

October 7, 2022

Jocelyn Clark, P.E.
Physical Scientist
Land, Chemicals, and Redevelopment Division – RCRA Branch
U.S. Environmental Protection Agency – Region 9
775 Hawthorne Street, LND-4-2
San Francisco, California 94105

Subject: Second Quarter 2022 Groundwater Monitoring Results, Former Thermal Treatment Unit, Nammo Defense Systems Inc., Mesa, Arizona

Dear Ms. Clark:

Pinyon Environmental, Inc. (Pinyon) prepared the following Second Quarter 2022 (Q2 2022) Groundwater Monitoring Report (Report) on behalf of Nammo Defense Systems Inc. (NDS). The report documents field activities and results for groundwater sampling at the NDS former Thermal Treatment Unit (TTU) in Mesa, Arizona (the Site; Figure 1). The monitoring activities were planned and executed following the scope of work and requirements outlined in the *Groundwater Water Sampling and Analysis Plan, Former Thermal Treatment Unit, NAMMO Defense Systems Inc., Mesa Arizona*, dated September 30, 2022 (TTU SAP); and the *Quality Assurance Project Plan, NAMMO Defense Systems Inc. Facility, Mesa, Arizona*, dated April 28, 2022 (NDS Facility QAPP). The TTU SAP was submitted to the U.S. Environmental Protection Agency (EPA) for review and comments were received on August 23, 2022. A revised TTU SAP incorporating responses to EPA's comments was submitted on September 30, 2022. Any changes or deviations from these documents are provided in subsequent sections of this report.

I. SCOPE OF ACTIVITIES

Most of the groundwater monitoring and pumping/extraction wells were sampled on June 13 through 21, 2022. In accordance with the TTU SAP and due to initial laboratory results indicating that trigger levels previously established for wells TTU-4, TTU-5, and TTU-9a had been exceeded, these three wells were resampled on July 21, 2022. Trigger levels are predetermined concentrations whereby if exceeded, re-sampling is required to confirm the original results. These established concentrations are intended to act as an early warning method for tracking migration of chemicals of potential concern (COPCs). Well construction details are summarized in Table 1 and well locations are shown in Figure 2. The Q2 2022 groundwater sampling was conducted in accordance with the TTU SAP and NDS Facility QAPP, unless otherwise noted below.

I.1 Groundwater Elevation Measurement

Table 2 provides a summary of groundwater elevation gauging for the 2Q 2022 sampling event. The depth to groundwater measurements were collected using an electronic water level indicator. The depths were measured to the nearest 0.01 foot on the north side, top of casing at each well. Well TTU-18 was dry and was therefore, not sampled.

1.2 Groundwater Sampling

For extraction/pumping wells, the wells were activated and allowed to purge for at least 15 minutes prior to sample collection. Water was taken from the spigot closest to the wellhead. From each sampled well, field parameter measurements were collected using a YSI 556 MPS water quality meter to evaluate water temperature, pH, oxidation reduction potential (ORP), conductivity, dissolved oxygen (DO), and turbidity. For the extraction/pumping wells, field readings were collected every 5 minutes during the minimum 15-minute purging/stabilization period. If purging took longer than 15 minutes, the reasons and rationale are provided on the individual well sampling records presented in Attachment I. No issues with field parameter stabilization during purging were encountered during the 2Q 2022 sampling event. For non-pumping wells, one round of field parameter measurements was collected at the time of sample collection.

Monitoring wells and other non-pumping wells were sampled using HydraSleeve samplers. The samplers were deployed by Pinyon at the end of the First Quarter (Q1) 2022 sampling event. The samplers were suspended inside the wells/boreholes at the depths summarized in Table 3.

Groundwater samples were collected into laboratory provided and preserved sample containers based on analytical method requirements. This information is summarized in Table 3. Each water sample was labeled, secured from breakage, and stored on-ice inside an insulated cooler. The samples were transported under chain-of-custody protocol to Pace Analytical for analysis. Pace Analytical is an Arizona Department of Health Services (ADHS) certified laboratory (#AZ0728).

The groundwater samples were analyzed for total volatile organic compounds (VOCs) Method 8260B, 1,4-dioxane using Method 8260B-SIM, and perchlorate using Method 314.0 Mod. Samples from TTU-11, TTU-19, and PF-2 were analyzed for perchlorate salts using EPA Method 6850. Wells TTU-11 and TTU-19 were sampled for VOCs and 1,4 dioxane as well as select metals and gases as part of the insitu biological remediation pilot test. These data will be presented in a separate document being prepared by Geosyntec.

Samples were collected from the PF-2 extraction/pumping well on June 14 and June 21, 2022. The June 14, 2022 sample was analyzed for perchlorate salts, while the June 21, 2022 sample was analyzed for VOCs and 1,4-dioxane.

Due to the results of the initial mid-June 2022 sampling, wells TTU-4, TTU-5, and TTU-9a were re-sampled on July 21, 2022 in an effort to verify the mid-June results.

1.3 Sampling Equipment Decontamination

Disposable sampling equipment such as protective gloves and paper towels were containerized and disposed of as non-hazardous commercial or household waste. Reusable equipment such as the YSI meter and the water level indicator were decontaminated prior to use and between each well using an Alconox and distilled water solution followed by a double rinse with distilled water. The reusable equipment was allowed to air dry prior to its next use.

1.4 Deviations from Work Plan

The groundwater monitoring was conducted in accordance with the TTU SAP and NDS Facility QAPP, with the exceptions of the items outlined below:

- Groundwater samples were collected from extraction well PF-2 on June 14 and June 21, 2022. As noted above, the June 14 sample was submitted for analysis of perchlorate salts, while the June 21 sample was submitted for analysis of VOCs and 1,4-dioxane. The latter analysis has historically not been completed during each sampling event and was therefore left out of the analysis plan for the 2Q 2022 sampling event.

This oversight was recognized prior to completing the TTU sampling event and Pinyon returned to the well to collect a sample for the additional analysis. As noted in the Q1 2022 report, VOCs and 1,4-dioxane have been added to the PF-2 analyte list in the current draft TTU SAP, which was under EPA review at the time of Q2 2022 sampling.

- Sampling and data collection from wells TTU-11 and TTU-19 associated with the insitu biological remediation pilot test. These data will be provided in a separate document to be prepared by Geosyntec.

2. GROUNDWATER MONITORING RESULTS

Laboratory reports and chain-of-custody forms are presented in Attachment 2. The following data summary tables are provided:

- Table 1 – 2022 Groundwater Well Network
- Table 2 – Groundwater Elevations Second Quarter 2022
- Table 3 – Summary of Perchlorate Concentrations Second Quarter 2022
- Table 4 – Summary of Detected VOC Concentrations Second Quarter 2022
- Table 5 – Historical 1,4-Dioxane and TCE Concentrations

During EPA's review of the Q1 2022 groundwater monitoring results, it was requested Pinyon provide in Table 1 the elevation difference between the top of casing elevation and the ground surface (well stickup). That information has been requested from NDS and following receipt, the data will be incorporated into Table 1, as requested. Placeholders for these data have been added to Table 1.

The following figures are provided for reference and data presentation:

- Figure 1 – Site Vicinity Map
- Figure 2 – Quarterly Groundwater Contour Map – Second Quarter 2022
- Figure 3 – Perchlorate Detections in Groundwater – Second Quarter 2022
- Figure 4 – VOC Detections in Groundwater – Second Quarter 2022

2.1 Estimated Groundwater Flow Direction

The groundwater gradient was measured between wells TTU-15 (1,321.23 feet above mean sea level (ft-msl)) and TTU-10 (1,145.24 ft-msl) at approximately 0.101 ft/ft (feet per foot). This gradient is similar to the 0.10 ft/ft reported during the Q1 2022 groundwater sampling event. The groundwater gradient suggests a westerly flow direction (Figure 2).

2.2 Groundwater Laboratory Results

The perchlorate data indicates samples from 22 of the 25 wells sampled contained concentrations above the laboratory detection limit. Of those, seven were below the Arizona department of Environmental Quality (ADEQ) Health Based Guidance Level (HBGL) of 14 micro grams per liter ($\mu\text{g/L}$). Fifteen sampled wells exceeded the HBGL with the highest concentration of 763,000 $\mu\text{g/L}$ measured in TTU-16.

The TCE data indicates that 14 of the 24 wells sampled contained concentrations above the laboratory detection limit. Of those TCE concentrations, 12 exceeded the 5 µg/L Arizona Aquifer Water Quality Standard (AWQS). The highest TCE concentration (96,500 µg/L) was measured in TTU-16.

The 1,4-dioxane data indicates 16 of 24 wells sampled contained concentrations above the laboratory detection limit, all of which also exceeded the 3.5 µg/L interim screening level. The highest concentration (3,600 µg/L) was measured in TTU-16.

As outlined in the TTU SAP, notification and resampling must be made if the following TLs are exceeded:

- For PF-2, if perchlorate exceeds 3.2 µg/L (this TL was not exceeded).
- For TTU-6, if 1,4-dioxane exceeds 3.5 µg/L and/or other VOCs reach 50% of the AWQS (this TL was not exceeded).
- For TTU-1, TTU-2, TTU-3, TTU-4, TTU-6, TTU-7, TTU-8, TTU-9a, TTU-10, TTU-14, PF-1, and PF-2, if an order-of-magnitude increase in the concentration¹ of a COPC that was previously measured at a concentration exceeding the project screening level (e.g., AWQS). With respect to the Q2 2022 sampling results relative to the TLs, the following was observed:
 - No perchlorate concentrations increased or decreased by an order of magnitude as defined above
 - No TCE concentration increased by an order of magnitude; however, the TTU-11 concentration decreased by one order of magnitude (baseline - 13,127 µg/L to current - 56.3 µg/L)
 - The 1,4-dioxane concentration increased by one order of magnitude in TTU-5 (baseline - <3 to 1st Q2 2022 sample - 130 µg/L), which was re-sampled, and had a 1,4-dioxane concentration below the laboratory detection limit (<3 µg/L). These data suggest the original June 2022 TTU-5 sample may have been erroneous.
 - It was assumed that TLs were met for 1,4 dioxane at wells TTU-4, TTU-5, and TTU-9a based on the initial sample laboratory results. This determination was made prior to establishing the definition of an order of magnitude change in concentration outlined in this report¹. These wells were re-sampled for 1,4-dioxane on July 21, 2022. Re-sampling results indicated that the 1,4-dioxane concentrations were below the laboratory detection limit for all three samples. Under the contingency requirements, no further action was required

2.3 Groundwater Concentration Versus Time

Concentration and groundwater elevation versus time plots for TCE, perchlorate, and 1,4-dioxane are presented in Attachment 3.

¹ To establish consistency regarding the trigger or action levels (TL or AL) based on concentration changes for different compounds, Pinyon offers the following definition for a concentration change of one order of magnitude or more: If the current concentration is greater than 10 times the average of the most recent 3 sampling events (the baseline) for a COPC, an increase of more than one order of magnitude has occurred. Similarly, if the current concentration of a COPC is less than 1/10th of the baseline concentration, a concentration decrease of more than one order of magnitude has occurred.

2.4 Discussion

Based on the Q2 2022 groundwater monitoring results, initial sampling suggested trigger conditions for 1,4-dioxane were encountered in wells TTU-4, TTU-5, and TTU-9A. Follow up sampling indicated each of the three concentrations returned to below the laboratory detection limit. These conditions will continue to be tracked during future sampling events.

