituents were detected at any of the wells sampled. Results of the 2023 MK statistical analysis at FPC-066 showed increasing trends of DRO at monitoring wells 066-MW06 and 066-MW07. The 2023 MK results showed changing trends when compared against the 2022 results, which were formerly stable at 066-MW05 and increasing at 066-MW06.

- Detectable concentrations of DRO were reported at all monitoring wells sampled at FPC-215, ranging between 261 B, J, QL µg/L and 609 B, J, QL µg/L. A single detection of total xylenes was also reported at monitoring well 215-MW09 with a concentration of 2.31 B, J, QH µg/L. Since 2022, analytical results have shown decreased concentrations at 215-MW09. All other results have been consistent with the historical data. The 2023 MK statistical analysis showed a single decreasing trend of DRO at monitoring well 215-MW09. The results from the 2023 trends are similar to previous trends conducted in years 2022 and 2021.

The following site-specific actions are recommended based on the 2023 site inspection observations and sampling results:

- Due to the corrosive environment, the combination locks installed during the LUC/IC inspection in 2022 will likely need to be replaced.
- Continue annual LUC/IC inspections at SS006.
- Continue groundwater monitoring at SS006.

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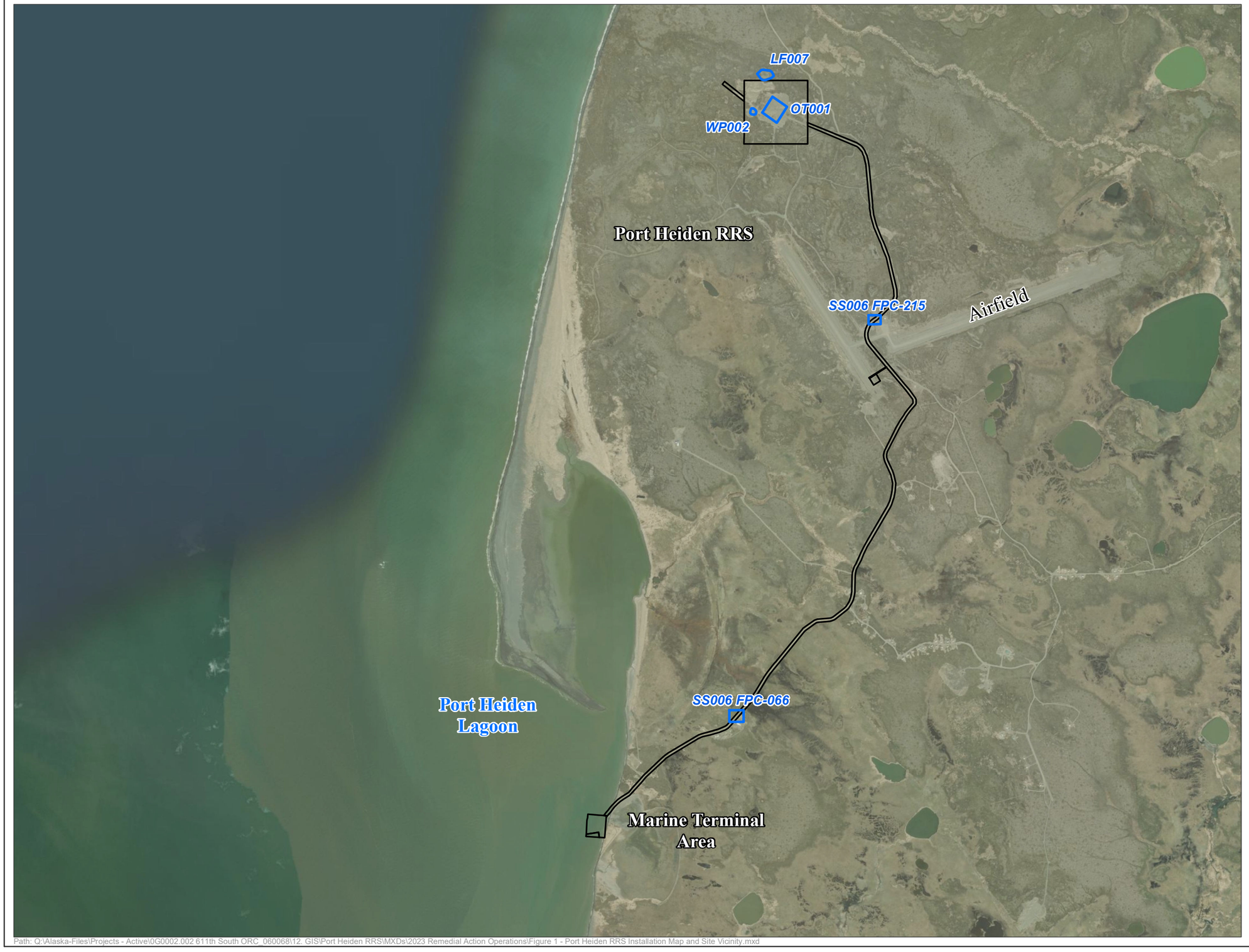
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FIGURES





Legend

- Installation Boundary
- Land Use Control Restriction

Notes:

1. LUC boundaries depicted on this figure are preliminary pending final analysis of survey information. LUC boundaries will be updated once this information is available.
2. Boundary data are from 611th GeoBase or have been georeferenced into GIS from historical documents. Data could be incomplete and are of unknown accuracy.
3. For more detailed land use restriction information, see individual site descriptions and summaries.

Acronyms

GIS - Geographic Information System
LUC - Land Use Control
RRS - Radio Relay Station

0 1,000 2,000 4,000 6,000

Feet

1 inch = 3,000 feet

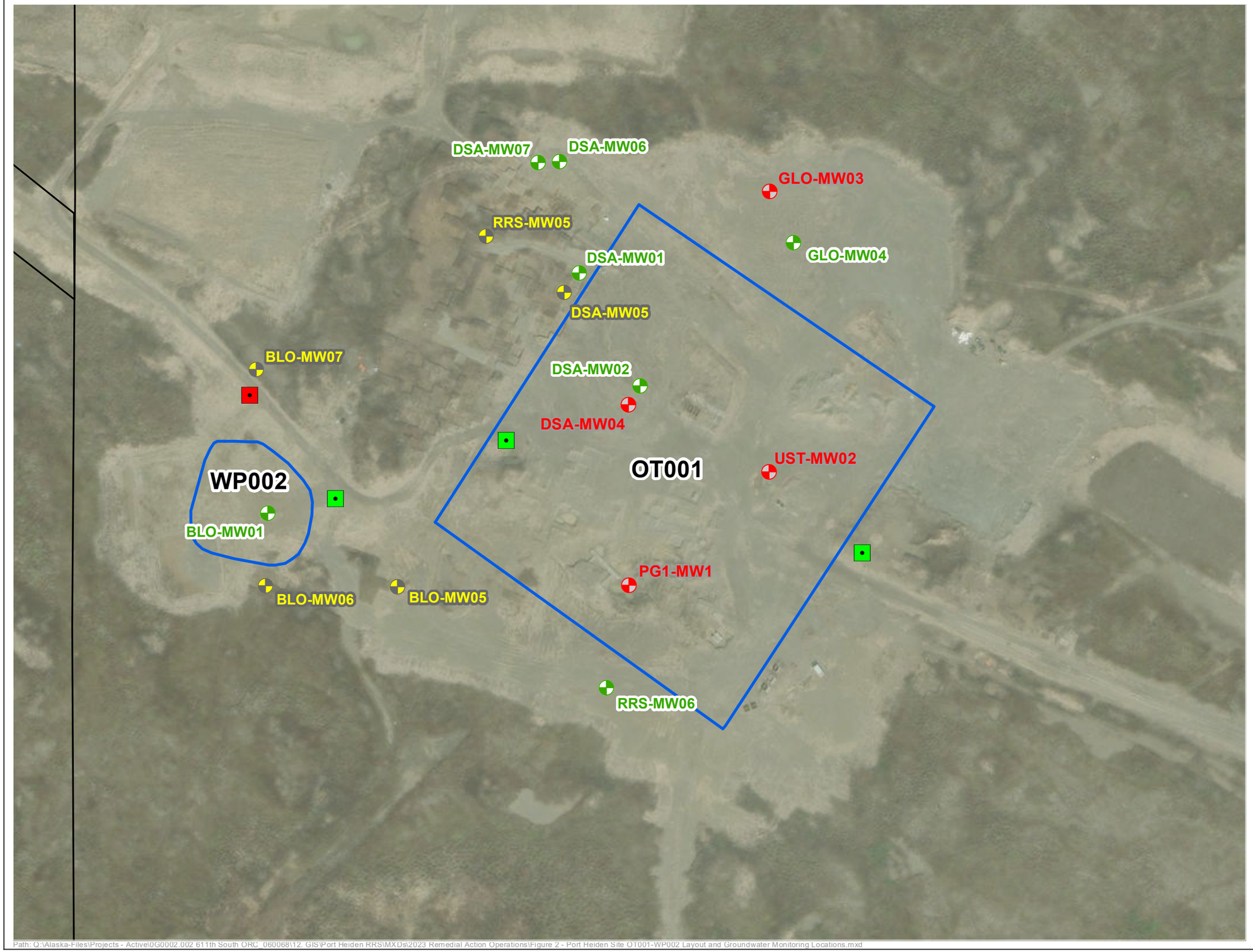
Coordinate System: NAD 1983 UTM Zone 4N

2023 Remedial Action Operations, Land Use/Institutional Control

Port Heiden RRS, Alaska

Figure 1 - Port Heiden RRS Installation Map and Site Vicinity

Path: Q:\Alaska-Files\Projects - Active\0G0002.002 611th South ORC_060068\12. GIS\Port Heiden RRS\MXDs\2023 Remedial Action Operations\Figure 1 - Port Heiden RRS Installation Map and Site Vicinity.mxd





Legend

- Installation Boundary
- LUC Boundary
- Existing Sign
- Sign Missing
- Monitoring Well in Good Condition
- Monitoring Well Has Slow Recharge
- Monitoring Well in Poor Condition

Notes:

1. LUC boundaries depicted on this figure are preliminary pending final analysis of survey information. LUC boundaries will be updated once this information is available.
2. Boundary data are from 611th GeoBase or have been georeferenced into GIS from historical documents. Data could be incomplete and are of unknown accuracy.
3. For more detailed land use restriction information, see individual site descriptions and summaries.

Acronyms

GIS - Geographic Information System
LUC - Land Use Control
RRS - Radio Relay Station

0 100 200 300
Feet

1 inch = 150 feet

Coordinate System: NAD 1983 UTM Zone 4N

2023 Remedial Action Operations, Land Use/Institutional Controll
Port Heiden RRS, Alaska

Figure 2 - Port Heiden Site OT001/WP002 Layout and Groundwater Monitoring Locations

Path: Q:\Alaska-Files\Projects - Active\0G0002.002.611th South ORC_060068\12. GIS\Port Heiden RRS\MXDs\2023 Remedial Action Operations\Figure 2 - Port Heiden Site OT001-WP002 Layout and Groundwater Monitoring Locations.mxd





Legend

- Installation Boundary
- LUC Boundary
- Monitoring Well (Good Condition)

Notes:
1. LUC boundaries depicted on this figure are preliminary pending final analysis of survey information. LUC boundaries will be updated once this information is available.
2. Boundary data are from 611th GeoBase or have been georeferenced into GIS from historical documents. Data could be incomplete and are of unknown accuracy.
3. For more detailed land use restriction information, see individual site descriptions and summaries.

Acronyms
ERP - Environmental Restoration Program
GIS - Geographic Information System
LUC - Land Use Control
RRS - Radio Relay Station

0 25 50 100 150 200
Feet

1 inch = 100 feet

Coordinate System: NAD 1983 UTM Zone 4N

2023 Remedial Action Operations, Land Use/Institutional Control
Port Heiden RRS, Alaska

Figure 3 - Port Heiden Site SS006 FPC-066 Layout and Monitoring Well Locations

Path: Q:\Alaska-Files\Projects - Active\0G0002.002 611th South ORC_060068\12. GIS\Port Heiden RRS\MXDs\2023 Remedial Action Operations\Figure 3 - Port Heiden Site SS006 FPC-066 Layout and Monitoring Well Locations.mxd





Legend

- Installation Boundary
- LUC Boundary
- Monitoring well has slow recharge

Notes:
1. LUC boundaries depicted on this figure are preliminary pending final analysis of survey information. LUC boundaries will be updated once this information is available.
2. Boundary data are from 611th GeoBase or have been georeferenced into GIS from historical documents. Data could be incomplete and are of unknown accuracy.
3. For more detailed land use restriction information, see individual site descriptions and summaries.

Acronyms
GIS - Geographic Information System
LUC - Land Use Control
RRS - Radio Relay Station

0 25 50 100 150 200
Feet

1 inch = 125 feet

Coordinate System: NAD 1983 UTM Zone 4N

2023 Remedial Action Operations, Land Use/Institutional Control
Port Heiden RRS, Alaska

Figure 4 - Port Heiden Site SS006 FPC-215 Layout and Monitoring Well Locations

Path: Q:\Alaska-Files\Projects - Active\0G0002.002 611th South ORC_060068\12. GIS\Port Heiden RRS\MXDs\2023 Remedial Action Operations\Figure 4 - Port Heiden Site SS006 FPC-215 Layout and Monitoring Well Locations.mxd





Legend

- Installation Boundary
- LUC Boundary
- Monitoring Well (In Good Condition)
- Monitoring Well (Poor Condition)
- Existing Sign in Good Condition

Notes:
1. LUC boundaries depicted on this figure are preliminary pending final analysis of survey information. LUC boundaries will be updated once this information is available.
2. Boundary data are from 611th GeoBase or have been georeferenced into GIS from historical documents. Data could be incomplete and are of unknown accuracy.
3. For more detailed land use restriction information, see individual site descriptions and summaries.

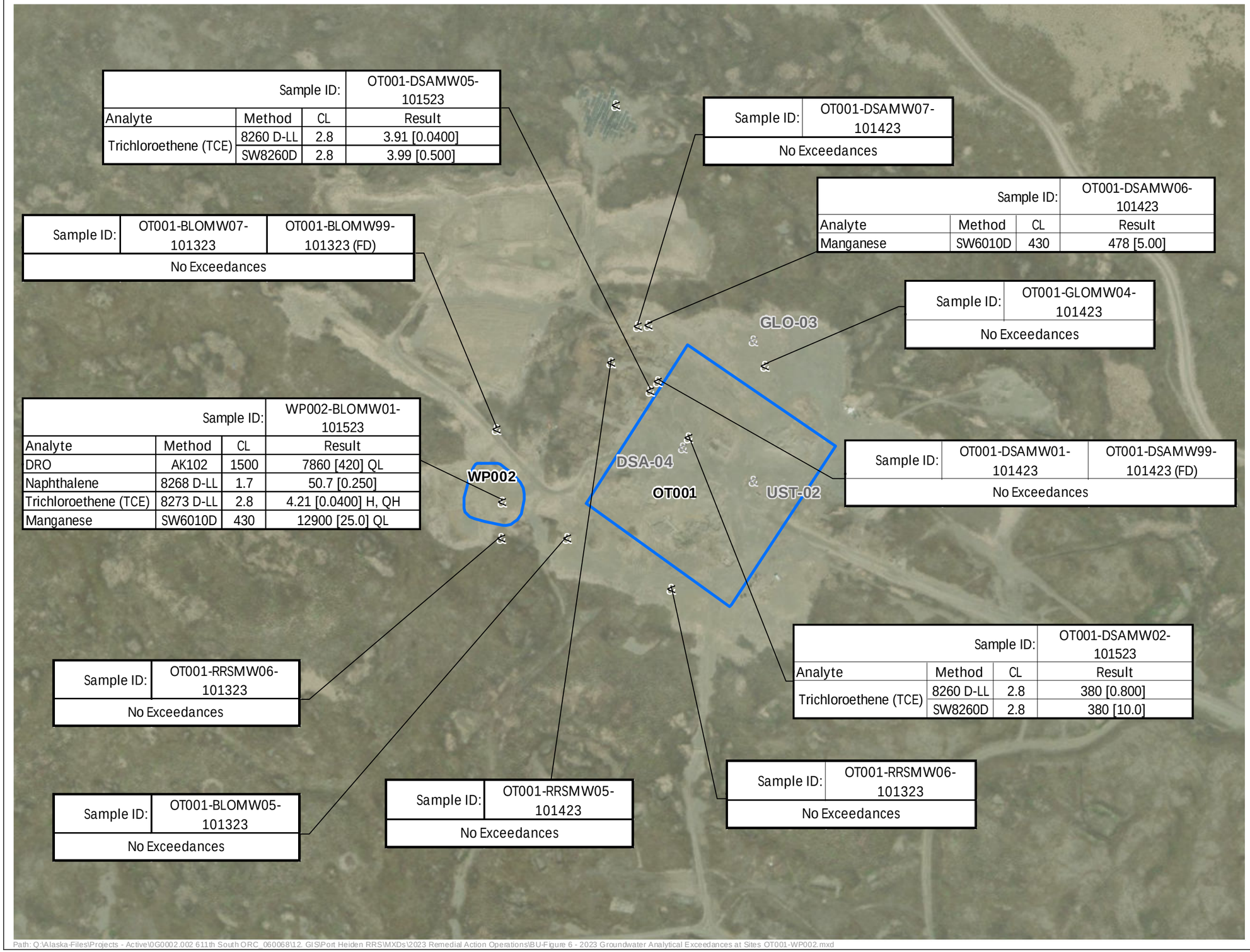
Acronyms
GIS - Geographic Information System
LUC - Land Use Control
RRS - Radio Relay Station

0 100 200 300
Feet
1 inch = 125 feet
Coordinate System: NAD 1983 UTM Zone 4N

2023 Remedial Action Operations, Land Use/Institutional Control
Port Heiden RRS, Alaska

Figure 5 - Port Heiden Site LF007 Layout

Path: Q:\Alaska-Files\Projects - Active\0G0002.002 611th South ORC_060068\12. GIS\Port Heiden RRS\MXDs\2023 Remedial Action Operations\Figure 5 - Port Heiden Site LF007 Layout.mxd



	Sample ID:	OT001-DSAMW05-101523
Analyte	Method	CL	Result
Trichloroethene (TCE)	8260 D-LL	2.8	3.91 [0.0400]
	SW8260D	2.8	3.99 [0.500]

Sample ID:	OT001-DSAMW07-101423
No Exceedances	

	Sample ID:	OT001-DSAMW06-101423
Analyte	Method	CL	Result
Manganese	SW6010D	430	478 [5.00]

Sample ID:	OT001-BLOMW07-101323	OT001-BLOMW99-101323 (FD)
No Exceedances		

Sample ID:	OT001-GLOMW04-101423
No Exceedances	

	Sample ID:	WP002-BLOMW01-101523
Analyte	Method	CL	Result
DRO	AK102	1500	7860 [420] QL
Naphthalene	8268 D-LL	1.7	50.7 [0.250]
Trichloroethene (TCE)	8273 D-LL	2.8	4.21 [0.0400] H, QH
Manganese	SW6010D	430	12900 [25.0] QL

Sample ID:	OT001-DSAMW01-101423	OT001-DSAMW99-101423 (FD)
No Exceedances		

	Sample ID:	OT001-DSAMW02-101523
Analyte	Method	CL	Result
Trichloroethene (TCE)	8260 D-LL	2.8	380 [0.800]
	SW8260D	2.8	380 [10.0]

Sample ID:	OT001-RRSMW06-101323
No Exceedances	

Sample ID:	OT001-BLOMW05-101323
No Exceedances	

Sample ID:	OT001-RRSMW05-101423
No Exceedances	

Sample ID:	OT001-RRSMW06-101323
No Exceedances	



Legend

- LUC Boundary
- < Monitoring Well
- < Damaged Well

Notes

- LUC boundaries depicted on this figure are preliminary pending survey information and will be updated when available.
- Boundary data are from 611th GeoBase or have been georeferenced into GIS from historical documents. Data could be incomplete and are of unknown accuracy.
- For more detailed land use restriction information, see 2023 Land Use Control Management Plan.
- [1] Groundwater cleanup level is from 18 AAC 75.345 Table C (ADEC 2023). Result presented with the laboratory Limit of Detection in brackets [LOD].
- All results reported in micrograms per liter (µg/L)
- Samples were analyzed for DRO, VOCs, low-level VOCs and MNA (iron, manganese, sulfate, alkalinity, nitrate and nitrogen).

Acronyms

µg/L = micrograms per liter
CL = Cleanup Level
DRO = Diesel range organics
FD = Field Duplicate
GIS = Geographic Information System
DL = Detection Limit
LUC = Land Use Control
MNA = Monitored Natural Attenuation
ND = Not detected above the LOD
RRS = Radio Relay Station
VOC = Volatile Organic Compounds

Qualifers

H = Result considered a low estimate due to holding time exceedance
QH = Result is considered estimated biased high due to matrix effects or a quality control failure
QL = Result is considered estimated biased low due to matrix effects or a quality control failure

0 100 200 300 400 500 Feet

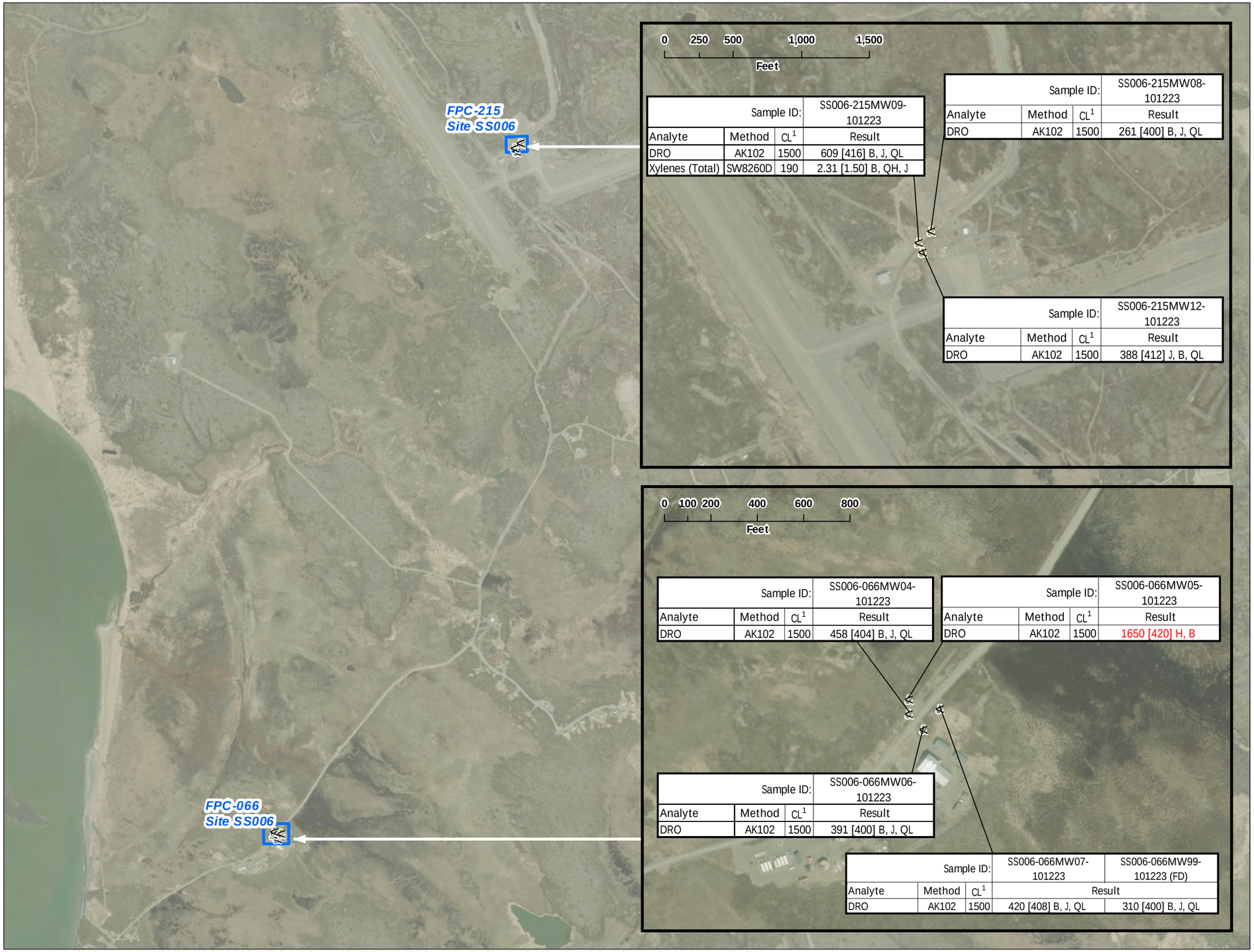
1 inch = 300 feet

Coordinate System: NAD 1983 UTM Zone 4N

2023 Remedial Action Operations, Land Use/Institutional Control
Port Heiden RRS, Alaska

Figure 6 – 2023 Groundwater Analytical Exceedances, Sites OT001 and WP002

Path: Q:\Alaska-Files\Projects - Active\0G0002.002 611th South ORC_060068\12. GIS\Port Heiden RRS\MXDs\2023 Remedial Action Operations\BU-Figure 6 - 2023 Groundwater Analytical Exceedances at Sites OT001-WP002.mxd





Legend

- Installation Boundary
- LUC Boundary
- < Monitoring Well

Notes

- LUC boundaries depicted on this figure are preliminary pending survey information and will be updated when available.
- Boundary data are from 611th GeoBase or have been georeferenced into GIS from historical documents. Data could be incomplete and are of unknown accuracy.
- For more detailed land use restriction information, see 2023 Land Use Control Management Plan.
- [1] Groundwater cleanup level is from 18 AAC 75.345 Table C (ADEC 2023). Result presented with the laboratory Limit of Detection in brackets [LOD].
- All results reported in micrograms per liter (µg/L)
- All samples were analyzed for DRO and BTEX.
- **BOLD RED** exceeds CL.

Acronyms

µg/L = micrograms per liter
BTEX = Benzene, toluene, ethylbenzene and xylenes
CL = Cleanup Level
DL = Detection Limit
DRO = Diesel Range Organics
FD = Field Duplicate
GIS = Geographic Information System
LUC = Land Use Control
RRS = Radio Relay Station

Qualifers

B = Result considered estimated high due to contamination present in the blank
H = Result considered a low estimate due to holding time exceedance
J = Result is considered estimated because the level is below the laboratory LOQ but above the DL
QH = Result is considered estimated biased high due to matrix effects or a quality control failure
QL = Result is considered estimated biased low due to matrix effects or a quality control failure

0 875 1,750 3,500 Feet

1 inch = 1,750 feet

Coordinate System: NAD 1983 UTM Zone 4N

2023 Remedial Action Operations, Land Use/Institutional Control

Port Heiden RRS, Alaska

Figure 7 – 2023 Groundwater Analytical Detections, Site SS006

Path: Q:\Alaska-Files\Projects - Active\0G0002.002 611th South ORC_060068\12. GIS\Port Heiden RRS\MXDs\2023 Remedial Action Operations\BU-Figure 7 - 2023 Groundwater Analytial Detections at Site SS006.mxd

APPENDIX A

Photographic Log

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Site LF007

Photograph No.: 001	**Photo ID:** PA110170
Date Taken: 11 Oct 2023	
Photograph taken by: K. Reichle	
Direction: North	**Location:** LF007
Description: LUC signs at entrance to landfill area.	



Photograph No.: 002	**Photo ID:** P9A110171
Date Taken: 11 Oct 2023	
Photograph taken by: K. Reichle	
Direction: North	**Location:** LF007
Description: LUC #1 located on the right side of the driveway into the landfill area.	



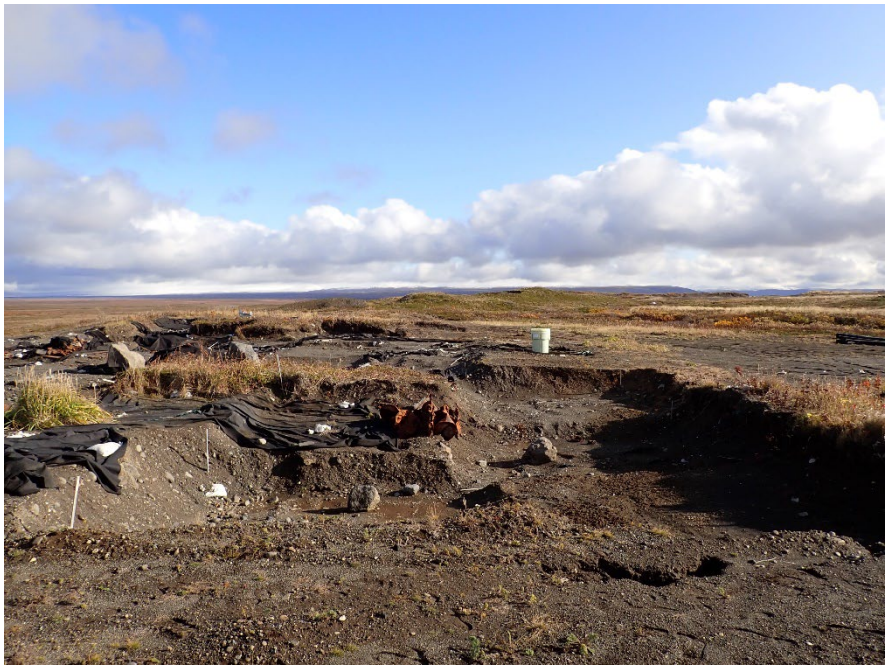
Photograph No.: 003	**Photo ID:** PA110172
Date Taken: 11 Oct 2023	
Photograph taken by: K. Reichle	
Direction: North	**Location:** LF007
Description: LUC sign #2 located on the left side of the driveway into the landfill area. Note: Fencing had been pulled to the side to allow for vehicle traffic.	



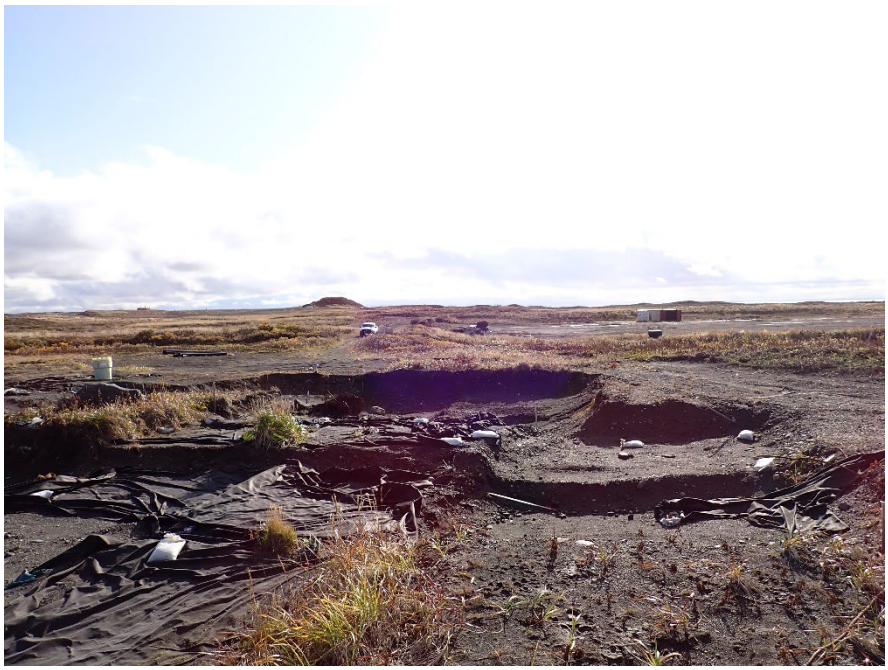
Photograph No.: 004	**Photo ID:** PA110174
Date Taken: 11 Oct 2023	
Photograph taken by: K. Reichle	
Direction: North	**Location:** LF007
Description: Parking area in front of landfill.	



Photograph No.: 005	**Photo ID:** PA110176
Date Taken: 10 Oct 2023	
Photograph taken by: K. Reichle	
Direction: East	**Location:** LF007
Description: Overview of site conditions facing east.	



Photograph No.: 006	**Photo ID:** PA110179
Date Taken: 11 Oct 2023	
Photograph taken by: K. Reichle	
Direction: South	**Location:** LF007
Description: Overview of site conditions facing south.	



Photograph No.: 007	**Photo ID:** PA110180
Date Taken: 11 Oct 2023	
Photograph taken by: K. Reichle	
Direction: North	**Location:** LF007
Description: Metal drums, debris, and geotextile fabric leftover following the 2022 removal action	



Photograph No.: 008	**Photo ID:** PA110183
Date Taken: 1 Oct 2023	
Photograph taken by: K. Reichle	
Direction: Northwest	**Location:** LF007
Description: Debris sand geotextile fabric leftover from 2022 removal action.	



Photograph No.: 009	**Photo ID:** PA110187
Date Taken: 11 Oct 2023	
Photograph taken by: K. Reichle	
Direction: North	**Location:** LF007
Description: Monitoring well located north/downgradient from the landfill at LF007.	



Photograph No.: 010	**Photo ID:** PA110188
Date Taken: 11 Oct 2023	
Photograph taken by: K. Reichle	
Direction: West	**Location:** LF007
Description: Plastic sheeting presumably blown from the landfill onto the tundra. The sheeting was removed and disposed of after the photograph.	



Site OT001

Photograph No.: 011	**Photo ID:** PA160324
Date Taken: 16 Oct 2023	
Photograph taken by: K. Reichle	
Direction: South	**Location:** OT001
Description: LUC sign #1 at entrance to site OT001.	



Photograph No.: 012	**Photo ID:** PA160330
Date Taken: 16 Oct 2023	
Photograph taken by: K. Reichle	
Direction: East	**Location:** OT001
Description: LUC sign #2 located next to stockpile near center of the site.	



Photograph No.: 013	**Photo ID:** PA160406
Date Taken: 16 Oct 2023	
Photograph taken by: K. Reichle	
Direction: West	**Location:** OT001
Description: Bullet holes in LUC sign #2 located next to the stockpile near the center of	



Photograph No.: 014	**Photo ID:** PA160344
Date Taken: 16 Oct 2023	
Photograph taken by: K. Reichle	
Direction: East	**Location:** OT001
Description: Overview of site as viewed from monitoring well RRS-MW06.	



Photograph No.: 015	**Photo ID:** PA160327
Date Taken: 10 Oct 2023	
Photograph taken by: K. Reichle	
Direction: East	**Location:** OT001
Description: Overview of site OT001 as viewed facing East from top of the stockpile near center of the site.	



Photograph No.: 016	**Photo ID:** PA160328
Date Taken: 10 Oct 2023	
Photograph taken by: K. Reichle	
Direction: North	**Location:** OT001
Description: Overview of site OT001 as viewed facing north from top of the stockpile near center of the site.	



Photograph No.: 017	**Photo ID:** PA160333
Date Taken: 16 Oct 2023	
Photograph taken by: K. Reichle	
Direction: Northwest	**Location:** OT001
Description: Erosion next to the stockpile facing northwest.	



Photograph No.: 018	**Photo ID:** PA160335
Date Taken: 16 Oct 2023	
Photograph taken by: K. Reichle	
Direction: Northeast	**Location:** OT001
Description: Erosion in the revegetated area near monitoring wells DSA-MW01 and DSA-MW05.	



Photograph No.: 019	**Photo ID:** PA160347
Date Taken: 10 Oct 2023	
Photograph taken by: K. Reichle	
Direction: East	**Location:** OT001
Description: Possible distressed vegetation along road near DSA-MW06.	



Photograph No.: 020	**Photo ID:** PA160355
Date Taken: 16 Oct 2023	
Photograph taken by: K. Reichle	
Direction: Northeast	**Location:** OT001
Description: Leftover traffic cones near monitoring well DSA-MW04.	



Photograph No.: 021	**Photo ID:** PA160366
Date Taken: 10 Oct 2023	
Photograph taken by: K. Reichle	
Direction: East	**Location:** OT001
Description: Project materials left by previous contractor on east side of the site.	



Photograph No.: 022	**Photo ID:** PA160409
Date Taken: 16 Oct 2023	
Photograph taken by: K. Reichle	
Direction: East	**Location:** OT001
Description: Project materials left by previous contractor on east side of site.	



Photograph No.: 023	**Photo ID:** PA160396
Date Taken: 10 Oct 2023	
Photograph taken by: K. Reichle	
Direction: South	**Location:** OT001
Description: Discarded construction fence materials.	



Photograph No.: 024	**Photo ID:** PA160354
Date Taken: 16 Oct 2023	
Photograph taken by: K. Reichle	
Direction: Northwest	**Location:** OT001
Description: Construction fencing and other discarded project materials.	



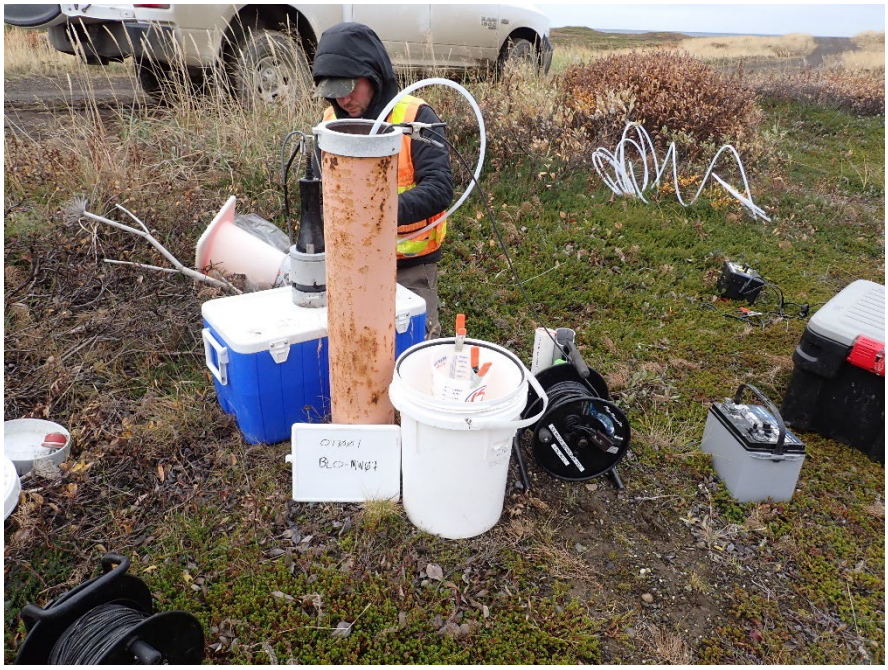
Photograph No.: 025	**Photo ID:** PA13216
Date Taken: 13 Oct 2023	
Photograph taken by: K. Reichle	
Direction: West	**Location:** OT001
Description: Groundwater sampling at RRS-MW06.	



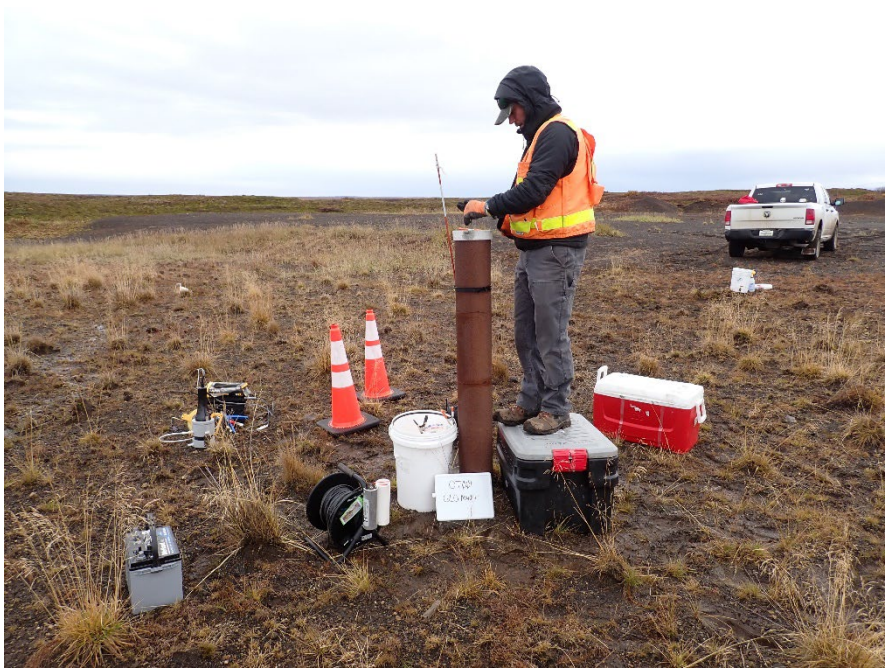
Photograph No.: 026	**Photo ID:** PA130222
Date Taken: 13 Oct 2023	
Photograph taken by: K. Reichle	
Direction: Down	**Location:** OT001
Description: Groundwater sampling at BLO-MW06.	



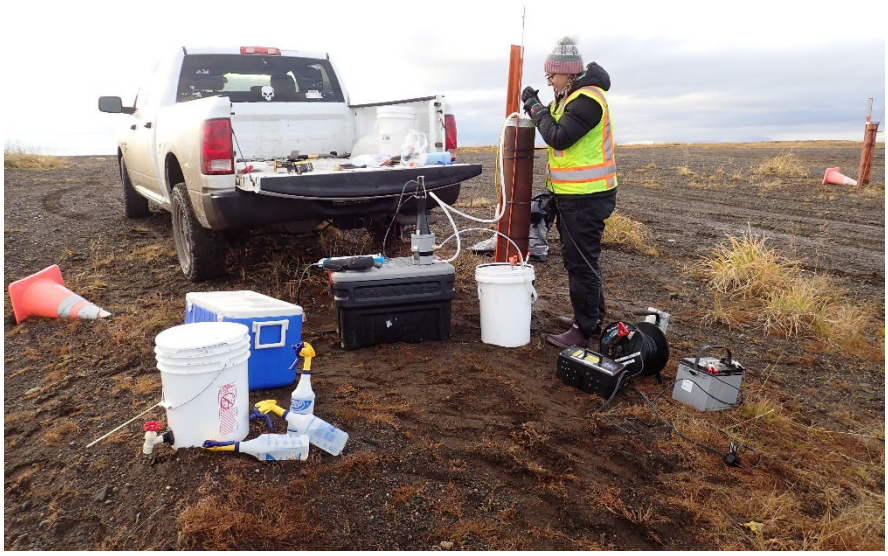
Photograph No.: 027	**Photo ID:** PA130227
Date Taken: 13 Oct 2023	
Photograph taken by: K. Reichle	
Direction: West	**Location:** OT001
Description: Groundwater sampling at BLO-MW07.	



Photograph No.: 028	**Photo ID:** PA140231
Date Taken: 14 Oct 2023	
Photograph taken by: K. Reichle	
Direction: South	**Location:** OT001
Description: Groundwater sampling at GLO-MW04.	



Photograph No.: 029	**Photo ID:** PA150270
Date Taken: 15 Oct 2023	
Photograph taken by: K. Reidt	
Direction: South	**Location:** OT001
Description: Groundwater sampling at DSA-MW02.	



Photograph No.: 030	**Photo ID:** PA140254
Date Taken: 14 Oct 2023	
Photograph taken by: K. Reichle	
Direction: North	**Location:** OT001
Description: Groundwater sampling at DSA-MW01.	



Site WP002

Photograph No.: 031	**Photo ID:** PA160376
Date Taken: 16 Oct 2023	
Photograph taken by: K. Reichle	
Direction: Northwest	**Location:** WP002
Description: Signpost for LUC sign #1 located on the southeast end of site WP002.	



Photograph No.: 032	**Photo ID:** PA160387
Date Taken: 16 Oct 2023	
Photograph taken by: K. Reichle	
Direction: North	**Location:** WP002
Description: Signpost for LUC sign #2 located at the northwestern end of the site. The sign was located further away in the grass.	



Photograph No.: 033	**Photo ID:** PA160390
Date Taken: 16 Oct 2023	
Photograph taken by: K. Reichle	
Direction: West	**Location:** WP002
Description: LUC sign #2 reinstalled on the signpost. Note: The sign is missing a bolt in the lower left corner as the hole previously drilled through the sign does not fit with the signpost. The field team did not have a drill on hand at the time of the inspection to redrill the hole for the bolt to fit.	



Photograph No.: 034	**Photo ID:** PA160383
Date Taken: 16 Oct 2023	
Photograph taken by: K. Reichle	
Direction: West	**Location:** WP002
Description: Site overview facing west.	



Photograph No.: 035	**Photo ID:** PA160382
Date Taken: 16 Oct 2023	
Photograph taken by: K. Reichle	
Direction: Southeast	**Location:** WP002
Description: View of formerly excavated area of WP002.	



Photograph No.: 036	**Photo ID:** PA160394
Date Taken: 16 Oct 2023	
Photograph taken by: K. Reichle	
Direction: North	**Location:** WP002
Description: Facing towards WP002 as viewed from across the road.	



Photograph No.: 037	**Photo ID:** PA160386
Date Taken: 16 Oct 2023	
Photograph taken by: K. Reichle	
Direction: Southeast	**Location:** WP002
Description: Site overview facing towards southeast.	



Photograph No.: 038	**Photo ID:** PA160385
Date Taken: 16 Oct 2023	
Photograph taken by: K. Reichle	
Direction: East	**Location:** WP002
Description: Site overview facing east.	



Photograph No.: 039	**Photo ID:** PA160379
Date Taken: 15 Oct 2023	
Photograph taken by: K. Reichle	
Direction: Down	**Location:** WP002
Description: New combination lock installed on the monument at BLO-MW01.	



Photograph No.: 040	**Photo ID:** PA160380
Date Taken: 16 Oct 2023	
Photograph taken by: K. Reichle	
Direction: Down	**Location:** WP002
Description: New combination lock installed on the monument at BLO-MW06.	



Site SS006-066

Photograph No.: 041	**Photo ID:** PA150278
Date Taken: 15 Oct 2023	
Photograph taken by: K. Reichle	
Direction: Southwest	**Location:** SS006-066
Description: View of looking down Airport Road.	



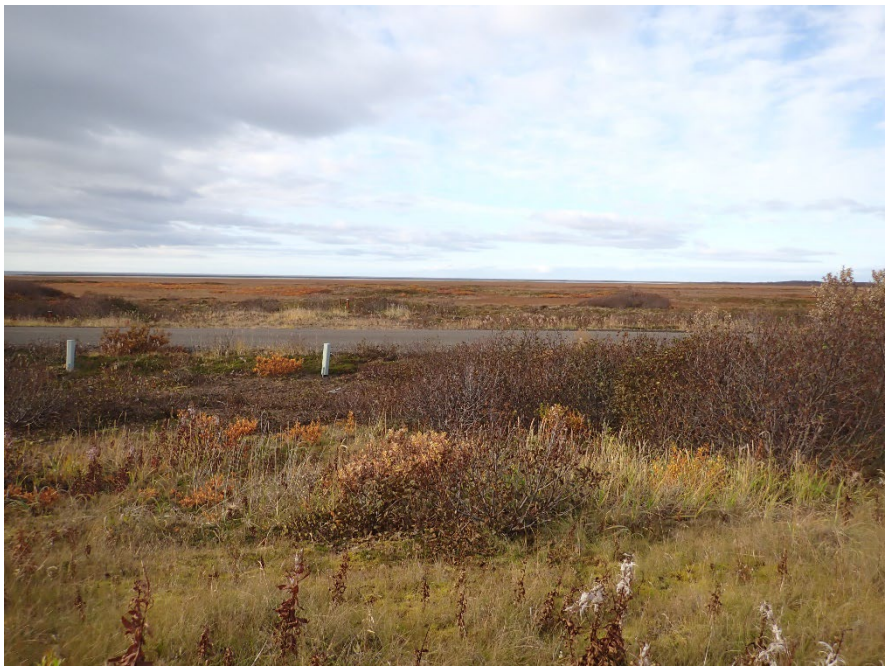
Photograph No.: 042	**Photo ID:** PA150288
Date Taken: 15 Oct 2023	
Photograph taken by: K. Reichle	
Direction: Southeast	**Location:** SS006-066
Description: Overview of site as viewed from monitoring well 066-MW04.	



Photograph No.: 043	**Photo ID:** PA150296
Date Taken: 15 Oct 2023	
Photograph taken by: K. Reichle	
Direction: West	**Location:** SS006-066
Description: Site overview from small hill behind school building.	



Photograph No.: 044	**Photo ID:** PA150295
Date Taken: 15 Oct 2023	
Photograph taken by: K. Reichle	
Direction: Northwest	**Location:** SS006-066
Description: Site overview from small hill behind school building.	



Photograph No.: 045	**Photo ID:** PA150290
Date Taken: 15 Oct 2023	
Photograph taken by: K. Reichle	
Direction: Northeast	**Location:** SS006-066
Description: View of condition of monitoring well 066-MW04 at time of LUC inspection.	



Photograph No.: 046	**Photo ID:** PA150291
Date Taken: 15 Oct 2023	
Photograph taken by: K. Reichle	
Direction: Down	**Location:** SS006-066
Description: New flex cap and combination lock installed at 066-MW04.	



Photograph No.: 047	**Photo ID:** PA150294
Date Taken: 15 Oct 2023	
Photograph taken by: K. Reichle	
Direction: Down	**Location:** SS006-066
Description: New combination lock installed at 066-MW07.	



Photograph No.: 048	**Photo ID:** PA150292
Date Taken: 15 Oct 2023	
Photograph taken by: K. Reichle	
Direction: Southwest	**Location:** SS006-066
Description: View of new aluminum royer cap and combination lock installed on monitoring well 066-MW06.	



Photograph No.: 049	**Photo ID:** PA150280
Date Taken: 15 Oct 2023	
Photograph taken by: K. Reichle	
Direction: Down	**Location:** SS006-066
Description: Broken monument at unnamed monitoring well.	



Photograph No.: 050	**Photo ID:** PA150287
Date Taken: 15 Oct 2023	
Photograph taken by: K. Reichle	
Direction: Down	**Location:** SS006-066
Description: Broken monument at a second unnamed monitoring well.	



Photograph No.: 051	**Photo ID:** PA120191
Date Taken: 12 Oct 2023	
Photograph taken by: K. Reidt	
Direction: Northwest	**Location:** SS006-066
Description: Groundwater sampling at 066-MW06.	



Photograph No.: 052	**Photo ID:** PA150196
Date Taken: 12 Oct 2023	
Photograph taken by: K. Reidt	
Direction: Southwest	**Location:** SS006-066
Description: Groundwater sampling at 066-MW04	



Photograph No.: 053	**Photo ID:** PA120198
Date Taken: 12 Oct 2023	
Photograph taken by: K. Reichle	
Direction: Northwest	**Location:** SS006-066
Description: Groundwater sampling at 066-MW04.	



Photograph No.: 054	**Photo ID:** PA120200
Date Taken: 12 Oct 2023	
Photograph taken by: K. Reichle	
Direction: West	**Location:** SS006-066
Description: Groundwater sampling at 066-MW05.	



Site SS006-215

Photograph No.: 055	**Photo ID:** PA150299
Date Taken: 15 Oct 2023	
Photograph taken by: K. Reichle	
Direction: South	**Location:** SS006-215
Description: Overview of site SS006-215 as viewed from Site Road facing south towards the DOT building.	



Photograph No.: 056	**Photo ID:** PA150302
Date Taken: 15 Oct 2023	
Photograph taken by: K. Reichle	
Direction: North	**Location:** SS006-215
Description: Concrete pad/foundation to former building on north side of road.	



Photograph No.: 057	**Photo ID:** PA150312
Date Taken: 15 Oct 2023	
Photograph taken by: K. Reichle	
Direction: Southeast	**Location:** SS006-215
Description: Overview of site conditions facing towards the airfield with monitoring well 215-MW12 in the foreground.	



Photograph No.: 058	**Photo ID:** PA150317
Date Taken: 15 Oct 2023	
Photograph taken by: K. Reichle	
Direction: Southwest	**Location:** SS006-215
Description: View of disturbed vegetation along the south side of the site.	



Photograph No.: 059	**Photo ID:** PA150308
Date Taken: 15 Oct 2023	
Photograph taken by: K. Reichle	
Direction: Southeast	**Location:** SS006-215
Description: Overview of site facing southeast from north side of the road. Unknown well in the foreground.	



Photograph No.: 060	**Photo ID:** PA150313
Date Taken: 15 Oct 2023	
Photograph taken by: K. Reichle	
Direction: Down	**Location:** SS006-215
Description: New combination lock installed on monitoring well 215-MW12.	



Photograph No.: 061	**Photo ID:** PA150205
Date Taken: 12 Oct 2023	
Photograph taken by: K. Reichle	
Direction: Down	**Location:** SS006-215
Description: Groundwater sampling at 215-MW09.	



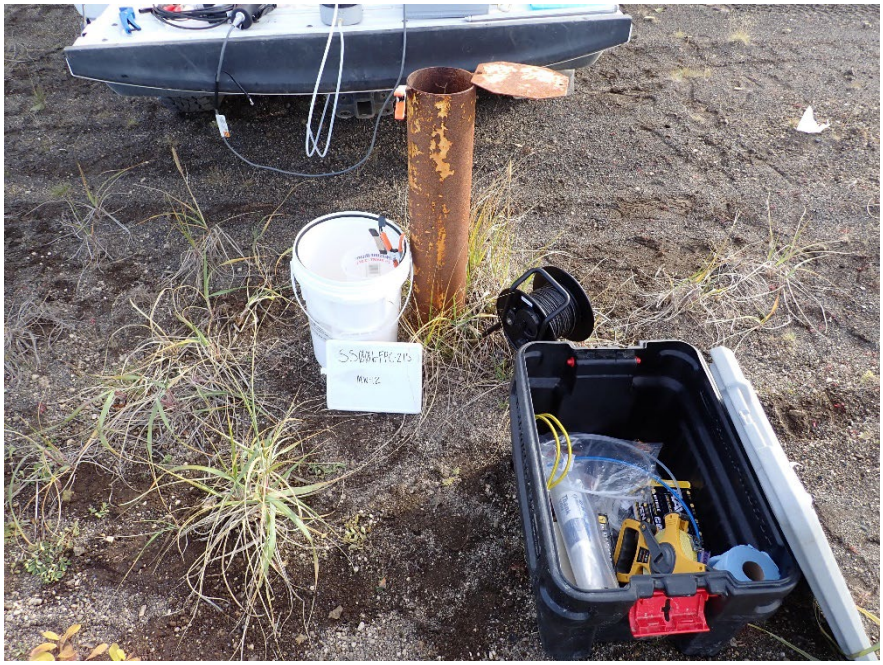
Photograph No.: 062	**Photo ID:** PA150208
Date Taken: 15 Oct 2023	
Photograph taken by: K. Reichle	
Direction: Down	**Location:** SS006-215
Description: Groundwater sampling at 215-MW08.	



Photograph No.: 063	**Photo ID:** PA120203
Date Taken: 12 Oct 2023	
Photograph taken by: K. Reichle	
Direction: Down	**Location:** SS006-215
Description: Groundwater sampling at 215-MW12.	



Photograph No.: 064	**Photo ID:** PA120202
Date Taken: 12 Oct 2023	
Photograph taken by: K. Reichle	
Direction: Down	**Location:** SS006-215
Description: Groundwater sampling at 215-MW12.	



APPENDIX B

Field Notes and Forms

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VISIUAL INSPECTION CHECKLIST

INSTALLATION: Port Heiden RRS INSPECTION SITE NAME: LF007

MONITORING ITEM	YES	NO	COMMENTS
If unit is a landfill, is there any evidence of settling at ground surface?		X	Driveway looks packed down from vehicles driving on soft soil from Rain
Evidence of fencing? Any damaged or broken areas?	X		Fencing at entrance to landfill Pulled to the side of driveway for Snow to get by with vehicle
Evidence of escape of impacted materials or debris from the site?	X	X	No evidence of impacted materials escaping site Some plastic and drum in NE edge
Survey monuments observed?			white liner material known to be offsite
Evidence of surface erosion/washouts in area?	X		Side wall of excavation Starting into hole.
Ponded water observed at or near the site? If yes, is petroleum sheen observed?		X	No standing water present.
Chemical or petroleum odors noted?		X	No odor observed
Discoloring of vegetations in the surrounding area of the site?		X	
Notification signage present? Confirm present and condition of each sign.	X		Two notification signs present at entrance of site. one on either side of driveway.
Integrity of observed monitoring wells, if present?	X		good condition. Poor/four locks rusted, Mounts loose (1 of wells ~~to offsite~~)
Is there wildlife present? Indicate number and types.		X	No wildlife present. Birds in the area.
Evidence of excavation activities or animal burrows?	X		Excavations occured in 2022 as part of removal action
Structures present on site? If so what is the structural integrity?		X	No structures on site
Estimated Percent Vegetative Cover: On Cap Surface: 20% On sideslopes: 99% Comments: Area comprised of excavated landfill and gravel pad for vehicles			

Name of Inspector: K. Reidt Date: 10-11-23

Weather Conditions: Partly Sunny, wind: 0-13 mph, Scattered Showers

Temperature: 41 °F

Photographs Taken: Yes

General Comments: Poly drum contains steel drum w/ POL smelling liquid. Dated 6-22
Removal action occured in 2022? Work looks incomplete. Metal poles, open excavations liner material, delaminated sidings, Carpet drum left behind. Landfilled trash exposed. Aerosol cans

Correction Action Taken:
Removed plastic from trenches on north side of site and returned to landfill

VISIUAL INSPECTION CHECKLIST

INSTALLATION: Port Hueneme RRS			INSPECTION SITE NAME: OTOO 1
MONITORING ITEM	**YES**	**NO**	**COMMENTS**
If unit is a landfill, is there any evidence of settling at ground surface?		X	Site is not a landfill
Evidence of fencing? Any damaged or broken areas?		X	No evidence of broken areas
Evidence of escape of impacted materials or debris from the site?		X	No escaped debris or impacted materials, left over project materials scattered around site
Survey monuments observed?		X	Did not observe survey monuments
Evidence of surface erosion/washouts in area?	X		Revegetated area around DSA-02 + DSA-05 had multiple channels of washout from the gravel pad/road.
Ponded water observed at or near the site? If yes, is petroleum sheen observed?	X		Multiple areas of ponded water, mostly on the road and gravel pad, Revegetated area near GW-MW03 had standing water. Roads are soft
Chemical or petroleum odors noted?		X	
Discoloring of vegetations in the surrounding area of the site?	X		possible discoloring of vegetation along road near DSA-01.
Notification signage present? Confirm present and condition of each sign.	X		2 LUC signs present. In fair condition. 1 located on the East, 1 on the West
Integrity of observed monitoring wells, if present?	X		Condition of monitoring wells range from good to poor. Some wells may require redevelopment.
Is there wildlife present? Indicate number and types.	X		Fox was present during groundwater sampling two days Animal burrows present (RRS-05)
Evidence of excavation activities or animal burrows?	X		Burrow near RRS-05.
Structures present on site? If so what is the structural integrity?		X	No structures on site. Cones and other construction equipment left behind.
Estimated Percent Vegetative Cover: On Cap Surface: 40 On sideslopes: 90			
Comments: Area is comprised of mostly gravel pad and areas revegetated. Revegetation lacks mostly intact.			

Name of Inspector: K. Rost. Date: 10-16-23

Weather Conditions: Overcast

Temperature: 43 °F

Photographs Taken: Yes

General Comments:

Site is frequently accessed by residents, left over materials and debris from excavation/removal scatter the site. Cones, sign sticks, metal debris, orange construction fence, Residents spoof LUC signs (see photos), Clean up tasks incomplete geo textiles, fence posts, tubes + overpack drums

Correction Action Taken: None

VISIUAL INSPECTION CHECKLIST

INSTALLATION: Fort Hunter RVCS INSPECTION SITE NAME: LWP002

MONITORING ITEM	YES	NO	COMMENTS
If unit is a landfill, is there any evidence of settling at ground surface?		X	Area is not a landfill. No evidence of ~~escaped debris~~ settling
Evidence of fencing? Any damaged or broken areas?		X	No fencing associated with site
Evidence of escape of impacted materials or debris from the site?		X	No escaped debris or materials from site
Survey monuments observed?		X	No monuments observed
Evidence of surface erosion/washouts in area?		X	No erosion or washout observed
Ponded water observed at or near the site? If yes, is petroleum sheen observed?		X	No ponded water
Chemical or petroleum odors noted?		X	No odor
Discoloring of vegetations in the surrounding area of the site?		X	
Notification signage present? Confirm present and condition of each sign.	X		1 sign post missing sign 1 sign post w/ sign on ground. Repaired sign
Integrity of observed monitoring wells, if present?	X		monitoring wells in fair condition, slow recharge during GW sampling
Is there wildlife present? Indicate number and types.	X		Fox was present during GW sampling. No wildlife during inspection
Evidence of excavation activities or animal burrows?		X	Did not see animal burrows
Structures present on site? If so what is the structural integrity?		X	No structures on site

Estimated Percent Vegetative Cover: On Cap Surface: 60 On sideslopes: 90

Comments: Large, flat gravel area, somewhat vegetated, surrounded by natural vegetation

Name of Inspector: K. Reidt Date: 10-16-23

Weather Conditions: Partly sunny, light breeze

Temperature: 43 °F

Photographs Taken: Yes

General Comments:

Site appears generally undisturbed. Left over project materials in sandy area. 2 x sign posts present. Missing 1 sign.

Correction Action Taken:

Reinstalled 1 sign.

VISIUAL INSPECTION CHECKLIST

INSTALLATION: Fort Heiden RFS			INSPECTION SITE NAME: SS006-066
MONITORING ITEM	**YES**	**NO**	**COMMENTS**
If unit is a landfill, is there any evidence of settling at ground surface?		X	Site is not a landfill
Evidence of fencing? Any damaged or broken areas?		X	No areas appear broken or damaged
Evidence of escape of impacted materials or debris from the site?		X	No evidence of escaped debris or impacted materials
Survey monuments observed?		X	None observed
Evidence of surface erosion/washouts in area?		X	No erosion observed
Ponded water observed at or near the site? If yes, is petroleum sheen observed?		X	No ponded water
Chemical or petroleum odors noted?		X	
Discoloring of vegetations in the surrounding area of the site?		X	
Notification signage present? Confirm present and condition of each sign.		X	No LUC signs present
Integrity of observed monitoring wells, if present?	X		Total of six wells observed (Four wells sampled) Condition: Poor - Fair. Flushmount wells may be serviceable
Is there wildlife present? Indicate number and types.	X		Grass cove present during inspection.
Evidence of excavation activities or animal burrows?	X		Several burrows observed (one burrow next to MW-5)
Structures present on site? If so what is the structural integrity?		X	No structures on site
Estimated Percent Vegetative Cover: On Cap Surface: 90 On sideslopes: 90 Comments: Site looks 90% vegetated (not including road)			

Name of Inspector: K. Reidt Date: 10-15-23

Weather Conditions: Mostly overcast, Wind: 5mph SW

Temperature: 40 °F

Photographs Taken: Yes

General Comments:

Site looks mostly unused/accessed. Few pieces of scattered trash along road. Several wells overgrown with alder bushes.

Correction Action Taken:

~~Site-took~~ Installed new locks and lids on wells

066-MW04: installed flexible pipe cap and new pad lock. Combo # = 0911

066-MW05: Installed new better put of lid (w/ set screws) so it will lock

066-MW06: Installed new monument lid + Combo lock. Combo # = 0911

066-MW07: Installed new pad lock. Combo # = 0911.

VISIUAL INSPECTION CHECKLIST

INSTALLATION: Port Hueden RICS			INSPECTION SITE NAME: SSOD-215
MONITORING ITEM	**YES**	**NO**	**COMMENTS**
If unit is a landfill, is there any evidence of settling at ground surface?		X	
Evidence of fencing? Any damaged or broken areas?		X	No fencing associated with site.
Evidence of escape of impacted materials or debris from the site?		X	No escaped debris associated with site. Scattered trash along road.
Survey monuments observed?		X	No monuments observed.
Evidence of surface erosion/washouts in area?		X	No erosion evident at site.
Ponded water observed at or near the site? If yes, is petroleum sheen observed?		X	No ponded water.
Chemical or petroleum odors noted?		X	No odors observed
Discoloring of vegetations in the surrounding area of the site?		X	No discolored vegetation
Notification signage present? Confirm present and condition of each sign.		X	No ~~the~~ LUC Signs present.
Integrity of observed monitoring wells, if present?	X		Observed five wells. All in fair condition
Is there wildlife present? Indicate number and types.	X		Fox present during inspection.
Evidence of excavation activities or animal burrows?	X		Observed two burrows
Structures present on site? If so what is the structural integrity?		X	No structures on site.
Estimated Percent Vegetative Cover: On Cap Surface: 70% On sideslopes: 90%			
Comments: Road cross through Site.			

Name of Inspector: K. Redit Date: 10-15-23

Weather Conditions: Overcast, wind: Singh SW

Temperature: 40 °F

Photographs Taken: Yes

General Comments:

Site appears generally undisturbed with the exception of scattered trash along road. dirt road. Area tacked NW of 215-MW12.

Correction Action Taken:

215-MW09: installed new set screws in monument lid so that it will secure shut

WP002 - BLO

WELL PURGE AND SAMPLING FIELDSHEET

Well ID: WP002-BLO-MW01

Project: Port Hueden BRS LTM
Project #: WA00108.001.03.03.01
Field Team: N. Beidt, K. Belchle
Date: 10/5/23
Start Time: 12:03
End Time: 13:05

Sample ID: WP002-BLO-MW01-101523 Time: 1230 primary dup other:
Sample ID: ~~WP002-BLO-MW01-MS~~ -101523MS Time: 1240 primary dup ~~other:~~ MS
Sample ID: ~~WP002-BLO-MW01-MSD~~ -101523MSD Time: 1240 primary dup other: MSD
Filtered? Y / ~~N~~ 0.45µm 1.0µm

Well Information

Depth to Top of Product:			NA	Depth to Water (BTOC):	46.67
Depth to Oil/Water Interface:			NA	Total Depth (BTOC):	53.60
Casing Diameter:	~~2-in~~	4-in		Water Column (ft):	7.93
gal/ft of casing:	0.163	0.653		Casing Volume(gal):	1.29
Pump Intake Depth:			47.00	Screen Interval :	to
Stable DTW (BTOC):			46.90	Measured Stickup:	3.30

Method of Purging

Pump: ~~SUB~~ BLADR PERIST OTHER: —
Purge Start Time: 12:03
Purge End Time: 12:27
Flow Rate (lpm): 0.270
Volume Purged (Liters): 6.5

Bailer: Teflon SS Other: —
Bailer volume (Liters): —
Required Pulls: —
Volume Purged (Liters): —

Criteria for Stable Parameters

Parameter	Working Range	Stability Criteria	Depth to Water Stabilization	
			Time	Depth to Water
Temperature	-5 to 45 degrees C	+/- 0.2 degrees C		
pH	0 to 14 NTU	+/- 0.1	1219	46.82
Conductivity	0 to 200 mS/cm	+/- 3%	1215	46.75
ORP	-999 to +999 mV	+/- 10 mV	1219	46.82
Dissoved Oxygen	0 to 50 mg/L	+/- 10%	1227	46.90
Turbidity	0 to 1,000 NTU	+/- 10% [<10 NTU]		

Instrument Observations

Round	Time	Water Level [ft BTOC]	Volume Purged [Liters]	✓ pH	✓ Cond [mS/cm]	Turbidity [NTU]	✓ DO [mg/L]	✓ Temp [C]	✓ ORP [mV]
1	1203	46.23	0	6.54	1.60	107	2.01	6.91	-90
2	1207	46.67	1.0	6.54	1.63	104.8	1.02	6.96	-101
3	1211	46.99	1.75	6.49	1.62	62.4	0.86	7.22	-93
4	1215	46.75	2.5	6.43	1.63	23.7	0.70	7.17	-92
5	1219	46.82	4.0	6.44	1.63	14.6	0.60	7.06	-91
6	1223	46.85	5.25	6.43	1.62	12.7	0.57	7.11	-93
7	1227	46.90	6.5	6.41	1.62	13.6	0.56	7.05	-91
8									
9									

Notes: Draw-down should ideally be less than 0.3 feet from the original depth to groundwater.
Minimal draw-down achieved and measuered by: 1)pumping at a low rate (approximately 1 liter/3 minutes or 0.1 gal/min and 2) continually measuring water levels in the well.

Sensory Observations

Color: Clear, Amber, ~~Tan,~~ Brown, Grey, Milky White, Other: Sheen
Odor: None, ~~Low,~~ Medium, High, Very Strong, H2S, Fuel Like, Chemical ?, Unknown
Turbidity: None, ~~Low,~~ Medium, High, Very Turbid, Heavy Silts

Comments: percent power: 42.4%. Output voltage: 11.3 V
Sampled for DRO, VOCs, MNA
~~replaced pellicle, rope cut~~

OTOL-BLO

WELL PURGE AND SAMPLING FIELDSHEET

Well ID: OTOL-BLO-MW-05

Project: Port Hueneme BRAC, LTM
Project #: 060068.002.93.03.01
Field Team: K. Beloit, K. Bachle
Sample ID: OTOL-BLOMW05-10323 Time: 1815 primary dup other:
Sample ID: — Time: — primary dup other: —
Sample ID: — Time: — primary dup other: —
Filtered? Y / N 0.45µm 1.0µm

Date: 10/13/23
Start Time: ~~0~~ NA 1328
End Time: 1340

Well Information

Depth to Top of Product:		NA	Depth to Water (BTOC):	47.80
Depth to Oil/Water Interface:		NA	Total Depth (BTOC):	56.11
Casing Diameter:	2-in	4-in	Water Column (ft):	8.31
gal/ft of casing:	0.163	0.653	Casing Volume(gal):	1.35
Pump Intake Depth:		48.5	Screen Interval :	to
Stable DTW (BTOC):			Measured Stickup:	3.6

Method of Purging

Pump: SUB BLADR PERIST OTHER: —
Purge Start Time: 1328
Purge End Time: 1337
Flow Rate (lpm): 0.350
Volume Purged (Liters): 3

Bailer: Teflon SS Other: —
Bailer volume (Liters): —
Required Pulls: —
Volume Purged (Liters): —

Criteria for Stable Parameters

Parameter	Working Range	Stability Criteria	Depth to Water Stabilization	
			Time	Depth to Water
Temperature	-5 to 45 degrees C	+/- 0.2 degrees C		
pH	0 to 14 NTU	+/- 0.1		
Conductivity	0 to 200 mS/cm	+/- 3%		
ORP	-999 to +999 mV	+/- 10 mV		
Dissoved Oxygen	0 to 50 mg/L	+/- 10%		
Turbidity	0 to 1,000 NTU	+/- 10% [<10 NTU]		

Instrument Observations

Round	Time	Water Level [ft BTOC]	Volume Purged [Liters]	pH	Cond [mS/cm]	Turbidity [NTU]	DO [mg/L]	Temp [C]	ORP [mV]
1	1328	49.98	1250mL	6.04	0.211	855	12.81	8.15	121
2	1332	51.40	2250mL	6.61	0.201	911	12.57	8.45	106
3	* Excessive draw down 7.50 ft								
4	will return to collect a no purge sample								
5									
6	~~0~~ 1810	47.88							
7									
8	* Sampled at 1815								
9									

Notes: Draw-down should ideally be less than 0.3 feet from the original depth to groundwater.
Minimal draw-down achieved and measuered by: 1)pumping at a low rate (approximately 1 liter/3 minutes or 0.1 gal/min and 2) continually measuring water levels in the well.

Sensory Observations

Color: Clear, ~~Amber~~, Tan, Brown, Grey, Milky White, Other:
Odor: ~~None~~, Low, Medium, High, Very Strong, H2S, Fuel Like, Chemical ?, Unknown
Turbidity: None, Low, ~~Medium~~, High, Very Turbid, Heavy Silts

Comments: Percent power: 68.3
output voltage: 10.4
Sampled for DRO, VOCs, MNA
Replaced Padlock; cod 0911
Replaced compression cap
* Recommend redevelopment

1810 came back to sample (no purge)
water level - 47.88
1815 collected sample

OT001-BLO

WELL PURGE AND SAMPLING FIELDSHEET

Well ID: OT001-BLO-MW-06

Project: Port Hadlock RRS, LTM
Project #: 060308.001.93.03.01
Field Team: K. Reidt, K. Reichle
Sample ID: OT001-BLOMW06-10823 Time: 1845 primary dup other:
Sample ID: - Time: - primary dup other: -
Sample ID: - Time: - primary dup other: -
Filtered? Y / N 0.45µm 1.0µm

Date: 10/3/23
Start Time: 14:14 ~~14:48~~
End Time: 1515

Well Information

Depth to Top of Product: NA
Depth to Oil/Water Interface: NA
Casing Diameter: ~~2-in~~ 4-in
gal/ft of casing: 0.163 0.653
Pump Intake Depth: 43.0
Stable DTW (BTOC): -

Depth to Water (BTOC): 41.71
Total Depth (BTOC): 50.89
Water Column (ft): 9.18
Casing Volume(gal): 1.496
Screen Interval : to
Measured Stickup: 3.2

Method of Purging

Pump: ~~SUB~~ BLADR PERIST OTHER: -
Purge Start Time: 14:14 ~~14:48~~
Purge End Time: 1508
Flow Rate (lpm): 0.187
Volume Purged (Liters): 4

Bailer: Teflon SS Other: -
Bailer volume (Liters): -
Required Pulls: -
Volume Purged (Liters): -

Criteria for Stable Parameters

Parameter	Working Range	Stability Criteria	Depth to Water Stabilization	
			Time	Depth to Water
Temperature	-5 to 45 degrees C	+/- 0.2 degrees C		
pH	0 to 14 NTU	+/- 0.1		
Conductivity	0 to 200 mS/cm	+/- 3%		
ORP	-999 to +999 mV	+/- 10 mV		
Dissoved Oxygen	0 to 50 mg/L	+/- 10%		
Turbidity	0 to 1,000 NTU	+/- 10% [<10 NTU]		

Instrument Observations

Round	Time	Water Level [ft BTOC]	Volume Purged [Liters]	pH	Cond [mS/cm]	Turbidity [NTU]	DO [mg/L]	Temp [C]	ORP [mV]
1	14:14		500 mL	6.99	0.163	53.6	15.24	6.55	108
2	14:18	43.80	1250 mL	6.88	0.160	207	13.54	6.11	108
3	*Purging Paused to fix pump					to ~~mw~~			
4	14:48	44.29	0mL	6.88	0.178	680	11.69	6.38	126
5	14:52	44.89	1250mL	6.84	0.170	741	10.21	6.38	128
6	14:56	44.99	2000 mL	6.91	0.168	552	14.80	6.57	127
7	~~1500~~ 1500	45.86	2750 mL	6.76	0.169	968	12.42	6.83	131
8	1504	45.85	3250 mL	6.84	0.169	906	11.72	8.35	124
9	1508	45.87	4000mL	6.83	0.169	879	12.22	8.12	122

Notes: Draw-down should ideally be less than 0.3 feet from the original depth to groundwater.
Minimal draw-down achieved and measuered by: 1)pumping at a low rate (approximately 1 liter/3 minutes or 0.1 gal/min and 2) continually measuring water levels in the well.

Sensory Observations

Color: Clear, Amber, ~~Tan,~~ Brown, Grey, Milky White, Other:
Odor: ~~None,~~ Low, Medium, High, Very Strong, H2S, Fuel Like, Chemical ?, Unknown
Turbidity: None, Low, ~~Medium,~~ High, Very Turbid, Heavy Silts

Comments: percent power: ~~41.4~~ 51.3 Sampled ~~for~~ DRO, VOCs, MNA
output voltage: ~~11.7~~ 13.6V Replaced padlock; Case OAII

~~0840~~ 1840 Came back to sample purged well * Recommend redevelopment
water level: 41.79

Sampled @ 1845

OTOOI-BLO

WELL PURGE AND SAMPLING FIELDSHEET

Well ID: OTOOI-BLO-MW-07

Project: Port Hebden RBS, LTM
Project #: 0600608.001.93.03.01
Field Team: N. Reibt, N. Reichle
Date: 10/13/23
Start Time: 17:03
End Time: 17:50

Sample ID: OTOOI-BLOMW07-101323 Time: 17:30 primary dup other:
Sample ID: OTOOI-BLOMW99-101323 Time: 1740 primary dup other:
Sample ID: - Time: - primary dup other: -
Filtered? Y / N 0.45µm 1.0µm

Well Information

Depth to Top of Product:		N/A	Depth to Water (BTOC):	38.53
Depth to Oil/Water Interface:		N/A	Total Depth (BTOC):	47.00
Casing Diameter:	2-in	4-in	Water Column (ft):	8.47
gal/ft of casing:	0.163	0.653	Casing Volume(gal):	1.38
Pump Intake Depth:		40.00 M 39.5	Screen Interval :	to
Stable DTW (BTOC):		39.68	Measured Stickup:	3.3

Method of Purging

Pump: SUB BLADR PERIST OTHER: Bailer: Teflon SS Other: -
Purge Start Time: 17:03 Flow Rate (lpm): .250 Bailer volume (Liters): -
Purge End Time: 17:21 Volume Purged (Liters): 4.5 Required Pulls: -
Volume Purged (Liters): -

Criteria for Stable Parameters

Parameter	Working Range	Stability Criteria	Depth to Water Stabilization	
			Time	Depth to Water
Temperature	-5 to 45 degrees C	+/- 0.2 degrees C		
pH	0 to 14 NTU	+/- 0.1	17:12	39.55
Conductivity	0 to 200 mS/cm	+/- 3%	17:09	39.38
ORP	-999 to +999 mV	+/- 10 mV	17:21	39.68
Dissoved Oxygen	0 to 50 mg/L	+/- 10%	17:15	39.56
Turbidity	0 to 1,000 NTU	+/- 10% [<10 NTU]	17:18	39.66

Instrument Observations

Round	Time	Water Level [ft BTOC]	Volume Purged [Liters]	pH	Cond [mS/cm]	Turbidity [NTU]	DO [mg/L]	Temp [C]	ORP [mV]
1	17:03	39.10	0	6.84	0.162	391	21.27	6.80	132
2	17:06	39.21	750 mL	6.61	0.161	532	13.02	6.53	148
3	17:09	39.38	1500 mL	6.53	0.161	194	12.36	6.52	155
4	17:12	39.55	2250 mL	6.00	0.160	115	12.09	6.61	151
5	17:15	39.56	3000 mL	6.64	0.160	114	12.00	6.62	146
6	17:18	39.66	3750 mL	6.61	0.159	113	11.98	6.70	149
7	17:21	39.68	4250 mL	6.62	0.159	117	11.94	6.62	148
8									
9									

Notes: Draw-down should ideally be less than 0.3 feet from the original depth to groundwater.
Minimal draw-down achieved and measuered by: 1)pumping at a low rate (approximately 1 liter/3 minutes or 0.1 gal/min and 2) continually measuring water levels in the well.

Sensory Observations

Color: Clear, Amber, ~~Tan~~, Brown, Grey, Milky White, Other: light milky tan
Odor: ~~None~~, Low, Medium, High, Very Strong, H2S, Fuel Like, Chemical ?, Unknown
Turbidity: None, Low, ~~Medium~~, High, Very Turbid, Heavy Silts

Comments: percent power: 43.1 Sampled for DRO, VOCs, MNA * New padlock; rusted out
output voltage: 100V * Sample collection - water drew down halfway through
* Recommend redevelopment

1730 Sample collection started
* Approximately 3 minutes in the water began to draw down

OT001-DSA

WELL PURGE AND SAMPLING FIELDSHEET

Well ID: OT001-DSA-MW01

Project: Port Hueneme BRS, LTM
Project #: 060108.001.03.03.01
Field Team: K. Reich, K. Reichle
Date: 10/14/23
Start Time: 16:00
End Time: 16:40

Sample ID: OT001-DSA MW01-101423 Time: 1625 primary dup other: -
Sample ID: OT001-DSA MW99-101423 Time: 1630 primary dup other: -
Sample ID: Time: primary dup other: -
Filtered? Y / N 0.45µm 1.0µm

Well Information

Depth to Top of Product: NA
Depth to Oil/Water Interface: NA
Casing Diameter: 2-in 4-in
gal/ft of casing: 0.163 0.653
Pump Intake Depth: 53.50
Stable DTW (BTOC): 52.40

Depth to Water (BTOC): 52.45
Total Depth (BTOC): 58.43
Water Column (ft): 5.98
Casing Volume(gal): 0.975
Screen Interval : to
Measured Stickup: 3.30

Method of Purging

Pump: SUB BLADR PERIST OTHER: -
Purge Start Time: 16:00
Purge End Time: 16:20
Flow Rate (lpm): 0.225
Volume Purged (Liters): 4.5

Bailer: Teflon SS Other: -
Bailer volume (Liters): -
Required Pulls: -
Volume Purged (Liters): -

Criteria for Stable Parameters

Parameter	Working Range	Stability Criteria	Depth to Water Stabilization	
			Time	Depth to Water
Temperature	-5 to 45 degrees C	+/- 0.2 degrees C		
pH	0 to 14 NTU	+/- 0.1	16:08	52.38
Conductivity	0 to 200 mS/cm	+/- 3%	16:08	52.38
ORP	-999 to +999 mV	+/- 10 mV	16:08	52.38
Dissoved Oxygen	0 to 50 mg/L	+/- 10%	16:20	52.40
Turbidity	0 to 1,000 NTU	+/- 10% [<10 NTU]		

Instrument Observations

Round	Time	Water Level [ft BTOC]	Volume Purged [Liters]	V pH	V Cond [mS/cm]	Turbidity [NTU]	DO [mg/L]	V Temp [C]	V ORP [mV]
1	16:00	52.37	0	7.01	0.279	16.3	13.64	6.87	94
2	16:04	52.38	1500mL	7.07	0.279	6.8	12.77	7.28	100
3	16:08	52.38	2250mL	7.06	0.296	4.3	12.20	7.71	104
4	16:12	52.38	2500mL	7.11	0.302	3.5	12.67	7.72	102
5	16:16	52.40	3500mL	7.04	0.298	3.3	12.77	7.62	108
6	1620	52.40	4250mL	7.07	0.298	2.6	12.72	7.66	111
7									
8									
9									

Notes: Draw-down should ideally be less than 0.3 feet from the original depth to groundwater.
Minimal draw-down achieved and measuered by: 1)pumping at a low rate (approximately 1 liter/3 minutes or 0.1 gal/min and 2) continually measuring water levels in the well.

Sensory Observations

Color: Clear, Amber, Tan, Brown, Grey, Milky White, Other:
Odor: None, Low, Medium, High, Very Strong, H2S, Fuel Like, Chemical ?, Unknown
Turbidity: None, Low, Medium, High, Very Turbid, Heavy Silts

Comments: Percent Power: 46.0%. Sampled For DRO, VOCs, MNA
Output Voltage: 17.4V replaced padlock; code 0911

OTOU-DSA

WELL PURGE AND SAMPLING FIELDSHEET

Well ID: OTOU-DSA-MW02

Project: Port Helden BRS, LTM
Project #: 060304.001.93.03.01
Field Team: B. Reist, B. Reichle
Date: 10/14/23 MM 10/15/23
Start Time: 10:32
End Time: 11:25

Sample ID:	OTOU-DSAMW02-101423MM	Time: 1120	primary	dup	other: —
Sample ID:	— 101523	Time: —	primary	dup	other: —
Sample ID:	—	Time: —	primary	dup	other: —
		Filtered? Y / N	0.45µm		1.0µm

Well Information

Depth to Top of Product:		WF		Depth to Water (BTOC):	102.14
Depth to Oil/Water Interface:		N/A		Total Depth (BTOC):	109.30
Casing Diameter:	2-in	4-in		Water Column (ft):	7.16
gal/ft of casing:	0.163	0.653		Casing Volume(gal):	1.166 7
Pump Intake Depth:		103.0		Screen Interval :	to
Stable DTW (BTOC):		103.77		Measured Stickup:	3.10

Method of Purging

Pump:	SUB BLADR PERIST OTHER: —			Bailer: Teflon SS Other:	—
Purge Start Time:	10:32	Flow Rate (lpm):	0.810	Bailer volume (Liters):	—
Purge End Time:	11:16	Volume Purged (Liters):	12.25	Required Pulls:	—
				Volume Purged (Liters):	—

Criteria for Stable Parameters

Parameter	Working Range	Stability Criteria	Depth to Water Stabilization	
			Time	Depth to Water
Temperature	-5 to 45 degrees C	+/- 0.2 degrees C	11:08	103.3
pH	0 to 14 NTU	+/- 0.1	11:08	103.3
Conductivity	0 to 200 mS/cm	+/- 3%	11:08	103.3
ORP	-999 to +999 mV	+/- 10 mV	11:16	103.77
Dissoved Oxygen	0 to 50 mg/L	+/- 10%		
Turbidity	0 to 1,000 NTU	+/- 10% [<10 NTU]		

Instrument Observations

Round	Time	Water Level [ft BTOC]	Volume Purged [Liters]	pH	Cond [mS/cm]	Turbidity [NTU]	DO [mg/L]	Temp [C]	ORP [mV]
1	10:52	102.55	0	6.48	0.351	254	14.48	6.51	140
2	10:56	102.81	2.0L	6.25	0.367	181	13.68	6.21	156
3	11:00	103.18	4.0 L	6.55	0.370	170	12.96	6.43	141
4	11:04	103.04	6.5 L	6.54	0.380	158	12.64	6.56	140
5	11:08	103.3	8.5L	6.57	0.379	172	13.10	6.57	141
6	11:12	103.3	10.0L	6.55	0.378	237	13.36	6.98	140
7	11:16	102.40	12.25L	6.64	0.374	450	13.26	6.94	140
8		103.77 MM							
9									

Notes: Draw-down should ideally be less than 0.3 feet from the original depth to groundwater.
Minimal draw-down achieved and measuered by: 1)pumping at a low rate (approximately 1 liter/3 minutes or 0.1 gal/min and 2) continually measuring water levels in the well.

Sensory Observations

Color: Clear, Amber, Tan, Brown, Grey, Milky White, Other:
Odor: None, Low, Medium, High, Very Strong, H2S, Fuel Like, Chemical ?, Unknown
Turbidity: None, Low, Medium, High, Very Turbid, Heavy Silts

Comments: Percent Power: 51.3%. Sampled for DRO, VOCs, MM
Output Voltage: 13.8V Replaced padlock, (ddeg)

OT001-DSA

WELL PURGE AND SAMPLING FIELDSHEET

Well ID: OT001-DSA-MW05

Project: Port Hueneme BRS, LTM
Project #: 60060B.001.03.03.01
Field Team: B. Briet, B. Berchtold
Sample ID: OT001-DSA-MW05-101423 Time: 1000 primary dup other: —
Sample ID: — 101523 Time: — primary dup other: —
Sample ID: — Time: — primary dup other: —
Filtered? Y / N 0.45µm 1.0µm

Date: 10/14/23 KK 10/15/23
Start Time: 17:03
End Time: 17:26

Well Information

Depth to Top of Product: NA
Depth to Oil/Water Interface: NA
Casing Diameter: 2-in 4-in
gal/ft of casing: 0.163 0.653
Pump Intake Depth: 58.00
Stable DTW (BTOC): —

Depth to Water (BTOC): 59.85
Total Depth (BTOC): 90.14
Water Column (ft): 31.29
Casing Volume(gal): 5.10
Screen Interval : to
Measured Stickup: 3.20

Method of Purging

Pump: SUB BLADR PERIST OTHER: —
Purge Start Time: 17:03
Purge End Time: 1723
Flow Rate (lpm): 0.213
Volume Purged (Liters): 4.25

Bailer: Teflon SS Other: —
Bailer volume (Liters): —
Required Pulls: —
Volume Purged (Liters): —

Criteria for Stable Parameters

Parameter	Working Range	Stability Criteria	Depth to Water Stabilization	
			Time	Depth to Water
Temperature	-5 to 45 degrees C	+/- 0.2 degrees C		
pH	0 to 14 NTU	+/- 0.1	1723	63.30
Conductivity	0 to 200 mS/cm	+/- 3%	1719	62.78
ORP	-999 to +999 mV	+/- 10 mV	1723	63.30
Dissoved Oxygen	0 to 50 mg/L	+/- 10%	1723	63.30
Turbidity	0 to 1,000 NTU	+/- 10% [<10 NTU]		

Instrument Observations

Round	Time	Water Level [ft BTOC]	Volume Purged [Liters]	pH	Cond [mS/cm]	Turbidity [NTU]	DO [mg/L]	Temp [C]	ORP [mV]
1	17:03	59.00	0	6.89	0.248	177	7.65	8.61	107
2	17:07	59.71	500mL	6.60	0.240	195	13.06	9.23	123
3	17:11	60.54	1750mL	6.69	0.249	114	6.09	9.30	108
4	1715	62.40	2250mL	6.60	0.251	138	5.45	9.61	125
5	1719	62.78	3500mL	6.57	0.253	177	5.44	8.72	125
6	1723	63.30	4250mL	6.59	0.250	91.7	5.48	8.64	125
7									
8									
9									

Notes: Draw-down should ideally be less than 0.3 feet from the original depth to groundwater.
Minimal draw-down achieved and measuered by: 1)pumping at a low rate (approximately 1 liter/3 minutes or 0.1 gal/min and 2) continually measuring water levels in the well.

Sensory Observations

Color: Clear, Amber, Tan, Brown, Grey, Milky White, Other:
Odor: None, Low, Medium, High, Very Strong, H2S, Fuel Like, Chemical ?, Unknown
Turbidity: None, Low, Medium, High, Very Turbid, Heavy Silts

Comments: Percent power: 55.2 %. Sampled for DRO, VOCs, MNA
output voltage: 14.7V
Replaced padlock, cute cap
* monument is bent

* poor recharge, recommend redevelopment
1724 well is slowly recharging, leaving and coming back
excessive draw down allowing for recharge
10/15/23 57.4 DTW @ 09:52
Sampled 10/15/23 @ 10:05

OT001-DSA

WELL PURGE AND SAMPLING FIELDSHEET

Well ID: ~~DSA~~ OT001-DSA-MW010

Project: Fort Hesden BRS, LTM
Project #: 0600069.001.03 03.01
Field Team: K. Reidt K. Berchtle
Sample ID: OT001-DSA MW010-101423 Time: 1435 primary dup other: -
Sample ID: - Time: - primary dup other: -
Sample ID: - Time: - primary dup other: -
Filtered? Y / N 0.45µm 1.0µm

Date: 10/14/23
Start Time: ~~AM~~ 1405
End Time: 1445

Well Information

Depth to Top of Product: -
Depth to Oil/Water Interface: -
Casing Diameter: 2-in 4-in
gal/ft of casing: 0.163 0.653
Pump Intake Depth: 57.00
Stable DTW (BTOC): 56.07

Depth to Water (BTOC): 56.04
Total Depth (BTOC): 90.83
Water Column (ft): 34.79
Casing Volume(gal): 5.67
Screen Interval : to
Measured Stickup: 3.7

Method of Purging

Pump: SUB BLADR PERIST OTHER: -
Purge Start Time: 1405
Purge End Time: 1429
Flow Rate (lpm): 2.0 0.365
Volume Purged (Liters): 9.0

Bailer: Teflon SS Other: -
Bailer volume (Liters): -
Required Pulls: -
Volume Purged (Liters): -

Criteria for Stable Parameters

Parameter	Working Range	Stability Criteria	Depth to Water Stabilization	
			Time	Depth to Water
Temperature	-5 to 45 degrees C	+/- 0.2 degrees C	1429	56.07
pH	0 to 14 NTU	+/- 0.1	1425	56.07
Conductivity	0 to 200 mS/cm	+/- 3%	1429	56.07
ORP	-999 to +999 mV	+/- 10 mV	1429	56.07
Dissoved Oxygen	0 to 50 mg/L	+/- 10%	1429	56.07
Turbidity	0 to 1,000 NTU	+/- 10% [<10 NTU]	1429	56.07

Instrument Observations

Round	Time	Water Level [ft BTOC]	Volume Purged [Liters]	pH	Cond [mS/cm]	Turbidity [NTU]	DO [mg/L]	Temp [C]	ORP [mV]
1	1405	56.40	0	6.52	0.200	49.1	10.28	7.74	96
2	1409	56.11	2.0	6.91	0.200	35.6	2.09	7.29	-7
3	1413	56.10	4.0	6.86	0.210	23.1	1.22	7.28	-93
4	1417	56.10	6.0	6.89	0.219	17.9	0.92	6.98	-111
5	1421	56.08	7.5	7.00	0.220	13.2	0.76	7.10	-121
6	1425	56.07	7.75	7.02	0.219	13.1	0.67	7.68	-123
7	1429	56.07	8.75	6.98	0.221	13.7	0.74	8.11	-123
8									
9									

Notes: Draw-down should ideally be less than 0.3 feet from the original depth to groundwater.
Minimal draw-down achieved and measuered by: 1)pumping at a low rate (approximately 1 liter/3 minutes or 0.1 gal/min and 2) continually measuring water levels in the well.

Sensory Observations

Color: Clear, Amber, Tan, Brown, Grey, Milky White, Other: Light tan
Odor: None, Low, Medium, High, Very Strong, H2S, Fuel Like, Chemical ?, Unknown
Turbidity: None, Low, Medium, High, Very Turbid, Heavy Silts

Comments: percent power: 48%. Sampled for DRO, VOCs, MNA
output voltage 12.9 V Replaced 10K', core 0911

OT001-DSA

WELL PURGE AND SAMPLING FIELDSHEET

Well ID: OT001-DSA-MW07

Project: Port Hueneme BRAC, LTM
Project #: 060108.02.03 03.01
Field Team: K. Pratt, K. Perchie
Sample ID: OT001-DSA-MW07-101423
Sample ID: –
Sample ID: –

Date: 10/14/23
Start Time: 15:02
End Time:

Time: 1325 primary dup other: –
Time: – primary dup other: –
Time: – primary dup other: –
Filtered? Y / N 0.45µm 1.0µm

Well Information

Depth to Top of Product: NA
Depth to Oil/Water Interface: NA
Casing Diameter: 2-in 4-in
gal/ft of casing: 0.163 0.653
Pump Intake Depth: 48.50
Stable DTW (BTOC): 48.41

Depth to Water (BTOC): 47.42
Total Depth (BTOC): 56.68
Water Column (ft): 9.26
Casing Volume(gal): 1.51
Screen Interval : to
Measured Stickup: 4.10

Method of Purging

Pump: SUB BLADR PERIST OTHER: –
Purge Start Time: 15:02
Purge End Time: 1518
Flow Rate (lpm): 0.125
Volume Purged (Liters): 2.0

Bailer: Teflon SS Other: –
Bailer volume (Liters): –
Required Pulls: –
Volume Purged (Liters): –

Criteria for Stable Parameters

Parameter	Working Range	Stability Criteria	Depth to Water Stabilization	
			Time	Depth to Water
Temperature	-5 to 45 degrees C	+/- 0.2 degrees C		
pH	0 to 14 NTU	+/- 0.1	1514	48.67
Conductivity	0 to 200 mS/cm	+/- 3%	1510	48.55
ORP	-999 to +999 mV	+/- 10 mV		
Dissoved Oxygen	0 to 50 mg/L	+/- 10%	1518	48.41
Turbidity	0 to 1,000 NTU	+/- 10% [<10 NTU]	1514	48.67

Instrument Observations

Round	Time	Water Level [ft BTOC]	Volume Purged [Liters]	pH	Cond [mS/cm]	Turbidity [NTU]	DO [mg/L]	Temp [C]	ORP [mV]
1	15:02	48.52	0	6.88	0.225	109	13.11	8.36	34
2	15:06	48.54	750mL	10.73	0.228	84	11.39	8.29	58
3	15:10	48.55	1250mL	6.71	0.227	85.8	10.97	8.69	107
4	15:14	48.67	1500mL	6.69	0.228	84.1	10.72	9.91	79
5	15:18	48.41	2000mL	6.70	0.228	84.7	10.90	9.14	83
6									
7									
8									
9									

Notes: Draw-down should ideally be less than 0.3 feet from the original depth to groundwater.
Minimal draw-down achieved and measuered by: 1)pumping at a low rate (approximately 1 liter/3 minutes or 0.1 gal/min and 2) continually measuring water levels in the well.

Sensory Observations

Color: Clear, Amber, Tan, Brown, Grey, Milky White, Other: very light tan
Odor: None, Low, Medium, High, Very Strong, H2S, Fuel Like, Chemical ?, Unknown
Turbidity: None, Low, Medium, High, Very Turbid, Heavy Silts

Comments: Percent power: 44.2%. Sampled for DRO, VOCs, MNA
Output voltage: 11.9V Replaced pump with (code 001)
+/- poor recharge, difficult to collect sample volume

OT001-GW0

WELL PURGE AND SAMPLING FIELDSHEET

Well ID: OT001-GW0-MW-04

Project: Port Hadlock BRAC, LTM
Project #: 0600208.001.93.03.01
Field Team: B. Reidt, M. Beichle
Date: 10/14/23
Start Time: 10:35
End Time: 11:15

Sample ID:	OT001-GW0-MW04-101423	Time: 1105	~~primary~~ dup	other:
Sample ID:		Time: –	primary dup	other: –
Sample ID:		Time: –	primary dup	other: –

Filtered? Y / ~~N~~ 0.45µm 1.0µm

Well Information

Depth to Top of Product:		NA	Depth to Water (BTOC):	56.00
Depth to Oil/Water Interface:		NA	Total Depth (BTOC):	60.26
Casing Diameter:	~~2-in~~	4-in	Water Column (ft):	4.26
gal/ft of casing:	0.163	0.653	Casing Volume(gal):	0.694
Pump Intake Depth:		57.00	Screen Interval :	to
Stable DTW (BTOC):		56.03	Measured Stickup:	4.50

Method of Purging

Pump: ~~SUB~~ BLADR PERIST OTHER: –
Purge Start Time: 10:35
Purge End Time: 10:59
Flow Rate (lpm): .250
Volume Purged (Liters): 4.25

Bailer: Teflon SS Other: –
Bailer volume (Liters): –
Required Pulls: –
Volume Purged (Liters): –

Criteria for Stable Parameters

Parameter	Working Range	Stability Criteria	Depth to Water Stabilization	
			Time	Depth to Water
Temperature	-5 to 45 degrees C	+/- 0.2 degrees C	10:59	56.03
pH	0 to 14 NTU	+/- 0.1	10:59	56.03
Conductivity	0 to 200 mS/cm	+/- 3%	10:59	56.03
ORP	-999 to +999 mV	+/- 10 mV	10:59	56.03
Dissoved Oxygen	0 to 50 mg/L	+/- 10%	10:55	56.03
Turbidity	0 to 1,000 NTU	+/- 10% [<10 NTU]	10:55	56.03

Instrument Observations

Round	Time	Water Level [ft BTOC]	Volume Purged [Liters]	✓ pH	✓ Cond [mS/cm]	✓ Turbidity [NTU]	✓ DO [mg/L]	✓ Temp [C]	✓ ORP [mV]
1	10:35	56.21	0	6.62	0.171	20.9	11.03	8.08	122
2	10:39	56.18	750 mL	6.55	0.171	13.4	9.50	7.72	133
3	10:43	56.03	2000 mL	6.33	0.174	12.7	8.96	7.75	143
4	10:47	56.03	3250 mL	6.16	0.182	20.6	9.23	7.39	159
5	10:51	56.03	4250 mL	5.90	0.197	19.5	9.49	7.27	176
6	10:55	56.03	5250mL	5.87	0.197	20.0	9.52	7.38	178
7	10:59	56.03	4250	5.86	0.199	19.8	9.48	7.46	180
8									
9									

Notes: Draw-down should ideally be less than 0.3 feet from the original depth to groundwater.
Minimal draw-down achieved and measuered by: 1)pumping at a low rate (approximately 1 liter/3 minutes or 0.1 gal/min and 2) continually measuring water levels in the well.

Sensory Observations

Color: ~~Clear~~, Amber, Tan, Brown, Grey, Milky White, Other:
Odor: ~~None~~, Low, Medium, High, Very Strong, H2S, Fuel Like, Chemical ?, Unknown
Turbidity: None, ~~Low~~, Medium, High, Very Turbid, Heavy Silts

Comments: Percent power: 47.6
Output Voltage: 17.0 V
Samaed for DRO, VOCs, MNA
* New padlock; code 0911

OTOOI-RBS

WELL PURGE AND SAMPLING FIELDSHEET

Well ID: OTOOI-RBS-MW05

Project: Port Hudson RBS, LTM
Project #: 060168.001.03.03.01
Field Team: N. Reist, B. Bechle
Sample ID: OTOOI-RBS MW05-101423
Sample ID: —
Sample ID: —

Date: 10/14/23
Start Time: 11:57
End Time: 12:27

Time: 12:20 primary ~~dup~~ other:
Time: — primary dup other: —
Time: — primary dup other: —

Filtered? Y / ~~N~~ 0.45µm 1.0µm

Well Information

Depth to Top of Product: NA
Depth to Oil/Water Interface: NA
Casing Diameter: ~~2-in~~ 4-in
gal/ft of casing: 0.163 0.653
Pump Intake Depth: 51.5
Stable DTW (BTOC): 51.41

Depth to Water (BTOC): 50.45
Total Depth (BTOC): 58.20
Water Column (ft): 7.75
Casing Volume(gal): 1.26
Screen Interval : to
Measured Stickup: 3.2

Method of Purging

Pump: ~~SUB~~ BLADR PERIST OTHER: —
Purge Start Time: 11:57
Purge End Time: 12:13
Flow Rate (lpm): 1.0
Volume Purged (Liters): 4.0

Bailer: Teflon SS Other: —
Bailer volume (Liters): —
Required Pulls: —
Volume Purged (Liters): —

Criteria for Stable Parameters

Parameter	Working Range	Stability Criteria	Depth to Water Stabilization	
			Time	Depth to Water
Temperature	-5 to 45 degrees C	+/- 0.2 degrees C		
pH	0 to 14 NTU	+/- 0.1	12:05	51.09
Conductivity	0 to 200 mS/cm	+/- 3%	12:05	51.09
ORP	-999 to +999 mV	+/- 10 mV	12:09	15.89
Dissoved Oxygen	0 to 50 mg/L	+/- 10%	12:09	15.89
Turbidity	0 to 1,000 NTU	+/- 10% [<10 NTU]		

Instrument Observations

Round	Time	Water Level [ft BTOC]	Volume Purged [Liters]	✓ pH	✓ Cond [mS/cm]	Turbidity [NTU]	✓ DO [mg/L]	✓ Temp [C]	✓ ORP [mV]
1	11:57	50.92	0	6.36	0.189	59.9	16.83	6.92	157
2	12:01	51.09	1.0	6.32	0.188	101	12.60	6.93	168
3	12:05	51.36	2.0	6.27	0.189	181	13.00	6.96	173
4	12:09	51.89	3.0	6.28	0.190	143	12.92	6.92	170
5	12:13	51.41	4.0	6.30	0.190	128	12.96	6.95	176
6									
7									
8									
9									

Notes: Draw-down should ideally be less than 0.3 feet from the original depth to groundwater.
Minimal draw-down achieved and measuered by: 1)pumping at a low rate (approximately 1 liter/3 minutes or 0.1 gal/min and 2) continually measuring water levels in the well.

Sensory Observations

Color: ~~Clear~~, Amber, Tan, Brown, Grey, Milky White, Other:
Odor: ~~None~~, Low, Medium, High, Very Strong, H2S, Fuel Like, Chemical ?, Unknown
Turbidity: ~~None~~, ~~Low~~, Medium, High, Very Turbid, Heavy Silts

Comments: Percent power: 45.0%, Output voltage: 12.0V
Sampled for DRO, VOCs, MNA
Installed compression cap
Installed padlock, Code 0911

* Well dropped down 70.3 ft DTW, but recharged by sample time
- Poor recharge difficulty collecting sample volume

OT001 - RBS

WELL PURGE AND SAMPLING FIELDSHEET

Well ID: OT001-RBS-MW06

Project: Port Hueneme RBS, LTM
Project #: 120009.001.93.03.01
Field Team: N. Rast, M. Berchie
Date: 10/3/23
Start Time: 1204
End Time: 1238

Sample ID: OT001-RBSMW06-101323 Time: 1230 primary dup other:
Sample ID: - Time: - primary dup other: -
Sample ID: - Time: - primary dup other: -
Filtered? Y / N 0.45µm 1.0µm

Well Information

Depth to Top of Product:		NA	Depth to Water (BTOC):	57.05
Depth to Oil/Water Interface:		NA	Total Depth (BTOC):	67.12
Casing Diameter:	2-in	4-in	Water Column (ft):	10.07
gal/ft of casing:	0.163	0.653	Casing Volume(gal):	1.64
Pump Intake Depth:		58.00	Screen Interval :	to
Stable DTW (BTOC):		57.22	Measured Stickup:	3.00

Method of Purging

Pump: SUB BLADR PERIST OTHER: -
Purge Start Time: 1204
Purge End Time: 1228
Flow Rate (lpm): 0.187
Volume Purged (Liters): 4
Bailer: Teflon SS Other: -
Bailer volume (Liters): -
Required Pulls: -
Volume Purged (Liters): -

Criteria for Stable Parameters

Parameter	Working Range	Stability Criteria	Depth to Water Stabilization	
			Time	Depth to Water
Temperature	-5 to 45 degrees C	+/- 0.2 degrees C	~~1216~~ 1228	~~57.14~~* 57.22
pH	0 to 14 NTU	+/- 0.1	1212	57.16
Conductivity	0 to 200 mS/cm	+/- 3%	1228	57.22
ORP	-999 to +999 mV	+/- 10 mV	1226	57.25
Dissoved Oxygen	0 to 50 mg/L	+/- 10%		
Turbidity	0 to 1,000 NTU	+/- 10% [<10 NTU]		

Instrument Observations

Round	Time	Water Level [ft BTOC]	Volume Purged [Liters]	pH	Cond [mS/cm]	Turbidity [NTU]	DO [mg/L]	Temp [C]	ORP [mV]
1	1204	57.32	0	6.72	0.284	69.6	12.96	6.78	123
2	1208	57.25	1250 mL	6.60	0.285	69.3	11.85	6.49	127
3	1212	57.16	1750 mL	6.60	0.286	123	11.30	6.55	129
4	1216	57.19	2000 mL	6.55	0.287	142	11.23	6.60	138
5	1220	57.25	2500 mL	6.30	0.288	137	11.34	6.75	150
6	1224	57.22	3250 mL	6.22	0.289	123	11.21	6.25	150
7	1228	57.22	4000 mL	6.24	0.289	93	11.23	7.62	153
8									
9									

Notes: Draw-down should ideally be less than 0.3 feet from the original depth to groundwater.
Minimal draw-down achieved and measuered by: 1)pumping at a low rate (approximately 1 liter/3 minutes or 0.1 gal/min and 2) continually measuring water levels in the well.

Sensory Observations

Color: Clear, Amber, Tan, Brown, Grey, ~~Milky White,~~ Other: slight milky color
Odor: ~~None,~~ Low, Medium, High, Very Strong, H2S, Fuel Like, Chemical ?, Unknown
Turbidity: None, ~~Low,~~ Medium, High, Very Turbid, Heavy Silts

Comments:
Percent power: 48.2%
Output Voltage: 13.0V
Sampled for DRO, VOCs, MNA
Replaced Padlock; Code is 0911
* Recommend redevelopment WL

55006 - 0606

WELL PURGE AND SAMPLING FIELDSHEET

Well ID: 55006 - 0606 - MW04

Project: Dark Heden BRS, LTM
Project #: 60068.001.93.03.01
Field Team: K. Hebt, M. Belchic
Sample ID: ~~55006-0606-MW04-101223~~ KK
Sample ID: 55006-0606MW04-101223
Sample ID:
Discharge: 1-2 KK
Fill: 1-2 KK

Date: 10/12/23
Start Time: 14:11
End Time: 14:38

Time: 1434 primary dup other:
Time: primary dup other:
Time: primary dup other:
Filtered? Y / N 0.45µm 1.0µm

Well Information

Depth to Top of Product: NA
Depth to Oil/Water Interface: NA
Casing Diameter: 1 (SW) 2-in 4-in
gal/ft of casing: 0.092 0.163 0.653
Pump Intake Depth: 5.50 ~~5.00~~ KK
Stable DTW (BTOC):

Depth to Water (BTOC): 6.50
Total Depth (BTOC): 15.00
Water Column (ft): 8.5
Casing Volume(gal): ~~1.38~~ KK 0.782
Screen Interval : to
Measured Stickup: 3.33

Method of Purging

Pump: SUB ~~BLADR~~ PERIST OTHER: ~~0~~ KK
Purge Start Time: 14:11
Purge End Time: 14:32
Flow Rate (lpm): 0.165
Volume Purged (Liters): 3.0

Bailer: Teflon SS Other: -
Bailer volume (Liters): -
Required Pulls: -
Volume Purged (Liters): -

Criteria for Stable Parameters

Parameter	Working Range	Stability Criteria	Depth to Water Stabilization	
			Time	Depth to Water
Temperature	-5 to 45 degrees C	+/- 0.2 degrees C	14:32	6.50
pH	0 to 14 NTU	+/- 0.1	14:24	6.50
Conductivity	0 to 200 mS/cm	+/- 3%	14:20	6.49
ORP	-999 to +999 mV	+/- 10 mV	14:26	6.50
Dissoved Oxygen	0 to 50 mg/L	+/- 10%	14:32	6.50
Turbidity	0 to 1,000 NTU	+/- 10% [<10 NTU]		

Instrument Observations

Round	Time	Water Level [ft BTOC]	Volume Purged [Liters]	✓ pH	Cond [mS/cm]	Turbidity [NTU]	✓ DO [mg/L]	✓ Temp [C]	✓ ORP [mV]
1	14:11	6.49	0	6.33	0.153	107	12.47	6.20	158
2	14:14	6.49	500 mL	6.54	0.130	88.7	13.40	6.36	145
3	14:17	~~6.62~~ KK	750 mL	6.62	0.082	64.0	13.05	6.55	149
4	-	6.49	-	-	-	-	-	-	-
5	14:20	6.49	1000 mL	6.74	0.140	33.1	12.04	6.90	148
6	14:23	6.50	1500 mL	6.56	0.138	29.5	11.48	6.97	148
7	14:26	6.50	1750 mL	6.48	0.139	30.9	10.92	6.96	151
8	14:29	6.50	2500 mL	6.46	0.140	28.6	10.98	6.92	152
9	14:32	6.50	3000 mL	6.43	0.142	27.4	10.99	6.90	151

Notes: Draw-down should ideally be less than 0.3 feet from the original depth to groundwater.
Minimal draw-down achieved and measuered by: 1)pumping at a low rate (approximately 1 liter/3 minutes or 0.1 gal/min and 2) continually measuring water levels in the well.

Sensory Observations

Color: ~~Clear~~, Amber, Tan, Brown, Grey, Milky White, Other:
Odor: ~~None~~, Low, Medium, High, Very Strong, H2S, Fuel Like, Chemical ?, Unknown
Turbidity: None, ~~Low~~ Medium, High, Very Turbid, Heavy Silts

Comments: Discharge Time: 1-2 Sampled for DRO & BTEX
Fill Time: 1-2

SS000-0106

WELL PURGE AND SAMPLING FIELDSHEET

Well ID: SS000-0106-MW05

Project: Fort Hunter RBS, LTM
Project #: 060008.001.93.03.01
Field Team: K. Reidt, K. Reinle
Sample ID: ~~SS000-0106-MW04-101223~~ MS
Sample ID: SS000-0106-MW05-101223
Sample ID:
~~Discharge: 2 hr~~
~~Fill: 2 hr~~

Date: 10/12/23
Start Time: 15:09
End Time: 15:40
Time: 15:35 primary dup other:
Time: primary dup other:
Time: primary dup other: —
Filtered? Y / N 0.45µm 1.0µm

Well Information

Depth to Top of Product:			NA	Depth to Water (BTOC):	8.01
Depth to Oil/Water Interface:			NA	Total Depth (BTOC):	15.02
Casing Diameter:	1.5in	2-in	4-in	Water Column (ft):	7.01
gal/ft of casing:	0.092	0.163	0.653	Casing Volume(gal):	~~1.14~~ MS 0.645
Pump Intake Depth:			9.01	Screen Interval :	to
Stable DTW (BTOC):			8.09	Measured Stickup:	2.40

Method of Purging

Pump: SUB (BLADR) PERIST OTHER: —
Purge Start Time: 15.09
Purge End Time: 15:33
Flow Rate (lpm): 0.167
Volume Purged (Liters): 4.0

Bailer: Teflon SS Other: —
Bailer volume (Liters): —
Required Pulls: —
Volume Purged (Liters): —

Criteria for Stable Parameters

Parameter	Working Range	Stability Criteria	Depth to Water Stabilization	
			Time	Depth to Water
Temperature	-5 to 45 degrees C	+/- 0.2 degrees C		
pH	0 to 14 NTU	+/- 0.1		
Conductivity	0 to 200 mS/cm	+/- 3%	15:21	8.09
ORP	-999 to +999 mV	+/- 10 mV	15:24	8.09
Dissoved Oxygen	0 to 50 mg/L	+/- 10%	15:33	8.09
Turbidity	0 to 1,000 NTU	+/- 10% [<10 NTU]	~~15:30~~	~~8.09~~ MS

Instrument Observations

Round	Time	Water Level [ft BTOC]	Volume Purged [Liters]	pH	✓ Cond [mS/cm]	✓ Turbidity [NTU]	✓ DO [mg/L]	✓ Temp [C]	✓ ORP [mV]
1	15.09	8.10	0	6.01	0.164	60.3	5.80	7.38	117
2	15:12	8.10	750 mL	4.99	0.163	36.1	1.94	7.23	134
3	15:15	8.10	1,250	4.49	0.161	18.4	1.39	7.15	122
4	15:18	8.09	1,750	4.21	0.160	12.5	1.17	7.06	105
5	15:21	8.09	2,250	4.07	0.159	10.9	1.06	7.04	100
6	15:24	8.09	3,000	3.97	0.159	9.6	1.00	7.01	98
7	15:27	8.09	3500	3.95	0.160	9.1	0.98	6.96	100
8	15:30	8.09	3750	3.77	0.161	8.2	0.94	6.99	101
9	15:33	8.09	4000	3.72	0.162	10.9	0.82	6.96	100

Notes: Draw-down should ideally be less than 0.3 feet from the original depth to groundwater.
Minimal draw-down achieved and measuered by: 1)pumping at a low rate (approximately 1 liter/3 minutes or 0.1 gal/min and 2) continually measuring water levels in the well.

Sensory Observations

Color: Clear, (Amber), Tan, Brown, Grey, Milky White, Other: light amber/clear
Odor: None, Low, (Medium), High, Very Strong, H2S, Fuel Like, Chemical?, Unknown
Turbidity: None, ~~Low~~, Medium, High, Very Turbid, Heavy Silts

Comments: Discharge Time: 2 Sampled for DRO + BTEX
Fill Time: 2

SS006

WELL PURGE AND SAMPLING FIELDSHEET

Well ID: SS006-066-MW06

Project: Port Hueneme BRAC LTM
Project #: 060069.001.93.03.01
Field Team: N. Reidt, K. Reichle
Sample ID: ~~SS006-066-MW06~~ WE
Sample ID: SS006-066MW06-121223
Sample ID:

Date: 10/12/23
Start Time: 10:56
End Time: 11:23

Time: 11:15 primary dup other:
Time: primary dup other:
Time: primary dup other:
Filtered? Y / (N) 0.45µm 1.0µm

Well Information

Depth to Top of Product: N/A
Depth to Oil/Water Interface: N/A
Casing Diameter: 1.5cm 2-in 4-in
gal/ft of casing: 0.092 0.163 0.653
Pump Intake Depth: 5.60
Stable DTW (BTOC): 4.69

Depth to Water (BTOC): 4.67 ft
Total Depth (BTOC): 12.30 ft
Water Column (ft): 7.63
Casing Volume(gal): ~~1.24~~ 0.702
Screen Interval : to
Measured Stickup: 0.65

Method of Purging

Pump: SUB (BLADR) PERIST OTHER:
Purge Start Time: 10:56
Purge End Time: 11:13
Discharge: 7 ha
Purge: 11 ha
Flow Rate (lpm): 50 mL/min
Volume Purged (Liters): 1500 mL

Bailer: Teflon SS Other: —
Bailer volume (Liters): —
Required Pulls: —
Volume Purged (Liters): —

Criteria for Stable Parameters

Parameter	Working Range	Stability Criteria	Depth to Water Stabilization	
			Time	Depth to Water
Temperature	-5 to 45 degrees C	+/- 0.2 degrees C		
pH	0 to 14 NTU	+/- 0.1	11:04	4.69
Conductivity	0 to 200 mS/cm	+/- 3%	11:07	4.69
ORP	-999 to +999 mV	+/- 10 mV	11:10	4.68
Dissoved Oxygen	0 to 50 mg/L	+/- 10%	11:10	4.69
Turbidity	0 to 1,000 NTU	+/- 10% [<10 NTU]	11:13	4.68

Instrument Observations

Round	Time	Water Level [ft BTOC]	Volume Purged [Liters]	pH ✓	Cond ✓ [mS/cm]	Turbidity [NTU]	DO [mg/L]	Temp [C] ✓	ORP [mV] ✓
1	10:56	4.68	200 mL	6.26	.248	17.6	8.52	6.16	136
2	11:00	4.68	275 mL	6.21	.246	15.1	11.43	6.17	132
3	11:04	4.68	550 mL	6.23	.242	14.3	11.41	6.19	137
4	11:07	4.69	725 mL	6.25	.240	12.2	10.04	6.23	143
5	11:10	4.68	1,000 mL	6.22	.238	10.9	9.67	6.24	144
6	11:13	4.68	1,250 mL	6.27	.236	10.9	11.23	6.20	143
7									
8									
9									

Notes: Draw-down should ideally be less than 0.3 feet from the original depth to groundwater.
Minimal draw-down achieved and measuered by: 1)pumping at a low rate (approximately 1 liter/3 minutes or 0.1 gal/min and 2) continually measuring water levels in the well.

Sensory Observations

Color: Clear, Amber, (Tan) Brown, Grey, Milky White, Other: very light tan
Odor: (None) Low, Medium, High, Very Strong, H2S, Fuel Like, Chemical ?, Unknown
Turbidity: None, (Low) Medium, High, Very Turbid, Heavy Silts

Comments: Discharge Time: 7
Fill Time: 11
Sampled for DRO + BTEX

55006

WELL PURGE AND SAMPLING FIELDSHEET

Well ID: 55006 - 066 - MW07

Project: Port Hueneme BBS LTM
Project #: 060108.001.9305.01
Field Team: K. Bridi, K. Bichel

Date: 10/12/23
Start Time: 12:11
End Time: 12:42 1250

Sample ID: 55006-066MW07-101223 Time: 12:30 (primary) dup other:
Sample ID: 55006-066MW99-101223 Time: 12:45 primary (dup) other:
Sample ID: Time: — primary dup other:

Filtered? Y / (N) 0.45µm 1.0µm

Well Information

Depth to Top of Product:			NA	Depth to Water (BTOC):	5.68
Depth to Oil/Water Interface:			NA	Total Depth (BTOC):	12.88
Casing Diameter:	1.5 in	2-in	4-in	Water Column (ft):	7.2
gal/ft of casing:	0.092	0.163	0.653	Casing Volume(gal):	1.174 kn 0.662
Pump Intake Depth:			3 ft	Screen Interval :	to
Stable DTW (BTOC):			5.68	Measured Stickup:	1.40

Method of Purging

Pump: SUB (BLADR) PERIST OTHER: —
Purge Start Time: 12:11
Purge End Time: 12:30
Discharge: 5 hr
Fill: 13 hr
Flow Rate (lpm): 0.125
Volume Purged (Liters): 3.5

Bailer: Teflon SS Other: —
Bailer volume (Liters): —
Required Pulls: —
Volume Purged (Liters): —

Criteria for Stable Parameters

Parameter	Working Range	Stability Criteria	Depth to Water Stabilization	
			Time	Depth to Water
Temperature	-5 to 45 degrees C	+/- 0.2 degrees C		
pH	0 to 14 NTU	+/- 0.1	12:19	5.68
Conductivity	0 to 200 mS/cm	+/- 3%	12:27	5.68
ORP	-999 to +999 mV	+/- 10 mV	12:19	5.68
Dissoved Oxygen	0 to 50 mg/L	+/- 10%	12:27	5.68
Turbidity	0 to 1,000 NTU	+/- 10% [<10 NTU]		

Instrument Observations

Round	Time	Water Level [ft BTOC]	Volume Purged [Liters]	✓ pH	✓ Cond [mS/cm]	Turbidity [NTU]	✓ DO [mg/L]	✓ Temp [C]	✓ ORP [mV]
1	12:11	5.68	0	6.50	.255	21.1	11.19	6.41	150
2	12:15	5.68	1	6.54	.265	22.2	10.55	6.62	150
3	12:19	5.68	1.75	6.57	.275	70.2	10.48	6.45	152
4	12:21	5.68	2.25	6.58	.282	128	10.09	6.29	152
5	12:24	5.68	2.75	6.55	.283	175	9.22	6.25	152
6	12:27	5.68	3.25	6.50	.282	207	8.51	6.21	153
7	12:30	5.68	3.5	6.51	.281	262	7.33	6.17	155
8									
9									

Notes: Draw-down should ideally be less than 0.3 feet from the original depth to groundwater.
Minimal draw-down achieved and measuered by: 1)pumping at a low rate (approximately 1 liter/3 minutes or 0.1 gal/min and 2) continually measuring water levels in the well.

Sensory Observations

Color: (Clear), Amber, Tan, Brown, Grey, Milky White, Other:
Odor: (None), Low, Medium, High, Very Strong, H2S, Fuel Like, Chemical ?, Unknown
Turbidity: None, (Low), Medium, High, Very Turbid, Heavy Silts

Comments: Discharg Time : 5 Sampled for DAU : BTEX
Fill Time : 13

SS006-FPC-21S — WELL PURGE AND SAMPLING FIELDSHEET

Well ID: SS006-FPC-21S-MW-08

Project: Port Hueneme BRS, LTM
Project #: 6100008.001.93.03.01
Field Team: K. Reidt, K. Reichle
Date: 10/12/23
Start Time: 19:05
End Time: 19:35

Sample ID: ~~SS006-21S-MW-08-101223~~ KR	Time: 1930	primary	dup	other:	
Sample ID: SS006-21S MW08-101273	Time:	primary	dup	other:	—
Sample ID:	Time:	primary	dup	other:	—

Filtered? Y / N 0.45µm 1.0µm

Well Information

Depth to Top of Product:			NA	Depth to Water (BTOC):	10.27
Depth to Oil/Water Interface:			NA	Total Depth (BTOC):	20.03
Casing Diameter:	1.5 in	2-in	4-in	Water Column (ft):	9.76
gal/ft of casing:	0.092	0.163	0.653	Casing Volume(gal):	~~1.59~~ KR 0.898
Pump Intake Depth:			11.3	Screen Interval:	to
Stable DTW (BTOC):			10.27	Measured Stickup:	1.90

Method of Purging

Pump: SUB (BLADR) PERIST OTHER: —
Purge Start Time: 19:05
Purge End Time: 19:25
Flow Rate (lpm): 0.150
Volume Purged (Liters): 3.5
Discharge ~~-5~~ KR FILL ~~-10-12~~ KR

Bailer: Teflon SS Other: —
Bailer volume (Liters): —
Required Pulls: —
Volume Purged (Liters): —

Criteria for Stable Parameters

Parameter	Working Range	Stability Criteria	Depth to Water Stabilization	
			Time	Depth to Water
Temperature	-5 to 45 degrees C	+/- 0.2 degrees C		
pH	0 to 14 NTU	+/- 0.1	19:20	10.27
Conductivity	0 to 200 mS/cm	+/- 3%		
ORP	-999 to +999 mV	+/- 10 mV	19:20	10.27
Dissoved Oxygen	0 to 50 mg/L	+/- 10%	19:20	10.27
Turbidity	0 to 1,000 NTU	+/- 10% [<10 NTU]		

Instrument Observations

Round	Time	Water Level [ft BTOC]	Volume Purged [Liters]	pH ✓	Cond [mS/cm] ✓	Turbidity [NTU]	DO [mg/L] ✓	Temp [C]	ORP [mV] ✓
1	19:05	10.28	0	6.70	0.135	302	12.01	4.47	94
2	19:10	10.28	750 mL	6.81	0.129	291	11.69	5.09	107
3	19:15	10.29	1750 mL	6.77	0.120	258	11.68	5.17	108
4	19:20	10.27	2250 mL	6.74	0.132	213	11.47	5.21	109
5	19:25	10.27	3.500 mL	6.75	0.130	176	11.40	5.23	110
6									
7									
8									
9									

Notes: Draw-down should ideally be less than 0.3 feet from the original depth to groundwater.
Minimal draw-down achieved and measuered by: 1)pumping at a low rate (approximately 1 liter/3 minutes or 0.1 gal/min and 2) continually measuring water levels in the well.

Sensory Observations

Color: Clear, Amber, (Tan), Brown, Grey, Milky White, Other: Light tan
Odor: (None), Low, Medium, High, Very Strong, H2S, Fuel Like, Chemical ?, Unknown
Turbidity: None, (~~Low~~) Medium, High, Very Turbid, Heavy Silts

Comments: Discharge Time: 5
Fill Time: 10-12
Sampled for DRO & BTEX

SS006-FPC-215

WELL PURGE AND SAMPLING FIELDSHEET

Well ID: SS006-FPC-215-MW-09

Project: Port Heiden BRES, LTM
Project #: 060068.001.93.03.01
Field Team: K. Reidt, K. Reidt
Date: 10/12/23
Start Time: 18:08
End Time: 19:40

Sample ID: ~~SS006-215-MW-09-101223~~ hr Time: 1930 primary dup other:
Sample ID: SS006-215MW09-101223 Time: primary dup other: —
Sample ID: Time: primary dup other: —

Discharge - 1-2 aa
Fill - 2 aa

Filtered? Y / N 0.45µm 1.0µm

Well Information

Depth to Top of Product: NA
Depth to Oil/Water Interface: NA
Casing Diameter: 1.5 in 2-in 4-in
gal/ft of casing: 0.092 0.163 0.653
Pump Intake Depth: 12.70
Stable DTW (BTOC): 11.77

Depth to Water (BTOC): ~~11.17~~ hr 11.70
Total Depth (BTOC): 20.63
Water Column (ft): 9.93
Casing Volume(gal): ~~1.146~~ hr 0.822
Screen Interval : to
Measured Stickup: 3.70

Method of Purging

Pump: SUB BLADR PERIST OTHER: —
Purge Start Time: 18:09
Purge End Time: 18:28
Flow Rate (lpm): 0.125
Volume Purged (Liters): 2.5

Bailer: Teflon SS Other: —
Bailer volume (Liters): —
Required Pulls: —
Volume Purged (Liters): —

Criteria for Stable Parameters

Parameter	Working Range	Stability Criteria	Depth to Water Stabilization	
			Time	Depth to Water
Temperature	-5 to 45 degrees C	+/- 0.2 degrees C	18:24	11.77
pH	0 to 14 NTU	+/- 0.1	18:28	11.77
Conductivity	0 to 200 mS/cm	+/- 3%	18:24	11.77
ORP	-999 to +999 mV	+/- 10 mV	18:28	11.77
Dissoved Oxygen	0 to 50 mg/L	+/- 10%		
Turbidity	0 to 1,000 NTU	+/- 10% [<10 NTU]		

Instrument Observations

Round	Time	Water Level [ft BTOC]	Volume Purged [Liters]	✓ pH	✓ Cond [mS/cm]	Turbidity [NTU]	DO [mg/L]	✓ Temp [C]	✓ ORP [mV]
1	18:08	11.77	0	4.00	0.145	22.4	6.01	4.72	191
2	18:12	11.78	500 mL	4.74	0.147	18.5	4.43	4.86	189
3	18:16	11.77	1000 mL	6.00	0.149	17.5	3.04	4.95	120
4	18:20	11.77	1750mL	6.05	0.151	14.8	2.45	4.95	117
5	18:24	11.77	2250mL	6.08	0.151	14.0	2.13	4.93	117
6	18:28	11.77	2500mL	6.10	0.151	13.7	2.15	4.87	116
7									
8									
9									

Notes: Draw-down should ideally be less than 0.3 feet from the original depth to groundwater.
Minimal draw-down achieved and measuered by: 1)pumping at a low rate (approximately 1 liter/3 minutes or 0.1 gal/min and 2) continually measuring water levels in the well.

Sensory Observations

Color: ~~Clear~~, Amber, Tan, Brown, Grey, Milky White, Other:
Odor: ~~None~~, Low, Medium, High, Very Strong, H2S, Fuel Like, Chemical ?, Unknown
Turbidity: None, ~~Low~~, Medium, High, Very Turbid, Heavy Silts

Comments: Lock Combo - 0911 Discharge Time: 1-2 Sampled for DRO, BTEX
Fill Time: 2

SS006 - FPC-215 **WELL PURGE AND SAMPLING FIELDSHEET**

Well ID: SS006-FPC-215-MW-12

Project: Post Hayden RBS, LTM — Date: 10/12/23
Project #: 060009.001.03.03.01 — Start Time: 17:00
Field Team: K. Bert, K. Berkle — End Time: 17:40
Sample ID: SS006-215-MW12-101223 Time: 1725 (primary) dup other:
Sample ID: SS006-215-MW12-MS-101223 Time: 1730 primary dup other: MS
Sample ID: SS006-215-MW12-MSD-101223 Time: 1730 primary dup other: MSD
~~Discharge = 3~~ ~~hrs~~ Fill = 4 hrs
Filtered? Y / N 0.45µm 1.0µm

Well Information

Depth to Top of Product:		NA	Depth to Water (BTOC):	12.20
Depth to Oil/Water Interface:		NA	Total Depth (BTOC):	19.90
Casing Diameter:	~~2-in~~	4-in	Water Column (ft):	7.50
gal/ft of casing:	0.163	0.653	Casing Volume(gal):	1.22
Pump Intake Depth:		13.20	Screen Interval :	to
Stable DTW (BTOC):		12.40	Measured Stickup:	2.80

Method of Purging

Pump: SUB (BLADR) PERIST OTHER: - Bailer: Teflon SS Other: -
Purge Start Time: 17:00 Flow Rate (lpm): 0.0025 Bailer volume (Liters): -
Purge End Time: 17:20 Volume Purged (Liters): 1.5 Required Pulls: -
Volume Purged (Liters): -

Criteria for Stable Parameters

Parameter	Working Range	Stability Criteria	Depth to Water Stabilization	
			Time	Depth to Water
Temperature	-5 to 45 degrees C	+/- 0.2 degrees C		
pH	0 to 14 NTU	+/- 0.1	17:08	12.40
Conductivity	0 to 200 mS/cm	+/- 3%	17:16	12.40
ORP	-999 to +999 mV	+/- 10 mV	17:08	12.40
Dissoved Oxygen	0 to 50 mg/L	+/- 10%	17:20	12.40
Turbidity	0 to 1,000 NTU	+/- 10% [<10 NTU]	17:20	12.40

Instrument Observations

Round	Time	Water Level [ft BTOC]	Volume Purged [Liters]	pH ✓	Cond [mS/cm] ✓	Turbidity [NTU]	DO [mg/L]	Temp [C] ✓	ORP [mV] ✓
1	17:00	12.37	0	4.36	0.118	11.6	11.23	5.82	182
2	17:04	12.39	500 mL	4.38	0.114	12.0	10.65	5.96	188
3	17:08	12.40	750 mL	4.44	0.109	10.6	10.41	6.08	191
4	17:12	12.40	1000 mL	4.46	0.106	12.1	10.37	6.05	192
5	17:16	12.40	1250 mL	4.48	0.105	12.5	10.31	6.02	193
6	17:20	12.40	1500 mL	4.51	0.104	12.4	10.35	5.99	194
7									
8									
9									

Notes: Draw-down should ideally be less than 0.3 feet from the original depth to groundwater.
Minimal draw-down achieved and measuered by: 1)pumping at a low rate (approximately 1 liter/3 minutes or 0.1 gal/min and 2) continually measuring water levels in the well.

Sensory Observations

Color: (Clear) Amber, Tan, Brown, Grey, Milky White, Other:
Odor: (None) Low, Medium, High, Very Strong, H2S, Fuel Like, Chemical ?, Unknown
Turbidity: None, (Low) Medium, High, Very Turbid, Heavy Silts

Comments: Lock Combo - 0000 Discharge Time: 3 Sampled for DRO + BTEX
Fill Time: 4

NORTH WIND

Field Instrument Calibration Datasheet

Project Number:

Calibration Event	1										2									
Date and Time	10-14-23 0730										10-15-23 0830									
Instrument																				
Instrument Type	Horiba U-50 water quality meter										Horiba U-50 water quality meter									
Instrument Make & Model Number	Horiba U-5000										Horiba U-5000									
Serial Number	17EFEKPO										17EFEKPO									
Owner of Instrument	North Wind Site Services										North Wind Site Services									
Calibration Solution(s)																				
	DO	ORP	Cond	pH			Turbidity				DO	ORP	Cond	pH			Turbidity			
				1st pt	2nd pt	3rd pt	1st pt	2nd pt	3rd pt	4th pt				1st pt	2nd pt	3rd pt	1st pt	2nd pt	3rd pt	4th pt
Solution Type(s)		89 mV		pH4										pH4						
Solution Lot Number(s)																				
Solution Expiration Date		10.00																		
Calibration Solution Temperature (°C)		~~15.16~~		15.16								19.59		19.61						
Solution Standard Value(s) @ Temperature	99.0	~~101.0~~		4.00							95mV	~~96mV~~		4.10						
Calibration Values																				
Calibration Value @ Temperature		99.0		4.00								96mV		4.00						
Operator's Name	K. Reuter																			
Notes/Comments	pH4: Exp: 11-30-2024 Lot # 1CZL0008, 700G741200 ORP Standard: 89 mV @ 25°C 700657005T Single point auto calibration + ORP manual cal.										pH4: Exp 11-30-2024 Lot # 1CZL0008, 700G741200 ORP Standard: 89 mV @ 25°C 700657005T Single point auto Calibration + manual ORP cal.									

NORTH WIND

Field Instrument Calibration Datasheet

Project Number: 060068.001.93.03.01

Calibration Event	1	2
Date and Time	10-12-23 0920	10-13-23 0900
Instrument		
Instrument Type	Horiba U-50 Water Quality Meter	Horiba U-50 Water quality meter
Instrument Make & Model Number	Horiba U-5000	Horiba U-5000
Serial Number	17EFEKPO	17EFEKPO
Owner of Instrument	North Wind Site Services	North Wind Site Services
Calibration Solution(s)		

	1 DO	1 ORP	1 Cond	1 pH 1st pt	1 pH 2nd pt	1 pH 3rd pt	1 Turbidity 1st pt	1 Turbidity 2nd pt	1 Turbidity 3rd pt	1 Turbidity 4th pt	2 DO	2 ORP	2 Cond	2 pH 1st pt	2 pH 2nd pt	2 pH 3rd pt	2 Turbidity 1st pt	2 Turbidity 2nd pt	2 Turbidity 3rd pt	2 Turbidity 4th pt
Solution Type(s)		ORP		pH4								ORP		pH4						
Solution Lot Number(s) 7006634855																				
Solution Expiration Date 08-31-2024																				
Calibration Solution Temperature (°C)		14°C		14°C								15°C		15°C						
Solution Standard Value(s) @ Temperature		100 mV		4.00								269		4.12						
Calibration Values																				
Calibration Value @ Temperature				4.00								101.0		4.00						
Operator's Name	K. Reidt										K. Reidt									

Notes/Comments

1: Single point auto calibration using pH4 solution.

Manual calibration for ORP

2: pH 4 exp: 11-30-2024, Lot # ~~7006~~ 7006741200 1CZL0008

ORP Standard: 89.0mV @ 25°C
7006570057

10-11-23 K. Reidt, K. Reichle

Project: Port Hueden RRS, Contract # W911KB-20-D-0012, Task ORDER # W911KB20F0220

Weather: 40-41°F, Partly Sunny with periods of rain, wind: 0-13 mph, Client: USACE

Objectives: Mobilize to Port Hueden. Locate Sites and monitoring wells.

0700 Arrive at North Wind Office. Meet Katelyn and pick up field gear left in office.

0730 Arrive at Lake Clark Air. Check in luggage and vehicle.

0945 Plane departs for Port Hueden.

1130 Arrive at Pilot Station. Drop people off. Depart again for Port Hueden.

1215 Arrive in Port Hueden. Unload gear. No rental vehicle waiting at airfield. A woman offers us ride to Kris's House. Get settled in with our lodging.

1300 Pick up rental vehicle. Go back to house to organize field gear.

1430 Head out towards sites LF007, OTOO1, and WP002.

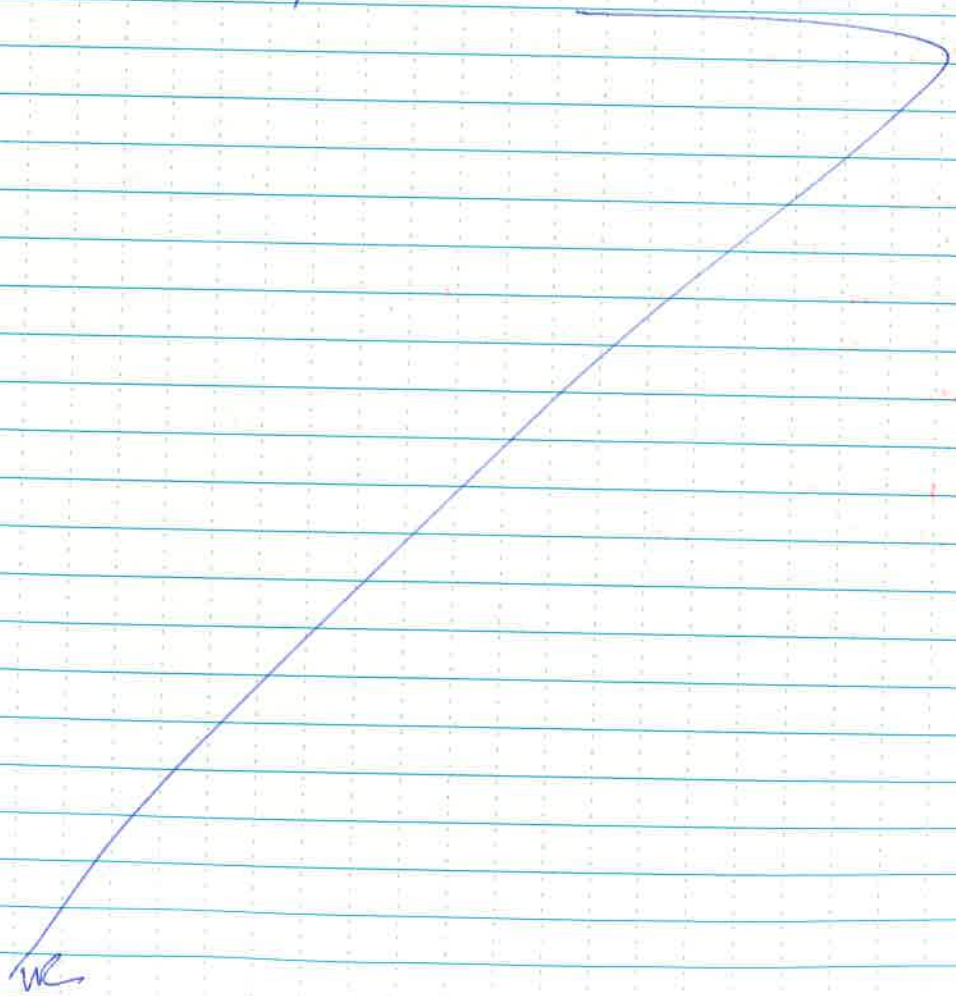
1500 Locate Site LF007. Begin LUC inspection. Camera dies after a few minutes. Return to house to get charger.

1530 Return to Site LF007 to finish LUC inspection.

1615 Complete inspection form. Go to locate sites OTOO1 and WP002.

1700 Go to Site SS006-FPC-066. Locate monitoring wells. A saw or clippers would be useful for removing branches in the way of several wells.

1730 Return to house to complete notes and organize sample bottles. End of day.



Scale: 1 square = _____

Rite in the Rain

10-12-23 K. Reibt, K. Reichle

Project: Part Heiler RIRS LTM, Contract # W911KB20F012, Client: USACE

Weather: ~~32~~ 23 ~~to~~ 43°F, Sunny, East winds 10-15 mph.

Objectives: Conduct Groundwater Sampling and LCC Inspections at Site SS006

0800 Conduct tailgate safety meeting at Carol's Legacy Lodge.

0920 Calibrate Horiba water quality meter. Go get gas for rental vehicle

0950 Arrive at Site SS006-FPC-215.

0958 Set up at monitoring well SS006-066-MW06. Begin purging @ 1056 Parameters stabilize @ 1113

*1115 Collect GW Sample SS006-066MW06-101223 for DRO + BTEX

1140 Set up at SS006-066MW07. Begin purging @ 1211. Parameters Stabilized @ 1230

~~SS006-066MW07-101223~~

*1236 Collect primary GW Sample ~~SS006-066MW07~~ for DRO + BTEX

*1245 Collect duplicate GW Sample SS006-066MW99-101223 for DRO + BTEX

1301 Set up Sampling equipment at MW04. Break for lunch.

1401 Return to Site SS006-066. Begin purging MW04 @ 1411. Parameters Stabilized @ 1432.

*1434 Collect primary GW Sample SS006-066MW04-101223 for DRO + BTEX

1451 Set up at SS006-066MW05. Begin purging @ 1508. Parameters Stabilize @ 1533

1535

*~~1540~~ We Collect Primary GW Sample SS006-066MW05-101223 for DRO, BTEX

1550 Break down Sampling equipment at SS006-066. Go to house to get Allen tool and then continue Sampling at SS006-215

1636 Set up at SS006-215MW12. Lock Combo is 0000. Well is in fair/poor condition. Lock getting rusty. May Expect to replace in 2024 Parameters Stabilized @ 1720 Began Purging @ 1700 Lock Combo # 0000

*1725 Collect Primary GW Sample SS006-215MW12-101223 for DRO + BTEX

+1720 Collect MS/MSD Samples for DRO + BTEX.

1800 Set up at MW09. Began purging @ 1808. Combo # is set to 0911 Monument lid in serviceable condition - needs set screws. Parameters Stabilized @ 1828

1830

*~~1840~~ We Collect primary GW Sample SS006-215MW09-101223 for DRO + BTEX.

1900 Set up at MW08. Lock Combo # is 0911. Began purging @ 1905

1930 Parameters Stabilized at or 1925.

*~~1935~~ We Collect primary GW Sample SS006-215MW08-101223 for DRO + BTEX

Demobilize Sampling equipment from site SS006-215. Return to house.

End of day

Scale: 1 square = ____ VC

10-13-23 K. Reidt, K. Reichle

Project: Port Heiden RRS LTM, Contract # W911KB20F012, Client: USACE

Weather: 31-46°F, Overcast with chance of rain, wind: W, 0-10 mph

Objectives: Ship samples from SSC06 on Lake Clark Air to Anchorage. Begin groundwater sampling at site OTOO1

0800 Tailgate safety meeting at Carol's Legacy Lodge. Topics discussed: physical hazards, working in inclement weather, bear safety.

0830 Package sample cooler for shipment to Anchorage. Complete DOCERs for 10/11 and 10/12

1030 Calibrate Horiba. Issue with calibration, Cleaned pH probe and added internal Solution. Problem resolved, Load sample equipment onto vehicle

1120 Head out to site OTOO1 for groundwater sampling

1130 Set up at OTOO1-RRSMW06. Begin purging at 1204. Parameters Stabilized @ 1228.

*1230 Collect primary GW sample OTOO1-RRSMW06-101323 for DRO, VOCs, MNA
Replaced pad lock on monitory well. Combo set to 0911

1315 Set up at OTOO1-BLOMW05. Begin purging @ 1328. Initial DTW = 47.80
Excessive drawdown 7.52 ft BTOC, Will return for No-Purge Sample after well has recharged 7.80' previous well volume.
Installed new pad lock. Combo # 0911. Installed new compression cap.

1400 Set up at OTOO1-BLOMW06. Begin purging @ 1414. Having problems getting water to flow. Attempt to bubble sheet. Some silt seemed to be stuck in the pump impeller. Could possible be cause of pump issues. Still getting excessive drawdown. Cannot get continuous water flow. Drawdown > 45.80 ft. Give up on well. Will attempt to return after recharge and collect a No-Purge Sample.

1515 Return to house for lunch and ship samples on Lake Clark flight.

~~1340~~ 1548 Call Lake Clark Air. Was told plane will arrive at Port Heiden @ 1600. Go to airfield to meet airplane. Notify R. Lafollette ~~1x~~ Sample Cooler is inbound to Anc. Return to the house for lunch.

1647 Set up at BLO-MW07. Begin purging @ 1703. Parameters Stabilized @ 1721.

*1730 Collect primary GW sample OTOO1-BLOMW07-101323 for DRO, VOCs, MNA

*1740 Collect duplicate sample OTOO1-BLOMW99-101323 for DRO, VOCs, MNA.
Had drawdown halfway though sampling. Had to lower pump
Replaced pad lock on well. Combo # = 0911.

1810 Set up at BLOMW05. DTW = 47.88

*1815 Collect primary GW Sample OTOO1-BLOMW05-101323 for DRO, VOCs, MNA Had to lower pump to finish sampling

1840 Set up at BLO-MW06. DTW = 41.79 ft BTOC

*1845 Collect primary GW sample OTOO1-BLOMW06-101323 for DRO, VOCs MNA
Installed new pad lock. Combo set to 0911. Had to lower pump to collect sample
Return to house.

1930 End of day

Scale: 1 square = _____

Rite in the Rain

10-14-23 K. Reitz, K. Rechle

Project: Fort Hayden RRS LTM, Contract # W911KB-20-F-0012, Client: USACE

Weather: 39-47°F Overcast w/ rain in morning. Wind 10 mph to SW

Objectives: Continue groundwater sampling at OT001 / WP002.

~~0830~~ 0730 Calibrate Horiba water quality meter

0830 Conduct tailgate safety meeting at Carl's Legacy Lodge.
Topics discussed: Walking on uneven ground, working in inclement weather, animal hazards, vehicle hazards.

0900 Complete DOCR form for work performed on 10-13-23. Start organizing field equipt for groundwater sampling.

1015 Setup at OT001-GLOMW04. Begin purging at 1035. Parameters stabilized @ 1059.

*1105 Collect primary GW sample OT001-GLOMW04-101423 for DRO, VOCs, MNA.
Installed new padlock. Combo # set to 0911.

1125 Setup at OT001-RRSMW05. Begin purging at 1157. Parameters Stabilized @ 1213. Replaced padlock-combo #0911. Replaced Compression Cap.

*1220 Collect primary GW sample OT001-RRSMW05-101423 for DRO, VOCs, MNA
Poor recharge during sampling. Installed new Compression Cap + Combo lock, Set to #0911

1240 Break for lunch. Head back to house.

1335 Return from lunch. Setup at DSA-MW06. Begin purging @ 1405. Parameters stabilize @ 1429

*1435 Collect primary GW sample OT001-DSAMW06-101423 for DRO, VOCs, MNA
Replaced padlock. Combo #0911.

1450 Setup at DSA-MW07. Begin purging @ 1502. Parameters Stabilize @ 1518.

*1525 Collect primary GW Sample OT001-DSAMW07 for DRO, VOCs, MNA.
Poor recharge. Recommend well redevelopment. Replaced padlock. Combo #0911

1545 Setup at DSA-MW01. Begin purging @ 1600 parameters stabilize @ 1620

*1625 ~~1630~~ Collect primary GW Sample OT001-DSAMW01-101423 for DRO, VOCs, MNA.

*1630 Collect duplicate GW Sample OT001-DSAMW99-101423
Replaced padlock. Combo set to 0911.

1645 Set up at DSA-MW05, Begin purging @ 1703. Excessive Drawdown DTW @ 1723: 6330A
Will allow for recharge prior to sampling. Replaced padlock. Combo #0911.

1825 Check water level @ DSA-MW05. DTW = 57.85 ft BTOC.

1850 Check water level. DTW = 57.60 ft. BTOC. Will return tomorrow for sample.
Return to the house. Recondition Sample Coolers with new gel ice.
Decon Sampling equipment.
End of day

K

Scale: 1 square =

10-15-23 K. Reidt, K. Reichle

Project: Port Heiden RCS LTM, Contract # W911KB20F012, Client: USACE

Weather: 30-50°F, Overcast with clear skies in afternoon/evening, wind: 0-5mph SW

Objectives: Complete GW sampling at OT001/WP002, Ship samples to Anchorage, if possible. Continue LUC inspections as time allows.

0830 Conduct tailgate safety meting at Carol's Legacy lodge: Topics discussed: Animals vehicle safety, slips/trips/falls.

- Calibrate Horiba water quality meter. Recondition sample coolers, Ready sample equipment.

0930 Called Lake Clark Air. Unable to provide us a time when plane will arrive in Port Heiden

0946 Arrive at DSA-MW005. DTW = 57.35 ft BTOC

* 1000 Collect primary GW sample OT00-DSAMW05-101523 for DRO, VOCs, MNA

1026 Set up at OT001-DSAMW02. Have problems with flow-through cell leaking. Fit problem - bottom gasket was out of place. Begin purge @ 1052

Parameters Stabilized @ 1116

* 1120 Collect GW sample OT001-DSAMW02-101523 for DRO, VOCs, MNA.

Replaced padlock. Combo set to 0911. Poor recharge/excessive drawdown.

1144 Set up at WP002-BLOMW01, Begin purging @ 1203 Parameters Stabilized @ 1227

* 1230 Collect primary GW sample WP002-BLOMW01-101523 and MS/MSD

* 1240 Collect QC Sample (MS/MSD) WP002-BLOMW01-101523.

1300 Clean up and return to the house to QC the samples and prepare for shipment.

1530 Don't have enough time to ship samples, head at to sites SS006-066, SS006-215

1540 Begin LUC inspection at SS006-066. Refer to LUC inspection form for observations

1630 Finished inspection at 066. Head to SS006-~~215~~ 215 for LUC inspection.

1700 Finish LUC inspection at SS006-215. Make decision to return to house to read background information + 2022 field notes on the remaining two sites before finishing inspections. Continue to clean and organize field equipment for shipment to Anchorage.

* 1745 Collect QC Equipment Blank Sample OT001-EQBK01-101523 for DRO, VOCs, MNA.

1800 Take Solid waste IDW to city dump for disposal.

1900 Complete COCs for the three Sample Coolers, ID: ~~Red~~ "Red", "Blue", "Green", "Yellow" Recondition Coolers with fresh gel ice.

2030 End of day

Scale: 1 square = _____

Rite in the Rain

10-16-23 K. Reidt, K. Reschke

Project: Port Heiden RRS LTM, Contract # W911KB20F012, Client: USACE

Weather: 43-46°F, Overcast with rain in afternoon, Wind: 10-16 mph, NNE

Objectives: Complete LTM inspections at OTOOL and WPOOZ
Ship samples to Anchorage on Lake Clark Air, Field equip w/ Grant Aviation
Demobilize from Port Heiden if flight in afternoon is available.

0800 Tailgate safety meeting at Carl's Legacy Lodge, Topics discussed: Incident reporting, staying hydrated, vehicle safety.
- Call Lake Clark Air to ask about changing reservations for today's flight. Made arrangements to meet the airplane at the airfield at 15:00

0900 Depart to perform LTM inspections at OTOOL and WPOOZ. Arrive at OTOOL @ 0920

1000 Begin LTM inspection at WPOOZ. Reattach LTM Sign (Southeastern sign) to Sign posts. Will need to redrill one hole to feed bolt through sign. 2nd LTM sign (Northwestern sign) had blown away/detached from sign posts. Photographs from 2022 show sign was zipped to Sign posts.

1120 Complete LTM inspections at WPOOZ and OTOOL. Return to house to pack up field equipment to deliver to Grant Village agent.

1200 Deliver freight to Billie, the Grant Aviation agent. Return to house to pack personal belongings.

1230 Receive phone call from Lake Clark Air. Was asked to be at the airfield by 1300. Remove food and belongings from house

1250 Arrive at airfield. Airplane arrives at 1315. Was told by pilot that there was a miscommunication and aircraft has only three seats available for four passengers. K. Reidt stays behind and waits for next airplane anticipated to arrive at Port Heiden @ 1445-1500. K. Reschke departs for Anchorage.

1510 Second airplane arrives. K. Reidt departs for Anchorage.

1830 Arrive in Anchorage. Have to wait to get vehicle out of storage lot.

1900 Arrive at North Wind office. B. Lafatte picked up K Reschke ~~for~~ from airport

End of day

Scale: 1 square = _____

North Wind-EA JV, LLC

Daily Quality Control Report

W911KB20D0012/ W911KB-20-F-0120	North Wind-EA JV	611 CES S. ORC at Multiple Installations/ 060068.001.94.03.01
Contract Number / Task Order Number	Contractor	Project Title / NWSS Project No.
001	10-11-23	Port Heiden, AK (K. Reidt, K. Reichle)
CQC Report Number	Date or Time Period	Location and Team

I. Weather Conditions:

Temp Low 37°F Temp High 41°F Cloudy ☐ Partly Cloudy ☒ Clear ☐

Wind Speed 0-13 mph Precipitation ☐ No ☒ Yes Partly sunny with intermittent rain squalls.

II. Quality Control Inspections Performed This Date (Include inspections, results, deficiencies observed, and corrective action)

Preparatory ☐

Initial ☒

Follow-Up ☐

Was the construction deficiency tracking list updated this date? Yes ☐ No ☒

III. Was Field Sampling and Testing Performed This Date? Yes ☐ No ☒

If yes, then complete the following:

	Type of test	Method/Matrix	Results

Have Data Quality Objectives been achieved? N/A ☐ Yes ☒ No ☐

IV. Have Samples Been Collected for Laboratory Analysis? Yes ☐ No ☒

If yes, then complete the following:

	Type of Test	EPA Test Method/Matrix	Quantity of Samples

Have required amount of QC trip blanks and rinsates been achieved? Yes ☐ No ☐

Have appropriate QC laboratory tests been ordered? (matrix spikes, method blanks, surrogates, reference standards, etc.) Yes ☐ No ☐

Have QA and QC samples been collected in the specified quantity? Yes ☐ No ☐

Have samples been properly labeled and packaged? Yes ☐ No ☐

V. Health and Safety.

Worker protection levels this date: Level A ☐ Level B ☐ Level C ☐ Level D ☒

Was any work activity conducted within a confined space? Yes ☐ No ☒

Was any work activity conducted within an area determined to be immediately dangerous to life and health? Yes ☐ No ☒

Were approved decontamination procedures used on ~~workers and~~ equipment as required? Yes ☒ No ☐

Was a Job Safety Meeting held this date? Yes ☒ No ☐

Were there any lost time accidents this date? **(If YES, attach copy of completed accident report)** Yes ☐ No ☒

Was hazardous waste/material released into the environment? Yes ☐ No ☒

Safety comments: (Include any infractions of approved safety plan, and include instructions from Government personnel. Specify corrective action taken.)

VI. Work Activities Performed This Date.

	Reference (DFW #/Tech Spec #)	Activity & Location	Quantity	Subcontractor
1.	QAPP & QAPP Update #1	Mobilize to site	1	
2.	QAPP & QAPP Update #1	LUC inspections at LF007	1	
3.				
4				
5				

VII. Labor & Manpower.

	Classification	Name	Employer	Hours
1.	Envi. Scientist	Kristopher Reidt	North Wind Site Services	10.5
2.	Envi. Scientist	Katelyn Reichle	North Wind Portage	10.5
3.				
4.				
5.				
6.				
			Total Hours	21.0

VIII. Equipment.

	No. of Units	Plant/Equipment	Date of Safety Check	Hours Used	Hours Idle	Hours Repair
1.	1	Rental Vehicle	10-11.23	3		
2.	1	Trimble GPS	10-11-23	3		
3.	1	GPS camera	10-11-23	3		
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
			Total Hours	9	0	0

IX. Material Received to be Incorporated into Job. None ☒

	Acceptability	Stored Where?	Reference Plans/Drawings
1.			
2.			

X. Submittals Reviewed. None ☒

	Submittal No.	Spec/Plan Reference	By Whom	Action Taken
1.				
2.				
3.				

XI. Offsite Surveillance Activities. (include action taken) None ☒

XII. Instructions Given by the Government to the Contractor. (Include names, reactions, and remarks) Verbal ☐ Written ☐ None ☒

XIII. Work Progress.

1.	Are there any Contractor caused delays?	Yes ☐	No ☒
2.	Are there any Contractor-potential findings of fact?	Yes ☐	No ☒
3.	Are there any Government caused delays or potential finding of fact?	Yes ☐	No ☒
4.	Are there any Government-potential findings of fact?	Yes ☐	No ☒
5.	Are there any unforeseeable or weather related delays? Fog, lightning, hail, numerous tornado warnings	Yes ☐	No ☒

XIV. Deficiency List.

Tracking No.	Deficiencies Identified (Not corrected by COB)	Tracking No.	Deficiencies Corrected (From Deficiency Tracking List)

XV. Remarks. (Include any visitors to project and miscellaneous remarks pertinent to work.)

1 Mobilized to Port Heiden from Anchorage, AK. Performed reconnaissance at all sites (LF007, OT001, WP002, SS006). Conducted LUC inspection at site LF007.

2 See photos of LF007 below.

3

4

5

The above report is complete and correct, and all work reported is believed, to the best of my knowledge, to be in compliance with contract plans and specifications, except as noted above.

CQC Site Manager Kristopher Reidt **Date** 10-11-23

Project Manager _____ **Date** _____

XVI. Government Quality Assurance Comments. (if applicable)

Concurs with the QC report? Yes ☐ No ☐

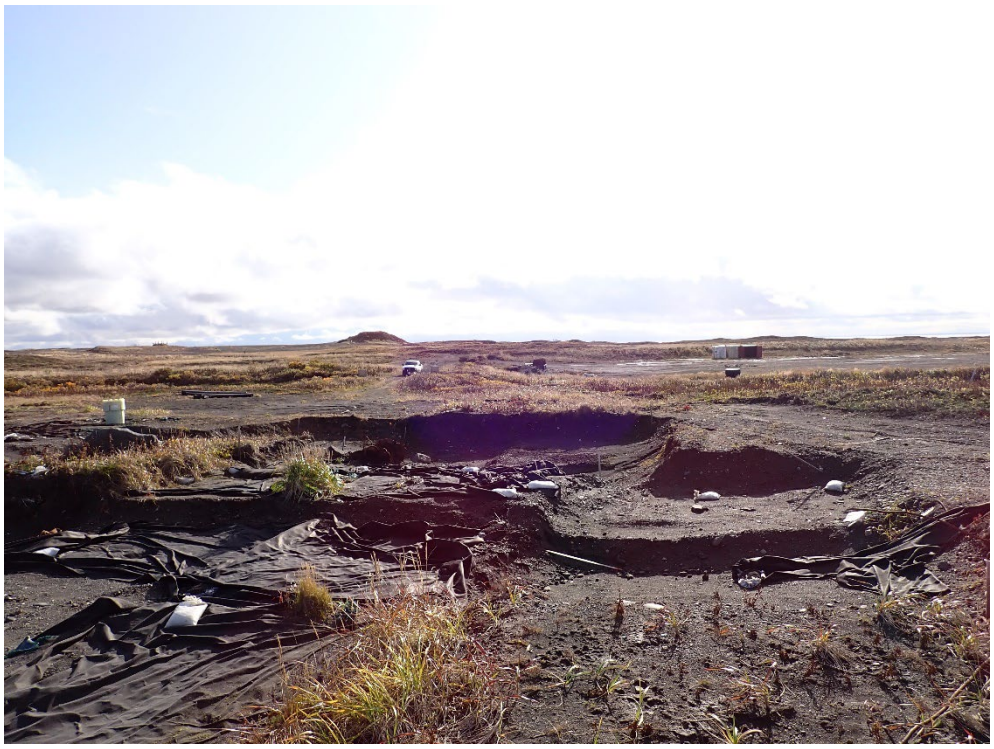
Additional comments or exceptions:

QAR Signature _____ **Date** _____

Supervisor's Initial _____ **Date** _____



Photograph 1: View of excavation at site LF007 facing east.



Photograph 2: View of excavation at site LF007 facing south.

North Wind-EA JV, LLC

Daily Quality Control Report

W911KB20D0012/ W911KB-20-F-0120	North Wind-EA JV	611 CES S. ORC at Multiple Installations/ 060068.001.94.03.01
Contract Number / Task Order Number	Contractor	Project Title / NWSS Project No.
002	10-12-23	Port Heiden, AK (K. Reidt, K. Reichle)
CQC Report Number	Date or Time Period	Location and Team

I. Weather Conditions:

Temp Low 36°F Temp High 43°F Cloudy ☐ Partly Cloudy ☐ Clear ☒

Wind Speed 0-15 mph Precipitation ☐ No ☒ Yes Mostly sunny. Intermittent wind gusts.

II. Quality Control Inspections Performed This Date (Include inspections, results, deficiencies observed, and corrective action)

Preparatory ☐

Initial ☒

Follow-Up ☐

Was the construction deficiency tracking list updated this date? Yes ☐ No ☒

III. Was Field Sampling and Testing Performed This Date? Yes ☐ No ☒

If yes, then complete the following:

	Type of test	Method/Matrix	Results

Have Data Quality Objectives been achieved? N/A ☐ Yes ☒ No ☐

IV. Have Samples Been Collected for Laboratory Analysis? Yes ☒ No ☐

If yes, then complete the following:

	Type of Test	EPA Test Method/Matrix	Quantity of Samples
	DRO, BTEX	AK102, 8260	SS006-215MW08-101223 (1 primary sample)
	DRO, BTEX	AK102, 8260	SS006-215MW09-101223 (1 primary sample)
	DRO, BTEX	AK102, 8260	SS006-215MW12-101223 (1 primary sample, 1 MS/MSD)
	DRO, BTEX	AK102, 8260	SS006-066MW05-101223 (1 primary sample)
	DRO, BTEX	AK102, 8260	SS006-066MW04-101223 (1 primary sample)
	DRO, BTEX	AK102, 8260	SS006-066MW07-101223 (1 primary sample) SS006-066MW99-101223 (1 duplicate sample)
	DRO, BTEX	AK102, 8260	SS006-066MW06-101223 (1 primary sample)
	DRO, BTEX	AK102, 8260	SS006- EQBK01-101223 (1 QC sample)
	DRO, BTEX	AK102, 8260	SS006-TRIPBLNK-HCL-101223 (1 QC sample)

Have required amount of QC trip blanks and rinsates been achieved? Yes ☒ No ☐

Have appropriate QC laboratory tests been ordered? (matrix spikes, method blanks, surrogates, reference standards, etc.) Yes ☒ No ☐

Have QA and QC samples been collected in the specified quantity? Yes ☒ No ☐

Have samples been properly labeled and packaged? Yes ☒ No ☐

V. Health and Safety.

Worker protection levels this date: Level A ☐ Level B ☐ Level C ☐ Level D ☒

Was any work activity conducted within a confined space? Yes ☐ No ☒

Was any work activity conducted within an area determined to be immediately dangerous to life and health? Yes ☐ No ☒

Were approved decontamination procedures used on ~~workers and~~ equipment as required? Yes ☒ No ☐

Was a Job Safety Meeting held this date? Yes ☒ No ☐

Were there any lost time accidents this date? **(If YES, attach copy of completed accident report)** Yes ☐ No ☒

Was hazardous waste/material released into the environment? Yes ☐ No ☒

Safety comments: (Include any infractions of approved safety plan, and include instructions from Government personnel. Specify corrective action taken.)

VI. Work Activities Performed This Date.

	Reference (DFW #/Tech Spec #)	Activity & Location	Quantity	Subcontractor
1.	QAPP & QAPP Update #1	Groundwater sampling at SS006-066 and SS006-215	1	
2.				
3.				
4				
5				

VII. Labor & Manpower.

	Classification	Name	Employer	Hours
1.	Envi. Scientist	Kristopher Reidt	North Wind Site Services	11.5
2.	Envi. Scientist	Katelyn Reichle	North Wind Portage	11.5
3.				
4.				
5.				
6.				
			Total Hours	23.0

VIII. Equipment.

	No. of Units	Plant/Equipment	Date of Safety Check	Hours Used	Hours Idle	Hours Repair
1.	1	Rental Vehicle	10-12.23	10		
2.	1	Trimble GPS	10-12-23	10		
3.	1	GPS camera	10-12-23	10		
4.		Bladder pump controller/compressor	10-12-23	10		
5.		Horiba water quality meter	10-12-23	10		
6.		Water level indicator probe	10-12-23	10		
7.						
8.						
9.						
10.						
11.						
			Total Hours	60	0	0

IX. Material Received to be Incorporated into Job. None ☒

	Acceptability	Stored Where?	Reference Plans/Drawings
1.			
2.			

X. Submittals Reviewed. None ☒

	Submittal No.	Spec/Plan Reference	By Whom	Action Taken
1.				
2.				
3.				

XI. Offsite Surveillance Activities. (include action taken) None ☒

XII. Instructions Given by the Government to the Contractor. (Include names, reactions, and remarks) Verbal ☐ Written ☐ None ☒

XIII. Work Progress.

1.	Are there any Contractor caused delays?	Yes ☐	No ☒
2.	Are there any Contractor-potential findings of fact?	Yes ☐	No ☒
3.	Are there any Government caused delays or potential finding of fact?	Yes ☐	No ☒
4.	Are there any Government-potential findings of fact?	Yes ☐	No ☒
5.	Are there any unforeseeable or weather related delays? Fog, lightning, hail, numerous tornado warnings	Yes ☐	No ☒

XIV. Deficiency List.

Tracking No.	Deficiencies Identified (Not corrected by COB)	Tracking No.	Deficiencies Corrected (From Deficiency Tracking List)

XV. Remarks. (Include any visitors to project and miscellaneous remarks pertinent to work.)

1 Completed groundwater sampling at site SS006-FPC-066 and SS006-FPC-215.
2
3
4
5

The above report is complete and correct, and all work reported is believed, to the best of my knowledge, to be in compliance with contract plans and specifications, except as noted above.

CQC Site Manager Kristopher Reidt **Date** 10-12-23

Project Manager _____ **Date** _____

XVI. Government Quality Assurance Comments. (if applicable)

Concurs with the QC report? Yes ☐ No ☐

Additional comments or exceptions:

QAR Signature _____ **Date** _____

Supervisor's Initial _____ **Date** _____



Photograph 1: Groundwater sampling at SS006-066MW06.



Photograph 2: Groundwater sampling at SS006-215MW06.

North Wind-EA JV, LLC

Daily Quality Control Report

W911KB20D0012/ W911KB-20-F-0120	North Wind-EA JV	611 CES S. ORC at Multiple Installations/ 060068.001.94.03.01
Contract Number / Task Order Number	Contractor	Project Title / NWSS Project No.
003	10-13-23	Port Heiden, AK (K. Reidt, K. Reichle)
CQC Report Number	Date or Time Period	Location and Team

I. Weather Conditions:

Temp Low 31°F Temp High 46°F Cloudy ☒ Partly Cloudy ☐ Clear ☐

Wind Speed 0-10 mph Precipitation ☐ No ☒ Yes Overcast with rain showers in afternoon and evening.

II. Quality Control Inspections Performed This Date (Include inspections, results, deficiencies observed, and corrective action)

Preparatory ☐

Initial ☒

Follow-Up ☐

Was the construction deficiency tracking list updated this date? Yes ☐ No ☒

III. Was Field Sampling and Testing Performed This Date? Yes ☐ No ☒

If yes, then complete the following:

	Type of test	Method/Matrix	Results

Have Data Quality Objectives been achieved? N/A ☐ Yes ☒ No ☐

IV. Have Samples Been Collected for Laboratory Analysis? Yes ☒ No ☐

If yes, then complete the following:

	Type of Test	EPA Test Method/Matrix	Quantity of Samples
	DRO, VOCs, MNA	AK102, 8260, 300.0, 300.1, 9056, 9056A, SM4110B, SM2320B, 351.2, 6010B, 6010C, 315.2	OT001- RRSMW06-101323 (1 primary sample)
	DRO, VOCs, MNA	AK102, 8260, 300.0, 300.1, 9056, 9056A, SM4110B, SM2320B, 351.2, 6010B, 6010C, 315.2	OT001-BLOMW07-101323 (1 primary sample) OT001-BLOMW99-101323 (1 duplicate sample)
	DRO, VOCs, MNA	AK102, 8260, 300.0, 300.1, 9056, 9056A, SM4110B, SM2320B, 351.2, 6010B, 6010C, 315.2	OT001-BLOMW05-101323 (1 primary sample)
	DRO, VOCs, MNA	AK102, 8260, 300.0, 300.1, 9056, 9056A, SM4110B, SM2320B, 351.2, 6010B, 6010C, 315.2	OT001-BLOMW06-101323 (1 primary sample)
	VOCs	8260	OT001-TRIPBLNK-HCL-101323 (1 QC sample)

Have required amount of QC trip blanks and rinsates been achieved? Yes ☒ No ☐

Have appropriate QC laboratory tests been ordered? (matrix spikes, method blanks, surrogates, reference standards, etc.) Yes ☒ No ☐

Have QA and QC samples been collected in the specified quantity? Yes ☒ No ☐

Have samples been properly labeled and packaged? Yes ☒ No ☐

V. Health and Safety.

Worker protection levels this date: Level A ☐ Level B ☐ Level C ☐ Level D ☒

Was any work activity conducted within a confined space? Yes ☐ No ☒

Was any work activity conducted within an area determined to be immediately dangerous to life and health? Yes ☐ No ☒

Were approved decontamination procedures used on ~~workers and~~ equipment as required? Yes ☒ No ☐

Was a Job Safety Meeting held this date? Yes ☒ No ☐

Were there any lost time accidents this date? **(If YES, attach copy of completed accident report)** Yes ☐ No ☒

Was hazardous waste/material released into the environment? Yes ☐ No ☒

Safety comments: (Include any infractions of approved safety plan, and include instructions from Government personnel. Specify corrective action taken.)

VI. Work Activities Performed This Date.

	Reference (DFW #/Tech Spec #)	Activity & Location	Quantity	Subcontractor
1.	QAPP	Groundwater sampling at OT001 and WP002	1	
2.	QAPP Update #1	Groundwater sampling at OT001 and WP002	1	
3.	2023 Well Repair Plan		1	
4				
5				

VII. Labor & Manpower.

	Classification	Name	Employer	Hours
1.	Envi. Scientist	Kristopher Reidt	North Wind Site Services	12
2.	Envi. Scientist	Katelyn Reichle	North Wind Portage	12
3.				
4.				
5.				
6.				
			Total Hours	24.0

VIII. Equipment.

	No. of Units	Plant/Equipment	Date of Safety Check	Hours Used	Hours Idle	Hours Repair
1.	1	Rental Vehicle	10-13.23	10		
2.	1	Trimble GPS	10-13-23	10		
3.	1	GPS camera	10-13-23	10		
4.	1	Bladder pump controller/compressor	10-13-23	10		
5.	1	Horiba water quality meter	10-13-23	10		
6.	1	Water level indicator probe	10-13-23	10		
7.						
8.						
9.						
10.						
11.						
			Total Hours	60	0	0

IX. Material Received to be Incorporated into Job. None ☒

	Acceptability	Stored Where?	Reference Plans/Drawings
1.			
2.			

X. Submittals Reviewed. None ☒

	Submittal No.	Spec/Plan Reference	By Whom	Action Taken
1.				
2.				
3.				

XI. Offsite Surveillance Activities. (include action taken) None ☒

XII. Instructions Given by the Government to the Contractor. (Include names, reactions, and remarks) Verbal ☐ Written ☐ None ☒

XIII. Work Progress.

1.	Are there any Contractor caused delays?	Yes ☐	No ☒
2.	Are there any Contractor-potential findings of fact?	Yes ☐	No ☒
3.	Are there any Government caused delays or potential finding of fact?	Yes ☐	No ☒
4.	Are there any Government-potential findings of fact?	Yes ☐	No ☒
5.	Are there any unforeseeable or weather related delays? Fog, lightning, hail, numerous tornado warnings	Yes ☐	No ☒

XIV. Deficiency List.

Tracking No.	Deficiencies Identified (Not corrected by COB)	Tracking No.	Deficiencies Corrected (From Deficiency Tracking List)

XV. Remarks. (Include any visitors to project and miscellaneous remarks pertinent to work.)

1 Performed groundwater sampling at sites OT001 and WP002. Two wells (OT001-BLOMW05 and OT001-BLOWMW06) had excessive drawdown and required a no purge sample. An additional well, (OT001-BLOMW07) stabilized during purging but had drawdown during sampling. Recommend redevelopment at these locations.

2 Samples collected from sites SS006-066 and SS006-215 were shipped to Anchorage with Lake Clark Air and received in Anchorage the same day.

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The above report is complete and correct, and all work reported is believed, to the best of my knowledge, to be in compliance with contract plans and specifications, except as noted above.

CQC Site Manager Kristopher Reidt **Date** 10-13-23

Project Manager _____ **Date** _____

XVI. Government Quality Assurance Comments. (if applicable)

Concurs with the QC report? Yes ☐ No ☐

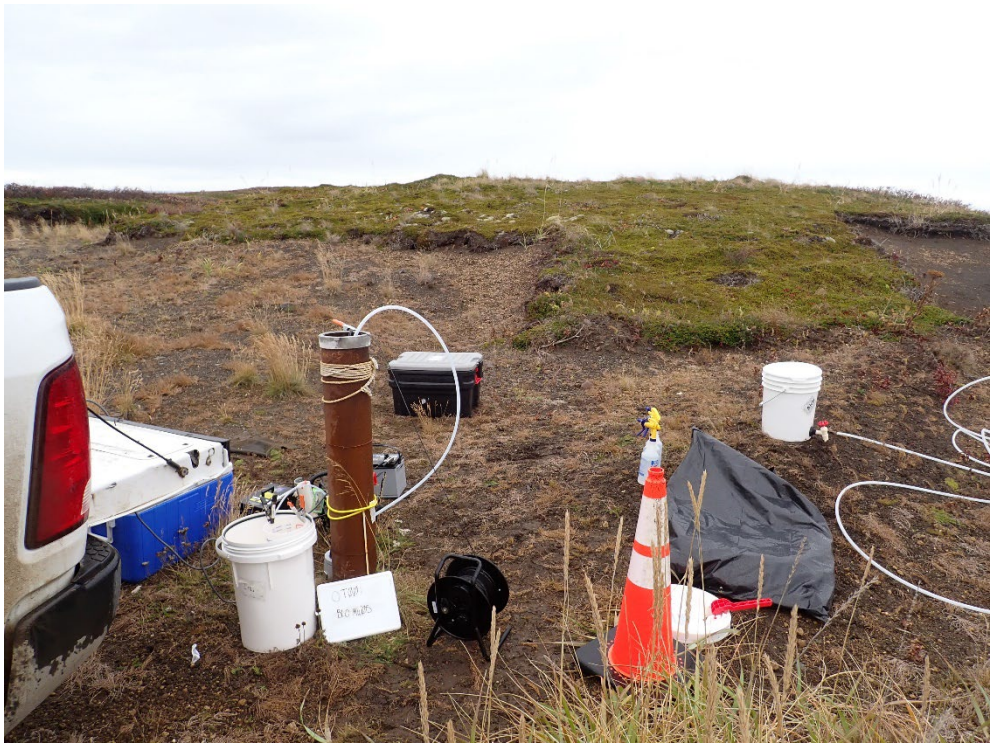
Additional comments or exceptions:

QAR Signature _____ **Date** _____

Supervisor's Initial _____ **Date** _____



Photograph 1: Groundwater sampling at OT001-RRSMW06.



Photograph 2: Groundwater sampling at OT001-BLOMW05.

North Wind-EA JV, LLC

Daily Quality Control Report

W911KB20D0012/ W911KB-20-F-0120	North Wind-EA JV	611 CES S. ORC at Multiple Installations/ 060068.001.94.03.01
Contract Number / Task Order Number	Contractor	Project Title / NWSS Project No.
004	10-14-23	Port Heiden, AK (K. Reidt, K. Reichle)
CQC Report Number	Date or Time Period	Location and Team

I. Weather Conditions:

Temp Low 39°F Temp High 47°F Cloudy ☒ Partly Cloudy ☐ Clear ☐

Wind Speed 0-10 mph Precipitation ☐ No ☒ Yes Overcast with rain showers in the morning. .

II. Quality Control Inspections Performed This Date (Include inspections, results, deficiencies observed, and corrective action)

Preparatory ☐

Initial ☒

Follow-Up ☐

Was the construction deficiency tracking list updated this date? Yes ☐ No ☒

III. Was Field Sampling and Testing Performed This Date? Yes ☐ No ☒

If yes, then complete the following:

	Type of test	Method/Matrix	Results

Have Data Quality Objectives been achieved? N/A ☐ Yes ☒ No ☐

IV. Have Samples Been Collected for Laboratory Analysis? Yes ☒ No ☐

If yes, then complete the following:

	Type of Test	EPA Test Method/Matrix	Quantity of Samples
	DRO, VOCs, MNA	AK102, 8260, 300.0, 300.1, 9056, 9056A, SM4110B, SM2320B, 351.2, 6010B, 6010C, 315.2	OT001-GLOMW04-101423 (1 primary sample)
	DRO, VOCs, MNA	AK102, 8260, 300.0, 300.1, 9056, 9056A, SM4110B, SM2320B, 351.2, 6010B, 6010C, 315.2	OT001-RRSMW05-101423 (1 primary sample)
	DRO, VOCs, MNA	AK102, 8260, 300.0, 300.1, 9056, 9056A, SM4110B, SM2320B, 351.2, 6010B, 6010C, 315.2	OT001-DSAMW06-101423 (1 primary sample)
	DRO, VOCs, MNA	AK102, 8260, 300.0, 300.1, 9056, 9056A, SM4110B, SM2320B, 351.2, 6010B, 6010C, 315.2	OT001-DSAMW07-101423 (1 primary sample)
	DRO, VOCs, MNA	AK102, 8260, 300.0, 300.1, 9056, 9056A, SM4110B, SM2320B, 351.2, 6010B, 6010C, 315.2	OT001-DSAMW01-101423 (1 primary sample) OT001-DSAMW99-101423 (1 duplicate sample)

Have required amount of QC trip blanks and rinsates been achieved? Yes ☒ No ☐

Have appropriate QC laboratory tests been ordered? (matrix spikes, method blanks, surrogates, reference standards, etc.) Yes ☒ No ☐

Have QA and QC samples been collected in the specified quantity? Yes ☒ No ☐

Have samples been properly labeled and packaged? Yes ☒ No ☐

V. Health and Safety.

Worker protection levels this date: Level A ☐ Level B ☐ Level C ☐ Level D ☒

Was any work activity conducted within a confined space? Yes ☐ No ☒

Was any work activity conducted within an area determined to be immediately dangerous to life and health? Yes ☐ No ☒

Were approved decontamination procedures used on ~~workers and~~ equipment as required? Yes ☒ No ☐

Was a Job Safety Meeting held this date? Yes ☒ No ☐

Were there any lost time accidents this date? **(If YES, attach copy of completed accident report)** Yes ☐ No ☒

Was hazardous waste/material released into the environment? Yes ☐ No ☒

Safety comments: (Include any infractions of approved safety plan, and include instructions from Government personnel. Specify corrective action taken.)

VI. Work Activities Performed This Date.

	Reference (DFW #/Tech Spec #)	Activity & Location	Quantity	Subcontractor
1.	QAPP	Groundwater sampling at OT001 and WP002	1	
2.	QAPP Update #1	Groundwater sampling at OT001 and WP002	1	
3.	2023 Well Repair Plan		1	
4				
5				

VII. Labor & Manpower.

	Classification	Name	Employer	Hours
1.	Envi. Scientist	Kristopher Reidt	North Wind Site Services	12
2.	Envi. Scientist	Katelyn Reichle	North Wind Portage	12
3.				
4.				
5.				
6.				
			Total Hours	24.0

VIII. Equipment.

	No. of Units	Plant/Equipment	Date of Safety Check	Hours Used	Hours Idle	Hours Repair
1.	1	Rental Vehicle	10-14.23	8		
2.	1	Trimble GPS	10-14-23	8		
3.	1	GPS camera	10-14-23	8		
4.	1	Bladder pump controller/compressor	10-14-23	8		
5.	1	Horiba water quality meter	10-14-23	8		
6.	1	Water level indicator probe	10-14-23	8		
7.						
8.						
9.						
10.						
11.						
			Total Hours	48	0	0

IX. Material Received to be Incorporated into Job. None ☒

	Acceptability	Stored Where?	Reference Plans/Drawings
1.			
2.			

North Wind-EA JV, LLC

Daily Quality Control Report

X. Submittals Reviewed. None ☒

	Submittal No.	Spec/Plan Reference	By Whom	Action Taken
1.				
2.				
3.				

XI. Offsite Surveillance Activities. (include action taken) None ☒

XII. Instructions Given by the Government to the Contractor. (Include names, reactions, and remarks) Verbal ☐ Written ☐ None ☒

XIII. Work Progress.

1.	Are there any Contractor caused delays?	Yes ☐	No ☒
2.	Are there any Contractor-potential findings of fact?	Yes ☐	No ☒
3.	Are there any Government caused delays or potential finding of fact?	Yes ☐	No ☒
4.	Are there any Government-potential findings of fact?	Yes ☐	No ☒
5.	Are there any unforeseeable or weather related delays? Fog, lightning, hail, numerous tornado warnings	Yes ☐	No ☒

XIV. Deficiency List.

Tracking No.	Deficiencies Identified (Not corrected by COB)	Tracking No.	Deficiencies Corrected (From Deficiency Tracking List)

XV. Remarks. (Include any visitors to project and miscellaneous remarks pertinent to work.)

1 Performed groundwater sampling at sites OT001 and WP002. Monitoring well DSA-MW05 had excessive drawdown and slow recharge. Had to return the following day (10-15-23) to collect sample. Recommend well redevelopment to improve purging/sampling.

2

3

4

5

The above report is complete and correct, and all work reported is believed, to the best of my knowledge, to be in compliance with contract plans and specifications, except as noted above.

CQC Site Manager Kristopher Reidt **Date** 10-14-23

Project Manager _____ **Date** _____

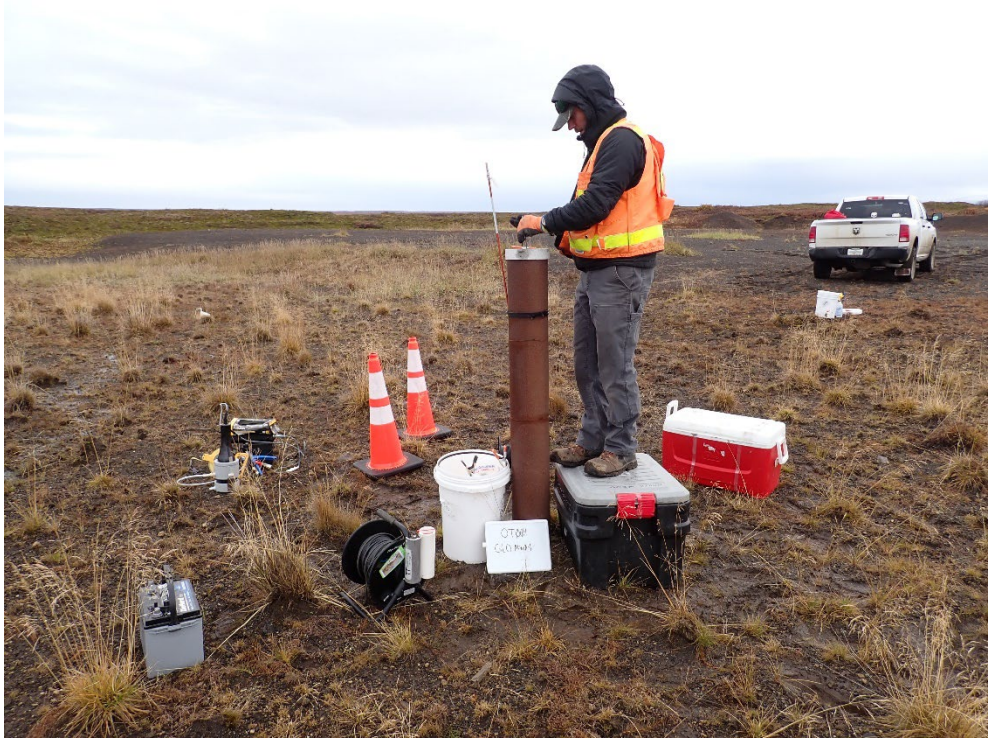
XVI. Government Quality Assurance Comments. (if applicable)

Concurs with the QC report? Yes ☐ No ☐

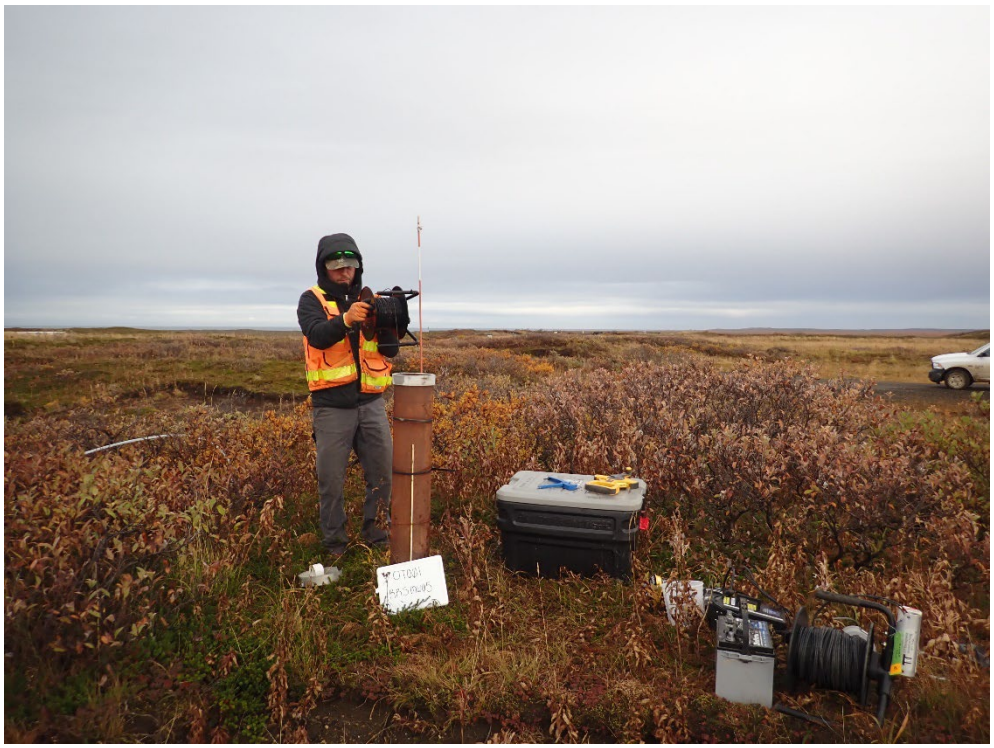
Additional comments or exceptions:

QAR Signature _____ **Date** _____

Supervisor's Initial _____ **Date** _____



Photograph 1: Groundwater sampling at OT001-GLOMW04.



Photograph 2: Groundwater sampling at OT001-RRSMW05.

North Wind-EA JV, LLC

Daily Quality Control Report

W911KB20D0012/ W911KB-20-F-0120	North Wind-EA JV	611 CES S. ORC at Multiple Installations/ 060068.001.94.03.01
Contract Number / Task Order Number	Contractor	Project Title / NWSS Project No.
005	10-15-23	Port Heiden, AK (K. Reidt, K. Reichle)
CQC Report Number	Date or Time Period	Location and Team

I. Weather Conditions:

Temp Low 38°F Temp High 50°F Cloudy ☐ Partly Cloudy ☒ Clear ☐

Wind Speed 0-5 mph Precipitation ☐ No ☒ Yes Overcast with clear skies in afternoon/evening.

II. Quality Control Inspections Performed This Date (Include inspections, results, deficiencies observed, and corrective action)

Preparatory ☐

Initial ☒

Follow-Up ☐

Was the construction deficiency tracking list updated this date? Yes ☐ No ☒

III. Was Field Sampling and Testing Performed This Date? Yes ☐ No ☒

If yes, then complete the following:

	Type of test	Method/Matrix	Results

Have Data Quality Objectives been achieved? N/A ☐ Yes ☒ No ☐

IV. Have Samples Been Collected for Laboratory Analysis? Yes ☒ No ☐

If yes, then complete the following:

	Type of Test	EPA Test Method/Matrix	Quantity of Samples
	DRO, VOCs, MNA	AK102, 8260, 300.0, 300.1, 9056, 9056A, SM4110B, SM2320B, 351.2, 6010B, 6010C, 315.2	OT001-DSAMW05-101523 (1 primary sample)
	DRO, VOCs, MNA	AK102, 8260, 300.0, 300.1, 9056, 9056A, SM4110B, SM2320B, 351.2, 6010B, 6010C, 315.2	OT001-DSAMW02-101523 (1 primary sample)
	DRO, VOCs, MNA	AK102, 8260, 300.0, 300.1, 9056, 9056A, SM4110B, SM2320B, 351.2, 6010B, 6010C, 315.2	WP002-BLOMW01-101523 (1 primary sample) WP002-BLOMW01-101523 [2 QC Samples (MS/MSD)]
	VOCs,	8260, 8260ULL	OT001-EQBK-101523 (3 QC samples)

Have required amount of QC trip blanks and rinsates been achieved? Yes ☒ No ☐

Have appropriate QC laboratory tests been ordered? (matrix spikes, method blanks, surrogates, reference standards, etc.) Yes ☒ No ☐

Have QA and QC samples been collected in the specified quantity? Yes ☒ No ☐

Have samples been properly labeled and packaged? Yes ☒ No ☐

V. Health and Safety.

Worker protection levels this date: Level A ☐ Level B ☐ Level C ☐ Level D ☒

Was any work activity conducted within a confined space? Yes ☐ No ☒

Was any work activity conducted within an area determined to be immediately dangerous to life and health? Yes ☐ No ☒

Were approved decontamination procedures used on ~~workers and~~ equipment as required? Yes ☒ No ☐

Was a Job Safety Meeting held this date? Yes ☒ No ☐

Were there any lost time accidents this date? **(If YES, attach copy of completed accident report)** Yes ☐ No ☒

Was hazardous waste/material released into the environment? Yes ☐ No ☒

Safety comments: (Include any infractions of approved safety plan, and include instructions from Government personnel. Specify corrective action taken.)

VI. Work Activities Performed This Date.

	Reference (DFW #/Tech Spec #)	Activity & Location	Quantity	Subcontractor
1.	QAPP	Groundwater sampling at OT001 and WP002.	1	
2.	QAPP	LUC inspections at SS006-066 and SS006-215	1	
3.	QAPP Update #1	Groundwater sampling at OT001 and WP002.	1	
4	2023 Well Repair Plan		1	
5				

VII. Labor & Manpower.

	Classification	Name	Employer	Hours
1.	Envi. Scientist	Kristopher Reidt	North Wind Site Services	12
2.	Envi. Scientist	Katelyn Reichle	North Wind Portage	12
3.				
4.				
5.				
6.				
			Total Hours	24.0

VIII. Equipment.

	No. of Units	Plant/Equipment	Date of Safety Check	Hours Used	Hours Idle	Hours Repair
1.	1	Rental Vehicle	10-15.23	10		
2.	1	Trimble GPS	10-15-23	10		
3.	1	GPS camera	10-15-23	10		
4.	1	Submersible pump and controller	10-15-23	4		
5.	1	Horiba water quality meter	10-15-23	4		
6.	1	Water level indicator probe	10-15-23	4		
7.						
8.						
9.						
10.						
11.						
			Total Hours	48	0	0

IX. Material Received to be Incorporated into Job. None ☒

	Acceptability	Stored Where?	Reference Plans/Drawings
1.			
2.			

X. Submittals Reviewed. None ☒

	Submittal No.	Spec/Plan Reference	By Whom	Action Taken
1.				
2.				
3.				

XI. Offsite Surveillance Activities. (include action taken) None ☒

XII. Instructions Given by the Government to the Contractor. (Include names, reactions, and remarks) Verbal ☐ Written ☐ None ☒

XIII. Work Progress.

1.	Are there any Contractor caused delays?	Yes ☐	No ☒
2.	Are there any Contractor-potential findings of fact?	Yes ☐	No ☒
3.	Are there any Government caused delays or potential finding of fact?	Yes ☐	No ☒
4.	Are there any Government-potential findings of fact?	Yes ☐	No ☒
5.	Are there any unforeseeable or weather related delays? Fog, lightning, hail, numerous tornado warnings	Yes ☐	No ☒

XIV. Deficiency List.

Tracking No.	Deficiencies Identified (Not corrected by COB)	Tracking No.	Deficiencies Corrected (From Deficiency Tracking List)

XV. Remarks. (Include any visitors to project and miscellaneous remarks pertinent to work.)

1 Completed groundwater sampling at sites OT001 and WP002. Performed LUC inspection at SS006-066 and SS006-215

2

3

4

5

The above report is complete and correct, and all work reported is believed, to the best of my knowledge, to be in compliance with contract plans and specifications, except as noted above.

CQC Site Manager Kristopher Reidt **Date** 10-15-23

Project Manager _____ **Date** _____

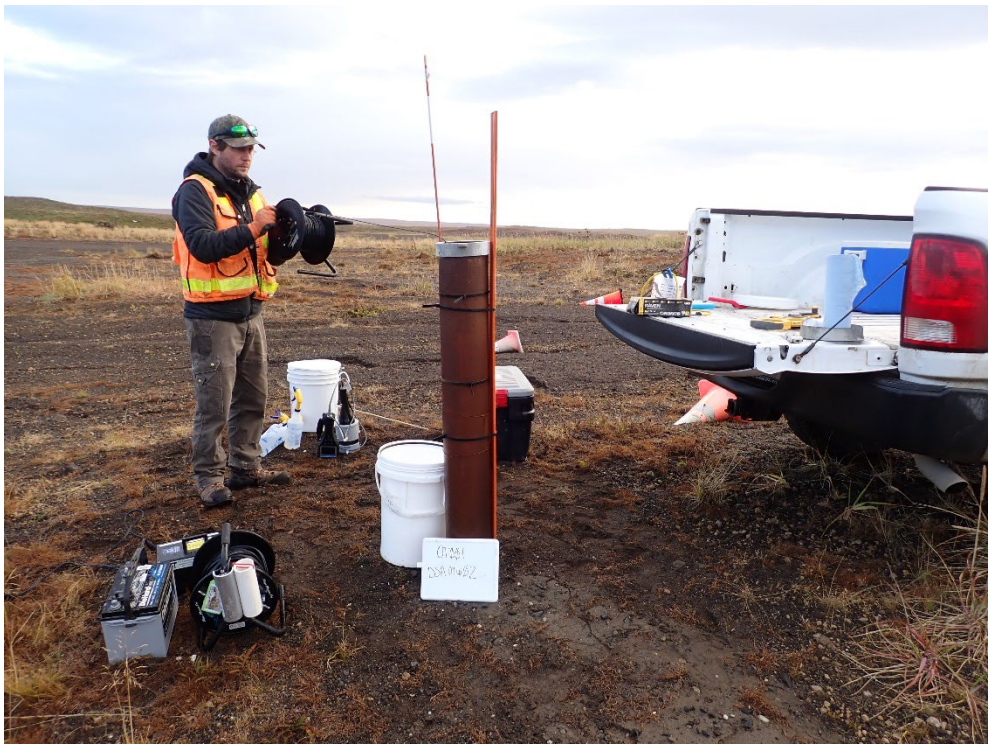
XVI. Government Quality Assurance Comments. (if applicable)

Concurs with the QC report? Yes ☐ No ☐

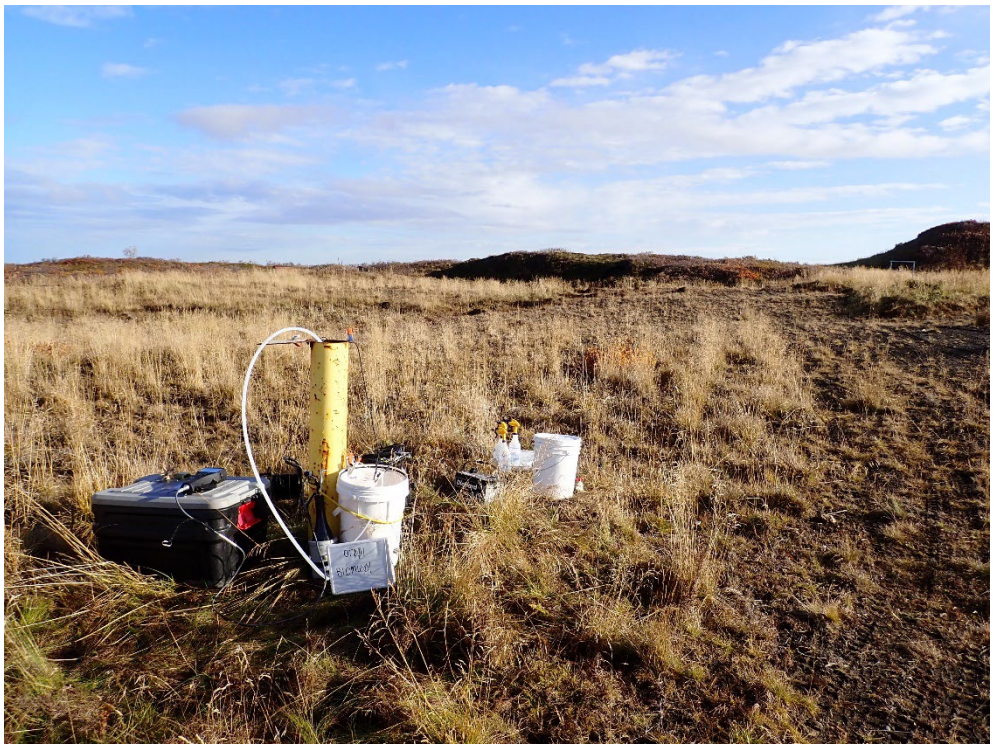
Additional comments or exceptions:

QAR Signature _____ **Date** _____

Supervisor's Initial _____ **Date** _____



Photograph 1: Groundwater sampling at OT001-DSAMW02



Photograph 2: Groundwater sampling at WP002-BLOMW01.

North Wind-EA JV, LLC

Daily Quality Control Report

W911KB20D0012/ W911KB-20-F-0120	North Wind-EA JV	611 CES S. ORC at Multiple Installations/ 060068.001.94.03.01
Contract Number / Task Order Number	Contractor	Project Title / NWSS Project No.
006	10-16-23	Port Heiden, AK (K. Reidt, K. Reichle)
CQC Report Number	Date or Time Period	Location and Team

I. Weather Conditions:

Temp Low 43°F Temp High 46°F Cloudy ☒ Partly Cloudy ☐ Clear ☐

Wind Speed 10-16 mph Precipitation ☐ No ☒ Yes Overcast with rain in the afternoon.

II. Quality Control Inspections Performed This Date (Include inspections, results, deficiencies observed, and corrective action)

Preparatory ☐

Initial ☒

Follow-Up ☐

Was the construction deficiency tracking list updated this date? Yes ☐ No ☒

III. Was Field Sampling and Testing Performed This Date? Yes ☐ No ☒

If yes, then complete the following:

	Type of test	Method/Matrix	Results

Have Data Quality Objectives been achieved? N/A ☐ Yes ☒ No ☐

IV. Have Samples Been Collected for Laboratory Analysis? Yes ☐ No ☒

If yes, then complete the following:

	Type of Test	EPA Test Method/Matrix	Quantity of Samples

Have required amount of QC trip blanks and rinsates been achieved? Yes ☒ No ☐

Have appropriate QC laboratory tests been ordered? (matrix spikes, method blanks, surrogates, reference standards, etc.) Yes ☒ No ☐

Have QA and QC samples been collected in the specified quantity? Yes ☒ No ☐

Have samples been properly labeled and packaged? Yes ☒ No ☐

V. Health and Safety.

Worker protection levels this date: Level A ☐ Level B ☐ Level C ☐ Level D ☒

Was any work activity conducted within a confined space? Yes ☐ No ☒

Was any work activity conducted within an area determined to be immediately dangerous to life and health? Yes ☐ No ☒

Were approved decontamination procedures used on ~~workers and~~ equipment as required? Yes ☒ No ☐

Was a Job Safety Meeting held this date? Yes ☒ No ☐

Were there any lost time accidents this date? **(If YES, attach copy of completed accident report)** Yes ☐ No ☒

Was hazardous waste/material released into the environment? Yes ☐ No ☒

Safety comments: (Include any infractions of approved safety plan, and include instructions from Government personnel. Specify corrective action taken.)

VI. Work Activities Performed This Date.

	Reference (DFW #/Tech Spec #)	Activity & Location	Quantity	Subcontractor
1.	QAPP	LUC inspections at OT001 and WP002	1	
2.	QAPP Update #1		1	
3.	2023 Well Repair Plan	Ensured all prescribed repairs from work plan were met	1	
4	QAPP	Demobilization from Port Heiden	1	
5				

VII. Labor & Manpower.

	Classification	Name	Employer	Hours
1.	Envi. Scientist	Kristopher Reidt	North Wind Site Services	11.5
2.	Envi. Scientist	Katelyn Reichle	North Wind Portage	10.0
3.				
4.				
5.				
6.				
			Total Hours	22.5

VIII. Equipment.

	No. of Units	Plant/Equipment	Date of Safety Check	Hours Used	Hours Idle	Hours Repair
1.	1	Rental Vehicle	10-16-23	5		
2.	1	Trimble GPS	10-16-23	3		
3.	1	GPS camera	10-16-23	3		
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
			Total Hours	11	0	0

IX. Material Received to be Incorporated into Job. None ☒

	Acceptability	Stored Where?	Reference Plans/Drawings
1.			
2.			

X. Submittals Reviewed. None ☒

	Submittal No.	Spec/Plan Reference	By Whom	Action Taken
1.				
2.				
3.				

XI. Offsite Surveillance Activities. (include action taken) None ☒

XII. Instructions Given by the Government to the Contractor. (Include names, reactions, and remarks) Verbal ☐ Written ☐ None ☒

XIII. Work Progress.

1.	Are there any Contractor caused delays?	Yes ☐	No ☒
2.	Are there any Contractor-potential findings of fact?	Yes ☐	No ☒
3.	Are there any Government caused delays or potential finding of fact?	Yes ☐	No ☒
4.	Are there any Government-potential findings of fact?	Yes ☐	No ☒
5.	Are there any unforeseeable or weather related delays? Fog, lightning, hail, numerous tornado warnings	Yes ☐	No ☒

XIV. Deficiency List.

Tracking No.	Deficiencies Identified (Not corrected by COB)	Tracking No.	Deficiencies Corrected (From Deficiency Tracking List)

XV. Remarks. (Include any visitors to project and miscellaneous remarks pertinent to work.)

1 Completed LUC inspections at OT001 and WP002.
2 Ensured all well repairs detailed in the Draft Well Repair Work Plan had been completed.
3 Repaired LUC sign at WP002.
4 Demobilized from Port Heiden to Anchorage, AK.
5

The above report is complete and correct, and all work reported is believed, to the best of my knowledge, to be in compliance with contract plans and specifications, except as noted above.

CQC Site Manager Kristopher Reidt **Date** 10-16-23

Project Manager _____ **Date** _____

XVI. Government Quality Assurance Comments. (if applicable)

Concurs with the QC report? Yes ☐ No ☐

Additional comments or exceptions:

QAR Signature _____ **Date** _____

Supervisor's Initial _____ **Date** _____



Photograph 1: Southeastern sign at WP002 that had fallen off the signposts.



Photograph 2: LUC sign reattached to the signposts.

APPENDIX C

Chemical Data Tables

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Table C- 1. 2023 Groundwater Sample Summary.