Using definition of order of magnitude changes established in Section 2.2, Footnote I, no order of magnitude concentration increases were observed between the Q1 and Q2 of 2022 for any of the COPCs. The initial results for 1,4-dioxane in TTU-5 suggested such an increase but follow up sampling indicated the concentration was below the laboratory detection limit. An order of magnitude reduction was documented for TCE in TTU-11. Conditions in all wells will continue to be evaluated during future monitoring events.

2.5 Data Validation

A Tier IA data validation of the laboratory results according to EPA guidance and the laboratory results are qualified as usable for meeting project objectives. A data validation memorandum is provided in Attachment 4.

3. CLOSING

The perchlorate, TCE, and 1,4-dioxane concentration trends, both long and short term, will continue to be evaluated and will be discussed in the Annual Groundwater Monitoring Report submitted following the Fourth Quarter (Q4) 2022 groundwater monitoring event. Extraction system pumping information will be presented in future reports such that a better understanding of groundwater elevation fluctuations and concentration changes can be obtained and presented herein.

Sincerely,
Pinyon Environmental, Inc.


Jeremy Musson
Principal



Arianne Godwin, P.E. (AZ# 67982)
Technical Group Manager
Site Characterization and Remediation



Copies to: Angel Soto, Nammo Defense Systems, Inc. (electronic)
Christopher Horan, Salt River Pima-Maricopa Indian Community (electronic)
Carol Hibbard, Salt River Pima-Maricopa Indian Community (electronic)
Kyle Johnson, Arizona Department of Environmental Quality (electronic)
Anthony Leverock, Arizona Department of Environmental Quality (electronic)
William Frier, U.S. Environmental Protection Agency (electronic)
Isaac Roll, Geosyntec Consultants (electronic)
Fabrizio Mascioni, Geosyntec Consultants (electronic)

Tables

Table 1 – Former Thermal Treatment Unit 2022 Groundwater Monitoring Well Network

Table 2 – Groundwater Elevation – Second Quarter 2022

Table 3 – Summary of Detected VOC Concentrations – Second Quarter 2022

Table 4 – Summary of Perchlorate Concentrations – Second Quarter 2022

Figures

Figure 1 – Site Vicinity Map

Figure 2 – Groundwater Elevations and Contours – Second Quarter 2022

Figure 3 – Perchlorate Detections in Groundwater – Second Quarter 2022

Figure 4 – VOC Detections in Groundwater – Second Quarter 2022

Attachments

Attachment 1 – Field Notes

Attachment 2 – Laboratory Analytical Reports

Attachment 3 – Concentration and Groundwater Elevation versus Time Plots

Attachment 4 – Data Validation Memo

Tables

**TABLE I:
FORMER THERMAL TREATMENT UNIT
2022 GROUNDWATER WELL NETWORK
NAMMO DEFENSE SYSTEMS INC.
MESA, ARIZONA**

Well ID	Install Date	Latitude	Longitude	Survey Date	Survey Coordinate Datum	Measuring Point Elevation Top of Casing (ft asml)	Ground Surface Elevation (ft asml)	Well Stickup Height (ft)	ADWR Number	Well Type/Use	Well Name/ Owner	Well Owner Information	Well Const	Well Diameter (in)	Screen Interval (ft bgs)	Casing Depth (ft bgs)	Boring Depth (ft bgs)
Plume Monitoring Wells																	
TTU-3	10/18/2013	33 29 57.98	-111 43 00.91	NP	NAVD 88	1308.03	1305.50	2.53	N/A	Monitoring	Nammo Defense Systems Inc.	P.O. Box 34299 Mesa, AZ 85279	PVC	4	78.1-138.1	143.6	180
TTU-4	10/25/2013	33 30 01.65	-111 42 59.09	NP	NAVD 88	1305.12	1302.50	2.62	N/A	Monitoring	Nammo Defense Systems Inc.	P.O. Box 34299 Mesa, AZ 85280	PVC	4	39.5-99.5	104.9	180
TTU-5	9/20/2014	33 29 52.48	-111 42 58.40	NP	NAVD 88	1314.93	1312.30	2.63	N/A	Monitoring	Nammo Defense Systems Inc.	P.O. Box 34299 Mesa, AZ 85281	PVC	4	59.5-164.5	169.5	174
TTU-6	10/7/2014	33 29 57.57	-111 43 04.79	NP	NAVD 88	1300.84	1299.40	1.44	N/A	Monitoring	Nammo Defense Systems Inc.	P.O. Box 34299 Mesa, AZ 85282	PVC	4	110-175	180	185
TTU-7	10/8/2014	33 29 57.85	-111 43 05.18	NP	NAVD 88	1301.84	1299.30	2.54	N/A	Monitoring	Nammo Defense Systems Inc.	P.O. Box 34299 Mesa, AZ 85282	Steel	8.5	282-410	282	410
													Open Borehole	8		None	
TTU-8	4/18/2016	33 30 01.91	-111 43 05.31	NP	NAVD 88	1310.23	1307.60	2.63	N/A	Monitoring	Nammo Defense Systems Inc.	P.O. Box 34299 Mesa, AZ 85282	PVC	4	135-185	190	204
TTU-9A	6/16/2016	33 30 04.61	-111 42 51.19	NP	NAVD 88	1318.04	1316.00	2.04	N/A	Monitoring	Nammo Defense Systems Inc.	P.O. Box 34299 Mesa, AZ 85282	PVC	4	24-99	104	105
TTU-10	4/18/2016	33 29 54.60	-111 43 07.90	NP	NAVD 88	1302.42	1299.80	2.62	N/A	Monitoring	Nammo Defense Systems Inc.	P.O. Box 34299 Mesa, AZ 85282	PVC	4	115-180	185	204
TTU-12	7/19/2018	33 29 56.03	-111 42 58.38	NP	NP	1312.21	NP	NP	N/A	Monitoring	Nammo Defense Systems Inc.	P.O. Box 34299 Mesa, AZ 85282	Steel	5.5	30-180	30	180
													Open Borehole	5		None	
TTU-13	7/20/2018	33 29 58.99	-111 42 56.85	NP	NP	1310.79	NP	NP	N/A	Monitoring	Nammo Defense Systems Inc.	P.O. Box 34299 Mesa, AZ 85283	Steel	5.5	30-80	30	80
													Open Borehole	5		None	
TTU-14	7/19/2018	33 29 57.20	-111 42 57.46	NP	NP	1319.30	1316.80	2.50	N/A	Monitoring	Nammo Defense Systems Inc.	P.O. Box 34299 Mesa, AZ 85284	Steel	5.5	45-100	45	100
													Open Borehole	5		None	
TTU-15	1/25/2018	33 29 56.78	-111 42 47.03	NP	NP	1350.85	NP	NP	55-228014	Monitoring	Nammo Defense Systems Inc.	P.O. Box 34299 Mesa, AZ 85285	Steel	5	10-100	10	100
													Open Borehole	4.5		None	
TTU-16	1/28/2020	33 29 56.18	-111 42 49.59	NP	NP	1338.55	NP	NP	55-231730	Monitoring	Nammo Defense Systems Inc.	P.O. Box 34299 Mesa, AZ 85286	Steel	8	20-95.6	20	95.6
													Open Borehole	8		None	
TTU-17	1/28/2020	33 29 58.61	-111 42 45.69	NP	NP	1347.49	NP	NP	55-231735	Monitoring	Nammo Defense Systems Inc.	P.O. Box 34299 Mesa, AZ 85287	Steel	8	20-101	20	101
													Open Borehole	8		None	
TTU-18	1/25/2020	33 29 47.20	-111 42 58.10	NP	NP	1320.25	NP	NP	55-231737	Monitoring	Nammo Defense Systems Inc.	P.O. Box 34299 Mesa, AZ 85288	Steel	8	21-140	21	140
													Open Borehole	8		None	
TTU-20	9/24/2020	33 29 55.17	-111 42 51.58	NP	NP	1336.90	NP	NP	55-232968	Monitoring	Nammo Defense Systems Inc.	P.O. Box 34299 Mesa, AZ 85288	PVC	4	25-95	95	100

**TABLE I:
FORMER THERMAL TREATMENT UNIT
2022 GROUNDWATER WELL NETWORK**
NAMMO DEFENSE SYSTEMS INC.
MESA, ARIZONA

Well ID	Install Date	Latitude	Longitude	Survey Date	Survey Coordinate Datum	Measuring Point Elevation Top of Casing (ft asml)	Ground Surface Elevation (ft asml)	Well Stickup Height (ft)	ADWR Number	Well Type/Use	Well Name/ Owner	Well Owner Information	Well Const	Well Diameter (in)	Screen Interval (ft bgs)	Casing Depth (ft bgs)	Boring Depth (ft bgs)
Extraction and Injection Wells																	
TTU-1	6/6/2012	33 29 59.14	-111 42 56.27	NP	NAVD 88	1312.73	1309.70	3.03	55-914440	Extraction	Nammo Defense Systems Inc.	P.O. Box 34299 Mesa, AZ 85277	PVC	4	30-70	75	200
TTU-2	10/17/2013	33 29 55.85	-111 42 57.85	NP	NAVD 88	1314.44	1311.80	2.64	N/A	Extraction	Nammo Defense Systems Inc.	P.O. Box 34299 Mesa, AZ 85278	PVC	4	49.4-179.6	185	187.5
TTU-11	9/11/2015	33 29 55.28	-111 42 51.47	NP	NAVD 88	1339.20	1336.60	2.60	55-918534	Extraction/Injection ¹	Nammo Defense Systems Inc.	P.O. Box 34299 Mesa, AZ 85282	PVC	4	24.1-89.1	94	136
TTU-19	9/24/2020	33 29 55.25	-111 42 51.50	NP	NP	1336.67	NP	NP	55-232969	Monitoring/Injection ²	Nammo Defense Systems Inc.	P.O. Box 34299 Mesa, AZ 85288	PVC	4	25-95	95	96
TTU-EX-1	1/25/2020	33 29 58.42	-111 42 52.55	NP	NP	1321.69	NP	NP	55-231733	Extraction/Monitoring ³	Nammo Defense Systems Inc.	P.O. Box 34299 Mesa, AZ 85288	Steel	8	19-110.7	19	110.7
													Open Borehole	8		None	
TTU-EX-2	1/23/2020	33 29 57.61	-111 42 53.79	NP	NP	1316.40	NP	NP	55-231734	Extraction/Monitoring ³	Nammo Defense Systems Inc.	P.O. Box 34299 Mesa, AZ 85289	Steel	8	20-110	20	110
													Open Borehole	8		None	
TTU-EX-3	1/24/2020	33 29 56.29	-111 42 54.12	NP	NP	1316.85	NP	NP	55-231731	Extraction/Monitoring ³	Nammo Defense Systems Inc.	P.O. Box 34299 Mesa, AZ 85290	Steel	8	20-101.45	20	111
													Open Borehole	8		None	
TTU-EX-4	1/24/2020	33 29 55.46	-111 42 54.39	NP	NP	1319.96	NP	NP	55-231732	Extraction/Monitoring ³	Nammo Defense Systems Inc.	P.O. Box 34299 Mesa, AZ 85291	Steel	8	20-110.7	20	110.7
													Open Borehole	8		None	
TTU-EX-5	1/24/2020	33 29 54.68	-111 42 54.62	NP	NP	1319.50	NP	NP	55-231736	Extraction/Monitoring ³	Nammo Defense Systems Inc.	P.O. Box 34299 Mesa, AZ 85292	Steel	8	20-110.8	20	110.8
													Open Borehole	8		None	
Production Wells																	
PF-1	NP	33 29 56.60	-111 43 09.75	NP	NP	1295.99	NP	NP	N/A	Production	University of Washington	4202 N Higley Rd Mesa, AZ 85215	Unknown	Unknown	Unknown	Unknown	Unknown
PF-2	3/27/2013	33 29 56.65	-111 43 09.96	NP	NP	1296.35	NP	NP	N/A	Production	University of Washington	4202 N Higley Rd Mesa, AZ 85215	Steel	6 5/8	300-400	400	400

Notes:

ft asml = feet above mean sea level (NAVD88)
 ADWR = Arizona Department of Water Resources
 Const = construction
 in = inches

N/A = Not applicable
 PVC = polyvinyl chloride
 ft bgs = feet below ground surface

TTU = Thermal Treatment Unit
 EX = Extraction
 PF = Primate Facility

NP = Not Provided
 Drill Log TOC Different from Original
 Drill Log TOC listed

- (1) - TTU-11 was converted from an extraction well to an injection well in October 2020 for a In-Situ Bioremediation Pilot Test.
 (2) - TTU-19 was converted from a monitoring well to an injection well in February 2021 for an In-Situ Bioremediation Pilot Test
 (3) - TTU-EX-1 through TTU-EX-5 are not currently operating as extraction wells. TTU-11 and TTU-19 are not currently operating as injection wells.

**TABLE 2:
FORMER THERMAL TREATMENT UNIT
GROUNDWATER ELEVATIONS - SECOND QUARTER 2022
NAMMO DEFENSE SYSTEMS INC.
MESA, ARIZONA**

Well ID	Northing (intl ft)	Easting (intl ft)	Top of Casing Elevation (ft asml)	Date Measured	Depth to Water (ft btoc)	Groundwater Elevation (ft asml)
TTU-1	909420.734	761281.203	1312.73	6/16/2022	NR	NR
TTU-2	909087.852	761148.265	1314.44	6/16/2022	NR	NR
TTU-3	909303.363	760888.204	1308.03	6/14/2022	91.13	1216.90
TTU-4	909673.680	761041.975	1305.12	6/14/2022	52.90	1252.22
TTU-5	908747.636	761102.227	1314.93	6/13/2022	79.96	1234.97
TTU-6	909260.820	760560.096	1300.84	6/14/2022	131.30	1169.54
TTU-7	909287.611	760527.269	1301.84	6/14/2022	131.52	1170.32
TTU-8	909699.266	760514.908	1310.23	6/14/2022	150.47	1159.76
TTU-9A	909974.490	761710.151	1318.04	6/13/2022	29.14	1288.90
TTU-10	908960.114	760297.013	1302.42	6/14/2022	157.18	1145.24
TTU-11	909029.758	761706.470	1339.20	6/20/2022	31.92	1307.28
TTU-12	909105.990	761103.280	1312.21	6/13/2022	75.14	1237.07
TTU-13	909405.920	761232.180	1310.79	6/13/2022	44.22	1266.57
TTU-14	909224.260	761181.230	1316.80	6/14/2022	61.61	1255.19
TTU-15	909185.100	762065.910	1350.85	6/13/2022	29.62	1321.23
TTU-16	909124.980	761848.851	1338.55	6/13/2022	20.21	1318.34
TTU-17	909370.903	762179.168	1347.49	6/13/2022	36.40	1311.09
TTU-18	908215.829	761130.011	1320.25	DRY		
TTU-19	909030.750	761687.700	1336.81	6/20/2022	26.61	1310.20
TTU-20	909022.530	761681.990	1336.90	6/16/2022	30.21	1306.69
TTU-EX-1	909350.574	761597.823	1321.69	6/13/2022	44.58	1277.11
TTU-EX-2	909268.187	761493.214	1316.40	6/13/2022	33.69	1282.71
TTU-EX-3	909134.941	761465.507	1316.85	6/13/2022	36.50	1280.35
TTU-EX-4	909051.298	761442.876	1319.96	6/13/2022	41.62	1278.34
TTU-EX-5	908971.770	761423.325	1319.50	6/13/2022	40.58	1278.92
PF-1	909161.578	760140.434	1295.99	Not Sampled		
PF-2	909166.890	760122.250	1296.35	6/14/2022	NA	NA

Notes:

intl ft - international foot

ft asml - feet above mean sea level

ft btoc - feet below top of casing

NR - not recorded

NA - Not Accessible

TABLE 3:
FORMER THERMAL TREATMENT UNIT
SUMMARY OF PERCHLORATE CONCENTRATIONS - SECOND QUARTER 2022
 NAMMO DEFENSE SYSTEMS INC.
 MESA, ARIZONA

				Analyte	
				EPA Method	Perchlorate
				Units	314 6850
				HBGL	µg/l 14
Well ID	Sample Depth (ft btoc)	Sample Date	Sample Type	Concentration	
TTU-1	50	6/16/2022	Primary	38,700	--
			Duplicate	13,200	--
TTU-2	114	6/16/2022	Primary	169,000^V	--
TTU-3	108	6/14/2022	Primary	134	--
TTU-4	57	6/14/2022	Primary	12.1 ^{J6}	--
TTU-5	110	6/13/2022	Primary	64	--
TTU-6	143	6/14/2022	Primary	7.15	--
TTU-7	345	6/14/2022	Primary	1.90 ^J	--
TTU-8	164	6/14/2022	Primary	1.84 ^J	--
TTU-9A	61	6/13/2022	Primary	7.02 ^{J5}	--
TTU-10	153	6/14/2022	Primary	<4.00	--
			Duplicate	<4.00	--
TTU-11	73	6/20/2022	Primary	<4.00	1.0
TTU-12	82	6/13/2022	Primary	132,000	--
TTU-13	51	6/13/2022	Primary	17,100^V	--
TTU-14	64	6/14/2022	Primary	136,000	--
TTU-15	75	6/13/2022	Primary	5,500	--
TTU-16	80	6/13/2022	Primary	763,000	--
TTU-17	80	6/13/2022	Primary	9.5	--
TTU-19	73	6/20/2022	Primary	295	110
			Duplicate	42.9^J	--
TTU-20	73	6/16/2022	Primary	454,000	--
TTU-EX-1	69	6/13/2022	Primary	58,500	--
TTU-EX-2	74	6/13/2022	Primary	60,200	--
TTU-EX-3	76	6/13/2022	Primary	375,000	--
TTU-EX-4	77	6/13/2022	Primary	88,300	--
			Duplicate	94,700	--
TTU-EX-5	80	6/13/2022	Primary	<4.00	--
PF-2	400	6/14/2022	Primary	--	0.44 ^{J*}

Notes:

ft btoc - feet below top of casing

µg/l - micrograms per liter

EPA - United States Environmental Protection Agency

HBGL - Health-Based Guidance Level

<Grey - Concentration is below laboratory reporting limits

--- - Not reported

BOLD - Concentration exceeds its respective HGBL

J* - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

J - The identification of the analyte is acceptable; the reported value is an estimate.

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.

V - The sample concentration is too high to evaluate accurate spike recoveries.

**TABLE 4:
FORMER THERMAL TREATMENT UNIT
SUMMARY OF DETECTED VOC CONCENTRATIONS - SECOND QUARTER 2022
NAMMO DEFENSE SYSTEMS INC.
MESA, ARIZONA**