Field Sample ID	Location ID	Matrix	Sample Type	Container	Sampler	Sample Depth	Collected	Analytical Method	NPDL Number	Laboratory	SDG	Laboratory Sample ID	Preservation	Cooler Name
SS006-066MW06-101223	066-MW-06	WG	Primary	100 mL Amber	KR	2.5-12.5 ft	10/12/23 11:15	AK102	21-034	PAN	L1667387	L1667387-01	HCL	Red
SS006-066MW06-101223	066-MW-06	WG	Primary	40 mL Amber	KR	2.5-12.5 ft	10/12/23 11:15	SW8260D	21-034	PAN	L1667387	L1667387-01	HCL	Red
SS006-066MW07-101223	066-MW-07	WG	Primary	100 mL Amber	KR	2.5-12.5 ft	10/12/23 12:37	AK102	21-034	PAN	L1667387	L1667387-02	HCL	Red
SS006-066MW07-101223	066-MW-07	WG	Primary	40 mL Amber	KR	2.5-12.5 ft	10/12/23 12:37	SW8260D	21-034	PAN	L1667387	L1667387-02	HCL	Red
SS006-066MW99-101223	066-MW-07	WG	FD of SS006-066MW06-101223	100 mL Amber	KR	2.5-12.5 ft	10/12/23 12:45	AK102	21-034	PAN	L1667387	L1667387-03	HCL	Red
SS006-066MW99-101223	066-MW-07	WG	FD of SS006-066MW06-101223	40 mL Amber	KR	2.5-12.5 ft	10/12/23 12:45	SW8260D	21-034	PAN	L1667387	L1667387-03	HCL	Red
SS006-066MW04-101223	066-MW-04	WG	Primary	100 mL Amber	KR	2.5-12.5 ft	10/12/23 14:34	AK102	21-034	PAN	L1667387	L1667387-04	HCL	Red
SS006-066MW04-101223	066-MW-04	WG	Primary	40 mL Amber	KR	2.5-12.5 ft	10/12/23 14:34	SW8260D	21-034	PAN	L1667387	L1667387-04	HCL	Red
SS006-066MW05-101223	066-MW-05	WG	Primary	100 mL Amber	KR	2.5-12.5 ft	10/12/23 15:35	AK102	21-034	PAN	L1667387	L1667387-05	HCL	Red
SS006-066MW05-101223	066-MW-05	WG	Primary	40 mL Amber	KR	2.5-12.5 ft	10/12/23 15:35	SW8260D	21-034	PAN	L1667387	L1667387-05	HCL	Red
SS006-215MW12-101223	215-MW-12	WG	Primary	100 mL Amber	KR	7-17 ft	10/12/23 17:25	AK102	21-034	PAN	L1667387	L1667387-06	HCL	Red
SS006-215MW12-101223	215-MW-12	WG	Primary	40 mL Amber	KR	7-17 ft	10/12/23 17:25	SW8260D	21-034	PAN	L1667387	L1667387-06	HCL	Red
SS006-215MW09-101223	215-MW-09	WG	Primary	100 mL Amber	KR	8-18 ft	10/12/23 18:30	AK102	21-034	PAN	L1667387	L1667387-07	HCL	Red
SS006-215MW09-101223	215-MW-09	WG	Primary	40 mL Amber	KR	8-18 ft	10/12/23 18:30	SW8260D	21-034	PAN	L1667387	L1667387-07	HCL	Red
SS006-215MW08-101223	215-MW-08	WG	Primary	100 mL Amber	KR	9-19 ft	10/12/23 19:30	AK102	21-034	PAN	L1667387	L1667387-08	HCL	Red
SS006-215MW08-101223	215-MW-08	WG	Primary	40 mL Amber	KR	9-19 ft	10/12/23 19:30	SW8260D	21-034	PAN	L1667387	L1667387-08	HCL	Red
SS006-EQBK01-101223	—	WQ	EB	100 mL Amber	KR	—	10/12/23 20:00	AK102	21-034	PAN	L1667387	L1667387-09	HCL	Red
SS006-EQBK01-101223	—	WQ	EB	40 mL Amber	KR	—	10/12/23 20:00	SW8260D	21-034	PAN	L1667387	L1667387-09	HCL	Red
SS006-TRIP BLANK-HCL-01	—	WQ	TB	40 mL Amber	KR	—	10/12/23 10:00	SW8260D	21-034	PAN	L1667387	L1667387-10	HCL	Red
OT001-GLOMW04-101423	GLO-MW04	WG	Primary	40 mL Amber	KR	35-45 ft	10/14/23 11:05	8260 D-LL	21-034	PAN	L1667742	L1667742-01	HCL	Blue
OT001-GLOMW04-101423	GLO-MW04	WG	Primary	100 mL Amber	KR	35-45 ft	10/14/23 11:05	AK102	21-034	PAN	L1667742	L1667742-01	HCL	Blue
OT001-GLOMW04-101423	GLO-MW04	WG	Primary	250 mL HDPE	KR	35-45 ft	10/14/23 11:05	E351.2	21-034	PAN	L1667742	L1667742-01	H_2SO_4	Blue
OT001-GLOMW04-101423	GLO-MW04	WG	Primary	250 mL HDPE	KR	35-45 ft	10/14/23 11:05	E353.2	21-034	PAN	L1667742	L1667742-01	H_2SO_4	Blue
OT001-GLOMW04-101423	GLO-MW04	WG	Primary	250 mL HDPE	KR	35-45 ft	10/14/23 11:05	SM2320B	21-034	PAN	L1667742	L1667742-01	0-6C	Blue
OT001-GLOMW04-101423	GLO-MW04	WG	Primary	250 mL HDPE	KR	35-45 ft	10/14/23 11:05	SW6010D	21-034	PAN	L1667742	L1667742-01	HNO3	Blue
OT001-GLOMW04-101423	GLO-MW04	WG	Primary	40 mL Amber	KR	35-45 ft	10/14/23 11:05	SW8260D	21-034	PAN	L1667742	L1667742-01	HCL	Blue
OT001-GLOMW04-101423	GLO-MW04	WG	Primary	250 mL HDPE	KR	35-45 ft	10/14/23 11:05	SW9056	21-034	PAN	L1667742	L1667742-01	0-6C	Blue
OT001-RRSMW05-101423	RRS-MW05	WG	Primary	40 mL Amber	KR	46-56 ft	10/14/23 12:20	8260 D-LL	21-034	PAN	L1667742	L1667742-02	HCL	Blue
OT001-RRSMW05-101423	RRS-MW05	WG	Primary	100 mL Amber	KR	46-56 ft	10/14/23 12:20	AK102	21-034	PAN	L1667742	L1667742-02	HCL	Blue
OT001-RRSMW05-101423	RRS-MW05	WG	Primary	250 mL HDPE	KR	46-56 ft	10/14/23 12:20	E351.2	21-034	PAN	L1667742	L1667742-02	H_2SO_4	Blue
OT001-RRSMW05-101423	RRS-MW05	WG	Primary	250 mL HDPE	KR	46-56 ft	10/14/23 12:20	E353.2	21-034	PAN	L1667742	L1667742-02	H_2SO_4	Blue
OT001-RRSMW05-101423	RRS-MW05	WG	Primary	250 mL HDPE	KR	46-56 ft	10/14/23 12:20	SM2320B	21-034	PAN	L1667742	L1667742-02	0-6C	Blue
OT001-RRSMW05-101423	RRS-MW05	WG	Primary	250 mL HDPE	KR	46-56 ft	10/14/23 12:20	SW6010D	21-034	PAN	L1667742	L1667742-02	HNO3	Blue
OT001-RRSMW05-101423	RRS-MW05	WG	Primary	40 mL Amber	KR	46-56 ft	10/14/23 12:20	SW8260D	21-034	PAN	L1667742	L1667742-02	HCL	Blue
OT001-RRSMW05-101423	RRS-MW05	WG	Primary	250 mL HDPE	KR	46-56 ft	10/14/23 12:20	SW9056	21-034	PAN	L1667742	L1667742-02	0-6C	Blue
OT001-DSAMW06-101423	DSA-MW06	WG	Primary	40 mL Amber	KR	85-90 ft	10/14/23 14:45	8260 D-LL	21-034	PAN	L1667742	L1667742-03	HCL	Blue
OT001-DSAMW06-101423	DSA-MW06	WG	Primary	100 mL Amber	KR	85-90 ft	10/14/23 14:45	AK102	21-034	PAN	L1667742	L1667742-03	HCL	Blue
OT001-DSAMW06-101423	DSA-MW06	WG	Primary	250 mL HDPE	KR	85-90 ft	10/14/23 14:45	E351.2	21-034	PAN	L1667742	L1667742-03	H_2SO_4	Blue
OT001-DSAMW06-101423	DSA-MW06	WG	Primary	250 mL HDPE	KR	85-90 ft	10/14/23 14:45	E353.2	21-034	PAN	L1667742	L1667742-03	H_2SO_4	Blue
OT001-DSAMW06-101423	DSA-MW06	WG	Primary	250 mL HDPE	KR	85-90 ft	10/14/23 14:45	SM2320B	21-034	PAN	L1667742	L1667742-03	0-6C	Blue
OT001-DSAMW06-101423	DSA-MW06	WG	Primary	250 mL HDPE	KR	85-90 ft	10/14/23 14:45	SW6010D	21-034	PAN	L1667742	L1667742-03	HNO3	Blue

Table C- 1. 2023 Groundwater Sample Summary, continued.

Field Sample ID	Location ID	Matrix	Sample Type	Container	Sampler	Sample Depth	Collected	Analytical Method	NPDL Number	Laboratory	SDG	Laboratory Sample ID	Preservation	Cooler Name
OT001-DSAMW06-101423	DSA-MW06	WG	Primary	40 mL Amber	KR	85-90 ft	10/14/23 14:45	SW8260D	21-034	PAN	L1667742	L1667742-03	HCL	Blue
OT001-DSAMW06-101423	DSA-MW06	WG	Primary	250 mL HDPE	KR	85-90 ft	10/14/23 14:45	SW9056	21-034	PAN	L1667742	L1667742-03	0-6C	Blue
OT001-DSAMW07-101423	DSA-MW07	WG	Primary	100 mL Amber	KR	45-55 ft	10/14/23 15:25	AK102	21-034	PAN	L1667742	L1667742-04	HCL	Blue
OT001-DSAMW07-101423	DSA-MW07	WG	Primary	250 mL HDPE	KR	45-55 ft	10/14/23 15:25	E351.2	21-034	PAN	L1667742	L1667742-04	H_2SO_4	Blue
OT001-DSAMW07-101423	DSA-MW07	WG	Primary	250 mL HDPE	KR	45-55 ft	10/14/23 15:25	E353.2	21-034	PAN	L1667742	L1667742-04	H_2SO_4	Blue
OT001-DSAMW07-101423	DSA-MW07	WG	Primary	250 mL HDPE	KR	45-55 ft	10/14/23 15:25	SM2320B	21-034	PAN	L1667742	L1667742-04	0-6C	Blue
OT001-DSAMW07-101423	DSA-MW07	WG	Primary	250 mL HDPE	KR	45-55 ft	10/14/23 15:25	SW6010D	21-034	PAN	L1667742	L1667742-04	HNO3	Blue
OT001-DSAMW07-101423	DSA-MW07	WG	Primary	40 mL Amber	KR	45-55 ft	10/14/23 15:25	SW8260D	21-034	PAN	L1667742	L1667742-04	HCL	Blue
OT001-DSAMW07-101423	DSA-MW07	WG	Primary	250 mL HDPE	KR	45-55 ft	10/14/23 15:25	SW9056	21-034	PAN	L1667742	L1667742-04	0-6C	Blue
OT001-DSAMW01-101423	DSA-MW01	WG	Primary	40 mL Amber	KR	48-58 ft	10/14/23 16:25	8260 D-LL	21-034	PAN	L1667742	L1667742-04	HCL	Blue
OT001-DSAMW01-101423	DSA-MW01	WG	Primary	100 mL Amber	KR	48-58 ft	10/14/23 16:25	AK102	21-034	PAN	L1667742	L1667742-05	HCL	Blue
OT001-DSAMW01-101423	DSA-MW01	WG	Primary	250 mL HDPE	KR	48-58 ft	10/14/23 16:25	E351.2	21-034	PAN	L1667742	L1667742-05	H_2SO_4	Blue
OT001-DSAMW01-101423	DSA-MW01	WG	Primary	250 mL HDPE	KR	48-58 ft	10/14/23 16:25	E353.2	21-034	PAN	L1667742	L1667742-05	H_2SO_4	Blue
OT001-DSAMW01-101423	DSA-MW01	WG	Primary	250 mL HDPE	KR	48-58 ft	10/14/23 16:25	SM2320B	21-034	PAN	L1667742	L1667742-05	0-6C	Blue
OT001-DSAMW01-101423	DSA-MW01	WG	Primary	250 mL HDPE	KR	48-58 ft	10/14/23 16:25	SW6010D	21-034	PAN	L1667742	L1667742-05	HNO3	Blue
OT001-DSAMW01-101423	DSA-MW01	WG	Primary	40 mL Amber	KR	48-58 ft	10/14/23 16:25	SW8260D	21-034	PAN	L1667742	L1667742-05	HCL	Blue
OT001-DSAMW01-101423	DSA-MW01	WG	Primary	250 mL HDPE	KR	48-58 ft	10/14/23 16:25	SW9056	21-034	PAN	L1667742	L1667742-05	0-6C	Blue
OT001-DSAMW99-101423	DSA-MW01	WG	FD of OT001-DSAMW01-101423	40 mL Amber	KR	48-58 ft	10/14/23 16:30	8260 D-LL	21-034	PAN	L1667742	L1667742-05	HCL	Blue
OT001-DSAMW99-101423	DSA-MW01	WG	FD of OT001-DSAMW01-101423	100 mL Amber	KR	48-58 ft	10/14/23 16:30	AK102	21-034	PAN	L1667742	L1667742-06	HCL	Blue
OT001-DSAMW99-101423	DSA-MW01	WG	FD of OT001-DSAMW01-101423	250 mL HDPE	KR	48-58 ft	10/14/23 16:30	E351.2	21-034	PAN	L1667742	L1667742-06	H_2SO_4	Blue
OT001-DSAMW99-101423	DSA-MW01	WG	FD of OT001-DSAMW01-101423	250 mL HDPE	KR	48-58 ft	10/14/23 16:30	E353.2	21-034	PAN	L1667742	L1667742-06	H_2SO_4	Blue
OT001-DSAMW99-101423	DSA-MW01	WG	FD of OT001-DSAMW01-101423	250 mL HDPE	KR	48-58 ft	10/14/23 16:30	SM2320B	21-034	PAN	L1667742	L1667742-06	0-6C	Blue
OT001-DSAMW99-101423	DSA-MW01	WG	FD of OT001-DSAMW01-101423	250 mL HDPE	KR	48-58 ft	10/14/23 16:30	SW6010D	21-034	PAN	L1667742	L1667742-06	HNO3	Blue
OT001-DSAMW99-101423	DSA-MW01	WG	FD of OT001-DSAMW01-101423	40 mL Amber	KR	48-58 ft	10/14/23 16:30	SW8260D	21-034	PAN	L1667742	L1667742-06	HCL	Blue
OT001-DSAMW99-101423	DSA-MW01	WG	FD of OT001-DSAMW01-101423	250 mL HDPE	KR	48-58 ft	10/14/23 16:30	SW9056	21-034	PAN	L1667742	L1667742-06	0-6C	Blue
OT001-DSAMW05-101523	DSA-MW05	WG	Primary	40 mL Amber	KR	82-87 ft	10/15/23 10:00	8260 D-LL	21-034	PAN	L1667791	L1667742-06	HCL	Green
OT001-DSAMW05-101523	DSA-MW05	WG	Primary	100 mL Amber	KR	82-87 ft	10/15/23 10:00	AK102	21-034	PAN	L1667791	L1667791-01	HCL	Green
OT001-DSAMW05-101523	DSA-MW05	WG	Primary	250 mL HDPE	KR	82-87 ft	10/15/23 10:00	E351.2	21-034	PAN	L1667791	L1667791-01	H_2SO_4	Green
OT001-DSAMW05-101523	DSA-MW05	WG	Primary	250 mL HDPE	KR	82-87 ft	10/15/23 10:00	E353.2	21-034	PAN	L1667791	L1667791-01	H_2SO_4	Green
OT001-DSAMW05-101523	DSA-MW05	WG	Primary	250 mL HDPE	KR	82-87 ft	10/15/23 10:00	SM2320B	21-034	PAN	L1667791	L1667791-01	0-6C	Green
OT001-DSAMW05-101523	DSA-MW05	WG	Primary	250 mL HDPE	KR	82-87 ft	10/15/23 10:00	SW6010D	21-034	PAN	L1667791	L1667791-01	HNO3	Green
OT001-DSAMW05-101523	DSA-MW05	WG	Primary	40 mL Amber	KR	82-87 ft	10/15/23 10:00	SW8260D	21-034	PAN	L1667791	L1667791-01	HCL	Green
OT001-DSAMW05-101523	DSA-MW05	WG	Primary	250 mL HDPE	KR	82-87 ft	10/15/23 10:00	SW9056	21-034	PAN	L1667791	L1667791-01	0-6C	Green
OT001-DSAMW02-101523	DSA-MW02	WG	Primary	40 mL Amber	KR	57.5-67.5 ft	10/15/23 11:20	8260 D-LL	21-034	PAN	L1667791	L1667791-01	HCL	Green
OT001-DSAMW02-101523	DSA-MW02	WG	Primary	100 mL Amber	KR	57.5-67.5 ft	10/15/23 11:20	AK102	21-034	PAN	L1667791	L1667791-02	HCL	Green

Table C- 1. 2023 Groundwater Sample Summary, continued.

Field Sample ID	Location ID	Matrix	Sample Type	Container	Sampler	Sample Depth	Collected	Analytical Method	NPDL Number	Laboratory	SDG	Laboratory Sample ID	Preservation	Cooler Name
OT001-DSAMW02-101523	DSA-MW02	WG	Primary	250 mL HDPE	KR	57.5-67.5 ft	10/15/23 11:20	E351.2	21-034	PAN	L1667791	L1667791-02	H_2SO_4	Green
OT001-DSAMW02-101523	DSA-MW02	WG	Primary	250 mL HDPE	KR	57.5-67.5 ft	10/15/23 11:20	E353.2	21-034	PAN	L1667791	L1667791-02	H_2SO_4	Green
OT001-DSAMW02-101523	DSA-MW02	WG	Primary	250 mL HDPE	KR	57.5-67.5 ft	10/15/23 11:20	SM2320B	21-034	PAN	L1667791	L1667791-02	0-6C	Green
OT001-DSAMW02-101523	DSA-MW02	WG	Primary	250 mL HDPE	KR	57.5-67.5 ft	10/15/23 11:20	SW6010D	21-034	PAN	L1667791	L1667791-02	HNO3	Green
OT001-DSAMW02-101523	DSA-MW02	WG	Primary	40 mL Amber	KR	57.5-67.5 ft	10/15/23 11:20	SW8260D	21-034	PAN	L1667791	L1667791-02	HCL	Green
OT001-DSAMW02-101523	DSA-MW02	WG	Primary	250 mL HDPE	KR	57.5-67.5 ft	10/15/23 11:20	SW9056	21-034	PAN	L1667791	L1667791-02	0-6C	Green
WP002-BLOMW01-101523	BLO-MW01	WG	Primary	40 mL Amber	KR	40-50 ft	10/15/23 12:30	8260 D-LL	21-034	PAN	L1667791	L1667791-02	HCL	Green
WP002-BLOMW01-101523	BLO-MW01	WG	Primary	100 mL Amber	KR	40-50 ft	10/15/23 12:30	AK102	21-034	PAN	L1667791	L1667791-03	HCL	Green
WP002-BLOMW01-101523	BLO-MW01	WG	Primary	250 mL HDPE	KR	40-50 ft	10/15/23 12:30	E351.2	21-034	PAN	L1667791	L1667791-03	H_2SO_4	Green
WP002-BLOMW01-101523	BLO-MW01	WG	Primary	250 mL HDPE	KR	40-50 ft	10/15/23 12:30	E353.2	21-034	PAN	L1667791	L1667791-03	H_2SO_4	Green
WP002-BLOMW01-101523	BLO-MW01	WG	Primary	250 mL HDPE	KR	40-50 ft	10/15/23 12:30	SM2320B	21-034	PAN	L1667791	L1667791-03	0-6C	Green
WP002-BLOMW01-101523	BLO-MW01	WG	Primary	250 mL HDPE	KR	40-50 ft	10/15/23 12:30	SW6010D	21-034	PAN	L1667791	L1667791-03	HNO3	Green
WP002-BLOMW01-101523	BLO-MW01	WG	Primary	40 mL Amber	KR	40-50 ft	10/15/23 12:30	SW8260D	21-034	PAN	L1667791	L1667791-03	HCL	Green
WP002-BLOMW01-101523	BLO-MW01	WG	Primary	250 mL HDPE	KR	40-50 ft	10/15/23 12:30	SW9056	21-034	PAN	L1667791	L1667791-03	0-6C	Green
OT001-EQBK01-101523	—	WQ	EB	40 mL Amber	KR	—	10/15/23 17:45	8260 D-LL	21-034	PAN	L1667791	L1667791-03	HCL	Green
OT001-EQBK01-101523	—	WQ	EB	100 mL Amber	KR	—	10/15/23 17:45	AK102	21-034	PAN	L1667791	L1667791-04	HCL	Green
OT001-EQBK01-101523	—	WQ	EB	250 mL HDPE	KR	—	10/15/23 17:45	E351.2	21-034	PAN	L1667791	L1667791-04	H_2SO_4	Green
OT001-EQBK01-101523	—	WQ	EB	250 mL HDPE	KR	—	10/15/23 17:45	E353.2	21-034	PAN	L1667791	L1667791-04	H_2SO_4	Green
OT001-EQBK01-101523	—	WQ	EB	250 mL HDPE	KR	—	10/15/23 17:45	SM2320B	21-034	PAN	L1667791	L1667791-04	0-6C	Green
OT001-EQBK01-101523	—	WQ	EB	250 mL HDPE	KR	—	10/15/23 17:45	SW6010D	21-034	PAN	L1667791	L1667791-04	HNO3	Green
OT001-EQBK01-101523	—	WQ	EB	40 mL Amber	KR	—	10/15/23 17:45	SW8260D	21-034	PAN	L1667791	L1667791-04	HCL	Green
OT001-EQBK01-101523	—	WQ	EB	250 mL HDPE	KR	—	10/15/23 17:45	SW9056	21-034	PAN	L1667791	L1667791-04	0-6C	Green
OT001-TRIPBLNK-HCL-01	—	WQ	TB	40 mL Amber	KR	—	10/15/23 9:00	8260 D-LL	21-034	PAN	L1667791	L1667791-04	HCL	Green
OT001-TRIPBLNK-HCL-01	—	WQ	TB	40 mL Amber	KR	—	10/15/23 9:00	SW8260D	21-034	PAN	L1667791	L1667791-05	HCL	Green
OT001-RRSMW06-101323	RRS-MW06	WG	Primary	40 mL Amber	KR	55-65 ft	10/13/23 12:30	8260 D-LL	21-034	PAN	L1667912	L1667791-05	HCL	Yellow
OT001-RRSMW06-101323	RRS-MW06	WG	Primary	100 mL Amber	KR	55-65 ft	10/13/23 12:30	AK102	21-034	PAN	L1667912	L1667912-01	HCL	Yellow
OT001-RRSMW06-101323	RRS-MW06	WG	Primary	250 mL HDPE	KR	55-65 ft	10/13/23 12:30	E351.2	21-034	PAN	L1667912	L1667912-01	H_2SO_4	Yellow
OT001-RRSMW06-101323	RRS-MW06	WG	Primary	250 mL HDPE	KR	55-65 ft	10/13/23 12:30	E353.2	21-034	PAN	L1667912	L1667912-01	H_2SO_4	Yellow
OT001-RRSMW06-101323	RRS-MW06	WG	Primary	250 mL HDPE	KR	55-65 ft	10/13/23 12:30	SM2320B	21-034	PAN	L1667912	L1667912-01	0-6C	Yellow
OT001-RRSMW06-101323	RRS-MW06	WG	Primary	250 mL HDPE	KR	55-65 ft	10/13/23 12:30	SW6010D	21-034	PAN	L1667912	L1667912-01	HNO3	Yellow
OT001-RRSMW06-101323	RRS-MW06	WG	Primary	40 mL Amber	KR	55-65 ft	10/13/23 12:30	SW8260D	21-034	PAN	L1667912	L1667912-01	HCL	Yellow
OT001-RRSMW06-101323	RRS-MW06	WG	Primary	250 mL HDPE	KR	55-65 ft	10/13/23 12:30	SW9056	21-034	PAN	L1667912	L1667912-01	0-6C	Yellow
OT001-BLOMW05-101323	BLO-MW05	WG	Primary	40 mL Amber	KR	42.5-52.5 ft	10/13/23 18:15	8260 D-LL	21-034	PAN	L1667912	L1667912-01	HCL	Yellow
OT001-BLOMW05-101323	BLO-MW05	WG	Primary	100 mL Amber	KR	42.5-52.5 ft	10/13/23 18:15	AK102	21-034	PAN	L1667912	L1667912-02	HCL	Yellow
OT001-BLOMW05-101323	BLO-MW05	WG	Primary	250 mL HDPE	KR	42.5-52.5 ft	10/13/23 18:15	E351.2	21-034	PAN	L1667912	L1667912-02	H_2SO_4	Yellow
OT001-BLOMW05-101323	BLO-MW05	WG	Primary	250 mL HDPE	KR	42.5-52.5 ft	10/13/23 18:15	E353.2	21-034	PAN	L1667912	L1667912-02	H_2SO_4	Yellow
OT001-BLOMW05-101323	BLO-MW05	WG	Primary	250 mL HDPE	KR	42.5-52.5 ft	10/13/23 18:15	SM2320B	21-034	PAN	L1667912	L1667912-02	0-6C	Yellow
OT001-BLOMW05-101323	BLO-MW05	WG	Primary	250 mL HDPE	KR	42.5-52.5 ft	10/13/23 18:15	SW6010D	21-034	PAN	L1667912	L1667912-02	HNO3	Yellow
OT001-BLOMW05-101323	BLO-MW05	WG	Primary	40 mL Amber	KR	42.5-52.5 ft	10/13/23 18:15	SW8260D	21-034	PAN	L1667912	L1667912-02	HCL	Yellow
OT001-BLOMW05-101323	BLO-MW05	WG	Primary	250 mL HDPE	KR	42.5-52.5 ft	10/13/23 18:15	SW9056	21-034	PAN	L1667912	L1667912-02	0-6C	Yellow
OT001-BLOMW07-101323	BLO-MW07	WG	Primary	40 mL Amber	KR	35-45 ft	10/13/23 17:30	8260 D-LL	21-034	PAN	L1667912	L1667912-02	HCL	Yellow

Table C- 1. 2023 Groundwater Sample Summary, continued.

Field Sample ID	Location ID	Matrix	Sample Type	Container	Sampler	Sample Depth	Collected	Analytical Method	NPDL Number	Laboratory	SDG	Laboratory Sample ID	Preservation	Cooler Name
OT001-BLOMW07-101323	BLO-MW07	WG	Primary	100 mL Amber	KR	35-45 ft	10/13/23 17:30	AK102	21-034	PAN	L1667912	L1667912-03	HCL	Yellow
OT001-BLOMW07-101323	BLO-MW07	WG	Primary	250 mL HDPE	KR	35-45 ft	10/13/23 17:30	E351.2	21-034	PAN	L1667912	L1667912-03	H_2SO_4	Yellow
OT001-BLOMW07-101323	BLO-MW07	WG	Primary	250 mL HDPE	KR	35-45 ft	10/13/23 17:30	E353.2	21-034	PAN	L1667912	L1667912-03	H_2SO_4	Yellow
OT001-BLOMW07-101323	BLO-MW07	WG	Primary	250 mL HDPE	KR	35-45 ft	10/13/23 17:30	SM2320B	21-034	PAN	L1667912	L1667912-03	0-6C	Yellow
OT001-BLOMW07-101323	BLO-MW07	WG	Primary	250 mL HDPE	KR	35-45 ft	10/13/23 17:30	SW6010D	21-034	PAN	L1667912	L1667912-03	HNO3	Yellow
OT001-BLOMW07-101323	BLO-MW07	WG	Primary	40 mL Amber	KR	35-45 ft	10/13/23 17:30	SW8260D	21-034	PAN	L1667912	L1667912-03	HCL	Yellow
OT001-BLOMW07-101323	BLO-MW07	WG	Primary	250 mL HDPE	KR	35-45 ft	10/13/23 17:30	SW9056	21-034	PAN	L1667912	L1667912-03	0-6C	Yellow
OT001-BLOMW99-101323	BLO-MW07	WG	FD of OT001-BLOMW07-101323	40 mL Amber	KR	35-45 ft	10/13/23 17:40	8260 D-LL	21-034	PAN	L1667912	L1667912-03	HCL	Yellow
OT001-BLOMW99-101323	BLO-MW07	WG	FD of OT001-BLOMW07-101323	100 mL Amber	KR	35-45 ft	10/13/23 17:40	AK102	21-034	PAN	L1667912	L1667912-04	HCL	Yellow
OT001-BLOMW99-101323	BLO-MW07	WG	FD of OT001-BLOMW07-101323	250 mL HDPE	KR	35-45 ft	10/13/23 17:40	E351.2	21-034	PAN	L1667912	L1667912-04	H_2SO_4	Yellow
OT001-BLOMW99-101323	BLO-MW07	WG	FD of OT001-BLOMW07-101323	250 mL HDPE	KR	35-45 ft	10/13/23 17:40	E353.2	21-034	PAN	L1667912	L1667912-04	H_2SO_4	Yellow
OT001-BLOMW99-101323	BLO-MW07	WG	FD of OT001-BLOMW07-101323	250 mL HDPE	KR	35-45 ft	10/13/23 17:40	SM2320B	21-034	PAN	L1667912	L1667912-04	0-6C	Yellow
OT001-BLOMW99-101323	BLO-MW07	WG	FD of OT001-BLOMW07-101323	250 mL HDPE	KR	35-45 ft	10/13/23 17:40	SW6010D	21-034	PAN	L1667912	L1667912-04	HNO3	Yellow
OT001-BLOMW99-101323	BLO-MW07	WG	FD of OT001-BLOMW07-101323	40 mL Amber	KR	35-45 ft	10/13/23 17:40	SW8260D	21-034	PAN	L1667912	L1667912-04	HCL	Yellow
OT001-BLOMW99-101323	BLO-MW07	WG	FD of OT001-BLOMW07-101323	250 mL HDPE	KR	35-45 ft	10/13/23 17:40	SW9056	21-034	PAN	L1667912	L1667912-04	0-6C	Yellow
OT001-BLOMW06-101323	BLO-MW06	WG	Primary	40 mL Amber	KR	38.5-48.5 ft	10/13/23 18:45	8260 D-LL	21-034	PAN	L1667912	L1667912-04	HCL	Yellow
OT001-BLOMW06-101323	BLO-MW06	WG	Primary	100 mL Amber	KR	38.5-48.5 ft	10/13/23 18:45	AK102	21-034	PAN	L1667912	L1667912-05	HCL	Yellow
OT001-BLOMW06-101323	BLO-MW06	WG	Primary	250 mL HDPE	KR	38.5-48.5 ft	10/13/23 18:45	E351.2	21-034	PAN	L1667912	L1667912-05	H_2SO_4	Yellow
OT001-BLOMW06-101323	BLO-MW06	WG	Primary	250 mL HDPE	KR	38.5-48.5 ft	10/13/23 18:45	E353.2	21-034	PAN	L1667912	L1667912-05	H_2SO_4	Yellow
OT001-BLOMW06-101323	BLO-MW06	WG	Primary	250 mL HDPE	KR	38.5-48.5 ft	10/13/23 18:45	SM2320B	21-034	PAN	L1667912	L1667912-05	0-6C	Yellow
OT001-BLOMW06-101323	BLO-MW06	WG	Primary	250 mL HDPE	KR	38.5-48.5 ft	10/13/23 18:45	SW6010D	21-034	PAN	L1667912	L1667912-05	HNO3	Yellow
OT001-BLOMW06-101323	BLO-MW06	WG	Primary	40 mL Amber	KR	38.5-48.5 ft	10/13/23 18:45	SW8260D	21-034	PAN	L1667912	L1667912-05	HCL	Yellow
OT001-BLOMW06-101323	BLO-MW06	WG	Primary	250 mL HDPE	KR	38.5-48.5 ft	10/13/23 18:45	SW9056	21-034	PAN	L1667912	L1667912-05	0-6C	Yellow
OT001-TRIPBLNK-HCL-02	—	WQ	TB	40 mL Amber	KR	—	10/13/23 11:30	8260 D-LL	21-034	PAN	L1667912	L1667912-05	HCL	Yellow
OT001-TRIPBLNK-HCL-02	—	WQ	TB	40 mL Amber	KR	—	10/13/23 11:30	SW8260D	21-034	PAN	L1667912	L1667912-06	HCL	Yellow
R3989208-6 MS	BLO-MW01	WQ	MS	250 mL HDPE	KR	40-50 ft	10/15/23 12:30	E353.2	21-034	PAN	L1667791	L1667912-06	H_2SO_4	Green
R3989208-7 MSD	BLO-MW01	WQ	MSD	250 mL HDPE	KR	40-50 ft	10/15/23 12:30	E353.2	21-034	PAN	L1667791	R3989208-6	H_2SO_4	Green
R3989558-4 MS	BLO-MW01	WQ	MS	250 mL HDPE	KR	40-50 ft	10/15/23 12:30	E351.2	21-034	PAN	L1667791	R3989208-7	H_2SO_4	Green
R3989558-5 MSD	BLO-MW01	WQ	MSD	250 mL HDPE	KR	40-50 ft	10/15/23 12:30	E351.2	21-034	PAN	L1667791	R3989558-4	H_2SO_4	Green
R3990042-4 MS	215-MW-12	WQ	MS	40 mL Amber	KR	7-17 ft	10/12/23 17:25	SW8260D	21-034	PAN	L1667387	R3989558-5	HCL	Red
R3990042-5 MSD	215-MW-12	WQ	MSD	40 mL Amber	KR	7-17 ft	10/12/23 17:25	SW8260D	21-034	PAN	L1667387	R3990042-4	HCL	Red
R3990480-4 MS	BLO-MW01	WQ	MS	250 mL HDPE	KR	40-50 ft	10/15/23 12:30	SW6010D	21-034	PAN	L1667791	R3990042-5	HNO3	Green
R3990480-5 MSD	BLO-MW01	WQ	MSD	250 mL HDPE	KR	40-50 ft	10/15/23 12:30	SW6010D	21-034	PAN	L1667791	R3990480-4	HNO3	Green
R3990575-6 MS	BLO-MW01	WQ	MS	40 mL Amber	KR	40-50 ft	10/15/23 12:30	8260 D-LL	21-034	PAN	L1667791	R3990480-5	HCL	Green
R3990575-7 MSD	BLO-MW01	WQ	MSD	40 mL Amber	KR	40-50 ft	10/15/23 12:30	8260 D-LL	21-034	PAN	L1667791	R3990575-6	HCL	Green

Table C- 1. 2023 Groundwater Sample Summary, continued.

Field Sample ID	Location ID	Matrix	Sample Type	Container	Sampler	Sample Depth	Collected	Analytical Method	NPDL Number	Laboratory	SDG	Laboratory Sample ID	Preservation	Cooler Name
R3990613-6 MS	BLO-MW01	WQ	MS	40 mL Amber	KR	40-50 ft	10/15/23 12:30	SW8260D	21-034	PAN	L1667791	R3990575-7	HCL	Green
R3990613-7 MSD	BLO-MW01	WQ	MSD	40 mL Amber	KR	40-50 ft	10/15/23 12:30	SW8260D	21-034	PAN	L1667791	R3990613-6	HCL	Green
R3992131-4 MS	BLO-MW01	WQ	MS	250 mL HDPE	KR	40-50 ft	10/15/23 12:30	SW9056	21-034	PAN	L1667791	R3990613-7	0-6C	Green
R3992131-5 MSD	BLO-MW01	WQ	MSD	250 mL HDPE	KR	40-50 ft	10/15/23 12:30	SW9056	21-034	PAN	L1667791	R3992131-4	0-6C	Green
R3992822-4 MS	215-MW-12	WQ	MS	100 mL Amber	KR	7-17 ft	10/12/23 17:25	AK102	21-034	PAN	L1667387	R3992131-5	HCL	Red
R3992822-5 MSD	215-MW-12	WQ	MSD	100 mL Amber	KR	7-17 ft	10/12/23 17:25	AK102	21-034	PAN	L1667387	R3992822-4	HCL	Red
R3992861-4 MS	BLO-MW01	WQ	MS	100 mL Amber	KR	40-50 ft	10/15/23 12:30	AK102	21-034	PAN	L1667791	R3992822-5	HCL	Green
R3992861-5 MSD	BLO-MW01	WQ	MSD	100 mL Amber	KR	40-50 ft	10/15/23 12:30	AK102	21-034	PAN	L1667791	R3992861-4	HCL	Green
R3992984-7 MS	BLO-MW06	WQ	MS	250 mL HDPE	KR	38.5-48.5 ft	10/13/23 18:45	SW9056	21-034	PAN	L1667912	R3992861-5	0-6C	Yellow

All samples were shipped to Pace with a standard turnaround time.

Acronyms

C = Degree Celsius
EB = Equipment blank
FD = Field Duplicate
ft = Feet
H_2SO_4 = Sulfuric acid
HCl = Hydrochloric acid
HDPE = High-density polyethylene
HNO3 = Nitric acid
ID = Identification
KR = K. Reidt
mL = Milliliter
MS = Matrix spike
MSD = Matrix spike duplicate
NA = Not Applicable
NPDL = North Pacific Division Laboratory
PAN = Pace Analytical National Laboratory
QC = Quality Control
SDG = sample delivery group
TB = Trip Blank
WG = Groundwater
WQ = Quality control sample

Table C- 2. Summary of 2023 Analytical Results for OT001 and WP002 Groundwater Samples.

				Location ID	BLO-MW01	BLO-MW05	BLO-MW06	BLO-MW07	BLO-MW07	DSA-MW01	DSA-MW01
				Client Sample ID	WP002-BLOMW01-101523	OT001-BLOMW05-101323	OT001-BLOMW06-101323	OT001-BLOMW07-101323	OT001-BLOMW99-101323	OT001-DSAMW01-101423	OT001-DSAMW99-101423
				Lab Sample ID	L1667791-03	L1667912-02	L1667912-05	L1667912-03	L1667912-04	L1667742-05	L1667742-06
				Collected Date	10/15/23 12:30	10/13/23 18:15	10/13/23 18:45	10/13/23 17:30	10/13/23 17:40	10/14/23 16:25	10/14/23 16:30
				Matrix	WG	WG	WG	WG	WG	WG	WG
				Sample Type	Primary	Primary	Primary	Primary	Field Duplicate	Primary	Field Duplicate
Analytes	**Analytical Method**	**PAL[1]**	**Units**						Field duplicate of OT001-BLOMW07-101323		Field Duplicate of OT001-DSAMW01-101423
TPH Diesel Range Organics (C10-C25)	AK102	1500	µg/L		7860 [420] QL	499 [420] B, J	347 [400] B, J	431 [400] B, J	407 [420] B, J, QL	436 [420] B, J	459 [420] B, J
2-Chloroethyl Vinyl Ether	SW8260D	—	µg/L		ND [25.0] QN	ND [25.0] QN	ND [25.0] QN	ND [25.0] QN	ND [25.0] QN	ND [25.0]	ND [25.0]
Acetone	SW8260D	14000	µg/L		ND [25.0]	ND [25.0]	ND [25.0]	ND [25.0]	ND [25.0]	ND [25.0]	ND [25.0]
Acrolein	SW8260D	—	µg/L		ND [25.0]	ND [25.0]	ND [25.0]	ND [25.0]	ND [25.0]	ND [25.0]	ND [25.0]
Acrylonitrile	SW8260D	—	µg/L		ND [5.00]	ND [5.00]	ND [5.00]	ND [5.00]	ND [5.00]	ND [5.00]	ND [5.00]
Benzene	SW8260D	4.6	µg/L		1.28 [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
Bromobenzene	SW8260D	62	µg/L		ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
Bromodichloromethane	SW8260D	1.3	µg/L		ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
Bromoform	SW8260D	33	µg/L		ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
Bromomethane	SW8260D	7.5	µg/L		ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]
n-Butylbenzene	SW8260D	1000	µg/L		0.500 [0.500] J	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
sec-Butylbenzene	SW8260D	2000	µg/L		0.571 [0.500] J	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
tert-Butylbenzene	SW8260D	690	µg/L		0.959 [0.500] J	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
Carbon Tetrachloride	SW8260D	4.6	µg/L		ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
Chlorobenzene	SW8260D	78	µg/L		ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
Dibromochloromethane	SW8260D	8.7	µg/L		ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
Chloroethane	SW8260D	21000	µg/L		ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]
Chloroform	SW8260D	2.2	µg/L		ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]
Chloromethane	SW8260D	190	µg/L		ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]
2-Chlorotoluene	SW8260D	—	µg/L		ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
4-Chlorotoluene	SW8260D	—	µg/L		ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
1,2-Dibromoethane	SW8260D	0.075	µg/L		ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
1,2-dibromo-3-chloropropane	SW8260D	—	µg/L		ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]
Dibromomethane	SW8260D	8.3	µg/L		ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
1,2-Dichlorobenzene	SW8260D	300	µg/L		ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
1,3-Dichlorobenzene	SW8260D	300	µg/L		ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
1,4-Dichlorobenzene	SW8260D	4.8	µg/L		ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
Dichlorodifluoromethane	SW8260D	200	µg/L		ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]
1,1-Dichloroethane	SW8260D	28	µg/L		ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
1,2-Dichloroethane	SW8260D	1.7	µg/L		ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
1,1-Dichloroethene	SW8260D	280	µg/L		ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
cis-1,2-Dichloroethene	SW8260D	36	µg/L		11.7 [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
trans-1,2-Dichloroethene	SW8260D	360	µg/L		ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
1,2-Dichloropropane	SW8260D	8.2	µg/L		ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
1,3-Dichloropropane	SW8260D	—	µg/L		ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
2,2-Dichloropropane	SW8260D	—	µg/L		ND [0.500]	ND [0.500]	ND [0.500] H	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
1,1-Dichloropropene	SW8260D	—	µg/L		ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
cis-1,3-Dichloropropene	SW8260D	4.7	µg/L		ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]

				Location ID	BLO-MW01	BLO-MW05	BLO-MW06	BLO-MW07	BLO-MW07	DSA-MW01	DSA-MW01
				Client Sample ID	WP002-BLOMW01-101523	OT001-BLOMW05-101323	OT001-BLOMW06-101323	OT001-BLOMW07-101323	OT001-BLOMW99-101323	OT001-DSAMW01-101423	OT001-DSAMW99-101423
				Lab Sample ID	L1667791-03	L1667912-02	L1667912-05	L1667912-03	L1667912-04	L1667742-05	L1667742-06
				Collected Date	10/15/23 12:30	10/13/23 18:15	10/13/23 18:45	10/13/23 17:30	10/13/23 17:40	10/14/23 16:25	10/14/23 16:30
				Matrix	WG	WG	WG	WG	WG	WG	WG
				Sample Type	Primary	Primary	Primary	Primary	Field Duplicate	Primary	Field Duplicate
Analytes	**Analytical Method**	**PAL[1]**	**Units**						Field duplicate of OT001-BLOMW07-101323		Field Duplicate of OT001-DSAMW01-101423
trans-1,3-Dichloropropene	SW8260D	4.7	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
Diisopropyl Ether	SW8260D	—	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
Ethylbenzene	SW8260D	15	µg/L	6.13 [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
Hexachloro-1,3-butadiene	SW8260D	1.4	µg/L	ND [0.750]	ND [0.750]	ND [0.750] H	ND [0.750]	ND [0.750]	ND [0.750]	ND [0.750]	
Isopropylbenzene	SW8260D	450	µg/L	8.29 [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
4-Isopropyltoluene	SW8260D	—	µg/L	0.537 [0.500] J	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
2-Butanone	SW8260D	5600	µg/L	1.94 [5.00] J	ND [5.00]	ND [5.00]	ND [5.00]	ND [5.00]	ND [5.00]	ND [5.00]	
Methylene chloride	SW8260D	110	µg/L	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	
4-Methyl-2-Pentanone	SW8260D	6300	µg/L	ND [5.00]	ND [5.00]	ND [5.00]	ND [5.00]	ND [5.00]	ND [5.00]	ND [5.00]	
Methyl Tert Butyl Ether (MTBE)	SW8260D	140	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
Naphthalene	SW8260D	1.7	µg/L	41.7 [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	
n-Propylbenzene	SW8260D	660	µg/L	2.73 [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
Styrene	SW8260D	1200	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
1,1,1,2-Tetrachloroethane	SW8260D	5.7	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
1,1,2,2-Tetrachloroethane	SW8260D	0.76	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
Tetrachloroethene (PCE)	SW8260D	41	µg/L	ND [0.600]	ND [0.600]	ND [0.600]	ND [0.600]	ND [0.600]	ND [0.600]	ND [0.600]	
Toluene	SW8260D	1100	µg/L	ND [0.600]	ND [0.600]	ND [0.600]	ND [0.600]	ND [0.600]	ND [0.600]	ND [0.600]	
1,2,3-Trichlorobenzene	SW8260D	7	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
1,2,4-Trichlorobenzene	SW8260D	4	µg/L	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]	
1,2,3-Trimethylbenzene	SW8260D	—	µg/L	0.171 [0.500] J	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
1,2,4-Trimethylbenzene	SW8260D	56	µg/L	0.613 [1.00] J	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]	
1,3,5-Trimethylbenzene	SW8260D	60	µg/L	0.689 [0.500] J	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
1,1,1-Trichloroethane	SW8260D	8000	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
1,1,2-Trichloroethane	SW8260D	0.41	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
Trichloroethene (TCE)	SW8260D	2.8	µg/L	4.21 [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	3.82 [0.500]	3.96 [0.500]	
Trichlorofluoromethane	SW8260D	5200	µg/L	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	
1,1,2-Trichloro-1,2,2-trifluoroethane	SW8260D	10000	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
1,2,3-Trichloropropane	SW8260D	0.0075	µg/L	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]	
Vinyl chloride	SW8260D	0.19	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
Xylenes, (Total)	SW8260D	190	µg/L	3.12 [1.50]	ND [1.50]	ND [1.50]	ND [1.50]	ND [1.50]	ND [1.50]	ND [1.50]	
Allyl Chloride	8260 D-LL	—	µg/L	ND [2.00]	ND [2.00]	ND [2.00] H	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	
Bromochloromethane	8260 D-LL	—	µg/L	ND [0.100]	ND [0.100]	ND [0.100] H	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	
Carbon Disulfide	8260 D-LL	810	µg/L	ND [0.500]	ND [0.500]	ND [0.500] H	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
Cyclohexane	8260 D-LL	13000	µg/L	1.41 [0.0500] QH	ND [0.0500]	ND [0.0500] H	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	
Ethyl ether	8260 D-LL	—	µg/L	ND [0.0500]	ND [0.0500]	ND [0.0500] H	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	
Iodomethane	8260 D-LL	—	µg/L	ND [0.500]	ND [0.500]	ND [0.500] H	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
Tetrahydrofuran	8260 D-LL	—	µg/L	ND [0.250] QL	ND [0.250]	ND [0.250] H	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	
trans-1,4-Dichloro-2-Butene	8260 D-LL	—	µg/L	ND [0.200] QN	ND [0.200] QN	ND [0.200] QN, H	ND [0.200] QN	ND [0.200] QN	ND [0.200] QN	ND [0.200] QN	
Vinyl Acetate	8260 D-LL	410	µg/L	ND [0.300] H	ND [0.300]	ND [0.300] H	ND [0.300]	ND [0.300]	ND [0.300]	ND [0.300]	

				Location ID	BLO-MW01	BLO-MW05	BLO-MW06	BLO-MW07	BLO-MW07	DSA-MW01	DSA-MW01
				Client Sample ID	WP002-BLOMW01-101523	OT001-BLOMW05-101323	OT001-BLOMW06-101323	OT001-BLOMW07-101323	OT001-BLOMW99-101323	OT001-DSAMW01-101423	OT001-DSAMW99-101423
				Lab Sample ID	L1667791-03	L1667912-02	L1667912-05	L1667912-03	L1667912-04	L1667742-05	L1667742-06
				Collected Date	10/15/23 12:30	10/13/23 18:15	10/13/23 18:45	10/13/23 17:30	10/13/23 17:40	10/14/23 16:25	10/14/23 16:30
				Matrix	WG	WG	WG	WG	WG	WG	WG
				Sample Type	Primary	Primary	Primary	Primary	Field Duplicate	Primary	Field Duplicate
Analytes	**Analytical Method**	**PAL[1]**	**Units**						Field duplicate of OT001-BLOMW07-101323		Field Duplicate of OT001-DSAMW01-101423
Acetone	8260 D-LL	14000	µg/L	5.59 [2.00] QN, B	1.48 [2.00] QN, J, B	1.52 [2.00] B, J, QN, H	2.39 [2.00] QN, J, B	2.08 [2.00] QN, J, B	3.29 [2.00] QN, J	1.69 [2.00] QN, J	
Acrylonitrile	8260 D-LL	—	µg/L	ND [0.250]	ND [0.250]	ND [0.250] H	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	
Benzene	8260 D-LL	4.6	µg/L	1.52 [0.0500] B	0.0760 [0.0500] J	ND [0.0500] H	0.0660 [0.0500] J	0.0680 [0.0500] J	ND [0.0500]	ND [0.0500]	
Bromobenzene	8260 D-LL	62	µg/L	ND [0.250]	ND [0.250]	ND [0.250] H	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	
Bromodichloromethane	8260 D-LL	1.3	µg/L	ND [0.100]	ND [0.100]	ND [0.100] H	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	
Bromoform	8260 D-LL	33	µg/L	ND [0.500]	ND [0.500]	ND [0.500] H	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
Bromomethane	8260 D-LL	7.5	µg/L	ND [0.500]	ND [0.500]	ND [0.500] H	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
n-Butylbenzene	8260 D-LL	1000	µg/L	ND [0.500]	ND [0.500]	ND [0.500] H	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
	8260 D-LL	2000	µg/L	0.344 [0.250] QH, J	ND [0.250]	ND [0.250] H	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	
tert-Butylbenzene	8260 D-LL	690	µg/L	0.861 [0.500] QH, J	ND [0.500]	ND [0.500] H	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
Carbon Tetrachloride	8260 D-LL	4.6	µg/L	ND [0.100] QN	ND [0.100] QN	ND [0.100] H	ND [0.100] QN	ND [0.100] QN	ND [0.100] QN	ND [0.100] QN	
Chlorobenzene	8260 D-LL	78	µg/L	ND [0.0500]	ND [0.0500]	ND [0.0500] H	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	
Dibromochloromethane	8260 D-LL	8.7	µg/L	ND [0.0500]	ND [0.0500]	ND [0.0500] H	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	
Chloroethane	8260 D-LL	21000	µg/L	ND [0.100]	ND [0.100]	ND [0.100] H	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	
Chloroform	8260 D-LL	2.2	µg/L	ND [0.0500]	ND [0.0500]	ND [0.0500] H	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	
Chloromethane	8260 D-LL	190	µg/L	ND [0.250]	ND [0.250]	ND [0.250] H	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	
2-Chlorotoluene	8260 D-LL	—	µg/L	ND [0.100]	ND [0.100]	ND [0.100] H	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	
4-Chlorotoluene	8260 D-LL	—	µg/L	ND [0.100]	ND [0.100]	ND [0.100] H	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	
1,2-Dibromoethane	8260 D-LL	0.075	µg/L	ND [0.0500]	ND [0.0500]	ND [0.0500] H	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	
1,2-dibromo-3-chloropropane	8260 D-LL		µg/L	ND [0.500]	ND [0.500]	ND [0.500] H	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
Dibromomethane	8260 D-LL	8.3	µg/L	ND [0.100]	ND [0.100]	ND [0.100] H	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	
1,2-Dichlorobenzene	8260 D-LL	300	µg/L	ND [0.200]	ND [0.200]	ND [0.200] H	ND [0.200]	ND [0.200]	ND [0.200]	ND [0.200]	
1,3-Dichlorobenzene	8260 D-LL	300	µg/L	ND [0.200]	ND [0.200]	ND [0.200] H	ND [0.200]	ND [0.200]	ND [0.200]	ND [0.200]	
1,4-Dichlorobenzene	8260 D-LL	4.8	µg/L	ND [0.250]	ND [0.250]	ND [0.250] H	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	
Dichlorodifluoromethane	8260 D-LL	200	µg/L	ND [0.100] QN	ND [0.100]	ND [0.100] H	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	
1,1-Dichloroethane	8260 D-LL	28	µg/L	ND [0.0500]	ND [0.0500]	ND [0.0500] H	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	
1,2-Dichloroethane	8260 D-LL	1.7	µg/L	ND [0.0500]	ND [0.0500]	ND [0.0500] H	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	
1,1-Dichloroethene	8260 D-LL	280	µg/L	ND [0.0500]	ND [0.0500]	ND [0.0500] H	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	
cis-1,2-Dichloroethene	8260 D-LL	36	µg/L	12.4 [0.0750]	ND [0.0750]	ND [0.0750] H	ND [0.0750]	ND [0.0750]	ND [0.0750]	ND [0.0750]	
trans-1,2-Dichloroethene	8260 D-LL	360	µg/L	0.0850 [0.300] QH, J	ND [0.300]	ND [0.300] H	ND [0.300]	ND [0.300]	ND [0.300]	ND [0.300]	
1,2-Dichloropropane	8260 D-LL	8.2	µg/L	ND [0.200]	ND [0.200]	ND [0.200] H	ND [0.200]	ND [0.200]	ND [0.200]	ND [0.200]	
1,3-Dichloropropane	8260 D-LL	—	µg/L	ND [0.150]	ND [0.150]	ND [0.150] H	ND [0.150]	ND [0.150]	ND [0.150]	ND [0.150]	
2,2-Dichloropropane	8260 D-LL	—	µg/L	ND [0.100]	ND [0.100]	ND [0.100] H	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	
1,1-Dichloropropene	8260 D-LL	—	µg/L	ND [0.100]	ND [0.100]	ND [0.100] H	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	
cis-1,3-Dichloropropene	8260 D-LL	4.7	µg/L	ND [0.100]	ND [0.100]	ND [0.100] H	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	
trans-1,3-Dichloropropene	8260 D-LL	4.7	µg/L	ND [0.150]	ND [0.150]	ND [0.150] H	ND [0.150]	ND [0.150]	ND [0.150]	ND [0.150]	
Diisopropyl Ether	8260 D-LL	—	µg/L	ND [0.0500]	ND [0.0500]	ND [0.0500] H	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	
Ethylbenzene	8260 D-LL	15	µg/L	6.74 [0.0500]	ND [0.0500]	ND [0.0500] H	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	
Hexachloro-1,3-butadiene	8260 D-LL	1.4	µg/L	ND [2.00]	ND [2.00]	ND [2.00] H	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	

				Location ID	BLO-MW01 WP002-BLOMW01-101523	BLO-MW05 OT001-BLOMW05-101323	BLO-MW06 OT001-BLOMW06-101323	BLO-MW07 OT001-BLOMW07-101323	BLO-MW07 OT001-BLOMW99-101323	DSA-MW01 OT001-DSAMW01-101423	DSA-MW01 OT001-DSAMW99-101423
				Client Sample ID							
				Lab Sample ID	L1667791-03	L1667912-02	L1667912-05	L1667912-03	L1667912-04	L1667742-05	L1667742-06
				Collected Date	10/15/23 12:30	10/13/23 18:15	10/13/23 18:45	10/13/23 17:30	10/13/23 17:40	10/14/23 16:25	10/14/23 16:30
				Matrix	WG	WG	WG	WG	WG	WG	WG
				Sample Type	Primary	Primary	Primary	Primary	Field Duplicate	Primary	Field Duplicate
Analytes	**Analytical Method**	**PAL[1]**	**Units**						Field duplicate of OT001-BLOMW07-101323		Field Duplicate of OT001-DSAMW01-101423
Isopropylbenzene	8260 D-LL	450	µg/L		7.47 [1.00]	ND [1.00]	ND [1.00] H	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]
4-Isopropyltoluene	8260 D-LL	—	µg/L		2.58 [0.300] QH	ND [0.300]	ND [0.300] H	ND [0.300]	ND [0.300]	ND [0.300]	ND [0.300]
2-Butanone	8260 D-LL	5600	µg/L		2.00 [1.00] J	ND [1.00]	ND [1.00] H	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]
Methylene chloride	8260 D-LL	110	µg/L		ND [0.750]	ND [0.750]	ND [0.750] H	ND [0.750]	ND [0.750]	ND [0.750]	ND [0.750]
4-Methyl-2-Pentanone	8260 D-LL	6300	µg/L		ND [1.00] QN	ND [1.00]	ND [1.00] H	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]
Methyl Tert Butyl Ether (MTBE)	8260 D-LL	140	µg/L		ND [0.0300]	ND [0.0300]	ND [0.0300] H	ND [0.0300]	ND [0.0300]	ND [0.0300]	ND [0.0300]
Naphthalene	8260 D-LL	1.7	µg/L		50.7 [0.250]	0.148 [0.250] J	ND [0.250] QN, H	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]
n-Propylbenzene	8260 D-LL	660	µg/L		1.98 [0.100] QH	ND [0.100]	ND [0.100] H	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]
Styrene	8260 D-LL	1200	µg/L		ND [0.250]	ND [0.250]	ND [0.250] H	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]
1,1,1,2-Tetrachloroethane	8260 D-LL	5.7	µg/L		ND [0.0500]	ND [0.0500]	ND [0.0500] H	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]
1,1,2,2-Tetrachloroethane	8260 D-LL	0.76	µg/L		ND [0.0500]	ND [0.0500]	ND [0.0500] H	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]
Tetrachloroethene (PCE)	8260 D-LL	41	µg/L		0.165 [0.0750]	ND [0.0750]	ND [0.0750] H	ND [0.0750]	ND [0.0750]	ND [0.0750]	ND [0.0750]
Toluene	8260 D-LL	1100	µg/L		0.404 [0.100] QH, B	0.183 [0.100] J	0.125 [0.100] H, J	0.237 [0.100]	0.216 [0.100]	0.131 [0.100] J	0.0600 [0.100] J
1,2,3-Trichlorobenzene	8260 D-LL	7	µg/L		ND [0.250]	ND [0.250]	ND [0.250] QN, H	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]
1,2,4-Trichlorobenzene	8260 D-LL	4	µg/L		ND [0.500] QH	ND [0.500]	ND [0.500] H	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
1,2,3-Trimethylbenzene	8260 D-LL	—	µg/L		ND [0.100]	ND [0.100]	ND [0.100] H	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]
1,2,4-Trimethylbenzene	8260 D-LL	56	µg/L		0.531 [0.100]	ND [0.100]	ND [0.100] H	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]
1,3,5-Trimethylbenzene	8260 D-LL	60	µg/L		ND [0.100]	ND [0.100]	ND [0.100] H	ND [0.100]	ND [0.100]	0.0810 [0.100] BJ	ND [0.100]
1,1,1-Trichloroethane	8260 D-LL	8000	µg/L		ND [0.0500]	ND [0.0500]	ND [0.0500] H	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]
1,1,2-Trichloroethane	8260 D-LL	0.41	µg/L		ND [0.100]	ND [0.100]	ND [0.100] H	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]
Trichloroethene (TCE)	8260 D-LL	2.8	µg/L		4.21 [0.0400] H, QH	ND [0.0400]	0.0200 [0.0400] H, J	ND [0.0400] QN	ND [0.0400] QN	4.04 [0.0400]	3.92 [0.0400] QN
Trichlorofluoromethane	8260 D-LL	5200	µg/L		ND [0.0500] QN	ND [0.0500] QN	ND [0.0500] H	ND [0.0500] QN	ND [0.0500] QN	ND [0.0500] QN	ND [0.0500]
1,1,2-Trichloro-1,2,2-trifluoroethane	8260 D-LL	10000	µg/L		ND [0.100] QN	ND [0.100]	ND [0.100] H	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]
1,2,3-Trichloropropane	8260 D-LL	0.0075	µg/L		ND [0.500]	ND [0.500]	ND [0.500] H	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
Vinyl chloride	8260 D-LL	0.19	µg/L		0.137 [0.0750] J	ND [0.0750]	ND [0.0750] H	ND [0.0750]	ND [0.0750]	ND [0.0750]	ND [0.0750]
Xylenes, (Total)	8260 D-LL	190	µg/L		3.55 [0.400] QH	ND [0.400]	ND [0.400] H	ND [0.400]	ND [0.400]	0.215 [0.400] J	ND [0.400]

Notes

[1] ADEC – 18 AAC 75 Table C Groundwater Cleanup Level (ADEC 2023)
[0.400] – Laboratory Limit of Detection (LOD)
ND – Not detected above the LOD
WG –Groundwater
µg/L – microgram per liter
Analyte detected at a concentration above the cleanup level.
Laboratory LOD is greater than the cleanup level.

Laboratory Qualifiers

B = The same analyte is found in the associated blank
J = Result is detected below the reporting limit and/or is an estimated concentration based on data assessment
H = Analyte result is considered a low estimate due to holding time exceedance.
QH = Analyte result is considered an estimated value biased high due to a quality control.
QL = Analyte result is considered an estimated value biased low due to a quality control failure.
QN = Analyte result is considered an estimated value with unknown bias due to a quality control failure.
Flags may be combined when more than one quality deficiency exists.

Table C- 3. Summary of 2023 Analytical Results for OT001 and WP002 Groundwater Samples.

				Location ID	DSA-MW02	DSA-MW05	DSA-MW06	DSA-MW07	GLO-MW04	RRS-MW05	RRS-MW06
				Client Sample ID	OT001-DSAMW02-101523	OT001-DSAMW05-101523	OT001-DSAMW06-101423	OT001-DSAMW07-101423	OT001-GLOMW04-101423	OT001-RRSMW05-101423	OT001-RRSMW06-101323
				Lab Sample ID	L1667791-02	L1667791-01	L1667742-03	L1667742-04	L1667742-01	L1667742-02	L1667912-01
				Collected Date	10/15/23 11:20	10/15/23 10:00	10/14/23 14:45	10/14/23 15:25	10/14/23 11:05	10/14/23 12:20	10/13/23 12:30
				Matrix	WG	WG	WG	WG	WG	WG	WG
				Sample Type	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Analytes	**Analytical Method**	**PAL[1]**	**Units**								
TPH Diesel Range Organics (C10-C25)	AK102	1500	µg/L	453 [420] QL, J, B	542 [400] QL, J, B	355 [420] B, J	509 [420] B, J	406 [420] B, J	509 [420] B, J	437 [400] B, J
2-Chloroethyl Vinyl Ether	SW8260D	—	µg/L	ND [25.0] QN	ND [25.0] QN	ND [25.0]	ND [25.0]	ND [25.0]	ND [25.0]	ND [25.0] QN
Acetone	SW8260D	14000	µg/L	ND [25.0]	ND [25.0]	ND [25.0] QN	ND [25.0]	ND [25.0] QN	ND [25.0] QN	ND [25.0]
Acrolein	SW8260D	—	µg/L	ND [25.0]	ND [25.0]	ND [25.0]	ND [25.0]	ND [25.0]	ND [25.0]	ND [25.0]
Acrylonitrile	SW8260D	—	µg/L	ND [5.00]	ND [5.00]	ND [5.00]	ND [5.00]	ND [5.00]	ND [5.00]	ND [5.00]
Benzene	SW8260D	4.6	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
Bromobenzene	SW8260D	62	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
Bromodichloromethane	SW8260D	1.3	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
Bromoform	SW8260D	33	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
Bromomethane	SW8260D	7.5	µg/L	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]
n-Butylbenzene	SW8260D	1000	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
sec-Butylbenzene	SW8260D	2000	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
tert-Butylbenzene	SW8260D	690	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
Carbon Tetrachloride	SW8260D	4.6	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
Chlorobenzene	SW8260D	78	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
Dibromochloromethane	SW8260D	8.7	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
Chloroethane	SW8260D	21000	µg/L	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]
Chloroform	SW8260D	2.2	µg/L	0.153 [2.00] B, J	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]
Chloromethane	SW8260D	190	µg/L	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]
2-Chlorotoluene	SW8260D	—	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
4-Chlorotoluene	SW8260D	—	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
1,2-Dibromoethane	SW8260D	0.075	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
1,2-dibromo-3-chloropropane	SW8260D	—	µg/L	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]
Dibromomethane	SW8260D	8.3	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
1,2-Dichlorobenzene	SW8260D	300	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
1,3-Dichlorobenzene	SW8260D	300	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
1,4-Dichlorobenzene	SW8260D	4.8	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
Dichlorodifluoromethane	SW8260D	200	µg/L	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]
1,1-Dichloroethane	SW8260D	28	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
1,2-Dichloroethane	SW8260D	1.7	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
1,1-Dichloroethene	SW8260D	280	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
cis-1,2-Dichloroethene	SW8260D	36	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
trans-1,2-Dichloroethene	SW8260D	360	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
1,2-Dichloropropane	SW8260D	8.2	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
1,3-Dichloropropane	SW8260D	—	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
2,2-Dichloropropane	SW8260D	—	µg/L	ND [10.0]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
1,1-Dichloropropene	SW8260D	—	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
cis-1,3-Dichloropropene	SW8260D	4.7	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
trans-1,3-Dichloropropene	SW8260D	4.7	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]

				Location ID	DSA-MW02	DSA-MW05	DSA-MW06	DSA-MW07	GLO-MW04	RRS-MW05	RRS-MW06
				Client Sample ID	OT001-DSAMW02-101523	OT001-DSAMW05-101523	OT001-DSAMW06-101423	OT001-DSAMW07-101423	OT001-GLOMW04-101423	OT001-RRSMW05-101423	OT001-RRSMW06-101323
				Lab Sample ID	L1667791-02	L1667791-01	L1667742-03	L1667742-04	L1667742-01	L1667742-02	L1667912-01
				Collected Date	10/15/23 11:20	10/15/23 10:00	10/14/23 14:45	10/14/23 15:25	10/14/23 11:05	10/14/23 12:20	10/13/23 12:30
				Matrix	WG	WG	WG	WG	WG	WG	WG
				Sample Type	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Analytes	**Analytical Method**	**PAL[1]**	**Units**								
Diisopropyl Ether	SW8260D	—	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
Ethylbenzene	SW8260D	15	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
Hexachloro-1,3-butadiene	SW8260D	1.4	µg/L	ND [15.0]	ND [0.750]	ND [0.750]	ND [0.750]	ND [0.750]	ND [0.750]	ND [0.750]	
Isopropylbenzene	SW8260D	450	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
4-Isopropyltoluene	SW8260D	—	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
2-Butanone	SW8260D	5600	µg/L	ND [5.00]	ND [5.00]	ND [5.00]	ND [5.00]	ND [5.00]	ND [5.00]	ND [5.00]	
Methylene chloride	SW8260D	110	µg/L	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	
4-Methyl-2-Pentanone	SW8260D	6300	µg/L	ND [5.00]	ND [5.00]	ND [5.00]	ND [5.00]	ND [5.00]	ND [5.00]	ND [5.00]	
Methyl Tert Butyl Ether (MTBE)	SW8260D	140	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
Naphthalene	SW8260D	1.7	µg/L	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	
n-Propylbenzene	SW8260D	660	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
Styrene	SW8260D	1200	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
1,1,1,2-Tetrachloroethane	SW8260D	5.7	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
1,1,2,2-Tetrachloroethane	SW8260D	0.76	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
Tetrachloroethene (PCE)	SW8260D	41	µg/L	ND [0.600]	ND [0.600]	ND [0.600]	ND [0.600]	ND [0.600]	ND [0.600]	ND [0.600]	
Toluene	SW8260D	1100	µg/L	ND [0.600]	ND [0.600]	0.300 [0.600] J	0.291 [0.600] J	ND [0.600]	ND [0.600]	ND [0.600]	
1,2,3-Trichlorobenzene	SW8260D	7	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
1,2,4-Trichlorobenzene	SW8260D	4	µg/L	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]	
1,2,3-Trimethylbenzene	SW8260D	—	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
1,2,4-Trimethylbenzene	SW8260D	56	µg/L	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]	
1,3,5-Trimethylbenzene	SW8260D	60	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
1,1,1-Trichloroethane	SW8260D	8000	µg/L	ND [10.0]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
1,1,2-Trichloroethane	SW8260D	0.41	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
Trichloroethene (TCE)	SW8260D	2.8	µg/L	380 [10.0]	3.99 [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
Trichlorofluoromethane	SW8260D	5200	µg/L	0.872 [2.00] J	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	
1,1,2-Trichloro-1,2,2-trifluoroethane	SW8260D	10000	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
1,2,3-Trichloropropane	SW8260D	0.0075	µg/L	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]	
Vinyl chloride	SW8260D	0.19	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
Xylenes, (Total)	SW8260D	190	µg/L	ND [1.50]	ND [1.50]	0.300 [1.50] J	ND [1.50]	ND [1.50]	ND [1.50]	ND [1.50]	
Allyl Chloride	8260 D-LL	—	µg/L	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	
Bromochloromethane	8260 D-LL	—	µg/L	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	
Carbon Disulfide	8260 D-LL	810	µg/L	ND [0.500]	ND [0.500]	0.262 [0.500] J	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
Cyclohexane	8260 D-LL	13000	µg/L	0.0750 [0.0500] J	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	
Ethyl ether	8260 D-LL	—	µg/L	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	
Iodomethane	8260 D-LL	—	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	
Tetrahydrofuran	8260 D-LL	—	µg/L	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	
trans-1,4-Dichloro-2-Butene	8260 D-LL	—	µg/L	ND [0.200] QN	ND [0.200] QN	ND [0.200] QN	ND [0.200] QN	0.211 [0.200] QN, J	ND [0.200] QN	ND [0.200] QN	
Vinyl Acetate	8260 D-LL	410	µg/L	ND [6.00]	ND [0.300]	ND [0.300]	ND [0.300]	ND [0.300]	ND [0.300]	ND [0.300]	
Acetone	8260 D-LL	14000	µg/L	2.53 [2.00] QN, J, B	1.67 [2.00] QN, J, B	1.44 [2.00] QN, J	1.37 [2.00] QN, J	1.67 [2.00] QN, J	1.42 [2.00] QN, J	2.10 [2.00] QN, J, B	
Acrylonitrile	8260 D-LL	—	µg/L	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	

				Location ID	DSA-MW02	DSA-MW05	DSA-MW06	DSA-MW07	GLO-MW04	RRS-MW05	RRS-MW06
				Client Sample ID	OT001-DSAMW02-101523	OT001-DSAMW05-101523	OT001-DSAMW06-101423	OT001-DSAMW07-101423	OT001-GLOMW04-101423	OT001-RRSMW05-101423	OT001-RRSMW06-101323
				Lab Sample ID	L1667791-02	L1667791-01	L1667742-03	L1667742-04	L1667742-01	L1667742-02	L1667912-01
				Collected Date	10/15/23 11:20	10/15/23 10:00	10/14/23 14:45	10/14/23 15:25	10/14/23 11:05	10/14/23 12:20	10/13/23 12:30
				Matrix	WG	WG	WG	WG	WG	WG	WG
				Sample Type	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Analytes	**Analytical Method**	**PAL[1]**	**Units**								
Benzene	8260 D-LL	4.6	µg/L	0.154 [0.0500] B	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	0.0890 [0.0500] J
Bromobenzene	8260 D-LL	62	µg/L	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]
Bromodichloromethane	8260 D-LL	1.3	µg/L	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]
Bromoform	8260 D-LL	33	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
Bromomethane	8260 D-LL	7.5	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
n-Butylbenzene	8260 D-LL	1000	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
sec-Butylbenzene	8260 D-LL	2000	µg/L	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]
tert-Butylbenzene	8260 D-LL	690	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
Carbon Tetrachloride	8260 D-LL	4.6	µg/L	ND [0.100] QN	ND [0.100] QN	ND [0.100] QN	ND [0.100] QN	ND [0.100] QN	ND [0.100] QN	ND [0.100] QN
Chlorobenzene	8260 D-LL	78	µg/L	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]
Dibromochloromethane	8260 D-LL	8.7	µg/L	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]
Chloroethane	8260 D-LL	21000	µg/L	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]
Chloroform	8260 D-LL	2.2	µg/L	0.148 [0.0500] B	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]
Chloromethane	8260 D-LL	190	µg/L	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]
2-Chlorotoluene	8260 D-LL	—	µg/L	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]
4-Chlorotoluene	8260 D-LL	—	µg/L	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]
1,2-Dibromoethane	8260 D-LL	0.075	µg/L	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]
1,2-dibromo-3-chloropropane	8260 D-LL	—	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
Dibromomethane	8260 D-LL	8.3	µg/L	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]
1,2-Dichlorobenzene	8260 D-LL	300	µg/L	ND [0.200]	ND [0.200]	ND [0.200]	ND [0.200]	ND [0.200]	ND [0.200]	ND [0.200]
1,3-Dichlorobenzene	8260 D-LL	300	µg/L	ND [0.200]	ND [0.200]	ND [0.200]	ND [0.200]	ND [0.200]	ND [0.200]	ND [0.200]
1,4-Dichlorobenzene	8260 D-LL	4.8	µg/L	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]
Dichlorodifluoromethane	8260 D-LL	200	µg/L	ND [0.100] QN	ND [0.100] QN	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]
1,1-Dichloroethane	8260 D-LL	28	µg/L	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]
1,2-Dichloroethane	8260 D-LL	1.7	µg/L	0.0490 [0.0500] J	0.0390 [0.0500] J	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]
1,1-Dichloroethene	8260 D-LL	280	µg/L	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]
cis-1,2-Dichloroethene	8260 D-LL	36	µg/L	ND [0.0750]	ND [0.0750]	ND [0.0750]	ND [0.0750]	ND [0.0750]	ND [0.0750]	ND [0.0750]
trans-1,2-Dichloroethene	8260 D-LL	360	µg/L	ND [0.300]	ND [0.300]	ND [0.300]	ND [0.300]	ND [0.300]	ND [0.300]	ND [0.300]
1,2-Dichloropropane	8260 D-LL	8.2	µg/L	ND [0.200]	ND [0.200]	ND [0.200]	ND [0.200]	ND [0.200]	ND [0.200]	ND [0.200]
1,3-Dichloropropane	8260 D-LL	—	µg/L	ND [0.150]	ND [0.150]	ND [0.150]	ND [0.150]	ND [0.150]	ND [0.150]	ND [0.150]
2,2-Dichloropropane	8260 D-LL	—	µg/L	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]
1,1-Dichloropropene	8260 D-LL	—	µg/L	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]
cis-1,3-Dichloropropene	8260 D-LL	4.7	µg/L	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]
trans-1,3-Dichloropropene	8260 D-LL	4.7	µg/L	ND [0.150]	ND [0.150]	ND [0.150]	ND [0.150]	ND [0.150]	ND [0.150]	ND [0.150]
Diisopropyl Ether	8260 D-LL	—	µg/L	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]
Ethylbenzene	8260 D-LL	15	µg/L	0.0280 [0.0500] B, J	0.0400 [0.0500] B, J	0.0370 [0.0500] J	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]
Hexachloro-1,3-butadiene	8260 D-LL	1.4	µg/L	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]	ND [2.00]
Isopropylbenzene	8260 D-LL	450	µg/L	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]	0.0480 [1.00] J	ND [1.00]	ND [1.00]
4-Isopropyltoluene	8260 D-LL	—	µg/L	ND [0.300]	ND [0.300]	ND [0.300]	ND [0.300]	ND [0.300]	ND [0.300]	ND [0.300]
2-Butanone	8260 D-LL	5600	µg/L	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]

				Location ID	DSA-MW02	DSA-MW05	DSA-MW06	DSA-MW07	GLO-MW04	RRS-MW05	RRS-MW06
				Client Sample ID	OT001-DSAMW02-101523	OT001-DSAMW05-101523	OT001-DSAMW06-101423	OT001-DSAMW07-101423	OT001-GLOMW04-101423	OT001-RRSMW05-101423	OT001-RRSMW06-101323
				Lab Sample ID	L1667791-02	L1667791-01	L1667742-03	L1667742-04	L1667742-01	L1667742-02	L1667912-01
				Collected Date	10/15/23 11:20	10/15/23 10:00	10/14/23 14:45	10/14/23 15:25	10/14/23 11:05	10/14/23 12:20	10/13/23 12:30
				Matrix	WG	WG	WG	WG	WG	WG	WG
				Sample Type	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Analytes	**Analytical Method**	**PAL[1]**	**Units**								
Methylene chloride	8260 D-LL	110	µg/L	ND [0.750]	ND [0.750]	ND [0.750]	ND [0.750]	ND [0.750]	ND [0.750]	ND [0.750]
4-Methyl-2-Pentanone	8260 D-LL	6300	µg/L	ND [1.00] QN	ND [1.00] QN	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]	ND [1.00]
Methyl Tert Butyl Ether (MTBE)	8260 D-LL	140	µg/L	ND [0.0300]	ND [0.0300]	ND [0.0300]	ND [0.0300]	ND [0.0300]	ND [0.0300]	ND [0.0300]
Naphthalene	8260 D-LL	1.7	µg/L	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	0.946 [0.250]	0.144 [0.250] J	0.842 [0.250]
n-Propylbenzene	8260 D-LL	660	µg/L	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	0.0540 [0.100] J	ND [0.100]	ND [0.100]
Styrene	8260 D-LL	1200	µg/L	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]
1,1,1,2-Tetrachloroethane	8260 D-LL	5.7	µg/L	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]
1,1,2,2-Tetrachloroethane	8260 D-LL	0.76	µg/L	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]
Tetrachloroethene (PCE)	8260 D-LL	41	µg/L	ND [0.0750]	ND [0.0750]	0.131 [0.0750] J	ND [0.0750]	ND [0.0750]	ND [0.0750]	ND [0.0750]
Toluene	8260 D-LL	1100	µg/L	18.1 [2.00]	0.116 [0.100] B, J	0.192 [0.100] J	0.0810 [0.100] J	0.0890 [0.100] J	0.0730 [0.100] J	0.250 [0.100]
1,2,3-Trichlorobenzene	8260 D-LL	7	µg/L	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]	ND [0.250]
1,2,4-Trichlorobenzene	8260 D-LL	4	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
1,2,3-Trimethylbenzene	8260 D-LL	—	µg/L	ND [0.100]	ND [0.100]	0.0800 [0.100] J	0.0480 [0.100] J	0.284 [0.100]	0.0770 [0.100] J	ND [0.100]
1,2,4-Trimethylbenzene	8260 D-LL	56	µg/L	ND [0.100]	ND [0.100]	0.0490 [0.100] B, J	ND [0.100]	ND [0.100]	ND [0.100]	0.0570 [0.100] J
1,3,5-Trimethylbenzene	8260 D-LL	60	µg/L	ND [0.100]	ND [0.100]	0.103 [0.100] J	0.0820 [0.100] J	0.195 [0.100] J	0.108 [0.100] J	ND [0.100]
1,1,1-Trichloroethane	8260 D-LL	8000	µg/L	1.11 [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]	ND [0.0500]
1,1,2-Trichloroethane	8260 D-LL	0.41	µg/L	0.0670 [0.100] J	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]
Trichloroethene (TCE)	8260 D-LL	2.8	µg/L	380 [0.800]	3.91 [0.0400]	0.0500 [0.0400] QN, J	0.0370 [0.0400] QN, J	ND [0.0400] QN	ND [0.0400] QN	ND [0.0400]
Trichlorofluoromethane	8260 D-LL	5200	µg/L	0.839 [0.0500] QN	ND [0.0500] QN	0.589 [0.0500] QN	ND [0.0500] QN	ND [0.0500] QN	ND [0.0500] QN	ND [0.0500] QN
1,1,2-Trichloro-1,2,2-trifluoroethane	8260 D-LL	10000	µg/L	ND [0.100] QN	ND [0.100] QN	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]	ND [0.100]
1,2,3-Trichloropropane	8260 D-LL	0.0075	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
Vinyl chloride	8260 D-LL	0.19	µg/L	ND [0.0750]	ND [0.0750]	ND [0.0750]	ND [0.0750]	ND [0.0750]	ND [0.0750]	ND [0.0750]
Xylenes, (Total)	8260 D-LL	190	µg/L	ND [0.400]	ND [0.400]	0.340 [0.400] J	ND [0.400]	ND [0.400]	ND [0.400]	ND [0.400]

Notes

[1] ADEC – 18 AAC 75 Table C Groundwater Cleanup Level (ADEC 2023)

[0.400] – Laboratory Limit of Detection (LOD)

ND – Not detected above the LOD

WG –Groundwater

µg/L – microgram per liter

Analyte detected at a concentration above the cleanup level.

Laboratory LOD is greater than the cleanup level.

Laboratory Qualifiers

B = The same analyte is found in the associated blank

J = Result is detected below the reporting limit and/or is an estimated concentration based on data assessment

QL = Analyte result is considered an estimated value biased low due to a quality control failure.

QN = Analyte result is considered an estimated value with unknown bias due to a quality control failure.

Flags may be combined when more than one quality deficiency exists.

Table C- 4. Summary of 2023 MNA Results for OT001 and WP002 Groundwater Samples.

				Location ID	BLO-MW01	BLO-MW05	BLO-MW06	BLO-MW07	BLO-MW07	DSA-MW01	DSA-MW01
				Client Sample ID	WP002-BLOMW01-101523	OT001-BLOMW05-101323	OT001-BLOMW06-101323	OT001-BLOMW07-101323	OT001-BLOMW99-101323	OT001-DSAMW01-101423	OT001-DSAMW99-101423
				Lab Sample ID	L1667791-03	L1667912-02	L1667912-05	L1667912-03	L1667912-04	L1667742-05	L1667742-06
				Collected Date	10/15/23 12:30	10/13/23 18:15	10/13/23 18:45	10/13/23 17:30	10/13/23 17:40	10/14/23 16:25	10/14/23 16:30
				Matrix	WG	WG	WG	WG	WG	WG	WG
				Type	Primary	Primary	Primary	Primary	Field Duplicate	Primary	Field Duplicate
Analytes	**Analytical Method**	**PAL[1]**	**Units**						Duplicate of OT001-BLOMW07-101323		Duplicate of OT001-DSAMW01-101423
Sulfate	SW9056	—	µg/L	4690 [2500] QL, J	2380 [2500] J	3800 [2500] J	2450 [2500] J	2240 [2500] J	5780 [2500]	5710 [2500]	
Iron, total	SW6010D	—	µg/L	3840 [50.0]	2330 [50.0]	5250 [50.0]	412 [50.0] QN	1620 [50.0] QN	43.0 [50.0] J	38.5 [50.0] J	
Manganese	SW6010D	430	µg/L	12900 [25.0] QL	122 [5.00]	218 [5.00]	18.8 [5.00] QN	83.7 [5.00] QN	1.42 [5.00] J	1.38 [5.00] J	
Alkalinity, bicarbonate	SM2320B	—	µg/L	988000 [10000]	60200 [10000]	47200 [10000]	45300 [10000]	44900 [10000]	102000 [10000]	105000 [10000]	
Alkalinity, carbonate	SM2320B	—	µg/L	ND [10000]	ND [10000]	ND [10000]	ND [10000]	ND [10000]	ND [10000]	ND [10000]	
Alkalinity, hydroxide	SM2320B	—	µg/L	ND [10000]	ND [10000]	ND [10000]	ND [10000]	ND [10000]	ND [10000]	ND [10000]	
Alkalinity, total	SM2320B	—	µg/L	988000 [10000]	60200 [10000]	47200 [10000]	45300 [10000]	44900 [10000]	102000 [10000]	105000 [10000]	
Nitrate-Nitrite	E353.2	—	µg/L	ND [100]	1290 [100]	60.3 [100] J	ND [100]	ND [100]	995 [100]	979 [100]	
Total Kjeldahl Nitrogen (TKN)	E351.2	—	µg/L	846 [300] QH, J	ND [300]	ND [300]	ND [300]	ND [300]	ND [300]	ND [300]	

Notes

[1] ADEC – 18 AAC 75 Table C Groundwater Cleanup Level (ADEC 2023)
[2500] – Laboratory Limit of Detection (LOD)
ND – Not detected above the LOD
WG –Groundwater
µg/L – microgram per liter
Analyte detected at a concentration above the cleanup level.

Laboratory Qualifiers

B = The same analyte is found in the associated blank
J = Result is detected below the reporting limit and/or is an estimated concentration based on data assessment
QH = Analyte result is considered an estimated value biased high due to a quality control.
QL = Analyte result is considered an estimated value biased low due to a quality control failure.
Flags may be combined when more than one quality deficiency exists.

Table C- 5. Summary of 2023 MNA Results for OT001 and WP002 Groundwater Samples.

				Location ID	DSA-MW02	DSA-MW05	DSA-MW06	DSA-MW07	GLO-MW04	RRS-MW05	RRS-MW06
				Client Sample ID	OT001-DSAMW02-101523	OT001-DSAMW05-101523	OT001-DSAMW06-101423	OT001-DSAMW07-101423	OT001-GLOMW04-101423	OT001-RRSMW05-101423	OT001-RRSMW06-101323
				Lab Sample ID	L1667791-02	L1667791-01	L1667742-03	L1667742-04	L1667742-01	L1667742-02	L1667912-01
				Collected Date	10/15/23 11:20	10/15/23 10:00	10/14/23 14:45	10/14/23 15:25	10/14/23 11:05	10/14/23 12:20	10/13/23 12:30
				Matrix	WG	WG	WG	WG	WG	WG	WG
				Type	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Analytes		**Analytical Method**	**PAL[1]**	**Units**							
Sulfate		SW9056	—	µg/L	8920 [2500] QL	10100 [2500] QL	4940 [2500] J	3630 [2500] J	3870 [2500] J	3640 [2500] J	3740 [2500] J
Iron, total		SW6010D	—	µg/L	5760 [50.0]	1690 [50.0]	2430 [50.0]	308 [50.0]	112 [50.0]	4460 [50.0]	247 [50.0]
Manganese		SW6010D	430	µg/L	153 [5.00] QL	113 [5.00] QL	478 [5.00]	7.62 [5.00] J	6.16 [5.00] J	99.5 [5.00]	7.75 [5.00] J
Alkalinity, bicarbonate		SM2320B	—	µg/L	125000 [10000]	69400 [10000]	75800 [10000]	78200 [10000]	69300 [10000]	57500 [10000]	110000 [10000]
Alkalinity, carbonate		SM2320B	—	µg/L	ND [10000]	ND [10000]	ND [10000]	ND [10000]	ND [10000]	ND [10000]	ND [10000]
Alkalinity, hydroxide		SM2320B	—	µg/L	ND [10000]	ND [10000]	ND [10000]	ND [10000]	ND [10000]	ND [10000]	ND [10000]
Alkalinity, total		SM2320B	—	µg/L	125000 [10000]	69400 [10000]	75800 [10000]	78200 [10000]	69300 [10000]	57500 [10000]	110000 [10000]
Nitrate-Nitrite		E353.2	—	µg/L	2220 [100]	1110 [100]	ND [100]	264 [100]	382 [100]	123 [100] J	1360 [100]
Total Kjeldahl Nitrogen (TKN)		E351.2	—	µg/L	ND [300] QH	183 [300] QH, J	ND [300]	177 [300] J	ND [300]	ND [300]	ND [300]

Notes
[1] ADEC – 18 AAC 75 Table C Groundwater Cleanup Level (ADEC 2023)
[2500] – Laboratory Limit of Detection (LOD)
ND – Not detected above the LOD
WG –Groundwater
µg/L – microgram per liter
Analyte detected at a concentration above the cleanup level.

Laboratory Qualifiers
J = Result is detected below the reporting limit and/or is an estimated concentration based on data assessment
QH = Analyte result is considered an estimated value biased high due to a quality control.
QL = Analyte result is considered an estimated value biased low due to a quality control failure.
Flags may be combined when more than one quality deficiency exists.

Table C- 6. Summary of 2023 Analytical Results for SS006 Groundwater Samples.

				Location ID	066-MW-04	066-MW-05	066-MW-06	066-MW-07	066-MW-07	215-MW-08	215-MW-09	215-MW-12
				Client Sample ID	SS006-066MW04-101223	SS006-066MW05-101223	SS006-066MW06-101223	SS006-066MW07-101223	SS006-066MW99-101223	SS006-215MW08-101223	SS006-215MW09-101223	SS006-215MW12-101223
				Lab Sample ID	L1667387-04	L1667387-05	L1667387-01	L1667387-02	L1667387-03	L1667387-08	L1667387-07	L1667387-06
				Collected Date	10/12/23 14:34	10/12/23 15:35	10/12/23 11:15	10/12/23 12:37	10/12/23 12:45	10/12/23 19:30	10/12/23 18:30	10/12/23 17:25
				Matrix	WG	WG	WG	WG	WG	WG	WG	WG
				Type	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Analytes		**Analytical Method**	**PAL[1]**	**Units**					Field duplicate of SS006-066MW07-101223			
TPH Diesel Range Organics (C10-C25)		AK102	1500	µg/L	458 [404] B, J, QL	1650 [420] H, B	391 [400] B, J, QL	420 [408] B, J, QL	310 [400] B, J, QL	261 [400] J, QL, B	609 [416] B, J, QL	388 [412] J, B, QL
Benzene		SW8260D	4.6	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
Ethylbenzene		SW8260D	15	µg/L	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]	ND [0.500]
Toluene		SW8260D	1100	µg/L	ND [0.600]	ND [0.600]	ND [0.600]	ND [0.600]	ND [0.600]	ND [0.600]	ND [0.600]	ND [0.600]
Xylenes, (Total)		SW8260D	190	µg/L	ND [1.50]	ND [1.50]	ND [1.50]	ND [1.50]	ND [1.50]	ND [1.50]	2.31 [1.50] B, QH, J	ND [1.50]

Notes
[1] ADEC – 18 AAC 75 Table C Groundwater Cleanup Level (ADEC 2023)
[404] – Laboratory Limit of Detection (LOD)
ND – Not detected above the LOD
WG –Groundwater
µg/L – microgram per liter
Analyte detected at a concentration above the cleanup level.

Laboratory Qualifiers
B = The same analyte is found in the associated blank
J = Result is detected below the reporting limit and/or is an estimated concentration based on data assessment
QH = Analyte result is considered an estimated value biased high due to a quality control.
QL = Analyte result is considered an estimated value biased low due to a quality control failure.
Flags may be combined when more than one quality deficiency exists.

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APPENDIX D

Data Quality Assessment Report and ADEC Laboratory Data Review Checklist

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ADEC Contaminated Sites Program Laboratory Data Review Checklist

Completed By:	Sherrie Robinson	**CS Site Name:**	Port Heiden RRS	**Lab Name:**	Pace Analytical
Title:	Staff Scientist	**ADEC File No.:**	SS006: 2637.38.002.02 NPDL 21-034	**Lab Report No.:**	L1667387
Consulting Firm:	North Wind Site Services	**Hazard ID No.:**	SS006: 179	**Lab Report Date:**	11/15/23

Note: *Any N/A or No box checked must have an explanation in the comments box.*

1. **Laboratory**

   a. Did an ADEC Contaminated Sites Laboratory Approval Program (CS-LAP) approved laboratory receive and perform all of the submitted sample analyses?
   Yes ☒ No ☐ N/A ☐
   Comments: Yes, the samples were analyzed by Pace Analytical

   b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses CS-LAP approved?
   Yes ☐ No ☐ N/A ☒
   Comments: Samples were not subcontracted.

2. **Chain of Custody (CoC)**

   a. Is the CoC information completed, signed, and dated (including released/received by)?
   Yes ☒ No ☐ N/A ☐
   Comments: COC information is complete and accurate.

   b. Were the correct analyses requested?
   Yes ☒ No ☐ N/A ☐
   Analyses requested: AK102, 8260D
   Comments: The correct analyses were requested per the COC.

3. **Laboratory Sample Receipt Documentation**

   a. Is the sample/cooler temperature documented and within range at receipt (0° to 6° C)?
   Yes ☒ No ☐ N/A ☐
   Cooler temperature(s): 4.1°C
   Sample temperature(s): Not applicable.

Comments: The samples were received cooled at 4.1°C per the sample receipt documentation.

b. Is the sample preservation acceptable – acidified waters, methanol preserved soil (GRO, BTEX, VOCs, etc.)?
Yes ☒ No ☐ N/A ☐
Comments: The samples were received properly preserved.

c. Is the sample condition documented – broken, leaking, zero headspace (VOA vials); canister vacuum/pressure checked and no open valves, etc.?
Yes ☒ No ☐ N/A ☐
Comments: No discrepancies were noted.

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, canister not holding a vacuum, etc.?
Yes ☐ No ☐ N/A ☒
Comments: No discrepancies were noted.

e. Is the data quality or usability affected?
Yes ☐ No ☒ N/A ☐
Comments: Data quality and usability were not affected.

4. Case Narrative

a. Is the case narrative present and understandable?
Yes ☒ No ☐ N/A ☐
Comments: The case narrative is present and understandable.

b. Are there discrepancies, errors, or QC failures identified by the lab?
Yes ☒ No ☐ N/A ☐
Comments: The Form 1s for all samples except SS006-066MW05-101223 noted: Duplicate Analysis performed due to surrogate failure. Results confirm; reporting in hold data.

The Case Narrative noted:
AK102: Sample was prepared and/or analyzed past recommended holding time. Concentrations should be considered minimum values. Batch- WG2159044 Method- AK102 Lab Sample ID- L1667387-05

Surrogate recovery limits have been exceeded; values are outside lower control limits. Batch- WG2155784 Analyte- o-Terphenyl
Lab Sample ID (BLANK) R3992822-1, (LCS) R3992822-2, (LCSD) R3992822-3, (MS) R3992822-4, (MSD) R3992822-5, L1667387-01, 02, 03, 04, 05, 06, 07

The same analyte is found in the associated blank.

Batch	Analyte	Lab Sample ID
WG2155784	AK102 DRO C10-C25	L1667387- 01-09
WG2159044	AK102 DRO C10-C25	L1667387-05

The associated batch QC was below the established quality control range for accuracy. Batch- WG2155784 Analytes- AK102 DRO C10-C25
Lab Sample ID- (LCS) R3992822-2, (LCSD) R3992822-3, L1667387- 01-09

8260D: Surrogate recovery limits have been exceeded; values are outside upper control limits.

Batch	Analyte	Lab Sample ID
WG2153963	4-Bromofluorobenzene	L1667387-05, 07
WG2154313	4-Bromofluorobenzene	(LCS/LCSD) R3990042-1/2

c. Were all the corrective actions documented?
Yes ☐ No ☐ N/A ☒
Comments: No corrective actions were noted in the Case Narrative.

d. What is the effect on data quality/usability according to the case narrative?
Comments: See following sections for the effects on data quality/usability.

5. Sample Results

a. Are the correct analyses performed/reported as requested on CoC?
Yes ☒ No ☐ N/A ☐
Comments: The correct analyses were performed as requested on the COC.

b. Are all applicable holding times met?
Yes ☐ No ☒ N/A ☐
Comments: AK102: The samples were collected on 10/12/23 and were received by the laboratory on 10/17/23 at 4.1°C. The samples were extracted on 10/25/23 within 13 days of collection and analyzed on 10/26/23 within 1 day of extraction. Due to surrogate failure and blank contamination, sample SS006-066MW05-101223 was re-extracted on 10/27/23 within 15 days of collection, but outside the 14 day collection to extraction holding time. DRO C10-C25 in sample SS006-066MW05-101223 was reported above the LOQ and has been qualified with a 'H' validation flag due to the exceeded holding time. The sample was analyzed on 10/28/23 within 1 day of extraction and no further qualifications were warranted. The result for sample SS006-066MW05-101223 extracted on 10/25/23 has been marked "Do Not Use."

8260D: The samples were collected on 10/12/23 and were received by the laboratory on 10/17/23 at 4.1°C. The samples were analyzed on 10/19/23 within 7 days of collection. All preservation criteria and holding time criteria were met. No qualifications were warranted.

A holding time table has been provided in the attachment.

c. Are all soils reported on a dry weight basis?
Yes ☐ No ☐ N/A ☒
Comments: Soil samples were not collected for this SDG.

d. Are the reported limits of quantitation (LoQ) or limits of detections (LOD), or reporting limits (RL) less than the Cleanup Level or the action level for the project?
Yes ☒ No ☐ N/A ☐
Comments: LOQs were below cleanup levels.

e. Is the data quality or usability affected?
Yes ☒ No ☐ N/A ☐
Comments: DRO C10-C25 in sample SS006-066MW05-101223 has been qualified with a 'H' validation flag due to exceeded holding time.

6. QC Samples

a. Method Blank

i. Was one method blank reported per matrix, analysis, and 20 samples?
Yes ☒ No ☐ N/A ☐
Comments: Method blanks were analyzed at the proper frequency.

ii. Are all method blank results less than LOQ (or RL)?
Yes ☐ No ☒
Comments: AK102: DRO C10-C25 (363 ug/l, J) was present in the method blank (lab ID R3992822-1) associated with all samples, except the 10/27/23 re-extraction of SS006-066MW05-101223. DRO C10-C25 (417 ug/L, J) was present in the method blank (lab ID R3992283-1) (417 ug/l, J) associated with the 10/27/23 re-extraction of SS006-066MW05-101223.

8260D: All method blank results were non-detect.

iii. If above LoQ or RL, what samples are affected?
Comments: AK102: • DRO C10-C25 in samples SS006-066MW06-101223, SS006-066MW07-101223, SS006-066MW99-101223, SS006-066MW04-101223, SS006-215MW12-101223, SS006-215MW09-101223, and SS006-215MW08-101223 was detected at a concentration <LOQ and has been qualified with a 'B' validation flag due to the method blank detections.
• DRO C10-C25 in sample SS006-EQBK01-101223 was detected at a concentration <LOQ and has been qualified with a 'B' validation flag due

to the method blank detection.
• DRO C10-C25 in the 10/27/23 extraction of sample SS006-066MW05-101223 (1650 ug/l) was detected at a concentration > LOQ but ≤ 5x the blank detection and has been qualified with a 'B' validation flag due to the method blank detection.
• DRO C10-C25 in the 10/25/23 extraction of sample SS006-066MW05-101223 (1040 ug/l) has been marked as "Do Not Use" and no further action was warranted.

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?
Yes ☒ No ☐ N/A ☐
Comments: Data flags are accurate.

v. Data quality or usability affected?
Yes ☒ No ☐ N/A ☐
Comments: AK102: • DRO C10-C25 in samples SS006-066MW06-101223, SS006-066MW07-101223, SS006-066MW99-101223, SS006-066MW04-101223, SS006-215MW12-101223, SS006-215MW09-101223, and SS006-215MW08-101223 has been qualified with a 'B' validation flag due to the method blank detections.
• DRO C10-C25 in sample SS006-EQBK01-101223 has been qualified with a 'B' validation flag due to the method blank detection.
• DRO C10-C25 in the 10/27/23 extraction of sample SS006-066MW05-101223 (1650 ug/l) has been qualified with a 'B' validation flag due to the method blank detection.

Associated sample results were qualified with a 'B' flag due to MB detections. All DRO results except for in sample SS006-066MW05-101223 were reported below the LOQ and PAL. In the professional judgement of the validator, the data is usable. However, the final usability determination should be decided by the project.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – Are one LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)
Yes ☒ No ☐ N/A ☐
Comments: LCS/LCSD analyses were analyzed at the proper frequency.

ii. Metals/Inorganics – Are one LCS and one sample duplicate reported per matrix, analysis and 20 samples?
Yes ☐ No ☐ N/A ☒
Comments: Not applicable, metals/inorganics were not included in this report.

iii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)
Yes ☐ No ☒ N/A ☐
Comments: AK102: The recoveries for DRO C10-C25 (70.7% & 68.7%) in the LCS/LCSD associated with the all samples except the 10/27/23 re-extraction of SS006-066MW05-101223 were outside of the 75-125% acceptance criteria.

8260D: All laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) recoveries and precision criteria were met. No qualifications were warranted.

iv. Precision – Are all relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? Was the RPD reported from LCS/LCSD, and or sample/sample duplicate? (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)
Yes ☒ No ☐ N/A ☐
Comments: All LCSD precision criteria was met.

v. If %R or RPD is outside of acceptable limits, what samples are affected?
Comments: AK102: DRO C10-C25 in all samples except the 10/27/23 re-extraction of SS006-066MW05-101223 was reported above the detection limit and have been qualified with a 'QL' validation flag due to low LCS/LCSD recoveries.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?
Yes ☒ No ☐ N/A ☐
Comments: Data flags are clearly defined.

vii. Is the data quality or usability affected?
Yes ☒ No ☐ N/A ☐
Comments: AK102: DRO C10-C25 in all samples except the 10/27/23 re-extraction of SS006-066MW05-101223 has been qualified with a 'QL' validation flag due to low LCS/LCSD recoveries.

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

i. Organics – Are one MS/MSD reported per matrix, analysis and 20 samples?
Yes ☒ No ☐ N/A ☐
Comments: AK102: Sample SS006-215MW12-101223 was the parent sample for the MS/MSD analysis.

8260D: Sample SS006-215MW12-101223 (Lab ID L1667387-06) was the parent sample for the MS/MSD analysis.

ii. Metals/Inorganics – Are one MS/MSD reported per matrix, analysis and 20 samples?
Yes ☐ No ☐ N/A ☒
Comments: Not applicable, metals/inorganics were not included in this report.

iii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?
Yes ☐ No ☒ N/A ☐
Comments: AK102: In the MS/MSD, DRO C10-C25 (51.3% & 43.8%) was outside of the 75-125% recovery criteria.

8260D: All matrix spike (MS) and matrix spike duplicate (MSD) recovery criteria were met.

iv. Precision – Are all relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from MS/MSD, and or sample/sample duplicate.
Yes ☒ No ☐ N/A ☐
Comments: All MSD precision criteria were met.

v. If %R or RPD is outside of acceptable limits, what samples are affected?
Comments: AK102: DRO C10-C25 in sample SS006-215MW12-101223 was reported above the detection limit and has been qualified with a 'QL' validation flag due to low MS/MSD recoveries.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?
Yes ☒ No ☐ N/A ☐
Comments: Data flags were clearly defined.

vii. Is the data quality or usability affected?
Yes ☒ No ☐ N/A ☐
Comments: AK102: DRO C10-C25 in sample SS006-215MW12-101223 has been qualified with a 'QL' validation flag due to low MS/MSD recoveries.

d. Surrogates – Organics Only or Isotope Dilution Analytes (IDA) – Isotope Dilution Methods Only

i. Are surrogate/IDA recoveries reported for organic analyses – field, QC, and laboratory samples?
Yes ☒ No ☐ N/A ☐
Comments: No comments.

ii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods 50-150 %R for field samples and 60-120 %R for QC samples; all other analyses see the laboratory report pages)
Yes ☐ No ☒ N/A ☐
Comments: AK102: The following table shows the surrogates that exceeded acceptance criteria and the affected samples.

Sample	Surrogate	%Recovery	Acceptance limits
SS006-066MW06-101223	o-Terphenyl	**36.7%**	50-150%
SS006-066MW07-101223		**32.2%**	
SS006-066MW99-101223		**29.6%**	
SS006-066MW04-101223		**32.0%**	
SS006-066MW05-101223 *Do not use		**49.8%**	
SS006-215MW12-101223		**43.6%**	
SS006-215MW09-101223		**44.3%**	
SS006-215MW12-101223 MS/MSD		**24.4%/ 21.7%**	
BLANK R3992822-1		**30.6%**	
LCS R3992822-2		**39.5%**	
LCSD R3992822-3		**28.8%**	

8260D: The following table shows the surrogates that exceeded acceptance criteria and the affected samples.

Sample	Surrogate	%Recovery	Acceptance limits
SS006-066MW05-101223	4-Bromofluorobenzene	**121%**	85.0 – 114%
SS006-215MW09-101223		**115%**	
LCS R3990042-1		**115%**	
LCSD R3990042-2		**115%**	

iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?
Yes ☒ No ☐ N/A ☐
Comments: Data flags were clearly defined.

iv. Is the data quality or usability affected?
Yes ☒ No ☐ N/A ☐

Comments: AK102: DRO C10-C25 in samples SS006-066MW06-101223, SS006-066MW07-101223, SS006-066MW99-101223, SS006-066MW04-101223, SS006-215MW12-101223, and SS006-215MW09-101223 was reported above the detection limit and has been qualified with a “QL” validation flag due to low surrogate recoveries.

8260D: Total xylenes in sample SS006-215MW09-101223 was reported above the detection limit and has been qualified with a “QH” validation flag due to high surrogate recovery.

e. Trip Blanks

i. Is one trip blank reported per matrix, analysis, and for each cooler containing volatile samples? Yes ☒ No ☐ N/A ☐
Comments: 8260D: Trip blank SS006-TRIP BLANK-HCL-01 was included in this SDG

ii. Are all results less than LoQ or RL?
Yes ☒ No ☐ N/A ☐
Comments:

iii. If above LoQ or RL, what samples are affected?
Comments: All trip blank SS006-TRIP BLANK-HCL-01 results were non-detect.

iv. Is the data quality or usability affected?
Yes ☐ No ☒ N/A ☐
Comments: Data quality and usability were not affected.

f. Field Duplicate

i. Are one field duplicate submitted per matrix, analysis, and 10 project samples?
Yes ☒ No ☐ N/A ☐
Comments: The field duplicate pair for this SDG was SS006-066MW07-101223 and SS006-066MW99-101223.

ii. Was the duplicate submitted blind to lab?
Yes ☒ No ☐ N/A ☐
Comments: Field duplicates were submitted blind to the lab.

iii. Precision – All relative percent differences (RPD) less than specified project objectives? (Recommended: 30% water or air, 50% soil)

$$RPD\ (\%) = \left| \frac{R_1 - R_2}{\left(\frac{R_1 + R_2}{2}\right)} \right| X\ 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

Is the data quality or usability affected? (Explain)

Yes ☐ No ☒ N/A ☐
Comments: AK102: The field duplicate RPD between samples SS006-066MW07-101223 and SS006-066MW99-101223 was 30.1%.

Analyte	SS006-066MW07-101223 (ug/L)	SS006-066MW99-101223 (ug/L)	RPD
AK102 DRO C10-C25	420, J	310, J	**30.1%**

8260D: All SS006-066MW07-101223 and SS006-066MW99-101223 sample results were non-detect which meets the field duplicate criteria.

iv. Is the data quality or usability affected? (Explain)
Yes ☐ No ☒ N/A ☐
Comments: AK102: DRO C10-C25 in samples SS006-066MW07-101223 and SS006-066MW99-101223 warrants no qualification as the parent and field duplicate results were <LOQ.

g. Decontamination or Equipment Blanks

i. Were decontamination or equipment blanks collected?
Yes ☒ No ☐ N/A ☐
Comments: Equipment blank SS007-EQBK01-091023 was present in this SDG.

ii. Are all results less than LoQ or RL?
Yes ☐ No ☒ N/A ☐
Comments: AK102: DRO C10-C25 (301 ug/L, J) was present in equipment blank SS006-EQBK01-101223.

8260D: Total xylenes (0.400 ug/l, J) and toluene (1.28 ug/l) were present in equipment blank SS006-EQBK01-101223.

iii. If above LoQ or RL, specify what samples are affected.
Comments: AK102: • DRO C10-C25 in samples SS006-066MW06-101223, SS006-066MW07-101223, SS006-066MW99-101223, SS006-066MW04-101223, SS006-215MW12-101223, SS006-215MW09-101223, and SS006-215MW08-101223 was detected at a concentration <LOQ and has been qualified with a 'B' validation flag due to the equipment blank detections.
• DRO C10-C25 in sample SS006-EQBK01-101223 was detected at a concentration <LOQ and has been qualified with a 'B' validation flag due to the method blank detection.
• DRO C10-C25 in the 10/27/23 extraction of sample SS006-066MW05-101223 (1650 ug/l) was detected at a concentration >LOQ and >5x the blank concentration and warrants no qualification due to the equipment blank detection.

8260D: • Total xylenes in sample SS006-215MW09-101223 has been qualified with a 'B' validation flag as the equipment blank result was <LOD and the sample result was >LOD but <5x the blank concentration.
• All toluene results and the remaining total xylenes results were non-detect and warrant no qualification due to the equipment blank detections.

iv. Are data quality or usability affected?
Yes ☒ No ☐ N/A ☐
Comments: AK102: • DRO C10-C25 in samples SS006-066MW06-101223, SS006-066MW07-101223, SS006-066MW99-101223, SS006-066MW04-101223, SS006-215MW12-101223, SS006-215MW09-101223, and SS006-215MW08-101223 has been qualified with a 'B' validation flag due to the equipment blank detection.

8260D: Total xylenes in sample SS006-215MW09-101223 has been qualified with a 'B' validation flag.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Are they defined and appropriate?
Yes ☒ No ☐ N/A ☐
Comments: AK102: Sample SS006-066MW05-101223 was reported above the LOQ. The remaining results have been qualified with a 'J' validation flag as the results were reported between the detection limit (DL) and the limit of quantitation (LOQ) and are estimates.

8260D: Total Xylenes in samples SS006-215MW09-101223 and SS006-EQBK01-101223 has been qualified with a 'J' validation flag to denote the reported results are estimated due to sample results reported at levels between the detection limit (DL) and the limit of quantitation (LOQ).

Level 2b Data Review

Project ID:	**Port Heiden RRS 21-034**	**Lab Name:**	**Pace Analytical National**
SOW No.	**South Optimized Remediation Contract**	**SDG No.**	**L1667387**

This review is based on Project requirements, the requirements of Method 8015, Base Method 8000, and validator technical judgment in accordance with the following documents:

- South Optimized Remediation Contract. *Port Heiden Radio Relay Station. Final, August 2022.*
- Department of Defense (DoD). Department of Defense (DOD)/Department of Energy (DOE) Consolidated Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.4. 2021.
- U.S. Environmental Protection Agency (USEPA). 1986. *Solid Waste SW-846 Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods*, Third Edition and Updates.
- Method AK102, *Determination of Diesel Range Organics*, Version 12/21/16.

Validation qualifiers are written in red on copies of the Laboratory Form 1s (result forms).

AK102 Data Review

1. Samples Submitted and Analyses Requested.

Sample ID	Lab ID	Type	Matrix	Date Collected	Prep/Extraction Date	Analysis Date
SS006-066MW06-101223	L1667387-01	Field Sample	Ground Water	10/12/23	10/25/23	10/26/23
SS006-066MW07-101223	L1667387-02	Field Sample	Ground Water	10/12/23	10/25/23	10/26/23
SS006-066MW99-101223	L1667387-03	Field Duplicate of SS006-066MW07-101223	Ground Water	10/12/23	10/25/23	10/26/23
SS006-066MW04-101223	L1667387-04	Field Sample	Ground Water	10/12/23	10/25/23	10/26/23
SS006-066MW05-101223	L1667387-05	Field Sample	Ground Water	10/12/23	10/25/23 *10/27/23	10/26/23 10/28/23
SS006-215MW12-101223	L1667387-06	Field Sample	Ground Water	10/12/23	10/25/23	10/26/23
SS006-215MW09-101223	L1667387-07	Field Sample	Ground Water	10/12/23	10/25/23	10/26/23
SS006-215MW08-101223	L1667387-08	Field Sample	Ground Water	10/12/23	10/25/23	10/26/23
SS006-EQBK01-101223	L1667387-09	Equipment Blank	Ground Water	10/12/23	10/25/23	10/26/23

* Denotes exceeded hold time

2. Reviewer Preliminary Comments

Review Type: [] Level IV (Level 3 or 4) [X] Level III (Level 2b) [X] Level II (Level 2a)
Confirm that narrative is present and complete; note overall initial indications.

Nine (9) groundwater samples were received by received by Pace Analytical on 10/17/23 at 4.1°C. The samples were analyzed for diesel range organics (DRO) by Method AK102. The data was validated to a Level 2B.

3. Instrumentation QA/QC	**Y**	**N**	**NA**
Were the following instrumentation criteria met?			
Was all retention time criteria met per the analytical method?	**X**		
Was all initial calibration criteria met (i.e. %RSD <25% or r^2<0.995)?	**X**		
Was all initial calibration verification (ICV) criteria met (%D<25% **or** method required criteria)?	**X**		
Was all continuing calibration verification (CCV) criteria met (%D<25% **or** method required criteria)?		**X**	

Reviewer Comments: All retention time, initial calibration, and initial calibration verification criteria were met. No qualifications were warranted.

Surrogate o-terphenyl in the CCV analyzed on 10/28/23 at 04:02 (73.8%) was outside of the 25%D acceptance criteria. However, no qualifications were warranted due to the high CCV%D for surrogate o-terphenyl. The remaining CCV criteria were met.

4. Method Quantitation Limits	Y	N	NA
Does the method quantitation limit (established by the lowest concentration calibration standard) meet project requirements? (**Method 8000**, Sections 7.4.1.2 and 7.4.1.4)	**X**		
Are only those results that fall between the lowest and highest calibration standards reported (i.e., no "J" values or values between the MDL and low standard or above the high standard)? (**Method 8000**, Section 7.4)		**X**	
Action: *Indicate non-correctable contract compliance deviations below. If MQL>RDL, reanalysis may be warranted.			

Reviewer Comments: Sample SS006-066MW05-101223 was reported above the LOQ.

The remaining results have been qualified with a 'J' validation flag as the results were reported between the detection limit (DL) and the limit of quantitation (LOQ) and are estimates.

5. Overall Comments

Overall, the data meet the requirements and intent of the methods, indicate the preparatory process and analytical system were in control at the time of sample analysis, and the reported laboratory results are of sufficient quality for their intended purpose.

Sample Qualifications Summary Table

Sample ID	Analyte	Validation Flag	Qualification Reason(s)
SS006-066MW06-101223 SS006-066MW07-101223 SS006-066MW99-101223 SS006-066MW04-101223 SS006-215MW09-101223	AK102 DRO C10-C25	B, QL, J	Method blank considerations Equipment blank considerations Low surrogate recovery Low LCS/LCSD recoveries Result ≥DL but <LOQ
SS006-066MW05-101223		H, B	Exceeded holding time Method blank considerations
SS006-215MW12-101223		B, QL, J	Method blank considerations Equipment blank considerations Low surrogate recovery Low MS/MSD recoveries Low LCS/LCSD recoveries Result ≥DL but <LOQ
SS006-215MW08-101223		B, QL, J	Method blank considerations Equipment blank considerations Low LCS/LCSD recoveries Result ≥DL but <LOQ
SS006-EQBK01-101223		B, QL, J	Method blank considerations Low LCS/LCSD recoveries Result ≥DL but <LOQ
SS006-066MW05-101223 10/25/23 ***Do not use**		B, QL	Method blank considerations Equipment blank considerations Low surrogate recovery Low LCS/LCSD recoveries

Level 2b Data Review

Project ID:	**Port Heiden RRS 21-034**	**Lab Name:**	**Pace Analytical National**
SOW No.	**South Optimized Remediation Contract**	**SDG No.**	**L1667387**

VOC Data Review

1. Samples Submitted

Sample ID	Lab ID	Type	Matrix	Date Collected	DF	Date Analyzed
SS006-066MW06-101223	L1667387-01	Field Sample	Ground Water	10/12/23	1	10/19/23
SS006-066MW07-101223	L1667387-02	Field Sample	Ground Water	10/12/23	1	10/19/23
SS006-066MW99-101223	L1667387-03	Field Duplicate of SS006-066MW07-101223	Ground Water	10/12/23	1	10/19/23
SS006-066MW04-101223	L1667387-04	Field Sample	Ground Water	10/12/23	1	10/19/23
SS006-066MW05-101223	L1667387-05	Field Sample	Ground Water	10/12/23	1	10/19/23
SS006-215MW12-101223	L1667387-06	Field Sample	Ground Water	10/12/23	1	10/19/23
SS006-215MW09-101223	L1667387-07	Field Sample	Ground Water	10/12/23	1	10/19/23
SS006-215MW08-101223	L1667387-08	Field Sample	Ground Water	10/12/23	1	10/19/23
SS006-EQBK01-101223	L1667387-09	Equipment Blank	Ground Water	10/12/23	1	10/19/23
SS006-TRIP BLANK-HCL-01	L1667387-10	Trip Blank	Ground Water	10/12/23	1	10/19/23

DF: Dilution Factor

2. Reviewer Preliminary Comments

Review Type: [] Level IV (Level 3 or 4) [x] Level III (Level 2B) []Level II (Level 2a)

Ten (10) ground water samples were received by received Pace Analytical on 10/17/23 at 4.1°C. The samples were analyzed for volatile organic compounds by EPA Method SW8260D. The data was validated to a Level 2b.

3. GC/MS Performance Check	Y	N
Are performance check data present in the data submittal?	**X**	
Is the GC/MS hardware-tuned to meet BFB criteria prior to the initial calibration and for each 12-hr period during which analyses are performed? (**Method 8260B**, Sections 4.9.3, 5.11, 7.3.1, 7.4.1, 7.5.2, 8.2.1, and 11.4.1)	**X**	
Are mass spectral relative abundances acceptable according to the method criteria? (**Method 8260B**, Table 4**)**	**X**	
Was there correct assignment of ions?	**X**	
Raw Data Confirmation		
Raw data show proper averaging of scans according to method recommendations.	**X**	
Action: Indicate affected samples in validation comments, primarily if data are rejected. * Qualify only if the deviation indicates an adverse effect on data quality. ** Qualify as appropriate		

Reviewer Comments: All tune criteria were met. No qualifications were warranted.

Level 2b Data Review

Project ID:	**Port Heiden RRS 21-034**	**Lab Name:**	**Pace Analytical National**
SOW No.	**South Optimized Remediation Contract**	**SDG No.**	**L1667387**

4. Initial Calibration	Y	N	NA
Are initial calibration data present in the data submittal?	**X**		
Does the initial calibration curve consist of a least 5 standards? (**Method 8260B**, Sections 5.7.6.10, 5.7.6.11, 5.12.1 and 7.3.2; and **Method 8000B**, Section 7.4)	**X**		
Are all target analytes present in the initial calibration? (**Method 8260B**, Section 5.12.3)	**X**		
For the continuing check compounds (1,1-Dichloroethene, Chloroform, 1,2-Dichloropropane, Toluene, Ethylbenzene, and vinyl chloride), is the RSD ≤30%? (**Method 8260B**, Section 7.3.6.3 and 8.2.3) **[Note: Method 8260 requires an RSD of ≤15% and Method 8260C/D requires an RSD of 20% for all compounds or another type of curve must be used]**	**X**		
For the system performance check compounds, are the response factors 0.10 for Chloromethane, 1,1-Dichloroethane, and Bromoform and 0.30 for chlorobenzene and 1,1,2,2-tetrachloroethane? (**Method 8260B**, Section 7.3.5.4 and 8.2.3)	**X**		
Do target compounds meet the minimum response factors summarized in Table 4? (**Method 8260D,** Table 4**)**	**X**		
For other compounds, is the response factor ≥0.01 (or method criteria)?	**X**		
If the RSD does not meet the 20% (15% for **Method 8260**) criterion, is a linear (or quadratic) regression equation used for target compound quantitation? (**Method 8260B**, Sections 7.3.8.2)	**X**		
If linear and/or quadradic regressions, are used, is r ≥0.99 or r^2≥0.98 (**Method 8000B**, Sections 7.5.2 and 8.3.2)	**X**		
Is the origin not forced and not included in the calibration curve for linear regression? (**Method 8000**, Section 7.5.2)	**X**		
QC Check Standard (ICV)			
Are QC Check Standard Results present in the data submittal?	**X**		
Is the check standard run on an ongoing basis? (**Method 8260B**, Section 8.7-referred to as a standard reference material)	**X**		
Are check standard results within 30% of reference value?	**X**		
Raw Data Confirmation			
Raw data have been examined for anomalies	**X**		
The quantitation ions for 2 compounds have been confirmed as the correct ions for quantitation.	**X**		
Action: Indicate affected samples in validation comments, primarily if data are rejected. * Qualify only if the deviation indicates an adverse effect on data quality. ** Qualify as appropriate *** Qualify only peaks outside linear portion			

Reviewer Comments: All initial calibration criteria and initial calibration verification criteria were met. No qualifications were warranted.

5. Continuing Calibration	Y	N	NA
Are continuing calibration data present in the data submittal?	**X**		
Are all target analytes present in the continuing calibration (verification)? (**Method 8260B**, Section 5.12.3)	**X**		
Has continuing calibration verification been performed within 12 hours of the time of associated sample analysis? (**Method 8260B**, Sections 7.4.2 and 8.2.3)	**X**		
For the system performance check compounds, are the response factors in the calibration verification 0.10 for Chloromethane, 1,1-Dichloroethane, and Bromoform and 0.30 for chlorobenzene and 1,1,2,2-tetrachloroethane? (**Method 8260B**, Sections 7.3.5.4, 7.4.4.1, 7.4.4.2, and 8.2.3)	**X**		
Do target compounds meet the minimum response factors summarized in Table 4? (**Method 8260D,** Table 4**)**	**X**		
For other compounds, is the response factor ≥0.01?	**X**		

Level 2b Data Review

Project ID:	**Port Heiden RRS 21-034**	**Lab Name:**	**Pace Analytical National**
SOW No.	**South Optimized Remediation Contract**	**SDG No.**	**L1667387**

5. Continuing Calibration	Y	N	NA
For the continuing check compounds (1,1-Dichloroethene, Chloroform, 1,2-Dichloropropane, Toluene, Ethylbenzene, and vinyl chloride), is the %D ≤20%? (**Method 8260B**, Sections 7.3.6.3, 7.4.5.1, 7.4.5.2, and 8.2.3)	**X**		
For other compounds, is %D ≤ 20%? (**Method 8260B**, Section 7.4.5.2)		**X**	
Is a closing CCV performed? (**DOD QSM 5.3** Table B-4)	**X**		
Is the closing CCV %D ≤ 50%? (**DOD QSM 5.3** Table B-4)	**X**		
Action: Indicate affected samples in validation comments, primarily if data are rejected.			

Reviewer Comments: Surrogate 1,2-dichloroethane-d4 in the CCVs analyzed on 10/18/23 at 21:26 (27.7%) and 10/19/23 at 08:34 (25.8%) was outside of the 20%D acceptance criteria. However, no qualifications were warranted due to the high CCV%D for surrogate 1,2-dichloroethane-d4. The remaining CCV criteria were met.

6. Internal Standards	Y	N	NA
Are internal standard data present in the data submittal?	**X**		
Were method-appropriate internal standards (ISs) used for the reported analyses?	**X**		
Are internal standards added to each calibration standard? (**Method 8260B**, Section 5.12.4 and 7.5.10.2)	**X**		
Do internal standard retention times **not** vary by more than 30 seconds from that in the mid-point standard level of the initial calibration? (**Method 8260B**, Section 7.4.6)	**X**		
Does the EICP area of any internal standard **not** vary by more than a factor of two (-50 to +100%) from that in the mid-point standard level of the initial calibration? (**Method 8260B**, Section 7.4.7)	**X**		
Do area counts appear to be at least minimally adequate?	**X**		
Note: Internal standard assessment is **not** required for a Level 2a data validation. Action: Indicate affected samples in validation comments, primarily if data were rejected * Qualify only if the deviation indicates an adverse effect on data quality. ** Qualify as appropriate			

Reviewer Comments: All internal standard criteria were met. No qualifications were warranted.

7. Method Quantitation Limits	Y	N	NA
Does the method quantitation limit (established by the lowest concentration calibration standard) meet project requirements? (**Method 8000**, Sections 7.4.1.2 and 7.4.1.4)	**X**		
Are only those results that fall between the lowest and highest calibration standards reported (i.e., no "J" values or values between the MDL and low standard or above the high standard)? (**QSAS**, Sections 5.5.2.2.1.f) and 5.5.2.2.1.g)) (**Method 8000**, Section 7.4) (**All data below LOQ qualified with a J**)		**X**	
Action: Indicate non-correctable contract compliance deviations below. If MQL>RDL, reanalysis may be warranted.			

Reviewer Comments: Total Xylenes in samples SS006-215MW09-101223 and SS006-EQBK01-101223 has been qualified with a 'J' validation flag to denote the reported results are estimated due to sample results reported at levels between the detection limit (DL) and the limit of quantitation (LOQ).

Toluene in sample SS006-EQBK01-101223 was reported above the LOQ.

The remaining sample results were non-detect.

8. Method 8260 Analytical Data Qualifiers

The following table provides data qualifiers used in **validation**.

Qualifier	Definition
J	The analyte result is considered an estimated value because the level is below the laboratory LOQ but above the DL.
B	Analyte result is considered a high estimated value due to contamination present in the blank.
H	Analyte result is considered a low estimate due to holding time exceedance.
QH, QL, QN	QH, QL, QN Analyte result is considered an estimated value biased (high, low, uncertain) due to matrix effects or a quality control failure.
R	Analyte result is rejected – result is not usable. Note that "R" replaces the chemical result (no result shall be reported with a "R" flag).

9. Overall Comments

Overall, the data meet the requirements and intent of the methods, indicate the preparatory process and analytical system were in control at the time of sample analysis, and the reported laboratory results are of sufficient quality for their intended purpose.

Sample Qualifications Summary Table			
Sample ID	Analyte	Validation Flag	Qualification Reason(s)
SS006-215MW09-101223	Total Xylenes	QH B J	Equipment blank considerations High surrogate recovery Result ≥DL but <LOQ
SS006-EQBK01-101223		J	Result ≥DL but <LOQ

Toluene in sample SS006-EQBK01-101223 was reported above the LOQ, has been assessed, and remains unqualified.

The remaining sample results were not detected and were reported at their respective detection limits (LOD) and were flagged "U" by the laboratory.

Data Validator	Data Validation Reviewer
Name: Sherrie Robinson	Name: Amber Brinly
Title: Staff Scientist	Title: Staff Scientist
Company: North Wind Site Services	Company: North Wind Portage
Signature: Sherrie Robinson	Signature: Amber Brinly
Date: 08/14/24	Date: 08/15/24

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS006-066MW06-101223

Lab Sample ID:	L1667387-01	**SDG:**	L1667387
Client Sample ID:	SS006-066MW06-101223	**Collected Date/Time:**	10/12/23 11:15
Lab File ID:	1018_46	**Received Date/Time:**	10/17/23 09:00
Instrument ID:	VOCMS30	**Preparation Date/Time:**	10/19/23 04:39
Analytical Batch:	WG2153963	**Analysis Date/Time:**	10/19/23 04:39
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
Benzene	71-43-2	0	0.500	U	0.0941	0.500	1.00
Ethylbenzene	100-41-4	0	0.500	U	0.137	0.500	1.00
Toluene	108-88-3	0	0.600	U	0.278	0.600	1.20
Total Xylenes	1330-20-7	0	1.50	U	0.174	1.50	3.00

12/6/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS006-066MW07-101223

Lab Sample ID:	L1667387-02	**SDG:**	L1667387
Client Sample ID:	SS006-066MW07-101223	**Collected Date/Time:**	10/12/23 12:37
Lab File ID:	1018_47	**Received Date/Time:**	10/17/23 09:00
Instrument ID:	VOCMS30	**Preparation Date/Time:**	10/19/23 05:03
Analytical Batch:	WG2153963	**Analysis Date/Time:**	10/19/23 05:03
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
Benzene	71-43-2	0	0.500	U	0.0941	0.500	1.00
Ethylbenzene	100-41-4	0	0.500	U	0.137	0.500	1.00
Toluene	108-88-3	0	0.600	U	0.278	0.600	1.20
Total Xylenes	1330-20-7	0	1.50	U	0.174	1.50	3.00

12/6/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS006-066MW99-101223

Lab Sample ID:	L1667387-03	**SDG:**	L1667387
Client Sample ID:	SS006-066MW99-101223	**Collected Date/Time:**	10/12/23 12:45
Lab File ID:	1018_48	**Received Date/Time:**	10/17/23 09:00
Instrument ID:	VOCMS30	**Preparation Date/Time:**	10/19/23 05:26
Analytical Batch:	WG2153963	**Analysis Date/Time:**	10/19/23 05:26
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
Benzene	71-43-2	0	0.500	U	0.0941	0.500	1.00
Ethylbenzene	100-41-4	0	0.500	U	0.137	0.500	1.00
Toluene	108-88-3	0	0.600	U	0.278	0.600	1.20
Total Xylenes	1330-20-7	0	1.50	U	0.174	1.50	3.00

12/6/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS006-066MW04-101223

Lab Sample ID:	L1667387-04	**SDG:**	L1667387
Client Sample ID:	SS006-066MW04-101223	**Collected Date/Time:**	10/12/23 14:34
Lab File ID:	1018_49	**Received Date/Time:**	10/17/23 09:00
Instrument ID:	VOCMS30	**Preparation Date/Time:**	10/19/23 05:50
Analytical Batch:	WG2153963	**Analysis Date/Time:**	10/19/23 05:50
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
Benzene	71-43-2	0	0.500	U	0.0941	0.500	1.00
Ethylbenzene	100-41-4	0	0.500	U	0.137	0.500	1.00
Toluene	108-88-3	0	0.600	U	0.278	0.600	1.20
Total Xylenes	1330-20-7	0	1.50	U	0.174	1.50	3.00

SV 12/6/23

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS006-066MW05-101223

Lab Sample ID:	L1667387-05	**SDG:**	L1667387
Client Sample ID:	SS006-066MW05-101223	**Collected Date/Time:**	10/12/23 15:35
Lab File ID:	1018_50	**Received Date/Time:**	10/17/23 09:00
Instrument ID:	VOCMS30	**Preparation Date/Time:**	10/19/23 06:13
Analytical Batch:	WG2153963	**Analysis Date/Time:**	10/19/23 06:13
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
Benzene	71-43-2	0	0.500	U	0.0941	0.500	1.00
Ethylbenzene	100-41-4	0	0.500	U	0.137	0.500	1.00
Toluene	108-88-3	0	0.600	U	0.278	0.600	1.20
Total Xylenes	1330-20-7	0	1.50	U	0.174	1.50	3.00

12/6/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS006-215MW12-101223

Lab Sample ID:	L1667387-06	**SDG:**	L1667387
Client Sample ID:	SS006-215MW12-101223	**Collected Date/Time:**	10/12/23 17:25
Lab File ID:	1019_09	**Received Date/Time:**	10/17/23 09:00
Instrument ID:	VOCMS30	**Preparation Date/Time:**	10/19/23 13:01
Analytical Batch:	WG2154313	**Analysis Date/Time:**	10/19/23 13:01
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
Benzene	71-43-2	0	0.500	U	0.0941	0.500	1.00
Ethylbenzene	100-41-4	0	0.500	U	0.137	0.500	1.00
Toluene	108-88-3	0	0.600	U	0.278	0.600	1.20
Total Xylenes	1330-20-7	0	1.50	U	0.174	1.50	3.00

12/6/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS006-215MW09-101223

Lab Sample ID:	L1667387-07	**SDG:**	L1667387
Client Sample ID:	SS006-215MW09-101223	**Collected Date/Time:**	10/12/23 18:30
Lab File ID:	1018_51	**Received Date/Time:**	10/17/23 09:00
Instrument ID:	VOCMS30	**Preparation Date/Time:**	10/19/23 06:36
Analytical Batch:	WG2153963	**Analysis Date/Time:**	10/19/23 06:36
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
Benzene	71-43-2	0	0.500	U	0.0941	0.500	1.00
Ethylbenzene	100-41-4	0	0.500	U	0.137	0.500	1.00
Toluene	108-88-3	0	0.600	U	0.278	0.600	1.20
Total Xylenes	1330-20-7	6.82	2.31 QHBJ	J	0.174	1.50	3.00

Sw 12/6/23

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS006-215MW08-101223

Lab Sample ID:	L1667387-08	**SDG:**	L1667387
Client Sample ID:	SS006-215MW08-101223	**Collected Date/Time:**	10/12/23 19:30
Lab File ID:	1018_52	**Received Date/Time:**	10/17/23 09:00
Instrument ID:	VOCMS30	**Preparation Date/Time:**	10/19/23 07:00
Analytical Batch:	WG2153963	**Analysis Date/Time:**	10/19/23 07:00
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
Benzene	71-43-2	0	0.500	U	0.0941	0.500	1.00
Ethylbenzene	100-41-4	0	0.500	U	0.137	0.500	1.00
Toluene	108-88-3	0	0.600	U	0.278	0.600	1.20
Total Xylenes	1330-20-7	0	1.50	U	0.174	1.50	3.00

12/6/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS006-EQBK01-101223

Lab Sample ID:	L1667387-09	**SDG:**	L1667387
Client Sample ID:	SS006-EQBK01-101223	**Collected Date/Time:**	10/12/23 20:00
Lab File ID:	1019_08	**Received Date/Time:**	10/17/23 09:00
Instrument ID:	VOCMS30	**Preparation Date/Time:**	10/19/23 12:37
Analytical Batch:	WG2154313	**Analysis Date/Time:**	10/19/23 12:37
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
Benzene	71-43-2	0	0.500	U	0.0941	0.500	1.00
Ethylbenzene	100-41-4	0	0.500	U	0.137	0.500	1.00
Toluene	108-88-3	5.42	1.28		0.278	0.600	1.20
Total Xylenes	1330-20-7	6.52	0.400	J J	0.174	1.50	3.00

SW 12/6/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS006-TRIP BLANK-HCL-01

Lab Sample ID:	L1667387-10	**SDG:**	L1667387
Client Sample ID:	SS006-TRIP BLANK-HCL-01	**Collected Date/Time:**	10/12/23 10:00
Lab File ID:	1019_07	**Received Date/Time:**	10/17/23 09:00
Instrument ID:	VOCMS30	**Preparation Date/Time:**	10/19/23 12:14
Analytical Batch:	WG2154313	**Analysis Date/Time:**	10/19/23 12:14
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
Benzene	71-43-2	0	0.500	U	0.0941	0.500	1.00
Ethylbenzene	100-41-4	0	0.500	U	0.137	0.500	1.00
Toluene	108-88-3	0	0.600	U	0.278	0.600	1.20
Total Xylenes	1330-20-7	0	1.50	U	0.174	1.50	3.00

12/6/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS006-066MW06-101223

Lab Sample ID:	L1667387-01	**SDG:**	L1667387
Client Sample ID:	SS006-066MW06-101223	**Collected Date/Time:**	10/12/23 11:15
Lab File ID:	1025_066	**Received Date/Time:**	10/17/23 09:00
Instrument ID:	SVGC34	**Preparation Date/Time:**	10/25/23 16:06
Analytical Batch:	WG2155784	**Analysis Date/Time:**	10/26/23 13:15
Dilution Factor:	1	**Prep Method:**	3510C
Analytical Method:	AK102	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	100 mL
Total Solids (%):	_____	**Final Wt/Vol:**	30 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		ug/l	ug/l	ug/l
AK102 DRO C10-C25	C10-C25	5.97	391 QLBJ	B J J4	170	400	800

Sample Narrative:
Duplicate Analysis performed due to surrogate failure. Results confirm; reporting in hold data

12/26/23

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS006-066MW07-101223

Lab Sample ID:	L1667387-02	**SDG:**	L1667387
Client Sample ID:	SS006-066MW07-101223	**Collected Date/Time:**	10/12/23 12:37
Lab File ID:	1025_067	**Received Date/Time:**	10/17/23 09:00
Instrument ID:	SVGC34	**Preparation Date/Time:**	10/25/23 16:06
Analytical Batch:	WG2155784	**Analysis Date/Time:**	10/26/23 13:36
Dilution Factor:	1.02	**Prep Method:**	3510C
Analytical Method:	AK102	**Sample Vol Used:**	
Matrix:	GW	**Initial Wt/Vol:**	98 mL
Total Solids (%):		**Final Wt/Vol:**	30 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
AK102 DRO C10-C25	C10-C25	5.97	420 QLB J	B J J4	173	408	816

Sample Narrative:
Duplicate Analysis performed due to surrogate failure. Results confirm; reporting in hold data

GW 12/06/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS006-066MW99-101223

Lab Sample ID:	L1667387-03	**SDG:**	L1667387
Client Sample ID:	SS006-066MW99-101223	**Collected Date/Time:**	10/12/23 12:45
Lab File ID:	1025_068	**Received Date/Time:**	10/17/23 09:00
Instrument ID:	SVGC34	**Preparation Date/Time:**	10/25/23 16:06
Analytical Batch:	WG2155784	**Analysis Date/Time:**	10/26/23 13:56
Dilution Factor:	1	**Prep Method:**	3510C
Analytical Method:	AK102	**Sample Vol Used:**	
Matrix:	GW	**Initial Wt/Vol:**	100 mL
Total Solids (%):		**Final Wt/Vol:**	30 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		ug/l	ug/l	ug/l
AK102 DRO C10-C25	C10-C25	5.97	310 QL B J	B J J4	170	400	800

Sample Narrative:
Duplicate Analysis performed due to surrogate failure. Results confirm; reporting in hold data

12/06/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS006-066MW04-101223

Lab Sample ID:	L1667387-04	**SDG:**	L1667387
Client Sample ID:	SS006-066MW04-101223	**Collected Date/Time:**	10/12/23 14:34
Lab File ID:	1025_069	**Received Date/Time:**	10/17/23 09:00
Instrument ID:	SVGC34	**Preparation Date/Time:**	10/25/23 16:06
Analytical Batch:	WG2155784	**Analysis Date/Time:**	10/26/23 14:17
Dilution Factor:	1.01	**Prep Method:**	3510C
Analytical Method:	AK102	**Sample Vol Used:**	
Matrix:	GW	**Initial Wt/Vol:**	99 mL
Total Solids (%):		**Final Wt/Vol:**	30 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		ug/l	ug/l	ug/l
AK102 DRO C10-C25	C10-C25	5.97	458 QLB J	B J J4	172	404	808

Sample Narrative:
Duplicate Analysis performed due to surrogate failure. Results confirm; reporting in hold data

12/06/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS006-066MW05-101223

Lab Sample ID:	L1667387-05	**SDG:**	L1667387
Client Sample ID:	SS006-066MW05-101223	**Collected Date/Time:**	10/12/23 15:35
Lab File ID:	1025_070	**Received Date/Time:**	10/17/23 09:00
Instrument ID:	SVGC34	**Preparation Date/Time:**	10/25/23 16:06
Analytical Batch:	WG2155784	**Analysis Date/Time:**	10/26/23 14:38
Dilution Factor:	1.01	**Prep Method:**	3510C
Analytical Method:	AK102	**Sample Vol Used:**	
Matrix:	GW	**Initial Wt/Vol:**	99 mL
Total Solids (%):		**Final Wt/Vol:**	30 mL

Analyte	CAS	RT		Result	Qualifier	DL	LOD	LOQ
				ug/l		*ug/l*	*ug/l*	*ug/l*
AK102 DRO C10-C25	C10-C25	5.97	*	1040	B J4	172	404	808

Sample Narrative:
Duplicate Analysis performed due to surrogate failure. Results don't confirm; both analyses reported

*Do Not Use

C 12/06/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS006-066MW05-101223

Lab Sample ID:	L1667387-05	**SDG:**	L1667387
Client Sample ID:	SS006-066MW05-101223	**Collected Date/Time:**	10/12/23 15:35
Lab File ID:	1027_068	**Received Date/Time:**	10/17/23 09:00
Instrument ID:	SVGC34	**Preparation Date/Time:**	10/27/23 05:58
Analytical Batch:	WG2159044	**Analysis Date/Time:**	10/28/23 02:01
Dilution Factor:	1.05	**Prep Method:**	3510C
Analytical Method:	AK102	**Sample Vol Used:**	
Matrix:	GW	**Initial Wt/Vol:**	95 mL
Total Solids (%):		**Final Wt/Vol:**	30 mL

Analyte	CAS	RT	Result		Qualifier	DL	LOD	LOQ
			ug/l			ug/l	ug/l	ug/l
AK102 DRO C10-C25	C10-C25	5.97	1650	B H	B Q	179	420	840

Sample Narrative:
Duplicate Analysis performed due to Blank contamination. Results don't confirm; both analyses report

= 12/06/23

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS006-215MW12-101223

Lab Sample ID:	L1667387-06	**SDG:**	L1667387
Client Sample ID:	SS006-215MW12-101223	**Collected Date/Time:**	10/12/23 17:25
Lab File ID:	1025_071	**Received Date/Time:**	10/17/23 09:00
Instrument ID:	SVGC34	**Preparation Date/Time:**	10/25/23 16:06
Analytical Batch:	WG2155784	**Analysis Date/Time:**	10/26/23 14:59
Dilution Factor:	1.03	**Prep Method:**	3510C
Analytical Method:	AK102	**Sample Vol Used:**	
Matrix:	GW	**Initial Wt/Vol:**	97 mL
Total Solids (%):		**Final Wt/Vol:**	30 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		ug/l	ug/l	ug/l
AK102 DRO C10-C25	C10-C25	5.97	388 QL B J	B J J4 J6	175	412	824

Sample Narrative:
Duplicate Analysis performed due to surrogate failure. Results confirm; reporting in hold data

12/06/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS006-215MW09-101223

Lab Sample ID:	L1667387-07	**SDG:**	L1667387
Client Sample ID:	SS006-215MW09-101223	**Collected Date/Time:**	10/12/23 18:30
Lab File ID:	1025_074	**Received Date/Time:**	10/17/23 09:00
Instrument ID:	SVGC34	**Preparation Date/Time:**	10/25/23 16:06
Analytical Batch:	WG2155784	**Analysis Date/Time:**	10/26/23 16:01
Dilution Factor:	1.04	**Prep Method:**	3510C
Analytical Method:	AK102	**Sample Vol Used:**	
Matrix:	GW	**Initial Wt/Vol:**	96 mL
Total Solids (%):		**Final Wt/Vol:**	30 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
AK102 DRO C10-C25	C10-C25	5.97	609 QL B J	B J J4	177	416	832

Sample Narrative:
Duplicate Analysis performed due to surrogate failure. Results confirm; reporting in hold data

12/06/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS006-215MW08-101223

Lab Sample ID:	L1667387-08	**SDG:**	L1667387
Client Sample ID:	SS006-215MW08-101223	**Collected Date/Time:**	10/12/23 19:30
Lab File ID:	1025_075	**Received Date/Time:**	10/17/23 09:00
Instrument ID:	SVGC34	**Preparation Date/Time:**	10/25/23 16:06
Analytical Batch:	WG2155784	**Analysis Date/Time:**	10/26/23 16:22
Dilution Factor:	1	**Prep Method:**	3510C
Analytical Method:	AK102	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	100 mL
Total Solids (%):	_____	**Final Wt/Vol:**	30 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
AK102 DRO C10-C25	C10-C25	5.97	261 QL B J	B J J4	170	400	800

Sample Narrative:
Duplicate Analysis performed due to surrogate failure. Results confirm; reporting in hold data

12/06/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
SS006-EQBK01-101223

Lab Sample ID:	L1667387-09	**SDG:**	L1667387
Client Sample ID:	SS006-EQBK01-101223	**Collected Date/Time:**	10/12/23 20:00
Lab File ID:	1025_080	**Received Date/Time:**	10/17/23 09:00
Instrument ID:	SVGC34	**Preparation Date/Time:**	10/25/23 16:06
Analytical Batch:	WG2155784	**Analysis Date/Time:**	10/26/23 18:21
Dilution Factor:	1.05	**Prep Method:**	3510C
Analytical Method:	AK102	**Sample Vol Used:**	
Matrix:	GW	**Initial Wt/Vol:**	95 mL
Total Solids (%):		**Final Wt/Vol:**	30 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		ug/l	ug/l	ug/l
AK102 DRO C10-C25	C10-C25	5.97	301 QLBJ	B J J4	179	420	840

Sample Narrative:
Duplicate Analysis performed due to surrogate failure. Results confirm; reporting in hold data

12/06/23

ADEC Contaminated Sites Program Laboratory Data Review Checklist

Completed By:	Sherrie Robinson	**CS Site Name:**	Port Heiden RRS	**Lab Name:**	Pace Analytical
Title:	Staff Scientist	**ADEC File No.:**	OT001: 2637.38.002.05 NPDL 21-034	**Lab Report No.:**	L1667791
Consulting Firm:	North Wind Site Services	**Hazard ID No.:**	OT001: 185	**Lab Report Date:**	11/07/23

Note: *Any N/A or No box checked must have an explanation in the comments box.*

1. **Laboratory**

   a. Did an ADEC Contaminated Sites Laboratory Approval Program (CS-LAP) approved laboratory receive and perform all of the submitted sample analyses?
   Yes ☒ No ☐ N/A ☐
   Comments: Yes, the samples were analyzed by Pace Analytical.

   b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses CS-LAP approved?
   Yes ☐ No ☐ N/A ☒
   Comments: Samples were not subcontracted.

2. **Chain of Custody (CoC)**

   a. Is the CoC information completed, signed, and dated (including released/received by)?
   Yes ☒ No ☐ N/A ☐
   Comments: COC information is complete and accurate.

   b. Were the correct analyses requested?
   Yes ☒ No ☐ N/A ☐
   Analyses requested: AK 102, 8260D, 8260D-LL, 2320 B-2011 Wet Chemistry, 351.2 Wet Chemistry, 353.2 Wet Chemistry, 6010D Metals (ICP), and 9056A Wet Chemistry.
   Comments: The correct analyses were requested per the COC.

3. **Laboratory Sample Receipt Documentation**

   a. Is the sample/cooler temperature documented and within range at receipt (0° to 6° C)?
   Yes ☒ No ☐ N/A ☐

Cooler temperature(s): 4.0°C
Sample temperature(s): Not Applicable.
Comments: The samples were received cooled at 4.0°C per the sample receipt documentation.

b. Is the sample preservation acceptable – acidified waters, methanol preserved soil (GRO, BTEX, VOCs, etc.)?
Yes ☒ No ☐ N/A ☐
Comments: 8260D: The samples had a pH <2 and ~7 which was outside the method criteria of pH 4-5 for 2-chloroethylvinyl ether, per the USEPA Method SW846 8260. All high-level 2-chloroethylvinyl ether results were non-detect and have been qualified with a 'QL' validation flag due to improper sample preservation; however, 2-chloroethylvinyl ether is not a chemical of concern.

The remaining samples were received properly preserved.

c. Is the sample condition documented – broken, leaking, zero headspace (VOA vials); canister vacuum/pressure checked and no open valves, etc.?
Yes ☒ No ☐ N/A ☐
Comments: The Sample Receipt Form noted that a vial for sample WP002-BLOMW01-101523 was received broken; however, sufficient volume remained to complete all analyses and no qualifications were warranted.

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, canister not holding a vacuum, etc.?
Yes ☒ No ☐ N/A ☐
Comments: See Section 3.c for the noted sample receipt discrepancy.

e. Is the data quality or usability affected?
Yes ☒ No ☐ N/A ☐
Comments: 8260D: All high-level 2-chloroethylvinyl ether results were non-detect and have been qualified with a 'QL' validation flag due to improper sample preservation.

4. Case Narrative

a. Is the case narrative present and understandable?
Yes ☒ No ☐ N/A ☐
Comments: The Case Narrative is present and understandable.

b. Are there discrepancies, errors, or QC failures identified by the lab?
Yes ☒ No ☐ N/A ☐
Comments:
The Case Narrative noted:
Wet Chemistry by Method 351.2: The sample matrix interfered with the ability to

make any accurate determination; spike value is high. Batches- WG2154036, WG2155459

The sample concentration is too high to evaluate accurate spike recoveries. Batch- WG2154036

Wet Chemistry by Method 9056A: The sample matrix interfered with the ability to make any accurate determination; spike value is low. Batch- WG2156852

Metals (ICP) by Method 6010D: The sample concentration is too high to evaluate accurate spike recoveries. Batch- WG2153991

Volatile Organic Compounds (GC/MS) by Method 8260D: The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Data is likely to show a low bias concerning the result. Batch Lab- WG2155682

The reported concentration is an estimate. The continuing calibration standard associated with this data responded high. Data is likely to show a high bias concerning the result. Batch- WG2155682

The sample matrix interfered with the ability to make any accurate determination; spike value is high. Batch- WG2155682

The sample matrix interfered with the ability to make any accurate determination; spike value is low. Batch- WG2155682

The associated batch QC was outside the established quality control range for precision. Batch- WG2155682

Semi-Volatile Organic Compounds (GC) by Method AK102:
Surrogate recovery limits have been exceeded; values are outside lower control limits. Batch- WG2156720

The same analyte is found in the associated blank. Analyte- AK102 DRO C10-C25 Batch- WG2156720

The sample matrix interfered with the ability to make any accurate determination; spike value is low. Batch- WG2156720

c. Were all the corrective actions documented?
Yes ☐ No ☐ N/A ☒
Comments: No corrective actions were noted.

d. What is the effect on data quality/usability according to the case narrative?
Comments: See following sections for data quality/usability.

5. Sample Results

a. Are the correct analyses performed/reported as requested on CoC?
Yes ☒ No ☐ N/A ☐
Comments: The correct analyses were performed as requested on the COC.

b. Are all applicable holding times met?
Yes ☐ No ☒ N/A ☐
Comments: AK102 DRO C10-C25: The samples were collected on 10/15/23 and were received by the laboratory on 10/18/23 at 4.0°C. The samples were extracted on 10/27/23 within 12 days of collection and analyzed on 10/28/23 and 10/29/23 within 1-2 days of extraction. The Form 1s for all samples noted, "Duplicate Analysis performed due to QC failure. Results confirm; reporting in hold data." All preservation and holding time criteria were met. No qualifications were warranted.

8260D-LL/8260D: The samples were collected on 10/15/23 and were received by the laboratory on 10/18/23 at 4.0°C. The Prep Logbook noted that sample WP002-BLOMW01-101523 had a pH ~7 and has been considered unpreserved. Sample WP002-BLOMW01-101523 was analyzed on 10/22/23 and 10/26/23, within 7 and 11 days of collection. The high and low-level WP002-BLOMW01-101523 results analyzed on 10/26/23 were analyzed within 11 days of collection and outside of the 7 day collection to analysis hold time for unpreserved aqueous samples.

The remaining samples had a pH <2 and were analyzed on 10/22/23, 10/26/23 and 10/27/23, within 7-12 days of collection. All preservation criteria and the remaining holding time criteria were met. No further qualifications were warranted.

2320 B-2011 Wet Chemistry, 351.2 Wet Chemistry, 353.2 Wet Chemistry, 6010D Metals (ICP), and 9056A Wet Chemistry: Receipt logs indicate that samples were received intact, and cooler temperatures were acceptable upon receipt for metals samples. The samples were prepared for metals on 10/22/2023 in accordance with USEPA Method 3015. The samples were prepared for alkalinity on 10/23/2023 in accordance with USEPA Method 2320 B-2011, TKN on 10/21/2023, 10/23/2023, and 10/24/2023 in accordance with USEPA Method 351.2/365.4, Nitrate-Nitrite on 10/20/2023 in accordance with USEPA Method 353.2, and Sulfate on 10/25/2023 in accordance with USEPA Method 9056A. Holding times were met for all preparatory and analytical processes. No qualifications were appended to the associated sample results due to holding time and preservation considerations.

A holding time table has been provided in the attachment.

c. Are all soils reported on a dry weight basis?
Yes ☐ No ☐ N/A ☒
Comments: Soil samples were not collected for this SDG.

d. Are the reported limits of quantitation (LoQ) or limits of detections (LOD), or reporting limits (RL) less than the Cleanup Level or the action level for the project?
Yes ☐ No ☒ N/A ☐
Comments: The following results were non-detect and the LODs reported by the laboratory were elevated and over the ADEC clean up limits. Users are cautioned that there are elevated LODs:
8260D-LL: 1,2,3-Trichloropropane and hexachloro-1,3-butadiene in samples OT001-EQBK01-101523, OT001-TRIPBLNK-HCL-01, WP002-BLOMW01-101523, OT001-DSAMW02-101523, and OT001-DSAMW05-101523.
8260D: 1,1,2-Trichloroethane, 1,2,3-trichloropropane, vinyl chloride, and 1,2-dibromoethane in samples OT001-EQBK01-101523, OT001-TRIPBLNK-HCL-01, WP002-BLOMW01-101523, OT001-DSAMW02-101523, and OT001-DSAMW05-101523.
Hexachloro-1,3-butadiene in sample OT001-DSAMW02-101523.
Naphthalene in samples OT001-EQBK01-101523, OT001-TRIPBLNK-HCL-01, OT001-DSAMW02-101523, and OT001-DSAMW05-101523.

The following results reported by the laboratory were elevated and over the ADEC cleanup limits. Users are cautioned that there are elevated LODs:
8260D-LL: Chloroform in sample OT001-EQBK01-101523.
Naphthalene in sample WP002-BLOMW01-101523.
Trichloroethene in samples WP002-BLOMW01-101523, OT001-DSAMW02-101523, and OT001-DSAMW05-101523.
8260D: Chloroform in sample OT001-EQBK01-101523.
Naphthalene in sample WP002-BLOMW01-101523.
Trichloroethene in samples WP002-BLOMW01-101523, OT001-DSAMW02-101523, and OT001-DSAMW05-101523.
AK102: TPH Diesel Range Organics (C10-C25) in sample WP002-BLOMW01-101523.
SW6010D: Manganese in sample WP002-BLOMW01-101523.

e. Is the data quality or usability affected?
Yes ☒ No ☐ N/A ☐
Comments: 8260D-LL: Only trichloroethene and vinyl acetate were reported from the 10/26/23 analysis of low-level sample WP002-BLOMW01-101523 and these results have been qualified with an ‘H’ validation flag as the exceeded hold time was <2x the required holding time.

8260D- Only 2,2-dichloropropane, hexachloro-1,3-butadiene, 1,1,1-trichloroethane, and trichloroethene were reported from the 10/26/23 analysis of high-level sample WP002-BLOMW01-101523 and these results have been

qualified with an 'H' validation flag as the exceeded hold time was <2x the required holding time.

LOQs were greater than the project cleanup levels. However, data usability is determined on a case by case basis by the project manager and risk assessment team. Data users are cautioned that non-detects will be driving the risk and the LOQs were greater than the PALs.

6. QC Samples

a. Method Blank

i. Was one method blank reported per matrix, analysis, and 20 samples?
Yes ☒ No ☐ N/A ☐
Comments: Method blanks were analyzed at the proper frequency.

ii. Are all method blank results less than LOQ (or RL)?
Yes ☐ No ☒
Comments: AK102 DRO C10-C25: DRO C10-C25 (386 ug/l, J) was present in the method blank.

8260D-LL: 1,2,4-Trimethylbenzene (0.0540 ug/l, J) was detected in the low-level method blank R3991882-3 associated with the 10/26/23-10/27/23 analysis of samples OT001-DSAMW02-101523, WP002-BLOMW01-101523, OT001-EQBK01-101523, and OT001-TRIPBLANK-HCL-01.

8260D- All high-level method blank results were non-detect.

2320 B-2011 Wet Chemistry, 351.2 Wet Chemistry, 353.2 Wet Chemistry, 6010D Metals (ICP), and 9056A Wet Chemistry: All initial calibration blank (ICB), continuing calibration blank (CCB), and preparation blank (PB) results were non-detect. No qualifications were warranted.

iii. If above LoQ or RL, what samples are affected?
Comments: AK102 DRO C10-C25: DRO C10-C25 in samples OT001-DSAMW05-101523, OT001-DSAMW02-101523, and OT001-EQBK01-101523 was detected at a concentration <LOQ and has been qualified with a 'B' validation flag due to the method blank detection.

AK102 DRO C10-C25 in sample WP002-BLOMW01-101523 (7860 ug/l) was detected at a concentration >LOQ and >5x the blank concentration and warrants no qualification due to the method blank detection.

8260D-LL: 1,2,4-Trimethylbenzene was not a target compound in the

10/26/23-10/27/23 low-level analysis of samples OT001-DSAMW02-101523, WP002-BLOMW01-101523, OT001-EQBK01-101523, and OT001-TRIPBLANK-HCL-01 and no qualification is warranted due to the method blank detection.

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?
Yes ☒ No ☐ N/A ☐
Comments: Data flags are clearly defined.

v. Data quality or usability affected?
Yes ☒ No ☐ N/A ☐
Comments: AK102 DRO C10-C25 in samples OT001-DSAMW05-101523, OT001-DSAMW02-101523, and OT001-EQBK01-101523 was detected at a concentration <LOQ and has been qualified with a 'B' validation flag due to the method blank detection.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – Are one LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)
Yes ☒ No ☐ N/A ☐
Comments: LCS/LCSD analyses were analyzed at the proper frequency.

ii. Metals/Inorganics – Are one LCS and one sample duplicate reported per matrix, analysis and 20 samples?
Yes ☒ No ☐ N/A ☐
Comments: All laboratory control sample recovery results were within the 80-120% acceptance criteria. No data qualifications were warranted.

iii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)
Yes ☐ No ☒ N/A ☐
Comments: AK102 DRO C10-C25: The recovery for DRO C10-C25 (73.5%) in the LCSD was outside of the 75-125% acceptance criteria.

8260D-LL/8260D: All LCS/LCSD recoveries were within the acceptance criteria.

iv. Precision – Are all relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? Was the RPD reported from LCS/LCSD, and or

sample/sample duplicate? (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)
Yes ☒ No ☐ N/A ☐
Comments: All LCSD precision criteria was met.

v. If %R or RPD is outside of acceptable limits, what samples are affected?
Comments: AK102 DRO C10-C25: All AK102 DRO C10-C25 results were reported above the detection limit and have been qualified with a 'QL' validation flag due to low LCSD recovery.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?
Yes ☒ No ☐ N/A ☐
Comments: The data flags are clearly defined.

vii. Is the data quality or usability affected?
Yes ☒ No ☐ N/A ☐
Comments: All AK102 DRO C10-C25 results were reported above the detection limit and have been qualified with a 'QL' validation flag due to low LCSD recovery.
In the professional judgement of the validator, the data is usable. However, the final usability determination should be decided by the project.

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

i. Organics – Are one MS/MSD reported per matrix, analysis and 20 samples?
Yes ☒ No ☐ N/A ☐
Comments: AK102 DRO C10-C25: Sample WP002-BLOMW01-101523 (lab ID L1667791-03) was the parent sample for the MS/MSD analysis.

8260D-LL/8260D: Sample WP002-BLOMW01-101523 (Lab ID L1667791-03) and non-SDG samples L1667486-03 and L1667978-05 were the parent samples for the MS/MSD analyses.

ii. Metals/Inorganics – Are one MS/MSD reported per matrix, analysis and 20 samples?
Yes ☒ No ☐ N/A ☐
Comments: 6010D Metals (ICP): Sample L1667791-03 was the parent sample for the MS/MSD analysis.

2320 B-2011 Wet Chemistry (Alkalinity), 351.2 Wet Chemistry (TKN), 353.2 Wet Chemistry (Nitrate/Nitrite), and 9056A Wet Chemistry (Anions): Non-SDG samples L1667732-01 and L1668498-01 were the parent

samples for the TKN MS/MSD analyses, non-SDG sample L1668237-03 was the parent sample for the sulfate MS/MSD analysis, and non-SDG sample L1667440-01 was the parent sample in the nitrate-nitrite MS/MSD analysis. Several non-SDG MS/MSD results exceeded the recovery criteria. However, the non-SDG parent samples were not from this project and their matrix may be dissimilar to the sample matrix of the samples within this SDG. In the professional judgment of the validator, the non-SDG MS/MSD results have not been utilized to assess the samples due to the potential dissimilar matrix of the non-SDG MS/MSD parent samples.

Samples L1667791-03 and L1667791-04 were the SDG parent samples for the TKN, sulfate, and nitrate-nitrite MS/MSD analyses.

Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?
Yes ☐ No ☒ N/A ☐
Comments: AK102 DRO C10-C25: In the MS/MSD, DRO C10-C25 (52.3% & 62.3%) was outside of the 75-125% recovery criteria.

6010D Metals (ICP): The matrix spike (MS) and matrix spike duplicate (MSD) recoveries for manganese (61.1% & 62.7%) were outside of the 75-125% acceptance criteria.

Wet Chemistry: The L1667791-03 MS/MSD recoveries for TKN (117% & 118%) and sulfate (84.1%) were outside the 87-112% recovery criteria. The L1667791-04 MS/MSD recovery for TKN (119%) was outside the 90-110% recovery criteria.

8260D-LL/8260D: The following table shows the WP002-BLOMW01-101523 MS/MSD compounds that exceeded the recovery or precision acceptance criteria.

Low-level WP002-BLOMW01-101523 MS/MSD Analytes	MS/MSD %R	MS/MSD %R Limit	MSD RPDs	MSD RPD Limit
Tetrahydrofuran	**44.4%/ 49.8%**	57-133%		
trans-1,4-Dichloro-2-butene			**54.2%**	36%
sec-Butylbenzene	**130%/ 141%**	77-126%		
tert-Butylbenzene	**131%**	78-124%		
Cyclohexane	**134%**	71-130%		
trans-1,2-Dichloroethene	**135%**	75-124%		
p-Isopropyltoluene	**128%/ 144%**	77-127%		
n-Propylbenzene	**135%/ 142%**	76-126%		
Toluene	**127%**	80-121%		
Trichloroethene	**126%/ 130%**	79-123%		
1,2,4-Trimethylbenzene	**129%/ 142%**	76-124%		

Low-level WP002-BLOMW01-101523 MS/MSD Analytes	**MS/MSD %R**	**MS/MSD %R Limit**	**MSD RPDs**	**MSD RPD Limit**
Total xylenes	**126%**	79-121%		
Several compounds	**Exceeded %R**			
High-level WP002-BLOMW01-101523 MS/MSD Analytes	**MS/MSD %R**	**MS/MSD %R Limit**	**MSD RPDs**	**MSD RPD Limit**
2-Chloroethyl vinyl ether	**0.000%**	**51-139%**	**200%**	**20%**
Isopropylbenzene	**58.2%**	**72-131**		
Naphthalene	**138%**	**61-128**		

iii. Precision – Are all relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from MS/MSD, and or sample/sample duplicate.

Yes ☐ No ☒ N/A ☐

Comments: AK102 DRO C10-C25: All WP002-BLOMW01-101523 MSD precision criteria were met. No further qualifications were warranted.

2320 B-2011 Wet Chemistry, 351.2 Wet Chemistry, 353.2 Wet Chemistry, 6010D Metals (ICP), and 9056A Wet Chemistry: All L1667791-03 MS/MSD precision criteria were met.
All laboratory duplicate (LD) and MSD RPD recoveries were within the 30%RPD acceptance criteria for aqueous samples.

8260D-LL: trans-1,4-Dichloro-2-butene was non-detect in sample WP002-BLOMW01-101523 and warrants no qualification due to the high MSD RPD.

iv. If %R or RPD is outside of acceptable limits, what samples are affected?
Comments: AK102 DRO C10-C25: DRO C10-C25 in sample WP002-BLOMW01-101523 was reported above the detection limit and has been qualified with a 'QL' validation flag due to low MS/MSD recoveries.

6010D Metals (ICP): All manganese results have been qualified with a "QL" validation flag to denote low MS/MSD recovery.

Wet Chemistry: • TKN in samples OT001-DSAMW05-101523 and WP002-BLOMW01-101523 has been qualified with a "QH" validation flag due to the high MS/MSD recovery.
• All sulfate results have been qualified with a "QL" validation flag due to low MS/MSD recovery.

8260D-LL: Low-level sec-butylbenzene, tert-butylbenzene, cyclohexane, trans-1,2-dichloroethene, p-isopropyltoluene, n-propylbenzene, toluene,

1,2,4-trimethylbenzene, and total xylenes in sample WP002-BLOMW01-101523 were reported above the detection limit and have been qualified with a 'QH' validation flag due to high MS/MSD recoveries.
- Low-level trichloroethene in sample WP002-BLOMW01-101523 analyzed on 10/26/23 was reported above the LOQ and has been qualified with a 'QH' validation flag due to high MS/MSD recoveries.
- Low-level tetrahydrofuran in sample WP002-BLOMW01-101523 was reported above the detection limit and has been qualified with a 'QL' validation flag due to low MS/MSD recoveries.
- Several more compounds in the low-level WP002-BLOMW01-101523 MS/MSD exceeded the recovery limits; however, the remaining exceeded compounds were non-detect and warrant no further qualifications due to the high MS/MSD recoveries (See attached MS/MSD pages for specifics).
- Low-level trans-1,4-dichloro-2-butene was non-detect in sample WP002-BLOMW01-101523 and warrants no qualification due to the high MSD RPD.
8260D- High-level Isopropylbenzene in sample WP002-BLOMW01-101523 was reported above the LOQ and has been qualified with a 'QH' validation flag due to high MS/MSD recoveries.
- In the professional judgment of the validator, 2-chloroethyl vinyl ether in high-level sample WP002-BLOMW01-101523 was non-detect and has been qualified with a 'QN' validation flag due to the poor MS performance as it historically performs poorly in acid preserved samples.

v. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?
Yes ☒ No ☐ N/A ☐
Comments: Data flags are clearly defined.

vi. Is the data quality or usability affected?
Yes ☒ No ☐ N/A ☐
Comments: See Section 6.c.iv for qualifications.

d. Surrogates – Organics Only or Isotope Dilution Analytes (IDA) – Isotope Dilution Methods Only

i. Are surrogate/IDA recoveries reported for organic analyses – field, QC, and laboratory samples?
Yes ☒ No ☐ N/A ☐
Comments: No comments.

ii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods 50-150 %R for field samples and 60-120 %R for QC samples; all other analyses see the laboratory report pages)
Yes ☐ No ☒ N/A ☐

Comments: 8260D-LL/8260D: All surrogate recoveries were within the acceptance criteria.

AK102 DRO C10-C25: The following table shows the surrogates that exceeded acceptance criteria and the affected samples.

AK102 DRO C10-C25 Sample	Surrogate	%Recovery	Acceptance limits
WP002-BLOMW01-101523	o-Terphenyl	**35.9%**	50-150%
WP002-BLOMW01-101523 MS/MSD		**41.1%/ 49.6%**	
Non-SDG L1667832-03 MS/MSD		**33.4%/ 26.5%**	
LCS/LCSD		**42.9%/ 33.5%**	

iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?
Yes ☒ No ☐ N/A ☐
Comments: The data flags were clearly defined.

iv. Is the data quality or usability affected?
Yes ☒ No ☐ N/A ☐
Comments: AK102 DRO C10-C25 in sample WP002-BLOMW01-101523 was reported above the detection limit and has been qualified with a "QL" validation flag due to low surrogate recovery. The low surrogate recoveries in the WP002-BLOMW01-101523 MS/MSD add further merit to the WP002-BLOMW01-101523 qualification.

e. Trip Blanks

i. Is one trip blank reported per matrix, analysis, and for each cooler containing volatile samples? Yes ☒ No ☐ N/A ☐
Comments: Trip Blank OT001-TRIPBLANK-HCL-01 was included with this SDG.

ii. Are all results less than LoQ or RL?
Yes ☒ No ☐ N/A ☐
Comments: 8260D-LL: Toluene (0.0650 ug/l, J) was detected in low-level analysis of trip blank OT001-TRIPBLANK-HCL-01.

8260D- All trip blank OT001-TRIPBLANK-HCL-01 results were non-detect.

iii. If above LOQ or RL, what samples are affected?
Comments: 8260D-LL: Toluene in low-level sample OT001-DSAMW05-101523 was detected at a concentration <LOQ and has been qualified with a 'B' validation flag due to the trip blank detection.

Toluene in low-level samples OT001-DSAMW02-101523 and WP002-BLOMW01-101523 was >LOQ and >5x the trip blank concentrations and warrants no qualification due to the trip blank detection.

iv. Is the data quality or usability affected?
Yes ☒ No ☐ N/A ☐
Comments: 8260D-LL: Toluene in low-level sample OT001-DSAMW05-101523 has been qualified with a 'B' validation flag due to the trip blank detection.

f. Field Duplicate

i. Are one field duplicate submitted per matrix, analysis, and 10 project samples?
Yes ☒ No ☐ N/A ☐
Comments: Field duplicates were collected at a frequency of one for every 10 primary samples for this project. However, a field duplicate was not collected for this SDG.

ii. Was the duplicate submitted blind to lab?
Yes ☐ No ☐ N/A ☒
Comments: Not applicable, a field duplicate was not included with this SDG.

iii. Precision – All relative percent differences (RPD) less than specified project objectives? (Recommended: 30% water or air, 50% soil)

$$RPD\ (\%) = \left| \frac{R_1 - R_2}{\left(\frac{R_1 + R_2}{2}\right)} \right| X\ 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

Is the data quality or usability affected? (Explain)

Yes ☐ No ☐ N/A ☒
Comments: Not applicable, a field duplicate was not included with this SDG.

iv. Is the data quality or usability affected? (Explain)
Yes ☐ No ☐ N/A ☒
Comments: Not applicable, a field duplicate was not included for this SDG. The data quality and usability was not affected.

g. Decontamination or Equipment Blanks

i. Were decontamination or equipment blanks collected?
Yes ☒ No ☐ N/A ☐
Comments: Equipment blank OT001-EQBK01-101523 was included with this SDG.

ii. Are all results less than LoQ or RL?
Yes ☐ No ☒ N/A ☐
Comments: AK102 DRO C10-C25 (423 ug/L, J) was present in equipment blank OT001-EQBK01-101523.

6010D Metals (ICP): A positive detection was noted in the equipment blank for manganese (1.78, J ug/L).

Wet Chemistry: A positive detection was noted in the equipment blank OT001-EQBK01-101523 for sulfate (742, J ug/L) near the detection limit (594, J ug/L).

8260D-LL/8260D: The following table shows the Equipment Blank detections.

	Compound
Low-level equipment blank OT001-EQBK01-101523	Acetone (1.21 ug/l, J)
	Benzene (0.0860 ug/l, J)
	Bromodichloromethane (0.220 ug/l)
	Carbon disulfide (0.244 ug/l, J)
	Chloroform (2.79 ug/l)
	Ethylbenzene (0.0920 ug/l, J)
	Toluene (1.30 ug/l)
	1,2,4-Trimethylbenzene (0.0590 ug/l, J)
	Xylenes, Total (0.602 ug/l, J)
High-level equipment blank OT001-EQBK01-101523	Benzene (0.114 ug/l, J)
	Bromodichloromethane (0.239 ug/l, J)
	Chloroform (2.50 ug/l, J)
	1,1-Dichloroethane (0.158 ug/l, J)
	Toluene (1.28 ug/l)
	Total xylenes (0.547 ug/l, J)

iii. If above LoQ or RL, specify what samples are affected.
Comments: AK102 DRO C10-C25 in samples OT001-DSAMW05-101523 and OT001-DSAMW02-101523 was detected at a concentration <LOQ and has been qualified with a 'B' validation flag due to the equipment blank detection.
- AK102 DRO C10-C25 in sample WP002-BLOMW01-101523 (7860 ug/l) was detected at a concentration >LOQ and >5x the blank concentration and warrants no qualification due to the equipment blank detection.

6010D Metals (ICP): No qualifications were warranted as the remaining field sample results were >LOQ and >5x the blank concentration.

8260D-LL: The following results have been qualified with a 'B' as the reported concentrations were >LOQ but ≤5x the equipment blank concentration:
- Low-level benzene and chloroform in sample OT001-DSAMW02-101523.
- Low-level acetone, benzene, and toluene in sample WP002-BLOMW01-101523.

The following sample results were detected at a concentration <LOQ and have been qualified with a 'B' validation flag due to the equipment blank detections:
- Low-level acetone, ethylbenzene, and toluene in sample OT001-DSAMW05-101523.
- Low-level acetone and ethylbenzene in sample OT001-DSAMW02-101523.
- High-level chloroform in sample OT001-DSAMW02-101523.

Low-level toluene in sample OT001-DSAMW02-101523 was >LOQ and >5x the blank concentrations and warrants no qualification due to the equipment blank detections.

Low-level ethylbenzene, 1,2,4-trimethylbenzene, and total xylenes in sample WP002-BLOMW01-101523 were >LOQ and >5x the blank concentration and warrant no qualification due to the equipment blank detections.

The remaining results for the compounds listed in the table above were non-detect and warrant no qualification due to the equipment blank detections.

Wet Chemistry: In the professional judgment of the validator, sulfate (4690, J ug/L) in sample WP002-BLOMW01-101523 was detected near the LOQ (5000, ug/L) and warrants no qualification as the sample result was >5x the equipment blank concentration.

The remaining sulfate results warrant no qualification as they were >LOQ and >5x the equipment blank concentration.

iv. Are data quality or usability affected?
Yes ☒ No ☐ N/A ☐
Comments: See section 6.g.iii for qualifications.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Are they defined and appropriate?
Yes ☐ No ☐ N/A ☒
Comments: Several sample results have been qualified with a 'J' validation flag to denote the reported results are estimated due to sample results reported at levels between the detection limit (DL) and the limit of quantitation (LOQ).

8260D-LL: The following results were reported above the detection limit and have been qualified with a 'QN' validation flag due to the exceeded CCV %R/%D criteria:

- Low-level acetone in samples OT001-DSAMW05-101523, WP002-BLOMW01-101523, and OT001-EQBK01-101523.
- Low-level acetone and trichlorofluoromethane in sample OT001-DSAMW02-101523.

The following sample results were non-detect and have been qualified with a 'QN' validation flag as the CCV %R/%D criteria was exceeded:

- Low-level 1,1,2-trichlorotrifluoroethane, 4-methyl-2-pentanone (MIBK), carbon tetrachloride, dichlorodifluoromethane, trans-1,4-dichloro-2-butene, and trichlorofluoromethane in samples OT001-DSAMW05-101523 and WP002-BLOMW01-101523.
- Low-level 1,1,2-trichlorotrifluoroethane, 4-methyl-2-pentanone (MIBK), carbon tetrachloride, trans-1,4-dichloro-2-butene, and dichlorodifluoromethane in sample OT001-DSAMW02-101523.
- Low-level 1,1,2-trichlorotrifluoroethane, 4-methyl-2-pentanone (MIBK), carbon tetrachloride, dichlorodifluoromethane, trichlorofluoromethane, trans-1,4-dichloro-2-butene, and trichloroethene in sample OT001-EQBK01-101523.
- Low-level 1,1,2-trichlorotrifluoroethane, 4-methyl-2-pentanone (MIBK), acetone, carbon tetrachloride, dichlorodifluoromethane, trichloroethene, trans-1,4-dichloro-2-butene, and trichlorofluoromethane in sample OT001-TRIPBLANK-HCL-01.

6010D Metals (ICP): Interference check standard recovery results were within the 80-120% acceptance criteria. No data qualifications were warranted.

Level 2b Data Review

Project ID:	**Port Heiden RRS 21-034**	**Lab Name:**	**Pace Analytical National**
SOW No.	**South Optimized Remediation Contract**	**SDG No.**	**L1667791**

This review is based on Project requirements, the requirements of Method 8015, Base Method 8000, and validator technical judgment in accordance with the following documents:

- South Optimized Remediation Contract. *Port Heiden Radio Relay Station. Final, August 2022.*
- Department of Defense (DoD). Department of Defense (DOD)/Department of Energy (DOE) Consolidated Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.4. 2021.
- U.S. Environmental Protection Agency (USEPA). 1986. *Solid Waste SW-846 Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods*, Third Edition and Updates.
- Method AK102, *Determination of Diesel Range Organics*, Version 12/21/16.
- USEPA Office of Research and Development., 1993 and Updates, Methods for the Determination of Inorganic Substances in Environmental Samples, EPA 600-R-93-100, August.

AK102 Data Review

1. Samples Submitted and Analyses Requested.

Sample ID	Lab ID	Type	Matrix	Date Collected	Prep/Extraction Date	Analysis Date
OT001-DSAMW05-101523	L1667791-01	Field Sample	Ground Water	10/15/23	10/27/23	10/28/23
OT001-DSAMW02-101523	L1667791-02	Field Sample	Ground Water	10/15/23	10/27/23	10/28/23
WP002-BLOMW01-101523	L1667791-03	Field Sample	Ground Water	10/15/23	10/27/23	10/28/23
OT001-EQBK01-101523	L1667791-04	Equipment Blank	Ground Water	10/15/23	10/27/23	10/29/23

* Denotes exceeded hold time

2. Reviewer Preliminary Comments

Review Type: [] Level IV (Level 3 or 4) [X] Level III (Level 2b) [X] Level II (Level 2a)
Confirm that narrative is present and complete; note overall initial indications.

Four (4) groundwater samples were received by received by Pace Analytical on 10/18/23 at 4.0°C. The samples were analyzed for diesel range organics (DRO) by Method AK102. The data was validated to a Level 2B.

3. Instrumentation QA/QC	**Y**	**N**	**NA**
Were the following instrumentation criteria met?			
Was all retention time criteria met per the analytical method?	**X**		
Was all initial calibration criteria met (i.e. %RSD <25% or r^2<0.995)?	**X**		
Was all initial calibration verification (ICV) criteria met (%D<25% **or** method required criteria)?	**X**		
Was all continuing calibration verification (CCV) criteria met (%D<25% **or** method required criteria)?		**X**	

Reviewer Comments: All retention time, initial calibration, and initial calibration verification criteria were met. No qualifications were warranted.

Surrogate o-terphenyl in the CCVs analyzed on 10/28/23 at 15:05 (28.5%) and 10/29/23 at 00:49 (36.2%) was outside of the 25%D acceptance criteria. However, no qualifications were warranted due to the high CCV%D for

surrogate o-terphenyl. The remaining CCV criteria were met.

4. Method Quantitation Limits	Y	N	NA
Does the method quantitation limit (established by the lowest concentration calibration standard) meet project requirements? (**Method 8000**, Sections 7.4.1.2 and 7.4.1.4)	**X**		
Are only those results that fall between the lowest and highest calibration standards reported (i.e., no "J" values or values between the MDL and low standard or above the high standard)? (**Method 8000**, Section 7.4)		**X**	
Action: *Indicate non-correctable contract compliance deviations below. If MQL>RDL, reanalysis may be warranted.			

Reviewer Comments: Sample WP002-BLOMW01-101523 was reported above the LOQ.

The remaining results have been qualified with a 'J' validation flag as the results were reported between the detection limit (DL) and the limit of quantitation (LOQ) and are estimates.

5. Overall Comments

Overall, the data meet the requirements and intent of the methods, indicate the preparatory process and analytical system were in control at the time of sample analysis, and the reported laboratory results are of sufficient quality for their intended purpose.

Sample Qualifications Summary Table

Sample ID	Analyte	Validation Flag	Qualification Reason(s)
OT001-DSAMW05-101523 OT001-DSAMW02-101523	AK102 DRO C10-C25	B, QL, J	Method blank considerations Equipment blank considerations Low LCSD recovery Result ≥DL but <LOQ
WP002-BLOMW01-101523		QL	Low surrogate recovery Low MS/MSD recovery Low LCSD recovery
OT001-EQBK01-101523		B, QL, J	Method blank considerations Low LCSD recovery Result ≥DL but <LOQ

Level 2b Data Review

Project ID:	**Port Heiden RRS 21-034**	**Lab Name:**	**Pace Analytical National**
SOW No.	**South Optimized Remediation Contract**	**SDG No.**	**L1667791**

VOC Data Review

6. Samples Submitted

Sample ID	Lab ID	Type	Matrix	Date Collected	Analysis	DF	Date Analyzed
OT001-DSAMW05-101523	L1667791-01	Field Sample	Ground Water	10/15/23	8260D-LL	1	10/22/23 10/26/23
					8260D		10/22/23
OT001-DSAMW02-101523	L1667791-02	Field Sample	Ground Water	10/15/23	8260D-LL	1 20	10/22/23 10/27/23
					8260D	1 20	10/22/23 10/27/23
WP002-BLOMW01-101523	L1667791-03	Field Sample	Ground Water	10/15/23	8260D-LL	1	10/22/23 *10/26/23
					8260D		10/22/23 *10/26/23
OT001-EQBK01-101523	L1667791-04	Equipment Blank	Ground Water	10/15/23	8260D-LL	1	10/22/23 10/26/23
					8260D		10/22/23
OT001-TRIPBLANK-HCL-01	L1667791-05	Trip Blank	Ground Water	10/15/23	8260D-LL	1	10/22/23 10/26/23
					8260D		10/22/23

DF: Dilution Factor
* Denotes exceeded holding time

7. Reviewer Preliminary Comments

Review Type: [] Level IV (Level 3 or 4) [x] Level III (Level 2B) []Level II (Level 2a)

Five (5) ground water samples were received by received Pace Analytical on 10/18/23 at 4.0°C. The samples were analyzed for volatile organic compounds and low level volatile organic compounds by EPA Method SW8260D. The data was validated to a Level 2b.

8. GC/MS Performance Check	**Y**	**N**
Are performance check data present in the data submittal?	**X**	
Is the GC/MS hardware-tuned to meet BFB criteria prior to the initial calibration and for each 12-hr period during which analyses are performed? (**Method 8260B**, Sections 4.9.3, 5.11, 7.3.1, 7.4.1, 7.5.2, 8.2.1, and 11.4.1)	**X**	
Are mass spectral relative abundances acceptable according to the method criteria? (**Method 8260B**, Table 4**)**	**X**	
Was there correct assignment of ions?	**X**	
Raw Data Confirmation		
Raw data show proper averaging of scans according to method recommendations.	**X**	
Action: Indicate affected samples in validation comments, primarily if data are rejected. * Qualify only if the deviation indicates an adverse effect on data quality. ** Qualify as appropriate		

Reviewer Comments: All tune criteria were met. No qualifications were warranted.

Level 2b Data Review

Project ID:	**Port Heiden RRS 21-034**	**Lab Name:**	**Pace Analytical National**
SOW No.	**South Optimized Remediation Contract**	**SDG No.**	**L1667791**

9. Initial Calibration	Y	N	NA
Are initial calibration data present in the data submittal?	**X**		
Does the initial calibration curve consist of a least 5 standards? (**Method 8260B**, Sections 5.7.6.10, 5.7.6.11, 5.12.1 and 7.3.2; and **Method 8000B**, Section 7.4)	**X**		
Are all target analytes present in the initial calibration? (**Method 8260B**, Section 5.12.3)	**X**		
For the continuing check compounds (1,1-Dichloroethene, Chloroform, 1,2-Dichloropropane, Toluene, Ethylbenzene, and vinyl chloride), is the RSD ≤30%? (**Method 8260B**, Section 7.3.6.3 and 8.2.3) **[Note: Method 8260 requires an RSD of ≤15% and Method 8260C/D requires an RSD of 20% for all compounds or another type of curve must be used]**	**X**		
For the system performance check compounds, are the response factors 0.10 for Chloromethane, 1,1-Dichloroethane, and Bromoform and 0.30 for chlorobenzene and 1,1,2,2-tetrachloroethane? (**Method 8260B**, Section 7.3.5.4 and 8.2.3)	**X**		
Do target compounds meet the minimum response factors summarized in Table 4? (**Method 8260D,** Table 4**)**	**X**		
For other compounds, is the response factor ≥0.01 (or method criteria)?	**X**		
If the RSD does not meet the 20% (15% for **Method 8260**) criterion, is a linear (or quadratic) regression equation used for target compound quantitation? (**Method 8260B**, Sections 7.3.8.2)	**X**		
If linear and/or quadradic regressions, are used, is r ≥0.99 or r^2≥0.98 (**Method 8000B**, Sections 7.5.2 and 8.3.2)	**X**		
Is the origin not forced and not included in the calibration curve for linear regression? (**Method 8000**, Section 7.5.2)	**X**		
QC Check Standard (ICV)			
Are QC Check Standard Results present in the data submittal?	**X**		
Is the check standard run on an ongoing basis? (**Method 8260B**, Section 8.7-referred to as a standard reference material)	**X**		
Are check standard results within 30% of reference value?		**X**	
Raw Data Confirmation			
Raw data have been examined for anomalies	**X**		
The quantitation ions for 2 compounds have been confirmed as the correct ions for quantitation.	**X**		
Action: Indicate affected samples in validation comments, primarily if data are rejected. * Qualify only if the deviation indicates an adverse effect on data quality. ** Qualify as appropriate *** Qualify only peaks outside linear portion			

Reviewer Comments: All initial calibration criteria were met. No qualifications were warranted.

4-Methyl-2-pentanone (MIBK) (44.0%), styrene (41.5%), and tetrahydrofuran (34.4%) in the initial calibration verification (ICV) analyzed on 10/20/23 at 05:37, and hexachloro-1,3-butadiene (30.7%) in the ICV analyzed 09/09/23 at 06:16 were outside of the 30%D acceptance criteria. However, the ICV only bracketed the associated ICAL and no qualifications were warranted. The remaining ICV criteria were met.

10. Continuing Calibration	Y	N	NA
Are continuing calibration data present in the data submittal?	**X**		
Are all target analytes present in the continuing calibration (verification)? (**Method 8260B**, Section 5.12.3)	**X**		
Has continuing calibration verification been performed within 12 hours of the time of associated sample analysis? (**Method 8260B**, Sections 7.4.2 and 8.2.3)	**X**		
For the system performance check compounds, are the response factors in the calibration verification 0.10 for Chloromethane, 1,1-Dichloroethane, and Bromoform and 0.30 for chlorobenzene and 1,1,2,2-tetrachloroethane? (**Method 8260B**, Sections 7.3.5.4, 7.4.4.1, 7.4.4.2, and 8.2.3)	**X**		

Level 2b Data Review

Project ID:	**Port Heiden RRS 21-034**	**Lab Name:**	**Pace Analytical National**
SOW No.	**South Optimized Remediation Contract**	**SDG No.**	**L1667791**

10. Continuing Calibration	Y	N	NA
Do target compounds meet the minimum response factors summarized in Table 4? (**Method 8260D,** Table 4**)**	X		
For other compounds, is the response factor ≥0.01?	X		
For the continuing check compounds (1,1-Dichloroethene, Chloroform, 1,2-Dichloropropane, Toluene, Ethylbenzene, and vinyl chloride), is the %D ≤20%? (**Method 8260B**, Sections 7.3.6.3, 7.4.5.1, 7.4.5.2, and 8.2.3)	X		
For other compounds, is %D ≤ 20%? (**Method 8260B**, Section 7.4.5.2)		X	
Is a closing CCV performed? (**DOD QSM 5.3** Table B-4)	X		
Is the closing CCV %D ≤ 50%? (**DOD QSM 5.3** Table B-4)	X		
Action: Indicate affected samples in validation comments, primarily if data are rejected.			

Reviewer Comments: The following table shows the CCV %Rs/%Ds that exceeded the 20%R/%D acceptance criteria and the affected samples.

Continuing Calibration Date/Time	Samples Bracketed	Analyte	CCV %R/%D >20%
VOCMS37 Low-level CCV 10/22/23, 00:38	All low-level samples and associated QA/QC	1,1,2-Trichlorotrifluoroethane	25.5%D
		4-Methyl-2-pentanone (MIBK)	34.0%D
		Acetone	30.5%D
		Carbon tetrachloride	20.7%D
		Dichlorodifluoromethane	27.9%D
		Trans-1,4-dichloro-2-butene	75.1%R
		Trichloroethene	20.7%D
		Trichlorofluoromethane	47.3%D
VOCMS57 High and low-level CCV 10/26/23, 16:04	All low-level samples and associated QA/QC High-level samples WP002-BLOMW01-101523 and OT001-DSAMW02-101523 and associated QA/QC	Surrogate 1,2-Dichloroethane-d4	20.3%D

Qualifications are as follows:

- The following results were reported above the detection limit and have been qualified with a 'QN' validation flag due to the exceeded CCV %R/%D criteria:
  - Low-level acetone in samples OT001-DSAMW05-101523, WP002-BLOMW01-101523, and OT001-EQBK01-101523.
  - Low-level acetone and trichlorofluoromethane in sample OT001-DSAMW02-101523.
- The following sample results were non-detect and have been qualified with a 'QN' validation flag as the CCV %R/%D criteria was exceeded:
  - Low-level 1,1,2-trichlorotrifluoroethane, 4-methyl-2-pentanone (MIBK), carbon tetrachloride, dichlorodifluoromethane, trans-1,4-dichloro-2-butene, and trichlorofluoromethane in samples OT001-DSAMW05-101523 and WP002-BLOMW01-101523.
  - Low-level 1,1,2-trichlorotrifluoroethane, 4-methyl-2-pentanone (MIBK), carbon tetrachloride, trans-1,4-dichloro-2-butene, and dichlorodifluoromethane in sample OT001-DSAMW02-101523.

  - Low-level 1,1,2-trichlorotrifluoroethane, 4-methyl-2-pentanone (MIBK), carbon tetrachloride, dichlorodifluoromethane, trichlorofluoromethane, trans-1,4-dichloro-2-butene, and trichloroethene in sample OT001-EQBK01-101523.
  - Low-level 1,1,2-trichlorotrifluoroethane, 4-methyl-2-pentanone (MIBK), acetone, carbon tetrachloride, dichlorodifluoromethane, trichloroethene, trans-1,4-dichloro-2-butene, and trichlorofluoromethane in sample OT001-TRIPBLANK-HCL-01.
- Low-level trichloroethene was not reported in the 10/22/23 analysis of samples OT001-DSAMW05-101523, OT001-DSAMW02-101523, and WP002-BLOMW01-101523 and no qualifications were warranted.
- No qualifications were warranted due to the high CCV%D for surrogate 1,2-dichloroethane-d4.
- The remaining CCV criteria were met. No further qualifications were warranted.

11. Internal Standards	Y	N	NA
Are internal standard data present in the data submittal?	**X**		
Were method-appropriate internal standards (ISs) used for the reported analyses?	**X**		
Are internal standards added to each calibration standard? (**Method 8260B**, Section 5.12.4 and 7.5.10.2)	**X**		
Do internal standard retention times **not** vary by more than 30 seconds from that in the mid-point standard level of the initial calibration? (**Method 8260B**, Section 7.4.6)	**X**		
Does the EICP area of any internal standard **not** vary by more than a factor of two (-50 to +100%) from that in the mid-point standard level of the initial calibration? (**Method 8260B**, Section 7.4.7)	**X**		
Do area counts appear to be at least minimally adequate?	**X**		
Note: Internal standard assessment is **not** required for a Level 2a data validation. Action: Indicate affected samples in validation comments, primarily if data were rejected * Qualify only if the deviation indicates an adverse effect on data quality. ** Qualify as appropriate			

Reviewer Comments: All internal standard criteria were met. No qualifications were warranted.

12. Method Quantitation Limits	Y	N	NA
Does the method quantitation limit (established by the lowest concentration calibration standard) meet project requirements? (**Method 8000**, Sections 7.4.1.2 and 7.4.1.4)	**X**		
Are only those results that fall between the lowest and highest calibration standards reported (i.e., no "J" values or values between the MDL and low standard or above the high standard)? (**QSAS**, Sections 5.5.2.2.1.f) and 5.5.2.2.1.g)) (**Method 8000**, Section 7.4) (**All data below LOQ qualified with a J**)		**X**	
Action: Indicate non-correctable contract compliance deviations below. If MQL>RDL, reanalysis may be warranted.			

Reviewer Comments: Several sample results have been qualified with a 'J' validation flag to denote the reported results are estimated due to sample results reported at levels between the detection limit (DL) and the limit of quantitation (LOQ).

The remaining sample results were either non-detect or reported above the LOQ.

13. Overall Comments

Overall, the data meet the requirements and intent of the methods, indicate the preparatory process and analytical system were in control at the time of sample analysis, and the reported laboratory results are of sufficient quality for their intended purpose.

Sample Qualifications Summary Table

Sample ID	Analyte	Validation Flag	Qualification Reason(s)
OT001-DSAMW05-101523	8260D-LL- Acetone	QN, B, J	Exceeded CCV criteria Equipment blank considerations Result ≥DL but <LOQ
	8260D-LL- 1,1,2-Trichlorotrifluoroethane	QN	Exceeded CCV criteria
	8260D-LL- 4-Methyl-2-pentanone (MIBK)		
	8260D-LL- Carbon tetrachloride		
	8260D-LL- Dichlorodifluoromethane		
	8260D-LL- Trichlorofluoromethane		
	8260D-LL- trans-1,4-Dichloro-2-butene		
	8260D-LL- Toluene	J, B	Result ≥DL but <LOQ Equipment blank and Trip Blank considerations
	8260D-LL- Ethylbenzene	J, B	Result ≥DL but <LOQ Equipment blank considerations
	8260D-LL- 1,2-Dichloroethane	J	Result ≥DL but <LOQ
	8260D- 2-Chloroethylvinyl ether	QN	Professional judgment as this compound degrades when acid preserved
OT001-DSAMW02-101523	8260D-LL- Acetone	QN, B, J	Exceeded CCV criteria Equipment blank considerations Result ≥DL but <LOQ
	8260D-LL- Trichlorofluoromethane	QN	Exceeded CCV criteria
	8260D-LL- 1,1,2-Trichlorotrifluoroethane	QN	Exceeded CCV criteria
	8260D-LL- 4-Methyl-2-pentanone (MIBK)		
	8260D-LL- Carbon tetrachloride		
	8260D-LL- Dichlorodifluoromethane		
	8260D-LL- trans-1,4-Dichloro-2-butene		
	8260D-LL- Benzene	B	Equipment blank considerations
	8260D-LL- Chloroform		
	8260D-LL- Ethylbenzene	J, B	Result ≥DL but <LOQ Equipment blank considerations
	8260D-LL- Cyclohexane	J	Result ≥DL but <LOQ
	8260D-LL- 1,2-Dichloroethane		
	8260D-LL- 1,1,2-Trichloroethane		
	8260D- Chloroform	J, B	Result ≥DL but <LOQ Equipment blank considerations
	8260D- Trichlorofluoromethane	J	Result ≥DL but <LOQ
	8260D- 2-Chloroethylvinyl ether	QN	Professional judgment as this compound degrades when acid preserved
WP002-BLOMW01-101523	8260D-LL- Acetone	B, QN	Equipment blank considerations Exceeded CCV criteria
	8260D-LL- 1,1,2-Trichlorotrifluoroethane	QN	Exceeded CCV criteria
	8260D-LL- 4-Methyl-2-pentanone (MIBK)		
	8260D-LL- Carbon tetrachloride		

	8260D-LL- Dichlorodifluoromethane		
	8260D-LL- Trichlorofluoromethane		
	8260D-LL- trans-1,4-Dichloro-2-butene		
	8260D-LL- Benzene	B	Equipment blank considerations
	8260D-LL- Toluene	B, QH	Equipment blank considerations High MS/MSD recovery
	8260D-LL- sec-Butylbenzene	QH, J	High MS/MSD recovery Result ≥DL but <LOQ
	8260D-LL- tert-Butylbenzene		
	8260D-LL- trans-1,2-Dichloroethene		
	8260D-LL- Cyclohexane	QH	High MS/MSD recovery
	8260D-LL- p-Isopropyltoluene		
	8260D-LL- n-Propylbenzene		
	8260D-LL- 1,2,4-Trimethylbenzene		
	8260D-LL- Total xylenes		
	8260D-LL- Trichloroethene	H, QH	Exceeded holding time High MS/MSD recovery
	8260D-LL- Vinyl acetate	H	Exceeded holding time
	8260D-LL- Tetrahydrofuran	QL	Low MS/MSD recovery
	8260D-LL- 2-Butanone (MEK)	J	Result ≥DL but <LOQ
	8260D-LL- Vinyl chloride		
	8260D- 2,2-Dichloropropane	H	Exceeded holding time
	8260D- Hexachloro-1,3-butadiene		
	8260D- 1,1,1-Trichloroethane		
	8260D- Trichloroethene		
	8260D- 2-Chloroethyl vinyl ether	QN	Professional judgment as this compound degrades when acid preserved Poor MS/MSD performance
	8260D- n-Butylbenzene	J	Result ≥DL but <LOQ
	8260D- sec-Butylbenzene		
	8260D- tert-Butylbenzene		
	8260D- p-Isopropyltoluene		
	8260D- 2-Butanone (MEK)		
	8260D- 1,2,3-Trimethylbenzene		
	8260D- 1,2,4-Trimethylbenzene		
	8260D- 1,3,5-Trimethylbenzene		
OT001-EQBK01-101523	8260D-LL- Acetone	QN, J	Exceeded CCV criteria Result ≥DL but <LOQ
	8260D-LL- 1,1,2-Trichlorotrifluoroethane	QN	Exceeded CCV criteria
	8260D-LL- 4-Methyl-2-pentanone (MIBK)		
	8260D-LL- Carbon tetrachloride		
	8260D-LL- Dichlorodifluoromethane		
	8260D-LL- Trichloroethene		
	8260D-LL- Trichlorofluoromethane		
	8260D-LL- trans-1,4-Dichloro-2-butene		
	8260D-LL- Benzene	J	Result ≥DL but <LOQ
	8260D-LL- Carbon disulfide		
	8260D-LL- Ethylbenzene		
	8260D-LL- 1,2,4-Trimethylbenzene		
	8260D-LL- Total xylenes		
	8260D- Benzene		
	8260D- Bromodichloromethane		
	8260D- Chloroform		
	8260D- 1,1-Dichloroethane		
	8260D- Total xylenes		

	8260D- 2-Chloroethyl vinyl ether	QN	Professional judgment as this compound degrades when acid preserved
OT001-TRIPBLANK-HCL-01	8260D-LL- 1,1,2-Trichlorotrifluoroethane	QN	Exceeded CCV criteria
	8260D-LL- 4-Methyl-2-pentanone (MIBK)		
	8260D-LL- Acetone		
	8260D-LL- Carbon tetrachloride		
	8260D-LL- Dichlorodifluoromethane		
	8260D-LL- Trichloroethene		
	8260D-LL- Trichlorofluoromethane		
	8260D-LL- trans-1,4-Dichloro-2-butene		
	8260D-LL- Toluene	J	Result ≥DL but <LOQ
	8260D- 2-Chloroethyl vinyl ether	QN	Professional judgment as this compound degrades when acid preserved

Several sample results were reported above the LOQ, have been assessed, and remain unqualified:

The remaining sample results were not detected and were reported at their respective detection limits (LOD) and were flagged "U" by the laboratory.

Metals Data Review

1. Samples Submitted and Analyses Requested

Sample ID	Lab ID	Type	Matrix	DL	Sample Date	Method(s)	Analysis Date(s)
OT001-DSAMW04-101523	L1667791-01	Field	GW	1	10/15/23	6010D	10/24/23
OT001-DSAMW02-101523	L1667791-02	Field	GW	1	10/15/23	6010D	10/24/23
WP002-BLOMW01-101523	L1667791-03	Field	GW	1 & 5	10/15/23	6010D	10/24/23
OT001-EQBK01-101523	L1667791-04	Equipment Blank	GW	1	10/15/23	6010D	10/24/23

2. Reviewer Preliminary Comments

Review Type: Review Type: [] Level IV (Level 3/4) [X] Level III (Level 2b)

Four (4) ground water samples were submitted to Pace Analytical for metals analysis by USEPA Method 6010D. The samples were received intact by the lab on 10/18/2023 at 4.0°C. The data has been validated to a Level 2b.

6. ICP Calibration	**Y**	**N**	**NA**
Are calibration data for ICP present in the data submittal?	**X**		
If **not** present, has all ICP calibration criteria (i.e. ICV, CCV, LLC, etc.) been met per the case narrative?			**X**
If present, is the ICV recovery within ±10% of reference value? (**Method 6010C**, Section 10.3.2.1)		**X**	
If present, is the lower limit of quantitation check sample recovery (LLC or CRDL standard) within ±30% of reference value? (Method 6010C, Sections 10.1.3.1, 10.3.2.1, and 10.3.4)	**X**		

6. ICP Calibration	Y	N	NA
If present, is a mid-level Continuing Calibration Verification (CCV) standard recovery within ±10% of reference value? (**Method 6010C**, Sections 10.3.4)	**X**		

Reviewer Comments: The initial calibration verification (ICV) for iron (122%) was outside of the 90-110% acceptance criteria. However, no data qualifications were warranted as the sample results were not bracketed by the ICV. The initial calibration consisted of at least three standards plus a blank. The associated correlation coefficients were acceptable. The run sequence was acceptable. The remaining ICV recoveries, and all continuing calibration verification (CCV) recovery results were acceptable. No further data qualifications were appended to the associated sample results due to calibration considerations.

8. Interference Check Sample	Y	N	NA
Are interference check standard data present in the data submittal?	**X**		
If not present, was the interference check standard criteria met per the case narrative?			**X**
Were the ICSAB recoveries within acceptance criteria of 80-120%? (**Method 6010C**, Section 4.2.10.2)	**X**		
Action: Use technical judgment to assess any potential interferences. Indicate affected samples in validation comments. For additional aid in assessing potential effects, consult general tables of interelement contributions at critical wavelengths; e.g. as in reference SW-846 6010B (and for atypical metals, other references). ICP-MS interferences in m/e regions may often be evaluated by comparing more differing quantitative ions for the same element. * Qualify only if the deviation indicates an adverse effect on data quality. ** Discuss impact of high concentrations on results.			

Reviewer Comments: Interference check standard recovery results were within the 80-120% acceptance criteria. No data qualifications were warranted.

9. Serial Dilution Analysis	Y	N	NA
Are serial dilution data present in the data submittal?	**X**		
Have field or equipment blanks <u>not</u> been used for the serial dilution analysis?		**X**	
Is one serial dilution analysis performed for each matrix in every batch with a minimum of one serial dilution per twenty samples?	**X**		
Is a dilution test run on a sample that fails both pre- and post-digestion spike analysis? (**Method 6010C**, Section 9.9.1; **Method 6020A**, Section 9.11.2; and **Method 7000B**, Section 9.8.1)	**X**		
For samples with concentrations that are minimally a factor of 50x above the method detection limit (MDL) (or detection limit) before a 1:4 dilution, was the serial dilution %D criterion of 10% met (**Method 6010C**, Section 9.9.2 and **Method 6020A**, Section 9.11.2)	**X**		
(**Hg**) For samples with concentrations that are minimally a factor of 10x above the method detection limit (MDL) (or detection limit DL) limit after a 1:5 dilution, was the serial dilution %D criterion of 10% met (**Method 7000B**, Section 9.8.2)			**X**
Action: Indicate affected samples in validation comments. * Qualify only if the deviation indicates an adverse effect on data quality.			

Reviewer Comments: All serial dilution (SDS) recovery results were within the 10%D acceptance criteria. No data

qualifications were warranted.

10. Method Quantitation Limits	Y	N	NA
Does the method quantitation limit (established by the lowest concentration calibration standard) meet project requirements? (**Method 8000**, Sections 7.4.1.2 and 7.4.1.4)	**X**		
Are only those results that fall between the lowest and highest calibration standards reported (i.e., no "J" values or values between the MDL and low standard or above the high standard)? (**Method 8000**, Section 7.4)	**X**		
Action: Indicate non-correctable contract compliance deviations below If MQL>RDL, reanalysis may be warranted.			

Reviewer Comments: Manganese in sample OT001-EQBK01-101523 was "J" flagged by the laboratory due to sample results greater than the detection limit (DL) but below the limit of quantitation (LOQ). A "J" validation flag has been applied to manganese in sample OT001-EQBK01-101523.

11. Overall Comments:

Overall, the data meet the requirements and intent of the methods, indicate the preparatory process and analytical system were in control at the time of sample analysis, and the reported laboratory results are of sufficient quality for their intended purpose.

Sample Qualifications Summary Table			
Sample ID	Analyte	Validation Flag	Qualification Reason(s)
OT001-EQBK01-101523	Manganese (Mn)	J, QL	Results between the MDL and LOQ & Low MS/MSD Recovery
Remaining Samples	Manganese (Mn)	QL	Low MS/MSD Recovery

Iron in sample OT001-EQBK01-101523 was non-detect and the remaining sample results were reported above the limit of quantitation, have been assessed and remain unqualified.

Wet Chem Data Review

3. Samples Submitted and Analyses Requested

Sample ID	Lab ID	Type	Matrix	Sample Date	Analysis Method	Analysis Date
OT001-DSAMW04-101523	L1667791-01	Field	GW	10/15/23	SM 2320B	10/23/23
					EPA 351.2	10/24/23
					EPA 353.2	10/20/23
					SW-846 9056A	10/25/23
OT001-DSAMW02-101523	L1667791-02	Field	GW	10/15/23	SM 2320B	10/23/23
					EPA 351.2	10/22/23
					EPA 353.2	10/20/23
					SW-846 9056A	10/25/23
WP002-BLOMW01-	L1667791-03	Field	GW	10/15/23	SM 2320B	10/23/23

Level 2b Data Review

Project ID:	**Port Heiden RRS 21-034**	**Lab Name:**	**Pace Analytical National**
SOW No.	**South Optimized Remediation Contract**	**SDG No.**	**L1667791**

3. Samples Submitted and Analyses Requested

Sample ID	Lab ID	Type	Matrix	Sample Date	Analysis Method	Analysis Date
101523					EPA 351.2	10/22/23
					EPA 353.2	10/20/23
					SW-846 9056A	10/25/23
OT001-EQBK01-101523	L1667791-04	Equipment Blank	GW	10/15/23	SM 2320B	10/23/23
					EPA 351.2	10/25/23
					EPA 353.2	10/20/23
					SW-846 9056A	10/25/23

4. Reviewer Preliminary Comments

Review Type: [] Level IV (Level 3 or 4) [X] Level III (Level 2b) [] Level II (Level 2a)
Confirm that narrative is present and complete; note overall initial indications.

Four (4) ground water samples were submitted to Pace Analytical National and were received intact by the lab on 10/18/2023 at 2.0°C. They were analyzed for the following:

- Alkalinity by SM 2320B
- TKN by EPA 351.2
- Nitrate/Nitrite by EPA 353.2
- Sulfate by SW-846 9056A

7. Calibration	Y	N	NA
Are calibration data present in the data submittal?	**X**		
Anions			
Was initial calibration (IC) performed prior to the sample analyses?	**X**		
Were at least 4 standard concentrations used for each analyte of interest in the IC?	**X**		
Were appropriate IC standard concentrations used?	**X**		
Is the IC correlation coefficient (linear regression) for each analyte ≥0.995?	**X**		
Was an initial calibration verification (ICV) standard (second source) run immediately after IC?	**X**		
Are analyte recoveries in the ICV within ±10% of reference values?		**X**	
Was a calibration check standard (CCV) run after every 10th sample and at the end of the sequence?	**X**		
Are analyte recoveries in the CCVs within ±10% of the reference values?	**X**		
Was the system recalibrated and affected samples re-analyzed if the ICV or a CCV was outside acceptance criteria?	**X**		
Were retention times (RTs) of individual anions consistent throughout the reported analyses?	**X**		
TKN			
Are initial and continuing calibration results included in the data package?	**X**		
Were at least 4 standards used to calibrate the instrument?	**X**		
Were the IC standards run in order of decreasing concentration?	**X**		
Were appropriate IC standard concentrations used?	**X**		
Is the IC correlation coefficient (linear regression) ≥0.995?	**X**		
Was an ICV standard (second source) run immediately after IC?	**X**		
Was the target analyte recovery in the ICV within ±10% of reference value?	**X**		
Was a CCV run after every 10 samples, or at least once every two hours?	**X**		
Were CCV recoveries within ±10% of the reference value?	**X**		
Was the system recalibrated and affected samples re-analyzed if the ICV or a CCV was outside			**X**

Level 2b Data Review

Project ID:	**Port Heiden RRS 21-034**	**Lab Name:**	**Pace Analytical National**
SOW No.	**South Optimized Remediation Contract**	**SDG No.**	**L1667791**

7. Calibration	Y	N	NA
acceptance criteria?			
Nitrate/Nitrite			
Are initial and continuing calibration results included in the data package?	X		
Were at least 4 standards used to calibrate the instrument?	X		
Were the initial calibration standards run in order of decreasing concentration?	X		
Were appropriate initial calibration standard concentrations used?	X		
Is the initial calibration correlation coefficient (linear regression) ≥0.995?	X		
Was an ICV standard (second source) run immediately after initial calibration?	X		
Was the target analyte recovery in the ICV within ±10% of reference value?	X		
Was a CCV run after every 10 samples, or at least once every two hours?	X		
Were CCV recoveries within ±10% of the reference value?	X		
Was the system recalibrated and affected samples re-analyzed if the ICV or a CCV was outside acceptance criteria?			X
Standardization for Total Alkalinity			
Are standardization data present in the package?	X		
Were the 0.02N and 0.1N H2SO4 solutions standardized against a primary sodium bicarbonate standard?	X		
For potentiometric titrations, was the pH meter calibrated prior to titration?	X		
Is the initial pH documented for each sample or QC sample analyzed?	X		
Is the titrant volume used to reach pH 8.3 recorded for each sample or QC sample analyzed?	X		
Is the titrant volume used to reach pH 4.5 recorded for each sample or QC sample analyzed?	X		
Is the titrant volume used to reach pH 4.2 recorded for each sample or QC sample analyzed?	X		
Action: Sample results associated with unacceptable calibration results, especially when the responses suggest high variability or sensitivity problems should be J/UJ qualified. Use professional judgment to determine if sample results warrant rejection or if qualifiers are not necessary – explain.			

Reviewer Comments: The initial calibration verification (ICV) recovery result for sulfate (133%) was outside of the 90-110% acceptance criteria; however, no data qualifications were warranted as the sample results were not bracketed by the ICV. The associated correlation coefficients were acceptable. The run sequence was acceptable. The remaining ICV/CCV recovery results were acceptable. No data qualifications were appended to the associated sample results due to calibration considerations. associated sample results due to calibration considerations.

11. Method Quantitation Limits	Y	N	NA
Does the method quantitation limit (established by the lowest concentration calibration standard) meet project requirements? (**Method 8000**, Sections 7.4.1.2 and 7.4.1.4)	X		
Are only those results that fall between the lowest and highest calibration standards reported (i.e., no "J" values or values between the MDL and low standard or above the high standard)? (**QSAS**, Sections 5.5.2.2.1.f and 5.5.2.2.1.g, and **Method 8000**, Section 7.4)		X	
Action: Indicate non-correctable contract compliance deviations below If MQL>RDL, reanalysis may be warranted.			

Reviewer Comments: The following results were "J" flagged by the laboratory due to sample results greater than the MDL but below the LOQ. A "J" validation flag has been applied to these results:

- TKN in samples OT001-DSAMW05-101523 and WP002-BLOMW01-101523.
- Sulfate in samples WP002-BLOMW01-101523 and OT001-EQBK01-101523.

13. Sample Result Verification
Validation Step
For the following evaluation, some qualification of sample data may be possible. For contractual noncompliance, a validation code is placed if the occurrence is non-correctable.
1. For each analysis, recalculate 2 or more selected results from the raw data. **NA.**
2. Did recalculation confirm reported results? **NA.** If not, increase the frequency of recalculations until adequate confidence is gained in the reported results.
3. Were results from diluted samples corrected for the dilution factor? **NA.**
Action: Indicate instances of manual calculations not confirming reported results. Where samples have been reanalyzed, and both analyses are included in the data package, indicate on the laboratory reporting forms which results are the most reliable.

14. Inorganics Analytical Data Flags:

The following table provides data qualifiers used in **validation**.

Qualifier	Definition
J	The analyte result is considered an estimated value because the level is below the laboratory LOQ but above the DL.
B	Analyte result is considered a high estimated value due to contamination present in the blank.
H	Analyte result is considered a low estimate due to holding time exceedance.
QH, QL, QN	QH, QL, QN Analyte result is considered an estimated value biased (high, low, uncertain) due to matrix effects or a quality control failure.
R	Analyte result is rejected – result is not usable. Note that "R" replaces the chemical result (no result shall be reported with a "R" flag).

15. Overall Comments:

Overall, the data meet the requirements and intent of the methods, indicate the preparatory process and analytical system were in control at the time of sample analysis, and the reported laboratory results are of sufficient quality for their intended purpose.

Sample Qualifications Summary Table			
Sample ID	Analyte	Validation Flag	Qualification Reason(s)
OT001-DSAMW05-101523 & WP002-BLOMW01-101523	TKN	J, QH	High MS/MSD recovery & Results between the MDL and LOQ
Remaining Samples	TKN	QH	High MS/MSD recovery
WP002-BLOMW01-101523 & OT001-EQBK01-101523	Sulfate	J, QL	Low MS/MSD recovery & Results between the MDL and LOQ
Remaining Samples	Sulfate	QL	Low MS/MSD recovery

Level 2b Data Review

Project ID:	**Port Heiden RRS 21-034**	**Lab Name:**	**Pace Analytical National**
SOW No.	**South Optimized Remediation Contract**	**SDG No.**	**L1667791**

The remaining results were either non-detect and qualified with a 'U' laboratory flag or were reported above the limit of quantitation, have been assessed, and remain unqualified.

Data Validator	Data Validation Reviewer
Name: Sherrie Robinson	Name: Amber Brinly
Title: Staff Scientist	Title: Staff Scientist
Company: North Wind Site Services	Company: North Wind Portage
Signature: Sherrie Robinson	Signature: Amber Brinly
Date: 08/14/24	Date: 08/15/24

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

L1667791-01,02,03,04,05

SAMPLE NO.:
R3990575-6
R3990575-7

MS Sample / File ID: R3990575-6 / 1022_29
MSD Sample / File ID: R3990575-7 / 1022_30
OS Sample / File ID: L1667791-03 / 1022_22
Instrument ID: VOCMS37
Analytical Method: 8260D

SDG: L1667791
Analytical Batch: WG2155682
Matrix: GW

Analyte	Spike Amount	OS Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	RPD	RPD Limit
	ug/l	*ug/l*	*ug/l*	*ug/l*	*%*	*%*		*%*	*%*	*%*
Acetone	25.0	5.59	31.6	28.1	104	90.0	1	39.0 - 160	11.7	40
Acrylonitrile	25.0	0.250	28.0	29.6	112	118	1	63.0 - 135	5.56	40
Benzene	5.00	1.52	7.06	7.51	111	120	1	79.0 - 120	6.18	37
Bromobenzene	5.00	0.250	5.38	6.01	108	120	1	80.0 - 120	11.1	38
Bromodichloromethane	5.00	0.100	5.58	5.97	112	119	1	79.0 - 125	6.75	37
Bromochloromethane	5.00	0.100	5.82	6.57	116	131*	1	78.0 - 123	12.1	33
Bromoform	5.00	0.500	5.00	5.34	100	107	1	66.0 - 130	6.58	36
Bromomethane	5.00	0.500	5.29	5.42	106	108	1	53.0 - 141	2.43	38
n-Butylbenzene	5.00	0.500	4.20	4.17	84.0	83.4	1	75.0 - 128	0.717	40
sec-Butylbenzene	5.00	0.344	6.82	7.37	130*	141*	1	77.0 - 126	7.75	39
tert-Butylbenzene	5.00	0.861	6.94	7.39	122	131*	1	78.0 - 124	6.28	39
Carbon tetrachloride	5.00	0.100	6.86	7.43	137*	149*	1	72.0 - 136	7.98	37
Carbon disulfide	5.00	0.500	5.39	6.09	108	122	1	64.0 - 133	12.2	39
Chlorobenzene	5.00	0.0500	5.72	6.01	114	120*	1	82.0 - 118	4.94	39
Chlorodibromomethane	5.00	0.0500	5.53	5.90	111	118	1	74.0 - 126	6.47	37
Chloroethane	5.00	0.100	5.11	5.75	102	115	1	60.0 - 138	11.8	40
Chloroform	5.00	0.0500	6.31	6.57	126*	131*	1	79.0 - 124	4.04	37
Chloromethane	5.00	0.250	5.49	6.21	110	124	1	50.0 - 139	12.3	37
Cyclohexane	5.00	1.41	6.47	8.11	101	134*	1	71.0 - 130	22.5	32
2-Chlorotoluene	5.00	0.100	5.91	6.54	118	131*	1	79.0 - 122	10.1	38
4-Chlorotoluene	5.00	0.100	5.57	6.24	111	125*	1	78.0 - 122	11.3	39
1,2-Dibromo-3-Chloropropane	5.00	0.500	5.49	6.29	110	126	1	62.0 - 128	13.6	39
1,2-Dibromoethane	5.00	0.0500	5.48	5.72	110	114	1	77.0 - 121	4.29	34
Dibromomethane	5.00	0.100	5.37	5.93	107	119	1	79.0 - 123	9.91	35
1,2-Dichlorobenzene	5.00	0.200	6.01	6.59	120*	132*	1	80.0 - 119	9.21	37
1,3-Dichlorobenzene	5.00	0.200	6.01	6.63	120*	133*	1	80.0 - 119	9.81	38
1,4-Dichlorobenzene	5.00	0.250	5.53	5.80	111	116	1	79.0 - 118	4.77	38
Dichlorodifluoromethane	5.00	0.100	6.08	6.48	122	130	1	32.0 - 152	6.37	35
1,1-Dichloroethane	5.00	0.0500	5.96	6.47	119	129*	1	77.0 - 125	8.21	37
1,2-Dichloroethane	5.00	0.0500	5.80	5.76	116	115	1	73.0 - 128	0.692	35
1,1-Dichloroethene	5.00	0.0500	6.37	6.82	127	136*	1	71.0 - 131	6.82	37
cis-1,2-Dichloroethene	5.00	12.4	18.5	19.0	122	132	1	10.0 - 149	2.67	37
trans-1,2-Dichloroethene	5.00	0.0850	6.24	6.81	123	135*	1	75.0 - 124	8.74	37
1,2-Dichloropropane	5.00	0.200	5.58	5.93	112	119	1	78.0 - 122	6.08	37
1,1-Dichloropropene	5.00	0.100	6.62	7.12	132*	142*	1	79.0 - 125	7.28	35
1,3-Dichloropropane	5.00	0.150	5.77	6.15	115	123*	1	80.0 - 119	6.38	35
cis-1,3-Dichloropropene	5.00	0.100	5.27	5.82	105	116	1	10.0 - 151	9.92	37
trans-1,3-Dichloropropene	5.00	0.150	5.53	5.69	111	114	1	73.0 - 127	2.85	37
2,2-Dichloropropane	5.00	0.100	5.47	6.17	109	123	1	60.0 - 139	12.0	36
Di-isopropyl ether	5.00	0.0500	5.64	6.49	113	130*	1	67.0 - 128	14.0	36
Ethylbenzene	5.00	6.74	12.2	12.4	109	113	1	79.0 - 121	1.63	38
Hexachloro-1,3-butadiene	5.00	2.00	6.53	6.46	131	129	1	66.0 - 134	1.08	40
Isopropylbenzene	5.00	7.47	13.5	14.0	121	131	1	72.0 - 131	3.64	38

*: Value outside the established quality control limits.
D: Surrogate recovery cannot be used for control limit evaluation due to dilution.

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

L1667791-01,02,03,04,05

SAMPLE NO.:
R3990575-6
R3990575-7

MS Sample / File ID: R3990575-6 / 1022_29
MSD Sample / File ID: R3990575-7 / 1022_30
OS Sample / File ID: L1667791-03 / 1022_22
Instrument ID: VOCMS37
Analytical Method: 8260D

SDG: L1667791
Analytical Batch: WG2155682
Matrix: GW

Analyte	Spike Amount	OS Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	RPD	RPD Limit
	ug/l	*ug/l*	*ug/l*	*ug/l*	*%*	*%*		*%*	*%*	*%*
p-Isopropyltoluene	5.00	2.58	8.97	9.78	128*	144*	1	77.0 - 127	8.64	40
2-Butanone (MEK)	25.0	2.00	27.3	29.1	101	108	1	56.0 - 143	6.38	40
Methylene Chloride	5.00	0.750	5.25	5.67	105	113	1	74.0 - 124	7.69	37
4-Methyl-2-pentanone (MIBK)	25.0	1.00	28.2	30.6	113	122	1	67.0 - 130	8.16	35
Methyl tert-butyl ether	5.00	0.0300	5.24	5.81	105	116	1	71.0 - 124	10.3	35
Naphthalene	5.00	50.7	54.4	56.3	74.0	112	1	61.0 - 128	3.43	36
n-Propylbenzene	5.00	1.98	8.71	9.07	135*	142*	1	76.0 - 126	4.05	38
Styrene	5.00	0.250	6.40	6.87	128*	137*	1	78.0 - 123	7.08	40
1,1,1,2-Tetrachloroethane	5.00	0.0500	5.39	5.92	108	118	1	71.0 - 121	9.37	39
1,1,2,2-Tetrachloroethane	5.00	0.0500	7.12	7.52	142	150	1	10.0 - 160	5.46	35
1,1,2-Trichlorotrifluoroethane	5.00	0.100	6.31	6.69	126	134	1	70.0 - 136	5.85	36
Tetrachloroethene	5.00	0.165	6.27	6.53	122	127	1	74.0 - 129	4.06	39
Toluene	5.00	0.404	6.30	6.75	118	127*	1	80.0 - 121	6.90	38
1,2,3-Trichlorobenzene	5.00	0.250	6.21	7.42	124	148*	1	69.0 - 129	17.8	40
1,2,4-Trichlorobenzene	5.00	0.500	6.93	7.36	139*	147*	1	69.0 - 130	6.02	40
1,1,1-Trichloroethane	5.00	0.0500	6.48	6.98	130	140	1	10.0 - 144	7.43	35
1,1,2-Trichloroethane	5.00	0.100	5.79	6.00	116	120*	1	80.0 - 119	3.56	35
Trichloroethene	5.00	5.21	11.5	11.7	126*	130*	1	79.0 - 123	1.72	38
Trichlorofluoromethane	5.00	0.0500	6.28	7.18	126	144*	1	65.0 - 141	13.4	40
1,2,3-Trichloropropane	5.00	0.500	5.13	5.13	103	103	1	73.0 - 122	0.000	35
1,2,4-Trimethylbenzene	5.00	0.531	6.96	7.61	129*	142*	1	76.0 - 124	8.92	36
1,2,3-Trimethylbenzene	5.00	0.100	6.21	5.66	124*	113	1	82.0 - 120	9.27	36
1,3,5-Trimethylbenzene	5.00	0.100	5.83	6.39	117	128*	1	75.0 - 124	9.17	38
Vinyl chloride	5.00	0.137	6.36	6.89	124	135	1	58.0 - 137	8.00	37
Xylenes, Total	15.0	3.55	21.3	22.4	118	126*	1	79.0 - 121	5.03	38
Ethyl Ether	5.00	0.0500	5.11	5.38	102	108	1	10.0 - 160	5.15	31
Tetrahydrofuran	5.00	0.250	2.22	2.49	44.4*	49.8*	1	57.0 - 133	11.5	33
Iodomethane	25.0	0.500	28.8	32.0	115	128	1	69.0 - 131	10.5	38
Allyl chloride	25.0	2.00	29.4	31.7	118	127	1	68.0 - 130	7.53	30
trans-1,4-Dichloro-2-butene	5.00	0.200	4.48	2.57	89.6	51.4	1	43.0 - 140	54.2*	36

*: Value outside the established quality control limits.
D: Surrogate recovery cannot be used for control limit evaluation due to dilution.

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW05-101523

Lab Sample ID:	L1667791-01	**SDG:**	L1667791
Client Sample ID:	OT001-DSAMW05-101523	**Collected Date/Time:**	10/15/23 10:00
Lab File ID:	1022_20	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 06:33
Analytical Batch:	WG2155682	**Analysis Date/Time:**	10/22/23 06:33
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		ug/l	ug/l	ug/l
Acetone	67-64-1	3.04	1.67 B QN J	J	0.548	2.00	4.00
Acrylonitrile	107-13-1	0	0.250	U	0.0760	0.250	0.500
Bromobenzene	108-86-1	0	0.250	U	0.0420	0.250	0.500
Bromodichloromethane	75-27-4	0	0.100	U	0.0315	0.100	0.200
Bromochloromethane	74-97-5	0	0.100	U	0.0452	0.100	0.200
Bromoform	75-25-2	0	0.500	U	0.239	0.500	1.00
Bromomethane	74-83-9	2.23	0.500	U	0.148	0.500	1.00
n-Butylbenzene	104-51-8	0	0.500	U	0.154	0.500	1.00
sec-Butylbenzene	135-98-8	7.78	0.250	U	0.101	0.250	0.500
tert-Butylbenzene	98-06-6	0	0.500	U	0.0620	0.500	1.00
Carbon tetrachloride	56-23-5	0	0.100 QN	U	0.0432	0.100	0.200
Carbon disulfide	75-15-0	2.71	0.500	U	0.162	0.500	1.00
Chlorobenzene	108-90-7	0	0.0500	U	0.0229	0.0500	0.100
Chlorodibromomethane	124-48-1	0	0.0500	U	0.0180	0.0500	0.100
Chloroethane	75-00-3	0	0.100	U	0.0432	0.100	0.200
Chloroform	67-66-3	3.89	0.0500	U	0.0166	0.0500	0.100
Chloromethane	74-87-3	1.89	0.250	U	0.0556	0.250	0.500
Cyclohexane	110-82-7	3.89	0.0500	U	0.0203	0.0500	0.100
2-Chlorotoluene	95-49-8	0	0.100	U	0.0368	0.100	0.200
4-Chlorotoluene	106-43-4	7.48	0.100	U	0.0452	0.100	0.200
1,2-Dibromo-3-Chloropropane	96-12-8	0	0.500	U	0.204	0.500	1.00
1,2-Dibromoethane	106-93-4	0	0.0500	U	0.0210	0.0500	0.100
Dibromomethane	74-95-3	0	0.100	U	0.0400	0.100	0.200
1,2-Dichlorobenzene	95-50-1	0	0.200	U	0.0580	0.200	0.400
1,3-Dichlorobenzene	541-73-1	0	0.200	U	0.0680	0.200	0.400
1,4-Dichlorobenzene	106-46-7	0	0.250	U	0.0788	0.250	0.500
Dichlorodifluoromethane	75-71-8	1.76	0.100	U	0.0327	0.100	0.200
1,1-Dichloroethane	75-34-3	0	0.0500	U	0.0230	0.0500	0.100
1,2-Dichloroethane	107-06-2	4.34	0.0390 J	J	0.0190	0.0500	0.100
1,1-Dichloroethene	75-35-4	0	0.0500	U	0.0200	0.0500	0.100
cis-1,2-Dichloroethene	156-59-2	3.80	0.0750	U	0.0276	0.0750	0.150
trans-1,2-Dichloroethene	156-60-5	0	0.300	U	0.0572	0.300	0.600
1,2-Dichloropropane	78-87-5	0	0.200	U	0.0508	0.200	0.400
1,1-Dichloropropene	563-58-6	4.09	0.100	U	0.0280	0.100	0.200
1,3-Dichloropropane	142-28-9	0	0.150	U	0.0700	0.150	0.300
cis-1,3-Dichloropropene	10061-01-5	0	0.100	U	0.0271	0.100	0.200
trans-1,3-Dichloropropene	10061-02-6	0	0.150	U	0.0612	0.150	0.300
2,2-Dichloropropane	594-20-7	3.78	0.100	U	0.0317	0.100	0.200
Di-isopropyl ether	108-20-3	3.34	0.0500	U	0.0140	0.0500	0.100
Ethylbenzene	100-41-4	6.41	0.0400 JB	J	0.0212	0.0500	0.100
Hexachloro-1,3-butadiene	87-68-3	0	2.00	U	0.508	2.00	4.00
Isopropylbenzene	98-82-8	7.04	1.00	U	0.0345	1.00	2.00
p-Isopropyltoluene	99-87-6	0	0.300	U	0.0932	0.300	0.600

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW05-101523

Lab Sample ID:	L1667791-01	**SDG:**	L1667791
Client Sample ID:	OT001-DSAMW05-101523	**Collected Date/Time:**	10/15/23 10:00
Lab File ID:	1022_20	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 06:33
Analytical Batch:	WG2155682	**Analysis Date/Time:**	10/22/23 06:33
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result		Qualifier	DL	LOD	LOQ
			ug/l			*ug/l*	*ug/l*	*ug/l*
2-Butanone (MEK)	78-93-3	4.13	1.00		U	0.500	1.00	2.00
Methylene Chloride	75-09-2	0	0.750		U	0.266	0.750	1.50
4-Methyl-2-pentanone (MIBK)	108-10-1	0	1.00		U	0.400	1.00	2.00
Methyl tert-butyl ether	1634-04-4	0	0.0300		U	0.0118	0.0300	0.0600
Naphthalene	91-20-3	0	0.250		U	0.125	0.250	0.500
n-Propylbenzene	103-65-1	7.31	0.100		U	0.0472	0.100	0.200
Styrene	100-42-5	0	0.250		U	0.109	0.250	0.500
1,1,1,2-Tetrachloroethane	630-20-6	0	0.0500		U	0.0200	0.0500	0.100
1,1,2,2-Tetrachloroethane	79-34-5	0	0.0500		U	0.0156	0.0500	0.100
1,1,2-Trichlorotrifluoroethane	76-13-1	0	0.100		U	0.0270	0.100	0.200
Tetrachloroethene	127-18-4	0	0.0750		U	0.0280	0.0750	0.150
1,2,3-Trichlorobenzene	87-61-6	0	0.250		U	0.0250	0.250	0.500
1,2,4-Trichlorobenzene	120-82-1	0	0.500		U	0.193	0.500	1.00
1,1,1-Trichloroethane	71-55-6	4.01	0.0500		U	0.0110	0.0500	0.100
1,1,2-Trichloroethane	79-00-5	0	0.100		U	0.0353	0.100	0.200
Trichlorofluoromethane	75-69-4	2.35	0.0500	QN	U	0.0200	0.0500	0.100
1,2,3-Trichloropropane	96-18-4	0	0.500		U	0.204	0.500	1.00
1,2,3-Trimethylbenzene	526-73-8	8.07	0.100		U	0.0460	0.100	0.200
1,3,5-Trimethylbenzene	108-67-8	7.39	0.100		U	0.0432	0.100	0.200
Vinyl chloride	75-01-4	2.01	0.0750		U	0.0273	0.0750	0.150
Xylenes, Total	1330-20-7	6.84	0.400		U	0.191	0.400	0.800
Ethyl Ether	60-29-7	0	0.0500		U	0.0170	0.0500	0.100
Tetrahydrofuran	109-99-9	4.01	0.250		U	0.0900	0.250	50.0
Iodomethane	74-88-4	0	0.500		U	0.242	0.500	1.00
Allyl chloride	107-05-1	0	2.00		U	0.580	2.00	4.00
trans-1,4-Dichloro-2-butene	110-57-6	0	0.200	QN	C4 U	0.0560	0.200	0.400

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW05-101523

Lab Sample ID:	L1667791-01	**SDG:**	L1667791
Client Sample ID:	OT001-DSAMW05-101523	**Collected Date/Time:**	10/15/23 10:00
Lab File ID:	1026_45	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS57	**Preparation Date/Time:**	10/26/23 22:58
Analytical Batch:	WG2157275	**Analysis Date/Time:**	10/26/23 22:58
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		ug/l	ug/l	ug/l
Benzene	71-43-2	4.16	0.0500	U	0.0160	0.0500	0.100
Toluene	108-88-3	5.33	0.116 JB	J	0.0500	0.100	0.200
Trichloroethene	79-01-6	4.48	3.91		0.0160	0.0400	0.0800
1,2,4-Trimethylbenzene	95-63-6	7.66	0.100	U	0.0464	0.100	0.200
Vinyl acetate	108-05-4	0	0.300	U	0.141	0.300	0.600

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW02-101523

Lab Sample ID:	L1667791-02	**SDG:**	L1667791
Client Sample ID:	OT001-DSAMW02-101523	**Collected Date/Time:**	10/15/23 11:20
Lab File ID:	1022_21	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 06:53
Analytical Batch:	WG2155682	**Analysis Date/Time:**	10/22/23 06:53
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l
Acetone	67-64-1	3.04	2.53 B QN J	J	0.548	2.00	4.00
Acrylonitrile	107-13-1	0	0.250	U	0.0760	0.250	0.500
Benzene	71-43-2	4.23	0.154 B		0.0160	0.0500	0.100
Bromobenzene	108-86-1	0	0.250	U	0.0420	0.250	0.500
Bromodichloromethane	75-27-4	0	0.100	U	0.0315	0.100	0.200
Bromochloromethane	74-97-5	0	0.100	U	0.0452	0.100	0.200
Bromoform	75-25-2	0	0.500	U	0.239	0.500	1.00
Bromomethane	74-83-9	2.28	0.500	U	0.148	0.500	1.00
n-Butylbenzene	104-51-8	0	0.500	U	0.154	0.500	1.00
sec-Butylbenzene	135-98-8	7.84	0.250	U	0.101	0.250	0.500
tert-Butylbenzene	98-06-6	0	0.500	U	0.0620	0.500	1.00
Carbon tetrachloride	56-23-5	4.02	0.100 QN	U	0.0432	0.100	0.200
Carbon disulfide	75-15-0	2.71	0.500	U	0.162	0.500	1.00
Chlorobenzene	108-90-7	0	0.0500	U	0.0229	0.0500	0.100
Chlorodibromomethane	124-48-1	0	0.0500	U	0.0180	0.0500	0.100
Chloroethane	75-00-3	0	0.100	U	0.0432	0.100	0.200
Chloroform	67-66-3	3.89	0.148 B		0.0166	0.0500	0.100
Chloromethane	74-87-3	0	0.250	U	0.0556	0.250	0.500
Cyclohexane	110-82-7	3.87	0.0750 J	J	0.0203	0.0500	0.100
2-Chlorotoluene	95-49-8	0	0.100	U	0.0368	0.100	0.200
4-Chlorotoluene	106-43-4	0	0.100	U	0.0452	0.100	0.200
1,2-Dibromo-3-Chloropropane	96-12-8	0	0.500	U	0.204	0.500	1.00
1,2-Dibromoethane	106-93-4	0	0.0500	U	0.0210	0.0500	0.100
Dibromomethane	74-95-3	0	0.100	U	0.0400	0.100	0.200
1,2-Dichlorobenzene	95-50-1	0	0.200	U	0.0580	0.200	0.400
1,3-Dichlorobenzene	541-73-1	0	0.200	U	0.0680	0.200	0.400
1,4-Dichlorobenzene	106-46-7	0	0.250	U	0.0788	0.250	0.500
Dichlorodifluoromethane	75-71-8	0	0.100	U	0.0327	0.100	0.200
1,1-Dichloroethane	75-34-3	3.45	0.0500	U	0.0230	0.0500	0.100
1,2-Dichloroethane	107-06-2	4.34	0.0490 J	J	0.0190	0.0500	0.100
1,1-Dichloroethene	75-35-4	0	0.0500	U	0.0200	0.0500	0.100
cis-1,2-Dichloroethene	156-59-2	3.82	0.0750	U	0.0276	0.0750	0.150
trans-1,2-Dichloroethene	156-60-5	3.12	0.300	U	0.0572	0.300	0.600
1,2-Dichloropropane	78-87-5	0	0.200	U	0.0508	0.200	0.400
1,1-Dichloropropene	563-58-6	4	0.100	U	0.0280	0.100	0.200
1,3-Dichloropropane	142-28-9	0	0.150	U	0.0700	0.150	0.300
cis-1,3-Dichloropropene	10061-01-5	0	0.100	U	0.0271	0.100	0.200
trans-1,3-Dichloropropene	10061-02-6	0	0.150	U	0.0612	0.150	0.300
2,2-Dichloropropane	594-20-7	3.78	0.100	U	0.0317	0.100	0.200
Di-isopropyl ether	108-20-3	0	0.0500	U	0.0140	0.0500	0.100
Ethylbenzene	100-41-4	6.43	0.0280 JB	J	0.0212	0.0500	0.100
Hexachloro-1,3-butadiene	87-68-3	0	2.00	U	0.508	2.00	4.00
Isopropylbenzene	98-82-8	7.04	1.00	U	0.0345	1.00	2.00

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW02-101523

Lab Sample ID:	L1667791-02	**SDG:**	L1667791
Client Sample ID:	OT001-DSAMW02-101523	**Collected Date/Time:**	10/15/23 11:20
Lab File ID:	1022_21	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 06:53
Analytical Batch:	WG2155682	**Analysis Date/Time:**	10/22/23 06:53
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result		Qualifier	DL	LOD	LOQ
			ug/l			*ug/l*	*ug/l*	*ug/l*
p-Isopropyltoluene	99-87-6	0	0.300		U	0.0932	0.300	0.600
2-Butanone (MEK)	78-93-3	0	1.00		U	0.500	1.00	2.00
Methylene Chloride	75-09-2	3.01	0.750		U	0.266	0.750	1.50
4-Methyl-2-pentanone (MIBK)	108-10-1	5.62	1.00		U	0.400	1.00	2.00
Methyl tert-butyl ether	1634-04-4	0	0.0300		U	0.0118	0.0300	0.0600
Naphthalene	91-20-3	0	0.250		U	0.125	0.250	0.500
n-Propylbenzene	103-65-1	7.22	0.100		U	0.0472	0.100	0.200
Styrene	100-42-5	0	0.250		U	0.109	0.250	0.500
1,1,1,2-Tetrachloroethane	630-20-6	0	0.0500		U	0.0200	0.0500	0.100
1,1,2,2-Tetrachloroethane	79-34-5	0	0.0500		U	0.0156	0.0500	0.100
1,1,2-Trichlorotrifluoroethane	76-13-1	0	0.100		U	0.0270	0.100	0.200
Tetrachloroethene	127-18-4	0	0.0750		U	0.0280	0.0750	0.150
1,2,3-Trichlorobenzene	87-61-6	0	0.250		U	0.0250	0.250	0.500
1,2,4-Trichlorobenzene	120-82-1	0	0.500		U	0.193	0.500	1.00
1,1,1-Trichloroethane	71-55-6	4.01	1.11			0.0110	0.0500	0.100
1,1,2-Trichloroethane	79-00-5	5.77	0.0670	J	J	0.0353	0.100	0.200
Trichlorofluoromethane	75-69-4	2.34	0.839	QN	C5	0.0200	0.0500	0.100
1,2,3-Trichloropropane	96-18-4	0	0.500		U	0.204	0.500	1.00
1,2,4-Trimethylbenzene	95-63-6	7.77	0.100		U	0.0464	0.100	0.200
1,2,3-Trimethylbenzene	526-73-8	8.08	0.100		U	0.0460	0.100	0.200
1,3,5-Trimethylbenzene	108-67-8	7.42	0.100		U	0.0432	0.100	0.200
Vinyl chloride	75-01-4	0	0.0750		U	0.0273	0.0750	0.150
Xylenes, Total	1330-20-7	6.82	0.400		U	0.191	0.400	0.800
Ethyl Ether	60-29-7	0	0.0500		U	0.0170	0.0500	0.100
Tetrahydrofuran	109-99-9	4	0.250		U	0.0900	0.250	50.0
Iodomethane	74-88-4	0	0.500		U	0.242	0.500	1.00
Allyl chloride	107-05-1	0	2.00		U	0.580	2.00	4.00
trans-1,4-Dichloro-2-butene	110-57-6	0	0.200	QN	C4 U	0.0560	0.200	0.400

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW02-101523

Lab Sample ID:	L1667791-02	**SDG:**	L1667791
Client Sample ID:	OT001-DSAMW02-101523	**Collected Date/Time:**	10/15/23 11:20
Lab File ID:	1026_53	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS57	**Preparation Date/Time:**	10/27/23 01:30
Analytical Batch:	WG2157275	**Analysis Date/Time:**	10/27/23 01:30
Dilution Factor:	20	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	0.25 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
Toluene	108-88-3	5.33	18.1		1.00	2.00	4.00
Trichloroethene	79-01-6	4.48	380		0.320	0.800	1.60
Vinyl acetate	108-05-4	0	6.00	U	2.82	6.00	12.0

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.: WP002-BLOMW01-101523

Lab Sample ID:	L1667791-03	**SDG:**	L1667791
Client Sample ID:	WP002-BLOMW01-101523	**Collected Date/Time:**	10/15/23 12:30
Lab File ID:	1022_22	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 07:12
Analytical Batch:	WG2155682	**Analysis Date/Time:**	10/22/23 07:12
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		ug/l	ug/l	ug/l
Acetone	67-64-1	3.04	5.59	B QN	0.548	2.00	4.00
Acrylonitrile	107-13-1	3.50	0.250	U	0.0760	0.250	0.500
Benzene	71-43-2	4.23	1.52	B	0.0160	0.0500	0.100
Bromobenzene	108-86-1	0	0.250	U	0.0420	0.250	0.500
Bromodichloromethane	75-27-4	4.79	0.100	U	0.0315	0.100	0.200
Bromochloromethane	74-97-5	0	0.100	J5 U	0.0452	0.100	0.200
Bromoform	75-25-2	0	0.500	U	0.239	0.500	1.00
Bromomethane	74-83-9	0	0.500	U	0.148	0.500	1.00
n-Butylbenzene	104-51-8	8.24	0.500	U	0.154	0.500	1.00
sec-Butylbenzene	135-98-8	7.81	0.344	QH J	J J5	0.101	0.250	0.500
tert-Butylbenzene	98-06-6	7.68	0.861	QH J	J J5	0.0620	0.500	1.00
Carbon tetrachloride	56-23-5	0	0.100	QN	J5 U	0.0432	0.100	0.200
Carbon disulfide	75-15-0	2.71	0.500		U	0.162	0.500	1.00
Chlorobenzene	108-90-7	6.36	0.0500		J5 U	0.0229	0.0500	0.100
Chlorodibromomethane	124-48-1	0	0.0500		U	0.0180	0.0500	0.100
Chloroethane	75-00-3	2.37	0.100		U	0.0432	0.100	0.200
Chloroform	67-66-3	3.88	0.0500		J5 U	0.0166	0.0500	0.100
Chloromethane	74-87-3	1.93	0.250		U	0.0556	0.250	0.500
Cyclohexane	110-82-7	3.88	1.41	QH	J5	0.0203	0.0500	0.100
2-Chlorotoluene	95-49-8	7.42	0.100		J5 U	0.0368	0.100	0.200
4-Chlorotoluene	106-43-4	7.60	0.100		J5 U	0.0452	0.100	0.200
1,2-Dibromo-3-Chloropropane	96-12-8	8.99	0.500		U	0.204	0.500	1.00
1,2-Dibromoethane	106-93-4	0	0.0500		U	0.0210	0.0500	0.100
Dibromomethane	74-95-3	0	0.100		U	0.0400	0.100	0.200
1,2-Dichlorobenzene	95-50-1	8.39	0.200		J5 U	0.0580	0.200	0.400
1,3-Dichlorobenzene	541-73-1	7.95	0.200		J5 U	0.0680	0.200	0.400
1,4-Dichlorobenzene	106-46-7	8.07	0.250		U	0.0788	0.250	0.500
Dichlorodifluoromethane	75-71-8	0	0.100		U	0.0327	0.100	0.200
1,1-Dichloroethane	75-34-3	0	0.0500		J5 U	0.0230	0.0500	0.100
1,2-Dichloroethane	107-06-2	4.32	0.0500		U	0.0190	0.0500	0.100
1,1-Dichloroethene	75-35-4	2.67	0.0500		J5 U	0.0200	0.0500	0.100
cis-1,2-Dichloroethene	156-59-2	3.75	12.4			0.0276	0.0750	0.150
trans-1,2-Dichloroethene	156-60-5	3.11	0.0850	QH J	J J5	0.0572	0.300	0.600
1,2-Dichloropropane	78-87-5	4.94	0.200		U	0.0508	0.200	0.400
1,1-Dichloropropene	563-58-6	4.07	0.100		J5 U	0.0280	0.100	0.200
1,3-Dichloropropane	142-28-9	0	0.150		J5 U	0.0700	0.150	0.300
cis-1,3-Dichloropropene	10061-01-5	0	0.100		U	0.0271	0.100	0.200
trans-1,3-Dichloropropene	10061-02-6	5.57	0.150		U	0.0612	0.150	0.300
2,2-Dichloropropane	594-20-7	3.86	0.100		U	0.0317	0.100	0.200
Di-isopropyl ether	108-20-3	3.31	0.0500		J5 U	0.0140	0.0500	0.100
Ethylbenzene	100-41-4	6.38	6.74			0.0212	0.0500	0.100
Hexachloro-1,3-butadiene	87-68-3	0	2.00		U	0.508	2.00	4.00
Isopropylbenzene	98-82-8	6.99	7.47			0.0345	1.00	2.00

12/15/23

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
WP002-BLOMW01-101523

Lab Sample ID:	L1667791-03	**SDG:**	L1667791
Client Sample ID:	WP002-BLOMW01-101523	**Collected Date/Time:**	10/15/23 12:30
Lab File ID:	1022_22	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 07:12
Analytical Batch:	WG2155682	**Analysis Date/Time:**	10/22/23 07:12
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result		Qualifier	DL	LOD	LOQ
			ug/l			ug/l	ug/l	ug/l
p-Isopropyltoluene	99-87-6	7.88	2.58	QH	J5	0.0932	0.300	0.600
2-Butanone (MEK)	78-93-3	4.09	2.00	J	J	0.500	1.00	2.00
Methylene Chloride	75-09-2	3.01	0.750		U	0.266	0.750	1.50
4-Methyl-2-pentanone (MIBK)	108-10-1	5.60	1.00		U	0.400	1.00	2.00
Methyl tert-butyl ether	1634-04-4	0	0.0300		U	0.0118	0.0300	0.0600
Naphthalene	91-20-3	9.85	50.7			0.125	0.250	0.500
n-Propylbenzene	103-65-1	7.30	1.98	QH	J5	0.0472	0.100	0.200
Styrene	100-42-5	0	0.250		J5 U	0.109	0.250	0.500
1,1,1,2-Tetrachloroethane	630-20-6	0	0.0500		U	0.0200	0.0500	0.100
1,1,2,2-Tetrachloroethane	79-34-5	7.38	0.0500		U	0.0156	0.0500	0.100
1,1,2-Trichlorotrifluoroethane	76-13-1	0	0.100		U	0.0270	0.100	0.200
Tetrachloroethene	127-18-4	5.65	0.165			0.0280	0.0750	0.150
Toluene	108-88-3	5.39	0.404	QH B	J5	0.0500	0.100	0.200
1,2,3-Trichlorobenzene	87-61-6	10.02	0.250		J5 U	0.0250	0.250	0.500
1,2,4-Trichlorobenzene	120-82-1	9.65	0.500		J5 U	0.193	0.500	1.00
1,1,1-Trichloroethane	71-55-6	0	0.0500		U	0.0110	0.0500	0.100
1,1,2-Trichloroethane	79-00-5	0	0.100		J5 U	0.0353	0.100	0.200
Trichlorofluoromethane	75-69-4	0	0.0500	QN	J5 U	0.0200	0.0500	0.100
1,2,3-Trichloropropane	96-18-4	7.46	0.500		U	0.204	0.500	1.00
1,2,4-Trimethylbenzene	95-63-6	7.74	0.531	QH	J5	0.0464	0.100	0.200
1,2,3-Trimethylbenzene	526-73-8	8.14	0.100		J5 U	0.0460	0.100	0.200
1,3,5-Trimethylbenzene	108-67-8	7.37	0.100		J5 U	0.0432	0.100	0.200
Vinyl chloride	75-01-4	1.98	0.137	J	J	0.0273	0.0750	0.150
Xylenes, Total	1330-20-7	6.79	3.55	QH	J5	0.191	0.400	0.800
Ethyl Ether	60-29-7	0	0.0500		U	0.0170	0.0500	0.100
Tetrahydrofuran	109-99-9	4.01	0.250	QL	J6 U	0.0900	0.250	50.0
Iodomethane	74-88-4	0	0.500		U	0.242	0.500	1.00
Allyl chloride	107-05-1	0	2.00		U	0.580	2.00	4.00
trans-1,4-Dichloro-2-butene	110-57-6	7.45	0.200	QN	C4 J3 U	0.0560	0.200	0.400

12/15/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
WP002-BLOMW01-101523

Lab Sample ID:	L1667791-03	**SDG:**	L1667791
Client Sample ID:	WP002-BLOMW01-101523	**Collected Date/Time:**	10/15/23 12:30
Lab File ID:	1026_46	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS57	**Preparation Date/Time:**	10/26/23 23:17
Analytical Batch:	WG2157275	**Analysis Date/Time:**	10/26/23 23:17
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
Trichloroethene	79-01-6	4.49	4.21 H QH		0.0160	0.0400	0.0800
Vinyl acetate	108-05-4	0	0.300 H	U	0.141	0.300	0.600

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1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-EQBK01-101523

Lab Sample ID:	L1667791-04	**SDG:**	L1667791
Client Sample ID:	OT001-EQBK01-101523	**Collected Date/Time:**	10/15/23 17:45
Lab File ID:	1022_08	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 02:36
Analytical Batch:	WG2155682	**Analysis Date/Time:**	10/22/23 02:36
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result		Qualifier	DL	LOD	LOQ
			ug/l			ug/l	ug/l	ug/l
Acetone	67-64-1	3.04	1.21	QNJ	J	0.548	2.00	4.00
Acrylonitrile	107-13-1	0	0.250		U	0.0760	0.250	0.500
Benzene	71-43-2	4.23	0.0860	J	J	0.0160	0.0500	0.100
Bromobenzene	108-86-1	0	0.250		U	0.0420	0.250	0.500
Bromodichloromethane	75-27-4	4.88	0.220			0.0315	0.100	0.200
Bromochloromethane	74-97-5	0	0.100		U	0.0452	0.100	0.200
Bromoform	75-25-2	0	0.500		U	0.239	0.500	1.00
Bromomethane	74-83-9	0	0.500		U	0.148	0.500	1.00
n-Butylbenzene	104-51-8	0	0.500		U	0.154	0.500	1.00
sec-Butylbenzene	135-98-8	7.77	0.250		U	0.101	0.250	0.500
tert-Butylbenzene	98-06-6	0	0.500		U	0.0620	0.500	1.00
Carbon tetrachloride	56-23-5	0	0.100	QN	U	0.0432	0.100	0.200
Carbon disulfide	75-15-0	2.71	0.244	J	J	0.162	0.500	1.00
Chlorobenzene	108-90-7	0	0.0500		U	0.0229	0.0500	0.100
Chlorodibromomethane	124-48-1	5.89	0.0500		U	0.0180	0.0500	0.100
Chloroethane	75-00-3	0	0.100		U	0.0432	0.100	0.200
Chloroform	67-66-3	3.89	2.79			0.0166	0.0500	0.100
Chloromethane	74-87-3	1.95	0.250		U	0.0556	0.250	0.500
Cyclohexane	110-82-7	3.89	0.0500		U	0.0203	0.0500	0.100
2-Chlorotoluene	95-49-8	0	0.100		U	0.0368	0.100	0.200
4-Chlorotoluene	106-43-4	7.61	0.100		U	0.0452	0.100	0.200
1,2-Dibromo-3-Chloropropane	96-12-8	0	0.500		U	0.204	0.500	1.00
1,2-Dibromoethane	106-93-4	0	0.0500		U	0.0210	0.0500	0.100
Dibromomethane	74-95-3	0	0.100		U	0.0400	0.100	0.200
1,2-Dichlorobenzene	95-50-1	0	0.200		U	0.0580	0.200	0.400
1,3-Dichlorobenzene	541-73-1	8.07	0.200		U	0.0680	0.200	0.400
1,4-Dichlorobenzene	106-46-7	8.07	0.250		U	0.0788	0.250	0.500
Dichlorodifluoromethane	75-71-8	0	0.100		U	0.0327	0.100	0.200
1,1-Dichloroethane	75-34-3	0	0.0500		U	0.0230	0.0500	0.100
1,2-Dichloroethane	107-06-2	4.33	0.0500		U	0.0190	0.0500	0.100
1,1-Dichloroethene	75-35-4	0	0.0500		U	0.0200	0.0500	0.100
cis-1,2-Dichloroethene	156-59-2	3.80	0.0750		U	0.0276	0.0750	0.150
trans-1,2-Dichloroethene	156-60-5	0	0.300		U	0.0572	0.300	0.600
1,2-Dichloropropane	78-87-5	0	0.200		U	0.0508	0.200	0.400
1,1-Dichloropropene	563-58-6	4.10	0.100		U	0.0280	0.100	0.200
1,3-Dichloropropane	142-28-9	0	0.150		U	0.0700	0.150	0.300
cis-1,3-Dichloropropene	10061-01-5	0	0.100		U	0.0271	0.100	0.200
trans-1,3-Dichloropropene	10061-02-6	0	0.150		U	0.0612	0.150	0.300
2,2-Dichloropropane	594-20-7	3.77	0.100		U	0.0317	0.100	0.200
Di-isopropyl ether	108-20-3	3.40	0.0500		U	0.0140	0.0500	0.100
Ethylbenzene	100-41-4	6.40	0.0920	J	J	0.0212	0.0500	0.100
Hexachloro-1,3-butadiene	87-68-3	0	2.00		U	0.508	2.00	4.00
Isopropylbenzene	98-82-8	7.04	1.00		U	0.0345	1.00	2.00

12/15/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-EQBK01-101523

Lab Sample ID:	L1667791-04	**SDG:**	L1667791
Client Sample ID:	OT001-EQBK01-101523	**Collected Date/Time:**	10/15/23 17:45
Lab File ID:	1022_08	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 02:36
Analytical Batch:	WG2155682	**Analysis Date/Time:**	10/22/23 02:36
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result		Qualifier	DL	LOD	LOQ
			ug/l			ug/l	ug/l	ug/l
p-Isopropyltoluene	99-87-6	7.92	0.300		U	0.0932	0.300	0.600
2-Butanone (MEK)	78-93-3	4.13	1.00		U	0.500	1.00	2.00
Methylene Chloride	75-09-2	3.02	0.750		U	0.266	0.750	1.50
4-Methyl-2-pentanone (MIBK)	108-10-1	0	1.00		U	0.400	1.00	2.00
Methyl tert-butyl ether	1634-04-4	0	0.0300		U	0.0118	0.0300	0.0600
Naphthalene	91-20-3	9.95	0.250		U	0.125	0.250	0.500
n-Propylbenzene	103-65-1	7.32	0.100		U	0.0472	0.100	0.200
Styrene	100-42-5	0	0.250		U	0.109	0.250	0.500
1,1,1,2-Tetrachloroethane	630-20-6	0	0.0500		U	0.0200	0.0500	0.100
1,1,2,2-Tetrachloroethane	79-34-5	0	0.0500		U	0.0156	0.0500	0.100
1,1,2-Trichlorotrifluoroethane	76-13-1	0	0.100		U	0.0270	0.100	0.200
Tetrachloroethene	127-18-4	0	0.0750		U	0.0280	0.0750	0.150
Toluene	108-88-3	5.39	1.30			0.0500	0.100	0.200
1,2,3-Trichlorobenzene	87-61-6	0	0.250		U	0.0250	0.250	0.500
1,2,4-Trichlorobenzene	120-82-1	0	0.500		U	0.193	0.500	1.00
1,1,1-Trichloroethane	71-55-6	0	0.0500		U	0.0110	0.0500	0.100
1,1,2-Trichloroethane	79-00-5	5.67	0.100		U	0.0353	0.100	0.200
Trichloroethene	79-01-6	0	0.0400	QN	U	0.0160	0.0400	0.0800
Trichlorofluoromethane	75-69-4	0	0.0500	QN	U	0.0200	0.0500	0.100
1,2,3-Trichloropropane	96-18-4	0	0.500		U	0.204	0.500	1.00
1,2,4-Trimethylbenzene	95-63-6	7.77	0.0590	J	J	0.0464	0.100	0.200
1,2,3-Trimethylbenzene	526-73-8	8.09	0.100		U	0.0460	0.100	0.200
1,3,5-Trimethylbenzene	108-67-8	7.40	0.100		U	0.0432	0.100	0.200
Vinyl chloride	75-01-4	0	0.0750		U	0.0273	0.0750	0.150
Xylenes, Total	1330-20-7	6.81	0.602	J	J	0.191	0.400	0.800
Ethyl Ether	60-29-7	0	0.0500		U	0.0170	0.0500	0.100
Tetrahydrofuran	109-99-9	0	0.250		U	0.0900	0.250	50.0
Iodomethane	74-88-4	0	0.500		U	0.242	0.500	1.00
Allyl chloride	107-05-1	0	2.00		U	0.580	2.00	4.00
trans-1,4-Dichloro-2-butene	110-57-6	0	0.200	QN	C4 U	0.0560	0.200	0.400

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1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-EQBK01-101523

Lab Sample ID:	L1667791-04	**SDG:**	L1667791
Client Sample ID:	OT001-EQBK01-101523	**Collected Date/Time:**	10/15/23 17:45
Lab File ID:	1026_47	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS57	**Preparation Date/Time:**	10/26/23 23:36
Analytical Batch:	WG2157275	**Analysis Date/Time:**	10/26/23 23:36
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		ug/l	ug/l	ug/l
Vinyl acetate	108-05-4	0	0.300	U	0.141	0.300	0.600

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-TRIPBLANK-HCL-01

Lab Sample ID:	L1667791-05	**SDG:**	L1667791
Client Sample ID:	OT001-TRIPBLANK-HCL-01	**Collected Date/Time:**	10/15/23 09:00
Lab File ID:	1022_09	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 02:56
Analytical Batch:	WG2155682	**Analysis Date/Time:**	10/22/23 02:56
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result		Qualifier	DL	LOD	LOQ
			ug/l			ug/l	ug/l	ug/l
Acetone	67-64-1	3.04	2.00	QN	U	0.548	2.00	4.00
Acrylonitrile	107-13-1	3.50	0.250		U	0.0760	0.250	0.500
Benzene	71-43-2	4.24	0.0500		U	0.0160	0.0500	0.100
Bromobenzene	108-86-1	0	0.250		U	0.0420	0.250	0.500
Bromodichloromethane	75-27-4	0	0.100		U	0.0315	0.100	0.200
Bromochloromethane	74-97-5	0	0.100		U	0.0452	0.100	0.200
Bromoform	75-25-2	0	0.500		U	0.239	0.500	1.00
Bromomethane	74-83-9	2.18	0.500		U	0.148	0.500	1.00
n-Butylbenzene	104-51-8	0	0.500		U	0.154	0.500	1.00
sec-Butylbenzene	135-98-8	7.78	0.250		U	0.101	0.250	0.500
tert-Butylbenzene	98-06-6	0	0.500		U	0.0620	0.500	1.00
Carbon tetrachloride	56-23-5	0	0.100	QN	U	0.0432	0.100	0.200
Carbon disulfide	75-15-0	2.71	0.500		U	0.162	0.500	1.00
Chlorobenzene	108-90-7	0	0.0500		U	0.0229	0.0500	0.100
Chlorodibromomethane	124-48-1	0	0.0500		U	0.0180	0.0500	0.100
Chloroethane	75-00-3	2.29	0.100		U	0.0432	0.100	0.200
Chloroform	67-66-3	3.89	0.0500		U	0.0166	0.0500	0.100
Chloromethane	74-87-3	2.01	0.250		U	0.0556	0.250	0.500
Cyclohexane	110-82-7	0	0.0500		U	0.0203	0.0500	0.100
2-Chlorotoluene	95-49-8	0	0.100		U	0.0368	0.100	0.200
4-Chlorotoluene	106-43-4	0	0.100		U	0.0452	0.100	0.200
1,2-Dibromo-3-Chloropropane	96-12-8	0	0.500		U	0.204	0.500	1.00
1,2-Dibromoethane	106-93-4	0	0.0500		U	0.0210	0.0500	0.100
Dibromomethane	74-95-3	0	0.100		U	0.0400	0.100	0.200
1,2-Dichlorobenzene	95-50-1	0	0.200		U	0.0580	0.200	0.400
1,3-Dichlorobenzene	541-73-1	8.06	0.200		U	0.0680	0.200	0.400
1,4-Dichlorobenzene	106-46-7	8.06	0.250		U	0.0788	0.250	0.500
Dichlorodifluoromethane	75-71-8	0	0.100		U	0.0327	0.100	0.200
1,1-Dichloroethane	75-34-3	0	0.0500		U	0.0230	0.0500	0.100
1,2-Dichloroethane	107-06-2	4.34	0.0500		U	0.0190	0.0500	0.100
1,1-Dichloroethene	75-35-4	0	0.0500		U	0.0200	0.0500	0.100
cis-1,2-Dichloroethene	156-59-2	3.80	0.0750		U	0.0276	0.0750	0.150
trans-1,2-Dichloroethene	156-60-5	0	0.300		U	0.0572	0.300	0.600
1,2-Dichloropropane	78-87-5	0	0.200		U	0.0508	0.200	0.400
1,1-Dichloropropene	563-58-6	4.02	0.100		U	0.0280	0.100	0.200
1,3-Dichloropropane	142-28-9	0	0.150		U	0.0700	0.150	0.300
cis-1,3-Dichloropropene	10061-01-5	0	0.100		U	0.0271	0.100	0.200
trans-1,3-Dichloropropene	10061-02-6	0	0.150		U	0.0612	0.150	0.300
2,2-Dichloropropane	594-20-7	3.78	0.100		U	0.0317	0.100	0.200
Di-isopropyl ether	108-20-3	0	0.0500		U	0.0140	0.0500	0.100
Ethylbenzene	100-41-4	0	0.0500		U	0.0212	0.0500	0.100
Hexachloro-1,3-butadiene	87-68-3	0	2.00		U	0.508	2.00	4.00
Isopropylbenzene	98-82-8	7.04	1.00		U	0.0345	1.00	2.00

12/15/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-TRIPBLANK-HCL-01

Lab Sample ID:	L1667791-05	**SDG:**	L1667791
Client Sample ID:	OT001-TRIPBLANK-HCL-01	**Collected Date/Time:**	10/15/23 09:00
Lab File ID:	1022_09	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 02:56
Analytical Batch:	WG2155682	**Analysis Date/Time:**	10/22/23 02:56
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result		Qualifier	DL	LOD	LOQ
			ug/l			ug/l	ug/l	ug/l
p-Isopropyltoluene	99-87-6	7.93	0.300		U	0.0932	0.300	0.600
2-Butanone (MEK)	78-93-3	4.08	1.00		U	0.500	1.00	2.00
Methylene Chloride	75-09-2	3.02	0.750		U	0.266	0.750	1.50
4-Methyl-2-pentanone (MIBK)	108-10-1	0	1.00		U	0.400	1.00	2.00
Methyl tert-butyl ether	1634-04-4	0	0.0300		U	0.0118	0.0300	0.0600
Naphthalene	91-20-3	0	0.250		U	0.125	0.250	0.500
n-Propylbenzene	103-65-1	7.32	0.100		U	0.0472	0.100	0.200
Styrene	100-42-5	0	0.250		U	0.109	0.250	0.500
1,1,1,2-Tetrachloroethane	630-20-6	0	0.0500		U	0.0200	0.0500	0.100
1,1,2,2-Tetrachloroethane	79-34-5	0	0.0500		U	0.0156	0.0500	0.100
1,1,2-Trichlorotrifluoroethane	76-13-1	0	0.100		U	0.0270	0.100	0.200
Tetrachloroethene	127-18-4	0	0.0750		U	0.0280	0.0750	0.150
Toluene	108-88-3	5.40	0.0650	J	J	0.0500	0.100	0.200
1,2,3-Trichlorobenzene	87-61-6	0	0.250		U	0.0250	0.250	0.500
1,2,4-Trichlorobenzene	120-82-1	0	0.500		U	0.193	0.500	1.00
1,1,1-Trichloroethane	71-55-6	0	0.0500		U	0.0110	0.0500	0.100
1,1,2-Trichloroethane	79-00-5	0	0.100		U	0.0353	0.100	0.200
Trichloroethene	79-01-6	0	0.0400	QN	U	0.0160	0.0400	0.0800
Trichlorofluoromethane	75-69-4	0	0.0500	QN	U	0.0200	0.0500	0.100
1,2,3-Trichloropropane	96-18-4	0	0.500		U	0.204	0.500	1.00
1,2,4-Trimethylbenzene	95-63-6	7.78	0.100		U	0.0464	0.100	0.200
1,2,3-Trimethylbenzene	526-73-8	8.06	0.100		U	0.0460	0.100	0.200
1,3,5-Trimethylbenzene	108-67-8	7.45	0.100		U	0.0432	0.100	0.200
Vinyl chloride	75-01-4	2	0.0750		U	0.0273	0.0750	0.150
Xylenes, Total	1330-20-7	0	0.400		U	0.191	0.400	0.800
Ethyl Ether	60-29-7	0	0.0500		U	0.0170	0.0500	0.100
Tetrahydrofuran	109-99-9	4.01	0.250		U	0.0900	0.250	50.0
Iodomethane	74-88-4	0	0.500		U	0.242	0.500	1.00
Allyl chloride	107-05-1	0	2.00		U	0.580	2.00	4.00
trans-1,4-Dichloro-2-butene	110-57-6	0	0.200	QN	C4 U	0.0560	0.200	0.400

12/15/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-TRIPBLANK-HCL-01

Lab Sample ID:	L1667791-05	**SDG:**	L1667791
Client Sample ID:	OT001-TRIPBLANK-HCL-01	**Collected Date/Time:**	10/15/23 09:00
Lab File ID:	1026_34	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS57	**Preparation Date/Time:**	10/26/23 19:29
Analytical Batch:	WG2157275	**Analysis Date/Time:**	10/26/23 19:29
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
Vinyl acetate	108-05-4	0	0.300	U	0.141	0.300	0.600

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW05-101523

Lab Sample ID:	L1667791-01	**SDG:**	L1667791
Client Sample ID:	OT001-DSAMW05-101523	**Collected Date/Time:**	10/15/23 10:00
Lab File ID:	1022_13	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS35	**Preparation Date/Time:**	10/22/23 15:05
Analytical Batch:	WG2155879	**Analysis Date/Time:**	10/22/23 15:05
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier		DL	LOD	LOQ
			ug/l			*ug/l*	*ug/l*	*ug/l*
Acetone	67-64-1	3.15	25.0	U		11.3	25.0	50.0
Acrolein	107-02-8	0	25.0	U		2.54	25.0	50.0
Acrylonitrile	107-13-1	0	5.00	U		0.671	5.00	10.0
Benzene	71-43-2	0	0.500	U		0.0941	0.500	1.00
Bromobenzene	108-86-1	0	0.500	U		0.118	0.500	1.00
Bromodichloromethane	75-27-4	0	0.500	U		0.136	0.500	1.00
Bromoform	75-25-2	0	0.500	U		0.129	0.500	1.00
Bromomethane	74-83-9	0	2.00	U		0.605	2.00	5.00
n-Butylbenzene	104-51-8	0	0.500	U		0.157	0.500	1.00
sec-Butylbenzene	135-98-8	0	0.500	U		0.125	0.500	1.00
tert-Butylbenzene	98-06-6	0	0.500	U		0.127	0.500	1.00
Carbon tetrachloride	56-23-5	0	0.500	U		0.128	0.500	1.00
Chlorobenzene	108-90-7	0	0.500	U		0.116	0.500	1.00
Chlorodibromomethane	124-48-1	0	0.500	U		0.140	0.500	1.00
Chloroethane	75-00-3	0	2.00	U		0.192	2.00	5.00
2-Chloroethyl vinyl ether	110-75-8	0	25.0	U	QN	0.575	25.0	50.0
Chloroform	67-66-3	0	2.00	U		0.111	2.00	5.00
Chloromethane	74-87-3	0	2.00	U		0.960	2.00	4.00
2-Chlorotoluene	95-49-8	0	0.500	U		0.106	0.500	1.00
4-Chlorotoluene	106-43-4	0	0.500	U		0.114	0.500	1.00
1,2-Dibromoethane	106-93-4	0	0.500	U		0.126	0.500	1.00
1,2-Dibromo-3-Chloropropane	96-12-8	0	2.00	U		0.276	2.00	5.00
Dibromomethane	74-95-3	0	0.500	U		0.122	0.500	1.00
1,2-Dichlorobenzene	95-50-1	0	0.500	U		0.107	0.500	1.00
1,3-Dichlorobenzene	541-73-1	0	0.500	U		0.110	0.500	1.00
1,4-Dichlorobenzene	106-46-7	0	0.500	U		0.120	0.500	1.00
Dichlorodifluoromethane	75-71-8	0	2.00	U		0.374	2.00	5.00
1,1-Dichloroethane	75-34-3	0	0.500	U		0.100	0.500	1.00
1,2-Dichloroethane	107-06-2	0	0.500	U		0.0819	0.500	1.00
1,1-Dichloroethene	75-35-4	0	0.500	U		0.188	0.500	1.00
cis-1,2-Dichloroethene	156-59-2	0	0.500	U		0.126	0.500	1.00
trans-1,2-Dichloroethene	156-60-5	0	0.500	U		0.149	0.500	1.00
1,2-Dichloropropane	78-87-5	0	0.500	U		0.149	0.500	1.00
1,3-Dichloropropane	142-28-9	0	0.500	U		0.110	0.500	1.00
1,1-Dichloropropene	563-58-6	0	0.500	U		0.142	0.500	1.00
cis-1,3-Dichloropropene	10061-01-5	0	0.500	U		0.111	0.500	1.00
trans-1,3-Dichloropropene	10061-02-6	0	0.500	U		0.118	0.500	1.00
Di-isopropyl ether	108-20-3	0	0.500	U		0.105	0.500	1.00
Ethylbenzene	100-41-4	0	0.500	U		0.137	0.500	1.00
Isopropylbenzene	98-82-8	0	0.500	U		0.105	0.500	1.00
p-Isopropyltoluene	99-87-6	0	0.500	U		0.120	0.500	1.00
2-Butanone (MEK)	78-93-3	0	5.00	U		1.19	5.00	10.0
Methylene Chloride	75-09-2	0	2.00	U		0.430	2.00	5.00

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW05-101523

Lab Sample ID:	L1667791-01	**SDG:**	L1667791
Client Sample ID:	OT001-DSAMW05-101523	**Collected Date/Time:**	10/15/23 10:00
Lab File ID:	1022_13	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS35	**Preparation Date/Time:**	10/22/23 15:05
Analytical Batch:	WG2155879	**Analysis Date/Time:**	10/22/23 15:05
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
4-Methyl-2-pentanone (MIBK)	108-10-1	0	5.00	U	0.478	5.00	10.0
Methyl tert-butyl ether	1634-04-4	0	0.500	U	0.101	0.500	1.00
Naphthalene	91-20-3	0	2.00	U	1.00	2.00	5.00
n-Propylbenzene	103-65-1	0	0.500	U	0.0993	0.500	1.00
Styrene	100-42-5	0	0.500	U	0.118	0.500	1.00
1,1,1,2-Tetrachloroethane	630-20-6	0	0.500	U	0.147	0.500	1.00
1,1,2,2-Tetrachloroethane	79-34-5	0	0.500	U	0.133	0.500	1.00
Tetrachloroethene	127-18-4	0	0.600	U	0.300	0.600	1.20
Toluene	108-88-3	5.56	0.600	U	0.278	0.600	1.20
1,2,3-Trichlorobenzene	87-61-6	0	0.500	U	0.230	0.500	1.00
1,2,4-Trichlorobenzene	120-82-1	0	1.00	U	0.481	1.00	2.00
1,2,3-Trimethylbenzene	526-73-8	0	0.500	U	0.104	0.500	1.00
1,2,4-Trimethylbenzene	95-63-6	0	1.00	U	0.322	1.00	2.00
1,3,5-Trimethylbenzene	108-67-8	0	0.500	U	0.104	0.500	1.00
1,1,2-Trichloroethane	79-00-5	0	0.500	U	0.158	0.500	1.00
Trichloroethene	79-01-6	4.70	3.99		0.190	0.500	1.00
Trichlorofluoromethane	75-69-4	2.44	2.00	U	0.160	2.00	5.00
1,1,2-Trichlorotrifluoroethane	76-13-1	0	0.500	U	0.180	0.500	1.00
1,2,3-Trichloropropane	96-18-4	0	1.00	U	0.237	1.00	2.50
Vinyl chloride	75-01-4	0	0.500	U	0.234	0.500	1.00
Xylenes, Total	1330-20-7	0	1.50	U	0.174	1.50	3.00

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW05-101523

Lab Sample ID:	L1667791-01	**SDG:**	L1667791
Client Sample ID:	OT001-DSAMW05-101523	**Collected Date/Time:**	10/15/23 10:00
Lab File ID:	1022b_20	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 06:33
Analytical Batch:	WG2225461	**Analysis Date/Time:**	10/22/23 06:33
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
2,2-Dichloropropane	594-20-7	3.78	0.500	U	0.161	0.500	1.00
Hexachloro-1,3-butadiene	87-68-3	0	0.750	U	0.337	0.750	1.50
1,1,1-Trichloroethane	71-55-6	4.01	0.500	U	0.149	0.500	1.00

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW02-101523

Lab Sample ID:	L1667791-02	**SDG:**	L1667791
Client Sample ID:	OT001-DSAMW02-101523	**Collected Date/Time:**	10/15/23 11:20
Lab File ID:	1022_14	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS35	**Preparation Date/Time:**	10/22/23 15:49
Analytical Batch:	WG2155879	**Analysis Date/Time:**	10/22/23 15:49
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier		DL	LOD	LOQ
			ug/l			*ug/l*	*ug/l*	*ug/l*
Acetone	67-64-1	3.15	25.0	U		11.3	25.0	50.0
Acrolein	107-02-8	0	25.0	U		2.54	25.0	50.0
Acrylonitrile	107-13-1	0	5.00	U		0.671	5.00	10.0
Benzene	71-43-2	0	0.500	U		0.0941	0.500	1.00
Bromobenzene	108-86-1	0	0.500	U		0.118	0.500	1.00
Bromodichloromethane	75-27-4	0	0.500	U		0.136	0.500	1.00
Bromoform	75-25-2	0	0.500	U		0.129	0.500	1.00
Bromomethane	74-83-9	0	2.00	U		0.605	2.00	5.00
n-Butylbenzene	104-51-8	0	0.500	U		0.157	0.500	1.00
sec-Butylbenzene	135-98-8	0	0.500	U		0.125	0.500	1.00
tert-Butylbenzene	98-06-6	0	0.500	U		0.127	0.500	1.00
Carbon tetrachloride	56-23-5	0	0.500	U		0.128	0.500	1.00
Chlorobenzene	108-90-7	0	0.500	U		0.116	0.500	1.00
Chlorodibromomethane	124-48-1	0	0.500	U		0.140	0.500	1.00
Chloroethane	75-00-3	0	2.00	U		0.192	2.00	5.00
2-Chloroethyl vinyl ether	110-75-8	0	25.0	U	QN	0.575	25.0	50.0
Chloroform	67-66-3	4.03	0.153	J	J, B	0.111	2.00	5.00
Chloromethane	74-87-3	0	2.00	U		0.960	2.00	4.00
2-Chlorotoluene	95-49-8	0	0.500	U		0.106	0.500	1.00
4-Chlorotoluene	106-43-4	0	0.500	U		0.114	0.500	1.00
1,2-Dibromoethane	106-93-4	0	0.500	U		0.126	0.500	1.00
1,2-Dibromo-3-Chloropropane	96-12-8	0	2.00	U		0.276	2.00	5.00
Dibromomethane	74-95-3	0	0.500	U		0.122	0.500	1.00
1,2-Dichlorobenzene	95-50-1	0	0.500	U		0.107	0.500	1.00
1,3-Dichlorobenzene	541-73-1	0	0.500	U		0.110	0.500	1.00
1,4-Dichlorobenzene	106-46-7	0	0.500	U		0.120	0.500	1.00
Dichlorodifluoromethane	75-71-8	0	2.00	U		0.374	2.00	5.00
1,1-Dichloroethane	75-34-3	0	0.500	U		0.100	0.500	1.00
1,2-Dichloroethane	107-06-2	0	0.500	U		0.0819	0.500	1.00
1,1-Dichloroethene	75-35-4	0	0.500	U		0.188	0.500	1.00
cis-1,2-Dichloroethene	156-59-2	0	0.500	U		0.126	0.500	1.00
trans-1,2-Dichloroethene	156-60-5	0	0.500	U		0.149	0.500	1.00
1,2-Dichloropropane	78-87-5	0	0.500	U		0.149	0.500	1.00
1,3-Dichloropropane	142-28-9	0	0.500	U		0.110	0.500	1.00
1,1-Dichloropropene	563-58-6	0	0.500	U		0.142	0.500	1.00
cis-1,3-Dichloropropene	10061-01-5	0	0.500	U		0.111	0.500	1.00
trans-1,3-Dichloropropene	10061-02-6	0	0.500	U		0.118	0.500	1.00
Di-isopropyl ether	108-20-3	0	0.500	U		0.105	0.500	1.00
Ethylbenzene	100-41-4	0	0.500	U		0.137	0.500	1.00
Isopropylbenzene	98-82-8	0	0.500	U		0.105	0.500	1.00
p-Isopropyltoluene	99-87-6	0	0.500	U		0.120	0.500	1.00
2-Butanone (MEK)	78-93-3	0	5.00	U		1.19	5.00	10.0
Methylene Chloride	75-09-2	3.13	2.00	U		0.430	2.00	5.00

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW02-101523

Lab Sample ID:	L1667791-02	**SDG:**	L1667791
Client Sample ID:	OT001-DSAMW02-101523	**Collected Date/Time:**	10/15/23 11:20
Lab File ID:	1022_14	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS35	**Preparation Date/Time:**	10/22/23 15:49
Analytical Batch:	WG2155879	**Analysis Date/Time:**	10/22/23 15:49
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier		DL	LOD	LOQ
			ug/l			*ug/l*	*ug/l*	*ug/l*
4-Methyl-2-pentanone (MIBK)	108-10-1	0	5.00	U		0.478	5.00	10.0
Methyl tert-butyl ether	1634-04-4	0	0.500	U		0.101	0.500	1.00
Naphthalene	91-20-3	0	2.00	U		1.00	2.00	5.00
n-Propylbenzene	103-65-1	0	0.500	U		0.0993	0.500	1.00
Styrene	100-42-5	0	0.500	U		0.118	0.500	1.00
1,1,1,2-Tetrachloroethane	630-20-6	0	0.500	U		0.147	0.500	1.00
1,1,2,2-Tetrachloroethane	79-34-5	0	0.500	U		0.133	0.500	1.00
Tetrachloroethene	127-18-4	0	0.600	U		0.300	0.600	1.20
Toluene	108-88-3	5.56	0.600	U		0.278	0.600	1.20
1,2,3-Trichlorobenzene	87-61-6	0	0.500	U		0.230	0.500	1.00
1,2,4-Trichlorobenzene	120-82-1	0	1.00	U		0.481	1.00	2.00
1,2,3-Trimethylbenzene	526-73-8	0	0.500	U		0.104	0.500	1.00
1,2,4-Trimethylbenzene	95-63-6	0	1.00	U		0.322	1.00	2.00
1,3,5-Trimethylbenzene	108-67-8	0	0.500	U		0.104	0.500	1.00
1,1,2-Trichloroethane	79-00-5	5.91	0.500	U		0.158	0.500	1.00
Trichlorofluoromethane	75-69-4	2.44	0.872	J	J	0.160	2.00	5.00
1,1,2-Trichlorotrifluoroethane	76-13-1	0	0.500	U		0.180	0.500	1.00
1,2,3-Trichloropropane	96-18-4	0	1.00	U		0.237	1.00	2.50
Vinyl chloride	75-01-4	0	0.500	U		0.234	0.500	1.00
Xylenes, Total	1330-20-7	0	1.50	U		0.174	1.50	3.00

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW02-101523

Lab Sample ID:	L1667791-02	**SDG:**	L1667791
Client Sample ID:	OT001-DSAMW02-101523	**Collected Date/Time:**	10/15/23 11:20
Lab File ID:	1026_53	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS57	**Preparation Date/Time:**	10/27/23 01:30
Analytical Batch:	WG2225572	**Analysis Date/Time:**	10/27/23 01:30
Dilution Factor:	20	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	0.25 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
2,2-Dichloropropane	594-20-7	3.73	10.0	U	3.22	10.0	20.0
Hexachloro-1,3-butadiene	87-68-3	0	15.0	U	6.74	15.0	30.0
1,1,1-Trichloroethane	71-55-6	3.96	10.0	U	2.98	10.0	20.0
Trichloroethene	79-01-6	4.48	380		3.80	10.0	20.0

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SAMPLE RESULT SUMMARY
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SAMPLE NO.:
WP002-BLOMW01-101523

Lab Sample ID:	L1667791-03	**SDG:**	L1667791
Client Sample ID:	WP002-BLOMW01-101523	**Collected Date/Time:**	10/15/23 12:30
Lab File ID:	1022_15	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS35	**Preparation Date/Time:**	10/22/23 16:11
Analytical Batch:	WG2155879	**Analysis Date/Time:**	10/22/23 16:11
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
Acetone	67-64-1	3.15	25.0	U	11.3	25.0	50.0
Acrolein	107-02-8	0	25.0	U	2.54	25.0	50.0
Acrylonitrile	107-13-1	0	5.00	U	0.671	5.00	10.0
Benzene	71-43-2	4.37	1.28		0.0941	0.500	1.00
Bromobenzene	108-86-1	0	0.500	U	0.118	0.500	1.00
Bromodichloromethane	75-27-4	0	0.500	U	0.136	0.500	1.00
Bromoform	75-25-2	0	0.500	U	0.129	0.500	1.00
Bromomethane	74-83-9	0	2.00	U	0.605	2.00	5.00
n-Butylbenzene	104-51-8	8.43	0.500	J J	0.157	0.500	1.00
sec-Butylbenzene	135-98-8	8	0.571	J J	0.125	0.500	1.00
tert-Butylbenzene	98-06-6	7.86	0.959	J J	0.127	0.500	1.00
Carbon tetrachloride	56-23-5	0	0.500	U	0.128	0.500	1.00
Chlorobenzene	108-90-7	0	0.500	U	0.116	0.500	1.00
Chlorodibromomethane	124-48-1	0	0.500	U	0.140	0.500	1.00
Chloroethane	75-00-3	0	2.00	U	0.192	2.00	5.00
2-Chloroethyl vinyl ether	110-75-8	0	25.0	J3 J6 U QN	0.575	25.0	50.0
Chloroform	67-66-3	0	2.00	U	0.111	2.00	5.00
Chloromethane	74-87-3	0	2.00	U	0.960	2.00	4.00
2-Chlorotoluene	95-49-8	0	0.500	U	0.106	0.500	1.00
4-Chlorotoluene	106-43-4	0	0.500	U	0.114	0.500	1.00
1,2-Dibromoethane	106-93-4	0	0.500	U	0.126	0.500	1.00
1,2-Dibromo-3-Chloropropane	96-12-8	0	2.00	U	0.276	2.00	5.00
Dibromomethane	74-95-3	0	0.500	U	0.122	0.500	1.00
1,2-Dichlorobenzene	95-50-1	0	0.500	U	0.107	0.500	1.00
1,3-Dichlorobenzene	541-73-1	0	0.500	U	0.110	0.500	1.00
1,4-Dichlorobenzene	106-46-7	0	0.500	U	0.120	0.500	1.00
Dichlorodifluoromethane	75-71-8	0	2.00	U	0.374	2.00	5.00
1,1-Dichloroethane	75-34-3	0	0.500	U	0.100	0.500	1.00
1,2-Dichloroethane	107-06-2	0	0.500	U	0.0819	0.500	1.00
1,1-Dichloroethene	75-35-4	0	0.500	U	0.188	0.500	1.00
cis-1,2-Dichloroethene	156-59-2	3.89	11.7		0.126	0.500	1.00
trans-1,2-Dichloroethene	156-60-5	0	0.500	U	0.149	0.500	1.00
1,2-Dichloropropane	78-87-5	0	0.500	U	0.149	0.500	1.00
1,3-Dichloropropane	142-28-9	0	0.500	U	0.110	0.500	1.00
1,1-Dichloropropene	563-58-6	0	0.500	U	0.142	0.500	1.00
cis-1,3-Dichloropropene	10061-01-5	0	0.500	U	0.111	0.500	1.00
trans-1,3-Dichloropropene	10061-02-6	0	0.500	U	0.118	0.500	1.00
Di-isopropyl ether	108-20-3	0	0.500	U	0.105	0.500	1.00
Ethylbenzene	100-41-4	6.56	6.13		0.137	0.500	1.00
Isopropylbenzene	98-82-8	7.18	8.29	J6 QL	0.105	0.500	1.00
p-Isopropyltoluene	99-87-6	8.10	0.537	J J	0.120	0.500	1.00
2-Butanone (MEK)	78-93-3	4.19	1.94	J J	1.19	5.00	10.0
Methylene Chloride	75-09-2	0	2.00	U	0.430	2.00	5.00

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
WP002-BLOMW01-101523

Lab Sample ID:	L1667791-03	**SDG:**	L1667791
Client Sample ID:	WP002-BLOMW01-101523	**Collected Date/Time:**	10/15/23 12:30
Lab File ID:	1022_15	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS35	**Preparation Date/Time:**	10/22/23 16:11
Analytical Batch:	WG2155879	**Analysis Date/Time:**	10/22/23 16:11
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier		DL	LOD	LOQ
			ug/l			*ug/l*	*ug/l*	*ug/l*
4-Methyl-2-pentanone (MIBK)	108-10-1	0	5.00	U		0.478	5.00	10.0
Methyl tert-butyl ether	1634-04-4	0	0.500	U		0.101	0.500	1.00
Naphthalene	91-20-3	10.05	41.7	V		1.00	2.00	5.00
n-Propylbenzene	103-65-1	7.48	2.73			0.0993	0.500	1.00
Styrene	100-42-5	0	0.500	U		0.118	0.500	1.00
1,1,1,2-Tetrachloroethane	630-20-6	0	0.500	U		0.147	0.500	1.00
1,1,2,2-Tetrachloroethane	79-34-5	0	0.500	U		0.133	0.500	1.00
Tetrachloroethene	127-18-4	5.81	0.600	U		0.300	0.600	1.20
Toluene	108-88-3	5.56	0.600	U		0.278	0.600	1.20
1,2,3-Trichlorobenzene	87-61-6	0	0.500	U		0.230	0.500	1.00
1,2,4-Trichlorobenzene	120-82-1	0	1.00	U		0.481	1.00	2.00
1,2,3-Trimethylbenzene	526-73-8	8.26	0.171	J	J	0.104	0.500	1.00
1,2,4-Trimethylbenzene	95-63-6	7.91	0.613	J	J	0.322	1.00	2.00
1,3,5-Trimethylbenzene	108-67-8	7.61	0.689	J	J	0.104	0.500	1.00
1,1,2-Trichloroethane	79-00-5	0	0.500	U		0.158	0.500	1.00
Trichlorofluoromethane	75-69-4	0	2.00	U		0.160	2.00	5.00
1,1,2-Trichlorotrifluoroethane	76-13-1	0	0.500	U		0.180	0.500	1.00
1,2,3-Trichloropropane	96-18-4	0	1.00	U		0.237	1.00	2.50
Vinyl chloride	75-01-4	0	0.500	U		0.234	0.500	1.00
Xylenes, Total	1330-20-7	6.65	3.12			0.174	1.50	3.00

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
WP002-BLOMW01-101523

Lab Sample ID:	L1667791-03	**SDG:**	L1667791
Client Sample ID:	WP002-BLOMW01-101523	**Collected Date/Time:**	10/15/23 12:30
Lab File ID:	1026_46	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS57	**Preparation Date/Time:**	10/26/23 23:17
Analytical Batch:	WG2225572	**Analysis Date/Time:**	10/26/23 23:17
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
2,2-Dichloropropane	594-20-7	3.73	0.500	U H	0.161	0.500	1.00
Hexachloro-1,3-butadiene	87-68-3	0	0.750	U H	0.337	0.750	1.50
1,1,1-Trichloroethane	71-55-6	0	0.500	U H	0.149	0.500	1.00
Trichloroethene	79-01-6	4.49	4.21	H	0.190	0.500	1.00

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-EQBK01-101523

Lab Sample ID:	L1667791-04	**SDG:**	L1667791
Client Sample ID:	OT001-EQBK01-101523	**Collected Date/Time:**	10/15/23 17:45
Lab File ID:	1022_06	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS35	**Preparation Date/Time:**	10/22/23 12:32
Analytical Batch:	WG2155879	**Analysis Date/Time:**	10/22/23 12:32
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier		DL	LOD	LOQ
			ug/l			*ug/l*	*ug/l*	*ug/l*
Acetone	67-64-1	3.15	25.0	U		11.3	25.0	50.0
Acrolein	107-02-8	0	25.0	U		2.54	25.0	50.0
Acrylonitrile	107-13-1	0	5.00	U		0.671	5.00	10.0
Benzene	71-43-2	4.37	0.114	J	J	0.0941	0.500	1.00
Bromobenzene	108-86-1	0	0.500	U		0.118	0.500	1.00
Bromodichloromethane	75-27-4	5.03	0.239	J	J	0.136	0.500	1.00
Bromoform	75-25-2	0	0.500	U		0.129	0.500	1.00
Bromomethane	74-83-9	0	2.00	U		0.605	2.00	5.00
n-Butylbenzene	104-51-8	0	0.500	U		0.157	0.500	1.00
sec-Butylbenzene	135-98-8	0	0.500	U		0.125	0.500	1.00
tert-Butylbenzene	98-06-6	0	0.500	U		0.127	0.500	1.00
Carbon tetrachloride	56-23-5	0	0.500	U		0.128	0.500	1.00
Chlorobenzene	108-90-7	0	0.500	U		0.116	0.500	1.00
Chlorodibromomethane	124-48-1	0	0.500	U		0.140	0.500	1.00
Chloroethane	75-00-3	0	2.00	U		0.192	2.00	5.00
2-Chloroethyl vinyl ether	110-75-8	0	25.0	U	QN	0.575	25.0	50.0
Chloroform	67-66-3	4.03	2.50	J	J	0.111	2.00	5.00
Chloromethane	74-87-3	0	2.00	U		0.960	2.00	4.00
2-Chlorotoluene	95-49-8	0	0.500	U		0.106	0.500	1.00
4-Chlorotoluene	106-43-4	0	0.500	U		0.114	0.500	1.00
1,2-Dibromoethane	106-93-4	0	0.500	U		0.126	0.500	1.00
1,2-Dibromo-3-Chloropropane	96-12-8	0	2.00	U		0.276	2.00	5.00
Dibromomethane	74-95-3	0	0.500	U		0.122	0.500	1.00
1,2-Dichlorobenzene	95-50-1	0	0.500	U		0.107	0.500	1.00
1,3-Dichlorobenzene	541-73-1	0	0.500	U		0.110	0.500	1.00
1,4-Dichlorobenzene	106-46-7	0	0.500	U		0.120	0.500	1.00
Dichlorodifluoromethane	75-71-8	0	2.00	U		0.374	2.00	5.00
1,1-Dichloroethane	75-34-3	3.59	0.158	J	J	0.100	0.500	1.00
1,2-Dichloroethane	107-06-2	0	0.500	U		0.0819	0.500	1.00
1,1-Dichloroethene	75-35-4	0	0.500	U		0.188	0.500	1.00
cis-1,2-Dichloroethene	156-59-2	0	0.500	U		0.126	0.500	1.00
trans-1,2-Dichloroethene	156-60-5	0	0.500	U		0.149	0.500	1.00
1,2-Dichloropropane	78-87-5	0	0.500	U		0.149	0.500	1.00
1,3-Dichloropropane	142-28-9	0	0.500	U		0.110	0.500	1.00
1,1-Dichloropropene	563-58-6	0	0.500	U		0.142	0.500	1.00
cis-1,3-Dichloropropene	10061-01-5	0	0.500	U		0.111	0.500	1.00
trans-1,3-Dichloropropene	10061-02-6	0	0.500	U		0.118	0.500	1.00
Di-isopropyl ether	108-20-3	0	0.500	U		0.105	0.500	1.00
Ethylbenzene	100-41-4	6.55	0.500	U		0.137	0.500	1.00
Isopropylbenzene	98-82-8	0	0.500	U		0.105	0.500	1.00
p-Isopropyltoluene	99-87-6	0	0.500	U		0.120	0.500	1.00
2-Butanone (MEK)	78-93-3	4.19	5.00	U		1.19	5.00	10.0
Methylene Chloride	75-09-2	0	2.00	U		0.430	2.00	5.00

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-EQBK01-101523

Lab Sample ID:	L1667791-04	**SDG:**	L1667791
Client Sample ID:	OT001-EQBK01-101523	**Collected Date/Time:**	10/15/23 17:45
Lab File ID:	1022_06	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS35	**Preparation Date/Time:**	10/22/23 12:32
Analytical Batch:	WG2155879	**Analysis Date/Time:**	10/22/23 12:32
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier		DL	LOD	LOQ
			ug/l			*ug/l*	*ug/l*	*ug/l*
4-Methyl-2-pentanone (MIBK)	108-10-1	0	5.00	U		0.478	5.00	10.0
Methyl tert-butyl ether	1634-04-4	0	0.500	U		0.101	0.500	1.00
Naphthalene	91-20-3	0	2.00	U		1.00	2.00	5.00
n-Propylbenzene	103-65-1	0	0.500	U		0.0993	0.500	1.00
Styrene	100-42-5	0	0.500	U		0.118	0.500	1.00
1,1,1,2-Tetrachloroethane	630-20-6	0	0.500	U		0.147	0.500	1.00
1,1,2,2-Tetrachloroethane	79-34-5	0	0.500	U		0.133	0.500	1.00
Tetrachloroethene	127-18-4	0	0.600	U		0.300	0.600	1.20
Toluene	108-88-3	5.56	1.28			0.278	0.600	1.20
1,2,3-Trichlorobenzene	87-61-6	0	0.500	U		0.230	0.500	1.00
1,2,4-Trichlorobenzene	120-82-1	0	1.00	U		0.481	1.00	2.00
1,2,3-Trimethylbenzene	526-73-8	0	0.500	U		0.104	0.500	1.00
1,2,4-Trimethylbenzene	95-63-6	0	1.00	U		0.322	1.00	2.00
1,3,5-Trimethylbenzene	108-67-8	0	0.500	U		0.104	0.500	1.00
1,1,2-Trichloroethane	79-00-5	0	0.500	U		0.158	0.500	1.00
Trichloroethene	79-01-6	0	0.500	U		0.190	0.500	1.00
Trichlorofluoromethane	75-69-4	0	2.00	U		0.160	2.00	5.00
1,1,2-Trichlorotrifluoroethane	76-13-1	0	0.500	U		0.180	0.500	1.00
1,2,3-Trichloropropane	96-18-4	0	1.00	U		0.237	1.00	2.50
Vinyl chloride	75-01-4	0	0.500	U		0.234	0.500	1.00
Xylenes, Total	1330-20-7	6.96	0.547	J	J	0.174	1.50	3.00

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-EQBK01-101523

Lab Sample ID:	L1667791-04	**SDG:**	L1667791
Client Sample ID:	OT001-EQBK01-101523	**Collected Date/Time:**	10/15/23 17:45
Lab File ID:	1022b_08	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 02:36
Analytical Batch:	WG2225461	**Analysis Date/Time:**	10/22/23 02:36
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
2,2-Dichloropropane	594-20-7	3.77	0.500	U	0.161	0.500	1.00
Hexachloro-1,3-butadiene	87-68-3	0	0.750	U	0.337	0.750	1.50
1,1,1-Trichloroethane	71-55-6	0	0.500	U	0.149	0.500	1.00

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-TRIPBLANK-HCL-01

Lab Sample ID:	L1667791-05	**SDG:**	L1667791
Client Sample ID:	OT001-TRIPBLANK-HCL-01	**Collected Date/Time:**	10/15/23 09:00
Lab File ID:	1022_07	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS35	**Preparation Date/Time:**	10/22/23 12:54
Analytical Batch:	WG2155879	**Analysis Date/Time:**	10/22/23 12:54
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier		DL	LOD	LOQ
			ug/l			*ug/l*	*ug/l*	*ug/l*
Acetone	67-64-1	3.15	25.0	U		11.3	25.0	50.0
Acrolein	107-02-8	0	25.0	U		2.54	25.0	50.0
Acrylonitrile	107-13-1	0	5.00	U		0.671	5.00	10.0
Benzene	71-43-2	0	0.500	U		0.0941	0.500	1.00
Bromobenzene	108-86-1	0	0.500	U		0.118	0.500	1.00
Bromodichloromethane	75-27-4	0	0.500	U		0.136	0.500	1.00
Bromoform	75-25-2	0	0.500	U		0.129	0.500	1.00
Bromomethane	74-83-9	0	2.00	U		0.605	2.00	5.00
n-Butylbenzene	104-51-8	0	0.500	U		0.157	0.500	1.00
sec-Butylbenzene	135-98-8	0	0.500	U		0.125	0.500	1.00
tert-Butylbenzene	98-06-6	0	0.500	U		0.127	0.500	1.00
Carbon tetrachloride	56-23-5	0	0.500	U		0.128	0.500	1.00
Chlorobenzene	108-90-7	0	0.500	U		0.116	0.500	1.00
Chlorodibromomethane	124-48-1	0	0.500	U		0.140	0.500	1.00
Chloroethane	75-00-3	0	2.00	U		0.192	2.00	5.00
2-Chloroethyl vinyl ether	110-75-8	0	25.0	U	QN	0.575	25.0	50.0
Chloroform	67-66-3	0	2.00	U		0.111	2.00	5.00
Chloromethane	74-87-3	0	2.00	U		0.960	2.00	4.00
2-Chlorotoluene	95-49-8	0	0.500	U		0.106	0.500	1.00
4-Chlorotoluene	106-43-4	0	0.500	U		0.114	0.500	1.00
1,2-Dibromoethane	106-93-4	0	0.500	U		0.126	0.500	1.00
1,2-Dibromo-3-Chloropropane	96-12-8	0	2.00	U		0.276	2.00	5.00
Dibromomethane	74-95-3	0	0.500	U		0.122	0.500	1.00
1,2-Dichlorobenzene	95-50-1	0	0.500	U		0.107	0.500	1.00
1,3-Dichlorobenzene	541-73-1	0	0.500	U		0.110	0.500	1.00
1,4-Dichlorobenzene	106-46-7	0	0.500	U		0.120	0.500	1.00
Dichlorodifluoromethane	75-71-8	0	2.00	U		0.374	2.00	5.00
1,1-Dichloroethane	75-34-3	0	0.500	U		0.100	0.500	1.00
1,2-Dichloroethane	107-06-2	0	0.500	U		0.0819	0.500	1.00
1,1-Dichloroethene	75-35-4	0	0.500	U		0.188	0.500	1.00
cis-1,2-Dichloroethene	156-59-2	0	0.500	U		0.126	0.500	1.00
trans-1,2-Dichloroethene	156-60-5	0	0.500	U		0.149	0.500	1.00
1,2-Dichloropropane	78-87-5	0	0.500	U		0.149	0.500	1.00
1,3-Dichloropropane	142-28-9	0	0.500	U		0.110	0.500	1.00
1,1-Dichloropropene	563-58-6	0	0.500	U		0.142	0.500	1.00
cis-1,3-Dichloropropene	10061-01-5	0	0.500	U		0.111	0.500	1.00
trans-1,3-Dichloropropene	10061-02-6	0	0.500	U		0.118	0.500	1.00
Di-isopropyl ether	108-20-3	0	0.500	U		0.105	0.500	1.00
Ethylbenzene	100-41-4	0	0.500	U		0.137	0.500	1.00
Isopropylbenzene	98-82-8	0	0.500	U		0.105	0.500	1.00
p-Isopropyltoluene	99-87-6	0	0.500	U		0.120	0.500	1.00
2-Butanone (MEK)	78-93-3	0	5.00	U		1.19	5.00	10.0
Methylene Chloride	75-09-2	0	2.00	U		0.430	2.00	5.00

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-TRIPBLANK-HCL-01

Lab Sample ID:	L1667791-05	**SDG:**	L1667791
Client Sample ID:	OT001-TRIPBLANK-HCL-01	**Collected Date/Time:**	10/15/23 09:00
Lab File ID:	1022_07	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS35	**Preparation Date/Time:**	10/22/23 12:54
Analytical Batch:	WG2155879	**Analysis Date/Time:**	10/22/23 12:54
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
4-Methyl-2-pentanone (MIBK)	108-10-1	0	5.00	U	0.478	5.00	10.0
Methyl tert-butyl ether	1634-04-4	0	0.500	U	0.101	0.500	1.00
Naphthalene	91-20-3	0	2.00	U	1.00	2.00	5.00
n-Propylbenzene	103-65-1	0	0.500	U	0.0993	0.500	1.00
Styrene	100-42-5	0	0.500	U	0.118	0.500	1.00
1,1,1,2-Tetrachloroethane	630-20-6	0	0.500	U	0.147	0.500	1.00
1,1,2,2-Tetrachloroethane	79-34-5	0	0.500	U	0.133	0.500	1.00
Tetrachloroethene	127-18-4	0	0.600	U	0.300	0.600	1.20
Toluene	108-88-3	0	0.600	U	0.278	0.600	1.20
1,2,3-Trichlorobenzene	87-61-6	0	0.500	U	0.230	0.500	1.00
1,2,4-Trichlorobenzene	120-82-1	0	1.00	U	0.481	1.00	2.00
1,2,3-Trimethylbenzene	526-73-8	0	0.500	U	0.104	0.500	1.00
1,2,4-Trimethylbenzene	95-63-6	0	1.00	U	0.322	1.00	2.00
1,3,5-Trimethylbenzene	108-67-8	0	0.500	U	0.104	0.500	1.00
1,1,2-Trichloroethane	79-00-5	0	0.500	U	0.158	0.500	1.00
Trichloroethene	79-01-6	0	0.500	U	0.190	0.500	1.00
Trichlorofluoromethane	75-69-4	0	2.00	U	0.160	2.00	5.00
1,1,2-Trichlorotrifluoroethane	76-13-1	0	0.500	U	0.180	0.500	1.00
1,2,3-Trichloropropane	96-18-4	0	1.00	U	0.237	1.00	2.50
Vinyl chloride	75-01-4	0	0.500	U	0.234	0.500	1.00
Xylenes, Total	1330-20-7	0	1.50	U	0.174	1.50	3.00

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-TRIPBLANK-HCL-01

Lab Sample ID:	L1667791-05	**SDG:**	L1667791
Client Sample ID:	OT001-TRIPBLANK-HCL-01	**Collected Date/Time:**	10/15/23 09:00
Lab File ID:	1022b_09	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 02:56
Analytical Batch:	WG2225461	**Analysis Date/Time:**	10/22/23 02:56
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
2,2-Dichloropropane	594-20-7	3.78	0.500	U	0.161	0.500	1.00
Hexachloro-1,3-butadiene	87-68-3	0	0.750	U	0.337	0.750	1.50
1,1,1-Trichloroethane	71-55-6	0	0.500	U	0.149	0.500	1.00

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1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW05-101523

Lab Sample ID:	L1667791-01	**SDG:**	L1667791
Client Sample ID:	OT001-DSAMW05-101523	**Collected Date/Time:**	10/15/23 10:00
Lab File ID:	1028_024	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	SVGC34	**Preparation Date/Time:**	10/27/23 07:36
Analytical Batch:	WG2156720	**Analysis Date/Time:**	10/28/23 23:28
Dilution Factor:	1	**Prep Method:**	3510C
Analytical Method:	AK102	**Sample Vol Used:**	
Matrix:	GW	**Initial Wt/Vol:**	100 mL
Total Solids (%):		**Final Wt/Vol:**	30 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
AK102 DRO C10-C25	C10-C25	5.97	542 QLBJ	B J J4	170	400	800

Sample Narrative:
Duplicate Analysis performed due to QC failure. Results confirm; reporting in hold data

12/14/23

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW02-101523

Lab Sample ID:	L1667791-02	**SDG:**	L1667791
Client Sample ID:	OT001-DSAMW02-101523	**Collected Date/Time:**	10/15/23 11:20
Lab File ID:	1028_025	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	SVGC34	**Preparation Date/Time:**	10/27/23 07:36
Analytical Batch:	WG2156720	**Analysis Date/Time:**	10/28/23 23:49
Dilution Factor:	1.05	**Prep Method:**	3510C
Analytical Method:	AK102	**Sample Vol Used:**	
Matrix:	GW	**Initial Wt/Vol:**	95 mL
Total Solids (%):		**Final Wt/Vol:**	30 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
AK102 DRO C10-C25	C10-C25	5.97	453 QL B J	B J J4	179	420	840

Sample Narrative:
Duplicate Analysis performed due to QC failure. Results confirm; reporting in hold data

12/14/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
WP002-BLOMW01-101523

Lab Sample ID:	L1667791-03	**SDG:**	L1667791
Client Sample ID:	WP002-BLOMW01-101523	**Collected Date/Time:**	10/15/23 12:30
Lab File ID:	1028_015	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	SVGC34	**Preparation Date/Time:**	10/27/23 07:36
Analytical Batch:	WG2156720	**Analysis Date/Time:**	10/28/23 20:27
Dilution Factor:	1.05	**Prep Method:**	3510C
Analytical Method:	AK102	**Sample Vol Used:**	
Matrix:	GW	**Initial Wt/Vol:**	95 mL
Total Solids (%):		**Final Wt/Vol:**	30 mL

Analyte	CAS	RT	Result		Qualifier	DL	LOD	LOQ
			ug/l			ug/l	ug/l	ug/l
AK102 DRO C10-C25	C10-C25	5.97	7860	QL	J4 J6	179	420	840

Sample Narrative:
Duplicate Analysis performed due to QC failure. Results confirm; reporting in hold data

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-EQBK01-101523

Lab Sample ID:	L1667791-04	**SDG:**	L1667791
Client Sample ID:	OT001-EQBK01-101523	**Collected Date/Time:**	10/15/23 17:45
Lab File ID:	1028_026	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	SVGC34	**Preparation Date/Time:**	10/27/23 07:36
Analytical Batch:	WG2156720	**Analysis Date/Time:**	10/29/23 00:09
Dilution Factor:	1	**Prep Method:**	3510C
Analytical Method:	AK102	**Sample Vol Used:**	
Matrix:	GW	**Initial Wt/Vol:**	100 mL
Total Solids (%):		**Final Wt/Vol:**	30 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
AK102 DRO C10-C25	C10-C25	5.97	423 QL B J	B J J4	170	400	800

Sample Narrative:
Duplicate Analysis performed due to QC failure. Results confirm; reporting in hold data

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW05-101523

Lab Sample ID:	L1667791-01	**SDG:**	L1667791
Client Sample ID:	OT001-DSAMW05-101523	**Collected Date/Time:**	10/15/23 10:00
Lab File ID:	20231024181337	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	LACHAT6	**Preparation Date/Time:**	10/23/23 16:56
Analytical Batch:	WG2155669	**Analysis Date/Time:**	10/24/23 18:13
Dilution Factor:	1	**Prep Method:**	351.2/365.4
Analytical Method:	351.2	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	20 mL
Total Solids (%):	_____	**Final Wt/Vol:**	20 mL

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Kjeldahl Nitrogen, TKN JQH	7727-37-9	183	J	140	300	600

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW02-101523

Lab Sample ID:	L1667791-02	**SDG:**	L1667791
Client Sample ID:	OT001-DSAMW02-101523	**Collected Date/Time:**	10/15/23 11:20
Lab File ID:	20231022223606	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	LACHAT6	**Preparation Date/Time:**	10/21/23 18:17
Analytical Batch:	WG2154036	**Analysis Date/Time:**	10/22/23 22:36
Dilution Factor:	1	**Prep Method:**	351.2/365.4
Analytical Method:	351.2	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	20 mL
Total Solids (%):	_____	**Final Wt/Vol:**	20 mL

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Kjeldahl Nitrogen, TKN QH	7727-37-9	300	U	140	300	600

KMR 12/08/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
WP002-BLOMW01-101523

Lab Sample ID:	L1667791-03	**SDG:**	L1667791
Client Sample ID:	WP002-BLOMW01-101523	**Collected Date/Time:**	10/15/23 12:30
Lab File ID:	20231022223722	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	LACHAT6	**Preparation Date/Time:**	10/21/23 18:17
Analytical Batch:	WG2154036	**Analysis Date/Time:**	10/22/23 22:37
Dilution Factor:	1	**Prep Method:**	351.2/365.4
Analytical Method:	351.2	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	20 mL
Total Solids (%):	_____	**Final Wt/Vol:**	20 mL

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Kjeldahl Nitrogen, TKN JQH	7727-37-9	846	J5	140	300	600

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-EQBK01-101523

Lab Sample ID:	L1667791-04	**SDG:**	L1667791
Client Sample ID:	OT001-EQBK01-101523	**Collected Date/Time:**	10/15/23 17:45
Lab File ID:	20231025094728	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	LACHAT6	**Preparation Date/Time:**	10/24/23 18:59
Analytical Batch:	WG2155459	**Analysis Date/Time:**	10/25/23 09:47
Dilution Factor:	1	**Prep Method:**	351.2/365.4
Analytical Method:	351.2	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	20 mL
Total Solids (%):	_____	**Final Wt/Vol:**	20 mL

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Kjeldahl Nitrogen, TKN QH	7727-37-9	300	J5 U	140	300	600

Sample Narrative:
[MS failed due to sample matrix RPD<20]

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW05-101523

Lab Sample ID:	L1667791-01	**SDG:**	L1667791
Client Sample ID:	OT001-DSAMW05-101523	**Collected Date/Time:**	10/15/23 10:00
Lab File ID:	21.0000.TXT	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	IC-10	**Preparation Date/Time:**	10/25/23 17:47
Analytical Batch:	WG2156852	**Analysis Date/Time:**	10/25/23 17:47
Dilution Factor:	1	**Prep Method:**	9056A
Analytical Method:	9056A	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Sulfate QL	14808-79-8	10100		594	2500	5000

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW02-101523

Lab Sample ID:	L1667791-02	**SDG:**	L1667791
Client Sample ID:	OT001-DSAMW02-101523	**Collected Date/Time:**	10/15/23 11:20
Lab File ID:	24.0000.TXT	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	IC-10	**Preparation Date/Time:**	10/25/23 18:31
Analytical Batch:	WG2156852	**Analysis Date/Time:**	10/25/23 18:31
Dilution Factor:	1	**Prep Method:**	9056A
Analytical Method:	9056A	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Sulfate QL	14808-79-8	8920		594	2500	5000

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
WP002-BLOMW01-101523

Lab Sample ID:	L1667791-03	**SDG:**	L1667791
Client Sample ID:	WP002-BLOMW01-101523	**Collected Date/Time:**	10/15/23 12:30
Lab File ID:	25.0000.TXT	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	IC-10	**Preparation Date/Time:**	10/25/23 18:46
Analytical Batch:	WG2156852	**Analysis Date/Time:**	10/25/23 18:46
Dilution Factor:	1	**Prep Method:**	9056A
Analytical Method:	9056A	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Sulfate JQL	14808-79-8	4690	J J6	594	2500	5000

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-EQBK01-101523

Lab Sample ID:	L1667791-04	**SDG:**	L1667791
Client Sample ID:	OT001-EQBK01-101523	**Collected Date/Time:**	10/15/23 17:45
Lab File ID:	29.0000.TXT	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	IC-10	**Preparation Date/Time:**	10/25/23 19:46
Analytical Batch:	WG2156852	**Analysis Date/Time:**	10/25/23 19:46
Dilution Factor:	1	**Prep Method:**	9056A
Analytical Method:	9056A	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Sulfate JQL	14808-79-8	742	J	594	2500	5000

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW05-101523

Lab Sample ID:	L1667791-01	**SDG:**	L1667791
Client Sample ID:	OT001-DSAMW05-101523	**Collected Date/Time:**	10/15/23 10:00
Lab File ID:	20231020205341	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	LACHAT2	**Preparation Date/Time:**	10/20/23 20:53
Analytical Batch:	WG2154634	**Analysis Date/Time:**	10/20/23 20:53
Dilution Factor:	1	**Prep Method:**	353.2
Analytical Method:	353.2	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Nitrate-Nitrite	7727-37-9	1110		50.0	100	200

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW02-101523

Lab Sample ID:	L1667791-02	**SDG:**	L1667791
Client Sample ID:	OT001-DSAMW02-101523	**Collected Date/Time:**	10/15/23 11:20
Lab File ID:	20231020205457	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	LACHAT2	**Preparation Date/Time:**	10/20/23 20:54
Analytical Batch:	WG2154634	**Analysis Date/Time:**	10/20/23 20:54
Dilution Factor:	1	**Prep Method:**	353.2
Analytical Method:	353.2	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Nitrate-Nitrite	7727-37-9	2220		50.0	100	200

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
WP002-BLOMW01-101523

Lab Sample ID:	L1667791-03	**SDG:**	L1667791
Client Sample ID:	WP002-BLOMW01-101523	**Collected Date/Time:**	10/15/23 12:30
Lab File ID:	20231020205614	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	LACHAT2	**Preparation Date/Time:**	10/20/23 20:56
Analytical Batch:	WG2154634	**Analysis Date/Time:**	10/20/23 20:56
Dilution Factor:	1	**Prep Method:**	353.2
Analytical Method:	353.2	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Nitrate-Nitrite	7727-37-9	100	U	50.0	100	200

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-EQBK01-101523

Lab Sample ID:	L1667791-04	**SDG:**	L1667791
Client Sample ID:	OT001-EQBK01-101523	**Collected Date/Time:**	10/15/23 17:45
Lab File ID:	20231020210511	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	LACHAT2	**Preparation Date/Time:**	10/20/23 21:05
Analytical Batch:	WG2154634	**Analysis Date/Time:**	10/20/23 21:05
Dilution Factor:	1	**Prep Method:**	353.2
Analytical Method:	353.2	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Nitrate-Nitrite	7727-37-9	100	U	50.0	100	200

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW02-101523

Lab Sample ID:	L1667791-02	**SDG:**	L1667791
Client Sample ID:	OT001-DSAMW02-101523	**Collected Date/Time:**	10/15/23 11:20
Lab File ID:	20231024092520	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	ICP13	**Preparation Date/Time:**	10/22/23 10:56
Analytical Batch:	WG2153991	**Analysis Date/Time:**	10/24/23 09:25
Dilution Factor:	1	**Prep Method:**	3015
Analytical Method:	6010D	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	45 mL
Total Solids (%):	_____	**Final Wt/Vol:**	50 mL

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Iron	7439-89-6	5760		20.5	50.0	100
Manganese QL	7439-96-5	153		0.855	5.00	10.0

KMR 12/07/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
WP002-BLOMW01-101523

Lab Sample ID:	L1667791-03	**SDG:**	L1667791
Client Sample ID:	WP002-BLOMW01-101523	**Collected Date/Time:**	10/15/23 12:30
Lab File ID:	20231024084512	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	ICP13	**Preparation Date/Time:**	10/22/23 10:56
Analytical Batch:	WG2153991	**Analysis Date/Time:**	10/24/23 08:45
Dilution Factor:	1	**Prep Method:**	3015
Analytical Method:	6010D	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	45 mL
Total Solids (%):	_____	**Final Wt/Vol:**	50 mL

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Iron	7439-89-6	3840		20.5	50.0	100

KMR 12/07/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
WP002-BLOMW01-101523

Lab Sample ID:	L1667791-03	**SDG:**	L1667791
Client Sample ID:	WP002-BLOMW01-101523	**Collected Date/Time:**	10/15/23 12:30
Lab File ID:	20231024171746	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	ICP13	**Preparation Date/Time:**	10/22/23 10:56
Analytical Batch:	WG2153991	**Analysis Date/Time:**	10/24/23 17:17
Dilution Factor:	5	**Prep Method:**	3015
Analytical Method:	6010D	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	45 mL
Total Solids (%):	_____	**Final Wt/Vol:**	50 mL

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Manganese QL	7439-96-5	12900		4.28	25.0	50.0

KMR 12/07/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-EQBK01-101523

Lab Sample ID:	L1667791-04	**SDG:**	L1667791
Client Sample ID:	OT001-EQBK01-101523	**Collected Date/Time:**	10/15/23 17:45
Lab File ID:	20231024092817	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	ICP13	**Preparation Date/Time:**	10/22/23 10:56
Analytical Batch:	WG2153991	**Analysis Date/Time:**	10/24/23 09:28
Dilution Factor:	1	**Prep Method:**	3015
Analytical Method:	6010D	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	45 mL
Total Solids (%):	_____	**Final Wt/Vol:**	50 mL

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Iron	7439-89-6	50.0	U	20.5	50.0	100
Manganese JQL	7439-96-5	1.78	J	0.855	5.00	10.0

KMR 12/07/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW05-101523

Lab Sample ID:	L1667791-01	**SDG:**	L1667791
Client Sample ID:	OT001-DSAMW05-101523	**Collected Date/Time:**	10/15/23 10:00
Lab File ID:	20231023172442	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	TITRANDO1	**Preparation Date/Time:**	10/23/23 17:24
Analytical Batch:	WG2156308	**Analysis Date/Time:**	10/23/23 17:24
Dilution Factor:	1	**Prep Method:**	2320 B-2011
Analytical Method:	2320 B-2011	**Sample Vol Used:**	50 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Alkalinity		69400		8450	10000	20000
Alkalinity,Bicarbonate		69400		8450	10000	20000
Alkalinity,Carbonate		10000	U	8450	10000	20000
Alkalinity,Hydroxide		10000	U	8450	10000	20000

Sample Narrative:
Endpoint pH 4.5 Headspace

KMR 12/08/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW02-101523

Lab Sample ID:	L1667791-02	**SDG:**	L1667791
Client Sample ID:	OT001-DSAMW02-101523	**Collected Date/Time:**	10/15/23 11:20
Lab File ID:	20231023173018	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	TITRANDO1	**Preparation Date/Time:**	10/23/23 17:30
Analytical Batch:	WG2156308	**Analysis Date/Time:**	10/23/23 17:30
Dilution Factor:	1	**Prep Method:**	2320 B-2011
Analytical Method:	2320 B-2011	**Sample Vol Used:**	50 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Alkalinity		125000		8450	10000	20000
Alkalinity,Bicarbonate		125000		8450	10000	20000
Alkalinity,Carbonate		10000	U	8450	10000	20000
Alkalinity,Hydroxide		10000	U	8450	10000	20000

Sample Narrative:
Endpoint pH 4.5 Headspace

KMR 12/08/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
WP002-BLOMW01-101523

Lab Sample ID:	L1667791-03	**SDG:**	L1667791
Client Sample ID:	WP002-BLOMW01-101523	**Collected Date/Time:**	10/15/23 12:30
Lab File ID:	20231023173542	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	TITRANDO1	**Preparation Date/Time:**	10/23/23 17:35
Analytical Batch:	WG2156308	**Analysis Date/Time:**	10/23/23 17:35
Dilution Factor:	1	**Prep Method:**	2320 B-2011
Analytical Method:	2320 B-2011	**Sample Vol Used:**	50 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Alkalinity		988000		8450	10000	20000
Alkalinity,Bicarbonate		988000		8450	10000	20000
Alkalinity,Carbonate		10000	U	8450	10000	20000
Alkalinity,Hydroxide		10000	U	8450	10000	20000

Sample Narrative:
Endpoint pH 4.5 Headspace

KMR 12/08/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-EQBK01-101523

Lab Sample ID:	L1667791-04	**SDG:**	L1667791
Client Sample ID:	OT001-EQBK01-101523	**Collected Date/Time:**	10/15/23 17:45
Lab File ID:	20231023173942	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	TITRANDO1	**Preparation Date/Time:**	10/23/23 17:39
Analytical Batch:	WG2156308	**Analysis Date/Time:**	10/23/23 17:39
Dilution Factor:	1	**Prep Method:**	2320 B-2011
Analytical Method:	2320 B-2011	**Sample Vol Used:**	50 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Alkalinity		10000	U	8450	10000	20000
Alkalinity,Bicarbonate		10000	U	8450	10000	20000
Alkalinity,Carbonate		10000	U	8450	10000	20000
Alkalinity,Hydroxide		10000	U	8450	10000	20000

Sample Narrative:
Endpoint pH 4.5 Headspace

KMR 12/08/23

ADEC Contaminated Sites Program Laboratory Data Review Checklist

Completed By:	Sherrie Robinson	**CS Site Name:**	Port Heiden RRS	**Lab Name:**	Pace Analytical
Title:	Staff Scientist	**ADEC File No.:**	OT001: 2637.38.002.05 NPDL 21-034	**Lab Report No.:**	L1667912
Consulting Firm:	North Wind Site Services	**Hazard ID No.:**	OT001: 185	**Lab Report Date:**	11/20/23

Note: *Any N/A or No box checked must have an explanation in the comments box.*

1. **Laboratory**

   a. Did an ADEC Contaminated Sites Laboratory Approval Program (CS-LAP) approved laboratory receive and perform all of the submitted sample analyses?
   Yes ☒ No ☐ N/A ☐
   Comments: Yes, the samples were analyzed by Pace Analytical.

   b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses CS-LAP approved?
   Yes ☐ No ☐ N/A ☒
   Comments: Samples were not subcontracted.

2. **Chain of Custody (CoC)**

   a. Is the CoC information completed, signed, and dated (including released/received by)?
   Yes ☒ No ☐ N/A ☐
   Comments: COC is complete and accurate.

   b. Were the correct analyses requested?
   Yes ☒ No ☐ N/A ☐
   Analyses requested: AK 102, 8260D-LL, 8260D, 2320 B-2011 Wet Chemistry, 351.2 Wet Chemistry, 353.2 Wet Chemistry, 6010D Metals (ICP), and 9056A Wet Chemistry.
   Comments: The correct analyses were requested per the COC.

3. **Laboratory Sample Receipt Documentation**

   a. Is the sample/cooler temperature documented and within range at receipt (0° to 6° C)?
   Yes ☒ No ☐ N/A ☐

Cooler temperature(s): 2.2°C
Sample temperature(s): Not applicable.
Comments: The samples were received cooled at 2.2°C per the sample receipt documentation.

b. Is the sample preservation acceptable – acidified waters, methanol preserved soil (GRO, BTEX, VOCs, etc.)?
Yes ☒ No ☐ N/A ☐
Comments: 8260D: The samples had a pH <2 and ~7 which was outside the method criteria of pH 4-5 for 2-chloroethylvinyl ether, per the USEPA Method SW846 8260. All high-level 2-chloroethylvinyl ether results were non-detect and have been qualified with a 'QL' validation flag due to improper sample preservation; however, 2-chloroethylvinyl ether is not a chemical of concern.

The remaining samples were received properly preserved.

c. Is the sample condition documented – broken, leaking, zero headspace (VOA vials); canister vacuum/pressure checked and no open valves, etc.?
Yes ☒ No ☐ N/A ☐
Comments: No discrepancies were noted.

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, canister not holding a vacuum, etc.?
Yes ☐ No ☐ N/A ☒
Comments: No discrepancies were noted.

e. Is the data quality or usability affected?
Yes ☐ No ☒ N/A ☐
Comments: Data quality and usability were not affected.

4. Case Narrative

a. Is the case narrative present and understandable?
Yes ☒ No ☐ N/A ☐
Comments: The case narrative is present and understandable.

b. Are there discrepancies, errors, or QC failures identified by the lab?
Yes ☒ No ☐ N/A ☐
Comments:
The Case Narrative noted:
Wet Chemistry by Method 351.2: The sample matrix interfered with the ability to make any accurate determination; spike value is low.

Method 8260D: The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Data is likely to

show a low bias concerning the result.
The initial calibration verification standard (SSCV) associated with this data responded low.
The sample matrix interfered with the ability to make any accurate determination; spike value is high.
The sample matrix interfered with the ability to make any accurate determination; spike value is low.
The associated batch QC was outside the established quality control range for precision.

AK102: Surrogate recovery limits have been exceeded; values are outside lower control limits.
The same analyte is found in the associated blank.

The Method Blank form noted, “Duplicate Analysis performed due to surrogate failure. Reporting most compliant data.”

c. Were all the corrective actions documented?
Yes ☐ No ☐ N/A ☒
Comments: No corrective actions were noted.

d. What is the effect on data quality/usability according to the case narrative?
Comments: See following sections for data quality/usability.

5. Sample Results

a. Are the correct analyses performed/reported as requested on CoC?
Yes ☒ No ☐ N/A ☐
Comments: The correct analyses were performed as requested on the COC.

b. Are all applicable holding times met?
Yes ☐ No ☒ N/A ☐
Comments: AK102 DRO C10-C25: The samples were collected on 10/13/23 and were received by the laboratory on 10/18/23 at 2.2°C. The samples were extracted on 10/27/23 within 14 days of collection and analyzed on 10/28/23 within 1 day of extraction. All preservation and holding time criteria were met.

8260D-LL: The samples were collected on 10/13/23 and were received by the laboratory on 10/18/23 at 2.2°C and a pH <2. Low-level samples OT001-BLOMW06-101323 and OT001-TRIPBLANK-HCL-02 were analyzed on 10/29/23 within 16 days of collection and outside of the 14 day collection to analysis hold time.

8260D- High-level samples OT001-BLOMW06-101323 and OT001-TRIPBLANK-HCL-02 were analyzed on 10/22/23 and 10/29/23 within 9-16 days of collection. The high-level OT001-BLOMW06-101323 and OT001-TRIPBLANK-HCL-02

results analyzed on 10/29/23 were analyzed within 16 days of collection, but outside of the 14 day collection to analysis hold time. In the high-level 10/29/23 analysis of these samples, only 2,2-dichloropropane, hexachloro-1,3-butadiene, and 1,1,1-trichloroethane in sample OT001-TRIPBLANK-HCL-02 and 2,2-dichloropropane and hexachloro-1,3-butadiene in sample OT001-BLOMW06-101323 were reported. These results have been qualified with an 'H' validation flag as the exceeded hold time was <2x the required holding time.

The remaining high and low-level samples were analyzed on 10/22/23, 10/26/23 and 10/27/23, within 9-14 days of collection. The remaining holding time criteria were met.

353.2 6010D Metals (ICP): Receipt logs indicate that samples were received intact, and cooler temperatures were acceptable upon receipt for metals samples. Holding times were met for all preparatory and analytical processes. No qualifications were appended to the associated sample results due to holding time and preservation considerations.

2320 B-2011, 9056A, 351.2, 353.2 Wet Chemistry: Receipt logs indicate that cooler temperatures were acceptable upon receipt for all samples and that the samples were received intact and that all holding times were met.

A holding time table has been provided in the attachment.

c. Are all soils reported on a dry weight basis?
Yes ☐ No ☐ N/A ☒
Comments: Soil samples were not collected for this SDG.

d. Are the reported limits of quantitation (LoQ) or limits of detections (LOD), or reporting limits (RL) less than the Cleanup Level or the action level for the project?
Yes ☐ No ☒ N/A ☐
Comments: The following results were non-detect and the LODs reported by the laboratory were elevated and over the ADEC clean up limits. Users are cautioned that there are elevated LODs:
8260D-LL: 1,2,3-Trichloropropane, hexachloro-1,3-butadiene, 1,1,2-trichloroethane, 1,2,3-trichloropropane, 1,2-dibromoethane, naphthalene, and vinyl chloride in samples OT001-TRIPBLNK-HCL-02, OT001-BLOMW05-101323, OT001-BLOMW06-101323, OT001-BLOMW07-101323, OT001-BLOMW99-101323, and OT001-RRSMW06-101323.

e. Is the data quality or usability affected?
Yes ☒ No ☐ N/A ☐
Comments: 8260D-LL: All low-level OT001-BLOMW06-101323 and OT001-TRIPBLANK-HCL-02 sample results have been qualified with an 'H' validation flag as the exceeded hold time was <2x the required holding time.

8260D- In the high-level 10/29/23 analysis of samples OT001-BLOMW06-101323 and OT001-TRIPBLANK-HCL-02, only 2,2-dichloropropane, hexachloro-1,3-butadiene, and 1,1,1-trichloroethane in sample OT001-TRIPBLANK-HCL-02 and 2,2-dichloropropane and hexachloro-1,3-butadiene in sample OT001-BLOMW06-101323 were reported. These results have been qualified with an 'H' validation flag as the exceeded hold time was <2x the required holding time.

All high-level 2-chloroethylvinyl ether results were non-detect and have been qualified with a 'QL' validation flag due to improper sample preservation.

LOQs were greater than the project cleanup levels. However, data usability is determined on a case by case basis by the project manager and risk assessment team. Data users are cautioned that non-detects will be driving the risk and the LOQs were greater than the PALs.

6. QC Samples

a. Method Blank

i. Was one method blank reported per matrix, analysis, and 20 samples?
Yes ☒ No ☐ N/A ☐
Comments: Method blanks were analyzed at the proper frequency.

ii. Are all method blank results less than LOQ (or RL)?
Yes ☐ No ☒
Comments: AK102: DRO C10-C25 (417 ug/l, J) was present in the method blank.

8260D: 1,1,1-Trichloroethane (0.328 ug/L, J) was present in high-level method blank associated with analytical batch WG2155879. 1,1,1-Trichloroethane was only reported from samples OT001-BLOMW99-101323 and OT001-BLOMW06-101323 in analytical batch WG2155879.

The remaining method blank (MB), initial calibration blank (ICB), continuing calibration blank (CCB), and preparation blank (PB) results were non-detect.

iii. If above LoQ or RL, what samples are affected?
Comments: AK102: All DRO C10-C25 results were detected at a concentration <LOQ and have been qualified with a 'B' validation flag due to the method blank detection.

8260D: 1,1,1-Trichloroethane was non-detect in high-level samples

OT001-BLOMW99-101323 and OT001-BLOMW06-101323 and no qualifications were warranted.

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?
Yes ☒ No ☐ N/A ☐
Comments: No comments.

v. Data quality or usability affected?
Yes ☒ No ☐ N/A ☐
Comments: AK102: All DRO C10-C25 results have been qualified with a 'B' validation flag due to the method blank detection.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – Are one LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)
Yes ☒ No ☐ N/A ☐
Comments: LCS/LCSD analyses were analyzed at the proper frequency.

ii. Metals/Inorganics – Are one LCS and one sample duplicate reported per matrix, analysis and 20 samples?
Yes ☒ No ☐ N/A ☐
Comments: 353.2 6010D Metals (ICP): All laboratory control sample recovery results were within the 80-120% acceptance criteria.

iii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)
Yes ☒ No ☐ N/A ☐
Comments: All LCS/LCSD recoveries were within the acceptance criteria.

iv. Precision – Are all relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? Was the RPD reported from LCS/LCSD, and or sample/sample duplicate? (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)
Yes ☒ No ☐ N/A ☐
Comments: All LCSD precision criteria was met.

v. If %R or RPD is outside of acceptable limits, what samples are affected?
Comments: All LCS/LCSD recovery and precision criteria was met.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?
Yes ☐ No ☐ N/A ☒
Comments: Not applicable, all LCS/LCSD recoveries were within the acceptance criteria.

vii. Is the data quality or usability affected?
Yes ☐ No ☒ N/A ☐
Comments: Data quality and usability was not affected.

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

i. Organics – Are one MS/MSD reported per matrix, analysis and 20 samples?
Yes ☐ No ☐ N/A ☒
Comments: AK102: A MS/MSD pair was not analyzed for the AK102 analysis in this SDG. In the professional judgement of the validator, no qualifications were warranted as an LCS/LCSD was analyzed to ensure precision and accuracy.

8260D-LL/8260D: Non-SDG samples L1667791-03, L1668251-01, L1668253-02, and L1667978-05 were the parent samples for the MS/MSD analyses.

ii. Metals/Inorganics – Are one MS/MSD reported per matrix, analysis and 20 samples?
Yes ☐ No ☐ N/A ☒
Comments: 353.2 6010D Metals (ICP): Non-SDG sample L1667832-03 was the parent sample for the MS/MSD analysis. All matrix spike and matrix spike duplicate (MS/MSD) recovery results were within the method specific acceptance criteria.

All laboratory duplicate (LD) and MSD RPD recoveries were within the 30%RPD acceptance criteria for aqueous samples.

2320 B-2011, 9056A, 351.2, 353.2 Wet Chemistry: Non-SDG sample L1667969-01 was the parent samples for the matrix spike and matrix spike duplicate (MS/MSD) analyses.

iii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?
Yes ☐ No ☐ N/A ☒
Comments: 8260D-LL/8260D: In the non-SDG L1667791-03, L1668251-01, L1668253-02, and L1667978-05 MS/MSDs several compounds were

outside of the recovery criteria and exceeded the 30%RPD acceptance criteria.

2320 B-2011, 9056A, 351.2, 353.2 Wet Chemistry: The non-SDG L1667969-01 MS recovery for TKN (81%) was outside the 90-110% recovery criteria.
All laboratory duplicate (LD) and MSD RPD recoveries were within the 30%RPD acceptance criteria for aqueous samples.

iv. Precision – Are all relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from MS/MSD, and or sample/sample duplicate.
Yes ☐ No ☐ N/A ☒
Comments: 8260D-LL/8260D: In the non-SDG L1667791-03, L1668251-01, L1668253-02, and L1667978-05 MS/MSD, several compounds were outside of the recovery criteria and exceeded the 30%RPD acceptance criteria.

v. If %R or RPD is outside of acceptable limits, what samples are affected?
Comments: 8260D-LL/8260D: No qualifications were warranted due to the exceedances in the non-SDG MS/MSDs as the parent samples were not from this SDG and only the parent sample shall be qualified due to MS/MSD considerations per the DOD QSM.

2320 B-2011, 9056A, 351.2, 353.2 Wet Chemistry: No qualifications were warranted due to the exceedances in the non-SDG L1667969-01 MS as the parent sample was not from this SDG.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?
Yes ☐ No ☐ N/A ☒
Comments: 8260D-LL/8260D: No qualifications were warranted due to the exceedances in the non-SDG MS/MSDs as the parent samples were not from this SDG.

2320 B-2011, 9056A, 351.2, 353.2 Wet Chemistry: No qualifications were warranted due to the exceedances in the non-SDG L1667969-01 MS as the parent sample was not from this SDG.

vii. Is the data quality or usability affected?
Yes ☐ No ☒ N/A ☐
Comments: Data quality and usability were not affected as the MS/MSD parent samples were not from this SDG.

d. Surrogates – Organics Only or Isotope Dilution Analytes (IDA) – Isotope Dilution Methods Only

i. Are surrogate/IDA recoveries reported for organic analyses – field, QC, and laboratory samples?
Yes ☒ No ☐ N/A ☐
Comments: No comments.

ii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods 50-150 %R for field samples and 60-120 %R for QC samples; all other analyses see the laboratory report pages)
Yes ☐ No ☒ N/A ☐
Comments: AK102: Surrogate o-terphenyl in sample OT001-BLOMW99-101323 (46.6%) exceeded the 50-150% recovery criteria.

8260D-LL/8260D: All surrogate recoveries were within the acceptance criteria.

iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?
Yes ☒ No ☐ N/A ☐
Comments:

iv. Is the data quality or usability affected?
Yes ☒ No ☐ N/A ☐
Comments: AK102: DRO C10-C25 in sample OT001-BLOMW99-101323 was reported above the detection limit and has been qualified with a “QL” validation flag due to low surrogate recovery.

e. Trip Blanks

i. Is one trip blank reported per matrix, analysis, and for each cooler containing volatile samples? Yes ☒ No ☐ N/A ☐
Comments: 8260D-LL/8260D: Trip blank OT001-TRIPBLANK-HCL-02 was present in this SDG.

ii. Are all results less than LoQ or RL?
Yes ☐ No ☒ N/A ☒
Comments: 8260D-LL: Acetone was present in low-level trip blank OT001-TRIPBLANK-HCL-02 (0.596 ug/L, J).

iii. If above LoQ or RL, what samples are affected?
Comments: 8260D-LL: All low-level acetone results were detected at a concentrations <LOQ and have been qualified with a ‘B’ validation flag due to the trip blank detection.

iv. Is the data quality or usability affected?
Yes ☒ No ☐ N/A ☐
Comments: 8260D-LL: All low-level acetone results have been qualified with a 'B' validation flag due to the trip blank detection. All affected acetone results were reported below the LOQ, and in the professional judgement of the validator, the data is usable. However, the final usability determination should be decided by the project.

f. Field Duplicate

i. Are one field duplicate submitted per matrix, analysis, and 10 project samples?
Yes ☒ No ☐ N/A ☐
Comments: The field duplicate pair for this SDG was OT001-BLOMW07-101323 and OT001-BLOMW99-101323.

ii. Was the duplicate submitted blind to lab?
Yes ☒ No ☐ N/A ☐
Comments: Field duplicates were submitted blind to the lab.

iii. Precision – All relative percent differences (RPD) less than specified project objectives? (Recommended: 30% water or air, 50% soil)

$$RPD\ (\%) = \left| \frac{R_1 - R_2}{\left(\frac{R_1 + R_2}{2}\right)} \right| X\ 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

Is the data quality or usability affected? (Explain)

Yes ☐ No ☒ N/A ☐
Comments: AK102: All field duplicate criteria were met.

AK102 Analyte	**OT001-BLOMW07-101323 (ug/L)**	**OT001-BLOMW99-101323 (ug/L)**	**RPD**
AK102 DRO C10-C25	431, J	407, J	**5.73%**

8260D: All field duplicate criteria were met.

8260D-LL Analytes	**OT001-BLOMW07-101323 (ug/L)**	**OT001-BLOMW99-101323 (ug/L)**	**RPD**

Low-level acetone	2.39, J	2.08, J	**13.9%**
Low-level benzene	0.0660, J	0.0680, J	**2.99%**
Low-level toluene	0.237	0.216	**9.27%**

353.2 6010D Metals (ICP): The iron and manganese results in samples OT001-BLOMW07-101323 and OT001-BLOMW99-101323 have been qualified with a 'QN' validation flag as the sample and duplicate results were > the LOQ and the field duplicate precision results were >30%.

Analyte	Sample	Duplicate	RPD
Fe	412	1620	**118.90%**
Mn	18.8	83.7	**126.63%**

2320 B-2011, 9056A, 351.2, 353.2 Wet Chemistry: All field duplicate RPDs were within the 35% acceptance criteria.

Analyte	Sample	Duplicate	RPD
Alkalinity	45300	44900	0.89%
Bicarbonate	45300	44900	0.89%
Carbonate	10000	10000	0.00%
Hydroxide	10000	10000	0.00%
TKN	300	300	0.00%
Nitrate-Nitrite	100	100	0.00%
Sulfate	2450	2240	8.96%

iv. Is the data quality or usability affected? (Explain)
Yes ☒ No ☐ N/A ☐
Comments: 353.2 6010D Metals (ICP): The iron and manganese results in samples OT001-BLOMW07-101323 and OT001-BLOMW99-101323 have been qualified with a 'QN' validation flag

g. Decontamination or Equipment Blanks

i. Were decontamination or equipment blanks collected?
Yes ☐ No ☒ N/A ☐
Comments: Field and equipment blanks were not included in this SDG.

ii. Are all results less than LoQ or RL?
Yes ☐ No ☐ N/A ☒
Comments: Field and equipment blanks were not included in this SDG.

iii. If above LoQ or RL, specify what samples are affected.
Comments: Not applicable, field and equipment blanks were not included in this SDG.

iv. Are data quality or usability affected?
Yes ☐ No ☒ N/A ☐
Comments: Data quality and usability was not affected.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Are they defined and appropriate?
Yes ☐ No ☐ N/A ☒
Comments: AK102: All sample results have been qualified with a 'J' validation flag as the results were reported between the detection limit (DL) and the limit of quantitation (LOQ) and are estimates.

8260D-LL/8260D: Several sample results have been qualified with a 'J' validation flag to denote the reported results are estimated due to sample results reported at levels between the detection limit (DL) and the limit of quantitation (LOQ).

Manganese in sample OT001-RRSMW06-101323 was "J" flagged by the laboratory due to sample results greater than the MDL but below the LOQ. A "J" validation flag has been applied to this result.

The following results were "J" flagged by the laboratory due to sample results greater than the MDL but below the LOQ. A "J" validation flag has been applied to these results:
• Nitrate/Nitrite in sample OT001-BLOMW06-101323.
• Sulfate in samples OT001-RRSMW06-101323, OT001-BLOMW05-101323, OT001-BLOMW07-101323, OT001-BLOMW99-101323, and OT001-BLOMW06-101323.

• The following results were reported above the detection limit and have been qualified with a 'QN' validation flag due to the exceeded CCV %R/%D criteria:

- Low-level acetone in samples OT001-RRSMW06-101323, OT001-BLOMW05-101323, OT001-BLOMW07-101323, and OT001-BLOMW99-101323.

• The following sample results were non-detect and have been qualified with a 'QN' validation flag as the CCV %R/%D criteria was exceeded:

- Low-level carbon tetrachloride, trans-1,4-dichloro-2-butene, and trichlorofluoromethane in samples OT001-RRSMW06-101323 and OT001-BLOMW05-101323.
- Low-level carbon tetrachloride, trans-1,4-dichloro-2-butene, trichloroethene, and trichlorofluoromethane in samples OT001-BLOMW07-101323 and OT001-BLOMW99-101323.
- Low-level 1,2,3-trichlorobenzene, naphthalene, and trans-1,4-dichloro-2-butene in samples OT001-TRIPBLANK-HCL-02 and OT001-BLOMW06-101323.

• Low-level trichloroethene was not reported in the 10/22/23 analysis of samples OT001-RRSMW06-101323 and OT001-BLOMW05-101323 and no qualifications were warranted.

• No qualifications were warranted due to the high CCV%D for surrogate 1,2-dichloroethane-d4.

• The remaining CCV criteria were met. No further qualifications were warranted.

Level 2b Data Review

Project ID:	**Port Heiden RRS 21-034**	**Lab Name:**	**Pace Analytical National**
SOW No.	**South Optimized Remediation Contract**	**SDG No.**	**L1667912**

This review is based on Project requirements, the requirements of Method 8015, Base Method 8000, and validator technical judgment in accordance with the following documents:

- South Optimized Remediation Contract. *Port Heiden Radio Relay Station. Final, August 2022.*
- Department of Defense (DoD). Department of Defense (DOD)/Department of Energy (DOE) Consolidated Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.4. 2021.
- U.S. Environmental Protection Agency (USEPA). 1986. *Solid Waste SW-846 Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods*, Third Edition and Updates.
- Method AK102, *Determination of Diesel Range Organics*, Version 12/21/16.
- USEPA Office of Research and Development., 1993 and Updates, Methods for the Determination of Inorganic Substances in Environmental Samples, EPA 600-R-93-100, August.

Validation qualifiers are written in red on copies of the Laboratory Form 1s (result forms).

AK102 Data Review

1. Samples Submitted and Analyses Requested.

Sample ID	Lab ID	Type	Matrix	Date Collected	Prep/Extraction Date	Analysis Date
OT001-RRSMW06-101323	L1667912-01	Field Sample	Ground Water	10/13/23	10/27/23	10/28/23
OT001-BLOMW05-101323	L1667912-02	Field Sample	Ground Water	10/13/23	10/27/23	10/28/23
OT001-BLOMW07-101323	L1667912-03	Field Sample	Ground Water	10/13/23	10/27/23	10/28/23
OT001-BLOMW99-101323	L1667912-04	Field Duplicate of OT001-BLOMW07-101323	Ground Water	10/13/23	10/27/23	10/28/23
OT001-BLOMW06-101323	L1667912-05	Field Sample	Ground Water	10/13/23	10/27/23	10/28/23

* Denotes exceeded hold time

2. Reviewer Preliminary Comments

Review Type: [] Level IV (Level 3 or 4) [X] Level III (Level 2b) [X] Level II (Level 2a)
Confirm that narrative is present and complete; note overall initial indications.

Five (5) groundwater samples were received by received by Pace Analytical on 10/18/23 at 2.2°C. The samples were analyzed for diesel range organics (DRO) by Method AK102. The data was validated to a Level 2B.

The Method Blank form noted, "Duplicate Analysis performed due to surrogate failure. Reporting most compliant data."

3. Instrumentation QA/QC	**Y**	**N**	**NA**
Were the following instrumentation criteria met?			
Was all retention time criteria met per the analytical method?	**X**		
Was all initial calibration criteria met (i.e. %RSD <25% or r^2<0.995)?	**X**		
Was all initial calibration verification (ICV) criteria met (%D<25% **or** method required criteria)?	**X**		
Was all continuing calibration verification (CCV) criteria met (%D<25% **or** method required criteria)?		**X**	

Reviewer Comments: All retention time, initial calibration, and initial calibration verification criteria were met. No

qualifications were warranted.

Surrogate o-terphenyl in the CCV analyzed on 10/28/23 at 04:02 (26.2%) was outside of the 25%D acceptance criteria. However, no qualifications were warranted due to the high CCV%D for surrogate o-terphenyl. Per, the Case Narrative and CCV forms, the remaining CCV criteria were met.

4. Method Quantitation Limits	**Y**	**N**	**NA**
Does the method quantitation limit (established by the lowest concentration calibration standard) meet project requirements? (**Method 8000**, Sections 7.4.1.2 and 7.4.1.4)	**X**		
Are only those results that fall between the lowest and highest calibration standards reported (i.e., no "J" values or values between the MDL and low standard or above the high standard)? (**Method 8000**, Section 7.4)		**X**	
Action: *Indicate non-correctable contract compliance deviations below. If MQL>RDL, reanalysis may be warranted.			

Reviewer Comments: All sample results have been qualified with a 'J' validation flag as the results were reported between the detection limit (DL) and the limit of quantitation (LOQ) and are estimates.

5. Overall Comments

Overall, the data meet the requirements and intent of the methods, indicate the preparatory process and analytical system were in control at the time of sample analysis, and the reported laboratory results are of sufficient quality for their intended purpose.

Sample Qualifications Summary Table

Sample ID	Analyte	Validation Flag	Qualification Reason(s)
OT001-RRSMW06-101323	DRO C10-C25	J, B	Result ≥DL but <LOQ Method blank considerations
OT001-BLOMW05-101323			
OT001-BLOMW07-101323			
OT001-BLOMW06-101323			
OT001-BLOMW99-101323		B, QL, J	Method blank considerations Low surrogate recovery Result ≥DL but <LOQ

Level 2b Data Review

Project ID:	**Port Heiden RRS 21-034**	**Lab Name:**	**Pace Analytical National**
SOW No.	**South Optimized Remediation Contract**	**SDG No.**	**L1667912**

VOC Data Review

6. Samples Submitted

Sample ID	Lab ID	Type	Matrix	Date Collected	Analysis	DF	Date Analyzed
OT001-RRSMW06-101323	L1667912-01	Field Sample	Ground Water	10/13/23	8260D-LL	1	10/22/23 10/26/23
					8260D		10/22/23
OT001-BLOMW05-101323	L1667912-02	Field Sample	Ground Water	10/13/23	8260D-LL	1	10/22/23 10/27/23
					8260D		10/22/23
OT001-BLOMW07-101323	L1667912-03	Field Sample	Ground Water	10/13/23	8260D-LL	1	10/22/23 10/27/23
					8260D		10/22/23
OT001-BLOMW99-101323	L1667912-04	Field Duplicate of OT001-BLOMW07-101323	Ground Water	10/13/23	8260D-LL	1	10/22/23 10/27/23
					8260D		10/22/23
OT001-BLOMW06-101323	L1667912-05	Field Sample	Ground Water	10/13/23	8260D-LL	1	*10/29/23
					8260D		10/22/23 *10/29/23
OT001-TRIPBLANK-HCL-02	L1667912-06	Trip Blank	Ground Water	10/13/23	8260D-LL	1	*10/29/23
					8260D		10/22/23 *10/29/23

DF: Dilution Factor
* Denotes exceeded holding time

7. Reviewer Preliminary Comments

Review Type: [] Level IV (Level 3 or 4) [x] Level III (Level 2B) []Level II (Level 2a)

Six (6) ground water samples were received by received Pace Analytical on 10/18/23 at 2.2°C. The samples were analyzed for volatile organic compounds and low level volatile organic compounds by EPA Method SW8260D. The data was validated to a Level 2b.

8. GC/MS Performance Check	**Y**	**N**
Are performance check data present in the data submittal?	**X**	
Is the GC/MS hardware-tuned to meet BFB criteria prior to the initial calibration and for each 12-hr period during which analyses are performed? (**Method 8260B**, Sections 4.9.3, 5.11, 7.3.1, 7.4.1, 7.5.2, 8.2.1, and 11.4.1)	**X**	
Are mass spectral relative abundances acceptable according to the method criteria? (**Method 8260B**, Table 4**)**	**X**	
Was there correct assignment of ions?	**X**	
Raw Data Confirmation		
Raw data show proper averaging of scans according to method recommendations.	**X**	
Action: Indicate affected samples in validation comments, primarily if data are rejected. * Qualify only if the deviation indicates an adverse effect on data quality. ** Qualify as appropriate		

Reviewer Comments: All tune criteria were met. No qualifications were warranted.

Level 2b Data Review

Project ID:	**Port Heiden RRS 21-034**	**Lab Name:**	**Pace Analytical National**
SOW No.	**South Optimized Remediation Contract**	**SDG No.**	**L1667912**

9. Initial Calibration	Y	N	NA
Are initial calibration data present in the data submittal?	X		
Does the initial calibration curve consist of a least 5 standards? (**Method 8260B**, Sections 5.7.6.10, 5.7.6.11, 5.12.1 and 7.3.2; and **Method 8000B**, Section 7.4)	X		
Are all target analytes present in the initial calibration? (**Method 8260B**, Section 5.12.3)	X		
For the continuing check compounds (1,1-Dichloroethene, Chloroform, 1,2-Dichloropropane, Toluene, Ethylbenzene, and vinyl chloride), is the RSD ≤30%? (**Method 8260B**, Section 7.3.6.3 and 8.2.3) **[Note: Method 8260 requires an RSD of ≤15% and Method 8260C/D requires an RSD of 20% for all compounds or another type of curve must be used]**	X		
For the system performance check compounds, are the response factors 0.10 for Chloromethane, 1,1-Dichloroethane, and Bromoform and 0.30 for chlorobenzene and 1,1,2,2-tetrachloroethane? (**Method 8260B**, Section 7.3.5.4 and 8.2.3)	X		
Do target compounds meet the minimum response factors summarized in Table 4? (**Method 8260D,** Table 4**)**	X		
For other compounds, is the response factor ≥0.01 (or method criteria)?	X		
If the RSD does not meet the 20% (15% for **Method 8260**) criterion, is a linear (or quadratic) regression equation used for target compound quantitation? (**Method 8260B**, Sections 7.3.8.2)	X		
If linear and/or quadradic regressions, are used, is r ≥0.99 or r^2≥0.98 (**Method 8000B**, Sections 7.5.2 and 8.3.2)	X		
Is the origin not forced and not included in the calibration curve for linear regression? (**Method 8000**, Section 7.5.2)	X		
QC Check Standard (ICV)			
Are QC Check Standard Results present in the data submittal?	X		
Is the check standard run on an ongoing basis? (**Method 8260B**, Section 8.7-referred to as a standard reference material)	X		
Are check standard results within 30% of reference value?		X	
Raw Data Confirmation			
Raw data have been examined for anomalies	X		
The quantitation ions for 2 compounds have been confirmed as the correct ions for quantitation.	X		
Action: Indicate affected samples in validation comments, primarily if data are rejected. * Qualify only if the deviation indicates an adverse effect on data quality. ** Qualify as appropriate *** Qualify only peaks outside linear portion			

Reviewer Comments: All initial calibration criteria were met. No qualifications were warranted.

In the initial calibration verification (ICV) analyzed on 09/14/23 at 05:45, acrylonitrile (59.9%D), allyl chloride (52.8%D), dichlorodifluoromethane (74.3%R), iodomethane (48.0%D), and n-butylbenzene (32.0%D), and in the ICV analyzed on 10/20/23 at 05:37, styrene (41.5%D), tetrahydrofuran (57.9%R), and vinyl acetate (66.2%D) were outside of the 30% difference or 80-120% recovery acceptance criteria. However, the ICV only bracketed the associated ICAL and no qualifications were warranted. The remaining ICV criteria were met.

10. Continuing Calibration	Y	N	NA
Are continuing calibration data present in the data submittal?	X		
Are all target analytes present in the continuing calibration (verification)? (**Method 8260B**, Section 5.12.3)	X		
Has continuing calibration verification been performed within 12 hours of the time of associated sample analysis? (**Method 8260B**, Sections 7.4.2 and 8.2.3)	X		

10. Continuing Calibration	Y	N	NA
For the system performance check compounds, are the response factors in the calibration verification 0.10 for Chloromethane, 1,1-Dichloroethane, and Bromoform and 0.30 for chlorobenzene and 1,1,2,2-tetrachloroethane? (**Method 8260B**, Sections 7.3.5.4, 7.4.4.1, 7.4.4.2, and 8.2.3)	**X**		
Do target compounds meet the minimum response factors summarized in Table 4? (**Method 8260D,** Table 4**)**	**X**		
For other compounds, is the response factor ≥0.01?	**X**		
For the continuing check compounds (1,1-Dichloroethene, Chloroform, 1,2-Dichloropropane, Toluene, Ethylbenzene, and vinyl chloride), is the %D ≤20%? (**Method 8260B**, Sections 7.3.6.3, 7.4.5.1, 7.4.5.2, and 8.2.3)	**X**		
For other compounds, is %D ≤ 20%? (**Method 8260B**, Section 7.4.5.2)		**X**	
Is a closing CCV performed? (**DOD QSM 5.3** Table B-4)	**X**		
Is the closing CCV %D ≤ 50%? (**DOD QSM 5.3** Table B-4)	**X**		
Action: Indicate affected samples in validation comments, primarily if data are rejected.			

Reviewer Comments: The following table shows the CCV %Rs/%Ds that exceeded the 20% D and 80-120% R acceptance criteria and the affected samples.

Continuing Calibration Date/Time	Samples Bracketed	Analyte	CCV 80-120%R/ >20% D
VOCMS37 Low-level CCV 10/22/23, 00:38	Low-level samples OT001-RRSMW06-101323, OT001-BLOMW05-101323, OT001-BLOMW07-101323, OT001-BLOMW99-101323, and associated QA/QC	Acetone	30.5%D
		Carbon tetrachloride	20.7%D
		Trans-1,4-dichloro-2-butene	75.1%R
		Trichloroethene	20.7%D
		Trichlorofluoromethane	47.3%D
VOCMS57 Low-level CCV 10/26/23, 16:04		Surrogate 1,2-Dichloroethane-d4	20.3%D
VOCMS58 Low-level CCV 10/29/23, 17:56	Low-level samples OT001-TRIPBLANK-HCL-02, OT001-BLOMW06-101323, and associated QA/QC	1,2,3-Trichlorobenzene	23.3%D
		Naphthalene	21.2%D
		trans-1,4-Dichloro-2-butene	22.2%D

Qualifications are as follows:

- The following results were reported above the detection limit and have been qualified with a 'QN' validation flag due to the exceeded CCV %R/%D criteria:
    - Low-level acetone in samples OT001-RRSMW06-101323, OT001-BLOMW05-101323, OT001-BLOMW07-101323, and OT001-BLOMW99-101323.
- The following sample results were non-detect and have been qualified with a 'QN' validation flag as the CCV %R/%D criteria was exceeded:
    - Low-level carbon tetrachloride, trans-1,4-dichloro-2-butene, and trichlorofluoromethane in samples OT001-RRSMW06-101323 and OT001-BLOMW05-101323.
    - Low-level carbon tetrachloride, trans-1,4-dichloro-2-butene, trichloroethene, and trichlorofluoromethane in samples OT001-BLOMW07-101323 and OT001-BLOMW99-101323.
    - Low-level 1,2,3-trichlorobenzene, naphthalene, and trans-1,4-dichloro-2-butene in samples OT001-TRIPBLANK-HCL-02 and OT001-BLOMW06-101323.
- Trichloroethene was not reported in the 10/22/23 low-level analysis of samples OT001-RRSMW06-101323 and OT001-BLOMW05-101323 and no qualifications were warranted.

- No qualifications were warranted due to the high CCV%D for surrogate 1,2-dichloroethane-d4.
- The remaining CCV criteria were met. No further qualifications were warranted.

11. Internal Standards	**Y**	**N**	**NA**
Are internal standard data present in the data submittal?	**X**		
Were method-appropriate internal standards (ISs) used for the reported analyses?	**X**		
Are internal standards added to each calibration standard? (**Method 8260B**, Section 5.12.4 and 7.5.10.2)	**X**		
Do internal standard retention times **not** vary by more than 30 seconds from that in the mid-point standard level of the initial calibration? (**Method 8260B**, Section 7.4.6)	**X**		
Does the EICP area of any internal standard **not** vary by more than a factor of two (-50 to +100%) from that in the mid-point standard level of the initial calibration? (**Method 8260B**, Section 7.4.7)	**X**		
Do area counts appear to be at least minimally adequate?	**X**		
Note: Internal standard assessment is **not** required for a Level 2a data validation. Action: Indicate affected samples in validation comments, primarily if data were rejected * Qualify only if the deviation indicates an adverse effect on data quality. ** Qualify as appropriate			

Reviewer Comments: All internal standard criteria were met. No qualifications were warranted.

12. Method Quantitation Limits	**Y**	**N**	**NA**
Does the method quantitation limit (established by the lowest concentration calibration standard) meet project requirements? (**Method 8000**, Sections 7.4.1.2 and 7.4.1.4)	**X**		
Are only those results that fall between the lowest and highest calibration standards reported (i.e., no "J" values or values between the MDL and low standard or above the high standard)? (**QSAS**, Sections 5.5.2.2.1.f) and 5.5.2.2.1.g)) (**Method 8000**, Section 7.4) (**All data below LOQ qualified with a J**)		**X**	
Action: Indicate non-correctable contract compliance deviations below. If MQL>RDL, reanalysis may be warranted.			

Reviewer Comments: Several sample results have been qualified with a 'J' validation flag to denote the reported results are estimated due to sample results reported at levels between the detection limit (DL) and the limit of quantitation (LOQ).

The remaining sample results were either non-detect or reported above the LOQ.

13. Overall Comments

Overall, the data meet the requirements and intent of the methods, indicate the preparatory process and analytical system were in control at the time of sample analysis, and the reported laboratory results are of sufficient quality for their intended purpose.

Sample Qualifications Summary Table			
Sample ID	Analyte	Validation Flag	Qualification Reason(s)
OT001-RRSMW06-101323	8260D-LL- Acetone	QN, B, J	Exceeded CCV criteria Trip blank considerations Result ≥DL but <LOQ
	8260D-LL- Carbon tetrachloride	QN	Exceeded CCV criteria

	8260D-LL- Trans-1,4-dichloro-2-butene		
	8260D-LL- Trichlorofluoromethane		
	8260D-LL- Benzene	J	Result ≥DL but <LOQ
	8260D-LL- 1,2,4-Trimethylbenzene		
	8260D- 2-Chloroethylvinyl ether	QN	Professional judgment as this compound degrades when acid preserved
OT001-BLOMW05-101323	8260D-LL- Acetone	QN, B, J	Exceeded CCV criteria Trip blank considerations Result ≥DL but <LOQ
	8260D-LL- Carbon tetrachloride	QN	Exceeded CCV criteria
	8260D-LL- Trans-1,4-dichloro-2-butene		
	8260D-LL- Trichlorofluoromethane		
	8260D-LL- Benzene	J	Result ≥DL but <LOQ
	8260D-LL- Naphthalene		
	8260D-LL- Toluene		
	8260D- 2-Chloroethylvinyl ether	QN	Professional judgment as this compound degrades when acid preserved
OT001-BLOMW07-101323	8260D-LL- Acetone	QN, B, J	Exceeded CCV criteria Trip blank considerations Result ≥DL but <LOQ
	8260D-LL- Carbon tetrachloride	QN	Exceeded CCV criteria
	8260D-LL- Trans-1,4-dichloro-2-butene		
	8260D-LL- Trichloroethene		
	8260D-LL- Trichlorofluoromethane		
	8260D-LL- Benzene	J	Result ≥DL but <LOQ
	8260D- 2-Chloroethylvinyl ether	QN	Professional judgment as this compound degrades when acid preserved
OT001-BLOMW99-101323	8260D-LL- Acetone	QN, B, J	Exceeded CCV criteria Trip blank considerations Result ≥DL but <LOQ
	8260D-LL- Carbon tetrachloride	QN	Exceeded CCV criteria
	8260D-LL- Trans-1,4-dichloro-2-butene		
	8260D-LL- Trichloroethene		
	8260D-LL- Trichlorofluoromethane		
	8260D-LL- Benzene	J	Result ≥DL but <LOQ
	8260D- 2-Chloroethylvinyl ether	QN	Professional judgment as this compound degrades when acid preserved
OT001-BLOMW06-101323	8260D-LL- 1,2,3-Trichlorobenzene	QN	Exceeded CCV criteria
	8260D-LL- Naphthalene		
	8260D-LL- trans-1,4-Dichloro-2-butene		
	8260D-LL- All compounds	H	Exceeded hold time
	8260D-LL- Acetone	QN, B, J	Exceeded CCV criteria Trip blank considerations Result ≥DL but <LOQ
	8260D-LL- Toluene	J	Result ≥DL but <LOQ
	8260D-LL- Trichloroethene		
	8260D- 2,2-Dichloropropane	H	Exceeded hold time
	8260D- Hexachloro-1,3-butadiene		
	8260D-2-Chloroethylvinyl ether	QN	Professional judgment as this compound degrades when acid preserved
OT001-TRIPBLANK-HCL-02	8260D-LL- 1,2,3-Trichlorobenzene	QN	Exceeded CCV criteria

	8260D-LL- Naphthalene		
	8260D-LL- trans-1,4-Dichloro-2-butene		
	8260D-LL- All compounds	H	Exceeded hold time
	8260D-LL- Acetone	J	Result ≥DL but <LOQ
	8260D- 2,2-Dichloropropane	H	Exceeded hold time
	8260D- Hexachloro-1,3-butadiene		
	8260D- 1,1,1-Trichloroethane		
	8260D-2-Chloroethylvinyl ether	QN	Professional judgment as this compound degrades when acid preserved

Several sample results were reported above the LOQ, have been assessed, and remain unqualified:

The remaining sample results were not detected and were reported at their respective detection limits (LOD) and were flagged "U" by the laboratory.

Metals Data Review

1. Samples Submitted and Analyses Requested

Sample ID	Lab ID	Type	Matrix	DL	Sample Date	Method(s)	Analysis Date(s)
OT001-RRSMW06-101323	L1667912-01	Field	GW	1	10/13/23	6010D	10/23/23
OT001-BLOMW05-101323	L1667912-02	Field	GW	1	10/13/23	6010D	10/23/23
OT001-BLOMW07-101323	L1667912-03	Field	GW	1	10/13/23	6010D	10/23/23
OT001-BLOMW99-101323	L1667912-04	Field Duplicate OT001-BLOMW07-101323	GW	1	10/13/23	6010D	10/23/23
OT001-BLOMW06-101323	L1667912-05	Field	GW	1	10/13/23	6010D	10/23/23

2. Reviewer Preliminary Comments

Review Type: Review Type: [] Level IV (Level 3/4) [X] Level III (Level 2b)

Five (5) ground water samples were submitted to Pace Analytical for metals analysis by USEPA Method 6010D. The samples were received intact by the lab on 10/18/2023 at 2.2°C. The data has been validated to a Level 2b.

3. ICP Calibration	**Y**	**N**	**NA**
Are calibration data for ICP present in the data submittal?	**X**		
If **not** present, has all ICP calibration criteria (i.e. ICV, CCV, LLC, etc.) been met per the case narrative?			**X**
If present, is the ICV recovery within ±10% of reference value? (**Method 6010C**, Section 10.3.2.1)	**X**		
If present, is the lower limit of quantitation check sample recovery (LLC or CRDL standard) within ±30% of reference value? (Method 6010C, Sections 10.1.3.1, 10.3.2.1, and 10.3.4)	**X**		
If present, is a mid-level Continuing Calibration Verification (CCV) standard recovery within ±10% of reference value? (**Method 6010C**, Sections 10.3.4)	**X**		

Reviewer Comments: The initial calibration consisted of at least three standards plus a blank. The associated correlation coefficients were acceptable. The run sequence was acceptable. All initial calibration verification (ICV) and continuing calibration verification (CCV) recovery results were acceptable. No data qualifications were appended to the associated sample results due to calibration considerations.

4. Interference Check Sample	**Y**	**N**	**NA**
Are interference check standard data present in the data submittal?	**X**		
If not present, was the interference check standard criteria met per the case narrative?			**X**
Were the ICSAB recoveries within acceptance criteria of 80-120%? (**Method 6010C**, Section 4.2.10.2)	**X**		
Action: Use technical judgment to assess any potential interferences. Indicate affected samples in validation comments. For additional aid in assessing potential effects, consult general tables of interelement contributions at critical wavelengths; e.g. as in reference SW-846 6010B (and for atypical metals, other references). ICP-MS interferences in m/e regions may often be evaluated by comparing more differing quantitative ions for the same element. * Qualify only if the deviation indicates an adverse effect on data quality. ** Discuss impact of high concentrations on results.			

Reviewer Comments: Interference check standard recovery results were within the 80-120% acceptance criteria. No data qualifications were warranted.

5. Serial Dilution Analysis	**Y**	**N**	**NA**
Are serial dilution data present in the data submittal?	**X**		
Have field or equipment blanks <u>not</u> been used for the serial dilution analysis?		**X**	
Is one serial dilution analysis performed for each matrix in every batch with a minimum of one serial dilution per twenty samples?	**X**		
Is a dilution test run on a sample that fails both pre- and post-digestion spike analysis? (**Method 6010C**, Section 9.9.1; **Method 6020A**, Section 9.11.2; and **Method 7000B**, Section 9.8.1)	**X**		
For samples with concentrations that are minimally a factor of 50x above the method detection limit (MDL) (or detection limit) before a 1:4 dilution, was the serial dilution %D criterion of 10% met (**Method 6010C**, Section 9.9.2 and **Method 6020A**, Section 9.11.2)	**X**		
(**Hg**) For samples with concentrations that are minimally a factor of 10x above the method detection limit (MDL) (or detection limit DL) limit after a 1:5 dilution, was the serial dilution %D criterion of 10% met (**Method 7000B**, Section 9.8.2)			**X**
Action: Indicate affected samples in validation comments. * Qualify only if the deviation indicates an adverse effect on data quality.			

Reviewer Comments: All serial dilution (SDS) recovery results were within the 10%D acceptance criteria. No data qualifications were warranted.

6. Method Quantitation Limits	Y	N	NA
Does the method quantitation limit (established by the lowest concentration calibration standard) meet project requirements? (**Method 8000**, Sections 7.4.1.2 and 7.4.1.4)	**X**		
Are only those results that fall between the lowest and highest calibration standards reported (i.e., no "J" values or values between the MDL and low standard or above the high standard)? (**Method 8000**, Section 7.4)	**X**		
Action: Indicate non-correctable contract compliance deviations below If MQL>RDL, reanalysis may be warranted.			

Reviewer Comments: Manganese in sample OT001-RRSMW06-101323was "J" flagged by the laboratory due to sample results greater than the MDL but below the LOQ. A "J" validation flag has been applied to this result.

7. Overall Comments:

Overall, the data meet the requirements and intent of the methods, indicate the preparatory process and analytical system were in control at the time of sample analysis, and the reported laboratory results are of sufficient quality for their intended purpose.

Sample Qualifications Summary Table

Sample ID	Analyte	Validation Flag	Qualification Reason(s)
OT001-BLOMW07-101323	Iron (Fe)	QN	High field duplicate RPD
	Manganese (Mn)		
OT001-BLOMW99-101323	Iron (Fe)		
	Manganese (Mn)		
OT001-RRSMW06-101323	Manganese (Mn)	J	Result between the MDL and LOQ

See Section 14 for Validation Flag Definitions.

The remaining sample results were reported above the limit of quantitation, have been assessed and remain unqualified.

Wet Chem Data Review

1. Samples Submitted and Analyses Requested

Sample ID	Lab ID	Type	Matrix	Sample Date	Analysis Method	Analysis Date
OT001-RRSMW06-101323	L1667912-01	Field	GW	10/13/23	SM 2320B	10/25/23
					EPA 351.2	10/24/23
					EPA 353.2	10/20/23
					SW-846 9056A	10/27/23
OT001-BLOMW05-101323	L1667912-05	Field	GW	10/13/23	SM 2320B	10/25/23
					EPA 351.2	10/24/23
					EPA 353.2	10/20/23

Level 2b Data Review

Project ID:	**Port Heiden RRS 21-034**	**Lab Name:**	**Pace Analytical National**
SOW No.	**South Optimized Remediation Contract**	**SDG No.**	**L1667912**

1. Samples Submitted and Analyses Requested

Sample ID	Lab ID	Type	Matrix	Sample Date	Analysis Method	Analysis Date
					SW-846 9056A	10/27/23
OT001-BLOMW07-101323	L16677442-03	Field	GW	10/13/23	SM 2320B	10/25/23
					EPA 351.2	10/24/23
					EPA 353.2	10/20/23
					SW-846 9056A	10/27/23
OT001-BLOMW99-101323	L16677442-04	Field Duplicate OT001-BLOMW07-101323	GW	10/13/23	SM 2320B	10/25/23
					EPA 351.2	10/24/23
					EPA 353.2	10/20/23
					SW-846 9056A	10/27/23
OT001-BLOMW06-101323	L16677442-05	Field	GW	10/13/23	SM 2320B	10/25/23
					EPA 351.2	10/24/23
					EPA 353.2	10/20/23
					SW-846 9056A	10/27/23

(*) Denotes an exceeded holding time.

2. Reviewer Preliminary Comments

Review Type: [] Level IV (Level 3 or 4) [X] Level III (Level 2b) [] Level II (Level 2a)
Confirm that narrative is present and complete; note overall initial indications.

Five (5) ground water samples were submitted to Pace Analytical National and were received intact by the lab on 10/18/2023 at 2.2°C. They were analyzed for the following:

- Alkalinity by SM 2320B
- TKN by EPA 351.2
- Nitrate/Nitrite by EPA 353.2
- Sulfate by SW-846 9056A

3. Calibration	**Y**	**N**	**NA**
Are calibration data present in the data submittal?	**X**		
Anions			
Was initial calibration (IC) performed prior to the sample analyses?	**X**		
Were at least 4 standard concentrations used for each analyte of interest in the IC?	**X**		
Were appropriate IC standard concentrations used?	**X**		
Is the IC correlation coefficient (linear regression) for each analyte ≥0.995?	**X**		
Was an initial calibration verification (ICV) standard (second source) run immediately after IC?	**X**		
Are analyte recoveries in the ICV within ±10% of reference values?	**X**		
Was a calibration check standard (CCV) run after every 10th sample and at the end of the sequence?	**X**		
Are analyte recoveries in the CCVs within ±10% of the reference values?	**X**		
Was the system recalibrated and affected samples re-analyzed if the ICV or a CCV was outside acceptance criteria?	**X**		
Were retention times (RTs) of individual anions consistent throughout the reported analyses?	**X**		
TKN			
Are initial and continuing calibration results included in the data package?	**X**		
Were at least 4 standards used to calibrate the instrument?	**X**		
Were the IC standards run in order of decreasing concentration?	**X**		

Level 2b Data Review

Project ID:	**Port Heiden RRS 21-034**	**Lab Name:**	**Pace Analytical National**
SOW No.	**South Optimized Remediation Contract**	**SDG No.**	**L1667912**

3. Calibration	**Y**	**N**	**NA**
Were appropriate IC standard concentrations used?	**X**		
Is the IC correlation coefficient (linear regression) ≥0.995?	**X**		
Was an ICV standard (second source) run immediately after IC?	**X**		
Was the target analyte recovery in the ICV within ±10% of reference value?	**X**		
Was a CCV run after every 10 samples, or at least once every two hours?	**X**		
Were CCV recoveries within ±10% of the reference value?	**X**		
Was the system recalibrated and affected samples re-analyzed if the ICV or a CCV was outside acceptance criteria?			**X**
Nitrate/Nitrite			
Are initial and continuing calibration results included in the data package?	**X**		
Were at least 4 standards used to calibrate the instrument?	**X**		
Were the initial calibration standards run in order of decreasing concentration?	**X**		
Were appropriate initial calibration standard concentrations used?	**X**		
Is the initial calibration correlation coefficient (linear regression) ≥0.995?	**X**		
Was an ICV standard (second source) run immediately after initial calibration?	**X**		
Was the target analyte recovery in the ICV within ±10% of reference value?	**X**		
Was a CCV run after every 10 samples, or at least once every two hours?	**X**		
Were CCV recoveries within ±10% of the reference value?	**X**		
Was the system recalibrated and affected samples re-analyzed if the ICV or a CCV was outside acceptance criteria?			**X**
Standardization for Total Alkalinity			
Are standardization data present in the package?	**X**		
Were the 0.02N and 0.1N H2SO4 solutions standardized against a primary sodium bicarbonate standard?	**X**		
For potentiometric titrations, was the pH meter calibrated prior to titration?	**X**		
Is the initial pH documented for each sample or QC sample analyzed?	**X**		
Is the titrant volume used to reach pH 8.3 recorded for each sample or QC sample analyzed?	**X**		
Is the titrant volume used to reach pH 4.5 recorded for each sample or QC sample analyzed?	**X**		
Is the titrant volume used to reach pH 4.2 recorded for each sample or QC sample analyzed?	**X**		
Action: Sample results associated with unacceptable calibration results, especially when the responses suggest high variability or sensitivity problems should be J/UJ qualified. Use professional judgment to determine if sample results warrant rejection or if qualifiers are not necessary – explain.			

Reviewer Comments: The run sequence was acceptable. All ICV/CCV recovery results were acceptable. No data qualifications were appended to the associated sample results due to calibration considerations. associated sample results due to calibration considerations.

4. Method Quantitation Limits	**Y**	**N**	**NA**
Does the method quantitation limit (established by the lowest concentration calibration standard) meet project requirements? (**Method 8000**, Sections 7.4.1.2 and 7.4.1.4)	**X**		
Are only those results that fall between the lowest and highest calibration standards reported (i.e., no "J" values or values between the MDL and low standard or above the high standard)? (**QSAS**, Sections 5.5.2.2.1.f and 5.5.2.2.1.g, and **Method 8000**, Section 7.4)		**X**	
Action: Indicate non-correctable contract compliance deviations below If MQL>RDL, reanalysis may be warranted.			

Reviewer Comments: The following results were "J" flagged by the laboratory due to sample results greater than

the MDL but below the LOQ. A "J" validation flag has been applied to these results:

- Nitrate/Nitrite in sample OT001-BLOMW06-101323.
- Sulfate in samples OT001-RRSMW06-101323, OT001-BLOMW05-101323, OT001-BLOMW07-101323, OT001-BLOMW99-101323, and OT001-BLOMW06-101323.

5. Inorganics Analytical Data Flags:

The following table provides data qualifiers used in **validation**.

Qualifier	Definition
J	The analyte result is considered an estimated value because the level is below the laboratory LOQ but above the DL.
B	Analyte result is considered a high estimated value due to contamination present in the blank.
H	Analyte result is considered a low estimate due to holding time exceedance.
QH, QL, QN	QH, QL, QN Analyte result is considered an estimated value biased (high, low, uncertain) due to matrix effects or a quality control failure.
R	Analyte result is rejected – result is not usable. Note that "R" replaces the chemical result (no result shall be reported with a "R" flag).

6. Overall Comments:

Overall, the data meet the requirements and intent of the methods, indicate the preparatory process and analytical system were in control at the time of sample analysis, and the reported laboratory results are of sufficient quality for their intended purpose.

Sample Qualifications Summary Table			
Sample ID	Analyte	Validation Flag	Qualification Reason(s)
OT001-BLOMW06-101323	Nitrate/Nitrite	J	Results between the MDL and LOQ
All Samples	Sulfate	J	Results between the MDL and LOQ

See Section 14 for Validation Flag Definitions.

Numerous results were either non-detect or reported above the limit of quantitation, have been assessed and remain unqualified.

Data Validator	Data Validation Reviewer
Name: Sherrie Robinson	Name: Amber Brinly
Title: Staff Scientist	Title: Staff Scientist
Company: North Wind Site Services	Company: North Wind Portage

Level 2b Data Review

Project ID:	**Port Heiden RRS 21-034**	**Lab Name:**	**Pace Analytical National**
SOW No.	**South Optimized Remediation Contract**	**SDG No.**	**L1667912**

Signature: Sherrie Robinson	Signature: Amber Brinly
Date: 08/14/24	Date: 08/15/24

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-RRSMW06-101323

Lab Sample ID:	L1667912-01	**SDG:**	L1667912
Client Sample ID:	OT001-RRSMW06-101323	**Collected Date/Time:**	10/13/23 12:30
Lab File ID:	1022_23	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 07:32
Analytical Batch:	WG2155682	**Analysis Date/Time:**	10/22/23 07:32
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		ug/l	ug/l	ug/l
Acetone	67-64-1	3.04	2.10 B QN J	J	0.548	2.00	4.00
Acrylonitrile	107-13-1	0	0.250	U	0.0760	0.250	0.500
Benzene	71-43-2	4.23	0.0890 J	J	0.0160	0.0500	0.100
Bromobenzene	108-86-1	0	0.250	U	0.0420	0.250	0.500
Bromodichloromethane	75-27-4	0	0.100	U	0.0315	0.100	0.200
Bromochloromethane	74-97-5	0	0.100	U	0.0452	0.100	0.200
Bromoform	75-25-2	0	0.500	U	0.239	0.500	1.00
Bromomethane	74-83-9	2.19	0.500	U	0.148	0.500	1.00
n-Butylbenzene	104-51-8	0	0.500	U	0.154	0.500	1.00
sec-Butylbenzene	135-98-8	7.80	0.250	U	0.101	0.250	0.500
tert-Butylbenzene	98-06-6	0	0.500	U	0.0620	0.500	1.00
Carbon tetrachloride	56-23-5	0	0.100 QN	U	0.0432	0.100	0.200
Carbon disulfide	75-15-0	2.71	0.500	U	0.162	0.500	1.00
Chlorobenzene	108-90-7	0	0.0500	U	0.0229	0.0500	0.100
Chlorodibromomethane	124-48-1	0	0.0500	U	0.0180	0.0500	0.100
Chloroethane	75-00-3	2.32	0.100	U	0.0432	0.100	0.200
Chloroform	67-66-3	0	0.0500	U	0.0166	0.0500	0.100
Chloromethane	74-87-3	0	0.250	U	0.0556	0.250	0.500
Cyclohexane	110-82-7	0	0.0500	U	0.0203	0.0500	0.100
2-Chlorotoluene	95-49-8	0	0.100	U	0.0368	0.100	0.200
4-Chlorotoluene	106-43-4	7.55	0.100	U	0.0452	0.100	0.200
1,2-Dibromo-3-Chloropropane	96-12-8	0	0.500	U	0.204	0.500	1.00
1,2-Dibromoethane	106-93-4	0	0.0500	U	0.0210	0.0500	0.100
Dibromomethane	74-95-3	0	0.100	U	0.0400	0.100	0.200
1,2-Dichlorobenzene	95-50-1	0	0.200	U	0.0580	0.200	0.400
1,3-Dichlorobenzene	541-73-1	0	0.200	U	0.0680	0.200	0.400
1,4-Dichlorobenzene	106-46-7	0	0.250	U	0.0788	0.250	0.500
Dichlorodifluoromethane	75-71-8	0	0.100	U	0.0327	0.100	0.200
1,1-Dichloroethane	75-34-3	0	0.0500	U	0.0230	0.0500	0.100
1,2-Dichloroethane	107-06-2	4.33	0.0500	U	0.0190	0.0500	0.100
1,1-Dichloroethene	75-35-4	0	0.0500	U	0.0200	0.0500	0.100
cis-1,2-Dichloroethene	156-59-2	3.80	0.0750	U	0.0276	0.0750	0.150
trans-1,2-Dichloroethene	156-60-5	0	0.300	U	0.0572	0.300	0.600
1,2-Dichloropropane	78-87-5	0	0.200	U	0.0508	0.200	0.400
1,1-Dichloropropene	563-58-6	0	0.100	U	0.0280	0.100	0.200
1,3-Dichloropropane	142-28-9	0	0.150	U	0.0700	0.150	0.300
cis-1,3-Dichloropropene	10061-01-5	0	0.100	U	0.0271	0.100	0.200
trans-1,3-Dichloropropene	10061-02-6	0	0.150	U	0.0612	0.150	0.300
2,2-Dichloropropane	594-20-7	3.83	0.100	U	0.0317	0.100	0.200
Di-isopropyl ether	108-20-3	3.33	0.0500	U	0.0140	0.0500	0.100
Ethylbenzene	100-41-4	6.38	0.0500	U	0.0212	0.0500	0.100
Hexachloro-1,3-butadiene	87-68-3	0	2.00	U	0.508	2.00	4.00
Isopropylbenzene	98-82-8	7.03	1.00	U	0.0345	1.00	2.00

12/15/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-RRSMW06-101323

Lab Sample ID:	L1667912-01	**SDG:**	L1667912
Client Sample ID:	OT001-RRSMW06-101323	**Collected Date/Time:**	10/13/23 12:30
Lab File ID:	1022_23	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 07:32
Analytical Batch:	WG2155682	**Analysis Date/Time:**	10/22/23 07:32
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result		Qualifier	DL	LOD	LOQ
			ug/l			*ug/l*	*ug/l*	*ug/l*
p-Isopropyltoluene	99-87-6	7.89	0.300		U	0.0932	0.300	0.600
2-Butanone (MEK)	78-93-3	0	1.00		U	0.500	1.00	2.00
Methylene Chloride	75-09-2	0	0.750		U	0.266	0.750	1.50
4-Methyl-2-pentanone (MIBK)	108-10-1	5.57	1.00		U	0.400	1.00	2.00
Methyl tert-butyl ether	1634-04-4	0	0.0300		U	0.0118	0.0300	0.0600
Naphthalene	91-20-3	9.88	0.842			0.125	0.250	0.500
n-Propylbenzene	103-65-1	7.31	0.100		U	0.0472	0.100	0.200
Styrene	100-42-5	0	0.250		U	0.109	0.250	0.500
1,1,1,2-Tetrachloroethane	630-20-6	0	0.0500		U	0.0200	0.0500	0.100
1,1,2,2-Tetrachloroethane	79-34-5	7.35	0.0500		U	0.0156	0.0500	0.100
1,1,2-Trichlorotrifluoroethane	76-13-1	0	0.100		U	0.0270	0.100	0.200
Tetrachloroethene	127-18-4	0	0.0750		U	0.0280	0.0750	0.150
Toluene	108-88-3	5.39	0.250			0.0500	0.100	0.200
1,2,3-Trichlorobenzene	87-61-6	0	0.250		U	0.0250	0.250	0.500
1,2,4-Trichlorobenzene	120-82-1	0	0.500		U	0.193	0.500	1.00
1,1,1-Trichloroethane	71-55-6	0	0.0500		U	0.0110	0.0500	0.100
1,1,2-Trichloroethane	79-00-5	0	0.100		U	0.0353	0.100	0.200
Trichlorofluoromethane	75-69-4	0	0.0500	QN	U	0.0200	0.0500	0.100
1,2,3-Trichloropropane	96-18-4	0	0.500		U	0.204	0.500	1.00
1,2,4-Trimethylbenzene	95-63-6	7.77	0.0570	J	J	0.0464	0.100	0.200
1,2,3-Trimethylbenzene	526-73-8	8.05	0.100		U	0.0460	0.100	0.200
1,3,5-Trimethylbenzene	108-67-8	7.40	0.100		U	0.0432	0.100	0.200
Vinyl chloride	75-01-4	0	0.0750		U	0.0273	0.0750	0.150
Xylenes, Total	1330-20-7	6.81	0.400		U	0.191	0.400	0.800
Ethyl Ether	60-29-7	0	0.0500		U	0.0170	0.0500	0.100
Tetrahydrofuran	109-99-9	3.98	0.250		U	0.0900	0.250	50.0
Iodomethane	74-88-4	0	0.500		U	0.242	0.500	1.00
Allyl chloride	107-05-1	0	2.00		U	0.580	2.00	4.00
trans-1,4-Dichloro-2-butene	110-57-6	7.49	0.200	QN	C4 U	0.0560	0.200	0.400

12/15/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-RRSMW06-101323

Lab Sample ID:	L1667912-01	**SDG:**	L1667912
Client Sample ID:	OT001-RRSMW06-101323	**Collected Date/Time:**	10/13/23 12:30
Lab File ID:	1026_48	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS57	**Preparation Date/Time:**	10/26/23 23:55
Analytical Batch:	WG2157275	**Analysis Date/Time:**	10/26/23 23:55
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
Trichloroethene	79-01-6	0	0.0400	U	0.0160	0.0400	0.0800
Vinyl acetate	108-05-4	0	0.300	U	0.141	0.300	0.600

12/15/23

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW05-101323

Lab Sample ID:	L1667912-02	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW05-101323	**Collected Date/Time:**	10/13/23 18:15
Lab File ID:	1022_24	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 07:52
Analytical Batch:	WG2155682	**Analysis Date/Time:**	10/22/23 07:52
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		ug/l	ug/l	ug/l
Acetone	67-64-1	3.04	1.48 B QN J	J	0.548	2.00	4.00
Acrylonitrile	107-13-1	0	0.250	U	0.0760	0.250	0.500
Benzene	71-43-2	4.23	0.0760 J	J	0.0160	0.0500	0.100
Bromobenzene	108-86-1	0	0.250	U	0.0420	0.250	0.500
Bromodichloromethane	75-27-4	0	0.100	U	0.0315	0.100	0.200
Bromochloromethane	74-97-5	0	0.100	U	0.0452	0.100	0.200
Bromoform	75-25-2	0	0.500	U	0.239	0.500	1.00
Bromomethane	74-83-9	2.21	0.500	U	0.148	0.500	1.00
n-Butylbenzene	104-51-8	0	0.500	U	0.154	0.500	1.00
sec-Butylbenzene	135-98-8	7.83	0.250	U	0.101	0.250	0.500
tert-Butylbenzene	98-06-6	0	0.500	U	0.0620	0.500	1.00
Carbon tetrachloride	56-23-5	0	0.100 QN	U	0.0432	0.100	0.200
Carbon disulfide	75-15-0	2.71	0.500	U	0.162	0.500	1.00
Chlorobenzene	108-90-7	0	0.0500	U	0.0229	0.0500	0.100
Chlorodibromomethane	124-48-1	0	0.0500	U	0.0180	0.0500	0.100
Chloroethane	75-00-3	0	0.100	U	0.0432	0.100	0.200
Chloroform	67-66-3	0	0.0500	U	0.0166	0.0500	0.100
Chloromethane	74-87-3	2.02	0.250	U	0.0556	0.250	0.500
Cyclohexane	110-82-7	0	0.0500	U	0.0203	0.0500	0.100
2-Chlorotoluene	95-49-8	0	0.100	U	0.0368	0.100	0.200
4-Chlorotoluene	106-43-4	7.48	0.100	U	0.0452	0.100	0.200
1,2-Dibromo-3-Chloropropane	96-12-8	0	0.500	U	0.204	0.500	1.00
1,2-Dibromoethane	106-93-4	0	0.0500	U	0.0210	0.0500	0.100
Dibromomethane	74-95-3	0	0.100	U	0.0400	0.100	0.200
1,2-Dichlorobenzene	95-50-1	0	0.200	U	0.0580	0.200	0.400
1,3-Dichlorobenzene	541-73-1	8.06	0.200	U	0.0680	0.200	0.400
1,4-Dichlorobenzene	106-46-7	8.06	0.250	U	0.0788	0.250	0.500
Dichlorodifluoromethane	75-71-8	0	0.100	U	0.0327	0.100	0.200
1,1-Dichloroethane	75-34-3	0	0.0500	U	0.0230	0.0500	0.100
1,2-Dichloroethane	107-06-2	4.33	0.0500	U	0.0190	0.0500	0.100
1,1-Dichloroethene	75-35-4	0	0.0500	U	0.0200	0.0500	0.100
cis-1,2-Dichloroethene	156-59-2	3.79	0.0750	U	0.0276	0.0750	0.150
trans-1,2-Dichloroethene	156-60-5	0	0.300	U	0.0572	0.300	0.600
1,2-Dichloropropane	78-87-5	0	0.200	U	0.0508	0.200	0.400
1,1-Dichloropropene	563-58-6	4.10	0.100	U	0.0280	0.100	0.200
1,3-Dichloropropane	142-28-9	0	0.150	U	0.0700	0.150	0.300
cis-1,3-Dichloropropene	10061-01-5	0	0.100	U	0.0271	0.100	0.200
trans-1,3-Dichloropropene	10061-02-6	0	0.150	U	0.0612	0.150	0.300
2,2-Dichloropropane	594-20-7	3.84	0.100	U	0.0317	0.100	0.200
Di-isopropyl ether	108-20-3	3.28	0.0500	U	0.0140	0.0500	0.100
Ethylbenzene	100-41-4	0	0.0500	U	0.0212	0.0500	0.100
Hexachloro-1,3-butadiene	87-68-3	0	2.00	U	0.508	2.00	4.00
Isopropylbenzene	98-82-8	7.04	1.00	U	0.0345	1.00	2.00

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW05-101323

Lab Sample ID:	L1667912-02	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW05-101323	**Collected Date/Time:**	10/13/23 18:15
Lab File ID:	1022_24	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 07:52
Analytical Batch:	WG2155682	**Analysis Date/Time:**	10/22/23 07:52
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result		Qualifier	DL	LOD	LOQ
			ug/l			*ug/l*	*ug/l*	*ug/l*
p-Isopropyltoluene	99-87-6	0	0.300		U	0.0932	0.300	0.600
2-Butanone (MEK)	78-93-3	0	1.00		U	0.500	1.00	2.00
Methylene Chloride	75-09-2	0	0.750		U	0.266	0.750	1.50
4-Methyl-2-pentanone (MIBK)	108-10-1	5.59	1.00		U	0.400	1.00	2.00
Methyl tert-butyl ether	1634-04-4	0	0.0300		U	0.0118	0.0300	0.0600
Naphthalene	91-20-3	9.91	0.148	J	J	0.125	0.250	0.500
n-Propylbenzene	103-65-1	7.35	0.100		U	0.0472	0.100	0.200
Styrene	100-42-5	0	0.250		U	0.109	0.250	0.500
1,1,1,2-Tetrachloroethane	630-20-6	0	0.0500		U	0.0200	0.0500	0.100
1,1,2,2-Tetrachloroethane	79-34-5	0	0.0500		U	0.0156	0.0500	0.100
1,1,2-Trichlorotrifluoroethane	76-13-1	0	0.100		U	0.0270	0.100	0.200
Tetrachloroethene	127-18-4	0	0.0750		U	0.0280	0.0750	0.150
Toluene	108-88-3	5.39	0.183	J	J	0.0500	0.100	0.200
1,2,3-Trichlorobenzene	87-61-6	0	0.250		U	0.0250	0.250	0.500
1,2,4-Trichlorobenzene	120-82-1	0	0.500		U	0.193	0.500	1.00
1,1,1-Trichloroethane	71-55-6	0	0.0500		U	0.0110	0.0500	0.100
1,1,2-Trichloroethane	79-00-5	0	0.100		U	0.0353	0.100	0.200
Trichlorofluoromethane	75-69-4	0	0.0500	QN	U	0.0200	0.0500	0.100
1,2,3-Trichloropropane	96-18-4	0	0.500		U	0.204	0.500	1.00
1,2,4-Trimethylbenzene	95-63-6	7.77	0.100		U	0.0464	0.100	0.200
1,2,3-Trimethylbenzene	526-73-8	8.07	0.100		U	0.0460	0.100	0.200
1,3,5-Trimethylbenzene	108-67-8	7.44	0.100		U	0.0432	0.100	0.200
Vinyl chloride	75-01-4	0	0.0750		U	0.0273	0.0750	0.150
Xylenes, Total	1330-20-7	6.84	0.400		U	0.191	0.400	0.800
Ethyl Ether	60-29-7	0	0.0500		U	0.0170	0.0500	0.100
Tetrahydrofuran	109-99-9	3.99	0.250		U	0.0900	0.250	50.0
Iodomethane	74-88-4	0	0.500		U	0.242	0.500	1.00
Allyl chloride	107-05-1	0	2.00		U	0.580	2.00	4.00
trans-1,4-Dichloro-2-butene	110-57-6	0	0.200	QN	C4 U	0.0560	0.200	0.400

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW05-101323

Lab Sample ID:	L1667912-02	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW05-101323	**Collected Date/Time:**	10/13/23 18:15
Lab File ID:	1026_49	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS57	**Preparation Date/Time:**	10/27/23 00:14
Analytical Batch:	WG2157275	**Analysis Date/Time:**	10/27/23 00:14
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
Trichloroethene	79-01-6	0	0.0400	U	0.0160	0.0400	0.0800
Vinyl acetate	108-05-4	0	0.300	U	0.141	0.300	0.600

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW07-101323

Lab Sample ID:	L1667912-03	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW07-101323	**Collected Date/Time:**	10/13/23 17:30
Lab File ID:	1022_25	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 08:12
Analytical Batch:	WG2155682	**Analysis Date/Time:**	10/22/23 08:12
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		ug/l	ug/l	ug/l
Acetone	67-64-1	3.04	2.39 B QNJ	J	0.548	2.00	4.00
Acrylonitrile	107-13-1	0	0.250	U	0.0760	0.250	0.500
Benzene	71-43-2	4.23	0.0660 J	J	0.0160	0.0500	0.100
Bromobenzene	108-86-1	0	0.250	U	0.0420	0.250	0.500
Bromodichloromethane	75-27-4	0	0.100	U	0.0315	0.100	0.200
Bromochloromethane	74-97-5	0	0.100	U	0.0452	0.100	0.200
Bromoform	75-25-2	0	0.500	U	0.239	0.500	1.00
Bromomethane	74-83-9	2.29	0.500	U	0.148	0.500	1.00
n-Butylbenzene	104-51-8	0	0.500	U	0.154	0.500	1.00
sec-Butylbenzene	135-98-8	7.77	0.250	U	0.101	0.250	0.500
tert-Butylbenzene	98-06-6	0	0.500	U	0.0620	0.500	1.00
Carbon tetrachloride	56-23-5	0	0.100 QN	U	0.0432	0.100	0.200
Carbon disulfide	75-15-0	0	0.500	U	0.162	0.500	1.00
Chlorobenzene	108-90-7	0	0.0500	U	0.0229	0.0500	0.100
Chlorodibromomethane	124-48-1	0	0.0500	U	0.0180	0.0500	0.100
Chloroethane	75-00-3	0	0.100	U	0.0432	0.100	0.200
Chloroform	67-66-3	0	0.0500	U	0.0166	0.0500	0.100
Chloromethane	74-87-3	1.95	0.250	U	0.0556	0.250	0.500
Cyclohexane	110-82-7	0	0.0500	U	0.0203	0.0500	0.100
2-Chlorotoluene	95-49-8	0	0.100	U	0.0368	0.100	0.200
4-Chlorotoluene	106-43-4	0	0.100	U	0.0452	0.100	0.200
1,2-Dibromo-3-Chloropropane	96-12-8	0	0.500	U	0.204	0.500	1.00
1,2-Dibromoethane	106-93-4	0	0.0500	U	0.0210	0.0500	0.100
Dibromomethane	74-95-3	0	0.100	U	0.0400	0.100	0.200
1,2-Dichlorobenzene	95-50-1	0	0.200	U	0.0580	0.200	0.400
1,3-Dichlorobenzene	541-73-1	0	0.200	U	0.0680	0.200	0.400
1,4-Dichlorobenzene	106-46-7	0	0.250	U	0.0788	0.250	0.500
Dichlorodifluoromethane	75-71-8	0	0.100	U	0.0327	0.100	0.200
1,1-Dichloroethane	75-34-3	0	0.0500	U	0.0230	0.0500	0.100
1,2-Dichloroethane	107-06-2	4.34	0.0500	U	0.0190	0.0500	0.100
1,1-Dichloroethene	75-35-4	0	0.0500	U	0.0200	0.0500	0.100
cis-1,2-Dichloroethene	156-59-2	3.81	0.0750	U	0.0276	0.0750	0.150
trans-1,2-Dichloroethene	156-60-5	0	0.300	U	0.0572	0.300	0.600
1,2-Dichloropropane	78-87-5	0	0.200	U	0.0508	0.200	0.400
1,1-Dichloropropene	563-58-6	4.04	0.100	U	0.0280	0.100	0.200
1,3-Dichloropropane	142-28-9	0	0.150	U	0.0700	0.150	0.300
cis-1,3-Dichloropropene	10061-01-5	0	0.100	U	0.0271	0.100	0.200
trans-1,3-Dichloropropene	10061-02-6	0	0.150	U	0.0612	0.150	0.300
2,2-Dichloropropane	594-20-7	3.77	0.100	U	0.0317	0.100	0.200
Di-isopropyl ether	108-20-3	0	0.0500	U	0.0140	0.0500	0.100
Ethylbenzene	100-41-4	0	0.0500	U	0.0212	0.0500	0.100
Hexachloro-1,3-butadiene	87-68-3	0	2.00	U	0.508	2.00	4.00
Isopropylbenzene	98-82-8	7.04	1.00	U	0.0345	1.00	2.00

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW07-101323

Lab Sample ID:	L1667912-03	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW07-101323	**Collected Date/Time:**	10/13/23 17:30
Lab File ID:	1022_25	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 08:12
Analytical Batch:	WG2155682	**Analysis Date/Time:**	10/22/23 08:12
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result		Qualifier	DL	LOD	LOQ
			ug/l			*ug/l*	*ug/l*	*ug/l*
p-Isopropyltoluene	99-87-6	0	0.300		U	0.0932	0.300	0.600
2-Butanone (MEK)	78-93-3	4.13	1.00		U	0.500	1.00	2.00
Methylene Chloride	75-09-2	0	0.750		U	0.266	0.750	1.50
4-Methyl-2-pentanone (MIBK)	108-10-1	5.64	1.00		U	0.400	1.00	2.00
Methyl tert-butyl ether	1634-04-4	0	0.0300		U	0.0118	0.0300	0.0600
Naphthalene	91-20-3	9.94	0.250		U	0.125	0.250	0.500
n-Propylbenzene	103-65-1	7.22	0.100		U	0.0472	0.100	0.200
Styrene	100-42-5	0	0.250		U	0.109	0.250	0.500
1,1,1,2-Tetrachloroethane	630-20-6	0	0.0500		U	0.0200	0.0500	0.100
1,1,2,2-Tetrachloroethane	79-34-5	0	0.0500		U	0.0156	0.0500	0.100
1,1,2-Trichlorotrifluoroethane	76-13-1	0	0.100		U	0.0270	0.100	0.200
Tetrachloroethene	127-18-4	0	0.0750		U	0.0280	0.0750	0.150
Toluene	108-88-3	5.39	0.237			0.0500	0.100	0.200
1,2,3-Trichlorobenzene	87-61-6	0	0.250		U	0.0250	0.250	0.500
1,2,4-Trichlorobenzene	120-82-1	0	0.500		U	0.193	0.500	1.00
1,1,1-Trichloroethane	71-55-6	0	0.0500		U	0.0110	0.0500	0.100
1,1,2-Trichloroethane	79-00-5	0	0.100		U	0.0353	0.100	0.200
Trichloroethene	79-01-6	4.54	0.0400	QN	U	0.0160	0.0400	0.0800
Trichlorofluoromethane	75-69-4	0	0.0500	QN	U	0.0200	0.0500	0.100
1,2,3-Trichloropropane	96-18-4	0	0.500		U	0.204	0.500	1.00
1,2,4-Trimethylbenzene	95-63-6	7.77	0.100		U	0.0464	0.100	0.200
1,2,3-Trimethylbenzene	526-73-8	8.07	0.100		U	0.0460	0.100	0.200
1,3,5-Trimethylbenzene	108-67-8	7.43	0.100		U	0.0432	0.100	0.200
Vinyl chloride	75-01-4	0	0.0750		U	0.0273	0.0750	0.150
Xylenes, Total	1330-20-7	6.52	0.400		U	0.191	0.400	0.800
Ethyl Ether	60-29-7	0	0.0500		U	0.0170	0.0500	0.100
Tetrahydrofuran	109-99-9	4.06	0.250		U	0.0900	0.250	50.0
Iodomethane	74-88-4	0	0.500		U	0.242	0.500	1.00
Allyl chloride	107-05-1	0	2.00		U	0.580	2.00	4.00
trans-1,4-Dichloro-2-butene	110-57-6	0	0.200	QN	C4 U	0.0560	0.200	0.400

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW07-101323

Lab Sample ID:	L1667912-03	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW07-101323	**Collected Date/Time:**	10/13/23 17:30
Lab File ID:	1026_50	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS57	**Preparation Date/Time:**	10/27/23 00:33
Analytical Batch:	WG2157275	**Analysis Date/Time:**	10/27/23 00:33
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		ug/l	ug/l	ug/l
Vinyl acetate	108-05-4	0	0.300	U	0.141	0.300	0.600

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW99-101323

Lab Sample ID:	L1667912-04	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW99-101323	**Collected Date/Time:**	10/13/23 17:40
Lab File ID:	1022_26	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 08:32
Analytical Batch:	WG2155682	**Analysis Date/Time:**	10/22/23 08:32
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		ug/l	ug/l	ug/l
Acetone	67-64-1	3.04	2.08 B QNJ	J	0.548	2.00	4.00
Acrylonitrile	107-13-1	0	0.250	U	0.0760	0.250	0.500
Benzene	71-43-2	4.23	0.0680 J	J	0.0160	0.0500	0.100
Bromobenzene	108-86-1	0	0.250	U	0.0420	0.250	0.500
Bromodichloromethane	75-27-4	0	0.100	U	0.0315	0.100	0.200
Bromochloromethane	74-97-5	0	0.100	U	0.0452	0.100	0.200
Bromoform	75-25-2	0	0.500	U	0.239	0.500	1.00
Bromomethane	74-83-9	0	0.500	U	0.148	0.500	1.00
n-Butylbenzene	104-51-8	0	0.500	U	0.154	0.500	1.00
sec-Butylbenzene	135-98-8	7.78	0.250	U	0.101	0.250	0.500
tert-Butylbenzene	98-06-6	0	0.500	U	0.0620	0.500	1.00
Carbon tetrachloride	56-23-5	0	0.100 QN	U	0.0432	0.100	0.200
Carbon disulfide	75-15-0	2.70	0.500	U	0.162	0.500	1.00
Chlorobenzene	108-90-7	0	0.0500	U	0.0229	0.0500	0.100
Chlorodibromomethane	124-48-1	0	0.0500	U	0.0180	0.0500	0.100
Chloroethane	75-00-3	2.25	0.100	U	0.0432	0.100	0.200
Chloroform	67-66-3	0	0.0500	U	0.0166	0.0500	0.100
Chloromethane	74-87-3	1.92	0.250	U	0.0556	0.250	0.500
Cyclohexane	110-82-7	0	0.0500	U	0.0203	0.0500	0.100
2-Chlorotoluene	95-49-8	0	0.100	U	0.0368	0.100	0.200
4-Chlorotoluene	106-43-4	0	0.100	U	0.0452	0.100	0.200
1,2-Dibromo-3-Chloropropane	96-12-8	0	0.500	U	0.204	0.500	1.00
1,2-Dibromoethane	106-93-4	0	0.0500	U	0.0210	0.0500	0.100
Dibromomethane	74-95-3	0	0.100	U	0.0400	0.100	0.200
1,2-Dichlorobenzene	95-50-1	0	0.200	U	0.0580	0.200	0.400
1,3-Dichlorobenzene	541-73-1	0	0.200	U	0.0680	0.200	0.400
1,4-Dichlorobenzene	106-46-7	0	0.250	U	0.0788	0.250	0.500
Dichlorodifluoromethane	75-71-8	0	0.100	U	0.0327	0.100	0.200
1,1-Dichloroethane	75-34-3	0	0.0500	U	0.0230	0.0500	0.100
1,2-Dichloroethane	107-06-2	4.34	0.0500	U	0.0190	0.0500	0.100
1,1-Dichloroethene	75-35-4	0	0.0500	U	0.0200	0.0500	0.100
cis-1,2-Dichloroethene	156-59-2	3.80	0.0750	U	0.0276	0.0750	0.150
trans-1,2-Dichloroethene	156-60-5	0	0.300	U	0.0572	0.300	0.600
1,2-Dichloropropane	78-87-5	0	0.200	U	0.0508	0.200	0.400
1,1-Dichloropropene	563-58-6	4.12	0.100	U	0.0280	0.100	0.200
1,3-Dichloropropane	142-28-9	0	0.150	U	0.0700	0.150	0.300
cis-1,3-Dichloropropene	10061-01-5	0	0.100	U	0.0271	0.100	0.200
trans-1,3-Dichloropropene	10061-02-6	0	0.150	U	0.0612	0.150	0.300
2,2-Dichloropropane	594-20-7	3.76	0.100	U	0.0317	0.100	0.200
Di-isopropyl ether	108-20-3	0	0.0500	U	0.0140	0.0500	0.100
Ethylbenzene	100-41-4	0	0.0500	U	0.0212	0.0500	0.100
Hexachloro-1,3-butadiene	87-68-3	0	2.00	U	0.508	2.00	4.00
Isopropylbenzene	98-82-8	7.05	1.00	U	0.0345	1.00	2.00

SV 12/15/23

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW99-101323

Lab Sample ID:	L1667912-04	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW99-101323	**Collected Date/Time:**	10/13/23 17:40
Lab File ID:	1022_26	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 08:32
Analytical Batch:	WG2155682	**Analysis Date/Time:**	10/22/23 08:32
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result		Qualifier	DL	LOD	LOQ
			ug/l			*ug/l*	*ug/l*	*ug/l*
p-Isopropyltoluene	99-87-6	0	0.300		U	0.0932	0.300	0.600
2-Butanone (MEK)	78-93-3	0	1.00		U	0.500	1.00	2.00
Methylene Chloride	75-09-2	0	0.750		U	0.266	0.750	1.50
4-Methyl-2-pentanone (MIBK)	108-10-1	5.61	1.00		U	0.400	1.00	2.00
Methyl tert-butyl ether	1634-04-4	0	0.0300		U	0.0118	0.0300	0.0600
Naphthalene	91-20-3	0	0.250		U	0.125	0.250	0.500
n-Propylbenzene	103-65-1	7.22	0.100		U	0.0472	0.100	0.200
Styrene	100-42-5	0	0.250		U	0.109	0.250	0.500
1,1,1,2-Tetrachloroethane	630-20-6	0	0.0500		U	0.0200	0.0500	0.100
1,1,2,2-Tetrachloroethane	79-34-5	0	0.0500		U	0.0156	0.0500	0.100
1,1,2-Trichlorotrifluoroethane	76-13-1	0	0.100		U	0.0270	0.100	0.200
Tetrachloroethene	127-18-4	0	0.0750		U	0.0280	0.0750	0.150
Toluene	108-88-3	5.39	0.216			0.0500	0.100	0.200
1,2,3-Trichlorobenzene	87-61-6	0	0.250		U	0.0250	0.250	0.500
1,2,4-Trichlorobenzene	120-82-1	0	0.500		U	0.193	0.500	1.00
1,1,1-Trichloroethane	71-55-6	0	0.0500		U	0.0110	0.0500	0.100
1,1,2-Trichloroethane	79-00-5	5.67	0.100		U	0.0353	0.100	0.200
Trichloroethene	79-01-6	0	0.0400	QN	U	0.0160	0.0400	0.0800
Trichlorofluoromethane	75-69-4	0	0.0500	QN	U	0.0200	0.0500	0.100
1,2,3-Trichloropropane	96-18-4	0	0.500		U	0.204	0.500	1.00
1,2,4-Trimethylbenzene	95-63-6	7.78	0.100		U	0.0464	0.100	0.200
1,2,3-Trimethylbenzene	526-73-8	8.07	0.100		U	0.0460	0.100	0.200
1,3,5-Trimethylbenzene	108-67-8	7.43	0.100		U	0.0432	0.100	0.200
Vinyl chloride	75-01-4	2.04	0.0750		U	0.0273	0.0750	0.150
Xylenes, Total	1330-20-7	6.51	0.400		U	0.191	0.400	0.800
Ethyl Ether	60-29-7	0	0.0500		U	0.0170	0.0500	0.100
Tetrahydrofuran	109-99-9	3.98	0.250		U	0.0900	0.250	50.0
Iodomethane	74-88-4	0	0.500		U	0.242	0.500	1.00
Allyl chloride	107-05-1	0	2.00		U	0.580	2.00	4.00
trans-1,4-Dichloro-2-butene	110-57-6	0	0.200	QN	C4 U	0.0560	0.200	0.400

R 12/15/23

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW99-101323

Lab Sample ID:	L1667912-04	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW99-101323	**Collected Date/Time:**	10/13/23 17:40
Lab File ID:	1026_51	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS57	**Preparation Date/Time:**	10/27/23 00:52
Analytical Batch:	WG2157275	**Analysis Date/Time:**	10/27/23 00:52
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
Vinyl acetate	108-05-4	0	0.300	U	0.141	0.300	0.600

SL 12/15/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW06-101323

Lab Sample ID:	L1667912-05	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW06-101323	**Collected Date/Time:**	10/13/23 18:45
Lab File ID:	1029_40	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS58	**Preparation Date/Time:**	10/29/23 21:30
Analytical Batch:	WG2159657	**Analysis Date/Time:**	10/29/23 21:30
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		ug/l	ug/l	ug/l
Acetone	67-64-1	3.16	1.52	H B J J Q	0.548	2.00	4.00
Acrylonitrile	107-13-1	0	0.250	Q U	0.0760	0.250	0.500
Benzene	71-43-2	4.40	0.0500	Q U	0.0160	0.0500	0.100
Bromobenzene	108-86-1	0	0.250	Q U	0.0420	0.250	0.500
Bromodichloromethane	75-27-4	0	0.100	Q U	0.0315	0.100	0.200
Bromochloromethane	74-97-5	0	0.100	Q U	0.0452	0.100	0.200
Bromoform	75-25-2	0	0.500	Q U	0.239	0.500	1.00
Bromomethane	74-83-9	2.30	0.500	Q U	0.148	0.500	1.00
n-Butylbenzene	104-51-8	0	0.500	Q U	0.154	0.500	1.00
sec-Butylbenzene	135-98-8	7.96	0.250	Q U	0.101	0.250	0.500
tert-Butylbenzene	98-06-6	0	0.500	Q U	0.0620	0.500	1.00
Carbon tetrachloride	56-23-5	0	0.100	Q U	0.0432	0.100	0.200
Carbon disulfide	75-15-0	2.84	0.500	Q U	0.162	0.500	1.00
Chlorobenzene	108-90-7	0	0.0500	Q U	0.0229	0.0500	0.100
Chlorodibromomethane	124-48-1	0	0.0500	Q U	0.0180	0.0500	0.100
Chloroethane	75-00-3	0	0.100	Q U	0.0432	0.100	0.200
Chloroform	67-66-3	0	0.0500	Q U	0.0166	0.0500	0.100
Chloromethane	74-87-3	1.99	0.250	Q U	0.0556	0.250	0.500
Cyclohexane	110-82-7	0	0.0500	Q U	0.0203	0.0500	0.100
2-Chlorotoluene	95-49-8	0	0.100	Q U	0.0368	0.100	0.200
4-Chlorotoluene	106-43-4	0	0.100	Q U	0.0452	0.100	0.200
1,2-Dibromo-3-Chloropropane	96-12-8	0	0.500	Q U	0.204	0.500	1.00
1,2-Dibromoethane	106-93-4	0	0.0500	Q U	0.0210	0.0500	0.100
Dibromomethane	74-95-3	0	0.100	Q U	0.0400	0.100	0.200
1,2-Dichlorobenzene	95-50-1	0	0.200	Q U	0.0580	0.200	0.400
1,3-Dichlorobenzene	541-73-1	8.28	0.200	Q U	0.0680	0.200	0.400
1,4-Dichlorobenzene	106-46-7	8.28	0.250	Q U	0.0788	0.250	0.500
Dichlorodifluoromethane	75-71-8	0	0.100	C6 Q U	0.0327	0.100	0.200
1,1-Dichloroethane	75-34-3	0	0.0500	Q U	0.0230	0.0500	0.100
1,2-Dichloroethane	107-06-2	4.50	0.0500	Q U	0.0190	0.0500	0.100
1,1-Dichloroethene	75-35-4	0	0.0500	Q U	0.0200	0.0500	0.100
cis-1,2-Dichloroethene	156-59-2	0	0.0750	Q U	0.0276	0.0750	0.150
trans-1,2-Dichloroethene	156-60-5	0	0.300	Q U	0.0572	0.300	0.600
1,2-Dichloropropane	78-87-5	0	0.200	Q U	0.0508	0.200	0.400
1,1-Dichloropropene	563-58-6	0	0.100	Q U	0.0280	0.100	0.200
1,3-Dichloropropane	142-28-9	0	0.150	Q U	0.0700	0.150	0.300
cis-1,3-Dichloropropene	10061-01-5	0	0.100	Q U	0.0271	0.100	0.200
trans-1,3-Dichloropropene	10061-02-6	0	0.150	Q U	0.0612	0.150	0.300
2,2-Dichloropropane	594-20-7	0	0.100	Q U	0.0317	0.100	0.200
Di-isopropyl ether	108-20-3	0	0.0500	Q U	0.0140	0.0500	0.100
Ethylbenzene	100-41-4	6.59	0.0500	Q U	0.0212	0.0500	0.100
Hexachloro-1,3-butadiene	87-68-3	0	2.00	Q U	0.508	2.00	4.00
Isopropylbenzene	98-82-8	0	1.00	Q U	0.0345	1.00	2.00

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1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW06-101323