Well ID Duplicate ID	Sample Depth (ft btoc)	Screening Level	Chemical Name	1,4-Dioxane	Acetone	1,1-dichloroethane	1,1-dichloroethene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	1,2-dichloroethane	Benzene	Carbon Disulfide	Chlorobenzene	Chloroform	Cyclohexane	cis-1,2-dichloroethene	Dichloromethane	Diisopropyl ether	Isopropylbenzene (Cumene)	Naphthalene	Propene	Tetrachloroethene	Toluene	trans-1,2-dichloroethene	1,1,2-trichloroethane	Trichloroethene	Vinyl chloride	Xylene Total	
			EPA Method	8260B SIM																										
			Unit	µg/l																										
Sample Date	3.5 ⁽¹⁾	1800 ⁽²⁾	2.8 ⁽²⁾	7	600	NE	75	5	5	81 ⁽²⁾	100	80 ⁽³⁾	1300 ⁽²⁾	70	5	150 ⁽²⁾	45 ⁽²⁾	140	NE	5	1,000	100	5	5	5	2	10,000			
PF-2	400	6/21/2022	<3	<50	<1	<1	<1	<1 ^J	<1	<1	<1	<1	<1	<5	<1	<1	<5	<1	<1 ^J	<1 ^J	<2.5	<1 ^J	<1	<1	<1	<1 ^J	<1	<3		
DUP-13		<3	<50	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<5	<1	<1	<1	<2.5	<1 ^J	<1	<1	<1	<1 ^J	<1	<3		
TTU-1	50	6/16/2022	17.5^{T8}	<50	<1	0.786^J	<1	<1	<1	<1	<1	<1	<5	<1	<1	<5	<1	<1	<1	<2.5	<1	<1	<1	<1	4.42	<1	<3			
DUP-06		35.5	<50	<1	0.902^J	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<5	<1	<1	<1	<2.5	<1	<1	<1	<1	<1	4.12	<1	<3		
TTU-2	114	6/16/2022	246^{T8}	<50	0.899^J	42.2	<1	<1	<1	<1 ^J	1.13	<1	<1	1.77^J	<1	1.43	<5	<1	<1	<2.5	0.654^J	<1	0.152^J	1.90	443	<1	<3			
TTU-3	108	6/14/2022	<3 ^J	<50	<1	<1 ^J	<1	<1	<1	<1	<1	<1	<5	<1	<1	<5	<1	<1	<1	<2.5	<1	<1	<1	<1	<1 ^J	<1	<3			
TTU-4	57	6/14/2022	11.1	<50	<1	<1 ^J	<1	<1	<1	<1	<1	<1	<5	<1	<1	0.483^J	<1	<1	<1	<2.5	<1	<1	<1	<1	<1	<1	<1	<3		
DUP-01		7/21/2022	<3	<50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
TTU-5	110	6/13/2022	130	<50	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<5	<1	<1	<1	<2.5	<1	<1	<1	<1	<1	<1	<1	<3		
DUP-01		7/21/2022	<3	<50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
TTU-6	143	6/14/2022	<3 ^J	<50	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	0.478^B	<1	<1	<1	1.18^J	<2.5	<1	<1	<1	<1	<1	<1	<3		
TTU-7	345	6/14/2022	<3 ^J	<50	<1	<1 ^J	<1	<1	<1	<1	<1	0.120^{B4}	<1	<1	<1	<5	<1	<1	0.107^J	<1	2.44^J	<1	0.950^J	<1	<1	<1 ^J	<1	<3		
TTU-8	164	6/14/2022	<3	<50	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<5	<1	<1	<1	<2.5	<1	<1	<1	<1	<1	<1	<1	<3		
TTU-9A	61	6/13/2022	4.82	<50	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<5	<1	<1	<1	<2.5	<1	<1	<1	<1	<1	<1	<1	<3		
DUP-02		7/21/2022	<3	<50	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
TTU-10	153	6/14/2022	<3 ^J	<50	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<5	<1	<1	<1	<2.5	<1	<1	<1	<1	<1	<1	<1	<3		
DUP-02		<3 ^J	<50	<1	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<1	<5	<1	<1	<1	<2.5	<1	<1	<1	<1	<1	<1	<1	<3		
TTU-11	73	6/20/2022	<3	<50	<10	5.8^J	<10	<10	<10	<10	<10	<10	<50	<10	9.94^J	7.65^J	<10	<10	<10	<2.5	<10	<10	<10	<10	<10	56.3	<10	<30		
TTU-12	82	6/13/2022	170	<50	<1	58.3	<1	<1	<1	<1	<1	<1	<5	<1	<1	<5	<1	<1	<1	<2.5	<1	<1	<1	<1	487	<1	<3			
TTU-13	51	6/13/2022	28.9	<50	<1	1.79	<1	<1	<1	<1	<1	<1	<5	<1	<1	<5	<1	<1	<1	<2.5	<1	<1	<1	<1	5.52	<1	<3			
TTU-14	64	6/14/2022	297^{J3}	<50	1.22	125^{J3}	<1	<1	<1	<1	1.95	<1	<1	1.96^J	<1	2.02	<5	<1	10.3	<1	<2.5	1.46	<1	<1	2.09	1,040	<1	<3		
TTU-15	75	6/13/2022	9.83	<50	<1	0.696^J	<1	<1	<1	<1	<1	<1	<5	<1	1.43^B	0.487^J	<1	<1	<1	<2.5	<1	<1	<1	<1	6.23	<1	<3			
TTU-16	80	6/13/2022	3600^{J3}	<50	<1000	4,660	<1000	<1000	<1000	<1000	324^J	<1000	<1000	<5000	<1000	<1000	127,000	<1000	<1000	<1000	<2500	<1000	<1000	<1000	<1000	96,500	<1000	<3000		
TTU-17	80	6/13/2022	10.1	<50	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	1.08^B	<5	<1	<1	<1	<2.5	<1	<1	<1	<1	2.10	<1	<3			
TTU-19	73	6/20/2022	<3	367	<10	22.9	<10	<10	<10	<10	2.79^J	<10	<10	<50	<10	34.6	8.03	<10	<10	11.1	9.36	<10	<10	<10	<10	189	<10	887		
TTU-20	73	6/16/2022	1540^{T8}	<50	29.0	2120	1.46	0.134^J	0.422^J	4.66	72.7	<1	0.947^J	20.1	1.15	112	147	0.262^J	<1	<1	<2.5	21.9	1.28	19.5	18.2	10,800	1.36	2.72^J		
TTU-EX-1	69	6/13/2022	324	<50	<1	79.8	<1	<1	<1	<1	<1	<1	<5	<1	0.920^J	<1	<1	<1	<2.5	<1	<1	<1	<1	<1	174	<1	<3			
TTU-EX-2	75	6/13/2022	189^{J3}	<50	<1	69.5	<1	<1	<1	<1	0.587^J	<1	<1	<5	<1	1.30^B	<5	<1	<1	<2.5	<1	<1	<1	<1	315	<1	<3			
TTU-EX-3	75	6/13/2022	863^{J3}	<50	<1	670	<1	<1	<1	<1	<1	<1	<5	<1	<1	<5	<1	<1	<1	<2.5	<1	<1	<1	<1	6,020	<1	<3			
TTU-EX-4	77	6/13/2022	27.4	<50	<1	81.6	<1	<1	<1	<1	<1	<1	<5	<1	3.09^B	<5	<1	<1	<1	<2.5	<1	<1	<1	<1	579	<1	<3			
DUP-01		26.1	<50	<1	89.4	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	2.61^B	<5	<1	<1	<2.5	<1	<1	<1	<1	635	<1	<3			
TTU-EX-5	80	6/13/2022	<3	<50	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	0.236^B	<5	<1	<1	<1	<2.5	<1	<1	<1	<1	5.58	<1	<3			
TRIP BLANK	---	6/14/2022	NA	<50	<1	<1	<1	<1	<1	<1	<1	0.0978^J	0.131^J	<1	<5	<1	<5	<1	<1	<2.5	<1	<1	<1	<1	<1	<1	<1	<3		

Notes:
ft btoc - feet below top of casing
µg/l - micrograms per liter
AWQS - Arizona Aquifer Water Quality Standard
NE - Not established, no aquifer water quality standard
EPA - Environmental Protection Agency
NA - Not Analyzed
SIM - Selected Ion Monitoring
<Gray - Concentration is below laboratory reporting limits
--- - Not reported
BOLD - Concentration exceeds its respective AWQS or other applicable screening level
(1) - Interim screening level
(2) - Top water regional screening level, AWQS has not been established
(3) - The total trihalomethane (TTHM) standard is exceeded when the sum of these four compounds exceeds 80 µg/l as a rolling annual average
NS - Not Sampled
J - The identification of the analyte is acceptable; the reported value is an estimate.
J3 - The associated batch QC was outside the established quality control range for precision.
B - The same analyte is found in the associated blank.
T8 - Sample(s) received past/too close to holding time expiration.

**TABLE 5:
FORMER THERMAL TREATMENT UNIT
HISTORICAL 1,4-DIOXANE AND TCE CONCENTRATIONS
NAMMO DEFENSE SYSTEMS INC.
MESA, ARIZONA**

		Chemical Name	1,4-Dioxane	Trichloroethene
		EPA Method	8260B SIM	8260B
		Unit	µg/l	
Well ID	Sample Type	Screening Level	3.5 ⁽¹⁾	5
		Sample Date		
PF-1	Primary	3/27/2018	<3	< 0.40
	Primary	6/28/2018	<3	< 0.40
	Primary	9/10/2018	<3	< 0.40
	Primary	12/10/2018	<3	< 0.40
	Primary	3/26/2019	<3	<1
PF-2	Primary	3/27/2018	<3	< 0.40
	Primary	6/28/2018	<3	< 0.40
	Primary	9/10/2018	<3	< 0.40
	Primary	12/10/2018	<3	< 0.40
	Primary	3/26/2019	<3	<1
	Primary	9/16/2019	<3	<1
	Duplicate	9/16/2019	<3	<1
	Primary	12/23/2019	<3	<1
	Primary	3/13/2020	<3	<1
	Primary	12/4/2020	<3	<1
	Duplicate	12/4/2020	<3	<1
	Primary	3/29/2021	<3	<1
	Primary	5/6/2021	<3	<1
	Primary	8/6/2021	<3	<1
	Primary	11/18/2021	<3	<1
	Primary	3/31/2022	<3	<1 ^{R7}
	Duplicate	3/31/2022	<3	<1 ^{R7}
	Primary	6/21/2022	<3	<1 ^{J3}
Duplicate	6/21/2022	<3	<1	

**TABLE 5:
FORMER THERMAL TREATMENT UNIT
HISTORICAL 1,4-DIOXANE AND TCE CONCENTRATIONS
NAMMO DEFENSE SYSTEMS INC.
MESA, ARIZONA**

Well ID	Sample Type	Screening Level	Chemical Name	1,4-Dioxane	Trichloroethene
			EPA Method	8260B SIM	8260B
		Unit	µg/l		
		Sample Date	3.5 ⁽¹⁾	5	
TTU-1	Primary	11/18/2014	--	6.10	
	Primary	12/23/2014	--	8.80	
	Primary	2/5/2015	26.0	10.0	
	Primary	5/18/2015	20.0	6.10	
	Primary	9/9/2015	17.0	5.20	
	Primary	11/23/2015	14.0	5.10	
	Primary	2/25/2016	11.0	4.60	
	Primary	6/1/2016	12.7	3.03	
	Primary	8/18/2016	11.0	3.70	
	Primary	11/22/2016	27.0	5.50	
	Primary	2/22/2017	18.4	5.50	
	Primary	5/23/2017	14.1	7.20	
	Primary	8/29/2017	11.0	1.40	
	Primary	11/27/2017	17.7	7.10	
	Duplicate	11/27/2017	18.1	7.20	
	Primary	3/27/2018	17.1	4.60	
	Primary	9/12/2018	31.8	11.20	
	Duplicate	9/12/2018	29.1	12.40	
	Primary	12/4/2018	7.30	4.40	
	Primary	9/16/2019	13.9	5.72	
	Duplicate	9/16/2019	10.8	4.85	
	Primary	12/20/2019	5.06	5.19	
	Primary	3/12/2020	4.63 ^J	3.91	
	Primary	6/18/2020	17.1	7.60	
	Primary	7/20/2020	3.71	6.09	
	Primary	12/2/2020	29.9	1.33	
	Primary	3/30/2021	18.9 ^J	6.40	
	Primary	5/6/2021	22.0	17.1 ^J	
	Primary	7/29/2021	37.7	14.3	
	Primary	12/22/2021	11.1	8.82	
	Primary	3/26/2022	18.4	3.72	
	Duplicate	3/26/2022	19.9	4.46	
Primary	6/16/2022	17.5 ^{T8}	4.42		
Duplicate	6/16/2022	35.5	4.12		

**TABLE 5:
FORMER THERMAL TREATMENT UNIT
HISTORICAL 1,4-DIOXANE AND TCE CONCENTRATIONS
NAMMO DEFENSE SYSTEMS INC.
MESA, ARIZONA**

Well ID	Sample Type	Screening Level	Chemical Name	1,4-Dioxane	Trichloroethene
			EPA Method	8260B SIM	8260B
		Unit	µg/l		
		Sample Date	3.5 ⁽¹⁾	5	
TTU-2	Primary	11/18/2014	--	370	
	Primary	12/23/2014	--	280	
	Primary	2/5/2015	170	280	
	Primary	5/18/2015	160	190	
	Primary	9/9/2015	170	200	
	Primary	11/23/2015	140	150	
	Primary	2/25/2016	110	150	
	Primary	6/1/2016	88.2	50.3	
	Primary	8/18/2016	150	360	
	Primary	11/22/2016	260	780	
	Primary	2/22/2017	244	727	
	Primary	5/23/2017	222	880	
	Primary	8/29/2017	241	93.2	
	Duplicate	8/29/2017	227	89.7	
	Primary	11/27/2017	235	353	
	Primary	3/27/2018	219	236	
	Duplicate	3/27/2018	152	274	
	Primary	6/28/2018	246	498	
	Primary	9/10/2018	246	433	
	Primary	12/4/2018	232	288	
	Primary	3/25/2019	313	364	
	Primary	9/16/2019	295	475	
	Primary	12/20/2019	211	711	
	Duplicate	12/20/2019	215	742	
	Primary	3/12/2020	227 ^J	511	
	Primary	6/18/2020	292	824	
	Primary	7/20/2020	156	959	
	Primary	12/2/2020	329	785	
	Primary	3/30/2021	196 ^J	656	
	Duplicate	3/30/2021	244 ^J	720	
	Primary	5/6/2021	316	683	
	Primary	7/29/2021	373	654	
	Primary	12/22/2021	280	627	
Duplicate	12/22/2021	281	653		
Primary	3/26/2022	251	823		
Primary	6/16/2022	246 ^{T8}	443		

**TABLE 5:
FORMER THERMAL TREATMENT UNIT
HISTORICAL 1,4-DIOXANE AND TCE CONCENTRATIONS
NAMMO DEFENSE SYSTEMS INC.
MESA, ARIZONA**