Lab Sample ID:	L1667912-05	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW06-101323	**Collected Date/Time:**	10/13/23 18:45
Lab File ID:	1029_40	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS58	**Preparation Date/Time:**	10/29/23 21:30
Analytical Batch:	WG2159657	**Analysis Date/Time:**	10/29/23 21:30
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result ug/l		Qualifier	DL ug/l	LOD ug/l	LOQ ug/l
p-Isopropyltoluene	99-87-6	8.14	0.300	H	Q U	0.0932	0.300	0.600
2-Butanone (MEK)	78-93-3	4.20	1.00		Q U	0.500	1.00	2.00
Methylene Chloride	75-09-2	0	0.750		Q U	0.266	0.750	1.50
4-Methyl-2-pentanone (MIBK)	108-10-1	0	1.00		Q U	0.400	1.00	2.00
Methyl tert-butyl ether	1634-04-4	0	0.0300		Q U	0.0118	0.0300	0.0600
Naphthalene	91-20-3	0	0.250	QN	C4 Q U	0.125	0.250	0.500
n-Propylbenzene	103-65-1	7.44	0.100		Q U	0.0472	0.100	0.200
Styrene	100-42-5	0	0.250		Q U	0.109	0.250	0.500
1,1,1,2-Tetrachloroethane	630-20-6	0	0.0500		Q U	0.0200	0.0500	0.100
1,1,2,2-Tetrachloroethane	79-34-5	0	0.0500		Q U	0.0156	0.0500	0.100
1,1,2-Trichlorotrifluoroethane	76-13-1	0	0.100		Q U	0.0270	0.100	0.200
Tetrachloroethene	127-18-4	5.84	0.0750		Q U	0.0280	0.0750	0.150
Toluene	108-88-3	5.59	0.125	J	J Q	0.0500	0.100	0.200
1,2,3-Trichlorobenzene	87-61-6	0	0.250	QN	C4 Q U	0.0250	0.250	0.500
1,2,4-Trichlorobenzene	120-82-1	0	0.500		Q U	0.193	0.500	1.00
1,1,1-Trichloroethane	71-55-6	0	0.0500		Q U	0.0110	0.0500	0.100
1,1,2-Trichloroethane	79-00-5	0	0.100		Q U	0.0353	0.100	0.200
Trichloroethene	79-01-6	4.72	0.0200	J	J Q	0.0160	0.0400	0.0800
Trichlorofluoromethane	75-69-4	0	0.0500		Q U	0.0200	0.0500	0.100
1,2,3-Trichloropropane	96-18-4	0	0.500		Q U	0.204	0.500	1.00
1,2,4-Trimethylbenzene	95-63-6	7.96	0.100		Q U	0.0464	0.100	0.200
1,2,3-Trimethylbenzene	526-73-8	8.29	0.100		Q U	0.0460	0.100	0.200
1,3,5-Trimethylbenzene	108-67-8	7.59	0.100		Q U	0.0432	0.100	0.200
Vinyl chloride	75-01-4	2.04	0.0750		Q U	0.0273	0.0750	0.150
Vinyl acetate	108-05-4	0	0.300		Q U	0.141	0.300	0.600
Xylenes, Total	1330-20-7	6.99	0.400		Q U	0.191	0.400	0.800
Ethyl Ether	60-29-7	2.59	0.0500		Q U	0.0170	0.0500	0.100
Tetrahydrofuran	109-99-9	0	0.250		Q U	0.0900	0.250	50.0
Iodomethane	74-88-4	0	0.500		Q U	0.242	0.500	1.00
Allyl chloride	107-05-1	0	2.00		Q U	0.580	2.00	4.00
trans-1,4-Dichloro-2-butene	110-57-6	0	0.200	QN	C4 Q U	0.0560	0.200	0.400

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1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-TRIPBLANK-HCL-02

Lab Sample ID:	L1667912-06	**SDG:**	L1667912
Client Sample ID:	OT001-TRIPBLANK-HCL-02	**Collected Date/Time:**	10/13/23 11:30
Lab File ID:	1029_36	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS58	**Preparation Date/Time:**	10/29/23 20:14
Analytical Batch:	WG2159657	**Analysis Date/Time:**	10/29/23 20:14
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
Acetone	67-64-1	3.16	0.596 H J	J	0.548	2.00	4.00
Acrylonitrile	107-13-1	0	0.250	U	0.0760	0.250	0.500
Benzene	71-43-2	0	0.0500	U	0.0160	0.0500	0.100
Bromobenzene	108-86-1	0	0.250	U	0.0420	0.250	0.500
Bromodichloromethane	75-27-4	0	0.100	U	0.0315	0.100	0.200
Bromochloromethane	74-97-5	0	0.100	U	0.0452	0.100	0.200
Bromoform	75-25-2	0	0.500	U	0.239	0.500	1.00
Bromomethane	74-83-9	2.02	0.500	U	0.148	0.500	1.00
n-Butylbenzene	104-51-8	0	0.500	U	0.154	0.500	1.00
sec-Butylbenzene	135-98-8	8.04	0.250	U	0.101	0.250	0.500
tert-Butylbenzene	98-06-6	0	0.500	U	0.0620	0.500	1.00
Carbon tetrachloride	56-23-5	0	0.100	U	0.0432	0.100	0.200
Carbon disulfide	75-15-0	2.84	0.500	U	0.162	0.500	1.00
Chlorobenzene	108-90-7	0	0.0500	U	0.0229	0.0500	0.100
Chlorodibromomethane	124-48-1	0	0.0500	U	0.0180	0.0500	0.100
Chloroethane	75-00-3	0	0.100	U	0.0432	0.100	0.200
Chloroform	67-66-3	0	0.0500	U	0.0166	0.0500	0.100
Chloromethane	74-87-3	2.09	0.250	U	0.0556	0.250	0.500
Cyclohexane	110-82-7	0	0.0500	U	0.0203	0.0500	0.100
2-Chlorotoluene	95-49-8	0	0.100	U	0.0368	0.100	0.200
4-Chlorotoluene	106-43-4	0	0.100	U	0.0452	0.100	0.200
1,2-Dibromo-3-Chloropropane	96-12-8	0	0.500	U	0.204	0.500	1.00
1,2-Dibromoethane	106-93-4	0	0.0500	U	0.0210	0.0500	0.100
Dibromomethane	74-95-3	0	0.100	U	0.0400	0.100	0.200
1,2-Dichlorobenzene	95-50-1	0	0.200	U	0.0580	0.200	0.400
1,3-Dichlorobenzene	541-73-1	8.29	0.200	U	0.0680	0.200	0.400
1,4-Dichlorobenzene	106-46-7	8.29	0.250	U	0.0788	0.250	0.500
Dichlorodifluoromethane	75-71-8	0	0.100	C6 U	0.0327	0.100	0.200
1,1-Dichloroethane	75-34-3	0	0.0500	U	0.0230	0.0500	0.100
1,2-Dichloroethane	107-06-2	4.50	0.0500	U	0.0190	0.0500	0.100
1,1-Dichloroethene	75-35-4	0	0.0500	U	0.0200	0.0500	0.100
cis-1,2-Dichloroethene	156-59-2	0	0.0750	U	0.0276	0.0750	0.150
trans-1,2-Dichloroethene	156-60-5	0	0.300	U	0.0572	0.300	0.600
1,2-Dichloropropane	78-87-5	0	0.200	U	0.0508	0.200	0.400
1,1-Dichloropropene	563-58-6	0	0.100	U	0.0280	0.100	0.200
1,3-Dichloropropane	142-28-9	0	0.150	U	0.0700	0.150	0.300
cis-1,3-Dichloropropene	10061-01-5	0	0.100	U	0.0271	0.100	0.200
trans-1,3-Dichloropropene	10061-02-6	0	0.150	U	0.0612	0.150	0.300
2,2-Dichloropropane	594-20-7	0	0.100	U	0.0317	0.100	0.200
Di-isopropyl ether	108-20-3	0	0.0500	U	0.0140	0.0500	0.100
Ethylbenzene	100-41-4	0	0.0500	U	0.0212	0.0500	0.100
Hexachloro-1,3-butadiene	87-68-3	0	2.00	U	0.508	2.00	4.00
Isopropylbenzene	98-82-8	0	1.00	U	0.0345	1.00	2.00

12/15/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-TRIPBLANK-HCL-02

Lab Sample ID:	L1667912-06	**SDG:**	L1667912
Client Sample ID:	OT001-TRIPBLANK-HCL-02	**Collected Date/Time:**	10/13/23 11:30
Lab File ID:	1029_36	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS58	**Preparation Date/Time:**	10/29/23 20:14
Analytical Batch:	WG2159657	**Analysis Date/Time:**	10/29/23 20:14
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result		Qualifier	DL	LOD	LOQ
			ug/l			ug/l	ug/l	ug/l
p-Isopropyltoluene	99-87-6	8.14	0.300	H	U	0.0932	0.300	0.600
2-Butanone (MEK)	78-93-3	4.20	1.00		U	0.500	1.00	2.00
Methylene Chloride	75-09-2	3.14	0.750		U	0.266	0.750	1.50
4-Methyl-2-pentanone (MIBK)	108-10-1	0	1.00		U	0.400	1.00	2.00
Methyl tert-butyl ether	1634-04-4	0	0.0300		U	0.0118	0.0300	0.0600
Naphthalene	91-20-3	0	0.250	QN	C4 U	0.125	0.250	0.500
n-Propylbenzene	103-65-1	7.43	0.100		U	0.0472	0.100	0.200
Styrene	100-42-5	0	0.250		U	0.109	0.250	0.500
1,1,1,2-Tetrachloroethane	630-20-6	0	0.0500		U	0.0200	0.0500	0.100
1,1,2,2-Tetrachloroethane	79-34-5	0	0.0500		U	0.0156	0.0500	0.100
1,1,2-Trichlorotrifluoroethane	76-13-1	0	0.100		U	0.0270	0.100	0.200
Tetrachloroethene	127-18-4	0	0.0750		U	0.0280	0.0750	0.150
Toluene	108-88-3	5.59	0.100		U	0.0500	0.100	0.200
1,2,3-Trichlorobenzene	87-61-6	0	0.250	QN	C4 U	0.0250	0.250	0.500
1,2,4-Trichlorobenzene	120-82-1	0	0.500		U	0.193	0.500	1.00
1,1,1-Trichloroethane	71-55-6	0	0.0500		U	0.0110	0.0500	0.100
1,1,2-Trichloroethane	79-00-5	0	0.100		U	0.0353	0.100	0.200
Trichloroethene	79-01-6	0	0.0400		U	0.0160	0.0400	0.0800
Trichlorofluoromethane	75-69-4	0	0.0500		U	0.0200	0.0500	0.100
1,2,3-Trichloropropane	96-18-4	0	0.500		U	0.204	0.500	1.00
1,2,4-Trimethylbenzene	95-63-6	7.96	0.100		U	0.0464	0.100	0.200
1,2,3-Trimethylbenzene	526-73-8	8.27	0.100		U	0.0460	0.100	0.200
1,3,5-Trimethylbenzene	108-67-8	0	0.100		U	0.0432	0.100	0.200
Vinyl chloride	75-01-4	2.20	0.0750		U	0.0273	0.0750	0.150
Vinyl acetate	108-05-4	0	0.300		U	0.141	0.300	0.600
Xylenes, Total	1330-20-7	0	0.400		U	0.191	0.400	0.800
Ethyl Ether	60-29-7	2.57	0.0500		U	0.0170	0.0500	0.100
Tetrahydrofuran	109-99-9	0	0.250		U	0.0900	0.250	50.0
Iodomethane	74-88-4	0	0.500		U	0.242	0.500	1.00
Allyl chloride	107-05-1	0	2.00		U	0.580	2.00	4.00
trans-1,4-Dichloro-2-butene	110-57-6	0	0.200	QN	C4 U	0.0560	0.200	0.400

12/15/23

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-RRSMW06-101323

Lab Sample ID:	L1667912-01	**SDG:**	L1667912
Client Sample ID:	OT001-RRSMW06-101323	**Collected Date/Time:**	10/13/23 12:30
Lab File ID:	1022_18	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS35	**Preparation Date/Time:**	10/22/23 17:16
Analytical Batch:	WG2155879	**Analysis Date/Time:**	10/22/23 17:16
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier		DL	LOD	LOQ
			ug/l			*ug/l*	*ug/l*	*ug/l*
Acetone	67-64-1	3.15	25.0	U		11.3	25.0	50.0
Acrolein	107-02-8	0	25.0	U		2.54	25.0	50.0
Acrylonitrile	107-13-1	0	5.00	U		0.671	5.00	10.0
Benzene	71-43-2	0	0.500	U		0.0941	0.500	1.00
Bromobenzene	108-86-1	0	0.500	U		0.118	0.500	1.00
Bromodichloromethane	75-27-4	0	0.500	U		0.136	0.500	1.00
Bromoform	75-25-2	0	0.500	U		0.129	0.500	1.00
Bromomethane	74-83-9	0	2.00	U		0.605	2.00	5.00
n-Butylbenzene	104-51-8	0	0.500	U		0.157	0.500	1.00
sec-Butylbenzene	135-98-8	0	0.500	U		0.125	0.500	1.00
tert-Butylbenzene	98-06-6	0	0.500	U		0.127	0.500	1.00
Carbon tetrachloride	56-23-5	0	0.500	U		0.128	0.500	1.00
Chlorobenzene	108-90-7	0	0.500	U		0.116	0.500	1.00
Chlorodibromomethane	124-48-1	0	0.500	U		0.140	0.500	1.00
Chloroethane	75-00-3	0	2.00	U		0.192	2.00	5.00
2-Chloroethyl vinyl ether	110-75-8	0	25.0	U	QN	0.575	25.0	50.0
Chloroform	67-66-3	0	2.00	U		0.111	2.00	5.00
Chloromethane	74-87-3	0	2.00	U		0.960	2.00	4.00
2-Chlorotoluene	95-49-8	0	0.500	U		0.106	0.500	1.00
4-Chlorotoluene	106-43-4	0	0.500	U		0.114	0.500	1.00
1,2-Dibromoethane	106-93-4	0	0.500	U		0.126	0.500	1.00
1,2-Dibromo-3-Chloropropane	96-12-8	0	2.00	U		0.276	2.00	5.00
Dibromomethane	74-95-3	0	0.500	U		0.122	0.500	1.00
1,2-Dichlorobenzene	95-50-1	0	0.500	U		0.107	0.500	1.00
1,3-Dichlorobenzene	541-73-1	0	0.500	U		0.110	0.500	1.00
1,4-Dichlorobenzene	106-46-7	0	0.500	U		0.120	0.500	1.00
Dichlorodifluoromethane	75-71-8	0	2.00	U		0.374	2.00	5.00
1,1-Dichloroethane	75-34-3	0	0.500	U		0.100	0.500	1.00
1,2-Dichloroethane	107-06-2	0	0.500	U		0.0819	0.500	1.00
1,1-Dichloroethene	75-35-4	0	0.500	U		0.188	0.500	1.00
cis-1,2-Dichloroethene	156-59-2	0	0.500	U		0.126	0.500	1.00
trans-1,2-Dichloroethene	156-60-5	0	0.500	U		0.149	0.500	1.00
1,2-Dichloropropane	78-87-5	0	0.500	U		0.149	0.500	1.00
1,3-Dichloropropane	142-28-9	0	0.500	U		0.110	0.500	1.00
1,1-Dichloropropene	563-58-6	0	0.500	U		0.142	0.500	1.00
cis-1,3-Dichloropropene	10061-01-5	0	0.500	U		0.111	0.500	1.00
trans-1,3-Dichloropropene	10061-02-6	0	0.500	U		0.118	0.500	1.00
Di-isopropyl ether	108-20-3	0	0.500	U		0.105	0.500	1.00
Ethylbenzene	100-41-4	0	0.500	U		0.137	0.500	1.00
Isopropylbenzene	98-82-8	0	0.500	U		0.105	0.500	1.00
p-Isopropyltoluene	99-87-6	0	0.500	U		0.120	0.500	1.00
2-Butanone (MEK)	78-93-3	0	5.00	U		1.19	5.00	10.0
Methylene Chloride	75-09-2	0	2.00	U		0.430	2.00	5.00

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-RRSMW06-101323

Lab Sample ID:	L1667912-01	**SDG:**	L1667912
Client Sample ID:	OT001-RRSMW06-101323	**Collected Date/Time:**	10/13/23 12:30
Lab File ID:	1022_18	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS35	**Preparation Date/Time:**	10/22/23 17:16
Analytical Batch:	WG2155879	**Analysis Date/Time:**	10/22/23 17:16
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
4-Methyl-2-pentanone (MIBK)	108-10-1	0	5.00	U	0.478	5.00	10.0
Methyl tert-butyl ether	1634-04-4	0	0.500	U	0.101	0.500	1.00
Naphthalene	91-20-3	10.04	2.00	U	1.00	2.00	5.00
n-Propylbenzene	103-65-1	0	0.500	U	0.0993	0.500	1.00
Styrene	100-42-5	0	0.500	U	0.118	0.500	1.00
1,1,1,2-Tetrachloroethane	630-20-6	0	0.500	U	0.147	0.500	1.00
1,1,2,2-Tetrachloroethane	79-34-5	0	0.500	U	0.133	0.500	1.00
Tetrachloroethene	127-18-4	0	0.600	U	0.300	0.600	1.20
Toluene	108-88-3	5.56	0.600	U	0.278	0.600	1.20
1,2,3-Trichlorobenzene	87-61-6	0	0.500	U	0.230	0.500	1.00
1,2,4-Trichlorobenzene	120-82-1	0	1.00	U	0.481	1.00	2.00
1,2,3-Trimethylbenzene	526-73-8	0	0.500	U	0.104	0.500	1.00
1,2,4-Trimethylbenzene	95-63-6	0	1.00	U	0.322	1.00	2.00
1,3,5-Trimethylbenzene	108-67-8	0	0.500	U	0.104	0.500	1.00
1,1,2-Trichloroethane	79-00-5	0	0.500	U	0.158	0.500	1.00
Trichloroethene	79-01-6	0	0.500	U	0.190	0.500	1.00
Trichlorofluoromethane	75-69-4	0	2.00	U	0.160	2.00	5.00
1,1,2-Trichlorotrifluoroethane	76-13-1	0	0.500	U	0.180	0.500	1.00
1,2,3-Trichloropropane	96-18-4	0	1.00	U	0.237	1.00	2.50
Vinyl chloride	75-01-4	0	0.500	U	0.234	0.500	1.00
Xylenes, Total	1330-20-7	0	1.50	U	0.174	1.50	3.00

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-RRSMW06-101323

Lab Sample ID:	L1667912-01	**SDG:**	L1667912
Client Sample ID:	OT001-RRSMW06-101323	**Collected Date/Time:**	10/13/23 12:30
Lab File ID:	1022b_23	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 07:32
Analytical Batch:	WG2225461	**Analysis Date/Time:**	10/22/23 07:32
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
2,2-Dichloropropane	594-20-7	3.83	0.500	U	0.161	0.500	1.00
Hexachloro-1,3-butadiene	87-68-3	0	0.750	U	0.337	0.750	1.50
1,1,1-Trichloroethane	71-55-6	0	0.500	U	0.149	0.500	1.00

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW05-101323

Lab Sample ID:	L1667912-02	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW05-101323	**Collected Date/Time:**	10/13/23 18:15
Lab File ID:	1022_19	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS35	**Preparation Date/Time:**	10/22/23 17:39
Analytical Batch:	WG2155879	**Analysis Date/Time:**	10/22/23 17:39
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier		DL	LOD	LOQ
			ug/l			*ug/l*	*ug/l*	*ug/l*
Acetone	67-64-1	3.15	25.0	U		11.3	25.0	50.0
Acrolein	107-02-8	0	25.0	U		2.54	25.0	50.0
Acrylonitrile	107-13-1	0	5.00	U		0.671	5.00	10.0
Benzene	71-43-2	0	0.500	U		0.0941	0.500	1.00
Bromobenzene	108-86-1	0	0.500	U		0.118	0.500	1.00
Bromodichloromethane	75-27-4	0	0.500	U		0.136	0.500	1.00
Bromoform	75-25-2	0	0.500	U		0.129	0.500	1.00
Bromomethane	74-83-9	0	2.00	U		0.605	2.00	5.00
n-Butylbenzene	104-51-8	0	0.500	U		0.157	0.500	1.00
sec-Butylbenzene	135-98-8	0	0.500	U		0.125	0.500	1.00
tert-Butylbenzene	98-06-6	0	0.500	U		0.127	0.500	1.00
Carbon tetrachloride	56-23-5	0	0.500	U		0.128	0.500	1.00
Chlorobenzene	108-90-7	0	0.500	U		0.116	0.500	1.00
Chlorodibromomethane	124-48-1	0	0.500	U		0.140	0.500	1.00
Chloroethane	75-00-3	0	2.00	U		0.192	2.00	5.00
2-Chloroethyl vinyl ether	110-75-8	0	25.0	U	QN	0.575	25.0	50.0
Chloroform	67-66-3	0	2.00	U		0.111	2.00	5.00
Chloromethane	74-87-3	0	2.00	U		0.960	2.00	4.00
2-Chlorotoluene	95-49-8	0	0.500	U		0.106	0.500	1.00
4-Chlorotoluene	106-43-4	0	0.500	U		0.114	0.500	1.00
1,2-Dibromoethane	106-93-4	0	0.500	U		0.126	0.500	1.00
1,2-Dibromo-3-Chloropropane	96-12-8	0	2.00	U		0.276	2.00	5.00
Dibromomethane	74-95-3	0	0.500	U		0.122	0.500	1.00
1,2-Dichlorobenzene	95-50-1	0	0.500	U		0.107	0.500	1.00
1,3-Dichlorobenzene	541-73-1	0	0.500	U		0.110	0.500	1.00
1,4-Dichlorobenzene	106-46-7	0	0.500	U		0.120	0.500	1.00
Dichlorodifluoromethane	75-71-8	0	2.00	U		0.374	2.00	5.00
1,1-Dichloroethane	75-34-3	0	0.500	U		0.100	0.500	1.00
1,2-Dichloroethane	107-06-2	0	0.500	U		0.0819	0.500	1.00
1,1-Dichloroethene	75-35-4	0	0.500	U		0.188	0.500	1.00
cis-1,2-Dichloroethene	156-59-2	0	0.500	U		0.126	0.500	1.00
trans-1,2-Dichloroethene	156-60-5	0	0.500	U		0.149	0.500	1.00
1,2-Dichloropropane	78-87-5	0	0.500	U		0.149	0.500	1.00
1,3-Dichloropropane	142-28-9	0	0.500	U		0.110	0.500	1.00
1,1-Dichloropropene	563-58-6	0	0.500	U		0.142	0.500	1.00
cis-1,3-Dichloropropene	10061-01-5	0	0.500	U		0.111	0.500	1.00
trans-1,3-Dichloropropene	10061-02-6	0	0.500	U		0.118	0.500	1.00
Di-isopropyl ether	108-20-3	0	0.500	U		0.105	0.500	1.00
Ethylbenzene	100-41-4	0	0.500	U		0.137	0.500	1.00
Isopropylbenzene	98-82-8	0	0.500	U		0.105	0.500	1.00
p-Isopropyltoluene	99-87-6	0	0.500	U		0.120	0.500	1.00
2-Butanone (MEK)	78-93-3	4.19	5.00	U		1.19	5.00	10.0
Methylene Chloride	75-09-2	0	2.00	U		0.430	2.00	5.00

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW05-101323

Lab Sample ID:	L1667912-02	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW05-101323	**Collected Date/Time:**	10/13/23 18:15
Lab File ID:	1022_19	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS35	**Preparation Date/Time:**	10/22/23 17:39
Analytical Batch:	WG2155879	**Analysis Date/Time:**	10/22/23 17:39
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
4-Methyl-2-pentanone (MIBK)	108-10-1	0	5.00	U	0.478	5.00	10.0
Methyl tert-butyl ether	1634-04-4	0	0.500	U	0.101	0.500	1.00
Naphthalene	91-20-3	0	2.00	U	1.00	2.00	5.00
n-Propylbenzene	103-65-1	0	0.500	U	0.0993	0.500	1.00
Styrene	100-42-5	0	0.500	U	0.118	0.500	1.00
1,1,1,2-Tetrachloroethane	630-20-6	0	0.500	U	0.147	0.500	1.00
1,1,2,2-Tetrachloroethane	79-34-5	0	0.500	U	0.133	0.500	1.00
Tetrachloroethene	127-18-4	0	0.600	U	0.300	0.600	1.20
Toluene	108-88-3	0	0.600	U	0.278	0.600	1.20
1,2,3-Trichlorobenzene	87-61-6	0	0.500	U	0.230	0.500	1.00
1,2,4-Trichlorobenzene	120-82-1	0	1.00	U	0.481	1.00	2.00
1,2,3-Trimethylbenzene	526-73-8	0	0.500	U	0.104	0.500	1.00
1,2,4-Trimethylbenzene	95-63-6	0	1.00	U	0.322	1.00	2.00
1,3,5-Trimethylbenzene	108-67-8	0	0.500	U	0.104	0.500	1.00
1,1,2-Trichloroethane	79-00-5	0	0.500	U	0.158	0.500	1.00
Trichloroethene	79-01-6	0	0.500	U	0.190	0.500	1.00
Trichlorofluoromethane	75-69-4	0	2.00	U	0.160	2.00	5.00
1,1,2-Trichlorotrifluoroethane	76-13-1	0	0.500	U	0.180	0.500	1.00
1,2,3-Trichloropropane	96-18-4	0	1.00	U	0.237	1.00	2.50
Vinyl chloride	75-01-4	0	0.500	U	0.234	0.500	1.00
Xylenes, Total	1330-20-7	0	1.50	U	0.174	1.50	3.00

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW05-101323

Lab Sample ID:	L1667912-02	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW05-101323	**Collected Date/Time:**	10/13/23 18:15
Lab File ID:	1022b_24	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 07:52
Analytical Batch:	WG2225461	**Analysis Date/Time:**	10/22/23 07:52
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
2,2-Dichloropropane	594-20-7	3.84	0.500	U	0.161	0.500	1.00
Hexachloro-1,3-butadiene	87-68-3	0	0.750	U	0.337	0.750	1.50
1,1,1-Trichloroethane	71-55-6	0	0.500	U	0.149	0.500	1.00

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW07-101323

Lab Sample ID:	L1667912-03	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW07-101323	**Collected Date/Time:**	10/13/23 17:30
Lab File ID:	1022_20	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS35	**Preparation Date/Time:**	10/22/23 18:01
Analytical Batch:	WG2155879	**Analysis Date/Time:**	10/22/23 18:01
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier		DL	LOD	LOQ
			ug/l			*ug/l*	*ug/l*	*ug/l*
Acetone	67-64-1	3.15	25.0	U		11.3	25.0	50.0
Acrolein	107-02-8	0	25.0	U		2.54	25.0	50.0
Acrylonitrile	107-13-1	0	5.00	U		0.671	5.00	10.0
Benzene	71-43-2	0	0.500	U		0.0941	0.500	1.00
Bromobenzene	108-86-1	0	0.500	U		0.118	0.500	1.00
Bromodichloromethane	75-27-4	0	0.500	U		0.136	0.500	1.00
Bromoform	75-25-2	0	0.500	U		0.129	0.500	1.00
Bromomethane	74-83-9	0	2.00	U		0.605	2.00	5.00
n-Butylbenzene	104-51-8	0	0.500	U		0.157	0.500	1.00
sec-Butylbenzene	135-98-8	0	0.500	U		0.125	0.500	1.00
tert-Butylbenzene	98-06-6	0	0.500	U		0.127	0.500	1.00
Carbon tetrachloride	56-23-5	0	0.500	U		0.128	0.500	1.00
Chlorobenzene	108-90-7	0	0.500	U		0.116	0.500	1.00
Chlorodibromomethane	124-48-1	0	0.500	U		0.140	0.500	1.00
Chloroethane	75-00-3	0	2.00	U		0.192	2.00	5.00
2-Chloroethyl vinyl ether	110-75-8	0	25.0	U	QN	0.575	25.0	50.0
Chloroform	67-66-3	0	2.00	U		0.111	2.00	5.00
Chloromethane	74-87-3	0	2.00	U		0.960	2.00	4.00
2-Chlorotoluene	95-49-8	0	0.500	U		0.106	0.500	1.00
4-Chlorotoluene	106-43-4	0	0.500	U		0.114	0.500	1.00
1,2-Dibromoethane	106-93-4	0	0.500	U		0.126	0.500	1.00
1,2-Dibromo-3-Chloropropane	96-12-8	0	2.00	U		0.276	2.00	5.00
Dibromomethane	74-95-3	0	0.500	U		0.122	0.500	1.00
1,2-Dichlorobenzene	95-50-1	0	0.500	U		0.107	0.500	1.00
1,3-Dichlorobenzene	541-73-1	0	0.500	U		0.110	0.500	1.00
1,4-Dichlorobenzene	106-46-7	0	0.500	U		0.120	0.500	1.00
Dichlorodifluoromethane	75-71-8	0	2.00	U		0.374	2.00	5.00
1,1-Dichloroethane	75-34-3	0	0.500	U		0.100	0.500	1.00
1,2-Dichloroethane	107-06-2	0	0.500	U		0.0819	0.500	1.00
1,1-Dichloroethene	75-35-4	0	0.500	U		0.188	0.500	1.00
cis-1,2-Dichloroethene	156-59-2	0	0.500	U		0.126	0.500	1.00
trans-1,2-Dichloroethene	156-60-5	0	0.500	U		0.149	0.500	1.00
1,2-Dichloropropane	78-87-5	0	0.500	U		0.149	0.500	1.00
1,3-Dichloropropane	142-28-9	0	0.500	U		0.110	0.500	1.00
1,1-Dichloropropene	563-58-6	0	0.500	U		0.142	0.500	1.00
cis-1,3-Dichloropropene	10061-01-5	0	0.500	U		0.111	0.500	1.00
trans-1,3-Dichloropropene	10061-02-6	0	0.500	U		0.118	0.500	1.00
Di-isopropyl ether	108-20-3	0	0.500	U		0.105	0.500	1.00
Ethylbenzene	100-41-4	0	0.500	U		0.137	0.500	1.00
Isopropylbenzene	98-82-8	0	0.500	U		0.105	0.500	1.00
p-Isopropyltoluene	99-87-6	0	0.500	U		0.120	0.500	1.00
2-Butanone (MEK)	78-93-3	0	5.00	U		1.19	5.00	10.0
Methylene Chloride	75-09-2	0	2.00	U		0.430	2.00	5.00

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SAMPLE RESULT SUMMARY
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SAMPLE NO.:
OT001-BLOMW07-101323

Lab Sample ID:	L1667912-03	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW07-101323	**Collected Date/Time:**	10/13/23 17:30
Lab File ID:	1022_20	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS35	**Preparation Date/Time:**	10/22/23 18:01
Analytical Batch:	WG2155879	**Analysis Date/Time:**	10/22/23 18:01
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
4-Methyl-2-pentanone (MIBK)	108-10-1	0	5.00	U	0.478	5.00	10.0
Methyl tert-butyl ether	1634-04-4	0	0.500	U	0.101	0.500	1.00
Naphthalene	91-20-3	0	2.00	U	1.00	2.00	5.00
n-Propylbenzene	103-65-1	0	0.500	U	0.0993	0.500	1.00
Styrene	100-42-5	0	0.500	U	0.118	0.500	1.00
1,1,1,2-Tetrachloroethane	630-20-6	0	0.500	U	0.147	0.500	1.00
1,1,2,2-Tetrachloroethane	79-34-5	0	0.500	U	0.133	0.500	1.00
Tetrachloroethene	127-18-4	0	0.600	U	0.300	0.600	1.20
Toluene	108-88-3	0	0.600	U	0.278	0.600	1.20
1,2,3-Trichlorobenzene	87-61-6	0	0.500	U	0.230	0.500	1.00
1,2,4-Trichlorobenzene	120-82-1	0	1.00	U	0.481	1.00	2.00
1,2,3-Trimethylbenzene	526-73-8	0	0.500	U	0.104	0.500	1.00
1,2,4-Trimethylbenzene	95-63-6	0	1.00	U	0.322	1.00	2.00
1,3,5-Trimethylbenzene	108-67-8	0	0.500	U	0.104	0.500	1.00
1,1,2-Trichloroethane	79-00-5	0	0.500	U	0.158	0.500	1.00
Trichloroethene	79-01-6	0	0.500	U	0.190	0.500	1.00
Trichlorofluoromethane	75-69-4	0	2.00	U	0.160	2.00	5.00
1,1,2-Trichlorotrifluoroethane	76-13-1	0	0.500	U	0.180	0.500	1.00
1,2,3-Trichloropropane	96-18-4	0	1.00	U	0.237	1.00	2.50
Vinyl chloride	75-01-4	0	0.500	U	0.234	0.500	1.00
Xylenes, Total	1330-20-7	0	1.50	U	0.174	1.50	3.00

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW07-101323

Lab Sample ID:	L1667912-03	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW07-101323	**Collected Date/Time:**	10/13/23 17:30
Lab File ID:	1022b_25	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 08:12
Analytical Batch:	WG2225461	**Analysis Date/Time:**	10/22/23 08:12
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
2,2-Dichloropropane	594-20-7	3.77	0.500	U	0.161	0.500	1.00
Hexachloro-1,3-butadiene	87-68-3	0	0.750	U	0.337	0.750	1.50
1,1,1-Trichloroethane	71-55-6	0	0.500	U	0.149	0.500	1.00

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW99-101323

Lab Sample ID:	L1667912-04	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW99-101323	**Collected Date/Time:**	10/13/23 17:40
Lab File ID:	1022_21	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS35	**Preparation Date/Time:**	10/22/23 18:22
Analytical Batch:	WG2155879	**Analysis Date/Time:**	10/22/23 18:22
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier		DL	LOD	LOQ
			ug/l			*ug/l*	*ug/l*	*ug/l*
Acetone	67-64-1	3.15	25.0	U		11.3	25.0	50.0
Acrolein	107-02-8	0	25.0	U		2.54	25.0	50.0
Acrylonitrile	107-13-1	0	5.00	U		0.671	5.00	10.0
Benzene	71-43-2	0	0.500	U		0.0941	0.500	1.00
Bromobenzene	108-86-1	0	0.500	U		0.118	0.500	1.00
Bromodichloromethane	75-27-4	0	0.500	U		0.136	0.500	1.00
Bromoform	75-25-2	0	0.500	U		0.129	0.500	1.00
Bromomethane	74-83-9	0	2.00	U		0.605	2.00	5.00
n-Butylbenzene	104-51-8	0	0.500	U		0.157	0.500	1.00
sec-Butylbenzene	135-98-8	0	0.500	U		0.125	0.500	1.00
tert-Butylbenzene	98-06-6	0	0.500	U		0.127	0.500	1.00
Carbon tetrachloride	56-23-5	0	0.500	U		0.128	0.500	1.00
Chlorobenzene	108-90-7	0	0.500	U		0.116	0.500	1.00
Chlorodibromomethane	124-48-1	0	0.500	U		0.140	0.500	1.00
Chloroethane	75-00-3	0	2.00	U		0.192	2.00	5.00
2-Chloroethyl vinyl ether	110-75-8	0	25.0	U	QN	0.575	25.0	50.0
Chloroform	67-66-3	0	2.00	U		0.111	2.00	5.00
Chloromethane	74-87-3	0	2.00	U		0.960	2.00	4.00
2-Chlorotoluene	95-49-8	0	0.500	U		0.106	0.500	1.00
4-Chlorotoluene	106-43-4	0	0.500	U		0.114	0.500	1.00
1,2-Dibromoethane	106-93-4	0	0.500	U		0.126	0.500	1.00
1,2-Dibromo-3-Chloropropane	96-12-8	0	2.00	U		0.276	2.00	5.00
Dibromomethane	74-95-3	0	0.500	U		0.122	0.500	1.00
1,2-Dichlorobenzene	95-50-1	0	0.500	U		0.107	0.500	1.00
1,3-Dichlorobenzene	541-73-1	0	0.500	U		0.110	0.500	1.00
1,4-Dichlorobenzene	106-46-7	0	0.500	U		0.120	0.500	1.00
Dichlorodifluoromethane	75-71-8	0	2.00	U		0.374	2.00	5.00
1,1-Dichloroethane	75-34-3	0	0.500	U		0.100	0.500	1.00
1,2-Dichloroethane	107-06-2	0	0.500	U		0.0819	0.500	1.00
1,1-Dichloroethene	75-35-4	0	0.500	U		0.188	0.500	1.00
cis-1,2-Dichloroethene	156-59-2	0	0.500	U		0.126	0.500	1.00
trans-1,2-Dichloroethene	156-60-5	0	0.500	U		0.149	0.500	1.00
1,2-Dichloropropane	78-87-5	0	0.500	U		0.149	0.500	1.00
1,3-Dichloropropane	142-28-9	0	0.500	U		0.110	0.500	1.00
1,1-Dichloropropene	563-58-6	0	0.500	U		0.142	0.500	1.00
cis-1,3-Dichloropropene	10061-01-5	0	0.500	U		0.111	0.500	1.00
trans-1,3-Dichloropropene	10061-02-6	0	0.500	U		0.118	0.500	1.00
Di-isopropyl ether	108-20-3	0	0.500	U		0.105	0.500	1.00
Ethylbenzene	100-41-4	0	0.500	U		0.137	0.500	1.00
Isopropylbenzene	98-82-8	0	0.500	U		0.105	0.500	1.00
p-Isopropyltoluene	99-87-6	0	0.500	U		0.120	0.500	1.00
2-Butanone (MEK)	78-93-3	0	5.00	U		1.19	5.00	10.0
Methylene Chloride	75-09-2	0	2.00	U		0.430	2.00	5.00

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW99-101323

Lab Sample ID:	L1667912-04	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW99-101323	**Collected Date/Time:**	10/13/23 17:40
Lab File ID:	1022_21	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS35	**Preparation Date/Time:**	10/22/23 18:22
Analytical Batch:	WG2155879	**Analysis Date/Time:**	10/22/23 18:22
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
4-Methyl-2-pentanone (MIBK)	108-10-1	0	5.00	U	0.478	5.00	10.0
Methyl tert-butyl ether	1634-04-4	0	0.500	U	0.101	0.500	1.00
Naphthalene	91-20-3	0	2.00	U	1.00	2.00	5.00
n-Propylbenzene	103-65-1	0	0.500	U	0.0993	0.500	1.00
Styrene	100-42-5	0	0.500	U	0.118	0.500	1.00
1,1,1,2-Tetrachloroethane	630-20-6	0	0.500	U	0.147	0.500	1.00
1,1,2,2-Tetrachloroethane	79-34-5	0	0.500	U	0.133	0.500	1.00
Tetrachloroethene	127-18-4	0	0.600	U	0.300	0.600	1.20
Toluene	108-88-3	0	0.600	U	0.278	0.600	1.20
1,2,3-Trichlorobenzene	87-61-6	0	0.500	U	0.230	0.500	1.00
1,2,4-Trichlorobenzene	120-82-1	0	1.00	U	0.481	1.00	2.00
1,2,3-Trimethylbenzene	526-73-8	0	0.500	U	0.104	0.500	1.00
1,2,4-Trimethylbenzene	95-63-6	0	1.00	U	0.322	1.00	2.00
1,3,5-Trimethylbenzene	108-67-8	0	0.500	U	0.104	0.500	1.00
1,1,1-Trichloroethane	71-55-6	4.17	0.500	U	0.149	0.500	1.00
1,1,2-Trichloroethane	79-00-5	0	0.500	U	0.158	0.500	1.00
Trichloroethene	79-01-6	0	0.500	U	0.190	0.500	1.00
Trichlorofluoromethane	75-69-4	0	2.00	U	0.160	2.00	5.00
1,1,2-Trichlorotrifluoroethane	76-13-1	0	0.500	U	0.180	0.500	1.00
1,2,3-Trichloropropane	96-18-4	0	1.00	U	0.237	1.00	2.50
Vinyl chloride	75-01-4	0	0.500	U	0.234	0.500	1.00
Xylenes, Total	1330-20-7	0	1.50	U	0.174	1.50	3.00

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW99-101323

Lab Sample ID:	L1667912-04	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW99-101323	**Collected Date/Time:**	10/13/23 17:40
Lab File ID:	1022b_26	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 08:32
Analytical Batch:	WG2225461	**Analysis Date/Time:**	10/22/23 08:32
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
2,2-Dichloropropane	594-20-7	3.76	0.500	U	0.161	0.500	1.00
Hexachloro-1,3-butadiene	87-68-3	0	0.750	U	0.337	0.750	1.50

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW06-101323

Lab Sample ID:	L1667912-05	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW06-101323	**Collected Date/Time:**	10/13/23 18:45
Lab File ID:	1022_22	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS35	**Preparation Date/Time:**	10/22/23 18:44
Analytical Batch:	WG2155879	**Analysis Date/Time:**	10/22/23 18:44
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier		DL	LOD	LOQ
			ug/l			*ug/l*	*ug/l*	*ug/l*
Acetone	67-64-1	3.15	25.0	U		11.3	25.0	50.0
Acrolein	107-02-8	0	25.0	U		2.54	25.0	50.0
Acrylonitrile	107-13-1	0	5.00	U		0.671	5.00	10.0
Benzene	71-43-2	0	0.500	U		0.0941	0.500	1.00
Bromobenzene	108-86-1	0	0.500	U		0.118	0.500	1.00
Bromodichloromethane	75-27-4	0	0.500	U		0.136	0.500	1.00
Bromoform	75-25-2	0	0.500	U		0.129	0.500	1.00
Bromomethane	74-83-9	0	2.00	U		0.605	2.00	5.00
n-Butylbenzene	104-51-8	0	0.500	U		0.157	0.500	1.00
sec-Butylbenzene	135-98-8	0	0.500	U		0.125	0.500	1.00
tert-Butylbenzene	98-06-6	0	0.500	U		0.127	0.500	1.00
Carbon tetrachloride	56-23-5	0	0.500	U		0.128	0.500	1.00
Chlorobenzene	108-90-7	0	0.500	U		0.116	0.500	1.00
Chlorodibromomethane	124-48-1	0	0.500	U		0.140	0.500	1.00
Chloroethane	75-00-3	0	2.00	U		0.192	2.00	5.00
2-Chloroethyl vinyl ether	110-75-8	0	25.0	U	QN	0.575	25.0	50.0
Chloroform	67-66-3	0	2.00	U		0.111	2.00	5.00
Chloromethane	74-87-3	0	2.00	U		0.960	2.00	4.00
2-Chlorotoluene	95-49-8	0	0.500	U		0.106	0.500	1.00
4-Chlorotoluene	106-43-4	0	0.500	U		0.114	0.500	1.00
1,2-Dibromoethane	106-93-4	0	0.500	U		0.126	0.500	1.00
1,2-Dibromo-3-Chloropropane	96-12-8	0	2.00	U		0.276	2.00	5.00
Dibromomethane	74-95-3	0	0.500	U		0.122	0.500	1.00
1,2-Dichlorobenzene	95-50-1	0	0.500	U		0.107	0.500	1.00
1,3-Dichlorobenzene	541-73-1	0	0.500	U		0.110	0.500	1.00
1,4-Dichlorobenzene	106-46-7	0	0.500	U		0.120	0.500	1.00
Dichlorodifluoromethane	75-71-8	0	2.00	U		0.374	2.00	5.00
1,1-Dichloroethane	75-34-3	0	0.500	U		0.100	0.500	1.00
1,2-Dichloroethane	107-06-2	0	0.500	U		0.0819	0.500	1.00
1,1-Dichloroethene	75-35-4	0	0.500	U		0.188	0.500	1.00
cis-1,2-Dichloroethene	156-59-2	0	0.500	U		0.126	0.500	1.00
trans-1,2-Dichloroethene	156-60-5	0	0.500	U		0.149	0.500	1.00
1,2-Dichloropropane	78-87-5	0	0.500	U		0.149	0.500	1.00
1,3-Dichloropropane	142-28-9	0	0.500	U		0.110	0.500	1.00
1,1-Dichloropropene	563-58-6	0	0.500	U		0.142	0.500	1.00
cis-1,3-Dichloropropene	10061-01-5	0	0.500	U		0.111	0.500	1.00
trans-1,3-Dichloropropene	10061-02-6	0	0.500	U		0.118	0.500	1.00
Di-isopropyl ether	108-20-3	0	0.500	U		0.105	0.500	1.00
Ethylbenzene	100-41-4	0	0.500	U		0.137	0.500	1.00
Isopropylbenzene	98-82-8	0	0.500	U		0.105	0.500	1.00
p-Isopropyltoluene	99-87-6	0	0.500	U		0.120	0.500	1.00
2-Butanone (MEK)	78-93-3	4.19	5.00	U		1.19	5.00	10.0
Methylene Chloride	75-09-2	0	2.00	U		0.430	2.00	5.00

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW06-101323

Lab Sample ID:	L1667912-05	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW06-101323	**Collected Date/Time:**	10/13/23 18:45
Lab File ID:	1022_22	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS35	**Preparation Date/Time:**	10/22/23 18:44
Analytical Batch:	WG2155879	**Analysis Date/Time:**	10/22/23 18:44
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
4-Methyl-2-pentanone (MIBK)	108-10-1	0	5.00	U	0.478	5.00	10.0
Methyl tert-butyl ether	1634-04-4	0	0.500	U	0.101	0.500	1.00
Naphthalene	91-20-3	0	2.00	U	1.00	2.00	5.00
n-Propylbenzene	103-65-1	0	0.500	U	0.0993	0.500	1.00
Styrene	100-42-5	0	0.500	U	0.118	0.500	1.00
1,1,1,2-Tetrachloroethane	630-20-6	0	0.500	U	0.147	0.500	1.00
1,1,2,2-Tetrachloroethane	79-34-5	0	0.500	U	0.133	0.500	1.00
Tetrachloroethene	127-18-4	0	0.600	U	0.300	0.600	1.20
Toluene	108-88-3	5.56	0.600	U	0.278	0.600	1.20
1,2,3-Trichlorobenzene	87-61-6	0	0.500	U	0.230	0.500	1.00
1,2,4-Trichlorobenzene	120-82-1	0	1.00	U	0.481	1.00	2.00
1,2,3-Trimethylbenzene	526-73-8	0	0.500	U	0.104	0.500	1.00
1,2,4-Trimethylbenzene	95-63-6	0	1.00	U	0.322	1.00	2.00
1,3,5-Trimethylbenzene	108-67-8	0	0.500	U	0.104	0.500	1.00
1,1,1-Trichloroethane	71-55-6	4.17	0.500	U	0.149	0.500	1.00
1,1,2-Trichloroethane	79-00-5	0	0.500	U	0.158	0.500	1.00
Trichloroethene	79-01-6	0	0.500	U	0.190	0.500	1.00
Trichlorofluoromethane	75-69-4	0	2.00	U	0.160	2.00	5.00
1,1,2-Trichlorotrifluoroethane	76-13-1	0	0.500	U	0.180	0.500	1.00
1,2,3-Trichloropropane	96-18-4	0	1.00	U	0.237	1.00	2.50
Vinyl chloride	75-01-4	0	0.500	U	0.234	0.500	1.00
Xylenes, Total	1330-20-7	0	1.50	U	0.174	1.50	3.00

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW06-101323

Lab Sample ID:	L1667912-05	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW06-101323	**Collected Date/Time:**	10/13/23 18:45
Lab File ID:	1029_40	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS58	**Preparation Date/Time:**	10/29/23 21:30
Analytical Batch:	WG2225492	**Analysis Date/Time:**	10/29/23 21:30
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
2,2-Dichloropropane	594-20-7	0	0.500	U H	0.161	0.500	1.00
Hexachloro-1,3-butadiene	87-68-3	0	0.750	U H	0.337	0.750	1.50

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-TRIPBLANK-HCL-02

Lab Sample ID:	L1667912-06	**SDG:**	L1667912
Client Sample ID:	OT001-TRIPBLANK-HCL-02	**Collected Date/Time:**	10/13/23 11:30
Lab File ID:	1022_08	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS35	**Preparation Date/Time:**	10/22/23 13:16
Analytical Batch:	WG2155879	**Analysis Date/Time:**	10/22/23 13:16
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier		DL	LOD	LOQ
			ug/l			*ug/l*	*ug/l*	*ug/l*
Acetone	67-64-1	3.15	25.0	U		11.3	25.0	50.0
Acrolein	107-02-8	0	25.0	U		2.54	25.0	50.0
Acrylonitrile	107-13-1	0	5.00	U		0.671	5.00	10.0
Benzene	71-43-2	0	0.500	U		0.0941	0.500	1.00
Bromobenzene	108-86-1	0	0.500	U		0.118	0.500	1.00
Bromodichloromethane	75-27-4	0	0.500	U		0.136	0.500	1.00
Bromoform	75-25-2	0	0.500	U		0.129	0.500	1.00
Bromomethane	74-83-9	0	2.00	U		0.605	2.00	5.00
n-Butylbenzene	104-51-8	0	0.500	U		0.157	0.500	1.00
sec-Butylbenzene	135-98-8	0	0.500	U		0.125	0.500	1.00
tert-Butylbenzene	98-06-6	0	0.500	U		0.127	0.500	1.00
Carbon tetrachloride	56-23-5	0	0.500	U		0.128	0.500	1.00
Chlorobenzene	108-90-7	0	0.500	U		0.116	0.500	1.00
Chlorodibromomethane	124-48-1	0	0.500	U		0.140	0.500	1.00
Chloroethane	75-00-3	0	2.00	U		0.192	2.00	5.00
2-Chloroethyl vinyl ether	110-75-8	0	25.0	U	QN	0.575	25.0	50.0
Chloroform	67-66-3	0	2.00	U		0.111	2.00	5.00
Chloromethane	74-87-3	0	2.00	U		0.960	2.00	4.00
2-Chlorotoluene	95-49-8	0	0.500	U		0.106	0.500	1.00
4-Chlorotoluene	106-43-4	0	0.500	U		0.114	0.500	1.00
1,2-Dibromoethane	106-93-4	0	0.500	U		0.126	0.500	1.00
1,2-Dibromo-3-Chloropropane	96-12-8	0	2.00	U		0.276	2.00	5.00
Dibromomethane	74-95-3	0	0.500	U		0.122	0.500	1.00
1,2-Dichlorobenzene	95-50-1	0	0.500	U		0.107	0.500	1.00
1,3-Dichlorobenzene	541-73-1	0	0.500	U		0.110	0.500	1.00
1,4-Dichlorobenzene	106-46-7	0	0.500	U		0.120	0.500	1.00
Dichlorodifluoromethane	75-71-8	0	2.00	U		0.374	2.00	5.00
1,1-Dichloroethane	75-34-3	0	0.500	U		0.100	0.500	1.00
1,2-Dichloroethane	107-06-2	0	0.500	U		0.0819	0.500	1.00
1,1-Dichloroethene	75-35-4	0	0.500	U		0.188	0.500	1.00
cis-1,2-Dichloroethene	156-59-2	0	0.500	U		0.126	0.500	1.00
trans-1,2-Dichloroethene	156-60-5	0	0.500	U		0.149	0.500	1.00
1,2-Dichloropropane	78-87-5	0	0.500	U		0.149	0.500	1.00
1,3-Dichloropropane	142-28-9	0	0.500	U		0.110	0.500	1.00
1,1-Dichloropropene	563-58-6	0	0.500	U		0.142	0.500	1.00
cis-1,3-Dichloropropene	10061-01-5	0	0.500	U		0.111	0.500	1.00
trans-1,3-Dichloropropene	10061-02-6	0	0.500	U		0.118	0.500	1.00
Di-isopropyl ether	108-20-3	0	0.500	U		0.105	0.500	1.00
Ethylbenzene	100-41-4	0	0.500	U		0.137	0.500	1.00
Isopropylbenzene	98-82-8	0	0.500	U		0.105	0.500	1.00
p-Isopropyltoluene	99-87-6	0	0.500	U		0.120	0.500	1.00
2-Butanone (MEK)	78-93-3	0	5.00	U		1.19	5.00	10.0
Methylene Chloride	75-09-2	0	2.00	U		0.430	2.00	5.00

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-TRIPBLANK-HCL-02

Lab Sample ID:	L1667912-06	**SDG:**	L1667912
Client Sample ID:	OT001-TRIPBLANK-HCL-02	**Collected Date/Time:**	10/13/23 11:30
Lab File ID:	1022_08	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS35	**Preparation Date/Time:**	10/22/23 13:16
Analytical Batch:	WG2155879	**Analysis Date/Time:**	10/22/23 13:16
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
4-Methyl-2-pentanone (MIBK)	108-10-1	0	5.00	U	0.478	5.00	10.0
Methyl tert-butyl ether	1634-04-4	0	0.500	U	0.101	0.500	1.00
Naphthalene	91-20-3	0	2.00	U	1.00	2.00	5.00
n-Propylbenzene	103-65-1	0	0.500	U	0.0993	0.500	1.00
Styrene	100-42-5	0	0.500	U	0.118	0.500	1.00
1,1,1,2-Tetrachloroethane	630-20-6	0	0.500	U	0.147	0.500	1.00
1,1,2,2-Tetrachloroethane	79-34-5	0	0.500	U	0.133	0.500	1.00
Tetrachloroethene	127-18-4	0	0.600	U	0.300	0.600	1.20
Toluene	108-88-3	0	0.600	U	0.278	0.600	1.20
1,2,3-Trichlorobenzene	87-61-6	0	0.500	U	0.230	0.500	1.00
1,2,4-Trichlorobenzene	120-82-1	0	1.00	U	0.481	1.00	2.00
1,2,3-Trimethylbenzene	526-73-8	0	0.500	U	0.104	0.500	1.00
1,2,4-Trimethylbenzene	95-63-6	0	1.00	U	0.322	1.00	2.00
1,3,5-Trimethylbenzene	108-67-8	0	0.500	U	0.104	0.500	1.00
1,1,2-Trichloroethane	79-00-5	0	0.500	U	0.158	0.500	1.00
Trichloroethene	79-01-6	0	0.500	U	0.190	0.500	1.00
Trichlorofluoromethane	75-69-4	0	2.00	U	0.160	2.00	5.00
1,1,2-Trichlorotrifluoroethane	76-13-1	0	0.500	U	0.180	0.500	1.00
1,2,3-Trichloropropane	96-18-4	0	1.00	U	0.237	1.00	2.50
Vinyl chloride	75-01-4	0	0.500	U	0.234	0.500	1.00
Xylenes, Total	1330-20-7	0	1.50	U	0.174	1.50	3.00

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-TRIPBLANK-HCL-02

Lab Sample ID:	L1667912-06	**SDG:**	L1667912
Client Sample ID:	OT001-TRIPBLANK-HCL-02	**Collected Date/Time:**	10/13/23 11:30
Lab File ID:	1029_36	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS58	**Preparation Date/Time:**	10/29/23 20:14
Analytical Batch:	WG2225492	**Analysis Date/Time:**	10/29/23 20:14
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
2,2-Dichloropropane	594-20-7	0	0.500	U H	0.161	0.500	1.00
Hexachloro-1,3-butadiene	87-68-3	0	0.750	U H	0.337	0.750	1.50
1,1,1-Trichloroethane	71-55-6	0	0.500	U H	0.149	0.500	1.00

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1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-RRSMW06-101323

Lab Sample ID:	L1667912-01	**SDG:**	L1667912
Client Sample ID:	OT001-RRSMW06-101323	**Collected Date/Time:**	10/13/23 12:30
Lab File ID:	1027_081	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	SVGC34	**Preparation Date/Time:**	10/27/23 05:58
Analytical Batch:	WG2159044	**Analysis Date/Time:**	10/28/23 06:23
Dilution Factor:	1	**Prep Method:**	3510C
Analytical Method:	AK102	**Sample Vol Used:**	
Matrix:	GW	**Initial Wt/Vol:**	100 mL
Total Solids (%):		**Final Wt/Vol:**	30 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
AK102 DRO C10-C25	C10-C25	5.97	437 J B	B J	170	400	800

12/15/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW05-101323

Lab Sample ID:	L1667912-02	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW05-101323	**Collected Date/Time:**	10/13/23 18:15
Lab File ID:	1027_082	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	SVGC34	**Preparation Date/Time:**	10/27/23 05:58
Analytical Batch:	WG2159044	**Analysis Date/Time:**	10/28/23 06:43
Dilution Factor:	1.05	**Prep Method:**	3510C
Analytical Method:	AK102	**Sample Vol Used:**	
Matrix:	GW	**Initial Wt/Vol:**	95 mL
Total Solids (%):		**Final Wt/Vol:**	30 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
AK102 DRO C10-C25	C10-C25	5.97	499 J B	B J	179	420	840

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1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW07-101323

Lab Sample ID:	L1667912-03	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW07-101323	**Collected Date/Time:**	10/13/23 17:30
Lab File ID:	1027_083	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	SVGC34	**Preparation Date/Time:**	10/27/23 05:58
Analytical Batch:	WG2159044	**Analysis Date/Time:**	10/28/23 07:04
Dilution Factor:	1	**Prep Method:**	3510C
Analytical Method:	AK102	**Sample Vol Used:**	
Matrix:	GW	**Initial Wt/Vol:**	100 mL
Total Solids (%):		**Final Wt/Vol:**	30 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
AK102 DRO C10-C25	C10-C25	5.97	431 J B	B J	170	400	800

SW 12/15/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW99-101323

Lab Sample ID:	L1667912-04	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW99-101323	**Collected Date/Time:**	10/13/23 17:40
Lab File ID:	1027_084	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	SVGC34	**Preparation Date/Time:**	10/27/23 05:58
Analytical Batch:	WG2159044	**Analysis Date/Time:**	10/28/23 07:24
Dilution Factor:	1.05	**Prep Method:**	3510C
Analytical Method:	AK102	**Sample Vol Used:**	
Matrix:	GW	**Initial Wt/Vol:**	95 mL
Total Solids (%):		**Final Wt/Vol:**	30 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		ug/l	ug/l	ug/l
AK102 DRO C10-C25	C10-C25	5.97	407 QL B J	B J	179	420	840

Sample Narrative:
Duplicate Analysis performed due to surrogate failure. Reporting most compliant data.

12/15/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW06-101323

Lab Sample ID:	L1667912-05	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW06-101323	**Collected Date/Time:**	10/13/23 18:45
Lab File ID:	1027_085	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	SVGC34	**Preparation Date/Time:**	10/27/23 05:58
Analytical Batch:	WG2159044	**Analysis Date/Time:**	10/28/23 07:44
Dilution Factor:	1	**Prep Method:**	3510C
Analytical Method:	AK102	**Sample Vol Used:**	
Matrix:	GW	**Initial Wt/Vol:**	100 mL
Total Solids (%):		**Final Wt/Vol:**	30 mL

Analyte	CAS	RT	Result		Qualifier	DL	LOD	LOQ
			ug/l			ug/l	ug/l	ug/l
AK102 DRO C10-C25	C10-C25	5.97	347	J B	B J	170	400	800

Σ 12/15/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-RRSMW06-101323

Lab Sample ID:	L1667912-01	**SDG:**	L1667912
Client Sample ID:	OT001-RRSMW06-101323	**Collected Date/Time:**	10/13/23 12:30
Lab File ID:	20231024201854	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	LACHAT6	**Preparation Date/Time:**	10/24/23 09:39
Analytical Batch:	WG2154830	**Analysis Date/Time:**	10/24/23 20:18
Dilution Factor:	1	**Prep Method:**	351.2
Analytical Method:	351.2	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	20 mL
Total Solids (%):	_____	**Final Wt/Vol:**	20 mL

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Kjeldahl Nitrogen, TKN	7727-37-9	300	U	140	300	600

KMR 12/08/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW05-101323

Lab Sample ID:	L1667912-02	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW05-101323	**Collected Date/Time:**	10/13/23 18:15
Lab File ID:	20231024202011	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	LACHAT6	**Preparation Date/Time:**	10/24/23 09:39
Analytical Batch:	WG2154830	**Analysis Date/Time:**	10/24/23 20:20
Dilution Factor:	1	**Prep Method:**	351.2
Analytical Method:	351.2	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	20 mL
Total Solids (%):	_____	**Final Wt/Vol:**	20 mL

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Kjeldahl Nitrogen, TKN	7727-37-9	300	U	140	300	600

KMR 12/08/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW07-101323

Lab Sample ID:	L1667912-03	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW07-101323	**Collected Date/Time:**	10/13/23 17:30
Lab File ID:	20231024202127	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	LACHAT6	**Preparation Date/Time:**	10/24/23 09:39
Analytical Batch:	WG2154830	**Analysis Date/Time:**	10/24/23 20:21
Dilution Factor:	1	**Prep Method:**	351.2
Analytical Method:	351.2	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	20 mL
Total Solids (%):	_____	**Final Wt/Vol:**	20 mL

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Kjeldahl Nitrogen, TKN	7727-37-9	300	U	140	300	600

KMR 12/08/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW99-101323

Lab Sample ID:	L1667912-04	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW99-101323	**Collected Date/Time:**	10/13/23 17:40
Lab File ID:	20231024202243	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	LACHAT6	**Preparation Date/Time:**	10/24/23 09:39
Analytical Batch:	WG2154830	**Analysis Date/Time:**	10/24/23 20:22
Dilution Factor:	1	**Prep Method:**	351.2
Analytical Method:	351.2	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	20 mL
Total Solids (%):	_____	**Final Wt/Vol:**	20 mL

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Kjeldahl Nitrogen, TKN	7727-37-9	300	U	140	300	600

KMR 12/08/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW06-101323

Lab Sample ID:	L1667912-05	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW06-101323	**Collected Date/Time:**	10/13/23 18:45
Lab File ID:	20231024202359	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	LACHAT6	**Preparation Date/Time:**	10/24/23 09:39
Analytical Batch:	WG2154830	**Analysis Date/Time:**	10/24/23 20:23
Dilution Factor:	1	**Prep Method:**	351.2
Analytical Method:	351.2	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	20 mL
Total Solids (%):	_____	**Final Wt/Vol:**	20 mL

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Kjeldahl Nitrogen, TKN	7727-37-9	300	U	140	300	600

KMR 12/08/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-RRSMW06-101323

Lab Sample ID:	L1667912-01	**SDG:**	L1667912
Client Sample ID:	OT001-RRSMW06-101323	**Collected Date/Time:**	10/13/23 12:30
Lab File ID:	38.0000.txt	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	IC-21	**Preparation Date/Time:**	10/27/23 17:08
Analytical Batch:	WG2158472	**Analysis Date/Time:**	10/27/23 17:08
Dilution Factor:	1	**Prep Method:**	9056A
Analytical Method:	9056A	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Sulfate J	14808-79-8	3740	J	594	2500	5000

KMR 12/08/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW05-101323

Lab Sample ID:	L1667912-02	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW05-101323	**Collected Date/Time:**	10/13/23 18:15
Lab File ID:	39.0000.txt	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	IC-21	**Preparation Date/Time:**	10/27/23 17:21
Analytical Batch:	WG2158472	**Analysis Date/Time:**	10/27/23 17:21
Dilution Factor:	1	**Prep Method:**	9056A
Analytical Method:	9056A	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Sulfate J	14808-79-8	2380	J	594	2500	5000

KMR 12/08/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW07-101323

Lab Sample ID:	L1667912-03	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW07-101323	**Collected Date/Time:**	10/13/23 17:30
Lab File ID:	40.0000.txt	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	IC-21	**Preparation Date/Time:**	10/27/23 17:34
Analytical Batch:	WG2158472	**Analysis Date/Time:**	10/27/23 17:34
Dilution Factor:	1	**Prep Method:**	9056A
Analytical Method:	9056A	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Sulfate J	14808-79-8	2450	J	594	2500	5000

KMR 12/08/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW99-101323

Lab Sample ID:	L1667912-04	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW99-101323	**Collected Date/Time:**	10/13/23 17:40
Lab File ID:	41.0000.txt	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	IC-21	**Preparation Date/Time:**	10/27/23 17:46
Analytical Batch:	WG2158472	**Analysis Date/Time:**	10/27/23 17:46
Dilution Factor:	1	**Prep Method:**	9056A
Analytical Method:	9056A	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Sulfate J	14808-79-8	2240	J	594	2500	5000

KMR 12/08/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW06-101323

Lab Sample ID:	L1667912-05	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW06-101323	**Collected Date/Time:**	10/13/23 18:45
Lab File ID:	42.0000.txt	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	IC-21	**Preparation Date/Time:**	10/27/23 17:59
Analytical Batch:	WG2158472	**Analysis Date/Time:**	10/27/23 17:59
Dilution Factor:	1	**Prep Method:**	9056A
Analytical Method:	9056A	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Sulfate J	14808-79-8	3800	J	594	2500	5000

KMR 12/08/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-RRSMW06-101323

Lab Sample ID:	L1667912-01	**SDG:**	L1667912
Client Sample ID:	OT001-RRSMW06-101323	**Collected Date/Time:**	10/13/23 12:30
Lab File ID:	20231020210627	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	LACHAT2	**Preparation Date/Time:**	10/20/23 21:06
Analytical Batch:	WG2154634	**Analysis Date/Time:**	10/20/23 21:06
Dilution Factor:	1	**Prep Method:**	353.2
Analytical Method:	353.2	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Nitrate-Nitrite	7727-37-9	1360		50.0	100	200

KMR 12/08/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW05-101323

Lab Sample ID:	L1667912-02	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW05-101323	**Collected Date/Time:**	10/13/23 18:15
Lab File ID:	20231020210744	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	LACHAT2	**Preparation Date/Time:**	10/20/23 21:07
Analytical Batch:	WG2154634	**Analysis Date/Time:**	10/20/23 21:07
Dilution Factor:	1	**Prep Method:**	353.2
Analytical Method:	353.2	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Nitrate-Nitrite	7727-37-9	1290		50.0	100	200

KMR 12/08/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW07-101323

Lab Sample ID:	L1667912-03	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW07-101323	**Collected Date/Time:**	10/13/23 17:30
Lab File ID:	20231020210859	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	LACHAT2	**Preparation Date/Time:**	10/20/23 21:08
Analytical Batch:	WG2154634	**Analysis Date/Time:**	10/20/23 21:08
Dilution Factor:	1	**Prep Method:**	353.2
Analytical Method:	353.2	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Nitrate-Nitrite	7727-37-9	100	U	50.0	100	200

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW99-101323

Lab Sample ID:	L1667912-04	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW99-101323	**Collected Date/Time:**	10/13/23 17:40
Lab File ID:	20231020211015	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	LACHAT2	**Preparation Date/Time:**	10/20/23 21:10
Analytical Batch:	WG2154634	**Analysis Date/Time:**	10/20/23 21:10
Dilution Factor:	1	**Prep Method:**	353.2
Analytical Method:	353.2	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Nitrate-Nitrite	7727-37-9	100	U	50.0	100	200

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW06-101323

Lab Sample ID:	L1667912-05	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW06-101323	**Collected Date/Time:**	10/13/23 18:45
Lab File ID:	20231020211131	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	LACHAT2	**Preparation Date/Time:**	10/20/23 21:11
Analytical Batch:	WG2154634	**Analysis Date/Time:**	10/20/23 21:11
Dilution Factor:	1	**Prep Method:**	353.2
Analytical Method:	353.2	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Nitrate-Nitrite J	7727-37-9	60.3	J	50.0	100	200

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-RRSMW06-101323

Lab Sample ID:	L1667912-01	**SDG:**	L1667912
Client Sample ID:	OT001-RRSMW06-101323	**Collected Date/Time:**	10/13/23 12:30
Lab File ID:	20231023231341	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	ICP13	**Preparation Date/Time:**	10/21/23 03:40
Analytical Batch:	WG2155276	**Analysis Date/Time:**	10/23/23 23:13
Dilution Factor:	1	**Prep Method:**	3015
Analytical Method:	6010D	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	45 mL
Total Solids (%):	_____	**Final Wt/Vol:**	50 mL

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Iron	7439-89-6	247		20.5	50.0	100
Manganese J	7439-96-5	7.75	J	0.855	5.00	10.0

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW05-101323

Lab Sample ID:	L1667912-02	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW05-101323	**Collected Date/Time:**	10/13/23 18:15
Lab File ID:	20231023231634	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	ICP13	**Preparation Date/Time:**	10/21/23 03:40
Analytical Batch:	WG2155276	**Analysis Date/Time:**	10/23/23 23:16
Dilution Factor:	1	**Prep Method:**	3015
Analytical Method:	6010D	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	45 mL
Total Solids (%):	_____	**Final Wt/Vol:**	50 mL

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Iron	7439-89-6	2330		20.5	50.0	100
Manganese	7439-96-5	122		0.855	5.00	10.0

KMR 12/08/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW07-101323

Lab Sample ID:	L1667912-03	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW07-101323	**Collected Date/Time:**	10/13/23 17:30
Lab File ID:	20231023231927	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	ICP13	**Preparation Date/Time:**	10/21/23 03:40
Analytical Batch:	WG2155276	**Analysis Date/Time:**	10/23/23 23:19
Dilution Factor:	1	**Prep Method:**	3015
Analytical Method:	6010D	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	45 mL
Total Solids (%):	_____	**Final Wt/Vol:**	50 mL

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Iron QN	7439-89-6	412		20.5	50.0	100
Manganese QN	7439-96-5	18.8		0.855	5.00	10.0

KMR 12/08/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW99-101323

Lab Sample ID:	L1667912-04	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW99-101323	**Collected Date/Time:**	10/13/23 17:40
Lab File ID:	20231023232219	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	ICP13	**Preparation Date/Time:**	10/21/23 03:40
Analytical Batch:	WG2155276	**Analysis Date/Time:**	10/23/23 23:22
Dilution Factor:	1	**Prep Method:**	3015
Analytical Method:	6010D	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	45 mL
Total Solids (%):	_____	**Final Wt/Vol:**	50 mL

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Iron QN	7439-89-6	1620		20.5	50.0	100
Manganese QN	7439-96-5	83.7		0.855	5.00	10.0

KMR 12/08/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW06-101323

Lab Sample ID:	L1667912-05	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW06-101323	**Collected Date/Time:**	10/13/23 18:45
Lab File ID:	20231023233047	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	ICP13	**Preparation Date/Time:**	10/21/23 03:40
Analytical Batch:	WG2155276	**Analysis Date/Time:**	10/23/23 23:30
Dilution Factor:	1	**Prep Method:**	3015
Analytical Method:	6010D	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	45 mL
Total Solids (%):	_____	**Final Wt/Vol:**	50 mL

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Iron	7439-89-6	5250		20.5	50.0	100
Manganese	7439-96-5	218		0.855	5.00	10.0

KMR 12/08/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-RRSMW06-101323

Lab Sample ID:	L1667912-01	**SDG:**	L1667912
Client Sample ID:	OT001-RRSMW06-101323	**Collected Date/Time:**	10/13/23 12:30
Lab File ID:	20231025131552	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	TITRANDO3	**Preparation Date/Time:**	10/25/23 13:15
Analytical Batch:	WG2156619	**Analysis Date/Time:**	10/25/23 13:15
Dilution Factor:	1	**Prep Method:**	2320 B-2011
Analytical Method:	2320 B-2011	**Sample Vol Used:**	50 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Alkalinity		110000		8450	10000	20000
Alkalinity,Bicarbonate		110000		8450	10000	20000
Alkalinity,Carbonate		10000	U	8450	10000	20000
Alkalinity,Hydroxide		10000	U	8450	10000	20000

Sample Narrative:
Endpoint pH 4.5 Headspace

KMR 12/08/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW05-101323

Lab Sample ID:	L1667912-02	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW05-101323	**Collected Date/Time:**	10/13/23 18:15
Lab File ID:	20231025132033	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	TITRANDO3	**Preparation Date/Time:**	10/25/23 13:20
Analytical Batch:	WG2156619	**Analysis Date/Time:**	10/25/23 13:20
Dilution Factor:	1	**Prep Method:**	2320 B-2011
Analytical Method:	2320 B-2011	**Sample Vol Used:**	50 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Alkalinity		60200		8450	10000	20000
Alkalinity,Bicarbonate		60200		8450	10000	20000
Alkalinity,Carbonate		10000	U	8450	10000	20000
Alkalinity,Hydroxide		10000	U	8450	10000	20000

Sample Narrative:
Endpoint pH 4.5 Headspace

KMR 12/08/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW07-101323

Lab Sample ID:	L1667912-03	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW07-101323	**Collected Date/Time:**	10/13/23 17:30
Lab File ID:	20231025132633	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	TITRANDO3	**Preparation Date/Time:**	10/25/23 13:26
Analytical Batch:	WG2156619	**Analysis Date/Time:**	10/25/23 13:26
Dilution Factor:	1	**Prep Method:**	2320 B-2011
Analytical Method:	2320 B-2011	**Sample Vol Used:**	50 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Alkalinity		45300		8450	10000	20000
Alkalinity,Bicarbonate		45300		8450	10000	20000
Alkalinity,Carbonate		10000	U	8450	10000	20000
Alkalinity,Hydroxide		10000	U	8450	10000	20000

Sample Narrative:
Endpoint pH 4.5 Headspace

KMR 12/08/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW99-101323

Lab Sample ID:	L1667912-04	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW99-101323	**Collected Date/Time:**	10/13/23 17:40
Lab File ID:	20231025133111	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	TITRANDO3	**Preparation Date/Time:**	10/25/23 13:31
Analytical Batch:	WG2156619	**Analysis Date/Time:**	10/25/23 13:31
Dilution Factor:	1	**Prep Method:**	2320 B-2011
Analytical Method:	2320 B-2011	**Sample Vol Used:**	50 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Alkalinity		44900		8450	10000	20000
Alkalinity,Bicarbonate		44900		8450	10000	20000
Alkalinity,Carbonate		10000	U	8450	10000	20000
Alkalinity,Hydroxide		10000	U	8450	10000	20000

Sample Narrative:
Endpoint pH 4.5 Headspace

KMR 12/08/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-BLOMW06-101323

Lab Sample ID:	L1667912-05	**SDG:**	L1667912
Client Sample ID:	OT001-BLOMW06-101323	**Collected Date/Time:**	10/13/23 18:45
Lab File ID:	20231025133550	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	TITRANDO3	**Preparation Date/Time:**	10/25/23 13:35
Analytical Batch:	WG2156619	**Analysis Date/Time:**	10/25/23 13:35
Dilution Factor:	1	**Prep Method:**	2320 B-2011
Analytical Method:	2320 B-2011	**Sample Vol Used:**	50 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Alkalinity		47200		8450	10000	20000
Alkalinity,Bicarbonate		47200		8450	10000	20000
Alkalinity,Carbonate		10000	U	8450	10000	20000
Alkalinity,Hydroxide		10000	U	8450	10000	20000

Sample Narrative:
Endpoint pH 4.5 Headspace

KMR 12/08/23

ADEC Contaminated Sites Program Laboratory Data Review Checklist

Completed By:	Sherrie Robinson	**CS Site Name:**	Port Heiden RRS	**Lab Name:**	Pace Analytical
Title:	Staff Scientist	**ADEC File No.:**	NPDL 21-034	**Lab Report No.:**	L1667742
Consulting Firm:	North Wind Site Services	**Hazard ID No.:**		**Lab Report Date:**	11/22/23

Note: *Any N/A or No box checked must have an explanation in the comments box.*

1. **Laboratory**

   a. Did an ADEC Contaminated Sites Laboratory Approval Program (CS-LAP) approved laboratory receive and perform all of the submitted sample analyses?
   Yes ☒ No ☐ N/A ☐
   Comments: Click or tap here to enter text.

   b. If the samples were transferred to another "network" laboratory or sub-contracted to an alternate laboratory, was the laboratory performing the analyses CS-LAP approved?
   Yes ☐ No ☐ N/A ☒
   Comments: Samples were not subcontracted.

2. **Chain of Custody (CoC)**

   a. Is the CoC information completed, signed, and dated (including released/received by)?
   Yes ☒ No ☐ N/A ☐
   Comments: Click or tap here to enter text.

   b. Were the correct analyses requested?
   Yes ☒ No ☐ N/A ☐
   Analyses requested: AK 102, 8260D, 2320 B-2011 Wet Chemistry, 351.2 Wet Chemistry, 353.2 Wet Chemistry, 6010D Metals (ICP), and 9056A Wet Chemistry.
   Comments: Click or tap here to enter text.

3. **Laboratory Sample Receipt Documentation**

   a. Is the sample/cooler temperature documented and within range at receipt (0° to 6° C)?
   Yes ☒ No ☐ N/A ☐

Cooler temperature(s): 2.5°C
Sample temperature(s): Click or tap here to enter text.
Comments: Click or tap here to enter text.

b. Is the sample preservation acceptable – acidified waters, methanol preserved soil (GRO, BTEX, VOCs, etc.)?
Yes ☒ No ☐ N/A ☐
Comments: The samples were received properly preserved.

c. Is the sample condition documented – broken, leaking, zero headspace (VOA vials); canister vacuum/pressure checked and no open valves, etc.?
Yes ☒ No ☐ N/A ☐
Comments: No discrepancies were noted.

d. If there were any discrepancies, were they documented? For example, incorrect sample containers/preservation, sample temperature outside of acceptable range, insufficient or missing samples, canister not holding a vacuum, etc.?
Yes ☐ No ☐ N/A ☒
Comments: No discrepancies were noted.

e. Is the data quality or usability affected?
Yes ☐ No ☒ N/A ☐
Comments: Data quality and usability were not affected.

4. Case Narrative

a. Is the case narrative present and understandable?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

b. Are there discrepancies, errors, or QC failures identified by the lab?
Yes ☒ No ☐ N/A ☐
Comments:
The Case Narrative noted:
Wet Chemistry by Method 351.2: The sample matrix interfered with the ability to make any accurate determination; spike value is high. Batch- WG2154036 Lab Sample ID- (MS) R3989558-4, (MSD) R3989558-5 Analytes- Kjeldahl Nitrogen, TKN

The sample concentration is too high to evaluate accurate spike recoveries. Batch- WG2154036 Lab Sample ID- (MS) R3989558-7 Analytes- Kjeldahl Nitrogen, TKN

Wet Chemistry by Method 9056A: The sample matrix interfered with the ability to make any accurate determination; spike value is low. Batch- WG2156852 Lab Sample ID- (MS) R3992131-4, (MS) R3992131-7, (MSD) R3992131-8 Analytes-

Sulfate

Metals (ICP) by Method 6010D: The sample concentration is too high to evaluate accurate spike recoveries. Batch- WG2153991 Lab Sample ID- (MS) R3990480-4, (MSD) R3990480-5 Analytes- Manganese

Volatile Organic Compounds (GC/MS) by Method 8260D: The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Data is likely to show a
low bias concerning the result. Batch Lab- WG2155682 Sample ID- L1667742-01, 02, 03, 04, 05, 06 Analytes- trans-1,4-Dichloro-2-butene

The reported concentration is an estimate. The continuing calibration standard associated with this data responded high. Data is likely to show a high bias concerning the result. Batch- WG2155682 Lab Sample ID- L1667742-03 Analytes- Trichlorofluoromethane

The same analyte is found in the associated blank. Batch- WG2157275 Analyte- 1,2,4-Trimethylbenzene Lab Sample ID- L1667742-03

The sample matrix interfered with the ability to make any accurate determination; spike value is high. Batch- WG2155682 Lab Sample ID- (MS) R3990575-6, (MSD) R3990575-7 Analytes- 28 analytes

The sample matrix interfered with the ability to make any accurate determination; spike value is low. Batch- WG2155682 Lab Sample ID- (MS) R3990575-4, (MS) R3990575-6,(MSD) R3990575-5, (MSD) R3990575-7
Analytes- 1,3,5-Trimethylbenzene, 2-Chlorotoluene, Cyclohexane, n-Butylbenzene,tert-Butylbenzene and Tetrahydrofuran

The associated batch QC was outside the established quality control range for precision. Batch- WG2155682 Lab Sample ID- (MSD) R3990575-7 Analytes- trans-1,4-Dichloro-2-butene

Semi-Volatile Organic Compounds (GC) by Method AK102:
Surrogate recovery limits have been exceeded; values are outside lower control limits. Batch- WG2159047 Lab Sample ID- (LCS) R3992862-2, (LCSD) R3992862-3 Analyte- o-Terphenyl

The same analyte is found in the associated blank. Analyte- AK102 DRO C10-C25 Batch- WG2159044 Lab Sample- ID L1667742-01, 02, 03, 04, 05
Batch- WG2159047 Lab Sample ID- L1667742-06

c. Were all the corrective actions documented?
Yes ☐ No ☐ N/A ☒
Comments: No corrective actions were noted.

d. What is the effect on data quality/usability according to the case narrative?
Comments: See following sections for data quality/usability.

5. Sample Results

a. Are the correct analyses performed/reported as requested on CoC?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

b. Are all applicable holding times met?
Yes ☒ No ☐ N/A ☐
Comments: AK102 DRO C10-C25: The samples were collected on 10/14/23 and were received by the laboratory on 10/18/23 at 2.5°C. The samples were extracted on 10/27/23 within 13 days of collection. The extracts were analyzed on 10/28/23 within 1 day of extraction. All preservation and holding time criteria were met.

8260D: The samples were collected on 10/14/23 and were received by the laboratory on 10/18/23 at 2.5°C and with a pH <2 per the Sample Prep log. The samples were analyzed on 10/19/23, 10/22/23, and 10/26/23 within 5-12 days of collection. All preservation criteria and the remaining holding time criteria were met.

9056A, 2320 B-2011, 351.2, 353.2 Wet Chemistry: Receipt logs indicate that samples were received intact, and cooler temperatures were acceptable upon receipt for metals samples. Holding times were met for all preparatory and analytical processes.

6010D Metals (ICP): Receipt logs indicate that samples were received intact, and cooler temperatures were acceptable upon receipt for metals samples. Holding times were met for all preparatory and analytical processes.

A holding time table has been provided in the attachment.

c. Are all soils reported on a dry weight basis?
Yes ☐ No ☐ N/A ☒
Comments: Soil samples were not collected for this SDG.

d. Are the reported limits of quantitation (LoQ) or limits of detections (LOD), or reporting limits (RL) less than the Cleanup Level or the action level for the project?
Yes ☐ No ☒ N/A ☐

Comments: The following results were non-detect and the LODs reported by the laboratory were elevated and over the ADEC clean up limits. Users are cautioned that there are elevated LODs:
• 8260D-LL: 1,1,2-Trichloroethane, 1,2,3-trichloropropane, 1,2-dibromoethane, naphthalene, and vinyl chloride in samples OT001-DSAMW01-101423, OT001-DSAMW99-101423, OT001-DSAMW06-101423, OT001-DSAMW07-101423, OT001-GLOMW04-101423, and OT001-RRSMW05-101423.

The following results reported by the laboratory were elevated and over the ADEC cleanup limits. Users are cautioned that there are elevated LODs:
• SW6010D: Manganese in sample OT001-DSAMW06-101423.
• 8260D-LL: Trichloroethene in samples OT001-DSAMW01-101423 and OT001-DSAMW99-101423.

e. Is the data quality or usability affected?
Yes ☐ No ☒ N/A ☐
Comments: LOQs were greater than the project cleanup levels. However, data usability is determined on a case by case basis by the project manager and risk assessment team. Data users are cautioned that non-detects will be driving the risk and the LOQs were greater than the PALs.

6. QC Samples

a. Method Blank

i. Was one method blank reported per matrix, analysis, and 20 samples?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

ii. Are all method blank results less than LOQ (or RL)?
Yes ☐ No ☒
Comments: AK102 DRO C10-C25 was present in method blank R3992283-1 (417 ug/l, J) associated with all samples except OT001-DSAMW99-101423 and in method blank R3992862-1 associated with sample OT001 DSAMW99-101423 (399 ug/l, J).

8260D: 1,2,4-Trimethylbenzene (0.0540 ug/l, J) was present in the method blank associated with the 10/26/23 low level analysis of all samples.

iii. If above LoQ or RL, what samples are affected?
Comments: AK102 DRO C10-C25: All DRO C10-C25 sample results were detected at a concentration <LOQ and have been qualified with a 'B' validation flag due to the method blank detections.

8260D: • 1,2,4-Trimethylbenzene in sample OT001-DSAMW06-101423

(0.0490 ug/l, J) was detected at a concentration <LOQ and has been qualified with a 'B' validation flag due to the method blank detection.
• The remaining 1,2,4-trimethylbenzene results were non-detect and warrant no qualification due to the method blank detection.

6010D Metals (ICP): All initial calibration blank (ICB), continuing calibration blank (CCB), and preparation blank (PB) results were non-detect.

9056A, 2320 B-2011, 351.2, 353.2 Wet Chemistry: All initial calibration blank (ICB), continuing calibration blank (CCB), and preparation blank (PB) results were non-detect.

iv. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?
Yes ☒ No ☐ N/A ☐
Comments:

v. Data quality or usability affected?
Yes ☒ No ☐ N/A ☐
Comments: AK102 DRO C10-C25: All DRO C10-C25 sample results have been qualified with a 'B' validation flag due to the method blank detections.

8260D: 1,2,4-Trimethylbenzene in sample OT001-DSAMW06-101423 (0.0490 ug/l, J) has been qualified with a 'B' validation flag due to the method blank detection.

b. Laboratory Control Sample/Duplicate (LCS/LCSD)

i. Organics – Are one LCS/LCSD reported per matrix, analysis and 20 samples? (LCS/LCSD required per AK methods, LCS required per SW846)
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

ii. Metals/Inorganics – Are one LCS and one sample duplicate reported per matrix, analysis and 20 samples?
Yes ☒ No ☐ N/A ☐
Comments: All laboratory duplicate (LD) and MSD RPD recoveries were within the acceptance criteria for aqueous samples. All laboratory control sample recovery results were within the 80-120% acceptance criteria.

iii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK

Petroleum methods: AK101 60%-120%, AK102 75%-125%, AK103 60%-120%; all other analyses see the laboratory QC pages)
Yes ☒ No ☐ N/A ☐
Comments: All LCS/LCSD recoveries were within the acceptance criteria.

All laboratory control sample recovery results were within the 80-120% acceptance criteria.

iv. Precision – Are all relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? Was the RPD reported from LCS/LCSD, and or sample/sample duplicate? (AK Petroleum methods 20%; all other analyses see the laboratory QC pages)
Yes ☒ No ☐ N/A ☐
Comments: All LCSD precision criteria was met.
All laboratory duplicate (LD) and MSD RPD recoveries were within the 30%RPD acceptance criteria for aqueous samples.

v. If %R or RPD is outside of acceptable limits, what samples are affected?
Comments: All LCS/LCSD recovery and precision criteria was met.

vi. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?
Yes ☐ No ☐ N/A ☒
Comments: Not applicable, all LCS/LCSD recoveries were within the acceptance criteria.

vii. Is the data quality or usability affected?
Yes ☐ No ☒ N/A ☐
Comments: Data quality and usability was not affected.

c. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

i. Organics – Are one MS/MSD reported per matrix, analysis and 20 samples?
Yes ☐ No ☐ N/A ☒
Comments: AK102: A MS/MSD pair was not analyzed for the AK102 analysis in this SDG. In the professional judgement of the validator, no qualifications were warranted as an LCS/LCSD was analyzed to ensure precision and accuracy.

8260D: Non-SDG sample L1667791-03 MS/MSD and non-SDG sample L1667486-03 MS/MSD were the parent samples for the MS/MSD analyses.

Metals/Inorganics – Are one MS/MD reported per matrix, analysis and 20 samples?
Yes ☐ No ☐ N/A ☒
Comments: 6010D Metals (ICP): Non-SDG sample L1667791-03 was the parent sample for the matrix spike and matrix spike duplicate (MS/MSD) analyses.

9056A, 2320 B-2011, 351.2, 353.2 Wet Chemistry: Non-SDG samples L1667791-03, L1667732-01, and L1668237-03 were the parent samples for the matrix spike and matrix spike duplicate (MS/MSD) analyses.

ii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable?
Yes ☐ No ☐ N/A ☒
Comments: 8260D: In the non-SDG L1667791-03 MS/MSD and non-SDG L1667486-03 MS/MSD, several compounds were outside of the recovery criteria and exceeded the 30%RPD acceptance criteria.

6010D Metals (ICP): The L1667791-03 MS/MSD recoveries for manganese (61.1% & 62.7%) were outside of the 75-125% acceptance criteria.

9056A, 2320 B-2011, 351.2, 353.2 Wet Chemistry: The L1667791-03 MS/MSD recoveries for TKN (118%) and sulfate (84.1%) were outside the 90-110% recovery criteria. The L1667732-01 MS/MSD recovery for TKN (80%) was outside the 90-110% recovery criteria. The L1668237-03 MS/MSD recovery for sulfate (74.7%) was outside the 90-110% recovery criteria.

iii. Precision – Are all relative percent differences (RPD) reported and less than method or laboratory limits and project specified objectives, if applicable? RPD reported from MS/MSD, and or sample/sample duplicate.
Yes ☐ No ☐ N/A ☒
Comments: 8260D: In the non-SDG L1667791-03 MS/MSD and non-SDG L1667486-03 MS/MSD, several compounds were outside of the recovery criteria and exceeded the 30%RPD acceptance criteria.

iv. If %R or RPD is outside of acceptable limits, what samples are affected?
Comments: 8260D: No qualifications were warranted due to the exceedances in the non-SDG MS/MSD as the parent samples were not from this SDG and only the parent sample shall be qualified due to MS/MSD considerations per the DOD QSM.

6010D Metals (ICP): No qualifications were warranted due to the exceedances in the non-SDG MS/MSD as the parent samples were not

from this SDG and only the parent sample shall be qualified due to MS/MSD considerations per the DOD QSM.

9056A, 2320 B-2011, 351.2, 353.2 Wet Chemistry: No qualifications were warranted due to the exceedances in the non-SDG MS/MSD as the parent samples were not from this SDG and only the parent sample shall be qualified due to MS/MSD considerations per the DOD QSM.

v. Do the affected sample(s) have data flags? If so, are the data flags clearly defined?
Yes ☐ No ☐ N/A ☒
Comments: 8260D: No qualifications were warranted due to the exceedances in the non-SDG MS/MSDs as the parent samples were not from this SDG.

6010D Metals (ICP): No qualifications were warranted due to the exceedances in the non-SDG MS/MSDs as the parent samples were not from this SDG.

9056A, 2320 B-2011, 351.2, 353.2 Wet Chemistry: No qualifications were warranted due to the exceedances in the non-SDG MS/MSDs as the parent samples were not from this SDG.

vi. Is the data quality or usability affected?
Yes ☐ No ☒ N/A ☐
Comments: Data quality and usability were not affected as the MS/MSD parent samples were not from this SDG.

d. Surrogates – Organics Only or Isotope Dilution Analytes (IDA) – Isotope Dilution Methods Only

i. Are surrogate/IDA recoveries reported for organic analyses – field, QC, and laboratory samples?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

ii. Accuracy – Are all percent recoveries (%R) reported and within method or laboratory limits and project specified objectives, if applicable? (AK Petroleum methods 50-150 %R for field samples and 60-120 %R for QC samples; all other analyses see the laboratory report pages)
Yes ☐ No ☒ N/A ☐
Comments: AK102 DRO: Surrogate o-terphenyl (47.1% & 46.9%) in the R3992862 LCS/LCSD was below the 50-150% recovery criteria. However, no qualifications were warranted as all sample surrogate recoveries were within the acceptance criteria.

8260D: All surrogate recoveries were within the acceptance criteria.

iii. Do the sample results with failed surrogate/IDA recoveries have data flags? If so, are the data flags clearly defined?
Yes ☐ No ☒ N/A ☐
Comments: AK102: No qualifications are warranted do to the low LCS/LCSD surrogate recoveries.

iv. Is the data quality or usability affected?
Yes ☐ No ☒ N/A ☐
Comments: Data quality and usability were not affected.

e. Trip Blanks

i. Is one trip blank reported per matrix, analysis, and for each cooler containing volatile samples? Yes ☐ No ☒ N/A ☐
Comments: A trip blank was not collected for this SDG.

ii. Are all results less than LoQ or RL?
Yes ☐ No ☐ N/A ☒
Comments: Not applicable, a trip blank was not collected for this SDG.

iii. If above LoQ or RL, what samples are affected?
Comments: Not applicable, a trip blank was not collected for this SDG.

iv. Is the data quality or usability affected?
Yes ☐ No ☒ N/A ☐
Comments: Data quality and usability were not affected.

f. Field Duplicate

i. Are one field duplicate submitted per matrix, analysis, and 10 project samples?
Yes ☒ No ☐ N/A ☐
Comments: The field duplicate pair for this SDG was OT001-DSAMW01-101423 and OT001-DSAMW99-101423.

ii. Was the duplicate submitted blind to lab?
Yes ☒ No ☐ N/A ☐
Comments: Click or tap here to enter text.

iii. Precision – All relative percent differences (RPD) less than specified project objectives? (Recommended: 30% water or air, 50% soil)

$$RPD\ (\%) = \left| \frac{R_1 - R_2}{\left(\frac{R_1 + R_2}{2}\right)} \right| X\ 100$$

Where R_1 = Sample Concentration

R_2 = Field Duplicate Concentration

Is the data quality or usability affected? (Explain)

Yes ☐ No ☒ N/A ☐
Comments: AK102: All field duplicate criteria were within the acceptance limits.

AK102 Analyte	OT001-DSAMW01-101423 (lab ID L1667742-05) (ug/L)	OT001-DSAMW99-101423 (lab ID L1667742-06) (ug/L)	RPD
AK102 DRO C10-C25	436, J	459, J	**5.14%**

8260D: Acetone, total xylenes, and toluene had results that were either non detect or <RL and warrant no qualifications due to the high field duplicate RPDs.

8260D Analyte	OT001-DSAMW01-101423 (lab ID L1667742-05) (ug/L)	OT001-DSAMW99-101423 (lab ID L1667742-06) (ug/L)	RPD
Acetone	3.29, J	1.69, J	**64.3%**
1,3,5-Trimethylbenzene	0.0810, J	0.100, U	21.0%
Xylenes, Total	0.215, J	0.400, U	**60.2%**
Toluene	0.131, J	0.0600, J	**74.3%**
Trichloroethene	4.04	3.92	3.02%

6010D Metals (ICP): The field duplicate results were within the 30% RPD acceptance criteria. No data qualifications were warranted.

Analyte	Sample	Duplicate	RPD
Fe	43	38.5	11.04%
Mn	1.42	1.38	2.86%

9056A, 2320 B-2011, 351.2, 353.2 Wet Chemistry: All field duplicate RPDs were within the 35% acceptance criteria. No data qualifications were warranted.

Analyte	Sample	Duplicate	RPD
Alkalinity	102000	105000	2.90%
Bicarbonate	102000	105000	2.90%
Carbonate	10000	10000	0.00%
Hydroxide	10000	10000	0.00%
TKN	300	300	0.00%
Nitrate-Nitrite	995	979	1.62%
Sulfate	5780	5710	1.22%

iv. Is the data quality or usability affected? (Explain)
Yes ☐ No ☒ N/A ☐
Comments: Data quality and usability was not affected.

g. Decontamination or Equipment Blanks

i. Were decontamination or equipment blanks collected?
Yes ☐ No ☒ N/A ☐
Comments: Field and equipment blanks were not included in this SDG.

ii. Are all results less than LoQ or RL?
Yes ☐ No ☐ N/A ☒
Comments: Field and equipment blanks were not included in this SDG.

iii. If above LoQ or RL, specify what samples are affected.
Comments: Not applicable, field and equipment blanks were not included in this SDG.

iv. Are data quality or usability affected?
Yes ☐ No ☒ N/A ☐
Comments: Data quality and usability was not affected.

7. Other Data Flags/Qualifiers (ACOE, AFCEE, Lab Specific, etc.)

a. Are they defined and appropriate?
Yes ☐ No ☐ N/A ☒
Comments: AK102: All sample results have been qualified with a 'J' validation flag as the results were reported between the detection limit (DL) and the limit of quantitation (LOQ) and are estimates.

8260D: Several sample results have been qualified with a 'J' validation flag to denote the reported results are estimated due to sample results reported at levels between the detection limit (DL) and the limit of quantitation (LOQ).

The following results were reported above the detection limit and have been qualified with a 'QN' validation flag due to the exceeded CCV %R/%D criteria:

- Acetone and trans-1,4-dichloro-2-butene in sample OT001-GLOMW04-101423 (10/22/23- Low level VOC).
- Acetone in samples OT001-RRSMW05-101423, OT001-DSAMW01-101423, and OT001-DSAMW99-101423 (10/22/23- Low level VOC).
- Acetone, trichloroethene, and trichlorofluoromethane in sample OT001-DSAMW06-101423 (10/22/23- Low level VOC).
- Acetone and trichloroethene in sample OT001-DSAMW07-101423 (10/22/23- Low level VOC).

The following sample results were non-detect and have been qualified with a 'QN' validation flag as the CCV %R/%D criteria was exceeded:

- Acetone in samples OT001-GLOMW04-101423, OT001-RRSMW05-101423, and OT001-DSAMW06-101423 (10/19/23- VOC).
- Carbon tetrachloride, trichloroethene, and trichlorofluoromethane in sample OT001-GLOMW04-101423 (10/22/23- Low level VOC).
- Carbon tetrachloride, trans-1,4-dichloro-2-butene, trichloroethene, and trichlorofluoromethane in sample OT001-RRSMW05-101423 (10/22/23- Low level VOC).
- Carbon tetrachloride and trans-1,4-dichloro-2-butene in sample OT001-DSAMW06-101423 (10/22/23- Low level VOC).
- Carbon tetrachloride, trichlorofluoromethane, and trans-1,4-dichloro-2-butene in samples OT001-DSAMW07-101423 and OT001-DSAMW01-101423 (10/22/23- Low level VOC).
- Trichloroethene was not reported in the 10/22/23 low level VOC analysis of samples OT001-DSAMW01-101423 and OT001-DSAMW99-101423 and no qualifications were warranted.

6010D Metals (ICP): The following results were “J” flagged by the laboratory due to sample results greater than the detection limit (DL) but below the limit of quantitation (LOQ). A “J” validation flag has been applied to these results:
• Manganese in samples OT001-GLOMW04-101423, OT001-DSAMW07-101423, OT001-DSAMW01-101423, and OT001-DSAMW99-101423.
• Iron in samples OT001-DSAMW01-101423 and OT001-DSAMW99-101423.

9056A, 2320 B-2011, 351.2, 353.2 Wet Chemistry: The following results were “J” flagged by the laboratory due to sample results greater than the detection limit (DL) but below the limit of quantitation (LOQ). A “J” validation flag has been applied to these results:
• TKN in sample OT001-DSAMW07-101423.
• Nitrate/Nitrite in sample OT001-RRSMW05-101423.
• Sulfate in samples OT001-GLOMW04-101423, OT001-RRSMW05-101423, OT001-DSAMW06-101423, and OT001-DSAMW07-101423.

Please refer to the attachment for the specifics on calibration.

Level 2b Data Review

Project ID:	**Port Heiden RRS 21-034**	**Lab Name:**	**Pace Analytical National**
SOW No.	**South Optimized Remediation Contract**	**SDG No.**	**L1667742**

This review is based on Project requirements, the requirements of Method 8015, Base Method 8000, and validator technical judgment in accordance with the following documents:

- South Optimized Remediation Contract. *Port Heiden Radio Relay Station. Final, August 2022.*
- Department of Defense (DoD). Department of Defense (DOD)/Department of Energy (DOE) Consolidated Quality Systems Manual (QSM) for Environmental Laboratories, Version 5.4. 2021.
- U.S. Environmental Protection Agency (USEPA). 1986. *Solid Waste SW-846 Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods*, Third Edition and Updates.
- Method AK102, *Determination of Diesel Range Organics*, Version 12/21/16.
- USEPA Office of Research and Development., 1993 and Updates, Methods for the Determination of Inorganic Substances in Environmental Samples, EPA 600-R-93-100, August.

Validation qualifiers are written in red on copies of the Laboratory Form 1s (result forms).

AK102 DRO Data Review

1. Samples Submitted and Analyses Requested.

Sample ID	Lab ID	Type	Matrix	Date Collected	Prep/Extraction Date	Analysis Date
OT001-GLOMW04-101423	L1667742-01	Field Sample	Groundwater	10/14/23	10/27/23	10/28/23
OT001-RRSMW05-101423	L1667742-02	Field Sample	Groundwater	10/14/23	10/27/23	10/28/23
OT001-DSAMW06-101423	L1667742-03	Field Sample	Groundwater	10/14/23	10/27/23	10/28/23
OT001-DSAMW07-101423	L1667742-04	Field Sample	Groundwater	10/14/23	10/27/23	10/28/23
OT001-DSAMW01-101423	L1667742-05	Field Sample	Groundwater	10/14/23	10/27/23	10/28/23
OT001-DSAMW99-101423	L1667742-06	Field Duplicate of OT001-DSAMW01-101423	Groundwater	10/14/23	10/27/23	10/28/23

2. Reviewer Preliminary Comments

Review Type: [] Level IV (Level 3 or 4) [X] Level III (Level 2b) [X] Level II (Level 2a)
Confirm that narrative is present and complete; note overall initial indications.

Six (6) groundwater samples were received by received by Pace Analytical on 10/18/23 at 2.5°C. The samples were analyzed for diesel range organics (DRO) by Method AK102. The data was validated to a Level 2B.

3. Instrumentation QA/QC	Y	N	NA
Were the following instrumentation criteria met?			
Was all retention time criteria met per the analytical method?	**X**		
Was all initial calibration criteria met (i.e. %RSD <25% or r^2<0.995)?	**X**		
Was all initial calibration verification (ICV) criteria met (%D<25% **or** method required criteria)?	**X**		
Was all continuing calibration verification (CCV) criteria met (%D<25% **or** method required criteria)?		**X**	

Reviewer Comments: All retention time criteria and initial calibration criteria were met. No qualifications were warranted.

Surrogate o-terphenyl in the CCVs analyzed on 10/28/23 at 04:02 (26.2%), 10/28/23 at 15:05 (28.5%), and 10/29/23 at 00:49 (36.2%) was outside of the 25%D acceptance criteria. However, no qualifications were warranted due to the high CCV%D for surrogate o-terphenyl. The remaining CCV criteria were met.

4. Method Quantitation Limits	Y	N	NA
Does the method quantitation limit (established by the lowest concentration calibration standard) meet project requirements? (**Method 8000**, Sections 7.4.1.2 and 7.4.1.4)	**X**		
Are only those results that fall between the lowest and highest calibration standards reported (i.e., no "J" values or values between the MDL and low standard or above the high standard)? (**Method 8000**, Section 7.4)		**X**	
Action: *Indicate non-correctable contract compliance deviations below. If MQL>RDL, reanalysis may be warranted.			

Reviewer Comments: All sample results have been qualified with a 'J' validation flag as the results were reported between the detection limit (DL) and the limit of quantitation (LOQ) and are estimates.

5. Overall Comments

Overall, the data meet the requirements and intent of the methods, indicate the preparatory process and analytical system were in control at the time of sample analysis, and the reported laboratory results are of sufficient quality for their intended purpose.

Sample Qualifications Summary Table

Sample ID	Analyte	Validation Flag	Qualification Reason(s)
OT001-GLOMW04-101423	AK102 DRO C10-C25	J, B	Result ≥DL but <LOQ Method blank considerations
OT001-RRSMW05-101423			
OT001-DSAMW06-101423			
OT001-DSAMW07-101423			
OT001-DSAMW01-101423			
OT001-DSAMW99-101423			

Level 2b Data Review

Project ID:	**Port Heiden RRS 21-034**	**Lab Name:**	**Pace Analytical National**
SOW No.	**South Optimized Remediation Contract**	**SDG No.**	**L1667742**

VOC Data Review

1. Samples Submitted

Sample ID	Lab ID	Type	Matrix	Date Collected	DF	Date Analyzed
OT001-GLOMW04-101423	L1667742-01	Field Sample	Ground Water	10/14/23	1	10/19/23 10/22/23 10/26/23
OT001-RRSMW05-101423	L1667742-02	Field Sample	Ground Water	10/14/23	1	10/19/23 10/22/23 10/26/23
OT001-DSAMW06-101423	L1667742-03	Field Sample	Ground Water	10/14/23	1	10/19/23 10/22/23 10/26/23
OT001-DSAMW07-101423	L1667742-04	Field Sample	Ground Water	10/14/23	1	10/22/23 10/26/23
OT001-DSAMW01-101423	L1667742-05	Field Sample	Ground Water	10/14/23	1	10/22/23 10/26/23
OT001-DSAMW99-101423	L1667742-06	Field Duplicate of OT001-DSAMW01-101423	Ground Water	10/14/23	1	10/22/23 10/26/23

DF: Dilution Factor

2. Reviewer Preliminary Comments

Review Type: [] Level IV (Level 3 or 4) [x] Level III (Level 2B) []Level II (Level 2a)

Six (6) ground water samples were received by received Pace Analytical on 10/18/23 at 2.5°C. The samples were analyzed for volatile organic compounds and low level volatile organic compounds by EPA Method SW8260D. The data was validated to a Level 2b.

Samples OT001-GLOMW04-101423, OT001-RRSMW05-101423, and OT001-DSAMW06-101423 were analyzed for volatile organic compounds (10/19/23) and low level volatile organic compounds (10/22/23 and 10/26/23). Both sets of results have been validated.

3. GC/MS Performance Check	**Y**	**N**
Are performance check data present in the data submittal?	**X**	
Is the GC/MS hardware-tuned to meet BFB criteria prior to the initial calibration and for each 12-hr period during which analyses are performed? (**Method 8260B**, Sections 4.9.3, 5.11, 7.3.1, 7.4.1, 7.5.2, 8.2.1, and 11.4.1)	**X**	
Are mass spectral relative abundances acceptable according to the method criteria? (**Method 8260B**, Table 4**)**	**X**	
Was there correct assignment of ions?	**X**	
Raw Data Confirmation		
Raw data show proper averaging of scans according to method recommendations.	**X**	
Action: Indicate affected samples in validation comments, primarily if data are rejected. * Qualify only if the deviation indicates an adverse effect on data quality. ** Qualify as appropriate		

Reviewer Comments: All tune criteria were met. No qualifications were warranted.

Level 2b Data Review

Project ID:	**Port Heiden RRS 21-034**	**Lab Name:**	**Pace Analytical National**
SOW No.	**South Optimized Remediation Contract**	**SDG No.**	**L1667742**

4. Initial Calibration	Y	N	NA
Are initial calibration data present in the data submittal?	**X**		
Does the initial calibration curve consist of a least 5 standards? (**Method 8260B**, Sections 5.7.6.10, 5.7.6.11, 5.12.1 and 7.3.2; and **Method 8000B**, Section 7.4)	**X**		
Are all target analytes present in the initial calibration? (**Method 8260B**, Section 5.12.3)	**X**		
For the continuing check compounds (1,1-Dichloroethene, Chloroform, 1,2-Dichloropropane, Toluene, Ethylbenzene, and vinyl chloride), is the RSD ≤30%? (**Method 8260B**, Section 7.3.6.3 and 8.2.3) **[Note: Method 8260 requires an RSD of ≤15% and Method 8260C/D requires an RSD of 20% for all compounds or another type of curve must be used]**	**X**		
For the system performance check compounds, are the response factors 0.10 for Chloromethane, 1,1-Dichloroethane, and Bromoform and 0.30 for chlorobenzene and 1,1,2,2-tetrachloroethane? (**Method 8260B**, Section 7.3.5.4 and 8.2.3)	**X**		
Do target compounds meet the minimum response factors summarized in Table 4? (**Method 8260D,** Table 4**)**	**X**		
For other compounds, is the response factor ≥0.01 (or method criteria)?	**X**		
If the RSD does not meet the 20% (15% for **Method 8260**) criterion, is a linear (or quadratic) regression equation used for target compound quantitation? (**Method 8260B**, Sections 7.3.8.2)	**X**		
If linear and/or quadradic regressions, are used, is r ≥0.99 or r^2≥0.98 (**Method 8000B**, Sections 7.5.2 and 8.3.2)	**X**		
Is the origin not forced and not included in the calibration curve for linear regression? (**Method 8000**, Section 7.5.2)	**X**		
QC Check Standard (ICV)			
Are QC Check Standard Results present in the data submittal?	**X**		
Is the check standard run on an ongoing basis? (**Method 8260B**, Section 8.7-referred to as a standard reference material)	**X**		
Are check standard results within 30% of reference value?		**X**	
Raw Data Confirmation			
Raw data have been examined for anomalies	**X**		
The quantitation ions for 2 compounds have been confirmed as the correct ions for quantitation.	**X**		
Action: Indicate affected samples in validation comments, primarily if data are rejected. * Qualify only if the deviation indicates an adverse effect on data quality. ** Qualify as appropriate *** Qualify only peaks outside linear portion			

Reviewer Comments: All initial calibration criteria were met. No qualifications were warranted.

In the initial calibration verification (ICV) analyzed on 10/20/23 at 05:37, 2-chloroethyl vinyl ether (45.8%), 4-methyl-2-pentanone (MIBK) (44.0%), acrolein (116%), styrene (41.5%), and tetrahydrofuran (34.4%) were outside of the 30%D acceptance criteria. However, the ICV only bracketed the associated ICAL and no qualifications were warranted. The remaining ICV criteria were met.

5. Continuing Calibration	Y	N	NA
Are continuing calibration data present in the data submittal?	**X**		
Are all target analytes present in the continuing calibration (verification)? (**Method 8260B**, Section 5.12.3)	**X**		
Has continuing calibration verification been performed within 12 hours of the time of associated sample analysis? (**Method 8260B**, Sections 7.4.2 and 8.2.3)	**X**		
For the system performance check compounds, are the response factors in the calibration verification 0.10 for Chloromethane, 1,1-Dichloroethane, and Bromoform and 0.30 for chlorobenzene and 1,1,2,2-tetrachloroethane? (**Method 8260B**, Sections 7.3.5.4, 7.4.4.1, 7.4.4.2, and 8.2.3)	**X**		

5. Continuing Calibration	Y	N	NA
Do target compounds meet the minimum response factors summarized in Table 4? (**Method 8260D,** Table 4**)**	**X**		
For other compounds, is the response factor ≥0.01?	**X**		
For the continuing check compounds (1,1-Dichloroethene, Chloroform, 1,2-Dichloropropane, Toluene, Ethylbenzene, and vinyl chloride), is the %D ≤20%? (**Method 8260B**, Sections 7.3.6.3, 7.4.5.1, 7.4.5.2, and 8.2.3)	**X**		
For other compounds, is %D ≤ 20%? (**Method 8260B**, Section 7.4.5.2)		**X**	
Is a closing CCV performed? (**DOD QSM 5.3** Table B-4)	**X**		
Is the closing CCV %D ≤ 50%? (**DOD QSM 5.3** Table B-4)	**X**		
Action: Indicate affected samples in validation comments, primarily if data are rejected.			

Reviewer Comments: The following table shows the CCV %Rs/%Ds that exceeded the 20%R/%D acceptance criteria and the affected samples.

Continuing Calibration Date/Time	Samples Bracketed	Analyte	CCV %R/%D >20%
VOCMS35 CCV 10/19/23, 09:51	Samples OT001-GLOMW04-101423, OT001-RRSMW05-101423, OT001-DSAMW06-101423, and associated QA/QC (10/19/23- VOC)	Acetone	31.5%D
VOCMS37 CCV 10/22/23, 00:38	All samples and associated QA/QC (10/22/23- Low level VOC)	Acetone	30.5%D
		Carbon tetrachloride	20.7%D
		trans-1,4-Dichloro-2-butene	75.1%R
		Trichloroethene	20.7%D
		Trichlorofluoromethane	47.3%D

Note: for results quantitated using average regression the CCV %D has been utilized for assessment; for compounds quantitated using linear/quadradic regression the CCV %R has been utilized for assessment.

Qualifications are as follows:

- The following results were reported above the detection limit and have been qualified with a 'QN' validation flag due to the exceeded CCV %R/%D criteria:
  - Acetone and trans-1,4-dichloro-2-butene in sample OT001-GLOMW04-101423 (10/22/23- Low level VOC).
  - Acetone in samples OT001-RRSMW05-101423, OT001-DSAMW01-101423, and OT001-DSAMW99-101423 (10/22/23- Low level VOC).
  - Acetone, trichloroethene, and trichlorofluoromethane in sample OT001-DSAMW06-101423 (10/22/23- Low level VOC).
  - Acetone and trichloroethene in sample OT001-DSAMW07-101423 (10/22/23- Low level VOC).
- The following sample results were non-detect and have been qualified with a 'QN' validation flag as the CCV %R/%D criteria was exceeded:
  - Acetone in samples OT001-GLOMW04-101423, OT001-RRSMW05-101423, and OT001-DSAMW06-101423 (10/19/23- VOC).
  - Carbon tetrachloride, trichloroethene, and trichlorofluoromethane in sample OT001-GLOMW04-101423 (10/22/23- Low level VOC).
  - Carbon tetrachloride, trans-1,4-dichloro-2-butene, trichloroethene, and trichlorofluoromethane in sample OT001-RRSMW05-101423 (10/22/23- Low level VOC).
  - Carbon tetrachloride and trans-1,4-dichloro-2-butene in sample OT001-DSAMW06-101423

(10/22/23- Low level VOC).
  - Carbon tetrachloride, trichlorofluoromethane, and trans-1,4-dichloro-2-butene in samples OT001-DSAMW07-101423 and OT001-DSAMW01-101423 (10/22/23- Low level VOC).
- Trichloroethene was not reported in the 10/22/23 low level VOC analysis of samples OT001-DSAMW01-101423 and OT001-DSAMW99-101423 and no qualifications were warranted.
- The remaining CCV criteria were met. No further qualifications were warranted.

6. Internal Standards	Y	N	NA
Are internal standard data present in the data submittal?	**X**		
Were method-appropriate internal standards (ISs) used for the reported analyses?	**X**		
Are internal standards added to each calibration standard? (**Method 8260B**, Section 5.12.4 and 7.5.10.2)	**X**		
Do internal standard retention times **not** vary by more than 30 seconds from that in the mid-point standard level of the initial calibration? (**Method 8260B**, Section 7.4.6)	**X**		
Does the EICP area of any internal standard **not** vary by more than a factor of two (-50 to +100%) from that in the mid-point standard level of the initial calibration? (**Method 8260B**, Section 7.4.7)	**X**		
Do area counts appear to be at least minimally adequate?	**X**		
Note: Internal standard assessment is **not** required for a Level 2a data validation. Action: Indicate affected samples in validation comments, primarily if data were rejected * Qualify only if the deviation indicates an adverse effect on data quality. ** Qualify as appropriate			

Reviewer Comments: All internal standard criteria were met. No qualifications were warranted.

7. Method Quantitation Limits	Y	N	NA
Does the method quantitation limit (established by the lowest concentration calibration standard) meet project requirements? (**Method 8000**, Sections 7.4.1.2 and 7.4.1.4)	**X**		
Are only those results that fall between the lowest and highest calibration standards reported (i.e., no "J" values or values between the MDL and low standard or above the high standard)? (**QSAS**, Sections 5.5.2.2.1.f) and 5.5.2.2.1.g)) (**Method 8000**, Section 7.4) (**All data below LOQ qualified with a J**)		**X**	
Action: Indicate non-correctable contract compliance deviations below. If MQL>RDL, reanalysis may be warranted.			

Reviewer Comments: Several sample results have been qualified with a 'J' validation flag to denote the reported results are estimated due to sample results reported at levels between the detection limit (DL) and the limit of quantitation (LOQ).

The following sample results were reported above the LOQ:
- Naphthalene and 1,2,3-trimethylbenzene in sample OT001-GLOMW04-101423.
- Trichlorofluoromethane in sample OT001-DSAMW06-101423.
- Trichloroethene in samples OT001-DSAMW01-101423 and OT001-DSAMW99-101423.

The remaining sample results were non-detect.

a. Overall Comments

Overall, the data meet the requirements and intent of the methods, indicate the preparatory process and analytical system were in control at the time of sample analysis, and the reported laboratory results are of sufficient quality for their intended purpose.

Level 2b Data Review

Project ID: Port Heiden RRS 21-034 **Lab Name:** Pace Analytical National

SOW No. South Optimized Remediation Contract **SDG No.** L1667742

Sample Qualifications Summary Table			
Sample ID	Analyte	Validation Flag	Qualification Reason(s)
OT001-GLOMW04-101423 (VOC- 10/19/23)	Acetone	QN	Exceeded CCV criteria
OT001-GLOMW04-101423 (Low level VOC- 10/22/23 & 10/26/23)	Acetone	QN, J	Exceeded CCV criteria Result ≥DL but <LOQ
	trans-1,4-Dichloro-2-butene		
	Carbon tetrachloride	QN	Exceeded CCV criteria
	Trichloroethene		
	Trichlorofluoromethane		
	Isopropylbenzene	J	Result ≥DL but <LOQ
	n-Propylbenzene		
	1,3,5-Trimethylbenzene		
	trans-1,4-Dichloro-2-butene		
	Toluene		
OT001-RRSMW05-101423 (VOC- 10/19/23)	Acetone	QN	Exceeded CCV criteria
OT001-RRSMW05-101423 (Low level VOC- 10/22/23 & 10/26/23)	Acetone	QN, J	Exceeded CCV criteria Result ≥DL but <LOQ
	Carbon tetrachloride	QN	Exceeded CCV criteria
	trans-1,4-Dichloro-2-butene		
	Trichloroethene		
	Trichlorofluoromethane		
	Toluene	J	Result ≥DL but <LOQ
OT001-DSAMW06-101423 (VOC- 10/19/23)	Acetone	QN	Exceeded CCV criteria
	Toluene	J	Result ≥DL but <LOQ
	Xylenes, Total		
OT001-DSAMW06-101423 (Low level VOC- 10/22/23 & 10/26/23)	Acetone	QN, J	Exceeded CCV criteria Result ≥DL but <LOQ
	Trichloroethene		
	Trichlorofluoromethane	QN	Exceeded CCV criteria
	Carbon tetrachloride	QN	Exceeded CCV criteria
	trans-1,4-Dichloro-2-butene		
	1,2,4-Trimethylbenzene	B, J	Method blank considerations Result ≥DL but <LOQ
	Carbon disulfide	J	Result ≥DL but <LOQ
	Tetrachloroethene		
	1,2,3-Trimethylbenzene		
	1,3,5-Trimethylbenzene		
	Ethylbenzene		
	Toluene		
	Xylenes, Total		
OT001-DSAMW07-101423 (Low level VOC- 10/22/23 & 10/26/23)	Acetone	QN, J	Exceeded CCV criteria Result ≥DL but <LOQ
	Trichloroethene		
	Carbon tetrachloride	QN	Exceeded CCV criteria
	Trichlorofluoromethane		
	trans-1,4-Dichloro-2-butene		
	1,2,3-Trimethylbenzene	J	Result ≥DL but <LOQ
	1,3,5-Trimethylbenzene		

	Toluene		
OT001-DSAMW01-101423 (Low level VOC- 10/22/23 & 10/26/23)	Acetone	QN, J	Exceeded CCV criteria Result ≥DL but <LOQ
	Carbon tetrachloride	QN	Exceeded CCV criteria
	Trichlorofluoromethane		
	trans-1,4-Dichloro-2-butene		
	1,3,5-Trimethylbenzene	J	Result ≥DL but <LOQ
	Xylenes, Total		
	Toluene		
OT001-DSAMW99-101423 (Low level VOC- 10/22/23 & 10/26/23)	Acetone	QN, J	Exceeded CCV criteria Result ≥DL but <LOQ
	Carbon tetrachloride	QN	Exceeded CCV criteria
	Trichlorofluoromethane		
	trans-1,4-Dichloro-2-butene		
	Toluene	J	Result ≥DL but <LOQ

The following sample results were reported above the LOQ, have been assessed, and remain unqualified:

- Naphthalene and 1,2,3-trimethylbenzene in sample OT001-GLOMW04-101423.
- Trichloroethene in samples OT001-DSAMW01-101423 and OT001-DSAMW99-101423.

The remaining sample results were not detected and were reported at their respective detection limits (LOD) and were flagged "U" by the laboratory.

Metals Data Review

1. Samples Submitted and Analyses Requested

Sample ID	Lab ID	Type	Matrix	DL	Sample Date	Method(s)	Analysis Date(s)
OT001-GLOMW04-101423	L1667742-01	Field	GW	1	10/14/23	6010D	10/24/23
OT001-RRSMW05-101423	L1667742-02	Field	GW	1	10/14/23	6010D	10/24/23
OT001-DSAMW06-101423	L1667742-03	Field	GW	1	10/14/23	6010D	10/24/23
OT001-DSAMW07-101423	L1667742-04	Field	GW	1	10/14/23	6010D	10/24/23
OT001-DSAMW01-101423	L1667742-05	Field	GW	1	10/14/23	6010D	10/24/23
OT001-DSAMW99-101423	L1667742-06	Dup	GW	1	10/14/23	6010D	10/24/23

2. Reviewer Preliminary Comments

Review Type: Review Type: [] Level IV (Level 3/4) [X] Level III (Level 2b)

Six (6) ground water samples were submitted to Pace Analytical for metals analysis by USEPA Method 6010D. The samples were received intact by the lab on 10/18/2023 at 2.5°C. The data has been validated to a Level 2b.

Level 2b Data Review

Project ID:	**Port Heiden RRS 21-034**	**Lab Name:**	**Pace Analytical National**
SOW No.	**South Optimized Remediation Contract**	**SDG No.**	**L1667742**

3. ICP Calibration	Y	N	NA
Are calibration data for ICP present in the data submittal?	**X**		
If **not** present, has all ICP calibration criteria (i.e. ICV, CCV, LLC, etc.) been met per the case narrative?			**X**
If present, is the ICV recovery within ±10% of reference value? (**Method 6010C**, Section 10.3.2.1)		**X**	
If present, is the lower limit of quantitation check sample recovery (LLC or CRDL standard) within ±30% of reference value? (Method 6010C, Sections 10.1.3.1, 10.3.2.1, and 10.3.4)	**X**		
If present, is a mid-level Continuing Calibration Verification (CCV) standard recovery within ±10% of reference value? (**Method 6010C**, Sections 10.3.4)	**X**		

Reviewer Comments: The initial calibration verification (ICV) for iron (122%) was outside of the 90-110% acceptance criteria. However, no data qualifications were warranted as the sample results were not bracketed by the ICV. The initial calibration consisted of at least three standards plus a blank. The associated correlation coefficients were acceptable. The run sequence was acceptable. The remaining ICV recoveries, and all continuing calibration verification (CCV) recovery results were acceptable. No further data qualifications were appended to the associated sample results due to calibration considerations.

4. Interference Check Sample	Y	N	NA
Are interference check standard data present in the data submittal?	**X**		
If not present, was the interference check standard criteria met per the case narrative?			**X**
Were the ICSAB recoveries within acceptance criteria of 80-120%? (**Method 6010C**, Section 4.2.10.2)	**X**		
Action: Use technical judgment to assess any potential interferences. Indicate affected samples in validation comments. For additional aid in assessing potential effects, consult general tables of interelement contributions at critical wavelengths; e.g. as in reference SW-846 6010B (and for atypical metals, other references). ICP-MS interferences in m/e regions may often be evaluated by comparing more differing quantitative ions for the same element. * Qualify only if the deviation indicates an adverse effect on data quality. ** Discuss impact of high concentrations on results.			

Reviewer Comments: Interference check standard recovery results were within the 80-120% acceptance criteria. No data qualifications were warranted.

5. Serial Dilution Analysis	Y	N	NA
Are serial dilution data present in the data submittal?	**X**		
Have field or equipment blanks not been used for the serial dilution analysis?		**X**	
Is one serial dilution analysis performed for each matrix in every batch with a minimum of one serial dilution per twenty samples?	**X**		
Is a dilution test run on a sample that fails both pre- and post-digestion spike analysis? (**Method 6010C**, Section 9.9.1; **Method 6020A**, Section 9.11.2; and **Method 7000B**, Section 9.8.1)	**X**		
For samples with concentrations that are minimally a factor of 50x above the method detection limit (MDL) (or detection limit) before a 1:4 dilution, was the serial dilution %D criterion of 10% met (**Method 6010C**, Section 9.9.2 and **Method 6020A**, Section 9.11.2)	**X**		

Level 2b Data Review

Project ID:	**Port Heiden RRS 21-034**	**Lab Name:**	**Pace Analytical National**
SOW No.	**South Optimized Remediation Contract**	**SDG No.**	**L1667742**

5. Serial Dilution Analysis	Y	N	NA
(**Hg**) For samples with concentrations that are minimally a factor of 10x above the method detection limit (MDL) (or detection limit DL) limit after a 1:5 dilution, was the serial dilution %D criterion of 10% met (**Method 7000B**, Section 9.8.2)			**X**
Action: Indicate affected samples in validation comments. * Qualify only if the deviation indicates an adverse effect on data quality.			

Reviewer Comments: All serial dilution (SDS) recovery results were within the 10%D acceptance criteria. No data qualifications were warranted.

6. Method Quantitation Limits	Y	N	NA
Does the method quantitation limit (established by the lowest concentration calibration standard) meet project requirements? (**Method 8000**, Sections 7.4.1.2 and 7.4.1.4)	**X**		
Are only those results that fall between the lowest and highest calibration standards reported (i.e., no "J" values or values between the MDL and low standard or above the high standard)? (**Method 8000**, Section 7.4)	**X**		
Action: Indicate non-correctable contract compliance deviations below If MQL>RDL, reanalysis may be warranted.			

Reviewer Comments: The following results were "J" flagged by the laboratory due to sample results greater than the detection limit (DL) but below the limit of quantitation (LOQ). A "J" validation flag has been applied to these results:

- Manganese in samples OT001-GLOMW04-101423, OT001-DSAMW07-101423, OT001-DSAMW01-101423, and OT001-DSAMW99-101423.
- Iron in samples OT001-DSAMW01-101423 and OT001-DSAMW99-101423.

7. Overall Comments:

Overall, the data meet the requirements and intent of the methods, indicate the preparatory process and analytical system were in control at the time of sample analysis, and the reported laboratory results are of sufficient quality for their intended purpose.

Sample Qualifications Summary Table			
Sample ID	Analyte	Validation Flag	Qualification Reason(s)
OT001-DSAMW01-101423 & OT001-DSAMW99-101423	Iron (Fe)	J	Results between the MDL and LOQ
OT001-GLOMW04-101423, OT001-DSAMW07-101423, OT001-DSAMW01-101423 & OT001-DSAMW99-101423	Manganese (Mn)	J	Results between the MDL and LOQ

The remaining sample results were reported above the limit of quantitation, have been assessed and remain unqualified.

Level 2b Data Review

Project ID:	**Port Heiden RRS 21-034**	**Lab Name:**	**Pace Analytical National**
SOW No.	**South Optimized Remediation Contract**	**SDG No.**	**L1667742**

Wet Chem Data Review

1. Samples Submitted and Analyses Requested

Sample ID	Lab ID	Type	Matrix	Sample Date	Analysis Method	Analysis Date
OT001-GLOMW04-101423	L16677442-01	Field	GW	10/14/23	SM 2320B	10/23/23
					EPA 351.2	10/22/23
					EPA 353.2	10/20/23
					SW-846 9056A	10/25/23
OT001-RRSMW05-101423	L16677442-02	Field	GW	10/14/23	SM 2320B	10/23/23
					EPA 351.2	10/22/23
					EPA 353.2	10/20/23
					SW-846 9056A	10/25/23
OT001-DSAMW06-101423	L16677442-03	Field	GW	10/14/23	SM 2320B	10/23/23
					EPA 351.2	10/22/23
					EPA 353.2	10/20/23
					SW-846 9056A	10/25/23
OT001-DSAMW07-101423	L16677442-04	Field	GW	10/14/23	SM 2320B	10/23/23
					EPA 351.2	10/22/23
					EPA 353.2	10/20/23
					SW-846 9056A	10/25/23
OT001-DSAMW01-101423	L16677442-05	Field	GW	10/14/23	SM 2320B	10/23/23
					EPA 351.2	10/22/23
					EPA 353.2	10/20/23
					SW-846 9056A	10/25/23
OT001-DSAMW99-101423	L16677442-06	Dup	GW	10/14/23	SM 2320B	10/23/23
					EPA 351.2	10/22/23
					EPA 353.2	10/20/23
					SW-846 9056A	10/25/23

2. Reviewer Preliminary Comments

Review Type: [] Level IV (Level 3 or 4) [X] Level III (Level 2b) [] Level II (Level 2a)
Confirm that narrative is present and complete; note overall initial indications.

Six (6) ground water samples were submitted to Pace Analytical National and were received intact by the lab on 10/18/2023 at 2.5°C. They were analyzed for the following:

- Alkalinity by SM 2320B
- TKN by EPA 351.2
- Nitrate/Nitrite by EPA 353.2
- Sulfate by SW-846 9056A

3. Calibration	**Y**	**N**	**NA**
Are calibration data present in the data submittal?	**X**		
Anions			
Was initial calibration (IC) performed prior to the sample analyses?	**X**		
Were at least 4 standard concentrations used for each analyte of interest in the IC?	**X**		

Level 2b Data Review

Project ID:	**Port Heiden RRS 21-034**	**Lab Name:**	**Pace Analytical National**
SOW No.	**South Optimized Remediation Contract**	**SDG No.**	**L1667742**

3. Calibration	Y	N	NA
Were appropriate IC standard concentrations used?	X		
Is the IC correlation coefficient (linear regression) for each analyte ≥0.995?	X		
Was an initial calibration verification (ICV) standard (second source) run immediately after IC?	X		
Are analyte recoveries in the ICV within ±10% of reference values?		X	
Was a calibration check standard (CCV) run after every 10th sample and at the end of the sequence?	X		
Are analyte recoveries in the CCVs within ±10% of the reference values?	X		
Was the system recalibrated and affected samples re-analyzed if the ICV or a CCV was outside acceptance criteria?	X		
Were retention times (RTs) of individual anions consistent throughout the reported analyses?	X		
TKN			
Are initial and continuing calibration results included in the data package?	X		
Were at least 4 standards used to calibrate the instrument?	X		
Were the IC standards run in order of decreasing concentration?	X		
Were appropriate IC standard concentrations used?	X		
Is the IC correlation coefficient (linear regression) ≥0.995?	X		
Was an ICV standard (second source) run immediately after IC?	X		
Was the target analyte recovery in the ICV within ±10% of reference value?	X		
Was a CCV run after every 10 samples, or at least once every two hours?	X		
Were CCV recoveries within ±10% of the reference value?	X		
Was the system recalibrated and affected samples re-analyzed if the ICV or a CCV was outside acceptance criteria?			X
Nitrate/Nitrite			
Are initial and continuing calibration results included in the data package?	X		
Were at least 4 standards used to calibrate the instrument?	X		
Were the initial calibration standards run in order of decreasing concentration?	X		
Were appropriate initial calibration standard concentrations used?	X		
Is the initial calibration correlation coefficient (linear regression) ≥0.995?	X		
Was an ICV standard (second source) run immediately after initial calibration?	X		
Was the target analyte recovery in the ICV within ±10% of reference value?	X		
Was a CCV run after every 10 samples, or at least once every two hours?	X		
Were CCV recoveries within ±10% of the reference value?	X		
Was the system recalibrated and affected samples re-analyzed if the ICV or a CCV was outside acceptance criteria?			X
Standardization for Total Alkalinity			
Are standardization data present in the package?	X		
Were the 0.02N and 0.1N H2SO4 solutions standardized against a primary sodium bicarbonate standard?	X		
For potentiometric titrations, was the pH meter calibrated prior to titration?	X		
Is the initial pH documented for each sample or QC sample analyzed?	X		
Is the titrant volume used to reach pH 8.3 recorded for each sample or QC sample analyzed?	X		
Is the titrant volume used to reach pH 4.5 recorded for each sample or QC sample analyzed?	X		
Is the titrant volume used to reach pH 4.2 recorded for each sample or QC sample analyzed?	X		
Action: Sample results associated with unacceptable calibration results, especially when the responses suggest high variability or sensitivity problems should be J/UJ qualified. Use professional judgment to determine if sample results warrant rejection or if qualifiers are not necessary – explain.			

Reviewer Comments: The initial calibration verification (ICV) recovery result for sulfate (133%) was outside of the 90-110% acceptance criteria; however, no data qualifications were warranted as the sample results were not bracketed by the ICV. The associated correlation coefficients were acceptable. The run sequence was acceptable.

The remaining ICV/CCV recovery results were acceptable. No data qualifications were appended to the associated sample results due to calibration considerations. associated sample results due to calibration considerations.

4. Method Quantitation Limits	Y	N	NA
Does the method quantitation limit (established by the lowest concentration calibration standard) meet project requirements? (**Method 8000**, Sections 7.4.1.2 and 7.4.1.4)	**X**		
Are only those results that fall between the lowest and highest calibration standards reported (i.e., no "J" values or values between the MDL and low standard or above the high standard)? (**QSAS**, Sections 5.5.2.2.1.f and 5.5.2.2.1.g, and **Method 8000**, Section 7.4)		**X**	
Action: Indicate non-correctable contract compliance deviations below If MQL>RDL, reanalysis may be warranted.			

Reviewer Comments: The following results were "J" flagged by the laboratory due to sample results greater than the detection limit (DL) but below the limit of quantitation (LOQ). A "J" validation flag has been applied to these results:

- TKN in sample OT001-DSAMW07-101423.
- Nitrate/Nitrite in sample OT001-RRSMW05-101423.
- Sulfate in samples OT001-GLOMW04-101423, OT001-RRSMW05-101423, OT001-DSAMW06-101423, and OT001-DSAMW07-101423.

5. Inorganics Analytical Data Flags:

The following table provides data qualifiers used in **validation**.

Qualifier	Definition
J	The analyte result is considered an estimated value because the level is below the laboratory LOQ but above the DL.
B	Analyte result is considered a high estimated value due to contamination present in the blank.
H	Analyte result is considered a low estimate due to holding time exceedance.
QH, QL, QN	QH, QL, QN Analyte result is considered an estimated value biased (high, low, uncertain) due to matrix effects or a quality control failure.
R	Analyte result is rejected – result is not usable. Note that "R" replaces the chemical result (no result shall be reported with a "R" flag).

6. Overall Comments:

Overall, the data meet the requirements and intent of the methods, indicate the preparatory process and analytical system were in control at the time of sample analysis, and the reported laboratory results are of sufficient quality for their intended purpose.

Sample Qualifications Summary Table

Sample ID	Analyte	Validation Flag	Qualification Reason(s)
OT001-DSAMW07-101423	TKN	J	Results between the MDL and LOQ
OT001-RRSMW05-101423	Nitrate/Nitrite	J	Results between the MDL and LOQ
OT001-GLOMW04-101423, OT001-RRSMW05-101423, OT001-DSAMW06-101423 & OT001-DSAMW07-101423	Sulfate	J	Results between the MDL and LOQ

Numerous results were reported above the limit of quantitation, have been assessed and remain unqualified.

Data Validator	Data Validation Reviewer
Name: Sherrie Robinson	Name: Amber Brinly
Title: Staff Scientist	Title: Staff Scientist
Company: North Wind Site Services	Company: North Wind Portage
Signature: Sherrie Robinson	Signature: Amber Brinly
Date: 08/14/24	Date: 08/15/24

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-GLOMW04-101423

Lab Sample ID:	L1667742-01	**SDG:**	L1667742
Client Sample ID:	OT001-GLOMW04-101423	**Collected Date/Time:**	10/14/23 11:05
Lab File ID:	1027_072	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	SVGC34	**Preparation Date/Time:**	10/27/23 05:58
Analytical Batch:	WG2159044	**Analysis Date/Time:**	10/28/23 03:22
Dilution Factor:	1.05	**Prep Method:**	3510C
Analytical Method:	AK102	**Sample Vol Used:**	
Matrix:	GW	**Initial Wt/Vol:**	95 mL
Total Solids (%):		**Final Wt/Vol:**	30 mL

Analyte	CAS	RT	Result		Qualifier	DL	LOD	LOQ
			ug/l			ug/l	ug/l	ug/l
AK102 DRO C10-C25	C10-C25	5.97	406	JB	B J	179	420	840

G 11/6/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-RRSMW05-101423

Lab Sample ID:	L1667742-02	**SDG:**	L1667742
Client Sample ID:	OT001-RRSMW05-101423	**Collected Date/Time:**	10/14/23 12:20
Lab File ID:	1027_077	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	SVGC34	**Preparation Date/Time:**	10/27/23 05:58
Analytical Batch:	WG2159044	**Analysis Date/Time:**	10/28/23 05:03
Dilution Factor:	1.05	**Prep Method:**	3510C
Analytical Method:	AK102	**Sample Vol Used:**	
Matrix:	GW	**Initial Wt/Vol:**	95 mL
Total Solids (%):		**Final Wt/Vol:**	30 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
AK102 DRO C10-C25	C10-C25	5.97	509 J B	B J	179	420	840

12/15/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW06-101423

Lab Sample ID:	L1667742-03	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW06-101423	**Collected Date/Time:**	10/14/23 14:45
Lab File ID:	1027_078	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	SVGC34	**Preparation Date/Time:**	10/27/23 05:58
Analytical Batch:	WG2159044	**Analysis Date/Time:**	10/28/23 05:23
Dilution Factor:	1.05	**Prep Method:**	3510C
Analytical Method:	AK102	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	95 mL
Total Solids (%):	_____	**Final Wt/Vol:**	30 mL

Analyte	CAS	RT	Result		Qualifier	DL	LOD	LOQ
			ug/l			*ug/l*	*ug/l*	*ug/l*
AK102 DRO C10-C25	C10-C25	5.97	355	JB	B J	179	420	840

12/15/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW07-101423

Lab Sample ID:	L1667742-04	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW07-101423	**Collected Date/Time:**	10/14/23 15:25
Lab File ID:	1027_079	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	SVGC34	**Preparation Date/Time:**	10/27/23 05:58
Analytical Batch:	WG2159044	**Analysis Date/Time:**	10/28/23 05:43
Dilution Factor:	1.05	**Prep Method:**	3510C
Analytical Method:	AK102	**Sample Vol Used:**	
Matrix:	GW	**Initial Wt/Vol:**	95 mL
Total Solids (%):		**Final Wt/Vol:**	30 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		ug/l	ug/l	ug/l
AK102 DRO C10-C25	C10-C25	5.97	509 J B	B J	179	420	840

12/15/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW01-101423

Lab Sample ID:	L1667742-05	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW01-101423	**Collected Date/Time:**	10/14/23 16:25
Lab File ID:	1027_080	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	SVGC34	**Preparation Date/Time:**	10/27/23 05:58
Analytical Batch:	WG2159044	**Analysis Date/Time:**	10/28/23 06:03
Dilution Factor:	1.05	**Prep Method:**	3510C
Analytical Method:	AK102	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	95 mL
Total Solids (%):	_____	**Final Wt/Vol:**	30 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
AK102 DRO C10-C25	C10-C25	5.97	436 J B	B J	179	420	840

12/5/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW99-101423

Lab Sample ID:	L1667742-06	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW99-101423	**Collected Date/Time:**	10/14/23 16:30
Lab File ID:	1028_021	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	SVGC34	**Preparation Date/Time:**	10/27/23 22:34
Analytical Batch:	WG2159047	**Analysis Date/Time:**	10/28/23 22:28
Dilution Factor:	1.05	**Prep Method:**	3510C
Analytical Method:	AK102	**Sample Vol Used:**	
Matrix:	GW	**Initial Wt/Vol:**	95 mL
Total Solids (%):		**Final Wt/Vol:**	30 mL

Analyte	CAS	RT	Result		Qualifier	DL	LOD	LOQ
			ug/l			*ug/l*	*ug/l*	*ug/l*
AK102 DRO C10-C25	C10-C25	5.97	459	J B	B J	179	420	840

12/15/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-GLOMW04-101423

Lab Sample ID:	L1667742-01	**SDG:**	L1667742
Client Sample ID:	OT001-GLOMW04-101423	**Collected Date/Time:**	10/14/23 11:05
Lab File ID:	1019_17	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS35	**Preparation Date/Time:**	10/19/23 17:17
Analytical Batch:	WG2154426	**Analysis Date/Time:**	10/19/23 17:17
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result		Qualifier	DL	LOD	LOQ
			ug/l			ug/l	ug/l	ug/l
Acetone	67-64-1	3.15	25.0	QN	U	11.3	25.0	50.0
Acrolein	107-02-8	0	25.0		U	2.54	25.0	50.0
Acrylonitrile	107-13-1	0	5.00		U	0.671	5.00	10.0
Benzene	71-43-2	0	0.500		U	0.0941	0.500	1.00
Bromobenzene	108-86-1	0	0.500		U	0.118	0.500	1.00
Bromodichloromethane	75-27-4	0	0.500		U	0.136	0.500	1.00
Bromoform	75-25-2	0	0.500		U	0.129	0.500	1.00
Bromomethane	74-83-9	0	2.00		U	0.605	2.00	5.00
n-Butylbenzene	104-51-8	0	0.500		U	0.157	0.500	1.00
sec-Butylbenzene	135-98-8	0	0.500		U	0.125	0.500	1.00
tert-Butylbenzene	98-06-6	0	0.500		U	0.127	0.500	1.00
Carbon tetrachloride	56-23-5	0	0.500		U	0.128	0.500	1.00
Chlorobenzene	108-90-7	0	0.500		U	0.116	0.500	1.00
Chlorodibromomethane	124-48-1	0	0.500		U	0.140	0.500	1.00
Chloroethane	75-00-3	0	2.00		U	0.192	2.00	5.00
2-Chloroethyl vinyl ether	110-75-8	0	25.0		U	0.575	25.0	50.0
Chloroform	67-66-3	0	2.00		U	0.111	2.00	5.00
Chloromethane	74-87-3	0	2.00		U	0.960	2.00	4.00
2-Chlorotoluene	95-49-8	0	0.500		U	0.106	0.500	1.00
4-Chlorotoluene	106-43-4	0	0.500		U	0.114	0.500	1.00
1,2-Dibromoethane	106-93-4	0	0.500		U	0.126	0.500	1.00
1,2-Dibromo-3-Chloropropane	96-12-8	0	2.00		U	0.276	2.00	5.00
Dibromomethane	74-95-3	0	0.500		U	0.122	0.500	1.00
1,2-Dichlorobenzene	95-50-1	0	0.500		U	0.107	0.500	1.00
1,3-Dichlorobenzene	541-73-1	0	0.500		U	0.110	0.500	1.00
1,4-Dichlorobenzene	106-46-7	0	0.500		U	0.120	0.500	1.00
Dichlorodifluoromethane	75-71-8	0	2.00		U	0.374	2.00	5.00
1,1-Dichloroethane	75-34-3	0	0.500		U	0.100	0.500	1.00
1,2-Dichloroethane	107-06-2	0	0.500		U	0.0819	0.500	1.00
1,1-Dichloroethene	75-35-4	0	0.500		U	0.188	0.500	1.00
cis-1,2-Dichloroethene	156-59-2	0	0.500		U	0.126	0.500	1.00
trans-1,2-Dichloroethene	156-60-5	0	0.500		U	0.149	0.500	1.00
1,2-Dichloropropane	78-87-5	0	0.500		U	0.149	0.500	1.00
1,3-Dichloropropane	142-28-9	0	0.500		U	0.110	0.500	1.00
2,2-Dichloropropane	594-20-7	0	0.500		U	0.161	0.500	1.00
1,1-Dichloropropene	563-58-6	0	0.500		U	0.142	0.500	1.00
cis-1,3-Dichloropropene	10061-01-5	0	0.500		U	0.111	0.500	1.00
trans-1,3-Dichloropropene	10061-02-6	0	0.500		U	0.118	0.500	1.00
Di-isopropyl ether	108-20-3	0	0.500		U	0.105	0.500	1.00
Ethylbenzene	100-41-4	0	0.500		U	0.137	0.500	1.00
Hexachloro-1,3-butadiene	87-68-3	0	0.750		U	0.337	0.750	1.50
Isopropylbenzene	98-82-8	0	0.500		U	0.105	0.500	1.00
p-Isopropyltoluene	99-87-6	0	0.500		U	0.120	0.500	1.00

12/15/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-GLOMW04-101423

Lab Sample ID:	L1667742-01	**SDG:**	L1667742
Client Sample ID:	OT001-GLOMW04-101423	**Collected Date/Time:**	10/14/23 11:05
Lab File ID:	1019_17	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS35	**Preparation Date/Time:**	10/19/23 17:17
Analytical Batch:	WG2154426	**Analysis Date/Time:**	10/19/23 17:17
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
2-Butanone (MEK)	78-93-3	0	5.00	U	1.19	5.00	10.0
Methylene Chloride	75-09-2	0	2.00	U	0.430	2.00	5.00
4-Methyl-2-pentanone (MIBK)	108-10-1	0	5.00	U	0.478	5.00	10.0
Methyl tert-butyl ether	1634-04-4	0	0.500	U	0.101	0.500	1.00
Naphthalene	91-20-3	0	2.00	U	1.00	2.00	5.00
n-Propylbenzene	103-65-1	0	0.500	U	0.0993	0.500	1.00
Styrene	100-42-5	0	0.500	U	0.118	0.500	1.00
1,1,1,2-Tetrachloroethane	630-20-6	0	0.500	U	0.147	0.500	1.00
1,1,2,2-Tetrachloroethane	79-34-5	0	0.500	U	0.133	0.500	1.00
Tetrachloroethene	127-18-4	0	0.600	U	0.300	0.600	1.20
Toluene	108-88-3	5.56	0.600	U	0.278	0.600	1.20
1,2,3-Trichlorobenzene	87-61-6	0	0.500	U	0.230	0.500	1.00
1,2,4-Trichlorobenzene	120-82-1	0	1.00	U	0.481	1.00	2.00
1,2,3-Trimethylbenzene	526-73-8	0	0.500	U	0.104	0.500	1.00
1,2,4-Trimethylbenzene	95-63-6	0	1.00	U	0.322	1.00	2.00
1,3,5-Trimethylbenzene	108-67-8	0	0.500	U	0.104	0.500	1.00
1,1,1-Trichloroethane	71-55-6	0	0.500	U	0.149	0.500	1.00
1,1,2-Trichloroethane	79-00-5	0	0.500	U	0.158	0.500	1.00
Trichloroethene	79-01-6	0	0.500	U	0.190	0.500	1.00
Trichlorofluoromethane	75-69-4	0	2.00	U	0.160	2.00	5.00
1,1,2-Trichlorotrifluoroethane	76-13-1	0	0.500	U	0.180	0.500	1.00
1,2,3-Trichloropropane	96-18-4	0	1.00	U	0.237	1.00	2.50
Vinyl chloride	75-01-4	0	0.500	U	0.234	0.500	1.00
Xylenes, Total	1330-20-7	0	1.50	U	0.174	1.50	3.00

12/15/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-GLOMW04-101423

Lab Sample ID:	L1667742-01	**SDG:**	L1667742
Client Sample ID:	OT001-GLOMW04-101423	**Collected Date/Time:**	10/14/23 11:05
Lab File ID:	1022_14	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 04:35
Analytical Batch:	WG2155682	**Analysis Date/Time:**	10/22/23 04:35
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result		Qualifier	DL	LOD	LOQ
			ug/l			ug/l	ug/l	ug/l
Acetone	67-64-1	3.04	1.67	QN J	J	0.548	2.00	4.00
Acrylonitrile	107-13-1	3.50	0.250		U	0.0760	0.250	0.500
Bromobenzene	108-86-1	0	0.250		U	0.0420	0.250	0.500
Bromodichloromethane	75-27-4	0	0.100		U	0.0315	0.100	0.200
Bromochloromethane	74-97-5	0	0.100		U	0.0452	0.100	0.200
Bromoform	75-25-2	0	0.500		U	0.239	0.500	1.00
Bromomethane	74-83-9	2.15	0.500		U	0.148	0.500	1.00
n-Butylbenzene	104-51-8	8.22	0.500		U	0.154	0.500	1.00
sec-Butylbenzene	135-98-8	7.74	0.250		U	0.101	0.250	0.500
tert-Butylbenzene	98-06-6	7.74	0.500		U	0.0620	0.500	1.00
Carbon tetrachloride	56-23-5	0	0.100	QN	U	0.0432	0.100	0.200
Carbon disulfide	75-15-0	2.72	0.500		U	0.162	0.500	1.00
Chlorobenzene	108-90-7	0	0.0500		U	0.0229	0.0500	0.100
Chlorodibromomethane	124-48-1	0	0.0500		U	0.0180	0.0500	0.100
Chloroethane	75-00-3	2.29	0.100		U	0.0432	0.100	0.200
Chloroform	67-66-3	3.87	0.0500		U	0.0166	0.0500	0.100
Chloromethane	74-87-3	1.95	0.250		U	0.0556	0.250	0.500
2-Chlorotoluene	95-49-8	0	0.100		U	0.0368	0.100	0.200
4-Chlorotoluene	106-43-4	7.49	0.100		U	0.0452	0.100	0.200
1,2-Dibromo-3-Chloropropane	96-12-8	0	0.500		U	0.204	0.500	1.00
1,2-Dibromoethane	106-93-4	0	0.0500		U	0.0210	0.0500	0.100
Dibromomethane	74-95-3	0	0.100		U	0.0400	0.100	0.200
1,2-Dichlorobenzene	95-50-1	0	0.200		U	0.0580	0.200	0.400
1,3-Dichlorobenzene	541-73-1	0	0.200		U	0.0680	0.200	0.400
1,4-Dichlorobenzene	106-46-7	0	0.250		U	0.0788	0.250	0.500
Dichlorodifluoromethane	75-71-8	0	0.100		U	0.0327	0.100	0.200
1,1-Dichloroethane	75-34-3	3.40	0.0500		U	0.0230	0.0500	0.100
1,1-Dichloroethene	75-35-4	2.70	0.0500		U	0.0200	0.0500	0.100
cis-1,2-Dichloroethene	156-59-2	3.80	0.0750		U	0.0276	0.0750	0.150
trans-1,2-Dichloroethene	156-60-5	0	0.300		U	0.0572	0.300	0.600
1,2-Dichloropropane	78-87-5	4.82	0.200		U	0.0508	0.200	0.400
1,1-Dichloropropene	563-58-6	4.09	0.100		U	0.0280	0.100	0.200
1,3-Dichloropropane	142-28-9	0	0.150		U	0.0700	0.150	0.300
cis-1,3-Dichloropropene	10061-01-5	5.23	0.100		U	0.0271	0.100	0.200
trans-1,3-Dichloropropene	10061-02-6	0	0.150		U	0.0612	0.150	0.300
2,2-Dichloropropane	594-20-7	3.83	0.100		U	0.0317	0.100	0.200
Di-isopropyl ether	108-20-3	3.39	0.0500		U	0.0140	0.0500	0.100
Hexachloro-1,3-butadiene	87-68-3	0	2.00		U	0.508	2.00	4.00
Isopropylbenzene	98-82-8	7.01	0.0480	J	J	0.0345	1.00	2.00
p-Isopropyltoluene	99-87-6	7.89	0.300		U	0.0932	0.300	0.600
2-Butanone (MEK)	78-93-3	4.11	1.00		U	0.500	1.00	2.00
Methylene Chloride	75-09-2	2.92	0.750		U	0.266	0.750	1.50
4-Methyl-2-pentanone (MIBK)	108-10-1	5.67	1.00		U	0.400	1.00	2.00

SV 12/15/23

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-GLOMW04-101423

Lab Sample ID:	L1667742-01	**SDG:**	L1667742
Client Sample ID:	OT001-GLOMW04-101423	**Collected Date/Time:**	10/14/23 11:05
Lab File ID:	1022_14	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 04:35
Analytical Batch:	WG2155682	**Analysis Date/Time:**	10/22/23 04:35
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result		Qualifier	DL	LOD	LOQ
			ug/l			*ug/l*	*ug/l*	*ug/l*
Methyl tert-butyl ether	1634-04-4	3.13	0.0300		U	0.0118	0.0300	0.0600
Naphthalene	91-20-3	9.88	0.946			0.125	0.250	0.500
n-Propylbenzene	103-65-1	7.32	0.0540	J	J	0.0472	0.100	0.200
Styrene	100-42-5	6.78	0.250		U	0.109	0.250	0.500
1,1,1,2-Tetrachloroethane	630-20-6	0	0.0500		U	0.0200	0.0500	0.100
1,1,2,2-Tetrachloroethane	79-34-5	7.33	0.0500		U	0.0156	0.0500	0.100
1,1,2-Trichlorotrifluoroethane	76-13-1	0	0.100		U	0.0270	0.100	0.200
Tetrachloroethene	127-18-4	0	0.0750		U	0.0280	0.0750	0.150
1,2,3-Trichlorobenzene	87-61-6	0	0.250		U	0.0250	0.250	0.500
1,2,4-Trichlorobenzene	120-82-1	0	0.500		U	0.193	0.500	1.00
1,1,1-Trichloroethane	71-55-6	0	0.0500		U	0.0110	0.0500	0.100
1,1,2-Trichloroethane	79-00-5	5.82	0.100		U	0.0353	0.100	0.200
Trichloroethene	79-01-6	0	0.0400	QN	U	0.0160	0.0400	0.0800
Trichlorofluoromethane	75-69-4	0	0.0500	QN	U	0.0200	0.0500	0.100
1,2,3-Trichloropropane	96-18-4	0	0.500		U	0.204	0.500	1.00
1,2,3-Trimethylbenzene	526-73-8	8.08	0.284			0.0460	0.100	0.200
1,3,5-Trimethylbenzene	108-67-8	7.44	0.195	J	J	0.0432	0.100	0.200
Vinyl chloride	75-01-4	0	0.0750		U	0.0273	0.0750	0.150
Ethyl Ether	60-29-7	0	0.0500		U	0.0170	0.0500	0.100
Tetrahydrofuran	109-99-9	4.01	0.250		U	0.0900	0.250	50.0
Iodomethane	74-88-4	0	0.500		U	0.242	0.500	1.00
Allyl chloride	107-05-1	3	2.00		U	0.580	2.00	4.00
trans-1,4-Dichloro-2-butene	110-57-6	7.50	0.211	QN J	C4 J	0.0560	0.200	0.400

12/15/23

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-GLOMW04-101423

Lab Sample ID:	L1667742-01	**SDG:**	L1667742
Client Sample ID:	OT001-GLOMW04-101423	**Collected Date/Time:**	10/14/23 11:05
Lab File ID:	1026_39	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS57	**Preparation Date/Time:**	10/26/23 21:04
Analytical Batch:	WG2157275	**Analysis Date/Time:**	10/26/23 21:04
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
Benzene	71-43-2	0	0.0500	U	0.0160	0.0500	0.100
Cyclohexane	110-82-7	0	0.0500	U	0.0203	0.0500	0.100
1,2-Dichloroethane	107-06-2	4.28	0.0500	U	0.0190	0.0500	0.100
Ethylbenzene	100-41-4	6.32	0.0500	U	0.0212	0.0500	0.100
Toluene	108-88-3	5.33	0.0890	J	0.0500	0.100	0.200
1,2,4-Trimethylbenzene	95-63-6	7.66	0.100	U	0.0464	0.100	0.200
Vinyl acetate	108-05-4	0	0.300	U	0.141	0.300	0.600
Xylenes, Total	1330-20-7	6.72	0.400	U	0.191	0.400	0.800

12/5/23

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-RRSMW05-101423

Lab Sample ID:	L1667742-02	**SDG:**	L1667742
Client Sample ID:	OT001-RRSMW05-101423	**Collected Date/Time:**	10/14/23 12:20
Lab File ID:	1019_18	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS35	**Preparation Date/Time:**	10/19/23 17:39
Analytical Batch:	WG2154426	**Analysis Date/Time:**	10/19/23 17:39
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result		Qualifier	DL	LOD	LOQ
			ug/l			*ug/l*	*ug/l*	*ug/l*
Acetone	67-64-1	3.15	25.0	QN	U	11.3	25.0	50.0
Acrolein	107-02-8	0	25.0		U	2.54	25.0	50.0
Acrylonitrile	107-13-1	0	5.00		U	0.671	5.00	10.0
Benzene	71-43-2	0	0.500		U	0.0941	0.500	1.00
Bromobenzene	108-86-1	0	0.500		U	0.118	0.500	1.00
Bromodichloromethane	75-27-4	0	0.500		U	0.136	0.500	1.00
Bromoform	75-25-2	0	0.500		U	0.129	0.500	1.00
Bromomethane	74-83-9	0	2.00		U	0.605	2.00	5.00
n-Butylbenzene	104-51-8	0	0.500		U	0.157	0.500	1.00
sec-Butylbenzene	135-98-8	0	0.500		U	0.125	0.500	1.00
tert-Butylbenzene	98-06-6	0	0.500		U	0.127	0.500	1.00
Carbon tetrachloride	56-23-5	0	0.500		U	0.128	0.500	1.00
Chlorobenzene	108-90-7	0	0.500		U	0.116	0.500	1.00
Chlorodibromomethane	124-48-1	0	0.500		U	0.140	0.500	1.00
Chloroethane	75-00-3	0	2.00		U	0.192	2.00	5.00
2-Chloroethyl vinyl ether	110-75-8	0	25.0		U	0.575	25.0	50.0
Chloroform	67-66-3	0	2.00		U	0.111	2.00	5.00
Chloromethane	74-87-3	0	2.00		U	0.960	2.00	4.00
2-Chlorotoluene	95-49-8	0	0.500		U	0.106	0.500	1.00
4-Chlorotoluene	106-43-4	0	0.500		U	0.114	0.500	1.00
1,2-Dibromoethane	106-93-4	0	0.500		U	0.126	0.500	1.00
1,2-Dibromo-3-Chloropropane	96-12-8	0	2.00		U	0.276	2.00	5.00
Dibromomethane	74-95-3	0	0.500		U	0.122	0.500	1.00
1,2-Dichlorobenzene	95-50-1	0	0.500		U	0.107	0.500	1.00
1,3-Dichlorobenzene	541-73-1	0	0.500		U	0.110	0.500	1.00
1,4-Dichlorobenzene	106-46-7	0	0.500		U	0.120	0.500	1.00
Dichlorodifluoromethane	75-71-8	0	2.00		U	0.374	2.00	5.00
1,1-Dichloroethane	75-34-3	0	0.500		U	0.100	0.500	1.00
1,2-Dichloroethane	107-06-2	0	0.500		U	0.0819	0.500	1.00
1,1-Dichloroethene	75-35-4	0	0.500		U	0.188	0.500	1.00
cis-1,2-Dichloroethene	156-59-2	0	0.500		U	0.126	0.500	1.00
trans-1,2-Dichloroethene	156-60-5	0	0.500		U	0.149	0.500	1.00
1,2-Dichloropropane	78-87-5	0	0.500		U	0.149	0.500	1.00
1,3-Dichloropropane	142-28-9	0	0.500		U	0.110	0.500	1.00
2,2-Dichloropropane	594-20-7	0	0.500		U	0.161	0.500	1.00
1,1-Dichloropropene	563-58-6	0	0.500		U	0.142	0.500	1.00
cis-1,3-Dichloropropene	10061-01-5	0	0.500		U	0.111	0.500	1.00
trans-1,3-Dichloropropene	10061-02-6	0	0.500		U	0.118	0.500	1.00
Di-isopropyl ether	108-20-3	0	0.500		U	0.105	0.500	1.00
Ethylbenzene	100-41-4	0	0.500		U	0.137	0.500	1.00
Hexachloro-1,3-butadiene	87-68-3	0	0.750		U	0.337	0.750	1.50
Isopropylbenzene	98-82-8	0	0.500		U	0.105	0.500	1.00
p-Isopropyltoluene	99-87-6	0	0.500		U	0.120	0.500	1.00

Sr 12/15/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-RRSMW05-101423

Lab Sample ID:	L1667742-02	**SDG:**	L1667742
Client Sample ID:	OT001-RRSMW05-101423	**Collected Date/Time:**	10/14/23 12:20
Lab File ID:	1019_18	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS35	**Preparation Date/Time:**	10/19/23 17:39
Analytical Batch:	WG2154426	**Analysis Date/Time:**	10/19/23 17:39
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		ug/l	ug/l	ug/l
2-Butanone (MEK)	78-93-3	0	5.00	U	1.19	5.00	10.0
Methylene Chloride	75-09-2	0	2.00	U	0.430	2.00	5.00
4-Methyl-2-pentanone (MIBK)	108-10-1	0	5.00	U	0.478	5.00	10.0
Methyl tert-butyl ether	1634-04-4	0	0.500	U	0.101	0.500	1.00
Naphthalene	91-20-3	0	2.00	U	1.00	2.00	5.00
n-Propylbenzene	103-65-1	0	0.500	U	0.0993	0.500	1.00
Styrene	100-42-5	0	0.500	U	0.118	0.500	1.00
1,1,1,2-Tetrachloroethane	630-20-6	0	0.500	U	0.147	0.500	1.00
1,1,2,2-Tetrachloroethane	79-34-5	0	0.500	U	0.133	0.500	1.00
Tetrachloroethene	127-18-4	0	0.600	U	0.300	0.600	1.20
Toluene	108-88-3	5.56	0.600	U	0.278	0.600	1.20
1,2,3-Trichlorobenzene	87-61-6	0	0.500	U	0.230	0.500	1.00
1,2,4-Trichlorobenzene	120-82-1	0	1.00	U	0.481	1.00	2.00
1,2,3-Trimethylbenzene	526-73-8	0	0.500	U	0.104	0.500	1.00
1,2,4-Trimethylbenzene	95-63-6	0	1.00	U	0.322	1.00	2.00
1,3,5-Trimethylbenzene	108-67-8	0	0.500	U	0.104	0.500	1.00
1,1,1-Trichloroethane	71-55-6	0	0.500	U	0.149	0.500	1.00
1,1,2-Trichloroethane	79-00-5	0	0.500	U	0.158	0.500	1.00
Trichloroethene	79-01-6	0	0.500	U	0.190	0.500	1.00
Trichlorofluoromethane	75-69-4	0	2.00	U	0.160	2.00	5.00
1,1,2-Trichlorotrifluoroethane	76-13-1	0	0.500	U	0.180	0.500	1.00
1,2,3-Trichloropropane	96-18-4	0	1.00	U	0.237	1.00	2.50
Vinyl chloride	75-01-4	0	0.500	U	0.234	0.500	1.00
Xylenes, Total	1330-20-7	0	1.50	U	0.174	1.50	3.00

12/15/23

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-RRSMW05-101423

Lab Sample ID:	L1667742-02	**SDG:**	L1667742
Client Sample ID:	OT001-RRSMW05-101423	**Collected Date/Time:**	10/14/23 12:20
Lab File ID:	1022_15	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 04:54
Analytical Batch:	WG2155682	**Analysis Date/Time:**	10/22/23 04:54
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		ug/l	ug/l	ug/l
Acetone	67-64-1	3.04	1.42 QN J	J	0.548	2.00	4.00
Acrylonitrile	107-13-1	3.50	0.250	U	0.0760	0.250	0.500
Bromobenzene	108-86-1	0	0.250	U	0.0420	0.250	0.500
Bromodichloromethane	75-27-4	0	0.100	U	0.0315	0.100	0.200
Bromochloromethane	74-97-5	0	0.100	U	0.0452	0.100	0.200
Bromoform	75-25-2	0	0.500	U	0.239	0.500	1.00
Bromomethane	74-83-9	0	0.500	U	0.148	0.500	1.00
n-Butylbenzene	104-51-8	8.24	0.500	U	0.154	0.500	1.00
sec-Butylbenzene	135-98-8	7.76	0.250	U	0.101	0.250	0.500
tert-Butylbenzene	98-06-6	7.71	0.500	U	0.0620	0.500	1.00
Carbon tetrachloride	56-23-5	0	0.100 QN	U	0.0432	0.100	0.200
Carbon disulfide	75-15-0	2.71	0.500	U	0.162	0.500	1.00
Chlorobenzene	108-90-7	0	0.0500	U	0.0229	0.0500	0.100
Chlorodibromomethane	124-48-1	0	0.0500	U	0.0180	0.0500	0.100
Chloroethane	75-00-3	2.37	0.100	U	0.0432	0.100	0.200
Chloroform	67-66-3	3.87	0.0500	U	0.0166	0.0500	0.100
Chloromethane	74-87-3	1.97	0.250	U	0.0556	0.250	0.500
2-Chlorotoluene	95-49-8	0	0.100	U	0.0368	0.100	0.200
4-Chlorotoluene	106-43-4	0	0.100	U	0.0452	0.100	0.200
1,2-Dibromo-3-Chloropropane	96-12-8	0	0.500	U	0.204	0.500	1.00
1,2-Dibromoethane	106-93-4	0	0.0500	U	0.0210	0.0500	0.100
Dibromomethane	74-95-3	0	0.100	U	0.0400	0.100	0.200
1,2-Dichlorobenzene	95-50-1	0	0.200	U	0.0580	0.200	0.400
1,3-Dichlorobenzene	541-73-1	0	0.200	U	0.0680	0.200	0.400
1,4-Dichlorobenzene	106-46-7	0	0.250	U	0.0788	0.250	0.500
Dichlorodifluoromethane	75-71-8	0	0.100	U	0.0327	0.100	0.200
1,1-Dichloroethane	75-34-3	3.53	0.0500	U	0.0230	0.0500	0.100
1,2-Dichloroethane	107-06-2	4.32	0.0500	U	0.0190	0.0500	0.100
1,1-Dichloroethene	75-35-4	0	0.0500	U	0.0200	0.0500	0.100
cis-1,2-Dichloroethene	156-59-2	3.81	0.0750	U	0.0276	0.0750	0.150
trans-1,2-Dichloroethene	156-60-5	0	0.300	U	0.0572	0.300	0.600
1,2-Dichloropropane	78-87-5	4.79	0.200	U	0.0508	0.200	0.400
1,1-Dichloropropene	563-58-6	4.15	0.100	U	0.0280	0.100	0.200
1,3-Dichloropropane	142-28-9	0	0.150	U	0.0700	0.150	0.300
cis-1,3-Dichloropropene	10061-01-5	0	0.100	U	0.0271	0.100	0.200
trans-1,3-Dichloropropene	10061-02-6	0	0.150	U	0.0612	0.150	0.300
2,2-Dichloropropane	594-20-7	3.76	0.100	U	0.0317	0.100	0.200
Di-isopropyl ether	108-20-3	3.45	0.0500	U	0.0140	0.0500	0.100
Hexachloro-1,3-butadiene	87-68-3	0	2.00	U	0.508	2.00	4.00
Isopropylbenzene	98-82-8	7.03	1.00	U	0.0345	1.00	2.00
p-Isopropyltoluene	99-87-6	7.90	0.300	U	0.0932	0.300	0.600
2-Butanone (MEK)	78-93-3	4.13	1.00	U	0.500	1.00	2.00
Methylene Chloride	75-09-2	2.92	0.750	U	0.266	0.750	1.50

12/5/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-RRSMW05-101423

Lab Sample ID:	L1667742-02	**SDG:**	L1667742
Client Sample ID:	OT001-RRSMW05-101423	**Collected Date/Time:**	10/14/23 12:20
Lab File ID:	1022_15	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 04:54
Analytical Batch:	WG2155682	**Analysis Date/Time:**	10/22/23 04:54
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result		Qualifier	DL	LOD	LOQ
			ug/l			ug/l	ug/l	ug/l
4-Methyl-2-pentanone (MIBK)	108-10-1	5.57	1.00		U	0.400	1.00	2.00
Methyl tert-butyl ether	1634-04-4	0	0.0300		U	0.0118	0.0300	0.0600
Naphthalene	91-20-3	9.91	0.144	J	J	0.125	0.250	0.500
n-Propylbenzene	103-65-1	7.23	0.100		U	0.0472	0.100	0.200
Styrene	100-42-5	0	0.250		U	0.109	0.250	0.500
1,1,1,2-Tetrachloroethane	630-20-6	0	0.0500		U	0.0200	0.0500	0.100
1,1,2,2-Tetrachloroethane	79-34-5	0	0.0500		U	0.0156	0.0500	0.100
1,1,2-Trichlorotrifluoroethane	76-13-1	0	0.100		U	0.0270	0.100	0.200
Tetrachloroethene	127-18-4	0	0.0750		U	0.0280	0.0750	0.150
1,2,3-Trichlorobenzene	87-61-6	0	0.250		U	0.0250	0.250	0.500
1,2,4-Trichlorobenzene	120-82-1	0	0.500		U	0.193	0.500	1.00
1,1,1-Trichloroethane	71-55-6	0	0.0500		U	0.0110	0.0500	0.100
1,1,2-Trichloroethane	79-00-5	5.69	0.100		U	0.0353	0.100	0.200
Trichloroethene	79-01-6	0	0.0400	QN	U	0.0160	0.0400	0.0800
Trichlorofluoromethane	75-69-4	0	0.0500	QN	U	0.0200	0.0500	0.100
1,2,3-Trichloropropane	96-18-4	0	0.500		U	0.204	0.500	1.00
1,2,3-Trimethylbenzene	526-73-8	8.09	0.0770	J	J	0.0460	0.100	0.200
1,3,5-Trimethylbenzene	108-67-8	7.40	0.108	J	J	0.0432	0.100	0.200
Vinyl chloride	75-01-4	1.99	0.0750		U	0.0273	0.0750	0.150
Ethyl Ether	60-29-7	0	0.0500		U	0.0170	0.0500	0.100
Tetrahydrofuran	109-99-9	3.91	0.250		U	0.0900	0.250	50.0
Iodomethane	74-88-4	0	0.500		U	0.242	0.500	1.00
Allyl chloride	107-05-1	0	2.00		U	0.580	2.00	4.00
trans-1,4-Dichloro-2-butene	110-57-6	7.46	0.200	QN	C4 U	0.0560	0.200	0.400

E 12/5/23

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-RRSMW05-101423

Lab Sample ID:	L1667742-02	**SDG:**	L1667742
Client Sample ID:	OT001-RRSMW05-101423	**Collected Date/Time:**	10/14/23 12:20
Lab File ID:	1026_40	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS57	**Preparation Date/Time:**	10/26/23 21:23
Analytical Batch:	WG2157275	**Analysis Date/Time:**	10/26/23 21:23
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
Benzene	71-43-2	0	0.0500	U	0.0160	0.0500	0.100
Cyclohexane	110-82-7	0	0.0500	U	0.0203	0.0500	0.100
Ethylbenzene	100-41-4	0	0.0500	U	0.0212	0.0500	0.100
Toluene	108-88-3	5.33	0.0730	J J	0.0500	0.100	0.200
1,2,4-Trimethylbenzene	95-63-6	7.66	0.100	U	0.0464	0.100	0.200
Vinyl acetate	108-05-4	0	0.300	U	0.141	0.300	0.600
Xylenes, Total	1330-20-7	6.72	0.400	U	0.191	0.400	0.800

R 12/6/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW06-101423

Lab Sample ID:	L1667742-03	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW06-101423	**Collected Date/Time:**	10/14/23 14:45
Lab File ID:	1019_19	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS35	**Preparation Date/Time:**	10/19/23 18:01
Analytical Batch:	WG2154426	**Analysis Date/Time:**	10/19/23 18:01
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result ug/l		Qualifier	DL ug/l	LOD ug/l	LOQ ug/l
Acetone	67-64-1	3.15	25.0	QN	U	11.3	25.0	50.0
Acrolein	107-02-8	0	25.0		U	2.54	25.0	50.0
Acrylonitrile	107-13-1	0	5.00		U	0.671	5.00	10.0
Benzene	71-43-2	0	0.500		U	0.0941	0.500	1.00
Bromobenzene	108-86-1	0	0.500		U	0.118	0.500	1.00
Bromodichloromethane	75-27-4	0	0.500		U	0.136	0.500	1.00
Bromoform	75-25-2	0	0.500		U	0.129	0.500	1.00
Bromomethane	74-83-9	0	2.00		U	0.605	2.00	5.00
n-Butylbenzene	104-51-8	0	0.500		U	0.157	0.500	1.00
sec-Butylbenzene	135-98-8	0	0.500		U	0.125	0.500	1.00
tert-Butylbenzene	98-06-6	0	0.500		U	0.127	0.500	1.00
Carbon tetrachloride	56-23-5	0	0.500		U	0.128	0.500	1.00
Chlorobenzene	108-90-7	0	0.500		U	0.116	0.500	1.00
Chlorodibromomethane	124-48-1	0	0.500		U	0.140	0.500	1.00
Chloroethane	75-00-3	0	2.00		U	0.192	2.00	5.00
2-Chloroethyl vinyl ether	110-75-8	0	25.0		U	0.575	25.0	50.0
Chloroform	67-66-3	0	2.00		U	0.111	2.00	5.00
Chloromethane	74-87-3	0	2.00		U	0.960	2.00	4.00
2-Chlorotoluene	95-49-8	0	0.500		U	0.106	0.500	1.00
4-Chlorotoluene	106-43-4	0	0.500		U	0.114	0.500	1.00
1,2-Dibromoethane	106-93-4	0	0.500		U	0.126	0.500	1.00
1,2-Dibromo-3-Chloropropane	96-12-8	0	2.00		U	0.276	2.00	5.00
Dibromomethane	74-95-3	0	0.500		U	0.122	0.500	1.00
1,2-Dichlorobenzene	95-50-1	0	0.500		U	0.107	0.500	1.00
1,3-Dichlorobenzene	541-73-1	0	0.500		U	0.110	0.500	1.00
1,4-Dichlorobenzene	106-46-7	0	0.500		U	0.120	0.500	1.00
Dichlorodifluoromethane	75-71-8	0	2.00		U	0.374	2.00	5.00
1,1-Dichloroethane	75-34-3	0	0.500		U	0.100	0.500	1.00
1,2-Dichloroethane	107-06-2	0	0.500		U	0.0819	0.500	1.00
1,1-Dichloroethene	75-35-4	0	0.500		U	0.188	0.500	1.00
cis-1,2-Dichloroethene	156-59-2	0	0.500		U	0.126	0.500	1.00
trans-1,2-Dichloroethene	156-60-5	0	0.500		U	0.149	0.500	1.00
1,2-Dichloropropane	78-87-5	0	0.500		U	0.149	0.500	1.00
1,3-Dichloropropane	142-28-9	0	0.500		U	0.110	0.500	1.00
2,2-Dichloropropane	594-20-7	0	0.500		U	0.161	0.500	1.00
1,1-Dichloropropene	563-58-6	0	0.500		U	0.142	0.500	1.00
cis-1,3-Dichloropropene	10061-01-5	0	0.500		U	0.111	0.500	1.00
trans-1,3-Dichloropropene	10061-02-6	0	0.500		U	0.118	0.500	1.00
Di-isopropyl ether	108-20-3	0	0.500		U	0.105	0.500	1.00
Ethylbenzene	100-41-4	0	0.500		U	0.137	0.500	1.00
Hexachloro-1,3-butadiene	87-68-3	0	0.750		U	0.337	0.750	1.50
Isopropylbenzene	98-82-8	0	0.500		U	0.105	0.500	1.00
p-Isopropyltoluene	99-87-6	0	0.500		U	0.120	0.500	1.00

SV 12/15/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW06-101423

Lab Sample ID:	L1667742-03	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW06-101423	**Collected Date/Time:**	10/14/23 14:45
Lab File ID:	1019_19	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS35	**Preparation Date/Time:**	10/19/23 18:01
Analytical Batch:	WG2154426	**Analysis Date/Time:**	10/19/23 18:01
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result		Qualifier	DL	LOD	LOQ
			ug/l			*ug/l*	*ug/l*	*ug/l*
2-Butanone (MEK)	78-93-3	4.19	5.00		U	1.19	5.00	10.0
Methylene Chloride	75-09-2	0	2.00		U	0.430	2.00	5.00
4-Methyl-2-pentanone (MIBK)	108-10-1	0	5.00		U	0.478	5.00	10.0
Methyl tert-butyl ether	1634-04-4	0	0.500		U	0.101	0.500	1.00
Naphthalene	91-20-3	0	2.00		U	1.00	2.00	5.00
n-Propylbenzene	103-65-1	0	0.500		U	0.0993	0.500	1.00
Styrene	100-42-5	0	0.500		U	0.118	0.500	1.00
1,1,1,2-Tetrachloroethane	630-20-6	0	0.500		U	0.147	0.500	1.00
1,1,2,2-Tetrachloroethane	79-34-5	0	0.500		U	0.133	0.500	1.00
Tetrachloroethene	127-18-4	0	0.600		U	0.300	0.600	1.20
Toluene	108-88-3	5.56	0.300	J	J	0.278	0.600	1.20
1,2,3-Trichlorobenzene	87-61-6	0	0.500		U	0.230	0.500	1.00
1,2,4-Trichlorobenzene	120-82-1	0	1.00		U	0.481	1.00	2.00
1,2,3-Trimethylbenzene	526-73-8	0	0.500		U	0.104	0.500	1.00
1,2,4-Trimethylbenzene	95-63-6	0	1.00		U	0.322	1.00	2.00
1,3,5-Trimethylbenzene	108-67-8	0	0.500		U	0.104	0.500	1.00
1,1,1-Trichloroethane	71-55-6	0	0.500		U	0.149	0.500	1.00
1,1,2-Trichloroethane	79-00-5	0	0.500		U	0.158	0.500	1.00
Trichloroethene	79-01-6	0	0.500		U	0.190	0.500	1.00
Trichlorofluoromethane	75-69-4	0	2.00		U	0.160	2.00	5.00
1,1,2-Trichlorotrifluoroethane	76-13-1	0	0.500		U	0.180	0.500	1.00
1,2,3-Trichloropropane	96-18-4	0	1.00		U	0.237	1.00	2.50
Vinyl chloride	75-01-4	0	0.500		U	0.234	0.500	1.00
Xylenes, Total	1330-20-7	6.97	0.300	J	J	0.174	1.50	3.00

C 12/5/23

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW06-101423

Lab Sample ID:	L1667742-03	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW06-101423	**Collected Date/Time:**	10/14/23 14:45
Lab File ID:	1022_16	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 05:14
Analytical Batch:	WG2155682	**Analysis Date/Time:**	10/22/23 05:14
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result ug/l		Qualifier	DL ug/l	LOD ug/l	LOQ ug/l
Acetone	67-64-1	3.04	1.44	QN J	J	0.548	2.00	4.00
Acrylonitrile	107-13-1	3.51	0.250		U	0.0760	0.250	0.500
Bromobenzene	108-86-1	0	0.250		U	0.0420	0.250	0.500
Bromodichloromethane	75-27-4	0	0.100		U	0.0315	0.100	0.200
Bromochloromethane	74-97-5	0	0.100		U	0.0452	0.100	0.200
Bromoform	75-25-2	0	0.500		U	0.239	0.500	1.00
Bromomethane	74-83-9	2.11	0.500		U	0.148	0.500	1.00
n-Butylbenzene	104-51-8	0	0.500		U	0.154	0.500	1.00
sec-Butylbenzene	135-98-8	7.76	0.250		U	0.101	0.250	0.500
tert-Butylbenzene	98-06-6	7.76	0.500		U	0.0620	0.500	1.00
Carbon tetrachloride	56-23-5	0	0.100	QN J	U	0.0432	0.100	0.200
Carbon disulfide	75-15-0	2.72	0.262		J	0.162	0.500	1.00
Chlorobenzene	108-90-7	0	0.0500		U	0.0229	0.0500	0.100
Chlorodibromomethane	124-48-1	0	0.0500		U	0.0180	0.0500	0.100
Chloroethane	75-00-3	2.29	0.100		U	0.0432	0.100	0.200
Chloroform	67-66-3	0	0.0500		U	0.0166	0.0500	0.100
Chloromethane	74-87-3	1.96	0.250		U	0.0556	0.250	0.500
2-Chlorotoluene	95-49-8	0	0.100		U	0.0368	0.100	0.200
4-Chlorotoluene	106-43-4	7.48	0.100		U	0.0452	0.100	0.200
1,2-Dibromo-3-Chloropropane	96-12-8	0	0.500		U	0.204	0.500	1.00
1,2-Dibromoethane	106-93-4	0	0.0500		U	0.0210	0.0500	0.100
Dibromomethane	74-95-3	0	0.100		U	0.0400	0.100	0.200
1,2-Dichlorobenzene	95-50-1	0	0.200		U	0.0580	0.200	0.400
1,3-Dichlorobenzene	541-73-1	0	0.200		U	0.0680	0.200	0.400
1,4-Dichlorobenzene	106-46-7	0	0.250		U	0.0788	0.250	0.500
Dichlorodifluoromethane	75-71-8	0	0.100		U	0.0327	0.100	0.200
1,1-Dichloroethane	75-34-3	0	0.0500		U	0.0230	0.0500	0.100
1,2-Dichloroethane	107-06-2	4.34	0.0500		U	0.0190	0.0500	0.100
1,1-Dichloroethene	75-35-4	0	0.0500		U	0.0200	0.0500	0.100
cis-1,2-Dichloroethene	156-59-2	3.81	0.0750		U	0.0276	0.0750	0.150
trans-1,2-Dichloroethene	156-60-5	0	0.300		U	0.0572	0.300	0.600
1,2-Dichloropropane	78-87-5	4.81	0.200		U	0.0508	0.200	0.400
1,1-Dichloropropene	563-58-6	4.08	0.100		U	0.0280	0.100	0.200
1,3-Dichloropropane	142-28-9	0	0.150		U	0.0700	0.150	0.300
cis-1,3-Dichloropropene	10061-01-5	0	0.100		U	0.0271	0.100	0.200
trans-1,3-Dichloropropene	10061-02-6	0	0.150		U	0.0612	0.150	0.300
2,2-Dichloropropane	594-20-7	3.76	0.100		U	0.0317	0.100	0.200
Di-isopropyl ether	108-20-3	3.41	0.0500		U	0.0140	0.0500	0.100
Hexachloro-1,3-butadiene	87-68-3	0	2.00		U	0.508	2.00	4.00
Isopropylbenzene	98-82-8	7.03	1.00		U	0.0345	1.00	2.00
p-Isopropyltoluene	99-87-6	0	0.300		U	0.0932	0.300	0.600
2-Butanone (MEK)	78-93-3	4.12	1.00		U	0.500	1.00	2.00
Methylene Chloride	75-09-2	3.03	0.750		U	0.266	0.750	1.50

SV 12/15/23

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW06-101423

Lab Sample ID:	L1667742-03	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW06-101423	**Collected Date/Time:**	10/14/23 14:45
Lab File ID:	1022_16	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 05:14
Analytical Batch:	WG2155682	**Analysis Date/Time:**	10/22/23 05:14
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result		Qualifier	DL	LOD	LOQ
			ug/l			*ug/l*	*ug/l*	*ug/l*
4-Methyl-2-pentanone (MIBK)	108-10-1	5.55	1.00		U	0.400	1.00	2.00
Methyl tert-butyl ether	1634-04-4	0	0.0300		U	0.0118	0.0300	0.0600
Naphthalene	91-20-3	9.93	0.250		U	0.125	0.250	0.500
n-Propylbenzene	103-65-1	7.21	0.100		U	0.0472	0.100	0.200
Styrene	100-42-5	0	0.250		U	0.109	0.250	0.500
1,1,1,2-Tetrachloroethane	630-20-6	0	0.0500		U	0.0200	0.0500	0.100
1,1,2,2-Tetrachloroethane	79-34-5	0	0.0500		U	0.0156	0.0500	0.100
1,1,2-Trichlorotrifluoroethane	76-13-1	0	0.100		U	0.0270	0.100	0.200
Tetrachloroethene	127-18-4	5.65	0.131	J	J	0.0280	0.0750	0.150
1,2,3-Trichlorobenzene	87-61-6	0	0.250		U	0.0250	0.250	0.500
1,2,4-Trichlorobenzene	120-82-1	0	0.500		U	0.193	0.500	1.00
1,1,1-Trichloroethane	71-55-6	0	0.0500		U	0.0110	0.0500	0.100
1,1,2-Trichloroethane	79-00-5	0	0.100		U	0.0353	0.100	0.200
Trichloroethene	79-01-6	4.56	0.0500	QN J	J	0.0160	0.0400	0.0800
Trichlorofluoromethane	75-69-4	2.35	0.589	QN	C5	0.0200	0.0500	0.100
1,2,3-Trichloropropane	96-18-4	0	0.500		U	0.204	0.500	1.00
1,2,3-Trimethylbenzene	526-73-8	8.08	0.0800	J	J	0.0460	0.100	0.200
1,3,5-Trimethylbenzene	108-67-8	7.40	0.103	J	J	0.0432	0.100	0.200
Vinyl chloride	75-01-4	2	0.0750		U	0.0273	0.0750	0.150
Ethyl Ether	60-29-7	0	0.0500		U	0.0170	0.0500	0.100
Tetrahydrofuran	109-99-9	0	0.250		U	0.0900	0.250	50.0
Iodomethane	74-88-4	0	0.500		U	0.242	0.500	1.00
Allyl chloride	107-05-1	2.85	2.00		U	0.580	2.00	4.00
trans-1,4-Dichloro-2-butene	110-57-6	0	0.200	QN	C4 U	0.0560	0.200	0.400

c 12/5/23

1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW06-101423

Lab Sample ID:	L1667742-03	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW06-101423	**Collected Date/Time:**	10/14/23 14:45
Lab File ID:	1026_41	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS57	**Preparation Date/Time:**	10/26/23 21:42
Analytical Batch:	WG2157275	**Analysis Date/Time:**	10/26/23 21:42
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result		Qualifier	DL	LOD	LOQ
			ug/l			ug/l	ug/l	ug/l
Benzene	71-43-2	4.17	0.0500		U	0.0160	0.0500	0.100
Cyclohexane	110-82-7	0	0.0500		U	0.0203	0.0500	0.100
Ethylbenzene	100-41-4	6.32	0.0370	J	J	0.0212	0.0500	0.100
Toluene	108-88-3	5.33	0.192	J	J	0.0500	0.100	0.200
1,2,4-Trimethylbenzene	95-63-6	7.66	0.0490	B J	B J	0.0464	0.100	0.200
Vinyl acetate	108-05-4	0	0.300		U	0.141	0.300	0.600
Xylenes, Total	1330-20-7	6.72	0.340	J	J	0.191	0.400	0.800

12/15/23

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW07-101423

Lab Sample ID:	L1667742-04	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW07-101423	**Collected Date/Time:**	10/14/23 15:25
Lab File ID:	1022_17	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 05:34
Analytical Batch:	WG2155682	**Analysis Date/Time:**	10/22/23 05:34
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		ug/l	ug/l	ug/l
Acetone	67-64-1	3.04	1.37 QN J	J	0.548	2.00	4.00
Acrylonitrile	107-13-1	0	0.250	U	0.0760	0.250	0.500
Bromobenzene	108-86-1	0	0.250	U	0.0420	0.250	0.500
Bromodichloromethane	75-27-4	0	0.100	U	0.0315	0.100	0.200
Bromochloromethane	74-97-5	0	0.100	U	0.0452	0.100	0.200
Bromoform	75-25-2	0	0.500	U	0.239	0.500	1.00
Bromomethane	74-83-9	2.21	0.500	U	0.148	0.500	1.00
n-Butylbenzene	104-51-8	0	0.500	U	0.154	0.500	1.00
sec-Butylbenzene	135-98-8	7.76	0.250	U	0.101	0.250	0.500
tert-Butylbenzene	98-06-6	0	0.500	U	0.0620	0.500	1.00
Carbon tetrachloride	56-23-5	0	0.100 QN	U	0.0432	0.100	0.200
Carbon disulfide	75-15-0	2.71	0.500	U	0.162	0.500	1.00
Chlorobenzene	108-90-7	0	0.0500	U	0.0229	0.0500	0.100
Chlorodibromomethane	124-48-1	0	0.0500	U	0.0180	0.0500	0.100
Chloroethane	75-00-3	2.25	0.100	U	0.0432	0.100	0.200
Chloroform	67-66-3	0	0.0500	U	0.0166	0.0500	0.100
Chloromethane	74-87-3	2.02	0.250	U	0.0556	0.250	0.500
2-Chlorotoluene	95-49-8	0	0.100	U	0.0368	0.100	0.200
4-Chlorotoluene	106-43-4	7.49	0.100	U	0.0452	0.100	0.200
1,2-Dibromo-3-Chloropropane	96-12-8	0	0.500	U	0.204	0.500	1.00
1,2-Dibromoethane	106-93-4	0	0.0500	U	0.0210	0.0500	0.100
Dibromomethane	74-95-3	0	0.100	U	0.0400	0.100	0.200
1,2-Dichlorobenzene	95-50-1	0	0.200	U	0.0580	0.200	0.400
1,3-Dichlorobenzene	541-73-1	0	0.200	U	0.0680	0.200	0.400
1,4-Dichlorobenzene	106-46-7	0	0.250	U	0.0788	0.250	0.500
Dichlorodifluoromethane	75-71-8	0	0.100	U	0.0327	0.100	0.200
1,1-Dichloroethane	75-34-3	0	0.0500	U	0.0230	0.0500	0.100
1,2-Dichloroethane	107-06-2	4.33	0.0500	U	0.0190	0.0500	0.100
1,1-Dichloroethene	75-35-4	0	0.0500	U	0.0200	0.0500	0.100
cis-1,2-Dichloroethene	156-59-2	3.81	0.0750	U	0.0276	0.0750	0.150
trans-1,2-Dichloroethene	156-60-5	0	0.300	U	0.0572	0.300	0.600
1,2-Dichloropropane	78-87-5	4.85	0.200	U	0.0508	0.200	0.400
1,1-Dichloropropene	563-58-6	0	0.100	U	0.0280	0.100	0.200
1,3-Dichloropropane	142-28-9	0	0.150	U	0.0700	0.150	0.300
cis-1,3-Dichloropropene	10061-01-5	0	0.100	U	0.0271	0.100	0.200
trans-1,3-Dichloropropene	10061-02-6	0	0.150	U	0.0612	0.150	0.300
2,2-Dichloropropane	594-20-7	3.85	0.100	U	0.0317	0.100	0.200
Di-isopropyl ether	108-20-3	3.42	0.0500	U	0.0140	0.0500	0.100
Hexachloro-1,3-butadiene	87-68-3	0	2.00	U	0.508	2.00	4.00
Isopropylbenzene	98-82-8	7.04	1.00	U	0.0345	1.00	2.00
p-Isopropyltoluene	99-87-6	0	0.300	U	0.0932	0.300	0.600
2-Butanone (MEK)	78-93-3	4.11	1.00	U	0.500	1.00	2.00
Methylene Chloride	75-09-2	0	0.750	U	0.266	0.750	1.50

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW07-101423

Lab Sample ID:	L1667742-04	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW07-101423	**Collected Date/Time:**	10/14/23 15:25
Lab File ID:	1022_17	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 05:34
Analytical Batch:	WG2155682	**Analysis Date/Time:**	10/22/23 05:34
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result		Qualifier	DL	LOD	LOQ
			ug/l			ug/l	ug/l	ug/l
4-Methyl-2-pentanone (MIBK)	108-10-1	0	1.00		U	0.400	1.00	2.00
Methyl tert-butyl ether	1634-04-4	0	0.0300		U	0.0118	0.0300	0.0600
Naphthalene	91-20-3	9.95	0.250		U	0.125	0.250	0.500
n-Propylbenzene	103-65-1	7.33	0.100		U	0.0472	0.100	0.200
Styrene	100-42-5	0	0.250		U	0.109	0.250	0.500
1,1,1,2-Tetrachloroethane	630-20-6	0	0.0500		U	0.0200	0.0500	0.100
1,1,2,2-Tetrachloroethane	79-34-5	0	0.0500		U	0.0156	0.0500	0.100
1,1,2-Trichlorotrifluoroethane	76-13-1	0	0.100		U	0.0270	0.100	0.200
Tetrachloroethene	127-18-4	0	0.0750		U	0.0280	0.0750	0.150
1,2,3-Trichlorobenzene	87-61-6	0	0.250		U	0.0250	0.250	0.500
1,2,4-Trichlorobenzene	120-82-1	0	0.500		U	0.193	0.500	1.00
1,1,1-Trichloroethane	71-55-6	0	0.0500		U	0.0110	0.0500	0.100
1,1,2-Trichloroethane	79-00-5	0	0.100		U	0.0353	0.100	0.200
Trichloroethene	79-01-6	4.56	0.0370	QN	J	0.0160	0.0400	0.0800
Trichlorofluoromethane	75-69-4	0	0.0500	QN	U	0.0200	0.0500	0.100
1,2,3-Trichloropropane	96-18-4	0	0.500		U	0.204	0.500	1.00
1,2,3-Trimethylbenzene	526-73-8	8.09	0.0480	J	J	0.0460	0.100	0.200
1,3,5-Trimethylbenzene	108-67-8	7.42	0.0820	J	J	0.0432	0.100	0.200
Vinyl chloride	75-01-4	0	0.0750		U	0.0273	0.0750	0.150
Xylenes, Total	1330-20-7	6.82	0.400		U	0.191	0.400	0.800
Ethyl Ether	60-29-7	0	0.0500		U	0.0170	0.0500	0.100
Tetrahydrofuran	109-99-9	3.98	0.250		U	0.0900	0.250	50.0
Iodomethane	74-88-4	0	0.500		U	0.242	0.500	1.00
Allyl chloride	107-05-1	0	2.00		U	0.580	2.00	4.00
trans-1,4-Dichloro-2-butene	110-57-6	0	0.200	QN	C4 U	0.0560	0.200	0.400

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW07-101423

Lab Sample ID:	L1667742-04	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW07-101423	**Collected Date/Time:**	10/14/23 15:25
Lab File ID:	1026_42	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS57	**Preparation Date/Time:**	10/26/23 22:01
Analytical Batch:	WG2157275	**Analysis Date/Time:**	10/26/23 22:01
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		*ug/l*	*ug/l*	*ug/l*
Benzene	71-43-2	4.17	0.0500	U	0.0160	0.0500	0.100
Cyclohexane	110-82-7	0	0.0500	U	0.0203	0.0500	0.100
Ethylbenzene	100-41-4	0	0.0500	U	0.0212	0.0500	0.100
Toluene	108-88-3	5.33	0.0810	J J	0.0500	0.100	0.200
1,2,4-Trimethylbenzene	95-63-6	7.66	0.100	U	0.0464	0.100	0.200
Vinyl acetate	108-05-4	0	0.300	U	0.141	0.300	0.600

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW01-101423

Lab Sample ID:	L1667742-05	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW01-101423	**Collected Date/Time:**	10/14/23 16:25
Lab File ID:	1022_18	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 05:53
Analytical Batch:	WG2155682	**Analysis Date/Time:**	10/22/23 05:53
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result		Qualifier	DL	LOD	LOQ
			ug/l			ug/l	ug/l	ug/l
Acetone	67-64-1	3.04	3.29	QN J	J	0.548	2.00	4.00
Acrylonitrile	107-13-1	3.56	0.250		U	0.0760	0.250	0.500
Bromobenzene	108-86-1	0	0.250		U	0.0420	0.250	0.500
Bromodichloromethane	75-27-4	0	0.100		U	0.0315	0.100	0.200
Bromochloromethane	74-97-5	0	0.100		U	0.0452	0.100	0.200
Bromoform	75-25-2	0	0.500		U	0.239	0.500	1.00
Bromomethane	74-83-9	2.32	0.500		U	0.148	0.500	1.00
n-Butylbenzene	104-51-8	0	0.500		U	0.154	0.500	1.00
sec-Butylbenzene	135-98-8	7.76	0.250		U	0.101	0.250	0.500
tert-Butylbenzene	98-06-6	7.77	0.500		U	0.0620	0.500	1.00
Carbon tetrachloride	56-23-5	0	0.100	QN	U	0.0432	0.100	0.200
Carbon disulfide	75-15-0	2.72	0.500		U	0.162	0.500	1.00
Chlorobenzene	108-90-7	0	0.0500		U	0.0229	0.0500	0.100
Chlorodibromomethane	124-48-1	0	0.0500		U	0.0180	0.0500	0.100
Chloroethane	75-00-3	2.32	0.100		U	0.0432	0.100	0.200
Chloroform	67-66-3	0	0.0500		U	0.0166	0.0500	0.100
Chloromethane	74-87-3	0	0.250		U	0.0556	0.250	0.500
Cyclohexane	110-82-7	3.87	0.0500		U	0.0203	0.0500	0.100
2-Chlorotoluene	95-49-8	0	0.100		U	0.0368	0.100	0.200
4-Chlorotoluene	106-43-4	7.48	0.100		U	0.0452	0.100	0.200
1,2-Dibromo-3-Chloropropane	96-12-8	0	0.500		U	0.204	0.500	1.00
1,2-Dibromoethane	106-93-4	0	0.0500		U	0.0210	0.0500	0.100
Dibromomethane	74-95-3	0	0.100		U	0.0400	0.100	0.200
1,2-Dichlorobenzene	95-50-1	0	0.200		U	0.0580	0.200	0.400
1,3-Dichlorobenzene	541-73-1	0	0.200		U	0.0680	0.200	0.400
1,4-Dichlorobenzene	106-46-7	0	0.250		U	0.0788	0.250	0.500
Dichlorodifluoromethane	75-71-8	0	0.100		U	0.0327	0.100	0.200
1,1-Dichloroethane	75-34-3	0	0.0500		U	0.0230	0.0500	0.100
1,2-Dichloroethane	107-06-2	4.34	0.0500		U	0.0190	0.0500	0.100
1,1-Dichloroethene	75-35-4	0	0.0500		U	0.0200	0.0500	0.100
cis-1,2-Dichloroethene	156-59-2	3.81	0.0750		U	0.0276	0.0750	0.150
trans-1,2-Dichloroethene	156-60-5	0	0.300		U	0.0572	0.300	0.600
1,2-Dichloropropane	78-87-5	0	0.200		U	0.0508	0.200	0.400
1,1-Dichloropropene	563-58-6	4.12	0.100		U	0.0280	0.100	0.200
1,3-Dichloropropane	142-28-9	0	0.150		U	0.0700	0.150	0.300
cis-1,3-Dichloropropene	10061-01-5	0	0.100		U	0.0271	0.100	0.200
trans-1,3-Dichloropropene	10061-02-6	0	0.150		U	0.0612	0.150	0.300
2,2-Dichloropropane	594-20-7	3.84	0.100		U	0.0317	0.100	0.200
Di-isopropyl ether	108-20-3	3.39	0.0500		U	0.0140	0.0500	0.100
Ethylbenzene	100-41-4	6.43	0.0500		U	0.0212	0.0500	0.100
Hexachloro-1,3-butadiene	87-68-3	0	2.00		U	0.508	2.00	4.00
Isopropylbenzene	98-82-8	7.05	1.00		U	0.0345	1.00	2.00
p-Isopropyltoluene	99-87-6	0	0.300		U	0.0932	0.300	0.600

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW01-101423

Lab Sample ID:	L1667742-05	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW01-101423	**Collected Date/Time:**	10/14/23 16:25
Lab File ID:	1022_18	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 05:53
Analytical Batch:	WG2155682	**Analysis Date/Time:**	10/22/23 05:53
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result		Qualifier	DL	LOD	LOQ
			ug/l			*ug/l*	*ug/l*	*ug/l*
2-Butanone (MEK)	78-93-3	4.13	1.00		U	0.500	1.00	2.00
Methylene Chloride	75-09-2	3.01	0.750		U	0.266	0.750	1.50
4-Methyl-2-pentanone (MIBK)	108-10-1	5.59	1.00		U	0.400	1.00	2.00
Methyl tert-butyl ether	1634-04-4	0	0.0300		U	0.0118	0.0300	0.0600
Naphthalene	91-20-3	0	0.250		U	0.125	0.250	0.500
n-Propylbenzene	103-65-1	7.23	0.100		U	0.0472	0.100	0.200
Styrene	100-42-5	0	0.250		U	0.109	0.250	0.500
1,1,1,2-Tetrachloroethane	630-20-6	0	0.0500		U	0.0200	0.0500	0.100
1,1,2,2-Tetrachloroethane	79-34-5	0	0.0500		U	0.0156	0.0500	0.100
1,1,2-Trichlorotrifluoroethane	76-13-1	0	0.100		U	0.0270	0.100	0.200
Tetrachloroethene	127-18-4	0	0.0750		U	0.0280	0.0750	0.150
1,2,3-Trichlorobenzene	87-61-6	0	0.250		U	0.0250	0.250	0.500
1,2,4-Trichlorobenzene	120-82-1	0	0.500		U	0.193	0.500	1.00
1,1,1-Trichloroethane	71-55-6	0	0.0500		U	0.0110	0.0500	0.100
1,1,2-Trichloroethane	79-00-5	0	0.100		U	0.0353	0.100	0.200
Trichlorofluoromethane	75-69-4	2.36	0.0500	QN	U	0.0200	0.0500	0.100
1,2,3-Trichloropropane	96-18-4	0	0.500		U	0.204	0.500	1.00
1,2,3-Trimethylbenzene	526-73-8	8.06	0.100		U	0.0460	0.100	0.200
1,3,5-Trimethylbenzene	108-67-8	7.43	0.0810	J	J	0.0432	0.100	0.200
Vinyl chloride	75-01-4	1.97	0.0750		U	0.0273	0.0750	0.150
Xylenes, Total	1330-20-7	6.82	0.215	J	J	0.191	0.400	0.800
Ethyl Ether	60-29-7	0	0.0500		U	0.0170	0.0500	0.100
Tetrahydrofuran	109-99-9	3.98	0.250		U	0.0900	0.250	50.0
Iodomethane	74-88-4	0	0.500		U	0.242	0.500	1.00
Allyl chloride	107-05-1	0	2.00		U	0.580	2.00	4.00
trans-1,4-Dichloro-2-butene	110-57-6	7.40	0.200	QN	C4 U	0.0560	0.200	0.400

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW01-101423

Lab Sample ID:	L1667742-05	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW01-101423	**Collected Date/Time:**	10/14/23 16:25
Lab File ID:	1026_43	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS57	**Preparation Date/Time:**	10/26/23 22:20
Analytical Batch:	WG2157275	**Analysis Date/Time:**	10/26/23 22:20
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result		Qualifier	DL	LOD	LOQ
			ug/l			ug/l	ug/l	ug/l
Benzene	71-43-2	4.16	0.0500		U	0.0160	0.0500	0.100
Toluene	108-88-3	5.33	0.131	J	J	0.0500	0.100	0.200
Trichloroethene	79-01-6	4.48	4.04			0.0160	0.0400	0.0800
1,2,4-Trimethylbenzene	95-63-6	7.66	0.100		U	0.0464	0.100	0.200
Vinyl acetate	108-05-4	0	0.300		U	0.141	0.300	0.600

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW99-101423

Lab Sample ID:	L1667742-06	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW99-101423	**Collected Date/Time:**	10/14/23 16:30
Lab File ID:	1022_19	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 06:13
Analytical Batch:	WG2155682	**Analysis Date/Time:**	10/22/23 06:13
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result	Qualifier	DL	LOD	LOQ
			ug/l		ug/l	ug/l	ug/l
Acetone	67-64-1	3.04	1.69 QN J	J	0.548	2.00	4.00
Acrylonitrile	107-13-1	0	0.250	U	0.0760	0.250	0.500
Bromobenzene	108-86-1	0	0.250	U	0.0420	0.250	0.500
Bromodichloromethane	75-27-4	0	0.100	U	0.0315	0.100	0.200
Bromochloromethane	74-97-5	0	0.100	U	0.0452	0.100	0.200
Bromoform	75-25-2	0	0.500	U	0.239	0.500	1.00
Bromomethane	74-83-9	2.31	0.500	U	0.148	0.500	1.00
n-Butylbenzene	104-51-8	0	0.500	U	0.154	0.500	1.00
sec-Butylbenzene	135-98-8	7.77	0.250	U	0.101	0.250	0.500
tert-Butylbenzene	98-06-6	0	0.500	U	0.0620	0.500	1.00
Carbon tetrachloride	56-23-5	0	0.100 QN	U	0.0432	0.100	0.200
Carbon disulfide	75-15-0	2.71	0.500	U	0.162	0.500	1.00
Chlorobenzene	108-90-7	0	0.0500	U	0.0229	0.0500	0.100
Chlorodibromomethane	124-48-1	0	0.0500	U	0.0180	0.0500	0.100
Chloroethane	75-00-3	2.28	0.100	U	0.0432	0.100	0.200
Chloroform	67-66-3	0	0.0500	U	0.0166	0.0500	0.100
Chloromethane	74-87-3	1.92	0.250	U	0.0556	0.250	0.500
Cyclohexane	110-82-7	3.87	0.0500	U	0.0203	0.0500	0.100
2-Chlorotoluene	95-49-8	0	0.100	U	0.0368	0.100	0.200
4-Chlorotoluene	106-43-4	7.53	0.100	U	0.0452	0.100	0.200
1,2-Dibromo-3-Chloropropane	96-12-8	0	0.500	U	0.204	0.500	1.00
1,2-Dibromoethane	106-93-4	0	0.0500	U	0.0210	0.0500	0.100
Dibromomethane	74-95-3	0	0.100	U	0.0400	0.100	0.200
1,2-Dichlorobenzene	95-50-1	0	0.200	U	0.0580	0.200	0.400
1,3-Dichlorobenzene	541-73-1	0	0.200	U	0.0680	0.200	0.400
1,4-Dichlorobenzene	106-46-7	0	0.250	U	0.0788	0.250	0.500
Dichlorodifluoromethane	75-71-8	0	0.100	U	0.0327	0.100	0.200
1,1-Dichloroethane	75-34-3	0	0.0500	U	0.0230	0.0500	0.100
1,2-Dichloroethane	107-06-2	4.34	0.0500	U	0.0190	0.0500	0.100
1,1-Dichloroethene	75-35-4	0	0.0500	U	0.0200	0.0500	0.100
cis-1,2-Dichloroethene	156-59-2	3.81	0.0750	U	0.0276	0.0750	0.150
trans-1,2-Dichloroethene	156-60-5	0	0.300	U	0.0572	0.300	0.600
1,2-Dichloropropane	78-87-5	4.87	0.200	U	0.0508	0.200	0.400
1,1-Dichloropropene	563-58-6	4.07	0.100	U	0.0280	0.100	0.200
1,3-Dichloropropane	142-28-9	0	0.150	U	0.0700	0.150	0.300
cis-1,3-Dichloropropene	10061-01-5	0	0.100	U	0.0271	0.100	0.200
trans-1,3-Dichloropropene	10061-02-6	0	0.150	U	0.0612	0.150	0.300
2,2-Dichloropropane	594-20-7	3.77	0.100	U	0.0317	0.100	0.200
Di-isopropyl ether	108-20-3	0	0.0500	U	0.0140	0.0500	0.100
Ethylbenzene	100-41-4	6.41	0.0500	U	0.0212	0.0500	0.100
Hexachloro-1,3-butadiene	87-68-3	0	2.00	U	0.508	2.00	4.00
Isopropylbenzene	98-82-8	7.04	1.00	U	0.0345	1.00	2.00
p-Isopropyltoluene	99-87-6	0	0.300	U	0.0932	0.300	0.600