		Chemical Name	1,4-Dioxane	Trichloroethene
		EPA Method	8260B SIM	8260B
		Unit	µg/l	
Well ID	Sample Type	Screening Level	3.5 ⁽¹⁾	5
		Sample Date		
TTU-3	Primary	6/1/2016	1.24	--
	Primary	5/23/2017	--	2.50
	Primary	3/27/2018	<3	< 0.40
	Primary	6/28/2018	<3	< 0.40
	Primary	9/10/2018	<3	< 0.40
	Primary	12/10/2018	<3	< 0.40
	Primary	3/26/2019	<3	<1
	Primary	6/7/2019	<3	<1
	Primary	9/16/2019	<3	<1
	Primary	12/23/2019	<3	<1
	Primary	3/13/2020	<3	<1
	Primary	6/18/2020	<3	<1
	Primary	7/21/2020	<3	<1
	Primary	12/4/2020	<3	<1
	Primary	3/29/2021	<3	<1
	Primary	5/6/2021	<3	<1
	Duplicate	5/6/2021	<3	<1
	Primary	7/30/2021	<3	<1
	Primary	11/18/2021	<3	<1
	Primary	3/22/2022	<3	0.454 ^{E4}
Primary	6/14/2022	<3 ^{J3}	<1 ^{J3}	

**TABLE 5:
FORMER THERMAL TREATMENT UNIT
HISTORICAL 1,4-DIOXANE AND TCE CONCENTRATIONS
NAMMO DEFENSE SYSTEMS INC.
MESA, ARIZONA**

		Chemical Name	1,4-Dioxane	Trichloroethene
		EPA Method	8260B SIM	8260B
		Unit	µg/l	
Well ID	Sample Type	Screening Level	3.5 ⁽¹⁾	5
		Sample Date		
TTU-4	Primary	5/23/2017	--	0.310
	Primary	3/27/2018	<3	< 0.40
	Duplicate	3/27/2018	<3	< 0.40
	Primary	6/28/2018	<3	< 0.40
	Duplicate	6/28/2018	<3	< 0.40
	Primary	9/10/2018	<3	< 0.40
	Duplicate	9/10/2018	<3	< 0.40
	Primary	12/10/2018	<3	< 0.40
	Duplicate	12/10/2018	<3	< 0.40
	Primary	3/26/2019	<3	<1
	Primary	6/7/2019	<3	<1
	Primary	9/16/2019	<3	<1
	Primary	12/23/2019	<3	<1
	Primary	3/13/2020	<3	<1
	Primary	6/18/2020	<3	<1
	Primary	7/21/2020	<3	<1
	Duplicate	7/21/2020	<3	<1
	Primary	12/4/2020	<3	<1
	Primary	3/29/2021	<3	<1
	Primary	5/6/2021	<3	<1
	Duplicate	5/6/2021	<3	<1
	Primary	7/30/2021	<3	<1
	Duplicate	7/30/2021	<3	<1
	Primary	11/18/2021	<3	<1
	Primary	3/22/2022	<3	<1
	Duplicate	3/22/2022	2.59	<1
	Primary	6/14/2022	11.1	<1 ^{J3}
	Primary	7/21/2022	<3	<1
	Duplicate	7/21/2022	<3	<1

**TABLE 5:
FORMER THERMAL TREATMENT UNIT
HISTORICAL 1,4-DIOXANE AND TCE CONCENTRATIONS
NAMMO DEFENSE SYSTEMS INC.
MESA, ARIZONA**

		Chemical Name	1,4-Dioxane	Trichloroethene
		EPA Method	8260B SIM	8260B
		Unit	µg/l	
Well ID	Sample Type	Screening Level	3.5 ⁽¹⁾	5
		Sample Date		
TTU-5	Primary	3/27/2018	<3	< 0.40
	Primary	6/28/2018	<3	< 0.40
	Primary	9/10/2018	<3	< 0.40
	Primary	12/10/2018	<3	< 0.40
	Primary	3/26/2019	<3	<1
	Primary	6/7/2019	<3	<1
	Primary	9/16/2019	<3	<1
	Primary	12/20/2019	<3	<1
	Primary	3/12/2020	<3	<1
	Primary	6/17/2020	<3	<1
	Primary	7/20/2020	<3	<1
	Primary	12/2/2020	<3	0.877^J
	Primary	3/30/2021	<3	<1
	Primary	5/6/2021	<3	<1
	Primary	7/29/2021	<3	<1
	Primary	11/17/2021	<3	<1
	Primary	3/21/2022	<3	0.640^{E4}
	Primary	6/13/2022	130	<1
Primary	7/21/2022	<3	<1	

**TABLE 5:
FORMER THERMAL TREATMENT UNIT
HISTORICAL 1,4-DIOXANE AND TCE CONCENTRATIONS
NAMMO DEFENSE SYSTEMS INC.
MESA, ARIZONA**

		Chemical Name	1,4-Dioxane	Trichloroethene
		EPA Method	8260B SIM	8260B
		Unit	µg/l	
Well ID	Sample Type	Screening Level	3.5 ⁽¹⁾	5
		Sample Date		
TTU-6	Primary	8/29/2017	--	0.380
	Primary	3/27/2018	<3	< 0.40
	Primary	6/28/2018	<3	< 0.40
	Primary	9/10/2018	<3	< 0.40
	Primary	12/10/2018	<3	< 0.40
	Primary	3/26/2019	<3	<1
	Primary	6/7/2019	<3	<1
	Duplicate	6/7/2019	<3	<1
	Primary	9/16/2019	<3	<1
	Primary	12/23/2019	<3	<1
	Primary	3/13/2020	<3	<1
	Primary	6/18/2020	<3	<1
	Primary	7/21/2020	<3	<1
	Primary	12/4/2020	<3	<1
	Primary	3/29/2021	<3	<1
	Primary	5/6/2021	<3	<1
	Primary	7/30/2021	<3	<1
	Primary	11/18/2021	<3	<1
	Primary	3/22/2022	<3	<1
Primary	6/14/2022	<3 ^{J3}	<1	

**TABLE 5:
FORMER THERMAL TREATMENT UNIT
HISTORICAL 1,4-DIOXANE AND TCE CONCENTRATIONS
NAMMO DEFENSE SYSTEMS INC.
MESA, ARIZONA**

		Chemical Name	1,4-Dioxane	Trichloroethene
		EPA Method	8260B SIM	8260B
		Unit	µg/l	
Well ID	Sample Type	Screening Level	3.5 ⁽¹⁾	5
		Sample Date		
TTU-7	Primary	8/18/2016	2.50	--
	Primary	3/27/2018	<3	< 0.40
	Primary	6/28/2018	<3	< 0.40
	Primary	9/10/2018	<3	< 0.40
	Primary	12/10/2018	<3	< 0.40
	Primary	3/26/2019	<3	<1
	Duplicate	3/26/2019	<3	<1
	Primary	6/7/2019	<3	<1
	Primary	9/16/2019	<3	<1
	Primary	12/23/2019	<3	<1
	Primary	3/13/2020	<3	<1
	Primary	6/18/2020	<3	<1
	Primary	7/21/2020	<3	<1
	Primary	12/4/2020	<3	<1
	Primary	3/29/2021	<3	<1
	Primary	5/6/2021	<3	<1
	Primary	7/30/2021	<3	<1
	Primary	11/18/2021	<3	<1
	Primary	3/22/2022	<3	<1
	Primary	6/14/2022	<3 ^{J3}	<1 ^{J3}

**TABLE 5:
FORMER THERMAL TREATMENT UNIT
HISTORICAL 1,4-DIOXANE AND TCE CONCENTRATIONS
NAMMO DEFENSE SYSTEMS INC.
MESA, ARIZONA**

		Chemical Name	1,4-Dioxane	Trichloroethene
		EPA Method	8260B SIM	8260B
		Unit	µg/l	
Well ID	Sample Type	Screening Level	3.5 ⁽¹⁾	5
		Sample Date		
TTU-8	Primary	3/27/2018	<3	< 0.40
	Primary	6/28/2018	<3	< 0.40
	Primary	9/10/2018	<3	< 0.40
	Primary	12/10/2018	<3	< 0.40
	Primary	3/26/2019	<3	<1
	Primary	6/7/2019	<3	<1
	Primary	9/16/2019	<3	<1
	Primary	12/23/2019	<3	<1
	Primary	3/16/2020	<3	<1
	Duplicate	3/16/2020	<3	<1
	Primary	6/18/2020	<3	<1
	Duplicate	6/18/2020	<3	<1
	Primary	7/21/2020	<3	<1
	Primary	12/4/2020	<3	<1
	Primary	3/29/2021	<3	<1
	Primary	5/6/2021	<3	<1
	Primary	7/30/2021	<3	<1
	Primary	11/18/2021	<3	<1
	Primary	3/22/2022	<3	<1
Primary	6/14/2022	<3	<1	

**TABLE 5:
FORMER THERMAL TREATMENT UNIT
HISTORICAL 1,4-DIOXANE AND TCE CONCENTRATIONS
NAMMO DEFENSE SYSTEMS INC.
MESA, ARIZONA**

		Chemical Name	1,4-Dioxane	Trichloroethene
		EPA Method	8260B SIM	8260B
		Unit	µg/l	
Well ID	Sample Type	Screening Level	3.5 ⁽¹⁾	5
		Sample Date		
TTU-9A	Primary	3/27/2018	<3	< 0.40
	Primary	6/28/2018	<3	< 0.40
	Primary	9/10/2018	<3	< 0.40
	Primary	12/10/2018	<3	< 0.40
	Primary	3/26/2019	<3	<1
	Primary	6/7/2019	<3	<1
	Primary	9/16/2019	<3	<1
	Primary	12/20/2019	1.01^J	<1
	Primary	3/12/2020	11.9^J	<1
	Primary	6/17/2020	<3	<1
	Primary	7/20/2020	<3	<1
	Primary	12/2/2020	<3	6.46^J
	Primary	3/30/2021	<3	7.53
	Primary	5/6/2021	<3	4.76
	Primary	7/29/2021	<3	2.75
	Primary	11/17/2021	<3	0.911^J
	Duplicate	11/17/2021	<3	0.985^J
	Primary	3/22/2022	<3	0.944^{E4}
Primary	6/13/2022	4.82	<1	
Primary	7/21/2022	<3	<1	

**TABLE 5:
FORMER THERMAL TREATMENT UNIT
HISTORICAL 1,4-DIOXANE AND TCE CONCENTRATIONS
NAMMO DEFENSE SYSTEMS INC.
MESA, ARIZONA**

		Chemical Name	1,4-Dioxane	Trichloroethene
		EPA Method	8260B SIM	8260B
		Unit	µg/l	
Well ID	Sample Type	Screening Level	3.5 ⁽¹⁾	5
		Sample Date		
TTU-10	Primary	3/27/2018	<3	< 0.40
	Primary	6/28/2018	<3	< 0.40
	Primary	9/10/2018	<3	< 0.40
	Primary	12/10/2018	<3	< 0.40
	Primary	3/26/2019	<3	< 1.0
	Primary	6/27/2019	<3	NS
	Primary	9/16/2019	<3	<1
	Primary	12/23/2019	<3	<1
	Primary	3/13/2020	<3	<1
	Primary	6/18/2020	<3	<1
	Primary	7/21/2020	<3	<1
	Primary	12/4/2020	<3	<1
	Primary	3/29/2021	<3	<1
	Primary	5/6/2021	<3	<1
	Primary	8/6/2021	<3	<1
	Primary	11/18/2021	<3	<1
	Primary	3/22/2022	1.58	<1
	Primary	6/14/2022	<3 ^{J3}	<1
	Duplicate	6/14/2022	<3 ^{J3}	<1

**TABLE 5:
FORMER THERMAL TREATMENT UNIT
HISTORICAL 1,4-DIOXANE AND TCE CONCENTRATIONS
NAMMO DEFENSE SYSTEMS INC.
MESA, ARIZONA**

		Chemical Name	1,4-Dioxane	Trichloroethene
		EPA Method	8260B SIM	8260B
		Unit	µg/l	
Well ID	Sample Type	Screening Level	3.5 ⁽¹⁾	5
		Sample Date		
TTU-11	Primary	9/23/2015	380	3,100
	Duplicate	9/23/2015	400	3,100
	Primary	11/23/2015	270	2,900
	Primary	2/25/2016	250	2,400
	Primary	6/1/2016	282	1,600
	Primary	8/18/2016	240	1,800
	Primary	11/22/2016	310	2,500
	Duplicate	11/22/2016	340	2,400
	Primary	2/22/2017	222	2,010
	Duplicate	2/22/2017	224	2,080
	Primary	5/23/2017	201	1,560
	Duplicate	5/23/2017	192	1,710
	Primary	8/29/2017	1,450	807
	Primary	3/27/2018	671	461
	Primary	9/12/2018	1,060	4,650
	Primary	12/4/2018	1,820	14,500
	Duplicate	12/4/2018	1,840	14,800
	Primary	9/16/2019	1,510	11,200
	Primary	12/20/2019	855 ^J	11,500
	Duplicate	12/20/2019	907 ^J	9,400
	Primary	3/12/2020	863	6,780
	Primary	6/18/2020	1,570	15,000
	Primary	7/20/2020	977	17,600
Primary	6/20/2022	<3	56.3	

**TABLE 5:
FORMER THERMAL TREATMENT UNIT
HISTORICAL 1,4-DIOXANE AND TCE CONCENTRATIONS
NAMMO DEFENSE SYSTEMS INC.
MESA, ARIZONA**

		Chemical Name	1,4-Dioxane	Trichloroethene
		EPA Method	8260B SIM	8260B
		Unit	µg/l	
Well ID	Sample Type	Screening Level	3.5 ⁽¹⁾	5
		Sample Date		
TTU-12	Primary	8/29/2017	85.7	335
	Primary	11/27/2017	84.1	301
	Primary	3/27/2018	85.5	484
	Primary	6/28/2018	108	339
	Primary	9/10/2018	91	460
	Primary	12/10/2018	107	454
	Primary	3/25/2019	136	176
	Primary	6/7/2019	120	507
	Primary	9/16/2019	160	543
	Primary	12/20/2019	106	567
	Primary	3/12/2020	94.8 ¹	407
	Primary	6/17/2020	184	471
	Primary	7/20/2020	82.2	547
	Primary	7/29/2021	176	466
	Primary	11/18/2021	133	624
	Duplicate	11/18/2021	141	617
	Primary	3/22/2022	149	538
Primary	6/13/2022	170	487	

**TABLE 5:
FORMER THERMAL TREATMENT UNIT
HISTORICAL 1,4-DIOXANE AND TCE CONCENTRATIONS
NAMMO DEFENSE SYSTEMS INC.
MESA, ARIZONA**

Well ID	Sample Type	Chemical Name	1,4-Dioxane	Trichloroethene
		EPA Method	8260B SIM	8260B
		Unit	µg/l	
		Screening Level	3.5 ⁽¹⁾	5
		Sample Date		
TTU-13	Primary	8/29/2017	4.00	2.60
	Primary	11/27/2017	14.1	5.70
	Primary	3/27/2018	18.3	7.30
	Primary	6/28/2018	33.9	12.6
	Primary	9/10/2018	47.3	24.2
	Primary	12/10/2018	45.2	20.1
	Primary	3/25/2019	55.8	21.7
	Primary	6/7/2019	39.9	22.6
	Primary	9/16/2019	58.0	18.3
	Primary	12/20/2019	40.2	17.0
	Primary	3/16/2020	32.2 ^J	15.4
	Duplicate	3/16/2020	33.5 ^J	14.9
	Primary	6/17/2020	48.5	14.6
	Duplicate	6/17/2020	54.1	16.6
	Primary	7/20/2020	29.6	13.3
	Duplicate	7/20/2020	27.7	13.8
	Primary	12/3/2020	25.3	11.2 ^J
	Primary	3/30/2021	37.7 ^J	17.1
	Primary	5/6/2021	37.9	12.9
	Primary	7/29/2021	58.6	11.1
Primary	11/18/2021	3.26	1.44 ^J	
Primary	3/22/2022	9.96	5.76	
Primary	6/13/2022	28.9	5.52	

**TABLE 5:
FORMER THERMAL TREATMENT UNIT
HISTORICAL 1,4-DIOXANE AND TCE CONCENTRATIONS
NAMMO DEFENSE SYSTEMS INC.
MESA, ARIZONA**

		Chemical Name	1,4-Dioxane	Trichloroethene
		EPA Method	8260B SIM	8260B
		Unit	µg/l	
Well ID	Sample Type	Screening Level	3.5 ⁽¹⁾	5
		Sample Date		
TTU-14	Primary	8/29/2017	367	657
	Primary	11/27/2017	356	828
	Primary	3/27/2018	363	1030
	Primary	6/28/2018	381	875
	Primary	9/10/2018	338	689
	Primary	12/17/2018	331	694
	Primary	3/27/2019	356	780
	Primary	6/27/2019	427	--
	Primary	9/16/2019	422	921
	Primary	12/20/2019	280	1060
	Primary	3/12/2020	278 ^J	880
	Primary	6/17/2020	504	891
	Primary	7/20/2020	241	1210
	Primary	12/2/2020	388	917
	Primary	3/30/2021	280 ^J	990
	Primary	5/6/2021	370	831
	Primary	7/29/2021	493	966
	Primary	11/18/2021	279	917
	Primary	3/22/2022	339	908
	Duplicate	3/22/2022	321	879
Primary	6/14/2022	297 ^{J3}	1,040	
TTU-15	Primary	3/27/2019	3.54	<1
	Primary	9/16/2019	3.95	<1
	Primary	12/20/2019	6.09	<1
	Primary	3/12/2020	3.02	<1
	Primary	6/17/2020	5.32	<1
	Primary	7/20/2020	2.81 ^J	<1
	Primary	12/2/2020	<3	3.10
	Primary	3/29/2021	5.33 ^J	12.9
	Primary	5/5/2021	3.83	11.7
	Primary	7/29/2021	6.26	13.0
	Primary	11/17/2021	5.90	10.3
	Primary	3/21/2022	6.93	7.89
	Primary	6/13/2022	9.83	6.23

**TABLE 5:
FORMER THERMAL TREATMENT UNIT
HISTORICAL 1,4-DIOXANE AND TCE CONCENTRATIONS
NAMMO DEFENSE SYSTEMS INC.
MESA, ARIZONA**

		Chemical Name	1,4-Dioxane	Trichloroethene
		EPA Method	8260B SIM	8260B
		Unit	µg/l	
Well ID	Sample Type	Screening Level	3.5 ⁽¹⁾	5
		Sample Date		
TTU-16	Primary	3/13/2020	2,470 ^J	51,500
	Primary	6/17/2020	4,310	68,400
	Duplicate	6/17/2020	5,610	70,200
	Primary	7/20/2020	2,220 ^J	92,200
	Primary	12/2/2020	1,730	80,000
	Duplicate	12/2/2020	1,990	96,000
	Primary	3/29/2021	2,880	76,800
	Duplicate	3/29/2021	2,550	71,800
	Primary	5/5/2021	4,920	77,400 ^J
	Duplicate	5/5/2021	5,270	38,500 ^J
	Primary	7/29/2021	5,140	86,000
	Duplicate	7/29/2021	5,710	87,300
	Primary	11/17/2021	3,930	93,200
	Primary	3/21/2022	5,430	103,000
Primary	6/13/2022	3,600 ^{J3}	96,500	
TTU-17	Primary	3/13/2020	< 0.424	0.463 ^J
	Primary	6/17/2020	<3	0.321 ^J
	Primary	7/20/2020	<3	0.367 ^J
	Primary	12/2/2020	<3	1.56
	Primary	3/29/2021	<3	5.00
	Primary	5/5/2021	<3	4.13
	Primary	7/29/2021	<3	3.99
	Primary	11/17/2021	<3	3.08
	Primary	3/21/2022	4.75	3.51
	Primary	6/13/2022	10.1	2.1
TTU-19	Primary	9/23/2021	70.4 ^J	478
	Primary	6/20/2021	<3	189
	Duplicate	6/20/2021	<3	373
TTU-20	Primary	11/18/2021	2,140	13,400
	Primary	9/23/2021	841 ^J	14,300
	Primary	6/16/2021	1,540 ^{T8}	10,800

**TABLE 5:
FORMER THERMAL TREATMENT UNIT
HISTORICAL 1,4-DIOXANE AND TCE CONCENTRATIONS
NAMMO DEFENSE SYSTEMS INC.
MESA, ARIZONA**

		Chemical Name	1,4-Dioxane	Trichloroethene
		EPA Method	8260B SIM	8260B
		Unit	µg/l	
Well ID	Sample Type	Screening Level	3.5 ⁽¹⁾	5
		Sample Date		
TTU-EX-1	Primary	3/13/2020	24.5	265
	Primary	6/17/2020	284	168
	Primary	7/20/2020	207	163
	Primary	12/2/2020	466	240
	Primary	3/29/2021	340 ^J	262
	Primary	5/5/2021	258	286
	Primary	7/29/2021	702	372
	Primary	11/17/2021	112	79.0
	Primary	3/21/2022	244	181
	Primary	6/13/2022	324 ^{J3}	174
TTU-EX-2	Primary	3/13/2020	198 ^J	327
	Primary	6/17/2020	405	549
	Primary	7/20/2020	212	561
	Primary	12/2/2020	424	506
	Primary	3/30/2021	334 ^J	634
	Primary	5/5/2021	218	536
	Primary	7/29/2021	523	630
	Primary	11/17/2021	158	238
	Primary	3/21/2022	213	234
	Primary	6/13/2022	189 ^{J3}	315
TTU-EX-3	Primary	3/13/2020	175 ^J	5,960
	Primary	6/17/2020	785	6,050
	Primary	7/20/2020	610	7,390
	Primary	12/2/2020	805 ^{J-}	5,970 ^J
	Primary	3/30/2021	697	5,560
	Primary	5/5/2021	536	5,540
	Primary	7/29/2021	1,010	7,260
	Primary	11/17/2021	909	8,120
	Duplicate	11/17/2021	969	8,010
	Primary	3/21/2022	885	6,560
	Primary	6/13/2022	863 ^{J3}	6,020

**TABLE 5:
FORMER THERMAL TREATMENT UNIT
HISTORICAL 1,4-DIOXANE AND TCE CONCENTRATIONS
NAMMO DEFENSE SYSTEMS INC.
MESA, ARIZONA**