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1A-OR

SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW99-101423

Lab Sample ID:	L1667742-06	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW99-101423	**Collected Date/Time:**	10/14/23 16:30
Lab File ID:	1022_19	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS37	**Preparation Date/Time:**	10/22/23 06:13
Analytical Batch:	WG2155682	**Analysis Date/Time:**	10/22/23 06:13
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result		Qualifier	DL	LOD	LOQ
			ug/l			*ug/l*	*ug/l*	*ug/l*
2-Butanone (MEK)	78-93-3	4.13	1.00		U	0.500	1.00	2.00
Methylene Chloride	75-09-2	3.01	0.750		U	0.266	0.750	1.50
4-Methyl-2-pentanone (MIBK)	108-10-1	0	1.00		U	0.400	1.00	2.00
Methyl tert-butyl ether	1634-04-4	0	0.0300		U	0.0118	0.0300	0.0600
Naphthalene	91-20-3	0	0.250		U	0.125	0.250	0.500
n-Propylbenzene	103-65-1	7.35	0.100		U	0.0472	0.100	0.200
Styrene	100-42-5	0	0.250		U	0.109	0.250	0.500
1,1,1,2-Tetrachloroethane	630-20-6	0	0.0500		U	0.0200	0.0500	0.100
1,1,2,2-Tetrachloroethane	79-34-5	0	0.0500		U	0.0156	0.0500	0.100
1,1,2-Trichlorotrifluoroethane	76-13-1	0	0.100		U	0.0270	0.100	0.200
Tetrachloroethene	127-18-4	0	0.0750		U	0.0280	0.0750	0.150
1,2,3-Trichlorobenzene	87-61-6	0	0.250		U	0.0250	0.250	0.500
1,2,4-Trichlorobenzene	120-82-1	0	0.500		U	0.193	0.500	1.00
1,1,1-Trichloroethane	71-55-6	0	0.0500		U	0.0110	0.0500	0.100
1,1,2-Trichloroethane	79-00-5	0	0.100		U	0.0353	0.100	0.200
Trichlorofluoromethane	75-69-4	2.39	0.0500	QN	U	0.0200	0.0500	0.100
1,2,3-Trichloropropane	96-18-4	0	0.500		U	0.204	0.500	1.00
1,2,3-Trimethylbenzene	526-73-8	8.07	0.100		U	0.0460	0.100	0.200
1,3,5-Trimethylbenzene	108-67-8	7.43	0.100		U	0.0432	0.100	0.200
Vinyl chloride	75-01-4	0	0.0750		U	0.0273	0.0750	0.150
Xylenes, Total	1330-20-7	6.82	0.400		U	0.191	0.400	0.800
Ethyl Ether	60-29-7	0	0.0500		U	0.0170	0.0500	0.100
Tetrahydrofuran	109-99-9	4.01	0.250		U	0.0900	0.250	50.0
Iodomethane	74-88-4	0	0.500		U	0.242	0.500	1.00
Allyl chloride	107-05-1	0	2.00		U	0.580	2.00	4.00
trans-1,4-Dichloro-2-butene	110-57-6	0	0.200	QN	C4 U	0.0560	0.200	0.400

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SAMPLE RESULT SUMMARY
ORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW99-101423

Lab Sample ID:	L1667742-06	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW99-101423	**Collected Date/Time:**	10/14/23 16:30
Lab File ID:	1026_44	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	VOCMS57	**Preparation Date/Time:**	10/26/23 22:39
Analytical Batch:	WG2157275	**Analysis Date/Time:**	10/26/23 22:39
Dilution Factor:	1	**Prep Method:**	8260D
Analytical Method:	8260D	**Sample Vol Used:**	5 mL
Matrix:	GW	**Initial Wt/Vol:**	
Total Solids (%):		**Final Wt/Vol:**	5 mL

Analyte	CAS	RT	Result		Qualifier	DL	LOD	LOQ
			ug/l			ug/l	ug/l	ug/l
Benzene	71-43-2	4.16	0.0500		U	0.0160	0.0500	0.100
Toluene	108-88-3	5.33	0.0600	J	J	0.0500	0.100	0.200
Trichloroethene	79-01-6	4.48	3.92			0.0160	0.0400	0.0800
1,2,4-Trimethylbenzene	95-63-6	7.67	0.100		U	0.0464	0.100	0.200
Vinyl acetate	108-05-4	0	0.300		U	0.141	0.300	0.600

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-GLOMW04-101423

Lab Sample ID:	L1667742-01	**SDG:**	L1667742
Client Sample ID:	OT001-GLOMW04-101423	**Collected Date/Time:**	10/14/23 11:05
Lab File ID:	20231024085638	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	ICP13	**Preparation Date/Time:**	10/22/23 10:56
Analytical Batch:	WG2153991	**Analysis Date/Time:**	10/24/23 08:56
Dilution Factor:	1	**Prep Method:**	3015
Analytical Method:	6010D	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	45 mL
Total Solids (%):	_____	**Final Wt/Vol:**	50 mL

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Iron	7439-89-6	112		20.5	50.0	100
Manganese J	7439-96-5	6.16	J	0.855	5.00	10.0

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-RRSMW05-101423

Lab Sample ID:	L1667742-02	**SDG:**	L1667742
Client Sample ID:	OT001-RRSMW05-101423	**Collected Date/Time:**	10/14/23 12:20
Lab File ID:	20231024085929	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	ICP13	**Preparation Date/Time:**	10/22/23 10:56
Analytical Batch:	WG2153991	**Analysis Date/Time:**	10/24/23 08:59
Dilution Factor:	1	**Prep Method:**	3015
Analytical Method:	6010D	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	45 mL
Total Solids (%):	_____	**Final Wt/Vol:**	50 mL

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Iron	7439-89-6	4460		20.5	50.0	100
Manganese	7439-96-5	99.5		0.855	5.00	10.0

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW06-101423

Lab Sample ID:	L1667742-03	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW06-101423	**Collected Date/Time:**	10/14/23 14:45
Lab File ID:	20231024090221	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	ICP13	**Preparation Date/Time:**	10/22/23 10:56
Analytical Batch:	WG2153991	**Analysis Date/Time:**	10/24/23 09:02
Dilution Factor:	1	**Prep Method:**	3015
Analytical Method:	6010D	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	45 mL
Total Solids (%):	_____	**Final Wt/Vol:**	50 mL

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Iron	7439-89-6	2430		20.5	50.0	100
Manganese	7439-96-5	478		0.855	5.00	10.0

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW07-101423

Lab Sample ID:	L1667742-04	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW07-101423	**Collected Date/Time:**	10/14/23 15:25
Lab File ID:	20231024090514	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	ICP13	**Preparation Date/Time:**	10/22/23 10:56
Analytical Batch:	WG2153991	**Analysis Date/Time:**	10/24/23 09:05
Dilution Factor:	1	**Prep Method:**	3015
Analytical Method:	6010D	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	45 mL
Total Solids (%):	_____	**Final Wt/Vol:**	50 mL

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Iron	7439-89-6	308		20.5	50.0	100
Manganese J	7439-96-5	7.62	J	0.855	5.00	10.0

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW01-101423

Lab Sample ID:	L1667742-05	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW01-101423	**Collected Date/Time:**	10/14/23 16:25
Lab File ID:	20231024091345	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	ICP13	**Preparation Date/Time:**	10/22/23 10:56
Analytical Batch:	WG2153991	**Analysis Date/Time:**	10/24/23 09:13
Dilution Factor:	1	**Prep Method:**	3015
Analytical Method:	6010D	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	45 mL
Total Solids (%):	_____	**Final Wt/Vol:**	50 mL

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Iron J	7439-89-6	43.0	J	20.5	50.0	100
Manganese J	7439-96-5	1.42	J	0.855	5.00	10.0

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW99-101423

Lab Sample ID:	L1667742-06	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW99-101423	**Collected Date/Time:**	10/14/23 16:30
Lab File ID:	20231024091638	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	ICP13	**Preparation Date/Time:**	10/22/23 10:56
Analytical Batch:	WG2153991	**Analysis Date/Time:**	10/24/23 09:16
Dilution Factor:	1	**Prep Method:**	3015
Analytical Method:	6010D	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	45 mL
Total Solids (%):	_____	**Final Wt/Vol:**	50 mL

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Iron J	7439-89-6	38.5	J	20.5	50.0	100
Manganese J	7439-96-5	1.38	J	0.855	5.00	10.0

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-GLOMW04-101423

Lab Sample ID:	L1667742-01	**SDG:**	L1667742
Client Sample ID:	OT001-GLOMW04-101423	**Collected Date/Time:**	10/14/23 11:05
Lab File ID:	20231023164654	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	TITRANDO1	**Preparation Date/Time:**	10/23/23 16:46
Analytical Batch:	WG2156308	**Analysis Date/Time:**	10/23/23 16:46
Dilution Factor:	1	**Prep Method:**	2320 B-2011
Analytical Method:	2320 B-2011	**Sample Vol Used:**	50 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Alkalinity		69300		8450	10000	20000
Alkalinity,Bicarbonate		69300		8450	10000	20000
Alkalinity,Carbonate		10000	U	8450	10000	20000
Alkalinity,Hydroxide		10000	U	8450	10000	20000

Sample Narrative:
Endpoint pH 4.5 Headspace

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-RRSMW05-101423

Lab Sample ID:	L1667742-02	**SDG:**	L1667742
Client Sample ID:	OT001-RRSMW05-101423	**Collected Date/Time:**	10/14/23 12:20
Lab File ID:	20231023165011	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	TITRANDO1	**Preparation Date/Time:**	10/23/23 16:50
Analytical Batch:	WG2156308	**Analysis Date/Time:**	10/23/23 16:50
Dilution Factor:	1	**Prep Method:**	2320 B-2011
Analytical Method:	2320 B-2011	**Sample Vol Used:**	50 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Alkalinity		57500		8450	10000	20000
Alkalinity,Bicarbonate		57500		8450	10000	20000
Alkalinity,Carbonate		10000	U	8450	10000	20000
Alkalinity,Hydroxide		10000	U	8450	10000	20000

Sample Narrative:
Endpoint pH 4.5 Headspace

KMR 12/07/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW06-101423

Lab Sample ID:	L1667742-03	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW06-101423	**Collected Date/Time:**	10/14/23 14:45
Lab File ID:	20231023165347	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	TITRANDO1	**Preparation Date/Time:**	10/23/23 16:53
Analytical Batch:	WG2156308	**Analysis Date/Time:**	10/23/23 16:53
Dilution Factor:	1	**Prep Method:**	2320 B-2011
Analytical Method:	2320 B-2011	**Sample Vol Used:**	50 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Alkalinity		75800		8450	10000	20000
Alkalinity,Bicarbonate		75800		8450	10000	20000
Alkalinity,Carbonate		10000	U	8450	10000	20000
Alkalinity,Hydroxide		10000	U	8450	10000	20000

Sample Narrative:
Endpoint pH 4.5 Headspace

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW07-101423

Lab Sample ID:	L1667742-04	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW07-101423	**Collected Date/Time:**	10/14/23 15:25
Lab File ID:	20231023165910	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	TITRANDO1	**Preparation Date/Time:**	10/23/23 16:59
Analytical Batch:	WG2156308	**Analysis Date/Time:**	10/23/23 16:59
Dilution Factor:	1	**Prep Method:**	2320 B-2011
Analytical Method:	2320 B-2011	**Sample Vol Used:**	50 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Alkalinity		78200		8450	10000	20000
Alkalinity,Bicarbonate		78200		8450	10000	20000
Alkalinity,Carbonate		10000	U	8450	10000	20000
Alkalinity,Hydroxide		10000	U	8450	10000	20000

Sample Narrative:
Endpoint pH 4.5 Headspace

KMR 12/07/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW01-101423

Lab Sample ID:	L1667742-05	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW01-101423	**Collected Date/Time:**	10/14/23 16:25
Lab File ID:	20231023170424	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	TITRANDO1	**Preparation Date/Time:**	10/23/23 17:04
Analytical Batch:	WG2156308	**Analysis Date/Time:**	10/23/23 17:04
Dilution Factor:	1	**Prep Method:**	2320 B-2011
Analytical Method:	2320 B-2011	**Sample Vol Used:**	50 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Alkalinity		102000		8450	10000	20000
Alkalinity,Bicarbonate		102000		8450	10000	20000
Alkalinity,Carbonate		10000	U	8450	10000	20000
Alkalinity,Hydroxide		10000	U	8450	10000	20000

Sample Narrative:
Endpoint pH 4.5 Headspace

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW99-101423

Lab Sample ID:	L1667742-06	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW99-101423	**Collected Date/Time:**	10/14/23 16:30
Lab File ID:	20231023171855	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	TITRANDO1	**Preparation Date/Time:**	10/23/23 17:18
Analytical Batch:	WG2156308	**Analysis Date/Time:**	10/23/23 17:18
Dilution Factor:	1	**Prep Method:**	2320 B-2011
Analytical Method:	2320 B-2011	**Sample Vol Used:**	50 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Alkalinity		105000		8450	10000	20000
Alkalinity,Bicarbonate		105000		8450	10000	20000
Alkalinity,Carbonate		10000	U	8450	10000	20000
Alkalinity,Hydroxide		10000	U	8450	10000	20000

Sample Narrative:
Endpoint pH 4.5 Headspace

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-GLOMW04-101423

Lab Sample ID:	L1667742-01	**SDG:**	L1667742
Client Sample ID:	OT001-GLOMW04-101423	**Collected Date/Time:**	10/14/23 11:05
Lab File ID:	20231020204055	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	LACHAT2	**Preparation Date/Time:**	10/20/23 20:40
Analytical Batch:	WG2154634	**Analysis Date/Time:**	10/20/23 20:40
Dilution Factor:	1	**Prep Method:**	353.2
Analytical Method:	353.2	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Nitrate-Nitrite	7727-37-9	382		50.0	100	200

KMR 12/07/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-RRSMW05-101423

Lab Sample ID:	L1667742-02	**SDG:**	L1667742
Client Sample ID:	OT001-RRSMW05-101423	**Collected Date/Time:**	10/14/23 12:20
Lab File ID:	20231020204602	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	LACHAT2	**Preparation Date/Time:**	10/20/23 20:46
Analytical Batch:	WG2154634	**Analysis Date/Time:**	10/20/23 20:46
Dilution Factor:	1	**Prep Method:**	353.2
Analytical Method:	353.2	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Nitrate-Nitrite J	7727-37-9	123	J	50.0	100	200

KMR 12/07/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW06-101423

Lab Sample ID:	L1667742-03	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW06-101423	**Collected Date/Time:**	10/14/23 14:45
Lab File ID:	20231020204718	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	LACHAT2	**Preparation Date/Time:**	10/20/23 20:47
Analytical Batch:	WG2154634	**Analysis Date/Time:**	10/20/23 20:47
Dilution Factor:	1	**Prep Method:**	353.2
Analytical Method:	353.2	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Nitrate-Nitrite	7727-37-9	100	U	50.0	100	200

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW07-101423

Lab Sample ID:	L1667742-04	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW07-101423	**Collected Date/Time:**	10/14/23 15:25
Lab File ID:	20231020204834	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	LACHAT2	**Preparation Date/Time:**	10/20/23 20:48
Analytical Batch:	WG2154634	**Analysis Date/Time:**	10/20/23 20:48
Dilution Factor:	1	**Prep Method:**	353.2
Analytical Method:	353.2	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Nitrate-Nitrite	7727-37-9	264		50.0	100	200

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW01-101423

Lab Sample ID:	L1667742-05	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW01-101423	**Collected Date/Time:**	10/14/23 16:25
Lab File ID:	20231020204950	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	LACHAT2	**Preparation Date/Time:**	10/20/23 20:49
Analytical Batch:	WG2154634	**Analysis Date/Time:**	10/20/23 20:49
Dilution Factor:	1	**Prep Method:**	353.2
Analytical Method:	353.2	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Nitrate-Nitrite	7727-37-9	995		50.0	100	200

KMR 12/07/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW99-101423

Lab Sample ID:	L1667742-06	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW99-101423	**Collected Date/Time:**	10/14/23 16:30
Lab File ID:	20231020205106	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	LACHAT2	**Preparation Date/Time:**	10/20/23 20:51
Analytical Batch:	WG2154634	**Analysis Date/Time:**	10/20/23 20:51
Dilution Factor:	1	**Prep Method:**	353.2
Analytical Method:	353.2	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Nitrate-Nitrite	7727-37-9	979		50.0	100	200

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-GLOMW04-101423

Lab Sample ID:	L1667742-01	**SDG:**	L1667742
Client Sample ID:	OT001-GLOMW04-101423	**Collected Date/Time:**	10/14/23 11:05
Lab File ID:	15.0000.TXT	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	IC-10	**Preparation Date/Time:**	10/25/23 16:18
Analytical Batch:	WG2156852	**Analysis Date/Time:**	10/25/23 16:18
Dilution Factor:	1	**Prep Method:**	9056A
Analytical Method:	9056A	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Sulfate J	14808-79-8	3870	J	594	2500	5000

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-RRSMW05-101423

Lab Sample ID:	L1667742-02	**SDG:**	L1667742
Client Sample ID:	OT001-RRSMW05-101423	**Collected Date/Time:**	10/14/23 12:20
Lab File ID:	16.0000.TXT	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	IC-10	**Preparation Date/Time:**	10/25/23 16:32
Analytical Batch:	WG2156852	**Analysis Date/Time:**	10/25/23 16:32
Dilution Factor:	1	**Prep Method:**	9056A
Analytical Method:	9056A	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Sulfate J	14808-79-8	3640	J	594	2500	5000

KMR 12/07/23

SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW06-101423

Lab Sample ID:	L1667742-03	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW06-101423	**Collected Date/Time:**	10/14/23 14:45
Lab File ID:	17.0000.TXT	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	IC-10	**Preparation Date/Time:**	10/25/23 16:47
Analytical Batch:	WG2156852	**Analysis Date/Time:**	10/25/23 16:47
Dilution Factor:	1	**Prep Method:**	9056A
Analytical Method:	9056A	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Sulfate J	14808-79-8	4940	J	594	2500	5000

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW07-101423

Lab Sample ID:	L1667742-04	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW07-101423	**Collected Date/Time:**	10/14/23 15:25
Lab File ID:	18.0000.TXT	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	IC-10	**Preparation Date/Time:**	10/25/23 17:02
Analytical Batch:	WG2156852	**Analysis Date/Time:**	10/25/23 17:02
Dilution Factor:	1	**Prep Method:**	9056A
Analytical Method:	9056A	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Sulfate J	14808-79-8	3630	J	594	2500	5000

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW01-101423

Lab Sample ID:	L1667742-05	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW01-101423	**Collected Date/Time:**	10/14/23 16:25
Lab File ID:	19.0000.TXT	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	IC-10	**Preparation Date/Time:**	10/25/23 17:17
Analytical Batch:	WG2156852	**Analysis Date/Time:**	10/25/23 17:17
Dilution Factor:	1	**Prep Method:**	9056A
Analytical Method:	9056A	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Sulfate	14808-79-8	5780		594	2500	5000

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW99-101423

Lab Sample ID:	L1667742-06	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW99-101423	**Collected Date/Time:**	10/14/23 16:30
Lab File ID:	20.0000.TXT	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	IC-10	**Preparation Date/Time:**	10/25/23 17:32
Analytical Batch:	WG2156852	**Analysis Date/Time:**	10/25/23 17:32
Dilution Factor:	1	**Prep Method:**	9056A
Analytical Method:	9056A	**Sample Vol Used:**	10 mL
Matrix:	GW	**Initial Wt/Vol:**	_____
Total Solids (%):	_____	**Final Wt/Vol:**	_____

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Sulfate	14808-79-8	5710		594	2500	5000

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-GLOMW04-101423

Lab Sample ID:	L1667742-01	**SDG:**	L1667742
Client Sample ID:	OT001-GLOMW04-101423	**Collected Date/Time:**	10/14/23 11:05
Lab File ID:	20231022222550	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	LACHAT6	**Preparation Date/Time:**	10/21/23 18:17
Analytical Batch:	WG2154036	**Analysis Date/Time:**	10/22/23 22:25
Dilution Factor:	1	**Prep Method:**	351.2/365.4
Analytical Method:	351.2	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	20 mL
Total Solids (%):	_____	**Final Wt/Vol:**	20 mL

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Kjeldahl Nitrogen, TKN	7727-37-9	300	U	140	300	600

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-RRSMW05-101423

Lab Sample ID:	L1667742-02	**SDG:**	L1667742
Client Sample ID:	OT001-RRSMW05-101423	**Collected Date/Time:**	10/14/23 12:20
Lab File ID:	20231022222708	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	LACHAT6	**Preparation Date/Time:**	10/21/23 18:17
Analytical Batch:	WG2154036	**Analysis Date/Time:**	10/22/23 22:27
Dilution Factor:	1	**Prep Method:**	351.2/365.4
Analytical Method:	351.2	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	20 mL
Total Solids (%):	_____	**Final Wt/Vol:**	20 mL

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Kjeldahl Nitrogen, TKN	7727-37-9	300	U	140	300	600

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW06-101423

Lab Sample ID:	L1667742-03	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW06-101423	**Collected Date/Time:**	10/14/23 14:45
Lab File ID:	20231022222825	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	LACHAT6	**Preparation Date/Time:**	10/21/23 18:17
Analytical Batch:	WG2154036	**Analysis Date/Time:**	10/22/23 22:28
Dilution Factor:	1	**Prep Method:**	351.2/365.4
Analytical Method:	351.2	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	20 mL
Total Solids (%):	_____	**Final Wt/Vol:**	20 mL

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Kjeldahl Nitrogen, TKN	7727-37-9	300	U	140	300	600

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW07-101423

Lab Sample ID:	L1667742-04	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW07-101423	**Collected Date/Time:**	10/14/23 15:25
Lab File ID:	20231022222942	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	LACHAT6	**Preparation Date/Time:**	10/21/23 18:17
Analytical Batch:	WG2154036	**Analysis Date/Time:**	10/22/23 22:29
Dilution Factor:	1	**Prep Method:**	351.2/365.4
Analytical Method:	351.2	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	20 mL
Total Solids (%):	_____	**Final Wt/Vol:**	20 mL

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Kjeldahl Nitrogen, TKN J	7727-37-9	177	J	140	300	600

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW01-101423

Lab Sample ID:	L1667742-05	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW01-101423	**Collected Date/Time:**	10/14/23 16:25
Lab File ID:	20231022223059	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	LACHAT6	**Preparation Date/Time:**	10/21/23 18:17
Analytical Batch:	WG2154036	**Analysis Date/Time:**	10/22/23 22:30
Dilution Factor:	1	**Prep Method:**	351.2/365.4
Analytical Method:	351.2	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	20 mL
Total Solids (%):	_____	**Final Wt/Vol:**	20 mL

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Kjeldahl Nitrogen, TKN	7727-37-9	300	U	140	300	600

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SAMPLE RESULT SUMMARY
INORGANIC ANALYSIS DATA SHEET

SAMPLE NO.:
OT001-DSAMW99-101423

Lab Sample ID:	L1667742-06	**SDG:**	L1667742
Client Sample ID:	OT001-DSAMW99-101423	**Collected Date/Time:**	10/14/23 16:30
Lab File ID:	20231022223215	**Received Date/Time:**	10/18/23 09:00
Instrument ID:	LACHAT6	**Preparation Date/Time:**	10/21/23 18:17
Analytical Batch:	WG2154036	**Analysis Date/Time:**	10/22/23 22:32
Dilution Factor:	1	**Prep Method:**	351.2/365.4
Analytical Method:	351.2	**Sample Vol Used:**	_____
Matrix:	GW	**Initial Wt/Vol:**	20 mL
Total Solids (%):	_____	**Final Wt/Vol:**	20 mL

Analyte	CAS	Result	Qualifier	DL	LOD	LOQ
		ug/l		*ug/l*	*ug/l*	*ug/l*
Kjeldahl Nitrogen, TKN	7727-37-9	300	U	140	300	600

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APPENDIX E

Laboratory Analytical Reports

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ANALYTICAL REPORT

October 30, 2023

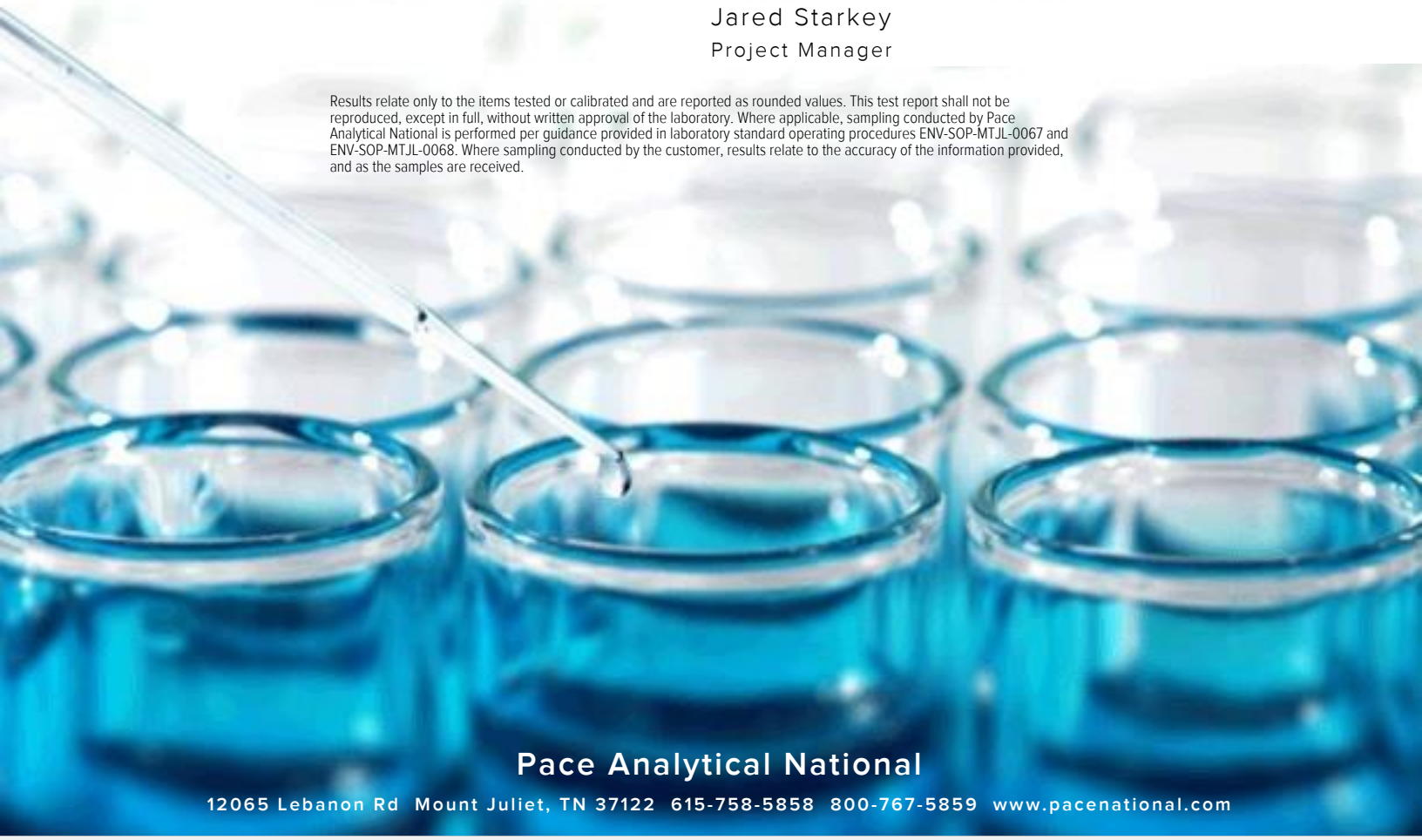
North Wind Site Services, LLC- AK

Sample Delivery Group:	L1667387
Samples Received:	10/17/2023
Project Number:	060068.001.93.3.01
Description:	Port Heiden RRS 21-034
Site:	PORT HEIDEN
Report To:	North Wind 7910 King Street Anchorage, AK 99518

Entire Report Reviewed By:

Jared Starkey
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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SS006-066MW06-101223 L1667387-01 GW

Collected by: Kristopher Reidt | Collected date/time: 10/12/23 11:15 | Received date/time: 10/17/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2153963	1	10/19/23 04:39	10/19/23 04:39	JCP	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2155784	1	10/25/23 16:06	10/26/23 13:15	DMG	Mt. Juliet, TN

SS006-066MW07-101223 L1667387-02 GW

Collected by: Kristopher Reidt | Collected date/time: 10/12/23 12:37 | Received date/time: 10/17/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2153963	1	10/19/23 05:03	10/19/23 05:03	JCP	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2155784	1.02	10/25/23 16:06	10/26/23 13:36	DMG	Mt. Juliet, TN

SS006-066MW99-101223 L1667387-03 GW

Collected by: Kristopher Reidt | Collected date/time: 10/12/23 12:45 | Received date/time: 10/17/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2153963	1	10/19/23 05:26	10/19/23 05:26	JCP	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2155784	1	10/25/23 16:06	10/26/23 13:56	DMG	Mt. Juliet, TN

SS006-066MW04-101223 L1667387-04 GW

Collected by: Kristopher Reidt | Collected date/time: 10/12/23 14:34 | Received date/time: 10/17/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2153963	1	10/19/23 05:50	10/19/23 05:50	JCP	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2155784	1.01	10/25/23 16:06	10/26/23 14:17	DMG	Mt. Juliet, TN

SS006-066MW05-101223 L1667387-05 GW

Collected by: Kristopher Reidt | Collected date/time: 10/12/23 15:35 | Received date/time: 10/17/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2153963	1	10/19/23 06:13	10/19/23 06:13	JCP	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2155784	1.01	10/25/23 16:06	10/26/23 14:38	DMG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2159044	1.05	10/27/23 05:58	10/28/23 02:01	DMG	Mt. Juliet, TN

SS006-215MW12-101223 L1667387-06 GW

Collected by: Kristopher Reidt | Collected date/time: 10/12/23 17:25 | Received date/time: 10/17/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2154313	1	10/19/23 13:01	10/19/23 13:01	JCP	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2155784	1.03	10/25/23 16:06	10/26/23 14:59	DMG	Mt. Juliet, TN

SS006-215MW09-101223 L1667387-07 GW

Collected by: Kristopher Reidt | Collected date/time: 10/12/23 18:30 | Received date/time: 10/17/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2153963	1	10/19/23 06:36	10/19/23 06:36	JCP	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2155784	1.04	10/25/23 16:06	10/26/23 16:01	DMG	Mt. Juliet, TN

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

SS006-215MW08-101223 L1667387-08 GW

Collected by: Kristopher Reidt
Collected date/time: 10/12/23 19:30
Received date/time: 10/17/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2153963	1	10/19/23 07:00	10/19/23 07:00	JCP	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2155784	1	10/25/23 16:06	10/26/23 16:22	DMG	Mt. Juliet, TN

SS006-EQBK01-101223 L1667387-09 GW

Collected by: Kristopher Reidt
Collected date/time: 10/12/23 20:00
Received date/time: 10/17/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2154313	1	10/19/23 12:37	10/19/23 12:37	JCP	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2155784	1.05	10/25/23 16:06	10/26/23 18:21	DMG	Mt. Juliet, TN

SS006-TRIP BLANK-HCL-01 L1667387-10 GW

Collected by: Kristopher Reidt
Collected date/time: 10/12/23 10:00
Received date/time: 10/17/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2154313	1	10/19/23 12:14	10/19/23 12:14	JCP	Mt. Juliet, TN

Unless qualified or notated within the narrative below, all sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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.



Jared Starkey
Project Manager

Sample Delivery Group (SDG) Narrative

Sample was prepared and/or analyzed past recommended holding time. Concentrations should be considered minimum values.

Batch	Method	Lab Sample ID
WG2159044	AK102	L1667387-05

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

Surrogate recovery limits have been exceeded; values are outside upper control limits.

Batch	Analyte	Lab Sample ID
WG2153963	4-Bromofluorobenzene	L1667387-05, 07
WG2154313	4-Bromofluorobenzene	(LCS) R3990042-1, (LCSD) R3990042-2

Semi-Volatile Organic Compounds (GC) by Method AK102

Surrogate recovery limits have been exceeded; values are outside lower control limits.

Batch	Analyte	Lab Sample ID
WG2155784	o-Terphenyl	(BLANK) R3992822-1, (LCS) R3992822-2, (LCSD) R3992822-3, (MS) R3992822-4, (MSD) R3992822-5, L1667387-01, 02, 03, 04, 05, 06, 07

The same analyte is found in the associated blank.

Batch	Analyte	Lab Sample ID
WG2155784	AK102 DRO C10-C25	L1667387-01, 02, 03, 04, 05, 06, 07, 08, 09
WG2159044	AK102 DRO C10-C25	L1667387-05

The associated batch QC was below the established quality control range for accuracy.

Batch	Lab Sample ID	Analytes
WG2155784	(LCS) R3992822-2, (LCSD) R3992822-3, L1667387-01, 02, 03, 04, 05, 06, 07, 08, 09	AK102 DRO C10-C25

The sample matrix interfered with the ability to make any accurate determination; spike value is low.

Batch	Lab Sample ID	Analytes
WG2155784	(MS) R3992822-4, (MSD) R3992822-5, L1667387-06	AK102 DRO C10-C25

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

Client ID	Lab Sample ID	Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
				ug/l		ug/l	ug/l	ug/l		date / time	
SS006-215MW09-101223	L1667387-07	Total Xylenes	1330-20-7	2.31	J	0.174	1.50	3.00	1	10/19/2023 06:36	WG2153963
SS006-EQBK01-101223	L1667387-09	Toluene	108-88-3	1.28		0.278	0.600	1.20	1	10/19/2023 12:37	WG2154313
SS006-EQBK01-101223	L1667387-09	Total Xylenes	1330-20-7	0.400	J	0.174	1.50	3.00	1	10/19/2023 12:37	WG2154313

Semi-Volatile Organic Compounds (GC) by Method AK102

Client ID	Lab Sample ID	Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
				ug/l		ug/l	ug/l	ug/l		date / time	
SS006-066MW06-101223	L1667387-01	AK102 DRO C10-C25	C10-C25	391	B J J4	170	400	800	1	10/26/2023 13:15	WG2155784
SS006-066MW07-101223	L1667387-02	AK102 DRO C10-C25	C10-C25	420	B J J4	173	408	816	1.02	10/26/2023 13:36	WG2155784
SS006-066MW99-101223	L1667387-03	AK102 DRO C10-C25	C10-C25	310	B J J4	170	400	800	1	10/26/2023 13:56	WG2155784
SS006-066MW04-101223	L1667387-04	AK102 DRO C10-C25	C10-C25	458	B J J4	172	404	808	1.01	10/26/2023 14:17	WG2155784
SS006-066MW05-101223	L1667387-05	AK102 DRO C10-C25	C10-C25	1040	B J4	172	404	808	1.01	10/26/2023 14:38	WG2155784
SS006-066MW05-101223	L1667387-05	AK102 DRO C10-C25	C10-C25	1650	B Q	179	420	840	1.05	10/28/2023 02:01	WG2159044
SS006-215MW12-101223	L1667387-06	AK102 DRO C10-C25	C10-C25	388	B J J4 J6	175	412	824	1.03	10/26/2023 14:59	WG2155784
SS006-215MW09-101223	L1667387-07	AK102 DRO C10-C25	C10-C25	609	B J J4	177	416	832	1.04	10/26/2023 16:01	WG2155784
SS006-215MW08-101223	L1667387-08	AK102 DRO C10-C25	C10-C25	261	B J J4	170	400	800	1	10/26/2023 16:22	WG2155784
SS006-EQBK01-101223	L1667387-09	AK102 DRO C10-C25	C10-C25	301	B J J4	179	420	840	1.05	10/26/2023 18:21	WG2155784

Additional Information - Results for field analyses are not accredited to ISO 17025

Analyte	Result	Units
Cooler#	red	
Cooler Temperature	4.1	Deg. C

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

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Benzene	71-43-2	0.500	U	0.0941	0.500	1.00	1	10/19/2023 04:39	WG2153963
Ethylbenzene	100-41-4	0.500	U	0.137	0.500	1.00	1	10/19/2023 04:39	WG2153963
Toluene	108-88-3	0.600	U	0.278	0.600	1.20	1	10/19/2023 04:39	WG2153963
Total Xylenes	1330-20-7	1.50	U	0.174	1.50	3.00	1	10/19/2023 04:39	WG2153963
(S) Toluene-d8	*2037-26-5*	*106*				*89.0-112*		*10/19/2023 04:39*	WG2153963
(S) 4-Bromofluorobenzene	*460-00-4*	*112*				*85.0-114*		*10/19/2023 04:39*	WG2153963
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*89.6*				*81.0-118*		*10/19/2023 04:39*	WG2153963

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
AK102 DRO C10-C25	C10-C25	391	B J J4	170	400	800	1	10/26/2023 13:15	WG2155784
(S) o-Terphenyl	*84-15-1*	*36.7*	J2			*50.0-150*		*10/26/2023 13:15*	WG2155784

Sample Narrative:

L1667387-01 WG2155784: Duplicate Analysis performed due to surrogate failure. Results confirm; reporting in hold data

Additional Information - Results for field analyses are not accredited to ISO 17025

Analyte	Result	Units
Cooler#	red	
Cooler Temperature	4.1	Deg. C

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

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Benzene	71-43-2	0.500	U	0.0941	0.500	1.00	1	10/19/2023 05:03	WG2153963
Ethylbenzene	100-41-4	0.500	U	0.137	0.500	1.00	1	10/19/2023 05:03	WG2153963
Toluene	108-88-3	0.600	U	0.278	0.600	1.20	1	10/19/2023 05:03	WG2153963
Total Xylenes	1330-20-7	1.50	U	0.174	1.50	3.00	1	10/19/2023 05:03	WG2153963
(S) Toluene-d8	*2037-26-5*	*105*				*89.0-112*		*10/19/2023 05:03*	WG2153963
(S) 4-Bromofluorobenzene	*460-00-4*	*111*				*85.0-114*		*10/19/2023 05:03*	WG2153963
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*89.8*				*81.0-118*		*10/19/2023 05:03*	WG2153963

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
AK102 DRO C10-C25	C10-C25	420	B J J4	173	408	816	1.02	10/26/2023 13:36	WG2155784
(S) o-Terphenyl	*84-15-1*	*32.2*	J2			*50.0-150*		*10/26/2023 13:36*	WG2155784

Sample Narrative:

L1667387-02 WG2155784: Duplicate Analysis performed due to surrogate failure. Results confirm; reporting in hold data

Additional Information - Results for field analyses are not accredited to ISO 17025

Analyte	Result	Units
Cooler#	red	
Cooler Temperature	4.1	Deg. C

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

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Benzene	71-43-2	0.500	U	0.0941	0.500	1.00	1	10/19/2023 05:26	WG2153963
Ethylbenzene	100-41-4	0.500	U	0.137	0.500	1.00	1	10/19/2023 05:26	WG2153963
Toluene	108-88-3	0.600	U	0.278	0.600	1.20	1	10/19/2023 05:26	WG2153963
Total Xylenes	1330-20-7	1.50	U	0.174	1.50	3.00	1	10/19/2023 05:26	WG2153963
(S) Toluene-d8	*2037-26-5*	*105*				*89.0-112*		*10/19/2023 05:26*	WG2153963
(S) 4-Bromofluorobenzene	*460-00-4*	*109*				*85.0-114*		*10/19/2023 05:26*	WG2153963
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*92.8*				*81.0-118*		*10/19/2023 05:26*	WG2153963

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
AK102 DRO C10-C25	C10-C25	310	B J J4	170	400	800	1	10/26/2023 13:56	WG2155784
(S) o-Terphenyl	*84-15-1*	*29.6*	J2			*50.0-150*		*10/26/2023 13:56*	WG2155784

Sample Narrative:

L1667387-03 WG2155784: Duplicate Analysis performed due to surrogate failure. Results confirm; reporting in hold data

Additional Information - Results for field analyses are not accredited to ISO 17025

Analyte	Result	Units
Cooler#	red	
Cooler Temperature	4.1	Deg. C

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

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Benzene	71-43-2	0.500	U	0.0941	0.500	1.00	1	10/19/2023 05:50	WG2153963
Ethylbenzene	100-41-4	0.500	U	0.137	0.500	1.00	1	10/19/2023 05:50	WG2153963
Toluene	108-88-3	0.600	U	0.278	0.600	1.20	1	10/19/2023 05:50	WG2153963
Total Xylenes	1330-20-7	1.50	U	0.174	1.50	3.00	1	10/19/2023 05:50	WG2153963
(S) Toluene-d8	*2037-26-5*	*106*				*89.0-112*		*10/19/2023 05:50*	WG2153963
(S) 4-Bromofluorobenzene	*460-00-4*	*112*				*85.0-114*		*10/19/2023 05:50*	WG2153963
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*89.6*				*81.0-118*		*10/19/2023 05:50*	WG2153963

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
AK102 DRO C10-C25	C10-C25	458	B J J4	172	404	808	1.01	10/26/2023 14:17	WG2155784
(S) o-Terphenyl	*84-15-1*	*32.0*	J2			*50.0-150*		*10/26/2023 14:17*	WG2155784

Sample Narrative:

L1667387-04 WG2155784: Duplicate Analysis performed due to surrogate failure. Results confirm; reporting in hold data

Additional Information - Results for field analyses are not accredited to ISO 17025

Analyte	Result	Units
Cooler#	red	
Cooler Temperature	4.1	Deg. C

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

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Benzene	71-43-2	0.500	U	0.0941	0.500	1.00	1	10/19/2023 06:13	WG2153963
Ethylbenzene	100-41-4	0.500	U	0.137	0.500	1.00	1	10/19/2023 06:13	WG2153963
Toluene	108-88-3	0.600	U	0.278	0.600	1.20	1	10/19/2023 06:13	WG2153963
Total Xylenes	1330-20-7	1.50	U	0.174	1.50	3.00	1	10/19/2023 06:13	WG2153963
(S) Toluene-d8	*2037-26-5*	*97.9*				*89.0-112*		*10/19/2023 06:13*	WG2153963
(S) 4-Bromofluorobenzene	*460-00-4*	*121*	J1			*85.0-114*		*10/19/2023 06:13*	WG2153963
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*93.2*				*81.0-118*		*10/19/2023 06:13*	WG2153963

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
AK102 DRO C10-C25	C10-C25	1040	B J4	172	404	808	1.01	10/26/2023 14:38	WG2155784
AK102 DRO C10-C25	C10-C25	1650	B Q	179	420	840	1.05	10/28/2023 02:01	WG2159044
(S) o-Terphenyl	*84-15-1*	*49.8*	J2			*50.0-150*		*10/26/2023 14:38*	WG2155784
(S) o-Terphenyl	*84-15-1*	*75.1*				*50.0-150*		*10/28/2023 02:01*	WG2159044

Sample Narrative:

L1667387-05 WG2155784, WG2159044: Duplicate Analysis performed due to surrogate failure. Results don't confirm; both analyses reported

L1667387-05 WG2155784, WG2159044: Duplicate Analysis performed due to Blank contamination. Results don't confirm; both analyses report

Additional Information - Results for field analyses are not accredited to ISO 17025

Analyte	Result	Units
Cooler#	red	
Cooler Temperature	4.1	Deg. C

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

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Benzene	71-43-2	0.500	U	0.0941	0.500	1.00	1	10/19/2023 13:01	WG2154313
Ethylbenzene	100-41-4	0.500	U	0.137	0.500	1.00	1	10/19/2023 13:01	WG2154313
Toluene	108-88-3	0.600	U	0.278	0.600	1.20	1	10/19/2023 13:01	WG2154313
Total Xylenes	1330-20-7	1.50	U	0.174	1.50	3.00	1	10/19/2023 13:01	WG2154313
(S) Toluene-d8	*2037-26-5*	*104*				*89.0-112*		*10/19/2023 13:01*	WG2154313
(S) 4-Bromofluorobenzene	*460-00-4*	*107*				*85.0-114*		*10/19/2023 13:01*	WG2154313
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*91.4*				*81.0-118*		*10/19/2023 13:01*	WG2154313

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
AK102 DRO C10-C25	C10-C25	388	B J J4 J6	175	412	824	1.03	10/26/2023 14:59	WG2155784
(S) o-Terphenyl	*84-15-1*	*43.6*	J2			*50.0-150*		*10/26/2023 14:59*	WG2155784

Sample Narrative:

L1667387-06 WG2155784: Duplicate Analysis performed due to surrogate failure. Results confirm; reporting in hold data

Additional Information - Results for field analyses are not accredited to ISO 17025

Analyte	Result	Units
Cooler#	red	
Cooler Temperature	4.1	Deg. C

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

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Benzene	71-43-2	0.500	U	0.0941	0.500	1.00	1	10/19/2023 06:36	WG2153963
Ethylbenzene	100-41-4	0.500	U	0.137	0.500	1.00	1	10/19/2023 06:36	WG2153963
Toluene	108-88-3	0.600	U	0.278	0.600	1.20	1	10/19/2023 06:36	WG2153963
Total Xylenes	1330-20-7	2.31	J	0.174	1.50	3.00	1	10/19/2023 06:36	WG2153963
(S) Toluene-d8	*2037-26-5*	*104*				*89.0-112*		*10/19/2023 06:36*	WG2153963
(S) 4-Bromofluorobenzene	*460-00-4*	*115*	J1			*85.0-114*		*10/19/2023 06:36*	WG2153963
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*89.4*				*81.0-118*		*10/19/2023 06:36*	WG2153963

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
AK102 DRO C10-C25	C10-C25	609	B J J4	177	416	832	1.04	10/26/2023 16:01	WG2155784
(S) o-Terphenyl	*84-15-1*	*44.3*	J2			*50.0-150*		*10/26/2023 16:01*	WG2155784

Sample Narrative:

L1667387-07 WG2155784: Duplicate Analysis performed due to surrogate failure. Results confirm; reporting in hold data

Additional Information - Results for field analyses are not accredited to ISO 17025

Analyte	Result	Units
Cooler#	red	
Cooler Temperature	4.1	Deg. C

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

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Benzene	71-43-2	0.500	U	0.0941	0.500	1.00	1	10/19/2023 07:00	WG2153963
Ethylbenzene	100-41-4	0.500	U	0.137	0.500	1.00	1	10/19/2023 07:00	WG2153963
Toluene	108-88-3	0.600	U	0.278	0.600	1.20	1	10/19/2023 07:00	WG2153963
Total Xylenes	1330-20-7	1.50	U	0.174	1.50	3.00	1	10/19/2023 07:00	WG2153963
(S) Toluene-d8	*2037-26-5*	*106*				*89.0-112*		*10/19/2023 07:00*	WG2153963
(S) 4-Bromofluorobenzene	*460-00-4*	*109*				*85.0-114*		*10/19/2023 07:00*	WG2153963
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*90.1*				*81.0-118*		*10/19/2023 07:00*	WG2153963

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
AK102 DRO C10-C25	C10-C25	261	B J J4	170	400	800	1	10/26/2023 16:22	WG2155784
(S) o-Terphenyl	*84-15-1*	*52.3*				*50.0-150*		*10/26/2023 16:22*	WG2155784

Sample Narrative:

L1667387-08 WG2155784: Duplicate Analysis performed due to surrogate failure. Results confirm; reporting in hold data

Additional Information - Results for field analyses are not accredited to ISO 17025

Analyte	Result	Units
Cooler#	red	
Cooler Temperature	4.1	Deg. C

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

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Benzene	71-43-2	0.500	U	0.0941	0.500	1.00	1	10/19/2023 12:37	WG2154313
Ethylbenzene	100-41-4	0.500	U	0.137	0.500	1.00	1	10/19/2023 12:37	WG2154313
Toluene	108-88-3	1.28		0.278	0.600	1.20	1	10/19/2023 12:37	WG2154313
Total Xylenes	1330-20-7	0.400	J	0.174	1.50	3.00	1	10/19/2023 12:37	WG2154313
(S) Toluene-d8	*2037-26-5*	*104*				*89.0-112*		*10/19/2023 12:37*	WG2154313
(S) 4-Bromofluorobenzene	*460-00-4*	*108*				*85.0-114*		*10/19/2023 12:37*	WG2154313
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*92.8*				*81.0-118*		*10/19/2023 12:37*	WG2154313

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
AK102 DRO C10-C25	C10-C25	301	B J J4	179	420	840	1.05	10/26/2023 18:21	WG2155784
(S) o-Terphenyl	*84-15-1*	*61.4*				*50.0-150*		*10/26/2023 18:21*	WG2155784

Sample Narrative:

L1667387-09 WG2155784: Duplicate Analysis performed due to surrogate failure. Results confirm; reporting in hold data

Additional Information - Results for field analyses are not accredited to ISO 17025

Analyte	Result	Units
Cooler#	red	
Cooler Temperature	4.1	Deg. C

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

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Benzene	71-43-2	0.500	U	0.0941	0.500	1.00	1	10/19/2023 12:14	WG2154313
Ethylbenzene	100-41-4	0.500	U	0.137	0.500	1.00	1	10/19/2023 12:14	WG2154313
Toluene	108-88-3	0.600	U	0.278	0.600	1.20	1	10/19/2023 12:14	WG2154313
Total Xylenes	1330-20-7	1.50	U	0.174	1.50	3.00	1	10/19/2023 12:14	WG2154313
(S) Toluene-d8	*2037-26-5*	*106*				*89.0-112*		*10/19/2023 12:14*	WG2154313
(S) 4-Bromofluorobenzene	*460-00-4*	*108*				*85.0-114*		*10/19/2023 12:14*	WG2154313
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*91.6*				*81.0-118*		*10/19/2023 12:14*	WG2154313

Method Blank (MB)

(MB) R3989033-3 10/18/23 23:35

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Benzene	0.500	U	0.0941	0.500	1.00
Ethylbenzene	0.500	U	0.137	0.500	1.00
Toluene	0.600	U	0.278	0.600	1.20
Total Xylenes	1.50	U	0.174	1.50	3.00
(S) Toluene-d8	*107*				*89.0-112*
(S) 4-Bromofluorobenzene	*110*				*85.0-114*
(S) 1,2-Dichloroethane-d4	*88.6*				*81.0-118*

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

(LCS) R3989033-1 10/18/23 21:26 • (LCSD) R3989033-2 10/18/23 22:59

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	5.00	5.97	5.78	119	116	79.0-120			3.23	20
Ethylbenzene	5.00	5.50	5.32	110	106	79.0-121			3.33	20
Toluene	5.00	5.70	5.42	114	108	80.0-121			5.04	20
Total Xylenes	15.0	16.2	15.7	108	105	79.0-121			3.13	20
(S) Toluene-d8				*105*	*105*	*89.0-112*				
(S) 4-Bromofluorobenzene				*113*	*113*	*85.0-114*				
(S) 1,2-Dichloroethane-d4				*85.9*	*82.7*	*81.0-118*				

Method Blank (MB)

(MB) R3990042-3 10/19/23 09:44

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Benzene	0.500	U	0.0941	0.500	1.00
Ethylbenzene	0.500	U	0.137	0.500	1.00
Toluene	0.600	U	0.278	0.600	1.20
Total Xylenes	1.50	U	0.174	1.50	3.00
(S) Toluene-d8	*105*				*89.0-112*
(S) 4-Bromofluorobenzene	*110*				*85.0-114*
(S) 1,2-Dichloroethane-d4	*92.3*				*81.0-118*

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

(LCS) R3990042-1 10/19/23 08:34 • (LCSD) R3990042-2 10/19/23 08:57

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	5.00	5.90	5.79	118	116	79.0-120			1.88	20
Ethylbenzene	5.00	5.32	5.16	106	103	79.0-121			3.05	20
Toluene	5.00	5.44	5.31	109	106	80.0-121			2.42	20
Total Xylenes	15.0	15.7	15.2	105	101	79.0-121			3.24	20
(S) Toluene-d8				*104*	*105*	*89.0-112*				
(S) 4-Bromofluorobenzene				*115*	*115*	*85.0-114*	J1	J1		
(S) 1,2-Dichloroethane-d4				*88.1*	*86.2*	*81.0-118*				

L1667387-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667387-06 10/19/23 13:01 • (MS) R3990042-4 10/19/23 20:00 • (MSD) R3990042-5 10/19/23 20:23

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Benzene	5.00	0.500	4.86	4.62	97.2	92.4	1	79.0-120			5.06	20
Ethylbenzene	5.00	0.500	4.39	4.18	87.8	83.6	1	79.0-121			4.90	20
Toluene	5.00	0.600	4.52	4.21	90.4	84.2	1	80.0-121			7.10	20
Total Xylenes	15.0	1.50	13.2	12.2	88.0	81.3	1	79.0-121			7.87	20
(S) Toluene-d8					*99.2*	*100*		*89.0-112*				
(S) 4-Bromofluorobenzene					*110*	*112*		*85.0-114*				
(S) 1,2-Dichloroethane-d4					*98.0*	*95.1*		*81.0-118*				

Method Blank (MB)

(MB) R3992822-1 10/26/23 10:51

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
AK102 DRO C10-C25	363	J	170	400	800
(S) o-Terphenyl	*30.6*	J2			*60.0-120*

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

(LCS) R3992822-2 10/26/23 11:11 • (LCSD) R3992822-3 10/26/23 12:13

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
AK102 DRO C10-C25	6000	4240	4120	70.7	68.7	75.0-125	J4	J4	2.87	20
(S) o-Terphenyl				*39.5*	*28.8*	*60.0-120*	J2	J2		

L1667387-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667387-06 10/26/23 14:59 • (MS) R3992822-4 10/26/23 15:20 • (MSD) R3992822-5 10/26/23 15:40

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
AK102 DRO C10-C25	6260	388	3600	3180	51.3	43.8	1.04	75.0-125	J6	J6	12.4	20
(S) o-Terphenyl					*24.4*	*21.7*		*50.0-150*	J2	J2		

Sample Narrative:

OS: Duplicate Analysis performed due to surrogate failure. Results confirm; reporting in hold data

Method Blank (MB)

(MB) R3992283-1 10/27/23 22:19

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
AK102 DRO C10-C25	417	J	170	400	800
(S) o-Terphenyl	*96.5*				*60.0-120*

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

(LCS) R3992283-2 10/27/23 23:00 • (LCSD) R3992283-3 10/27/23 23:20

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
AK102 DRO C10-C25	6000	4910	5390	81.8	89.8	75.0-125			9.32	20
(S) o-Terphenyl				*61.9*	*63.3*	*60.0-120*				

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

DL	Detection Limit.
LOD	Limit of Detection.
LOQ	Limit of Quantitation.
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.
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.
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.
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.
Q	Sample was prepared and/or analyzed past holding time as defined in the method. Concentrations should be considered minimum values.
U	Below Detectable Limits: Indicates that the analyte was not detected.

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.

Company Name/Address:
North Wind Site Services, LLC- AK
~~7910 King Street~~ VR 2525 C St. Ste 130
~~Anchorage, AK 99518~~ Anchorage, AK 99503

Billing Information:
Accounts Payable
1425 Higham St
Idaho Falls, ID 83402

Report to: North Wind

Email To: rlafata@northwindgrp.com;jill.jones@northwin

Project Description: Port Heiden RRS 21-034

City/State Collected: Port Heiden, AK

Please Circle: PT MT CT ET

Phone: ~~907-277-5488~~ VR 907-602-3082

Client Project # 060068.001.93.3.01

Lab Project # NORWINDAAK-PORTHEID

Collected by (print): Kristopher Reidt

Site/Facility ID # PORT HEIDEN

P.O. # 6-0000198

Collected by (signature):

Immediately Packed on Ice N ___ Y X

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

Quote # NORTHWIND AK

Date Results Needed: STANDARD

Analysis / Container / Preservative

Pres Chk	DODAK102 100ml Amb HCl	DODALK,DODSULFATE 250mlHDPE-NoPres	DODFEICP,DODMNICP 250mlHDPE-HNO3	DODNO2NO3,DODTKN 250mlHDPE-H2SO4	DODV8260 40mlAmb-HCl	DODV8260BTEX 40mlAmb-HCl	DODV8260ULL 40mlAmb HCl				
X						X					

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Remarks	Sample # (lab only)
SS006-066MW06-101223	Grab	GW		10-12-23	1115	5		-01
SS006-066MW07-101223	Grab	GW		10-12-23	1237	5		-02
SS006-066MW99-101223	Grab	GW		10-12-23	1245	5		-03
SS006-066MW04-101223	Grab	GW		10-12-23	1434	5		-04
SS006-066MW05-101223	Grab	GW		10-12-23	1535	5		-05
SS006-215MW12-101223	Grab	GW		10-12-23	1725	5		-06
SS006-215MW12-101223-MS	Grab	GW		10-12-23	1730	5	MS	-06
SS006-215MW12-101223-MSD	Grab	GW		10-12-23	1730	5	MSD	-06
SS006-215MW09-101223	Grab	GW		10-12-23	1830	5		-07
SS006-215MW08-101223	Grab	GW		10-12-23	1930	5		-08

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

Remarks: Cooler ID "RED"
NPDL # 21-034

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __UPS __FedEx __Courier _____

Tracking # 6841 8346 5408

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
[signature]	~~10-12-23~~ 10-13-23	~~12:00~~	[signature] 18:50 10-13-23	3	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: <CA 8 °C 4-1W=4.1 Bottles Received: 55	
[signature]	10-16-23	10:20			
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 10-17-23 Time: 9:00	Hold: Condition: NCF / (OK)
			9 10		

Chain of Custody Page 1 of 2

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 # L1467887
B098
Tab

Acctnum: NORWINDAAK
Template: T235099
Prelogin: P1015439
PM: 546 - Jared Starkey
PB: 8/1/23

Shipped Via:

Company Name/Address:
North Wind Site Services, LLC- AK
~~7910 King Street~~ VR 2525 C St. Ste 130
~~Anchorage, AK 99518~~ Anchorage, AK 99503

Billing Information:
Accounts Payable
1425 Higham St
Idaho Falls, ID 83402

Report to: North Wind

Email To: rlafata@northwindgrp.com;jill.jones@northwin

Project Description: Port Heiden RRS 21-034

City/State Collected: Port Heiden, AK

Please Circle: PT MT CT ET

Phone: ~~907-277-5488~~ 907-602-3082

Client Project # 060068.001.93.03.01

Lab Project # NORWINDAAK-PORTHEID

Collected by (print): Kristopher Rezat

Site/Facility ID # PORTHEIDEN

P.O. # G-00001098

Collected by (signature):

Immediately Packed on Ice N___ Y_X_

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

Quote # NORTHWIND AK

Date Results Needed: STANDARD

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DODAK102 100ml Amb HCl	DODALK,DODSULFATE 250mlHDPE-NoPres	DODFEICP,DODMNICP 250mlHDPE-HNO3	DODNO2NO3,DODTKN 250mlHDPE-H2SO4	DODV8260 40mlAmb-HCl	DODV8260BTEX 40mlAmb-HCl	DODV8260ULL 40mlAmb HCl				Remarks	Sample # (lab only)
SS006-EQBK01-101223	Grab	GW		10-12-23	2000	5	X					X						-09
SS006-TRIPBLNK-HCL-01	Grab			10-12-23	1000	3						X					TRIP BLNK	-10

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

Remarks: Cooler ID: "RED"
NPDL # 21-034

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __ UPS __ FedEx __ Courier _____

Tracking #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR
	10-13-23	1200	Renee Lafata 18:50 10-13-23	
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C Bottles Received:
	10/16/23	10:20		
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: Time:
				10/17/23 9:00

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

If preservation required by Login: Date/Time

Hold:

Condition: NCF / OK

Chain of Custody Page 2 of 2

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 # L1666738

Table #

Acctnum: NORWINDAAK
Template: T235099
Prelogin: P1015439
PM: 546 - Jared Starkey
PB: CR 8/1/23

Shipped Via:

ANALYTICAL REPORT

February 14, 2024

Revised Report

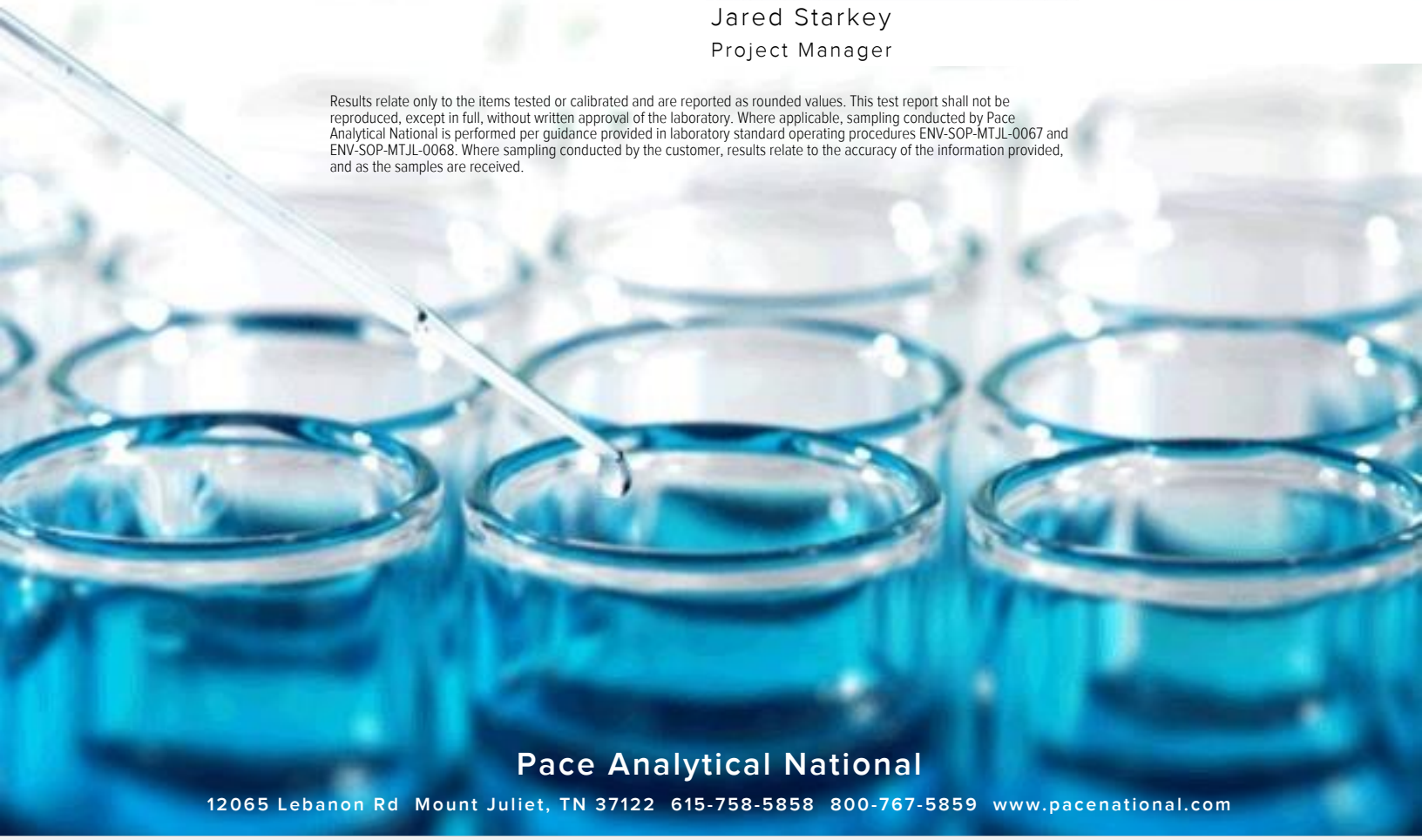
North Wind Site Services, LLC- AK

Sample Delivery Group:	L1667742
Samples Received:	10/18/2023
Project Number:	060068.001.93.03.01
Description:	Port Heiden RRS 21-034
Site:	6LOMW04
Report To:	North Wind 7910 King Street Anchorage, AK 99518

Entire Report Reviewed By:

Jared Starkey
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
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OT001-GLOMW04-101423 L1667742-01 GW

Collected by: Kristopher Reidt | Collected date/time: 10/14/23 11:05 | Received date/time: 10/18/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2156308	1	10/23/23 16:46	10/23/23 16:46	BJM	Mt. Juliet, TN
Wet Chemistry by Method 351.2	WG2154036	1	10/21/23 18:17	10/22/23 22:25	CAT	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG2154634	1	10/20/23 20:40	10/20/23 20:40	AEC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2156852	1	10/25/23 16:18	10/25/23 16:18	KMC	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2153991	1	10/22/23 10:56	10/24/23 08:56	DJS	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260 D-LL	WG2155682	1	10/22/23 04:35	10/22/23 04:35	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260 D-LL	WG2157275	1	10/26/23 21:04	10/26/23 21:04	KSD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2154426	1	10/19/23 17:17	10/19/23 17:17	DYW	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2159044	1.05	10/27/23 05:58	10/28/23 03:22	DMG	Mt. Juliet, TN

OT001-RRSMW05-101423 L1667742-02 GW

Collected by: Kristopher Reidt | Collected date/time: 10/14/23 12:20 | Received date/time: 10/18/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2156308	1	10/23/23 16:50	10/23/23 16:50	BJM	Mt. Juliet, TN
Wet Chemistry by Method 351.2	WG2154036	1	10/21/23 18:17	10/22/23 22:27	CAT	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG2154634	1	10/20/23 20:46	10/20/23 20:46	AEC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2156852	1	10/25/23 16:32	10/25/23 16:32	KMC	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2153991	1	10/22/23 10:56	10/24/23 08:59	DJS	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260 D-LL	WG2155682	1	10/22/23 04:54	10/22/23 04:54	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260 D-LL	WG2157275	1	10/26/23 21:23	10/26/23 21:23	KSD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2154426	1	10/19/23 17:39	10/19/23 17:39	DYW	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2159044	1.05	10/27/23 05:58	10/28/23 05:03	DMG	Mt. Juliet, TN

OT001-DSAMW06-101423 L1667742-03 GW

Collected by: Kristopher Reidt | Collected date/time: 10/14/23 14:45 | Received date/time: 10/18/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2156308	1	10/23/23 16:53	10/23/23 16:53	BJM	Mt. Juliet, TN
Wet Chemistry by Method 351.2	WG2154036	1	10/21/23 18:17	10/22/23 22:28	CAT	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG2154634	1	10/20/23 20:47	10/20/23 20:47	AEC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2156852	1	10/25/23 16:47	10/25/23 16:47	KMC	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2153991	1	10/22/23 10:56	10/24/23 09:02	DJS	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260 D-LL	WG2155682	1	10/22/23 05:14	10/22/23 05:14	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260 D-LL	WG2157275	1	10/26/23 21:42	10/26/23 21:42	KSD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2154426	1	10/19/23 18:01	10/19/23 18:01	DYW	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2159044	1.05	10/27/23 05:58	10/28/23 05:23	DMG	Mt. Juliet, TN

OT001-DSAMW07-101423 L1667742-04 GW

Collected by: Kristopher Reidt | Collected date/time: 10/14/23 15:25 | Received date/time: 10/18/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2156308	1	10/23/23 16:59	10/23/23 16:59	BJM	Mt. Juliet, TN
Wet Chemistry by Method 351.2	WG2154036	1	10/21/23 18:17	10/22/23 22:29	CAT	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG2154634	1	10/20/23 20:48	10/20/23 20:48	AEC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2156852	1	10/25/23 17:02	10/25/23 17:02	KMC	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2153991	1	10/22/23 10:56	10/24/23 09:05	DJS	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260 D-LL	WG2155682	1	10/22/23 05:34	10/22/23 05:34	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260 D-LL	WG2157275	1	10/26/23 22:01	10/26/23 22:01	KSD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2155879	1	10/22/23 14:00	10/22/23 14:00	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2225461	1	10/22/23 05:34	10/22/23 05:34	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2159044	1.05	10/27/23 05:58	10/28/23 05:43	DMG	Mt. Juliet, TN

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

SAMPLE SUMMARY

OT001-DSAMW01-101423 L1667742-05 GW

Collected by: Kristopher Reidt
Collected date/time: 10/14/23 16:25
Received date/time: 10/18/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2156308	1	10/23/23 17:04	10/23/23 17:04	BJM	Mt. Juliet, TN
Wet Chemistry by Method 351.2	WG2154036	1	10/21/23 18:17	10/22/23 22:30	CAT	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG2154634	1	10/20/23 20:49	10/20/23 20:49	AEC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2156852	1	10/25/23 17:17	10/25/23 17:17	KMC	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2153991	1	10/22/23 10:56	10/24/23 09:13	DJS	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260 D-LL	WG2155682	1	10/22/23 05:53	10/22/23 05:53	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260 D-LL	WG2157275	1	10/26/23 22:20	10/26/23 22:20	KSD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2155879	1	10/22/23 14:22	10/22/23 14:22	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2225461	1	10/22/23 05:53	10/22/23 05:53	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2159044	1.05	10/27/23 05:58	10/28/23 06:03	DMG	Mt. Juliet, TN

OT001-DSAMW99-101423 L1667742-06 GW

Collected by: Kristopher Reidt
Collected date/time: 10/14/23 16:30
Received date/time: 10/18/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2156308	1	10/23/23 17:18	10/23/23 17:18	BJM	Mt. Juliet, TN
Wet Chemistry by Method 351.2	WG2154036	1	10/21/23 18:17	10/22/23 22:32	CAT	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG2154634	1	10/20/23 20:51	10/20/23 20:51	AEC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2156852	1	10/25/23 17:32	10/25/23 17:32	KMC	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2153991	1	10/22/23 10:56	10/24/23 09:16	DJS	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260 D-LL	WG2155682	1	10/22/23 06:13	10/22/23 06:13	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260 D-LL	WG2157275	1	10/26/23 22:39	10/26/23 22:39	KSD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2155879	1	10/22/23 14:43	10/22/23 14:43	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2225461	1	10/22/23 06:13	10/22/23 06:13	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2159047	1.05	10/27/23 22:34	10/28/23 22:28	DMG	Mt. Juliet, TN

Unless qualified or notated within the narrative below, all sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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.



Jared Starkey
Project Manager

Report Revision History

Level II Report - Version 1: 11/20/23 15:22
Level IV Report - Version 2: 11/22/23 14:31

Project Comments

Separating 8260 and 8260LL runs with recent IT update.

Wet Chemistry by Method 351.2

The sample matrix interfered with the ability to make any accurate determination; spike value is high.

Batch	Lab Sample ID	Analytes
WG2154036	(MS) R3989558-4, (MSD) R3989558-5	Kjeldahl Nitrogen, TKN

The sample concentration is too high to evaluate accurate spike recoveries.

Batch	Lab Sample ID	Analytes
WG2154036	(MS) R3989558-7	Kjeldahl Nitrogen, TKN

Wet Chemistry by Method 9056A

The sample matrix interfered with the ability to make any accurate determination; spike value is low.

Batch	Lab Sample ID	Analytes
WG2156852	(MS) R3992131-7, (MS) R3992131-4, (MSD) R3992131-8	Sulfate

Metals (ICP) by Method 6010D

The sample concentration is too high to evaluate accurate spike recoveries.

Batch	Lab Sample ID	Analytes
WG2153991	(MS) R3990480-4, (MSD) R3990480-5	Manganese

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Data is likely to show a low bias concerning the result.

Batch	Lab Sample ID	Analytes
WG2155682	L1667742-01	trans-1,4-Dichloro-2-butene
WG2155682	L1667742-02	trans-1,4-Dichloro-2-butene
WG2155682	L1667742-03	trans-1,4-Dichloro-2-butene
WG2155682	L1667742-04	trans-1,4-Dichloro-2-butene
WG2155682	L1667742-05	trans-1,4-Dichloro-2-butene
WG2155682	L1667742-06	trans-1,4-Dichloro-2-butene

The reported concentration is an estimate. The continuing calibration standard associated with this data responded high. Data is likely to show a high bias concerning the result.

Batch	Lab Sample ID	Analytes
WG2155682	L1667742-03	Trichlorofluoromethane

The same analyte is found in the associated blank.

Batch	Analyte	Lab Sample ID
WG2157275	1,2,4-Trimethylbenzene	L1667742-03

The sample matrix interfered with the ability to make any accurate determination; spike value is high.

Batch	Lab Sample ID	Analytes
WG2155682	(MS) R3990575-6, (MSD) R3990575-7	28 analytes

The sample matrix interfered with the ability to make any accurate determination; spike value is low.

Batch	Lab Sample ID	Analytes
WG2155682	(MS) R3990575-4, (MS) R3990575-6, (MSD) R3990575-5, (MSD) R3990575-7	1,3,5-Trimethylbenzene, 2-Chlorotoluene, Cyclohexane, n-Butylbenzene, tert-Butylbenzene and Tetrahydrofuran

The associated batch QC was outside the established quality control range for precision.

Batch	Lab Sample ID	Analytes
WG2155682	(MSD) R3990575-7	trans-1,4-Dichloro-2-butene

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

The sample concentration is too high to evaluate accurate spike recoveries.

Batch	Lab Sample ID	Analytes
WG2155879	(MS) R3990613-4, (MSD) R3990613-5, (MSD) R3990613-7	1,1-Dichloroethane, Acetone and Naphthalene

The sample matrix interfered with the ability to make any accurate determination; spike value is low.

Batch	Lab Sample ID	Analytes
WG2155879	(MS) R3990613-6, (MS) R3990613-4, (MSD) R3990613-5, (MSD) R3990613-7	2-Chloroethyl vinyl ether and Isopropylbenzene

The sample matrix interfered with the ability to make any accurate determination; spike value is high.

Batch	Lab Sample ID	Analytes
WG2155879	(MS) R3990613-4	Naphthalene

The associated batch QC was outside the established quality control range for precision.

Batch	Lab Sample ID	Analytes
WG2155879	(MSD) R3990613-7, (MSD) R3990613-5	2-Chloroethyl vinyl ether, Acetone and Naphthalene

Semi-Volatile Organic Compounds (GC) by Method AK102

Surrogate recovery limits have been exceeded; values are outside lower control limits.

Batch	Analyte	Lab Sample ID
WG2159047	o-Terphenyl	(LCS) R3992862-2, (LCSD) R3992862-3

Semi-Volatile Organic Compounds (GC) by Method AK102

The same analyte is found in the associated blank.

Batch	Analyte	Lab Sample ID
WG2159044	AK102 DRO C10-C25	L1667742-01, 02, 03, 04, 05
WG2159047	AK102 DRO C10-C25	L1667742-06

Wet Chemistry by Method 2320 B-2011

Client ID	Lab Sample ID	Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
				ug/l		ug/l	ug/l	ug/l		date / time	
OT001-GLOMW04-101423	L1667742-01	Alkalinity		69300		8450	10000	20000	1	10/23/2023 16:46	WG2156308
OT001-GLOMW04-101423	L1667742-01	Alkalinity,Bicarbonate		69300		8450	10000	20000	1	10/23/2023 16:46	WG2156308
OT001-RRSMW05-101423	L1667742-02	Alkalinity		57500		8450	10000	20000	1	10/23/2023 16:50	WG2156308
OT001-RRSMW05-101423	L1667742-02	Alkalinity,Bicarbonate		57500		8450	10000	20000	1	10/23/2023 16:50	WG2156308
OT001-DSAMW06-101423	L1667742-03	Alkalinity		75800		8450	10000	20000	1	10/23/2023 16:53	WG2156308
OT001-DSAMW06-101423	L1667742-03	Alkalinity,Bicarbonate		75800		8450	10000	20000	1	10/23/2023 16:53	WG2156308
OT001-DSAMW07-101423	L1667742-04	Alkalinity		78200		8450	10000	20000	1	10/23/2023 16:59	WG2156308
OT001-DSAMW07-101423	L1667742-04	Alkalinity,Bicarbonate		78200		8450	10000	20000	1	10/23/2023 16:59	WG2156308
OT001-DSAMW01-101423	L1667742-05	Alkalinity		102000		8450	10000	20000	1	10/23/2023 17:04	WG2156308
OT001-DSAMW01-101423	L1667742-05	Alkalinity,Bicarbonate		102000		8450	10000	20000	1	10/23/2023 17:04	WG2156308
OT001-DSAMW99-101423	L1667742-06	Alkalinity		105000		8450	10000	20000	1	10/23/2023 17:18	WG2156308
OT001-DSAMW99-101423	L1667742-06	Alkalinity,Bicarbonate		105000		8450	10000	20000	1	10/23/2023 17:18	WG2156308

Wet Chemistry by Method 351.2

Client ID	Lab Sample ID	Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
				ug/l		ug/l	ug/l	ug/l		date / time	
OT001-DSAMW07-101423	L1667742-04	Kjeldahl Nitrogen, TKN	7727-37-9	177	J	140	300	600	1	10/22/2023 22:29	WG2154036

Wet Chemistry by Method 353.2

Client ID	Lab Sample ID	Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
				ug/l		ug/l	ug/l	ug/l		date / time	
OT001-GLOMW04-101423	L1667742-01	Nitrate-Nitrite	7727-37-9	382		50.0	100	200	1	10/20/2023 20:40	WG2154634
OT001-RRSMW05-101423	L1667742-02	Nitrate-Nitrite	7727-37-9	123	J	50.0	100	200	1	10/20/2023 20:46	WG2154634
OT001-DSAMW07-101423	L1667742-04	Nitrate-Nitrite	7727-37-9	264		50.0	100	200	1	10/20/2023 20:48	WG2154634
OT001-DSAMW01-101423	L1667742-05	Nitrate-Nitrite	7727-37-9	995		50.0	100	200	1	10/20/2023 20:49	WG2154634
OT001-DSAMW99-101423	L1667742-06	Nitrate-Nitrite	7727-37-9	979		50.0	100	200	1	10/20/2023 20:51	WG2154634

Wet Chemistry by Method 9056A

Client ID	Lab Sample ID	Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
				ug/l		ug/l	ug/l	ug/l		date / time	
OT001-GLOMW04-101423	L1667742-01	Sulfate	14808-79-8	3870	J	594	2500	5000	1	10/25/2023 16:18	WG2156852
OT001-RRSMW05-101423	L1667742-02	Sulfate	14808-79-8	3640	J	594	2500	5000	1	10/25/2023 16:32	WG2156852
OT001-DSAMW06-101423	L1667742-03	Sulfate	14808-79-8	4940	J	594	2500	5000	1	10/25/2023 16:47	WG2156852
OT001-DSAMW07-101423	L1667742-04	Sulfate	14808-79-8	3630	J	594	2500	5000	1	10/25/2023 17:02	WG2156852
OT001-DSAMW01-101423	L1667742-05	Sulfate	14808-79-8	5780		594	2500	5000	1	10/25/2023 17:17	WG2156852

Wet Chemistry by Method 9056A

Client ID	Lab Sample ID	Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
				ug/l		ug/l	ug/l	ug/l		date / time	
OT001-DSAMW99-101423	L1667742-06	Sulfate	14808-79-8	5710		594	2500	5000	1	10/25/2023 17:32	WG2156852

Metals (ICP) by Method 6010D

Client ID	Lab Sample ID	Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
				ug/l		ug/l	ug/l	ug/l		date / time	
OT001-GLOMW04-101423	L1667742-01	Iron	7439-89-6	112		20.5	50.0	100	1	10/24/2023 08:56	WG2153991
OT001-GLOMW04-101423	L1667742-01	Manganese	7439-96-5	6.16	J	0.855	5.00	10.0	1	10/24/2023 08:56	WG2153991
OT001-RRSMW05-101423	L1667742-02	Iron	7439-89-6	4460		20.5	50.0	100	1	10/24/2023 08:59	WG2153991
OT001-RRSMW05-101423	L1667742-02	Manganese	7439-96-5	99.5		0.855	5.00	10.0	1	10/24/2023 08:59	WG2153991
OT001-DSAMW06-101423	L1667742-03	Iron	7439-89-6	2430		20.5	50.0	100	1	10/24/2023 09:02	WG2153991
OT001-DSAMW06-101423	L1667742-03	Manganese	7439-96-5	478		0.855	5.00	10.0	1	10/24/2023 09:02	WG2153991
OT001-DSAMW07-101423	L1667742-04	Iron	7439-89-6	308		20.5	50.0	100	1	10/24/2023 09:05	WG2153991
OT001-DSAMW07-101423	L1667742-04	Manganese	7439-96-5	7.62	J	0.855	5.00	10.0	1	10/24/2023 09:05	WG2153991
OT001-DSAMW01-101423	L1667742-05	Iron	7439-89-6	43.0	J	20.5	50.0	100	1	10/24/2023 09:13	WG2153991
OT001-DSAMW01-101423	L1667742-05	Manganese	7439-96-5	1.42	J	0.855	5.00	10.0	1	10/24/2023 09:13	WG2153991
OT001-DSAMW99-101423	L1667742-06	Iron	7439-89-6	38.5	J	20.5	50.0	100	1	10/24/2023 09:16	WG2153991
OT001-DSAMW99-101423	L1667742-06	Manganese	7439-96-5	1.38	J	0.855	5.00	10.0	1	10/24/2023 09:16	WG2153991

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Client ID	Lab Sample ID	Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
				ug/l		ug/l	ug/l	ug/l		date / time	
OT001-GLOMW04-101423	L1667742-01	Acetone	67-64-1	1.67	J	0.548	2.00	4.00	1	10/22/2023 04:35	WG2155682
OT001-GLOMW04-101423	L1667742-01	Isopropylbenzene	98-82-8	0.0480	J	0.0345	1.00	2.00	1	10/22/2023 04:35	WG2155682
OT001-GLOMW04-101423	L1667742-01	Naphthalene	91-20-3	0.946		0.125	0.250	0.500	1	10/22/2023 04:35	WG2155682
OT001-GLOMW04-101423	L1667742-01	n-Propylbenzene	103-65-1	0.0540	J	0.0472	0.100	0.200	1	10/22/2023 04:35	WG2155682
OT001-GLOMW04-101423	L1667742-01	Toluene	108-88-3	0.0890	J	0.0500	0.100	0.200	1	10/26/2023 21:04	WG2157275
OT001-GLOMW04-101423	L1667742-01	1,2,3-Trimethylbenzene	526-73-8	0.284		0.0460	0.100	0.200	1	10/22/2023 04:35	WG2155682
OT001-GLOMW04-101423	L1667742-01	1,3,5-Trimethylbenzene	108-67-8	0.195	J	0.0432	0.100	0.200	1	10/22/2023 04:35	WG2155682
OT001-GLOMW04-101423	L1667742-01	trans-1,4-Dichloro-2-butene	110-57-6	0.211	C4 J	0.0560	0.200	0.400	1	10/22/2023 04:35	WG2155682
OT001-RRSMW05-101423	L1667742-02	Acetone	67-64-1	1.42	J	0.548	2.00	4.00	1	10/22/2023 04:54	WG2155682
OT001-RRSMW05-101423	L1667742-02	Naphthalene	91-20-3	0.144	J	0.125	0.250	0.500	1	10/22/2023 04:54	WG2155682
OT001-RRSMW05-101423	L1667742-02	Toluene	108-88-3	0.0730	J	0.0500	0.100	0.200	1	10/26/2023 21:23	WG2157275
OT001-RRSMW05-101423	L1667742-02	1,2,3-Trimethylbenzene	526-73-8	0.0770	J	0.0460	0.100	0.200	1	10/22/2023 04:54	WG2155682
OT001-RRSMW05-101423	L1667742-02	1,3,5-Trimethylbenzene	108-67-8	0.108	J	0.0432	0.100	0.200	1	10/22/2023 04:54	WG2155682

DETECTION SUMMARY

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Client ID	Lab Sample ID	Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
				ug/l		ug/l	ug/l	ug/l		date / time	
OT001-DSAMW06-101423	L1667742-03	Acetone	67-64-1	1.44	J	0.548	2.00	4.00	1	10/22/2023 05:14	WG2155682
OT001-DSAMW06-101423	L1667742-03	Carbon disulfide	75-15-0	0.262	J	0.162	0.500	1.00	1	10/22/2023 05:14	WG2155682
OT001-DSAMW06-101423	L1667742-03	Ethylbenzene	100-41-4	0.0370	J	0.0212	0.0500	0.100	1	10/26/2023 21:42	WG2157275
OT001-DSAMW06-101423	L1667742-03	Tetrachloroethene	127-18-4	0.131	J	0.0280	0.0750	0.150	1	10/22/2023 05:14	WG2155682
OT001-DSAMW06-101423	L1667742-03	Toluene	108-88-3	0.192	J	0.0500	0.100	0.200	1	10/26/2023 21:42	WG2157275
OT001-DSAMW06-101423	L1667742-03	Trichloroethene	79-01-6	0.0500	J	0.0160	0.0400	0.0800	1	10/22/2023 05:14	WG2155682
OT001-DSAMW06-101423	L1667742-03	Trichlorofluoromethane	75-69-4	0.589	C5	0.0200	0.0500	0.100	1	10/22/2023 05:14	WG2155682
OT001-DSAMW06-101423	L1667742-03	1,2,4-Trimethylbenzene	95-63-6	0.0490	B J	0.0464	0.100	0.200	1	10/26/2023 21:42	WG2157275
OT001-DSAMW06-101423	L1667742-03	1,2,3-Trimethylbenzene	526-73-8	0.0800	J	0.0460	0.100	0.200	1	10/22/2023 05:14	WG2155682
OT001-DSAMW06-101423	L1667742-03	1,3,5-Trimethylbenzene	108-67-8	0.103	J	0.0432	0.100	0.200	1	10/22/2023 05:14	WG2155682
OT001-DSAMW06-101423	L1667742-03	Xylenes, Total	1330-20-7	0.340	J	0.191	0.400	0.800	1	10/26/2023 21:42	WG2157275
OT001-DSAMW07-101423	L1667742-04	Acetone	67-64-1	1.37	J	0.548	2.00	4.00	1	10/22/2023 05:34	WG2155682
OT001-DSAMW07-101423	L1667742-04	Toluene	108-88-3	0.0810	J	0.0500	0.100	0.200	1	10/26/2023 22:01	WG2157275
OT001-DSAMW07-101423	L1667742-04	Trichloroethene	79-01-6	0.0370	J	0.0160	0.0400	0.0800	1	10/22/2023 05:34	WG2155682
OT001-DSAMW07-101423	L1667742-04	1,2,3-Trimethylbenzene	526-73-8	0.0480	J	0.0460	0.100	0.200	1	10/22/2023 05:34	WG2155682
OT001-DSAMW07-101423	L1667742-04	1,3,5-Trimethylbenzene	108-67-8	0.0820	J	0.0432	0.100	0.200	1	10/22/2023 05:34	WG2155682
OT001-DSAMW01-101423	L1667742-05	Acetone	67-64-1	3.29	J	0.548	2.00	4.00	1	10/22/2023 05:53	WG2155682
OT001-DSAMW01-101423	L1667742-05	Toluene	108-88-3	0.131	J	0.0500	0.100	0.200	1	10/26/2023 22:20	WG2157275
OT001-DSAMW01-101423	L1667742-05	Trichloroethene	79-01-6	4.04		0.0160	0.0400	0.0800	1	10/26/2023 22:20	WG2157275
OT001-DSAMW01-101423	L1667742-05	1,3,5-Trimethylbenzene	108-67-8	0.0810	J	0.0432	0.100	0.200	1	10/22/2023 05:53	WG2155682
OT001-DSAMW01-101423	L1667742-05	Xylenes, Total	1330-20-7	0.215	J	0.191	0.400	0.800	1	10/22/2023 05:53	WG2155682
OT001-DSAMW99-101423	L1667742-06	Acetone	67-64-1	1.69	J	0.548	2.00	4.00	1	10/22/2023 06:13	WG2155682
OT001-DSAMW99-101423	L1667742-06	Toluene	108-88-3	0.0600	J	0.0500	0.100	0.200	1	10/26/2023 22:39	WG2157275
OT001-DSAMW99-101423	L1667742-06	Trichloroethene	79-01-6	3.92		0.0160	0.0400	0.0800	1	10/26/2023 22:39	WG2157275

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

Client ID	Lab Sample ID	Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
				ug/l		ug/l	ug/l	ug/l		date / time	
OT001-DSAMW06-101423	L1667742-03	Toluene	108-88-3	0.300	J	0.278	0.600	1.20	1	10/19/2023 18:01	WG2154426
OT001-DSAMW06-101423	L1667742-03	Xylenes, Total	1330-20-7	0.300	J	0.174	1.50	3.00	1	10/19/2023 18:01	WG2154426
OT001-DSAMW07-101423	L1667742-04	Toluene	108-88-3	0.291	J	0.278	0.600	1.20	1	10/22/2023 14:00	WG2155879
OT001-DSAMW01-101423	L1667742-05	Trichloroethene	79-01-6	3.82		0.190	0.500	1.00	1	10/22/2023 14:22	WG2155879
OT001-DSAMW99-101423	L1667742-06	Trichloroethene	79-01-6	3.96		0.190	0.500	1.00	1	10/22/2023 14:43	WG2155879

DETECTION SUMMARY

Semi-Volatile Organic Compounds (GC) by Method AK102

Client ID	Lab Sample ID	Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
				ug/l		ug/l	ug/l	ug/l		date / time	
OT001-GLOMW04-101423	L1667742-01	AK102 DRO C10-C25	C10-C25	406	B J	179	420	840	1.05	10/28/2023 03:22	WG2159044
OT001-RRSMW05-101423	L1667742-02	AK102 DRO C10-C25	C10-C25	509	B J	179	420	840	1.05	10/28/2023 05:03	WG2159044
OT001-DSAMW06-101423	L1667742-03	AK102 DRO C10-C25	C10-C25	355	B J	179	420	840	1.05	10/28/2023 05:23	WG2159044
OT001-DSAMW07-101423	L1667742-04	AK102 DRO C10-C25	C10-C25	509	B J	179	420	840	1.05	10/28/2023 05:43	WG2159044
OT001-DSAMW01-101423	L1667742-05	AK102 DRO C10-C25	C10-C25	436	B J	179	420	840	1.05	10/28/2023 06:03	WG2159044
OT001-DSAMW99-101423	L1667742-06	AK102 DRO C10-C25	C10-C25	459	B J	179	420	840	1.05	10/28/2023 22:28	WG2159047

Additional Information - Results for field analyses are not accredited to ISO 17025

Analyte	Result	Units
Cooler#	Blue	
Cooler Temperature	2.5	Deg. C

Wet Chemistry by Method 2320 B-2011

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Alkalinity		69300		8450	10000	20000	1	10/23/2023 16:46	WG2156308
Alkalinity,Bicarbonate		69300		8450	10000	20000	1	10/23/2023 16:46	WG2156308
Alkalinity,Carbonate		10000	U	8450	10000	20000	1	10/23/2023 16:46	WG2156308
Alkalinity,Hydroxide		10000	U	8450	10000	20000	1	10/23/2023 16:46	WG2156308

Sample Narrative:

L1667742-01 WG2156308: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 351.2

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Kjeldahl Nitrogen, TKN	7727-37-9	300	U	140	300	600	1	10/22/2023 22:25	WG2154036

Wet Chemistry by Method 353.2

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Nitrate-Nitrite	7727-37-9	382		50.0	100	200	1	10/20/2023 20:40	WG2154634

Wet Chemistry by Method 9056A

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Sulfate	14808-79-8	3870	J	594	2500	5000	1	10/25/2023 16:18	WG2156852

Metals (ICP) by Method 6010D

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Iron	7439-89-6	112		20.5	50.0	100	1	10/24/2023 08:56	WG2153991
Manganese	7439-96-5	6.16	J	0.855	5.00	10.0	1	10/24/2023 08:56	WG2153991

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Acetone	67-64-1	1.67	J	0.548	2.00	4.00	1	10/22/2023 04:35	WG2155682
Acrylonitrile	107-13-1	0.250	U	0.0760	0.250	0.500	1	10/22/2023 04:35	WG2155682
Benzene	71-43-2	0.0500	U	0.0160	0.0500	0.100	1	10/26/2023 21:04	WG2157275
Bromobenzene	108-86-1	0.250	U	0.0420	0.250	0.500	1	10/22/2023 04:35	WG2155682
Bromodichloromethane	75-27-4	0.100	U	0.0315	0.100	0.200	1	10/22/2023 04:35	WG2155682
Bromochloromethane	74-97-5	0.100	U	0.0452	0.100	0.200	1	10/22/2023 04:35	WG2155682
Bromoform	75-25-2	0.500	U	0.239	0.500	1.00	1	10/22/2023 04:35	WG2155682
Bromomethane	74-83-9	0.500	U	0.148	0.500	1.00	1	10/22/2023 04:35	WG2155682
n-Butylbenzene	104-51-8	0.500	U	0.154	0.500	1.00	1	10/22/2023 04:35	WG2155682
sec-Butylbenzene	135-98-8	0.250	U	0.101	0.250	0.500	1	10/22/2023 04:35	WG2155682
tert-Butylbenzene	98-06-6	0.500	U	0.0620	0.500	1.00	1	10/22/2023 04:35	WG2155682
Carbon tetrachloride	56-23-5	0.100	U	0.0432	0.100	0.200	1	10/22/2023 04:35	WG2155682
Carbon disulfide	75-15-0	0.500	U	0.162	0.500	1.00	1	10/22/2023 04:35	WG2155682
Chlorobenzene	108-90-7	0.0500	U	0.0229	0.0500	0.100	1	10/22/2023 04:35	WG2155682
Chlorodibromomethane	124-48-1	0.0500	U	0.0180	0.0500	0.100	1	10/22/2023 04:35	WG2155682

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Chloroethane	75-00-3	0.100	U	0.0432	0.100	0.200	1	10/22/2023 04:35	WG2155682
Chloroform	67-66-3	0.0500	U	0.0166	0.0500	0.100	1	10/22/2023 04:35	WG2155682
Chloromethane	74-87-3	0.250	U	0.0556	0.250	0.500	1	10/22/2023 04:35	WG2155682
Cyclohexane	110-82-7	0.0500	U	0.0203	0.0500	0.100	1	10/26/2023 21:04	WG2157275
2-Chlorotoluene	95-49-8	0.100	U	0.0368	0.100	0.200	1	10/22/2023 04:35	WG2155682
4-Chlorotoluene	106-43-4	0.100	U	0.0452	0.100	0.200	1	10/22/2023 04:35	WG2155682
1,2-Dibromo-3-Chloropropane	96-12-8	0.500	U	0.204	0.500	1.00	1	10/22/2023 04:35	WG2155682
1,2-Dibromoethane	106-93-4	0.0500	U	0.0210	0.0500	0.100	1	10/22/2023 04:35	WG2155682
Dibromomethane	74-95-3	0.100	U	0.0400	0.100	0.200	1	10/22/2023 04:35	WG2155682
1,2-Dichlorobenzene	95-50-1	0.200	U	0.0580	0.200	0.400	1	10/22/2023 04:35	WG2155682
1,3-Dichlorobenzene	541-73-1	0.200	U	0.0680	0.200	0.400	1	10/22/2023 04:35	WG2155682
1,4-Dichlorobenzene	106-46-7	0.250	U	0.0788	0.250	0.500	1	10/22/2023 04:35	WG2155682
Dichlorodifluoromethane	75-71-8	0.100	U	0.0327	0.100	0.200	1	10/22/2023 04:35	WG2155682
1,1-Dichloroethane	75-34-3	0.0500	U	0.0230	0.0500	0.100	1	10/22/2023 04:35	WG2155682
1,2-Dichloroethane	107-06-2	0.0500	U	0.0190	0.0500	0.100	1	10/26/2023 21:04	WG2157275
1,1-Dichloroethene	75-35-4	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 04:35	WG2155682
cis-1,2-Dichloroethene	156-59-2	0.0750	U	0.0276	0.0750	0.150	1	10/22/2023 04:35	WG2155682
trans-1,2-Dichloroethene	156-60-5	0.300	U	0.0572	0.300	0.600	1	10/22/2023 04:35	WG2155682
1,2-Dichloropropane	78-87-5	0.200	U	0.0508	0.200	0.400	1	10/22/2023 04:35	WG2155682
1,1-Dichloropropene	563-58-6	0.100	U	0.0280	0.100	0.200	1	10/22/2023 04:35	WG2155682
1,3-Dichloropropane	142-28-9	0.150	U	0.0700	0.150	0.300	1	10/22/2023 04:35	WG2155682
cis-1,3-Dichloropropene	10061-01-5	0.100	U	0.0271	0.100	0.200	1	10/22/2023 04:35	WG2155682
trans-1,3-Dichloropropene	10061-02-6	0.150	U	0.0612	0.150	0.300	1	10/22/2023 04:35	WG2155682
2,2-Dichloropropane	594-20-7	0.100	U	0.0317	0.100	0.200	1	10/22/2023 04:35	WG2155682
Di-isopropyl ether	108-20-3	0.0500	U	0.0140	0.0500	0.100	1	10/22/2023 04:35	WG2155682
Ethylbenzene	100-41-4	0.0500	U	0.0212	0.0500	0.100	1	10/26/2023 21:04	WG2157275
Hexachloro-1,3-butadiene	87-68-3	2.00	U	0.508	2.00	4.00	1	10/22/2023 04:35	WG2155682
Isopropylbenzene	98-82-8	0.0480	J	0.0345	1.00	2.00	1	10/22/2023 04:35	WG2155682
p-Isopropyltoluene	99-87-6	0.300	U	0.0932	0.300	0.600	1	10/22/2023 04:35	WG2155682
2-Butanone (MEK)	78-93-3	1.00	U	0.500	1.00	2.00	1	10/22/2023 04:35	WG2155682
Methylene Chloride	75-09-2	0.750	U	0.266	0.750	1.50	1	10/22/2023 04:35	WG2155682
4-Methyl-2-pentanone (MIBK)	108-10-1	1.00	U	0.400	1.00	2.00	1	10/22/2023 04:35	WG2155682
Methyl tert-butyl ether	1634-04-4	0.0300	U	0.0118	0.0300	0.0600	1	10/22/2023 04:35	WG2155682
Naphthalene	91-20-3	0.946		0.125	0.250	0.500	1	10/22/2023 04:35	WG2155682
n-Propylbenzene	103-65-1	0.0540	J	0.0472	0.100	0.200	1	10/22/2023 04:35	WG2155682
Styrene	100-42-5	0.250	U	0.109	0.250	0.500	1	10/22/2023 04:35	WG2155682
1,1,1,2-Tetrachloroethane	630-20-6	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 04:35	WG2155682
1,1,2,2-Tetrachloroethane	79-34-5	0.0500	U	0.0156	0.0500	0.100	1	10/22/2023 04:35	WG2155682
1,1,2-Trichlorotrifluoroethane	76-13-1	0.100	U	0.0270	0.100	0.200	1	10/22/2023 04:35	WG2155682
Tetrachloroethene	127-18-4	0.0750	U	0.0280	0.0750	0.150	1	10/22/2023 04:35	WG2155682
Toluene	108-88-3	0.0890	J	0.0500	0.100	0.200	1	10/26/2023 21:04	WG2157275
1,2,3-Trichlorobenzene	87-61-6	0.250	U	0.0250	0.250	0.500	1	10/22/2023 04:35	WG2155682
1,2,4-Trichlorobenzene	120-82-1	0.500	U	0.193	0.500	1.00	1	10/22/2023 04:35	WG2155682
1,1,1-Trichloroethane	71-55-6	0.0500	U	0.0110	0.0500	0.100	1	10/22/2023 04:35	WG2155682
1,1,2-Trichloroethane	79-00-5	0.100	U	0.0353	0.100	0.200	1	10/22/2023 04:35	WG2155682
Trichloroethene	79-01-6	0.0400	U	0.0160	0.0400	0.0800	1	10/22/2023 04:35	WG2155682
Trichlorofluoromethane	75-69-4	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 04:35	WG2155682
1,2,3-Trichloropropane	96-18-4	0.500	U	0.204	0.500	1.00	1	10/22/2023 04:35	WG2155682
1,2,4-Trimethylbenzene	95-63-6	0.100	U	0.0464	0.100	0.200	1	10/26/2023 21:04	WG2157275
1,2,3-Trimethylbenzene	526-73-8	0.284		0.0460	0.100	0.200	1	10/22/2023 04:35	WG2155682
1,3,5-Trimethylbenzene	108-67-8	0.195	J	0.0432	0.100	0.200	1	10/22/2023 04:35	WG2155682
Vinyl chloride	75-01-4	0.0750	U	0.0273	0.0750	0.150	1	10/22/2023 04:35	WG2155682
Vinyl acetate	108-05-4	0.300	U	0.141	0.300	0.600	1	10/26/2023 21:04	WG2157275
Xylenes, Total	1330-20-7	0.400	U	0.191	0.400	0.800	1	10/26/2023 21:04	WG2157275
Ethyl Ether	60-29-7	0.0500	U	0.0170	0.0500	0.100	1	10/22/2023 04:35	WG2155682
Tetrahydrofuran	109-99-9	0.250	U	0.0900	0.250	50.0	1	10/22/2023 04:35	WG2155682

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Iodomethane	74-88-4	0.500	U	0.242	0.500	1.00	1	10/22/2023 04:35	WG2155682
Allyl chloride	107-05-1	2.00	U	0.580	2.00	4.00	1	10/22/2023 04:35	WG2155682
trans-1,4-Dichloro-2-butene	110-57-6	0.211	C4 J	0.0560	0.200	0.400	1	10/22/2023 04:35	WG2155682
(S) Toluene-d8	*2037-26-5*	*104*				*89.0-112*		*10/22/2023 04:35*	WG2155682
(S) Toluene-d8	*2037-26-5*	*111*				*89.0-112*		*10/26/2023 21:04*	WG2157275
(S) 4-Bromofluorobenzene	*460-00-4*	*101*				*85.0-114*		*10/22/2023 04:35*	WG2155682
(S) 4-Bromofluorobenzene	*460-00-4*	*104*				*85.0-114*		*10/26/2023 21:04*	WG2157275
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*88.9*				*81.0-118*		*10/22/2023 04:35*	WG2155682
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*95.8*				*81.0-118*		*10/26/2023 21:04*	WG2157275

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Acetone	67-64-1	25.0	U	11.3	25.0	50.0	1	10/19/2023 17:17	WG2154426
Acrolein	107-02-8	25.0	U	2.54	25.0	50.0	1	10/19/2023 17:17	WG2154426
Acrylonitrile	107-13-1	5.00	U	0.671	5.00	10.0	1	10/19/2023 17:17	WG2154426
Benzene	71-43-2	0.500	U	0.0941	0.500	1.00	1	10/19/2023 17:17	WG2154426
Bromobenzene	108-86-1	0.500	U	0.118	0.500	1.00	1	10/19/2023 17:17	WG2154426
Bromodichloromethane	75-27-4	0.500	U	0.136	0.500	1.00	1	10/19/2023 17:17	WG2154426
Bromoform	75-25-2	0.500	U	0.129	0.500	1.00	1	10/19/2023 17:17	WG2154426
Bromomethane	74-83-9	2.00	U	0.605	2.00	5.00	1	10/19/2023 17:17	WG2154426
n-Butylbenzene	104-51-8	0.500	U	0.157	0.500	1.00	1	10/19/2023 17:17	WG2154426
sec-Butylbenzene	135-98-8	0.500	U	0.125	0.500	1.00	1	10/19/2023 17:17	WG2154426
tert-Butylbenzene	98-06-6	0.500	U	0.127	0.500	1.00	1	10/19/2023 17:17	WG2154426
Carbon tetrachloride	56-23-5	0.500	U	0.128	0.500	1.00	1	10/19/2023 17:17	WG2154426
Chlorobenzene	108-90-7	0.500	U	0.116	0.500	1.00	1	10/19/2023 17:17	WG2154426
Chlorodibromomethane	124-48-1	0.500	U	0.140	0.500	1.00	1	10/19/2023 17:17	WG2154426
Chloroethane	75-00-3	2.00	U	0.192	2.00	5.00	1	10/19/2023 17:17	WG2154426
2-Chloroethyl vinyl ether	110-75-8	25.0	U	0.575	25.0	50.0	1	10/19/2023 17:17	WG2154426
Chloroform	67-66-3	2.00	U	0.111	2.00	5.00	1	10/19/2023 17:17	WG2154426
Chloromethane	74-87-3	2.00	U	0.960	2.00	4.00	1	10/19/2023 17:17	WG2154426
2-Chlorotoluene	95-49-8	0.500	U	0.106	0.500	1.00	1	10/19/2023 17:17	WG2154426
4-Chlorotoluene	106-43-4	0.500	U	0.114	0.500	1.00	1	10/19/2023 17:17	WG2154426
1,2-Dibromoethane	106-93-4	0.500	U	0.126	0.500	1.00	1	10/19/2023 17:17	WG2154426
1,2-Dibromo-3-Chloropropane	96-12-8	2.00	U	0.276	2.00	5.00	1	10/19/2023 17:17	WG2154426
Dibromomethane	74-95-3	0.500	U	0.122	0.500	1.00	1	10/19/2023 17:17	WG2154426
1,2-Dichlorobenzene	95-50-1	0.500	U	0.107	0.500	1.00	1	10/19/2023 17:17	WG2154426
1,3-Dichlorobenzene	541-73-1	0.500	U	0.110	0.500	1.00	1	10/19/2023 17:17	WG2154426
1,4-Dichlorobenzene	106-46-7	0.500	U	0.120	0.500	1.00	1	10/19/2023 17:17	WG2154426
Dichlorodifluoromethane	75-71-8	2.00	U	0.374	2.00	5.00	1	10/19/2023 17:17	WG2154426
1,1-Dichloroethane	75-34-3	0.500	U	0.100	0.500	1.00	1	10/19/2023 17:17	WG2154426
1,2-Dichloroethane	107-06-2	0.500	U	0.0819	0.500	1.00	1	10/19/2023 17:17	WG2154426
1,1-Dichloroethene	75-35-4	0.500	U	0.188	0.500	1.00	1	10/19/2023 17:17	WG2154426
cis-1,2-Dichloroethene	156-59-2	0.500	U	0.126	0.500	1.00	1	10/19/2023 17:17	WG2154426
trans-1,2-Dichloroethene	156-60-5	0.500	U	0.149	0.500	1.00	1	10/19/2023 17:17	WG2154426
1,2-Dichloropropane	78-87-5	0.500	U	0.149	0.500	1.00	1	10/19/2023 17:17	WG2154426
1,3-Dichloropropane	142-28-9	0.500	U	0.110	0.500	1.00	1	10/19/2023 17:17	WG2154426
2,2-Dichloropropane	594-20-7	0.500	U	0.161	0.500	1.00	1	10/19/2023 17:17	WG2154426
1,1-Dichloropropene	563-58-6	0.500	U	0.142	0.500	1.00	1	10/19/2023 17:17	WG2154426
cis-1,3-Dichloropropene	10061-01-5	0.500	U	0.111	0.500	1.00	1	10/19/2023 17:17	WG2154426
trans-1,3-Dichloropropene	10061-02-6	0.500	U	0.118	0.500	1.00	1	10/19/2023 17:17	WG2154426
Di-isopropyl ether	108-20-3	0.500	U	0.105	0.500	1.00	1	10/19/2023 17:17	WG2154426
Ethylbenzene	100-41-4	0.500	U	0.137	0.500	1.00	1	10/19/2023 17:17	WG2154426
Hexachloro-1,3-butadiene	87-68-3	0.750	U	0.337	0.750	1.50	1	10/19/2023 17:17	WG2154426
Isopropylbenzene	98-82-8	0.500	U	0.105	0.500	1.00	1	10/19/2023 17:17	WG2154426
p-Isopropyltoluene	99-87-6	0.500	U	0.120	0.500	1.00	1	10/19/2023 17:17	WG2154426

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
2-Butanone (MEK)	78-93-3	5.00	U	1.19	5.00	10.0	1	10/19/2023 17:17	WG2154426
Methylene Chloride	75-09-2	2.00	U	0.430	2.00	5.00	1	10/19/2023 17:17	WG2154426
4-Methyl-2-pentanone (MIBK)	108-10-1	5.00	U	0.478	5.00	10.0	1	10/19/2023 17:17	WG2154426
Methyl tert-butyl ether	1634-04-4	0.500	U	0.101	0.500	1.00	1	10/19/2023 17:17	WG2154426
Naphthalene	91-20-3	2.00	U	1.00	2.00	5.00	1	10/19/2023 17:17	WG2154426
n-Propylbenzene	103-65-1	0.500	U	0.0993	0.500	1.00	1	10/19/2023 17:17	WG2154426
Styrene	100-42-5	0.500	U	0.118	0.500	1.00	1	10/19/2023 17:17	WG2154426
1,1,1,2-Tetrachloroethane	630-20-6	0.500	U	0.147	0.500	1.00	1	10/19/2023 17:17	WG2154426
1,1,2,2-Tetrachloroethane	79-34-5	0.500	U	0.133	0.500	1.00	1	10/19/2023 17:17	WG2154426
Tetrachloroethene	127-18-4	0.600	U	0.300	0.600	1.20	1	10/19/2023 17:17	WG2154426
Toluene	108-88-3	0.600	U	0.278	0.600	1.20	1	10/19/2023 17:17	WG2154426
1,2,3-Trichlorobenzene	87-61-6	0.500	U	0.230	0.500	1.00	1	10/19/2023 17:17	WG2154426
1,2,4-Trichlorobenzene	120-82-1	1.00	U	0.481	1.00	2.00	1	10/19/2023 17:17	WG2154426
1,2,3-Trimethylbenzene	526-73-8	0.500	U	0.104	0.500	1.00	1	10/19/2023 17:17	WG2154426
1,2,4-Trimethylbenzene	95-63-6	1.00	U	0.322	1.00	2.00	1	10/19/2023 17:17	WG2154426
1,3,5-Trimethylbenzene	108-67-8	0.500	U	0.104	0.500	1.00	1	10/19/2023 17:17	WG2154426
1,1,1-Trichloroethane	71-55-6	0.500	U	0.149	0.500	1.00	1	10/19/2023 17:17	WG2154426
1,1,2-Trichloroethane	79-00-5	0.500	U	0.158	0.500	1.00	1	10/19/2023 17:17	WG2154426
Trichloroethene	79-01-6	0.500	U	0.190	0.500	1.00	1	10/19/2023 17:17	WG2154426
Trichlorofluoromethane	75-69-4	2.00	U	0.160	2.00	5.00	1	10/19/2023 17:17	WG2154426
1,1,2-Trichlorotrifluoroethane	76-13-1	0.500	U	0.180	0.500	1.00	1	10/19/2023 17:17	WG2154426
1,2,3-Trichloropropane	96-18-4	1.00	U	0.237	1.00	2.50	1	10/19/2023 17:17	WG2154426
Vinyl chloride	75-01-4	0.500	U	0.234	0.500	1.00	1	10/19/2023 17:17	WG2154426
Xylenes, Total	1330-20-7	1.50	U	0.174	1.50	3.00	1	10/19/2023 17:17	WG2154426
(S) Toluene-d8	*2037-26-5*	*104*				*89.0-112*		*10/19/2023 17:17*	WG2154426
(S) 4-Bromofluorobenzene	*460-00-4*	*95.8*				*85.0-114*		*10/19/2023 17:17*	WG2154426
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*106*				*81.0-118*		*10/19/2023 17:17*	WG2154426

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	C10-C25	406	B J	179	420	840	1.05	10/28/2023 03:22	WG2159044
(S) o-Terphenyl	*84-15-1*	*58.8*				*50.0-150*		*10/28/2023 03:22*	WG2159044

Additional Information - Results for field analyses are not accredited to ISO 17025

Analyte	Result	Units
Cooler#	Blue	
Cooler Temperature	2.5	Deg. C

Wet Chemistry by Method 2320 B-2011

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Alkalinity		57500		8450	10000	20000	1	10/23/2023 16:50	WG2156308
Alkalinity,Bicarbonate		57500		8450	10000	20000	1	10/23/2023 16:50	WG2156308
Alkalinity,Carbonate		10000	U	8450	10000	20000	1	10/23/2023 16:50	WG2156308
Alkalinity,Hydroxide		10000	U	8450	10000	20000	1	10/23/2023 16:50	WG2156308

Sample Narrative:
L1667742-02 WG2156308: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 351.2

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Kjeldahl Nitrogen, TKN	7727-37-9	300	U	140	300	600	1	10/22/2023 22:27	WG2154036

Wet Chemistry by Method 353.2

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	7727-37-9	123	J	50.0	100	200	1	10/20/2023 20:46	WG2154634

Wet Chemistry by Method 9056A

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Sulfate	14808-79-8	3640	J	594	2500	5000	1	10/25/2023 16:32	WG2156852

Metals (ICP) by Method 6010D

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Iron	7439-89-6	4460		20.5	50.0	100	1	10/24/2023 08:59	WG2153991
Manganese	7439-96-5	99.5		0.855	5.00	10.0	1	10/24/2023 08:59	WG2153991

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Acetone	67-64-1	1.42	J	0.548	2.00	4.00	1	10/22/2023 04:54	WG2155682
Acrylonitrile	107-13-1	0.250	U	0.0760	0.250	0.500	1	10/22/2023 04:54	WG2155682
Benzene	71-43-2	0.0500	U	0.0160	0.0500	0.100	1	10/26/2023 21:23	WG2157275
Bromobenzene	108-86-1	0.250	U	0.0420	0.250	0.500	1	10/22/2023 04:54	WG2155682
Bromodichloromethane	75-27-4	0.100	U	0.0315	0.100	0.200	1	10/22/2023 04:54	WG2155682
Bromochloromethane	74-97-5	0.100	U	0.0452	0.100	0.200	1	10/22/2023 04:54	WG2155682
Bromoform	75-25-2	0.500	U	0.239	0.500	1.00	1	10/22/2023 04:54	WG2155682
Bromomethane	74-83-9	0.500	U	0.148	0.500	1.00	1	10/22/2023 04:54	WG2155682
n-Butylbenzene	104-51-8	0.500	U	0.154	0.500	1.00	1	10/22/2023 04:54	WG2155682
sec-Butylbenzene	135-98-8	0.250	U	0.101	0.250	0.500	1	10/22/2023 04:54	WG2155682
tert-Butylbenzene	98-06-6	0.500	U	0.0620	0.500	1.00	1	10/22/2023 04:54	WG2155682
Carbon tetrachloride	56-23-5	0.100	U	0.0432	0.100	0.200	1	10/22/2023 04:54	WG2155682
Carbon disulfide	75-15-0	0.500	U	0.162	0.500	1.00	1	10/22/2023 04:54	WG2155682
Chlorobenzene	108-90-7	0.0500	U	0.0229	0.0500	0.100	1	10/22/2023 04:54	WG2155682
Chlorodibromomethane	124-48-1	0.0500	U	0.0180	0.0500	0.100	1	10/22/2023 04:54	WG2155682

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Chloroethane	75-00-3	0.100	U	0.0432	0.100	0.200	1	10/22/2023 04:54	WG2155682
Chloroform	67-66-3	0.0500	U	0.0166	0.0500	0.100	1	10/22/2023 04:54	WG2155682
Chloromethane	74-87-3	0.250	U	0.0556	0.250	0.500	1	10/22/2023 04:54	WG2155682
Cyclohexane	110-82-7	0.0500	U	0.0203	0.0500	0.100	1	10/26/2023 21:23	WG2157275
2-Chlorotoluene	95-49-8	0.100	U	0.0368	0.100	0.200	1	10/22/2023 04:54	WG2155682
4-Chlorotoluene	106-43-4	0.100	U	0.0452	0.100	0.200	1	10/22/2023 04:54	WG2155682
1,2-Dibromo-3-Chloropropane	96-12-8	0.500	U	0.204	0.500	1.00	1	10/22/2023 04:54	WG2155682
1,2-Dibromoethane	106-93-4	0.0500	U	0.0210	0.0500	0.100	1	10/22/2023 04:54	WG2155682
Dibromomethane	74-95-3	0.100	U	0.0400	0.100	0.200	1	10/22/2023 04:54	WG2155682
1,2-Dichlorobenzene	95-50-1	0.200	U	0.0580	0.200	0.400	1	10/22/2023 04:54	WG2155682
1,3-Dichlorobenzene	541-73-1	0.200	U	0.0680	0.200	0.400	1	10/22/2023 04:54	WG2155682
1,4-Dichlorobenzene	106-46-7	0.250	U	0.0788	0.250	0.500	1	10/22/2023 04:54	WG2155682
Dichlorodifluoromethane	75-71-8	0.100	U	0.0327	0.100	0.200	1	10/22/2023 04:54	WG2155682
1,1-Dichloroethane	75-34-3	0.0500	U	0.0230	0.0500	0.100	1	10/22/2023 04:54	WG2155682
1,2-Dichloroethane	107-06-2	0.0500	U	0.0190	0.0500	0.100	1	10/22/2023 04:54	WG2155682
1,1-Dichloroethene	75-35-4	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 04:54	WG2155682
cis-1,2-Dichloroethene	156-59-2	0.0750	U	0.0276	0.0750	0.150	1	10/22/2023 04:54	WG2155682
trans-1,2-Dichloroethene	156-60-5	0.300	U	0.0572	0.300	0.600	1	10/22/2023 04:54	WG2155682
1,2-Dichloropropane	78-87-5	0.200	U	0.0508	0.200	0.400	1	10/22/2023 04:54	WG2155682
1,1-Dichloropropene	563-58-6	0.100	U	0.0280	0.100	0.200	1	10/22/2023 04:54	WG2155682
1,3-Dichloropropane	142-28-9	0.150	U	0.0700	0.150	0.300	1	10/22/2023 04:54	WG2155682
cis-1,3-Dichloropropene	10061-01-5	0.100	U	0.0271	0.100	0.200	1	10/22/2023 04:54	WG2155682
trans-1,3-Dichloropropene	10061-02-6	0.150	U	0.0612	0.150	0.300	1	10/22/2023 04:54	WG2155682
2,2-Dichloropropane	594-20-7	0.100	U	0.0317	0.100	0.200	1	10/22/2023 04:54	WG2155682
Di-isopropyl ether	108-20-3	0.0500	U	0.0140	0.0500	0.100	1	10/22/2023 04:54	WG2155682
Ethylbenzene	100-41-4	0.0500	U	0.0212	0.0500	0.100	1	10/26/2023 21:23	WG2157275
Hexachloro-1,3-butadiene	87-68-3	2.00	U	0.508	2.00	4.00	1	10/22/2023 04:54	WG2155682
Isopropylbenzene	98-82-8	1.00	U	0.0345	1.00	2.00	1	10/22/2023 04:54	WG2155682
p-Isopropyltoluene	99-87-6	0.300	U	0.0932	0.300	0.600	1	10/22/2023 04:54	WG2155682
2-Butanone (MEK)	78-93-3	1.00	U	0.500	1.00	2.00	1	10/22/2023 04:54	WG2155682
Methylene Chloride	75-09-2	0.750	U	0.266	0.750	1.50	1	10/22/2023 04:54	WG2155682
4-Methyl-2-pentanone (MIBK)	108-10-1	1.00	U	0.400	1.00	2.00	1	10/22/2023 04:54	WG2155682
Methyl tert-butyl ether	1634-04-4	0.0300	U	0.0118	0.0300	0.0600	1	10/22/2023 04:54	WG2155682
Naphthalene	91-20-3	0.144	J	0.125	0.250	0.500	1	10/22/2023 04:54	WG2155682
n-Propylbenzene	103-65-1	0.100	U	0.0472	0.100	0.200	1	10/22/2023 04:54	WG2155682
Styrene	100-42-5	0.250	U	0.109	0.250	0.500	1	10/22/2023 04:54	WG2155682
1,1,1,2-Tetrachloroethane	630-20-6	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 04:54	WG2155682
1,1,2,2-Tetrachloroethane	79-34-5	0.0500	U	0.0156	0.0500	0.100	1	10/22/2023 04:54	WG2155682
1,1,2-Trichlorotrifluoroethane	76-13-1	0.100	U	0.0270	0.100	0.200	1	10/22/2023 04:54	WG2155682
Tetrachloroethene	127-18-4	0.0750	U	0.0280	0.0750	0.150	1	10/22/2023 04:54	WG2155682
Toluene	108-88-3	0.0730	J	0.0500	0.100	0.200	1	10/26/2023 21:23	WG2157275
1,2,3-Trichlorobenzene	87-61-6	0.250	U	0.0250	0.250	0.500	1	10/22/2023 04:54	WG2155682
1,2,4-Trichlorobenzene	120-82-1	0.500	U	0.193	0.500	1.00	1	10/22/2023 04:54	WG2155682
1,1,1-Trichloroethane	71-55-6	0.0500	U	0.0110	0.0500	0.100	1	10/22/2023 04:54	WG2155682
1,1,2-Trichloroethane	79-00-5	0.100	U	0.0353	0.100	0.200	1	10/22/2023 04:54	WG2155682
Trichloroethene	79-01-6	0.0400	U	0.0160	0.0400	0.0800	1	10/22/2023 04:54	WG2155682
Trichlorofluoromethane	75-69-4	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 04:54	WG2155682
1,2,3-Trichloropropane	96-18-4	0.500	U	0.204	0.500	1.00	1	10/22/2023 04:54	WG2155682
1,2,4-Trimethylbenzene	95-63-6	0.100	U	0.0464	0.100	0.200	1	10/26/2023 21:23	WG2157275
1,2,3-Trimethylbenzene	526-73-8	0.0770	J	0.0460	0.100	0.200	1	10/22/2023 04:54	WG2155682
1,3,5-Trimethylbenzene	108-67-8	0.108	J	0.0432	0.100	0.200	1	10/22/2023 04:54	WG2155682
Vinyl chloride	75-01-4	0.0750	U	0.0273	0.0750	0.150	1	10/22/2023 04:54	WG2155682
Vinyl acetate	108-05-4	0.300	U	0.141	0.300	0.600	1	10/26/2023 21:23	WG2157275
Xylenes, Total	1330-20-7	0.400	U	0.191	0.400	0.800	1	10/26/2023 21:23	WG2157275
Ethyl Ether	60-29-7	0.0500	U	0.0170	0.0500	0.100	1	10/22/2023 04:54	WG2155682
Tetrahydrofuran	109-99-9	0.250	U	0.0900	0.250	50.0	1	10/22/2023 04:54	WG2155682

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Iodomethane	74-88-4	0.500	U	0.242	0.500	1.00	1	10/22/2023 04:54	WG2155682
Allyl chloride	107-05-1	2.00	U	0.580	2.00	4.00	1	10/22/2023 04:54	WG2155682
trans-1,4-Dichloro-2-butene	110-57-6	0.200	C4 U	0.0560	0.200	0.400	1	10/22/2023 04:54	WG2155682
(S) Toluene-d8	*2037-26-5*	*104*				*89.0-112*		*10/22/2023 04:54*	WG2155682
(S) Toluene-d8	*2037-26-5*	*109*				*89.0-112*		*10/26/2023 21:23*	WG2157275
(S) 4-Bromofluorobenzene	*460-00-4*	*101*				*85.0-114*		*10/22/2023 04:54*	WG2155682
(S) 4-Bromofluorobenzene	*460-00-4*	*103*				*85.0-114*		*10/26/2023 21:23*	WG2157275
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*95.5*				*81.0-118*		*10/22/2023 04:54*	WG2155682
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*97.0*				*81.0-118*		*10/26/2023 21:23*	WG2157275

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Acetone	67-64-1	25.0	U	11.3	25.0	50.0	1	10/19/2023 17:39	WG2154426
Acrolein	107-02-8	25.0	U	2.54	25.0	50.0	1	10/19/2023 17:39	WG2154426
Acrylonitrile	107-13-1	5.00	U	0.671	5.00	10.0	1	10/19/2023 17:39	WG2154426
Benzene	71-43-2	0.500	U	0.0941	0.500	1.00	1	10/19/2023 17:39	WG2154426
Bromobenzene	108-86-1	0.500	U	0.118	0.500	1.00	1	10/19/2023 17:39	WG2154426
Bromodichloromethane	75-27-4	0.500	U	0.136	0.500	1.00	1	10/19/2023 17:39	WG2154426
Bromoform	75-25-2	0.500	U	0.129	0.500	1.00	1	10/19/2023 17:39	WG2154426
Bromomethane	74-83-9	2.00	U	0.605	2.00	5.00	1	10/19/2023 17:39	WG2154426
n-Butylbenzene	104-51-8	0.500	U	0.157	0.500	1.00	1	10/19/2023 17:39	WG2154426
sec-Butylbenzene	135-98-8	0.500	U	0.125	0.500	1.00	1	10/19/2023 17:39	WG2154426
tert-Butylbenzene	98-06-6	0.500	U	0.127	0.500	1.00	1	10/19/2023 17:39	WG2154426
Carbon tetrachloride	56-23-5	0.500	U	0.128	0.500	1.00	1	10/19/2023 17:39	WG2154426
Chlorobenzene	108-90-7	0.500	U	0.116	0.500	1.00	1	10/19/2023 17:39	WG2154426
Chlorodibromomethane	124-48-1	0.500	U	0.140	0.500	1.00	1	10/19/2023 17:39	WG2154426
Chloroethane	75-00-3	2.00	U	0.192	2.00	5.00	1	10/19/2023 17:39	WG2154426
2-Chloroethyl vinyl ether	110-75-8	25.0	U	0.575	25.0	50.0	1	10/19/2023 17:39	WG2154426
Chloroform	67-66-3	2.00	U	0.111	2.00	5.00	1	10/19/2023 17:39	WG2154426
Chloromethane	74-87-3	2.00	U	0.960	2.00	4.00	1	10/19/2023 17:39	WG2154426
2-Chlorotoluene	95-49-8	0.500	U	0.106	0.500	1.00	1	10/19/2023 17:39	WG2154426
4-Chlorotoluene	106-43-4	0.500	U	0.114	0.500	1.00	1	10/19/2023 17:39	WG2154426
1,2-Dibromoethane	106-93-4	0.500	U	0.126	0.500	1.00	1	10/19/2023 17:39	WG2154426
1,2-Dibromo-3-Chloropropane	96-12-8	2.00	U	0.276	2.00	5.00	1	10/19/2023 17:39	WG2154426
Dibromomethane	74-95-3	0.500	U	0.122	0.500	1.00	1	10/19/2023 17:39	WG2154426
1,2-Dichlorobenzene	95-50-1	0.500	U	0.107	0.500	1.00	1	10/19/2023 17:39	WG2154426
1,3-Dichlorobenzene	541-73-1	0.500	U	0.110	0.500	1.00	1	10/19/2023 17:39	WG2154426
1,4-Dichlorobenzene	106-46-7	0.500	U	0.120	0.500	1.00	1	10/19/2023 17:39	WG2154426
Dichlorodifluoromethane	75-71-8	2.00	U	0.374	2.00	5.00	1	10/19/2023 17:39	WG2154426
1,1-Dichloroethane	75-34-3	0.500	U	0.100	0.500	1.00	1	10/19/2023 17:39	WG2154426
1,2-Dichloroethane	107-06-2	0.500	U	0.0819	0.500	1.00	1	10/19/2023 17:39	WG2154426
1,1-Dichloroethene	75-35-4	0.500	U	0.188	0.500	1.00	1	10/19/2023 17:39	WG2154426
cis-1,2-Dichloroethene	156-59-2	0.500	U	0.126	0.500	1.00	1	10/19/2023 17:39	WG2154426
trans-1,2-Dichloroethene	156-60-5	0.500	U	0.149	0.500	1.00	1	10/19/2023 17:39	WG2154426
1,2-Dichloropropane	78-87-5	0.500	U	0.149	0.500	1.00	1	10/19/2023 17:39	WG2154426
1,3-Dichloropropane	142-28-9	0.500	U	0.110	0.500	1.00	1	10/19/2023 17:39	WG2154426
2,2-Dichloropropane	594-20-7	0.500	U	0.161	0.500	1.00	1	10/19/2023 17:39	WG2154426
1,1-Dichloropropene	563-58-6	0.500	U	0.142	0.500	1.00	1	10/19/2023 17:39	WG2154426
cis-1,3-Dichloropropene	10061-01-5	0.500	U	0.111	0.500	1.00	1	10/19/2023 17:39	WG2154426
trans-1,3-Dichloropropene	10061-02-6	0.500	U	0.118	0.500	1.00	1	10/19/2023 17:39	WG2154426
Di-isopropyl ether	108-20-3	0.500	U	0.105	0.500	1.00	1	10/19/2023 17:39	WG2154426
Ethylbenzene	100-41-4	0.500	U	0.137	0.500	1.00	1	10/19/2023 17:39	WG2154426
Hexachloro-1,3-butadiene	87-68-3	0.750	U	0.337	0.750	1.50	1	10/19/2023 17:39	WG2154426
Isopropylbenzene	98-82-8	0.500	U	0.105	0.500	1.00	1	10/19/2023 17:39	WG2154426
p-Isopropyltoluene	99-87-6	0.500	U	0.120	0.500	1.00	1	10/19/2023 17:39	WG2154426

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

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
2-Butanone (MEK)	78-93-3	5.00	U	1.19	5.00	10.0	1	10/19/2023 17:39	WG2154426
Methylene Chloride	75-09-2	2.00	U	0.430	2.00	5.00	1	10/19/2023 17:39	WG2154426
4-Methyl-2-pentanone (MIBK)	108-10-1	5.00	U	0.478	5.00	10.0	1	10/19/2023 17:39	WG2154426
Methyl tert-butyl ether	1634-04-4	0.500	U	0.101	0.500	1.00	1	10/19/2023 17:39	WG2154426
Naphthalene	91-20-3	2.00	U	1.00	2.00	5.00	1	10/19/2023 17:39	WG2154426
n-Propylbenzene	103-65-1	0.500	U	0.0993	0.500	1.00	1	10/19/2023 17:39	WG2154426
Styrene	100-42-5	0.500	U	0.118	0.500	1.00	1	10/19/2023 17:39	WG2154426
1,1,1,2-Tetrachloroethane	630-20-6	0.500	U	0.147	0.500	1.00	1	10/19/2023 17:39	WG2154426
1,1,2,2-Tetrachloroethane	79-34-5	0.500	U	0.133	0.500	1.00	1	10/19/2023 17:39	WG2154426
Tetrachloroethene	127-18-4	0.600	U	0.300	0.600	1.20	1	10/19/2023 17:39	WG2154426
Toluene	108-88-3	0.600	U	0.278	0.600	1.20	1	10/19/2023 17:39	WG2154426
1,2,3-Trichlorobenzene	87-61-6	0.500	U	0.230	0.500	1.00	1	10/19/2023 17:39	WG2154426
1,2,4-Trichlorobenzene	120-82-1	1.00	U	0.481	1.00	2.00	1	10/19/2023 17:39	WG2154426
1,2,3-Trimethylbenzene	526-73-8	0.500	U	0.104	0.500	1.00	1	10/19/2023 17:39	WG2154426
1,2,4-Trimethylbenzene	95-63-6	1.00	U	0.322	1.00	2.00	1	10/19/2023 17:39	WG2154426
1,3,5-Trimethylbenzene	108-67-8	0.500	U	0.104	0.500	1.00	1	10/19/2023 17:39	WG2154426
1,1,1-Trichloroethane	71-55-6	0.500	U	0.149	0.500	1.00	1	10/19/2023 17:39	WG2154426
1,1,2-Trichloroethane	79-00-5	0.500	U	0.158	0.500	1.00	1	10/19/2023 17:39	WG2154426
Trichloroethene	79-01-6	0.500	U	0.190	0.500	1.00	1	10/19/2023 17:39	WG2154426
Trichlorofluoromethane	75-69-4	2.00	U	0.160	2.00	5.00	1	10/19/2023 17:39	WG2154426
1,1,2-Trichlorotrifluoroethane	76-13-1	0.500	U	0.180	0.500	1.00	1	10/19/2023 17:39	WG2154426
1,2,3-Trichloropropane	96-18-4	1.00	U	0.237	1.00	2.50	1	10/19/2023 17:39	WG2154426
Vinyl chloride	75-01-4	0.500	U	0.234	0.500	1.00	1	10/19/2023 17:39	WG2154426
Xylenes, Total	1330-20-7	1.50	U	0.174	1.50	3.00	1	10/19/2023 17:39	WG2154426
(S) Toluene-d8	*2037-26-5*	*104*				*89.0-112*		*10/19/2023 17:39*	WG2154426
(S) 4-Bromofluorobenzene	*460-00-4*	*94.8*				*85.0-114*		*10/19/2023 17:39*	WG2154426
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*104*				*81.0-118*		*10/19/2023 17:39*	WG2154426

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
AK102 DRO C10-C25	C10-C25	509	B J	179	420	840	1.05	10/28/2023 05:03	WG2159044
(S) o-Terphenyl	*84-15-1*	*67.5*				*50.0-150*		*10/28/2023 05:03*	WG2159044

Additional Information - Results for field analyses are not accredited to ISO 17025

Analyte	Result	Units
Cooler#	Blue	
Cooler Temperature	2.5	Deg. C

Wet Chemistry by Method 2320 B-2011

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Alkalinity		75800		8450	10000	20000	1	10/23/2023 16:53	WG2156308
Alkalinity,Bicarbonate		75800		8450	10000	20000	1	10/23/2023 16:53	WG2156308
Alkalinity,Carbonate		10000	U	8450	10000	20000	1	10/23/2023 16:53	WG2156308
Alkalinity,Hydroxide		10000	U	8450	10000	20000	1	10/23/2023 16:53	WG2156308

Sample Narrative:

L1667742-03 WG2156308: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 351.2

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Kjeldahl Nitrogen, TKN	7727-37-9	300	U	140	300	600	1	10/22/2023 22:28	WG2154036

Wet Chemistry by Method 353.2

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	7727-37-9	100	U	50.0	100	200	1	10/20/2023 20:47	WG2154634

Wet Chemistry by Method 9056A

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Sulfate	14808-79-8	4940	J	594	2500	5000	1	10/25/2023 16:47	WG2156852

Metals (ICP) by Method 6010D

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Iron	7439-89-6	2430		20.5	50.0	100	1	10/24/2023 09:02	WG2153991
Manganese	7439-96-5	478		0.855	5.00	10.0	1	10/24/2023 09:02	WG2153991

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Acetone	67-64-1	1.44	J	0.548	2.00	4.00	1	10/22/2023 05:14	WG2155682
Acrylonitrile	107-13-1	0.250	U	0.0760	0.250	0.500	1	10/22/2023 05:14	WG2155682
Benzene	71-43-2	0.0500	U	0.0160	0.0500	0.100	1	10/26/2023 21:42	WG2157275
Bromobenzene	108-86-1	0.250	U	0.0420	0.250	0.500	1	10/22/2023 05:14	WG2155682
Bromodichloromethane	75-27-4	0.100	U	0.0315	0.100	0.200	1	10/22/2023 05:14	WG2155682
Bromochloromethane	74-97-5	0.100	U	0.0452	0.100	0.200	1	10/22/2023 05:14	WG2155682
Bromoform	75-25-2	0.500	U	0.239	0.500	1.00	1	10/22/2023 05:14	WG2155682
Bromomethane	74-83-9	0.500	U	0.148	0.500	1.00	1	10/22/2023 05:14	WG2155682
n-Butylbenzene	104-51-8	0.500	U	0.154	0.500	1.00	1	10/22/2023 05:14	WG2155682
sec-Butylbenzene	135-98-8	0.250	U	0.101	0.250	0.500	1	10/22/2023 05:14	WG2155682
tert-Butylbenzene	98-06-6	0.500	U	0.0620	0.500	1.00	1	10/22/2023 05:14	WG2155682
Carbon tetrachloride	56-23-5	0.100	U	0.0432	0.100	0.200	1	10/22/2023 05:14	WG2155682
Carbon disulfide	75-15-0	0.262	J	0.162	0.500	1.00	1	10/22/2023 05:14	WG2155682
Chlorobenzene	108-90-7	0.0500	U	0.0229	0.0500	0.100	1	10/22/2023 05:14	WG2155682
Chlorodibromomethane	124-48-1	0.0500	U	0.0180	0.0500	0.100	1	10/22/2023 05:14	WG2155682

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Chloroethane	75-00-3	0.100	U	0.0432	0.100	0.200	1	10/22/2023 05:14	WG2155682
Chloroform	67-66-3	0.0500	U	0.0166	0.0500	0.100	1	10/22/2023 05:14	WG2155682
Chloromethane	74-87-3	0.250	U	0.0556	0.250	0.500	1	10/22/2023 05:14	WG2155682
Cyclohexane	110-82-7	0.0500	U	0.0203	0.0500	0.100	1	10/26/2023 21:42	WG2157275
2-Chlorotoluene	95-49-8	0.100	U	0.0368	0.100	0.200	1	10/22/2023 05:14	WG2155682
4-Chlorotoluene	106-43-4	0.100	U	0.0452	0.100	0.200	1	10/22/2023 05:14	WG2155682
1,2-Dibromo-3-Chloropropane	96-12-8	0.500	U	0.204	0.500	1.00	1	10/22/2023 05:14	WG2155682
1,2-Dibromoethane	106-93-4	0.0500	U	0.0210	0.0500	0.100	1	10/22/2023 05:14	WG2155682
Dibromomethane	74-95-3	0.100	U	0.0400	0.100	0.200	1	10/22/2023 05:14	WG2155682
1,2-Dichlorobenzene	95-50-1	0.200	U	0.0580	0.200	0.400	1	10/22/2023 05:14	WG2155682
1,3-Dichlorobenzene	541-73-1	0.200	U	0.0680	0.200	0.400	1	10/22/2023 05:14	WG2155682
1,4-Dichlorobenzene	106-46-7	0.250	U	0.0788	0.250	0.500	1	10/22/2023 05:14	WG2155682
Dichlorodifluoromethane	75-71-8	0.100	U	0.0327	0.100	0.200	1	10/22/2023 05:14	WG2155682
1,1-Dichloroethane	75-34-3	0.0500	U	0.0230	0.0500	0.100	1	10/22/2023 05:14	WG2155682
1,2-Dichloroethane	107-06-2	0.0500	U	0.0190	0.0500	0.100	1	10/22/2023 05:14	WG2155682
1,1-Dichloroethene	75-35-4	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 05:14	WG2155682
cis-1,2-Dichloroethene	156-59-2	0.0750	U	0.0276	0.0750	0.150	1	10/22/2023 05:14	WG2155682
trans-1,2-Dichloroethene	156-60-5	0.300	U	0.0572	0.300	0.600	1	10/22/2023 05:14	WG2155682
1,2-Dichloropropane	78-87-5	0.200	U	0.0508	0.200	0.400	1	10/22/2023 05:14	WG2155682
1,1-Dichloropropene	563-58-6	0.100	U	0.0280	0.100	0.200	1	10/22/2023 05:14	WG2155682
1,3-Dichloropropane	142-28-9	0.150	U	0.0700	0.150	0.300	1	10/22/2023 05:14	WG2155682
cis-1,3-Dichloropropene	10061-01-5	0.100	U	0.0271	0.100	0.200	1	10/22/2023 05:14	WG2155682
trans-1,3-Dichloropropene	10061-02-6	0.150	U	0.0612	0.150	0.300	1	10/22/2023 05:14	WG2155682
2,2-Dichloropropane	594-20-7	0.100	U	0.0317	0.100	0.200	1	10/22/2023 05:14	WG2155682
Di-isopropyl ether	108-20-3	0.0500	U	0.0140	0.0500	0.100	1	10/22/2023 05:14	WG2155682
Ethylbenzene	100-41-4	0.0370	J	0.0212	0.0500	0.100	1	10/26/2023 21:42	WG2157275
Hexachloro-1,3-butadiene	87-68-3	2.00	U	0.508	2.00	4.00	1	10/22/2023 05:14	WG2155682
Isopropylbenzene	98-82-8	1.00	U	0.0345	1.00	2.00	1	10/22/2023 05:14	WG2155682
p-Isopropyltoluene	99-87-6	0.300	U	0.0932	0.300	0.600	1	10/22/2023 05:14	WG2155682
2-Butanone (MEK)	78-93-3	1.00	U	0.500	1.00	2.00	1	10/22/2023 05:14	WG2155682
Methylene Chloride	75-09-2	0.750	U	0.266	0.750	1.50	1	10/22/2023 05:14	WG2155682
4-Methyl-2-pentanone (MIBK)	108-10-1	1.00	U	0.400	1.00	2.00	1	10/22/2023 05:14	WG2155682
Methyl tert-butyl ether	1634-04-4	0.0300	U	0.0118	0.0300	0.0600	1	10/22/2023 05:14	WG2155682
Naphthalene	91-20-3	0.250	U	0.125	0.250	0.500	1	10/22/2023 05:14	WG2155682
n-Propylbenzene	103-65-1	0.100	U	0.0472	0.100	0.200	1	10/22/2023 05:14	WG2155682
Styrene	100-42-5	0.250	U	0.109	0.250	0.500	1	10/22/2023 05:14	WG2155682
1,1,1,2-Tetrachloroethane	630-20-6	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 05:14	WG2155682
1,1,2,2-Tetrachloroethane	79-34-5	0.0500	U	0.0156	0.0500	0.100	1	10/22/2023 05:14	WG2155682
1,1,2-Trichlorotrifluoroethane	76-13-1	0.100	U	0.0270	0.100	0.200	1	10/22/2023 05:14	WG2155682
Tetrachloroethene	127-18-4	0.131	J	0.0280	0.0750	0.150	1	10/22/2023 05:14	WG2155682
Toluene	108-88-3	0.192	J	0.0500	0.100	0.200	1	10/26/2023 21:42	WG2157275
1,2,3-Trichlorobenzene	87-61-6	0.250	U	0.0250	0.250	0.500	1	10/22/2023 05:14	WG2155682
1,2,4-Trichlorobenzene	120-82-1	0.500	U	0.193	0.500	1.00	1	10/22/2023 05:14	WG2155682
1,1,1-Trichloroethane	71-55-6	0.0500	U	0.0110	0.0500	0.100	1	10/22/2023 05:14	WG2155682
1,1,2-Trichloroethane	79-00-5	0.100	U	0.0353	0.100	0.200	1	10/22/2023 05:14	WG2155682
Trichloroethene	79-01-6	0.0500	J	0.0160	0.0400	0.0800	1	10/22/2023 05:14	WG2155682
Trichlorofluoromethane	75-69-4	0.589	C5	0.0200	0.0500	0.100	1	10/22/2023 05:14	WG2155682
1,2,3-Trichloropropane	96-18-4	0.500	U	0.204	0.500	1.00	1	10/22/2023 05:14	WG2155682
1,2,4-Trimethylbenzene	95-63-6	0.0490	B J	0.0464	0.100	0.200	1	10/26/2023 21:42	WG2157275
1,2,3-Trimethylbenzene	526-73-8	0.0800	J	0.0460	0.100	0.200	1	10/22/2023 05:14	WG2155682
1,3,5-Trimethylbenzene	108-67-8	0.103	J	0.0432	0.100	0.200	1	10/22/2023 05:14	WG2155682
Vinyl chloride	75-01-4	0.0750	U	0.0273	0.0750	0.150	1	10/22/2023 05:14	WG2155682
Vinyl acetate	108-05-4	0.300	U	0.141	0.300	0.600	1	10/26/2023 21:42	WG2157275
Xylenes, Total	1330-20-7	0.340	J	0.191	0.400	0.800	1	10/26/2023 21:42	WG2157275
Ethyl Ether	60-29-7	0.0500	U	0.0170	0.0500	0.100	1	10/22/2023 05:14	WG2155682
Tetrahydrofuran	109-99-9	0.250	U	0.0900	0.250	50.0	1	10/22/2023 05:14	WG2155682

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Iodomethane	74-88-4	0.500	U	0.242	0.500	1.00	1	10/22/2023 05:14	WG2155682
Allyl chloride	107-05-1	2.00	U	0.580	2.00	4.00	1	10/22/2023 05:14	WG2155682
trans-1,4-Dichloro-2-butene	110-57-6	0.200	C4 U	0.0560	0.200	0.400	1	10/22/2023 05:14	WG2155682
(S) Toluene-d8	*2037-26-5*	*103*				*89.0-112*		*10/22/2023 05:14*	WG2155682
(S) Toluene-d8	*2037-26-5*	*109*				*89.0-112*		*10/26/2023 21:42*	WG2157275
(S) 4-Bromofluorobenzene	*460-00-4*	*100*				*85.0-114*		*10/22/2023 05:14*	WG2155682
(S) 4-Bromofluorobenzene	*460-00-4*	*103*				*85.0-114*		*10/26/2023 21:42*	WG2157275
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*94.1*				*81.0-118*		*10/22/2023 05:14*	WG2155682
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*96.0*				*81.0-118*		*10/26/2023 21:42*	WG2157275

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Acetone	67-64-1	25.0	U	11.3	25.0	50.0	1	10/19/2023 18:01	WG2154426
Acrolein	107-02-8	25.0	U	2.54	25.0	50.0	1	10/19/2023 18:01	WG2154426
Acrylonitrile	107-13-1	5.00	U	0.671	5.00	10.0	1	10/19/2023 18:01	WG2154426
Benzene	71-43-2	0.500	U	0.0941	0.500	1.00	1	10/19/2023 18:01	WG2154426
Bromobenzene	108-86-1	0.500	U	0.118	0.500	1.00	1	10/19/2023 18:01	WG2154426
Bromodichloromethane	75-27-4	0.500	U	0.136	0.500	1.00	1	10/19/2023 18:01	WG2154426
Bromoform	75-25-2	0.500	U	0.129	0.500	1.00	1	10/19/2023 18:01	WG2154426
Bromomethane	74-83-9	2.00	U	0.605	2.00	5.00	1	10/19/2023 18:01	WG2154426
n-Butylbenzene	104-51-8	0.500	U	0.157	0.500	1.00	1	10/19/2023 18:01	WG2154426
sec-Butylbenzene	135-98-8	0.500	U	0.125	0.500	1.00	1	10/19/2023 18:01	WG2154426
tert-Butylbenzene	98-06-6	0.500	U	0.127	0.500	1.00	1	10/19/2023 18:01	WG2154426
Carbon tetrachloride	56-23-5	0.500	U	0.128	0.500	1.00	1	10/19/2023 18:01	WG2154426
Chlorobenzene	108-90-7	0.500	U	0.116	0.500	1.00	1	10/19/2023 18:01	WG2154426
Chlorodibromomethane	124-48-1	0.500	U	0.140	0.500	1.00	1	10/19/2023 18:01	WG2154426
Chloroethane	75-00-3	2.00	U	0.192	2.00	5.00	1	10/19/2023 18:01	WG2154426
2-Chloroethyl vinyl ether	110-75-8	25.0	U	0.575	25.0	50.0	1	10/19/2023 18:01	WG2154426
Chloroform	67-66-3	2.00	U	0.111	2.00	5.00	1	10/19/2023 18:01	WG2154426
Chloromethane	74-87-3	2.00	U	0.960	2.00	4.00	1	10/19/2023 18:01	WG2154426
2-Chlorotoluene	95-49-8	0.500	U	0.106	0.500	1.00	1	10/19/2023 18:01	WG2154426
4-Chlorotoluene	106-43-4	0.500	U	0.114	0.500	1.00	1	10/19/2023 18:01	WG2154426
1,2-Dibromoethane	106-93-4	0.500	U	0.126	0.500	1.00	1	10/19/2023 18:01	WG2154426
1,2-Dibromo-3-Chloropropane	96-12-8	2.00	U	0.276	2.00	5.00	1	10/19/2023 18:01	WG2154426
Dibromomethane	74-95-3	0.500	U	0.122	0.500	1.00	1	10/19/2023 18:01	WG2154426
1,2-Dichlorobenzene	95-50-1	0.500	U	0.107	0.500	1.00	1	10/19/2023 18:01	WG2154426
1,3-Dichlorobenzene	541-73-1	0.500	U	0.110	0.500	1.00	1	10/19/2023 18:01	WG2154426
1,4-Dichlorobenzene	106-46-7	0.500	U	0.120	0.500	1.00	1	10/19/2023 18:01	WG2154426
Dichlorodifluoromethane	75-71-8	2.00	U	0.374	2.00	5.00	1	10/19/2023 18:01	WG2154426
1,1-Dichloroethane	75-34-3	0.500	U	0.100	0.500	1.00	1	10/19/2023 18:01	WG2154426
1,2-Dichloroethane	107-06-2	0.500	U	0.0819	0.500	1.00	1	10/19/2023 18:01	WG2154426
1,1-Dichloroethene	75-35-4	0.500	U	0.188	0.500	1.00	1	10/19/2023 18:01	WG2154426
cis-1,2-Dichloroethene	156-59-2	0.500	U	0.126	0.500	1.00	1	10/19/2023 18:01	WG2154426
trans-1,2-Dichloroethene	156-60-5	0.500	U	0.149	0.500	1.00	1	10/19/2023 18:01	WG2154426
1,2-Dichloropropane	78-87-5	0.500	U	0.149	0.500	1.00	1	10/19/2023 18:01	WG2154426
1,3-Dichloropropane	142-28-9	0.500	U	0.110	0.500	1.00	1	10/19/2023 18:01	WG2154426
2,2-Dichloropropane	594-20-7	0.500	U	0.161	0.500	1.00	1	10/19/2023 18:01	WG2154426
1,1-Dichloropropene	563-58-6	0.500	U	0.142	0.500	1.00	1	10/19/2023 18:01	WG2154426
cis-1,3-Dichloropropene	10061-01-5	0.500	U	0.111	0.500	1.00	1	10/19/2023 18:01	WG2154426
trans-1,3-Dichloropropene	10061-02-6	0.500	U	0.118	0.500	1.00	1	10/19/2023 18:01	WG2154426
Di-isopropyl ether	108-20-3	0.500	U	0.105	0.500	1.00	1	10/19/2023 18:01	WG2154426
Ethylbenzene	100-41-4	0.500	U	0.137	0.500	1.00	1	10/19/2023 18:01	WG2154426
Hexachloro-1,3-butadiene	87-68-3	0.750	U	0.337	0.750	1.50	1	10/19/2023 18:01	WG2154426
Isopropylbenzene	98-82-8	0.500	U	0.105	0.500	1.00	1	10/19/2023 18:01	WG2154426
p-Isopropyltoluene	99-87-6	0.500	U	0.120	0.500	1.00	1	10/19/2023 18:01	WG2154426

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
2-Butanone (MEK)	78-93-3	5.00	U	1.19	5.00	10.0	1	10/19/2023 18:01	WG2154426
Methylene Chloride	75-09-2	2.00	U	0.430	2.00	5.00	1	10/19/2023 18:01	WG2154426
4-Methyl-2-pentanone (MIBK)	108-10-1	5.00	U	0.478	5.00	10.0	1	10/19/2023 18:01	WG2154426
Methyl tert-butyl ether	1634-04-4	0.500	U	0.101	0.500	1.00	1	10/19/2023 18:01	WG2154426
Naphthalene	91-20-3	2.00	U	1.00	2.00	5.00	1	10/19/2023 18:01	WG2154426
n-Propylbenzene	103-65-1	0.500	U	0.0993	0.500	1.00	1	10/19/2023 18:01	WG2154426
Styrene	100-42-5	0.500	U	0.118	0.500	1.00	1	10/19/2023 18:01	WG2154426
1,1,1,2-Tetrachloroethane	630-20-6	0.500	U	0.147	0.500	1.00	1	10/19/2023 18:01	WG2154426
1,1,2,2-Tetrachloroethane	79-34-5	0.500	U	0.133	0.500	1.00	1	10/19/2023 18:01	WG2154426
Tetrachloroethene	127-18-4	0.600	U	0.300	0.600	1.20	1	10/19/2023 18:01	WG2154426
Toluene	108-88-3	0.300	J	0.278	0.600	1.20	1	10/19/2023 18:01	WG2154426
1,2,3-Trichlorobenzene	87-61-6	0.500	U	0.230	0.500	1.00	1	10/19/2023 18:01	WG2154426
1,2,4-Trichlorobenzene	120-82-1	1.00	U	0.481	1.00	2.00	1	10/19/2023 18:01	WG2154426
1,2,3-Trimethylbenzene	526-73-8	0.500	U	0.104	0.500	1.00	1	10/19/2023 18:01	WG2154426
1,2,4-Trimethylbenzene	95-63-6	1.00	U	0.322	1.00	2.00	1	10/19/2023 18:01	WG2154426
1,3,5-Trimethylbenzene	108-67-8	0.500	U	0.104	0.500	1.00	1	10/19/2023 18:01	WG2154426
1,1,1-Trichloroethane	71-55-6	0.500	U	0.149	0.500	1.00	1	10/19/2023 18:01	WG2154426
1,1,2-Trichloroethane	79-00-5	0.500	U	0.158	0.500	1.00	1	10/19/2023 18:01	WG2154426
Trichloroethene	79-01-6	0.500	U	0.190	0.500	1.00	1	10/19/2023 18:01	WG2154426
Trichlorofluoromethane	75-69-4	2.00	U	0.160	2.00	5.00	1	10/19/2023 18:01	WG2154426
1,1,2-Trichlorotrifluoroethane	76-13-1	0.500	U	0.180	0.500	1.00	1	10/19/2023 18:01	WG2154426
1,2,3-Trichloropropane	96-18-4	1.00	U	0.237	1.00	2.50	1	10/19/2023 18:01	WG2154426
Vinyl chloride	75-01-4	0.500	U	0.234	0.500	1.00	1	10/19/2023 18:01	WG2154426
Xylenes, Total	1330-20-7	0.300	J	0.174	1.50	3.00	1	10/19/2023 18:01	WG2154426
(S) Toluene-d8	*2037-26-5*	*104*				*89.0-112*		*10/19/2023 18:01*	WG2154426
(S) 4-Bromofluorobenzene	*460-00-4*	*96.6*				*85.0-114*		*10/19/2023 18:01*	WG2154426
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*106*				*81.0-118*		*10/19/2023 18:01*	WG2154426

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	C10-C25	355	B J	179	420	840	1.05	10/28/2023 05:23	WG2159044
(S) o-Terphenyl	*84-15-1*	*69.3*				*50.0-150*		*10/28/2023 05:23*	WG2159044

Additional Information - Results for field analyses are not accredited to ISO 17025

Analyte	Result	Units
Cooler#	Blue	
Cooler Temperature	2.5	Deg. C

Wet Chemistry by Method 2320 B-2011

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Alkalinity		78200		8450	10000	20000	1	10/23/2023 16:59	WG2156308
Alkalinity,Bicarbonate		78200		8450	10000	20000	1	10/23/2023 16:59	WG2156308
Alkalinity,Carbonate		10000	U	8450	10000	20000	1	10/23/2023 16:59	WG2156308
Alkalinity,Hydroxide		10000	U	8450	10000	20000	1	10/23/2023 16:59	WG2156308

Sample Narrative:

L1667742-04 WG2156308: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 351.2

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Kjeldahl Nitrogen, TKN	7727-37-9	177	J	140	300	600	1	10/22/2023 22:29	WG2154036

Wet Chemistry by Method 353.2

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Nitrate-Nitrite	7727-37-9	264		50.0	100	200	1	10/20/2023 20:48	WG2154634

Wet Chemistry by Method 9056A

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Sulfate	14808-79-8	3630	J	594	2500	5000	1	10/25/2023 17:02	WG2156852

Metals (ICP) by Method 6010D

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Iron	7439-89-6	308		20.5	50.0	100	1	10/24/2023 09:05	WG2153991
Manganese	7439-96-5	7.62	J	0.855	5.00	10.0	1	10/24/2023 09:05	WG2153991

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Acetone	67-64-1	1.37	J	0.548	2.00	4.00	1	10/22/2023 05:34	WG2155682
Acrylonitrile	107-13-1	0.250	U	0.0760	0.250	0.500	1	10/22/2023 05:34	WG2155682
Benzene	71-43-2	0.0500	U	0.0160	0.0500	0.100	1	10/26/2023 22:01	WG2157275
Bromobenzene	108-86-1	0.250	U	0.0420	0.250	0.500	1	10/22/2023 05:34	WG2155682
Bromodichloromethane	75-27-4	0.100	U	0.0315	0.100	0.200	1	10/22/2023 05:34	WG2155682
Bromochloromethane	74-97-5	0.100	U	0.0452	0.100	0.200	1	10/22/2023 05:34	WG2155682
Bromoform	75-25-2	0.500	U	0.239	0.500	1.00	1	10/22/2023 05:34	WG2155682
Bromomethane	74-83-9	0.500	U	0.148	0.500	1.00	1	10/22/2023 05:34	WG2155682
n-Butylbenzene	104-51-8	0.500	U	0.154	0.500	1.00	1	10/22/2023 05:34	WG2155682
sec-Butylbenzene	135-98-8	0.250	U	0.101	0.250	0.500	1	10/22/2023 05:34	WG2155682
tert-Butylbenzene	98-06-6	0.500	U	0.0620	0.500	1.00	1	10/22/2023 05:34	WG2155682
Carbon tetrachloride	56-23-5	0.100	U	0.0432	0.100	0.200	1	10/22/2023 05:34	WG2155682
Carbon disulfide	75-15-0	0.500	U	0.162	0.500	1.00	1	10/22/2023 05:34	WG2155682
Chlorobenzene	108-90-7	0.0500	U	0.0229	0.0500	0.100	1	10/22/2023 05:34	WG2155682
Chlorodibromomethane	124-48-1	0.0500	U	0.0180	0.0500	0.100	1	10/22/2023 05:34	WG2155682

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Chloroethane	75-00-3	0.100	U	0.0432	0.100	0.200	1	10/22/2023 05:34	WG2155682
Chloroform	67-66-3	0.0500	U	0.0166	0.0500	0.100	1	10/22/2023 05:34	WG2155682
Chloromethane	74-87-3	0.250	U	0.0556	0.250	0.500	1	10/22/2023 05:34	WG2155682
Cyclohexane	110-82-7	0.0500	U	0.0203	0.0500	0.100	1	10/26/2023 22:01	WG2157275
2-Chlorotoluene	95-49-8	0.100	U	0.0368	0.100	0.200	1	10/22/2023 05:34	WG2155682
4-Chlorotoluene	106-43-4	0.100	U	0.0452	0.100	0.200	1	10/22/2023 05:34	WG2155682
1,2-Dibromo-3-Chloropropane	96-12-8	0.500	U	0.204	0.500	1.00	1	10/22/2023 05:34	WG2155682
1,2-Dibromoethane	106-93-4	0.0500	U	0.0210	0.0500	0.100	1	10/22/2023 05:34	WG2155682
Dibromomethane	74-95-3	0.100	U	0.0400	0.100	0.200	1	10/22/2023 05:34	WG2155682
1,2-Dichlorobenzene	95-50-1	0.200	U	0.0580	0.200	0.400	1	10/22/2023 05:34	WG2155682
1,3-Dichlorobenzene	541-73-1	0.200	U	0.0680	0.200	0.400	1	10/22/2023 05:34	WG2155682
1,4-Dichlorobenzene	106-46-7	0.250	U	0.0788	0.250	0.500	1	10/22/2023 05:34	WG2155682
Dichlorodifluoromethane	75-71-8	0.100	U	0.0327	0.100	0.200	1	10/22/2023 05:34	WG2155682
1,1-Dichloroethane	75-34-3	0.0500	U	0.0230	0.0500	0.100	1	10/22/2023 05:34	WG2155682
1,2-Dichloroethane	107-06-2	0.0500	U	0.0190	0.0500	0.100	1	10/22/2023 05:34	WG2155682
1,1-Dichloroethene	75-35-4	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 05:34	WG2155682
cis-1,2-Dichloroethene	156-59-2	0.0750	U	0.0276	0.0750	0.150	1	10/22/2023 05:34	WG2155682
trans-1,2-Dichloroethene	156-60-5	0.300	U	0.0572	0.300	0.600	1	10/22/2023 05:34	WG2155682
1,2-Dichloropropane	78-87-5	0.200	U	0.0508	0.200	0.400	1	10/22/2023 05:34	WG2155682
1,1-Dichloropropene	563-58-6	0.100	U	0.0280	0.100	0.200	1	10/22/2023 05:34	WG2155682
1,3-Dichloropropane	142-28-9	0.150	U	0.0700	0.150	0.300	1	10/22/2023 05:34	WG2155682
cis-1,3-Dichloropropene	10061-01-5	0.100	U	0.0271	0.100	0.200	1	10/22/2023 05:34	WG2155682
trans-1,3-Dichloropropene	10061-02-6	0.150	U	0.0612	0.150	0.300	1	10/22/2023 05:34	WG2155682
2,2-Dichloropropane	594-20-7	0.100	U	0.0317	0.100	0.200	1	10/22/2023 05:34	WG2155682
Di-isopropyl ether	108-20-3	0.0500	U	0.0140	0.0500	0.100	1	10/22/2023 05:34	WG2155682
Ethylbenzene	100-41-4	0.0500	U	0.0212	0.0500	0.100	1	10/26/2023 22:01	WG2157275
Hexachloro-1,3-butadiene	87-68-3	2.00	U	0.508	2.00	4.00	1	10/22/2023 05:34	WG2155682
Isopropylbenzene	98-82-8	1.00	U	0.0345	1.00	2.00	1	10/22/2023 05:34	WG2155682
p-Isopropyltoluene	99-87-6	0.300	U	0.0932	0.300	0.600	1	10/22/2023 05:34	WG2155682
2-Butanone (MEK)	78-93-3	1.00	U	0.500	1.00	2.00	1	10/22/2023 05:34	WG2155682
Methylene Chloride	75-09-2	0.750	U	0.266	0.750	1.50	1	10/22/2023 05:34	WG2155682
4-Methyl-2-pentanone (MIBK)	108-10-1	1.00	U	0.400	1.00	2.00	1	10/22/2023 05:34	WG2155682
Methyl tert-butyl ether	1634-04-4	0.0300	U	0.0118	0.0300	0.0600	1	10/22/2023 05:34	WG2155682
Naphthalene	91-20-3	0.250	U	0.125	0.250	0.500	1	10/22/2023 05:34	WG2155682
n-Propylbenzene	103-65-1	0.100	U	0.0472	0.100	0.200	1	10/22/2023 05:34	WG2155682
Styrene	100-42-5	0.250	U	0.109	0.250	0.500	1	10/22/2023 05:34	WG2155682
1,1,1,2-Tetrachloroethane	630-20-6	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 05:34	WG2155682
1,1,2,2-Tetrachloroethane	79-34-5	0.0500	U	0.0156	0.0500	0.100	1	10/22/2023 05:34	WG2155682
1,1,2-Trichlorotrifluoroethane	76-13-1	0.100	U	0.0270	0.100	0.200	1	10/22/2023 05:34	WG2155682
Tetrachloroethene	127-18-4	0.0750	U	0.0280	0.0750	0.150	1	10/22/2023 05:34	WG2155682
Toluene	108-88-3	0.0810	J	0.0500	0.100	0.200	1	10/26/2023 22:01	WG2157275
1,2,3-Trichlorobenzene	87-61-6	0.250	U	0.0250	0.250	0.500	1	10/22/2023 05:34	WG2155682
1,2,4-Trichlorobenzene	120-82-1	0.500	U	0.193	0.500	1.00	1	10/22/2023 05:34	WG2155682
1,1,1-Trichloroethane	71-55-6	0.0500	U	0.0110	0.0500	0.100	1	10/22/2023 05:34	WG2155682
1,1,2-Trichloroethane	79-00-5	0.100	U	0.0353	0.100	0.200	1	10/22/2023 05:34	WG2155682
Trichloroethene	79-01-6	0.0370	J	0.0160	0.0400	0.0800	1	10/22/2023 05:34	WG2155682
Trichlorofluoromethane	75-69-4	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 05:34	WG2155682
1,2,3-Trichloropropane	96-18-4	0.500	U	0.204	0.500	1.00	1	10/22/2023 05:34	WG2155682
1,2,4-Trimethylbenzene	95-63-6	0.100	U	0.0464	0.100	0.200	1	10/26/2023 22:01	WG2157275
1,2,3-Trimethylbenzene	526-73-8	0.0480	J	0.0460	0.100	0.200	1	10/22/2023 05:34	WG2155682
1,3,5-Trimethylbenzene	108-67-8	0.0820	J	0.0432	0.100	0.200	1	10/22/2023 05:34	WG2155682
Vinyl chloride	75-01-4	0.0750	U	0.0273	0.0750	0.150	1	10/22/2023 05:34	WG2155682
Vinyl acetate	108-05-4	0.300	U	0.141	0.300	0.600	1	10/26/2023 22:01	WG2157275
Xylenes, Total	1330-20-7	0.400	U	0.191	0.400	0.800	1	10/22/2023 05:34	WG2155682
Ethyl Ether	60-29-7	0.0500	U	0.0170	0.0500	0.100	1	10/22/2023 05:34	WG2155682
Tetrahydrofuran	109-99-9	0.250	U	0.0900	0.250	50.0	1	10/22/2023 05:34	WG2155682

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Iodomethane	74-88-4	0.500	U	0.242	0.500	1.00	1	10/22/2023 05:34	WG2155682
Allyl chloride	107-05-1	2.00	U	0.580	2.00	4.00	1	10/22/2023 05:34	WG2155682
trans-1,4-Dichloro-2-butene	110-57-6	0.200	C4 U	0.0560	0.200	0.400	1	10/22/2023 05:34	WG2155682
(S) Toluene-d8	*2037-26-5*	*104*				*89.0-112*		*10/22/2023 05:34*	WG2155682
(S) Toluene-d8	*2037-26-5*	*107*				*89.0-112*		*10/26/2023 22:01*	WG2157275
(S) 4-Bromofluorobenzene	*460-00-4*	*103*				*85.0-114*		*10/22/2023 05:34*	WG2155682
(S) 4-Bromofluorobenzene	*460-00-4*	*102*				*85.0-114*		*10/26/2023 22:01*	WG2157275
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*94.3*				*81.0-118*		*10/22/2023 05:34*	WG2155682
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*97.2*				*81.0-118*		*10/26/2023 22:01*	WG2157275

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Acetone	67-64-1	25.0	U	11.3	25.0	50.0	1	10/22/2023 14:00	WG2155879
Acrolein	107-02-8	25.0	U	2.54	25.0	50.0	1	10/22/2023 14:00	WG2155879
Acrylonitrile	107-13-1	5.00	U	0.671	5.00	10.0	1	10/22/2023 14:00	WG2155879
Benzene	71-43-2	0.500	U	0.0941	0.500	1.00	1	10/22/2023 14:00	WG2155879
Bromobenzene	108-86-1	0.500	U	0.118	0.500	1.00	1	10/22/2023 14:00	WG2155879
Bromodichloromethane	75-27-4	0.500	U	0.136	0.500	1.00	1	10/22/2023 14:00	WG2155879
Bromoform	75-25-2	0.500	U	0.129	0.500	1.00	1	10/22/2023 14:00	WG2155879
Bromomethane	74-83-9	2.00	U	0.605	2.00	5.00	1	10/22/2023 14:00	WG2155879
n-Butylbenzene	104-51-8	0.500	U	0.157	0.500	1.00	1	10/22/2023 14:00	WG2155879
sec-Butylbenzene	135-98-8	0.500	U	0.125	0.500	1.00	1	10/22/2023 14:00	WG2155879
tert-Butylbenzene	98-06-6	0.500	U	0.127	0.500	1.00	1	10/22/2023 14:00	WG2155879
Carbon tetrachloride	56-23-5	0.500	U	0.128	0.500	1.00	1	10/22/2023 14:00	WG2155879
Chlorobenzene	108-90-7	0.500	U	0.116	0.500	1.00	1	10/22/2023 14:00	WG2155879
Chlorodibromomethane	124-48-1	0.500	U	0.140	0.500	1.00	1	10/22/2023 14:00	WG2155879
Chloroethane	75-00-3	2.00	U	0.192	2.00	5.00	1	10/22/2023 14:00	WG2155879
2-Chloroethyl vinyl ether	110-75-8	25.0	U	0.575	25.0	50.0	1	10/22/2023 14:00	WG2155879
Chloroform	67-66-3	2.00	U	0.111	2.00	5.00	1	10/22/2023 14:00	WG2155879
Chloromethane	74-87-3	2.00	U	0.960	2.00	4.00	1	10/22/2023 14:00	WG2155879
2-Chlorotoluene	95-49-8	0.500	U	0.106	0.500	1.00	1	10/22/2023 14:00	WG2155879
4-Chlorotoluene	106-43-4	0.500	U	0.114	0.500	1.00	1	10/22/2023 14:00	WG2155879
1,2-Dibromoethane	106-93-4	0.500	U	0.126	0.500	1.00	1	10/22/2023 14:00	WG2155879
1,2-Dibromo-3-Chloropropane	96-12-8	2.00	U	0.276	2.00	5.00	1	10/22/2023 14:00	WG2155879
Dibromomethane	74-95-3	0.500	U	0.122	0.500	1.00	1	10/22/2023 14:00	WG2155879
1,2-Dichlorobenzene	95-50-1	0.500	U	0.107	0.500	1.00	1	10/22/2023 14:00	WG2155879
1,3-Dichlorobenzene	541-73-1	0.500	U	0.110	0.500	1.00	1	10/22/2023 14:00	WG2155879
1,4-Dichlorobenzene	106-46-7	0.500	U	0.120	0.500	1.00	1	10/22/2023 14:00	WG2155879
Dichlorodifluoromethane	75-71-8	2.00	U	0.374	2.00	5.00	1	10/22/2023 14:00	WG2155879
1,1-Dichloroethane	75-34-3	0.500	U	0.100	0.500	1.00	1	10/22/2023 14:00	WG2155879
1,2-Dichloroethane	107-06-2	0.500	U	0.0819	0.500	1.00	1	10/22/2023 14:00	WG2155879
1,1-Dichloroethene	75-35-4	0.500	U	0.188	0.500	1.00	1	10/22/2023 14:00	WG2155879
cis-1,2-Dichloroethene	156-59-2	0.500	U	0.126	0.500	1.00	1	10/22/2023 14:00	WG2155879
trans-1,2-Dichloroethene	156-60-5	0.500	U	0.149	0.500	1.00	1	10/22/2023 14:00	WG2155879
1,2-Dichloropropane	78-87-5	0.500	U	0.149	0.500	1.00	1	10/22/2023 14:00	WG2155879
1,3-Dichloropropane	142-28-9	0.500	U	0.110	0.500	1.00	1	10/22/2023 14:00	WG2155879
2,2-Dichloropropane	594-20-7	0.500	U	0.161	0.500	1.00	1	10/22/2023 05:34	WG2225461
1,1-Dichloropropene	563-58-6	0.500	U	0.142	0.500	1.00	1	10/22/2023 14:00	WG2155879
cis-1,3-Dichloropropene	10061-01-5	0.500	U	0.111	0.500	1.00	1	10/22/2023 14:00	WG2155879
trans-1,3-Dichloropropene	10061-02-6	0.500	U	0.118	0.500	1.00	1	10/22/2023 14:00	WG2155879
Di-isopropyl ether	108-20-3	0.500	U	0.105	0.500	1.00	1	10/22/2023 14:00	WG2155879
Ethylbenzene	100-41-4	0.500	U	0.137	0.500	1.00	1	10/22/2023 14:00	WG2155879
Hexachloro-1,3-butadiene	87-68-3	0.750	U	0.337	0.750	1.50	1	10/22/2023 05:34	WG2225461
Isopropylbenzene	98-82-8	0.500	U	0.105	0.500	1.00	1	10/22/2023 14:00	WG2155879
p-Isopropyltoluene	99-87-6	0.500	U	0.120	0.500	1.00	1	10/22/2023 14:00	WG2155879

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
2-Butanone (MEK)	78-93-3	5.00	U	1.19	5.00	10.0	1	10/22/2023 14:00	WG2155879
Methylene Chloride	75-09-2	2.00	U	0.430	2.00	5.00	1	10/22/2023 14:00	WG2155879
4-Methyl-2-pentanone (MIBK)	108-10-1	5.00	U	0.478	5.00	10.0	1	10/22/2023 14:00	WG2155879
Methyl tert-butyl ether	1634-04-4	0.500	U	0.101	0.500	1.00	1	10/22/2023 14:00	WG2155879
Naphthalene	91-20-3	2.00	U	1.00	2.00	5.00	1	10/22/2023 14:00	WG2155879
n-Propylbenzene	103-65-1	0.500	U	0.0993	0.500	1.00	1	10/22/2023 14:00	WG2155879
Styrene	100-42-5	0.500	U	0.118	0.500	1.00	1	10/22/2023 14:00	WG2155879
1,1,1,2-Tetrachloroethane	630-20-6	0.500	U	0.147	0.500	1.00	1	10/22/2023 14:00	WG2155879
1,1,2,2-Tetrachloroethane	79-34-5	0.500	U	0.133	0.500	1.00	1	10/22/2023 14:00	WG2155879
Tetrachloroethene	127-18-4	0.600	U	0.300	0.600	1.20	1	10/22/2023 14:00	WG2155879
Toluene	108-88-3	0.291	J	0.278	0.600	1.20	1	10/22/2023 14:00	WG2155879
1,2,3-Trichlorobenzene	87-61-6	0.500	U	0.230	0.500	1.00	1	10/22/2023 14:00	WG2155879
1,2,4-Trichlorobenzene	120-82-1	1.00	U	0.481	1.00	2.00	1	10/22/2023 14:00	WG2155879
1,2,3-Trimethylbenzene	526-73-8	0.500	U	0.104	0.500	1.00	1	10/22/2023 14:00	WG2155879
1,2,4-Trimethylbenzene	95-63-6	1.00	U	0.322	1.00	2.00	1	10/22/2023 14:00	WG2155879
1,3,5-Trimethylbenzene	108-67-8	0.500	U	0.104	0.500	1.00	1	10/22/2023 14:00	WG2155879
1,1,1-Trichloroethane	71-55-6	0.500	U	0.149	0.500	1.00	1	10/22/2023 05:34	WG2225461
1,1,2-Trichloroethane	79-00-5	0.500	U	0.158	0.500	1.00	1	10/22/2023 14:00	WG2155879
Trichloroethene	79-01-6	0.500	U	0.190	0.500	1.00	1	10/22/2023 14:00	WG2155879
Trichlorofluoromethane	75-69-4	2.00	U	0.160	2.00	5.00	1	10/22/2023 14:00	WG2155879
1,1,2-Trichlorotrifluoroethane	76-13-1	0.500	U	0.180	0.500	1.00	1	10/22/2023 14:00	WG2155879
1,2,3-Trichloropropane	96-18-4	1.00	U	0.237	1.00	2.50	1	10/22/2023 14:00	WG2155879
Vinyl chloride	75-01-4	0.500	U	0.234	0.500	1.00	1	10/22/2023 14:00	WG2155879
Xylenes, Total	1330-20-7	1.50	U	0.174	1.50	3.00	1	10/22/2023 14:00	WG2155879
(S) Toluene-d8	*2037-26-5*	*106*				*89.0-112*		*10/22/2023 14:00*	WG2155879
(S) Toluene-d8	*2037-26-5*	*104*				*89.0-112*		*10/22/2023 05:34*	WG2225461
(S) 4-Bromofluorobenzene	*460-00-4*	*94.2*				*85.0-114*		*10/22/2023 14:00*	WG2155879
(S) 4-Bromofluorobenzene	*460-00-4*	*103*				*85.0-114*		*10/22/2023 05:34*	WG2225461
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*102*				*81.0-118*		*10/22/2023 14:00*	WG2155879
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*94.3*				*81.0-118*		*10/22/2023 05:34*	WG2225461

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	C10-C25	509	B J	179	420	840	1.05	10/28/2023 05:43	WG2159044
(S) o-Terphenyl	*84-15-1*	*73.1*				*50.0-150*		*10/28/2023 05:43*	WG2159044

Additional Information - Results for field analyses are not accredited to ISO 17025

Analyte	Result	Units
Cooler#	Blue	
Cooler Temperature	2.5	Deg. C

Wet Chemistry by Method 2320 B-2011

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Alkalinity		102000		8450	10000	20000	1	10/23/2023 17:04	WG2156308
Alkalinity,Bicarbonate		102000		8450	10000	20000	1	10/23/2023 17:04	WG2156308
Alkalinity,Carbonate		10000	U	8450	10000	20000	1	10/23/2023 17:04	WG2156308
Alkalinity,Hydroxide		10000	U	8450	10000	20000	1	10/23/2023 17:04	WG2156308

Sample Narrative:

L1667742-05 WG2156308: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 351.2

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Kjeldahl Nitrogen, TKN	7727-37-9	300	U	140	300	600	1	10/22/2023 22:30	WG2154036

Wet Chemistry by Method 353.2

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	7727-37-9	995		50.0	100	200	1	10/20/2023 20:49	WG2154634

Wet Chemistry by Method 9056A

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Sulfate	14808-79-8	5780		594	2500	5000	1	10/25/2023 17:17	WG2156852

Metals (ICP) by Method 6010D

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Iron	7439-89-6	43.0	J	20.5	50.0	100	1	10/24/2023 09:13	WG2153991
Manganese	7439-96-5	1.42	J	0.855	5.00	10.0	1	10/24/2023 09:13	WG2153991

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Acetone	67-64-1	3.29	J	0.548	2.00	4.00	1	10/22/2023 05:53	WG2155682
Acrylonitrile	107-13-1	0.250	U	0.0760	0.250	0.500	1	10/22/2023 05:53	WG2155682
Benzene	71-43-2	0.0500	U	0.0160	0.0500	0.100	1	10/26/2023 22:20	WG2157275
Bromobenzene	108-86-1	0.250	U	0.0420	0.250	0.500	1	10/22/2023 05:53	WG2155682
Bromodichloromethane	75-27-4	0.100	U	0.0315	0.100	0.200	1	10/22/2023 05:53	WG2155682
Bromochloromethane	74-97-5	0.100	U	0.0452	0.100	0.200	1	10/22/2023 05:53	WG2155682
Bromoform	75-25-2	0.500	U	0.239	0.500	1.00	1	10/22/2023 05:53	WG2155682
Bromomethane	74-83-9	0.500	U	0.148	0.500	1.00	1	10/22/2023 05:53	WG2155682
n-Butylbenzene	104-51-8	0.500	U	0.154	0.500	1.00	1	10/22/2023 05:53	WG2155682
sec-Butylbenzene	135-98-8	0.250	U	0.101	0.250	0.500	1	10/22/2023 05:53	WG2155682
tert-Butylbenzene	98-06-6	0.500	U	0.0620	0.500	1.00	1	10/22/2023 05:53	WG2155682
Carbon tetrachloride	56-23-5	0.100	U	0.0432	0.100	0.200	1	10/22/2023 05:53	WG2155682
Carbon disulfide	75-15-0	0.500	U	0.162	0.500	1.00	1	10/22/2023 05:53	WG2155682
Chlorobenzene	108-90-7	0.0500	U	0.0229	0.0500	0.100	1	10/22/2023 05:53	WG2155682
Chlorodibromomethane	124-48-1	0.0500	U	0.0180	0.0500	0.100	1	10/22/2023 05:53	WG2155682

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Chloroethane	75-00-3	0.100	U	0.0432	0.100	0.200	1	10/22/2023 05:53	WG2155682
Chloroform	67-66-3	0.0500	U	0.0166	0.0500	0.100	1	10/22/2023 05:53	WG2155682
Chloromethane	74-87-3	0.250	U	0.0556	0.250	0.500	1	10/22/2023 05:53	WG2155682
Cyclohexane	110-82-7	0.0500	U	0.0203	0.0500	0.100	1	10/22/2023 05:53	WG2155682
2-Chlorotoluene	95-49-8	0.100	U	0.0368	0.100	0.200	1	10/22/2023 05:53	WG2155682
4-Chlorotoluene	106-43-4	0.100	U	0.0452	0.100	0.200	1	10/22/2023 05:53	WG2155682
1,2-Dibromo-3-Chloropropane	96-12-8	0.500	U	0.204	0.500	1.00	1	10/22/2023 05:53	WG2155682
1,2-Dibromoethane	106-93-4	0.0500	U	0.0210	0.0500	0.100	1	10/22/2023 05:53	WG2155682
Dibromomethane	74-95-3	0.100	U	0.0400	0.100	0.200	1	10/22/2023 05:53	WG2155682
1,2-Dichlorobenzene	95-50-1	0.200	U	0.0580	0.200	0.400	1	10/22/2023 05:53	WG2155682
1,3-Dichlorobenzene	541-73-1	0.200	U	0.0680	0.200	0.400	1	10/22/2023 05:53	WG2155682
1,4-Dichlorobenzene	106-46-7	0.250	U	0.0788	0.250	0.500	1	10/22/2023 05:53	WG2155682
Dichlorodifluoromethane	75-71-8	0.100	U	0.0327	0.100	0.200	1	10/22/2023 05:53	WG2155682
1,1-Dichloroethane	75-34-3	0.0500	U	0.0230	0.0500	0.100	1	10/22/2023 05:53	WG2155682
1,2-Dichloroethane	107-06-2	0.0500	U	0.0190	0.0500	0.100	1	10/22/2023 05:53	WG2155682
1,1-Dichloroethene	75-35-4	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 05:53	WG2155682
cis-1,2-Dichloroethene	156-59-2	0.0750	U	0.0276	0.0750	0.150	1	10/22/2023 05:53	WG2155682
trans-1,2-Dichloroethene	156-60-5	0.300	U	0.0572	0.300	0.600	1	10/22/2023 05:53	WG2155682
1,2-Dichloropropane	78-87-5	0.200	U	0.0508	0.200	0.400	1	10/22/2023 05:53	WG2155682
1,1-Dichloropropene	563-58-6	0.100	U	0.0280	0.100	0.200	1	10/22/2023 05:53	WG2155682
1,3-Dichloropropane	142-28-9	0.150	U	0.0700	0.150	0.300	1	10/22/2023 05:53	WG2155682
cis-1,3-Dichloropropene	10061-01-5	0.100	U	0.0271	0.100	0.200	1	10/22/2023 05:53	WG2155682
trans-1,3-Dichloropropene	10061-02-6	0.150	U	0.0612	0.150	0.300	1	10/22/2023 05:53	WG2155682
2,2-Dichloropropane	594-20-7	0.100	U	0.0317	0.100	0.200	1	10/22/2023 05:53	WG2155682
Di-isopropyl ether	108-20-3	0.0500	U	0.0140	0.0500	0.100	1	10/22/2023 05:53	WG2155682
Ethylbenzene	100-41-4	0.0500	U	0.0212	0.0500	0.100	1	10/22/2023 05:53	WG2155682
Hexachloro-1,3-butadiene	87-68-3	2.00	U	0.508	2.00	4.00	1	10/22/2023 05:53	WG2155682
Isopropylbenzene	98-82-8	1.00	U	0.0345	1.00	2.00	1	10/22/2023 05:53	WG2155682
p-Isopropyltoluene	99-87-6	0.300	U	0.0932	0.300	0.600	1	10/22/2023 05:53	WG2155682
2-Butanone (MEK)	78-93-3	1.00	U	0.500	1.00	2.00	1	10/22/2023 05:53	WG2155682
Methylene Chloride	75-09-2	0.750	U	0.266	0.750	1.50	1	10/22/2023 05:53	WG2155682
4-Methyl-2-pentanone (MIBK)	108-10-1	1.00	U	0.400	1.00	2.00	1	10/22/2023 05:53	WG2155682
Methyl tert-butyl ether	1634-04-4	0.0300	U	0.0118	0.0300	0.0600	1	10/22/2023 05:53	WG2155682
Naphthalene	91-20-3	0.250	U	0.125	0.250	0.500	1	10/22/2023 05:53	WG2155682
n-Propylbenzene	103-65-1	0.100	U	0.0472	0.100	0.200	1	10/22/2023 05:53	WG2155682
Styrene	100-42-5	0.250	U	0.109	0.250	0.500	1	10/22/2023 05:53	WG2155682
1,1,1,2-Tetrachloroethane	630-20-6	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 05:53	WG2155682
1,1,2,2-Tetrachloroethane	79-34-5	0.0500	U	0.0156	0.0500	0.100	1	10/22/2023 05:53	WG2155682
1,1,2-Trichlorotrifluoroethane	76-13-1	0.100	U	0.0270	0.100	0.200	1	10/22/2023 05:53	WG2155682
Tetrachloroethene	127-18-4	0.0750	U	0.0280	0.0750	0.150	1	10/22/2023 05:53	WG2155682
Toluene	108-88-3	0.131	J	0.0500	0.100	0.200	1	10/26/2023 22:20	WG2157275
1,2,3-Trichlorobenzene	87-61-6	0.250	U	0.0250	0.250	0.500	1	10/22/2023 05:53	WG2155682
1,2,4-Trichlorobenzene	120-82-1	0.500	U	0.193	0.500	1.00	1	10/22/2023 05:53	WG2155682
1,1,1-Trichloroethane	71-55-6	0.0500	U	0.0110	0.0500	0.100	1	10/22/2023 05:53	WG2155682
1,1,2-Trichloroethane	79-00-5	0.100	U	0.0353	0.100	0.200	1	10/22/2023 05:53	WG2155682
Trichloroethene	79-01-6	4.04		0.0160	0.0400	0.0800	1	10/26/2023 22:20	WG2157275
Trichlorofluoromethane	75-69-4	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 05:53	WG2155682
1,2,3-Trichloropropane	96-18-4	0.500	U	0.204	0.500	1.00	1	10/22/2023 05:53	WG2155682
1,2,4-Trimethylbenzene	95-63-6	0.100	U	0.0464	0.100	0.200	1	10/26/2023 22:20	WG2157275
1,2,3-Trimethylbenzene	526-73-8	0.100	U	0.0460	0.100	0.200	1	10/22/2023 05:53	WG2155682
1,3,5-Trimethylbenzene	108-67-8	0.0810	J	0.0432	0.100	0.200	1	10/22/2023 05:53	WG2155682
Vinyl chloride	75-01-4	0.0750	U	0.0273	0.0750	0.150	1	10/22/2023 05:53	WG2155682
Vinyl acetate	108-05-4	0.300	U	0.141	0.300	0.600	1	10/26/2023 22:20	WG2157275
Xylenes, Total	1330-20-7	0.215	J	0.191	0.400	0.800	1	10/22/2023 05:53	WG2155682
Ethyl Ether	60-29-7	0.0500	U	0.0170	0.0500	0.100	1	10/22/2023 05:53	WG2155682
Tetrahydrofuran	109-99-9	0.250	U	0.0900	0.250	50.0	1	10/22/2023 05:53	WG2155682

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Iodomethane	74-88-4	0.500	U	0.242	0.500	1.00	1	10/22/2023 05:53	WG2155682
Allyl chloride	107-05-1	2.00	U	0.580	2.00	4.00	1	10/22/2023 05:53	WG2155682
trans-1,4-Dichloro-2-butene	110-57-6	0.200	C4 U	0.0560	0.200	0.400	1	10/22/2023 05:53	WG2155682
(S) Toluene-d8	*2037-26-5*	*101*				*89.0-112*		*10/22/2023 05:53*	WG2155682
(S) Toluene-d8	*2037-26-5*	*111*				*89.0-112*		*10/26/2023 22:20*	WG2157275
(S) 4-Bromofluorobenzene	*460-00-4*	*102*				*85.0-114*		*10/22/2023 05:53*	WG2155682
(S) 4-Bromofluorobenzene	*460-00-4*	*103*				*85.0-114*		*10/26/2023 22:20*	WG2157275
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*95.6*				*81.0-118*		*10/22/2023 05:53*	WG2155682
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*93.1*				*81.0-118*		*10/26/2023 22:20*	WG2157275

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Acetone	67-64-1	25.0	U	11.3	25.0	50.0	1	10/22/2023 14:22	WG2155879
Acrolein	107-02-8	25.0	U	2.54	25.0	50.0	1	10/22/2023 14:22	WG2155879
Acrylonitrile	107-13-1	5.00	U	0.671	5.00	10.0	1	10/22/2023 14:22	WG2155879
Benzene	71-43-2	0.500	U	0.0941	0.500	1.00	1	10/22/2023 14:22	WG2155879
Bromobenzene	108-86-1	0.500	U	0.118	0.500	1.00	1	10/22/2023 14:22	WG2155879
Bromodichloromethane	75-27-4	0.500	U	0.136	0.500	1.00	1	10/22/2023 14:22	WG2155879
Bromoform	75-25-2	0.500	U	0.129	0.500	1.00	1	10/22/2023 14:22	WG2155879
Bromomethane	74-83-9	2.00	U	0.605	2.00	5.00	1	10/22/2023 14:22	WG2155879
n-Butylbenzene	104-51-8	0.500	U	0.157	0.500	1.00	1	10/22/2023 14:22	WG2155879
sec-Butylbenzene	135-98-8	0.500	U	0.125	0.500	1.00	1	10/22/2023 14:22	WG2155879
tert-Butylbenzene	98-06-6	0.500	U	0.127	0.500	1.00	1	10/22/2023 14:22	WG2155879
Carbon tetrachloride	56-23-5	0.500	U	0.128	0.500	1.00	1	10/22/2023 14:22	WG2155879
Chlorobenzene	108-90-7	0.500	U	0.116	0.500	1.00	1	10/22/2023 14:22	WG2155879
Chlorodibromomethane	124-48-1	0.500	U	0.140	0.500	1.00	1	10/22/2023 14:22	WG2155879
Chloroethane	75-00-3	2.00	U	0.192	2.00	5.00	1	10/22/2023 14:22	WG2155879
2-Chloroethyl vinyl ether	110-75-8	25.0	U	0.575	25.0	50.0	1	10/22/2023 14:22	WG2155879
Chloroform	67-66-3	2.00	U	0.111	2.00	5.00	1	10/22/2023 14:22	WG2155879
Chloromethane	74-87-3	2.00	U	0.960	2.00	4.00	1	10/22/2023 14:22	WG2155879
2-Chlorotoluene	95-49-8	0.500	U	0.106	0.500	1.00	1	10/22/2023 14:22	WG2155879
4-Chlorotoluene	106-43-4	0.500	U	0.114	0.500	1.00	1	10/22/2023 14:22	WG2155879
1,2-Dibromoethane	106-93-4	0.500	U	0.126	0.500	1.00	1	10/22/2023 14:22	WG2155879
1,2-Dibromo-3-Chloropropane	96-12-8	2.00	U	0.276	2.00	5.00	1	10/22/2023 14:22	WG2155879
Dibromomethane	74-95-3	0.500	U	0.122	0.500	1.00	1	10/22/2023 14:22	WG2155879
1,2-Dichlorobenzene	95-50-1	0.500	U	0.107	0.500	1.00	1	10/22/2023 14:22	WG2155879
1,3-Dichlorobenzene	541-73-1	0.500	U	0.110	0.500	1.00	1	10/22/2023 14:22	WG2155879
1,4-Dichlorobenzene	106-46-7	0.500	U	0.120	0.500	1.00	1	10/22/2023 14:22	WG2155879
Dichlorodifluoromethane	75-71-8	2.00	U	0.374	2.00	5.00	1	10/22/2023 14:22	WG2155879
1,1-Dichloroethane	75-34-3	0.500	U	0.100	0.500	1.00	1	10/22/2023 14:22	WG2155879
1,2-Dichloroethane	107-06-2	0.500	U	0.0819	0.500	1.00	1	10/22/2023 14:22	WG2155879
1,1-Dichloroethene	75-35-4	0.500	U	0.188	0.500	1.00	1	10/22/2023 14:22	WG2155879
cis-1,2-Dichloroethene	156-59-2	0.500	U	0.126	0.500	1.00	1	10/22/2023 14:22	WG2155879
trans-1,2-Dichloroethene	156-60-5	0.500	U	0.149	0.500	1.00	1	10/22/2023 14:22	WG2155879
1,2-Dichloropropane	78-87-5	0.500	U	0.149	0.500	1.00	1	10/22/2023 14:22	WG2155879
1,3-Dichloropropane	142-28-9	0.500	U	0.110	0.500	1.00	1	10/22/2023 14:22	WG2155879
2,2-Dichloropropane	594-20-7	0.500	U	0.161	0.500	1.00	1	10/22/2023 05:53	WG2225461
1,1-Dichloropropene	563-58-6	0.500	U	0.142	0.500	1.00	1	10/22/2023 14:22	WG2155879
cis-1,3-Dichloropropene	10061-01-5	0.500	U	0.111	0.500	1.00	1	10/22/2023 14:22	WG2155879
trans-1,3-Dichloropropene	10061-02-6	0.500	U	0.118	0.500	1.00	1	10/22/2023 14:22	WG2155879
Di-isopropyl ether	108-20-3	0.500	U	0.105	0.500	1.00	1	10/22/2023 14:22	WG2155879
Ethylbenzene	100-41-4	0.500	U	0.137	0.500	1.00	1	10/22/2023 14:22	WG2155879
Hexachloro-1,3-butadiene	87-68-3	0.750	U	0.337	0.750	1.50	1	10/22/2023 05:53	WG2225461
Isopropylbenzene	98-82-8	0.500	U	0.105	0.500	1.00	1	10/22/2023 14:22	WG2155879
p-Isopropyltoluene	99-87-6	0.500	U	0.120	0.500	1.00	1	10/22/2023 14:22	WG2155879

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
2-Butanone (MEK)	78-93-3	5.00	U	1.19	5.00	10.0	1	10/22/2023 14:22	WG2155879
Methylene Chloride	75-09-2	2.00	U	0.430	2.00	5.00	1	10/22/2023 14:22	WG2155879
4-Methyl-2-pentanone (MIBK)	108-10-1	5.00	U	0.478	5.00	10.0	1	10/22/2023 14:22	WG2155879
Methyl tert-butyl ether	1634-04-4	0.500	U	0.101	0.500	1.00	1	10/22/2023 14:22	WG2155879
Naphthalene	91-20-3	2.00	U	1.00	2.00	5.00	1	10/22/2023 14:22	WG2155879
n-Propylbenzene	103-65-1	0.500	U	0.0993	0.500	1.00	1	10/22/2023 14:22	WG2155879
Styrene	100-42-5	0.500	U	0.118	0.500	1.00	1	10/22/2023 14:22	WG2155879
1,1,1,2-Tetrachloroethane	630-20-6	0.500	U	0.147	0.500	1.00	1	10/22/2023 14:22	WG2155879
1,1,2,2-Tetrachloroethane	79-34-5	0.500	U	0.133	0.500	1.00	1	10/22/2023 14:22	WG2155879
Tetrachloroethene	127-18-4	0.600	U	0.300	0.600	1.20	1	10/22/2023 14:22	WG2155879
Toluene	108-88-3	0.600	U	0.278	0.600	1.20	1	10/22/2023 14:22	WG2155879
1,2,3-Trichlorobenzene	87-61-6	0.500	U	0.230	0.500	1.00	1	10/22/2023 14:22	WG2155879
1,2,4-Trichlorobenzene	120-82-1	1.00	U	0.481	1.00	2.00	1	10/22/2023 14:22	WG2155879
1,2,3-Trimethylbenzene	526-73-8	0.500	U	0.104	0.500	1.00	1	10/22/2023 14:22	WG2155879
1,2,4-Trimethylbenzene	95-63-6	1.00	U	0.322	1.00	2.00	1	10/22/2023 14:22	WG2155879
1,3,5-Trimethylbenzene	108-67-8	0.500	U	0.104	0.500	1.00	1	10/22/2023 14:22	WG2155879
1,1,1-Trichloroethane	71-55-6	0.500	U	0.149	0.500	1.00	1	10/22/2023 05:53	WG2225461
1,1,2-Trichloroethane	79-00-5	0.500	U	0.158	0.500	1.00	1	10/22/2023 14:22	WG2155879
Trichloroethene	79-01-6	3.82		0.190	0.500	1.00	1	10/22/2023 14:22	WG2155879
Trichlorofluoromethane	75-69-4	2.00	U	0.160	2.00	5.00	1	10/22/2023 14:22	WG2155879
1,1,2-Trichlorotrifluoroethane	76-13-1	0.500	U	0.180	0.500	1.00	1	10/22/2023 14:22	WG2155879
1,2,3-Trichloropropane	96-18-4	1.00	U	0.237	1.00	2.50	1	10/22/2023 14:22	WG2155879
Vinyl chloride	75-01-4	0.500	U	0.234	0.500	1.00	1	10/22/2023 14:22	WG2155879
Xylenes, Total	1330-20-7	1.50	U	0.174	1.50	3.00	1	10/22/2023 14:22	WG2155879
(S) Toluene-d8	*2037-26-5*	*104*				*89.0-112*		*10/22/2023 14:22*	WG2155879
(S) Toluene-d8	*2037-26-5*	*101*				*89.0-112*		*10/22/2023 05:53*	WG2225461
(S) 4-Bromofluorobenzene	*460-00-4*	*95.6*				*85.0-114*		*10/22/2023 14:22*	WG2155879
(S) 4-Bromofluorobenzene	*460-00-4*	*102*				*85.0-114*		*10/22/2023 05:53*	WG2225461
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*107*				*81.0-118*		*10/22/2023 14:22*	WG2155879
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*95.6*				*81.0-118*		*10/22/2023 05:53*	WG2225461

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	C10-C25	436	B J	179	420	840	1.05	10/28/2023 06:03	WG2159044
(S) o-Terphenyl	*84-15-1*	*72.5*				*50.0-150*		*10/28/2023 06:03*	WG2159044

Additional Information - Results for field analyses are not accredited to ISO 17025

Analyte	Result	Units
Cooler#	Blue	
Cooler Temperature	2.5	Deg. C

Wet Chemistry by Method 2320 B-2011

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Alkalinity		105000		8450	10000	20000	1	10/23/2023 17:18	WG2156308
Alkalinity,Bicarbonate		105000		8450	10000	20000	1	10/23/2023 17:18	WG2156308
Alkalinity,Carbonate		10000	U	8450	10000	20000	1	10/23/2023 17:18	WG2156308
Alkalinity,Hydroxide		10000	U	8450	10000	20000	1	10/23/2023 17:18	WG2156308

Sample Narrative:

L1667742-06 WG2156308: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 351.2

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Kjeldahl Nitrogen, TKN	7727-37-9	300	U	140	300	600	1	10/22/2023 22:32	WG2154036

Wet Chemistry by Method 353.2

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Nitrate-Nitrite	7727-37-9	979		50.0	100	200	1	10/20/2023 20:51	WG2154634

Wet Chemistry by Method 9056A

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Sulfate	14808-79-8	5710		594	2500	5000	1	10/25/2023 17:32	WG2156852

Metals (ICP) by Method 6010D

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Iron	7439-89-6	38.5	J	20.5	50.0	100	1	10/24/2023 09:16	WG2153991
Manganese	7439-96-5	1.38	J	0.855	5.00	10.0	1	10/24/2023 09:16	WG2153991

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Acetone	67-64-1	1.69	J	0.548	2.00	4.00	1	10/22/2023 06:13	WG2155682
Acrylonitrile	107-13-1	0.250	U	0.0760	0.250	0.500	1	10/22/2023 06:13	WG2155682
Benzene	71-43-2	0.0500	U	0.0160	0.0500	0.100	1	10/26/2023 22:39	WG2157275
Bromobenzene	108-86-1	0.250	U	0.0420	0.250	0.500	1	10/22/2023 06:13	WG2155682
Bromodichloromethane	75-27-4	0.100	U	0.0315	0.100	0.200	1	10/22/2023 06:13	WG2155682
Bromochloromethane	74-97-5	0.100	U	0.0452	0.100	0.200	1	10/22/2023 06:13	WG2155682
Bromoform	75-25-2	0.500	U	0.239	0.500	1.00	1	10/22/2023 06:13	WG2155682
Bromomethane	74-83-9	0.500	U	0.148	0.500	1.00	1	10/22/2023 06:13	WG2155682
n-Butylbenzene	104-51-8	0.500	U	0.154	0.500	1.00	1	10/22/2023 06:13	WG2155682
sec-Butylbenzene	135-98-8	0.250	U	0.101	0.250	0.500	1	10/22/2023 06:13	WG2155682
tert-Butylbenzene	98-06-6	0.500	U	0.0620	0.500	1.00	1	10/22/2023 06:13	WG2155682
Carbon tetrachloride	56-23-5	0.100	U	0.0432	0.100	0.200	1	10/22/2023 06:13	WG2155682
Carbon disulfide	75-15-0	0.500	U	0.162	0.500	1.00	1	10/22/2023 06:13	WG2155682
Chlorobenzene	108-90-7	0.0500	U	0.0229	0.0500	0.100	1	10/22/2023 06:13	WG2155682
Chlorodibromomethane	124-48-1	0.0500	U	0.0180	0.0500	0.100	1	10/22/2023 06:13	WG2155682

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Chloroethane	75-00-3	0.100	U	0.0432	0.100	0.200	1	10/22/2023 06:13	WG2155682
Chloroform	67-66-3	0.0500	U	0.0166	0.0500	0.100	1	10/22/2023 06:13	WG2155682
Chloromethane	74-87-3	0.250	U	0.0556	0.250	0.500	1	10/22/2023 06:13	WG2155682
Cyclohexane	110-82-7	0.0500	U	0.0203	0.0500	0.100	1	10/22/2023 06:13	WG2155682
2-Chlorotoluene	95-49-8	0.100	U	0.0368	0.100	0.200	1	10/22/2023 06:13	WG2155682
4-Chlorotoluene	106-43-4	0.100	U	0.0452	0.100	0.200	1	10/22/2023 06:13	WG2155682
1,2-Dibromo-3-Chloropropane	96-12-8	0.500	U	0.204	0.500	1.00	1	10/22/2023 06:13	WG2155682
1,2-Dibromoethane	106-93-4	0.0500	U	0.0210	0.0500	0.100	1	10/22/2023 06:13	WG2155682
Dibromomethane	74-95-3	0.100	U	0.0400	0.100	0.200	1	10/22/2023 06:13	WG2155682
1,2-Dichlorobenzene	95-50-1	0.200	U	0.0580	0.200	0.400	1	10/22/2023 06:13	WG2155682
1,3-Dichlorobenzene	541-73-1	0.200	U	0.0680	0.200	0.400	1	10/22/2023 06:13	WG2155682
1,4-Dichlorobenzene	106-46-7	0.250	U	0.0788	0.250	0.500	1	10/22/2023 06:13	WG2155682
Dichlorodifluoromethane	75-71-8	0.100	U	0.0327	0.100	0.200	1	10/22/2023 06:13	WG2155682
1,1-Dichloroethane	75-34-3	0.0500	U	0.0230	0.0500	0.100	1	10/22/2023 06:13	WG2155682
1,2-Dichloroethane	107-06-2	0.0500	U	0.0190	0.0500	0.100	1	10/22/2023 06:13	WG2155682
1,1-Dichloroethene	75-35-4	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 06:13	WG2155682
cis-1,2-Dichloroethene	156-59-2	0.0750	U	0.0276	0.0750	0.150	1	10/22/2023 06:13	WG2155682
trans-1,2-Dichloroethene	156-60-5	0.300	U	0.0572	0.300	0.600	1	10/22/2023 06:13	WG2155682
1,2-Dichloropropane	78-87-5	0.200	U	0.0508	0.200	0.400	1	10/22/2023 06:13	WG2155682
1,1-Dichloropropene	563-58-6	0.100	U	0.0280	0.100	0.200	1	10/22/2023 06:13	WG2155682
1,3-Dichloropropane	142-28-9	0.150	U	0.0700	0.150	0.300	1	10/22/2023 06:13	WG2155682
cis-1,3-Dichloropropene	10061-01-5	0.100	U	0.0271	0.100	0.200	1	10/22/2023 06:13	WG2155682
trans-1,3-Dichloropropene	10061-02-6	0.150	U	0.0612	0.150	0.300	1	10/22/2023 06:13	WG2155682
2,2-Dichloropropane	594-20-7	0.100	U	0.0317	0.100	0.200	1	10/22/2023 06:13	WG2155682
Di-isopropyl ether	108-20-3	0.0500	U	0.0140	0.0500	0.100	1	10/22/2023 06:13	WG2155682
Ethylbenzene	100-41-4	0.0500	U	0.0212	0.0500	0.100	1	10/22/2023 06:13	WG2155682
Hexachloro-1,3-butadiene	87-68-3	2.00	U	0.508	2.00	4.00	1	10/22/2023 06:13	WG2155682
Isopropylbenzene	98-82-8	1.00	U	0.0345	1.00	2.00	1	10/22/2023 06:13	WG2155682
p-Isopropyltoluene	99-87-6	0.300	U	0.0932	0.300	0.600	1	10/22/2023 06:13	WG2155682
2-Butanone (MEK)	78-93-3	1.00	U	0.500	1.00	2.00	1	10/22/2023 06:13	WG2155682
Methylene Chloride	75-09-2	0.750	U	0.266	0.750	1.50	1	10/22/2023 06:13	WG2155682
4-Methyl-2-pentanone (MIBK)	108-10-1	1.00	U	0.400	1.00	2.00	1	10/22/2023 06:13	WG2155682
Methyl tert-butyl ether	1634-04-4	0.0300	U	0.0118	0.0300	0.0600	1	10/22/2023 06:13	WG2155682
Naphthalene	91-20-3	0.250	U	0.125	0.250	0.500	1	10/22/2023 06:13	WG2155682
n-Propylbenzene	103-65-1	0.100	U	0.0472	0.100	0.200	1	10/22/2023 06:13	WG2155682
Styrene	100-42-5	0.250	U	0.109	0.250	0.500	1	10/22/2023 06:13	WG2155682
1,1,1,2-Tetrachloroethane	630-20-6	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 06:13	WG2155682
1,1,2,2-Tetrachloroethane	79-34-5	0.0500	U	0.0156	0.0500	0.100	1	10/22/2023 06:13	WG2155682
1,1,2-Trichlorotrifluoroethane	76-13-1	0.100	U	0.0270	0.100	0.200	1	10/22/2023 06:13	WG2155682
Tetrachloroethene	127-18-4	0.0750	U	0.0280	0.0750	0.150	1	10/22/2023 06:13	WG2155682
Toluene	108-88-3	0.0600	J	0.0500	0.100	0.200	1	10/26/2023 22:39	WG2157275
1,2,3-Trichlorobenzene	87-61-6	0.250	U	0.0250	0.250	0.500	1	10/22/2023 06:13	WG2155682
1,2,4-Trichlorobenzene	120-82-1	0.500	U	0.193	0.500	1.00	1	10/22/2023 06:13	WG2155682
1,1,1-Trichloroethane	71-55-6	0.0500	U	0.0110	0.0500	0.100	1	10/22/2023 06:13	WG2155682
1,1,2-Trichloroethane	79-00-5	0.100	U	0.0353	0.100	0.200	1	10/22/2023 06:13	WG2155682
Trichloroethene	79-01-6	3.92		0.0160	0.0400	0.0800	1	10/26/2023 22:39	WG2157275
Trichlorofluoromethane	75-69-4	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 06:13	WG2155682
1,2,3-Trichloropropane	96-18-4	0.500	U	0.204	0.500	1.00	1	10/22/2023 06:13	WG2155682
1,2,4-Trimethylbenzene	95-63-6	0.100	U	0.0464	0.100	0.200	1	10/26/2023 22:39	WG2157275
1,2,3-Trimethylbenzene	526-73-8	0.100	U	0.0460	0.100	0.200	1	10/22/2023 06:13	WG2155682
1,3,5-Trimethylbenzene	108-67-8	0.100	U	0.0432	0.100	0.200	1	10/22/2023 06:13	WG2155682
Vinyl chloride	75-01-4	0.0750	U	0.0273	0.0750	0.150	1	10/22/2023 06:13	WG2155682
Vinyl acetate	108-05-4	0.300	U	0.141	0.300	0.600	1	10/26/2023 22:39	WG2157275
Xylenes, Total	1330-20-7	0.400	U	0.191	0.400	0.800	1	10/22/2023 06:13	WG2155682
Ethyl Ether	60-29-7	0.0500	U	0.0170	0.0500	0.100	1	10/22/2023 06:13	WG2155682
Tetrahydrofuran	109-99-9	0.250	U	0.0900	0.250	50.0	1	10/22/2023 06:13	WG2155682

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Iodomethane	74-88-4	0.500	U	0.242	0.500	1.00	1	10/22/2023 06:13	WG2155682
Allyl chloride	107-05-1	2.00	U	0.580	2.00	4.00	1	10/22/2023 06:13	WG2155682
trans-1,4-Dichloro-2-butene	110-57-6	0.200	C4 U	0.0560	0.200	0.400	1	10/22/2023 06:13	WG2155682
(S) Toluene-d8	*2037-26-5*	*103*				*89.0-112*		*10/22/2023 06:13*	WG2155682
(S) Toluene-d8	*2037-26-5*	*110*				*89.0-112*		*10/26/2023 22:39*	WG2157275
(S) 4-Bromofluorobenzene	*460-00-4*	*102*				*85.0-114*		*10/22/2023 06:13*	WG2155682
(S) 4-Bromofluorobenzene	*460-00-4*	*102*				*85.0-114*		*10/26/2023 22:39*	WG2157275
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*97.6*				*81.0-118*		*10/22/2023 06:13*	WG2155682
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*95.3*				*81.0-118*		*10/26/2023 22:39*	WG2157275

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Acetone	67-64-1	25.0	U	11.3	25.0	50.0	1	10/22/2023 14:43	WG2155879
Acrolein	107-02-8	25.0	U	2.54	25.0	50.0	1	10/22/2023 14:43	WG2155879
Acrylonitrile	107-13-1	5.00	U	0.671	5.00	10.0	1	10/22/2023 14:43	WG2155879
Benzene	71-43-2	0.500	U	0.0941	0.500	1.00	1	10/22/2023 14:43	WG2155879
Bromobenzene	108-86-1	0.500	U	0.118	0.500	1.00	1	10/22/2023 14:43	WG2155879
Bromodichloromethane	75-27-4	0.500	U	0.136	0.500	1.00	1	10/22/2023 14:43	WG2155879
Bromoform	75-25-2	0.500	U	0.129	0.500	1.00	1	10/22/2023 14:43	WG2155879
Bromomethane	74-83-9	2.00	U	0.605	2.00	5.00	1	10/22/2023 14:43	WG2155879
n-Butylbenzene	104-51-8	0.500	U	0.157	0.500	1.00	1	10/22/2023 14:43	WG2155879
sec-Butylbenzene	135-98-8	0.500	U	0.125	0.500	1.00	1	10/22/2023 14:43	WG2155879
tert-Butylbenzene	98-06-6	0.500	U	0.127	0.500	1.00	1	10/22/2023 14:43	WG2155879
Carbon tetrachloride	56-23-5	0.500	U	0.128	0.500	1.00	1	10/22/2023 14:43	WG2155879
Chlorobenzene	108-90-7	0.500	U	0.116	0.500	1.00	1	10/22/2023 14:43	WG2155879
Chlorodibromomethane	124-48-1	0.500	U	0.140	0.500	1.00	1	10/22/2023 14:43	WG2155879
Chloroethane	75-00-3	2.00	U	0.192	2.00	5.00	1	10/22/2023 14:43	WG2155879
2-Chloroethyl vinyl ether	110-75-8	25.0	U	0.575	25.0	50.0	1	10/22/2023 14:43	WG2155879
Chloroform	67-66-3	2.00	U	0.111	2.00	5.00	1	10/22/2023 14:43	WG2155879
Chloromethane	74-87-3	2.00	U	0.960	2.00	4.00	1	10/22/2023 14:43	WG2155879
2-Chlorotoluene	95-49-8	0.500	U	0.106	0.500	1.00	1	10/22/2023 14:43	WG2155879
4-Chlorotoluene	106-43-4	0.500	U	0.114	0.500	1.00	1	10/22/2023 14:43	WG2155879
1,2-Dibromoethane	106-93-4	0.500	U	0.126	0.500	1.00	1	10/22/2023 14:43	WG2155879
1,2-Dibromo-3-Chloropropane	96-12-8	2.00	U	0.276	2.00	5.00	1	10/22/2023 14:43	WG2155879
Dibromomethane	74-95-3	0.500	U	0.122	0.500	1.00	1	10/22/2023 14:43	WG2155879
1,2-Dichlorobenzene	95-50-1	0.500	U	0.107	0.500	1.00	1	10/22/2023 14:43	WG2155879
1,3-Dichlorobenzene	541-73-1	0.500	U	0.110	0.500	1.00	1	10/22/2023 14:43	WG2155879
1,4-Dichlorobenzene	106-46-7	0.500	U	0.120	0.500	1.00	1	10/22/2023 14:43	WG2155879
Dichlorodifluoromethane	75-71-8	2.00	U	0.374	2.00	5.00	1	10/22/2023 14:43	WG2155879
1,1-Dichloroethane	75-34-3	0.500	U	0.100	0.500	1.00	1	10/22/2023 14:43	WG2155879
1,2-Dichloroethane	107-06-2	0.500	U	0.0819	0.500	1.00	1	10/22/2023 14:43	WG2155879
1,1-Dichloroethene	75-35-4	0.500	U	0.188	0.500	1.00	1	10/22/2023 14:43	WG2155879
cis-1,2-Dichloroethene	156-59-2	0.500	U	0.126	0.500	1.00	1	10/22/2023 14:43	WG2155879
trans-1,2-Dichloroethene	156-60-5	0.500	U	0.149	0.500	1.00	1	10/22/2023 14:43	WG2155879
1,2-Dichloropropane	78-87-5	0.500	U	0.149	0.500	1.00	1	10/22/2023 14:43	WG2155879
1,3-Dichloropropane	142-28-9	0.500	U	0.110	0.500	1.00	1	10/22/2023 14:43	WG2155879
2,2-Dichloropropane	594-20-7	0.500	U	0.161	0.500	1.00	1	10/22/2023 06:13	WG2225461
1,1-Dichloropropene	563-58-6	0.500	U	0.142	0.500	1.00	1	10/22/2023 14:43	WG2155879
cis-1,3-Dichloropropene	10061-01-5	0.500	U	0.111	0.500	1.00	1	10/22/2023 14:43	WG2155879
trans-1,3-Dichloropropene	10061-02-6	0.500	U	0.118	0.500	1.00	1	10/22/2023 14:43	WG2155879
Di-isopropyl ether	108-20-3	0.500	U	0.105	0.500	1.00	1	10/22/2023 14:43	WG2155879
Ethylbenzene	100-41-4	0.500	U	0.137	0.500	1.00	1	10/22/2023 14:43	WG2155879
Hexachloro-1,3-butadiene	87-68-3	0.750	U	0.337	0.750	1.50	1	10/22/2023 06:13	WG2225461
Isopropylbenzene	98-82-8	0.500	U	0.105	0.500	1.00	1	10/22/2023 14:43	WG2155879
p-Isopropyltoluene	99-87-6	0.500	U	0.120	0.500	1.00	1	10/22/2023 14:43	WG2155879

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
2-Butanone (MEK)	78-93-3	5.00	U	1.19	5.00	10.0	1	10/22/2023 14:43	WG2155879
Methylene Chloride	75-09-2	2.00	U	0.430	2.00	5.00	1	10/22/2023 14:43	WG2155879
4-Methyl-2-pentanone (MIBK)	108-10-1	5.00	U	0.478	5.00	10.0	1	10/22/2023 14:43	WG2155879
Methyl tert-butyl ether	1634-04-4	0.500	U	0.101	0.500	1.00	1	10/22/2023 14:43	WG2155879
Naphthalene	91-20-3	2.00	U	1.00	2.00	5.00	1	10/22/2023 14:43	WG2155879
n-Propylbenzene	103-65-1	0.500	U	0.0993	0.500	1.00	1	10/22/2023 14:43	WG2155879
Styrene	100-42-5	0.500	U	0.118	0.500	1.00	1	10/22/2023 14:43	WG2155879
1,1,1,2-Tetrachloroethane	630-20-6	0.500	U	0.147	0.500	1.00	1	10/22/2023 14:43	WG2155879
1,1,2,2-Tetrachloroethane	79-34-5	0.500	U	0.133	0.500	1.00	1	10/22/2023 14:43	WG2155879
Tetrachloroethene	127-18-4	0.600	U	0.300	0.600	1.20	1	10/22/2023 14:43	WG2155879
Toluene	108-88-3	0.600	U	0.278	0.600	1.20	1	10/22/2023 14:43	WG2155879
1,2,3-Trichlorobenzene	87-61-6	0.500	U	0.230	0.500	1.00	1	10/22/2023 14:43	WG2155879
1,2,4-Trichlorobenzene	120-82-1	1.00	U	0.481	1.00	2.00	1	10/22/2023 14:43	WG2155879
1,2,3-Trimethylbenzene	526-73-8	0.500	U	0.104	0.500	1.00	1	10/22/2023 14:43	WG2155879
1,2,4-Trimethylbenzene	95-63-6	1.00	U	0.322	1.00	2.00	1	10/22/2023 14:43	WG2155879
1,3,5-Trimethylbenzene	108-67-8	0.500	U	0.104	0.500	1.00	1	10/22/2023 14:43	WG2155879
1,1,1-Trichloroethane	71-55-6	0.500	U	0.149	0.500	1.00	1	10/22/2023 06:13	WG2225461
1,1,2-Trichloroethane	79-00-5	0.500	U	0.158	0.500	1.00	1	10/22/2023 14:43	WG2155879
Trichloroethene	79-01-6	3.96		0.190	0.500	1.00	1	10/22/2023 14:43	WG2155879
Trichlorofluoromethane	75-69-4	2.00	U	0.160	2.00	5.00	1	10/22/2023 14:43	WG2155879
1,1,2-Trichlorotrifluoroethane	76-13-1	0.500	U	0.180	0.500	1.00	1	10/22/2023 14:43	WG2155879
1,2,3-Trichloropropane	96-18-4	1.00	U	0.237	1.00	2.50	1	10/22/2023 14:43	WG2155879
Vinyl chloride	75-01-4	0.500	U	0.234	0.500	1.00	1	10/22/2023 14:43	WG2155879
Xylenes, Total	1330-20-7	1.50	U	0.174	1.50	3.00	1	10/22/2023 14:43	WG2155879
(S) Toluene-d8	*2037-26-5*	*106*				*89.0-112*		*10/22/2023 14:43*	WG2155879
(S) Toluene-d8	*2037-26-5*	*103*				*89.0-112*		*10/22/2023 06:13*	WG2225461
(S) 4-Bromofluorobenzene	*460-00-4*	*92.4*				*85.0-114*		*10/22/2023 14:43*	WG2155879
(S) 4-Bromofluorobenzene	*460-00-4*	*102*				*85.0-114*		*10/22/2023 06:13*	WG2225461
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*102*				*81.0-118*		*10/22/2023 14:43*	WG2155879
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*97.6*				*81.0-118*		*10/22/2023 06:13*	WG2225461

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	C10-C25	459	B J	179	420	840	1.05	10/28/2023 22:28	WG2159047
(S) o-Terphenyl	*84-15-1*	*78.0*				*50.0-150*		*10/28/2023 22:28*	WG2159047

Method Blank (MB)

(MB) R3990223-2 10/23/23 16:19

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Alkalinity	10000	U	8450	10000	20000
Alkalinity,Bicarbonate	10000	U	8450	10000	20000
Alkalinity,Carbonate	10000	U	8450	10000	20000
Alkalinity,Hydroxide	10000	U	8450	10000	20000

Sample Narrative:

BLANK: Endpoint pH 4.5

L1667676-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1667676-10 10/23/23 16:32 • (DUP) R3990223-3 10/23/23 16:34

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	10000	10000	1	0.000	U	20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

L1667796-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1667796-02 10/23/23 18:12 • (DUP) R3990223-4 10/23/23 18:17

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	372000	370000	1	0.771		20
Alkalinity,Bicarbonate	372000	370000	1	0.771		20
Alkalinity,Carbonate	10000	10000	1	0.000	U	20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

Laboratory Control Sample (LCS)

(LCS) R3990223-1 10/23/23 16:14

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100000	97200	97.2	85.0-115	

Sample Narrative:

LCS: Endpoint pH 4.5

Method Blank (MB)

(MB) R3989558-1 10/22/23 22:05

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Kjeldahl Nitrogen, TKN	300	U	140	300	600

L1667791-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1667791-03 10/22/23 22:37 • (DUP) R3989558-3 10/22/23 22:38

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Kjeldahl Nitrogen, TKN	846	913	1	7.62		20

L1667732-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1667732-01 10/22/23 23:05 • (DUP) R3989558-6 10/22/23 23:06

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Kjeldahl Nitrogen, TKN	52000	53500	5	2.84		20

Laboratory Control Sample (LCS)

(LCS) R3989558-2 10/22/23 22:06

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Kjeldahl Nitrogen, TKN	12000	13100	110	90.0-110	

L1667791-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667791-03 10/22/23 22:37 • (MS) R3989558-4 10/22/23 22:39 • (MSD) R3989558-5 10/22/23 22:41

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Kjeldahl Nitrogen, TKN	5000	846	6700	6750	117	118	1	90.0-110	J5	J5	0.743	20

Sample Narrative:

MS: [MS failed due to matrix]

MSD: [MS failed due to matrix]

L1667732-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1667732-01 10/22/23 23:05 • (MS) R3989558-7 10/22/23 23:07

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Kjeldahl Nitrogen, TKN	5000	52000	56000	80.0	5	90.0-110	V

Sample Narrative:

MS: [MS failed due to matrix]

Method Blank (MB)

(MB) R3989208-1 10/20/23 20:30

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Nitrate-Nitrite	100	U	50.0	100	200

L1667440-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1667440-01 10/20/23 20:37 • (DUP) R3989208-3 10/20/23 20:38

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Nitrate-Nitrite	2010	2010	1	0.000		20

L1667791-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1667791-03 10/20/23 20:56 • (DUP) R3989208-5 10/20/23 20:57

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Nitrate-Nitrite	100	100	1	0.000	U	20

Laboratory Control Sample (LCS)

(LCS) R3989208-2 10/20/23 20:32

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Nitrate-Nitrite	2500	2540	102	90.0-110	

L1667440-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1667440-01 10/20/23 20:37 • (MS) R3989208-4 10/20/23 20:39

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Nitrate-Nitrite	2500	2010	4500	99.6	1	90.0-110	

L1667791-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667791-03 10/20/23 20:56 • (MS) R3989208-6 10/20/23 21:02 • (MSD) R3989208-7 10/20/23 21:03

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Nitrate-Nitrite	2500	100	2640	2560	106	102	1	90.0-110			3.08	20

Method Blank (MB)

(MB) R3992131-1 10/25/23 12:01

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Sulfate	2500	U	594	2500	5000

L1667791-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1667791-03 10/25/23 18:46 • (DUP) R3992131-3 10/25/23 19:01

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	4690	4460	1	5.18	J	15

L1668237-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1668237-03 10/26/23 00:59 • (DUP) R3992131-6 10/26/23 01:14

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	31300	31200	1	0.195		15

Laboratory Control Sample (LCS)

(LCS) R3992131-2 10/25/23 12:16

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfate	40000	37900	94.8	87.0-112	

L1667791-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667791-03 10/25/23 18:46 • (MS) R3992131-4 10/25/23 19:16 • (MSD) R3992131-5 10/25/23 19:31

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfate	40000	4690	38300	40200	84.1	88.8	1	87.0-112	J6		4.75	15

L1668237-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1668237-03 10/26/23 00:59 • (MS) R3992131-7 10/26/23 01:29 • (MSD) R3992131-8 10/26/23 01:44

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfate	40000	31300	62500	61100	78.0	74.7	1	87.0-112	J6	J6	2.17	15

L1668237-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1668237-03 10/26/23 00:59 • (MS) R3992131-7 10/26/23 01:29 • (MSD) R3992131-8 10/26/23 01:44

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %

Sample Narrative:

MS: Spike failure due to matrix interference

MSD: Spike failure due to matrix interference

Method Blank (MB)

(MB) R3990480-1 10/24/23 08:39

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Iron	50.0	U	20.5	50.0	100
Manganese	5.00	U	0.855	5.00	10.0

Laboratory Control Sample (LCS)

(LCS) R3990480-2 10/24/23 08:42

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Iron	10000	10000	100	87.0-115	
Manganese	1000	989	98.9	90.0-114	

L1667791-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667791-03 10/24/23 08:45 • (MS) R3990480-4 10/24/23 08:50 • (MSD) R3990480-5 10/24/23 08:53

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Iron	10000	3840	13800	13700	99.7	98.2	1	87.0-115			1.09	20
Manganese	1000	12200	12800	12800	61.1	62.7	1	90.0-114	E V	E V	0.129	20

Method Blank (MB)

(MB) R3990575-3 10/22/23 01:57

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Acetone	2.00	U	0.548	2.00	4.00
Acrylonitrile	0.250	U	0.0760	0.250	0.500
Bromobenzene	0.250	U	0.0420	0.250	0.500
Bromodichloromethane	0.100	U	0.0315	0.100	0.200
Bromochloromethane	0.100	U	0.0452	0.100	0.200
Bromoform	0.500	U	0.239	0.500	1.00
Bromomethane	0.500	U	0.148	0.500	1.00
n-Butylbenzene	0.500	U	0.154	0.500	1.00
sec-Butylbenzene	0.250	U	0.101	0.250	0.500
tert-Butylbenzene	0.500	U	0.0620	0.500	1.00
Carbon tetrachloride	0.100	U	0.0432	0.100	0.200
Carbon disulfide	0.500	U	0.162	0.500	1.00
Chlorobenzene	0.0500	U	0.0229	0.0500	0.100
Chlorodibromomethane	0.0500	U	0.0180	0.0500	0.100
Chloroethane	0.100	U	0.0432	0.100	0.200
Chloroform	0.0500	U	0.0166	0.0500	0.100
Chloromethane	0.250	U	0.0556	0.250	0.500
Cyclohexane	0.0500	U	0.0203	0.0500	0.100
2-Chlorotoluene	0.100	U	0.0368	0.100	0.200
4-Chlorotoluene	0.100	U	0.0452	0.100	0.200
1,2-Dibromo-3-Chloropropane	0.500	U	0.204	0.500	1.00
1,2-Dibromoethane	0.0500	U	0.0210	0.0500	0.100
Dibromomethane	0.100	U	0.0400	0.100	0.200
1,2-Dichlorobenzene	0.200	U	0.0580	0.200	0.400
1,3-Dichlorobenzene	0.200	U	0.0680	0.200	0.400
1,4-Dichlorobenzene	0.250	U	0.0788	0.250	0.500
Dichlorodifluoromethane	0.100	U	0.0327	0.100	0.200
1,1-Dichloroethane	0.0500	U	0.0230	0.0500	0.100
1,2-Dichloroethane	0.0500	U	0.0190	0.0500	0.100
1,1-Dichloroethene	0.0500	U	0.0200	0.0500	0.100
cis-1,2-Dichloroethene	0.0750	U	0.0276	0.0750	0.150
trans-1,2-Dichloroethene	0.300	U	0.0572	0.300	0.600
1,2-Dichloropropane	0.200	U	0.0508	0.200	0.400
1,1-Dichloropropene	0.100	U	0.0280	0.100	0.200
1,3-Dichloropropane	0.150	U	0.0700	0.150	0.300
cis-1,3-Dichloropropene	0.100	U	0.0271	0.100	0.200
trans-1,3-Dichloropropene	0.150	U	0.0612	0.150	0.300
2,2-Dichloropropane	0.100	U	0.0317	0.100	0.200
Di-isopropyl ether	0.0500	U	0.0140	0.0500	0.100
Ethylbenzene	0.0500	U	0.0212	0.0500	0.100

Method Blank (MB)

(MB) R3990575-3 10/22/23 01:57

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Hexachloro-1,3-butadiene	2.00	U	0.508	2.00	4.00
Isopropylbenzene	1.00	U	0.0345	1.00	2.00
p-Isopropyltoluene	0.300	U	0.0932	0.300	0.600
2-Butanone (MEK)	1.00	U	0.500	1.00	2.00
Methylene Chloride	0.750	U	0.266	0.750	1.50
4-Methyl-2-pentanone (MIBK)	1.00	U	0.400	1.00	2.00
Methyl tert-butyl ether	0.0300	U	0.0118	0.0300	0.0600
Naphthalene	0.250	U	0.125	0.250	0.500
n-Propylbenzene	0.100	U	0.0472	0.100	0.200
Styrene	0.250	U	0.109	0.250	0.500
1,1,1,2-Tetrachloroethane	0.0500	U	0.0200	0.0500	0.100
1,1,2,2-Tetrachloroethane	0.0500	U	0.0156	0.0500	0.100
1,1,2-Trichlorotrifluoroethane	0.100	U	0.0270	0.100	0.200
Tetrachloroethene	0.0750	U	0.0280	0.0750	0.150
1,2,3-Trichlorobenzene	0.250	U	0.0250	0.250	0.500
1,2,4-Trichlorobenzene	0.500	U	0.193	0.500	1.00
1,1,1-Trichloroethane	0.0500	U	0.0110	0.0500	0.100
1,1,2-Trichloroethane	0.100	U	0.0353	0.100	0.200
Trichloroethene	0.0400	U	0.0160	0.0400	0.0800
Trichlorofluoromethane	0.0500	U	0.0200	0.0500	0.100
1,2,3-Trichloropropane	0.500	U	0.204	0.500	1.00
1,2,3-Trimethylbenzene	0.100	U	0.0460	0.100	0.200
1,3,5-Trimethylbenzene	0.100	U	0.0432	0.100	0.200
Vinyl chloride	0.0750	U	0.0273	0.0750	0.150
Xylenes, Total	0.400	U	0.191	0.400	0.800
Ethyl Ether	0.0500	U	0.0170	0.0500	0.100
Tetrahydrofuran	0.250	U	0.0900	0.250	50.0
Iodomethane	0.500	U	0.242	0.500	1.00
Allyl chloride	2.00	U	0.580	2.00	4.00
trans-1,4-Dichloro-2-butene	0.200	U	0.0560	0.200	0.400
(S) Toluene-d8	*103*				*89.0-112*
(S) 4-Bromofluorobenzene	*101*				*85.0-114*
(S) 1,2-Dichloroethane-d4	*94.4*				*81.0-118*

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

(LCS) R3990575-1 10/22/23 00:38 • (LCSD) R3990575-2 10/22/23 00:57

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	27.8	25.7	111	103	39.0-160			7.85	20
Acrylonitrile	25.0	28.5	25.9	114	104	63.0-135			9.56	20
Bromobenzene	5.00	5.14	4.92	103	98.4	80.0-120			4.37	20
Bromodichloromethane	5.00	5.44	5.17	109	103	79.0-125			5.09	20
Bromochloromethane	5.00	5.62	5.39	112	108	78.0-123			4.18	20
Bromoform	5.00	4.88	4.47	97.6	89.4	66.0-130			8.77	20
Bromomethane	5.00	5.18	5.32	104	106	53.0-141			2.67	20
n-Butylbenzene	5.00	4.84	4.99	96.8	99.8	75.0-128			3.05	20
sec-Butylbenzene	5.00	5.86	5.47	117	109	77.0-126			6.88	20
tert-Butylbenzene	5.00	5.43	5.13	109	103	78.0-124			5.68	20
Carbon tetrachloride	5.00	6.04	5.80	121	116	72.0-136			4.05	20
Carbon disulfide	5.00	5.61	5.44	112	109	64.0-133			3.08	20
Chlorobenzene	5.00	5.18	5.08	104	102	82.0-118			1.95	20
Chlorodibromomethane	5.00	5.12	4.69	102	93.8	74.0-126			8.77	20
Chloroethane	5.00	5.12	4.71	102	94.2	60.0-138			8.34	20
Chloroform	5.00	5.42	5.37	108	107	79.0-124			0.927	20
Chloromethane	5.00	5.42	5.17	108	103	50.0-139			4.72	20
Cyclohexane	5.00	4.74	4.69	94.8	93.8	71.0-130			1.06	20
2-Chlorotoluene	5.00	5.21	4.80	104	96.0	79.0-122			8.19	20
4-Chlorotoluene	5.00	5.66	5.15	113	103	78.0-122			9.44	20
1,2-Dibromo-3-Chloropropane	5.00	4.77	4.63	95.4	92.6	62.0-128			2.98	20
1,2-Dibromoethane	5.00	5.00	5.00	100	100	77.0-121			0.000	20
Dibromomethane	5.00	5.15	4.88	103	97.6	79.0-123			5.38	20
1,2-Dichlorobenzene	5.00	5.21	5.02	104	100	80.0-119			3.71	20
1,3-Dichlorobenzene	5.00	5.52	5.36	110	107	80.0-119			2.94	20
1,4-Dichlorobenzene	5.00	5.15	4.90	103	98.0	79.0-118			4.98	20
Dichlorodifluoromethane	5.00	5.59	5.68	112	114	32.0-152			1.60	20
1,1-Dichloroethane	5.00	5.34	5.16	107	103	77.0-125			3.43	20
1,2-Dichloroethane	5.00	5.34	5.24	107	105	73.0-128			1.89	20
1,1-Dichloroethene	5.00	5.80	5.57	116	111	71.0-131			4.05	20
cis-1,2-Dichloroethene	5.00	5.68	5.34	114	107	78.0-123			6.17	20
trans-1,2-Dichloroethene	5.00	5.62	5.46	112	109	75.0-124			2.89	20
1,2-Dichloropropane	5.00	5.15	4.71	103	94.2	78.0-122			8.92	20
1,1-Dichloropropene	5.00	5.95	5.72	119	114	79.0-125			3.94	20
1,3-Dichloropropane	5.00	5.31	5.26	106	105	80.0-119			0.946	20
cis-1,3-Dichloropropene	5.00	5.59	5.31	112	106	75.0-124			5.14	20
trans-1,3-Dichloropropene	5.00	5.18	4.73	104	94.6	73.0-127			9.08	20
2,2-Dichloropropane	5.00	5.53	5.27	111	105	60.0-139			4.81	20
Di-isopropyl ether	5.00	5.52	5.31	110	106	67.0-128			3.88	20
Ethylbenzene	5.00	5.40	5.19	108	104	79.0-121			3.97	20

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

(LCS) R3990575-1 10/22/23 00:38 • (LCSD) R3990575-2 10/22/23 00:57

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Hexachloro-1,3-butadiene	5.00	5.70	5.23	114	105	66.0-134			8.60	20
Isopropylbenzene	5.00	5.50	5.33	110	107	72.0-131			3.14	20
p-Isopropyltoluene	5.00	5.42	5.40	108	108	77.0-127			0.370	20
2-Butanone (MEK)	25.0	20.7	19.8	82.8	79.2	56.0-143			4.44	20
Methylene Chloride	5.00	4.91	4.71	98.2	94.2	74.0-124			4.16	20
4-Methyl-2-pentanone (MIBK)	25.0	26.5	25.0	106	100	67.0-130			5.83	20
Methyl tert-butyl ether	5.00	5.09	4.80	102	96.0	71.0-124			5.86	20
Naphthalene	5.00	5.83	5.69	117	114	61.0-128			2.43	20
n-Propylbenzene	5.00	5.73	5.40	115	108	76.0-126			5.93	20
Styrene	5.00	5.47	5.20	109	104	78.0-123			5.06	20
1,1,1,2-Tetrachloroethane	5.00	5.08	4.72	102	94.4	78.0-124			7.35	20
1,1,2,2-Tetrachloroethane	5.00	5.10	4.80	102	96.0	71.0-121			6.06	20
1,1,2-Trichlorotrifluoroethane	5.00	5.29	4.99	106	99.8	70.0-136			5.84	20
Tetrachloroethene	5.00	5.72	5.50	114	110	74.0-129			3.92	20
1,2,3-Trichlorobenzene	5.00	5.30	5.12	106	102	69.0-129			3.45	20
1,2,4-Trichlorobenzene	5.00	5.11	5.25	102	105	69.0-130			2.70	20
1,1,1-Trichloroethane	5.00	5.75	5.63	115	113	74.0-131			2.11	20
1,1,2-Trichloroethane	5.00	4.80	4.60	96.0	92.0	80.0-119			4.26	20
Trichloroethene	5.00	6.03	5.82	121	116	79.0-123			3.54	20
Trichlorofluoromethane	5.00	6.54	5.52	131	110	65.0-141			16.9	20
1,2,3-Trichloropropane	5.00	5.23	4.85	105	97.0	73.0-122			7.54	20
1,2,3-Trimethylbenzene	5.00	5.53	5.25	111	105	82.0-120			5.19	20
1,3,5-Trimethylbenzene	5.00	4.92	4.69	98.4	93.8	75.0-124			4.79	20
Vinyl chloride	5.00	5.82	5.80	116	116	58.0-137			0.344	20
Xylenes, Total	15.0	16.2	15.8	108	105	79.0-121			2.50	20
Ethyl Ether	5.00	4.80	4.60	96.0	92.0	64.0-137			4.26	20
Tetrahydrofuran	5.00	5.14	4.58	103	91.6	57.0-133			11.5	20
Iodomethane	25.0	28.0	27.5	112	110	69.0-131			1.80	20
Allyl chloride	25.0	27.1	26.8	108	107	68.0-130			1.11	20
trans-1,4-Dichloro-2-butene	5.00	3.76	4.02	75.2	80.4	43.0-140			6.68	20
(S) Toluene-d8				*102*	*101*	*89.0-112*				
(S) 4-Bromofluorobenzene				*101*	*99.5*	*85.0-114*				
(S) 1,2-Dichloroethane-d4				*101*	*100*	*81.0-118*				

L1667486-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667486-03 10/22/23 03:35 • (MS) R3990575-4 10/22/23 08:51 • (MSD) R3990575-5 10/22/23 09:11

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	4.17	36.0	35.2	127	124	1	39.0-160			2.25	40
Acrylonitrile	25.0	0.250	29.6	32.1	118	128	1	63.0-135			8.10	40
Bromobenzene	5.00	0.250	4.24	4.49	84.8	89.8	1	80.0-120			5.73	38
Bromodichloromethane	5.00	0.100	4.63	4.73	92.6	94.6	1	79.0-125			2.14	37
Bromochloromethane	5.00	0.100	4.92	5.36	98.4	107	1	78.0-123			8.56	33
Bromoform	5.00	0.500	4.64	4.87	92.8	97.4	1	66.0-130			4.84	36
Bromomethane	5.00	0.500	3.77	4.33	75.4	86.6	1	53.0-141			13.8	38
n-Butylbenzene	5.00	0.500	3.58	4.13	71.6	82.6	1	75.0-128	J6		14.3	40
sec-Butylbenzene	5.00	0.250	4.07	4.61	81.4	92.2	1	77.0-126			12.4	39
tert-Butylbenzene	5.00	0.500	3.86	4.31	77.2	86.2	1	78.0-124	J6		11.0	39
Carbon tetrachloride	5.00	0.100	4.48	5.07	89.6	101	1	72.0-136			12.4	37
Carbon disulfide	5.00	0.500	3.68	4.19	73.6	83.8	1	64.0-133			13.0	39
Chlorobenzene	5.00	0.0500	4.20	4.33	84.0	86.6	1	82.0-118			3.05	39
Chlorodibromomethane	5.00	0.0500	4.62	4.88	92.4	97.6	1	74.0-126			5.47	37
Chloroethane	5.00	0.100	3.53	4.08	70.6	81.6	1	60.0-138			14.5	40
Chloroform	5.00	0.0500	4.54	5.10	90.8	102	1	79.0-124			11.6	37
Chloromethane	5.00	0.250	3.55	3.93	71.0	78.6	1	50.0-139			10.2	37
Cyclohexane	5.00	0.312	3.43	3.99	62.4	73.6	1	71.0-130	J6		15.1	32
2-Chlorotoluene	5.00	0.100	3.85	4.21	77.0	84.2	1	79.0-122	J6		8.93	38
4-Chlorotoluene	5.00	0.100	4.30	4.65	86.0	93.0	1	78.0-122			7.82	39
1,2-Dibromo-3-Chloropropane	5.00	0.500	4.93	5.41	98.6	108	1	62.0-128			9.28	39
1,2-Dibromoethane	5.00	0.0500	4.75	4.74	95.0	94.8	1	77.0-121			0.211	34
Dibromomethane	5.00	0.100	4.87	5.02	97.4	100	1	79.0-123			3.03	35
1,2-Dichlorobenzene	5.00	0.200	4.34	4.69	86.8	93.8	1	80.0-119			7.75	37
1,3-Dichlorobenzene	5.00	0.200	4.38	4.69	87.6	93.8	1	80.0-119			6.84	38
1,4-Dichlorobenzene	5.00	0.250	4.13	4.37	82.6	87.4	1	79.0-118			5.65	38
Dichlorodifluoromethane	5.00	0.100	3.74	4.56	74.8	91.2	1	32.0-152			19.8	35
1,1-Dichloroethane	5.00	0.0500	4.20	4.55	84.0	91.0	1	77.0-125			8.00	37
1,2-Dichloroethane	5.00	0.0500	5.00	5.21	100	104	1	73.0-128			4.11	35
1,1-Dichloroethene	5.00	0.0500	4.21	4.70	84.2	94.0	1	71.0-131			11.0	37
cis-1,2-Dichloroethene	5.00	0.0750	4.55	4.60	91.0	92.0	1	10.0-149			1.09	37
trans-1,2-Dichloroethene	5.00	0.300	4.26	4.60	85.2	92.0	1	75.0-124			7.67	37
1,2-Dichloropropane	5.00	0.200	4.35	4.55	87.0	91.0	1	78.0-122			4.49	37
1,1-Dichloropropene	5.00	0.100	4.22	4.83	84.4	96.6	1	79.0-125			13.5	35
1,3-Dichloropropane	5.00	0.150	5.04	5.28	101	106	1	80.0-119			4.65	35
cis-1,3-Dichloropropene	5.00	0.100	4.35	4.58	87.0	91.6	1	10.0-151			5.15	37
trans-1,3-Dichloropropene	5.00	0.150	4.32	4.66	86.4	93.2	1	73.0-127			7.57	37
2,2-Dichloropropane	5.00	0.100	4.02	4.32	80.4	86.4	1	60.0-139			7.19	36
Di-isopropyl ether	5.00	0.0500	4.85	5.25	97.0	105	1	67.0-128			7.92	36
Ethylbenzene	5.00	0.342	4.38	4.76	80.8	88.4	1	79.0-121			8.32	38

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

L1667486-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667486-03 10/22/23 03:35 • (MS) R3990575-4 10/22/23 08:51 • (MSD) R3990575-5 10/22/23 09:11

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexachloro-1,3-butadiene	5.00	2.00	3.87	4.29	77.4	85.8	1	66.0-134			10.3	40
Isopropylbenzene	5.00	1.00	4.00	4.66	80.0	93.2	1	72.0-131			15.2	38
p-Isopropyltoluene	5.00	0.300	3.97	4.37	79.4	87.4	1	77.0-127			9.59	40
2-Butanone (MEK)	25.0	1.00	21.9	24.8	87.6	99.2	1	56.0-143			12.4	40
Methylene Chloride	5.00	0.750	4.01	4.25	80.2	85.0	1	74.0-124			5.81	37
4-Methyl-2-pentanone (MIBK)	25.0	1.00	27.4	29.2	110	117	1	67.0-130			6.36	35
Methyl tert-butyl ether	5.00	0.0300	4.69	5.11	93.8	102	1	71.0-124			8.57	35
Naphthalene	5.00	0.250	5.48	6.07	110	121	1	61.0-128			10.2	36
n-Propylbenzene	5.00	0.100	4.02	4.49	80.4	89.8	1	76.0-126			11.0	38
Styrene	5.00	0.250	4.29	4.54	85.8	90.8	1	78.0-123			5.66	40
1,1,1,2-Tetrachloroethane	5.00	0.0500	4.32	4.67	86.4	93.4	1	71.0-121			7.79	39
1,1,2,2-Tetrachloroethane	5.00	0.0500	5.29	5.34	106	107	1	10.0-160			0.941	35
1,1,2-Trichlorotrifluoroethane	5.00	0.100	3.66	4.30	73.2	86.0	1	70.0-136			16.1	36
Tetrachloroethene	5.00	0.0750	4.10	4.47	82.0	89.4	1	74.0-129			8.63	39
1,2,3-Trichlorobenzene	5.00	0.250	4.43	4.97	88.6	99.4	1	69.0-129			11.5	40
1,2,4-Trichlorobenzene	5.00	0.500	4.22	4.77	84.4	95.4	1	69.0-130			12.2	40
1,1,1-Trichloroethane	5.00	0.0500	4.52	5.02	90.4	100	1	10.0-144			10.5	35
1,1,2-Trichloroethane	5.00	0.100	4.61	4.84	92.2	96.8	1	80.0-119			4.87	35
Trichloroethene	5.00	0.0400	4.34	4.91	86.8	98.2	1	79.0-123			12.3	38
Trichlorofluoromethane	5.00	0.0500	3.91	5.06	78.2	101	1	65.0-141			25.6	40
1,2,3-Trichloropropane	5.00	0.500	5.08	4.91	102	98.2	1	73.0-122			3.40	35
1,2,3-Trimethylbenzene	5.00	0.100	4.21	4.66	84.2	93.2	1	82.0-120			10.1	36
1,3,5-Trimethylbenzene	5.00	0.100	3.58	3.97	71.6	79.4	1	75.0-124	J6		10.3	38
Vinyl chloride	5.00	0.0750	4.01	4.69	80.2	93.8	1	58.0-137			15.6	37
Xylenes, Total	15.0	0.400	12.3	13.6	82.0	90.7	1	79.0-121			10.0	38
Ethyl Ether	5.00	0.0500	4.67	4.84	93.4	96.8	1	10.0-160			3.58	31
Tetrahydrofuran	5.00	0.250	2.62	2.77	52.4	55.4	1	57.0-133	J6	J6	5.57	33
Iodomethane	25.0	0.500	21.0	23.4	84.0	93.6	1	69.0-131			10.8	38
Allyl chloride	25.0	2.00	20.4	22.8	81.6	91.2	1	68.0-130			11.1	30
trans-1,4-Dichloro-2-butene	5.00	0.200	3.46	3.62	69.2	72.4	1	43.0-140			4.52	36
(S) Toluene-d8					*103*	*101*		*89.0-112*				
(S) 4-Bromofluorobenzene					*102*	*102*		*85.0-114*				
(S) 1,2-Dichloroethane-d4					*103*	*103*		*81.0-118*				

L1667791-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667791-03 10/22/23 07:12 • (MS) R3990575-6 10/22/23 09:31 • (MSD) R3990575-7 10/22/23 09:51

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	5.59	31.6	28.1	104	90.0	1	39.0-160			11.7	40
Acrylonitrile	25.0	0.250	28.0	29.6	112	118	1	63.0-135			5.56	40
Bromobenzene	5.00	0.250	5.38	6.01	108	120	1	80.0-120			11.1	38
Bromodichloromethane	5.00	0.100	5.58	5.97	112	119	1	79.0-125			6.75	37
Bromochloromethane	5.00	0.100	5.82	6.57	116	131	1	78.0-123		J5	12.1	33
Bromoform	5.00	0.500	5.00	5.34	100	107	1	66.0-130			6.58	36
Bromomethane	5.00	0.500	5.29	5.42	106	108	1	53.0-141			2.43	38
n-Butylbenzene	5.00	0.500	4.20	4.17	84.0	83.4	1	75.0-128			0.717	40
sec-Butylbenzene	5.00	0.344	6.82	7.37	130	141	1	77.0-126	J5	J5	7.75	39
tert-Butylbenzene	5.00	0.861	6.94	7.39	122	131	1	78.0-124		J5	6.28	39
Carbon tetrachloride	5.00	0.100	6.86	7.43	137	149	1	72.0-136	J5	J5	7.98	37
Carbon disulfide	5.00	0.500	5.39	6.09	108	122	1	64.0-133			12.2	39
Chlorobenzene	5.00	0.0500	5.72	6.01	114	120	1	82.0-118		J5	4.94	39
Chlorodibromomethane	5.00	0.0500	5.53	5.90	111	118	1	74.0-126			6.47	37
Chloroethane	5.00	0.100	5.11	5.75	102	115	1	60.0-138			11.8	40
Chloroform	5.00	0.0500	6.31	6.57	126	131	1	79.0-124	J5	J5	4.04	37
Chloromethane	5.00	0.250	5.49	6.21	110	124	1	50.0-139			12.3	37
Cyclohexane	5.00	1.41	6.47	8.11	101	134	1	71.0-130		J5	22.5	32
2-Chlorotoluene	5.00	0.100	5.91	6.54	118	131	1	79.0-122		J5	10.1	38
4-Chlorotoluene	5.00	0.100	5.57	6.24	111	125	1	78.0-122		J5	11.3	39
1,2-Dibromo-3-Chloropropane	5.00	0.500	5.49	6.29	110	126	1	62.0-128			13.6	39
1,2-Dibromoethane	5.00	0.0500	5.48	5.72	110	114	1	77.0-121			4.29	34
Dibromomethane	5.00	0.100	5.37	5.93	107	119	1	79.0-123			9.91	35
1,2-Dichlorobenzene	5.00	0.200	6.01	6.59	120	132	1	80.0-119	J5	J5	9.21	37
1,3-Dichlorobenzene	5.00	0.200	6.01	6.63	120	133	1	80.0-119	J5	J5	9.81	38
1,4-Dichlorobenzene	5.00	0.250	5.53	5.80	111	116	1	79.0-118			4.77	38
Dichlorodifluoromethane	5.00	0.100	6.08	6.48	122	130	1	32.0-152			6.37	35
1,1-Dichloroethane	5.00	0.0500	5.96	6.47	119	129	1	77.0-125		J5	8.21	37
1,2-Dichloroethane	5.00	0.0500	5.80	5.76	116	115	1	73.0-128			0.692	35
1,1-Dichloroethene	5.00	0.0500	6.37	6.82	127	136	1	71.0-131		J5	6.82	37
cis-1,2-Dichloroethene	5.00	12.4	18.5	19.0	122	132	1	10.0-149			2.67	37
trans-1,2-Dichloroethene	5.00	0.0850	6.24	6.81	123	135	1	75.0-124		J5	8.74	37
1,2-Dichloropropane	5.00	0.200	5.58	5.93	112	119	1	78.0-122			6.08	37
1,1-Dichloropropene	5.00	0.100	6.62	7.12	132	142	1	79.0-125	J5	J5	7.28	35
1,3-Dichloropropane	5.00	0.150	5.77	6.15	115	123	1	80.0-119		J5	6.38	35
cis-1,3-Dichloropropene	5.00	0.100	5.27	5.82	105	116	1	10.0-151			9.92	37
trans-1,3-Dichloropropene	5.00	0.150	5.53	5.69	111	114	1	73.0-127			2.85	37
2,2-Dichloropropane	5.00	0.100	5.47	6.17	109	123	1	60.0-139			12.0	36
Di-isopropyl ether	5.00	0.0500	5.64	6.49	113	130	1	67.0-128		J5	14.0	36
Ethylbenzene	5.00	6.74	12.2	12.4	109	113	1	79.0-121			1.63	38

L1667791-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667791-03 10/22/23 07:12 • (MS) R3990575-6 10/22/23 09:31 • (MSD) R3990575-7 10/22/23 09:51

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Hexachloro-1,3-butadiene	5.00	2.00	6.53	6.46	131	129	1	66.0-134			1.08	40
Isopropylbenzene	5.00	7.47	13.5	14.0	121	131	1	72.0-131			3.64	38
p-Isopropyltoluene	5.00	2.58	8.97	9.78	128	144	1	77.0-127	J5	J5	8.64	40
2-Butanone (MEK)	25.0	2.00	27.3	29.1	101	108	1	56.0-143			6.38	40
Methylene Chloride	5.00	0.750	5.25	5.67	105	113	1	74.0-124			7.69	37
4-Methyl-2-pentanone (MIBK)	25.0	1.00	28.2	30.6	113	122	1	67.0-130			8.16	35
Methyl tert-butyl ether	5.00	0.0300	5.24	5.81	105	116	1	71.0-124			10.3	35
Naphthalene	5.00	50.7	54.4	56.3	74.0	112	1	61.0-128			3.43	36
n-Propylbenzene	5.00	1.98	8.71	9.07	135	142	1	76.0-126	J5	J5	4.05	38
Styrene	5.00	0.250	6.40	6.87	128	137	1	78.0-123	J5	J5	7.08	40
1,1,1,2-Tetrachloroethane	5.00	0.0500	5.39	5.92	108	118	1	71.0-121			9.37	39
1,1,2,2-Tetrachloroethane	5.00	0.0500	7.12	7.52	142	150	1	10.0-160			5.46	35
1,1,2-Trichlorotrifluoroethane	5.00	0.100	6.31	6.69	126	134	1	70.0-136			5.85	36
Tetrachloroethene	5.00	0.165	6.27	6.53	122	127	1	74.0-129			4.06	39
1,2,3-Trichlorobenzene	5.00	0.250	6.21	7.42	124	148	1	69.0-129		J5	17.8	40
1,2,4-Trichlorobenzene	5.00	0.500	6.93	7.36	139	147	1	69.0-130	J5	J5	6.02	40
1,1,1-Trichloroethane	5.00	0.0500	6.48	6.98	130	140	1	10.0-144			7.43	35
1,1,2-Trichloroethane	5.00	0.100	5.79	6.00	116	120	1	80.0-119		J5	3.56	35
Trichloroethene	5.00	5.21	11.5	11.7	126	130	1	79.0-123	J5	J5	1.72	38
Trichlorofluoromethane	5.00	0.0500	6.28	7.18	126	144	1	65.0-141		J5	13.4	40
1,2,3-Trichloropropane	5.00	0.500	5.13	5.13	103	103	1	73.0-122			0.000	35
1,2,3-Trimethylbenzene	5.00	0.100	6.21	5.66	124	113	1	82.0-120	J5		9.27	36
1,3,5-Trimethylbenzene	5.00	0.100	5.83	6.39	117	128	1	75.0-124		J5	9.17	38
Vinyl chloride	5.00	0.137	6.36	6.89	124	135	1	58.0-137			8.00	37
Xylenes, Total	15.0	3.55	21.3	22.4	118	126	1	79.0-121		J5	5.03	38
Ethyl Ether	5.00	0.0500	5.11	5.38	102	108	1	10.0-160			5.15	31
Tetrahydrofuran	5.00	0.250	2.22	2.49	44.4	49.8	1	57.0-133	J6	J6	11.5	33
Iodomethane	25.0	0.500	28.8	32.0	115	128	1	69.0-131			10.5	38
Allyl chloride	25.0	2.00	29.4	31.7	118	127	1	68.0-130			7.53	30
trans-1,4-Dichloro-2-butene	5.00	0.200	4.48	2.57	89.6	51.4	1	43.0-140		J3	54.2	36
(S) Toluene-d8					*97.1*	*97.8*		*89.0-112*				
(S) 4-Bromofluorobenzene					*102*	*102*		*85.0-114*				
(S) 1,2-Dichloroethane-d4					*95.4*	*101*		*81.0-118*				

Method Blank (MB)

(MB) R3991882-3 10/26/23 17:21

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Benzene	0.0500	U	0.0160	0.0500	0.100
Cyclohexane	0.0500	U	0.0203	0.0500	0.100
1,2-Dichloroethane	0.0500	U	0.0190	0.0500	0.100
Ethylbenzene	0.0500	U	0.0212	0.0500	0.100
Toluene	0.100	U	0.0500	0.100	0.200
Trichloroethene	0.0400	U	0.0160	0.0400	0.0800
1,2,4-Trimethylbenzene	0.0540	J	0.0464	0.100	0.200
Vinyl acetate	0.300	U	0.141	0.300	0.600
Xylenes, Total	0.400	U	0.191	0.400	0.800
(S) Toluene-d8	*108*				*89.0-112*
(S) 4-Bromofluorobenzene	*98.6*				*85.0-114*
(S) 1,2-Dichloroethane-d4	*94.0*				*81.0-118*

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

(LCS) R3991882-1 10/26/23 16:04 • (LCSD) R3991882-2 10/26/23 16:24

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	5.00	4.79	4.75	95.8	95.0	79.0-120			0.839	20
Cyclohexane	5.00	4.48	4.44	89.6	88.8	71.0-130			0.897	20
1,2-Dichloroethane	5.00	4.44	4.46	88.8	89.2	73.0-128			0.449	20
Ethylbenzene	5.00	5.60	5.62	112	112	79.0-121			0.357	20
Toluene	5.00	5.26	5.39	105	108	80.0-121			2.44	20
Trichloroethene	5.00	5.10	5.14	102	103	79.0-123			0.781	20
1,2,4-Trimethylbenzene	5.00	5.14	4.99	103	99.8	76.0-124			2.96	20
Vinyl acetate	25.0	22.1	21.6	88.4	86.4	54.0-146			2.29	20
Xylenes, Total	15.0	17.5	17.5	117	117	79.0-121			0.000	20
(S) Toluene-d8				*110*	*111*	*89.0-112*				
(S) 4-Bromofluorobenzene				*103*	*103*	*85.0-114*				
(S) 1,2-Dichloroethane-d4				*94.6*	*93.9*	*81.0-118*				

Method Blank (MB)

(MB) R3989809-3 10/19/23 10:57

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Acetone	25.0	U	11.3	25.0	50.0
Acrolein	25.0	U	2.54	25.0	50.0
Acrylonitrile	5.00	U	0.671	5.00	10.0
Benzene	0.500	U	0.0941	0.500	1.00
Bromobenzene	0.500	U	0.118	0.500	1.00
Bromodichloromethane	0.500	U	0.136	0.500	1.00
Bromoform	0.500	U	0.129	0.500	1.00
Bromomethane	2.00	U	0.605	2.00	5.00
n-Butylbenzene	0.500	U	0.157	0.500	1.00
sec-Butylbenzene	0.500	U	0.125	0.500	1.00
tert-Butylbenzene	0.500	U	0.127	0.500	1.00
Carbon tetrachloride	0.500	U	0.128	0.500	1.00
Chlorobenzene	0.500	U	0.116	0.500	1.00
Chlorodibromomethane	0.500	U	0.140	0.500	1.00
Chloroethane	2.00	U	0.192	2.00	5.00
2-Chloroethyl vinyl ether	25.0	U	0.575	25.0	50.0
Chloroform	2.00	U	0.111	2.00	5.00
Chloromethane	2.00	U	0.960	2.00	4.00
2-Chlorotoluene	0.500	U	0.106	0.500	1.00
4-Chlorotoluene	0.500	U	0.114	0.500	1.00
1,2-Dibromoethane	0.500	U	0.126	0.500	1.00
1,2-Dibromo-3-Chloropropane	2.00	U	0.276	2.00	5.00
Dibromomethane	0.500	U	0.122	0.500	1.00
1,2-Dichlorobenzene	0.500	U	0.107	0.500	1.00
1,3-Dichlorobenzene	0.500	U	0.110	0.500	1.00
1,4-Dichlorobenzene	0.500	U	0.120	0.500	1.00
Dichlorodifluoromethane	2.00	U	0.374	2.00	5.00
1,1-Dichloroethane	0.500	U	0.100	0.500	1.00
1,2-Dichloroethane	0.500	U	0.0819	0.500	1.00
1,1-Dichloroethene	0.500	U	0.188	0.500	1.00
cis-1,2-Dichloroethene	0.500	U	0.126	0.500	1.00
trans-1,2-Dichloroethene	0.500	U	0.149	0.500	1.00
1,2-Dichloropropane	0.500	U	0.149	0.500	1.00
1,3-Dichloropropane	0.500	U	0.110	0.500	1.00
2,2-Dichloropropane	0.500	U	0.161	0.500	1.00
1,1-Dichloropropene	0.500	U	0.142	0.500	1.00
cis-1,3-Dichloropropene	0.500	U	0.111	0.500	1.00
trans-1,3-Dichloropropene	0.500	U	0.118	0.500	1.00
Di-isopropyl ether	0.500	U	0.105	0.500	1.00
Ethylbenzene	0.500	U	0.137	0.500	1.00

Method Blank (MB)

(MB) R3989809-3 10/19/23 10:57

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Hexachloro-1,3-butadiene	0.750	U	0.337	0.750	1.50
Isopropylbenzene	0.500	U	0.105	0.500	1.00
p-Isopropyltoluene	0.500	U	0.120	0.500	1.00
2-Butanone (MEK)	5.00	U	1.19	5.00	10.0
Methylene Chloride	2.00	U	0.430	2.00	5.00
4-Methyl-2-pentanone (MIBK)	5.00	U	0.478	5.00	10.0
Methyl tert-butyl ether	0.500	U	0.101	0.500	1.00
Naphthalene	2.00	U	1.00	2.00	5.00
n-Propylbenzene	0.500	U	0.0993	0.500	1.00
Styrene	0.500	U	0.118	0.500	1.00
1,1,1,2-Tetrachloroethane	0.500	U	0.147	0.500	1.00
1,1,2,2-Tetrachloroethane	0.500	U	0.133	0.500	1.00
Tetrachloroethene	0.600	U	0.300	0.600	1.20
Toluene	0.600	U	0.278	0.600	1.20
1,2,3-Trichlorobenzene	0.500	U	0.230	0.500	1.00
1,2,4-Trichlorobenzene	1.00	U	0.481	1.00	2.00
1,2,3-Trimethylbenzene	0.500	U	0.104	0.500	1.00
1,2,4-Trimethylbenzene	1.00	U	0.322	1.00	2.00
1,3,5-Trimethylbenzene	0.500	U	0.104	0.500	1.00
1,1,1-Trichloroethane	0.500	U	0.149	0.500	1.00
1,1,2-Trichloroethane	0.500	U	0.158	0.500	1.00
Trichloroethene	0.500	U	0.190	0.500	1.00
Trichlorofluoromethane	2.00	U	0.160	2.00	5.00
1,1,2-Trichlorotrifluoroethane	0.500	U	0.180	0.500	1.00
1,2,3-Trichloropropane	1.00	U	0.237	1.00	2.50
Vinyl chloride	0.500	U	0.234	0.500	1.00
Xylenes, Total	1.50	U	0.174	1.50	3.00
(S) Toluene-d8	*104*				*89.0-112*
(S) 4-Bromofluorobenzene	*95.9*				*85.0-114*
(S) 1,2-Dichloroethane-d4	*102*				*81.0-118*

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

(LCS) R3989809-1 10/19/23 09:51 • (LCSD) R3989809-2 10/19/23 10:13

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	32.9	33.6	132	134	39.0-160			2.11	20
Acrolein	25.0	27.7	28.4	111	114	39.0-155			2.50	20
Acrylonitrile	25.0	23.9	23.8	95.6	95.2	63.0-135			0.419	20

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

(LCS) R3989809-1 10/19/23 09:51 • (LCSD) R3989809-2 10/19/23 10:13

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	5.00	5.10	5.13	102	103	79.0-120			0.587	20
Bromobenzene	5.00	5.32	5.52	106	110	80.0-120			3.69	20
Bromodichloromethane	5.00	5.32	5.27	106	105	79.0-125			0.944	20
Bromoform	5.00	4.52	4.53	90.4	90.6	66.0-130			0.221	20
Bromomethane	5.00	5.04	5.05	101	101	53.0-141			0.198	20
n-Butylbenzene	5.00	4.82	5.00	96.4	100	75.0-128			3.67	20
sec-Butylbenzene	5.00	5.23	5.26	105	105	77.0-126			0.572	20
tert-Butylbenzene	5.00	5.26	5.42	105	108	78.0-124			3.00	20
Carbon tetrachloride	5.00	4.97	4.90	99.4	98.0	72.0-136			1.42	20
Chlorobenzene	5.00	4.78	4.95	95.6	99.0	82.0-118			3.49	20
Chlorodibromomethane	5.00	5.22	5.43	104	109	74.0-126			3.94	20
Chloroethane	5.00	4.95	5.02	99.0	100	60.0-138			1.40	20
2-Chloroethyl vinyl ether	25.0	25.2	24.9	101	99.6	51.0-139			1.20	20
Chloroform	5.00	5.11	5.17	102	103	79.0-124			1.17	20
Chloromethane	5.00	5.56	5.30	111	106	50.0-139			4.79	20
2-Chlorotoluene	5.00	5.44	5.68	109	114	79.0-122			4.32	20
4-Chlorotoluene	5.00	5.41	5.56	108	111	78.0-122			2.73	20
1,2-Dibromoethane	5.00	4.93	5.02	98.6	100	77.0-121			1.81	20
1,2-Dibromo-3-Chloropropane	5.00	4.56	4.31	91.2	86.2	62.0-128			5.64	20
Dibromomethane	5.00	5.28	5.28	106	106	79.0-123			0.000	20
1,2-Dichlorobenzene	5.00	5.15	5.17	103	103	80.0-119			0.388	20
1,3-Dichlorobenzene	5.00	5.24	5.35	105	107	80.0-119			2.08	20
1,4-Dichlorobenzene	5.00	5.29	5.38	106	108	79.0-118			1.69	20
Dichlorodifluoromethane	5.00	5.74	5.65	115	113	32.0-152			1.58	20
1,1-Dichloroethane	5.00	4.76	4.71	95.2	94.2	77.0-125			1.06	20
1,2-Dichloroethane	5.00	5.03	5.06	101	101	73.0-128			0.595	20
1,1-Dichloroethene	5.00	5.28	5.28	106	106	71.0-131			0.000	20
cis-1,2-Dichloroethene	5.00	4.99	5.01	99.8	100	78.0-123			0.400	20
trans-1,2-Dichloroethene	5.00	5.09	4.99	102	99.8	75.0-124			1.98	20
1,2-Dichloropropane	5.00	5.03	4.97	101	99.4	78.0-122			1.20	20
1,3-Dichloropropane	5.00	5.31	5.31	106	106	80.0-119			0.000	20
2,2-Dichloropropane	5.00	4.38	4.58	87.6	91.6	60.0-139			4.46	20
1,1-Dichloropropene	5.00	5.44	5.48	109	110	79.0-125			0.733	20
cis-1,3-Dichloropropene	5.00	5.01	5.19	100	104	75.0-124			3.53	20
trans-1,3-Dichloropropene	5.00	4.83	5.05	96.6	101	73.0-127			4.45	20
Di-isopropyl ether	5.00	4.66	4.55	93.2	91.0	67.0-128			2.39	20
Ethylbenzene	5.00	4.81	4.94	96.2	98.8	79.0-121			2.67	20
Hexachloro-1,3-butadiene	5.00	4.60	4.74	92.0	94.8	66.0-134			3.00	20
Isopropylbenzene	5.00	4.85	4.90	97.0	98.0	72.0-131			1.03	20
p-Isopropyltoluene	5.00	5.14	5.27	103	105	77.0-127			2.50	20

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

(LCS) R3989809-1 10/19/23 09:51 • (LCSD) R3989809-2 10/19/23 10:13

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
2-Butanone (MEK)	25.0	25.0	25.4	100	102	56.0-143			1.59	20
Methylene Chloride	5.00	5.12	4.92	102	98.4	74.0-124			3.98	20
4-Methyl-2-pentanone (MIBK)	25.0	23.5	23.9	94.0	95.6	67.0-130			1.69	20
Methyl tert-butyl ether	5.00	4.85	4.73	97.0	94.6	71.0-124			2.51	20
Naphthalene	5.00	5.48	5.07	110	101	61.0-128			7.77	20
n-Propylbenzene	5.00	5.52	5.73	110	115	76.0-126			3.73	20
Styrene	5.00	4.54	4.67	90.8	93.4	78.0-123			2.82	20
1,1,1,2-Tetrachloroethane	5.00	4.63	4.78	92.6	95.6	78.0-124			3.19	20
1,1,2,2-Tetrachloroethane	5.00	5.48	5.73	110	115	71.0-121			4.46	20
Tetrachloroethene	5.00	4.86	4.85	97.2	97.0	74.0-129			0.206	20
Toluene	5.00	5.13	5.20	103	104	80.0-121			1.36	20
1,2,3-Trichlorobenzene	5.00	4.75	4.61	95.0	92.2	69.0-129			2.99	20
1,2,4-Trichlorobenzene	5.00	4.71	4.55	94.2	91.0	69.0-130			3.46	20
1,2,3-Trimethylbenzene	5.00	5.19	5.22	104	104	82.0-120			0.576	20
1,2,4-Trimethylbenzene	5.00	5.18	5.29	104	106	76.0-124			2.10	20
1,3,5-Trimethylbenzene	5.00	5.19	5.26	104	105	75.0-124			1.34	20
1,1,1-Trichloroethane	5.00	5.52	5.51	110	110	74.0-131			0.181	20
1,1,2-Trichloroethane	5.00	5.18	5.41	104	108	80.0-119			4.34	20
Trichloroethene	5.00	5.18	4.85	104	97.0	79.0-123			6.58	20
Trichlorofluoromethane	5.00	5.58	5.38	112	108	65.0-141			3.65	20
1,1,2-Trichlorotrifluoroethane	5.00	5.06	4.98	101	99.6	70.0-136			1.59	20
1,2,3-Trichloropropane	5.00	5.65	5.48	113	110	73.0-122			3.05	20
Vinyl chloride	5.00	5.16	4.93	103	98.6	58.0-137			4.56	20
Xylenes, Total	15.0	14.3	14.6	95.3	97.3	79.0-121			2.08	20
(S) Toluene-d8				*104*	*105*	*89.0-112*				
(S) 4-Bromofluorobenzene				*97.1*	*98.1*	*85.0-114*				
(S) 1,2-Dichloroethane-d4				*104*	*105*	*81.0-118*				

Method Blank (MB)

(MB) R3990613-3 10/22/23 10:57

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Acetone	25.0	U	11.3	25.0	50.0
Acrolein	25.0	U	2.54	25.0	50.0
Acrylonitrile	5.00	U	0.671	5.00	10.0
Benzene	0.500	U	0.0941	0.500	1.00
Bromobenzene	0.500	U	0.118	0.500	1.00
Bromodichloromethane	0.500	U	0.136	0.500	1.00
Bromoform	0.500	U	0.129	0.500	1.00
Bromomethane	2.00	U	0.605	2.00	5.00
n-Butylbenzene	0.500	U	0.157	0.500	1.00
sec-Butylbenzene	0.500	U	0.125	0.500	1.00
tert-Butylbenzene	0.500	U	0.127	0.500	1.00
Carbon tetrachloride	0.500	U	0.128	0.500	1.00
Chlorobenzene	0.500	U	0.116	0.500	1.00
Chlorodibromomethane	0.500	U	0.140	0.500	1.00
Chloroethane	2.00	U	0.192	2.00	5.00
2-Chloroethyl vinyl ether	25.0	U	0.575	25.0	50.0
Chloroform	2.00	U	0.111	2.00	5.00
Chloromethane	2.00	U	0.960	2.00	4.00
2-Chlorotoluene	0.500	U	0.106	0.500	1.00
4-Chlorotoluene	0.500	U	0.114	0.500	1.00
1,2-Dibromoethane	0.500	U	0.126	0.500	1.00
1,2-Dibromo-3-Chloropropane	2.00	U	0.276	2.00	5.00
Dibromomethane	0.500	U	0.122	0.500	1.00
1,2-Dichlorobenzene	0.500	U	0.107	0.500	1.00
1,3-Dichlorobenzene	0.500	U	0.110	0.500	1.00
1,4-Dichlorobenzene	0.500	U	0.120	0.500	1.00
Dichlorodifluoromethane	2.00	U	0.374	2.00	5.00
1,1-Dichloroethane	0.500	U	0.100	0.500	1.00
1,2-Dichloroethane	0.500	U	0.0819	0.500	1.00
1,1-Dichloroethene	0.500	U	0.188	0.500	1.00
cis-1,2-Dichloroethene	0.500	U	0.126	0.500	1.00
trans-1,2-Dichloroethene	0.500	U	0.149	0.500	1.00
1,2-Dichloropropane	0.500	U	0.149	0.500	1.00
1,3-Dichloropropane	0.500	U	0.110	0.500	1.00
1,1-Dichloropropene	0.500	U	0.142	0.500	1.00
cis-1,3-Dichloropropene	0.500	U	0.111	0.500	1.00
trans-1,3-Dichloropropene	0.500	U	0.118	0.500	1.00
Di-isopropyl ether	0.500	U	0.105	0.500	1.00
Ethylbenzene	0.500	U	0.137	0.500	1.00
Isopropylbenzene	0.500	U	0.105	0.500	1.00

Method Blank (MB)

(MB) R3990613-3 10/22/23 10:57

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
p-Isopropyltoluene	0.500	U	0.120	0.500	1.00
2-Butanone (MEK)	5.00	U	1.19	5.00	10.0
Methylene Chloride	2.00	U	0.430	2.00	5.00
4-Methyl-2-pentanone (MIBK)	5.00	U	0.478	5.00	10.0
Methyl tert-butyl ether	0.500	U	0.101	0.500	1.00
Naphthalene	2.00	U	1.00	2.00	5.00
n-Propylbenzene	0.500	U	0.0993	0.500	1.00
Styrene	0.500	U	0.118	0.500	1.00
1,1,1,2-Tetrachloroethane	0.500	U	0.147	0.500	1.00
1,1,2,2-Tetrachloroethane	0.500	U	0.133	0.500	1.00
Tetrachloroethene	0.600	U	0.300	0.600	1.20
Toluene	0.600	U	0.278	0.600	1.20
1,2,3-Trichlorobenzene	0.500	U	0.230	0.500	1.00
1,2,4-Trichlorobenzene	1.00	U	0.481	1.00	2.00
1,2,3-Trimethylbenzene	0.500	U	0.104	0.500	1.00
1,2,4-Trimethylbenzene	1.00	U	0.322	1.00	2.00
1,3,5-Trimethylbenzene	0.500	U	0.104	0.500	1.00
1,1,2-Trichloroethane	0.500	U	0.158	0.500	1.00
Trichloroethene	0.500	U	0.190	0.500	1.00
Trichlorofluoromethane	2.00	U	0.160	2.00	5.00
1,1,2-Trichlorotrifluoroethane	0.500	U	0.180	0.500	1.00
1,2,3-Trichloropropane	1.00	U	0.237	1.00	2.50
Vinyl chloride	0.500	U	0.234	0.500	1.00
Xylenes, Total	1.50	U	0.174	1.50	3.00
(S) Toluene-d8	*104*				*89.0-112*
(S) 4-Bromofluorobenzene	*93.8*				*85.0-114*
(S) 1,2-Dichloroethane-d4	*105*				*81.0-118*

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

(LCS) R3990613-1 10/22/23 09:40 • (LCSD) R3990613-2 10/22/23 10:13

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	29.3	28.1	117	112	39.0-160			4.18	20
Acrolein	25.0	23.0	25.5	92.0	102	39.0-155			10.3	20
Acrylonitrile	25.0	23.5	22.6	94.0	90.4	63.0-135			3.90	20
Benzene	5.00	5.04	4.88	101	97.6	79.0-120			3.23	20
Bromobenzene	5.00	5.14	5.18	103	104	80.0-120			0.775	20
Bromodichloromethane	5.00	5.21	5.03	104	101	79.0-125			3.52	20

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

(LCS) R3990613-1 10/22/23 09:40 • (LCSD) R3990613-2 10/22/23 10:13

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromoform	5.00	4.29	4.23	85.8	84.6	66.0-130			1.41	20
Bromomethane	5.00	4.97	4.82	99.4	96.4	53.0-141			3.06	20
n-Butylbenzene	5.00	4.36	4.29	87.2	85.8	75.0-128			1.62	20
sec-Butylbenzene	5.00	4.81	4.84	96.2	96.8	77.0-126			0.622	20
tert-Butylbenzene	5.00	4.98	4.95	99.6	99.0	78.0-124			0.604	20
Carbon tetrachloride	5.00	4.88	4.79	97.6	95.8	72.0-136			1.86	20
Chlorobenzene	5.00	4.74	4.58	94.8	91.6	82.0-118			3.43	20
Chlorodibromomethane	5.00	5.11	4.91	102	98.2	74.0-126			3.99	20
Chloroethane	5.00	5.02	4.75	100	95.0	60.0-138			5.53	20
2-Chloroethyl vinyl ether	25.0	24.1	24.2	96.4	96.8	51.0-139			0.414	20
Chloroform	5.00	5.06	4.85	101	97.0	79.0-124			4.24	20
Chloromethane	5.00	5.59	5.30	112	106	50.0-139			5.33	20
2-Chlorotoluene	5.00	5.16	5.15	103	103	79.0-122			0.194	20
4-Chlorotoluene	5.00	5.13	5.19	103	104	78.0-122			1.16	20
1,2-Dibromoethane	5.00	4.64	4.56	92.8	91.2	77.0-121			1.74	20
1,2-Dibromo-3-Chloropropane	5.00	4.13	4.16	82.6	83.2	62.0-128			0.724	20
Dibromomethane	5.00	5.23	4.99	105	99.8	79.0-123			4.70	20
1,2-Dichlorobenzene	5.00	4.85	4.82	97.0	96.4	80.0-119			0.620	20
1,3-Dichlorobenzene	5.00	4.92	4.90	98.4	98.0	80.0-119			0.407	20
1,4-Dichlorobenzene	5.00	5.03	5.02	101	100	79.0-118			0.199	20
Dichlorodifluoromethane	5.00	5.82	5.86	116	117	32.0-152			0.685	20
1,1-Dichloroethane	5.00	4.75	4.52	95.0	90.4	77.0-125			4.96	20
1,2-Dichloroethane	5.00	5.03	4.85	101	97.0	73.0-128			3.64	20
1,1-Dichloroethene	5.00	5.26	5.01	105	100	71.0-131			4.87	20
cis-1,2-Dichloroethene	5.00	4.87	4.77	97.4	95.4	78.0-123			2.07	20
trans-1,2-Dichloroethene	5.00	5.10	4.89	102	97.8	75.0-124			4.20	20
1,2-Dichloropropane	5.00	4.97	4.69	99.4	93.8	78.0-122			5.80	20
1,3-Dichloropropane	5.00	4.97	4.87	99.4	97.4	80.0-119			2.03	20
1,1-Dichloropropene	5.00	5.24	5.03	105	101	79.0-125			4.09	20
cis-1,3-Dichloropropene	5.00	4.75	4.74	95.0	94.8	75.0-124			0.211	20
trans-1,3-Dichloropropene	5.00	4.65	4.54	93.0	90.8	73.0-127			2.39	20
Di-isopropyl ether	5.00	4.50	4.37	90.0	87.4	67.0-128			2.93	20
Ethylbenzene	5.00	4.72	4.46	94.4	89.2	79.0-121			5.66	20
Isopropylbenzene	5.00	4.52	4.41	90.4	88.2	72.0-131			2.46	20
p-Isopropyltoluene	5.00	4.82	4.72	96.4	94.4	77.0-127			2.10	20
2-Butanone (MEK)	25.0	23.5	23.2	94.0	92.8	56.0-143			1.28	20
Methylene Chloride	5.00	4.87	4.77	97.4	95.4	74.0-124			2.07	20
4-Methyl-2-pentanone (MIBK)	25.0	22.1	21.5	88.4	86.0	67.0-130			2.75	20
Methyl tert-butyl ether	5.00	4.67	4.48	93.4	89.6	71.0-124			4.15	20
Naphthalene	5.00	4.35	4.50	87.0	90.0	61.0-128			3.39	20

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

(LCS) R3990613-1 10/22/23 09:40 • (LCSD) R3990613-2 10/22/23 10:13

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
n-Propylbenzene	5.00	5.15	5.16	103	103	76.0-126			0.194	20
Styrene	5.00	4.27	4.17	85.4	83.4	78.0-123			2.37	20
1,1,1,2-Tetrachloroethane	5.00	4.50	4.36	90.0	87.2	78.0-124			3.16	20
1,1,2,2-Tetrachloroethane	5.00	4.58	5.07	91.6	101	71.0-121			10.2	20
Tetrachloroethene	5.00	4.65	4.46	93.0	89.2	74.0-129			4.17	20
Toluene	5.00	4.95	4.84	99.0	96.8	80.0-121			2.25	20
1,2,3-Trichlorobenzene	5.00	4.33	4.55	86.6	91.0	69.0-129			4.95	20
1,2,4-Trichlorobenzene	5.00	4.14	4.18	82.8	83.6	69.0-130			0.962	20
1,2,3-Trimethylbenzene	5.00	4.94	4.71	98.8	94.2	82.0-120			4.77	20
1,2,4-Trimethylbenzene	5.00	4.88	4.79	97.6	95.8	76.0-124			1.86	20
1,3,5-Trimethylbenzene	5.00	4.91	4.86	98.2	97.2	75.0-124			1.02	20
1,1,2-Trichloroethane	5.00	4.92	4.93	98.4	98.6	80.0-119			0.203	20
Trichloroethene	5.00	5.36	4.98	107	99.6	79.0-123			7.35	20
Trichlorofluoromethane	5.00	5.72	5.94	114	119	65.0-141			3.77	20
1,1,2-Trichlorotrifluoroethane	5.00	4.66	4.71	93.2	94.2	70.0-136			1.07	20
1,2,3-Trichloropropane	5.00	5.41	5.37	108	107	73.0-122			0.742	20
Vinyl chloride	5.00	5.01	5.00	100	100	58.0-137			0.200	20
Xylenes, Total	15.0	13.5	13.2	90.0	88.0	79.0-121			2.25	20
(S) Toluene-d8				*103*	*102*	*89.0-112*				
(S) 4-Bromofluorobenzene				*96.3*	*95.4*	*85.0-114*				
(S) 1,2-Dichloroethane-d4				*106*	*105*	*81.0-118*				

L1667978-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667978-05 10/22/23 19:50 • (MS) R3990613-4 10/22/23 20:56 • (MSD) R3990613-5 10/22/23 21:18

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	263	147	260	0.000	0.000	1	39.0-160	V	J3 V	55.5	20
Acrolein	25.0	25.0	31.9	30.8	128	123	1	39.0-155			3.51	20
Acrylonitrile	25.0	5.00	23.3	21.4	93.2	85.6	1	63.0-135			8.50	20
Benzene	5.00	0.500	5.08	4.80	102	96.0	1	79.0-120			5.67	20
Bromobenzene	5.00	0.500	5.36	5.28	107	106	1	80.0-120			1.50	20
Bromodichloromethane	5.00	0.500	5.37	5.15	107	103	1	79.0-125			4.18	20
Bromoform	5.00	0.500	4.41	4.27	88.2	85.4	1	66.0-130			3.23	20
Bromomethane	5.00	2.00	4.51	4.32	90.2	86.4	1	53.0-141			4.30	20
n-Butylbenzene	5.00	0.500	4.94	4.89	98.8	97.8	1	75.0-128			1.02	20
sec-Butylbenzene	5.00	0.500	5.42	5.16	108	103	1	77.0-126			4.91	20
tert-Butylbenzene	5.00	0.500	5.48	5.34	110	107	1	78.0-124			2.59	20
Carbon tetrachloride	5.00	0.500	4.42	4.12	88.4	82.4	1	72.0-136			7.03	20

L1667978-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667978-05 10/22/23 19:50 • (MS) R3990613-4 10/22/23 20:56 • (MSD) R3990613-5 10/22/23 21:18

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chlorobenzene	5.00	0.500	4.87	4.68	97.4	93.6	1	82.0-118			3.98	20
Chlorodibromomethane	5.00	0.500	5.21	5.12	104	102	1	74.0-126			1.74	20
Chloroethane	5.00	2.00	4.92	4.89	98.4	97.8	1	60.0-138			0.612	20
2-Chloroethyl vinyl ether	25.0	25.0	25.0	25.0	0.000	0.000	1	51.0-139	J6 U	J6 U	0.000	20
Chloroform	5.00	2.00	5.35	5.01	107	100	1	79.0-124			6.56	20
Chloromethane	5.00	2.00	4.74	4.59	94.8	91.8	1	50.0-139			3.22	20
2-Chlorotoluene	5.00	0.500	5.56	5.38	111	108	1	79.0-122			3.29	20
4-Chlorotoluene	5.00	0.500	5.48	5.39	110	108	1	78.0-122			1.66	20
1,2-Dibromoethane	5.00	0.500	4.71	4.62	94.2	92.4	1	77.0-121			1.93	20
1,2-Dibromo-3-Chloropropane	5.00	2.00	4.44	4.11	88.8	82.2	1	62.0-128			7.72	20
Dibromomethane	5.00	0.500	5.21	4.84	104	96.8	1	79.0-123			7.36	20
1,2-Dichlorobenzene	5.00	0.500	4.98	4.90	99.6	98.0	1	80.0-119			1.62	20
1,3-Dichlorobenzene	5.00	0.500	5.17	5.15	103	103	1	80.0-119			0.388	20
1,4-Dichlorobenzene	5.00	0.500	5.23	5.23	105	105	1	79.0-118			0.000	20
Dichlorodifluoromethane	5.00	2.00	5.68	5.37	114	107	1	32.0-152			5.61	20
1,1-Dichloroethane	5.00	32.8	36.2	35.6	68.0	56.0	1	77.0-125	V	V	1.67	20
1,2-Dichloroethane	5.00	0.500	5.10	4.91	102	98.2	1	73.0-128			3.80	20
1,1-Dichloroethene	5.00	0.500	5.93	5.69	119	114	1	71.0-131			4.13	20
cis-1,2-Dichloroethene	5.00	0.500	4.94	4.61	98.8	92.2	1	78.0-123			6.91	20
trans-1,2-Dichloroethene	5.00	0.500	4.95	4.75	99.0	95.0	1	75.0-124			4.12	20
1,2-Dichloropropane	5.00	0.500	4.97	4.67	99.4	93.4	1	78.0-122			6.22	20
1,3-Dichloropropane	5.00	0.500	4.97	4.81	99.4	96.2	1	80.0-119			3.27	20
1,1-Dichloropropene	5.00	0.500	5.44	5.10	109	102	1	79.0-125			6.45	20
cis-1,3-Dichloropropene	5.00	0.500	4.98	4.76	99.6	95.2	1	75.0-124			4.52	20
trans-1,3-Dichloropropene	5.00	0.500	4.75	4.59	95.0	91.8	1	73.0-127			3.43	20
Di-isopropyl ether	5.00	0.500	4.70	4.40	94.0	88.0	1	67.0-128			6.59	20
Ethylbenzene	5.00	0.500	4.91	4.74	98.2	94.8	1	79.0-121			3.52	20
Isopropylbenzene	5.00	0.500	5.05	4.78	101	95.6	1	72.0-131			5.49	20
p-Isopropyltoluene	5.00	0.500	5.44	5.12	109	102	1	77.0-127			6.06	20
2-Butanone (MEK)	25.0	5.84	26.3	27.1	81.8	85.0	1	56.0-143			3.00	20
Methylene Chloride	5.00	2.00	4.76	4.39	95.2	87.8	1	74.0-124			8.09	20
4-Methyl-2-pentanone (MIBK)	25.0	5.00	23.3	22.6	93.2	90.4	1	67.0-130			3.05	20
Methyl tert-butyl ether	5.00	0.500	4.86	4.51	97.2	90.2	1	71.0-124			7.47	20
Naphthalene	5.00	2.00	6.48	5.08	130	102	1	61.0-128	J5	J3	24.2	20
n-Propylbenzene	5.00	0.500	5.66	5.53	113	111	1	76.0-126			2.32	20
Styrene	5.00	0.500	4.46	4.25	89.2	85.0	1	78.0-123			4.82	20
1,1,1,2-Tetrachloroethane	5.00	0.500	4.62	4.48	92.4	89.6	1	78.0-124			3.08	20
1,1,2,2-Tetrachloroethane	5.00	0.500	5.74	5.51	115	110	1	71.0-121			4.09	20
Tetrachloroethene	5.00	0.600	4.95	4.53	99.0	90.6	1	74.0-129			8.86	20
Toluene	5.00	0.600	5.09	4.87	102	97.4	1	80.0-121			4.42	20

L1667978-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667978-05 10/22/23 19:50 • (MS) R3990613-4 10/22/23 20:56 • (MSD) R3990613-5 10/22/23 21:18

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,2,3-Trichlorobenzene	5.00	0.500	4.67	4.35	93.4	87.0	1	69.0-129			7.10	20
1,2,4-Trichlorobenzene	5.00	1.00	4.62	4.29	92.4	85.8	1	69.0-130			7.41	20
1,2,3-Trimethylbenzene	5.00	0.500	5.18	5.00	104	100	1	82.0-120			3.54	20
1,2,4-Trimethylbenzene	5.00	1.00	5.14	4.89	103	97.8	1	76.0-124			4.99	20
1,3,5-Trimethylbenzene	5.00	0.500	5.28	4.97	106	99.4	1	75.0-124			6.05	20
1,1,2-Trichloroethane	5.00	0.500	5.23	5.21	105	104	1	80.0-119			0.383	20
Trichloroethene	5.00	0.500	5.00	4.48	100	89.6	1	79.0-123			11.0	20
Trichlorofluoromethane	5.00	2.00	5.99	5.51	120	110	1	65.0-141			8.35	20
1,1,2-Trichlorotrifluoroethane	5.00	0.500	5.45	5.17	109	103	1	70.0-136			5.27	20
1,2,3-Trichloropropane	5.00	1.00	5.56	5.40	111	108	1	73.0-122			2.92	20
Vinyl chloride	5.00	0.500	4.75	4.68	95.0	93.6	1	58.0-137			1.48	20
Xylenes, Total	15.0	1.50	14.1	13.6	94.0	90.7	1	79.0-121			3.61	20
(S) Toluene-d8					*101*	*102*		*89.0-112*				
(S) 4-Bromofluorobenzene					*96.4*	*96.9*		*85.0-114*				
(S) 1,2-Dichloroethane-d4					*106*	*105*		*81.0-118*				

L1667791-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667791-03 10/22/23 16:11 • (MS) R3990613-6 10/22/23 20:12 • (MSD) R3990613-7 10/22/23 20:34

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	25.0	28.9	28.2	116	113	1	39.0-160			2.45	20
Acrolein	25.0	25.0	31.2	28.9	125	116	1	39.0-155			7.65	20
Acrylonitrile	25.0	5.00	23.0	22.4	92.0	89.6	1	63.0-135			2.64	20
Benzene	5.00	1.28	6.37	6.52	102	105	1	79.0-120			2.33	20
Bromobenzene	5.00	0.500	5.57	5.84	111	117	1	80.0-120			4.73	20
Bromodichloromethane	5.00	0.500	5.43	5.54	109	111	1	79.0-125			2.01	20
Bromoform	5.00	0.500	4.11	4.41	82.2	88.2	1	66.0-130			7.04	20
Bromomethane	5.00	2.00	4.54	4.87	90.8	97.4	1	53.0-141			7.01	20
n-Butylbenzene	5.00	0.500	4.77	5.72	85.4	104	1	75.0-128			18.1	20
sec-Butylbenzene	5.00	0.571	5.42	5.94	97.0	107	1	77.0-126			9.15	20
tert-Butylbenzene	5.00	0.959	6.06	6.55	102	112	1	78.0-124			7.77	20
Carbon tetrachloride	5.00	0.500	5.14	5.39	103	108	1	72.0-136			4.75	20
Chlorobenzene	5.00	0.500	4.56	4.97	91.2	99.4	1	82.0-118			8.60	20
Chlorodibromomethane	5.00	0.500	4.90	5.43	98.0	109	1	74.0-126			10.3	20
Chloroethane	5.00	2.00	4.79	4.89	95.8	97.8	1	60.0-138			2.07	20
2-Chloroethyl vinyl ether	25.0	25.0	25.0	23.6	0.000	94.4	1	51.0-139	J6 U	J3	200	20
Chloroform	5.00	2.00	5.41	5.55	108	111	1	79.0-124			2.55	20
Chloromethane	5.00	2.00	4.97	5.07	99.4	101	1	50.0-139			1.99	20

L1667791-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667791-03 10/22/23 16:11 • (MS) R3990613-6 10/22/23 20:12 • (MSD) R3990613-7 10/22/23 20:34

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
2-Chlorotoluene	5.00	0.500	5.31	5.71	106	114	1	79.0-122			7.26	20
4-Chlorotoluene	5.00	0.500	5.34	5.61	107	112	1	78.0-122			4.93	20
1,2-Dibromoethane	5.00	0.500	4.23	4.76	84.6	95.2	1	77.0-121			11.8	20
1,2-Dibromo-3-Chloropropane	5.00	2.00	4.79	4.90	95.8	98.0	1	62.0-128			2.27	20
Dibromomethane	5.00	0.500	5.15	5.44	103	109	1	79.0-123			5.48	20
1,2-Dichlorobenzene	5.00	0.500	4.96	5.38	99.2	108	1	80.0-119			8.12	20
1,3-Dichlorobenzene	5.00	0.500	4.96	5.48	99.2	110	1	80.0-119			9.96	20
1,4-Dichlorobenzene	5.00	0.500	5.06	5.48	101	110	1	79.0-118			7.97	20
Dichlorodifluoromethane	5.00	2.00	5.93	5.93	119	119	1	32.0-152			0.000	20
1,1-Dichloroethane	5.00	0.500	4.87	5.17	97.4	103	1	77.0-125			5.98	20
1,2-Dichloroethane	5.00	0.500	5.06	5.18	101	104	1	73.0-128			2.34	20
1,1-Dichloroethene	5.00	0.500	5.37	5.47	107	109	1	71.0-131			1.85	20
cis-1,2-Dichloroethene	5.00	11.7	17.1	16.5	108	96.0	1	78.0-123			3.57	20
trans-1,2-Dichloroethene	5.00	0.500	5.06	5.01	101	100	1	75.0-124			0.993	20
1,2-Dichloropropane	5.00	0.500	5.08	5.21	102	104	1	78.0-122			2.53	20
1,3-Dichloropropane	5.00	0.500	4.85	5.08	97.0	102	1	80.0-119			4.63	20
1,1-Dichloropropene	5.00	0.500	5.56	5.74	111	115	1	79.0-125			3.19	20
cis-1,3-Dichloropropene	5.00	0.500	4.87	5.43	97.4	109	1	75.0-124			10.9	20
trans-1,3-Dichloropropene	5.00	0.500	4.48	4.96	89.6	99.2	1	73.0-127			10.2	20
Di-isopropyl ether	5.00	0.500	4.58	4.78	91.6	95.6	1	67.0-128			4.27	20
Ethylbenzene	5.00	6.13	10.6	10.7	89.4	91.4	1	79.0-121			0.939	20
Isopropylbenzene	5.00	8.29	12.2	11.2	78.2	58.2	1	72.0-131		J6	8.55	20
p-Isopropyltoluene	5.00	0.537	5.45	6.09	98.3	111	1	77.0-127			11.1	20
2-Butanone (MEK)	25.0	1.94	24.7	24.2	91.0	89.0	1	56.0-143			2.04	20
Methylene Chloride	5.00	2.00	4.73	4.90	94.6	98.0	1	74.0-124			3.53	20
4-Methyl-2-pentanone (MIBK)	25.0	5.00	21.7	23.4	86.8	93.6	1	67.0-130			7.54	20
Methyl tert-butyl ether	5.00	0.500	4.55	4.85	91.0	97.0	1	71.0-124			6.38	20
Naphthalene	5.00	41.7	47.2	48.6	110	138	1	61.0-128		V	2.92	20
n-Propylbenzene	5.00	2.73	7.96	7.82	105	102	1	76.0-126			1.77	20
Styrene	5.00	0.500	4.27	4.73	85.4	94.6	1	78.0-123			10.2	20
1,1,1,2-Tetrachloroethane	5.00	0.500	4.30	4.81	86.0	96.2	1	78.0-124			11.2	20
1,1,2,2-Tetrachloroethane	5.00	0.500	5.93	5.94	119	119	1	71.0-121			0.168	20
Tetrachloroethene	5.00	0.600	4.61	4.95	92.2	99.0	1	74.0-129			7.11	20
Toluene	5.00	0.600	4.93	5.30	98.6	106	1	80.0-121			7.23	20
1,2,3-Trichlorobenzene	5.00	0.500	4.53	5.11	90.6	102	1	69.0-129			12.0	20
1,2,4-Trichlorobenzene	5.00	1.00	4.48	5.22	89.6	104	1	69.0-130			15.3	20
1,2,3-Trimethylbenzene	5.00	0.171	5.12	5.46	99.0	106	1	82.0-120			6.43	20
1,2,4-Trimethylbenzene	5.00	0.613	5.55	5.92	98.7	106	1	76.0-124			6.45	20
1,3,5-Trimethylbenzene	5.00	0.689	5.62	5.92	98.6	105	1	75.0-124			5.20	20
1,1,2-Trichloroethane	5.00	0.500	5.26	5.60	105	112	1	80.0-119			6.26	20

L1667791-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667791-03 10/22/23 16:11 • (MS) R3990613-6 10/22/23 20:12 • (MSD) R3990613-7 10/22/23 20:34

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Trichloroethene	5.00	4.68	9.19	9.40	90.2	94.4	1	79.0-123			2.26	20
Trichlorofluoromethane	5.00	2.00	6.06	5.89	121	118	1	65.0-141			2.85	20
1,1,2-Trichlorotrifluoroethane	5.00	0.500	5.60	5.43	112	109	1	70.0-136			3.08	20
1,2,3-Trichloropropane	5.00	1.00	5.56	5.92	111	118	1	73.0-122			6.27	20
Vinyl chloride	5.00	0.500	5.00	5.02	100	100	1	58.0-137			0.399	20
Xylenes, Total	15.0	3.12	16.4	17.8	88.5	97.9	1	79.0-121			8.19	20
(S) Toluene-d8					*94.9*	*99.6*		*89.0-112*				
(S) 4-Bromofluorobenzene					*95.1*	*97.9*		*85.0-114*				
(S) 1,2-Dichloroethane-d4					*107*	*105*		*81.0-118*				

Method Blank (MB)

(MB) R4033245-3 10/22/23 01:57

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
2,2-Dichloropropane	0.500	U	0.161	0.500	1.00
Hexachloro-1,3-butadiene	0.750	U	0.337	0.750	1.50
1,1,1-Trichloroethane	0.500	U	0.149	0.500	1.00
(S) Toluene-d8	*103*				*89.0-112*
(S) 4-Bromofluorobenzene	*101*				*85.0-114*
(S) 1,2-Dichloroethane-d4	*94.4*				*81.0-118*

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

(LCS) R4033245-1 10/22/23 00:38 • (LCSD) R4033245-2 10/22/23 00:57

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
2,2-Dichloropropane	5.00	5.53	5.27	111	105	60.0-139			4.81	20
Hexachloro-1,3-butadiene	5.00	5.70	5.23	114	105	66.0-134			8.60	20
1,1,1-Trichloroethane	5.00	5.75	5.63	115	113	74.0-131			2.11	20
(S) Toluene-d8				*102*	*101*	*89.0-112*				
(S) 4-Bromofluorobenzene				*101*	*99.5*	*85.0-114*				
(S) 1,2-Dichloroethane-d4				*101*	*100*	*81.0-118*				

Method Blank (MB)

(MB) R3992283-1 10/27/23 22:19

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
AK102 DRO C10-C25	417	J	170	400	800
(S) o-Terphenyl	*96.5*				*60.0-120*

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

(LCS) R3992283-2 10/27/23 23:00 • (LCSD) R3992283-3 10/27/23 23:20

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
AK102 DRO C10-C25	6000	4910	5390	81.8	89.8	75.0-125			9.32	20
(S) o-Terphenyl				*61.9*	*63.3*	*60.0-120*				

Method Blank (MB)

(MB) R3992862-1 10/28/23 17:46

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
AK102 DRO C10-C25	399	J	170	400	800
(S) o-Terphenyl	*87.4*				*60.0-120*

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

(LCS) R3992862-2 10/28/23 18:26 • (LCSD) R3992862-3 10/28/23 18:46

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
AK102 DRO C10-C25	6000	5380	4880	89.7	81.3	75.0-125			9.75	20
(S) o-Terphenyl				*47.1*	*46.9*	*60.0-120*	J2	J2		

GLOSSARY OF TERMS

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

DL	Detection Limit.
LOD	Limit of Detection.
LOQ	Limit of Quantitation.
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.
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.
C4	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Data is likely to show a low bias concerning the result.
C5	The reported concentration is an estimate. The continuing calibration standard associated with this data responded high. Data is likely to show a high bias concerning the result.
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.
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.
U	Below Detectable Limits: Indicates that the analyte was not detected.

Qualifier	Description
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

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.

Company Name/Address:
North Wind Site Services, LLC- AK
~~7910 King Street~~
~~Anchorage, AK 99518~~ 2525 C St. Ste 130 Anchorage, AK 99503

Billing Information:
Accounts Payable
1425 Higham St
Idaho Falls, ID 83402

Report to: **North Wind**

Email To: rlafata@northwindgrp.com;jill.jones@northwin

Project Description: **Port Heiden RRS 21-034**

City/State Collected: Port Heiden, AK

Please Circle: PT MT CT ET

Phone: ~~907-277-5488~~ 907-602-3082

Client Project # 060068.001.93.03.01

Lab Project # **NORWINDAAK-PORTHEID**

Collected by (print): Kristopher Reidt

Site/Facility ID #

P.O. # 6-00001098

Collected by (signature):

Immediately Packed on Ice N ___ Y X

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

Quote # NORWINDAAK

Date Results Needed: STANDARD

Chain of Custody Page 1 of 1

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

PDC # L1667142

E030

Acctnum: **NORWINDAAK**
Template: **T235099**
Prelogin: **P1015439**
PM: **546 - Jared Starkey**
PB: CA 8/1/23

Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	DODAK102 100ml Amb HCl	DODALK,DODSULFATE 250mlHDPE-NoPres	DODFEICP,DODMNICP 250mlHDPE-HNO3	DODNO2NO3,DODTKN 250mlHDPE-H2SO4	DODV8260 40mlAmb-HCl	DODV8260BTEX 40mlAmb-HCl	DODV8260ULL 40mlAmb HCl				Remarks	Sample # (lab only)
							Pres Chk	2	1	1	1	3		2					
OT001-GLOMW04-101423	GRAB	GW		10-14-23	1105	10	X	X	X	X	X		X					-
OT001-RRSMW05-101423	GRAB	GW		10-14-23	1220	10	X	X	X	X	X		X					-
OT001-DSAMW06-101423	GRAB	GW		10-14-23	1445	10	X	X	X	X	X		X					-
OT001-DSAMW07-101423	GRAB	GW		10-14-23	1525	10	X	X	X	X	X		X					-
OT001-DSAMW01-101423	GRAB	GW		10-14-23	1625	10	X	X	X	X	X		X					-
OT001-DSAMW99-101423	GRAB	GW		10-14-23	1630	10	X	X	X	X	X		X					-
		GW																
		GW																
		GW																
		GW																

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

Remarks: Cooler ID "Blue"
NPDL # 21-034

pH _____ Temp _____
Flow _____ Other _____

Samples returned via: __ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist
COC Seal Present/Intact: __NP Y __Y __N
COC Signed/Accurate: Y __Y __N
Bottles arrive intact: Y __Y __N
Correct bottles used: Y __Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: __Y __N
Preservation Correct/Checked: Y __Y __N
RAD Screen <0.5 mR/hr: Y __Y __N

	Date:	Time:			
Relinquished by: (Signature)	10-16-23	1230	Received by: (Signature)	10/16/23 1630	Trip Blank Received: Yes / No HCL / MeoH TBR
Relinquished by: (Signature)	10/17/23	0922	Received by: (Signature)	10/17/23 10:05	Temp: 2.8 °C Bottles Received: 2.5+0=2.5 60
Relinquished by: (Signature)	10/17/23	10:05	Received for lab by: (Signature)	Date: 10-18-23	Time: 900

If preservation required by Login: Date/Time

Hold:

Condition: NCF / (OK)

ANALYTICAL REPORT

February 14, 2024

Revised Report

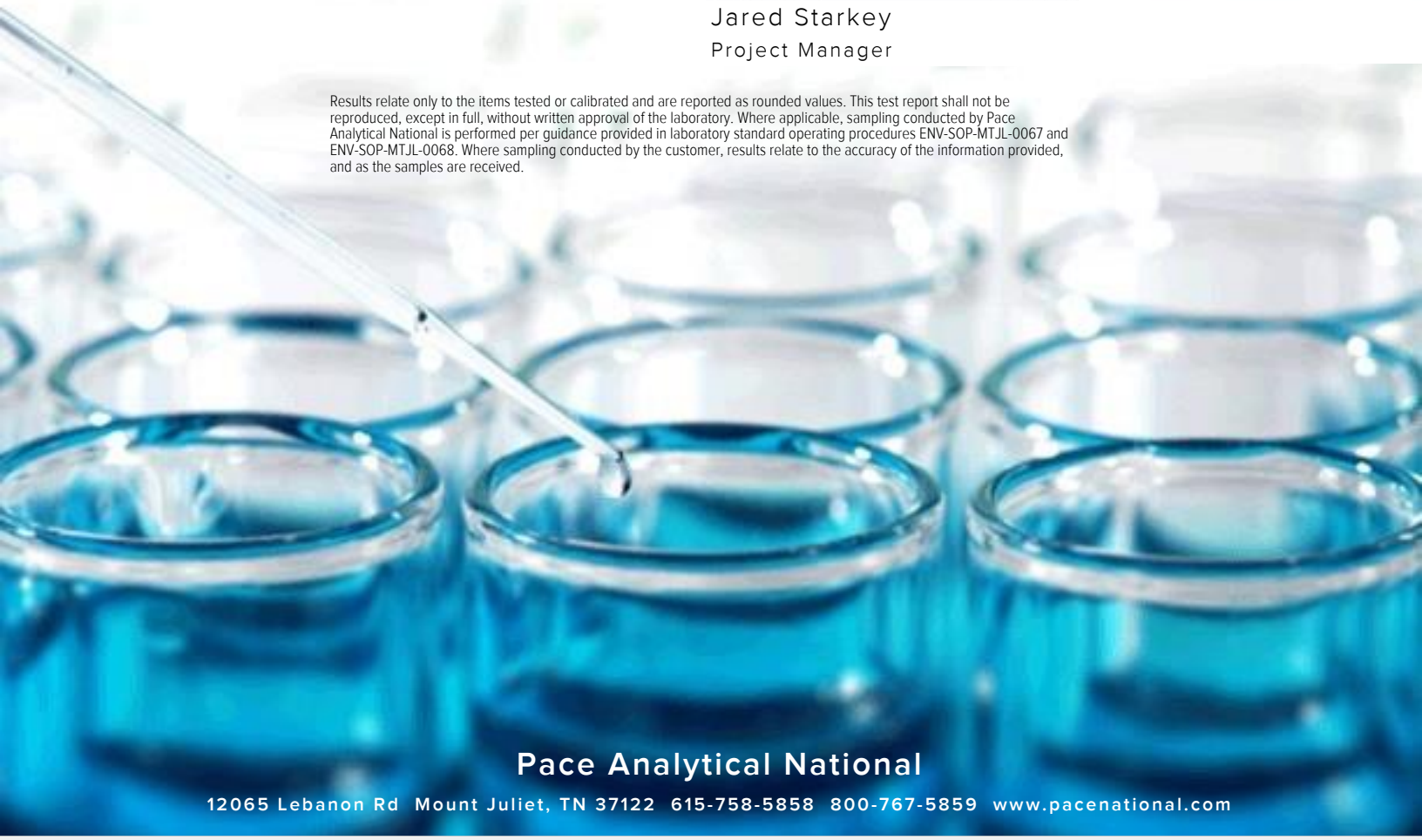
North Wind Site Services, LLC- AK

Sample Delivery Group:	L1667791
Samples Received:	10/18/2023
Project Number:	060068.001.93.03.01
Description:	Port Heiden RRS 21-034
Site:	DSAMW05
Report To:	North Wind 7910 King Street Anchorage, AK 99518

Entire Report Reviewed By:

Jared Starkey
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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OT001-DSAMW05-101523 L1667791-01 GW

Collected by: Kristopher Reidt | Collected date/time: 10/15/23 10:00 | Received date/time: 10/18/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2156308	1	10/23/23 17:24	10/23/23 17:24	BJM	Mt. Juliet, TN
Wet Chemistry by Method 351.2	WG2155669	1	10/23/23 16:56	10/24/23 18:13	UNP	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG2154634	1	10/20/23 20:53	10/20/23 20:53	AEC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2156852	1	10/25/23 17:47	10/25/23 17:47	KMC	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2153991	1	10/22/23 10:56	10/24/23 09:22	DJS	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260 D-LL	WG2155682	1	10/22/23 06:33	10/22/23 06:33	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260 D-LL	WG2157275	1	10/26/23 22:58	10/26/23 22:58	KSD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2155879	1	10/22/23 15:05	10/22/23 15:05	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2225461	1	10/22/23 06:33	10/22/23 06:33	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2156720	1	10/27/23 07:36	10/28/23 23:28	DMG	Mt. Juliet, TN

OT001-DSAMW02-101523 L1667791-02 GW

Collected by: Kristopher Reidt | Collected date/time: 10/15/23 11:20 | Received date/time: 10/18/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2156308	1	10/23/23 17:30	10/23/23 17:30	BJM	Mt. Juliet, TN
Wet Chemistry by Method 351.2	WG2154036	1	10/21/23 18:17	10/22/23 22:36	CAT	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG2154634	1	10/20/23 20:54	10/20/23 20:54	AEC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2156852	1	10/25/23 18:31	10/25/23 18:31	KMC	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2153991	1	10/22/23 10:56	10/24/23 09:25	DJS	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260 D-LL	WG2155682	1	10/22/23 06:53	10/22/23 06:53	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260 D-LL	WG2157275	20	10/27/23 01:30	10/27/23 01:30	KSD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2155879	1	10/22/23 15:49	10/22/23 15:49	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2225572	20	10/27/23 01:30	10/27/23 01:30	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2156720	1.05	10/27/23 07:36	10/28/23 23:49	DMG	Mt. Juliet, TN

WP002-BLOMW01-101523 L1667791-03 GW

Collected by: Kristopher Reidt | Collected date/time: 10/15/23 12:30 | Received date/time: 10/18/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2156308	1	10/23/23 17:35	10/23/23 17:35	BJM	Mt. Juliet, TN
Wet Chemistry by Method 351.2	WG2154036	1	10/21/23 18:17	10/22/23 22:37	CAT	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG2154634	1	10/20/23 20:56	10/20/23 20:56	AEC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2156852	1	10/25/23 18:46	10/25/23 18:46	KMC	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2153991	1	10/22/23 10:56	10/24/23 08:45	DJS	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2153991	5	10/22/23 10:56	10/24/23 17:17	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260 D-LL	WG2155682	1	10/22/23 07:12	10/22/23 07:12	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260 D-LL	WG2157275	1	10/26/23 23:17	10/26/23 23:17	KSD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2155879	1	10/22/23 16:11	10/22/23 16:11	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2225572	1	10/26/23 23:17	10/26/23 23:17	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2156720	1.05	10/27/23 07:36	10/28/23 20:27	DMG	Mt. Juliet, TN

OT001-EQBK01-101523 L1667791-04 GW

Collected by: Kristopher Reidt | Collected date/time: 10/15/23 17:45 | Received date/time: 10/18/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2156308	1	10/23/23 17:39	10/23/23 17:39	BJM	Mt. Juliet, TN
Wet Chemistry by Method 351.2	WG2155459	1	10/24/23 18:59	10/25/23 09:47	UNP	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG2154634	1	10/20/23 21:05	10/20/23 21:05	AEC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2156852	1	10/25/23 19:46	10/25/23 19:46	KMC	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2153991	1	10/22/23 10:56	10/24/23 09:28	DJS	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260 D-LL	WG2155682	1	10/22/23 02:36	10/22/23 02:36	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260 D-LL	WG2157275	1	10/26/23 23:36	10/26/23 23:36	KSD	Mt. Juliet, TN

OT001-EQBK01-101523 L1667791-04 GW

Collected by: Kristopher Reidt
Collected date/time: 10/15/23 17:45
Received date/time: 10/18/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2155879	1	10/22/23 12:32	10/22/23 12:32	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2225461	1	10/22/23 02:36	10/22/23 02:36	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2156720	1	10/27/23 07:36	10/29/23 00:09	DMG	Mt. Juliet, TN

OT001-TRIPBLANK-HCL-01 L1667791-05 GW

Collected by: Kristopher Reidt
Collected date/time: 10/15/23 09:00
Received date/time: 10/18/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260 D-LL	WG2155682	1	10/22/23 02:56	10/22/23 02:56	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260 D-LL	WG2157275	1	10/26/23 19:29	10/26/23 19:29	KSD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2155879	1	10/22/23 12:54	10/22/23 12:54	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2225461	1	10/22/23 02:56	10/22/23 02:56	JHH	Mt. Juliet, TN

Unless qualified or notated within the narrative below, all sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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.



Jared Starkey
Project Manager

Report Revision History

Level II Report - Version 1: 11/07/23 17:31
Level IV Report - Version 2: 11/07/23 17:56

Project Comments

Reporting 8260 and 8260LL

Wet Chemistry by Method 351.2

The sample matrix interfered with the ability to make any accurate determination; spike value is high.

Batch	Lab Sample ID	Analytes
WG2154036	(MS) R3989558-4, (MSD) R3989558-5, L1667791-03	Kjeldahl Nitrogen, TKN
WG2155459	(MS) R3990817-7, (MS) R3990817-4, L1667791-04	Kjeldahl Nitrogen, TKN

The sample concentration is too high to evaluate accurate spike recoveries.

Batch	Lab Sample ID	Analytes
WG2154036	(MS) R3989558-7	Kjeldahl Nitrogen, TKN

Wet Chemistry by Method 9056A

The sample matrix interfered with the ability to make any accurate determination; spike value is low.

Batch	Lab Sample ID	Analytes
WG2156852	(MS) R3992131-7, (MS) R3992131-4, (MSD) R3992131-8, L1667791-03	Sulfate

Metals (ICP) by Method 6010D

The sample concentration is too high to evaluate accurate spike recoveries.

Batch	Lab Sample ID	Analytes
WG2153991	(MS) R3990480-4, (MSD) R3990480-5	Manganese

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Data is likely to show a low bias concerning the result.

Batch	Lab Sample ID	Analytes
WG2155682	L1667791-01	trans-1,4-Dichloro-2-butene
WG2155682	L1667791-02	trans-1,4-Dichloro-2-butene
WG2155682	L1667791-03	trans-1,4-Dichloro-2-butene
WG2155682	L1667791-04	trans-1,4-Dichloro-2-butene
WG2155682	L1667791-05	trans-1,4-Dichloro-2-butene

The reported concentration is an estimate. The continuing calibration standard associated with this data responded high. Data is likely to show a high bias concerning the result.

Batch	Lab Sample ID	Analytes
WG2155682	L1667791-02	Trichlorofluoromethane

The sample matrix interfered with the ability to make any accurate determination; spike value is high.

Batch	Lab Sample ID	Analytes
WG2155682	(MS) R3990575-6, (MSD) R3990575-7, L1667791-03	30 analytes

The sample matrix interfered with the ability to make any accurate determination; spike value is low.

Batch	Lab Sample ID	Analytes
WG2155682	(MS) R3990575-4, (MS) R3990575-6, (MSD) R3990575-5, (MSD) R3990575-7, L1667791-03	1,3,5-Trimethylbenzene, 2-Chlorotoluene, Cyclohexane, n-Butylbenzene, tert-Butylbenzene and Tetrahydrofuran

The associated batch QC was outside the established quality control range for precision.

Batch	Lab Sample ID	Analytes
WG2155682	(MSD) R3990575-7, L1667791-03	trans-1,4-Dichloro-2-butene

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

The sample concentration is too high to evaluate accurate spike recoveries.

Batch	Lab Sample ID	Analytes
WG2155879	(MS) R3990613-4, (MSD) R3990613-5, (MSD) R3990613-7, L1667791-03	1,1-Dichloroethane, Acetone and Naphthalene

The sample matrix interfered with the ability to make any accurate determination; spike value is low.

Batch	Lab Sample ID	Analytes
WG2155879	(MS) R3990613-6, (MS) R3990613-4, (MSD) R3990613-5, (MSD) R3990613-7, L1667791-03	2-Chloroethyl vinyl ether and Isopropylbenzene

The sample matrix interfered with the ability to make any accurate determination; spike value is high.

Batch	Lab Sample ID	Analytes
WG2155879	(MS) R3990613-4	Naphthalene

The associated batch QC was outside the established quality control range for precision.

Batch	Lab Sample ID	Analytes
WG2155879	(MSD) R3990613-7, (MSD) R3990613-5, L1667791-03	2-Chloroethyl vinyl ether, Acetone and Naphthalene

Semi-Volatile Organic Compounds (GC) by Method AK102

Surrogate recovery limits have been exceeded; values are outside lower control limits.

Batch	Analyte	Lab Sample ID
WG2156720	o-Terphenyl	(LCS) R3992861-2, (LCSD) R3992861-3, (MS) R3992861-4, (MS) R3992861-6, (MSD) R3992861-5, (MSD) R3992861-7, L1667791-03

The same analyte is found in the associated blank.

Batch	Analyte	Lab Sample ID
WG2156720	AK102 DRO C10-C25	L1667791-01, 02, 04

Semi-Volatile Organic Compounds (GC) by Method AK102

The associated batch QC was below the established quality control range for accuracy.

Batch	Lab Sample ID	Analytes
WG2156720	(LCSD) R3992861-3, L1667791-01, 02, 03, 04	AK102 DRO C10-C25

The sample matrix interfered with the ability to make any accurate determination; spike value is low.

Batch	Lab Sample ID	Analytes
WG2156720	(MS) R3992861-6, (MS) R3992861-4, (MSD) R3992861-7, (MSD) R3992861-5, L1667791-03	AK102 DRO C10-C25

DETECTION SUMMARY

Wet Chemistry by Method 2320 B-2011

Client ID	Lab Sample ID	Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
				ug/l		ug/l	ug/l	ug/l		date / time	
OT001-DSAMW05-101523	L1667791-01	Alkalinity		69400		8450	10000	20000	1	10/23/2023 17:24	WG2156308
OT001-DSAMW05-101523	L1667791-01	Alkalinity,Bicarbonate		69400		8450	10000	20000	1	10/23/2023 17:24	WG2156308
OT001-DSAMW02-101523	L1667791-02	Alkalinity		125000		8450	10000	20000	1	10/23/2023 17:30	WG2156308
OT001-DSAMW02-101523	L1667791-02	Alkalinity,Bicarbonate		125000		8450	10000	20000	1	10/23/2023 17:30	WG2156308
WP002-BLOMW01-101523	L1667791-03	Alkalinity		988000		8450	10000	20000	1	10/23/2023 17:35	WG2156308
WP002-BLOMW01-101523	L1667791-03	Alkalinity,Bicarbonate		988000		8450	10000	20000	1	10/23/2023 17:35	WG2156308

Wet Chemistry by Method 351.2

Client ID	Lab Sample ID	Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
				ug/l		ug/l	ug/l	ug/l		date / time	
OT001-DSAMW05-101523	L1667791-01	Kjeldahl Nitrogen, TKN	7727-37-9	183	J	140	300	600	1	10/24/2023 18:13	WG2155669
WP002-BLOMW01-101523	L1667791-03	Kjeldahl Nitrogen, TKN	7727-37-9	846	J5	140	300	600	1	10/22/2023 22:37	WG2154036

Wet Chemistry by Method 353.2

Client ID	Lab Sample ID	Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
				ug/l		ug/l	ug/l	ug/l		date / time	
OT001-DSAMW05-101523	L1667791-01	Nitrate-Nitrite	7727-37-9	1110		50.0	100	200	1	10/20/2023 20:53	WG2154634
OT001-DSAMW02-101523	L1667791-02	Nitrate-Nitrite	7727-37-9	2220		50.0	100	200	1	10/20/2023 20:54	WG2154634

Wet Chemistry by Method 9056A

Client ID	Lab Sample ID	Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
				ug/l		ug/l	ug/l	ug/l		date / time	
OT001-DSAMW05-101523	L1667791-01	Sulfate	14808-79-8	10100		594	2500	5000	1	10/25/2023 17:47	WG2156852
OT001-DSAMW02-101523	L1667791-02	Sulfate	14808-79-8	8920		594	2500	5000	1	10/25/2023 18:31	WG2156852
WP002-BLOMW01-101523	L1667791-03	Sulfate	14808-79-8	4690	J J6	594	2500	5000	1	10/25/2023 18:46	WG2156852
OT001-EQBK01-101523	L1667791-04	Sulfate	14808-79-8	742	J	594	2500	5000	1	10/25/2023 19:46	WG2156852

Metals (ICP) by Method 6010D

Client ID	Lab Sample ID	Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
				ug/l		ug/l	ug/l	ug/l		date / time	
OT001-DSAMW05-101523	L1667791-01	Iron	7439-89-6	1690		20.5	50.0	100	1	10/24/2023 09:22	WG2153991
OT001-DSAMW05-101523	L1667791-01	Manganese	7439-96-5	113		0.855	5.00	10.0	1	10/24/2023 09:22	WG2153991
OT001-DSAMW02-101523	L1667791-02	Iron	7439-89-6	5760		20.5	50.0	100	1	10/24/2023 09:25	WG2153991
OT001-DSAMW02-101523	L1667791-02	Manganese	7439-96-5	153		0.855	5.00	10.0	1	10/24/2023 09:25	WG2153991
WP002-BLOMW01-101523	L1667791-03	Iron	7439-89-6	3840		20.5	50.0	100	1	10/24/2023 08:45	WG2153991
WP002-BLOMW01-101523	L1667791-03	Manganese	7439-96-5	12900		4.28	25.0	50.0	5	10/24/2023 17:17	WG2153991
OT001-EQBK01-101523	L1667791-04	Manganese	7439-96-5	1.78	J	0.855	5.00	10.0	1	10/24/2023 09:28	WG2153991

DETECTION SUMMARY

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Client ID	Lab Sample ID	Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
				ug/l		ug/l	ug/l	ug/l		date / time	
OT001-DSAMW05-101523	L1667791-01	Acetone	67-64-1	1.67	J	0.548	2.00	4.00	1	10/22/2023 06:33	WG2155682
OT001-DSAMW05-101523	L1667791-01	1,2-Dichloroethane	107-06-2	0.0390	J	0.0190	0.0500	0.100	1	10/22/2023 06:33	WG2155682
OT001-DSAMW05-101523	L1667791-01	Ethylbenzene	100-41-4	0.0400	J	0.0212	0.0500	0.100	1	10/22/2023 06:33	WG2155682
OT001-DSAMW05-101523	L1667791-01	Toluene	108-88-3	0.116	J	0.0500	0.100	0.200	1	10/26/2023 22:58	WG2157275
OT001-DSAMW05-101523	L1667791-01	Trichloroethene	79-01-6	3.91		0.0160	0.0400	0.0800	1	10/26/2023 22:58	WG2157275
OT001-DSAMW02-101523	L1667791-02	Acetone	67-64-1	2.53	J	0.548	2.00	4.00	1	10/22/2023 06:53	WG2155682
OT001-DSAMW02-101523	L1667791-02	Benzene	71-43-2	0.154		0.0160	0.0500	0.100	1	10/22/2023 06:53	WG2155682
OT001-DSAMW02-101523	L1667791-02	Chloroform	67-66-3	0.148		0.0166	0.0500	0.100	1	10/22/2023 06:53	WG2155682
OT001-DSAMW02-101523	L1667791-02	Cyclohexane	110-82-7	0.0750	J	0.0203	0.0500	0.100	1	10/22/2023 06:53	WG2155682
OT001-DSAMW02-101523	L1667791-02	1,2-Dichloroethane	107-06-2	0.0490	J	0.0190	0.0500	0.100	1	10/22/2023 06:53	WG2155682
OT001-DSAMW02-101523	L1667791-02	Ethylbenzene	100-41-4	0.0280	J	0.0212	0.0500	0.100	1	10/22/2023 06:53	WG2155682
OT001-DSAMW02-101523	L1667791-02	Toluene	108-88-3	18.1		1.00	2.00	4.00	20	10/27/2023 01:30	WG2157275
OT001-DSAMW02-101523	L1667791-02	1,1,1-Trichloroethane	71-55-6	1.11		0.0110	0.0500	0.100	1	10/22/2023 06:53	WG2155682
OT001-DSAMW02-101523	L1667791-02	1,1,2-Trichloroethane	79-00-5	0.0670	J	0.0353	0.100	0.200	1	10/22/2023 06:53	WG2155682
OT001-DSAMW02-101523	L1667791-02	Trichloroethene	79-01-6	380		0.320	0.800	1.60	20	10/27/2023 01:30	WG2157275
OT001-DSAMW02-101523	L1667791-02	Trichlorofluoromethane	75-69-4	0.839	C5	0.0200	0.0500	0.100	1	10/22/2023 06:53	WG2155682
WP002-BLOMW01-101523	L1667791-03	Acetone	67-64-1	5.59		0.548	2.00	4.00	1	10/22/2023 07:12	WG2155682
WP002-BLOMW01-101523	L1667791-03	Benzene	71-43-2	1.52		0.0160	0.0500	0.100	1	10/22/2023 07:12	WG2155682
WP002-BLOMW01-101523	L1667791-03	sec-Butylbenzene	135-98-8	0.344	J J5	0.101	0.250	0.500	1	10/22/2023 07:12	WG2155682
WP002-BLOMW01-101523	L1667791-03	tert-Butylbenzene	98-06-6	0.861	J J5	0.0620	0.500	1.00	1	10/22/2023 07:12	WG2155682
WP002-BLOMW01-101523	L1667791-03	Cyclohexane	110-82-7	1.41	J5	0.0203	0.0500	0.100	1	10/22/2023 07:12	WG2155682
WP002-BLOMW01-101523	L1667791-03	cis-1,2-Dichloroethene	156-59-2	12.4		0.0276	0.0750	0.150	1	10/22/2023 07:12	WG2155682
WP002-BLOMW01-101523	L1667791-03	trans-1,2-Dichloroethene	156-60-5	0.0850	J J5	0.0572	0.300	0.600	1	10/22/2023 07:12	WG2155682
WP002-BLOMW01-101523	L1667791-03	Ethylbenzene	100-41-4	6.74		0.0212	0.0500	0.100	1	10/22/2023 07:12	WG2155682
WP002-BLOMW01-101523	L1667791-03	Isopropylbenzene	98-82-8	7.47		0.0345	1.00	2.00	1	10/22/2023 07:12	WG2155682
WP002-BLOMW01-101523	L1667791-03	p-Isopropyltoluene	99-87-6	2.58	J5	0.0932	0.300	0.600	1	10/22/2023 07:12	WG2155682
WP002-BLOMW01-101523	L1667791-03	2-Butanone (MEK)	78-93-3	2.00	J	0.500	1.00	2.00	1	10/22/2023 07:12	WG2155682
WP002-BLOMW01-101523	L1667791-03	Naphthalene	91-20-3	50.7		0.125	0.250	0.500	1	10/22/2023 07:12	WG2155682
WP002-BLOMW01-101523	L1667791-03	n-Propylbenzene	103-65-1	1.98	J5	0.0472	0.100	0.200	1	10/22/2023 07:12	WG2155682
WP002-BLOMW01-101523	L1667791-03	Tetrachloroethene	127-18-4	0.165		0.0280	0.0750	0.150	1	10/22/2023 07:12	WG2155682
WP002-BLOMW01-101523	L1667791-03	Toluene	108-88-3	0.404	J5	0.0500	0.100	0.200	1	10/22/2023 07:12	WG2155682
WP002-BLOMW01-101523	L1667791-03	Trichloroethene	79-01-6	4.21		0.0160	0.0400	0.0800	1	10/26/2023 23:17	WG2157275
WP002-BLOMW01-101523	L1667791-03	1,2,4-Trimethylbenzene	95-63-6	0.531	J5	0.0464	0.100	0.200	1	10/22/2023 07:12	WG2155682

DETECTION SUMMARY

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Client ID	Lab Sample ID	Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
				ug/l		ug/l	ug/l	ug/l		date / time	
WP002-BLOMW01-101523	L1667791-03	Vinyl chloride	75-01-4	0.137	J	0.0273	0.0750	0.150	1	10/22/2023 07:12	WG2155682
WP002-BLOMW01-101523	L1667791-03	Xylenes, Total	1330-20-7	3.55	J5	0.191	0.400	0.800	1	10/22/2023 07:12	WG2155682
OT001-EQBK01-101523	L1667791-04	Acetone	67-64-1	1.21	J	0.548	2.00	4.00	1	10/22/2023 02:36	WG2155682
OT001-EQBK01-101523	L1667791-04	Benzene	71-43-2	0.0860	J	0.0160	0.0500	0.100	1	10/22/2023 02:36	WG2155682
OT001-EQBK01-101523	L1667791-04	Bromodichloromethane	75-27-4	0.220		0.0315	0.100	0.200	1	10/22/2023 02:36	WG2155682
OT001-EQBK01-101523	L1667791-04	Carbon disulfide	75-15-0	0.244	J	0.162	0.500	1.00	1	10/22/2023 02:36	WG2155682
OT001-EQBK01-101523	L1667791-04	Chloroform	67-66-3	2.79		0.0166	0.0500	0.100	1	10/22/2023 02:36	WG2155682
OT001-EQBK01-101523	L1667791-04	Ethylbenzene	100-41-4	0.0920	J	0.0212	0.0500	0.100	1	10/22/2023 02:36	WG2155682
OT001-EQBK01-101523	L1667791-04	Toluene	108-88-3	1.30		0.0500	0.100	0.200	1	10/22/2023 02:36	WG2155682
OT001-EQBK01-101523	L1667791-04	1,2,4-Trimethylbenzene	95-63-6	0.0590	J	0.0464	0.100	0.200	1	10/22/2023 02:36	WG2155682
OT001-EQBK01-101523	L1667791-04	Xylenes, Total	1330-20-7	0.602	J	0.191	0.400	0.800	1	10/22/2023 02:36	WG2155682
OT001-TRIPBLANK-HCL-01	L1667791-05	Toluene	108-88-3	0.0650	J	0.0500	0.100	0.200	1	10/22/2023 02:56	WG2155682

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

Client ID	Lab Sample ID	Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
				ug/l		ug/l	ug/l	ug/l		date / time	
OT001-DSAMW05-101523	L1667791-01	Trichloroethene	79-01-6	3.99		0.190	0.500	1.00	1	10/22/2023 15:05	WG2155879
OT001-DSAMW02-101523	L1667791-02	Chloroform	67-66-3	0.153	J	0.111	2.00	5.00	1	10/22/2023 15:49	WG2155879
OT001-DSAMW02-101523	L1667791-02	Trichloroethene	79-01-6	380		3.80	10.0	20.0	20	10/27/2023 01:30	WG2225572
OT001-DSAMW02-101523	L1667791-02	Trichlorofluoromethane	75-69-4	0.872	J	0.160	2.00	5.00	1	10/22/2023 15:49	WG2155879
WP002-BLOMW01-101523	L1667791-03	Benzene	71-43-2	1.28		0.0941	0.500	1.00	1	10/22/2023 16:11	WG2155879
WP002-BLOMW01-101523	L1667791-03	n-Butylbenzene	104-51-8	0.500	J	0.157	0.500	1.00	1	10/22/2023 16:11	WG2155879
WP002-BLOMW01-101523	L1667791-03	sec-Butylbenzene	135-98-8	0.571	J	0.125	0.500	1.00	1	10/22/2023 16:11	WG2155879
WP002-BLOMW01-101523	L1667791-03	tert-Butylbenzene	98-06-6	0.959	J	0.127	0.500	1.00	1	10/22/2023 16:11	WG2155879
WP002-BLOMW01-101523	L1667791-03	cis-1,2-Dichloroethene	156-59-2	11.7		0.126	0.500	1.00	1	10/22/2023 16:11	WG2155879
WP002-BLOMW01-101523	L1667791-03	Ethylbenzene	100-41-4	6.13		0.137	0.500	1.00	1	10/22/2023 16:11	WG2155879
WP002-BLOMW01-101523	L1667791-03	Isopropylbenzene	98-82-8	8.29	J6	0.105	0.500	1.00	1	10/22/2023 16:11	WG2155879
WP002-BLOMW01-101523	L1667791-03	p-Isopropyltoluene	99-87-6	0.537	J	0.120	0.500	1.00	1	10/22/2023 16:11	WG2155879
WP002-BLOMW01-101523	L1667791-03	2-Butanone (MEK)	78-93-3	1.94	J	1.19	5.00	10.0	1	10/22/2023 16:11	WG2155879
WP002-BLOMW01-101523	L1667791-03	Naphthalene	91-20-3	41.7	V	1.00	2.00	5.00	1	10/22/2023 16:11	WG2155879
WP002-BLOMW01-101523	L1667791-03	n-Propylbenzene	103-65-1	2.73		0.0993	0.500	1.00	1	10/22/2023 16:11	WG2155879
WP002-BLOMW01-101523	L1667791-03	1,2,3-Trimethylbenzene	526-73-8	0.171	J	0.104	0.500	1.00	1	10/22/2023 16:11	WG2155879
WP002-BLOMW01-101523	L1667791-03	1,2,4-Trimethylbenzene	95-63-6	0.613	J	0.322	1.00	2.00	1	10/22/2023 16:11	WG2155879
WP002-BLOMW01-101523	L1667791-03	1,3,5-Trimethylbenzene	108-67-8	0.689	J	0.104	0.500	1.00	1	10/22/2023 16:11	WG2155879
WP002-BLOMW01-101523	L1667791-03	Trichloroethene	79-01-6	4.21		0.190	0.500	1.00	1	10/26/2023 23:17	WG2225572
WP002-BLOMW01-101523	L1667791-03	Xylenes, Total	1330-20-7	3.12		0.174	1.50	3.00	1	10/22/2023 16:11	WG2155879

DETECTION SUMMARY

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

Client ID	Lab Sample ID	Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
				ug/l		ug/l	ug/l	ug/l		date / time	
OT001-EQBK01-101523	L1667791-04	Benzene	71-43-2	0.114	J	0.0941	0.500	1.00	1	10/22/2023 12:32	WG2155879
OT001-EQBK01-101523	L1667791-04	Bromodichloromethane	75-27-4	0.239	J	0.136	0.500	1.00	1	10/22/2023 12:32	WG2155879
OT001-EQBK01-101523	L1667791-04	Chloroform	67-66-3	2.50	J	0.111	2.00	5.00	1	10/22/2023 12:32	WG2155879
OT001-EQBK01-101523	L1667791-04	1,1-Dichloroethane	75-34-3	0.158	J	0.100	0.500	1.00	1	10/22/2023 12:32	WG2155879
OT001-EQBK01-101523	L1667791-04	Toluene	108-88-3	1.28		0.278	0.600	1.20	1	10/22/2023 12:32	WG2155879
OT001-EQBK01-101523	L1667791-04	Xylenes, Total	1330-20-7	0.547	J	0.174	1.50	3.00	1	10/22/2023 12:32	WG2155879

Semi-Volatile Organic Compounds (GC) by Method AK102

Client ID	Lab Sample ID	Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
				ug/l		ug/l	ug/l	ug/l		date / time	
OT001-DSAMW05-101523	L1667791-01	AK102 DRO C10-C25	C10-C25	542	B J J4	170	400	800	1	10/28/2023 23:28	WG2156720
OT001-DSAMW02-101523	L1667791-02	AK102 DRO C10-C25	C10-C25	453	B J J4	179	420	840	1.05	10/28/2023 23:49	WG2156720
WP002-BLOMW01-101523	L1667791-03	AK102 DRO C10-C25	C10-C25	7860	J4 J6	179	420	840	1.05	10/28/2023 20:27	WG2156720
OT001-EQBK01-101523	L1667791-04	AK102 DRO C10-C25	C10-C25	423	B J J4	170	400	800	1	10/29/2023 00:09	WG2156720

Additional Information - Results for field analyses are not accredited to ISO 17025

Analyte	Result	Units
Cooler#	green	
Cooler Temperature	4.0	Deg. C

Wet Chemistry by Method 2320 B-2011

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Alkalinity		69400		8450	10000	20000	1	10/23/2023 17:24	WG2156308
Alkalinity,Bicarbonate		69400		8450	10000	20000	1	10/23/2023 17:24	WG2156308
Alkalinity,Carbonate		10000	U	8450	10000	20000	1	10/23/2023 17:24	WG2156308
Alkalinity,Hydroxide		10000	U	8450	10000	20000	1	10/23/2023 17:24	WG2156308

Sample Narrative:

L1667791-01 WG2156308: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 351.2

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Kjeldahl Nitrogen, TKN	7727-37-9	183	J	140	300	600	1	10/24/2023 18:13	WG2155669

Wet Chemistry by Method 353.2

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Nitrate-Nitrite	7727-37-9	1110		50.0	100	200	1	10/20/2023 20:53	WG2154634

Wet Chemistry by Method 9056A

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Sulfate	14808-79-8	10100		594	2500	5000	1	10/25/2023 17:47	WG2156852

Metals (ICP) by Method 6010D

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Iron	7439-89-6	1690		20.5	50.0	100	1	10/24/2023 09:22	WG2153991
Manganese	7439-96-5	113		0.855	5.00	10.0	1	10/24/2023 09:22	WG2153991

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Acetone	67-64-1	1.67	J	0.548	2.00	4.00	1	10/22/2023 06:33	WG2155682
Acrylonitrile	107-13-1	0.250	U	0.0760	0.250	0.500	1	10/22/2023 06:33	WG2155682
Benzene	71-43-2	0.0500	U	0.0160	0.0500	0.100	1	10/26/2023 22:58	WG2157275
Bromobenzene	108-86-1	0.250	U	0.0420	0.250	0.500	1	10/22/2023 06:33	WG2155682
Bromodichloromethane	75-27-4	0.100	U	0.0315	0.100	0.200	1	10/22/2023 06:33	WG2155682
Bromochloromethane	74-97-5	0.100	U	0.0452	0.100	0.200	1	10/22/2023 06:33	WG2155682
Bromoform	75-25-2	0.500	U	0.239	0.500	1.00	1	10/22/2023 06:33	WG2155682
Bromomethane	74-83-9	0.500	U	0.148	0.500	1.00	1	10/22/2023 06:33	WG2155682
n-Butylbenzene	104-51-8	0.500	U	0.154	0.500	1.00	1	10/22/2023 06:33	WG2155682
sec-Butylbenzene	135-98-8	0.250	U	0.101	0.250	0.500	1	10/22/2023 06:33	WG2155682
tert-Butylbenzene	98-06-6	0.500	U	0.0620	0.500	1.00	1	10/22/2023 06:33	WG2155682
Carbon tetrachloride	56-23-5	0.100	U	0.0432	0.100	0.200	1	10/22/2023 06:33	WG2155682
Carbon disulfide	75-15-0	0.500	U	0.162	0.500	1.00	1	10/22/2023 06:33	WG2155682
Chlorobenzene	108-90-7	0.0500	U	0.0229	0.0500	0.100	1	10/22/2023 06:33	WG2155682
Chlorodibromomethane	124-48-1	0.0500	U	0.0180	0.0500	0.100	1	10/22/2023 06:33	WG2155682

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Chloroethane	75-00-3	0.100	U	0.0432	0.100	0.200	1	10/22/2023 06:33	WG2155682
Chloroform	67-66-3	0.0500	U	0.0166	0.0500	0.100	1	10/22/2023 06:33	WG2155682
Chloromethane	74-87-3	0.250	U	0.0556	0.250	0.500	1	10/22/2023 06:33	WG2155682
Cyclohexane	110-82-7	0.0500	U	0.0203	0.0500	0.100	1	10/22/2023 06:33	WG2155682
2-Chlorotoluene	95-49-8	0.100	U	0.0368	0.100	0.200	1	10/22/2023 06:33	WG2155682
4-Chlorotoluene	106-43-4	0.100	U	0.0452	0.100	0.200	1	10/22/2023 06:33	WG2155682
1,2-Dibromo-3-Chloropropane	96-12-8	0.500	U	0.204	0.500	1.00	1	10/22/2023 06:33	WG2155682
1,2-Dibromoethane	106-93-4	0.0500	U	0.0210	0.0500	0.100	1	10/22/2023 06:33	WG2155682
Dibromomethane	74-95-3	0.100	U	0.0400	0.100	0.200	1	10/22/2023 06:33	WG2155682
1,2-Dichlorobenzene	95-50-1	0.200	U	0.0580	0.200	0.400	1	10/22/2023 06:33	WG2155682
1,3-Dichlorobenzene	541-73-1	0.200	U	0.0680	0.200	0.400	1	10/22/2023 06:33	WG2155682
1,4-Dichlorobenzene	106-46-7	0.250	U	0.0788	0.250	0.500	1	10/22/2023 06:33	WG2155682
Dichlorodifluoromethane	75-71-8	0.100	U	0.0327	0.100	0.200	1	10/22/2023 06:33	WG2155682
1,1-Dichloroethane	75-34-3	0.0500	U	0.0230	0.0500	0.100	1	10/22/2023 06:33	WG2155682
1,2-Dichloroethane	107-06-2	0.0390	J	0.0190	0.0500	0.100	1	10/22/2023 06:33	WG2155682
1,1-Dichloroethene	75-35-4	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 06:33	WG2155682
cis-1,2-Dichloroethene	156-59-2	0.0750	U	0.0276	0.0750	0.150	1	10/22/2023 06:33	WG2155682
trans-1,2-Dichloroethene	156-60-5	0.300	U	0.0572	0.300	0.600	1	10/22/2023 06:33	WG2155682
1,2-Dichloropropane	78-87-5	0.200	U	0.0508	0.200	0.400	1	10/22/2023 06:33	WG2155682
1,1-Dichloropropene	563-58-6	0.100	U	0.0280	0.100	0.200	1	10/22/2023 06:33	WG2155682
1,3-Dichloropropane	142-28-9	0.150	U	0.0700	0.150	0.300	1	10/22/2023 06:33	WG2155682
cis-1,3-Dichloropropene	10061-01-5	0.100	U	0.0271	0.100	0.200	1	10/22/2023 06:33	WG2155682
trans-1,3-Dichloropropene	10061-02-6	0.150	U	0.0612	0.150	0.300	1	10/22/2023 06:33	WG2155682
2,2-Dichloropropane	594-20-7	0.100	U	0.0317	0.100	0.200	1	10/22/2023 06:33	WG2155682
Di-isopropyl ether	108-20-3	0.0500	U	0.0140	0.0500	0.100	1	10/22/2023 06:33	WG2155682
Ethylbenzene	100-41-4	0.0400	J	0.0212	0.0500	0.100	1	10/22/2023 06:33	WG2155682
Hexachloro-1,3-butadiene	87-68-3	2.00	U	0.508	2.00	4.00	1	10/22/2023 06:33	WG2155682
Isopropylbenzene	98-82-8	1.00	U	0.0345	1.00	2.00	1	10/22/2023 06:33	WG2155682
p-Isopropyltoluene	99-87-6	0.300	U	0.0932	0.300	0.600	1	10/22/2023 06:33	WG2155682
2-Butanone (MEK)	78-93-3	1.00	U	0.500	1.00	2.00	1	10/22/2023 06:33	WG2155682
Methylene Chloride	75-09-2	0.750	U	0.266	0.750	1.50	1	10/22/2023 06:33	WG2155682
4-Methyl-2-pentanone (MIBK)	108-10-1	1.00	U	0.400	1.00	2.00	1	10/22/2023 06:33	WG2155682
Methyl tert-butyl ether	1634-04-4	0.0300	U	0.0118	0.0300	0.0600	1	10/22/2023 06:33	WG2155682
Naphthalene	91-20-3	0.250	U	0.125	0.250	0.500	1	10/22/2023 06:33	WG2155682
n-Propylbenzene	103-65-1	0.100	U	0.0472	0.100	0.200	1	10/22/2023 06:33	WG2155682
Styrene	100-42-5	0.250	U	0.109	0.250	0.500	1	10/22/2023 06:33	WG2155682
1,1,1,2-Tetrachloroethane	630-20-6	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 06:33	WG2155682
1,1,2,2-Tetrachloroethane	79-34-5	0.0500	U	0.0156	0.0500	0.100	1	10/22/2023 06:33	WG2155682
1,1,2-Trichlorotrifluoroethane	76-13-1	0.100	U	0.0270	0.100	0.200	1	10/22/2023 06:33	WG2155682
Tetrachloroethene	127-18-4	0.0750	U	0.0280	0.0750	0.150	1	10/22/2023 06:33	WG2155682
Toluene	108-88-3	0.116	J	0.0500	0.100	0.200	1	10/26/2023 22:58	WG2157275
1,2,3-Trichlorobenzene	87-61-6	0.250	U	0.0250	0.250	0.500	1	10/22/2023 06:33	WG2155682
1,2,4-Trichlorobenzene	120-82-1	0.500	U	0.193	0.500	1.00	1	10/22/2023 06:33	WG2155682
1,1,1-Trichloroethane	71-55-6	0.0500	U	0.0110	0.0500	0.100	1	10/22/2023 06:33	WG2155682
1,1,2-Trichloroethane	79-00-5	0.100	U	0.0353	0.100	0.200	1	10/22/2023 06:33	WG2155682
Trichloroethene	79-01-6	3.91		0.0160	0.0400	0.0800	1	10/26/2023 22:58	WG2157275
Trichlorofluoromethane	75-69-4	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 06:33	WG2155682
1,2,3-Trichloropropane	96-18-4	0.500	U	0.204	0.500	1.00	1	10/22/2023 06:33	WG2155682
1,2,4-Trimethylbenzene	95-63-6	0.100	U	0.0464	0.100	0.200	1	10/26/2023 22:58	WG2157275
1,2,3-Trimethylbenzene	526-73-8	0.100	U	0.0460	0.100	0.200	1	10/22/2023 06:33	WG2155682
1,3,5-Trimethylbenzene	108-67-8	0.100	U	0.0432	0.100	0.200	1	10/22/2023 06:33	WG2155682
Vinyl chloride	75-01-4	0.0750	U	0.0273	0.0750	0.150	1	10/22/2023 06:33	WG2155682
Vinyl acetate	108-05-4	0.300	U	0.141	0.300	0.600	1	10/26/2023 22:58	WG2157275
Xylenes, Total	1330-20-7	0.400	U	0.191	0.400	0.800	1	10/22/2023 06:33	WG2155682
Ethyl Ether	60-29-7	0.0500	U	0.0170	0.0500	0.100	1	10/22/2023 06:33	WG2155682
Tetrahydrofuran	109-99-9	0.250	U	0.0900	0.250	50.0	1	10/22/2023 06:33	WG2155682

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Iodomethane	74-88-4	0.500	U	0.242	0.500	1.00	1	10/22/2023 06:33	WG2155682
Allyl chloride	107-05-1	2.00	U	0.580	2.00	4.00	1	10/22/2023 06:33	WG2155682
trans-1,4-Dichloro-2-butene	110-57-6	0.200	C4 U	0.0560	0.200	0.400	1	10/22/2023 06:33	WG2155682
(S) Toluene-d8	*2037-26-5*	*104*				*89.0-112*		*10/22/2023 06:33*	WG2155682
(S) Toluene-d8	*2037-26-5*	*108*				*89.0-112*		*10/26/2023 22:58*	WG2157275
(S) 4-Bromofluorobenzene	*460-00-4*	*103*				*85.0-114*		*10/22/2023 06:33*	WG2155682
(S) 4-Bromofluorobenzene	*460-00-4*	*101*				*85.0-114*		*10/26/2023 22:58*	WG2157275
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*95.9*				*81.0-118*		*10/22/2023 06:33*	WG2155682
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*96.9*				*81.0-118*		*10/26/2023 22:58*	WG2157275

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Acetone	67-64-1	25.0	U	11.3	25.0	50.0	1	10/22/2023 15:05	WG2155879
Acrolein	107-02-8	25.0	U	2.54	25.0	50.0	1	10/22/2023 15:05	WG2155879
Acrylonitrile	107-13-1	5.00	U	0.671	5.00	10.0	1	10/22/2023 15:05	WG2155879
Benzene	71-43-2	0.500	U	0.0941	0.500	1.00	1	10/22/2023 15:05	WG2155879
Bromobenzene	108-86-1	0.500	U	0.118	0.500	1.00	1	10/22/2023 15:05	WG2155879
Bromodichloromethane	75-27-4	0.500	U	0.136	0.500	1.00	1	10/22/2023 15:05	WG2155879
Bromoform	75-25-2	0.500	U	0.129	0.500	1.00	1	10/22/2023 15:05	WG2155879
Bromomethane	74-83-9	2.00	U	0.605	2.00	5.00	1	10/22/2023 15:05	WG2155879
n-Butylbenzene	104-51-8	0.500	U	0.157	0.500	1.00	1	10/22/2023 15:05	WG2155879
sec-Butylbenzene	135-98-8	0.500	U	0.125	0.500	1.00	1	10/22/2023 15:05	WG2155879
tert-Butylbenzene	98-06-6	0.500	U	0.127	0.500	1.00	1	10/22/2023 15:05	WG2155879
Carbon tetrachloride	56-23-5	0.500	U	0.128	0.500	1.00	1	10/22/2023 15:05	WG2155879
Chlorobenzene	108-90-7	0.500	U	0.116	0.500	1.00	1	10/22/2023 15:05	WG2155879
Chlorodibromomethane	124-48-1	0.500	U	0.140	0.500	1.00	1	10/22/2023 15:05	WG2155879
Chloroethane	75-00-3	2.00	U	0.192	2.00	5.00	1	10/22/2023 15:05	WG2155879
2-Chloroethyl vinyl ether	110-75-8	25.0	U	0.575	25.0	50.0	1	10/22/2023 15:05	WG2155879
Chloroform	67-66-3	2.00	U	0.111	2.00	5.00	1	10/22/2023 15:05	WG2155879
Chloromethane	74-87-3	2.00	U	0.960	2.00	4.00	1	10/22/2023 15:05	WG2155879
2-Chlorotoluene	95-49-8	0.500	U	0.106	0.500	1.00	1	10/22/2023 15:05	WG2155879
4-Chlorotoluene	106-43-4	0.500	U	0.114	0.500	1.00	1	10/22/2023 15:05	WG2155879
1,2-Dibromoethane	106-93-4	0.500	U	0.126	0.500	1.00	1	10/22/2023 15:05	WG2155879
1,2-Dibromo-3-Chloropropane	96-12-8	2.00	U	0.276	2.00	5.00	1	10/22/2023 15:05	WG2155879
Dibromomethane	74-95-3	0.500	U	0.122	0.500	1.00	1	10/22/2023 15:05	WG2155879
1,2-Dichlorobenzene	95-50-1	0.500	U	0.107	0.500	1.00	1	10/22/2023 15:05	WG2155879
1,3-Dichlorobenzene	541-73-1	0.500	U	0.110	0.500	1.00	1	10/22/2023 15:05	WG2155879
1,4-Dichlorobenzene	106-46-7	0.500	U	0.120	0.500	1.00	1	10/22/2023 15:05	WG2155879
Dichlorodifluoromethane	75-71-8	2.00	U	0.374	2.00	5.00	1	10/22/2023 15:05	WG2155879
1,1-Dichloroethane	75-34-3	0.500	U	0.100	0.500	1.00	1	10/22/2023 15:05	WG2155879
1,2-Dichloroethane	107-06-2	0.500	U	0.0819	0.500	1.00	1	10/22/2023 15:05	WG2155879
1,1-Dichloroethene	75-35-4	0.500	U	0.188	0.500	1.00	1	10/22/2023 15:05	WG2155879
cis-1,2-Dichloroethene	156-59-2	0.500	U	0.126	0.500	1.00	1	10/22/2023 15:05	WG2155879
trans-1,2-Dichloroethene	156-60-5	0.500	U	0.149	0.500	1.00	1	10/22/2023 15:05	WG2155879
1,2-Dichloropropane	78-87-5	0.500	U	0.149	0.500	1.00	1	10/22/2023 15:05	WG2155879
1,3-Dichloropropane	142-28-9	0.500	U	0.110	0.500	1.00	1	10/22/2023 15:05	WG2155879
2,2-Dichloropropane	594-20-7	0.500	U	0.161	0.500	1.00	1	10/22/2023 06:33	WG2225461
1,1-Dichloropropene	563-58-6	0.500	U	0.142	0.500	1.00	1	10/22/2023 15:05	WG2155879
cis-1,3-Dichloropropene	10061-01-5	0.500	U	0.111	0.500	1.00	1	10/22/2023 15:05	WG2155879
trans-1,3-Dichloropropene	10061-02-6	0.500	U	0.118	0.500	1.00	1	10/22/2023 15:05	WG2155879
Di-isopropyl ether	108-20-3	0.500	U	0.105	0.500	1.00	1	10/22/2023 15:05	WG2155879
Ethylbenzene	100-41-4	0.500	U	0.137	0.500	1.00	1	10/22/2023 15:05	WG2155879
Hexachloro-1,3-butadiene	87-68-3	0.750	U	0.337	0.750	1.50	1	10/22/2023 06:33	WG2225461
Isopropylbenzene	98-82-8	0.500	U	0.105	0.500	1.00	1	10/22/2023 15:05	WG2155879
p-Isopropyltoluene	99-87-6	0.500	U	0.120	0.500	1.00	1	10/22/2023 15:05	WG2155879

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
2-Butanone (MEK)	78-93-3	5.00	U	1.19	5.00	10.0	1	10/22/2023 15:05	WG2155879
Methylene Chloride	75-09-2	2.00	U	0.430	2.00	5.00	1	10/22/2023 15:05	WG2155879
4-Methyl-2-pentanone (MIBK)	108-10-1	5.00	U	0.478	5.00	10.0	1	10/22/2023 15:05	WG2155879
Methyl tert-butyl ether	1634-04-4	0.500	U	0.101	0.500	1.00	1	10/22/2023 15:05	WG2155879
Naphthalene	91-20-3	2.00	U	1.00	2.00	5.00	1	10/22/2023 15:05	WG2155879
n-Propylbenzene	103-65-1	0.500	U	0.0993	0.500	1.00	1	10/22/2023 15:05	WG2155879
Styrene	100-42-5	0.500	U	0.118	0.500	1.00	1	10/22/2023 15:05	WG2155879
1,1,1,2-Tetrachloroethane	630-20-6	0.500	U	0.147	0.500	1.00	1	10/22/2023 15:05	WG2155879
1,1,2,2-Tetrachloroethane	79-34-5	0.500	U	0.133	0.500	1.00	1	10/22/2023 15:05	WG2155879
Tetrachloroethene	127-18-4	0.600	U	0.300	0.600	1.20	1	10/22/2023 15:05	WG2155879
Toluene	108-88-3	0.600	U	0.278	0.600	1.20	1	10/22/2023 15:05	WG2155879
1,2,3-Trichlorobenzene	87-61-6	0.500	U	0.230	0.500	1.00	1	10/22/2023 15:05	WG2155879
1,2,4-Trichlorobenzene	120-82-1	1.00	U	0.481	1.00	2.00	1	10/22/2023 15:05	WG2155879
1,2,3-Trimethylbenzene	526-73-8	0.500	U	0.104	0.500	1.00	1	10/22/2023 15:05	WG2155879
1,2,4-Trimethylbenzene	95-63-6	1.00	U	0.322	1.00	2.00	1	10/22/2023 15:05	WG2155879
1,3,5-Trimethylbenzene	108-67-8	0.500	U	0.104	0.500	1.00	1	10/22/2023 15:05	WG2155879
1,1,1-Trichloroethane	71-55-6	0.500	U	0.149	0.500	1.00	1	10/22/2023 06:33	WG2225461
1,1,2-Trichloroethane	79-00-5	0.500	U	0.158	0.500	1.00	1	10/22/2023 15:05	WG2155879
Trichloroethene	79-01-6	3.99		0.190	0.500	1.00	1	10/22/2023 15:05	WG2155879
Trichlorofluoromethane	75-69-4	2.00	U	0.160	2.00	5.00	1	10/22/2023 15:05	WG2155879
1,1,2-Trichlorotrifluoroethane	76-13-1	0.500	U	0.180	0.500	1.00	1	10/22/2023 15:05	WG2155879
1,2,3-Trichloropropane	96-18-4	1.00	U	0.237	1.00	2.50	1	10/22/2023 15:05	WG2155879
Vinyl chloride	75-01-4	0.500	U	0.234	0.500	1.00	1	10/22/2023 15:05	WG2155879
Xylenes, Total	1330-20-7	1.50	U	0.174	1.50	3.00	1	10/22/2023 15:05	WG2155879
(S) Toluene-d8	*2037-26-5*	*105*				*89.0-112*		*10/22/2023 15:05*	WG2155879
(S) Toluene-d8	*2037-26-5*	*104*				*89.0-112*		*10/22/2023 06:33*	WG2225461
(S) 4-Bromofluorobenzene	*460-00-4*	*94.9*				*85.0-114*		*10/22/2023 15:05*	WG2155879
(S) 4-Bromofluorobenzene	*460-00-4*	*103*				*85.0-114*		*10/22/2023 06:33*	WG2225461
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*102*				*81.0-118*		*10/22/2023 15:05*	WG2155879
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*95.9*				*81.0-118*		*10/22/2023 06:33*	WG2225461

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	C10-C25	542	B J J4	170	400	800	1	10/28/2023 23:28	WG2156720
(S) o-Terphenyl	*84-15-1*	*54.1*				*50.0-150*		*10/28/2023 23:28*	WG2156720

Sample Narrative:

L1667791-01 WG2156720: Duplicate Analysis performed due to QC failure. Results confirm; reporting in hold data

Additional Information - Results for field analyses are not accredited to ISO 17025

Analyte	Result	Units
Cooler#	green	
Cooler Temperature	4.0	Deg. C

Wet Chemistry by Method 2320 B-2011

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Alkalinity		125000		8450	10000	20000	1	10/23/2023 17:30	WG2156308
Alkalinity,Bicarbonate		125000		8450	10000	20000	1	10/23/2023 17:30	WG2156308
Alkalinity,Carbonate		10000	U	8450	10000	20000	1	10/23/2023 17:30	WG2156308
Alkalinity,Hydroxide		10000	U	8450	10000	20000	1	10/23/2023 17:30	WG2156308

Sample Narrative:

L1667791-02 WG2156308: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 351.2

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Kjeldahl Nitrogen, TKN	7727-37-9	300	U	140	300	600	1	10/22/2023 22:36	WG2154036

Wet Chemistry by Method 353.2

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Nitrate-Nitrite	7727-37-9	2220		50.0	100	200	1	10/20/2023 20:54	WG2154634

Wet Chemistry by Method 9056A

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Sulfate	14808-79-8	8920		594	2500	5000	1	10/25/2023 18:31	WG2156852

Metals (ICP) by Method 6010D

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Iron	7439-89-6	5760		20.5	50.0	100	1	10/24/2023 09:25	WG2153991
Manganese	7439-96-5	153		0.855	5.00	10.0	1	10/24/2023 09:25	WG2153991

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Acetone	67-64-1	2.53	J	0.548	2.00	4.00	1	10/22/2023 06:53	WG2155682
Acrylonitrile	107-13-1	0.250	U	0.0760	0.250	0.500	1	10/22/2023 06:53	WG2155682
Benzene	71-43-2	0.154		0.0160	0.0500	0.100	1	10/22/2023 06:53	WG2155682
Bromobenzene	108-86-1	0.250	U	0.0420	0.250	0.500	1	10/22/2023 06:53	WG2155682
Bromodichloromethane	75-27-4	0.100	U	0.0315	0.100	0.200	1	10/22/2023 06:53	WG2155682
Bromochloromethane	74-97-5	0.100	U	0.0452	0.100	0.200	1	10/22/2023 06:53	WG2155682
Bromoform	75-25-2	0.500	U	0.239	0.500	1.00	1	10/22/2023 06:53	WG2155682
Bromomethane	74-83-9	0.500	U	0.148	0.500	1.00	1	10/22/2023 06:53	WG2155682
n-Butylbenzene	104-51-8	0.500	U	0.154	0.500	1.00	1	10/22/2023 06:53	WG2155682
sec-Butylbenzene	135-98-8	0.250	U	0.101	0.250	0.500	1	10/22/2023 06:53	WG2155682
tert-Butylbenzene	98-06-6	0.500	U	0.0620	0.500	1.00	1	10/22/2023 06:53	WG2155682
Carbon tetrachloride	56-23-5	0.100	U	0.0432	0.100	0.200	1	10/22/2023 06:53	WG2155682
Carbon disulfide	75-15-0	0.500	U	0.162	0.500	1.00	1	10/22/2023 06:53	WG2155682
Chlorobenzene	108-90-7	0.0500	U	0.0229	0.0500	0.100	1	10/22/2023 06:53	WG2155682
Chlorodibromomethane	124-48-1	0.0500	U	0.0180	0.0500	0.100	1	10/22/2023 06:53	WG2155682

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Chloroethane	75-00-3	0.100	U	0.0432	0.100	0.200	1	10/22/2023 06:53	WG2155682
Chloroform	67-66-3	0.148		0.0166	0.0500	0.100	1	10/22/2023 06:53	WG2155682
Chloromethane	74-87-3	0.250	U	0.0556	0.250	0.500	1	10/22/2023 06:53	WG2155682
Cyclohexane	110-82-7	0.0750	J	0.0203	0.0500	0.100	1	10/22/2023 06:53	WG2155682
2-Chlorotoluene	95-49-8	0.100	U	0.0368	0.100	0.200	1	10/22/2023 06:53	WG2155682
4-Chlorotoluene	106-43-4	0.100	U	0.0452	0.100	0.200	1	10/22/2023 06:53	WG2155682
1,2-Dibromo-3-Chloropropane	96-12-8	0.500	U	0.204	0.500	1.00	1	10/22/2023 06:53	WG2155682
1,2-Dibromoethane	106-93-4	0.0500	U	0.0210	0.0500	0.100	1	10/22/2023 06:53	WG2155682
Dibromomethane	74-95-3	0.100	U	0.0400	0.100	0.200	1	10/22/2023 06:53	WG2155682
1,2-Dichlorobenzene	95-50-1	0.200	U	0.0580	0.200	0.400	1	10/22/2023 06:53	WG2155682
1,3-Dichlorobenzene	541-73-1	0.200	U	0.0680	0.200	0.400	1	10/22/2023 06:53	WG2155682
1,4-Dichlorobenzene	106-46-7	0.250	U	0.0788	0.250	0.500	1	10/22/2023 06:53	WG2155682
Dichlorodifluoromethane	75-71-8	0.100	U	0.0327	0.100	0.200	1	10/22/2023 06:53	WG2155682
1,1-Dichloroethane	75-34-3	0.0500	U	0.0230	0.0500	0.100	1	10/22/2023 06:53	WG2155682
1,2-Dichloroethane	107-06-2	0.0490	J	0.0190	0.0500	0.100	1	10/22/2023 06:53	WG2155682
1,1-Dichloroethene	75-35-4	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 06:53	WG2155682
cis-1,2-Dichloroethene	156-59-2	0.0750	U	0.0276	0.0750	0.150	1	10/22/2023 06:53	WG2155682
trans-1,2-Dichloroethene	156-60-5	0.300	U	0.0572	0.300	0.600	1	10/22/2023 06:53	WG2155682
1,2-Dichloropropane	78-87-5	0.200	U	0.0508	0.200	0.400	1	10/22/2023 06:53	WG2155682
1,1-Dichloropropene	563-58-6	0.100	U	0.0280	0.100	0.200	1	10/22/2023 06:53	WG2155682
1,3-Dichloropropane	142-28-9	0.150	U	0.0700	0.150	0.300	1	10/22/2023 06:53	WG2155682
cis-1,3-Dichloropropene	10061-01-5	0.100	U	0.0271	0.100	0.200	1	10/22/2023 06:53	WG2155682
trans-1,3-Dichloropropene	10061-02-6	0.150	U	0.0612	0.150	0.300	1	10/22/2023 06:53	WG2155682
2,2-Dichloropropane	594-20-7	0.100	U	0.0317	0.100	0.200	1	10/22/2023 06:53	WG2155682
Di-isopropyl ether	108-20-3	0.0500	U	0.0140	0.0500	0.100	1	10/22/2023 06:53	WG2155682
Ethylbenzene	100-41-4	0.0280	J	0.0212	0.0500	0.100	1	10/22/2023 06:53	WG2155682
Hexachloro-1,3-butadiene	87-68-3	2.00	U	0.508	2.00	4.00	1	10/22/2023 06:53	WG2155682
Isopropylbenzene	98-82-8	1.00	U	0.0345	1.00	2.00	1	10/22/2023 06:53	WG2155682
p-Isopropyltoluene	99-87-6	0.300	U	0.0932	0.300	0.600	1	10/22/2023 06:53	WG2155682
2-Butanone (MEK)	78-93-3	1.00	U	0.500	1.00	2.00	1	10/22/2023 06:53	WG2155682
Methylene Chloride	75-09-2	0.750	U	0.266	0.750	1.50	1	10/22/2023 06:53	WG2155682
4-Methyl-2-pentanone (MIBK)	108-10-1	1.00	U	0.400	1.00	2.00	1	10/22/2023 06:53	WG2155682
Methyl tert-butyl ether	1634-04-4	0.0300	U	0.0118	0.0300	0.0600	1	10/22/2023 06:53	WG2155682
Naphthalene	91-20-3	0.250	U	0.125	0.250	0.500	1	10/22/2023 06:53	WG2155682
n-Propylbenzene	103-65-1	0.100	U	0.0472	0.100	0.200	1	10/22/2023 06:53	WG2155682
Styrene	100-42-5	0.250	U	0.109	0.250	0.500	1	10/22/2023 06:53	WG2155682
1,1,1,2-Tetrachloroethane	630-20-6	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 06:53	WG2155682
1,1,2,2-Tetrachloroethane	79-34-5	0.0500	U	0.0156	0.0500	0.100	1	10/22/2023 06:53	WG2155682
1,1,2-Trichlorotrifluoroethane	76-13-1	0.100	U	0.0270	0.100	0.200	1	10/22/2023 06:53	WG2155682
Tetrachloroethene	127-18-4	0.0750	U	0.0280	0.0750	0.150	1	10/22/2023 06:53	WG2155682
Toluene	108-88-3	18.1		1.00	2.00	4.00	20	10/27/2023 01:30	WG2157275
1,2,3-Trichlorobenzene	87-61-6	0.250	U	0.0250	0.250	0.500	1	10/22/2023 06:53	WG2155682
1,2,4-Trichlorobenzene	120-82-1	0.500	U	0.193	0.500	1.00	1	10/22/2023 06:53	WG2155682
1,1,1-Trichloroethane	71-55-6	1.11		0.0110	0.0500	0.100	1	10/22/2023 06:53	WG2155682
1,1,2-Trichloroethane	79-00-5	0.0670	J	0.0353	0.100	0.200	1	10/22/2023 06:53	WG2155682
Trichloroethene	79-01-6	380		0.320	0.800	1.60	20	10/27/2023 01:30	WG2157275
Trichlorofluoromethane	75-69-4	0.839	C5	0.0200	0.0500	0.100	1	10/22/2023 06:53	WG2155682
1,2,3-Trichloropropane	96-18-4	0.500	U	0.204	0.500	1.00	1	10/22/2023 06:53	WG2155682
1,2,4-Trimethylbenzene	95-63-6	0.100	U	0.0464	0.100	0.200	1	10/22/2023 06:53	WG2155682
1,2,3-Trimethylbenzene	526-73-8	0.100	U	0.0460	0.100	0.200	1	10/22/2023 06:53	WG2155682
1,3,5-Trimethylbenzene	108-67-8	0.100	U	0.0432	0.100	0.200	1	10/22/2023 06:53	WG2155682
Vinyl chloride	75-01-4	0.0750	U	0.0273	0.0750	0.150	1	10/22/2023 06:53	WG2155682
Vinyl acetate	108-05-4	6.00	U	2.82	6.00	12.0	20	10/27/2023 01:30	WG2157275
Xylenes, Total	1330-20-7	0.400	U	0.191	0.400	0.800	1	10/22/2023 06:53	WG2155682
Ethyl Ether	60-29-7	0.0500	U	0.0170	0.0500	0.100	1	10/22/2023 06:53	WG2155682
Tetrahydrofuran	109-99-9	0.250	U	0.0900	0.250	50.0	1	10/22/2023 06:53	WG2155682

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Iodomethane	74-88-4	0.500	U	0.242	0.500	1.00	1	10/22/2023 06:53	WG2155682
Allyl chloride	107-05-1	2.00	U	0.580	2.00	4.00	1	10/22/2023 06:53	WG2155682
trans-1,4-Dichloro-2-butene	110-57-6	0.200	C4 U	0.0560	0.200	0.400	1	10/22/2023 06:53	WG2155682
(S) Toluene-d8	*2037-26-5*	*105*				*89.0-112*		*10/22/2023 06:53*	WG2155682
(S) Toluene-d8	*2037-26-5*	*109*				*89.0-112*		*10/27/2023 01:30*	WG2157275
(S) 4-Bromofluorobenzene	*460-00-4*	*103*				*85.0-114*		*10/22/2023 06:53*	WG2155682
(S) 4-Bromofluorobenzene	*460-00-4*	*102*				*85.0-114*		*10/27/2023 01:30*	WG2157275
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*95.2*				*81.0-118*		*10/22/2023 06:53*	WG2155682
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*99.9*				*81.0-118*		*10/27/2023 01:30*	WG2157275

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Acetone	67-64-1	25.0	U	11.3	25.0	50.0	1	10/22/2023 15:49	WG2155879
Acrolein	107-02-8	25.0	U	2.54	25.0	50.0	1	10/22/2023 15:49	WG2155879
Acrylonitrile	107-13-1	5.00	U	0.671	5.00	10.0	1	10/22/2023 15:49	WG2155879
Benzene	71-43-2	0.500	U	0.0941	0.500	1.00	1	10/22/2023 15:49	WG2155879
Bromobenzene	108-86-1	0.500	U	0.118	0.500	1.00	1	10/22/2023 15:49	WG2155879
Bromodichloromethane	75-27-4	0.500	U	0.136	0.500	1.00	1	10/22/2023 15:49	WG2155879
Bromoform	75-25-2	0.500	U	0.129	0.500	1.00	1	10/22/2023 15:49	WG2155879
Bromomethane	74-83-9	2.00	U	0.605	2.00	5.00	1	10/22/2023 15:49	WG2155879
n-Butylbenzene	104-51-8	0.500	U	0.157	0.500	1.00	1	10/22/2023 15:49	WG2155879
sec-Butylbenzene	135-98-8	0.500	U	0.125	0.500	1.00	1	10/22/2023 15:49	WG2155879
tert-Butylbenzene	98-06-6	0.500	U	0.127	0.500	1.00	1	10/22/2023 15:49	WG2155879
Carbon tetrachloride	56-23-5	0.500	U	0.128	0.500	1.00	1	10/22/2023 15:49	WG2155879
Chlorobenzene	108-90-7	0.500	U	0.116	0.500	1.00	1	10/22/2023 15:49	WG2155879
Chlorodibromomethane	124-48-1	0.500	U	0.140	0.500	1.00	1	10/22/2023 15:49	WG2155879
Chloroethane	75-00-3	2.00	U	0.192	2.00	5.00	1	10/22/2023 15:49	WG2155879
2-Chloroethyl vinyl ether	110-75-8	25.0	U	0.575	25.0	50.0	1	10/22/2023 15:49	WG2155879
Chloroform	67-66-3	0.153	J	0.111	2.00	5.00	1	10/22/2023 15:49	WG2155879
Chloromethane	74-87-3	2.00	U	0.960	2.00	4.00	1	10/22/2023 15:49	WG2155879
2-Chlorotoluene	95-49-8	0.500	U	0.106	0.500	1.00	1	10/22/2023 15:49	WG2155879
4-Chlorotoluene	106-43-4	0.500	U	0.114	0.500	1.00	1	10/22/2023 15:49	WG2155879
1,2-Dibromoethane	106-93-4	0.500	U	0.126	0.500	1.00	1	10/22/2023 15:49	WG2155879
1,2-Dibromo-3-Chloropropane	96-12-8	2.00	U	0.276	2.00	5.00	1	10/22/2023 15:49	WG2155879
Dibromomethane	74-95-3	0.500	U	0.122	0.500	1.00	1	10/22/2023 15:49	WG2155879
1,2-Dichlorobenzene	95-50-1	0.500	U	0.107	0.500	1.00	1	10/22/2023 15:49	WG2155879
1,3-Dichlorobenzene	541-73-1	0.500	U	0.110	0.500	1.00	1	10/22/2023 15:49	WG2155879
1,4-Dichlorobenzene	106-46-7	0.500	U	0.120	0.500	1.00	1	10/22/2023 15:49	WG2155879
Dichlorodifluoromethane	75-71-8	2.00	U	0.374	2.00	5.00	1	10/22/2023 15:49	WG2155879
1,1-Dichloroethane	75-34-3	0.500	U	0.100	0.500	1.00	1	10/22/2023 15:49	WG2155879
1,2-Dichloroethane	107-06-2	0.500	U	0.0819	0.500	1.00	1	10/22/2023 15:49	WG2155879
1,1-Dichloroethene	75-35-4	0.500	U	0.188	0.500	1.00	1	10/22/2023 15:49	WG2155879
cis-1,2-Dichloroethene	156-59-2	0.500	U	0.126	0.500	1.00	1	10/22/2023 15:49	WG2155879
trans-1,2-Dichloroethene	156-60-5	0.500	U	0.149	0.500	1.00	1	10/22/2023 15:49	WG2155879
1,2-Dichloropropane	78-87-5	0.500	U	0.149	0.500	1.00	1	10/22/2023 15:49	WG2155879
1,3-Dichloropropane	142-28-9	0.500	U	0.110	0.500	1.00	1	10/22/2023 15:49	WG2155879
2,2-Dichloropropane	594-20-7	10.0	U	3.22	10.0	20.0	20	10/27/2023 01:30	WG2225572
1,1-Dichloropropene	563-58-6	0.500	U	0.142	0.500	1.00	1	10/22/2023 15:49	WG2155879
cis-1,3-Dichloropropene	10061-01-5	0.500	U	0.111	0.500	1.00	1	10/22/2023 15:49	WG2155879
trans-1,3-Dichloropropene	10061-02-6	0.500	U	0.118	0.500	1.00	1	10/22/2023 15:49	WG2155879
Di-isopropyl ether	108-20-3	0.500	U	0.105	0.500	1.00	1	10/22/2023 15:49	WG2155879
Ethylbenzene	100-41-4	0.500	U	0.137	0.500	1.00	1	10/22/2023 15:49	WG2155879
Hexachloro-1,3-butadiene	87-68-3	15.0	U	6.74	15.0	30.0	20	10/27/2023 01:30	WG2225572
Isopropylbenzene	98-82-8	0.500	U	0.105	0.500	1.00	1	10/22/2023 15:49	WG2155879
p-Isopropyltoluene	99-87-6	0.500	U	0.120	0.500	1.00	1	10/22/2023 15:49	WG2155879

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
2-Butanone (MEK)	78-93-3	5.00	U	1.19	5.00	10.0	1	10/22/2023 15:49	WG2155879
Methylene Chloride	75-09-2	2.00	U	0.430	2.00	5.00	1	10/22/2023 15:49	WG2155879
4-Methyl-2-pentanone (MIBK)	108-10-1	5.00	U	0.478	5.00	10.0	1	10/22/2023 15:49	WG2155879
Methyl tert-butyl ether	1634-04-4	0.500	U	0.101	0.500	1.00	1	10/22/2023 15:49	WG2155879
Naphthalene	91-20-3	2.00	U	1.00	2.00	5.00	1	10/22/2023 15:49	WG2155879
n-Propylbenzene	103-65-1	0.500	U	0.0993	0.500	1.00	1	10/22/2023 15:49	WG2155879
Styrene	100-42-5	0.500	U	0.118	0.500	1.00	1	10/22/2023 15:49	WG2155879
1,1,1,2-Tetrachloroethane	630-20-6	0.500	U	0.147	0.500	1.00	1	10/22/2023 15:49	WG2155879
1,1,2,2-Tetrachloroethane	79-34-5	0.500	U	0.133	0.500	1.00	1	10/22/2023 15:49	WG2155879
Tetrachloroethene	127-18-4	0.600	U	0.300	0.600	1.20	1	10/22/2023 15:49	WG2155879
Toluene	108-88-3	0.600	U	0.278	0.600	1.20	1	10/22/2023 15:49	WG2155879
1,2,3-Trichlorobenzene	87-61-6	0.500	U	0.230	0.500	1.00	1	10/22/2023 15:49	WG2155879
1,2,4-Trichlorobenzene	120-82-1	1.00	U	0.481	1.00	2.00	1	10/22/2023 15:49	WG2155879
1,2,3-Trimethylbenzene	526-73-8	0.500	U	0.104	0.500	1.00	1	10/22/2023 15:49	WG2155879
1,2,4-Trimethylbenzene	95-63-6	1.00	U	0.322	1.00	2.00	1	10/22/2023 15:49	WG2155879
1,3,5-Trimethylbenzene	108-67-8	0.500	U	0.104	0.500	1.00	1	10/22/2023 15:49	WG2155879
1,1,1-Trichloroethane	71-55-6	10.0	U	2.98	10.0	20.0	20	10/27/2023 01:30	WG2225572
1,1,2-Trichloroethane	79-00-5	0.500	U	0.158	0.500	1.00	1	10/22/2023 15:49	WG2155879
Trichloroethene	79-01-6	380		3.80	10.0	20.0	20	10/27/2023 01:30	WG2225572
Trichlorofluoromethane	75-69-4	0.872	J	0.160	2.00	5.00	1	10/22/2023 15:49	WG2155879
1,1,2-Trichlorotrifluoroethane	76-13-1	0.500	U	0.180	0.500	1.00	1	10/22/2023 15:49	WG2155879
1,2,3-Trichloropropane	96-18-4	1.00	U	0.237	1.00	2.50	1	10/22/2023 15:49	WG2155879
Vinyl chloride	75-01-4	0.500	U	0.234	0.500	1.00	1	10/22/2023 15:49	WG2155879
Xylenes, Total	1330-20-7	1.50	U	0.174	1.50	3.00	1	10/22/2023 15:49	WG2155879
(S) Toluene-d8	*2037-26-5*	*105*				*89.0-112*		*10/22/2023 15:49*	WG2155879
(S) Toluene-d8	*2037-26-5*	*109*				*89.0-112*		*10/27/2023 01:30*	WG2225572
(S) 4-Bromofluorobenzene	*460-00-4*	*94.0*				*85.0-114*		*10/22/2023 15:49*	WG2155879
(S) 4-Bromofluorobenzene	*460-00-4*	*102*				*85.0-114*		*10/27/2023 01:30*	WG2225572
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*104*				*81.0-118*		*10/22/2023 15:49*	WG2155879
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*99.9*				*81.0-118*		*10/27/2023 01:30*	WG2225572

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	C10-C25	453	B J J4	179	420	840	1.05	10/28/2023 23:49	WG2156720
(S) o-Terphenyl	*84-15-1*	*61.7*				*50.0-150*		*10/28/2023 23:49*	WG2156720

Sample Narrative:

L1667791-02 WG2156720: Duplicate Analysis performed due to QC failure. Results confirm; reporting in hold data

Additional Information - Results for field analyses are not accredited to ISO 17025

Analyte	Result	Units
Cooler#	green	
Cooler Temperature	4.0	Deg. C

Wet Chemistry by Method 2320 B-2011

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Alkalinity		988000		8450	10000	20000	1	10/23/2023 17:35	WG2156308
Alkalinity,Bicarbonate		988000		8450	10000	20000	1	10/23/2023 17:35	WG2156308
Alkalinity,Carbonate		10000	U	8450	10000	20000	1	10/23/2023 17:35	WG2156308
Alkalinity,Hydroxide		10000	U	8450	10000	20000	1	10/23/2023 17:35	WG2156308

Sample Narrative:

L1667791-03 WG2156308: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 351.2

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Kjeldahl Nitrogen, TKN	7727-37-9	846	J5	140	300	600	1	10/22/2023 22:37	WG2154036

Wet Chemistry by Method 353.2

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Nitrate-Nitrite	7727-37-9	100	U	50.0	100	200	1	10/20/2023 20:56	WG2154634

Wet Chemistry by Method 9056A

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Sulfate	14808-79-8	4690	J J6	594	2500	5000	1	10/25/2023 18:46	WG2156852

Metals (ICP) by Method 6010D

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Iron	7439-89-6	3840		20.5	50.0	100	1	10/24/2023 08:45	WG2153991
Manganese	7439-96-5	12900		4.28	25.0	50.0	5	10/24/2023 17:17	WG2153991

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Acetone	67-64-1	5.59		0.548	2.00	4.00	1	10/22/2023 07:12	WG2155682
Acrylonitrile	107-13-1	0.250	U	0.0760	0.250	0.500	1	10/22/2023 07:12	WG2155682
Benzene	71-43-2	1.52		0.0160	0.0500	0.100	1	10/22/2023 07:12	WG2155682
Bromobenzene	108-86-1	0.250	U	0.0420	0.250	0.500	1	10/22/2023 07:12	WG2155682
Bromodichloromethane	75-27-4	0.100	U	0.0315	0.100	0.200	1	10/22/2023 07:12	WG2155682
Bromochloromethane	74-97-5	0.100	J5 U	0.0452	0.100	0.200	1	10/22/2023 07:12	WG2155682
Bromoform	75-25-2	0.500	U	0.239	0.500	1.00	1	10/22/2023 07:12	WG2155682
Bromomethane	74-83-9	0.500	U	0.148	0.500	1.00	1	10/22/2023 07:12	WG2155682
n-Butylbenzene	104-51-8	0.500	U	0.154	0.500	1.00	1	10/22/2023 07:12	WG2155682
sec-Butylbenzene	135-98-8	0.344	J J5	0.101	0.250	0.500	1	10/22/2023 07:12	WG2155682
tert-Butylbenzene	98-06-6	0.861	J J5	0.0620	0.500	1.00	1	10/22/2023 07:12	WG2155682
Carbon tetrachloride	56-23-5	0.100	J5 U	0.0432	0.100	0.200	1	10/22/2023 07:12	WG2155682
Carbon disulfide	75-15-0	0.500	U	0.162	0.500	1.00	1	10/22/2023 07:12	WG2155682
Chlorobenzene	108-90-7	0.0500	J5 U	0.0229	0.0500	0.100	1	10/22/2023 07:12	WG2155682
Chlorodibromomethane	124-48-1	0.0500	U	0.0180	0.0500	0.100	1	10/22/2023 07:12	WG2155682

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Chloroethane	75-00-3	0.100	U	0.0432	0.100	0.200	1	10/22/2023 07:12	WG2155682
Chloroform	67-66-3	0.0500	J5 U	0.0166	0.0500	0.100	1	10/22/2023 07:12	WG2155682
Chloromethane	74-87-3	0.250	U	0.0556	0.250	0.500	1	10/22/2023 07:12	WG2155682
Cyclohexane	110-82-7	1.41	J5	0.0203	0.0500	0.100	1	10/22/2023 07:12	WG2155682
2-Chlorotoluene	95-49-8	0.100	J5 U	0.0368	0.100	0.200	1	10/22/2023 07:12	WG2155682
4-Chlorotoluene	106-43-4	0.100	J5 U	0.0452	0.100	0.200	1	10/22/2023 07:12	WG2155682
1,2-Dibromo-3-Chloropropane	96-12-8	0.500	U	0.204	0.500	1.00	1	10/22/2023 07:12	WG2155682
1,2-Dibromoethane	106-93-4	0.0500	U	0.0210	0.0500	0.100	1	10/22/2023 07:12	WG2155682
Dibromomethane	74-95-3	0.100	U	0.0400	0.100	0.200	1	10/22/2023 07:12	WG2155682
1,2-Dichlorobenzene	95-50-1	0.200	J5 U	0.0580	0.200	0.400	1	10/22/2023 07:12	WG2155682
1,3-Dichlorobenzene	541-73-1	0.200	J5 U	0.0680	0.200	0.400	1	10/22/2023 07:12	WG2155682
1,4-Dichlorobenzene	106-46-7	0.250	U	0.0788	0.250	0.500	1	10/22/2023 07:12	WG2155682
Dichlorodifluoromethane	75-71-8	0.100	U	0.0327	0.100	0.200	1	10/22/2023 07:12	WG2155682
1,1-Dichloroethane	75-34-3	0.0500	J5 U	0.0230	0.0500	0.100	1	10/22/2023 07:12	WG2155682
1,2-Dichloroethane	107-06-2	0.0500	U	0.0190	0.0500	0.100	1	10/22/2023 07:12	WG2155682
1,1-Dichloroethene	75-35-4	0.0500	J5 U	0.0200	0.0500	0.100	1	10/22/2023 07:12	WG2155682
cis-1,2-Dichloroethene	156-59-2	12.4		0.0276	0.0750	0.150	1	10/22/2023 07:12	WG2155682
trans-1,2-Dichloroethene	156-60-5	0.0850	J J5	0.0572	0.300	0.600	1	10/22/2023 07:12	WG2155682
1,2-Dichloropropane	78-87-5	0.200	U	0.0508	0.200	0.400	1	10/22/2023 07:12	WG2155682
1,1-Dichloropropene	563-58-6	0.100	J5 U	0.0280	0.100	0.200	1	10/22/2023 07:12	WG2155682
1,3-Dichloropropane	142-28-9	0.150	J5 U	0.0700	0.150	0.300	1	10/22/2023 07:12	WG2155682
cis-1,3-Dichloropropene	10061-01-5	0.100	U	0.0271	0.100	0.200	1	10/22/2023 07:12	WG2155682
trans-1,3-Dichloropropene	10061-02-6	0.150	U	0.0612	0.150	0.300	1	10/22/2023 07:12	WG2155682
2,2-Dichloropropane	594-20-7	0.100	U	0.0317	0.100	0.200	1	10/22/2023 07:12	WG2155682
Di-isopropyl ether	108-20-3	0.0500	J5 U	0.0140	0.0500	0.100	1	10/22/2023 07:12	WG2155682
Ethylbenzene	100-41-4	6.74		0.0212	0.0500	0.100	1	10/22/2023 07:12	WG2155682
Hexachloro-1,3-butadiene	87-68-3	2.00	U	0.508	2.00	4.00	1	10/22/2023 07:12	WG2155682
Isopropylbenzene	98-82-8	7.47		0.0345	1.00	2.00	1	10/22/2023 07:12	WG2155682
p-Isopropyltoluene	99-87-6	2.58	J5	0.0932	0.300	0.600	1	10/22/2023 07:12	WG2155682
2-Butanone (MEK)	78-93-3	2.00	J	0.500	1.00	2.00	1	10/22/2023 07:12	WG2155682
Methylene Chloride	75-09-2	0.750	U	0.266	0.750	1.50	1	10/22/2023 07:12	WG2155682
4-Methyl-2-pentanone (MIBK)	108-10-1	1.00	U	0.400	1.00	2.00	1	10/22/2023 07:12	WG2155682
Methyl tert-butyl ether	1634-04-4	0.0300	U	0.0118	0.0300	0.0600	1	10/22/2023 07:12	WG2155682
Naphthalene	91-20-3	50.7		0.125	0.250	0.500	1	10/22/2023 07:12	WG2155682
n-Propylbenzene	103-65-1	1.98	J5	0.0472	0.100	0.200	1	10/22/2023 07:12	WG2155682
Styrene	100-42-5	0.250	J5 U	0.109	0.250	0.500	1	10/22/2023 07:12	WG2155682
1,1,1,2-Tetrachloroethane	630-20-6	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 07:12	WG2155682
1,1,2,2-Tetrachloroethane	79-34-5	0.0500	U	0.0156	0.0500	0.100	1	10/22/2023 07:12	WG2155682
1,1,2-Trichlorotrifluoroethane	76-13-1	0.100	U	0.0270	0.100	0.200	1	10/22/2023 07:12	WG2155682
Tetrachloroethene	127-18-4	0.165		0.0280	0.0750	0.150	1	10/22/2023 07:12	WG2155682
Toluene	108-88-3	0.404	J5	0.0500	0.100	0.200	1	10/22/2023 07:12	WG2155682
1,2,3-Trichlorobenzene	87-61-6	0.250	J5 U	0.0250	0.250	0.500	1	10/22/2023 07:12	WG2155682
1,2,4-Trichlorobenzene	120-82-1	0.500	J5 U	0.193	0.500	1.00	1	10/22/2023 07:12	WG2155682
1,1,1-Trichloroethane	71-55-6	0.0500	U	0.0110	0.0500	0.100	1	10/22/2023 07:12	WG2155682
1,1,2-Trichloroethane	79-00-5	0.100	J5 U	0.0353	0.100	0.200	1	10/22/2023 07:12	WG2155682
Trichloroethene	79-01-6	4.21		0.0160	0.0400	0.0800	1	10/26/2023 23:17	WG2157275
Trichlorofluoromethane	75-69-4	0.0500	J5 U	0.0200	0.0500	0.100	1	10/22/2023 07:12	WG2155682
1,2,3-Trichloropropane	96-18-4	0.500	U	0.204	0.500	1.00	1	10/22/2023 07:12	WG2155682
1,2,4-Trimethylbenzene	95-63-6	0.531	J5	0.0464	0.100	0.200	1	10/22/2023 07:12	WG2155682
1,2,3-Trimethylbenzene	526-73-8	0.100	J5 U	0.0460	0.100	0.200	1	10/22/2023 07:12	WG2155682
1,3,5-Trimethylbenzene	108-67-8	0.100	J5 U	0.0432	0.100	0.200	1	10/22/2023 07:12	WG2155682
Vinyl chloride	75-01-4	0.137	J	0.0273	0.0750	0.150	1	10/22/2023 07:12	WG2155682
Vinyl acetate	108-05-4	0.300	U	0.141	0.300	0.600	1	10/26/2023 23:17	WG2157275
Xylenes, Total	1330-20-7	3.55	J5	0.191	0.400	0.800	1	10/22/2023 07:12	WG2155682
Ethyl Ether	60-29-7	0.0500	U	0.0170	0.0500	0.100	1	10/22/2023 07:12	WG2155682
Tetrahydrofuran	109-99-9	0.250	J6 U	0.0900	0.250	50.0	1	10/22/2023 07:12	WG2155682

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Iodomethane	74-88-4	0.500	U	0.242	0.500	1.00	1	10/22/2023 07:12	WG2155682
Allyl chloride	107-05-1	2.00	U	0.580	2.00	4.00	1	10/22/2023 07:12	WG2155682
trans-1,4-Dichloro-2-butene	110-57-6	0.200	C4 J3 U	0.0560	0.200	0.400	1	10/22/2023 07:12	WG2155682
(S) Toluene-d8	*2037-26-5*	*103*				*89.0-112*		*10/22/2023 07:12*	WG2155682
(S) Toluene-d8	*2037-26-5*	*105*				*89.0-112*		*10/26/2023 23:17*	WG2157275
(S) 4-Bromofluorobenzene	*460-00-4*	*105*				*85.0-114*		*10/22/2023 07:12*	WG2155682
(S) 4-Bromofluorobenzene	*460-00-4*	*104*				*85.0-114*		*10/26/2023 23:17*	WG2157275
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*101*				*81.0-118*		*10/22/2023 07:12*	WG2155682
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*96.6*				*81.0-118*		*10/26/2023 23:17*	WG2157275

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Acetone	67-64-1	25.0	U	11.3	25.0	50.0	1	10/22/2023 16:11	WG2155879
Acrolein	107-02-8	25.0	U	2.54	25.0	50.0	1	10/22/2023 16:11	WG2155879
Acrylonitrile	107-13-1	5.00	U	0.671	5.00	10.0	1	10/22/2023 16:11	WG2155879
Benzene	71-43-2	1.28		0.0941	0.500	1.00	1	10/22/2023 16:11	WG2155879
Bromobenzene	108-86-1	0.500	U	0.118	0.500	1.00	1	10/22/2023 16:11	WG2155879
Bromodichloromethane	75-27-4	0.500	U	0.136	0.500	1.00	1	10/22/2023 16:11	WG2155879
Bromoform	75-25-2	0.500	U	0.129	0.500	1.00	1	10/22/2023 16:11	WG2155879
Bromomethane	74-83-9	2.00	U	0.605	2.00	5.00	1	10/22/2023 16:11	WG2155879
n-Butylbenzene	104-51-8	0.500	J	0.157	0.500	1.00	1	10/22/2023 16:11	WG2155879
sec-Butylbenzene	135-98-8	0.571	J	0.125	0.500	1.00	1	10/22/2023 16:11	WG2155879
tert-Butylbenzene	98-06-6	0.959	J	0.127	0.500	1.00	1	10/22/2023 16:11	WG2155879
Carbon tetrachloride	56-23-5	0.500	U	0.128	0.500	1.00	1	10/22/2023 16:11	WG2155879
Chlorobenzene	108-90-7	0.500	U	0.116	0.500	1.00	1	10/22/2023 16:11	WG2155879
Chlorodibromomethane	124-48-1	0.500	U	0.140	0.500	1.00	1	10/22/2023 16:11	WG2155879
Chloroethane	75-00-3	2.00	U	0.192	2.00	5.00	1	10/22/2023 16:11	WG2155879
2-Chloroethyl vinyl ether	110-75-8	25.0	J3 J6 U	0.575	25.0	50.0	1	10/22/2023 16:11	WG2155879
Chloroform	67-66-3	2.00	U	0.111	2.00	5.00	1	10/22/2023 16:11	WG2155879
Chloromethane	74-87-3	2.00	U	0.960	2.00	4.00	1	10/22/2023 16:11	WG2155879
2-Chlorotoluene	95-49-8	0.500	U	0.106	0.500	1.00	1	10/22/2023 16:11	WG2155879
4-Chlorotoluene	106-43-4	0.500	U	0.114	0.500	1.00	1	10/22/2023 16:11	WG2155879
1,2-Dibromoethane	106-93-4	0.500	U	0.126	0.500	1.00	1	10/22/2023 16:11	WG2155879
1,2-Dibromo-3-Chloropropane	96-12-8	2.00	U	0.276	2.00	5.00	1	10/22/2023 16:11	WG2155879
Dibromomethane	74-95-3	0.500	U	0.122	0.500	1.00	1	10/22/2023 16:11	WG2155879
1,2-Dichlorobenzene	95-50-1	0.500	U	0.107	0.500	1.00	1	10/22/2023 16:11	WG2155879
1,3-Dichlorobenzene	541-73-1	0.500	U	0.110	0.500	1.00	1	10/22/2023 16:11	WG2155879
1,4-Dichlorobenzene	106-46-7	0.500	U	0.120	0.500	1.00	1	10/22/2023 16:11	WG2155879
Dichlorodifluoromethane	75-71-8	2.00	U	0.374	2.00	5.00	1	10/22/2023 16:11	WG2155879
1,1-Dichloroethane	75-34-3	0.500	U	0.100	0.500	1.00	1	10/22/2023 16:11	WG2155879
1,2-Dichloroethane	107-06-2	0.500	U	0.0819	0.500	1.00	1	10/22/2023 16:11	WG2155879
1,1-Dichloroethene	75-35-4	0.500	U	0.188	0.500	1.00	1	10/22/2023 16:11	WG2155879
cis-1,2-Dichloroethene	156-59-2	11.7		0.126	0.500	1.00	1	10/22/2023 16:11	WG2155879
trans-1,2-Dichloroethene	156-60-5	0.500	U	0.149	0.500	1.00	1	10/22/2023 16:11	WG2155879
1,2-Dichloropropane	78-87-5	0.500	U	0.149	0.500	1.00	1	10/22/2023 16:11	WG2155879
1,3-Dichloropropane	142-28-9	0.500	U	0.110	0.500	1.00	1	10/22/2023 16:11	WG2155879
2,2-Dichloropropane	594-20-7	0.500	U	0.161	0.500	1.00	1	10/26/2023 23:17	WG2225572
1,1-Dichloropropene	563-58-6	0.500	U	0.142	0.500	1.00	1	10/22/2023 16:11	WG2155879
cis-1,3-Dichloropropene	10061-01-5	0.500	U	0.111	0.500	1.00	1	10/22/2023 16:11	WG2155879
trans-1,3-Dichloropropene	10061-02-6	0.500	U	0.118	0.500	1.00	1	10/22/2023 16:11	WG2155879
Di-isopropyl ether	108-20-3	0.500	U	0.105	0.500	1.00	1	10/22/2023 16:11	WG2155879
Ethylbenzene	100-41-4	6.13		0.137	0.500	1.00	1	10/22/2023 16:11	WG2155879
Hexachloro-1,3-butadiene	87-68-3	0.750	U	0.337	0.750	1.50	1	10/26/2023 23:17	WG2225572
Isopropylbenzene	98-82-8	8.29	J6	0.105	0.500	1.00	1	10/22/2023 16:11	WG2155879
p-Isopropyltoluene	99-87-6	0.537	J	0.120	0.500	1.00	1	10/22/2023 16:11	WG2155879

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
2-Butanone (MEK)	78-93-3	1.94	J	1.19	5.00	10.0	1	10/22/2023 16:11	WG2155879
Methylene Chloride	75-09-2	2.00	U	0.430	2.00	5.00	1	10/22/2023 16:11	WG2155879
4-Methyl-2-pentanone (MIBK)	108-10-1	5.00	U	0.478	5.00	10.0	1	10/22/2023 16:11	WG2155879
Methyl tert-butyl ether	1634-04-4	0.500	U	0.101	0.500	1.00	1	10/22/2023 16:11	WG2155879
Naphthalene	91-20-3	41.7	V	1.00	2.00	5.00	1	10/22/2023 16:11	WG2155879
n-Propylbenzene	103-65-1	2.73		0.0993	0.500	1.00	1	10/22/2023 16:11	WG2155879
Styrene	100-42-5	0.500	U	0.118	0.500	1.00	1	10/22/2023 16:11	WG2155879
1,1,1,2-Tetrachloroethane	630-20-6	0.500	U	0.147	0.500	1.00	1	10/22/2023 16:11	WG2155879
1,1,2,2-Tetrachloroethane	79-34-5	0.500	U	0.133	0.500	1.00	1	10/22/2023 16:11	WG2155879
Tetrachloroethene	127-18-4	0.600	U	0.300	0.600	1.20	1	10/22/2023 16:11	WG2155879
Toluene	108-88-3	0.600	U	0.278	0.600	1.20	1	10/22/2023 16:11	WG2155879
1,2,3-Trichlorobenzene	87-61-6	0.500	U	0.230	0.500	1.00	1	10/22/2023 16:11	WG2155879
1,2,4-Trichlorobenzene	120-82-1	1.00	U	0.481	1.00	2.00	1	10/22/2023 16:11	WG2155879
1,2,3-Trimethylbenzene	526-73-8	0.171	J	0.104	0.500	1.00	1	10/22/2023 16:11	WG2155879
1,2,4-Trimethylbenzene	95-63-6	0.613	J	0.322	1.00	2.00	1	10/22/2023 16:11	WG2155879
1,3,5-Trimethylbenzene	108-67-8	0.689	J	0.104	0.500	1.00	1	10/22/2023 16:11	WG2155879
1,1,1-Trichloroethane	71-55-6	0.500	U	0.149	0.500	1.00	1	10/26/2023 23:17	WG2225572
1,1,2-Trichloroethane	79-00-5	0.500	U	0.158	0.500	1.00	1	10/22/2023 16:11	WG2155879
Trichloroethene	79-01-6	4.21		0.190	0.500	1.00	1	10/26/2023 23:17	WG2225572
Trichlorofluoromethane	75-69-4	2.00	U	0.160	2.00	5.00	1	10/22/2023 16:11	WG2155879
1,1,2-Trichlorotrifluoroethane	76-13-1	0.500	U	0.180	0.500	1.00	1	10/22/2023 16:11	WG2155879
1,2,3-Trichloropropane	96-18-4	1.00	U	0.237	1.00	2.50	1	10/22/2023 16:11	WG2155879
Vinyl chloride	75-01-4	0.500	U	0.234	0.500	1.00	1	10/22/2023 16:11	WG2155879
Xylenes, Total	1330-20-7	3.12		0.174	1.50	3.00	1	10/22/2023 16:11	WG2155879
(S) Toluene-d8	*2037-26-5*	*97.7*				*89.0-112*		*10/22/2023 16:11*	WG2155879
(S) Toluene-d8	*2037-26-5*	*105*				*89.0-112*		*10/26/2023 23:17*	WG2225572
(S) 4-Bromofluorobenzene	*460-00-4*	*99.1*				*85.0-114*		*10/22/2023 16:11*	WG2155879
(S) 4-Bromofluorobenzene	*460-00-4*	*104*				*85.0-114*		*10/26/2023 23:17*	WG2225572
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*104*				*81.0-118*		*10/22/2023 16:11*	WG2155879
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*96.6*				*81.0-118*		*10/26/2023 23:17*	WG2225572

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	C10-C25	7860	J4 J6	179	420	840	1.05	10/28/2023 20:27	WG2156720
(S) o-Terphenyl	*84-15-1*	*35.9*	J2			*50.0-150*		*10/28/2023 20:27*	WG2156720

Sample Narrative:

L1667791-03 WG2156720: Duplicate Analysis performed due to QC failure. Results confirm; reporting in hold data

Additional Information - Results for field analyses are not accredited to ISO 17025

Analyte	Result	Units
Cooler#	green	
Cooler Temperature	4.0	Deg. C

Wet Chemistry by Method 2320 B-2011

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Alkalinity		10000	U	8450	10000	20000	1	10/23/2023 17:39	WG2156308
Alkalinity,Bicarbonate		10000	U	8450	10000	20000	1	10/23/2023 17:39	WG2156308
Alkalinity,Carbonate		10000	U	8450	10000	20000	1	10/23/2023 17:39	WG2156308
Alkalinity,Hydroxide		10000	U	8450	10000	20000	1	10/23/2023 17:39	WG2156308

Sample Narrative:

L1667791-04 WG2156308: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 351.2

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Kjeldahl Nitrogen, TKN	7727-37-9	300	J5 U	140	300	600	1	10/25/2023 09:47	WG2155459

Sample Narrative:

L1667791-04 WG2155459: [MS failed due to sample matrix RPD<20]

Wet Chemistry by Method 353.2

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Nitrate-Nitrite	7727-37-9	100	U	50.0	100	200	1	10/20/2023 21:05	WG2154634

Wet Chemistry by Method 9056A

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Sulfate	14808-79-8	742	J	594	2500	5000	1	10/25/2023 19:46	WG2156852

Metals (ICP) by Method 6010D

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Iron	7439-89-6	50.0	U	20.5	50.0	100	1	10/24/2023 09:28	WG2153991
Manganese	7439-96-5	1.78	J	0.855	5.00	10.0	1	10/24/2023 09:28	WG2153991

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Acetone	67-64-1	1.21	J	0.548	2.00	4.00	1	10/22/2023 02:36	WG2155682
Acrylonitrile	107-13-1	0.250	U	0.0760	0.250	0.500	1	10/22/2023 02:36	WG2155682
Benzene	71-43-2	0.0860	J	0.0160	0.0500	0.100	1	10/22/2023 02:36	WG2155682
Bromobenzene	108-86-1	0.250	U	0.0420	0.250	0.500	1	10/22/2023 02:36	WG2155682
Bromodichloromethane	75-27-4	0.220		0.0315	0.100	0.200	1	10/22/2023 02:36	WG2155682
Bromochloromethane	74-97-5	0.100	U	0.0452	0.100	0.200	1	10/22/2023 02:36	WG2155682
Bromoform	75-25-2	0.500	U	0.239	0.500	1.00	1	10/22/2023 02:36	WG2155682
Bromomethane	74-83-9	0.500	U	0.148	0.500	1.00	1	10/22/2023 02:36	WG2155682
n-Butylbenzene	104-51-8	0.500	U	0.154	0.500	1.00	1	10/22/2023 02:36	WG2155682
sec-Butylbenzene	135-98-8	0.250	U	0.101	0.250	0.500	1	10/22/2023 02:36	WG2155682
tert-Butylbenzene	98-06-6	0.500	U	0.0620	0.500	1.00	1	10/22/2023 02:36	WG2155682
Carbon tetrachloride	56-23-5	0.100	U	0.0432	0.100	0.200	1	10/22/2023 02:36	WG2155682

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Carbon disulfide	75-15-0	0.244	J	0.162	0.500	1.00	1	10/22/2023 02:36	WG2155682
Chlorobenzene	108-90-7	0.0500	U	0.0229	0.0500	0.100	1	10/22/2023 02:36	WG2155682
Chlorodibromomethane	124-48-1	0.0500	U	0.0180	0.0500	0.100	1	10/22/2023 02:36	WG2155682
Chloroethane	75-00-3	0.100	U	0.0432	0.100	0.200	1	10/22/2023 02:36	WG2155682
Chloroform	67-66-3	2.79		0.0166	0.0500	0.100	1	10/22/2023 02:36	WG2155682
Chloromethane	74-87-3	0.250	U	0.0556	0.250	0.500	1	10/22/2023 02:36	WG2155682
Cyclohexane	110-82-7	0.0500	U	0.0203	0.0500	0.100	1	10/22/2023 02:36	WG2155682
2-Chlorotoluene	95-49-8	0.100	U	0.0368	0.100	0.200	1	10/22/2023 02:36	WG2155682
4-Chlorotoluene	106-43-4	0.100	U	0.0452	0.100	0.200	1	10/22/2023 02:36	WG2155682
1,2-Dibromo-3-Chloropropane	96-12-8	0.500	U	0.204	0.500	1.00	1	10/22/2023 02:36	WG2155682
1,2-Dibromoethane	106-93-4	0.0500	U	0.0210	0.0500	0.100	1	10/22/2023 02:36	WG2155682
Dibromomethane	74-95-3	0.100	U	0.0400	0.100	0.200	1	10/22/2023 02:36	WG2155682
1,2-Dichlorobenzene	95-50-1	0.200	U	0.0580	0.200	0.400	1	10/22/2023 02:36	WG2155682
1,3-Dichlorobenzene	541-73-1	0.200	U	0.0680	0.200	0.400	1	10/22/2023 02:36	WG2155682
1,4-Dichlorobenzene	106-46-7	0.250	U	0.0788	0.250	0.500	1	10/22/2023 02:36	WG2155682
Dichlorodifluoromethane	75-71-8	0.100	U	0.0327	0.100	0.200	1	10/22/2023 02:36	WG2155682
1,1-Dichloroethane	75-34-3	0.0500	U	0.0230	0.0500	0.100	1	10/22/2023 02:36	WG2155682
1,2-Dichloroethane	107-06-2	0.0500	U	0.0190	0.0500	0.100	1	10/22/2023 02:36	WG2155682
1,1-Dichloroethene	75-35-4	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 02:36	WG2155682
cis-1,2-Dichloroethene	156-59-2	0.0750	U	0.0276	0.0750	0.150	1	10/22/2023 02:36	WG2155682
trans-1,2-Dichloroethene	156-60-5	0.300	U	0.0572	0.300	0.600	1	10/22/2023 02:36	WG2155682
1,2-Dichloropropane	78-87-5	0.200	U	0.0508	0.200	0.400	1	10/22/2023 02:36	WG2155682
1,1-Dichloropropene	563-58-6	0.100	U	0.0280	0.100	0.200	1	10/22/2023 02:36	WG2155682
1,3-Dichloropropane	142-28-9	0.150	U	0.0700	0.150	0.300	1	10/22/2023 02:36	WG2155682
cis-1,3-Dichloropropene	10061-01-5	0.100	U	0.0271	0.100	0.200	1	10/22/2023 02:36	WG2155682
trans-1,3-Dichloropropene	10061-02-6	0.150	U	0.0612	0.150	0.300	1	10/22/2023 02:36	WG2155682
2,2-Dichloropropane	594-20-7	0.100	U	0.0317	0.100	0.200	1	10/22/2023 02:36	WG2155682
Di-isopropyl ether	108-20-3	0.0500	U	0.0140	0.0500	0.100	1	10/22/2023 02:36	WG2155682
Ethylbenzene	100-41-4	0.0920	J	0.0212	0.0500	0.100	1	10/22/2023 02:36	WG2155682
Hexachloro-1,3-butadiene	87-68-3	2.00	U	0.508	2.00	4.00	1	10/22/2023 02:36	WG2155682
Isopropylbenzene	98-82-8	1.00	U	0.0345	1.00	2.00	1	10/22/2023 02:36	WG2155682
p-Isopropyltoluene	99-87-6	0.300	U	0.0932	0.300	0.600	1	10/22/2023 02:36	WG2155682
2-Butanone (MEK)	78-93-3	1.00	U	0.500	1.00	2.00	1	10/22/2023 02:36	WG2155682
Methylene Chloride	75-09-2	0.750	U	0.266	0.750	1.50	1	10/22/2023 02:36	WG2155682
4-Methyl-2-pentanone (MIBK)	108-10-1	1.00	U	0.400	1.00	2.00	1	10/22/2023 02:36	WG2155682
Methyl tert-butyl ether	1634-04-4	0.0300	U	0.0118	0.0300	0.0600	1	10/22/2023 02:36	WG2155682
Naphthalene	91-20-3	0.250	U	0.125	0.250	0.500	1	10/22/2023 02:36	WG2155682
n-Propylbenzene	103-65-1	0.100	U	0.0472	0.100	0.200	1	10/22/2023 02:36	WG2155682
Styrene	100-42-5	0.250	U	0.109	0.250	0.500	1	10/22/2023 02:36	WG2155682
1,1,1,2-Tetrachloroethane	630-20-6	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 02:36	WG2155682
1,1,2,2-Tetrachloroethane	79-34-5	0.0500	U	0.0156	0.0500	0.100	1	10/22/2023 02:36	WG2155682
1,1,2-Trichlorotrifluoroethane	76-13-1	0.100	U	0.0270	0.100	0.200	1	10/22/2023 02:36	WG2155682
Tetrachloroethene	127-18-4	0.0750	U	0.0280	0.0750	0.150	1	10/22/2023 02:36	WG2155682
Toluene	108-88-3	1.30		0.0500	0.100	0.200	1	10/22/2023 02:36	WG2155682
1,2,3-Trichlorobenzene	87-61-6	0.250	U	0.0250	0.250	0.500	1	10/22/2023 02:36	WG2155682
1,2,4-Trichlorobenzene	120-82-1	0.500	U	0.193	0.500	1.00	1	10/22/2023 02:36	WG2155682
1,1,1-Trichloroethane	71-55-6	0.0500	U	0.0110	0.0500	0.100	1	10/22/2023 02:36	WG2155682
1,1,2-Trichloroethane	79-00-5	0.100	U	0.0353	0.100	0.200	1	10/22/2023 02:36	WG2155682
Trichloroethene	79-01-6	0.0400	U	0.0160	0.0400	0.0800	1	10/22/2023 02:36	WG2155682
Trichlorofluoromethane	75-69-4	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 02:36	WG2155682
1,2,3-Trichloropropane	96-18-4	0.500	U	0.204	0.500	1.00	1	10/22/2023 02:36	WG2155682
1,2,4-Trimethylbenzene	95-63-6	0.0590	J	0.0464	0.100	0.200	1	10/22/2023 02:36	WG2155682
1,2,3-Trimethylbenzene	526-73-8	0.100	U	0.0460	0.100	0.200	1	10/22/2023 02:36	WG2155682
1,3,5-Trimethylbenzene	108-67-8	0.100	U	0.0432	0.100	0.200	1	10/22/2023 02:36	WG2155682
Vinyl chloride	75-01-4	0.0750	U	0.0273	0.0750	0.150	1	10/22/2023 02:36	WG2155682
Vinyl acetate	108-05-4	0.300	U	0.141	0.300	0.600	1	10/26/2023 23:36	WG2157275

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Xylenes, Total	1330-20-7	0.602	J	0.191	0.400	0.800	1	10/22/2023 02:36	WG2155682
Ethyl Ether	60-29-7	0.0500	U	0.0170	0.0500	0.100	1	10/22/2023 02:36	WG2155682
Tetrahydrofuran	109-99-9	0.250	U	0.0900	0.250	50.0	1	10/22/2023 02:36	WG2155682
Iodomethane	74-88-4	0.500	U	0.242	0.500	1.00	1	10/22/2023 02:36	WG2155682
Allyl chloride	107-05-1	2.00	U	0.580	2.00	4.00	1	10/22/2023 02:36	WG2155682
trans-1,4-Dichloro-2-butene	110-57-6	0.200	C4 U	0.0560	0.200	0.400	1	10/22/2023 02:36	WG2155682
(S) Toluene-d8	*2037-26-5*	*101*				*89.0-112*		*10/22/2023 02:36*	WG2155682
(S) Toluene-d8	*2037-26-5*	*109*				*89.0-112*		*10/26/2023 23:36*	WG2157275
(S) 4-Bromofluorobenzene	*460-00-4*	*99.9*				*85.0-114*		*10/22/2023 02:36*	WG2155682
(S) 4-Bromofluorobenzene	*460-00-4*	*102*				*85.0-114*		*10/26/2023 23:36*	WG2157275
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*96.8*				*81.0-118*		*10/22/2023 02:36*	WG2155682
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*97.4*				*81.0-118*		*10/26/2023 23:36*	WG2157275