		Chemical Name	1,4-Dioxane	Trichloroethene
		EPA Method	8260B SIM	8260B
		Unit	µg/l	
Well ID	Sample Type	Screening Level	3.5 ⁽¹⁾	5
		Sample Date		
TTU-EX-4	Primary	3/13/2020	16.1	811
	Primary	6/17/2020	23.7	1,040
	Primary	7/20/2020	18.1	934
	Primary	12/2/2020	20.7	501
	Primary	3/30/2021	16.3	486
	Primary	5/5/2021	12.8	420
	Primary	7/29/2021	29.0	461
	Primary	11/17/2021	16.1	755
	Primary	3/21/2022	23.9	909
	Primary	6/13/2022	27.4	579
	Duplicate	6/13/2022	26.1	635
	TTU-EX-5	Primary	3/13/2020	< 0.476
Duplicate		3/13/2020	< 0.492	0.775^J
Primary		6/17/2020	<3	0.456^J
Primary		7/20/2020	<3	0.562^J
Duplicate		7/20/2020	<3	0.637^J
Primary		12/2/2020	<3	4.18^J
Duplicate		12/2/2020	<3	3.89^J
Primary		3/30/2021	<3	6.53
Primary		5/5/2021	<3	5.52
Primary		7/29/2021	<3	5.51
Primary		11/17/2021	<3	6.91
Primary		3/21/2022	<3	5.74
Duplicate		3/21/2022	<3	5.98
Primary		6/13/2022	<3	5.58

Notes:

µg/l - micrograms per liter

AWQS - Arizona Aquifer Water Quality Standard

EPA - Environmental Protection Agency

NA - Not Analyzed

NS - No sample collected

SIM - Selected Ion Monitoring

< - Concentration is below laboratory reporting limits

-- - Not reported

Bold - Concentration above laboratory reporting limits

Highlighted gray - Concentration exceeds its respective AWQS

(1) - Interim Screen Level; TCE screening level is the AWQS

E4 - Concentration estimated. Analyte was detected below laboratory minimum reporting level

J = The analyte was positively identified; the associated numerical value is the approximate

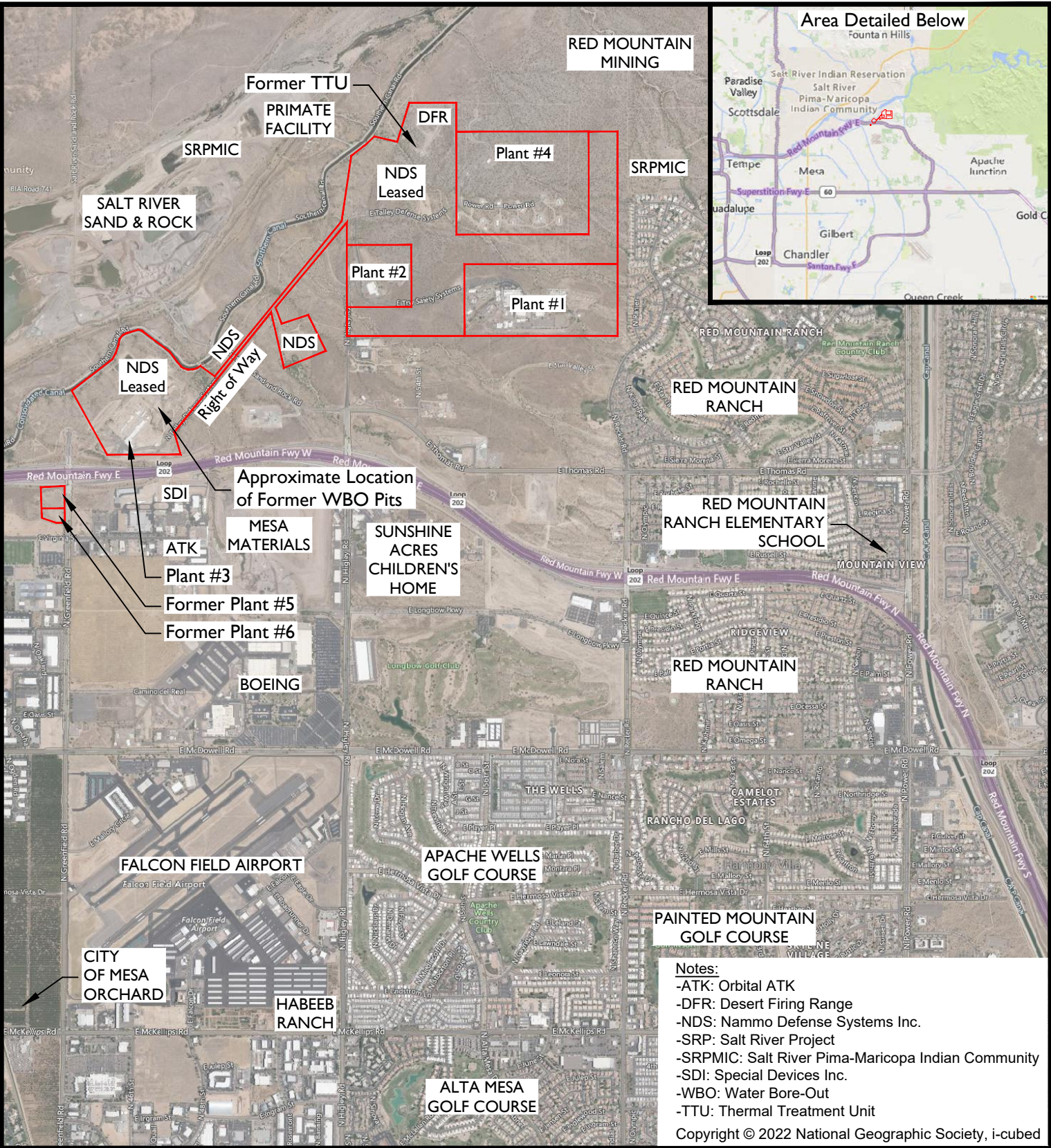
J- = Estimated concentration; actual concentration is likely lower than the detected value.

R7 - Laboratory field blank/laboratory field blank duplicate (LFB/LFBD) relative percent difference

Figures

PLOT DATE: 10/7/2022

C:\Users\pactman\pinyon Environmental Inc\Arizona Project Delivery - NDS - Documents\NDS\WBO_TTU_GWM\Figure\AutoCAD\DWG\TTU_Q2_2022\TTU_GW01.dwg





Notes:

- ATK: Orbital ATK
- DFR: Desert Firing Range
- NDS: Nammo Defense Systems Inc.
- SRP: Salt River Project
- SRPMIC: Salt River Pima-Maricopa Indian Community
- SDI: Special Devices Inc.
- WBO: Water Bore-Out
- TTU: Thermal Treatment Unit

Copyright © 2022 National Geographic Society, i-cubed

LEGEND

 Approximate Property Boundary



0 5000' 10000'

SCALE: 1" = 5000'

Pinyon
Environmental, Inc.

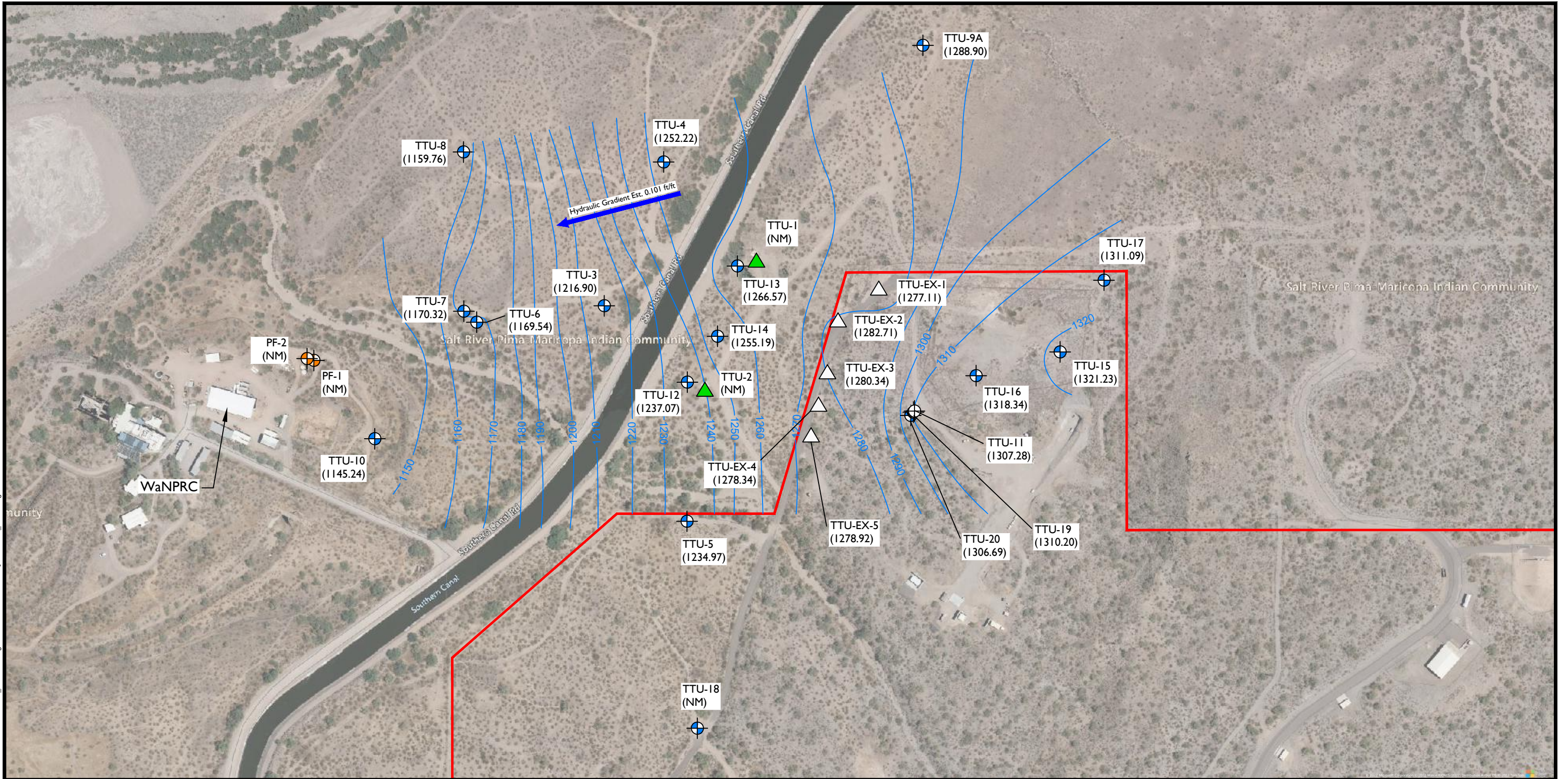
SITE VICINITY MAP

*Nammo Defense Systems Inc.
Former Thermal Treatment Unit (TTU)
Mesa, Arizona*

Site Location: Section 3, 15 and 27 Township 1N, Range 6E, Gila-Salt River Meridian	Drawn By: SJA	Figure: 1
Pinyon Project Number: 7/22-1522-01.REM001.4	Reviewed By: DW	Date: 10/7/2022

PLOT DATE: 10/10/2022

C:\Users\pccaman\Pinyon Environmental Inc\Arizona Project Delivery - NDS - Documents\NDS\WBO_TTU GWM\Figures\AutoCAD\DWG\TTU Q2 2022\TTU_GW02.dwg

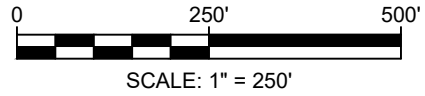


LEGEND

- Extraction Well
- Monitoring Well
- Primate Production Well
- Extraction and Pilot Test Injection Well
- Monitoring / Injection Well
- Extraction Well Currently used for Monitoring
- TTU-1 = 1145.24 = Monitoring Well Location Groundwater Elevation (ft. amsl)
- Groundwater Elevation Contour (ft amsl) (Contour Interval: 10ft)
- Estimated Regional Groundwater Flow Direction
- NDS Leased Property Boundary with SRP-MIC

Notes:
 All locations are approximate.
 NM: Not Measured
 ft. amsl: feet above mean sea level.
 TTU-7 is a deep well and therefore it is not used for contouring.
 TTU-18 is dry and not sampled.