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Acetone	67-64-1	25.0	U	11.3	25.0	50.0	1	10/22/2023 12:32	WG2155879
Acrolein	107-02-8	25.0	U	2.54	25.0	50.0	1	10/22/2023 12:32	WG2155879
Acrylonitrile	107-13-1	5.00	U	0.671	5.00	10.0	1	10/22/2023 12:32	WG2155879
Benzene	71-43-2	0.114	J	0.0941	0.500	1.00	1	10/22/2023 12:32	WG2155879
Bromobenzene	108-86-1	0.500	U	0.118	0.500	1.00	1	10/22/2023 12:32	WG2155879
Bromodichloromethane	75-27-4	0.239	J	0.136	0.500	1.00	1	10/22/2023 12:32	WG2155879
Bromoform	75-25-2	0.500	U	0.129	0.500	1.00	1	10/22/2023 12:32	WG2155879
Bromomethane	74-83-9	2.00	U	0.605	2.00	5.00	1	10/22/2023 12:32	WG2155879
n-Butylbenzene	104-51-8	0.500	U	0.157	0.500	1.00	1	10/22/2023 12:32	WG2155879
sec-Butylbenzene	135-98-8	0.500	U	0.125	0.500	1.00	1	10/22/2023 12:32	WG2155879
tert-Butylbenzene	98-06-6	0.500	U	0.127	0.500	1.00	1	10/22/2023 12:32	WG2155879
Carbon tetrachloride	56-23-5	0.500	U	0.128	0.500	1.00	1	10/22/2023 12:32	WG2155879
Chlorobenzene	108-90-7	0.500	U	0.116	0.500	1.00	1	10/22/2023 12:32	WG2155879
Chlorodibromomethane	124-48-1	0.500	U	0.140	0.500	1.00	1	10/22/2023 12:32	WG2155879
Chloroethane	75-00-3	2.00	U	0.192	2.00	5.00	1	10/22/2023 12:32	WG2155879
2-Chloroethyl vinyl ether	110-75-8	25.0	U	0.575	25.0	50.0	1	10/22/2023 12:32	WG2155879
Chloroform	67-66-3	2.50	J	0.111	2.00	5.00	1	10/22/2023 12:32	WG2155879
Chloromethane	74-87-3	2.00	U	0.960	2.00	4.00	1	10/22/2023 12:32	WG2155879
2-Chlorotoluene	95-49-8	0.500	U	0.106	0.500	1.00	1	10/22/2023 12:32	WG2155879
4-Chlorotoluene	106-43-4	0.500	U	0.114	0.500	1.00	1	10/22/2023 12:32	WG2155879
1,2-Dibromoethane	106-93-4	0.500	U	0.126	0.500	1.00	1	10/22/2023 12:32	WG2155879
1,2-Dibromo-3-Chloropropane	96-12-8	2.00	U	0.276	2.00	5.00	1	10/22/2023 12:32	WG2155879
Dibromomethane	74-95-3	0.500	U	0.122	0.500	1.00	1	10/22/2023 12:32	WG2155879
1,2-Dichlorobenzene	95-50-1	0.500	U	0.107	0.500	1.00	1	10/22/2023 12:32	WG2155879
1,3-Dichlorobenzene	541-73-1	0.500	U	0.110	0.500	1.00	1	10/22/2023 12:32	WG2155879
1,4-Dichlorobenzene	106-46-7	0.500	U	0.120	0.500	1.00	1	10/22/2023 12:32	WG2155879
Dichlorodifluoromethane	75-71-8	2.00	U	0.374	2.00	5.00	1	10/22/2023 12:32	WG2155879
1,1-Dichloroethane	75-34-3	0.158	J	0.100	0.500	1.00	1	10/22/2023 12:32	WG2155879
1,2-Dichloroethane	107-06-2	0.500	U	0.0819	0.500	1.00	1	10/22/2023 12:32	WG2155879
1,1-Dichloroethene	75-35-4	0.500	U	0.188	0.500	1.00	1	10/22/2023 12:32	WG2155879
cis-1,2-Dichloroethene	156-59-2	0.500	U	0.126	0.500	1.00	1	10/22/2023 12:32	WG2155879
trans-1,2-Dichloroethene	156-60-5	0.500	U	0.149	0.500	1.00	1	10/22/2023 12:32	WG2155879
1,2-Dichloropropane	78-87-5	0.500	U	0.149	0.500	1.00	1	10/22/2023 12:32	WG2155879
1,3-Dichloropropane	142-28-9	0.500	U	0.110	0.500	1.00	1	10/22/2023 12:32	WG2155879
2,2-Dichloropropane	594-20-7	0.500	U	0.161	0.500	1.00	1	10/22/2023 02:36	WG2225461
1,1-Dichloropropene	563-58-6	0.500	U	0.142	0.500	1.00	1	10/22/2023 12:32	WG2155879
cis-1,3-Dichloropropene	10061-01-5	0.500	U	0.111	0.500	1.00	1	10/22/2023 12:32	WG2155879
trans-1,3-Dichloropropene	10061-02-6	0.500	U	0.118	0.500	1.00	1	10/22/2023 12:32	WG2155879
Di-isopropyl ether	108-20-3	0.500	U	0.105	0.500	1.00	1	10/22/2023 12:32	WG2155879
Ethylbenzene	100-41-4	0.500	U	0.137	0.500	1.00	1	10/22/2023 12:32	WG2155879

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Hexachloro-1,3-butadiene	87-68-3	0.750	U	0.337	0.750	1.50	1	10/22/2023 02:36	WG2225461
Isopropylbenzene	98-82-8	0.500	U	0.105	0.500	1.00	1	10/22/2023 12:32	WG2155879
p-Isopropyltoluene	99-87-6	0.500	U	0.120	0.500	1.00	1	10/22/2023 12:32	WG2155879
2-Butanone (MEK)	78-93-3	5.00	U	1.19	5.00	10.0	1	10/22/2023 12:32	WG2155879
Methylene Chloride	75-09-2	2.00	U	0.430	2.00	5.00	1	10/22/2023 12:32	WG2155879
4-Methyl-2-pentanone (MIBK)	108-10-1	5.00	U	0.478	5.00	10.0	1	10/22/2023 12:32	WG2155879
Methyl tert-butyl ether	1634-04-4	0.500	U	0.101	0.500	1.00	1	10/22/2023 12:32	WG2155879
Naphthalene	91-20-3	2.00	U	1.00	2.00	5.00	1	10/22/2023 12:32	WG2155879
n-Propylbenzene	103-65-1	0.500	U	0.0993	0.500	1.00	1	10/22/2023 12:32	WG2155879
Styrene	100-42-5	0.500	U	0.118	0.500	1.00	1	10/22/2023 12:32	WG2155879
1,1,1,2-Tetrachloroethane	630-20-6	0.500	U	0.147	0.500	1.00	1	10/22/2023 12:32	WG2155879
1,1,2,2-Tetrachloroethane	79-34-5	0.500	U	0.133	0.500	1.00	1	10/22/2023 12:32	WG2155879
Tetrachloroethene	127-18-4	0.600	U	0.300	0.600	1.20	1	10/22/2023 12:32	WG2155879
Toluene	108-88-3	1.28		0.278	0.600	1.20	1	10/22/2023 12:32	WG2155879
1,2,3-Trichlorobenzene	87-61-6	0.500	U	0.230	0.500	1.00	1	10/22/2023 12:32	WG2155879
1,2,4-Trichlorobenzene	120-82-1	1.00	U	0.481	1.00	2.00	1	10/22/2023 12:32	WG2155879
1,2,3-Trimethylbenzene	526-73-8	0.500	U	0.104	0.500	1.00	1	10/22/2023 12:32	WG2155879
1,2,4-Trimethylbenzene	95-63-6	1.00	U	0.322	1.00	2.00	1	10/22/2023 12:32	WG2155879
1,3,5-Trimethylbenzene	108-67-8	0.500	U	0.104	0.500	1.00	1	10/22/2023 12:32	WG2155879
1,1,1-Trichloroethane	71-55-6	0.500	U	0.149	0.500	1.00	1	10/22/2023 02:36	WG2225461
1,1,2-Trichloroethane	79-00-5	0.500	U	0.158	0.500	1.00	1	10/22/2023 12:32	WG2155879
Trichloroethene	79-01-6	0.500	U	0.190	0.500	1.00	1	10/22/2023 12:32	WG2155879
Trichlorofluoromethane	75-69-4	2.00	U	0.160	2.00	5.00	1	10/22/2023 12:32	WG2155879
1,1,2-Trichlorotrifluoroethane	76-13-1	0.500	U	0.180	0.500	1.00	1	10/22/2023 12:32	WG2155879
1,2,3-Trichloropropane	96-18-4	1.00	U	0.237	1.00	2.50	1	10/22/2023 12:32	WG2155879
Vinyl chloride	75-01-4	0.500	U	0.234	0.500	1.00	1	10/22/2023 12:32	WG2155879
Xylenes, Total	1330-20-7	0.547	J	0.174	1.50	3.00	1	10/22/2023 12:32	WG2155879
(S) Toluene-d8	*2037-26-5*	*104*				*89.0-112*		*10/22/2023 12:32*	WG2155879
(S) Toluene-d8	*2037-26-5*	*101*				*89.0-112*		*10/22/2023 02:36*	WG2225461
(S) 4-Bromofluorobenzene	*460-00-4*	*95.9*				*85.0-114*		*10/22/2023 12:32*	WG2155879
(S) 4-Bromofluorobenzene	*460-00-4*	*99.9*				*85.0-114*		*10/22/2023 02:36*	WG2225461
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*104*				*81.0-118*		*10/22/2023 12:32*	WG2155879
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*96.8*				*81.0-118*		*10/22/2023 02:36*	WG2225461

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	C10-C25	423	B J J4	170	400	800	1	10/29/2023 00:09	WG2156720
(S) o-Terphenyl	*84-15-1*	*75.7*				*50.0-150*		*10/29/2023 00:09*	WG2156720

Sample Narrative:

L1667791-04 WG2156720: Duplicate Analysis performed due to QC failure. Results confirm; reporting in hold data

Additional Information - Results for field analyses are not accredited to ISO 17025

Analyte	Result	Units
Cooler#	green	
Cooler Temperature	4.0	Deg. C

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Acetone	67-64-1	2.00	U	0.548	2.00	4.00	1	10/22/2023 02:56	WG2155682
Acrylonitrile	107-13-1	0.250	U	0.0760	0.250	0.500	1	10/22/2023 02:56	WG2155682
Benzene	71-43-2	0.0500	U	0.0160	0.0500	0.100	1	10/22/2023 02:56	WG2155682
Bromobenzene	108-86-1	0.250	U	0.0420	0.250	0.500	1	10/22/2023 02:56	WG2155682
Bromodichloromethane	75-27-4	0.100	U	0.0315	0.100	0.200	1	10/22/2023 02:56	WG2155682
Bromochloromethane	74-97-5	0.100	U	0.0452	0.100	0.200	1	10/22/2023 02:56	WG2155682
Bromoform	75-25-2	0.500	U	0.239	0.500	1.00	1	10/22/2023 02:56	WG2155682
Bromomethane	74-83-9	0.500	U	0.148	0.500	1.00	1	10/22/2023 02:56	WG2155682
n-Butylbenzene	104-51-8	0.500	U	0.154	0.500	1.00	1	10/22/2023 02:56	WG2155682
sec-Butylbenzene	135-98-8	0.250	U	0.101	0.250	0.500	1	10/22/2023 02:56	WG2155682
tert-Butylbenzene	98-06-6	0.500	U	0.0620	0.500	1.00	1	10/22/2023 02:56	WG2155682
Carbon tetrachloride	56-23-5	0.100	U	0.0432	0.100	0.200	1	10/22/2023 02:56	WG2155682
Carbon disulfide	75-15-0	0.500	U	0.162	0.500	1.00	1	10/22/2023 02:56	WG2155682
Chlorobenzene	108-90-7	0.0500	U	0.0229	0.0500	0.100	1	10/22/2023 02:56	WG2155682
Chlorodibromomethane	124-48-1	0.0500	U	0.0180	0.0500	0.100	1	10/22/2023 02:56	WG2155682
Chloroethane	75-00-3	0.100	U	0.0432	0.100	0.200	1	10/22/2023 02:56	WG2155682
Chloroform	67-66-3	0.0500	U	0.0166	0.0500	0.100	1	10/22/2023 02:56	WG2155682
Chloromethane	74-87-3	0.250	U	0.0556	0.250	0.500	1	10/22/2023 02:56	WG2155682
Cyclohexane	110-82-7	0.0500	U	0.0203	0.0500	0.100	1	10/22/2023 02:56	WG2155682
2-Chlorotoluene	95-49-8	0.100	U	0.0368	0.100	0.200	1	10/22/2023 02:56	WG2155682
4-Chlorotoluene	106-43-4	0.100	U	0.0452	0.100	0.200	1	10/22/2023 02:56	WG2155682
1,2-Dibromo-3-Chloropropane	96-12-8	0.500	U	0.204	0.500	1.00	1	10/22/2023 02:56	WG2155682
1,2-Dibromoethane	106-93-4	0.0500	U	0.0210	0.0500	0.100	1	10/22/2023 02:56	WG2155682
Dibromomethane	74-95-3	0.100	U	0.0400	0.100	0.200	1	10/22/2023 02:56	WG2155682
1,2-Dichlorobenzene	95-50-1	0.200	U	0.0580	0.200	0.400	1	10/22/2023 02:56	WG2155682
1,3-Dichlorobenzene	541-73-1	0.200	U	0.0680	0.200	0.400	1	10/22/2023 02:56	WG2155682
1,4-Dichlorobenzene	106-46-7	0.250	U	0.0788	0.250	0.500	1	10/22/2023 02:56	WG2155682
Dichlorodifluoromethane	75-71-8	0.100	U	0.0327	0.100	0.200	1	10/22/2023 02:56	WG2155682
1,1-Dichloroethane	75-34-3	0.0500	U	0.0230	0.0500	0.100	1	10/22/2023 02:56	WG2155682
1,2-Dichloroethane	107-06-2	0.0500	U	0.0190	0.0500	0.100	1	10/22/2023 02:56	WG2155682
1,1-Dichloroethene	75-35-4	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 02:56	WG2155682
cis-1,2-Dichloroethene	156-59-2	0.0750	U	0.0276	0.0750	0.150	1	10/22/2023 02:56	WG2155682
trans-1,2-Dichloroethene	156-60-5	0.300	U	0.0572	0.300	0.600	1	10/22/2023 02:56	WG2155682
1,2-Dichloropropane	78-87-5	0.200	U	0.0508	0.200	0.400	1	10/22/2023 02:56	WG2155682
1,1-Dichloropropene	563-58-6	0.100	U	0.0280	0.100	0.200	1	10/22/2023 02:56	WG2155682
1,3-Dichloropropane	142-28-9	0.150	U	0.0700	0.150	0.300	1	10/22/2023 02:56	WG2155682
cis-1,3-Dichloropropene	10061-01-5	0.100	U	0.0271	0.100	0.200	1	10/22/2023 02:56	WG2155682
trans-1,3-Dichloropropene	10061-02-6	0.150	U	0.0612	0.150	0.300	1	10/22/2023 02:56	WG2155682
2,2-Dichloropropane	594-20-7	0.100	U	0.0317	0.100	0.200	1	10/22/2023 02:56	WG2155682
Di-isopropyl ether	108-20-3	0.0500	U	0.0140	0.0500	0.100	1	10/22/2023 02:56	WG2155682
Ethylbenzene	100-41-4	0.0500	U	0.0212	0.0500	0.100	1	10/22/2023 02:56	WG2155682
Hexachloro-1,3-butadiene	87-68-3	2.00	U	0.508	2.00	4.00	1	10/22/2023 02:56	WG2155682
Isopropylbenzene	98-82-8	1.00	U	0.0345	1.00	2.00	1	10/22/2023 02:56	WG2155682
p-Isopropyltoluene	99-87-6	0.300	U	0.0932	0.300	0.600	1	10/22/2023 02:56	WG2155682
2-Butanone (MEK)	78-93-3	1.00	U	0.500	1.00	2.00	1	10/22/2023 02:56	WG2155682
Methylene Chloride	75-09-2	0.750	U	0.266	0.750	1.50	1	10/22/2023 02:56	WG2155682
4-Methyl-2-pentanone (MIBK)	108-10-1	1.00	U	0.400	1.00	2.00	1	10/22/2023 02:56	WG2155682
Methyl tert-butyl ether	1634-04-4	0.0300	U	0.0118	0.0300	0.0600	1	10/22/2023 02:56	WG2155682
Naphthalene	91-20-3	0.250	U	0.125	0.250	0.500	1	10/22/2023 02:56	WG2155682

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
n-Propylbenzene	103-65-1	0.100	U	0.0472	0.100	0.200	1	10/22/2023 02:56	WG2155682
Styrene	100-42-5	0.250	U	0.109	0.250	0.500	1	10/22/2023 02:56	WG2155682
1,1,1,2-Tetrachloroethane	630-20-6	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 02:56	WG2155682
1,1,2,2-Tetrachloroethane	79-34-5	0.0500	U	0.0156	0.0500	0.100	1	10/22/2023 02:56	WG2155682
1,1,2-Trichlorotrifluoroethane	76-13-1	0.100	U	0.0270	0.100	0.200	1	10/22/2023 02:56	WG2155682
Tetrachloroethene	127-18-4	0.0750	U	0.0280	0.0750	0.150	1	10/22/2023 02:56	WG2155682
Toluene	108-88-3	0.0650	J	0.0500	0.100	0.200	1	10/22/2023 02:56	WG2155682
1,2,3-Trichlorobenzene	87-61-6	0.250	U	0.0250	0.250	0.500	1	10/22/2023 02:56	WG2155682
1,2,4-Trichlorobenzene	120-82-1	0.500	U	0.193	0.500	1.00	1	10/22/2023 02:56	WG2155682
1,1,1-Trichloroethane	71-55-6	0.0500	U	0.0110	0.0500	0.100	1	10/22/2023 02:56	WG2155682
1,1,2-Trichloroethane	79-00-5	0.100	U	0.0353	0.100	0.200	1	10/22/2023 02:56	WG2155682
Trichloroethene	79-01-6	0.0400	U	0.0160	0.0400	0.0800	1	10/22/2023 02:56	WG2155682
Trichlorofluoromethane	75-69-4	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 02:56	WG2155682
1,2,3-Trichloropropane	96-18-4	0.500	U	0.204	0.500	1.00	1	10/22/2023 02:56	WG2155682
1,2,4-Trimethylbenzene	95-63-6	0.100	U	0.0464	0.100	0.200	1	10/22/2023 02:56	WG2155682
1,2,3-Trimethylbenzene	526-73-8	0.100	U	0.0460	0.100	0.200	1	10/22/2023 02:56	WG2155682
1,3,5-Trimethylbenzene	108-67-8	0.100	U	0.0432	0.100	0.200	1	10/22/2023 02:56	WG2155682
Vinyl chloride	75-01-4	0.0750	U	0.0273	0.0750	0.150	1	10/22/2023 02:56	WG2155682
Vinyl acetate	108-05-4	0.300	U	0.141	0.300	0.600	1	10/26/2023 19:29	WG2157275
Xylenes, Total	1330-20-7	0.400	U	0.191	0.400	0.800	1	10/22/2023 02:56	WG2155682
Ethyl Ether	60-29-7	0.0500	U	0.0170	0.0500	0.100	1	10/22/2023 02:56	WG2155682
Tetrahydrofuran	109-99-9	0.250	U	0.0900	0.250	50.0	1	10/22/2023 02:56	WG2155682
Iodomethane	74-88-4	0.500	U	0.242	0.500	1.00	1	10/22/2023 02:56	WG2155682
Allyl chloride	107-05-1	2.00	U	0.580	2.00	4.00	1	10/22/2023 02:56	WG2155682
trans-1,4-Dichloro-2-butene	110-57-6	0.200	C4 U	0.0560	0.200	0.400	1	10/22/2023 02:56	WG2155682
(S) Toluene-d8	*2037-26-5*	*103*				*89.0-112*		*10/22/2023 02:56*	WG2155682
(S) Toluene-d8	*2037-26-5*	*109*				*89.0-112*		*10/26/2023 19:29*	WG2157275
(S) 4-Bromofluorobenzene	*460-00-4*	*101*				*85.0-114*		*10/22/2023 02:56*	WG2155682
(S) 4-Bromofluorobenzene	*460-00-4*	*107*				*85.0-114*		*10/26/2023 19:29*	WG2157275
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*92.3*				*81.0-118*		*10/22/2023 02:56*	WG2155682
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*93.2*				*81.0-118*		*10/26/2023 19:29*	WG2157275

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Acetone	67-64-1	25.0	U	11.3	25.0	50.0	1	10/22/2023 12:54	WG2155879
Acrolein	107-02-8	25.0	U	2.54	25.0	50.0	1	10/22/2023 12:54	WG2155879
Acrylonitrile	107-13-1	5.00	U	0.671	5.00	10.0	1	10/22/2023 12:54	WG2155879
Benzene	71-43-2	0.500	U	0.0941	0.500	1.00	1	10/22/2023 12:54	WG2155879
Bromobenzene	108-86-1	0.500	U	0.118	0.500	1.00	1	10/22/2023 12:54	WG2155879
Bromodichloromethane	75-27-4	0.500	U	0.136	0.500	1.00	1	10/22/2023 12:54	WG2155879
Bromoform	75-25-2	0.500	U	0.129	0.500	1.00	1	10/22/2023 12:54	WG2155879
Bromomethane	74-83-9	2.00	U	0.605	2.00	5.00	1	10/22/2023 12:54	WG2155879
n-Butylbenzene	104-51-8	0.500	U	0.157	0.500	1.00	1	10/22/2023 12:54	WG2155879
sec-Butylbenzene	135-98-8	0.500	U	0.125	0.500	1.00	1	10/22/2023 12:54	WG2155879
tert-Butylbenzene	98-06-6	0.500	U	0.127	0.500	1.00	1	10/22/2023 12:54	WG2155879
Carbon tetrachloride	56-23-5	0.500	U	0.128	0.500	1.00	1	10/22/2023 12:54	WG2155879
Chlorobenzene	108-90-7	0.500	U	0.116	0.500	1.00	1	10/22/2023 12:54	WG2155879
Chlorodibromomethane	124-48-1	0.500	U	0.140	0.500	1.00	1	10/22/2023 12:54	WG2155879
Chloroethane	75-00-3	2.00	U	0.192	2.00	5.00	1	10/22/2023 12:54	WG2155879
2-Chloroethyl vinyl ether	110-75-8	25.0	U	0.575	25.0	50.0	1	10/22/2023 12:54	WG2155879
Chloroform	67-66-3	2.00	U	0.111	2.00	5.00	1	10/22/2023 12:54	WG2155879
Chloromethane	74-87-3	2.00	U	0.960	2.00	4.00	1	10/22/2023 12:54	WG2155879
2-Chlorotoluene	95-49-8	0.500	U	0.106	0.500	1.00	1	10/22/2023 12:54	WG2155879
4-Chlorotoluene	106-43-4	0.500	U	0.114	0.500	1.00	1	10/22/2023 12:54	WG2155879
1,2-Dibromoethane	106-93-4	0.500	U	0.126	0.500	1.00	1	10/22/2023 12:54	WG2155879

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
1,2-Dibromo-3-Chloropropane	96-12-8	2.00	U	0.276	2.00	5.00	1	10/22/2023 12:54	WG2155879
Dibromomethane	74-95-3	0.500	U	0.122	0.500	1.00	1	10/22/2023 12:54	WG2155879
1,2-Dichlorobenzene	95-50-1	0.500	U	0.107	0.500	1.00	1	10/22/2023 12:54	WG2155879
1,3-Dichlorobenzene	541-73-1	0.500	U	0.110	0.500	1.00	1	10/22/2023 12:54	WG2155879
1,4-Dichlorobenzene	106-46-7	0.500	U	0.120	0.500	1.00	1	10/22/2023 12:54	WG2155879
Dichlorodifluoromethane	75-71-8	2.00	U	0.374	2.00	5.00	1	10/22/2023 12:54	WG2155879
1,1-Dichloroethane	75-34-3	0.500	U	0.100	0.500	1.00	1	10/22/2023 12:54	WG2155879
1,2-Dichloroethane	107-06-2	0.500	U	0.0819	0.500	1.00	1	10/22/2023 12:54	WG2155879
1,1-Dichloroethene	75-35-4	0.500	U	0.188	0.500	1.00	1	10/22/2023 12:54	WG2155879
cis-1,2-Dichloroethene	156-59-2	0.500	U	0.126	0.500	1.00	1	10/22/2023 12:54	WG2155879
trans-1,2-Dichloroethene	156-60-5	0.500	U	0.149	0.500	1.00	1	10/22/2023 12:54	WG2155879
1,2-Dichloropropane	78-87-5	0.500	U	0.149	0.500	1.00	1	10/22/2023 12:54	WG2155879
1,3-Dichloropropane	142-28-9	0.500	U	0.110	0.500	1.00	1	10/22/2023 12:54	WG2155879
2,2-Dichloropropane	594-20-7	0.500	U	0.161	0.500	1.00	1	10/22/2023 02:56	WG2225461
1,1-Dichloropropene	563-58-6	0.500	U	0.142	0.500	1.00	1	10/22/2023 12:54	WG2155879
cis-1,3-Dichloropropene	10061-01-5	0.500	U	0.111	0.500	1.00	1	10/22/2023 12:54	WG2155879
trans-1,3-Dichloropropene	10061-02-6	0.500	U	0.118	0.500	1.00	1	10/22/2023 12:54	WG2155879
Di-isopropyl ether	108-20-3	0.500	U	0.105	0.500	1.00	1	10/22/2023 12:54	WG2155879
Ethylbenzene	100-41-4	0.500	U	0.137	0.500	1.00	1	10/22/2023 12:54	WG2155879
Hexachloro-1,3-butadiene	87-68-3	0.750	U	0.337	0.750	1.50	1	10/22/2023 02:56	WG2225461
Isopropylbenzene	98-82-8	0.500	U	0.105	0.500	1.00	1	10/22/2023 12:54	WG2155879
p-Isopropyltoluene	99-87-6	0.500	U	0.120	0.500	1.00	1	10/22/2023 12:54	WG2155879
2-Butanone (MEK)	78-93-3	5.00	U	1.19	5.00	10.0	1	10/22/2023 12:54	WG2155879
Methylene Chloride	75-09-2	2.00	U	0.430	2.00	5.00	1	10/22/2023 12:54	WG2155879
4-Methyl-2-pentanone (MIBK)	108-10-1	5.00	U	0.478	5.00	10.0	1	10/22/2023 12:54	WG2155879
Methyl tert-butyl ether	1634-04-4	0.500	U	0.101	0.500	1.00	1	10/22/2023 12:54	WG2155879
Naphthalene	91-20-3	2.00	U	1.00	2.00	5.00	1	10/22/2023 12:54	WG2155879
n-Propylbenzene	103-65-1	0.500	U	0.0993	0.500	1.00	1	10/22/2023 12:54	WG2155879
Styrene	100-42-5	0.500	U	0.118	0.500	1.00	1	10/22/2023 12:54	WG2155879
1,1,1,2-Tetrachloroethane	630-20-6	0.500	U	0.147	0.500	1.00	1	10/22/2023 12:54	WG2155879
1,1,2,2-Tetrachloroethane	79-34-5	0.500	U	0.133	0.500	1.00	1	10/22/2023 12:54	WG2155879
Tetrachloroethene	127-18-4	0.600	U	0.300	0.600	1.20	1	10/22/2023 12:54	WG2155879
Toluene	108-88-3	0.600	U	0.278	0.600	1.20	1	10/22/2023 12:54	WG2155879
1,2,3-Trichlorobenzene	87-61-6	0.500	U	0.230	0.500	1.00	1	10/22/2023 12:54	WG2155879
1,2,4-Trichlorobenzene	120-82-1	1.00	U	0.481	1.00	2.00	1	10/22/2023 12:54	WG2155879
1,2,3-Trimethylbenzene	526-73-8	0.500	U	0.104	0.500	1.00	1	10/22/2023 12:54	WG2155879
1,2,4-Trimethylbenzene	95-63-6	1.00	U	0.322	1.00	2.00	1	10/22/2023 12:54	WG2155879
1,3,5-Trimethylbenzene	108-67-8	0.500	U	0.104	0.500	1.00	1	10/22/2023 12:54	WG2155879
1,1,1-Trichloroethane	71-55-6	0.500	U	0.149	0.500	1.00	1	10/22/2023 02:56	WG2225461
1,1,2-Trichloroethane	79-00-5	0.500	U	0.158	0.500	1.00	1	10/22/2023 12:54	WG2155879
Trichloroethene	79-01-6	0.500	U	0.190	0.500	1.00	1	10/22/2023 12:54	WG2155879
Trichlorofluoromethane	75-69-4	2.00	U	0.160	2.00	5.00	1	10/22/2023 12:54	WG2155879
1,1,2-Trichlorotrifluoroethane	76-13-1	0.500	U	0.180	0.500	1.00	1	10/22/2023 12:54	WG2155879
1,2,3-Trichloropropane	96-18-4	1.00	U	0.237	1.00	2.50	1	10/22/2023 12:54	WG2155879
Vinyl chloride	75-01-4	0.500	U	0.234	0.500	1.00	1	10/22/2023 12:54	WG2155879
Xylenes, Total	1330-20-7	1.50	U	0.174	1.50	3.00	1	10/22/2023 12:54	WG2155879
(S) Toluene-d8	*2037-26-5*	*104*				*89.0-112*		*10/22/2023 12:54*	WG2155879
(S) Toluene-d8	*2037-26-5*	*103*				*89.0-112*		*10/22/2023 02:56*	WG2225461
(S) 4-Bromofluorobenzene	*460-00-4*	*92.3*				*85.0-114*		*10/22/2023 12:54*	WG2155879
(S) 4-Bromofluorobenzene	*460-00-4*	*101*				*85.0-114*		*10/22/2023 02:56*	WG2225461
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*103*				*81.0-118*		*10/22/2023 12:54*	WG2155879
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*92.3*				*81.0-118*		*10/22/2023 02:56*	WG2225461

Method Blank (MB)

(MB) R3990223-2 10/23/23 16:19

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Alkalinity	10000	U	8450	10000	20000
Alkalinity,Bicarbonate	10000	U	8450	10000	20000
Alkalinity,Carbonate	10000	U	8450	10000	20000
Alkalinity,Hydroxide	10000	U	8450	10000	20000

Sample Narrative:

BLANK: Endpoint pH 4.5

L1667676-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1667676-10 10/23/23 16:32 • (DUP) R3990223-3 10/23/23 16:34

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	10000	10000	1	0.000	U	20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

L1667796-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1667796-02 10/23/23 18:12 • (DUP) R3990223-4 10/23/23 18:17

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	372000	370000	1	0.771		20
Alkalinity,Bicarbonate	372000	370000	1	0.771		20
Alkalinity,Carbonate	10000	10000	1	0.000	U	20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

Laboratory Control Sample (LCS)

(LCS) R3990223-1 10/23/23 16:14

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100000	97200	97.2	85.0-115	

Sample Narrative:

LCS: Endpoint pH 4.5

Method Blank (MB)

(MB) R3989558-1 10/22/23 22:05

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Kjeldahl Nitrogen, TKN	300	U	140	300	600

L1667791-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1667791-03 10/22/23 22:37 • (DUP) R3989558-3 10/22/23 22:38

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Kjeldahl Nitrogen, TKN	846	913	1	7.62		20

L1667732-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1667732-01 10/22/23 23:05 • (DUP) R3989558-6 10/22/23 23:06

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Kjeldahl Nitrogen, TKN	52000	53500	5	2.84		20

Laboratory Control Sample (LCS)

(LCS) R3989558-2 10/22/23 22:06

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Kjeldahl Nitrogen, TKN	12000	13100	110	90.0-110	

L1667791-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667791-03 10/22/23 22:37 • (MS) R3989558-4 10/22/23 22:39 • (MSD) R3989558-5 10/22/23 22:41

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Kjeldahl Nitrogen, TKN	5000	846	6700	6750	117	118	1	90.0-110	J5	J5	0.743	20

Sample Narrative:

MS: [MS failed due to matrix]

MSD: [MS failed due to matrix]

L1667732-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1667732-01 10/22/23 23:05 • (MS) R3989558-7 10/22/23 23:07

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Kjeldahl Nitrogen, TKN	5000	52000	56000	80.0	5	90.0-110	V

Sample Narrative:

MS: [MS failed due to matrix]

Method Blank (MB)

(MB) R3990817-1 10/25/23 09:43

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Kjeldahl Nitrogen, TKN	300	U	140	300	600

L1667791-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1667791-04 10/25/23 09:47 • (DUP) R3990817-3 10/25/23 09:48

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Kjeldahl Nitrogen, TKN	300	300	1	0.000	U	20

Sample Narrative:

OS: [MS failed due to sample matrix RPD<20]

L1668696-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1668696-06 10/25/23 10:10 • (DUP) R3990817-6 10/25/23 10:14

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Kjeldahl Nitrogen, TKN	300	300	1	0.000	U	20

Sample Narrative:

OS: [MS failed due to sample matrix RPD<20]

Laboratory Control Sample (LCS)

(LCS) R3990817-2 10/25/23 09:44

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Kjeldahl Nitrogen, TKN	12000	13200	110	90.0-110	

L1667791-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667791-04 10/25/23 09:47 • (MS) R3990817-4 10/25/23 09:50 • (MSD) R3990817-5 10/25/23 09:51

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Kjeldahl Nitrogen, TKN	5000	300	5970	5030	119	101	1	90.0-110	J5		17.1	20

Sample Narrative:

L1667791-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667791-04 10/25/23 09:47 • (MS) R3990817-4 10/25/23 09:50 • (MSD) R3990817-5 10/25/23 09:51

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %

OS: [MS failed due to sample matrix RPD<20]
MS: [MS failed due to sample matrix RPD<20]
MSD: [MS failed due to sample matrix RPD<20]

L1668696-06 Original Sample (OS) • Matrix Spike (MS)

(OS) L1668696-06 10/25/23 10:10 • (MS) R3990817-7 10/25/23 10:15

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Kjeldahl Nitrogen, TKN	5000	300	5650	113	1	90.0-110	J5

Sample Narrative:
OS: [MS failed due to sample matrix RPD<20]
MS: [MS failed due to sample matrix]

Method Blank (MB)

(MB) R3990590-1 10/24/23 18:11

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Kjeldahl Nitrogen, TKN	300	U	140	300	600

L1668940-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1668940-02 10/24/23 18:19 • (DUP) R3990590-5 10/24/23 18:21

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Kjeldahl Nitrogen, TKN	1020	1050	1	2.90		20

Laboratory Control Sample (LCS)

(LCS) R3990590-2 10/24/23 18:12

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Kjeldahl Nitrogen, TKN	12000	12600	105	90.0-110	

L1668498-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1668498-01 10/24/23 18:30 • (MS) R3990590-6 10/24/23 18:31 • (MSD) R3990590-7 10/24/23 18:32

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Kjeldahl Nitrogen, TKN	5000	28000	32800	32600	96.0	92.0	2	90.0-110			0.612	20

Method Blank (MB)

(MB) R3989208-1 10/20/23 20:30

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Nitrate-Nitrite	100	U	50.0	100	200

L1667440-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1667440-01 10/20/23 20:37 • (DUP) R3989208-3 10/20/23 20:38

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Nitrate-Nitrite	2010	2010	1	0.000		20

L1667791-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1667791-03 10/20/23 20:56 • (DUP) R3989208-5 10/20/23 20:57

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Nitrate-Nitrite	100	100	1	0.000	U	20

Laboratory Control Sample (LCS)

(LCS) R3989208-2 10/20/23 20:32

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Nitrate-Nitrite	2500	2540	102	90.0-110	

L1667440-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1667440-01 10/20/23 20:37 • (MS) R3989208-4 10/20/23 20:39

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Nitrate-Nitrite	2500	2010	4500	99.6	1	90.0-110	

L1667791-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667791-03 10/20/23 20:56 • (MS) R3989208-6 10/20/23 21:02 • (MSD) R3989208-7 10/20/23 21:03

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Nitrate-Nitrite	2500	100	2640	2560	106	102	1	90.0-110			3.08	20

Method Blank (MB)

(MB) R3992131-1 10/25/23 12:01

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Sulfate	2500	U	594	2500	5000

L1667791-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1667791-03 10/25/23 18:46 • (DUP) R3992131-3 10/25/23 19:01

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	4690	4460	1	5.18	J	15

L1668237-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1668237-03 10/26/23 00:59 • (DUP) R3992131-6 10/26/23 01:14

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	31300	31200	1	0.195		15

Laboratory Control Sample (LCS)

(LCS) R3992131-2 10/25/23 12:16

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfate	40000	37900	94.8	87.0-112	

L1667791-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667791-03 10/25/23 18:46 • (MS) R3992131-4 10/25/23 19:16 • (MSD) R3992131-5 10/25/23 19:31

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfate	40000	4690	38300	40200	84.1	88.8	1	87.0-112	J6		4.75	15

L1668237-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1668237-03 10/26/23 00:59 • (MS) R3992131-7 10/26/23 01:29 • (MSD) R3992131-8 10/26/23 01:44

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfate	40000	31300	62500	61100	78.0	74.7	1	87.0-112	J6	J6	2.17	15

L1668237-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1668237-03 10/26/23 00:59 • (MS) R3992131-7 10/26/23 01:29 • (MSD) R3992131-8 10/26/23 01:44

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %

Sample Narrative:

MS: Spike failure due to matrix interference

MSD: Spike failure due to matrix interference

Method Blank (MB)

(MB) R3990480-1 10/24/23 08:39

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Iron	50.0	U	20.5	50.0	100
Manganese	5.00	U	0.855	5.00	10.0

Laboratory Control Sample (LCS)

(LCS) R3990480-2 10/24/23 08:42

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Iron	10000	10000	100	87.0-115	
Manganese	1000	989	98.9	90.0-114	

L1667791-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667791-03 10/24/23 08:45 • (MS) R3990480-4 10/24/23 08:50 • (MSD) R3990480-5 10/24/23 08:53

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Iron	10000	3840	13800	13700	99.7	98.2	1	87.0-115			1.09	20
Manganese	1000	12200	12800	12800	61.1	62.7	1	90.0-114	E V	E V	0.129	20

Method Blank (MB)

(MB) R3990575-3 10/22/23 01:57

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Acetone	2.00	U	0.548	2.00	4.00
Acrylonitrile	0.250	U	0.0760	0.250	0.500
Benzene	0.0500	U	0.0160	0.0500	0.100
Bromobenzene	0.250	U	0.0420	0.250	0.500
Bromodichloromethane	0.100	U	0.0315	0.100	0.200
Bromochloromethane	0.100	U	0.0452	0.100	0.200
Bromoform	0.500	U	0.239	0.500	1.00
Bromomethane	0.500	U	0.148	0.500	1.00
n-Butylbenzene	0.500	U	0.154	0.500	1.00
sec-Butylbenzene	0.250	U	0.101	0.250	0.500
tert-Butylbenzene	0.500	U	0.0620	0.500	1.00
Carbon tetrachloride	0.100	U	0.0432	0.100	0.200
Carbon disulfide	0.500	U	0.162	0.500	1.00
Chlorobenzene	0.0500	U	0.0229	0.0500	0.100
Chlorodibromomethane	0.0500	U	0.0180	0.0500	0.100
Chloroethane	0.100	U	0.0432	0.100	0.200
Chloroform	0.0500	U	0.0166	0.0500	0.100
Chloromethane	0.250	U	0.0556	0.250	0.500
Cyclohexane	0.0500	U	0.0203	0.0500	0.100
2-Chlorotoluene	0.100	U	0.0368	0.100	0.200
4-Chlorotoluene	0.100	U	0.0452	0.100	0.200
1,2-Dibromo-3-Chloropropane	0.500	U	0.204	0.500	1.00
1,2-Dibromoethane	0.0500	U	0.0210	0.0500	0.100
Dibromomethane	0.100	U	0.0400	0.100	0.200
1,2-Dichlorobenzene	0.200	U	0.0580	0.200	0.400
1,3-Dichlorobenzene	0.200	U	0.0680	0.200	0.400
1,4-Dichlorobenzene	0.250	U	0.0788	0.250	0.500
Dichlorodifluoromethane	0.100	U	0.0327	0.100	0.200
1,1-Dichloroethane	0.0500	U	0.0230	0.0500	0.100
1,2-Dichloroethane	0.0500	U	0.0190	0.0500	0.100
1,1-Dichloroethene	0.0500	U	0.0200	0.0500	0.100
cis-1,2-Dichloroethene	0.0750	U	0.0276	0.0750	0.150
trans-1,2-Dichloroethene	0.300	U	0.0572	0.300	0.600
1,2-Dichloropropane	0.200	U	0.0508	0.200	0.400
1,1-Dichloropropene	0.100	U	0.0280	0.100	0.200
1,3-Dichloropropane	0.150	U	0.0700	0.150	0.300
cis-1,3-Dichloropropene	0.100	U	0.0271	0.100	0.200
trans-1,3-Dichloropropene	0.150	U	0.0612	0.150	0.300
2,2-Dichloropropane	0.100	U	0.0317	0.100	0.200
Di-isopropyl ether	0.0500	U	0.0140	0.0500	0.100

Method Blank (MB)

(MB) R3990575-3 10/22/23 01:57

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Ethylbenzene	0.0500	U	0.0212	0.0500	0.100
Hexachloro-1,3-butadiene	2.00	U	0.508	2.00	4.00
Isopropylbenzene	1.00	U	0.0345	1.00	2.00
p-Isopropyltoluene	0.300	U	0.0932	0.300	0.600
2-Butanone (MEK)	1.00	U	0.500	1.00	2.00
Methylene Chloride	0.750	U	0.266	0.750	1.50
4-Methyl-2-pentanone (MIBK)	1.00	U	0.400	1.00	2.00
Methyl tert-butyl ether	0.0300	U	0.0118	0.0300	0.0600
Naphthalene	0.250	U	0.125	0.250	0.500
n-Propylbenzene	0.100	U	0.0472	0.100	0.200
Styrene	0.250	U	0.109	0.250	0.500
1,1,1,2-Tetrachloroethane	0.0500	U	0.0200	0.0500	0.100
1,1,2,2-Tetrachloroethane	0.0500	U	0.0156	0.0500	0.100
1,1,2-Trichlorotrifluoroethane	0.100	U	0.0270	0.100	0.200
Tetrachloroethene	0.0750	U	0.0280	0.0750	0.150
Toluene	0.100	U	0.0500	0.100	0.200
1,2,3-Trichlorobenzene	0.250	U	0.0250	0.250	0.500
1,2,4-Trichlorobenzene	0.500	U	0.193	0.500	1.00
1,1,1-Trichloroethane	0.0500	U	0.0110	0.0500	0.100
1,1,2-Trichloroethane	0.100	U	0.0353	0.100	0.200
Trichloroethene	0.0400	U	0.0160	0.0400	0.0800
Trichlorofluoromethane	0.0500	U	0.0200	0.0500	0.100
1,2,3-Trichloropropane	0.500	U	0.204	0.500	1.00
1,2,4-Trimethylbenzene	0.100	U	0.0464	0.100	0.200
1,2,3-Trimethylbenzene	0.100	U	0.0460	0.100	0.200
1,3,5-Trimethylbenzene	0.100	U	0.0432	0.100	0.200
Vinyl chloride	0.0750	U	0.0273	0.0750	0.150
Xylenes, Total	0.400	U	0.191	0.400	0.800
Ethyl Ether	0.0500	U	0.0170	0.0500	0.100
Tetrahydrofuran	0.250	U	0.0900	0.250	50.0
Iodomethane	0.500	U	0.242	0.500	1.00
Allyl chloride	2.00	U	0.580	2.00	4.00
trans-1,4-Dichloro-2-butene	0.200	U	0.0560	0.200	0.400
(S) Toluene-d8	*103*				*89.0-112*
(S) 4-Bromofluorobenzene	*101*				*85.0-114*
(S) 1,2-Dichloroethane-d4	*94.4*				*81.0-118*

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

(LCS) R3990575-1 10/22/23 00:38 • (LCSD) R3990575-2 10/22/23 00:57

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	27.8	25.7	111	103	39.0-160			7.85	20
Acrylonitrile	25.0	28.5	25.9	114	104	63.0-135			9.56	20
Benzene	5.00	5.34	5.04	107	101	79.0-120			5.78	20
Bromobenzene	5.00	5.14	4.92	103	98.4	80.0-120			4.37	20
Bromodichloromethane	5.00	5.44	5.17	109	103	79.0-125			5.09	20
Bromochloromethane	5.00	5.62	5.39	112	108	78.0-123			4.18	20
Bromoform	5.00	4.88	4.47	97.6	89.4	66.0-130			8.77	20
Bromomethane	5.00	5.18	5.32	104	106	53.0-141			2.67	20
n-Butylbenzene	5.00	4.84	4.99	96.8	99.8	75.0-128			3.05	20
sec-Butylbenzene	5.00	5.86	5.47	117	109	77.0-126			6.88	20
tert-Butylbenzene	5.00	5.43	5.13	109	103	78.0-124			5.68	20
Carbon tetrachloride	5.00	6.04	5.80	121	116	72.0-136			4.05	20
Carbon disulfide	5.00	5.61	5.44	112	109	64.0-133			3.08	20
Chlorobenzene	5.00	5.18	5.08	104	102	82.0-118			1.95	20
Chlorodibromomethane	5.00	5.12	4.69	102	93.8	74.0-126			8.77	20
Chloroethane	5.00	5.12	4.71	102	94.2	60.0-138			8.34	20
Chloroform	5.00	5.42	5.37	108	107	79.0-124			0.927	20
Chloromethane	5.00	5.42	5.17	108	103	50.0-139			4.72	20
Cyclohexane	5.00	4.74	4.69	94.8	93.8	71.0-130			1.06	20
2-Chlorotoluene	5.00	5.21	4.80	104	96.0	79.0-122			8.19	20
4-Chlorotoluene	5.00	5.66	5.15	113	103	78.0-122			9.44	20
1,2-Dibromo-3-Chloropropane	5.00	4.77	4.63	95.4	92.6	62.0-128			2.98	20
1,2-Dibromoethane	5.00	5.00	5.00	100	100	77.0-121			0.000	20
Dibromomethane	5.00	5.15	4.88	103	97.6	79.0-123			5.38	20
1,2-Dichlorobenzene	5.00	5.21	5.02	104	100	80.0-119			3.71	20
1,3-Dichlorobenzene	5.00	5.52	5.36	110	107	80.0-119			2.94	20
1,4-Dichlorobenzene	5.00	5.15	4.90	103	98.0	79.0-118			4.98	20
Dichlorodifluoromethane	5.00	5.59	5.68	112	114	32.0-152			1.60	20
1,1-Dichloroethane	5.00	5.34	5.16	107	103	77.0-125			3.43	20
1,2-Dichloroethane	5.00	5.34	5.24	107	105	73.0-128			1.89	20
1,1-Dichloroethene	5.00	5.80	5.57	116	111	71.0-131			4.05	20
cis-1,2-Dichloroethene	5.00	5.68	5.34	114	107	78.0-123			6.17	20
trans-1,2-Dichloroethene	5.00	5.62	5.46	112	109	75.0-124			2.89	20
1,2-Dichloropropane	5.00	5.15	4.71	103	94.2	78.0-122			8.92	20
1,1-Dichloropropene	5.00	5.95	5.72	119	114	79.0-125			3.94	20
1,3-Dichloropropane	5.00	5.31	5.26	106	105	80.0-119			0.946	20
cis-1,3-Dichloropropene	5.00	5.59	5.31	112	106	75.0-124			5.14	20
trans-1,3-Dichloropropene	5.00	5.18	4.73	104	94.6	73.0-127			9.08	20
2,2-Dichloropropane	5.00	5.53	5.27	111	105	60.0-139			4.81	20
Di-isopropyl ether	5.00	5.52	5.31	110	106	67.0-128			3.88	20

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

(LCS) R3990575-1 10/22/23 00:38 • (LCSD) R3990575-2 10/22/23 00:57

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	5.00	5.40	5.19	108	104	79.0-121			3.97	20
Hexachloro-1,3-butadiene	5.00	5.70	5.23	114	105	66.0-134			8.60	20
Isopropylbenzene	5.00	5.50	5.33	110	107	72.0-131			3.14	20
p-Isopropyltoluene	5.00	5.42	5.40	108	108	77.0-127			0.370	20
2-Butanone (MEK)	25.0	20.7	19.8	82.8	79.2	56.0-143			4.44	20
Methylene Chloride	5.00	4.91	4.71	98.2	94.2	74.0-124			4.16	20
4-Methyl-2-pentanone (MIBK)	25.0	26.5	25.0	106	100	67.0-130			5.83	20
Methyl tert-butyl ether	5.00	5.09	4.80	102	96.0	71.0-124			5.86	20
Naphthalene	5.00	5.83	5.69	117	114	61.0-128			2.43	20
n-Propylbenzene	5.00	5.73	5.40	115	108	76.0-126			5.93	20
Styrene	5.00	5.47	5.20	109	104	78.0-123			5.06	20
1,1,1,2-Tetrachloroethane	5.00	5.08	4.72	102	94.4	78.0-124			7.35	20
1,1,2,2-Tetrachloroethane	5.00	5.10	4.80	102	96.0	71.0-121			6.06	20
1,1,2-Trichlorotrifluoroethane	5.00	5.29	4.99	106	99.8	70.0-136			5.84	20
Tetrachloroethene	5.00	5.72	5.50	114	110	74.0-129			3.92	20
Toluene	5.00	5.63	5.48	113	110	80.0-121			2.70	20
1,2,3-Trichlorobenzene	5.00	5.30	5.12	106	102	69.0-129			3.45	20
1,2,4-Trichlorobenzene	5.00	5.11	5.25	102	105	69.0-130			2.70	20
1,1,1-Trichloroethane	5.00	5.75	5.63	115	113	74.0-131			2.11	20
1,1,2-Trichloroethane	5.00	4.80	4.60	96.0	92.0	80.0-119			4.26	20
Trichloroethene	5.00	6.03	5.82	121	116	79.0-123			3.54	20
Trichlorofluoromethane	5.00	6.54	5.52	131	110	65.0-141			16.9	20
1,2,3-Trichloropropane	5.00	5.23	4.85	105	97.0	73.0-122			7.54	20
1,2,4-Trimethylbenzene	5.00	5.41	5.19	108	104	76.0-124			4.15	20
1,2,3-Trimethylbenzene	5.00	5.53	5.25	111	105	82.0-120			5.19	20
1,3,5-Trimethylbenzene	5.00	4.92	4.69	98.4	93.8	75.0-124			4.79	20
Vinyl chloride	5.00	5.82	5.80	116	116	58.0-137			0.344	20
Xylenes, Total	15.0	16.2	15.8	108	105	79.0-121			2.50	20
Ethyl Ether	5.00	4.80	4.60	96.0	92.0	64.0-137			4.26	20
Tetrahydrofuran	5.00	5.14	4.58	103	91.6	57.0-133			11.5	20
Iodomethane	25.0	28.0	27.5	112	110	69.0-131			1.80	20
Allyl chloride	25.0	27.1	26.8	108	107	68.0-130			1.11	20
trans-1,4-Dichloro-2-butene	5.00	3.76	4.02	75.2	80.4	43.0-140			6.68	20
(S) Toluene-d8				*102*	*101*	*89.0-112*				
(S) 4-Bromofluorobenzene				*101*	*99.5*	*85.0-114*				
(S) 1,2-Dichloroethane-d4				*101*	*100*	*81.0-118*				

L1667486-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667486-03 10/22/23 03:35 • (MS) R3990575-4 10/22/23 08:51 • (MSD) R3990575-5 10/22/23 09:11

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	4.17	36.0	35.2	127	124	1	39.0-160			2.25	40
Acrylonitrile	25.0	0.250	29.6	32.1	118	128	1	63.0-135			8.10	40
Benzene	5.00	0.430	4.59	5.01	83.2	91.6	1	79.0-120			8.75	37
Bromobenzene	5.00	0.250	4.24	4.49	84.8	89.8	1	80.0-120			5.73	38
Bromodichloromethane	5.00	0.100	4.63	4.73	92.6	94.6	1	79.0-125			2.14	37
Bromochloromethane	5.00	0.100	4.92	5.36	98.4	107	1	78.0-123			8.56	33
Bromoform	5.00	0.500	4.64	4.87	92.8	97.4	1	66.0-130			4.84	36
Bromomethane	5.00	0.500	3.77	4.33	75.4	86.6	1	53.0-141			13.8	38
n-Butylbenzene	5.00	0.500	3.58	4.13	71.6	82.6	1	75.0-128	J6		14.3	40
sec-Butylbenzene	5.00	0.250	4.07	4.61	81.4	92.2	1	77.0-126			12.4	39
tert-Butylbenzene	5.00	0.500	3.86	4.31	77.2	86.2	1	78.0-124	J6		11.0	39
Carbon tetrachloride	5.00	0.100	4.48	5.07	89.6	101	1	72.0-136			12.4	37
Carbon disulfide	5.00	0.500	3.68	4.19	73.6	83.8	1	64.0-133			13.0	39
Chlorobenzene	5.00	0.0500	4.20	4.33	84.0	86.6	1	82.0-118			3.05	39
Chlorodibromomethane	5.00	0.0500	4.62	4.88	92.4	97.6	1	74.0-126			5.47	37
Chloroethane	5.00	0.100	3.53	4.08	70.6	81.6	1	60.0-138			14.5	40
Chloroform	5.00	0.0500	4.54	5.10	90.8	102	1	79.0-124			11.6	37
Chloromethane	5.00	0.250	3.55	3.93	71.0	78.6	1	50.0-139			10.2	37
Cyclohexane	5.00	0.312	3.43	3.99	62.4	73.6	1	71.0-130	J6		15.1	32
2-Chlorotoluene	5.00	0.100	3.85	4.21	77.0	84.2	1	79.0-122	J6		8.93	38
4-Chlorotoluene	5.00	0.100	4.30	4.65	86.0	93.0	1	78.0-122			7.82	39
1,2-Dibromo-3-Chloropropane	5.00	0.500	4.93	5.41	98.6	108	1	62.0-128			9.28	39
1,2-Dibromoethane	5.00	0.0500	4.75	4.74	95.0	94.8	1	77.0-121			0.211	34
Dibromomethane	5.00	0.100	4.87	5.02	97.4	100	1	79.0-123			3.03	35
1,2-Dichlorobenzene	5.00	0.200	4.34	4.69	86.8	93.8	1	80.0-119			7.75	37
1,3-Dichlorobenzene	5.00	0.200	4.38	4.69	87.6	93.8	1	80.0-119			6.84	38
1,4-Dichlorobenzene	5.00	0.250	4.13	4.37	82.6	87.4	1	79.0-118			5.65	38
Dichlorodifluoromethane	5.00	0.100	3.74	4.56	74.8	91.2	1	32.0-152			19.8	35
1,1-Dichloroethane	5.00	0.0500	4.20	4.55	84.0	91.0	1	77.0-125			8.00	37
1,2-Dichloroethane	5.00	0.0500	5.00	5.21	100	104	1	73.0-128			4.11	35
1,1-Dichloroethene	5.00	0.0500	4.21	4.70	84.2	94.0	1	71.0-131			11.0	37
cis-1,2-Dichloroethene	5.00	0.0750	4.55	4.60	91.0	92.0	1	10.0-149			1.09	37
trans-1,2-Dichloroethene	5.00	0.300	4.26	4.60	85.2	92.0	1	75.0-124			7.67	37
1,2-Dichloropropane	5.00	0.200	4.35	4.55	87.0	91.0	1	78.0-122			4.49	37
1,1-Dichloropropene	5.00	0.100	4.22	4.83	84.4	96.6	1	79.0-125			13.5	35
1,3-Dichloropropane	5.00	0.150	5.04	5.28	101	106	1	80.0-119			4.65	35
cis-1,3-Dichloropropene	5.00	0.100	4.35	4.58	87.0	91.6	1	10.0-151			5.15	37
trans-1,3-Dichloropropene	5.00	0.150	4.32	4.66	86.4	93.2	1	73.0-127			7.57	37
2,2-Dichloropropane	5.00	0.100	4.02	4.32	80.4	86.4	1	60.0-139			7.19	36
Di-isopropyl ether	5.00	0.0500	4.85	5.25	97.0	105	1	67.0-128			7.92	36

L1667486-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667486-03 10/22/23 03:35 • (MS) R3990575-4 10/22/23 08:51 • (MSD) R3990575-5 10/22/23 09:11

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	5.00	0.342	4.38	4.76	80.8	88.4	1	79.0-121			8.32	38
Hexachloro-1,3-butadiene	5.00	2.00	3.87	4.29	77.4	85.8	1	66.0-134			10.3	40
Isopropylbenzene	5.00	1.00	4.00	4.66	80.0	93.2	1	72.0-131			15.2	38
p-Isopropyltoluene	5.00	0.300	3.97	4.37	79.4	87.4	1	77.0-127			9.59	40
2-Butanone (MEK)	25.0	1.00	21.9	24.8	87.6	99.2	1	56.0-143			12.4	40
Methylene Chloride	5.00	0.750	4.01	4.25	80.2	85.0	1	74.0-124			5.81	37
4-Methyl-2-pentanone (MIBK)	25.0	1.00	27.4	29.2	110	117	1	67.0-130			6.36	35
Methyl tert-butyl ether	5.00	0.0300	4.69	5.11	93.8	102	1	71.0-124			8.57	35
Naphthalene	5.00	0.250	5.48	6.07	110	121	1	61.0-128			10.2	36
n-Propylbenzene	5.00	0.100	4.02	4.49	80.4	89.8	1	76.0-126			11.0	38
Styrene	5.00	0.250	4.29	4.54	85.8	90.8	1	78.0-123			5.66	40
1,1,1,2-Tetrachloroethane	5.00	0.0500	4.32	4.67	86.4	93.4	1	71.0-121			7.79	39
1,1,2,2-Tetrachloroethane	5.00	0.0500	5.29	5.34	106	107	1	10.0-160			0.941	35
1,1,2-Trichlorotrifluoroethane	5.00	0.100	3.66	4.30	73.2	86.0	1	70.0-136			16.1	36
Tetrachloroethene	5.00	0.0750	4.10	4.47	82.0	89.4	1	74.0-129			8.63	39
Toluene	5.00	0.0900	4.44	4.83	87.0	94.8	1	80.0-121			8.41	38
1,2,3-Trichlorobenzene	5.00	0.250	4.43	4.97	88.6	99.4	1	69.0-129			11.5	40
1,2,4-Trichlorobenzene	5.00	0.500	4.22	4.77	84.4	95.4	1	69.0-130			12.2	40
1,1,1-Trichloroethane	5.00	0.0500	4.52	5.02	90.4	100	1	10.0-144			10.5	35
1,1,2-Trichloroethane	5.00	0.100	4.61	4.84	92.2	96.8	1	80.0-119			4.87	35
Trichloroethene	5.00	0.0400	4.34	4.91	86.8	98.2	1	79.0-123			12.3	38
Trichlorofluoromethane	5.00	0.0500	3.91	5.06	78.2	101	1	65.0-141			25.6	40
1,2,3-Trichloropropane	5.00	0.500	5.08	4.91	102	98.2	1	73.0-122			3.40	35
1,2,4-Trimethylbenzene	5.00	0.100	4.01	4.52	80.2	90.4	1	76.0-124			12.0	36
1,2,3-Trimethylbenzene	5.00	0.100	4.21	4.66	84.2	93.2	1	82.0-120			10.1	36
1,3,5-Trimethylbenzene	5.00	0.100	3.58	3.97	71.6	79.4	1	75.0-124	J6		10.3	38
Vinyl chloride	5.00	0.0750	4.01	4.69	80.2	93.8	1	58.0-137			15.6	37
Xylenes, Total	15.0	0.400	12.3	13.6	82.0	90.7	1	79.0-121			10.0	38
Ethyl Ether	5.00	0.0500	4.67	4.84	93.4	96.8	1	10.0-160			3.58	31
Tetrahydrofuran	5.00	0.250	2.62	2.77	52.4	55.4	1	57.0-133	J6	J6	5.57	33
Iodomethane	25.0	0.500	21.0	23.4	84.0	93.6	1	69.0-131			10.8	38
Allyl chloride	25.0	2.00	20.4	22.8	81.6	91.2	1	68.0-130			11.1	30
trans-1,4-Dichloro-2-butene	5.00	0.200	3.46	3.62	69.2	72.4	1	43.0-140			4.52	36
(S) Toluene-d8					*103*	*101*		*89.0-112*				
(S) 4-Bromofluorobenzene					*102*	*102*		*85.0-114*				
(S) 1,2-Dichloroethane-d4					*103*	*103*		*81.0-118*				

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

L1667791-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667791-03 10/22/23 07:12 • (MS) R3990575-6 10/22/23 09:31 • (MSD) R3990575-7 10/22/23 09:51

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	5.59	31.6	28.1	104	90.0	1	39.0-160			11.7	40
Acrylonitrile	25.0	0.250	28.0	29.6	112	118	1	63.0-135			5.56	40
Benzene	5.00	1.52	7.06	7.51	111	120	1	79.0-120			6.18	37
Bromobenzene	5.00	0.250	5.38	6.01	108	120	1	80.0-120			11.1	38
Bromodichloromethane	5.00	0.100	5.58	5.97	112	119	1	79.0-125			6.75	37
Bromochloromethane	5.00	0.100	5.82	6.57	116	131	1	78.0-123		J5	12.1	33
Bromoform	5.00	0.500	5.00	5.34	100	107	1	66.0-130			6.58	36
Bromomethane	5.00	0.500	5.29	5.42	106	108	1	53.0-141			2.43	38
n-Butylbenzene	5.00	0.500	4.20	4.17	84.0	83.4	1	75.0-128			0.717	40
sec-Butylbenzene	5.00	0.344	6.82	7.37	130	141	1	77.0-126	J5	J5	7.75	39
tert-Butylbenzene	5.00	0.861	6.94	7.39	122	131	1	78.0-124		J5	6.28	39
Carbon tetrachloride	5.00	0.100	6.86	7.43	137	149	1	72.0-136	J5	J5	7.98	37
Carbon disulfide	5.00	0.500	5.39	6.09	108	122	1	64.0-133			12.2	39
Chlorobenzene	5.00	0.0500	5.72	6.01	114	120	1	82.0-118		J5	4.94	39
Chlorodibromomethane	5.00	0.0500	5.53	5.90	111	118	1	74.0-126			6.47	37
Chloroethane	5.00	0.100	5.11	5.75	102	115	1	60.0-138			11.8	40
Chloroform	5.00	0.0500	6.31	6.57	126	131	1	79.0-124	J5	J5	4.04	37
Chloromethane	5.00	0.250	5.49	6.21	110	124	1	50.0-139			12.3	37
Cyclohexane	5.00	1.41	6.47	8.11	101	134	1	71.0-130		J5	22.5	32
2-Chlorotoluene	5.00	0.100	5.91	6.54	118	131	1	79.0-122		J5	10.1	38
4-Chlorotoluene	5.00	0.100	5.57	6.24	111	125	1	78.0-122		J5	11.3	39
1,2-Dibromo-3-Chloropropane	5.00	0.500	5.49	6.29	110	126	1	62.0-128			13.6	39
1,2-Dibromoethane	5.00	0.0500	5.48	5.72	110	114	1	77.0-121			4.29	34
Dibromomethane	5.00	0.100	5.37	5.93	107	119	1	79.0-123			9.91	35
1,2-Dichlorobenzene	5.00	0.200	6.01	6.59	120	132	1	80.0-119	J5	J5	9.21	37
1,3-Dichlorobenzene	5.00	0.200	6.01	6.63	120	133	1	80.0-119	J5	J5	9.81	38
1,4-Dichlorobenzene	5.00	0.250	5.53	5.80	111	116	1	79.0-118			4.77	38
Dichlorodifluoromethane	5.00	0.100	6.08	6.48	122	130	1	32.0-152			6.37	35
1,1-Dichloroethane	5.00	0.0500	5.96	6.47	119	129	1	77.0-125		J5	8.21	37
1,2-Dichloroethane	5.00	0.0500	5.80	5.76	116	115	1	73.0-128			0.692	35
1,1-Dichloroethene	5.00	0.0500	6.37	6.82	127	136	1	71.0-131		J5	6.82	37
cis-1,2-Dichloroethene	5.00	12.4	18.5	19.0	122	132	1	10.0-149			2.67	37
trans-1,2-Dichloroethene	5.00	0.0850	6.24	6.81	123	135	1	75.0-124		J5	8.74	37
1,2-Dichloropropane	5.00	0.200	5.58	5.93	112	119	1	78.0-122			6.08	37
1,1-Dichloropropene	5.00	0.100	6.62	7.12	132	142	1	79.0-125	J5	J5	7.28	35
1,3-Dichloropropane	5.00	0.150	5.77	6.15	115	123	1	80.0-119		J5	6.38	35
cis-1,3-Dichloropropene	5.00	0.100	5.27	5.82	105	116	1	10.0-151			9.92	37
trans-1,3-Dichloropropene	5.00	0.150	5.53	5.69	111	114	1	73.0-127			2.85	37
2,2-Dichloropropane	5.00	0.100	5.47	6.17	109	123	1	60.0-139			12.0	36
Di-isopropyl ether	5.00	0.0500	5.64	6.49	113	130	1	67.0-128		J5	14.0	36

L1667791-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667791-03 10/22/23 07:12 • (MS) R3990575-6 10/22/23 09:31 • (MSD) R3990575-7 10/22/23 09:51

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	5.00	6.74	12.2	12.4	109	113	1	79.0-121			1.63	38
Hexachloro-1,3-butadiene	5.00	2.00	6.53	6.46	131	129	1	66.0-134			1.08	40
Isopropylbenzene	5.00	7.47	13.5	14.0	121	131	1	72.0-131			3.64	38
p-Isopropyltoluene	5.00	2.58	8.97	9.78	128	144	1	77.0-127	J5	J5	8.64	40
2-Butanone (MEK)	25.0	2.00	27.3	29.1	101	108	1	56.0-143			6.38	40
Methylene Chloride	5.00	0.750	5.25	5.67	105	113	1	74.0-124			7.69	37
4-Methyl-2-pentanone (MIBK)	25.0	1.00	28.2	30.6	113	122	1	67.0-130			8.16	35
Methyl tert-butyl ether	5.00	0.0300	5.24	5.81	105	116	1	71.0-124			10.3	35
Naphthalene	5.00	50.7	54.4	56.3	74.0	112	1	61.0-128			3.43	36
n-Propylbenzene	5.00	1.98	8.71	9.07	135	142	1	76.0-126	J5	J5	4.05	38
Styrene	5.00	0.250	6.40	6.87	128	137	1	78.0-123	J5	J5	7.08	40
1,1,1,2-Tetrachloroethane	5.00	0.0500	5.39	5.92	108	118	1	71.0-121			9.37	39
1,1,2,2-Tetrachloroethane	5.00	0.0500	7.12	7.52	142	150	1	10.0-160			5.46	35
1,1,2-Trichlorotrifluoroethane	5.00	0.100	6.31	6.69	126	134	1	70.0-136			5.85	36
Tetrachloroethene	5.00	0.165	6.27	6.53	122	127	1	74.0-129			4.06	39
Toluene	5.00	0.404	6.30	6.75	118	127	1	80.0-121		J5	6.90	38
1,2,3-Trichlorobenzene	5.00	0.250	6.21	7.42	124	148	1	69.0-129		J5	17.8	40
1,2,4-Trichlorobenzene	5.00	0.500	6.93	7.36	139	147	1	69.0-130	J5	J5	6.02	40
1,1,1-Trichloroethane	5.00	0.0500	6.48	6.98	130	140	1	10.0-144			7.43	35
1,1,2-Trichloroethane	5.00	0.100	5.79	6.00	116	120	1	80.0-119		J5	3.56	35
Trichloroethene	5.00	5.21	11.5	11.7	126	130	1	79.0-123	J5	J5	1.72	38
Trichlorofluoromethane	5.00	0.0500	6.28	7.18	126	144	1	65.0-141		J5	13.4	40
1,2,3-Trichloropropane	5.00	0.500	5.13	5.13	103	103	1	73.0-122			0.000	35
1,2,4-Trimethylbenzene	5.00	0.531	6.96	7.61	129	142	1	76.0-124	J5	J5	8.92	36
1,2,3-Trimethylbenzene	5.00	0.100	6.21	5.66	124	113	1	82.0-120	J5		9.27	36
1,3,5-Trimethylbenzene	5.00	0.100	5.83	6.39	117	128	1	75.0-124		J5	9.17	38
Vinyl chloride	5.00	0.137	6.36	6.89	124	135	1	58.0-137			8.00	37
Xylenes, Total	15.0	3.55	21.3	22.4	118	126	1	79.0-121		J5	5.03	38
Ethyl Ether	5.00	0.0500	5.11	5.38	102	108	1	10.0-160			5.15	31
Tetrahydrofuran	5.00	0.250	2.22	2.49	44.4	49.8	1	57.0-133	J6	J6	11.5	33
Iodomethane	25.0	0.500	28.8	32.0	115	128	1	69.0-131			10.5	38
Allyl chloride	25.0	2.00	29.4	31.7	118	127	1	68.0-130			7.53	30
trans-1,4-Dichloro-2-butene	5.00	0.200	4.48	2.57	89.6	51.4	1	43.0-140		J3	54.2	36
(S) Toluene-d8					*97.1*	*97.8*		*89.0-112*				
(S) 4-Bromofluorobenzene					*102*	*102*		*85.0-114*				
(S) 1,2-Dichloroethane-d4					*95.4*	*101*		*81.0-118*				

Method Blank (MB)

(MB) R3991882-3 10/26/23 17:21

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Benzene	0.0500	U	0.0160	0.0500	0.100
Toluene	0.100	U	0.0500	0.100	0.200
Trichloroethene	0.0400	U	0.0160	0.0400	0.0800
1,2,4-Trimethylbenzene	0.0540	J	0.0464	0.100	0.200
Vinyl acetate	0.300	U	0.141	0.300	0.600
(S) Toluene-d8	*108*				*89.0-112*
(S) 4-Bromofluorobenzene	*98.6*				*85.0-114*
(S) 1,2-Dichloroethane-d4	*94.0*				*81.0-118*

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

(LCS) R3991882-1 10/26/23 16:04 • (LCSD) R3991882-2 10/26/23 16:24

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	5.00	4.79	4.75	95.8	95.0	79.0-120			0.839	20
Toluene	5.00	5.26	5.39	105	108	80.0-121			2.44	20
Trichloroethene	5.00	5.10	5.14	102	103	79.0-123			0.781	20
1,2,4-Trimethylbenzene	5.00	5.14	4.99	103	99.8	76.0-124			2.96	20
Vinyl acetate	25.0	22.1	21.6	88.4	86.4	54.0-146			2.29	20
(S) Toluene-d8				*110*	*111*	*89.0-112*				
(S) 4-Bromofluorobenzene				*103*	*103*	*85.0-114*				
(S) 1,2-Dichloroethane-d4				*94.6*	*93.9*	*81.0-118*				

Method Blank (MB)

(MB) R3990613-3 10/22/23 10:57

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Acetone	25.0	U	11.3	25.0	50.0
Acrolein	25.0	U	2.54	25.0	50.0
Acrylonitrile	5.00	U	0.671	5.00	10.0
Benzene	0.500	U	0.0941	0.500	1.00
Bromobenzene	0.500	U	0.118	0.500	1.00
Bromodichloromethane	0.500	U	0.136	0.500	1.00
Bromoform	0.500	U	0.129	0.500	1.00
Bromomethane	2.00	U	0.605	2.00	5.00
n-Butylbenzene	0.500	U	0.157	0.500	1.00
sec-Butylbenzene	0.500	U	0.125	0.500	1.00
tert-Butylbenzene	0.500	U	0.127	0.500	1.00
Carbon tetrachloride	0.500	U	0.128	0.500	1.00
Chlorobenzene	0.500	U	0.116	0.500	1.00
Chlorodibromomethane	0.500	U	0.140	0.500	1.00
Chloroethane	2.00	U	0.192	2.00	5.00
2-Chloroethyl vinyl ether	25.0	U	0.575	25.0	50.0
Chloroform	2.00	U	0.111	2.00	5.00
Chloromethane	2.00	U	0.960	2.00	4.00
2-Chlorotoluene	0.500	U	0.106	0.500	1.00
4-Chlorotoluene	0.500	U	0.114	0.500	1.00
1,2-Dibromoethane	0.500	U	0.126	0.500	1.00
1,2-Dibromo-3-Chloropropane	2.00	U	0.276	2.00	5.00
Dibromomethane	0.500	U	0.122	0.500	1.00
1,2-Dichlorobenzene	0.500	U	0.107	0.500	1.00
1,3-Dichlorobenzene	0.500	U	0.110	0.500	1.00
1,4-Dichlorobenzene	0.500	U	0.120	0.500	1.00
Dichlorodifluoromethane	2.00	U	0.374	2.00	5.00
1,1-Dichloroethane	0.500	U	0.100	0.500	1.00
1,2-Dichloroethane	0.500	U	0.0819	0.500	1.00
1,1-Dichloroethene	0.500	U	0.188	0.500	1.00
cis-1,2-Dichloroethene	0.500	U	0.126	0.500	1.00
trans-1,2-Dichloroethene	0.500	U	0.149	0.500	1.00
1,2-Dichloropropane	0.500	U	0.149	0.500	1.00
1,3-Dichloropropane	0.500	U	0.110	0.500	1.00
1,1-Dichloropropene	0.500	U	0.142	0.500	1.00
cis-1,3-Dichloropropene	0.500	U	0.111	0.500	1.00
trans-1,3-Dichloropropene	0.500	U	0.118	0.500	1.00
Di-isopropyl ether	0.500	U	0.105	0.500	1.00
Ethylbenzene	0.500	U	0.137	0.500	1.00
Isopropylbenzene	0.500	U	0.105	0.500	1.00

Method Blank (MB)

(MB) R3990613-3 10/22/23 10:57

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
p-Isopropyltoluene	0.500	U	0.120	0.500	1.00
2-Butanone (MEK)	5.00	U	1.19	5.00	10.0
Methylene Chloride	2.00	U	0.430	2.00	5.00
4-Methyl-2-pentanone (MIBK)	5.00	U	0.478	5.00	10.0
Methyl tert-butyl ether	0.500	U	0.101	0.500	1.00
Naphthalene	2.00	U	1.00	2.00	5.00
n-Propylbenzene	0.500	U	0.0993	0.500	1.00
Styrene	0.500	U	0.118	0.500	1.00
1,1,1,2-Tetrachloroethane	0.500	U	0.147	0.500	1.00
1,1,2,2-Tetrachloroethane	0.500	U	0.133	0.500	1.00
Tetrachloroethene	0.600	U	0.300	0.600	1.20
Toluene	0.600	U	0.278	0.600	1.20
1,2,3-Trichlorobenzene	0.500	U	0.230	0.500	1.00
1,2,4-Trichlorobenzene	1.00	U	0.481	1.00	2.00
1,2,3-Trimethylbenzene	0.500	U	0.104	0.500	1.00
1,2,4-Trimethylbenzene	1.00	U	0.322	1.00	2.00
1,3,5-Trimethylbenzene	0.500	U	0.104	0.500	1.00
1,1,2-Trichloroethane	0.500	U	0.158	0.500	1.00
Trichloroethene	0.500	U	0.190	0.500	1.00
Trichlorofluoromethane	2.00	U	0.160	2.00	5.00
1,1,2-Trichlorotrifluoroethane	0.500	U	0.180	0.500	1.00
1,2,3-Trichloropropane	1.00	U	0.237	1.00	2.50
Vinyl chloride	0.500	U	0.234	0.500	1.00
Xylenes, Total	1.50	U	0.174	1.50	3.00
(S) Toluene-d8	*104*				*89.0-112*
(S) 4-Bromofluorobenzene	*93.8*				*85.0-114*
(S) 1,2-Dichloroethane-d4	*105*				*81.0-118*

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

(LCS) R3990613-1 10/22/23 09:40 • (LCSD) R3990613-2 10/22/23 10:13

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	29.3	28.1	117	112	39.0-160			4.18	20
Acrolein	25.0	23.0	25.5	92.0	102	39.0-155			10.3	20
Acrylonitrile	25.0	23.5	22.6	94.0	90.4	63.0-135			3.90	20
Benzene	5.00	5.04	4.88	101	97.6	79.0-120			3.23	20
Bromobenzene	5.00	5.14	5.18	103	104	80.0-120			0.775	20
Bromodichloromethane	5.00	5.21	5.03	104	101	79.0-125			3.52	20

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

(LCS) R3990613-1 10/22/23 09:40 • (LCSD) R3990613-2 10/22/23 10:13

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromoform	5.00	4.29	4.23	85.8	84.6	66.0-130			1.41	20
Bromomethane	5.00	4.97	4.82	99.4	96.4	53.0-141			3.06	20
n-Butylbenzene	5.00	4.36	4.29	87.2	85.8	75.0-128			1.62	20
sec-Butylbenzene	5.00	4.81	4.84	96.2	96.8	77.0-126			0.622	20
tert-Butylbenzene	5.00	4.98	4.95	99.6	99.0	78.0-124			0.604	20
Carbon tetrachloride	5.00	4.88	4.79	97.6	95.8	72.0-136			1.86	20
Chlorobenzene	5.00	4.74	4.58	94.8	91.6	82.0-118			3.43	20
Chlorodibromomethane	5.00	5.11	4.91	102	98.2	74.0-126			3.99	20
Chloroethane	5.00	5.02	4.75	100	95.0	60.0-138			5.53	20
2-Chloroethyl vinyl ether	25.0	24.1	24.2	96.4	96.8	51.0-139			0.414	20
Chloroform	5.00	5.06	4.85	101	97.0	79.0-124			4.24	20
Chloromethane	5.00	5.59	5.30	112	106	50.0-139			5.33	20
2-Chlorotoluene	5.00	5.16	5.15	103	103	79.0-122			0.194	20
4-Chlorotoluene	5.00	5.13	5.19	103	104	78.0-122			1.16	20
1,2-Dibromoethane	5.00	4.64	4.56	92.8	91.2	77.0-121			1.74	20
1,2-Dibromo-3-Chloropropane	5.00	4.13	4.16	82.6	83.2	62.0-128			0.724	20
Dibromomethane	5.00	5.23	4.99	105	99.8	79.0-123			4.70	20
1,2-Dichlorobenzene	5.00	4.85	4.82	97.0	96.4	80.0-119			0.620	20
1,3-Dichlorobenzene	5.00	4.92	4.90	98.4	98.0	80.0-119			0.407	20
1,4-Dichlorobenzene	5.00	5.03	5.02	101	100	79.0-118			0.199	20
Dichlorodifluoromethane	5.00	5.82	5.86	116	117	32.0-152			0.685	20
1,1-Dichloroethane	5.00	4.75	4.52	95.0	90.4	77.0-125			4.96	20
1,2-Dichloroethane	5.00	5.03	4.85	101	97.0	73.0-128			3.64	20
1,1-Dichloroethene	5.00	5.26	5.01	105	100	71.0-131			4.87	20
cis-1,2-Dichloroethene	5.00	4.87	4.77	97.4	95.4	78.0-123			2.07	20
trans-1,2-Dichloroethene	5.00	5.10	4.89	102	97.8	75.0-124			4.20	20
1,2-Dichloropropane	5.00	4.97	4.69	99.4	93.8	78.0-122			5.80	20
1,3-Dichloropropane	5.00	4.97	4.87	99.4	97.4	80.0-119			2.03	20
1,1-Dichloropropene	5.00	5.24	5.03	105	101	79.0-125			4.09	20
cis-1,3-Dichloropropene	5.00	4.75	4.74	95.0	94.8	75.0-124			0.211	20
trans-1,3-Dichloropropene	5.00	4.65	4.54	93.0	90.8	73.0-127			2.39	20
Di-isopropyl ether	5.00	4.50	4.37	90.0	87.4	67.0-128			2.93	20
Ethylbenzene	5.00	4.72	4.46	94.4	89.2	79.0-121			5.66	20
Isopropylbenzene	5.00	4.52	4.41	90.4	88.2	72.0-131			2.46	20
p-Isopropyltoluene	5.00	4.82	4.72	96.4	94.4	77.0-127			2.10	20
2-Butanone (MEK)	25.0	23.5	23.2	94.0	92.8	56.0-143			1.28	20
Methylene Chloride	5.00	4.87	4.77	97.4	95.4	74.0-124			2.07	20
4-Methyl-2-pentanone (MIBK)	25.0	22.1	21.5	88.4	86.0	67.0-130			2.75	20
Methyl tert-butyl ether	5.00	4.67	4.48	93.4	89.6	71.0-124			4.15	20
Naphthalene	5.00	4.35	4.50	87.0	90.0	61.0-128			3.39	20

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

(LCS) R3990613-1 10/22/23 09:40 • (LCSD) R3990613-2 10/22/23 10:13

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
n-Propylbenzene	5.00	5.15	5.16	103	103	76.0-126			0.194	20
Styrene	5.00	4.27	4.17	85.4	83.4	78.0-123			2.37	20
1,1,1,2-Tetrachloroethane	5.00	4.50	4.36	90.0	87.2	78.0-124			3.16	20
1,1,2,2-Tetrachloroethane	5.00	4.58	5.07	91.6	101	71.0-121			10.2	20
Tetrachloroethene	5.00	4.65	4.46	93.0	89.2	74.0-129			4.17	20
Toluene	5.00	4.95	4.84	99.0	96.8	80.0-121			2.25	20
1,2,3-Trichlorobenzene	5.00	4.33	4.55	86.6	91.0	69.0-129			4.95	20
1,2,4-Trichlorobenzene	5.00	4.14	4.18	82.8	83.6	69.0-130			0.962	20
1,2,3-Trimethylbenzene	5.00	4.94	4.71	98.8	94.2	82.0-120			4.77	20
1,2,4-Trimethylbenzene	5.00	4.88	4.79	97.6	95.8	76.0-124			1.86	20
1,3,5-Trimethylbenzene	5.00	4.91	4.86	98.2	97.2	75.0-124			1.02	20
1,1,2-Trichloroethane	5.00	4.92	4.93	98.4	98.6	80.0-119			0.203	20
Trichloroethene	5.00	5.36	4.98	107	99.6	79.0-123			7.35	20
Trichlorofluoromethane	5.00	5.72	5.94	114	119	65.0-141			3.77	20
1,1,2-Trichlorotrifluoroethane	5.00	4.66	4.71	93.2	94.2	70.0-136			1.07	20
1,2,3-Trichloropropane	5.00	5.41	5.37	108	107	73.0-122			0.742	20
Vinyl chloride	5.00	5.01	5.00	100	100	58.0-137			0.200	20
Xylenes, Total	15.0	13.5	13.2	90.0	88.0	79.0-121			2.25	20
(S) Toluene-d8				*103*	*102*	*89.0-112*				
(S) 4-Bromofluorobenzene				*96.3*	*95.4*	*85.0-114*				
(S) 1,2-Dichloroethane-d4				*106*	*105*	*81.0-118*				

L1667978-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667978-05 10/22/23 19:50 • (MS) R3990613-4 10/22/23 20:56 • (MSD) R3990613-5 10/22/23 21:18

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	263	147	260	0.000	0.000	1	39.0-160	V	J3 V	55.5	20
Acrolein	25.0	25.0	31.9	30.8	128	123	1	39.0-155			3.51	20
Acrylonitrile	25.0	5.00	23.3	21.4	93.2	85.6	1	63.0-135			8.50	20
Benzene	5.00	0.500	5.08	4.80	102	96.0	1	79.0-120			5.67	20
Bromobenzene	5.00	0.500	5.36	5.28	107	106	1	80.0-120			1.50	20
Bromodichloromethane	5.00	0.500	5.37	5.15	107	103	1	79.0-125			4.18	20
Bromoform	5.00	0.500	4.41	4.27	88.2	85.4	1	66.0-130			3.23	20
Bromomethane	5.00	2.00	4.51	4.32	90.2	86.4	1	53.0-141			4.30	20
n-Butylbenzene	5.00	0.500	4.94	4.89	98.8	97.8	1	75.0-128			1.02	20
sec-Butylbenzene	5.00	0.500	5.42	5.16	108	103	1	77.0-126			4.91	20
tert-Butylbenzene	5.00	0.500	5.48	5.34	110	107	1	78.0-124			2.59	20
Carbon tetrachloride	5.00	0.500	4.42	4.12	88.4	82.4	1	72.0-136			7.03	20

L1667978-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667978-05 10/22/23 19:50 • (MS) R3990613-4 10/22/23 20:56 • (MSD) R3990613-5 10/22/23 21:18

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chlorobenzene	5.00	0.500	4.87	4.68	97.4	93.6	1	82.0-118			3.98	20
Chlorodibromomethane	5.00	0.500	5.21	5.12	104	102	1	74.0-126			1.74	20
Chloroethane	5.00	2.00	4.92	4.89	98.4	97.8	1	60.0-138			0.612	20
2-Chloroethyl vinyl ether	25.0	25.0	25.0	25.0	0.000	0.000	1	51.0-139	J6 U	J6 U	0.000	20
Chloroform	5.00	2.00	5.35	5.01	107	100	1	79.0-124			6.56	20
Chloromethane	5.00	2.00	4.74	4.59	94.8	91.8	1	50.0-139			3.22	20
2-Chlorotoluene	5.00	0.500	5.56	5.38	111	108	1	79.0-122			3.29	20
4-Chlorotoluene	5.00	0.500	5.48	5.39	110	108	1	78.0-122			1.66	20
1,2-Dibromoethane	5.00	0.500	4.71	4.62	94.2	92.4	1	77.0-121			1.93	20
1,2-Dibromo-3-Chloropropane	5.00	2.00	4.44	4.11	88.8	82.2	1	62.0-128			7.72	20
Dibromomethane	5.00	0.500	5.21	4.84	104	96.8	1	79.0-123			7.36	20
1,2-Dichlorobenzene	5.00	0.500	4.98	4.90	99.6	98.0	1	80.0-119			1.62	20
1,3-Dichlorobenzene	5.00	0.500	5.17	5.15	103	103	1	80.0-119			0.388	20
1,4-Dichlorobenzene	5.00	0.500	5.23	5.23	105	105	1	79.0-118			0.000	20
Dichlorodifluoromethane	5.00	2.00	5.68	5.37	114	107	1	32.0-152			5.61	20
1,1-Dichloroethane	5.00	32.8	36.2	35.6	68.0	56.0	1	77.0-125	V	V	1.67	20
1,2-Dichloroethane	5.00	0.500	5.10	4.91	102	98.2	1	73.0-128			3.80	20
1,1-Dichloroethene	5.00	0.500	5.93	5.69	119	114	1	71.0-131			4.13	20
cis-1,2-Dichloroethene	5.00	0.500	4.94	4.61	98.8	92.2	1	78.0-123			6.91	20
trans-1,2-Dichloroethene	5.00	0.500	4.95	4.75	99.0	95.0	1	75.0-124			4.12	20
1,2-Dichloropropane	5.00	0.500	4.97	4.67	99.4	93.4	1	78.0-122			6.22	20
1,3-Dichloropropane	5.00	0.500	4.97	4.81	99.4	96.2	1	80.0-119			3.27	20
1,1-Dichloropropene	5.00	0.500	5.44	5.10	109	102	1	79.0-125			6.45	20
cis-1,3-Dichloropropene	5.00	0.500	4.98	4.76	99.6	95.2	1	75.0-124			4.52	20
trans-1,3-Dichloropropene	5.00	0.500	4.75	4.59	95.0	91.8	1	73.0-127			3.43	20
Di-isopropyl ether	5.00	0.500	4.70	4.40	94.0	88.0	1	67.0-128			6.59	20
Ethylbenzene	5.00	0.500	4.91	4.74	98.2	94.8	1	79.0-121			3.52	20
Isopropylbenzene	5.00	0.500	5.05	4.78	101	95.6	1	72.0-131			5.49	20
p-Isopropyltoluene	5.00	0.500	5.44	5.12	109	102	1	77.0-127			6.06	20
2-Butanone (MEK)	25.0	5.84	26.3	27.1	81.8	85.0	1	56.0-143			3.00	20
Methylene Chloride	5.00	2.00	4.76	4.39	95.2	87.8	1	74.0-124			8.09	20
4-Methyl-2-pentanone (MIBK)	25.0	5.00	23.3	22.6	93.2	90.4	1	67.0-130			3.05	20
Methyl tert-butyl ether	5.00	0.500	4.86	4.51	97.2	90.2	1	71.0-124			7.47	20
Naphthalene	5.00	2.00	6.48	5.08	130	102	1	61.0-128	J5	J3	24.2	20
n-Propylbenzene	5.00	0.500	5.66	5.53	113	111	1	76.0-126			2.32	20
Styrene	5.00	0.500	4.46	4.25	89.2	85.0	1	78.0-123			4.82	20
1,1,1,2-Tetrachloroethane	5.00	0.500	4.62	4.48	92.4	89.6	1	78.0-124			3.08	20
1,1,2,2-Tetrachloroethane	5.00	0.500	5.74	5.51	115	110	1	71.0-121			4.09	20
Tetrachloroethene	5.00	0.600	4.95	4.53	99.0	90.6	1	74.0-129			8.86	20
Toluene	5.00	0.600	5.09	4.87	102	97.4	1	80.0-121			4.42	20

L1667978-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667978-05 10/22/23 19:50 • (MS) R3990613-4 10/22/23 20:56 • (MSD) R3990613-5 10/22/23 21:18

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,2,3-Trichlorobenzene	5.00	0.500	4.67	4.35	93.4	87.0	1	69.0-129			7.10	20
1,2,4-Trichlorobenzene	5.00	1.00	4.62	4.29	92.4	85.8	1	69.0-130			7.41	20
1,2,3-Trimethylbenzene	5.00	0.500	5.18	5.00	104	100	1	82.0-120			3.54	20
1,2,4-Trimethylbenzene	5.00	1.00	5.14	4.89	103	97.8	1	76.0-124			4.99	20
1,3,5-Trimethylbenzene	5.00	0.500	5.28	4.97	106	99.4	1	75.0-124			6.05	20
1,1,2-Trichloroethane	5.00	0.500	5.23	5.21	105	104	1	80.0-119			0.383	20
Trichloroethene	5.00	0.500	5.00	4.48	100	89.6	1	79.0-123			11.0	20
Trichlorofluoromethane	5.00	2.00	5.99	5.51	120	110	1	65.0-141			8.35	20
1,1,2-Trichlorotrifluoroethane	5.00	0.500	5.45	5.17	109	103	1	70.0-136			5.27	20
1,2,3-Trichloropropane	5.00	1.00	5.56	5.40	111	108	1	73.0-122			2.92	20
Vinyl chloride	5.00	0.500	4.75	4.68	95.0	93.6	1	58.0-137			1.48	20
Xylenes, Total	15.0	1.50	14.1	13.6	94.0	90.7	1	79.0-121			3.61	20
(S) Toluene-d8					*101*	*102*		*89.0-112*				
(S) 4-Bromofluorobenzene					*96.4*	*96.9*		*85.0-114*				
(S) 1,2-Dichloroethane-d4					*106*	*105*		*81.0-118*				

L1667791-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667791-03 10/22/23 16:11 • (MS) R3990613-6 10/22/23 20:12 • (MSD) R3990613-7 10/22/23 20:34

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	25.0	28.9	28.2	116	113	1	39.0-160			2.45	20
Acrolein	25.0	25.0	31.2	28.9	125	116	1	39.0-155			7.65	20
Acrylonitrile	25.0	5.00	23.0	22.4	92.0	89.6	1	63.0-135			2.64	20
Benzene	5.00	1.28	6.37	6.52	102	105	1	79.0-120			2.33	20
Bromobenzene	5.00	0.500	5.57	5.84	111	117	1	80.0-120			4.73	20
Bromodichloromethane	5.00	0.500	5.43	5.54	109	111	1	79.0-125			2.01	20
Bromoform	5.00	0.500	4.11	4.41	82.2	88.2	1	66.0-130			7.04	20
Bromomethane	5.00	2.00	4.54	4.87	90.8	97.4	1	53.0-141			7.01	20
n-Butylbenzene	5.00	0.500	4.77	5.72	85.4	104	1	75.0-128			18.1	20
sec-Butylbenzene	5.00	0.571	5.42	5.94	97.0	107	1	77.0-126			9.15	20
tert-Butylbenzene	5.00	0.959	6.06	6.55	102	112	1	78.0-124			7.77	20
Carbon tetrachloride	5.00	0.500	5.14	5.39	103	108	1	72.0-136			4.75	20
Chlorobenzene	5.00	0.500	4.56	4.97	91.2	99.4	1	82.0-118			8.60	20
Chlorodibromomethane	5.00	0.500	4.90	5.43	98.0	109	1	74.0-126			10.3	20
Chloroethane	5.00	2.00	4.79	4.89	95.8	97.8	1	60.0-138			2.07	20
2-Chloroethyl vinyl ether	25.0	25.0	25.0	23.6	0.000	94.4	1	51.0-139	J6 U	J3	200	20
Chloroform	5.00	2.00	5.41	5.55	108	111	1	79.0-124			2.55	20
Chloromethane	5.00	2.00	4.97	5.07	99.4	101	1	50.0-139			1.99	20

L1667791-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667791-03 10/22/23 16:11 • (MS) R3990613-6 10/22/23 20:12 • (MSD) R3990613-7 10/22/23 20:34

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
2-Chlorotoluene	5.00	0.500	5.31	5.71	106	114	1	79.0-122			7.26	20
4-Chlorotoluene	5.00	0.500	5.34	5.61	107	112	1	78.0-122			4.93	20
1,2-Dibromoethane	5.00	0.500	4.23	4.76	84.6	95.2	1	77.0-121			11.8	20
1,2-Dibromo-3-Chloropropane	5.00	2.00	4.79	4.90	95.8	98.0	1	62.0-128			2.27	20
Dibromomethane	5.00	0.500	5.15	5.44	103	109	1	79.0-123			5.48	20
1,2-Dichlorobenzene	5.00	0.500	4.96	5.38	99.2	108	1	80.0-119			8.12	20
1,3-Dichlorobenzene	5.00	0.500	4.96	5.48	99.2	110	1	80.0-119			9.96	20
1,4-Dichlorobenzene	5.00	0.500	5.06	5.48	101	110	1	79.0-118			7.97	20
Dichlorodifluoromethane	5.00	2.00	5.93	5.93	119	119	1	32.0-152			0.000	20
1,1-Dichloroethane	5.00	0.500	4.87	5.17	97.4	103	1	77.0-125			5.98	20
1,2-Dichloroethane	5.00	0.500	5.06	5.18	101	104	1	73.0-128			2.34	20
1,1-Dichloroethene	5.00	0.500	5.37	5.47	107	109	1	71.0-131			1.85	20
cis-1,2-Dichloroethene	5.00	11.7	17.1	16.5	108	96.0	1	78.0-123			3.57	20
trans-1,2-Dichloroethene	5.00	0.500	5.06	5.01	101	100	1	75.0-124			0.993	20
1,2-Dichloropropane	5.00	0.500	5.08	5.21	102	104	1	78.0-122			2.53	20
1,3-Dichloropropane	5.00	0.500	4.85	5.08	97.0	102	1	80.0-119			4.63	20
1,1-Dichloropropene	5.00	0.500	5.56	5.74	111	115	1	79.0-125			3.19	20
cis-1,3-Dichloropropene	5.00	0.500	4.87	5.43	97.4	109	1	75.0-124			10.9	20
trans-1,3-Dichloropropene	5.00	0.500	4.48	4.96	89.6	99.2	1	73.0-127			10.2	20
Di-isopropyl ether	5.00	0.500	4.58	4.78	91.6	95.6	1	67.0-128			4.27	20
Ethylbenzene	5.00	6.13	10.6	10.7	89.4	91.4	1	79.0-121			0.939	20
Isopropylbenzene	5.00	8.29	12.2	11.2	78.2	58.2	1	72.0-131		J6	8.55	20
p-Isopropyltoluene	5.00	0.537	5.45	6.09	98.3	111	1	77.0-127			11.1	20
2-Butanone (MEK)	25.0	1.94	24.7	24.2	91.0	89.0	1	56.0-143			2.04	20
Methylene Chloride	5.00	2.00	4.73	4.90	94.6	98.0	1	74.0-124			3.53	20
4-Methyl-2-pentanone (MIBK)	25.0	5.00	21.7	23.4	86.8	93.6	1	67.0-130			7.54	20
Methyl tert-butyl ether	5.00	0.500	4.55	4.85	91.0	97.0	1	71.0-124			6.38	20
Naphthalene	5.00	41.7	47.2	48.6	110	138	1	61.0-128		V	2.92	20
n-Propylbenzene	5.00	2.73	7.96	7.82	105	102	1	76.0-126			1.77	20
Styrene	5.00	0.500	4.27	4.73	85.4	94.6	1	78.0-123			10.2	20
1,1,1,2-Tetrachloroethane	5.00	0.500	4.30	4.81	86.0	96.2	1	78.0-124			11.2	20
1,1,2,2-Tetrachloroethane	5.00	0.500	5.93	5.94	119	119	1	71.0-121			0.168	20
Tetrachloroethene	5.00	0.600	4.61	4.95	92.2	99.0	1	74.0-129			7.11	20
Toluene	5.00	0.600	4.93	5.30	98.6	106	1	80.0-121			7.23	20
1,2,3-Trichlorobenzene	5.00	0.500	4.53	5.11	90.6	102	1	69.0-129			12.0	20
1,2,4-Trichlorobenzene	5.00	1.00	4.48	5.22	89.6	104	1	69.0-130			15.3	20
1,2,3-Trimethylbenzene	5.00	0.171	5.12	5.46	99.0	106	1	82.0-120			6.43	20
1,2,4-Trimethylbenzene	5.00	0.613	5.55	5.92	98.7	106	1	76.0-124			6.45	20
1,3,5-Trimethylbenzene	5.00	0.689	5.62	5.92	98.6	105	1	75.0-124			5.20	20
1,1,2-Trichloroethane	5.00	0.500	5.26	5.60	105	112	1	80.0-119			6.26	20

L1667791-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667791-03 10/22/23 16:11 • (MS) R3990613-6 10/22/23 20:12 • (MSD) R3990613-7 10/22/23 20:34

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Trichloroethene	5.00	4.68	9.19	9.40	90.2	94.4	1	79.0-123			2.26	20
Trichlorofluoromethane	5.00	2.00	6.06	5.89	121	118	1	65.0-141			2.85	20
1,1,2-Trichlorotrifluoroethane	5.00	0.500	5.60	5.43	112	109	1	70.0-136			3.08	20
1,2,3-Trichloropropane	5.00	1.00	5.56	5.92	111	118	1	73.0-122			6.27	20
Vinyl chloride	5.00	0.500	5.00	5.02	100	100	1	58.0-137			0.399	20
Xylenes, Total	15.0	3.12	16.4	17.8	88.5	97.9	1	79.0-121			8.19	20
(S) Toluene-d8					*94.9*	*99.6*		*89.0-112*				
(S) 4-Bromofluorobenzene					*95.1*	*97.9*		*85.0-114*				
(S) 1,2-Dichloroethane-d4					*107*	*105*		*81.0-118*				

Method Blank (MB)

(MB) R4033245-3 10/22/23 01:57

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
2,2-Dichloropropane	0.500	U	0.161	0.500	1.00
Hexachloro-1,3-butadiene	0.750	U	0.337	0.750	1.50
1,1,1-Trichloroethane	0.500	U	0.149	0.500	1.00
(S) Toluene-d8	*103*				*89.0-112*
(S) 4-Bromofluorobenzene	*101*				*85.0-114*
(S) 1,2-Dichloroethane-d4	*94.4*				*81.0-118*

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

(LCS) R4033245-1 10/22/23 00:38 • (LCSD) R4033245-2 10/22/23 00:57

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
2,2-Dichloropropane	5.00	5.53	5.27	111	105	60.0-139			4.81	20
Hexachloro-1,3-butadiene	5.00	5.70	5.23	114	105	66.0-134			8.60	20
1,1,1-Trichloroethane	5.00	5.75	5.63	115	113	74.0-131			2.11	20
(S) Toluene-d8				*102*	*101*	*89.0-112*				
(S) 4-Bromofluorobenzene				*101*	*99.5*	*85.0-114*				
(S) 1,2-Dichloroethane-d4				*101*	*100*	*81.0-118*				

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

Method Blank (MB)

(MB) R4033260-3 10/26/23 17:21

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
2,2-Dichloropropane	0.500	U	0.161	0.500	1.00
Hexachloro-1,3-butadiene	0.750	U	0.337	0.750	1.50
1,1,1-Trichloroethane	0.500	U	0.149	0.500	1.00
Trichloroethene	0.500	U	0.190	0.500	1.00
(S) Toluene-d8	*108*				*89.0-112*
(S) 4-Bromofluorobenzene	*98.6*				*85.0-114*
(S) 1,2-Dichloroethane-d4	*94.0*				*81.0-118*

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

(LCS) R4033260-1 10/26/23 16:04 • (LCSD) R4033260-2 10/26/23 16:24

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
2,2-Dichloropropane	5.00	4.15	4.18	83.0	83.6	60.0-139			0.720	20
Hexachloro-1,3-butadiene	5.00	4.80	4.43	96.0	88.6	66.0-134			8.02	20
1,1,1-Trichloroethane	5.00	4.83	4.92	96.6	98.4	74.0-131			1.85	20
Trichloroethene	5.00	5.10	5.14	102	103	79.0-123			0.781	20
(S) Toluene-d8				*110*	*111*	*89.0-112*				
(S) 4-Bromofluorobenzene				*103*	*103*	*85.0-114*				
(S) 1,2-Dichloroethane-d4				*94.6*	*93.9*	*81.0-118*				

Method Blank (MB)

(MB) R3992861-1 10/28/23 18:06

Analyte	MB Result	MB Qualifier	MB DL	MB LOD	MB LOQ
	ug/l		ug/l	ug/l	ug/l
AK102 DRO C10-C25	386	J	170	400	800
(S) o-Terphenyl	*69.9*				*60.0-120*

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

(LCS) R3992861-2 10/28/23 19:47 • (LCSD) R3992861-3 10/28/23 20:07

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	%	%	%			%	%
AK102 DRO C10-C25	6000	4700	4410	78.3	73.5	75.0-125		J4	6.37	20
(S) o-Terphenyl				*42.9*	*33.5*	*60.0-120*	J2	J2		

L1667791-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667791-03 10/28/23 20:27 • (MS) R3992861-4 10/28/23 20:47 • (MSD) R3992861-5 10/28/23 21:07

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
AK102 DRO C10-C25	6000	7860	11000	11600	52.3	62.3	1	75.0-125	J6	J6	5.31	20
(S) o-Terphenyl					*41.1*	*49.6*		*50.0-150*	J2	J2		

Sample Narrative:

OS: Duplicate Analysis performed due to QC failure. Results confirm; reporting in hold data

L1667832-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667832-03 10/28/23 21:28 • (MS) R3992861-6 10/28/23 21:48 • (MSD) R3992861-7 10/28/23 22:08

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
AK102 DRO C10-C25	6320	594	4860	4020	67.5	54.2	1.05	75.0-125	J6	J6	18.9	20
(S) o-Terphenyl					*33.4*	*26.5*		*50.0-150*	J2	J2		

Sample Narrative:

OS: Duplicate Analysis performed due to QC failure. Results don't confirm; both analyses reported

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

DL	Detection Limit.
LOD	Limit of Detection.
LOQ	Limit of Quantitation.
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.
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.
C4	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Data is likely to show a low bias concerning the result.
C5	The reported concentration is an estimate. The continuing calibration standard associated with this data responded high. Data is likely to show a high bias concerning the result.
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.

GLOSSARY OF TERMS

Qualifier	Description
U	Below Detectable Limits: Indicates that the analyte was not detected.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

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.

Company Name/Address:
North Wind Site Services, LLC- AK
~~7910 King Street~~ 2525 C ST, Ste 130
~~Anchorage, AK 99518~~ Anchorage, AK 99503

Billing Information:
Accounts Payable
1425 Higham St
Idaho Falls, ID 83402

Report to:
North Wind

Email To:
rlafata@northwindgrp.com;jill.jones@northwin

Project Description:
Port Heiden RRS 21-034

City/State Collected: Port Heiden, AK

Please Circle: PT MT CT ET

Phone: ~~907-277-5488~~ 907-602-3082

Client Project # 060068.001.93.03.01

Lab Project # **NORWINDAAK-PORTHEID**

Collected by (print): Kristopher Reidt

Site/Facility ID #

P.O. # 6-00001098

Collected by (signature):

Immediately Packed on Ice N ___ Y X

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

Quote # NORWINDAAK

Date Results Needed STANDARD

Analysis / Container / Preservative

Pres Chk	2	1	1 x2	1 x2	3		2			
	DODAK102 100ml Amb HCl	DODALK,DODSULFATE 250mlHDPE-NoPres	DODFEICP,DODMNICP 250mlHDPE-HNO3	DODNO2NO3,DODTKN 250mlHDPE-H2SO4	DODV8260 40mlAmb-HCl	DODV8260BTEX 40mlAmb-HCl	DODV8260ULL 40mlAmb HCl			

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs										Remarks	Sample # (lab only)
OT001-DSAMW05-101523	GRAB	GW	1000	10-15-23		10	X	X	X	X	X		X				-01
OT001-DSAMW02-101523	GRAB	GW	1120	10-15-23		10	X	X	X	X	X		X				-02
WP002-BLOMW01-101523	GRAB	GW	1230	10-15-23		10	X	X	X	X	X		X				-03
WP002-BLOMW01-101523-MS	GRAB	GW	1240	10-15-23		10	X	X	X	X	X		X			MS	-03
WP002-BLOMW01-101523-MSD	GRAB	GW	1240	10-15-23		10	X	X	X	X	X		X			MSD	-03
OT001-EQBLK001-101523	GRAB	GW	1745	10-15-23		10	X	X	X	X	X		X				-04
OT001-TRIPBLNK-HCL-01	GRAB	GW	0900	10-15-23		3					X		X				-05
		GW															
		GW															
		GW															

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

Remarks: Cooler ID "GREEN"
NPDL # 21-034

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking # 6841 8346 5441

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	Temp °C	Bottles Received:	If preservation required by Login: Date/Time
	10-16-23	1230	10/16/23 1630	3	CLAS		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)		Temp	Bottles Received:	
	10/17/23	0922	10/17/23 10:05		4.0+0=4.0	59	
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date:	Time:	Hold:	Condition:
	10/17/23	10:05		10-18-23	900		NCF / OK

Chain of Custody Page 1 of 1

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 RMD/18

SDG # ~~L66~~ L1667791

E031

Acctnum: **NORWINDAAK**
Template: **T235099**
Prelogin: **P1015439**
PM: 546 - Jared Starkey
PB: JF 8/1/23

Shipped Via:

10/18 - NCF-L1667791 NORWINDAAK

R5

Time estimate: oh **Time spent:** oh **Grouping date:** 18 October 2023

Members

Robert Rountree (responsible)

- [ ] Parameter(s) past holding time
- [ ] Temperature not in range
- [ ] Improper container type
- [ ] pH not in range
- [ ] Insufficient sample volume
- [ ] Sample is biphasic
- [ ] Vials received with headspace
- [x] Broken container
- [x] Sufficient sample remains
- [ ] If broken container: Insufficient packing material around container
- [ ] If broken container: Insufficient packing material inside cooler
- [ ] If broken container: Improper handling by carrier:_____
- [ ] If broken container: Sample was frozen
- [ ] If broken container: Container lid not intact
- [ ] Client informed by Call
- [ ] Client informed by Email
- [ ] Client informed by Voicemail
- [ ] Date/Time:_____
- [ ] PM initials:_____
- [ ] Client Contact:_____

Comments

Robert Rountree *18 October 2023 8:55 PM*

Received a broken HCL vial for sample WP002-BLOMW01-101523 multiple Vials remain.

ANALYTICAL REPORT

February 14, 2024

Revised Report

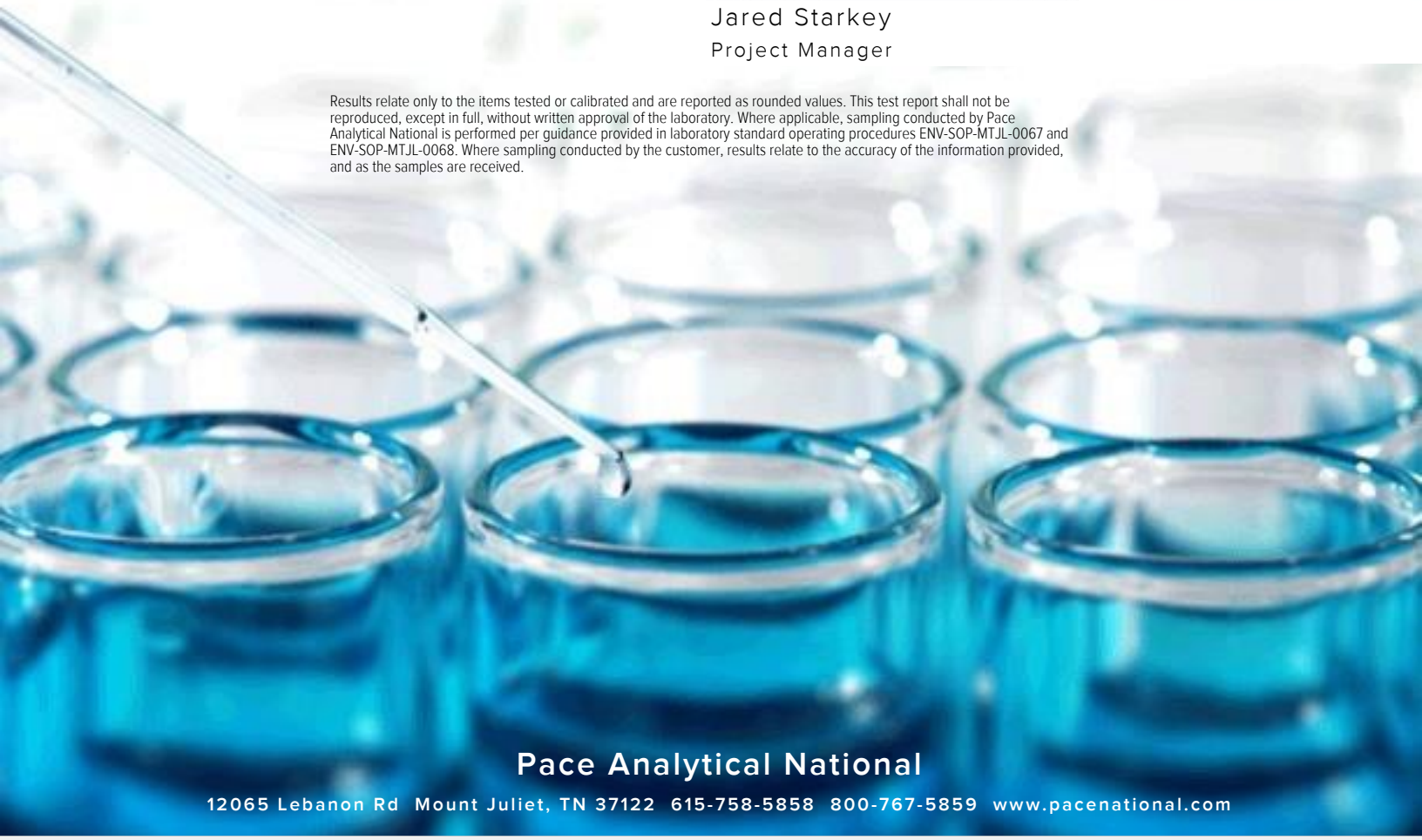
North Wind Site Services, LLC- AK

Sample Delivery Group:	L1667912
Samples Received:	10/18/2023
Project Number:	060068.001.93.03.01
Description:	Port Heiden RRS 21-034
Site:	RCSMW06
Report To:	North Wind 7910 King Street Anchorage, AK 99518

Entire Report Reviewed By:

Jared Starkey
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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OT001-RRSMW06-101323 L1667912-01 GW

Collected by: Kristopher Reidt | Collected date/time: 10/13/23 12:30 | Received date/time: 10/18/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2156619	1	10/25/23 13:15	10/25/23 13:15	BJM	Mt. Juliet, TN
Wet Chemistry by Method 351.2	WG2154830	1	10/24/23 09:39	10/24/23 20:18	UNP	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG2154634	1	10/20/23 21:06	10/20/23 21:06	AEC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2158472	1	10/27/23 17:08	10/27/23 17:08	ASM	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2155276	1	10/21/23 03:40	10/23/23 23:13	DJS	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260 D-LL	WG2155682	1	10/22/23 07:32	10/22/23 07:32	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260 D-LL	WG2157275	1	10/26/23 23:55	10/26/23 23:55	KSD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2155879	1	10/22/23 17:16	10/22/23 17:16	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2225461	1	10/22/23 07:32	10/22/23 07:32	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2159044	1	10/27/23 05:58	10/28/23 06:23	DMG	Mt. Juliet, TN

OT001-BLOMW05-101323 L1667912-02 GW

Collected by: Kristopher Reidt | Collected date/time: 10/13/23 18:15 | Received date/time: 10/18/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2156619	1	10/25/23 13:20	10/25/23 13:20	BJM	Mt. Juliet, TN
Wet Chemistry by Method 351.2	WG2154830	1	10/24/23 09:39	10/24/23 20:20	UNP	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG2154634	1	10/20/23 21:07	10/20/23 21:07	AEC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2158472	1	10/27/23 17:21	10/27/23 17:21	ASM	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2155276	1	10/21/23 03:40	10/23/23 23:16	DJS	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260 D-LL	WG2155682	1	10/22/23 07:52	10/22/23 07:52	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260 D-LL	WG2157275	1	10/27/23 00:14	10/27/23 00:14	KSD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2155879	1	10/22/23 17:39	10/22/23 17:39	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2225461	1	10/22/23 07:52	10/22/23 07:52	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2159044	1.05	10/27/23 05:58	10/28/23 06:43	DMG	Mt. Juliet, TN

OT001-BLOMW07-101323 L1667912-03 GW

Collected by: Kristopher Reidt | Collected date/time: 10/13/23 17:30 | Received date/time: 10/18/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2156619	1	10/25/23 13:26	10/25/23 13:26	BJM	Mt. Juliet, TN
Wet Chemistry by Method 351.2	WG2154830	1	10/24/23 09:39	10/24/23 20:21	UNP	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG2154634	1	10/20/23 21:08	10/20/23 21:08	AEC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2158472	1	10/27/23 17:34	10/27/23 17:34	ASM	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2155276	1	10/21/23 03:40	10/23/23 23:19	DJS	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260 D-LL	WG2155682	1	10/22/23 08:12	10/22/23 08:12	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260 D-LL	WG2157275	1	10/27/23 00:33	10/27/23 00:33	KSD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2155879	1	10/22/23 18:01	10/22/23 18:01	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2225461	1	10/22/23 08:12	10/22/23 08:12	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2159044	1	10/27/23 05:58	10/28/23 07:04	DMG	Mt. Juliet, TN

OT001-BLOMW99-101323 L1667912-04 GW

Collected by: Kristopher Reidt | Collected date/time: 10/13/23 17:40 | Received date/time: 10/18/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2156619	1	10/25/23 13:31	10/25/23 13:31	BJM	Mt. Juliet, TN
Wet Chemistry by Method 351.2	WG2154830	1	10/24/23 09:39	10/24/23 20:22	UNP	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG2154634	1	10/20/23 21:10	10/20/23 21:10	AEC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2158472	1	10/27/23 17:46	10/27/23 17:46	ASM	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2155276	1	10/21/23 03:40	10/23/23 23:22	DJS	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260 D-LL	WG2155682	1	10/22/23 08:32	10/22/23 08:32	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260 D-LL	WG2157275	1	10/27/23 00:52	10/27/23 00:52	KSD	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2155879	1	10/22/23 18:22	10/22/23 18:22	JHH	Mt. Juliet, TN

OT001-BLOMW99-101323 L1667912-04 GW

Collected by: Kristopher Reidt
Collected date/time: 10/13/23 17:40
Received date/time: 10/18/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2225461	1	10/22/23 08:32	10/22/23 08:32	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2159044	1.05	10/27/23 05:58	10/28/23 07:24	DMG	Mt. Juliet, TN

OT001-BLOMW06-101323 L1667912-05 GW

Collected by: Kristopher Reidt
Collected date/time: 10/13/23 18:45
Received date/time: 10/18/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2320 B-2011	WG2156619	1	10/25/23 13:35	10/25/23 13:35	BJM	Mt. Juliet, TN
Wet Chemistry by Method 351.2	WG2154830	1	10/24/23 09:39	10/24/23 20:23	UNP	Mt. Juliet, TN
Wet Chemistry by Method 353.2	WG2154634	1	10/20/23 21:11	10/20/23 21:11	AEC	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2158472	1	10/27/23 17:59	10/27/23 17:59	ASM	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG2155276	1	10/21/23 03:40	10/23/23 23:30	DJS	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260 D-LL	WG2159657	1	10/29/23 21:30	10/29/23 21:30	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2155879	1	10/22/23 18:44	10/22/23 18:44	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2225492	1	10/29/23 21:30	10/29/23 21:30	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method AK102	WG2159044	1	10/27/23 05:58	10/28/23 07:44	DMG	Mt. Juliet, TN

OT001-TRIPBLANK-HCL-02 L1667912-06 GW

Collected by: Kristopher Reidt
Collected date/time: 10/13/23 11:30
Received date/time: 10/18/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260 D-LL	WG2159657	1	10/29/23 20:14	10/29/23 20:14	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2155879	1	10/22/23 13:16	10/22/23 13:16	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260D	WG2225492	1	10/29/23 20:14	10/29/23 20:14	JHH	Mt. Juliet, TN

Unless qualified or notated within the narrative below, all sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times. 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.



Jared Starkey
Project Manager

Report Revision History

Level II Report - Version 1: 11/13/23 10:03
Level IV Report - Version 2: 11/13/23 13:29
Level II Report - Version 3: 11/20/23 16:03
Level IV Report - Version 4: 11/20/23 16:50

Project Comments

ID Correction
Reporting 8260 and 8260LL

Sample Delivery Group (SDG) Narrative

Sample was prepared and/or analyzed past recommended holding time. Concentrations should be considered minimum values.

Batch	Method	Lab Sample ID
WG2159657	8260 D-LL	L1667912-05

Wet Chemistry by Method 351.2

The sample matrix interfered with the ability to make any accurate determination; spike value is low.

Batch	Lab Sample ID	Analytes
WG2154830	(MS) R3990627-4	Kjeldahl Nitrogen, TKN

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Data is likely to show a low bias concerning the result.

Batch	Lab Sample ID	Analytes
WG2155682	L1667912-01	trans-1,4-Dichloro-2-butene
WG2155682	L1667912-02	trans-1,4-Dichloro-2-butene
WG2155682	L1667912-03	trans-1,4-Dichloro-2-butene
WG2155682	L1667912-04	trans-1,4-Dichloro-2-butene
WG2159657	L1667912-05	1,2,3-Trichlorobenzene, Naphthalene and trans-1,4-Dichloro-2-butene
WG2159657	L1667912-06	1,2,3-Trichlorobenzene, Naphthalene and trans-1,4-Dichloro-2-butene

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

The initial calibration verification standard (SSCV) associated with this data responded low.

Batch	Lab Sample ID	Analytes
WG2159657	L1667912-05	Dichlorodifluoromethane
WG2159657	L1667912-06	Dichlorodifluoromethane

The sample matrix interfered with the ability to make any accurate determination; spike value is high.

Batch	Lab Sample ID	Analytes
WG2155682	(MS) R3990575-6, (MSD) R3990575-7	30 analytes
WG2159657	(MS) R3992710-4, (MSD) R3992710-7	1,1-Dichloropropene, Ethylbenzene, Tetrachloroethene, Trichloroethene, Trichlorofluoromethane, Vinyl chloride and Xylenes, Total

The sample matrix interfered with the ability to make any accurate determination; spike value is low.

Batch	Lab Sample ID	Analytes
WG2155682	(MS) R3990575-4, (MS) R3990575-6, (MSD) R3990575-7, (MSD) R3990575-5	1,3,5-Trimethylbenzene, 2-Chlorotoluene, Cyclohexane, n-Butylbenzene, tert-Butylbenzene and Tetrahydrofuran

The associated batch QC was outside the established quality control range for precision.

Batch	Lab Sample ID	Analytes
WG2155682	(MSD) R3990575-7	trans-1,4-Dichloro-2-butene
WG2159657	(MSD) R3992710-5	Cyclohexane

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

The sample concentration is too high to evaluate accurate spike recoveries.

Batch	Lab Sample ID	Analytes
WG2155879	(MS) R3990613-4, (MSD) R3990613-5, (MSD) R3990613-7	1,1,1-Trichloroethane, 1,1-Dichloroethane, Acetone and Naphthalene

The sample matrix interfered with the ability to make any accurate determination; spike value is low.

Batch	Lab Sample ID	Analytes
WG2155879	(MS) R3990613-6, (MS) R3990613-4, (MSD) R3990613-5, (MSD) R3990613-7	2-Chloroethyl vinyl ether and Isopropylbenzene

The sample matrix interfered with the ability to make any accurate determination; spike value is high.

Batch	Lab Sample ID	Analytes
WG2155879	(MS) R3990613-4	Naphthalene

The associated batch QC was outside the established quality control range for precision.

Batch	Lab Sample ID	Analytes
WG2155879	(MSD) R3990613-7, (MSD) R3990613-5	2-Chloroethyl vinyl ether, Acetone and Naphthalene

Semi-Volatile Organic Compounds (GC) by Method AK102

Surrogate recovery limits have been exceeded; values are outside lower control limits.

Batch	Analyte	Lab Sample ID
WG2159044	o-Terphenyl	L1667912-04

The same analyte is found in the associated blank.

Batch	Analyte	Lab Sample ID
WG2159044	AK102 DRO C10-C25	L1667912-01, 02, 03, 04, 05

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

DETECTION SUMMARY

Wet Chemistry by Method 2320 B-2011

Client ID	Lab Sample ID	Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
				ug/l		ug/l	ug/l	ug/l		date / time	
OT001-RRSMW06-101323	L1667912-01	Alkalinity		110000		8450	10000	20000	1	10/25/2023 13:15	WG2156619
OT001-RRSMW06-101323	L1667912-01	Alkalinity,Bicarbonate		110000		8450	10000	20000	1	10/25/2023 13:15	WG2156619
OT001-BLOMW05-101323	L1667912-02	Alkalinity		60200		8450	10000	20000	1	10/25/2023 13:20	WG2156619
OT001-BLOMW05-101323	L1667912-02	Alkalinity,Bicarbonate		60200		8450	10000	20000	1	10/25/2023 13:20	WG2156619
OT001-BLOMW07-101323	L1667912-03	Alkalinity		45300		8450	10000	20000	1	10/25/2023 13:26	WG2156619
OT001-BLOMW07-101323	L1667912-03	Alkalinity,Bicarbonate		45300		8450	10000	20000	1	10/25/2023 13:26	WG2156619
OT001-BLOMW99-101323	L1667912-04	Alkalinity		44900		8450	10000	20000	1	10/25/2023 13:31	WG2156619
OT001-BLOMW99-101323	L1667912-04	Alkalinity,Bicarbonate		44900		8450	10000	20000	1	10/25/2023 13:31	WG2156619
OT001-BLOMW06-101323	L1667912-05	Alkalinity		47200		8450	10000	20000	1	10/25/2023 13:35	WG2156619
OT001-BLOMW06-101323	L1667912-05	Alkalinity,Bicarbonate		47200		8450	10000	20000	1	10/25/2023 13:35	WG2156619

Wet Chemistry by Method 353.2

Client ID	Lab Sample ID	Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
				ug/l		ug/l	ug/l	ug/l		date / time	
OT001-RRSMW06-101323	L1667912-01	Nitrate-Nitrite	7727-37-9	1360		50.0	100	200	1	10/20/2023 21:06	WG2154634
OT001-BLOMW05-101323	L1667912-02	Nitrate-Nitrite	7727-37-9	1290		50.0	100	200	1	10/20/2023 21:07	WG2154634
OT001-BLOMW06-101323	L1667912-05	Nitrate-Nitrite	7727-37-9	60.3	J	50.0	100	200	1	10/20/2023 21:11	WG2154634

Wet Chemistry by Method 9056A

Client ID	Lab Sample ID	Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
				ug/l		ug/l	ug/l	ug/l		date / time	
OT001-RRSMW06-101323	L1667912-01	Sulfate	14808-79-8	3740	J	594	2500	5000	1	10/27/2023 17:08	WG2158472
OT001-BLOMW05-101323	L1667912-02	Sulfate	14808-79-8	2380	J	594	2500	5000	1	10/27/2023 17:21	WG2158472
OT001-BLOMW07-101323	L1667912-03	Sulfate	14808-79-8	2450	J	594	2500	5000	1	10/27/2023 17:34	WG2158472
OT001-BLOMW99-101323	L1667912-04	Sulfate	14808-79-8	2240	J	594	2500	5000	1	10/27/2023 17:46	WG2158472
OT001-BLOMW06-101323	L1667912-05	Sulfate	14808-79-8	3800	J	594	2500	5000	1	10/27/2023 17:59	WG2158472

Metals (ICP) by Method 6010D

Client ID	Lab Sample ID	Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
				ug/l		ug/l	ug/l	ug/l		date / time	
OT001-RRSMW06-101323	L1667912-01	Iron	7439-89-6	247		20.5	50.0	100	1	10/23/2023 23:13	WG2155276
OT001-RRSMW06-101323	L1667912-01	Manganese	7439-96-5	7.75	J	0.855	5.00	10.0	1	10/23/2023 23:13	WG2155276
OT001-BLOMW05-101323	L1667912-02	Iron	7439-89-6	2330		20.5	50.0	100	1	10/23/2023 23:16	WG2155276
OT001-BLOMW05-101323	L1667912-02	Manganese	7439-96-5	122		0.855	5.00	10.0	1	10/23/2023 23:16	WG2155276

DETECTION SUMMARY

Metals (ICP) by Method 6010D

Client ID	Lab Sample ID	Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
				ug/l		ug/l	ug/l	ug/l		date / time	
OT001-BLOMW07-101323	L1667912-03	Iron	7439-89-6	412		20.5	50.0	100	1	10/23/2023 23:19	WG2155276
OT001-BLOMW07-101323	L1667912-03	Manganese	7439-96-5	18.8		0.855	5.00	10.0	1	10/23/2023 23:19	WG2155276
OT001-BLOMW99-101323	L1667912-04	Iron	7439-89-6	1620		20.5	50.0	100	1	10/23/2023 23:22	WG2155276
OT001-BLOMW99-101323	L1667912-04	Manganese	7439-96-5	83.7		0.855	5.00	10.0	1	10/23/2023 23:22	WG2155276
OT001-BLOMW06-101323	L1667912-05	Iron	7439-89-6	5250		20.5	50.0	100	1	10/23/2023 23:30	WG2155276
OT001-BLOMW06-101323	L1667912-05	Manganese	7439-96-5	218		0.855	5.00	10.0	1	10/23/2023 23:30	WG2155276

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Client ID	Lab Sample ID	Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
				ug/l		ug/l	ug/l	ug/l		date / time	
OT001-RRSMW06-101323	L1667912-01	Acetone	67-64-1	2.10	J	0.548	2.00	4.00	1	10/22/2023 07:32	WG2155682
OT001-RRSMW06-101323	L1667912-01	Benzene	71-43-2	0.0890	J	0.0160	0.0500	0.100	1	10/22/2023 07:32	WG2155682
OT001-RRSMW06-101323	L1667912-01	Naphthalene	91-20-3	0.842		0.125	0.250	0.500	1	10/22/2023 07:32	WG2155682
OT001-RRSMW06-101323	L1667912-01	Toluene	108-88-3	0.250		0.0500	0.100	0.200	1	10/22/2023 07:32	WG2155682
OT001-RRSMW06-101323	L1667912-01	1,2,4-Trimethylbenzene	95-63-6	0.0570	J	0.0464	0.100	0.200	1	10/22/2023 07:32	WG2155682
OT001-BLOMW05-101323	L1667912-02	Acetone	67-64-1	1.48	J	0.548	2.00	4.00	1	10/22/2023 07:52	WG2155682
OT001-BLOMW05-101323	L1667912-02	Benzene	71-43-2	0.0760	J	0.0160	0.0500	0.100	1	10/22/2023 07:52	WG2155682
OT001-BLOMW05-101323	L1667912-02	Naphthalene	91-20-3	0.148	J	0.125	0.250	0.500	1	10/22/2023 07:52	WG2155682
OT001-BLOMW05-101323	L1667912-02	Toluene	108-88-3	0.183	J	0.0500	0.100	0.200	1	10/22/2023 07:52	WG2155682
OT001-BLOMW07-101323	L1667912-03	Acetone	67-64-1	2.39	J	0.548	2.00	4.00	1	10/22/2023 08:12	WG2155682
OT001-BLOMW07-101323	L1667912-03	Benzene	71-43-2	0.0660	J	0.0160	0.0500	0.100	1	10/22/2023 08:12	WG2155682
OT001-BLOMW07-101323	L1667912-03	Toluene	108-88-3	0.237		0.0500	0.100	0.200	1	10/22/2023 08:12	WG2155682
OT001-BLOMW99-101323	L1667912-04	Acetone	67-64-1	2.08	J	0.548	2.00	4.00	1	10/22/2023 08:32	WG2155682
OT001-BLOMW99-101323	L1667912-04	Benzene	71-43-2	0.0680	J	0.0160	0.0500	0.100	1	10/22/2023 08:32	WG2155682
OT001-BLOMW99-101323	L1667912-04	Toluene	108-88-3	0.216		0.0500	0.100	0.200	1	10/22/2023 08:32	WG2155682
OT001-BLOMW06-101323	L1667912-05	Acetone	67-64-1	1.52	J Q	0.548	2.00	4.00	1	10/29/2023 21:30	WG2159657
OT001-BLOMW06-101323	L1667912-05	Toluene	108-88-3	0.125	J Q	0.0500	0.100	0.200	1	10/29/2023 21:30	WG2159657
OT001-BLOMW06-101323	L1667912-05	Trichloroethene	79-01-6	0.0200	J Q	0.0160	0.0400	0.0800	1	10/29/2023 21:30	WG2159657
OT001-TRIPBLANK-HCL-02	L1667912-06	Acetone	67-64-1	0.596	J	0.548	2.00	4.00	1	10/29/2023 20:14	WG2159657

Semi-Volatile Organic Compounds (GC) by Method AK102

Client ID	Lab Sample ID	Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
				ug/l		ug/l	ug/l	ug/l		date / time	
OT001-RRSMW06-101323	L1667912-01	AK102 DRO C10-C25	C10-C25	437	B J	170	400	800	1	10/28/2023 06:23	WG2159044

DETECTION SUMMARY

Semi-Volatile Organic Compounds (GC) by Method AK102

Client ID	Lab Sample ID	Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
				ug/l		ug/l	ug/l	ug/l		date / time	
OT001-BLOMW05-101323	L1667912-02	AK102 DRO C10-C25	C10-C25	499	B J	179	420	840	1.05	10/28/2023 06:43	WG2159044
OT001-BLOMW07-101323	L1667912-03	AK102 DRO C10-C25	C10-C25	431	B J	170	400	800	1	10/28/2023 07:04	WG2159044
OT001-BLOMW99-101323	L1667912-04	AK102 DRO C10-C25	C10-C25	407	B J	179	420	840	1.05	10/28/2023 07:24	WG2159044
OT001-BLOMW06-101323	L1667912-05	AK102 DRO C10-C25	C10-C25	347	B J	170	400	800	1	10/28/2023 07:44	WG2159044

Additional Information - Results for field analyses are not accredited to ISO 17025

Analyte	Result	Units
Cooler#	yellow	
Cooler Temperature	2.2	Deg. C

Wet Chemistry by Method 2320 B-2011

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Alkalinity		110000		8450	10000	20000	1	10/25/2023 13:15	WG2156619
Alkalinity,Bicarbonate		110000		8450	10000	20000	1	10/25/2023 13:15	WG2156619
Alkalinity,Carbonate		10000	U	8450	10000	20000	1	10/25/2023 13:15	WG2156619
Alkalinity,Hydroxide		10000	U	8450	10000	20000	1	10/25/2023 13:15	WG2156619

Sample Narrative:
L1667912-01 WG2156619: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 351.2

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Kjeldahl Nitrogen, TKN	7727-37-9	300	U	140	300	600	1	10/24/2023 20:18	WG2154830

Wet Chemistry by Method 353.2

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Nitrate-Nitrite	7727-37-9	1360		50.0	100	200	1	10/20/2023 21:06	WG2154634

Wet Chemistry by Method 9056A

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Sulfate	14808-79-8	3740	J	594	2500	5000	1	10/27/2023 17:08	WG2158472

Metals (ICP) by Method 6010D

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Iron	7439-89-6	247		20.5	50.0	100	1	10/23/2023 23:13	WG2155276
Manganese	7439-96-5	7.75	J	0.855	5.00	10.0	1	10/23/2023 23:13	WG2155276

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Acetone	67-64-1	2.10	J	0.548	2.00	4.00	1	10/22/2023 07:32	WG2155682
Acrylonitrile	107-13-1	0.250	U	0.0760	0.250	0.500	1	10/22/2023 07:32	WG2155682
Benzene	71-43-2	0.0890	J	0.0160	0.0500	0.100	1	10/22/2023 07:32	WG2155682
Bromobenzene	108-86-1	0.250	U	0.0420	0.250	0.500	1	10/22/2023 07:32	WG2155682
Bromodichloromethane	75-27-4	0.100	U	0.0315	0.100	0.200	1	10/22/2023 07:32	WG2155682
Bromochloromethane	74-97-5	0.100	U	0.0452	0.100	0.200	1	10/22/2023 07:32	WG2155682
Bromoform	75-25-2	0.500	U	0.239	0.500	1.00	1	10/22/2023 07:32	WG2155682
Bromomethane	74-83-9	0.500	U	0.148	0.500	1.00	1	10/22/2023 07:32	WG2155682
n-Butylbenzene	104-51-8	0.500	U	0.154	0.500	1.00	1	10/22/2023 07:32	WG2155682
sec-Butylbenzene	135-98-8	0.250	U	0.101	0.250	0.500	1	10/22/2023 07:32	WG2155682
tert-Butylbenzene	98-06-6	0.500	U	0.0620	0.500	1.00	1	10/22/2023 07:32	WG2155682
Carbon tetrachloride	56-23-5	0.100	U	0.0432	0.100	0.200	1	10/22/2023 07:32	WG2155682
Carbon disulfide	75-15-0	0.500	U	0.162	0.500	1.00	1	10/22/2023 07:32	WG2155682
Chlorobenzene	108-90-7	0.0500	U	0.0229	0.0500	0.100	1	10/22/2023 07:32	WG2155682
Chlorodibromomethane	124-48-1	0.0500	U	0.0180	0.0500	0.100	1	10/22/2023 07:32	WG2155682

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Chloroethane	75-00-3	0.100	U	0.0432	0.100	0.200	1	10/22/2023 07:32	WG2155682
Chloroform	67-66-3	0.0500	U	0.0166	0.0500	0.100	1	10/22/2023 07:32	WG2155682
Chloromethane	74-87-3	0.250	U	0.0556	0.250	0.500	1	10/22/2023 07:32	WG2155682
Cyclohexane	110-82-7	0.0500	U	0.0203	0.0500	0.100	1	10/22/2023 07:32	WG2155682
2-Chlorotoluene	95-49-8	0.100	U	0.0368	0.100	0.200	1	10/22/2023 07:32	WG2155682
4-Chlorotoluene	106-43-4	0.100	U	0.0452	0.100	0.200	1	10/22/2023 07:32	WG2155682
1,2-Dibromo-3-Chloropropane	96-12-8	0.500	U	0.204	0.500	1.00	1	10/22/2023 07:32	WG2155682
1,2-Dibromoethane	106-93-4	0.0500	U	0.0210	0.0500	0.100	1	10/22/2023 07:32	WG2155682
Dibromomethane	74-95-3	0.100	U	0.0400	0.100	0.200	1	10/22/2023 07:32	WG2155682
1,2-Dichlorobenzene	95-50-1	0.200	U	0.0580	0.200	0.400	1	10/22/2023 07:32	WG2155682
1,3-Dichlorobenzene	541-73-1	0.200	U	0.0680	0.200	0.400	1	10/22/2023 07:32	WG2155682
1,4-Dichlorobenzene	106-46-7	0.250	U	0.0788	0.250	0.500	1	10/22/2023 07:32	WG2155682
Dichlorodifluoromethane	75-71-8	0.100	U	0.0327	0.100	0.200	1	10/22/2023 07:32	WG2155682
1,1-Dichloroethane	75-34-3	0.0500	U	0.0230	0.0500	0.100	1	10/22/2023 07:32	WG2155682
1,2-Dichloroethane	107-06-2	0.0500	U	0.0190	0.0500	0.100	1	10/22/2023 07:32	WG2155682
1,1-Dichloroethene	75-35-4	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 07:32	WG2155682
cis-1,2-Dichloroethene	156-59-2	0.0750	U	0.0276	0.0750	0.150	1	10/22/2023 07:32	WG2155682
trans-1,2-Dichloroethene	156-60-5	0.300	U	0.0572	0.300	0.600	1	10/22/2023 07:32	WG2155682
1,2-Dichloropropane	78-87-5	0.200	U	0.0508	0.200	0.400	1	10/22/2023 07:32	WG2155682
1,1-Dichloropropene	563-58-6	0.100	U	0.0280	0.100	0.200	1	10/22/2023 07:32	WG2155682
1,3-Dichloropropane	142-28-9	0.150	U	0.0700	0.150	0.300	1	10/22/2023 07:32	WG2155682
cis-1,3-Dichloropropene	10061-01-5	0.100	U	0.0271	0.100	0.200	1	10/22/2023 07:32	WG2155682
trans-1,3-Dichloropropene	10061-02-6	0.150	U	0.0612	0.150	0.300	1	10/22/2023 07:32	WG2155682
2,2-Dichloropropane	594-20-7	0.100	U	0.0317	0.100	0.200	1	10/22/2023 07:32	WG2155682
Di-isopropyl ether	108-20-3	0.0500	U	0.0140	0.0500	0.100	1	10/22/2023 07:32	WG2155682
Ethylbenzene	100-41-4	0.0500	U	0.0212	0.0500	0.100	1	10/22/2023 07:32	WG2155682
Hexachloro-1,3-butadiene	87-68-3	2.00	U	0.508	2.00	4.00	1	10/22/2023 07:32	WG2155682
Isopropylbenzene	98-82-8	1.00	U	0.0345	1.00	2.00	1	10/22/2023 07:32	WG2155682
p-Isopropyltoluene	99-87-6	0.300	U	0.0932	0.300	0.600	1	10/22/2023 07:32	WG2155682
2-Butanone (MEK)	78-93-3	1.00	U	0.500	1.00	2.00	1	10/22/2023 07:32	WG2155682
Methylene Chloride	75-09-2	0.750	U	0.266	0.750	1.50	1	10/22/2023 07:32	WG2155682
4-Methyl-2-pentanone (MIBK)	108-10-1	1.00	U	0.400	1.00	2.00	1	10/22/2023 07:32	WG2155682
Methyl tert-butyl ether	1634-04-4	0.0300	U	0.0118	0.0300	0.0600	1	10/22/2023 07:32	WG2155682
Naphthalene	91-20-3	0.842		0.125	0.250	0.500	1	10/22/2023 07:32	WG2155682
n-Propylbenzene	103-65-1	0.100	U	0.0472	0.100	0.200	1	10/22/2023 07:32	WG2155682
Styrene	100-42-5	0.250	U	0.109	0.250	0.500	1	10/22/2023 07:32	WG2155682
1,1,1,2-Tetrachloroethane	630-20-6	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 07:32	WG2155682
1,1,2,2-Tetrachloroethane	79-34-5	0.0500	U	0.0156	0.0500	0.100	1	10/22/2023 07:32	WG2155682
1,1,2-Trichlorotrifluoroethane	76-13-1	0.100	U	0.0270	0.100	0.200	1	10/22/2023 07:32	WG2155682
Tetrachloroethene	127-18-4	0.0750	U	0.0280	0.0750	0.150	1	10/22/2023 07:32	WG2155682
Toluene	108-88-3	0.250		0.0500	0.100	0.200	1	10/22/2023 07:32	WG2155682
1,2,3-Trichlorobenzene	87-61-6	0.250	U	0.0250	0.250	0.500	1	10/22/2023 07:32	WG2155682
1,2,4-Trichlorobenzene	120-82-1	0.500	U	0.193	0.500	1.00	1	10/22/2023 07:32	WG2155682
1,1,1-Trichloroethane	71-55-6	0.0500	U	0.0110	0.0500	0.100	1	10/22/2023 07:32	WG2155682
1,1,2-Trichloroethane	79-00-5	0.100	U	0.0353	0.100	0.200	1	10/22/2023 07:32	WG2155682
Trichloroethene	79-01-6	0.0400	U	0.0160	0.0400	0.0800	1	10/26/2023 23:55	WG2157275
Trichlorofluoromethane	75-69-4	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 07:32	WG2155682
1,2,3-Trichloropropane	96-18-4	0.500	U	0.204	0.500	1.00	1	10/22/2023 07:32	WG2155682
1,2,4-Trimethylbenzene	95-63-6	0.0570	J	0.0464	0.100	0.200	1	10/22/2023 07:32	WG2155682
1,2,3-Trimethylbenzene	526-73-8	0.100	U	0.0460	0.100	0.200	1	10/22/2023 07:32	WG2155682
1,3,5-Trimethylbenzene	108-67-8	0.100	U	0.0432	0.100	0.200	1	10/22/2023 07:32	WG2155682
Vinyl chloride	75-01-4	0.0750	U	0.0273	0.0750	0.150	1	10/22/2023 07:32	WG2155682
Vinyl acetate	108-05-4	0.300	U	0.141	0.300	0.600	1	10/26/2023 23:55	WG2157275
Xylenes, Total	1330-20-7	0.400	U	0.191	0.400	0.800	1	10/22/2023 07:32	WG2155682
Ethyl Ether	60-29-7	0.0500	U	0.0170	0.0500	0.100	1	10/22/2023 07:32	WG2155682
Tetrahydrofuran	109-99-9	0.250	U	0.0900	0.250	50.0	1	10/22/2023 07:32	WG2155682

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Iodomethane	74-88-4	0.500	U	0.242	0.500	1.00	1	10/22/2023 07:32	WG2155682
Allyl chloride	107-05-1	2.00	U	0.580	2.00	4.00	1	10/22/2023 07:32	WG2155682
trans-1,4-Dichloro-2-butene	110-57-6	0.200	C4 U	0.0560	0.200	0.400	1	10/22/2023 07:32	WG2155682
(S) Toluene-d8	*2037-26-5*	*102*				*89.0-112*		*10/22/2023 07:32*	WG2155682
(S) Toluene-d8	*2037-26-5*	*109*				*89.0-112*		*10/26/2023 23:55*	WG2157275
(S) 4-Bromofluorobenzene	*460-00-4*	*101*				*85.0-114*		*10/22/2023 07:32*	WG2155682
(S) 4-Bromofluorobenzene	*460-00-4*	*101*				*85.0-114*		*10/26/2023 23:55*	WG2157275
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*95.3*				*81.0-118*		*10/22/2023 07:32*	WG2155682
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*96.1*				*81.0-118*		*10/26/2023 23:55*	WG2157275

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Acetone	67-64-1	25.0	U	11.3	25.0	50.0	1	10/22/2023 17:16	WG2155879
Acrolein	107-02-8	25.0	U	2.54	25.0	50.0	1	10/22/2023 17:16	WG2155879
Acrylonitrile	107-13-1	5.00	U	0.671	5.00	10.0	1	10/22/2023 17:16	WG2155879
Benzene	71-43-2	0.500	U	0.0941	0.500	1.00	1	10/22/2023 17:16	WG2155879
Bromobenzene	108-86-1	0.500	U	0.118	0.500	1.00	1	10/22/2023 17:16	WG2155879
Bromodichloromethane	75-27-4	0.500	U	0.136	0.500	1.00	1	10/22/2023 17:16	WG2155879
Bromoform	75-25-2	0.500	U	0.129	0.500	1.00	1	10/22/2023 17:16	WG2155879
Bromomethane	74-83-9	2.00	U	0.605	2.00	5.00	1	10/22/2023 17:16	WG2155879
n-Butylbenzene	104-51-8	0.500	U	0.157	0.500	1.00	1	10/22/2023 17:16	WG2155879
sec-Butylbenzene	135-98-8	0.500	U	0.125	0.500	1.00	1	10/22/2023 17:16	WG2155879
tert-Butylbenzene	98-06-6	0.500	U	0.127	0.500	1.00	1	10/22/2023 17:16	WG2155879
Carbon tetrachloride	56-23-5	0.500	U	0.128	0.500	1.00	1	10/22/2023 17:16	WG2155879
Chlorobenzene	108-90-7	0.500	U	0.116	0.500	1.00	1	10/22/2023 17:16	WG2155879
Chlorodibromomethane	124-48-1	0.500	U	0.140	0.500	1.00	1	10/22/2023 17:16	WG2155879
Chloroethane	75-00-3	2.00	U	0.192	2.00	5.00	1	10/22/2023 17:16	WG2155879
2-Chloroethyl vinyl ether	110-75-8	25.0	U	0.575	25.0	50.0	1	10/22/2023 17:16	WG2155879
Chloroform	67-66-3	2.00	U	0.111	2.00	5.00	1	10/22/2023 17:16	WG2155879
Chloromethane	74-87-3	2.00	U	0.960	2.00	4.00	1	10/22/2023 17:16	WG2155879
2-Chlorotoluene	95-49-8	0.500	U	0.106	0.500	1.00	1	10/22/2023 17:16	WG2155879
4-Chlorotoluene	106-43-4	0.500	U	0.114	0.500	1.00	1	10/22/2023 17:16	WG2155879
1,2-Dibromoethane	106-93-4	0.500	U	0.126	0.500	1.00	1	10/22/2023 17:16	WG2155879
1,2-Dibromo-3-Chloropropane	96-12-8	2.00	U	0.276	2.00	5.00	1	10/22/2023 17:16	WG2155879
Dibromomethane	74-95-3	0.500	U	0.122	0.500	1.00	1	10/22/2023 17:16	WG2155879
1,2-Dichlorobenzene	95-50-1	0.500	U	0.107	0.500	1.00	1	10/22/2023 17:16	WG2155879
1,3-Dichlorobenzene	541-73-1	0.500	U	0.110	0.500	1.00	1	10/22/2023 17:16	WG2155879
1,4-Dichlorobenzene	106-46-7	0.500	U	0.120	0.500	1.00	1	10/22/2023 17:16	WG2155879
Dichlorodifluoromethane	75-71-8	2.00	U	0.374	2.00	5.00	1	10/22/2023 17:16	WG2155879
1,1-Dichloroethane	75-34-3	0.500	U	0.100	0.500	1.00	1	10/22/2023 17:16	WG2155879
1,2-Dichloroethane	107-06-2	0.500	U	0.0819	0.500	1.00	1	10/22/2023 17:16	WG2155879
1,1-Dichloroethene	75-35-4	0.500	U	0.188	0.500	1.00	1	10/22/2023 17:16	WG2155879
cis-1,2-Dichloroethene	156-59-2	0.500	U	0.126	0.500	1.00	1	10/22/2023 17:16	WG2155879
trans-1,2-Dichloroethene	156-60-5	0.500	U	0.149	0.500	1.00	1	10/22/2023 17:16	WG2155879
1,2-Dichloropropane	78-87-5	0.500	U	0.149	0.500	1.00	1	10/22/2023 17:16	WG2155879
1,3-Dichloropropane	142-28-9	0.500	U	0.110	0.500	1.00	1	10/22/2023 17:16	WG2155879
2,2-Dichloropropane	594-20-7	0.500	U	0.161	0.500	1.00	1	10/22/2023 07:32	WG2225461
1,1-Dichloropropene	563-58-6	0.500	U	0.142	0.500	1.00	1	10/22/2023 17:16	WG2155879
cis-1,3-Dichloropropene	10061-01-5	0.500	U	0.111	0.500	1.00	1	10/22/2023 17:16	WG2155879
trans-1,3-Dichloropropene	10061-02-6	0.500	U	0.118	0.500	1.00	1	10/22/2023 17:16	WG2155879
Di-isopropyl ether	108-20-3	0.500	U	0.105	0.500	1.00	1	10/22/2023 17:16	WG2155879
Ethylbenzene	100-41-4	0.500	U	0.137	0.500	1.00	1	10/22/2023 17:16	WG2155879
Hexachloro-1,3-butadiene	87-68-3	0.750	U	0.337	0.750	1.50	1	10/22/2023 07:32	WG2225461
Isopropylbenzene	98-82-8	0.500	U	0.105	0.500	1.00	1	10/22/2023 17:16	WG2155879
p-Isopropyltoluene	99-87-6	0.500	U	0.120	0.500	1.00	1	10/22/2023 17:16	WG2155879

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
2-Butanone (MEK)	78-93-3	5.00	U	1.19	5.00	10.0	1	10/22/2023 17:16	WG2155879
Methylene Chloride	75-09-2	2.00	U	0.430	2.00	5.00	1	10/22/2023 17:16	WG2155879
4-Methyl-2-pentanone (MIBK)	108-10-1	5.00	U	0.478	5.00	10.0	1	10/22/2023 17:16	WG2155879
Methyl tert-butyl ether	1634-04-4	0.500	U	0.101	0.500	1.00	1	10/22/2023 17:16	WG2155879
Naphthalene	91-20-3	2.00	U	1.00	2.00	5.00	1	10/22/2023 17:16	WG2155879
n-Propylbenzene	103-65-1	0.500	U	0.0993	0.500	1.00	1	10/22/2023 17:16	WG2155879
Styrene	100-42-5	0.500	U	0.118	0.500	1.00	1	10/22/2023 17:16	WG2155879
1,1,1,2-Tetrachloroethane	630-20-6	0.500	U	0.147	0.500	1.00	1	10/22/2023 17:16	WG2155879
1,1,2,2-Tetrachloroethane	79-34-5	0.500	U	0.133	0.500	1.00	1	10/22/2023 17:16	WG2155879
Tetrachloroethene	127-18-4	0.600	U	0.300	0.600	1.20	1	10/22/2023 17:16	WG2155879
Toluene	108-88-3	0.600	U	0.278	0.600	1.20	1	10/22/2023 17:16	WG2155879
1,2,3-Trichlorobenzene	87-61-6	0.500	U	0.230	0.500	1.00	1	10/22/2023 17:16	WG2155879
1,2,4-Trichlorobenzene	120-82-1	1.00	U	0.481	1.00	2.00	1	10/22/2023 17:16	WG2155879
1,2,3-Trimethylbenzene	526-73-8	0.500	U	0.104	0.500	1.00	1	10/22/2023 17:16	WG2155879
1,2,4-Trimethylbenzene	95-63-6	1.00	U	0.322	1.00	2.00	1	10/22/2023 17:16	WG2155879
1,3,5-Trimethylbenzene	108-67-8	0.500	U	0.104	0.500	1.00	1	10/22/2023 17:16	WG2155879
1,1,1-Trichloroethane	71-55-6	0.500	U	0.149	0.500	1.00	1	10/22/2023 07:32	WG2225461
1,1,2-Trichloroethane	79-00-5	0.500	U	0.158	0.500	1.00	1	10/22/2023 17:16	WG2155879
Trichloroethene	79-01-6	0.500	U	0.190	0.500	1.00	1	10/22/2023 17:16	WG2155879
Trichlorofluoromethane	75-69-4	2.00	U	0.160	2.00	5.00	1	10/22/2023 17:16	WG2155879
1,1,2-Trichlorotrifluoroethane	76-13-1	0.500	U	0.180	0.500	1.00	1	10/22/2023 17:16	WG2155879
1,2,3-Trichloropropane	96-18-4	1.00	U	0.237	1.00	2.50	1	10/22/2023 17:16	WG2155879
Vinyl chloride	75-01-4	0.500	U	0.234	0.500	1.00	1	10/22/2023 17:16	WG2155879
Xylenes, Total	1330-20-7	1.50	U	0.174	1.50	3.00	1	10/22/2023 17:16	WG2155879
(S) Toluene-d8	*2037-26-5*	*105*				*89.0-112*		*10/22/2023 17:16*	WG2155879
(S) Toluene-d8	*2037-26-5*	*102*				*89.0-112*		*10/22/2023 07:32*	WG2225461
(S) 4-Bromofluorobenzene	*460-00-4*	*94.9*				*85.0-114*		*10/22/2023 17:16*	WG2155879
(S) 4-Bromofluorobenzene	*460-00-4*	*101*				*85.0-114*		*10/22/2023 07:32*	WG2225461
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*103*				*81.0-118*		*10/22/2023 17:16*	WG2155879
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*95.3*				*81.0-118*		*10/22/2023 07:32*	WG2225461

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	C10-C25	437	B J	170	400	800	1	10/28/2023 06:23	WG2159044
(S) o-Terphenyl	*84-15-1*	*61.5*				*50.0-150*		*10/28/2023 06:23*	WG2159044

Additional Information - Results for field analyses are not accredited to ISO 17025

Analyte	Result	Units
Cooler#	yellow	
Cooler Temperature	2.2	Deg. C

Wet Chemistry by Method 2320 B-2011

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Alkalinity		60200		8450	10000	20000	1	10/25/2023 13:20	WG2156619
Alkalinity,Bicarbonate		60200		8450	10000	20000	1	10/25/2023 13:20	WG2156619
Alkalinity,Carbonate		10000	U	8450	10000	20000	1	10/25/2023 13:20	WG2156619
Alkalinity,Hydroxide		10000	U	8450	10000	20000	1	10/25/2023 13:20	WG2156619

Sample Narrative:

L1667912-02 WG2156619: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 351.2

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Kjeldahl Nitrogen, TKN	7727-37-9	300	U	140	300	600	1	10/24/2023 20:20	WG2154830

Wet Chemistry by Method 353.2

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Nitrate-Nitrite	7727-37-9	1290		50.0	100	200	1	10/20/2023 21:07	WG2154634

Wet Chemistry by Method 9056A

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Sulfate	14808-79-8	2380	J	594	2500	5000	1	10/27/2023 17:21	WG2158472

Metals (ICP) by Method 6010D

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Iron	7439-89-6	2330		20.5	50.0	100	1	10/23/2023 23:16	WG2155276
Manganese	7439-96-5	122		0.855	5.00	10.0	1	10/23/2023 23:16	WG2155276

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Acetone	67-64-1	1.48	J	0.548	2.00	4.00	1	10/22/2023 07:52	WG2155682
Acrylonitrile	107-13-1	0.250	U	0.0760	0.250	0.500	1	10/22/2023 07:52	WG2155682
Benzene	71-43-2	0.0760	J	0.0160	0.0500	0.100	1	10/22/2023 07:52	WG2155682
Bromobenzene	108-86-1	0.250	U	0.0420	0.250	0.500	1	10/22/2023 07:52	WG2155682
Bromodichloromethane	75-27-4	0.100	U	0.0315	0.100	0.200	1	10/22/2023 07:52	WG2155682
Bromochloromethane	74-97-5	0.100	U	0.0452	0.100	0.200	1	10/22/2023 07:52	WG2155682
Bromoform	75-25-2	0.500	U	0.239	0.500	1.00	1	10/22/2023 07:52	WG2155682
Bromomethane	74-83-9	0.500	U	0.148	0.500	1.00	1	10/22/2023 07:52	WG2155682
n-Butylbenzene	104-51-8	0.500	U	0.154	0.500	1.00	1	10/22/2023 07:52	WG2155682
sec-Butylbenzene	135-98-8	0.250	U	0.101	0.250	0.500	1	10/22/2023 07:52	WG2155682
tert-Butylbenzene	98-06-6	0.500	U	0.0620	0.500	1.00	1	10/22/2023 07:52	WG2155682
Carbon tetrachloride	56-23-5	0.100	U	0.0432	0.100	0.200	1	10/22/2023 07:52	WG2155682
Carbon disulfide	75-15-0	0.500	U	0.162	0.500	1.00	1	10/22/2023 07:52	WG2155682
Chlorobenzene	108-90-7	0.0500	U	0.0229	0.0500	0.100	1	10/22/2023 07:52	WG2155682
Chlorodibromomethane	124-48-1	0.0500	U	0.0180	0.0500	0.100	1	10/22/2023 07:52	WG2155682

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Chloroethane	75-00-3	0.100	U	0.0432	0.100	0.200	1	10/22/2023 07:52	WG2155682
Chloroform	67-66-3	0.0500	U	0.0166	0.0500	0.100	1	10/22/2023 07:52	WG2155682
Chloromethane	74-87-3	0.250	U	0.0556	0.250	0.500	1	10/22/2023 07:52	WG2155682
Cyclohexane	110-82-7	0.0500	U	0.0203	0.0500	0.100	1	10/22/2023 07:52	WG2155682
2-Chlorotoluene	95-49-8	0.100	U	0.0368	0.100	0.200	1	10/22/2023 07:52	WG2155682
4-Chlorotoluene	106-43-4	0.100	U	0.0452	0.100	0.200	1	10/22/2023 07:52	WG2155682
1,2-Dibromo-3-Chloropropane	96-12-8	0.500	U	0.204	0.500	1.00	1	10/22/2023 07:52	WG2155682
1,2-Dibromoethane	106-93-4	0.0500	U	0.0210	0.0500	0.100	1	10/22/2023 07:52	WG2155682
Dibromomethane	74-95-3	0.100	U	0.0400	0.100	0.200	1	10/22/2023 07:52	WG2155682
1,2-Dichlorobenzene	95-50-1	0.200	U	0.0580	0.200	0.400	1	10/22/2023 07:52	WG2155682
1,3-Dichlorobenzene	541-73-1	0.200	U	0.0680	0.200	0.400	1	10/22/2023 07:52	WG2155682
1,4-Dichlorobenzene	106-46-7	0.250	U	0.0788	0.250	0.500	1	10/22/2023 07:52	WG2155682
Dichlorodifluoromethane	75-71-8	0.100	U	0.0327	0.100	0.200	1	10/22/2023 07:52	WG2155682
1,1-Dichloroethane	75-34-3	0.0500	U	0.0230	0.0500	0.100	1	10/22/2023 07:52	WG2155682
1,2-Dichloroethane	107-06-2	0.0500	U	0.0190	0.0500	0.100	1	10/22/2023 07:52	WG2155682
1,1-Dichloroethene	75-35-4	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 07:52	WG2155682
cis-1,2-Dichloroethene	156-59-2	0.0750	U	0.0276	0.0750	0.150	1	10/22/2023 07:52	WG2155682
trans-1,2-Dichloroethene	156-60-5	0.300	U	0.0572	0.300	0.600	1	10/22/2023 07:52	WG2155682
1,2-Dichloropropane	78-87-5	0.200	U	0.0508	0.200	0.400	1	10/22/2023 07:52	WG2155682
1,1-Dichloropropene	563-58-6	0.100	U	0.0280	0.100	0.200	1	10/22/2023 07:52	WG2155682
1,3-Dichloropropane	142-28-9	0.150	U	0.0700	0.150	0.300	1	10/22/2023 07:52	WG2155682
cis-1,3-Dichloropropene	10061-01-5	0.100	U	0.0271	0.100	0.200	1	10/22/2023 07:52	WG2155682
trans-1,3-Dichloropropene	10061-02-6	0.150	U	0.0612	0.150	0.300	1	10/22/2023 07:52	WG2155682
2,2-Dichloropropane	594-20-7	0.100	U	0.0317	0.100	0.200	1	10/22/2023 07:52	WG2155682
Di-isopropyl ether	108-20-3	0.0500	U	0.0140	0.0500	0.100	1	10/22/2023 07:52	WG2155682
Ethylbenzene	100-41-4	0.0500	U	0.0212	0.0500	0.100	1	10/22/2023 07:52	WG2155682
Hexachloro-1,3-butadiene	87-68-3	2.00	U	0.508	2.00	4.00	1	10/22/2023 07:52	WG2155682
Isopropylbenzene	98-82-8	1.00	U	0.0345	1.00	2.00	1	10/22/2023 07:52	WG2155682
p-Isopropyltoluene	99-87-6	0.300	U	0.0932	0.300	0.600	1	10/22/2023 07:52	WG2155682
2-Butanone (MEK)	78-93-3	1.00	U	0.500	1.00	2.00	1	10/22/2023 07:52	WG2155682
Methylene Chloride	75-09-2	0.750	U	0.266	0.750	1.50	1	10/22/2023 07:52	WG2155682
4-Methyl-2-pentanone (MIBK)	108-10-1	1.00	U	0.400	1.00	2.00	1	10/22/2023 07:52	WG2155682
Methyl tert-butyl ether	1634-04-4	0.0300	U	0.0118	0.0300	0.0600	1	10/22/2023 07:52	WG2155682
Naphthalene	91-20-3	0.148	J	0.125	0.250	0.500	1	10/22/2023 07:52	WG2155682
n-Propylbenzene	103-65-1	0.100	U	0.0472	0.100	0.200	1	10/22/2023 07:52	WG2155682
Styrene	100-42-5	0.250	U	0.109	0.250	0.500	1	10/22/2023 07:52	WG2155682
1,1,1,2-Tetrachloroethane	630-20-6	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 07:52	WG2155682
1,1,2,2-Tetrachloroethane	79-34-5	0.0500	U	0.0156	0.0500	0.100	1	10/22/2023 07:52	WG2155682
1,1,2-Trichlorotrifluoroethane	76-13-1	0.100	U	0.0270	0.100	0.200	1	10/22/2023 07:52	WG2155682
Tetrachloroethene	127-18-4	0.0750	U	0.0280	0.0750	0.150	1	10/22/2023 07:52	WG2155682
Toluene	108-88-3	0.183	J	0.0500	0.100	0.200	1	10/22/2023 07:52	WG2155682
1,2,3-Trichlorobenzene	87-61-6	0.250	U	0.0250	0.250	0.500	1	10/22/2023 07:52	WG2155682
1,2,4-Trichlorobenzene	120-82-1	0.500	U	0.193	0.500	1.00	1	10/22/2023 07:52	WG2155682
1,1,1-Trichloroethane	71-55-6	0.0500	U	0.0110	0.0500	0.100	1	10/22/2023 07:52	WG2155682
1,1,2-Trichloroethane	79-00-5	0.100	U	0.0353	0.100	0.200	1	10/22/2023 07:52	WG2155682
Trichloroethene	79-01-6	0.0400	U	0.0160	0.0400	0.0800	1	10/27/2023 00:14	WG2157275
Trichlorofluoromethane	75-69-4	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 07:52	WG2155682
1,2,3-Trichloropropane	96-18-4	0.500	U	0.204	0.500	1.00	1	10/22/2023 07:52	WG2155682
1,2,4-Trimethylbenzene	95-63-6	0.100	U	0.0464	0.100	0.200	1	10/22/2023 07:52	WG2155682
1,2,3-Trimethylbenzene	526-73-8	0.100	U	0.0460	0.100	0.200	1	10/22/2023 07:52	WG2155682
1,3,5-Trimethylbenzene	108-67-8	0.100	U	0.0432	0.100	0.200	1	10/22/2023 07:52	WG2155682
Vinyl chloride	75-01-4	0.0750	U	0.0273	0.0750	0.150	1	10/22/2023 07:52	WG2155682
Vinyl acetate	108-05-4	0.300	U	0.141	0.300	0.600	1	10/27/2023 00:14	WG2157275
Xylenes, Total	1330-20-7	0.400	U	0.191	0.400	0.800	1	10/22/2023 07:52	WG2155682
Ethyl Ether	60-29-7	0.0500	U	0.0170	0.0500	0.100	1	10/22/2023 07:52	WG2155682
Tetrahydrofuran	109-99-9	0.250	U	0.0900	0.250	50.0	1	10/22/2023 07:52	WG2155682

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Iodomethane	74-88-4	0.500	U	0.242	0.500	1.00	1	10/22/2023 07:52	WG2155682
Allyl chloride	107-05-1	2.00	U	0.580	2.00	4.00	1	10/22/2023 07:52	WG2155682
trans-1,4-Dichloro-2-butene	110-57-6	0.200	C4 U	0.0560	0.200	0.400	1	10/22/2023 07:52	WG2155682
(S) Toluene-d8	*2037-26-5*	*103*				*89.0-112*		*10/22/2023 07:52*	WG2155682
(S) Toluene-d8	*2037-26-5*	*110*				*89.0-112*		*10/27/2023 00:14*	WG2157275
(S) 4-Bromofluorobenzene	*460-00-4*	*102*				*85.0-114*		*10/22/2023 07:52*	WG2155682
(S) 4-Bromofluorobenzene	*460-00-4*	*102*				*85.0-114*		*10/27/2023 00:14*	WG2157275
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*95.6*				*81.0-118*		*10/22/2023 07:52*	WG2155682
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*96.9*				*81.0-118*		*10/27/2023 00:14*	WG2157275

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Acetone	67-64-1	25.0	U	11.3	25.0	50.0	1	10/22/2023 17:39	WG2155879
Acrolein	107-02-8	25.0	U	2.54	25.0	50.0	1	10/22/2023 17:39	WG2155879
Acrylonitrile	107-13-1	5.00	U	0.671	5.00	10.0	1	10/22/2023 17:39	WG2155879
Benzene	71-43-2	0.500	U	0.0941	0.500	1.00	1	10/22/2023 17:39	WG2155879
Bromobenzene	108-86-1	0.500	U	0.118	0.500	1.00	1	10/22/2023 17:39	WG2155879
Bromodichloromethane	75-27-4	0.500	U	0.136	0.500	1.00	1	10/22/2023 17:39	WG2155879
Bromoform	75-25-2	0.500	U	0.129	0.500	1.00	1	10/22/2023 17:39	WG2155879
Bromomethane	74-83-9	2.00	U	0.605	2.00	5.00	1	10/22/2023 17:39	WG2155879
n-Butylbenzene	104-51-8	0.500	U	0.157	0.500	1.00	1	10/22/2023 17:39	WG2155879
sec-Butylbenzene	135-98-8	0.500	U	0.125	0.500	1.00	1	10/22/2023 17:39	WG2155879
tert-Butylbenzene	98-06-6	0.500	U	0.127	0.500	1.00	1	10/22/2023 17:39	WG2155879
Carbon tetrachloride	56-23-5	0.500	U	0.128	0.500	1.00	1	10/22/2023 17:39	WG2155879
Chlorobenzene	108-90-7	0.500	U	0.116	0.500	1.00	1	10/22/2023 17:39	WG2155879
Chlorodibromomethane	124-48-1	0.500	U	0.140	0.500	1.00	1	10/22/2023 17:39	WG2155879
Chloroethane	75-00-3	2.00	U	0.192	2.00	5.00	1	10/22/2023 17:39	WG2155879
2-Chloroethyl vinyl ether	110-75-8	25.0	U	0.575	25.0	50.0	1	10/22/2023 17:39	WG2155879
Chloroform	67-66-3	2.00	U	0.111	2.00	5.00	1	10/22/2023 17:39	WG2155879
Chloromethane	74-87-3	2.00	U	0.960	2.00	4.00	1	10/22/2023 17:39	WG2155879
2-Chlorotoluene	95-49-8	0.500	U	0.106	0.500	1.00	1	10/22/2023 17:39	WG2155879
4-Chlorotoluene	106-43-4	0.500	U	0.114	0.500	1.00	1	10/22/2023 17:39	WG2155879
1,2-Dibromoethane	106-93-4	0.500	U	0.126	0.500	1.00	1	10/22/2023 17:39	WG2155879
1,2-Dibromo-3-Chloropropane	96-12-8	2.00	U	0.276	2.00	5.00	1	10/22/2023 17:39	WG2155879
Dibromomethane	74-95-3	0.500	U	0.122	0.500	1.00	1	10/22/2023 17:39	WG2155879
1,2-Dichlorobenzene	95-50-1	0.500	U	0.107	0.500	1.00	1	10/22/2023 17:39	WG2155879
1,3-Dichlorobenzene	541-73-1	0.500	U	0.110	0.500	1.00	1	10/22/2023 17:39	WG2155879
1,4-Dichlorobenzene	106-46-7	0.500	U	0.120	0.500	1.00	1	10/22/2023 17:39	WG2155879
Dichlorodifluoromethane	75-71-8	2.00	U	0.374	2.00	5.00	1	10/22/2023 17:39	WG2155879
1,1-Dichloroethane	75-34-3	0.500	U	0.100	0.500	1.00	1	10/22/2023 17:39	WG2155879
1,2-Dichloroethane	107-06-2	0.500	U	0.0819	0.500	1.00	1	10/22/2023 17:39	WG2155879
1,1-Dichloroethene	75-35-4	0.500	U	0.188	0.500	1.00	1	10/22/2023 17:39	WG2155879
cis-1,2-Dichloroethene	156-59-2	0.500	U	0.126	0.500	1.00	1	10/22/2023 17:39	WG2155879
trans-1,2-Dichloroethene	156-60-5	0.500	U	0.149	0.500	1.00	1	10/22/2023 17:39	WG2155879
1,2-Dichloropropane	78-87-5	0.500	U	0.149	0.500	1.00	1	10/22/2023 17:39	WG2155879
1,3-Dichloropropane	142-28-9	0.500	U	0.110	0.500	1.00	1	10/22/2023 17:39	WG2155879
2,2-Dichloropropane	594-20-7	0.500	U	0.161	0.500	1.00	1	10/22/2023 07:52	WG2225461
1,1-Dichloropropene	563-58-6	0.500	U	0.142	0.500	1.00	1	10/22/2023 17:39	WG2155879
cis-1,3-Dichloropropene	10061-01-5	0.500	U	0.111	0.500	1.00	1	10/22/2023 17:39	WG2155879
trans-1,3-Dichloropropene	10061-02-6	0.500	U	0.118	0.500	1.00	1	10/22/2023 17:39	WG2155879
Di-isopropyl ether	108-20-3	0.500	U	0.105	0.500	1.00	1	10/22/2023 17:39	WG2155879
Ethylbenzene	100-41-4	0.500	U	0.137	0.500	1.00	1	10/22/2023 17:39	WG2155879
Hexachloro-1,3-butadiene	87-68-3	0.750	U	0.337	0.750	1.50	1	10/22/2023 07:52	WG2225461
Isopropylbenzene	98-82-8	0.500	U	0.105	0.500	1.00	1	10/22/2023 17:39	WG2155879
p-Isopropyltoluene	99-87-6	0.500	U	0.120	0.500	1.00	1	10/22/2023 17:39	WG2155879

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
2-Butanone (MEK)	78-93-3	5.00	U	1.19	5.00	10.0	1	10/22/2023 17:39	WG2155879
Methylene Chloride	75-09-2	2.00	U	0.430	2.00	5.00	1	10/22/2023 17:39	WG2155879
4-Methyl-2-pentanone (MIBK)	108-10-1	5.00	U	0.478	5.00	10.0	1	10/22/2023 17:39	WG2155879
Methyl tert-butyl ether	1634-04-4	0.500	U	0.101	0.500	1.00	1	10/22/2023 17:39	WG2155879
Naphthalene	91-20-3	2.00	U	1.00	2.00	5.00	1	10/22/2023 17:39	WG2155879
n-Propylbenzene	103-65-1	0.500	U	0.0993	0.500	1.00	1	10/22/2023 17:39	WG2155879
Styrene	100-42-5	0.500	U	0.118	0.500	1.00	1	10/22/2023 17:39	WG2155879
1,1,1,2-Tetrachloroethane	630-20-6	0.500	U	0.147	0.500	1.00	1	10/22/2023 17:39	WG2155879
1,1,2,2-Tetrachloroethane	79-34-5	0.500	U	0.133	0.500	1.00	1	10/22/2023 17:39	WG2155879
Tetrachloroethene	127-18-4	0.600	U	0.300	0.600	1.20	1	10/22/2023 17:39	WG2155879
Toluene	108-88-3	0.600	U	0.278	0.600	1.20	1	10/22/2023 17:39	WG2155879
1,2,3-Trichlorobenzene	87-61-6	0.500	U	0.230	0.500	1.00	1	10/22/2023 17:39	WG2155879
1,2,4-Trichlorobenzene	120-82-1	1.00	U	0.481	1.00	2.00	1	10/22/2023 17:39	WG2155879
1,2,3-Trimethylbenzene	526-73-8	0.500	U	0.104	0.500	1.00	1	10/22/2023 17:39	WG2155879
1,2,4-Trimethylbenzene	95-63-6	1.00	U	0.322	1.00	2.00	1	10/22/2023 17:39	WG2155879
1,3,5-Trimethylbenzene	108-67-8	0.500	U	0.104	0.500	1.00	1	10/22/2023 17:39	WG2155879
1,1,1-Trichloroethane	71-55-6	0.500	U	0.149	0.500	1.00	1	10/22/2023 07:52	WG2225461
1,1,2-Trichloroethane	79-00-5	0.500	U	0.158	0.500	1.00	1	10/22/2023 17:39	WG2155879
Trichloroethene	79-01-6	0.500	U	0.190	0.500	1.00	1	10/22/2023 17:39	WG2155879
Trichlorofluoromethane	75-69-4	2.00	U	0.160	2.00	5.00	1	10/22/2023 17:39	WG2155879
1,1,2-Trichlorotrifluoroethane	76-13-1	0.500	U	0.180	0.500	1.00	1	10/22/2023 17:39	WG2155879
1,2,3-Trichloropropane	96-18-4	1.00	U	0.237	1.00	2.50	1	10/22/2023 17:39	WG2155879
Vinyl chloride	75-01-4	0.500	U	0.234	0.500	1.00	1	10/22/2023 17:39	WG2155879
Xylenes, Total	1330-20-7	1.50	U	0.174	1.50	3.00	1	10/22/2023 17:39	WG2155879
(S) Toluene-d8	*2037-26-5*	*104*				*89.0-112*		*10/22/2023 17:39*	WG2155879
(S) Toluene-d8	*2037-26-5*	*103*				*89.0-112*		*10/22/2023 07:52*	WG2225461
(S) 4-Bromofluorobenzene	*460-00-4*	*94.9*				*85.0-114*		*10/22/2023 17:39*	WG2155879
(S) 4-Bromofluorobenzene	*460-00-4*	*102*				*85.0-114*		*10/22/2023 07:52*	WG2225461
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*105*				*81.0-118*		*10/22/2023 17:39*	WG2155879
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*95.6*				*81.0-118*		*10/22/2023 07:52*	WG2225461

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	C10-C25	499	B J	179	420	840	1.05	10/28/2023 06:43	WG2159044
(S) o-Terphenyl	*84-15-1*	*77.3*				*50.0-150*		*10/28/2023 06:43*	WG2159044

Additional Information - Results for field analyses are not accredited to ISO 17025

Analyte	Result	Units
Cooler#	yellow	
Cooler Temperature	2.2	Deg. C

Wet Chemistry by Method 2320 B-2011

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Alkalinity		45300		8450	10000	20000	1	10/25/2023 13:26	WG2156619
Alkalinity,Bicarbonate		45300		8450	10000	20000	1	10/25/2023 13:26	WG2156619
Alkalinity,Carbonate		10000	U	8450	10000	20000	1	10/25/2023 13:26	WG2156619
Alkalinity,Hydroxide		10000	U	8450	10000	20000	1	10/25/2023 13:26	WG2156619

Sample Narrative:
L1667912-03 WG2156619: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 351.2

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Kjeldahl Nitrogen, TKN	7727-37-9	300	U	140	300	600	1	10/24/2023 20:21	WG2154830

Wet Chemistry by Method 353.2

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Nitrate-Nitrite	7727-37-9	100	U	50.0	100	200	1	10/20/2023 21:08	WG2154634

Wet Chemistry by Method 9056A

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Sulfate	14808-79-8	2450	J	594	2500	5000	1	10/27/2023 17:34	WG2158472

Metals (ICP) by Method 6010D

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Iron	7439-89-6	412		20.5	50.0	100	1	10/23/2023 23:19	WG2155276
Manganese	7439-96-5	18.8		0.855	5.00	10.0	1	10/23/2023 23:19	WG2155276

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Acetone	67-64-1	2.39	J	0.548	2.00	4.00	1	10/22/2023 08:12	WG2155682
Acrylonitrile	107-13-1	0.250	U	0.0760	0.250	0.500	1	10/22/2023 08:12	WG2155682
Benzene	71-43-2	0.0660	J	0.0160	0.0500	0.100	1	10/22/2023 08:12	WG2155682
Bromobenzene	108-86-1	0.250	U	0.0420	0.250	0.500	1	10/22/2023 08:12	WG2155682
Bromodichloromethane	75-27-4	0.100	U	0.0315	0.100	0.200	1	10/22/2023 08:12	WG2155682
Bromochloromethane	74-97-5	0.100	U	0.0452	0.100	0.200	1	10/22/2023 08:12	WG2155682
Bromoform	75-25-2	0.500	U	0.239	0.500	1.00	1	10/22/2023 08:12	WG2155682
Bromomethane	74-83-9	0.500	U	0.148	0.500	1.00	1	10/22/2023 08:12	WG2155682
n-Butylbenzene	104-51-8	0.500	U	0.154	0.500	1.00	1	10/22/2023 08:12	WG2155682
sec-Butylbenzene	135-98-8	0.250	U	0.101	0.250	0.500	1	10/22/2023 08:12	WG2155682
tert-Butylbenzene	98-06-6	0.500	U	0.0620	0.500	1.00	1	10/22/2023 08:12	WG2155682
Carbon tetrachloride	56-23-5	0.100	U	0.0432	0.100	0.200	1	10/22/2023 08:12	WG2155682
Carbon disulfide	75-15-0	0.500	U	0.162	0.500	1.00	1	10/22/2023 08:12	WG2155682
Chlorobenzene	108-90-7	0.0500	U	0.0229	0.0500	0.100	1	10/22/2023 08:12	WG2155682
Chlorodibromomethane	124-48-1	0.0500	U	0.0180	0.0500	0.100	1	10/22/2023 08:12	WG2155682

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Chloroethane	75-00-3	0.100	U	0.0432	0.100	0.200	1	10/22/2023 08:12	WG2155682
Chloroform	67-66-3	0.0500	U	0.0166	0.0500	0.100	1	10/22/2023 08:12	WG2155682
Chloromethane	74-87-3	0.250	U	0.0556	0.250	0.500	1	10/22/2023 08:12	WG2155682
Cyclohexane	110-82-7	0.0500	U	0.0203	0.0500	0.100	1	10/22/2023 08:12	WG2155682
2-Chlorotoluene	95-49-8	0.100	U	0.0368	0.100	0.200	1	10/22/2023 08:12	WG2155682
4-Chlorotoluene	106-43-4	0.100	U	0.0452	0.100	0.200	1	10/22/2023 08:12	WG2155682
1,2-Dibromo-3-Chloropropane	96-12-8	0.500	U	0.204	0.500	1.00	1	10/22/2023 08:12	WG2155682
1,2-Dibromoethane	106-93-4	0.0500	U	0.0210	0.0500	0.100	1	10/22/2023 08:12	WG2155682
Dibromomethane	74-95-3	0.100	U	0.0400	0.100	0.200	1	10/22/2023 08:12	WG2155682
1,2-Dichlorobenzene	95-50-1	0.200	U	0.0580	0.200	0.400	1	10/22/2023 08:12	WG2155682
1,3-Dichlorobenzene	541-73-1	0.200	U	0.0680	0.200	0.400	1	10/22/2023 08:12	WG2155682
1,4-Dichlorobenzene	106-46-7	0.250	U	0.0788	0.250	0.500	1	10/22/2023 08:12	WG2155682
Dichlorodifluoromethane	75-71-8	0.100	U	0.0327	0.100	0.200	1	10/22/2023 08:12	WG2155682
1,1-Dichloroethane	75-34-3	0.0500	U	0.0230	0.0500	0.100	1	10/22/2023 08:12	WG2155682
1,2-Dichloroethane	107-06-2	0.0500	U	0.0190	0.0500	0.100	1	10/22/2023 08:12	WG2155682
1,1-Dichloroethene	75-35-4	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 08:12	WG2155682
cis-1,2-Dichloroethene	156-59-2	0.0750	U	0.0276	0.0750	0.150	1	10/22/2023 08:12	WG2155682
trans-1,2-Dichloroethene	156-60-5	0.300	U	0.0572	0.300	0.600	1	10/22/2023 08:12	WG2155682
1,2-Dichloropropane	78-87-5	0.200	U	0.0508	0.200	0.400	1	10/22/2023 08:12	WG2155682
1,1-Dichloropropene	563-58-6	0.100	U	0.0280	0.100	0.200	1	10/22/2023 08:12	WG2155682
1,3-Dichloropropane	142-28-9	0.150	U	0.0700	0.150	0.300	1	10/22/2023 08:12	WG2155682
cis-1,3-Dichloropropene	10061-01-5	0.100	U	0.0271	0.100	0.200	1	10/22/2023 08:12	WG2155682
trans-1,3-Dichloropropene	10061-02-6	0.150	U	0.0612	0.150	0.300	1	10/22/2023 08:12	WG2155682
2,2-Dichloropropane	594-20-7	0.100	U	0.0317	0.100	0.200	1	10/22/2023 08:12	WG2155682
Di-isopropyl ether	108-20-3	0.0500	U	0.0140	0.0500	0.100	1	10/22/2023 08:12	WG2155682
Ethylbenzene	100-41-4	0.0500	U	0.0212	0.0500	0.100	1	10/22/2023 08:12	WG2155682
Hexachloro-1,3-butadiene	87-68-3	2.00	U	0.508	2.00	4.00	1	10/22/2023 08:12	WG2155682
Isopropylbenzene	98-82-8	1.00	U	0.0345	1.00	2.00	1	10/22/2023 08:12	WG2155682
p-Isopropyltoluene	99-87-6	0.300	U	0.0932	0.300	0.600	1	10/22/2023 08:12	WG2155682
2-Butanone (MEK)	78-93-3	1.00	U	0.500	1.00	2.00	1	10/22/2023 08:12	WG2155682
Methylene Chloride	75-09-2	0.750	U	0.266	0.750	1.50	1	10/22/2023 08:12	WG2155682
4-Methyl-2-pentanone (MIBK)	108-10-1	1.00	U	0.400	1.00	2.00	1	10/22/2023 08:12	WG2155682
Methyl tert-butyl ether	1634-04-4	0.0300	U	0.0118	0.0300	0.0600	1	10/22/2023 08:12	WG2155682
Naphthalene	91-20-3	0.250	U	0.125	0.250	0.500	1	10/22/2023 08:12	WG2155682
n-Propylbenzene	103-65-1	0.100	U	0.0472	0.100	0.200	1	10/22/2023 08:12	WG2155682
Styrene	100-42-5	0.250	U	0.109	0.250	0.500	1	10/22/2023 08:12	WG2155682
1,1,1,2-Tetrachloroethane	630-20-6	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 08:12	WG2155682
1,1,2,2-Tetrachloroethane	79-34-5	0.0500	U	0.0156	0.0500	0.100	1	10/22/2023 08:12	WG2155682
1,1,2-Trichlorotrifluoroethane	76-13-1	0.100	U	0.0270	0.100	0.200	1	10/22/2023 08:12	WG2155682
Tetrachloroethene	127-18-4	0.0750	U	0.0280	0.0750	0.150	1	10/22/2023 08:12	WG2155682
Toluene	108-88-3	0.237		0.0500	0.100	0.200	1	10/22/2023 08:12	WG2155682
1,2,3-Trichlorobenzene	87-61-6	0.250	U	0.0250	0.250	0.500	1	10/22/2023 08:12	WG2155682
1,2,4-Trichlorobenzene	120-82-1	0.500	U	0.193	0.500	1.00	1	10/22/2023 08:12	WG2155682
1,1,1-Trichloroethane	71-55-6	0.0500	U	0.0110	0.0500	0.100	1	10/22/2023 08:12	WG2155682
1,1,2-Trichloroethane	79-00-5	0.100	U	0.0353	0.100	0.200	1	10/22/2023 08:12	WG2155682
Trichloroethene	79-01-6	0.0400	U	0.0160	0.0400	0.0800	1	10/22/2023 08:12	WG2155682
Trichlorofluoromethane	75-69-4	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 08:12	WG2155682
1,2,3-Trichloropropane	96-18-4	0.500	U	0.204	0.500	1.00	1	10/22/2023 08:12	WG2155682
1,2,4-Trimethylbenzene	95-63-6	0.100	U	0.0464	0.100	0.200	1	10/22/2023 08:12	WG2155682
1,2,3-Trimethylbenzene	526-73-8	0.100	U	0.0460	0.100	0.200	1	10/22/2023 08:12	WG2155682
1,3,5-Trimethylbenzene	108-67-8	0.100	U	0.0432	0.100	0.200	1	10/22/2023 08:12	WG2155682
Vinyl chloride	75-01-4	0.0750	U	0.0273	0.0750	0.150	1	10/22/2023 08:12	WG2155682
Vinyl acetate	108-05-4	0.300	U	0.141	0.300	0.600	1	10/27/2023 00:33	WG2157275
Xylenes, Total	1330-20-7	0.400	U	0.191	0.400	0.800	1	10/22/2023 08:12	WG2155682
Ethyl Ether	60-29-7	0.0500	U	0.0170	0.0500	0.100	1	10/22/2023 08:12	WG2155682
Tetrahydrofuran	109-99-9	0.250	U	0.0900	0.250	50.0	1	10/22/2023 08:12	WG2155682

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Iodomethane	74-88-4	0.500	U	0.242	0.500	1.00	1	10/22/2023 08:12	WG2155682
Allyl chloride	107-05-1	2.00	U	0.580	2.00	4.00	1	10/22/2023 08:12	WG2155682
trans-1,4-Dichloro-2-butene	110-57-6	0.200	C4 U	0.0560	0.200	0.400	1	10/22/2023 08:12	WG2155682
(S) Toluene-d8	*2037-26-5*	*103*				*89.0-112*		*10/22/2023 08:12*	WG2155682
(S) Toluene-d8	*2037-26-5*	*109*				*89.0-112*		*10/27/2023 00:33*	WG2157275
(S) 4-Bromofluorobenzene	*460-00-4*	*103*				*85.0-114*		*10/22/2023 08:12*	WG2155682
(S) 4-Bromofluorobenzene	*460-00-4*	*102*				*85.0-114*		*10/27/2023 00:33*	WG2157275
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*95.2*				*81.0-118*		*10/22/2023 08:12*	WG2155682
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*95.1*				*81.0-118*		*10/27/2023 00:33*	WG2157275

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Acetone	67-64-1	25.0	U	11.3	25.0	50.0	1	10/22/2023 18:01	WG2155879
Acrolein	107-02-8	25.0	U	2.54	25.0	50.0	1	10/22/2023 18:01	WG2155879
Acrylonitrile	107-13-1	5.00	U	0.671	5.00	10.0	1	10/22/2023 18:01	WG2155879
Benzene	71-43-2	0.500	U	0.0941	0.500	1.00	1	10/22/2023 18:01	WG2155879
Bromobenzene	108-86-1	0.500	U	0.118	0.500	1.00	1	10/22/2023 18:01	WG2155879
Bromodichloromethane	75-27-4	0.500	U	0.136	0.500	1.00	1	10/22/2023 18:01	WG2155879
Bromoform	75-25-2	0.500	U	0.129	0.500	1.00	1	10/22/2023 18:01	WG2155879
Bromomethane	74-83-9	2.00	U	0.605	2.00	5.00	1	10/22/2023 18:01	WG2155879
n-Butylbenzene	104-51-8	0.500	U	0.157	0.500	1.00	1	10/22/2023 18:01	WG2155879
sec-Butylbenzene	135-98-8	0.500	U	0.125	0.500	1.00	1	10/22/2023 18:01	WG2155879
tert-Butylbenzene	98-06-6	0.500	U	0.127	0.500	1.00	1	10/22/2023 18:01	WG2155879
Carbon tetrachloride	56-23-5	0.500	U	0.128	0.500	1.00	1	10/22/2023 18:01	WG2155879
Chlorobenzene	108-90-7	0.500	U	0.116	0.500	1.00	1	10/22/2023 18:01	WG2155879
Chlorodibromomethane	124-48-1	0.500	U	0.140	0.500	1.00	1	10/22/2023 18:01	WG2155879
Chloroethane	75-00-3	2.00	U	0.192	2.00	5.00	1	10/22/2023 18:01	WG2155879
2-Chloroethyl vinyl ether	110-75-8	25.0	U	0.575	25.0	50.0	1	10/22/2023 18:01	WG2155879
Chloroform	67-66-3	2.00	U	0.111	2.00	5.00	1	10/22/2023 18:01	WG2155879
Chloromethane	74-87-3	2.00	U	0.960	2.00	4.00	1	10/22/2023 18:01	WG2155879
2-Chlorotoluene	95-49-8	0.500	U	0.106	0.500	1.00	1	10/22/2023 18:01	WG2155879
4-Chlorotoluene	106-43-4	0.500	U	0.114	0.500	1.00	1	10/22/2023 18:01	WG2155879
1,2-Dibromoethane	106-93-4	0.500	U	0.126	0.500	1.00	1	10/22/2023 18:01	WG2155879
1,2-Dibromo-3-Chloropropane	96-12-8	2.00	U	0.276	2.00	5.00	1	10/22/2023 18:01	WG2155879
Dibromomethane	74-95-3	0.500	U	0.122	0.500	1.00	1	10/22/2023 18:01	WG2155879
1,2-Dichlorobenzene	95-50-1	0.500	U	0.107	0.500	1.00	1	10/22/2023 18:01	WG2155879
1,3-Dichlorobenzene	541-73-1	0.500	U	0.110	0.500	1.00	1	10/22/2023 18:01	WG2155879
1,4-Dichlorobenzene	106-46-7	0.500	U	0.120	0.500	1.00	1	10/22/2023 18:01	WG2155879
Dichlorodifluoromethane	75-71-8	2.00	U	0.374	2.00	5.00	1	10/22/2023 18:01	WG2155879
1,1-Dichloroethane	75-34-3	0.500	U	0.100	0.500	1.00	1	10/22/2023 18:01	WG2155879
1,2-Dichloroethane	107-06-2	0.500	U	0.0819	0.500	1.00	1	10/22/2023 18:01	WG2155879
1,1-Dichloroethene	75-35-4	0.500	U	0.188	0.500	1.00	1	10/22/2023 18:01	WG2155879
cis-1,2-Dichloroethene	156-59-2	0.500	U	0.126	0.500	1.00	1	10/22/2023 18:01	WG2155879
trans-1,2-Dichloroethene	156-60-5	0.500	U	0.149	0.500	1.00	1	10/22/2023 18:01	WG2155879
1,2-Dichloropropane	78-87-5	0.500	U	0.149	0.500	1.00	1	10/22/2023 18:01	WG2155879
1,3-Dichloropropane	142-28-9	0.500	U	0.110	0.500	1.00	1	10/22/2023 18:01	WG2155879
2,2-Dichloropropane	594-20-7	0.500	U	0.161	0.500	1.00	1	10/22/2023 08:12	WG2225461
1,1-Dichloropropene	563-58-6	0.500	U	0.142	0.500	1.00	1	10/22/2023 18:01	WG2155879
cis-1,3-Dichloropropene	10061-01-5	0.500	U	0.111	0.500	1.00	1	10/22/2023 18:01	WG2155879
trans-1,3-Dichloropropene	10061-02-6	0.500	U	0.118	0.500	1.00	1	10/22/2023 18:01	WG2155879
Di-isopropyl ether	108-20-3	0.500	U	0.105	0.500	1.00	1	10/22/2023 18:01	WG2155879
Ethylbenzene	100-41-4	0.500	U	0.137	0.500	1.00	1	10/22/2023 18:01	WG2155879
Hexachloro-1,3-butadiene	87-68-3	0.750	U	0.337	0.750	1.50	1	10/22/2023 08:12	WG2225461
Isopropylbenzene	98-82-8	0.500	U	0.105	0.500	1.00	1	10/22/2023 18:01	WG2155879
p-Isopropyltoluene	99-87-6	0.500	U	0.120	0.500	1.00	1	10/22/2023 18:01	WG2155879

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
2-Butanone (MEK)	78-93-3	5.00	U	1.19	5.00	10.0	1	10/22/2023 18:01	WG2155879
Methylene Chloride	75-09-2	2.00	U	0.430	2.00	5.00	1	10/22/2023 18:01	WG2155879
4-Methyl-2-pentanone (MIBK)	108-10-1	5.00	U	0.478	5.00	10.0	1	10/22/2023 18:01	WG2155879
Methyl tert-butyl ether	1634-04-4	0.500	U	0.101	0.500	1.00	1	10/22/2023 18:01	WG2155879
Naphthalene	91-20-3	2.00	U	1.00	2.00	5.00	1	10/22/2023 18:01	WG2155879
n-Propylbenzene	103-65-1	0.500	U	0.0993	0.500	1.00	1	10/22/2023 18:01	WG2155879
Styrene	100-42-5	0.500	U	0.118	0.500	1.00	1	10/22/2023 18:01	WG2155879
1,1,1,2-Tetrachloroethane	630-20-6	0.500	U	0.147	0.500	1.00	1	10/22/2023 18:01	WG2155879
1,1,2,2-Tetrachloroethane	79-34-5	0.500	U	0.133	0.500	1.00	1	10/22/2023 18:01	WG2155879
Tetrachloroethene	127-18-4	0.600	U	0.300	0.600	1.20	1	10/22/2023 18:01	WG2155879
Toluene	108-88-3	0.600	U	0.278	0.600	1.20	1	10/22/2023 18:01	WG2155879
1,2,3-Trichlorobenzene	87-61-6	0.500	U	0.230	0.500	1.00	1	10/22/2023 18:01	WG2155879
1,2,4-Trichlorobenzene	120-82-1	1.00	U	0.481	1.00	2.00	1	10/22/2023 18:01	WG2155879
1,2,3-Trimethylbenzene	526-73-8	0.500	U	0.104	0.500	1.00	1	10/22/2023 18:01	WG2155879
1,2,4-Trimethylbenzene	95-63-6	1.00	U	0.322	1.00	2.00	1	10/22/2023 18:01	WG2155879
1,3,5-Trimethylbenzene	108-67-8	0.500	U	0.104	0.500	1.00	1	10/22/2023 18:01	WG2155879
1,1,1-Trichloroethane	71-55-6	0.500	U	0.149	0.500	1.00	1	10/22/2023 08:12	WG2225461
1,1,2-Trichloroethane	79-00-5	0.500	U	0.158	0.500	1.00	1	10/22/2023 18:01	WG2155879
Trichloroethene	79-01-6	0.500	U	0.190	0.500	1.00	1	10/22/2023 18:01	WG2155879
Trichlorofluoromethane	75-69-4	2.00	U	0.160	2.00	5.00	1	10/22/2023 18:01	WG2155879
1,1,2-Trichlorotrifluoroethane	76-13-1	0.500	U	0.180	0.500	1.00	1	10/22/2023 18:01	WG2155879
1,2,3-Trichloropropane	96-18-4	1.00	U	0.237	1.00	2.50	1	10/22/2023 18:01	WG2155879
Vinyl chloride	75-01-4	0.500	U	0.234	0.500	1.00	1	10/22/2023 18:01	WG2155879
Xylenes, Total	1330-20-7	1.50	U	0.174	1.50	3.00	1	10/22/2023 18:01	WG2155879
(S) Toluene-d8	*2037-26-5*	*103*				*89.0-112*		*10/22/2023 18:01*	WG2155879
(S) Toluene-d8	*2037-26-5*	*103*				*89.0-112*		*10/22/2023 08:12*	WG2225461
(S) 4-Bromofluorobenzene	*460-00-4*	*95.8*				*85.0-114*		*10/22/2023 18:01*	WG2155879
(S) 4-Bromofluorobenzene	*460-00-4*	*103*				*85.0-114*		*10/22/2023 08:12*	WG2225461
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*107*				*81.0-118*		*10/22/2023 18:01*	WG2155879
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*95.2*				*81.0-118*		*10/22/2023 08:12*	WG2225461

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	C10-C25	431	B J	170	400	800	1	10/28/2023 07:04	WG2159044
(S) o-Terphenyl	*84-15-1*	*82.3*				*50.0-150*		*10/28/2023 07:04*	WG2159044

Additional Information - Results for field analyses are not accredited to ISO 17025

Analyte	Result	Units
Cooler#	yellow	
Cooler Temperature	2.2	Deg. C

Wet Chemistry by Method 2320 B-2011

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Alkalinity		44900		8450	10000	20000	1	10/25/2023 13:31	WG2156619
Alkalinity,Bicarbonate		44900		8450	10000	20000	1	10/25/2023 13:31	WG2156619
Alkalinity,Carbonate		10000	U	8450	10000	20000	1	10/25/2023 13:31	WG2156619
Alkalinity,Hydroxide		10000	U	8450	10000	20000	1	10/25/2023 13:31	WG2156619

Sample Narrative:

L1667912-04 WG2156619: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 351.2

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Kjeldahl Nitrogen, TKN	7727-37-9	300	U	140	300	600	1	10/24/2023 20:22	WG2154830

Wet Chemistry by Method 353.2

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Nitrate-Nitrite	7727-37-9	100	U	50.0	100	200	1	10/20/2023 21:10	WG2154634

Wet Chemistry by Method 9056A

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Sulfate	14808-79-8	2240	J	594	2500	5000	1	10/27/2023 17:46	WG2158472

Metals (ICP) by Method 6010D

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Iron	7439-89-6	1620		20.5	50.0	100	1	10/23/2023 23:22	WG2155276
Manganese	7439-96-5	83.7		0.855	5.00	10.0	1	10/23/2023 23:22	WG2155276

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Acetone	67-64-1	2.08	J	0.548	2.00	4.00	1	10/22/2023 08:32	WG2155682
Acrylonitrile	107-13-1	0.250	U	0.0760	0.250	0.500	1	10/22/2023 08:32	WG2155682
Benzene	71-43-2	0.0680	J	0.0160	0.0500	0.100	1	10/22/2023 08:32	WG2155682
Bromobenzene	108-86-1	0.250	U	0.0420	0.250	0.500	1	10/22/2023 08:32	WG2155682
Bromodichloromethane	75-27-4	0.100	U	0.0315	0.100	0.200	1	10/22/2023 08:32	WG2155682
Bromochloromethane	74-97-5	0.100	U	0.0452	0.100	0.200	1	10/22/2023 08:32	WG2155682
Bromoform	75-25-2	0.500	U	0.239	0.500	1.00	1	10/22/2023 08:32	WG2155682
Bromomethane	74-83-9	0.500	U	0.148	0.500	1.00	1	10/22/2023 08:32	WG2155682
n-Butylbenzene	104-51-8	0.500	U	0.154	0.500	1.00	1	10/22/2023 08:32	WG2155682
sec-Butylbenzene	135-98-8	0.250	U	0.101	0.250	0.500	1	10/22/2023 08:32	WG2155682
tert-Butylbenzene	98-06-6	0.500	U	0.0620	0.500	1.00	1	10/22/2023 08:32	WG2155682
Carbon tetrachloride	56-23-5	0.100	U	0.0432	0.100	0.200	1	10/22/2023 08:32	WG2155682
Carbon disulfide	75-15-0	0.500	U	0.162	0.500	1.00	1	10/22/2023 08:32	WG2155682
Chlorobenzene	108-90-7	0.0500	U	0.0229	0.0500	0.100	1	10/22/2023 08:32	WG2155682
Chlorodibromomethane	124-48-1	0.0500	U	0.0180	0.0500	0.100	1	10/22/2023 08:32	WG2155682

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Chloroethane	75-00-3	0.100	U	0.0432	0.100	0.200	1	10/22/2023 08:32	WG2155682
Chloroform	67-66-3	0.0500	U	0.0166	0.0500	0.100	1	10/22/2023 08:32	WG2155682
Chloromethane	74-87-3	0.250	U	0.0556	0.250	0.500	1	10/22/2023 08:32	WG2155682
Cyclohexane	110-82-7	0.0500	U	0.0203	0.0500	0.100	1	10/22/2023 08:32	WG2155682
2-Chlorotoluene	95-49-8	0.100	U	0.0368	0.100	0.200	1	10/22/2023 08:32	WG2155682
4-Chlorotoluene	106-43-4	0.100	U	0.0452	0.100	0.200	1	10/22/2023 08:32	WG2155682
1,2-Dibromo-3-Chloropropane	96-12-8	0.500	U	0.204	0.500	1.00	1	10/22/2023 08:32	WG2155682
1,2-Dibromoethane	106-93-4	0.0500	U	0.0210	0.0500	0.100	1	10/22/2023 08:32	WG2155682
Dibromomethane	74-95-3	0.100	U	0.0400	0.100	0.200	1	10/22/2023 08:32	WG2155682
1,2-Dichlorobenzene	95-50-1	0.200	U	0.0580	0.200	0.400	1	10/22/2023 08:32	WG2155682
1,3-Dichlorobenzene	541-73-1	0.200	U	0.0680	0.200	0.400	1	10/22/2023 08:32	WG2155682
1,4-Dichlorobenzene	106-46-7	0.250	U	0.0788	0.250	0.500	1	10/22/2023 08:32	WG2155682
Dichlorodifluoromethane	75-71-8	0.100	U	0.0327	0.100	0.200	1	10/22/2023 08:32	WG2155682
1,1-Dichloroethane	75-34-3	0.0500	U	0.0230	0.0500	0.100	1	10/22/2023 08:32	WG2155682
1,2-Dichloroethane	107-06-2	0.0500	U	0.0190	0.0500	0.100	1	10/22/2023 08:32	WG2155682
1,1-Dichloroethene	75-35-4	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 08:32	WG2155682
cis-1,2-Dichloroethene	156-59-2	0.0750	U	0.0276	0.0750	0.150	1	10/22/2023 08:32	WG2155682
trans-1,2-Dichloroethene	156-60-5	0.300	U	0.0572	0.300	0.600	1	10/22/2023 08:32	WG2155682
1,2-Dichloropropane	78-87-5	0.200	U	0.0508	0.200	0.400	1	10/22/2023 08:32	WG2155682
1,1-Dichloropropene	563-58-6	0.100	U	0.0280	0.100	0.200	1	10/22/2023 08:32	WG2155682
1,3-Dichloropropane	142-28-9	0.150	U	0.0700	0.150	0.300	1	10/22/2023 08:32	WG2155682
cis-1,3-Dichloropropene	10061-01-5	0.100	U	0.0271	0.100	0.200	1	10/22/2023 08:32	WG2155682
trans-1,3-Dichloropropene	10061-02-6	0.150	U	0.0612	0.150	0.300	1	10/22/2023 08:32	WG2155682
2,2-Dichloropropane	594-20-7	0.100	U	0.0317	0.100	0.200	1	10/22/2023 08:32	WG2155682
Di-isopropyl ether	108-20-3	0.0500	U	0.0140	0.0500	0.100	1	10/22/2023 08:32	WG2155682
Ethylbenzene	100-41-4	0.0500	U	0.0212	0.0500	0.100	1	10/22/2023 08:32	WG2155682
Hexachloro-1,3-butadiene	87-68-3	2.00	U	0.508	2.00	4.00	1	10/22/2023 08:32	WG2155682
Isopropylbenzene	98-82-8	1.00	U	0.0345	1.00	2.00	1	10/22/2023 08:32	WG2155682
p-Isopropyltoluene	99-87-6	0.300	U	0.0932	0.300	0.600	1	10/22/2023 08:32	WG2155682
2-Butanone (MEK)	78-93-3	1.00	U	0.500	1.00	2.00	1	10/22/2023 08:32	WG2155682
Methylene Chloride	75-09-2	0.750	U	0.266	0.750	1.50	1	10/22/2023 08:32	WG2155682
4-Methyl-2-pentanone (MIBK)	108-10-1	1.00	U	0.400	1.00	2.00	1	10/22/2023 08:32	WG2155682
Methyl tert-butyl ether	1634-04-4	0.0300	U	0.0118	0.0300	0.0600	1	10/22/2023 08:32	WG2155682
Naphthalene	91-20-3	0.250	U	0.125	0.250	0.500	1	10/22/2023 08:32	WG2155682
n-Propylbenzene	103-65-1	0.100	U	0.0472	0.100	0.200	1	10/22/2023 08:32	WG2155682
Styrene	100-42-5	0.250	U	0.109	0.250	0.500	1	10/22/2023 08:32	WG2155682
1,1,1,2-Tetrachloroethane	630-20-6	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 08:32	WG2155682
1,1,2,2-Tetrachloroethane	79-34-5	0.0500	U	0.0156	0.0500	0.100	1	10/22/2023 08:32	WG2155682
1,1,2-Trichlorotrifluoroethane	76-13-1	0.100	U	0.0270	0.100	0.200	1	10/22/2023 08:32	WG2155682
Tetrachloroethene	127-18-4	0.0750	U	0.0280	0.0750	0.150	1	10/22/2023 08:32	WG2155682
Toluene	108-88-3	0.216		0.0500	0.100	0.200	1	10/22/2023 08:32	WG2155682
1,2,3-Trichlorobenzene	87-61-6	0.250	U	0.0250	0.250	0.500	1	10/22/2023 08:32	WG2155682
1,2,4-Trichlorobenzene	120-82-1	0.500	U	0.193	0.500	1.00	1	10/22/2023 08:32	WG2155682
1,1,1-Trichloroethane	71-55-6	0.0500	U	0.0110	0.0500	0.100	1	10/22/2023 08:32	WG2155682
1,1,2-Trichloroethane	79-00-5	0.100	U	0.0353	0.100	0.200	1	10/22/2023 08:32	WG2155682
Trichloroethene	79-01-6	0.0400	U	0.0160	0.0400	0.0800	1	10/22/2023 08:32	WG2155682
Trichlorofluoromethane	75-69-4	0.0500	U	0.0200	0.0500	0.100	1	10/22/2023 08:32	WG2155682
1,2,3-Trichloropropane	96-18-4	0.500	U	0.204	0.500	1.00	1	10/22/2023 08:32	WG2155682
1,2,4-Trimethylbenzene	95-63-6	0.100	U	0.0464	0.100	0.200	1	10/22/2023 08:32	WG2155682
1,2,3-Trimethylbenzene	526-73-8	0.100	U	0.0460	0.100	0.200	1	10/22/2023 08:32	WG2155682
1,3,5-Trimethylbenzene	108-67-8	0.100	U	0.0432	0.100	0.200	1	10/22/2023 08:32	WG2155682
Vinyl chloride	75-01-4	0.0750	U	0.0273	0.0750	0.150	1	10/22/2023 08:32	WG2155682
Vinyl acetate	108-05-4	0.300	U	0.141	0.300	0.600	1	10/27/2023 00:52	WG2157275
Xylenes, Total	1330-20-7	0.400	U	0.191	0.400	0.800	1	10/22/2023 08:32	WG2155682
Ethyl Ether	60-29-7	0.0500	U	0.0170	0.0500	0.100	1	10/22/2023 08:32	WG2155682
Tetrahydrofuran	109-99-9	0.250	U	0.0900	0.250	50.0	1	10/22/2023 08:32	WG2155682

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Iodomethane	74-88-4	0.500	U	0.242	0.500	1.00	1	10/22/2023 08:32	WG2155682
Allyl chloride	107-05-1	2.00	U	0.580	2.00	4.00	1	10/22/2023 08:32	WG2155682
trans-1,4-Dichloro-2-butene	110-57-6	0.200	C4 U	0.0560	0.200	0.400	1	10/22/2023 08:32	WG2155682
(S) Toluene-d8	*2037-26-5*	*103*				*89.0-112*		*10/22/2023 08:32*	WG2155682
(S) Toluene-d8	*2037-26-5*	*109*				*89.0-112*		*10/27/2023 00:52*	WG2157275
(S) 4-Bromofluorobenzene	*460-00-4*	*104*				*85.0-114*		*10/22/2023 08:32*	WG2155682
(S) 4-Bromofluorobenzene	*460-00-4*	*102*				*85.0-114*		*10/27/2023 00:52*	WG2157275
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*96.5*				*81.0-118*		*10/22/2023 08:32*	WG2155682
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*98.0*				*81.0-118*		*10/27/2023 00:52*	WG2157275

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Acetone	67-64-1	25.0	U	11.3	25.0	50.0	1	10/22/2023 18:22	WG2155879
Acrolein	107-02-8	25.0	U	2.54	25.0	50.0	1	10/22/2023 18:22	WG2155879
Acrylonitrile	107-13-1	5.00	U	0.671	5.00	10.0	1	10/22/2023 18:22	WG2155879
Benzene	71-43-2	0.500	U	0.0941	0.500	1.00	1	10/22/2023 18:22	WG2155879
Bromobenzene	108-86-1	0.500	U	0.118	0.500	1.00	1	10/22/2023 18:22	WG2155879
Bromodichloromethane	75-27-4	0.500	U	0.136	0.500	1.00	1	10/22/2023 18:22	WG2155879
Bromoform	75-25-2	0.500	U	0.129	0.500	1.00	1	10/22/2023 18:22	WG2155879
Bromomethane	74-83-9	2.00	U	0.605	2.00	5.00	1	10/22/2023 18:22	WG2155879
n-Butylbenzene	104-51-8	0.500	U	0.157	0.500	1.00	1	10/22/2023 18:22	WG2155879
sec-Butylbenzene	135-98-8	0.500	U	0.125	0.500	1.00	1	10/22/2023 18:22	WG2155879
tert-Butylbenzene	98-06-6	0.500	U	0.127	0.500	1.00	1	10/22/2023 18:22	WG2155879
Carbon tetrachloride	56-23-5	0.500	U	0.128	0.500	1.00	1	10/22/2023 18:22	WG2155879
Chlorobenzene	108-90-7	0.500	U	0.116	0.500	1.00	1	10/22/2023 18:22	WG2155879
Chlorodibromomethane	124-48-1	0.500	U	0.140	0.500	1.00	1	10/22/2023 18:22	WG2155879
Chloroethane	75-00-3	2.00	U	0.192	2.00	5.00	1	10/22/2023 18:22	WG2155879
2-Chloroethyl vinyl ether	110-75-8	25.0	U	0.575	25.0	50.0	1	10/22/2023 18:22	WG2155879
Chloroform	67-66-3	2.00	U	0.111	2.00	5.00	1	10/22/2023 18:22	WG2155879
Chloromethane	74-87-3	2.00	U	0.960	2.00	4.00	1	10/22/2023 18:22	WG2155879
2-Chlorotoluene	95-49-8	0.500	U	0.106	0.500	1.00	1	10/22/2023 18:22	WG2155879
4-Chlorotoluene	106-43-4	0.500	U	0.114	0.500	1.00	1	10/22/2023 18:22	WG2155879
1,2-Dibromoethane	106-93-4	0.500	U	0.126	0.500	1.00	1	10/22/2023 18:22	WG2155879
1,2-Dibromo-3-Chloropropane	96-12-8	2.00	U	0.276	2.00	5.00	1	10/22/2023 18:22	WG2155879
Dibromomethane	74-95-3	0.500	U	0.122	0.500	1.00	1	10/22/2023 18:22	WG2155879
1,2-Dichlorobenzene	95-50-1	0.500	U	0.107	0.500	1.00	1	10/22/2023 18:22	WG2155879
1,3-Dichlorobenzene	541-73-1	0.500	U	0.110	0.500	1.00	1	10/22/2023 18:22	WG2155879
1,4-Dichlorobenzene	106-46-7	0.500	U	0.120	0.500	1.00	1	10/22/2023 18:22	WG2155879
Dichlorodifluoromethane	75-71-8	2.00	U	0.374	2.00	5.00	1	10/22/2023 18:22	WG2155879
1,1-Dichloroethane	75-34-3	0.500	U	0.100	0.500	1.00	1	10/22/2023 18:22	WG2155879
1,2-Dichloroethane	107-06-2	0.500	U	0.0819	0.500	1.00	1	10/22/2023 18:22	WG2155879
1,1-Dichloroethene	75-35-4	0.500	U	0.188	0.500	1.00	1	10/22/2023 18:22	WG2155879
cis-1,2-Dichloroethene	156-59-2	0.500	U	0.126	0.500	1.00	1	10/22/2023 18:22	WG2155879
trans-1,2-Dichloroethene	156-60-5	0.500	U	0.149	0.500	1.00	1	10/22/2023 18:22	WG2155879
1,2-Dichloropropane	78-87-5	0.500	U	0.149	0.500	1.00	1	10/22/2023 18:22	WG2155879
1,3-Dichloropropane	142-28-9	0.500	U	0.110	0.500	1.00	1	10/22/2023 18:22	WG2155879
2,2-Dichloropropane	594-20-7	0.500	U	0.161	0.500	1.00	1	10/22/2023 08:32	WG2225461
1,1-Dichloropropene	563-58-6	0.500	U	0.142	0.500	1.00	1	10/22/2023 18:22	WG2155879
cis-1,3-Dichloropropene	10061-01-5	0.500	U	0.111	0.500	1.00	1	10/22/2023 18:22	WG2155879
trans-1,3-Dichloropropene	10061-02-6	0.500	U	0.118	0.500	1.00	1	10/22/2023 18:22	WG2155879
Di-isopropyl ether	108-20-3	0.500	U	0.105	0.500	1.00	1	10/22/2023 18:22	WG2155879
Ethylbenzene	100-41-4	0.500	U	0.137	0.500	1.00	1	10/22/2023 18:22	WG2155879
Hexachloro-1,3-butadiene	87-68-3	0.750	U	0.337	0.750	1.50	1	10/22/2023 08:32	WG2225461
Isopropylbenzene	98-82-8	0.500	U	0.105	0.500	1.00	1	10/22/2023 18:22	WG2155879
p-Isopropyltoluene	99-87-6	0.500	U	0.120	0.500	1.00	1	10/22/2023 18:22	WG2155879

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
2-Butanone (MEK)	78-93-3	5.00	U	1.19	5.00	10.0	1	10/22/2023 18:22	WG2155879
Methylene Chloride	75-09-2	2.00	U	0.430	2.00	5.00	1	10/22/2023 18:22	WG2155879
4-Methyl-2-pentanone (MIBK)	108-10-1	5.00	U	0.478	5.00	10.0	1	10/22/2023 18:22	WG2155879
Methyl tert-butyl ether	1634-04-4	0.500	U	0.101	0.500	1.00	1	10/22/2023 18:22	WG2155879
Naphthalene	91-20-3	2.00	U	1.00	2.00	5.00	1	10/22/2023 18:22	WG2155879
n-Propylbenzene	103-65-1	0.500	U	0.0993	0.500	1.00	1	10/22/2023 18:22	WG2155879
Styrene	100-42-5	0.500	U	0.118	0.500	1.00	1	10/22/2023 18:22	WG2155879
1,1,1,2-Tetrachloroethane	630-20-6	0.500	U	0.147	0.500	1.00	1	10/22/2023 18:22	WG2155879
1,1,2,2-Tetrachloroethane	79-34-5	0.500	U	0.133	0.500	1.00	1	10/22/2023 18:22	WG2155879
Tetrachloroethene	127-18-4	0.600	U	0.300	0.600	1.20	1	10/22/2023 18:22	WG2155879
Toluene	108-88-3	0.600	U	0.278	0.600	1.20	1	10/22/2023 18:22	WG2155879
1,2,3-Trichlorobenzene	87-61-6	0.500	U	0.230	0.500	1.00	1	10/22/2023 18:22	WG2155879
1,2,4-Trichlorobenzene	120-82-1	1.00	U	0.481	1.00	2.00	1	10/22/2023 18:22	WG2155879
1,2,3-Trimethylbenzene	526-73-8	0.500	U	0.104	0.500	1.00	1	10/22/2023 18:22	WG2155879
1,2,4-Trimethylbenzene	95-63-6	1.00	U	0.322	1.00	2.00	1	10/22/2023 18:22	WG2155879
1,3,5-Trimethylbenzene	108-67-8	0.500	U	0.104	0.500	1.00	1	10/22/2023 18:22	WG2155879
1,1,1-Trichloroethane	71-55-6	0.500	U	0.149	0.500	1.00	1	10/22/2023 18:22	WG2155879
1,1,2-Trichloroethane	79-00-5	0.500	U	0.158	0.500	1.00	1	10/22/2023 18:22	WG2155879
Trichloroethene	79-01-6	0.500	U	0.190	0.500	1.00	1	10/22/2023 18:22	WG2155879
Trichlorofluoromethane	75-69-4	2.00	U	0.160	2.00	5.00	1	10/22/2023 18:22	WG2155879
1,1,2-Trichlorotrifluoroethane	76-13-1	0.500	U	0.180	0.500	1.00	1	10/22/2023 18:22	WG2155879
1,2,3-Trichloropropane	96-18-4	1.00	U	0.237	1.00	2.50	1	10/22/2023 18:22	WG2155879
Vinyl chloride	75-01-4	0.500	U	0.234	0.500	1.00	1	10/22/2023 18:22	WG2155879
Xylenes, Total	1330-20-7	1.50	U	0.174	1.50	3.00	1	10/22/2023 18:22	WG2155879
(S) Toluene-d8	*2037-26-5*	*104*				*89.0-112*		*10/22/2023 18:22*	WG2155879
(S) Toluene-d8	*2037-26-5*	*103*				*89.0-112*		*10/22/2023 08:32*	WG2225461
(S) 4-Bromofluorobenzene	*460-00-4*	*94.3*				*85.0-114*		*10/22/2023 18:22*	WG2155879
(S) 4-Bromofluorobenzene	*460-00-4*	*104*				*85.0-114*		*10/22/2023 08:32*	WG2225461
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*104*				*81.0-118*		*10/22/2023 18:22*	WG2155879
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*96.5*				*81.0-118*		*10/22/2023 08:32*	WG2225461

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	C10-C25	407	B J	179	420	840	1.05	10/28/2023 07:24	WG2159044
(S) o-Terphenyl	*84-15-1*	*46.6*	J2			*50.0-150*		*10/28/2023 07:24*	WG2159044

Sample Narrative:

L1667912-04 WG2159044: Duplicate Analysis performed due to surrogate failure. Reporting most compliant data.

Additional Information - Results for field analyses are not accredited to ISO 17025

Analyte	Result	Units
Cooler#	yellow	
Cooler Temperature	2.2	Deg. C

Wet Chemistry by Method 2320 B-2011

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Alkalinity		47200		8450	10000	20000	1	10/25/2023 13:35	WG2156619
Alkalinity,Bicarbonate		47200		8450	10000	20000	1	10/25/2023 13:35	WG2156619
Alkalinity,Carbonate		10000	U	8450	10000	20000	1	10/25/2023 13:35	WG2156619
Alkalinity,Hydroxide		10000	U	8450	10000	20000	1	10/25/2023 13:35	WG2156619

Sample Narrative:
L1667912-05 WG2156619: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 351.2

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Kjeldahl Nitrogen, TKN	7727-37-9	300	U	140	300	600	1	10/24/2023 20:23	WG2154830

Wet Chemistry by Method 353.2

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Nitrate-Nitrite	7727-37-9	60.3	J	50.0	100	200	1	10/20/2023 21:11	WG2154634

Wet Chemistry by Method 9056A

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Sulfate	14808-79-8	3800	J	594	2500	5000	1	10/27/2023 17:59	WG2158472

Metals (ICP) by Method 6010D

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Iron	7439-89-6	5250		20.5	50.0	100	1	10/23/2023 23:30	WG2155276
Manganese	7439-96-5	218		0.855	5.00	10.0	1	10/23/2023 23:30	WG2155276

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result	Qualifier	DL	LOD	LOQ	Dilution	Analysis	Batch
		ug/l		ug/l	ug/l	ug/l		date / time	
Acetone	67-64-1	1.52	J Q	0.548	2.00	4.00	1	10/29/2023 21:30	WG2159657
Acrylonitrile	107-13-1	0.250	Q U	0.0760	0.250	0.500	1	10/29/2023 21:30	WG2159657
Benzene	71-43-2	0.0500	Q U	0.0160	0.0500	0.100	1	10/29/2023 21:30	WG2159657
Bromobenzene	108-86-1	0.250	Q U	0.0420	0.250	0.500	1	10/29/2023 21:30	WG2159657
Bromodichloromethane	75-27-4	0.100	Q U	0.0315	0.100	0.200	1	10/29/2023 21:30	WG2159657
Bromochloromethane	74-97-5	0.100	Q U	0.0452	0.100	0.200	1	10/29/2023 21:30	WG2159657
Bromoform	75-25-2	0.500	Q U	0.239	0.500	1.00	1	10/29/2023 21:30	WG2159657
Bromomethane	74-83-9	0.500	Q U	0.148	0.500	1.00	1	10/29/2023 21:30	WG2159657
n-Butylbenzene	104-51-8	0.500	Q U	0.154	0.500	1.00	1	10/29/2023 21:30	WG2159657
sec-Butylbenzene	135-98-8	0.250	Q U	0.101	0.250	0.500	1	10/29/2023 21:30	WG2159657
tert-Butylbenzene	98-06-6	0.500	Q U	0.0620	0.500	1.00	1	10/29/2023 21:30	WG2159657
Carbon tetrachloride	56-23-5	0.100	Q U	0.0432	0.100	0.200	1	10/29/2023 21:30	WG2159657
Carbon disulfide	75-15-0	0.500	Q U	0.162	0.500	1.00	1	10/29/2023 21:30	WG2159657
Chlorobenzene	108-90-7	0.0500	Q U	0.0229	0.0500	0.100	1	10/29/2023 21:30	WG2159657
Chlorodibromomethane	124-48-1	0.0500	Q U	0.0180	0.0500	0.100	1	10/29/2023 21:30	WG2159657

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Chloroethane	75-00-3	0.100	Q U	0.0432	0.100	0.200	1	10/29/2023 21:30	WG2159657
Chloroform	67-66-3	0.0500	Q U	0.0166	0.0500	0.100	1	10/29/2023 21:30	WG2159657
Chloromethane	74-87-3	0.250	Q U	0.0556	0.250	0.500	1	10/29/2023 21:30	WG2159657
Cyclohexane	110-82-7	0.0500	Q U	0.0203	0.0500	0.100	1	10/29/2023 21:30	WG2159657
2-Chlorotoluene	95-49-8	0.100	Q U	0.0368	0.100	0.200	1	10/29/2023 21:30	WG2159657
4-Chlorotoluene	106-43-4	0.100	Q U	0.0452	0.100	0.200	1	10/29/2023 21:30	WG2159657
1,2-Dibromo-3-Chloropropane	96-12-8	0.500	Q U	0.204	0.500	1.00	1	10/29/2023 21:30	WG2159657
1,2-Dibromoethane	106-93-4	0.0500	Q U	0.0210	0.0500	0.100	1	10/29/2023 21:30	WG2159657
Dibromomethane	74-95-3	0.100	Q U	0.0400	0.100	0.200	1	10/29/2023 21:30	WG2159657
1,2-Dichlorobenzene	95-50-1	0.200	Q U	0.0580	0.200	0.400	1	10/29/2023 21:30	WG2159657
1,3-Dichlorobenzene	541-73-1	0.200	Q U	0.0680	0.200	0.400	1	10/29/2023 21:30	WG2159657
1,4-Dichlorobenzene	106-46-7	0.250	Q U	0.0788	0.250	0.500	1	10/29/2023 21:30	WG2159657
Dichlorodifluoromethane	75-71-8	0.100	C6 Q U	0.0327	0.100	0.200	1	10/29/2023 21:30	WG2159657
1,1-Dichloroethane	75-34-3	0.0500	Q U	0.0230	0.0500	0.100	1	10/29/2023 21:30	WG2159657
1,2-Dichloroethane	107-06-2	0.0500	Q U	0.0190	0.0500	0.100	1	10/29/2023 21:30	WG2159657
1,1-Dichloroethene	75-35-4	0.0500	Q U	0.0200	0.0500	0.100	1	10/29/2023 21:30	WG2159657
cis-1,2-Dichloroethene	156-59-2	0.0750	Q U	0.0276	0.0750	0.150	1	10/29/2023 21:30	WG2159657
trans-1,2-Dichloroethene	156-60-5	0.300	Q U	0.0572	0.300	0.600	1	10/29/2023 21:30	WG2159657
1,2-Dichloropropane	78-87-5	0.200	Q U	0.0508	0.200	0.400	1	10/29/2023 21:30	WG2159657
1,1-Dichloropropene	563-58-6	0.100	Q U	0.0280	0.100	0.200	1	10/29/2023 21:30	WG2159657
1,3-Dichloropropane	142-28-9	0.150	Q U	0.0700	0.150	0.300	1	10/29/2023 21:30	WG2159657
cis-1,3-Dichloropropene	10061-01-5	0.100	Q U	0.0271	0.100	0.200	1	10/29/2023 21:30	WG2159657
trans-1,3-Dichloropropene	10061-02-6	0.150	Q U	0.0612	0.150	0.300	1	10/29/2023 21:30	WG2159657
2,2-Dichloropropane	594-20-7	0.100	Q U	0.0317	0.100	0.200	1	10/29/2023 21:30	WG2159657
Di-isopropyl ether	108-20-3	0.0500	Q U	0.0140	0.0500	0.100	1	10/29/2023 21:30	WG2159657
Ethylbenzene	100-41-4	0.0500	Q U	0.0212	0.0500	0.100	1	10/29/2023 21:30	WG2159657
Hexachloro-1,3-butadiene	87-68-3	2.00	Q U	0.508	2.00	4.00	1	10/29/2023 21:30	WG2159657
Isopropylbenzene	98-82-8	1.00	Q U	0.0345	1.00	2.00	1	10/29/2023 21:30	WG2159657
p-Isopropyltoluene	99-87-6	0.300	Q U	0.0932	0.300	0.600	1	10/29/2023 21:30	WG2159657
2-Butanone (MEK)	78-93-3	1.00	Q U	0.500	1.00	2.00	1	10/29/2023 21:30	WG2159657
Methylene Chloride	75-09-2	0.750	Q U	0.266	0.750	1.50	1	10/29/2023 21:30	WG2159657
4-Methyl-2-pentanone (MIBK)	108-10-1	1.00	Q U	0.400	1.00	2.00	1	10/29/2023 21:30	WG2159657
Methyl tert-butyl ether	1634-04-4	0.0300	Q U	0.0118	0.0300	0.0600	1	10/29/2023 21:30	WG2159657
Naphthalene	91-20-3	0.250	C4 Q U	0.125	0.250	0.500	1	10/29/2023 21:30	WG2159657
n-Propylbenzene	103-65-1	0.100	Q U	0.0472	0.100	0.200	1	10/29/2023 21:30	WG2159657
Styrene	100-42-5	0.250	Q U	0.109	0.250	0.500	1	10/29/2023 21:30	WG2159657
1,1,1,2-Tetrachloroethane	630-20-6	0.0500	Q U	0.0200	0.0500	0.100	1	10/29/2023 21:30	WG2159657
1,1,2,2-Tetrachloroethane	79-34-5	0.0500	Q U	0.0156	0.0500	0.100	1	10/29/2023 21:30	WG2159657
1,1,2-Trichlorotrifluoroethane	76-13-1	0.100	Q U	0.0270	0.100	0.200	1	10/29/2023 21:30	WG2159657
Tetrachloroethene	127-18-4	0.0750	Q U	0.0280	0.0750	0.150	1	10/29/2023 21:30	WG2159657
Toluene	108-88-3	0.125	J Q	0.0500	0.100	0.200	1	10/29/2023 21:30	WG2159657
1,2,3-Trichlorobenzene	87-61-6	0.250	C4 Q U	0.0250	0.250	0.500	1	10/29/2023 21:30	WG2159657
1,2,4-Trichlorobenzene	120-82-1	0.500	Q U	0.193	0.500	1.00	1	10/29/2023 21:30	WG2159657
1,1,1-Trichloroethane	71-55-6	0.0500	Q U	0.0110	0.0500	0.100	1	10/29/2023 21:30	WG2159657
1,1,2-Trichloroethane	79-00-5	0.100	Q U	0.0353	0.100	0.200	1	10/29/2023 21:30	WG2159657
Trichloroethene	79-01-6	0.0200	J Q	0.0160	0.0400	0.0800	1	10/29/2023 21:30	WG2159657
Trichlorofluoromethane	75-69-4	0.0500	Q U	0.0200	0.0500	0.100	1	10/29/2023 21:30	WG2159657
1,2,3-Trichloropropane	96-18-4	0.500	Q U	0.204	0.500	1.00	1	10/29/2023 21:30	WG2159657
1,2,4-Trimethylbenzene	95-63-6	0.100	Q U	0.0464	0.100	0.200	1	10/29/2023 21:30	WG2159657
1,2,3-Trimethylbenzene	526-73-8	0.100	Q U	0.0460	0.100	0.200	1	10/29/2023 21:30	WG2159657
1,3,5-Trimethylbenzene	108-67-8	0.100	Q U	0.0432	0.100	0.200	1	10/29/2023 21:30	WG2159657
Vinyl chloride	75-01-4	0.0750	Q U	0.0273	0.0750	0.150	1	10/29/2023 21:30	WG2159657
Vinyl acetate	108-05-4	0.300	Q U	0.141	0.300	0.600	1	10/29/2023 21:30	WG2159657
Xylenes, Total	1330-20-7	0.400	Q U	0.191	0.400	0.800	1	10/29/2023 21:30	WG2159657
Ethyl Ether	60-29-7	0.0500	Q U	0.0170	0.0500	0.100	1	10/29/2023 21:30	WG2159657
Tetrahydrofuran	109-99-9	0.250	Q U	0.0900	0.250	50.0	1	10/29/2023 21:30	WG2159657

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Iodomethane	74-88-4	0.500	Q U	0.242	0.500	1.00	1	10/29/2023 21:30	WG2159657
Allyl chloride	107-05-1	2.00	Q U	0.580	2.00	4.00	1	10/29/2023 21:30	WG2159657
trans-1,4-Dichloro-2-butene	110-57-6	0.200	C4 Q U	0.0560	0.200	0.400	1	10/29/2023 21:30	WG2159657
(S) Toluene-d8	*2037-26-5*	*106*				*89.0-112*		*10/29/2023 21:30*	WG2159657
(S) 4-Bromofluorobenzene	*460-00-4*	*97.2*				*85.0-114*		*10/29/2023 21:30*	WG2159657
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*101*				*81.0-118*		*10/29/2023 21:30*	WG2159657

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Acetone	67-64-1	25.0	U	11.3	25.0	50.0	1	10/22/2023 18:44	WG2155879
Acrolein	107-02-8	25.0	U	2.54	25.0	50.0	1	10/22/2023 18:44	WG2155879
Acrylonitrile	107-13-1	5.00	U	0.671	5.00	10.0	1	10/22/2023 18:44	WG2155879
Benzene	71-43-2	0.500	U	0.0941	0.500	1.00	1	10/22/2023 18:44	WG2155879
Bromobenzene	108-86-1	0.500	U	0.118	0.500	1.00	1	10/22/2023 18:44	WG2155879
Bromodichloromethane	75-27-4	0.500	U	0.136	0.500	1.00	1	10/22/2023 18:44	WG2155879
Bromoform	75-25-2	0.500	U	0.129	0.500	1.00	1	10/22/2023 18:44	WG2155879
Bromomethane	74-83-9	2.00	U	0.605	2.00	5.00	1	10/22/2023 18:44	WG2155879
n-Butylbenzene	104-51-8	0.500	U	0.157	0.500	1.00	1	10/22/2023 18:44	WG2155879
sec-Butylbenzene	135-98-8	0.500	U	0.125	0.500	1.00	1	10/22/2023 18:44	WG2155879
tert-Butylbenzene	98-06-6	0.500	U	0.127	0.500	1.00	1	10/22/2023 18:44	WG2155879
Carbon tetrachloride	56-23-5	0.500	U	0.128	0.500	1.00	1	10/22/2023 18:44	WG2155879
Chlorobenzene	108-90-7	0.500	U	0.116	0.500	1.00	1	10/22/2023 18:44	WG2155879
Chlorodibromomethane	124-48-1	0.500	U	0.140	0.500	1.00	1	10/22/2023 18:44	WG2155879
Chloroethane	75-00-3	2.00	U	0.192	2.00	5.00	1	10/22/2023 18:44	WG2155879
2-Chloroethyl vinyl ether	110-75-8	25.0	U	0.575	25.0	50.0	1	10/22/2023 18:44	WG2155879
Chloroform	67-66-3	2.00	U	0.111	2.00	5.00	1	10/22/2023 18:44	WG2155879
Chloromethane	74-87-3	2.00	U	0.960	2.00	4.00	1	10/22/2023 18:44	WG2155879
2-Chlorotoluene	95-49-8	0.500	U	0.106	0.500	1.00	1	10/22/2023 18:44	WG2155879
4-Chlorotoluene	106-43-4	0.500	U	0.114	0.500	1.00	1	10/22/2023 18:44	WG2155879
1,2-Dibromoethane	106-93-4	0.500	U	0.126	0.500	1.00	1	10/22/2023 18:44	WG2155879
1,2-Dibromo-3-Chloropropane	96-12-8	2.00	U	0.276	2.00	5.00	1	10/22/2023 18:44	WG2155879
Dibromomethane	74-95-3	0.500	U	0.122	0.500	1.00	1	10/22/2023 18:44	WG2155879
1,2-Dichlorobenzene	95-50-1	0.500	U	0.107	0.500	1.00	1	10/22/2023 18:44	WG2155879
1,3-Dichlorobenzene	541-73-1	0.500	U	0.110	0.500	1.00	1	10/22/2023 18:44	WG2155879
1,4-Dichlorobenzene	106-46-7	0.500	U	0.120	0.500	1.00	1	10/22/2023 18:44	WG2155879
Dichlorodifluoromethane	75-71-8	2.00	U	0.374	2.00	5.00	1	10/22/2023 18:44	WG2155879
1,1-Dichloroethane	75-34-3	0.500	U	0.100	0.500	1.00	1	10/22/2023 18:44	WG2155879
1,2-Dichloroethane	107-06-2	0.500	U	0.0819	0.500	1.00	1	10/22/2023 18:44	WG2155879
1,1-Dichloroethene	75-35-4	0.500	U	0.188	0.500	1.00	1	10/22/2023 18:44	WG2155879
cis-1,2-Dichloroethene	156-59-2	0.500	U	0.126	0.500	1.00	1	10/22/2023 18:44	WG2155879
trans-1,2-Dichloroethene	156-60-5	0.500	U	0.149	0.500	1.00	1	10/22/2023 18:44	WG2155879
1,2-Dichloropropane	78-87-5	0.500	U	0.149	0.500	1.00	1	10/22/2023 18:44	WG2155879
1,3-Dichloropropane	142-28-9	0.500	U	0.110	0.500	1.00	1	10/22/2023 18:44	WG2155879
2,2-Dichloropropane	594-20-7	0.500	U	0.161	0.500	1.00	1	10/29/2023 21:30	WG2225492
1,1-Dichloropropene	563-58-6	0.500	U	0.142	0.500	1.00	1	10/22/2023 18:44	WG2155879
cis-1,3-Dichloropropene	10061-01-5	0.500	U	0.111	0.500	1.00	1	10/22/2023 18:44	WG2155879
trans-1,3-Dichloropropene	10061-02-6	0.500	U	0.118	0.500	1.00	1	10/22/2023 18:44	WG2155879
Di-isopropyl ether	108-20-3	0.500	U	0.105	0.500	1.00	1	10/22/2023 18:44	WG2155879
Ethylbenzene	100-41-4	0.500	U	0.137	0.500	1.00	1	10/22/2023 18:44	WG2155879
Hexachloro-1,3-butadiene	87-68-3	0.750	U	0.337	0.750	1.50	1	10/29/2023 21:30	WG2225492
Isopropylbenzene	98-82-8	0.500	U	0.105	0.500	1.00	1	10/22/2023 18:44	WG2155879
p-Isopropyltoluene	99-87-6	0.500	U	0.120	0.500	1.00	1	10/22/2023 18:44	WG2155879
2-Butanone (MEK)	78-93-3	5.00	U	1.19	5.00	10.0	1	10/22/2023 18:44	WG2155879
Methylene Chloride	75-09-2	2.00	U	0.430	2.00	5.00	1	10/22/2023 18:44	WG2155879
4-Methyl-2-pentanone (MIBK)	108-10-1	5.00	U	0.478	5.00	10.0	1	10/22/2023 18:44	WG2155879

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Methyl tert-butyl ether	1634-04-4	0.500	U	0.101	0.500	1.00	1	10/22/2023 18:44	WG2155879
Naphthalene	91-20-3	2.00	U	1.00	2.00	5.00	1	10/22/2023 18:44	WG2155879
n-Propylbenzene	103-65-1	0.500	U	0.0993	0.500	1.00	1	10/22/2023 18:44	WG2155879
Styrene	100-42-5	0.500	U	0.118	0.500	1.00	1	10/22/2023 18:44	WG2155879
1,1,1,2-Tetrachloroethane	630-20-6	0.500	U	0.147	0.500	1.00	1	10/22/2023 18:44	WG2155879
1,1,2,2-Tetrachloroethane	79-34-5	0.500	U	0.133	0.500	1.00	1	10/22/2023 18:44	WG2155879
Tetrachloroethene	127-18-4	0.600	U	0.300	0.600	1.20	1	10/22/2023 18:44	WG2155879
Toluene	108-88-3	0.600	U	0.278	0.600	1.20	1	10/22/2023 18:44	WG2155879
1,2,3-Trichlorobenzene	87-61-6	0.500	U	0.230	0.500	1.00	1	10/22/2023 18:44	WG2155879
1,2,4-Trichlorobenzene	120-82-1	1.00	U	0.481	1.00	2.00	1	10/22/2023 18:44	WG2155879
1,2,3-Trimethylbenzene	526-73-8	0.500	U	0.104	0.500	1.00	1	10/22/2023 18:44	WG2155879
1,2,4-Trimethylbenzene	95-63-6	1.00	U	0.322	1.00	2.00	1	10/22/2023 18:44	WG2155879
1,3,5-Trimethylbenzene	108-67-8	0.500	U	0.104	0.500	1.00	1	10/22/2023 18:44	WG2155879
1,1,1-Trichloroethane	71-55-6	0.500	U	0.149	0.500	1.00	1	10/22/2023 18:44	WG2155879
1,1,2-Trichloroethane	79-00-5	0.500	U	0.158	0.500	1.00	1	10/22/2023 18:44	WG2155879
Trichloroethene	79-01-6	0.500	U	0.190	0.500	1.00	1	10/22/2023 18:44	WG2155879
Trichlorofluoromethane	75-69-4	2.00	U	0.160	2.00	5.00	1	10/22/2023 18:44	WG2155879
1,1,2-Trichlorotrifluoroethane	76-13-1	0.500	U	0.180	0.500	1.00	1	10/22/2023 18:44	WG2155879
1,2,3-Trichloropropane	96-18-4	1.00	U	0.237	1.00	2.50	1	10/22/2023 18:44	WG2155879
Vinyl chloride	75-01-4	0.500	U	0.234	0.500	1.00	1	10/22/2023 18:44	WG2155879
Xylenes, Total	1330-20-7	1.50	U	0.174	1.50	3.00	1	10/22/2023 18:44	WG2155879
(S) Toluene-d8	*2037-26-5*	*103*				*89.0-112*		*10/22/2023 18:44*	WG2155879
(S) Toluene-d8	*2037-26-5*	*106*				*89.0-112*		*10/29/2023 21:30*	WG2225492
(S) 4-Bromofluorobenzene	*460-00-4*	*94.8*				*85.0-114*		*10/22/2023 18:44*	WG2155879
(S) 4-Bromofluorobenzene	*460-00-4*	*97.2*				*85.0-114*		*10/29/2023 21:30*	WG2225492
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*104*				*81.0-118*		*10/22/2023 18:44*	WG2155879
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*101*				*81.0-118*		*10/29/2023 21:30*	WG2225492

Semi-Volatile Organic Compounds (GC) by Method AK102

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
AK102 DRO C10-C25	C10-C25	347	B J	170	400	800	1	10/28/2023 07:44	WG2159044
(S) o-Terphenyl	*84-15-1*	*57.8*				*50.0-150*		*10/28/2023 07:44*	WG2159044

Additional Information - Results for field analyses are not accredited to ISO 17025

Analyte	Result	Units
Cooler#	yellow	
Cooler Temperature	2.2	Deg. C

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Acetone	67-64-1	0.596	J	0.548	2.00	4.00	1	10/29/2023 20:14	WG2159657
Acrylonitrile	107-13-1	0.250	U	0.0760	0.250	0.500	1	10/29/2023 20:14	WG2159657
Benzene	71-43-2	0.0500	U	0.0160	0.0500	0.100	1	10/29/2023 20:14	WG2159657
Bromobenzene	108-86-1	0.250	U	0.0420	0.250	0.500	1	10/29/2023 20:14	WG2159657
Bromodichloromethane	75-27-4	0.100	U	0.0315	0.100	0.200	1	10/29/2023 20:14	WG2159657
Bromochloromethane	74-97-5	0.100	U	0.0452	0.100	0.200	1	10/29/2023 20:14	WG2159657
Bromoform	75-25-2	0.500	U	0.239	0.500	1.00	1	10/29/2023 20:14	WG2159657
Bromomethane	74-83-9	0.500	U	0.148	0.500	1.00	1	10/29/2023 20:14	WG2159657
n-Butylbenzene	104-51-8	0.500	U	0.154	0.500	1.00	1	10/29/2023 20:14	WG2159657
sec-Butylbenzene	135-98-8	0.250	U	0.101	0.250	0.500	1	10/29/2023 20:14	WG2159657
tert-Butylbenzene	98-06-6	0.500	U	0.0620	0.500	1.00	1	10/29/2023 20:14	WG2159657
Carbon tetrachloride	56-23-5	0.100	U	0.0432	0.100	0.200	1	10/29/2023 20:14	WG2159657
Carbon disulfide	75-15-0	0.500	U	0.162	0.500	1.00	1	10/29/2023 20:14	WG2159657
Chlorobenzene	108-90-7	0.0500	U	0.0229	0.0500	0.100	1	10/29/2023 20:14	WG2159657
Chlorodibromomethane	124-48-1	0.0500	U	0.0180	0.0500	0.100	1	10/29/2023 20:14	WG2159657
Chloroethane	75-00-3	0.100	U	0.0432	0.100	0.200	1	10/29/2023 20:14	WG2159657
Chloroform	67-66-3	0.0500	U	0.0166	0.0500	0.100	1	10/29/2023 20:14	WG2159657
Chloromethane	74-87-3	0.250	U	0.0556	0.250	0.500	1	10/29/2023 20:14	WG2159657
Cyclohexane	110-82-7	0.0500	U	0.0203	0.0500	0.100	1	10/29/2023 20:14	WG2159657
2-Chlorotoluene	95-49-8	0.100	U	0.0368	0.100	0.200	1	10/29/2023 20:14	WG2159657
4-Chlorotoluene	106-43-4	0.100	U	0.0452	0.100	0.200	1	10/29/2023 20:14	WG2159657
1,2-Dibromo-3-Chloropropane	96-12-8	0.500	U	0.204	0.500	1.00	1	10/29/2023 20:14	WG2159657
1,2-Dibromoethane	106-93-4	0.0500	U	0.0210	0.0500	0.100	1	10/29/2023 20:14	WG2159657
Dibromomethane	74-95-3	0.100	U	0.0400	0.100	0.200	1	10/29/2023 20:14	WG2159657
1,2-Dichlorobenzene	95-50-1	0.200	U	0.0580	0.200	0.400	1	10/29/2023 20:14	WG2159657
1,3-Dichlorobenzene	541-73-1	0.200	U	0.0680	0.200	0.400	1	10/29/2023 20:14	WG2159657
1,4-Dichlorobenzene	106-46-7	0.250	U	0.0788	0.250	0.500	1	10/29/2023 20:14	WG2159657
Dichlorodifluoromethane	75-71-8	0.100	C6 U	0.0327	0.100	0.200	1	10/29/2023 20:14	WG2159657
1,1-Dichloroethane	75-34-3	0.0500	U	0.0230	0.0500	0.100	1	10/29/2023 20:14	WG2159657
1,2-Dichloroethane	107-06-2	0.0500	U	0.0190	0.0500	0.100	1	10/29/2023 20:14	WG2159657
1,1-Dichloroethene	75-35-4	0.0500	U	0.0200	0.0500	0.100	1	10/29/2023 20:14	WG2159657
cis-1,2-Dichloroethene	156-59-2	0.0750	U	0.0276	0.0750	0.150	1	10/29/2023 20:14	WG2159657
trans-1,2-Dichloroethene	156-60-5	0.300	U	0.0572	0.300	0.600	1	10/29/2023 20:14	WG2159657
1,2-Dichloropropane	78-87-5	0.200	U	0.0508	0.200	0.400	1	10/29/2023 20:14	WG2159657
1,1-Dichloropropene	563-58-6	0.100	U	0.0280	0.100	0.200	1	10/29/2023 20:14	WG2159657
1,3-Dichloropropane	142-28-9	0.150	U	0.0700	0.150	0.300	1	10/29/2023 20:14	WG2159657
cis-1,3-Dichloropropene	10061-01-5	0.100	U	0.0271	0.100	0.200	1	10/29/2023 20:14	WG2159657
trans-1,3-Dichloropropene	10061-02-6	0.150	U	0.0612	0.150	0.300	1	10/29/2023 20:14	WG2159657
2,2-Dichloropropane	594-20-7	0.100	U	0.0317	0.100	0.200	1	10/29/2023 20:14	WG2159657
Di-isopropyl ether	108-20-3	0.0500	U	0.0140	0.0500	0.100	1	10/29/2023 20:14	WG2159657
Ethylbenzene	100-41-4	0.0500	U	0.0212	0.0500	0.100	1	10/29/2023 20:14	WG2159657
Hexachloro-1,3-butadiene	87-68-3	2.00	U	0.508	2.00	4.00	1	10/29/2023 20:14	WG2159657
Isopropylbenzene	98-82-8	1.00	U	0.0345	1.00	2.00	1	10/29/2023 20:14	WG2159657
p-Isopropyltoluene	99-87-6	0.300	U	0.0932	0.300	0.600	1	10/29/2023 20:14	WG2159657
2-Butanone (MEK)	78-93-3	1.00	U	0.500	1.00	2.00	1	10/29/2023 20:14	WG2159657
Methylene Chloride	75-09-2	0.750	U	0.266	0.750	1.50	1	10/29/2023 20:14	WG2159657
4-Methyl-2-pentanone (MIBK)	108-10-1	1.00	U	0.400	1.00	2.00	1	10/29/2023 20:14	WG2159657
Methyl tert-butyl ether	1634-04-4	0.0300	U	0.0118	0.0300	0.0600	1	10/29/2023 20:14	WG2159657
Naphthalene	91-20-3	0.250	C4 U	0.125	0.250	0.500	1	10/29/2023 20:14	WG2159657

Volatile Organic Compounds (GC/MS) by Method 8260 D-LL

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
n-Propylbenzene	103-65-1	0.100	U	0.0472	0.100	0.200	1	10/29/2023 20:14	WG2159657
Styrene	100-42-5	0.250	U	0.109	0.250	0.500	1	10/29/2023 20:14	WG2159657
1,1,1,2-Tetrachloroethane	630-20-6	0.0500	U	0.0200	0.0500	0.100	1	10/29/2023 20:14	WG2159657
1,1,2,2-Tetrachloroethane	79-34-5	0.0500	U	0.0156	0.0500	0.100	1	10/29/2023 20:14	WG2159657
1,1,2-Trichlorotrifluoroethane	76-13-1	0.100	U	0.0270	0.100	0.200	1	10/29/2023 20:14	WG2159657
Tetrachloroethene	127-18-4	0.0750	U	0.0280	0.0750	0.150	1	10/29/2023 20:14	WG2159657
Toluene	108-88-3	0.100	U	0.0500	0.100	0.200	1	10/29/2023 20:14	WG2159657
1,2,3-Trichlorobenzene	87-61-6	0.250	C4 U	0.0250	0.250	0.500	1	10/29/2023 20:14	WG2159657
1,2,4-Trichlorobenzene	120-82-1	0.500	U	0.193	0.500	1.00	1	10/29/2023 20:14	WG2159657
1,1,1-Trichloroethane	71-55-6	0.0500	U	0.0110	0.0500	0.100	1	10/29/2023 20:14	WG2159657
1,1,2-Trichloroethane	79-00-5	0.100	U	0.0353	0.100	0.200	1	10/29/2023 20:14	WG2159657
Trichloroethene	79-01-6	0.0400	U	0.0160	0.0400	0.0800	1	10/29/2023 20:14	WG2159657
Trichlorofluoromethane	75-69-4	0.0500	U	0.0200	0.0500	0.100	1	10/29/2023 20:14	WG2159657
1,2,3-Trichloropropane	96-18-4	0.500	U	0.204	0.500	1.00	1	10/29/2023 20:14	WG2159657
1,2,4-Trimethylbenzene	95-63-6	0.100	U	0.0464	0.100	0.200	1	10/29/2023 20:14	WG2159657
1,2,3-Trimethylbenzene	526-73-8	0.100	U	0.0460	0.100	0.200	1	10/29/2023 20:14	WG2159657
1,3,5-Trimethylbenzene	108-67-8	0.100	U	0.0432	0.100	0.200	1	10/29/2023 20:14	WG2159657
Vinyl chloride	75-01-4	0.0750	U	0.0273	0.0750	0.150	1	10/29/2023 20:14	WG2159657
Vinyl acetate	108-05-4	0.300	U	0.141	0.300	0.600	1	10/29/2023 20:14	WG2159657
Xylenes, Total	1330-20-7	0.400	U	0.191	0.400	0.800	1	10/29/2023 20:14	WG2159657
Ethyl Ether	60-29-7	0.0500	U	0.0170	0.0500	0.100	1	10/29/2023 20:14	WG2159657
Tetrahydrofuran	109-99-9	0.250	U	0.0900	0.250	50.0	1	10/29/2023 20:14	WG2159657
Iodomethane	74-88-4	0.500	U	0.242	0.500	1.00	1	10/29/2023 20:14	WG2159657
Allyl chloride	107-05-1	2.00	U	0.580	2.00	4.00	1	10/29/2023 20:14	WG2159657
trans-1,4-Dichloro-2-butene	110-57-6	0.200	C4 U	0.0560	0.200	0.400	1	10/29/2023 20:14	WG2159657
(S) Toluene-d8	*2037-26-5*	*105*				*89.0-112*		*10/29/2023 20:14*	WG2159657
(S) 4-Bromofluorobenzene	*460-00-4*	*100*				*85.0-114*		*10/29/2023 20:14*	WG2159657
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*104*				*81.0-118*		*10/29/2023 20:14*	WG2159657

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
Acetone	67-64-1	25.0	U	11.3	25.0	50.0	1	10/22/2023 13:16	WG2155879
Acrolein	107-02-8	25.0	U	2.54	25.0	50.0	1	10/22/2023 13:16	WG2155879
Acrylonitrile	107-13-1	5.00	U	0.671	5.00	10.0	1	10/22/2023 13:16	WG2155879
Benzene	71-43-2	0.500	U	0.0941	0.500	1.00	1	10/22/2023 13:16	WG2155879
Bromobenzene	108-86-1	0.500	U	0.118	0.500	1.00	1	10/22/2023 13:16	WG2155879
Bromodichloromethane	75-27-4	0.500	U	0.136	0.500	1.00	1	10/22/2023 13:16	WG2155879
Bromoform	75-25-2	0.500	U	0.129	0.500	1.00	1	10/22/2023 13:16	WG2155879
Bromomethane	74-83-9	2.00	U	0.605	2.00	5.00	1	10/22/2023 13:16	WG2155879
n-Butylbenzene	104-51-8	0.500	U	0.157	0.500	1.00	1	10/22/2023 13:16	WG2155879
sec-Butylbenzene	135-98-8	0.500	U	0.125	0.500	1.00	1	10/22/2023 13:16	WG2155879
tert-Butylbenzene	98-06-6	0.500	U	0.127	0.500	1.00	1	10/22/2023 13:16	WG2155879
Carbon tetrachloride	56-23-5	0.500	U	0.128	0.500	1.00	1	10/22/2023 13:16	WG2155879
Chlorobenzene	108-90-7	0.500	U	0.116	0.500	1.00	1	10/22/2023 13:16	WG2155879
Chlorodibromomethane	124-48-1	0.500	U	0.140	0.500	1.00	1	10/22/2023 13:16	WG2155879
Chloroethane	75-00-3	2.00	U	0.192	2.00	5.00	1	10/22/2023 13:16	WG2155879
2-Chloroethyl vinyl ether	110-75-8	25.0	U	0.575	25.0	50.0	1	10/22/2023 13:16	WG2155879
Chloroform	67-66-3	2.00	U	0.111	2.00	5.00	1	10/22/2023 13:16	WG2155879
Chloromethane	74-87-3	2.00	U	0.960	2.00	4.00	1	10/22/2023 13:16	WG2155879
2-Chlorotoluene	95-49-8	0.500	U	0.106	0.500	1.00	1	10/22/2023 13:16	WG2155879
4-Chlorotoluene	106-43-4	0.500	U	0.114	0.500	1.00	1	10/22/2023 13:16	WG2155879
1,2-Dibromoethane	106-93-4	0.500	U	0.126	0.500	1.00	1	10/22/2023 13:16	WG2155879
1,2-Dibromo-3-Chloropropane	96-12-8	2.00	U	0.276	2.00	5.00	1	10/22/2023 13:16	WG2155879
Dibromomethane	74-95-3	0.500	U	0.122	0.500	1.00	1	10/22/2023 13:16	WG2155879
1,2-Dichlorobenzene	95-50-1	0.500	U	0.107	0.500	1.00	1	10/22/2023 13:16	WG2155879

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

Analyte	CAS #	Result ug/l	Qualifier	DL ug/l	LOD ug/l	LOQ ug/l	Dilution	Analysis date / time	Batch
1,3-Dichlorobenzene	541-73-1	0.500	U	0.110	0.500	1.00	1	10/22/2023 13:16	WG2155879
1,4-Dichlorobenzene	106-46-7	0.500	U	0.120	0.500	1.00	1	10/22/2023 13:16	WG2155879
Dichlorodifluoromethane	75-71-8	2.00	U	0.374	2.00	5.00	1	10/22/2023 13:16	WG2155879
1,1-Dichloroethane	75-34-3	0.500	U	0.100	0.500	1.00	1	10/22/2023 13:16	WG2155879
1,2-Dichloroethane	107-06-2	0.500	U	0.0819	0.500	1.00	1	10/22/2023 13:16	WG2155879
1,1-Dichloroethene	75-35-4	0.500	U	0.188	0.500	1.00	1	10/22/2023 13:16	WG2155879
cis-1,2-Dichloroethene	156-59-2	0.500	U	0.126	0.500	1.00	1	10/22/2023 13:16	WG2155879
trans-1,2-Dichloroethene	156-60-5	0.500	U	0.149	0.500	1.00	1	10/22/2023 13:16	WG2155879
1,2-Dichloropropane	78-87-5	0.500	U	0.149	0.500	1.00	1	10/22/2023 13:16	WG2155879
1,3-Dichloropropane	142-28-9	0.500	U	0.110	0.500	1.00	1	10/22/2023 13:16	WG2155879
2,2-Dichloropropane	594-20-7	0.500	U	0.161	0.500	1.00	1	10/29/2023 20:14	WG2225492
1,1-Dichloropropene	563-58-6	0.500	U	0.142	0.500	1.00	1	10/22/2023 13:16	WG2155879
cis-1,3-Dichloropropene	10061-01-5	0.500	U	0.111	0.500	1.00	1	10/22/2023 13:16	WG2155879
trans-1,3-Dichloropropene	10061-02-6	0.500	U	0.118	0.500	1.00	1	10/22/2023 13:16	WG2155879
Di-isopropyl ether	108-20-3	0.500	U	0.105	0.500	1.00	1	10/22/2023 13:16	WG2155879
Ethylbenzene	100-41-4	0.500	U	0.137	0.500	1.00	1	10/22/2023 13:16	WG2155879
Hexachloro-1,3-butadiene	87-68-3	0.750	U	0.337	0.750	1.50	1	10/29/2023 20:14	WG2225492
Isopropylbenzene	98-82-8	0.500	U	0.105	0.500	1.00	1	10/22/2023 13:16	WG2155879
p-Isopropyltoluene	99-87-6	0.500	U	0.120	0.500	1.00	1	10/22/2023 13:16	WG2155879
2-Butanone (MEK)	78-93-3	5.00	U	1.19	5.00	10.0	1	10/22/2023 13:16	WG2155879
Methylene Chloride	75-09-2	2.00	U	0.430	2.00	5.00	1	10/22/2023 13:16	WG2155879
4-Methyl-2-pentanone (MIBK)	108-10-1	5.00	U	0.478	5.00	10.0	1	10/22/2023 13:16	WG2155879
Methyl tert-butyl ether	1634-04-4	0.500	U	0.101	0.500	1.00	1	10/22/2023 13:16	WG2155879
Naphthalene	91-20-3	2.00	U	1.00	2.00	5.00	1	10/22/2023 13:16	WG2155879
n-Propylbenzene	103-65-1	0.500	U	0.0993	0.500	1.00	1	10/22/2023 13:16	WG2155879
Styrene	100-42-5	0.500	U	0.118	0.500	1.00	1	10/22/2023 13:16	WG2155879
1,1,1,2-Tetrachloroethane	630-20-6	0.500	U	0.147	0.500	1.00	1	10/22/2023 13:16	WG2155879
1,1,2,2-Tetrachloroethane	79-34-5	0.500	U	0.133	0.500	1.00	1	10/22/2023 13:16	WG2155879
Tetrachloroethene	127-18-4	0.600	U	0.300	0.600	1.20	1	10/22/2023 13:16	WG2155879
Toluene	108-88-3	0.600	U	0.278	0.600	1.20	1	10/22/2023 13:16	WG2155879
1,2,3-Trichlorobenzene	87-61-6	0.500	U	0.230	0.500	1.00	1	10/22/2023 13:16	WG2155879
1,2,4-Trichlorobenzene	120-82-1	1.00	U	0.481	1.00	2.00	1	10/22/2023 13:16	WG2155879
1,2,3-Trimethylbenzene	526-73-8	0.500	U	0.104	0.500	1.00	1	10/22/2023 13:16	WG2155879
1,2,4-Trimethylbenzene	95-63-6	1.00	U	0.322	1.00	2.00	1	10/22/2023 13:16	WG2155879
1,3,5-Trimethylbenzene	108-67-8	0.500	U	0.104	0.500	1.00	1	10/22/2023 13:16	WG2155879
1,1,1-Trichloroethane	71-55-6	0.500	U	0.149	0.500	1.00	1	10/29/2023 20:14	WG2225492
1,1,2-Trichloroethane	79-00-5	0.500	U	0.158	0.500	1.00	1	10/22/2023 13:16	WG2155879
Trichloroethene	79-01-6	0.500	U	0.190	0.500	1.00	1	10/22/2023 13:16	WG2155879
Trichlorofluoromethane	75-69-4	2.00	U	0.160	2.00	5.00	1	10/22/2023 13:16	WG2155879
1,1,2-Trichlorotrifluoroethane	76-13-1	0.500	U	0.180	0.500	1.00	1	10/22/2023 13:16	WG2155879
1,2,3-Trichloropropane	96-18-4	1.00	U	0.237	1.00	2.50	1	10/22/2023 13:16	WG2155879
Vinyl chloride	75-01-4	0.500	U	0.234	0.500	1.00	1	10/22/2023 13:16	WG2155879
Xylenes, Total	1330-20-7	1.50	U	0.174	1.50	3.00	1	10/22/2023 13:16	WG2155879
(S) Toluene-d8	*2037-26-5*	*104*				*89.0-112*		*10/22/2023 13:16*	WG2155879
(S) Toluene-d8	*2037-26-5*	*105*				*89.0-112*		*10/29/2023 20:14*	WG2225492
(S) 4-Bromofluorobenzene	*460-00-4*	*93.2*				*85.0-114*		*10/22/2023 13:16*	WG2155879
(S) 4-Bromofluorobenzene	*460-00-4*	*100*				*85.0-114*		*10/29/2023 20:14*	WG2225492
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*106*				*81.0-118*		*10/22/2023 13:16*	WG2155879
(S) 1,2-Dichloroethane-d4	*17060-07-0*	*104*				*81.0-118*		*10/29/2023 20:14*	WG2225492

Method Blank (MB)

(MB) R3991001-2 10/25/23 11:53

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Alkalinity	10000	U	8450	10000	20000
Alkalinity,Bicarbonate	10000	U	8450	10000	20000
Alkalinity,Carbonate	10000	U	8450	10000	20000
Alkalinity,Hydroxide	10000	U	8450	10000	20000

Sample Narrative:

BLANK: Endpoint pH 4.5

L1667877-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1667877-04 10/25/23 12:03 • (DUP) R3991001-3 10/25/23 12:07

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	196000	196000	1	0.102		20
Alkalinity,Bicarbonate	196000	196000	1	0.102		20
Alkalinity,Carbonate	10000	10000	1	0.000	U	20
Alkalinity,Hydroxide	10000	10000	1	0.000	U	20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

L1668214-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1668214-01 10/25/23 14:09 • (DUP) R3991001-4 10/25/23 14:14

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity	204000	204000	1	0.0924		20
Alkalinity,Bicarbonate	204000	204000	1	0.0924		20
Alkalinity,Carbonate	10000	10000	1	0.000	U	20
Alkalinity,Hydroxide	10000	10000	1	0.000	U	20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

Laboratory Control Sample (LCS)

(LCS) R3991001-1 10/25/23 11:49

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Alkalinity	100000	97800	97.8	85.0-115	

Sample Narrative:

LCS: Endpoint pH 4.5

Method Blank (MB)

(MB) R3990627-1 10/24/23 20:12

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Kjeldahl Nitrogen, TKN	300	U	140	300	600

L1667969-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1667969-01 10/24/23 20:27 • (DUP) R3990627-3 10/24/23 20:29

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Kjeldahl Nitrogen, TKN	6450	6290	1	2.51		20

L1668034-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1668034-01 10/24/23 20:55 • (DUP) R3990627-5 10/24/23 20:34

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Kjeldahl Nitrogen, TKN	1520	1750	1	14.1		20

Laboratory Control Sample (LCS)

(LCS) R3990627-2 10/24/23 20:13

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Kjeldahl Nitrogen, TKN	12000	11900	99.6	90.0-110	

L1667969-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1667969-01 10/24/23 20:27 • (MS) R3990627-4 10/24/23 20:30

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Kjeldahl Nitrogen, TKN	5000	6450	10500	81.0	1	90.0-110	J6

Sample Narrative:

MS: Spike failure due to matrix interference

L1668034-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1668034-01 10/24/23 20:55 • (MS) R3990627-6 10/24/23 20:35 • (MSD) R3990627-7 10/24/23 20:36

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Kjeldahl Nitrogen, TKN	5000	1520	6710	6670	104	103	1	90.0-110			0.598	20

Method Blank (MB)

(MB) R3989208-1 10/20/23 20:30

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Nitrate-Nitrite	100	U	50.0	100	200

L1667440-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1667440-01 10/20/23 20:37 • (DUP) R3989208-3 10/20/23 20:38

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Nitrate-Nitrite	2010	2010	1	0.000		20

L1667791-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1667791-03 10/20/23 20:56 • (DUP) R3989208-5 10/20/23 20:57

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Nitrate-Nitrite	100	100	1	0.000	U	20

Laboratory Control Sample (LCS)

(LCS) R3989208-2 10/20/23 20:32

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Nitrate-Nitrite	2500	2540	102	90.0-110	

L1667440-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1667440-01 10/20/23 20:37 • (MS) R3989208-4 10/20/23 20:39

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Nitrate-Nitrite	2500	2010	4500	99.6	1	90.0-110	

L1667791-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667791-03 10/20/23 20:56 • (MS) R3989208-6 10/20/23 21:02 • (MSD) R3989208-7 10/20/23 21:03

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Nitrate-Nitrite	2500	100	2640	2560	106	102	1	90.0-110			3.08	20

Method Blank (MB)

(MB) R3992984-1 10/27/23 09:03

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Sulfate	2500	U	594	2500	5000

L1667823-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1667823-01 10/27/23 12:41 • (DUP) R3992984-3 10/27/23 12:54

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	2530	2530	1	0.0197	J	15

L1667912-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1667912-05 10/27/23 17:59 • (DUP) R3992984-6 10/27/23 18:12

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Sulfate	3800	3910	1	2.75	J	15

Laboratory Control Sample (LCS)

(LCS) R3992984-2 10/27/23 09:16

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sulfate	40000	38400	95.9	87.0-112	

L1667823-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667823-01 10/27/23 12:41 • (MS) R3992984-4 10/27/23 13:06 • (MSD) R3992984-5 10/27/23 13:19

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Sulfate	40000	2530	39300	39200	91.9	91.7	1	87.0-112			0.175	15

L1667912-05 Original Sample (OS) • Matrix Spike (MS)

(OS) L1667912-05 10/27/23 17:59 • (MS) R3992984-7 10/27/23 18:25

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Sulfate	40000	3800	41100	93.3	1	87.0-112	

Method Blank (MB)

(MB) R3990108-1 10/23/23 22:22

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Iron	50.0	U	20.5	50.0	100
Manganese	5.00	U	0.855	5.00	10.0

Laboratory Control Sample (LCS)

(LCS) R3990108-2 10/23/23 22:25

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Iron	10000	10000	100	87.0-115	
Manganese	1000	989	98.9	90.0-114	

L1667832-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667832-03 10/23/23 22:27 • (MS) R3990108-4 10/23/23 22:33 • (MSD) R3990108-5 10/23/23 22:35

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Iron	10000	37600	47500	47200	98.7	95.9	1	87.0-115			0.589	20
Manganese	1000	1990	2920	2910	92.6	91.3	1	90.0-114			0.448	20

Method Blank (MB)

(MB) R3990575-3 10/22/23 01:57

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Acetone	2.00	U	0.548	2.00	4.00
Acrylonitrile	0.250	U	0.0760	0.250	0.500
Benzene	0.0500	U	0.0160	0.0500	0.100
Bromobenzene	0.250	U	0.0420	0.250	0.500
Bromodichloromethane	0.100	U	0.0315	0.100	0.200
Bromochloromethane	0.100	U	0.0452	0.100	0.200
Bromoform	0.500	U	0.239	0.500	1.00
Bromomethane	0.500	U	0.148	0.500	1.00
n-Butylbenzene	0.500	U	0.154	0.500	1.00
sec-Butylbenzene	0.250	U	0.101	0.250	0.500
tert-Butylbenzene	0.500	U	0.0620	0.500	1.00
Carbon tetrachloride	0.100	U	0.0432	0.100	0.200
Carbon disulfide	0.500	U	0.162	0.500	1.00
Chlorobenzene	0.0500	U	0.0229	0.0500	0.100
Chlorodibromomethane	0.0500	U	0.0180	0.0500	0.100
Chloroethane	0.100	U	0.0432	0.100	0.200
Chloroform	0.0500	U	0.0166	0.0500	0.100
Chloromethane	0.250	U	0.0556	0.250	0.500
Cyclohexane	0.0500	U	0.0203	0.0500	0.100
2-Chlorotoluene	0.100	U	0.0368	0.100	0.200
4-Chlorotoluene	0.100	U	0.0452	0.100	0.200
1,2-Dibromo-3-Chloropropane	0.500	U	0.204	0.500	1.00
1,2-Dibromoethane	0.0500	U	0.0210	0.0500	0.100
Dibromomethane	0.100	U	0.0400	0.100	0.200
1,2-Dichlorobenzene	0.200	U	0.0580	0.200	0.400
1,3-Dichlorobenzene	0.200	U	0.0680	0.200	0.400
1,4-Dichlorobenzene	0.250	U	0.0788	0.250	0.500
Dichlorodifluoromethane	0.100	U	0.0327	0.100	0.200
1,1-Dichloroethane	0.0500	U	0.0230	0.0500	0.100
1,2-Dichloroethane	0.0500	U	0.0190	0.0500	0.100
1,1-Dichloroethene	0.0500	U	0.0200	0.0500	0.100
cis-1,2-Dichloroethene	0.0750	U	0.0276	0.0750	0.150
trans-1,2-Dichloroethene	0.300	U	0.0572	0.300	0.600
1,2-Dichloropropane	0.200	U	0.0508	0.200	0.400
1,1-Dichloropropene	0.100	U	0.0280	0.100	0.200
1,3-Dichloropropane	0.150	U	0.0700	0.150	0.300
cis-1,3-Dichloropropene	0.100	U	0.0271	0.100	0.200
trans-1,3-Dichloropropene	0.150	U	0.0612	0.150	0.300
2,2-Dichloropropane	0.100	U	0.0317	0.100	0.200
Di-isopropyl ether	0.0500	U	0.0140	0.0500	0.100

Method Blank (MB)

(MB) R3990575-3 10/22/23 01:57

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Ethylbenzene	0.0500	U	0.0212	0.0500	0.100
Hexachloro-1,3-butadiene	2.00	U	0.508	2.00	4.00
Isopropylbenzene	1.00	U	0.0345	1.00	2.00
p-Isopropyltoluene	0.300	U	0.0932	0.300	0.600
2-Butanone (MEK)	1.00	U	0.500	1.00	2.00
Methylene Chloride	0.750	U	0.266	0.750	1.50
4-Methyl-2-pentanone (MIBK)	1.00	U	0.400	1.00	2.00
Methyl tert-butyl ether	0.0300	U	0.0118	0.0300	0.0600
Naphthalene	0.250	U	0.125	0.250	0.500
n-Propylbenzene	0.100	U	0.0472	0.100	0.200
Styrene	0.250	U	0.109	0.250	0.500
1,1,1,2-Tetrachloroethane	0.0500	U	0.0200	0.0500	0.100
1,1,2,2-Tetrachloroethane	0.0500	U	0.0156	0.0500	0.100
1,1,2-Trichlorotrifluoroethane	0.100	U	0.0270	0.100	0.200
Tetrachloroethene	0.0750	U	0.0280	0.0750	0.150
Toluene	0.100	U	0.0500	0.100	0.200
1,2,3-Trichlorobenzene	0.250	U	0.0250	0.250	0.500
1,2,4-Trichlorobenzene	0.500	U	0.193	0.500	1.00
1,1,1-Trichloroethane	0.0500	U	0.0110	0.0500	0.100
1,1,2-Trichloroethane	0.100	U	0.0353	0.100	0.200
Trichloroethene	0.0400	U	0.0160	0.0400	0.0800
Trichlorofluoromethane	0.0500	U	0.0200	0.0500	0.100
1,2,3-Trichloropropane	0.500	U	0.204	0.500	1.00
1,2,4-Trimethylbenzene	0.100	U	0.0464	0.100	0.200
1,2,3-Trimethylbenzene	0.100	U	0.0460	0.100	0.200
1,3,5-Trimethylbenzene	0.100	U	0.0432	0.100	0.200
Vinyl chloride	0.0750	U	0.0273	0.0750	0.150
Xylenes, Total	0.400	U	0.191	0.400	0.800
Ethyl Ether	0.0500	U	0.0170	0.0500	0.100
Tetrahydrofuran	0.250	U	0.0900	0.250	50.0
Iodomethane	0.500	U	0.242	0.500	1.00
Allyl chloride	2.00	U	0.580	2.00	4.00
trans-1,4-Dichloro-2-butene	0.200	U	0.0560	0.200	0.400
(S) Toluene-d8	*103*				*89.0-112*
(S) 4-Bromofluorobenzene	*101*				*85.0-114*
(S) 1,2-Dichloroethane-d4	*94.4*				*81.0-118*

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

(LCS) R3990575-1 10/22/23 00:38 • (LCSD) R3990575-2 10/22/23 00:57

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	27.8	25.7	111	103	39.0-160			7.85	20
Acrylonitrile	25.0	28.5	25.9	114	104	63.0-135			9.56	20
Benzene	5.00	5.34	5.04	107	101	79.0-120			5.78	20
Bromobenzene	5.00	5.14	4.92	103	98.4	80.0-120			4.37	20
Bromodichloromethane	5.00	5.44	5.17	109	103	79.0-125			5.09	20
Bromochloromethane	5.00	5.62	5.39	112	108	78.0-123			4.18	20
Bromoform	5.00	4.88	4.47	97.6	89.4	66.0-130			8.77	20
Bromomethane	5.00	5.18	5.32	104	106	53.0-141			2.67	20
n-Butylbenzene	5.00	4.84	4.99	96.8	99.8	75.0-128			3.05	20
sec-Butylbenzene	5.00	5.86	5.47	117	109	77.0-126			6.88	20
tert-Butylbenzene	5.00	5.43	5.13	109	103	78.0-124			5.68	20
Carbon tetrachloride	5.00	6.04	5.80	121	116	72.0-136			4.05	20
Carbon disulfide	5.00	5.61	5.44	112	109	64.0-133			3.08	20
Chlorobenzene	5.00	5.18	5.08	104	102	82.0-118			1.95	20
Chlorodibromomethane	5.00	5.12	4.69	102	93.8	74.0-126			8.77	20
Chloroethane	5.00	5.12	4.71	102	94.2	60.0-138			8.34	20
Chloroform	5.00	5.42	5.37	108	107	79.0-124			0.927	20
Chloromethane	5.00	5.42	5.17	108	103	50.0-139			4.72	20
Cyclohexane	5.00	4.74	4.69	94.8	93.8	71.0-130			1.06	20
2-Chlorotoluene	5.00	5.21	4.80	104	96.0	79.0-122			8.19	20
4-Chlorotoluene	5.00	5.66	5.15	113	103	78.0-122			9.44	20
1,2-Dibromo-3-Chloropropane	5.00	4.77	4.63	95.4	92.6	62.0-128			2.98	20
1,2-Dibromoethane	5.00	5.00	5.00	100	100	77.0-121			0.000	20
Dibromomethane	5.00	5.15	4.88	103	97.6	79.0-123			5.38	20
1,2-Dichlorobenzene	5.00	5.21	5.02	104	100	80.0-119			3.71	20
1,3-Dichlorobenzene	5.00	5.52	5.36	110	107	80.0-119			2.94	20
1,4-Dichlorobenzene	5.00	5.15	4.90	103	98.0	79.0-118			4.98	20
Dichlorodifluoromethane	5.00	5.59	5.68	112	114	32.0-152			1.60	20
1,1-Dichloroethane	5.00	5.34	5.16	107	103	77.0-125			3.43	20
1,2-Dichloroethane	5.00	5.34	5.24	107	105	73.0-128			1.89	20
1,1-Dichloroethene	5.00	5.80	5.57	116	111	71.0-131			4.05	20
cis-1,2-Dichloroethene	5.00	5.68	5.34	114	107	78.0-123			6.17	20
trans-1,2-Dichloroethene	5.00	5.62	5.46	112	109	75.0-124			2.89	20
1,2-Dichloropropane	5.00	5.15	4.71	103	94.2	78.0-122			8.92	20
1,1-Dichloropropene	5.00	5.95	5.72	119	114	79.0-125			3.94	20
1,3-Dichloropropane	5.00	5.31	5.26	106	105	80.0-119			0.946	20
cis-1,3-Dichloropropene	5.00	5.59	5.31	112	106	75.0-124			5.14	20
trans-1,3-Dichloropropene	5.00	5.18	4.73	104	94.6	73.0-127			9.08	20
2,2-Dichloropropane	5.00	5.53	5.27	111	105	60.0-139			4.81	20
Di-isopropyl ether	5.00	5.52	5.31	110	106	67.0-128			3.88	20

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

(LCS) R3990575-1 10/22/23 00:38 • (LCSD) R3990575-2 10/22/23 00:57

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	5.00	5.40	5.19	108	104	79.0-121			3.97	20
Hexachloro-1,3-butadiene	5.00	5.70	5.23	114	105	66.0-134			8.60	20
Isopropylbenzene	5.00	5.50	5.33	110	107	72.0-131			3.14	20
p-Isopropyltoluene	5.00	5.42	5.40	108	108	77.0-127			0.370	20
2-Butanone (MEK)	25.0	20.7	19.8	82.8	79.2	56.0-143			4.44	20
Methylene Chloride	5.00	4.91	4.71	98.2	94.2	74.0-124			4.16	20
4-Methyl-2-pentanone (MIBK)	25.0	26.5	25.0	106	100	67.0-130			5.83	20
Methyl tert-butyl ether	5.00	5.09	4.80	102	96.0	71.0-124			5.86	20
Naphthalene	5.00	5.83	5.69	117	114	61.0-128			2.43	20
n-Propylbenzene	5.00	5.73	5.40	115	108	76.0-126			5.93	20
Styrene	5.00	5.47	5.20	109	104	78.0-123			5.06	20
1,1,1,2-Tetrachloroethane	5.00	5.08	4.72	102	94.4	78.0-124			7.35	20
1,1,2,2-Tetrachloroethane	5.00	5.10	4.80	102	96.0	71.0-121			6.06	20
1,1,2-Trichlorotrifluoroethane	5.00	5.29	4.99	106	99.8	70.0-136			5.84	20
Tetrachloroethene	5.00	5.72	5.50	114	110	74.0-129			3.92	20
Toluene	5.00	5.63	5.48	113	110	80.0-121			2.70	20
1,2,3-Trichlorobenzene	5.00	5.30	5.12	106	102	69.0-129			3.45	20
1,2,4-Trichlorobenzene	5.00	5.11	5.25	102	105	69.0-130			2.70	20
1,1,1-Trichloroethane	5.00	5.75	5.63	115	113	74.0-131			2.11	20
1,1,2-Trichloroethane	5.00	4.80	4.60	96.0	92.0	80.0-119			4.26	20
Trichloroethene	5.00	6.03	5.82	121	116	79.0-123			3.54	20
Trichlorofluoromethane	5.00	6.54	5.52	131	110	65.0-141			16.9	20
1,2,3-Trichloropropane	5.00	5.23	4.85	105	97.0	73.0-122			7.54	20
1,2,4-Trimethylbenzene	5.00	5.41	5.19	108	104	76.0-124			4.15	20
1,2,3-Trimethylbenzene	5.00	5.53	5.25	111	105	82.0-120			5.19	20
1,3,5-Trimethylbenzene	5.00	4.92	4.69	98.4	93.8	75.0-124			4.79	20
Vinyl chloride	5.00	5.82	5.80	116	116	58.0-137			0.344	20
Xylenes, Total	15.0	16.2	15.8	108	105	79.0-121			2.50	20
Ethyl Ether	5.00	4.80	4.60	96.0	92.0	64.0-137			4.26	20
Tetrahydrofuran	5.00	5.14	4.58	103	91.6	57.0-133			11.5	20
Iodomethane	25.0	28.0	27.5	112	110	69.0-131			1.80	20
Allyl chloride	25.0	27.1	26.8	108	107	68.0-130			1.11	20
trans-1,4-Dichloro-2-butene	5.00	3.76	4.02	75.2	80.4	43.0-140			6.68	20
(S) Toluene-d8				*102*	*101*	*89.0-112*				
(S) 4-Bromofluorobenzene				*101*	*99.5*	*85.0-114*				
(S) 1,2-Dichloroethane-d4				*101*	*100*	*81.0-118*				

L1667486-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667486-03 10/22/23 03:35 • (MS) R3990575-4 10/22/23 08:51 • (MSD) R3990575-5 10/22/23 09:11

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	4.17	36.0	35.2	127	124	1	39.0-160			2.25	40
Acrylonitrile	25.0	0.250	29.6	32.1	118	128	1	63.0-135			8.10	40
Benzene	5.00	0.430	4.59	5.01	83.2	91.6	1	79.0-120			8.75	37
Bromobenzene	5.00	0.250	4.24	4.49	84.8	89.8	1	80.0-120			5.73	38
Bromodichloromethane	5.00	0.100	4.63	4.73	92.6	94.6	1	79.0-125			2.14	37
Bromochloromethane	5.00	0.100	4.92	5.36	98.4	107	1	78.0-123			8.56	33
Bromoform	5.00	0.500	4.64	4.87	92.8	97.4	1	66.0-130			4.84	36
Bromomethane	5.00	0.500	3.77	4.33	75.4	86.6	1	53.0-141			13.8	38
n-Butylbenzene	5.00	0.500	3.58	4.13	71.6	82.6	1	75.0-128	J6		14.3	40
sec-Butylbenzene	5.00	0.250	4.07	4.61	81.4	92.2	1	77.0-126			12.4	39
tert-Butylbenzene	5.00	0.500	3.86	4.31	77.2	86.2	1	78.0-124	J6		11.0	39
Carbon tetrachloride	5.00	0.100	4.48	5.07	89.6	101	1	72.0-136			12.4	37
Carbon disulfide	5.00	0.500	3.68	4.19	73.6	83.8	1	64.0-133			13.0	39
Chlorobenzene	5.00	0.0500	4.20	4.33	84.0	86.6	1	82.0-118			3.05	39
Chlorodibromomethane	5.00	0.0500	4.62	4.88	92.4	97.6	1	74.0-126			5.47	37
Chloroethane	5.00	0.100	3.53	4.08	70.6	81.6	1	60.0-138			14.5	40
Chloroform	5.00	0.0500	4.54	5.10	90.8	102	1	79.0-124			11.6	37
Chloromethane	5.00	0.250	3.55	3.93	71.0	78.6	1	50.0-139			10.2	37
Cyclohexane	5.00	0.312	3.43	3.99	62.4	73.6	1	71.0-130	J6		15.1	32
2-Chlorotoluene	5.00	0.100	3.85	4.21	77.0	84.2	1	79.0-122	J6		8.93	38
4-Chlorotoluene	5.00	0.100	4.30	4.65	86.0	93.0	1	78.0-122			7.82	39
1,2-Dibromo-3-Chloropropane	5.00	0.500	4.93	5.41	98.6	108	1	62.0-128			9.28	39
1,2-Dibromoethane	5.00	0.0500	4.75	4.74	95.0	94.8	1	77.0-121			0.211	34
Dibromomethane	5.00	0.100	4.87	5.02	97.4	100	1	79.0-123			3.03	35
1,2-Dichlorobenzene	5.00	0.200	4.34	4.69	86.8	93.8	1	80.0-119			7.75	37
1,3-Dichlorobenzene	5.00	0.200	4.38	4.69	87.6	93.8	1	80.0-119			6.84	38
1,4-Dichlorobenzene	5.00	0.250	4.13	4.37	82.6	87.4	1	79.0-118			5.65	38
Dichlorodifluoromethane	5.00	0.100	3.74	4.56	74.8	91.2	1	32.0-152			19.8	35
1,1-Dichloroethane	5.00	0.0500	4.20	4.55	84.0	91.0	1	77.0-125			8.00	37
1,2-Dichloroethane	5.00	0.0500	5.00	5.21	100	104	1	73.0-128			4.11	35
1,1-Dichloroethene	5.00	0.0500	4.21	4.70	84.2	94.0	1	71.0-131			11.0	37
cis-1,2-Dichloroethene	5.00	0.0750	4.55	4.60	91.0	92.0	1	10.0-149			1.09	37
trans-1,2-Dichloroethene	5.00	0.300	4.26	4.60	85.2	92.0	1	75.0-124			7.67	37
1,2-Dichloropropane	5.00	0.200	4.35	4.55	87.0	91.0	1	78.0-122			4.49	37
1,1-Dichloropropene	5.00	0.100	4.22	4.83	84.4	96.6	1	79.0-125			13.5	35
1,3-Dichloropropane	5.00	0.150	5.04	5.28	101	106	1	80.0-119			4.65	35
cis-1,3-Dichloropropene	5.00	0.100	4.35	4.58	87.0	91.6	1	10.0-151			5.15	37
trans-1,3-Dichloropropene	5.00	0.150	4.32	4.66	86.4	93.2	1	73.0-127			7.57	37
2,2-Dichloropropane	5.00	0.100	4.02	4.32	80.4	86.4	1	60.0-139			7.19	36
Di-isopropyl ether	5.00	0.0500	4.85	5.25	97.0	105	1	67.0-128			7.92	36

L1667486-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667486-03 10/22/23 03:35 • (MS) R3990575-4 10/22/23 08:51 • (MSD) R3990575-5 10/22/23 09:11

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	5.00	0.342	4.38	4.76	80.8	88.4	1	79.0-121			8.32	38
Hexachloro-1,3-butadiene	5.00	2.00	3.87	4.29	77.4	85.8	1	66.0-134			10.3	40
Isopropylbenzene	5.00	1.00	4.00	4.66	80.0	93.2	1	72.0-131			15.2	38
p-Isopropyltoluene	5.00	0.300	3.97	4.37	79.4	87.4	1	77.0-127			9.59	40
2-Butanone (MEK)	25.0	1.00	21.9	24.8	87.6	99.2	1	56.0-143			12.4	40
Methylene Chloride	5.00	0.750	4.01	4.25	80.2	85.0	1	74.0-124			5.81	37
4-Methyl-2-pentanone (MIBK)	25.0	1.00	27.4	29.2	110	117	1	67.0-130			6.36	35
Methyl tert-butyl ether	5.00	0.0300	4.69	5.11	93.8	102	1	71.0-124			8.57	35
Naphthalene	5.00	0.250	5.48	6.07	110	121	1	61.0-128			10.2	36
n-Propylbenzene	5.00	0.100	4.02	4.49	80.4	89.8	1	76.0-126			11.0	38
Styrene	5.00	0.250	4.29	4.54	85.8	90.8	1	78.0-123			5.66	40
1,1,1,2-Tetrachloroethane	5.00	0.0500	4.32	4.67	86.4	93.4	1	71.0-121			7.79	39
1,1,2,2-Tetrachloroethane	5.00	0.0500	5.29	5.34	106	107	1	10.0-160			0.941	35
1,1,2-Trichlorotrifluoroethane	5.00	0.100	3.66	4.30	73.2	86.0	1	70.0-136			16.1	36
Tetrachloroethene	5.00	0.0750	4.10	4.47	82.0	89.4	1	74.0-129			8.63	39
Toluene	5.00	0.0900	4.44	4.83	87.0	94.8	1	80.0-121			8.41	38
1,2,3-Trichlorobenzene	5.00	0.250	4.43	4.97	88.6	99.4	1	69.0-129			11.5	40
1,2,4-Trichlorobenzene	5.00	0.500	4.22	4.77	84.4	95.4	1	69.0-130			12.2	40
1,1,1-Trichloroethane	5.00	0.0500	4.52	5.02	90.4	100	1	10.0-144			10.5	35
1,1,2-Trichloroethane	5.00	0.100	4.61	4.84	92.2	96.8	1	80.0-119			4.87	35
Trichloroethene	5.00	0.0400	4.34	4.91	86.8	98.2	1	79.0-123			12.3	38
Trichlorofluoromethane	5.00	0.0500	3.91	5.06	78.2	101	1	65.0-141			25.6	40
1,2,3-Trichloropropane	5.00	0.500	5.08	4.91	102	98.2	1	73.0-122			3.40	35
1,2,4-Trimethylbenzene	5.00	0.100	4.01	4.52	80.2	90.4	1	76.0-124			12.0	36
1,2,3-Trimethylbenzene	5.00	0.100	4.21	4.66	84.2	93.2	1	82.0-120			10.1	36
1,3,5-Trimethylbenzene	5.00	0.100	3.58	3.97	71.6	79.4	1	75.0-124	J6		10.3	38
Vinyl chloride	5.00	0.0750	4.01	4.69	80.2	93.8	1	58.0-137			15.6	37
Xylenes, Total	15.0	0.400	12.3	13.6	82.0	90.7	1	79.0-121			10.0	38
Ethyl Ether	5.00	0.0500	4.67	4.84	93.4	96.8	1	10.0-160			3.58	31
Tetrahydrofuran	5.00	0.250	2.62	2.77	52.4	55.4	1	57.0-133	J6	J6	5.57	33
Iodomethane	25.0	0.500	21.0	23.4	84.0	93.6	1	69.0-131			10.8	38
Allyl chloride	25.0	2.00	20.4	22.8	81.6	91.2	1	68.0-130			11.1	30
trans-1,4-Dichloro-2-butene	5.00	0.200	3.46	3.62	69.2	72.4	1	43.0-140			4.52	36
(S) Toluene-d8					*103*	*101*		*89.0-112*				
(S) 4-Bromofluorobenzene					*102*	*102*		*85.0-114*				
(S) 1,2-Dichloroethane-d4					*103*	*103*		*81.0-118*				

L1667791-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667791-03 10/22/23 07:12 • (MS) R3990575-6 10/22/23 09:31 • (MSD) R3990575-7 10/22/23 09:51

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	5.59	31.6	28.1	104	90.0	1	39.0-160			11.7	40
Acrylonitrile	25.0	0.250	28.0	29.6	112	118	1	63.0-135			5.56	40
Benzene	5.00	1.52	7.06	7.51	111	120	1	79.0-120			6.18	37
Bromobenzene	5.00	0.250	5.38	6.01	108	120	1	80.0-120			11.1	38
Bromodichloromethane	5.00	0.100	5.58	5.97	112	119	1	79.0-125			6.75	37
Bromochloromethane	5.00	0.100	5.82	6.57	116	131	1	78.0-123		J5	12.1	33
Bromoform	5.00	0.500	5.00	5.34	100	107	1	66.0-130			6.58	36
Bromomethane	5.00	0.500	5.29	5.42	106	108	1	53.0-141			2.43	38
n-Butylbenzene	5.00	0.500	4.20	4.17	84.0	83.4	1	75.0-128			0.717	40
sec-Butylbenzene	5.00	0.344	6.82	7.37	130	141	1	77.0-126	J5	J5	7.75	39
tert-Butylbenzene	5.00	0.861	6.94	7.39	122	131	1	78.0-124		J5	6.28	39
Carbon tetrachloride	5.00	0.100	6.86	7.43	137	149	1	72.0-136	J5	J5	7.98	37
Carbon disulfide	5.00	0.500	5.39	6.09	108	122	1	64.0-133			12.2	39
Chlorobenzene	5.00	0.0500	5.72	6.01	114	120	1	82.0-118		J5	4.94	39
Chlorodibromomethane	5.00	0.0500	5.53	5.90	111	118	1	74.0-126			6.47	37
Chloroethane	5.00	0.100	5.11	5.75	102	115	1	60.0-138			11.8	40
Chloroform	5.00	0.0500	6.31	6.57	126	131	1	79.0-124	J5	J5	4.04	37
Chloromethane	5.00	0.250	5.49	6.21	110	124	1	50.0-139			12.3	37
Cyclohexane	5.00	1.41	6.47	8.11	101	134	1	71.0-130		J5	22.5	32
2-Chlorotoluene	5.00	0.100	5.91	6.54	118	131	1	79.0-122		J5	10.1	38
4-Chlorotoluene	5.00	0.100	5.57	6.24	111	125	1	78.0-122		J5	11.3	39
1,2-Dibromo-3-Chloropropane	5.00	0.500	5.49	6.29	110	126	1	62.0-128			13.6	39
1,2-Dibromoethane	5.00	0.0500	5.48	5.72	110	114	1	77.0-121			4.29	34
Dibromomethane	5.00	0.100	5.37	5.93	107	119	1	79.0-123			9.91	35
1,2-Dichlorobenzene	5.00	0.200	6.01	6.59	120	132	1	80.0-119	J5	J5	9.21	37
1,3-Dichlorobenzene	5.00	0.200	6.01	6.63	120	133	1	80.0-119	J5	J5	9.81	38
1,4-Dichlorobenzene	5.00	0.250	5.53	5.80	111	116	1	79.0-118			4.77	38
Dichlorodifluoromethane	5.00	0.100	6.08	6.48	122	130	1	32.0-152			6.37	35
1,1-Dichloroethane	5.00	0.0500	5.96	6.47	119	129	1	77.0-125		J5	8.21	37
1,2-Dichloroethane	5.00	0.0500	5.80	5.76	116	115	1	73.0-128			0.692	35
1,1-Dichloroethene	5.00	0.0500	6.37	6.82	127	136	1	71.0-131		J5	6.82	37
cis-1,2-Dichloroethene	5.00	12.4	18.5	19.0	122	132	1	10.0-149			2.67	37
trans-1,2-Dichloroethene	5.00	0.0850	6.24	6.81	123	135	1	75.0-124		J5	8.74	37
1,2-Dichloropropane	5.00	0.200	5.58	5.93	112	119	1	78.0-122			6.08	37
1,1-Dichloropropene	5.00	0.100	6.62	7.12	132	142	1	79.0-125	J5	J5	7.28	35
1,3-Dichloropropane	5.00	0.150	5.77	6.15	115	123	1	80.0-119		J5	6.38	35
cis-1,3-Dichloropropene	5.00	0.100	5.27	5.82	105	116	1	10.0-151			9.92	37
trans-1,3-Dichloropropene	5.00	0.150	5.53	5.69	111	114	1	73.0-127			2.85	37
2,2-Dichloropropane	5.00	0.100	5.47	6.17	109	123	1	60.0-139			12.0	36
Di-isopropyl ether	5.00	0.0500	5.64	6.49	113	130	1	67.0-128		J5	14.0	36

L1667791-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667791-03 10/22/23 07:12 • (MS) R3990575-6 10/22/23 09:31 • (MSD) R3990575-7 10/22/23 09:51

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	5.00	6.74	12.2	12.4	109	113	1	79.0-121			1.63	38
Hexachloro-1,3-butadiene	5.00	2.00	6.53	6.46	131	129	1	66.0-134			1.08	40
Isopropylbenzene	5.00	7.47	13.5	14.0	121	131	1	72.0-131			3.64	38
p-Isopropyltoluene	5.00	2.58	8.97	9.78	128	144	1	77.0-127	J5	J5	8.64	40
2-Butanone (MEK)	25.0	2.00	27.3	29.1	101	108	1	56.0-143			6.38	40
Methylene Chloride	5.00	0.750	5.25	5.67	105	113	1	74.0-124			7.69	37
4-Methyl-2-pentanone (MIBK)	25.0	1.00	28.2	30.6	113	122	1	67.0-130			8.16	35
Methyl tert-butyl ether	5.00	0.0300	5.24	5.81	105	116	1	71.0-124			10.3	35
Naphthalene	5.00	50.7	54.4	56.3	74.0	112	1	61.0-128			3.43	36
n-Propylbenzene	5.00	1.98	8.71	9.07	135	142	1	76.0-126	J5	J5	4.05	38
Styrene	5.00	0.250	6.40	6.87	128	137	1	78.0-123	J5	J5	7.08	40
1,1,1,2-Tetrachloroethane	5.00	0.0500	5.39	5.92	108	118	1	71.0-121			9.37	39
1,1,2,2-Tetrachloroethane	5.00	0.0500	7.12	7.52	142	150	1	10.0-160			5.46	35
1,1,2-Trichlorotrifluoroethane	5.00	0.100	6.31	6.69	126	134	1	70.0-136			5.85	36
Tetrachloroethene	5.00	0.165	6.27	6.53	122	127	1	74.0-129			4.06	39
Toluene	5.00	0.404	6.30	6.75	118	127	1	80.0-121		J5	6.90	38
1,2,3-Trichlorobenzene	5.00	0.250	6.21	7.42	124	148	1	69.0-129		J5	17.8	40
1,2,4-Trichlorobenzene	5.00	0.500	6.93	7.36	139	147	1	69.0-130	J5	J5	6.02	40
1,1,1-Trichloroethane	5.00	0.0500	6.48	6.98	130	140	1	10.0-144			7.43	35
1,1,2-Trichloroethane	5.00	0.100	5.79	6.00	116	120	1	80.0-119		J5	3.56	35
Trichloroethene	5.00	5.21	11.5	11.7	126	130	1	79.0-123	J5	J5	1.72	38
Trichlorofluoromethane	5.00	0.0500	6.28	7.18	126	144	1	65.0-141		J5	13.4	40
1,2,3-Trichloropropane	5.00	0.500	5.13	5.13	103	103	1	73.0-122			0.000	35
1,2,4-Trimethylbenzene	5.00	0.531	6.96	7.61	129	142	1	76.0-124	J5	J5	8.92	36
1,2,3-Trimethylbenzene	5.00	0.100	6.21	5.66	124	113	1	82.0-120	J5		9.27	36
1,3,5-Trimethylbenzene	5.00	0.100	5.83	6.39	117	128	1	75.0-124		J5	9.17	38
Vinyl chloride	5.00	0.137	6.36	6.89	124	135	1	58.0-137			8.00	37
Xylenes, Total	15.0	3.55	21.3	22.4	118	126	1	79.0-121		J5	5.03	38
Ethyl Ether	5.00	0.0500	5.11	5.38	102	108	1	10.0-160			5.15	31
Tetrahydrofuran	5.00	0.250	2.22	2.49	44.4	49.8	1	57.0-133	J6	J6	11.5	33
Iodomethane	25.0	0.500	28.8	32.0	115	128	1	69.0-131			10.5	38
Allyl chloride	25.0	2.00	29.4	31.7	118	127	1	68.0-130			7.53	30
trans-1,4-Dichloro-2-butene	5.00	0.200	4.48	2.57	89.6	51.4	1	43.0-140		J3	54.2	36
(S) Toluene-d8					*97.1*	*97.8*		*89.0-112*				
(S) 4-Bromofluorobenzene					*102*	*102*		*85.0-114*				
(S) 1,2-Dichloroethane-d4					*95.4*	*101*		*81.0-118*				

Method Blank (MB)

(MB) R3991882-3 10/26/23 17:21

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Trichloroethene	0.0400	U	0.0160	0.0400	0.0800
Vinyl acetate	0.300	U	0.141	0.300	0.600
(S) Toluene-d8	*108*				*89.0-112*
(S) 4-Bromofluorobenzene	*98.6*				*85.0-114*
(S) 1,2-Dichloroethane-d4	*94.0*				*81.0-118*

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

(LCS) R3991882-1 10/26/23 16:04 • (LCSD) R3991882-2 10/26/23 16:24

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Trichloroethene	5.00	5.10	5.14	102	103	79.0-123			0.781	20
Vinyl acetate	25.0	22.1	21.6	88.4	86.4	54.0-146			2.29	20
(S) Toluene-d8				*110*	*111*	*89.0-112*				
(S) 4-Bromofluorobenzene				*103*	*103*	*85.0-114*				
(S) 1,2-Dichloroethane-d4				*94.6*	*93.9*	*81.0-118*				

Method Blank (MB)

(MB) R3992710-3 10/29/23 19:36

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Acetone	2.00	U	0.548	2.00	4.00
Acrylonitrile	0.250	U	0.0760	0.250	0.500
Benzene	0.0500	U	0.0160	0.0500	0.100
Bromobenzene	0.250	U	0.0420	0.250	0.500
Bromodichloromethane	0.100	U	0.0315	0.100	0.200
Bromochloromethane	0.100	U	0.0452	0.100	0.200
Bromoform	0.500	U	0.239	0.500	1.00
Bromomethane	0.500	U	0.148	0.500	1.00
n-Butylbenzene	0.500	U	0.154	0.500	1.00
sec-Butylbenzene	0.250	U	0.101	0.250	0.500
tert-Butylbenzene	0.500	U	0.0620	0.500	1.00
Carbon tetrachloride	0.100	U	0.0432	0.100	0.200
Carbon disulfide	0.500	U	0.162	0.500	1.00
Chlorobenzene	0.0500	U	0.0229	0.0500	0.100
Chlorodibromomethane	0.0500	U	0.0180	0.0500	0.100
Chloroethane	0.100	U	0.0432	0.100	0.200
Chloroform	0.0500	U	0.0166	0.0500	0.100
Chloromethane	0.250	U	0.0556	0.250	0.500
Cyclohexane	0.0500	U	0.0203	0.0500	0.100
2-Chlorotoluene	0.100	U	0.0368	0.100	0.200
4-Chlorotoluene	0.100	U	0.0452	0.100	0.200
1,2-Dibromo-3-Chloropropane	0.500	U	0.204	0.500	1.00
1,2-Dibromoethane	0.0500	U	0.0210	0.0500	0.100
Dibromomethane	0.100	U	0.0400	0.100	0.200
1,2-Dichlorobenzene	0.200	U	0.0580	0.200	0.400
1,3-Dichlorobenzene	0.200	U	0.0680	0.200	0.400
1,4-Dichlorobenzene	0.250	U	0.0788	0.250	0.500
Dichlorodifluoromethane	0.100	U	0.0327	0.100	0.200
1,1-Dichloroethane	0.0500	U	0.0230	0.0500	0.100
1,2-Dichloroethane	0.0500	U	0.0190	0.0500	0.100
1,1-Dichloroethene	0.0500	U	0.0200	0.0500	0.100
cis-1,2-Dichloroethene	0.0750	U	0.0276	0.0750	0.150
trans-1,2-Dichloroethene	0.300	U	0.0572	0.300	0.600
1,2-Dichloropropane	0.200	U	0.0508	0.200	0.400
1,1-Dichloropropene	0.100	U	0.0280	0.100	0.200
1,3-Dichloropropane	0.150	U	0.0700	0.150	0.300
cis-1,3-Dichloropropene	0.100	U	0.0271	0.100	0.200
trans-1,3-Dichloropropene	0.150	U	0.0612	0.150	0.300
2,2-Dichloropropane	0.100	U	0.0317	0.100	0.200
Di-isopropyl ether	0.0500	U	0.0140	0.0500	0.100

Method Blank (MB)

(MB) R3992710-3 10/29/23 19:36

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Ethylbenzene	0.0500	U	0.0212	0.0500	0.100
Hexachloro-1,3-butadiene	2.00	U	0.508	2.00	4.00
Isopropylbenzene	1.00	U	0.0345	1.00	2.00
p-Isopropyltoluene	0.300	U	0.0932	0.300	0.600
2-Butanone (MEK)	1.00	U	0.500	1.00	2.00
Methylene Chloride	0.750	U	0.266	0.750	1.50
4-Methyl-2-pentanone (MIBK)	1.00	U	0.400	1.00	2.00
Methyl tert-butyl ether	0.0300	U	0.0118	0.0300	0.0600
Naphthalene	0.250	U	0.125	0.250	0.500
n-Propylbenzene	0.100	U	0.0472	0.100	0.200
Styrene	0.250	U	0.109	0.250	0.500
1,1,1,2-Tetrachloroethane	0.0500	U	0.0200	0.0500	0.100
1,1,2,2-Tetrachloroethane	0.0500	U	0.0156	0.0500	0.100
1,1,2-Trichlorotrifluoroethane	0.100	U	0.0270	0.100	0.200
Tetrachloroethene	0.0750	U	0.0280	0.0750	0.150
Toluene	0.100	U	0.0500	0.100	0.200
1,2,3-Trichlorobenzene	0.250	U	0.0250	0.250	0.500
1,2,4-Trichlorobenzene	0.500	U	0.193	0.500	1.00
1,1,1-Trichloroethane	0.0500	U	0.0110	0.0500	0.100
1,1,2-Trichloroethane	0.100	U	0.0353	0.100	0.200
Trichloroethene	0.0400	U	0.0160	0.0400	0.0800
Trichlorofluoromethane	0.0500	U	0.0200	0.0500	0.100
1,2,3-Trichloropropane	0.500	U	0.204	0.500	1.00
1,2,4-Trimethylbenzene	0.100	U	0.0464	0.100	0.200
1,2,3-Trimethylbenzene	0.100	U	0.0460	0.100	0.200
1,3,5-Trimethylbenzene	0.100	U	0.0432	0.100	0.200
Vinyl chloride	0.0750	U	0.0273	0.0750	0.150
Vinyl acetate	0.300	U	0.141	0.300	0.600
Xylenes, Total	0.400	U	0.191	0.400	0.800
Ethyl Ether	0.0500	U	0.0170	0.0500	0.100
Tetrahydrofuran	0.250	U	0.0900	0.250	50.0
Iodomethane	0.500	U	0.242	0.500	1.00
Allyl chloride	2.00	U	0.580	2.00	4.00
trans-1,4-Dichloro-2-butene	0.200	U	0.0560	0.200	0.400
(S) Toluene-d8	*105*				*89.0-112*
(S) 4-Bromofluorobenzene	*98.9*				*85.0-114*
(S) 1,2-Dichloroethane-d4	*103*				*81.0-118*

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

(LCS) R3992710-1 10/29/23 17:56 • (LCSD) R3992710-2 10/29/23 18:15

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	24.4	27.6	97.6	110	39.0-160			12.3	20
Acrylonitrile	25.0	24.9	24.2	99.6	96.8	63.0-135			2.85	20
Benzene	5.00	4.96	4.98	99.2	99.6	79.0-120			0.402	20
Bromobenzene	5.00	4.91	5.00	98.2	100	80.0-120			1.82	20
Bromodichloromethane	5.00	5.26	5.41	105	108	79.0-125			2.81	20
Bromochloromethane	5.00	5.52	5.53	110	111	78.0-123			0.181	20
Bromoform	5.00	4.83	5.04	96.6	101	66.0-130			4.26	20
Bromomethane	5.00	5.19	4.97	104	99.4	53.0-141			4.33	20
n-Butylbenzene	5.00	4.55	4.90	91.0	98.0	75.0-128			7.41	20
sec-Butylbenzene	5.00	4.73	4.92	94.6	98.4	77.0-126			3.94	20
tert-Butylbenzene	5.00	5.03	5.20	101	104	78.0-124			3.32	20
Carbon tetrachloride	5.00	5.00	4.74	100	94.8	72.0-136			5.34	20
Carbon disulfide	5.00	4.67	4.58	93.4	91.6	64.0-133			1.95	20
Chlorobenzene	5.00	5.22	5.18	104	104	82.0-118			0.769	20
Chlorodibromomethane	5.00	5.35	5.60	107	112	74.0-126			4.57	20
Chloroethane	5.00	4.72	4.38	94.4	87.6	60.0-138			7.47	20
Chloroform	5.00	4.87	4.95	97.4	99.0	79.0-124			1.63	20
Chloromethane	5.00	5.40	5.04	108	101	50.0-139			6.90	20
Cyclohexane	5.00	4.28	3.96	85.6	79.2	71.0-130			7.77	20
2-Chlorotoluene	5.00	5.08	5.15	102	103	79.0-122			1.37	20
4-Chlorotoluene	5.00	4.80	4.75	96.0	95.0	78.0-122			1.05	20
1,2-Dibromo-3-Chloropropane	5.00	4.43	4.40	88.6	88.0	62.0-128			0.680	20
1,2-Dibromoethane	5.00	5.44	5.46	109	109	77.0-121			0.367	20
Dibromomethane	5.00	5.21	5.42	104	108	79.0-123			3.95	20
1,2-Dichlorobenzene	5.00	4.76	4.84	95.2	96.8	80.0-119			1.67	20
1,3-Dichlorobenzene	5.00	4.90	5.05	98.0	101	80.0-119			3.02	20
1,4-Dichlorobenzene	5.00	4.98	4.98	99.6	99.6	79.0-118			0.000	20
Dichlorodifluoromethane	5.00	4.73	4.54	94.6	90.8	32.0-152			4.10	20
1,1-Dichloroethane	5.00	5.13	4.91	103	98.2	77.0-125			4.38	20
1,2-Dichloroethane	5.00	4.95	5.02	99.0	100	73.0-128			1.40	20
1,1-Dichloroethene	5.00	5.05	4.90	101	98.0	71.0-131			3.02	20
cis-1,2-Dichloroethene	5.00	5.12	4.96	102	99.2	78.0-123			3.17	20
trans-1,2-Dichloroethene	5.00	5.22	4.89	104	97.8	75.0-124			6.53	20
1,2-Dichloropropane	5.00	5.31	5.07	106	101	78.0-122			4.62	20
1,1-Dichloropropene	5.00	5.17	5.10	103	102	79.0-125			1.36	20
1,3-Dichloropropane	5.00	5.11	5.25	102	105	80.0-119			2.70	20
cis-1,3-Dichloropropene	5.00	5.32	5.34	106	107	75.0-124			0.375	20
trans-1,3-Dichloropropene	5.00	5.27	5.36	105	107	73.0-127			1.69	20
2,2-Dichloropropane	5.00	5.22	5.12	104	102	60.0-139			1.93	20
Di-isopropyl ether	5.00	4.96	5.07	99.2	101	67.0-128			2.19	20

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

(LCS) R3992710-1 10/29/23 17:56 • (LCSD) R3992710-2 10/29/23 18:15

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	5.00	5.02	5.09	100	102	79.0-121			1.38	20
Hexachloro-1,3-butadiene	5.00	4.51	4.56	90.2	91.2	66.0-134			1.10	20
Isopropylbenzene	5.00	5.09	5.22	102	104	72.0-131			2.52	20
p-Isopropyltoluene	5.00	4.29	4.40	85.8	88.0	77.0-127			2.53	20
2-Butanone (MEK)	25.0	24.1	26.9	96.4	108	56.0-143			11.0	20
Methylene Chloride	5.00	4.74	4.63	94.8	92.6	74.0-124			2.35	20
4-Methyl-2-pentanone (MIBK)	25.0	28.0	28.3	112	113	67.0-130			1.07	20
Methyl tert-butyl ether	5.00	4.36	4.31	87.2	86.2	71.0-124			1.15	20
Naphthalene	5.00	3.94	4.28	78.8	85.6	61.0-128			8.27	20
n-Propylbenzene	5.00	4.79	4.85	95.8	97.0	76.0-126			1.24	20
Styrene	5.00	4.48	4.49	89.6	89.8	78.0-123			0.223	20
1,1,1,2-Tetrachloroethane	5.00	5.34	5.54	107	111	78.0-124			3.68	20
1,1,2,2-Tetrachloroethane	5.00	4.61	4.59	92.2	91.8	71.0-121			0.435	20
1,1,2-Trichlorotrifluoroethane	5.00	5.56	5.21	111	104	70.0-136			6.50	20
Tetrachloroethene	5.00	5.75	5.72	115	114	74.0-129			0.523	20
Toluene	5.00	5.00	5.08	100	102	80.0-121			1.59	20
1,2,3-Trichlorobenzene	5.00	3.84	3.96	76.8	79.2	69.0-129			3.08	20
1,2,4-Trichlorobenzene	5.00	4.02	4.05	80.4	81.0	69.0-130			0.744	20
1,1,1-Trichloroethane	5.00	4.83	4.62	96.6	92.4	74.0-131			4.44	20
1,1,2-Trichloroethane	5.00	5.19	5.22	104	104	80.0-119			0.576	20
Trichloroethene	5.00	5.58	5.53	112	111	79.0-123			0.900	20
Trichlorofluoromethane	5.00	5.45	5.37	109	107	65.0-141			1.48	20
1,2,3-Trichloropropane	5.00	4.85	4.78	97.0	95.6	73.0-122			1.45	20
1,2,4-Trimethylbenzene	5.00	4.75	4.79	95.0	95.8	76.0-124			0.839	20
1,2,3-Trimethylbenzene	5.00	4.51	4.53	90.2	90.6	82.0-120			0.442	20
1,3,5-Trimethylbenzene	5.00	4.72	4.77	94.4	95.4	75.0-124			1.05	20
Vinyl chloride	5.00	5.58	5.40	112	108	58.0-137			3.28	20
Vinyl acetate	25.0	29.0	28.3	116	113	54.0-146			2.44	20
Xylenes, Total	15.0	15.6	15.6	104	104	79.0-121			0.000	20
Ethyl Ether	5.00	4.43	4.36	88.6	87.2	64.0-137			1.59	20
Tetrahydrofuran	5.00	4.69	4.75	93.8	95.0	57.0-133			1.27	20
Iodomethane	25.0	24.5	24.3	98.0	97.2	69.0-131			0.820	20
Allyl chloride	25.0	25.0	24.3	100	97.2	68.0-130			2.84	20
trans-1,4-Dichloro-2-butene	5.00	3.89	4.07	77.8	81.4	43.0-140			4.52	20
(S) Toluene-d8				*103*	*102*	*89.0-112*				
(S) 4-Bromofluorobenzene				*98.6*	*99.2*	*85.0-114*				
(S) 1,2-Dichloroethane-d4				*106*	*103*	*81.0-118*				

L1668251-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1668251-01 10/29/23 21:49 • (MS) R3992710-4 10/30/23 02:14 • (MSD) R3992710-5 10/30/23 02:33

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	125	1.39	119	141	94.1	112	1	39.0-160			16.9	40
Acrylonitrile	125	0.250	127	129	102	103	1	63.0-135			1.56	40
Benzene	25.0	0.0500	28.9	26.4	116	106	1	79.0-120			9.04	37
Bromobenzene	25.0	0.250	26.8	23.3	107	93.2	1	80.0-120			14.0	38
Bromodichloromethane	25.0	0.100	30.0	27.6	120	110	1	79.0-125			8.33	37
Bromochloromethane	25.0	0.100	30.2	28.0	121	112	1	78.0-123			7.56	33
Bromoform	25.0	0.500	24.8	23.3	99.2	93.2	1	66.0-130			6.24	36
Bromomethane	25.0	0.500	28.8	27.6	115	110	1	53.0-141			4.26	38
n-Butylbenzene	25.0	0.500	25.9	23.7	104	94.8	1	75.0-128			8.87	40
sec-Butylbenzene	25.0	0.250	27.0	23.6	108	94.4	1	77.0-126			13.4	39
tert-Butylbenzene	25.0	0.500	29.1	25.8	116	103	1	78.0-124			12.0	39
Carbon tetrachloride	25.0	0.100	32.0	28.8	128	115	1	72.0-136			10.5	37
Carbon disulfide	25.0	0.500	27.5	25.6	110	102	1	64.0-133			7.16	39
Chlorobenzene	25.0	0.0500	29.0	26.0	116	104	1	82.0-118			10.9	39
Chlorodibromomethane	25.0	0.0500	28.7	26.4	115	106	1	74.0-126			8.35	37
Chloroethane	25.0	0.100	27.8	24.8	111	99.2	1	60.0-138			11.4	40
Chloroform	25.0	0.0500	28.6	25.8	114	103	1	79.0-124			10.3	37
Chloromethane	25.0	0.250	32.2	29.8	129	119	1	50.0-139			7.74	37
Cyclohexane	25.0	0.0500	27.8	19.0	111	76.0	1	71.0-130		J3	37.6	32
2-Chlorotoluene	25.0	0.100	27.8	24.6	111	98.4	1	79.0-122			12.2	38
4-Chlorotoluene	25.0	0.100	25.7	22.9	103	91.6	1	78.0-122			11.5	39
1,2-Dibromo-3-Chloropropane	25.0	0.500	23.5	22.5	94.0	90.0	1	62.0-128			4.35	39
1,2-Dibromoethane	25.0	0.0500	28.6	25.6	114	102	1	77.0-121			11.1	34
Dibromomethane	25.0	0.100	28.2	26.2	113	105	1	79.0-123			7.35	35
1,2-Dichlorobenzene	25.0	0.200	25.2	23.4	101	93.6	1	80.0-119			7.41	37
1,3-Dichlorobenzene	25.0	0.200	25.8	23.9	103	95.6	1	80.0-119			7.65	38
1,4-Dichlorobenzene	25.0	0.250	25.6	23.6	102	94.4	1	79.0-118			8.13	38
Dichlorodifluoromethane	25.0	0.100	29.0	24.6	116	98.4	1	32.0-152			16.4	35
1,1-Dichloroethane	25.0	0.0500	29.2	26.8	117	107	1	77.0-125			8.57	37
1,2-Dichloroethane	25.0	0.0500	26.1	24.3	104	97.2	1	73.0-128			7.14	35
1,1-Dichloroethene	25.0	0.0500	31.5	29.0	126	116	1	71.0-131			8.26	37
cis-1,2-Dichloroethene	25.0	0.0750	28.8	26.8	115	107	1	10.0-149			7.19	37
trans-1,2-Dichloroethene	25.0	0.300	29.3	26.7	117	107	1	75.0-124			9.29	37
1,2-Dichloropropane	25.0	0.200	29.4	27.2	118	109	1	78.0-122			7.77	37
1,1-Dichloropropene	25.0	0.100	31.5	28.0	126	112	1	79.0-125	J5		11.8	35
1,3-Dichloropropane	25.0	0.150	27.5	24.9	110	99.6	1	80.0-119			9.92	35
cis-1,3-Dichloropropene	25.0	0.100	26.7	24.9	107	99.6	1	10.0-151			6.98	37
trans-1,3-Dichloropropene	25.0	0.150	26.7	24.0	107	96.0	1	73.0-127			10.7	37
2,2-Dichloropropane	25.0	0.100	18.2	16.2	72.8	64.8	1	60.0-139			11.6	36
Di-isopropyl ether	25.0	0.0500	28.2	26.1	113	104	1	67.0-128			7.73	36

L1668251-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1668251-01 10/29/23 21:49 • (MS) R3992710-4 10/30/23 02:14 • (MSD) R3992710-5 10/30/23 02:33

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	25.0	0.0500	29.5	26.4	118	106	1	79.0-121			11.1	38
Hexachloro-1,3-butadiene	25.0	2.00	22.0	22.6	88.0	90.4	1	66.0-134			2.69	40
Isopropylbenzene	25.0	1.00	30.1	27.3	120	109	1	72.0-131			9.76	38
p-Isopropyltoluene	25.0	0.300	23.8	21.3	95.2	85.2	1	77.0-127			11.1	40
2-Butanone (MEK)	125	1.00	137	133	110	106	1	56.0-143			2.96	40
Methylene Chloride	25.0	0.750	27.6	25.4	110	102	1	74.0-124			8.30	37
4-Methyl-2-pentanone (MIBK)	125	1.00	154	140	123	112	1	67.0-130			9.52	35
Methyl tert-butyl ether	25.0	0.0300	24.2	22.7	96.8	90.8	1	71.0-124			6.40	35
Naphthalene	25.0	0.250	23.1	22.3	92.4	89.2	1	61.0-128			3.52	36
n-Propylbenzene	25.0	0.100	27.2	23.9	109	95.6	1	76.0-126			12.9	38
Styrene	25.0	0.250	25.3	23.0	101	92.0	1	78.0-123			9.52	40
1,1,1,2-Tetrachloroethane	25.0	0.0500	29.1	26.5	116	106	1	71.0-121			9.35	39
1,1,2,2-Tetrachloroethane	25.0	0.0500	24.4	21.4	97.6	85.6	1	10.0-160			13.1	35
1,1,2-Trichlorotrifluoroethane	25.0	0.100	32.8	28.7	131	115	1	70.0-136			13.3	36
Tetrachloroethene	25.0	0.0750	31.1	28.1	124	112	1	74.0-129			10.1	39
Toluene	25.0	0.0530	27.9	24.9	111	99.4	1	80.0-121			11.4	38
1,2,3-Trichlorobenzene	25.0	0.250	20.0	20.1	80.0	80.4	1	69.0-129			0.499	40
1,2,4-Trichlorobenzene	25.0	0.500	20.1	20.7	80.4	82.8	1	69.0-130			2.94	40
1,1,1-Trichloroethane	25.0	0.0500	30.7	27.3	123	109	1	10.0-144			11.7	35
1,1,2-Trichloroethane	25.0	0.100	27.8	24.5	111	98.0	1	80.0-119			12.6	35
Trichloroethene	25.0	0.0400	32.1	28.9	128	116	1	79.0-123	J5		10.5	38
Trichlorofluoromethane	25.0	0.0500	35.6	32.2	142	129	1	65.0-141	J5		10.0	40
1,2,3-Trichloropropane	25.0	0.500	25.0	21.4	100	85.6	1	73.0-122			15.5	35
1,2,4-Trimethylbenzene	25.0	0.100	26.0	23.0	104	92.0	1	76.0-124			12.2	36
1,2,3-Trimethylbenzene	25.0	0.100	24.4	21.4	97.6	85.6	1	82.0-120			13.1	36
1,3,5-Trimethylbenzene	25.0	0.100	26.4	22.7	106	90.8	1	75.0-124			15.1	38
Vinyl chloride	25.0	0.0750	36.1	32.6	144	130	1	58.0-137	J5		10.2	37
Vinyl acetate	125	0.300	143	118	114	94.4	1	54.0-146			19.2	40
Xylenes, Total	75.0	0.400	88.4	79.8	118	106	1	79.0-121			10.2	38
Ethyl Ether	25.0	0.0500	23.8	22.3	95.2	89.2	1	10.0-160			6.51	31
Tetrahydrofuran	25.0	0.250	24.3	24.4	97.2	97.6	1	57.0-133			0.411	33
Iodomethane	125	0.500	142	130	114	104	1	69.0-131			8.82	38
Allyl chloride	125	2.00	140	128	112	102	1	68.0-130			8.96	30
trans-1,4-Dichloro-2-butene	25.0	0.200	16.4	14.7	65.6	58.8	1	43.0-140			10.9	36
(S) Toluene-d8					*101*	*98.6*		*89.0-112*				
(S) 4-Bromofluorobenzene					*97.6*	*100*		*85.0-114*				
(S) 1,2-Dichloroethane-d4					*110*	*112*		*81.0-118*				

L1668253-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1668253-02 10/29/23 23:04 • (MS) R3992710-6 10/30/23 02:52 • (MSD) R3992710-7 10/30/23 03:11

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	125	1.31	126	127	99.8	101	1	39.0-160			0.791	40
Acrylonitrile	125	0.250	121	133	96.8	106	1	63.0-135			9.45	40
Benzene	25.0	0.0500	26.8	29.4	107	118	1	79.0-120			9.25	37
Bromobenzene	25.0	0.250	24.5	27.7	98.0	111	1	80.0-120			12.3	38
Bromodichloromethane	25.0	0.100	27.8	30.9	111	124	1	79.0-125			10.6	37
Bromochloromethane	25.0	0.100	28.3	30.3	113	121	1	78.0-123			6.83	33
Bromoform	25.0	0.500	23.8	26.7	95.2	107	1	66.0-130			11.5	36
Bromomethane	25.0	0.500	26.4	29.3	106	117	1	53.0-141			10.4	38
n-Butylbenzene	25.0	0.211	24.3	26.0	96.4	103	1	75.0-128			6.76	40
sec-Butylbenzene	25.0	0.674	25.2	27.9	98.1	109	1	77.0-126			10.2	39
tert-Butylbenzene	25.0	0.0950	26.6	29.9	106	119	1	78.0-124			11.7	39
Carbon tetrachloride	25.0	0.100	30.2	32.0	121	128	1	72.0-136			5.79	37
Carbon disulfide	25.0	0.500	25.8	28.6	103	114	1	64.0-133			10.3	39
Chlorobenzene	25.0	0.0500	26.6	29.5	106	118	1	82.0-118			10.3	39
Chlorodibromomethane	25.0	0.0500	26.7	30.1	107	120	1	74.0-126			12.0	37
Chloroethane	25.0	0.100	24.4	28.6	97.6	114	1	60.0-138			15.8	40
Chloroform	25.0	0.0500	26.3	28.1	105	112	1	79.0-124			6.62	37
Chloromethane	25.0	0.250	29.9	32.6	120	130	1	50.0-139			8.64	37
Cyclohexane	25.0	0.0500	20.8	28.0	83.2	112	1	71.0-130			29.5	32
2-Chlorotoluene	25.0	0.100	25.7	29.3	103	117	1	79.0-122			13.1	38
4-Chlorotoluene	25.0	0.100	24.0	27.7	96.0	111	1	78.0-122			14.3	39
1,2-Dibromo-3-Chloropropane	25.0	0.500	23.1	27.0	92.4	108	1	62.0-128			15.6	39
1,2-Dibromoethane	25.0	0.0500	26.3	29.1	105	116	1	77.0-121			10.1	34
Dibromomethane	25.0	0.100	26.4	28.6	106	114	1	79.0-123			8.00	35
1,2-Dichlorobenzene	25.0	0.200	24.0	27.1	96.0	108	1	80.0-119			12.1	37
1,3-Dichlorobenzene	25.0	0.200	24.3	27.3	97.2	109	1	80.0-119			11.6	38
1,4-Dichlorobenzene	25.0	0.250	24.2	26.7	96.8	107	1	79.0-118			9.82	38
Dichlorodifluoromethane	25.0	0.100	25.6	28.7	102	115	1	32.0-152			11.4	35
1,1-Dichloroethane	25.0	0.0500	27.0	29.5	108	118	1	77.0-125			8.85	37
1,2-Dichloroethane	25.0	0.0250	24.3	26.2	97.1	105	1	73.0-128			7.52	35
1,1-Dichloroethene	25.0	0.0500	29.4	32.3	118	129	1	71.0-131			9.40	37
cis-1,2-Dichloroethene	25.0	0.0750	26.8	29.1	107	116	1	10.0-149			8.23	37
trans-1,2-Dichloroethene	25.0	0.300	27.1	29.5	108	118	1	75.0-124			8.48	37
1,2-Dichloropropane	25.0	0.200	27.4	29.7	110	119	1	78.0-122			8.06	37
1,1-Dichloropropene	25.0	0.100	29.4	32.0	118	128	1	79.0-125		J5	8.47	35
1,3-Dichloropropane	25.0	0.150	25.2	27.9	101	112	1	80.0-119			10.2	35
cis-1,3-Dichloropropene	25.0	0.100	25.2	27.4	101	110	1	10.0-151			8.37	37
trans-1,3-Dichloropropene	25.0	0.150	24.0	27.0	96.0	108	1	73.0-127			11.8	37
2,2-Dichloropropane	25.0	0.100	17.1	19.4	68.4	77.6	1	60.0-139			12.6	36
Di-isopropyl ether	25.0	0.0500	26.8	29.8	107	119	1	67.0-128			10.6	36

L1668253-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1668253-02 10/29/23 23:04 • (MS) R3992710-6 10/30/23 02:52 • (MSD) R3992710-7 10/30/23 03:11

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Ethylbenzene	25.0	0.0500	27.4	30.4	110	122	1	79.0-121		J5	10.4	38
Hexachloro-1,3-butadiene	25.0	2.00	16.5	16.6	66.0	66.4	1	66.0-134			0.604	40
Isopropylbenzene	25.0	0.252	28.7	31.7	114	126	1	72.0-131			9.93	38
p-Isopropyltoluene	25.0	0.220	22.3	24.6	88.3	97.5	1	77.0-127			9.81	40
2-Butanone (MEK)	125	1.00	132	138	106	110	1	56.0-143			4.44	40
Methylene Chloride	25.0	0.750	25.6	27.5	102	110	1	74.0-124			7.16	37
4-Methyl-2-pentanone (MIBK)	125	1.00	142	159	114	127	1	67.0-130			11.3	35
Methyl tert-butyl ether	25.0	0.0300	23.3	25.4	93.2	102	1	71.0-124			8.62	35
Naphthalene	25.0	1.39	24.4	27.4	92.0	104	1	61.0-128			11.6	36
n-Propylbenzene	25.0	0.236	25.2	28.7	99.9	114	1	76.0-126			13.0	38
Styrene	25.0	0.250	23.4	25.8	93.6	103	1	78.0-123			9.76	40
1,1,1,2-Tetrachloroethane	25.0	0.0500	26.8	30.2	107	121	1	71.0-121			11.9	39
1,1,2,2-Tetrachloroethane	25.0	0.0500	22.4	25.7	89.6	103	1	10.0-160			13.7	35
1,1,2-Trichlorotrifluoroethane	25.0	0.100	29.0	33.7	116	135	1	70.0-136			15.0	36
Tetrachloroethene	25.0	0.0750	29.1	32.4	116	130	1	74.0-129		J5	10.7	39
Toluene	25.0	0.0600	25.3	28.1	101	112	1	80.0-121			10.5	38
1,2,3-Trichlorobenzene	25.0	0.250	20.6	22.4	82.4	89.6	1	69.0-129			8.37	40
1,2,4-Trichlorobenzene	25.0	0.500	21.2	22.2	84.8	88.8	1	69.0-130			4.61	40
1,1,1-Trichloroethane	25.0	0.0500	27.2	31.6	109	126	1	10.0-144			15.0	35
1,1,2-Trichloroethane	25.0	0.100	25.0	27.9	100	112	1	80.0-119			11.0	35
Trichloroethene	25.0	0.0400	29.8	32.2	119	129	1	79.0-123		J5	7.74	38
Trichlorofluoromethane	25.0	0.0500	33.3	36.6	133	146	1	65.0-141		J5	9.44	40
1,2,3-Trichloropropane	25.0	0.500	22.5	25.7	90.0	103	1	73.0-122			13.3	35
1,2,4-Trimethylbenzene	25.0	0.128	24.1	27.4	95.9	109	1	76.0-124			12.8	36
1,2,3-Trimethylbenzene	25.0	0.100	23.0	25.8	92.0	103	1	82.0-120			11.5	36
1,3,5-Trimethylbenzene	25.0	0.100	24.6	27.9	98.4	112	1	75.0-124			12.6	38
Vinyl chloride	25.0	0.0750	32.8	36.4	131	146	1	58.0-137		J5	10.4	37
Vinyl acetate	125	0.300	132	144	106	115	1	54.0-146			8.70	40
Xylenes, Total	75.0	0.400	75.6	91.5	101	122	1	79.0-121		J5	19.0	38
Ethyl Ether	25.0	0.0500	22.5	24.2	90.0	96.8	1	10.0-160			7.28	31
Tetrahydrofuran	25.0	0.250	23.4	25.8	93.6	103	1	57.0-133			9.76	33
Iodomethane	125	0.500	133	145	106	116	1	69.0-131			8.63	38
Allyl chloride	125	2.00	129	140	103	112	1	68.0-130			8.18	30
trans-1,4-Dichloro-2-butene	25.0	0.200	15.5	17.8	62.0	71.2	1	43.0-140			13.8	36
(S) Toluene-d8					*97.8*	*99.1*		*89.0-112*				
(S) 4-Bromofluorobenzene					*99.1*	*99.7*		*85.0-114*				
(S) 1,2-Dichloroethane-d4					*112*	*110*		*81.0-118*				

Method Blank (MB)

(MB) R3990613-3 10/22/23 10:57

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
Acetone	25.0	U	11.3	25.0	50.0
Acrolein	25.0	U	2.54	25.0	50.0
Acrylonitrile	5.00	U	0.671	5.00	10.0
Benzene	0.500	U	0.0941	0.500	1.00
Bromobenzene	0.500	U	0.118	0.500	1.00
Bromodichloromethane	0.500	U	0.136	0.500	1.00
Bromoform	0.500	U	0.129	0.500	1.00
Bromomethane	2.00	U	0.605	2.00	5.00
n-Butylbenzene	0.500	U	0.157	0.500	1.00
sec-Butylbenzene	0.500	U	0.125	0.500	1.00
tert-Butylbenzene	0.500	U	0.127	0.500	1.00
Carbon tetrachloride	0.500	U	0.128	0.500	1.00
Chlorobenzene	0.500	U	0.116	0.500	1.00
Chlorodibromomethane	0.500	U	0.140	0.500	1.00
Chloroethane	2.00	U	0.192	2.00	5.00
2-Chloroethyl vinyl ether	25.0	U	0.575	25.0	50.0
Chloroform	2.00	U	0.111	2.00	5.00
Chloromethane	2.00	U	0.960	2.00	4.00
2-Chlorotoluene	0.500	U	0.106	0.500	1.00
4-Chlorotoluene	0.500	U	0.114	0.500	1.00
1,2-Dibromoethane	0.500	U	0.126	0.500	1.00
1,2-Dibromo-3-Chloropropane	2.00	U	0.276	2.00	5.00
Dibromomethane	0.500	U	0.122	0.500	1.00
1,2-Dichlorobenzene	0.500	U	0.107	0.500	1.00
1,3-Dichlorobenzene	0.500	U	0.110	0.500	1.00
1,4-Dichlorobenzene	0.500	U	0.120	0.500	1.00
Dichlorodifluoromethane	2.00	U	0.374	2.00	5.00
1,1-Dichloroethane	0.500	U	0.100	0.500	1.00
1,2-Dichloroethane	0.500	U	0.0819	0.500	1.00
1,1-Dichloroethene	0.500	U	0.188	0.500	1.00
cis-1,2-Dichloroethene	0.500	U	0.126	0.500	1.00
trans-1,2-Dichloroethene	0.500	U	0.149	0.500	1.00
1,2-Dichloropropane	0.500	U	0.149	0.500	1.00
1,3-Dichloropropane	0.500	U	0.110	0.500	1.00
1,1-Dichloropropene	0.500	U	0.142	0.500	1.00
cis-1,3-Dichloropropene	0.500	U	0.111	0.500	1.00
trans-1,3-Dichloropropene	0.500	U	0.118	0.500	1.00
Di-isopropyl ether	0.500	U	0.105	0.500	1.00
Ethylbenzene	0.500	U	0.137	0.500	1.00
Isopropylbenzene	0.500	U	0.105	0.500	1.00

Method Blank (MB)

(MB) R3990613-3 10/22/23 10:57

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
p-Isopropyltoluene	0.500	U	0.120	0.500	1.00
2-Butanone (MEK)	5.00	U	1.19	5.00	10.0
Methylene Chloride	2.00	U	0.430	2.00	5.00
4-Methyl-2-pentanone (MIBK)	5.00	U	0.478	5.00	10.0
Methyl tert-butyl ether	0.500	U	0.101	0.500	1.00
Naphthalene	2.00	U	1.00	2.00	5.00
n-Propylbenzene	0.500	U	0.0993	0.500	1.00
Styrene	0.500	U	0.118	0.500	1.00
1,1,1,2-Tetrachloroethane	0.500	U	0.147	0.500	1.00
1,1,2,2-Tetrachloroethane	0.500	U	0.133	0.500	1.00
Tetrachloroethene	0.600	U	0.300	0.600	1.20
Toluene	0.600	U	0.278	0.600	1.20
1,2,3-Trichlorobenzene	0.500	U	0.230	0.500	1.00
1,2,4-Trichlorobenzene	1.00	U	0.481	1.00	2.00
1,2,3-Trimethylbenzene	0.500	U	0.104	0.500	1.00
1,2,4-Trimethylbenzene	1.00	U	0.322	1.00	2.00
1,3,5-Trimethylbenzene	0.500	U	0.104	0.500	1.00
1,1,1-Trichloroethane	0.328	J	0.149	0.500	1.00
1,1,2-Trichloroethane	0.500	U	0.158	0.500	1.00
Trichloroethene	0.500	U	0.190	0.500	1.00
Trichlorofluoromethane	2.00	U	0.160	2.00	5.00
1,1,2-Trichlorotrifluoroethane	0.500	U	0.180	0.500	1.00
1,2,3-Trichloropropane	1.00	U	0.237	1.00	2.50
Vinyl chloride	0.500	U	0.234	0.500	1.00
Xylenes, Total	1.50	U	0.174	1.50	3.00
(S) Toluene-d8	*104*				*89.0-112*
(S) 4-Bromofluorobenzene	*93.8*				*85.0-114*
(S) 1,2-Dichloroethane-d4	*105*				*81.0-118*

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

(LCS) R3990613-1 10/22/23 09:40 • (LCSD) R3990613-2 10/22/23 10:13

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	29.3	28.1	117	112	39.0-160			4.18	20
Acrolein	25.0	23.0	25.5	92.0	102	39.0-155			10.3	20
Acrylonitrile	25.0	23.5	22.6	94.0	90.4	63.0-135			3.90	20
Benzene	5.00	5.04	4.88	101	97.6	79.0-120			3.23	20
Bromobenzene	5.00	5.14	5.18	103	104	80.0-120			0.775	20

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

(LCS) R3990613-1 10/22/23 09:40 • (LCSD) R3990613-2 10/22/23 10:13

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Bromodichloromethane	5.00	5.21	5.03	104	101	79.0-125			3.52	20
Bromoform	5.00	4.29	4.23	85.8	84.6	66.0-130			1.41	20
Bromomethane	5.00	4.97	4.82	99.4	96.4	53.0-141			3.06	20
n-Butylbenzene	5.00	4.36	4.29	87.2	85.8	75.0-128			1.62	20
sec-Butylbenzene	5.00	4.81	4.84	96.2	96.8	77.0-126			0.622	20
tert-Butylbenzene	5.00	4.98	4.95	99.6	99.0	78.0-124			0.604	20
Carbon tetrachloride	5.00	4.88	4.79	97.6	95.8	72.0-136			1.86	20
Chlorobenzene	5.00	4.74	4.58	94.8	91.6	82.0-118			3.43	20
Chlorodibromomethane	5.00	5.11	4.91	102	98.2	74.0-126			3.99	20
Chloroethane	5.00	5.02	4.75	100	95.0	60.0-138			5.53	20
2-Chloroethyl vinyl ether	25.0	24.1	24.2	96.4	96.8	51.0-139			0.414	20
Chloroform	5.00	5.06	4.85	101	97.0	79.0-124			4.24	20
Chloromethane	5.00	5.59	5.30	112	106	50.0-139			5.33	20
2-Chlorotoluene	5.00	5.16	5.15	103	103	79.0-122			0.194	20
4-Chlorotoluene	5.00	5.13	5.19	103	104	78.0-122			1.16	20
1,2-Dibromoethane	5.00	4.64	4.56	92.8	91.2	77.0-121			1.74	20
1,2-Dibromo-3-Chloropropane	5.00	4.13	4.16	82.6	83.2	62.0-128			0.724	20
Dibromomethane	5.00	5.23	4.99	105	99.8	79.0-123			4.70	20
1,2-Dichlorobenzene	5.00	4.85	4.82	97.0	96.4	80.0-119			0.620	20
1,3-Dichlorobenzene	5.00	4.92	4.90	98.4	98.0	80.0-119			0.407	20
1,4-Dichlorobenzene	5.00	5.03	5.02	101	100	79.0-118			0.199	20
Dichlorodifluoromethane	5.00	5.82	5.86	116	117	32.0-152			0.685	20
1,1-Dichloroethane	5.00	4.75	4.52	95.0	90.4	77.0-125			4.96	20
1,2-Dichloroethane	5.00	5.03	4.85	101	97.0	73.0-128			3.64	20
1,1-Dichloroethene	5.00	5.26	5.01	105	100	71.0-131			4.87	20
cis-1,2-Dichloroethene	5.00	4.87	4.77	97.4	95.4	78.0-123			2.07	20
trans-1,2-Dichloroethene	5.00	5.10	4.89	102	97.8	75.0-124			4.20	20
1,2-Dichloropropane	5.00	4.97	4.69	99.4	93.8	78.0-122			5.80	20
1,3-Dichloropropane	5.00	4.97	4.87	99.4	97.4	80.0-119			2.03	20
1,1-Dichloropropene	5.00	5.24	5.03	105	101	79.0-125			4.09	20
cis-1,3-Dichloropropene	5.00	4.75	4.74	95.0	94.8	75.0-124			0.211	20
trans-1,3-Dichloropropene	5.00	4.65	4.54	93.0	90.8	73.0-127			2.39	20
Di-isopropyl ether	5.00	4.50	4.37	90.0	87.4	67.0-128			2.93	20
Ethylbenzene	5.00	4.72	4.46	94.4	89.2	79.0-121			5.66	20
Isopropylbenzene	5.00	4.52	4.41	90.4	88.2	72.0-131			2.46	20
p-Isopropyltoluene	5.00	4.82	4.72	96.4	94.4	77.0-127			2.10	20
2-Butanone (MEK)	25.0	23.5	23.2	94.0	92.8	56.0-143			1.28	20
Methylene Chloride	5.00	4.87	4.77	97.4	95.4	74.0-124			2.07	20
4-Methyl-2-pentanone (MIBK)	25.0	22.1	21.5	88.4	86.0	67.0-130			2.75	20
Methyl tert-butyl ether	5.00	4.67	4.48	93.4	89.6	71.0-124			4.15	20

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

(LCS) R3990613-1 10/22/23 09:40 • (LCSD) R3990613-2 10/22/23 10:13

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Naphthalene	5.00	4.35	4.50	87.0	90.0	61.0-128			3.39	20
n-Propylbenzene	5.00	5.15	5.16	103	103	76.0-126			0.194	20
Styrene	5.00	4.27	4.17	85.4	83.4	78.0-123			2.37	20
1,1,1,2-Tetrachloroethane	5.00	4.50	4.36	90.0	87.2	78.0-124			3.16	20
1,1,2,2-Tetrachloroethane	5.00	4.58	5.07	91.6	101	71.0-121			10.2	20
Tetrachloroethene	5.00	4.65	4.46	93.0	89.2	74.0-129			4.17	20
Toluene	5.00	4.95	4.84	99.0	96.8	80.0-121			2.25	20
1,2,3-Trichlorobenzene	5.00	4.33	4.55	86.6	91.0	69.0-129			4.95	20
1,2,4-Trichlorobenzene	5.00	4.14	4.18	82.8	83.6	69.0-130			0.962	20
1,2,3-Trimethylbenzene	5.00	4.94	4.71	98.8	94.2	82.0-120			4.77	20
1,2,4-Trimethylbenzene	5.00	4.88	4.79	97.6	95.8	76.0-124			1.86	20
1,3,5-Trimethylbenzene	5.00	4.91	4.86	98.2	97.2	75.0-124			1.02	20
1,1,1-Trichloroethane	5.00	5.69	5.69	114	114	74.0-131			0.000	20
1,1,2-Trichloroethane	5.00	4.92	4.93	98.4	98.6	80.0-119			0.203	20
Trichloroethene	5.00	5.36	4.98	107	99.6	79.0-123			7.35	20
Trichlorofluoromethane	5.00	5.72	5.94	114	119	65.0-141			3.77	20
1,1,2-Trichlorotrifluoroethane	5.00	4.66	4.71	93.2	94.2	70.0-136			1.07	20
1,2,3-Trichloropropane	5.00	5.41	5.37	108	107	73.0-122			0.742	20
Vinyl chloride	5.00	5.01	5.00	100	100	58.0-137			0.200	20
Xylenes, Total	15.0	13.5	13.2	90.0	88.0	79.0-121			2.25	20
(S) Toluene-d8				*103*	*102*	*89.0-112*				
(S) 4-Bromofluorobenzene				*96.3*	*95.4*	*85.0-114*				
(S) 1,2-Dichloroethane-d4				*106*	*105*	*81.0-118*				

L1667978-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667978-05 10/22/23 19:50 • (MS) R3990613-4 10/22/23 20:56 • (MSD) R3990613-5 10/22/23 21:18

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	263	147	260	0.000	0.000	1	39.0-160	V	J3 V	55.5	20
Acrolein	25.0	25.0	31.9	30.8	128	123	1	39.0-155			3.51	20
Acrylonitrile	25.0	5.00	23.3	21.4	93.2	85.6	1	63.0-135			8.50	20
Benzene	5.00	0.500	5.08	4.80	102	96.0	1	79.0-120			5.67	20
Bromobenzene	5.00	0.500	5.36	5.28	107	106	1	80.0-120			1.50	20
Bromodichloromethane	5.00	0.500	5.37	5.15	107	103	1	79.0-125			4.18	20
Bromoform	5.00	0.500	4.41	4.27	88.2	85.4	1	66.0-130			3.23	20
Bromomethane	5.00	2.00	4.51	4.32	90.2	86.4	1	53.0-141			4.30	20
n-Butylbenzene	5.00	0.500	4.94	4.89	98.8	97.8	1	75.0-128			1.02	20
sec-Butylbenzene	5.00	0.500	5.42	5.16	108	103	1	77.0-126			4.91	20

L1667978-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667978-05 10/22/23 19:50 • (MS) R3990613-4 10/22/23 20:56 • (MSD) R3990613-5 10/22/23 21:18

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
tert-Butylbenzene	5.00	0.500	5.48	5.34	110	107	1	78.0-124			2.59	20
Carbon tetrachloride	5.00	0.500	4.42	4.12	88.4	82.4	1	72.0-136			7.03	20
Chlorobenzene	5.00	0.500	4.87	4.68	97.4	93.6	1	82.0-118			3.98	20
Chlorodibromomethane	5.00	0.500	5.21	5.12	104	102	1	74.0-126			1.74	20
Chloroethane	5.00	2.00	4.92	4.89	98.4	97.8	1	60.0-138			0.612	20
2-Chloroethyl vinyl ether	25.0	25.0	25.0	25.0	0.000	0.000	1	51.0-139	J6 U	J6 U	0.000	20
Chloroform	5.00	2.00	5.35	5.01	107	100	1	79.0-124			6.56	20
Chloromethane	5.00	2.00	4.74	4.59	94.8	91.8	1	50.0-139			3.22	20
2-Chlorotoluene	5.00	0.500	5.56	5.38	111	108	1	79.0-122			3.29	20
4-Chlorotoluene	5.00	0.500	5.48	5.39	110	108	1	78.0-122			1.66	20
1,2-Dibromoethane	5.00	0.500	4.71	4.62	94.2	92.4	1	77.0-121			1.93	20
1,2-Dibromo-3-Chloropropane	5.00	2.00	4.44	4.11	88.8	82.2	1	62.0-128			7.72	20
Dibromomethane	5.00	0.500	5.21	4.84	104	96.8	1	79.0-123			7.36	20
1,2-Dichlorobenzene	5.00	0.500	4.98	4.90	99.6	98.0	1	80.0-119			1.62	20
1,3-Dichlorobenzene	5.00	0.500	5.17	5.15	103	103	1	80.0-119			0.388	20
1,4-Dichlorobenzene	5.00	0.500	5.23	5.23	105	105	1	79.0-118			0.000	20
Dichlorodifluoromethane	5.00	2.00	5.68	5.37	114	107	1	32.0-152			5.61	20
1,1-Dichloroethane	5.00	32.8	36.2	35.6	68.0	56.0	1	77.0-125	V	V	1.67	20
1,2-Dichloroethane	5.00	0.500	5.10	4.91	102	98.2	1	73.0-128			3.80	20
1,1-Dichloroethene	5.00	0.500	5.93	5.69	119	114	1	71.0-131			4.13	20
cis-1,2-Dichloroethene	5.00	0.500	4.94	4.61	98.8	92.2	1	78.0-123			6.91	20
trans-1,2-Dichloroethene	5.00	0.500	4.95	4.75	99.0	95.0	1	75.0-124			4.12	20
1,2-Dichloropropane	5.00	0.500	4.97	4.67	99.4	93.4	1	78.0-122			6.22	20
1,3-Dichloropropane	5.00	0.500	4.97	4.81	99.4	96.2	1	80.0-119			3.27	20
1,1-Dichloropropene	5.00	0.500	5.44	5.10	109	102	1	79.0-125			6.45	20
cis-1,3-Dichloropropene	5.00	0.500	4.98	4.76	99.6	95.2	1	75.0-124			4.52	20
trans-1,3-Dichloropropene	5.00	0.500	4.75	4.59	95.0	91.8	1	73.0-127			3.43	20
Di-isopropyl ether	5.00	0.500	4.70	4.40	94.0	88.0	1	67.0-128			6.59	20
Ethylbenzene	5.00	0.500	4.91	4.74	98.2	94.8	1	79.0-121			3.52	20
Isopropylbenzene	5.00	0.500	5.05	4.78	101	95.6	1	72.0-131			5.49	20
p-Isopropyltoluene	5.00	0.500	5.44	5.12	109	102	1	77.0-127			6.06	20
2-Butanone (MEK)	25.0	5.84	26.3	27.1	81.8	85.0	1	56.0-143			3.00	20
Methylene Chloride	5.00	2.00	4.76	4.39	95.2	87.8	1	74.0-124			8.09	20
4-Methyl-2-pentanone (MIBK)	25.0	5.00	23.3	22.6	93.2	90.4	1	67.0-130			3.05	20
Methyl tert-butyl ether	5.00	0.500	4.86	4.51	97.2	90.2	1	71.0-124			7.47	20
Naphthalene	5.00	2.00	6.48	5.08	130	102	1	61.0-128	J5	J3	24.2	20
n-Propylbenzene	5.00	0.500	5.66	5.53	113	111	1	76.0-126			2.32	20
Styrene	5.00	0.500	4.46	4.25	89.2	85.0	1	78.0-123			4.82	20
1,1,1,2-Tetrachloroethane	5.00	0.500	4.62	4.48	92.4	89.6	1	78.0-124			3.08	20
1,1,2,2-Tetrachloroethane	5.00	0.500	5.74	5.51	115	110	1	71.0-121			4.09	20

L1667978-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667978-05 10/22/23 19:50 • (MS) R3990613-4 10/22/23 20:56 • (MSD) R3990613-5 10/22/23 21:18

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Tetrachloroethene	5.00	0.600	4.95	4.53	99.0	90.6	1	74.0-129			8.86	20
Toluene	5.00	0.600	5.09	4.87	102	97.4	1	80.0-121			4.42	20
1,2,3-Trichlorobenzene	5.00	0.500	4.67	4.35	93.4	87.0	1	69.0-129			7.10	20
1,2,4-Trichlorobenzene	5.00	1.00	4.62	4.29	92.4	85.8	1	69.0-130			7.41	20
1,2,3-Trimethylbenzene	5.00	0.500	5.18	5.00	104	100	1	82.0-120			3.54	20
1,2,4-Trimethylbenzene	5.00	1.00	5.14	4.89	103	97.8	1	76.0-124			4.99	20
1,3,5-Trimethylbenzene	5.00	0.500	5.28	4.97	106	99.4	1	75.0-124			6.05	20
1,1,1-Trichloroethane	5.00	89.9	86.6	88.9	0.000	0.000	1	74.0-131	V	V	2.62	20
1,1,2-Trichloroethane	5.00	0.500	5.23	5.21	105	104	1	80.0-119			0.383	20
Trichloroethene	5.00	0.500	5.00	4.48	100	89.6	1	79.0-123			11.0	20
Trichlorofluoromethane	5.00	2.00	5.99	5.51	120	110	1	65.0-141			8.35	20
1,1,2-Trichlorotrifluoroethane	5.00	0.500	5.45	5.17	109	103	1	70.0-136			5.27	20
1,2,3-Trichloropropane	5.00	1.00	5.56	5.40	111	108	1	73.0-122			2.92	20
Vinyl chloride	5.00	0.500	4.75	4.68	95.0	93.6	1	58.0-137			1.48	20
Xylenes, Total	15.0	1.50	14.1	13.6	94.0	90.7	1	79.0-121			3.61	20
(S) Toluene-d8					*101*	*102*		*89.0-112*				
(S) 4-Bromofluorobenzene					*96.4*	*96.9*		*85.0-114*				
(S) 1,2-Dichloroethane-d4					*106*	*105*		*81.0-118*				

L1667791-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667791-03 10/22/23 16:11 • (MS) R3990613-6 10/22/23 20:12 • (MSD) R3990613-7 10/22/23 20:34

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	25.0	28.9	28.2	116	113	1	39.0-160			2.45	20
Acrolein	25.0	25.0	31.2	28.9	125	116	1	39.0-155			7.65	20
Acrylonitrile	25.0	5.00	23.0	22.4	92.0	89.6	1	63.0-135			2.64	20
Benzene	5.00	1.28	6.37	6.52	102	105	1	79.0-120			2.33	20
Bromobenzene	5.00	0.500	5.57	5.84	111	117	1	80.0-120			4.73	20
Bromodichloromethane	5.00	0.500	5.43	5.54	109	111	1	79.0-125			2.01	20
Bromoform	5.00	0.500	4.11	4.41	82.2	88.2	1	66.0-130			7.04	20
Bromomethane	5.00	2.00	4.54	4.87	90.8	97.4	1	53.0-141			7.01	20
n-Butylbenzene	5.00	0.500	4.77	5.72	85.4	104	1	75.0-128			18.1	20
sec-Butylbenzene	5.00	0.571	5.42	5.94	97.0	107	1	77.0-126			9.15	20
tert-Butylbenzene	5.00	0.959	6.06	6.55	102	112	1	78.0-124			7.77	20
Carbon tetrachloride	5.00	0.500	5.14	5.39	103	108	1	72.0-136			4.75	20
Chlorobenzene	5.00	0.500	4.56	4.97	91.2	99.4	1	82.0-118			8.60	20
Chlorodibromomethane	5.00	0.500	4.90	5.43	98.0	109	1	74.0-126			10.3	20
Chloroethane	5.00	2.00	4.79	4.89	95.8	97.8	1	60.0-138			2.07	20

L1667791-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667791-03 10/22/23 16:11 • (MS) R3990613-6 10/22/23 20:12 • (MSD) R3990613-7 10/22/23 20:34

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
2-Chloroethyl vinyl ether	25.0	25.0	25.0	23.6	0.000	94.4	1	51.0-139	J6 U	J3	200	20
Chloroform	5.00	2.00	5.41	5.55	108	111	1	79.0-124			2.55	20
Chloromethane	5.00	2.00	4.97	5.07	99.4	101	1	50.0-139			1.99	20
2-Chlorotoluene	5.00	0.500	5.31	5.71	106	114	1	79.0-122			7.26	20
4-Chlorotoluene	5.00	0.500	5.34	5.61	107	112	1	78.0-122			4.93	20
1,2-Dibromoethane	5.00	0.500	4.23	4.76	84.6	95.2	1	77.0-121			11.8	20
1,2-Dibromo-3-Chloropropane	5.00	2.00	4.79	4.90	95.8	98.0	1	62.0-128			2.27	20
Dibromomethane	5.00	0.500	5.15	5.44	103	109	1	79.0-123			5.48	20
1,2-Dichlorobenzene	5.00	0.500	4.96	5.38	99.2	108	1	80.0-119			8.12	20
1,3-Dichlorobenzene	5.00	0.500	4.96	5.48	99.2	110	1	80.0-119			9.96	20
1,4-Dichlorobenzene	5.00	0.500	5.06	5.48	101	110	1	79.0-118			7.97	20
Dichlorodifluoromethane	5.00	2.00	5.93	5.93	119	119	1	32.0-152			0.000	20
1,1-Dichloroethane	5.00	0.500	4.87	5.17	97.4	103	1	77.0-125			5.98	20
1,2-Dichloroethane	5.00	0.500	5.06	5.18	101	104	1	73.0-128			2.34	20
1,1-Dichloroethene	5.00	0.500	5.37	5.47	107	109	1	71.0-131			1.85	20
cis-1,2-Dichloroethene	5.00	11.7	17.1	16.5	108	96.0	1	78.0-123			3.57	20
trans-1,2-Dichloroethene	5.00	0.500	5.06	5.01	101	100	1	75.0-124			0.993	20
1,2-Dichloropropane	5.00	0.500	5.08	5.21	102	104	1	78.0-122			2.53	20
1,3-Dichloropropane	5.00	0.500	4.85	5.08	97.0	102	1	80.0-119			4.63	20
1,1-Dichloropropene	5.00	0.500	5.56	5.74	111	115	1	79.0-125			3.19	20
cis-1,3-Dichloropropene	5.00	0.500	4.87	5.43	97.4	109	1	75.0-124			10.9	20
trans-1,3-Dichloropropene	5.00	0.500	4.48	4.96	89.6	99.2	1	73.0-127			10.2	20
Di-isopropyl ether	5.00	0.500	4.58	4.78	91.6	95.6	1	67.0-128			4.27	20
Ethylbenzene	5.00	6.13	10.6	10.7	89.4	91.4	1	79.0-121			0.939	20
Isopropylbenzene	5.00	8.29	12.2	11.2	78.2	58.2	1	72.0-131		J6	8.55	20
p-Isopropyltoluene	5.00	0.537	5.45	6.09	98.3	111	1	77.0-127			11.1	20
2-Butanone (MEK)	25.0	1.94	24.7	24.2	91.0	89.0	1	56.0-143			2.04	20
Methylene Chloride	5.00	2.00	4.73	4.90	94.6	98.0	1	74.0-124			3.53	20
4-Methyl-2-pentanone (MIBK)	25.0	5.00	21.7	23.4	86.8	93.6	1	67.0-130			7.54	20
Methyl tert-butyl ether	5.00	0.500	4.55	4.85	91.0	97.0	1	71.0-124			6.38	20
Naphthalene	5.00	41.7	47.2	48.6	110	138	1	61.0-128		V	2.92	20
n-Propylbenzene	5.00	2.73	7.96	7.82	105	102	1	76.0-126			1.77	20
Styrene	5.00	0.500	4.27	4.73	85.4	94.6	1	78.0-123			10.2	20
1,1,1,2-Tetrachloroethane	5.00	0.500	4.30	4.81	86.0	96.2	1	78.0-124			11.2	20
1,1,2,2-Tetrachloroethane	5.00	0.500	5.93	5.94	119	119	1	71.0-121			0.168	20
Tetrachloroethene	5.00	0.600	4.61	4.95	92.2	99.0	1	74.0-129			7.11	20
Toluene	5.00	0.600	4.93	5.30	98.6	106	1	80.0-121			7.23	20
1,2,3-Trichlorobenzene	5.00	0.500	4.53	5.11	90.6	102	1	69.0-129			12.0	20
1,2,4-Trichlorobenzene	5.00	1.00	4.48	5.22	89.6	104	1	69.0-130			15.3	20
1,2,3-Trimethylbenzene	5.00	0.171	5.12	5.46	99.0	106	1	82.0-120			6.43	20

L1667791-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1667791-03 10/22/23 16:11 • (MS) R3990613-6 10/22/23 20:12 • (MSD) R3990613-7 10/22/23 20:34

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
1,2,4-Trimethylbenzene	5.00	0.613	5.55	5.92	98.7	106	1	76.0-124			6.45	20
1,3,5-Trimethylbenzene	5.00	0.689	5.62	5.92	98.6	105	1	75.0-124			5.20	20
1,1,1-Trichloroethane	5.00	0.194	5.81	6.23	112	121	1	74.0-131			6.98	20
1,1,2-Trichloroethane	5.00	0.500	5.26	5.60	105	112	1	80.0-119			6.26	20
Trichloroethene	5.00	4.68	9.19	9.40	90.2	94.4	1	79.0-123			2.26	20
Trichlorofluoromethane	5.00	2.00	6.06	5.89	121	118	1	65.0-141			2.85	20
1,1,2-Trichlorotrifluoroethane	5.00	0.500	5.60	5.43	112	109	1	70.0-136			3.08	20
1,2,3-Trichloropropane	5.00	1.00	5.56	5.92	111	118	1	73.0-122			6.27	20
Vinyl chloride	5.00	0.500	5.00	5.02	100	100	1	58.0-137			0.399	20
Xylenes, Total	15.0	3.12	16.4	17.8	88.5	97.9	1	79.0-121			8.19	20
(S) Toluene-d8					*94.9*	*99.6*		*89.0-112*				
(S) 4-Bromofluorobenzene					*95.1*	*97.9*		*85.0-114*				
(S) 1,2-Dichloroethane-d4					*107*	*105*		*81.0-118*				

Method Blank (MB)

(MB) R4033245-3 10/22/23 01:57

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
2,2-Dichloropropane	0.500	U	0.161	0.500	1.00
Hexachloro-1,3-butadiene	0.750	U	0.337	0.750	1.50
1,1,1-Trichloroethane	0.500	U	0.149	0.500	1.00
(S) Toluene-d8	*103*				*89.0-112*
(S) 4-Bromofluorobenzene	*101*				*85.0-114*
(S) 1,2-Dichloroethane-d4	*94.4*				*81.0-118*

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

(LCS) R4033245-1 10/22/23 00:38 • (LCSD) R4033245-2 10/22/23 00:57

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
2,2-Dichloropropane	5.00	5.53	5.27	111	105	60.0-139			4.81	20
Hexachloro-1,3-butadiene	5.00	5.70	5.23	114	105	66.0-134			8.60	20
1,1,1-Trichloroethane	5.00	5.75	5.63	115	113	74.0-131			2.11	20
(S) Toluene-d8				*102*	*101*	*89.0-112*				
(S) 4-Bromofluorobenzene				*101*	*99.5*	*85.0-114*				
(S) 1,2-Dichloroethane-d4				*101*	*100*	*81.0-118*				

Method Blank (MB)

(MB) R4033267-3 10/29/23 19:36

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
2,2-Dichloropropane	0.500	U	0.161	0.500	1.00
Hexachloro-1,3-butadiene	0.750	U	0.337	0.750	1.50
1,1,1-Trichloroethane	0.500	U	0.149	0.500	1.00
(S) Toluene-d8	*105*				*89.0-112*
(S) 4-Bromofluorobenzene	*98.9*				*85.0-114*
(S) 1,2-Dichloroethane-d4	*103*				*81.0-118*

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

(LCS) R4033267-1 10/29/23 17:56 • (LCSD) R4033267-2 10/29/23 18:15

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
2,2-Dichloropropane	5.00	5.22	5.12	104	102	60.0-139			1.93	20
Hexachloro-1,3-butadiene	5.00	4.51	4.56	90.2	91.2	66.0-134			1.10	20
1,1,1-Trichloroethane	5.00	4.83	4.62	96.6	92.4	74.0-131			4.44	20
(S) Toluene-d8				*103*	*102*	*89.0-112*				
(S) 4-Bromofluorobenzene				*98.6*	*99.2*	*85.0-114*				
(S) 1,2-Dichloroethane-d4				*106*	*103*	*81.0-118*				

Method Blank (MB)

(MB) R3992283-1 10/27/23 22:19

Analyte	MB Result ug/l	MB Qualifier	MB DL ug/l	MB LOD ug/l	MB LOQ ug/l
AK102 DRO C10-C25	417	J	170	400	800
(S) o-Terphenyl	*96.5*				*60.0-120*

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

(LCS) R3992283-2 10/27/23 23:00 • (LCSD) R3992283-3 10/27/23 23:20

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
AK102 DRO C10-C25	6000	4910	5390	81.8	89.8	75.0-125			9.32	20
(S) o-Terphenyl				*61.9*	*63.3*	*60.0-120*				

GLOSSARY OF TERMS

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

DL	Detection Limit.
LOD	Limit of Detection.
LOQ	Limit of Quantitation.
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.
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.
C4	The reported concentration is an estimate. The continuing calibration standard associated with this data responded low. Data is likely to show a low bias concerning the result.
C6	The initial calibration verification standard (SSCV) associated with this data responded low.
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.
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.
Q	Sample was prepared and/or analyzed past holding time as defined in the method. Concentrations should be considered minimum values.
U	Below Detectable Limits: Indicates that the analyte was not detected.
V	The sample concentration is too high to evaluate accurate spike recoveries.

ACCREDITATIONS & LOCATIONS

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.

Company Name/Address:
North Wind Site Services, LLC- AK
~~7910 King Street~~ 2525 C ST. Ste 130
~~Anchorage, AK 99518~~ Anchorage, AK 99503

Billing Information:
Accounts Payable
1425 Higham St
Idaho Falls, ID 83402

Report to: North Wind

Email To: rlafata@northwindgrp.com;jill.jones@northwin

Project Description: Port Heiden RRS 21-034

City/State Collected: Port Heiden, AK

Please Circle: PT MT CT ET

Phone: ~~907-277-5488~~ 907-602-3082

Client Project # 060068.001.93.03.01

Lab Project # NORWINDAAK-PORTHEID

Collected by (print): Kristopher Reist

Site/Facility ID #

P.O. # 6-00001098

Collected by (signature):

Immediately Packed on Ice N ___ Y X

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

Quote # NORWINDAAK

Date Results Needed: STANDARD

Analysis / Container / Preservative

Pres Chk	2	1	1	1	3	.	2			
	DODAK102 100ml Amb HCl	DODALK,DODSULFATE 250mlHDPE-NoPres	DODFEICP,DODMNICP 250mlHDPE-HNO3	DODNO2NO3,DODTKN 250mlHDPE-H2SO4	DODV8260 40mlAmb-HCl	DODV8260BTEX 40mlAmb-HCl	DODV8260ULL 40mlAmb HCl			

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs												Remarks	Sample # (lab only)
OTOO1-RRSMW06-101323	GRAB	GW		10-13-23	1230	10	X	X	X	X	X		X						01
OTOO1-BLOMW05-101323	GRAB	GW		10-13-23	1815	10	X	X	X	X	X		X						02
OTOO1-BLOMW07-101323	GRAB	GW		10-13-23	1730	10	X	X	X	X	X		X						03
OTOO1-BLOMW99-101323	GRAB	GW		10-13-23	1740	10	X	X	X	X	X		X						04
OTOO1-BLOMW06-101323	GRAB	GW		10-13-23	1845	10	X	X	X	X	X		X						05
OTOO1-TRIPBLANK-HCL-02	GRAB	GW		10-13-23	1130	3					X		X						06
		GW																	
		GW																	
		GW																	
		GW																	

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

Remarks: COOLER ID "YELLOW"
NPDL # 21-034

PH-10BDH4321 TRC-2352362
CR6-20221V
PH-10BDH4321 TRC-2352362
CR6-20221V
Temp _____
FLOW _____ Other _____

Samples returned via: __UPS __FedEx __Courier _____

Tracking # 6641 8346 5420

Relinquished by : (Signature) — Date: 10-16-23 — Time: 1230
Received by: (Signature) — 10/16/23 1630

Relinquished by : (Signature) — Date: 10/17/23 — Time: 0922
Received by: (Signature) — 10/17/23 10:05

Relinquished by : (Signature) — Date: 10/17/23 — Time: 10:05
Received for lab by: (Signature) — Date: 10/18/23 — Time: 0900

Trip Blank Received: (Yes) / No — HCL / MeoH — TBR
Temp: CORR °C 2.2+0.2=2.2 — Bottles Received: 49
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 1

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 # L1667912
A086

Acctnum: NORWINDAAK
Template: T235099
Prelogin: P1015439
PM: 546 - Jared Starkey
PB: CS 8/1/23
Shipped Via:

APPENDIX F

Mann-Kendall Trend Analysis

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Mann-Kendall Trend Test Analysis

User Selected Options	
Date/Time of Computation	ProUCL 5.2 4/2/2024 1:02:57 PM
From File	PH_ProUCL input file_DRO_2023.xls
Full Precision	OFF
Confidence Coefficient	0.95
Level of Significance	0.05

DRO-066-MW-04

General Statistics

Number of Events Reported (m)	14
Number of Missing Events	5
Number or Reported Events Used	9
Number Values Reported (n)	14
Number Values Missing	5
Number Values Used	9
Minimum	0.018
Maximum	0.504
Mean	0.257
Geometric Mean	0.173
Median	0.274
Standard Deviation	0.179
Coefficient of Variation	0.696

Mann-Kendall Test

M-K Test Value (S)	8
Tabulated p-value	0.238
Standard Deviation of S	9.592
Standardized Value of S	0.73
Approximate p-value	0.233

Insufficient evidence to identify a significant trend at the specified level of significance.

DRO-066-MW-05

General Statistics

Number of Events Reported (m)	14
Number of Missing Events	1
Number or Reported Events Used	13
Number Values Reported (n)	14
Number Values Missing	1
Number Values Used	13
Minimum	1.29
Maximum	4.5
Mean	2.268
Geometric Mean	2.104
Median	2.02
Standard Deviation	0.974
Coefficient of Variation	0.43

Mann-Kendall Test

M-K Test Value (S)	-16
Tabulated p-value	0.184
Standard Deviation of S	16.39
Standardized Value of S	-0.915
Approximate p-value	0.18

Insufficient evidence to identify a significant trend at the specified level of significance.

DRO-066-MW-06

General Statistics

Number of Events Reported (m)	10
Number of Missing Events	1
Number or Reported Events Used	9
Number Values Reported (n)	10
Number Values Missing	1
Number Values Used	9
Minimum	0.019
Maximum	0.4
Mean	0.148
Geometric Mean	0.0913
Median	0.08
Standard Deviation	0.151
Coefficient of Variation	1.016

Mann-Kendall Test

M-K Test Value (S)	24
Tabulated p-value	0.006
Standard Deviation of S	9.592
Standardized Value of S	2.398
Approximate p-value	0.00824

Statistically significant evidence of an increasing trend at the specified level of significance.

DRO-066-MW-07

General Statistics

Number of Events Reported (m)	10
Number of Missing Events	3
Number or Reported Events Used	7
Number Values Reported (n)	10
Number Values Missing	3
Number Values Used	7
Minimum	0.024
Maximum	0.42
Mean	0.15
Geometric Mean	0.08
Median	0.056
Standard Deviation	0.179
Coefficient of Variation	1.189

Mann-Kendall Test

M-K Test Value (S)	13
Tabulated p-value	0.035
Standard Deviation of S	6.658
Standardized Value of S	1.802
Approximate p-value	0.0358

Statistically significant evidence of an increasing trend at the specified level of significance.

DRO-215-MW-08

General Statistics

Number of Events Reported (m)	14
Number of Missing Events	3
Number or Reported Events Used	11
Number Values Reported (n)	14
Number Values Missing	3
Number Values Used	11
Minimum	0.019
Maximum	4.18
Mean	0.582
Geometric Mean	0.141
Median	0.08
Standard Deviation	1.24
Coefficient of Variation	2.128

Mann-Kendall Test

M-K Test Value (S)	6
Tabulated p-value	0.324
Standard Deviation of S	12.7
Standardized Value of S	0.394
Approximate p-value	0.347

Insufficient evidence to identify a significant trend at the specified level of significance.

DRO-215-MW-09

General Statistics

Number of Events Reported (m)	14
Number of Missing Events	1
Number or Reported Events Used	13
Number Values Reported (n)	14
Number Values Missing	1
Number Values Used	13
Minimum	0.4
Maximum	14
Mean	6.971
Geometric Mean	4.772
Median	6.8
Standard Deviation	4.571
Coefficient of Variation	0.656

Mann-Kendall Test

M-K Test Value (S)	-41
Tabulated p-value	0.007
Standard Deviation of S	16.36
Standardized Value of S	-2.445
Approximate p-value	0.00724

Statistically significant evidence of a decreasing trend at the specified level of significance.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
62	**DRO-215-MW-12**						**DRO-BLO-MW-01**						**DRO-BLO-MW-05**				
63																	
64	**General Statistics**						**General Statistics**						**General Statistics**				
65	Number of Events Reported (m)				7		Number of Events Reported (m)				13		Number of Events Reported (m)				12
66	Number of Missing Events				0		Number of Missing Events				2		Number of Missing Events				2
67	Number or Reported Events Used				7		Number or Reported Events Used				11		Number or Reported Events Used				10
68	Number Values Reported (n)				7		Number Values Reported (n)				13		Number Values Reported (n)				12
69	Minimum				0.075		Number Values Missing				2		Number Values Missing				2
70	Maximum				0.475		Number Values Used				11		Number Values Used				10
71	Mean				0.242		Minimum				7.86		Minimum				0.0247
72	Geometric Mean				0.188		Maximum				16002		Maximum				0.499
73	Median				0.15		Mean				3012		Mean				0.146
74	Standard Deviation				0.172		Geometric Mean				104.4		Geometric Mean				0.079
75	Coefficient of Variation				0.71		Median				26.5		Median				0.0595
76							Standard Deviation				6335		Standard Deviation				0.174
77	**Mann-Kendall Test**						Coefficient of Variation				2.103		Coefficient of Variation				1.191
78	M-K Test Value (S)				7												
79	Tabulated p-value				0.191		**Mann-Kendall Test**						**Mann-Kendall Test**				
80	Standard Deviation of S				6.658		M-K Test Value (S)				-39		M-K Test Value (S)				2
81	Standardized Value of S				0.901		Tabulated p-value				0.001		Tabulated p-value				0.431
82	Approximate p-value				0.184		Standard Deviation of S				12.85		Standard Deviation of S				11.14
83							Standardized Value of S				-2.958		Standardized Value of S				0.0898
84	**Insufficient evidence to identify a significant**						Approximate p-value				0.00155		Approximate p-value				0.464
85	**trend at the specified level of significance.**																
86							**Statistically significant evidence of a decreasing**						**Insufficient evidence to identify a significant**				
87							**trend at the specified level of significance.**						**trend at the specified level of significance.**				
88																	
89	**DRO-BLO-MW-06**						**DRO-BLO-MW-07**						**DRO-DSA-MW01**				
90																	
91	**General Statistics**						**General Statistics**						**General Statistics**				
92	Number of Events Reported (m)				12		Number of Events Reported (m)				9		Number of Events Reported (m)				6
93	Number of Missing Events				3		Number of Missing Events				2		Number of Missing Events				0
94	Number or Reported Events Used				9		Number or Reported Events Used				7		Number or Reported Events Used				6
95	Number Values Reported (n)				12		Number Values Reported (n)				9		Number Values Reported (n)				6
96	Number Values Missing				3		Number Values Missing				2		Minimum				0.05
97	Number Values Used				9		Number Values Used				7		Maximum				0.459
98	Minimum				0.0247		Minimum				0.0247		Mean				0.307
99	Maximum				0.883		Maximum				0.431		Geometric Mean				0.235
100	Mean				0.214		Mean				0.177		Median				0.4
101	Geometric Mean				0.0982		Geometric Mean				0.104		Standard Deviation				0.178
102	Median				0.074		Median				0.084		Coefficient of Variation				0.58
103	Standard Deviation				0.289		Standard Deviation				0.173						
104	Coefficient of Variation				1.348		Coefficient of Variation				0.976		**Mann-Kendall Test**				
105													M-K Test Value (S)				6
106	**Mann-Kendall Test**						**Mann-Kendall Test**						Tabulated p-value				0.136
107	M-K Test Value (S)				-5		M-K Test Value (S)				6		Standard Deviation of S				5.228
108	Tabulated p-value				0.381		Tabulated p-value				0.191		Standardized Value of S				0.956
109	Standard Deviation of S				9.539		Standard Deviation of S				6.583		Approximate p-value				0.169
110	Standardized Value of S				-0.419		Standardized Value of S				0.76						
111	Approximate p-value				0.337		Approximate p-value				0.224		**Insufficient evidence to identify a significant**				
112													**trend at the specified level of significance.**				
113	**Insufficient evidence to identify a significant**						**Insufficient evidence to identify a significant**										
114	**trend at the specified level of significance.**						**trend at the specified level of significance.**										

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
115	**DRO-DSA-MW02**						**DRO-DS-MW05**						**DRO-DSA-MW06**				
116																	
117	**General Statistics**						**General Statistics**						**General Statistics**				
118	Number of Events Reported (m)				12		Number of Events Reported (m)				5		Number of Events Reported (m)				5
119	Number of Missing Events				3		Number of Missing Events				0		Number of Missing Events				0
120	Number or Reported Events Used				9		Number or Reported Events Used				5		Number or Reported Events Used				5
121	Number Values Reported (n)				12		Number Values Reported (n)				5		Number Values Reported (n)				5
122	Number Values Missing				3		Minimum				0.059		Minimum				0.0665
123	Number Values Used				9		Maximum				0.542		Maximum				0.4
124	Minimum				0.0247		Mean				0.306		Mean				0.266
125	Maximum				0.479		Geometric Mean				0.226		Geometric Mean				0.211
126	Mean				0.193		Median				0.4		Median				0.355
127	Geometric Mean				0.102		Standard Deviation				0.21		Standard Deviation				0.164
128	Median				0.07		Coefficient of Variation				0.687		Coefficient of Variation				0.617
129	Standard Deviation				0.197												
130	Coefficient of Variation				1.022		**Mann-Kendall Test**						**Mann-Kendall Test**				
131							M-K Test Value (S)				4		M-K Test Value (S)				1
132	**Mann-Kendall Test**						Tabulated p-value				0.242		Tabulated p-value				0.592
133	M-K Test Value (S)				5		Standard Deviation of S				4.082		Standard Deviation of S				3.958
134	Tabulated p-value				0.381		Standardized Value of S				0.735		Standardized Value of S				0
135	Standard Deviation of S				9.539		Approximate p-value				0.231		Approximate p-value				0.5
136	Standardized Value of S				0.419												
137	Approximate p-value				0.337		**Insufficient evidence to identify a significant**						**Insufficient evidence to identify a significant**				
138							**trend at the specified level of significance.**						**trend at the specified level of significance.**				
139	**Insufficient evidence to identify a significant**																
140	**trend at the specified level of significance.**																
141																	
142	**DRO-DS-MW07**						**DRO-GLO-MW-04**						**DRO-RRS-MW05**				
143																	
144	**General Statistics**						**General Statistics**						**General Statistics**				
145	Number of Events Reported (m)				5		Number of Events Reported (m)				5		Number of Events Reported (m)				5
146	Number of Missing Events				0		Number of Missing Events				0		Number of Missing Events				0
147	Number or Reported Events Used				5		Number or Reported Events Used				5		Number or Reported Events Used				5
148	Number Values Reported (n)				5		Number Values Reported (n)				5		Number Values Reported (n)				5
149	Minimum				0.0936		Minimum				0		Minimum				0.0958
150	Maximum				0.509		Maximum				0.406		Maximum				0.509
151	Mean				0.307		Mean				0.22		Mean				0.307
152	Geometric Mean				0.245		Geometric Mean				0		Geometric Mean				0.246
153	Median				0.4		Median				0.183		Median				0.4
154	Standard Deviation				0.191		Standard Deviation				0.179		Standard Deviation				0.191
155	Coefficient of Variation				0.625		Coefficient of Variation				0.817		Coefficient of Variation				0.622
156																	
157	**Mann-Kendall Test**						**Mann-Kendall Test**						**Mann-Kendall Test**				
158	M-K Test Value (S)				4		M-K Test Value (S)				2		M-K Test Value (S)				4
159	Tabulated p-value				0.242		Tabulated p-value				0.408		Tabulated p-value				0.242
160	Standard Deviation of S				4.082		Standard Deviation of S				4.082		Standard Deviation of S				4.082
161	Standardized Value of S				0.735		Standardized Value of S				0.245		Standardized Value of S				0.735
162	Approximate p-value				0.231		Approximate p-value				0.403		Approximate p-value				0.231
163																	
164	**Insufficient evidence to identify a significant**						**Insufficient evidence to identify a significant**						**Insufficient evidence to identify a significant**				
165	**trend at the specified level of significance.**						**trend at the specified level of significance.**						**trend at the specified level of significance.**				

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
166																	
167	**DRO-RRS-MW06**																
168																	
169	**General Statistics**																
170	Number of Events Reported (m)				5												
171	Number of Missing Events				0												
172	Number or Reported Events Used				5												
173	Number Values Reported (n)				5												
174	Minimum				0.0567												
175	Maximum				0.437												
176	Mean				0.238												
177	Geometric Mean				0.182												
178	Median				0.185												
179	Standard Deviation				0.172												
180	Coefficient of Variation				0.722												
181																	
182	**Mann-Kendall Test**																
183	M-K Test Value (S)				6												
184	Tabulated p-value				0.117												
185	Standard Deviation of S				4.082												
186	Standardized Value of S				1.225												
187	Approximate p-value				0.11												
188																	
189	**Insufficient evidence to identify a significant**																
190	**trend at the specified level of significance.**																

Mann-Kendall Trend Test Analysis

User Selected Options	
Date/Time of Computation	ProUCL 5.2 4/2/2024 1:20:34 PM
From File	PH_ProUCL input file_PCE_2023.xls
Full Precision	OFF
Confidence Coefficient	0.95
Level of Significance	0.05

PCE-blo-mw01

General Statistics

Number of Events Reported (m)	5
Number of Missing Events	0
Number or Reported Events Used	5
Number Values Reported (n)	5
Minimum	0.165
Maximum	990
Mean	198.3
Geometric Mean	1.501
Median	0.306
Standard Deviation	442.6
Coefficient of Variation	2.232

Mann-Kendall Test

M-K Test Value (S)	-4
Tabulated p-value	0.242
Standard Deviation of S	4.082
Standardized Value of S	-0.735
Approximate p-value	0.231

Insufficient evidence to identify a significant trend at the specified level of significance.

PCE-blo-mw05

General Statistics

Number of Events Reported (m)	5
Number of Missing Events	0
Number or Reported Events Used	5
Number Values Reported (n)	5
Minimum	0.05
Maximum	0.6
Mean	0.265
Geometric Mean	0.183
Median	0.3
Standard Deviation	0.222
Coefficient of Variation	0.837

Mann-Kendall Test

M-K Test Value (S)	3
Tabulated p-value	0.408
Standard Deviation of S	3.958
Standardized Value of S	0.505
Approximate p-value	0.307

Insufficient evidence to identify a significant trend at the specified level of significance.

PCE-blo-mw06

General Statistics

Number of Events Reported (m)	5
Number of Missing Events	0
Number or Reported Events Used	5
Number Values Reported (n)	5
Minimum	0.054
Maximum	0.6
Mean	0.266
Geometric Mean	0.185
Median	0.3
Standard Deviation	0.221
Coefficient of Variation	0.831

Mann-Kendall Test

M-K Test Value (S)	3
Tabulated p-value	0.408
Standard Deviation of S	3.958
Standardized Value of S	0.505
Approximate p-value	0.307

Insufficient evidence to identify a significant trend at the specified level of significance.

PCE-blo-mw07

General Statistics

Number of Events Reported (m)	5
Number of Missing Events	0
Number or Reported Events Used	5
Number Values Reported (n)	5
Minimum	0.075
Maximum	460
Mean	92.25
Geometric Mean	1.126
Median	0.3
Standard Deviation	205.6
Coefficient of Variation	2.228

Mann-Kendall Test

M-K Test Value (S)	-4
Tabulated p-value	0.242
Standard Deviation of S	4.082
Standardized Value of S	-0.735
Approximate p-value	0.231

Insufficient evidence to identify a significant trend at the specified level of significance.

PCE-dsa-mw01

General Statistics

Number of Events Reported (m)	5
Number of Missing Events	0
Number or Reported Events Used	5
Number Values Reported (n)	5
Minimum	0.3
Maximum	32
Mean	7.432
Geometric Mean	1.469
Median	0.6
Standard Deviation	13.82
Coefficient of Variation	1.86

Mann-Kendall Test

M-K Test Value (S)	1
Tabulated p-value	0.592
Standard Deviation of S	3.958
Standardized Value of S	0
Approximate p-value	0.5

Insufficient evidence to identify a significant trend at the specified level of significance.

PCE-dsa-mw02

General Statistics

Number of Events Reported (m)	5
Number of Missing Events	0
Number or Reported Events Used	5
Number Values Reported (n)	5
Minimum	0.075
Maximum	224
Mean	45.07
Geometric Mean	1.034
Median	0.39
Standard Deviation	100
Coefficient of Variation	2.219

Mann-Kendall Test

M-K Test Value (S)	-4
Tabulated p-value	0.242
Standard Deviation of S	4.082
Standardized Value of S	-0.735
Approximate p-value	0.231

Insufficient evidence to identify a significant trend at the specified level of significance.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
58																	
59	**PCE-dsa-mw05**						**PCE-dsa-mw06**						**PCE-dsa-mw07**				
60																	
61	**General Statistics**						**General Statistics**						**General Statistics**				
62	Number of Events Reported (m)				5		Number of Events Reported (m)				5		Number of Events Reported (m)				5
63	Number of Missing Events				0		Number of Missing Events				0		Number of Missing Events				0
64	Number or Reported Events Used				5		Number or Reported Events Used				5		Number or Reported Events Used				5
65	Number Values Reported (n)				5		Number Values Reported (n)				5		Number Values Reported (n)				5
66	Minimum				0.075		Minimum				0.131		Minimum				0.075
67	Maximum				0.6		Maximum				6.2		Maximum				0.6
68	Mean				0.281		Mean				2.21		Mean				0.272
69	Geometric Mean				0.221		Geometric Mean				0.869		Geometric Mean				0.202
70	Median				0.3		Median				0.521		Median				0.3
71	Standard Deviation				0.205		Standard Deviation				2.72		Standard Deviation				0.214
72	Coefficient of Variation				0.729		Coefficient of Variation				1.231		Coefficient of Variation				0.789
73																	
74	**Mann-Kendall Test**						**Mann-Kendall Test**						**Mann-Kendall Test**				
75	M-K Test Value (S)				1		M-K Test Value (S)				-8		M-K Test Value (S)				1
76	Tabulated p-value				0.592		Tabulated p-value				0.042		Tabulated p-value				0.592
77	Standard Deviation of S				3.958		Standard Deviation of S				4.082		Standard Deviation of S				3.958
78	Standardized Value of S				0		Standardized Value of S				-1.715		Standardized Value of S				0
79	Approximate p-value				0.5		Approximate p-value				0.0432		Approximate p-value				0.5
80																	
81	**Insufficient evidence to identify a significant**						**Statistically significant evidence of a decreasing**						**Insufficient evidence to identify a significant**				
82	**trend at the specified level of significance.**						**trend at the specified level of significance.**						**trend at the specified level of significance.**				
83																	
84	**PCE-glo-mw04**						**PCE-rrs-mw05**						**PCE-rrs-mw06**				
85																	
86	**General Statistics**						**General Statistics**						**General Statistics**				
87	Number of Events Reported (m)				5		Number of Events Reported (m)				5		Number of Events Reported (m)				5
88	Number of Missing Events				0		Number of Missing Events				0		Number of Missing Events				0
89	Number or Reported Events Used				5		Number or Reported Events Used				5		Number or Reported Events Used				5
90	Number Values Reported (n)				5		Number Values Reported (n)				5		Number Values Reported (n)				5
91	Minimum				0.075		Minimum				0.049		Minimum				0.3
92	Maximum				0.6		Maximum				0.6		Maximum				0.6
93	Mean				0.272		Mean				0.265		Mean				0.46
94	Geometric Mean				0.204		Geometric Mean				0.182		Geometric Mean				0.438
95	Median				0.3		Median				0.3		Median				0.5
96	Standard Deviation				0.213		Standard Deviation				0.222		Standard Deviation				0.152
97	Coefficient of Variation				0.783		Coefficient of Variation				0.839		Coefficient of Variation				0.33
98																	
99	**Mann-Kendall Test**						**Mann-Kendall Test**						**Mann-Kendall Test**				
100	M-K Test Value (S)				1		M-K Test Value (S)				3		M-K Test Value (S)				4
101	Tabulated p-value				0.592		Tabulated p-value				0.408		Tabulated p-value				0.242
102	Standard Deviation of S				3.958		Standard Deviation of S				3.958		Standard Deviation of S				3.83
103	Standardized Value of S				0		Standardized Value of S				0.505		Standardized Value of S				0.783
104	Approximate p-value				0.5		Approximate p-value				0.307		Approximate p-value				0.217
105																	
106	**Insufficient evidence to identify a significant**						**Insufficient evidence to identify a significant**						**Insufficient evidence to identify a significant**				
107	**trend at the specified level of significance.**						**trend at the specified level of significance.**						**trend at the specified level of significance.**				

Mann-Kendall Trend Test Analysis

User Selected Options	
Date/Time of Computation	ProUCL 5.2 4/2/2024 1:27:54 PM
From File	PH_ProUCL input file_TCE_2023.xls
Full Precision	OFF
Confidence Coefficient	0.95
Level of Significance	0.05

TCE-blo-mw-01

General Statistics

Number of Events Reported (m)	13
Number of Missing Events	2
Number or Reported Events Used	11
Number Values Reported (n)	13
Number Values Missing	2
Number Values Used	11
Minimum	3.1
Maximum	4170
Mean	385.1
Geometric Mean	9.75
Median	5.3
Standard Deviation	1255
Coefficient of Variation	3.26

Mann-Kendall Test

M-K Test Value (S)	8
Tabulated p-value	0.271
Standard Deviation of S	12.81
Standardized Value of S	0.547
Approximate p-value	0.292

Insufficient evidence to identify a significant trend at the specified level of significance.

TCE-blo-mw-05

General Statistics

Number of Events Reported (m)	9
Number of Missing Events	1
Number or Reported Events Used	8
Number Values Reported (n)	9
Number Values Missing	1
Number Values Used	8
Minimum	0.032
Maximum	0.5
Mean	0.209
Geometric Mean	0.15
Median	0.175
Standard Deviation	0.163
Coefficient of Variation	0.781

Mann-Kendall Test

M-K Test Value (S)	7
Tabulated p-value	0.274
Standard Deviation of S	8.021
Standardized Value of S	0.748
Approximate p-value	0.227

Insufficient evidence to identify a significant trend at the specified level of significance.

TCE-blo-mw-06

General Statistics

Number of Events Reported (m)	7
Number of Missing Events	0
Number or Reported Events Used	7
Number Values Reported (n)	7
Minimum	0.009
Maximum	0.88
Mean	0.286
Geometric Mean	0.124
Median	0.19
Standard Deviation	0.322
Coefficient of Variation	1.126

Mann-Kendall Test

M-K Test Value (S)	-2
Tabulated p-value	0.386
Standard Deviation of S	6.583
Standardized Value of S	-0.152
Approximate p-value	0.44

Insufficient evidence to identify a significant trend at the specified level of significance.

TCE-blo-mw-07

General Statistics

Number of Events Reported (m)	5
Number of Missing Events	0
Number or Reported Events Used	5
Number Values Reported (n)	5
Minimum	0.19
Maximum	0.771
Mean	0.466
Geometric Mean	0.424
Median	0.47
Standard Deviation	0.209
Coefficient of Variation	0.448

Mann-Kendall Test

M-K Test Value (S)	-2
Tabulated p-value	0.408
Standard Deviation of S	4.082
Standardized Value of S	-0.245
Approximate p-value	0.403

Insufficient evidence to identify a significant trend at the specified level of significance.

TCE-dsa-mw01

General Statistics

Number of Events Reported (m)	13
Number of Missing Events	0
Number or Reported Events Used	13
Number Values Reported (n)	13
Minimum	0.47
Maximum	479
Mean	44.1
Geometric Mean	8.806
Median	7.7
Standard Deviation	130.7
Coefficient of Variation	2.964

Mann-Kendall Test

M-K Test Value (S)	-12
Tabulated p-value	0.255
Standard Deviation of S	16.39
Standardized Value of S	-0.671
Approximate p-value	0.251

Insufficient evidence to identify a significant trend at the specified level of significance.

TCE-dsa-mw02

General Statistics

Number of Events Reported (m)	13
Number of Missing Events	0
Number or Reported Events Used	13
Number Values Reported (n)	13
Minimum	330
Maximum	690
Mean	456.9
Geometric Mean	449.2
Median	440
Standard Deviation	91.39
Coefficient of Variation	0.2

Mann-Kendall Test

M-K Test Value (S)	-49
Tabulated p-value	0.001
Standard Deviation of S	16.36
Standardized Value of S	-2.934
Approximate p-value	0.00167

Statistically significant evidence of a decreasing trend at the specified level of significance.

TCE-dsa-mw05

General Statistics

Number of Events Reported (m)	10
Number of Missing Events	0
Number or Reported Events Used	10
Number Values Reported (n)	10
Minimum	0.58
Maximum	5.25
Mean	2.831
Geometric Mean	2.418
Median	2.85
Standard Deviation	1.426
Coefficient of Variation	0.504

Mann-Kendall Test

M-K Test Value (S)	1
Tabulated p-value	0.5
Standard Deviation of S	11.18
Standardized Value of S	0
Approximate p-value	0.5

Insufficient evidence to identify a significant trend at the specified level of significance.

TCE-dsa-mw06

General Statistics

Number of Events Reported (m)	10
Number of Missing Events	3
Number or Reported Events Used	7
Number Values Reported (n)	10
Number Values Missing	3
Number Values Used	7
Minimum	0.05
Maximum	0.54
Mean	0.245
Geometric Mean	0.184
Median	0.19
Standard Deviation	0.195
Coefficient of Variation	0.794

Mann-Kendall Test

M-K Test Value (S)	-4
Tabulated p-value	0.281
Standard Deviation of S	6.583
Standardized Value of S	-0.456
Approximate p-value	0.324

Insufficient evidence to identify a significant trend at the specified level of significance.

TCE-dsa-mw07

General Statistics

Number of Events Reported (m)	6
Number of Missing Events	0
Number or Reported Events Used	6
Number Values Reported (n)	6
Minimum	0.037
Maximum	44.7
Mean	7.595
Geometric Mean	0.298
Median	0.143
Standard Deviation	18.18
Coefficient of Variation	2.394

Mann-Kendall Test

M-K Test Value (S)	-3
Tabulated p-value	0.36
Standard Deviation of S	5.323
Standardized Value of S	-0.376
Approximate p-value	0.354

Insufficient evidence to identify a significant trend at the specified level of significance.

TCE-glo-mw04

General Statistics

Number of Events Reported (m)	5
Number of Missing Events	0
Number or Reported Events Used	5
Number Values Reported (n)	5
Minimum	0.04
Maximum	0.5
Mean	0.203
Geometric Mean	0.147
Median	0.19
Standard Deviation	0.178
Coefficient of Variation	0.879

Mann-Kendall Test

M-K Test Value (S)	1
Tabulated p-value	0.592
Standard Deviation of S	3.958
Standardized Value of S	0
Approximate p-value	0.5

Insufficient evidence to identify a significant trend at the specified level of significance.

TCE-rrs-mw05

General Statistics

Number of Events Reported (m)	6
Number of Missing Events	0
Number or Reported Events Used	6
Number Values Reported (n)	6
Minimum	0.009
Maximum	0.5
Mean	0.16
Geometric Mean	0.0863
Median	0.11
Standard Deviation	0.178
Coefficient of Variation	1.115

Mann-Kendall Test

M-K Test Value (S)	4
Tabulated p-value	0.235
Standard Deviation of S	5.228
Standardized Value of S	0.574
Approximate p-value	0.283

Insufficient evidence to identify a significant trend at the specified level of significance.

TCE-rrs-mw06

General Statistics

Number of Events Reported (m)	5
Number of Missing Events	0
Number or Reported Events Used	5
Number Values Reported (n)	5
Minimum	0.009
Maximum	0.5
Mean	0.186
Geometric Mean	0.0917
Median	0.19
Standard Deviation	0.194
Coefficient of Variation	1.047

Mann-Kendall Test

M-K Test Value (S)	3
Tabulated p-value	0.408
Standard Deviation of S	3.958
Standardized Value of S	0.505
Approximate p-value	0.307

Insufficient evidence to identify a significant trend at the specified level of significance.

Mann-Kendall Trend Test Analysis

User Selected Options	
Date/Time of Computation	ProUCL 5.2 4/2/2024 3:28:49 PM
From File	PH_ProUCL input file_Mn_2023.xls
Full Precision	OFF
Confidence Coefficient	0.95
Level of Significance	0.05

Mn-blo-mw01

General Statistics

Number of Events Reported (m)	8
Number of Missing Events	1
Number or Reported Events Used	7
Number Values Reported (n)	8
Number Values Missing	1
Number Values Used	7
Minimum	9400
Maximum	97000
Mean	24486
Geometric Mean	16480
Median	12600
Standard Deviation	32028
Coefficient of Variation	1.308

Mann-Kendall Test

M-K Test Value (S)	7
Tabulated p-value	0.191
Standard Deviation of S	6.658
Standardized Value of S	0.901
Approximate p-value	0.184

Insufficient evidence to identify a significant trend at the specified level of significance.

Mn-blo-mw05

General Statistics

Number of Events Reported (m)	8
Number of Missing Events	0
Number or Reported Events Used	8
Number Values Reported (n)	8
Minimum	13
Maximum	748
Mean	251
Geometric Mean	136.3
Median	223.5
Standard Deviation	236.5
Coefficient of Variation	0.942

Mann-Kendall Test

M-K Test Value (S)	10
Tabulated p-value	0.138
Standard Deviation of S	8.083
Standardized Value of S	1.113
Approximate p-value	0.133

Insufficient evidence to identify a significant trend at the specified level of significance.

Mn-blo-mw06

General Statistics

Number of Events Reported (m)	8
Number of Missing Events	0
Number or Reported Events Used	8
Number Values Reported (n)	8
Minimum	31
Maximum	622
Mean	262.8
Geometric Mean	166.5
Median	221
Standard Deviation	216.3
Coefficient of Variation	0.823

Mann-Kendall Test

M-K Test Value (S)	7
Tabulated p-value	0.274
Standard Deviation of S	8.021
Standardized Value of S	0.748
Approximate p-value	0.227

Insufficient evidence to identify a significant trend at the specified level of significance.

Mn-blo-mw07

General Statistics

Number of Events Reported (m)	8
Number of Missing Events	0
Number or Reported Events Used	8
Number Values Reported (n)	8
Minimum	18.8
Maximum	1030
Mean	320.2
Geometric Mean	134
Median	164.5
Standard Deviation	394.1
Coefficient of Variation	1.231

Mann-Kendall Test

M-K Test Value (S)	0
Tabulated p-value	0.548
Standard Deviation of S	8.083
Standardized Value of S	N/A
Approximate p-value	N/A

Insufficient evidence to identify a significant trend at the specified level of significance.

Mn-dsa-mw01

General Statistics

Number of Events Reported (m)	8
Number of Missing Events	0
Number or Reported Events Used	8
Number Values Reported (n)	8
Minimum	1.42
Maximum	15
Mean	5.865
Geometric Mean	4.055
Median	4.59
Standard Deviation	4.972
Coefficient of Variation	0.848

Mann-Kendall Test

M-K Test Value (S)	-10
Tabulated p-value	0.138
Standard Deviation of S	8.083
Standardized Value of S	-1.113
Approximate p-value	0.133

Insufficient evidence to identify a significant trend at the specified level of significance.

Mn-dsa-mw02

General Statistics

Number of Events Reported (m)	8
Number of Missing Events	0
Number or Reported Events Used	8
Number Values Reported (n)	8
Minimum	29
Maximum	5300
Mean	985.5
Geometric Mean	197.4
Median	107.6
Standard Deviation	1813
Coefficient of Variation	1.84

Mann-Kendall Test

M-K Test Value (S)	2
Tabulated p-value	0.452
Standard Deviation of S	8.083
Standardized Value of S	0.124
Approximate p-value	0.451

Insufficient evidence to identify a significant trend at the specified level of significance.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
60	**Mn-dsa-mw05**						**Mn-dsa-mw06**						**Mn-dsa-mw07**				
61																	
62	**General Statistics**						**General Statistics**						**General Statistics**				
63	Number of Events Reported (m)				8		Number of Events Reported (m)				8		Number of Events Reported (m)				8
64	Number of Missing Events				0		Number of Missing Events				0		Number of Missing Events				0
65	Number or Reported Events Used				8		Number or Reported Events Used				8		Number or Reported Events Used				8
66	Number Values Reported (n)				8		Number Values Reported (n)				8		Number Values Reported (n)				8
67	Minimum				61		Minimum				211		Minimum				7.62
68	Maximum				217		Maximum				510		Maximum				2000
69	Mean				109		Mean				416.5		Mean				412.1
70	Geometric Mean				98.32		Geometric Mean				403.4		Geometric Mean				97.41
71	Median				92.15		Median				458.5		Median				66.45
72	Standard Deviation				55.34		Standard Deviation				98.05		Standard Deviation				706.8
73	Coefficient of Variation				0.508		Coefficient of Variation				0.235		Coefficient of Variation				1.715
74																	
75	**Mann-Kendall Test**						**Mann-Kendall Test**						**Mann-Kendall Test**				
76	M-K Test Value (S)				-8		M-K Test Value (S)				0		M-K Test Value (S)				-10
77	Tabulated p-value				0.119		Tabulated p-value				0.548		Tabulated p-value				0.138
78	Standard Deviation of S				8.083		Standard Deviation of S				8.083		Standard Deviation of S				8.083
79	Standardized Value of S				-0.866		Standardized Value of S				N/A		Standardized Value of S				-1.113
80	Approximate p-value				0.193		Approximate p-value				N/A		Approximate p-value				0.133
81																	
82	**Insufficient evidence to identify a significant**						**Insufficient evidence to identify a significant**						**Insufficient evidence to identify a significant**				
83	**trend at the specified level of significance.**						**trend at the specified level of significance.**						**trend at the specified level of significance.**				
84																	
85	**Mn-glo-mw04**						**Mn-rrs-mw05**						**Mn-rrs-mw06**				
86																	
87	**General Statistics**						**General Statistics**						**General Statistics**				
88	Number of Events Reported (m)				8		Number of Events Reported (m)				8		Number of Events Reported (m)				8
89	Number of Missing Events				0		Number of Missing Events				0		Number of Missing Events				0
90	Number or Reported Events Used				8		Number or Reported Events Used				8		Number or Reported Events Used				8
91	Number Values Reported (n)				8		Number Values Reported (n)				8		Number Values Reported (n)				8
92	Minimum				3.2		Minimum				10.6		Minimum				2
93	Maximum				710		Maximum				99.5		Maximum				140
94	Mean				119.8		Mean				43.36		Mean				23.59
95	Geometric Mean				36.19		Geometric Mean				31.94		Geometric Mean				8.695
96	Median				46.75		Median				30.65		Median				8.075
97	Standard Deviation				239.5		Standard Deviation				34.26		Standard Deviation				47.17
98	Coefficient of Variation				1.998		Coefficient of Variation				0.79		Coefficient of Variation				2
99																	
100	**Mann-Kendall Test**						**Mann-Kendall Test**						**Mann-Kendall Test**				
101	M-K Test Value (S)				-8		M-K Test Value (S)				-10		M-K Test Value (S)				-10
102	Tabulated p-value				0.119		Tabulated p-value				0.138		Tabulated p-value				0.138
103	Standard Deviation of S				8.083		Standard Deviation of S				8.083		Standard Deviation of S				8.083
104	Standardized Value of S				-0.866		Standardized Value of S				-1.113		Standardized Value of S				-1.113
105	Approximate p-value				0.193		Approximate p-value				0.133		Approximate p-value				0.133
106																	
107	**Insufficient evidence to identify a significant**						**Insufficient evidence to identify a significant**						**Insufficient evidence to identify a significant**				
108	**trend at the specified level of significance.**						**trend at the specified level of significance.**						**trend at the specified level of significance.**				

APPENDIX G

ADEC Correspondence

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THE STATE of ALASKA
GOVERNOR MIKE DUNLEAVY

Department of Environmental Conservation

DIVISION OF SPILL PREVENTION AND RESPONSE
Contaminated Sites Program

555 Cordova St
Anchorage, Alaska, 99501
Main: 907.269.7608
www.dec.alaska.gov

File #: 2637.38.002

January 29, 2025

Electronic Transmittal Only
Robert A. Johnston
United States Air Force
AFCEC/CZOP
10471 – 20th Street, Suite 347
JBER, AK 99506

Re: DEC review of the *Draft Final 2023 Remedial Action Operations, Land Use/Institutional Control Report, Port Heiden Radio Relay Station Sites OT001, WP002, SS006, and LF007, Alaska,* October 2024.

Dear Mr. Johnston:

The Alaska Department of Environmental Conservation (DEC) has completed a review of the above referenced report. The report summarizes the 2023 institutional control and land-use control (IC/LUC) and landfill cap inspection activities, and annual groundwater (GW) monitoring at Port Heiden Radio Relay Station (RRS) sites. The report states that the majority of the LUCs were functioning as intended. RRS site WP002 was missing a LUC warning sign, while the geotextile fabric at LF007 landfill was windblown and may not be covering the remaining PCB contamination. RRS site OT001 showed areas of significant erosion. Nineteen monitoring wells were sampled across the RRS sites, and a Mann-Kendall analysis was used to indicate increasing, decreasing, or no trends in the data. Based on the IC/LUC inspection and the GW monitoring the report provides recommendations for future field.

DEC has reviewed the report and all comments were addressed. Please attach this letter and comment table to the final document and submit for approval. If you have any questions, do not hesitate to contact the DEC project manager at (907) 269-7608, or at matthew.fleetwood@alaska.gov.

Sincerely,

Digitally signed by Matthew Fleetwood
Date: 2025.01.29 12:06:43 -09'00'

Matthew Fleetwood
Alternate Remedial Project Manager

Enclosures: DEC Comment Matrix

cc via email: Sarah Bernhardt, DEC

REVIEW COMMENTS

PROJECT: Port Heiden RRS

DOCUMENT: Draft Final 2023 Remedial Action Operations, Land Use/Institutional Control Report, Port Heiden Radio Relay Station, Sites OT001, WP002, SS006, and LF007, dated October 2024

ALASKA DEPT. OF ENVIRONMENTAL CONSERVATION (DEC)	DATE: 10/31/2024 REVIEWER: DEC PHONE: (907) 269-7608	Action taken on comment by: North Wind-EA JV

Item No.	Section, PDF Page Number	COMMENTS	REVIEW CONFERENCE A - comment accepted W - comment withdrawn (if neither, explain)	CONTRACTOR RESPONSE	DEC RESPONSE ACCEPTANCE (A-AGREE) (D-DISAGREE)	CONTRACTOR RESPONSE
1	General	The document needs to be proofread again to revise syntax and grammar in some areas. Where this was most noticed was in Section 1 and Section 2.	A	Sections 1 and 2 were reviewed for syntax.	Acknowledged	
2	Executive Summary, pg 11; Section 2.1.1 pg 20; Section 6.1 pg 38	Previous documents have stated that there should be a monitoring well (MW) in the middle of LF007. What is the status of this MW, and can it be sampled to monitor groundwater contamination under LF007?	A	Section 2.1.1 paragraph 2 was amended to read as follows: "A total of four monitoring wells were observed within the site area. One well was located near the center of the landfill and three wells were located downgradient from the landfill on the north side of the site." Not included in report text: The well (MW-10) was dry when it was installed in 2018 during the Supplemental RI. Sampling the well is not included in the LTM. A new well (MW-13) was installed next to MW-10 at OT001/LF007 in 2024 under a different contract.	A - DEC Accepts Response (1/28/2025)	
3	Section 1.2.1 pg 13	Between documents there seems to be differing verbiage regarding the LF007 Remedial Action. In some places it states that they are going to remove the landfill entirely, and in this document it states:	A	Further background information regarding the 2022 PCB removal action at LF007 was included in Section 1.2.1. The sentence "The 2020 inspection found that a fence should be installed around the capped area of LF007 to	A - DEC Accepts Response (1/28/2025)	

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Item No.	**Section, PDF Page Number**	**COMMENTS**	**REVIEW CONFERENCE A - comment accepted W - comment withdrawn (if neither, explain)**	**CONTRACTOR RESPONSE**	**DEC RESPONSE ACCEPTANCE (A-AGREE) (D-DISAGREE)**	**CONTRACTOR RESPONSE**
		"Further remedial actions will be required to remove remaining PCB contamination at Site LF007." Clarify the remedial action for LF007, and when action will take place.		eliminate human exposure to contaminated soil in compliance with the 2009 ROD (USAF 2021b)" has been stricken from the section as it pertains to the local landfill where the soil was disposed at. The 2022 PCB Removal Action report indicated that the future remedial action required would be the removal of the remaining TSCA and non-TSCA soils in the landfill, as stated in paragraph 3 in Section 1.2.1		
4	Section 2.3 pg 22	"Damage to monitoring wells DSA-MW04, GLO-MW03, PG1-MW01, and UST-MW02 has been previously documented. The four damaged monitoring wells at Site OT001 appeared damaged beyond use or repair." These two sentences are referring to the same monitoring wells. Combine the sentences.	A	Sentence amended to read as follows: "Four damaged monitoring wells at Site OT001 appeared damaged beyond use or repair: DSA-MW04, GLO-MW03, PG1-MW01, and UST-MW02 (USAF 2024)."	A - DEC Accepts Response (1/28/2025)	
5	Section 2.3 pg 23	In table 2-3 add a column that helps identify which well belongs to which site (OT001 or WP002).		The sixteen groundwater monitoring wells from OT001 includes the WP002 source area and surrounding plume footprint, as presented in the Final UFP-QAPP. Current efforts to define the extent of the combined plume does not distinguish between sources. The location of the wells in	A - DEC Accepts Response (1/28/2025)	

REVIEW COMMENTS

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				relation to the site boundaries is presented in Figure 2.		
6	Section 3.1 pg 26	"Cleanup level exceedance between Sites OT001 and WP002 are summarized below in Table 3-2, and Figure 6." Is this supposed to reference Table 3-1 instead of Table 3-2? Table 3-1 is Analytical Groundwater Exceedances at OT001/WP002. And Table 3-2 is MNA Parameters at OT001/WP002.	A	Sentence corrected to read Table 3-1.	A - DEC Accepts Response (1/28/2025)	
7	Section 6.1 pg 38	"Repair and maintain the fencing across the driveway between the LUC notification signs to discourage trespassing at the landfill." Damage to the fence and moving it back across the driveway was in the 2022 version of this report. Is the fence being taken down between each sampling season? Or is this the same work needing to be completed?	A	This is the same task recommended in 2022. The fence has not been moved back and forth between annual LUC/IC inspections.	A - DEC Accepts Response (1/28/2025)	
8	Section 6.1 pg 38	"Areas in the landfill should be covered with geotextile liner material to reduce rain infiltration and migration of remaining contaminants."	A	Reworded recommendations to be protective of human health and the environment in Section 6.1.	A - DEC Accepts Response (1/28/2025)	

REVIEW COMMENTS

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		Remove 'should' from the above sentence, and replace with will. Areas in the landfill need to be covered to help limit migration of contamination at the site while waiting for the removal action to be completed.				
9	Section 7 pg 41	DEC has released an updated Field Sampling Guidance. This will need to be the referenced document in future reports. Current DEC Guidance is available at: https://dec.alaska.gov/spar/csp/guidance-forms		The field work was performed in October 2023, ten months prior to the release of the latest (Aug 2024) Field Sampling Guidance. All references to the ADEC Field Sampling Guidance will remain January 2022 for this report. In future reports, the updated Field Sampling Guidance version will be referenced.	A - DEC Accepts Response (1/28/2025)	
10	Section Figures pg 46 & 47	Figure 4 is shown twice in the report. Remove one instance of Figure 4.	A	Figures have been corrected to be presented in chronological order.	A - DEC Accepts Response (1/28/2025)	
11	Section Figures pg 49 & 50	In Figures 6 & 7 there are tables displaying sampling data. In Figure 6 the tables for Monitoring Wells DSAMW07-101423, GLOMW04-101423, and RRSM MW06-101323 do not have consistent formatting with the other data tables.	A	Figures were updated to present consistent table formats.	A - DEC Accepts Response (1/28/2025)	

REVIEW COMMENTS

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		In Figure 7 the table for Monitoring Well SS006-215MW12-101223 does not have consistent formatting with the other data tables. Update formatting to be consistent with the other data tables.				
12	Appendix D	There are a number of data quality issues regarding the 2023 samples. One issue that also was encountered in 2022 is that VOC samples were analyzed outside of their hold times. Include a recommendation for how the number of data quality issues can be reduced for future sampling efforts.		North Wind acknowledges the increasing data quality issues associated with data produced by Pace National, TN. As a result, the North Wind Quality Assurance team has issued a formal notice to Pace National requesting a Root Cause Analysis for the increase in data quality issues across multiple contracts and requested an immediate corrective action plan. Alternatively, North Wind is also considering pursuing contract work with alternate DoD and AK accredited laboratories should Pace National fail to improve their data quality in the immediate future.	A - DEC Accepts Response (1/28/2025)	
13	Appendix D pg 194	In the text it is mentioned multiple times that no data was rejected during analysis. However, this data is labeled as 'Do Not Use'.		The samples with 'Do not Use' (DNU) results were not rejected but were from a reanalysis of sample results due to surrogate failure and blank contamination. The reanalysis was selected for validation and	A - DEC Accepts Response (1/28/2025)	

REVIEW COMMENTS

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		Is this not a rejected sample? If it is a rejected sample then the text should be clarified to reflect this.		reporting based on the review of sample results between the initial and reanalysis. Sample results and QC between the initial and reanalysis were compared and the reanalysis results were retained, validated, and reported as they were of better quality than the initial analysis results. In summary, DNU results are not validated and therefore not recommended for rejection (qualified), they are simply just not used for reporting or validation purposes.		
14	Appendix D pg 208	Sample WP002-BLOMW01-101523 had the majority of the MS/MSD compounds outside of the recovery or precision acceptance criteria. Was this due to the state of the sample when it arrived to the lab?	A	SDG L1667791- The case narrative noted that matrix interference in the parent sample likely impacted the MS/MSD resulting in poor performance. The high MS/MSD recoveries supports laboratories conclusion of matrix interference. The high bias only affected detections in the sample.	A - DEC Accepts Response (1/28/2025)	
15	Appendix D pg 388	Table header is on a different page to the body of the table. Adjust so all of the table is on the same page.	A	SR- Report for L1667742 revised so that entire table is on same page.	A - DEC Accepts Response (1/28/2025)	
16	End of Comments					