WaNPRC: Washington National Primate Research Center
 NDS: Nammo Defense Systems Inc.



Pinyon
 Environmental, Inc.

**QUARTERLY GROUNDWATER CONTOUR
 MAP - SECOND QUARTER 2022**

Nammo Defense Systems Inc.
 Former Thermal Treatment Unit (TTU)
 Mesa, Arizona

Site Location: Section 23, Township 12N, Range 6E, Gila-Salt River Meridian

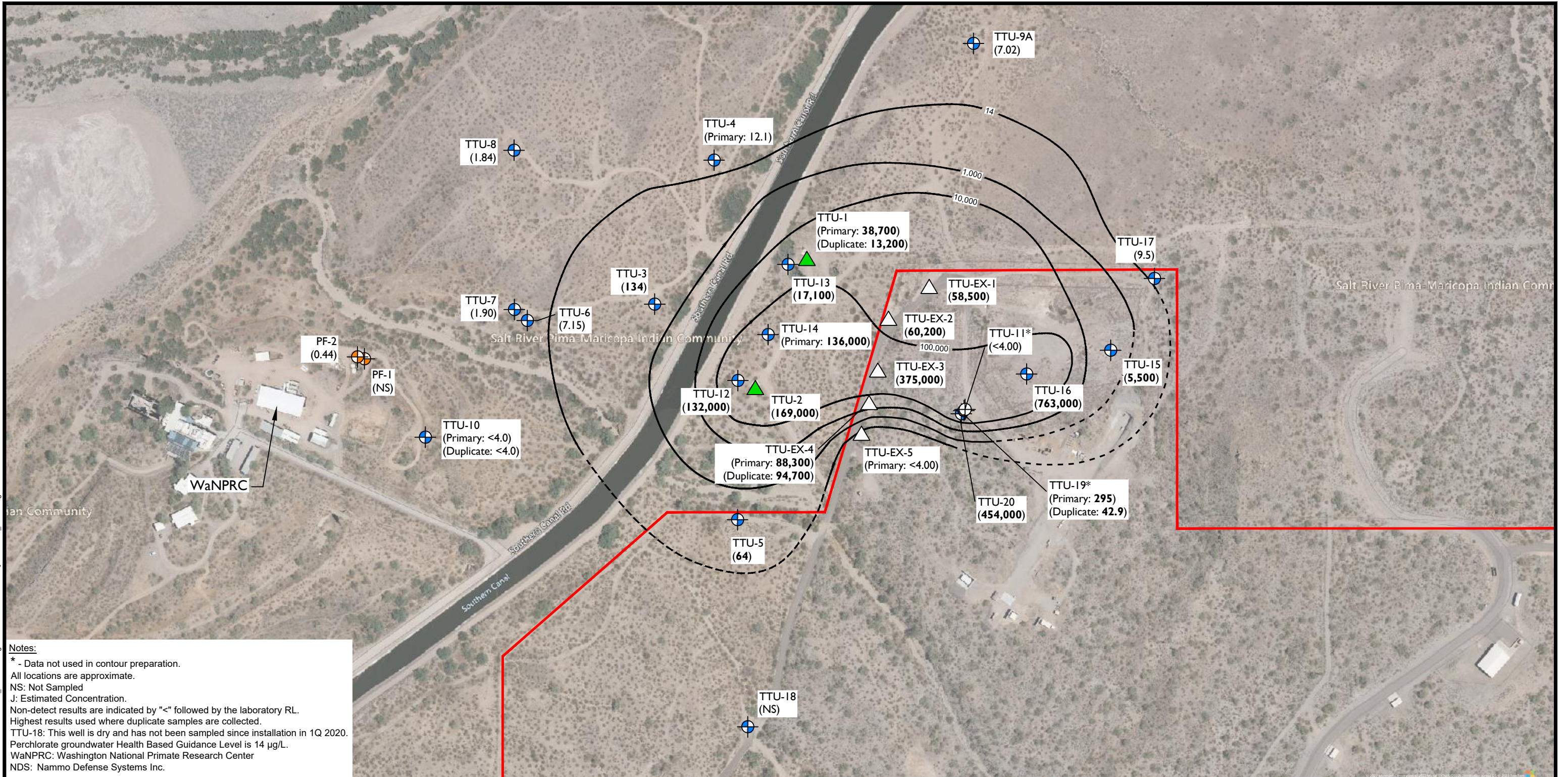
Pinyon Project Number: 7/22-1522-01.REM001.4

Drawn By: SJA	Figure: 2
Reviewed By: DW	Date: 10/10/2022

Coordinate System: NAD83 ARIZONA STATE PLANES, CENTRAL ZONE, US FOOT - AZ83-CF

PLOT DATE: 10/10/2022

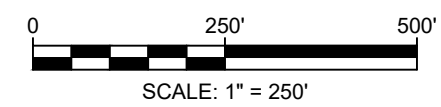
C:\Users\pccaman\Pinyon Environmental Inc\Arizona Project Delivery - NDS - Documents\NDS\WBO_TTU GWM\Figures\AutoCAD\DWG\TTU Q2 2022\TTU_GW03.dwg



Notes:
 * - Data not used in contour preparation.
 All locations are approximate.
 NS: Not Sampled
 J: Estimated Concentration.
 Non-detect results are indicated by "<" followed by the laboratory RL.
 Highest results used where duplicate samples are collected.
 TTU-18: This well is dry and has not been sampled since installation in 1Q 2020.
 Perchlorate groundwater Health Based Guidance Level is 14 µg/L.
 WaNPRC: Washington National Primate Research Center
 NDS: Nammo Defense Systems Inc.

LEGEND

	Extraction Well		Monitoring / Injection Well	5.76	Exceeds the 14 µg/L Screening Level
	Monitoring Well		Extraction Well Currently used for Monitoring		Perchlorate Concentration Contour (µg/l)
	Primate Production Well	TTU-1 =	Monitoring Well Location		
	Extraction and Pilot Test Injection Well	14,000 =	Perchlorate Concentration in micrograms per liter (µg/L)		
	NDS Leased Property Boundary with SRP-MIC				



Pinyon
Environmental, Inc.

PERCHLORATE DETECTIONS IN GROUNDWATER - SECOND QUARTER 2022

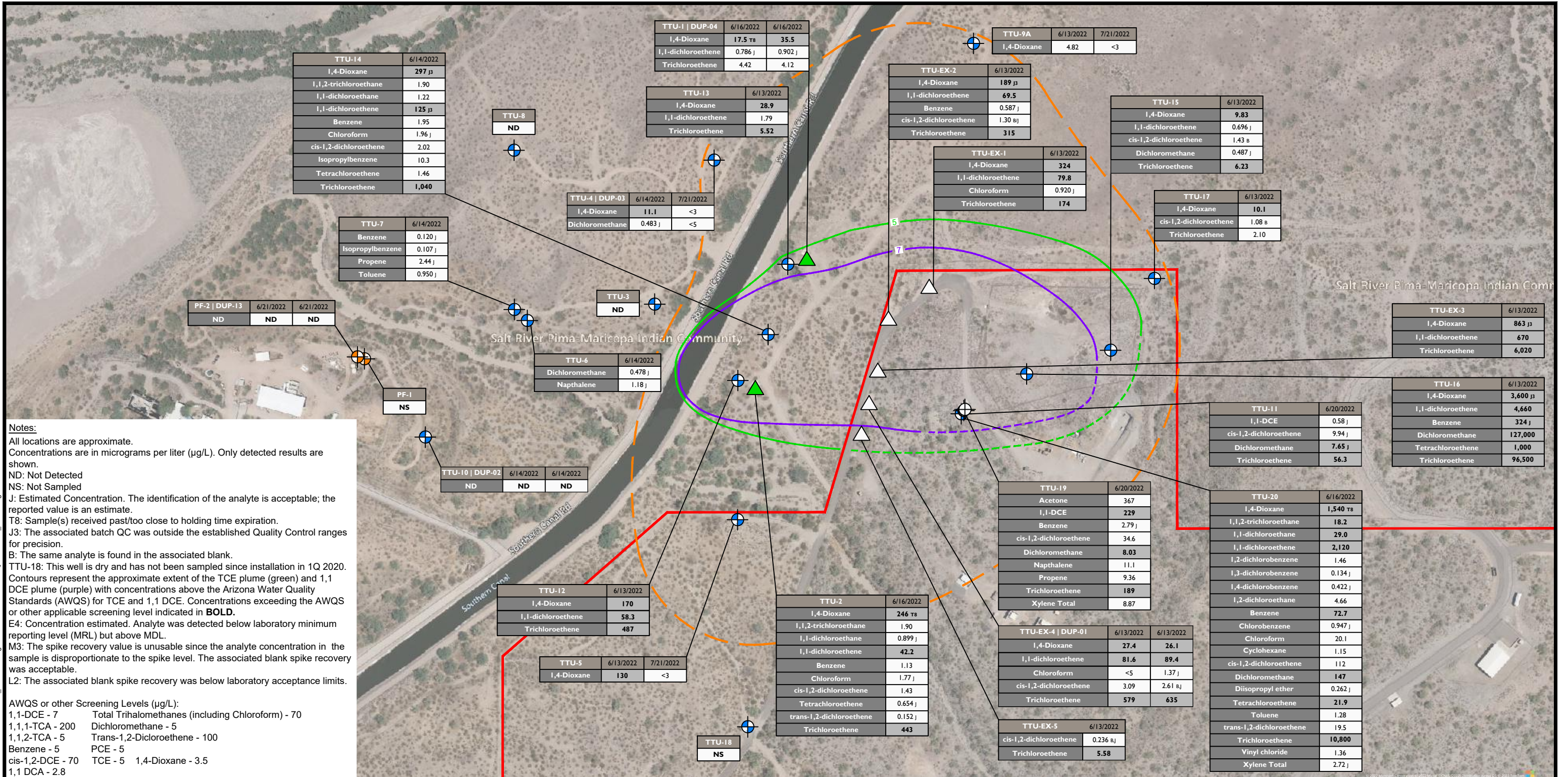
Nammo Defense Systems Inc.
Former Thermal Treatment Unit (TTU)
Mesa, Arizona

Site Location: Section 23, Township 12N, Range 6E, Gila-Salt River Meridian

Pinyon Project Number: 7/22-1522-01.REM001.4

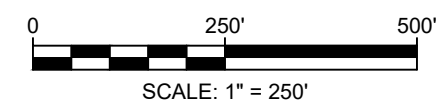
Drawn By: SJA	Figure: 3
Reviewed By: DW	Date: 10/10/2022

Coordinate System: NAD83 ARIZONA STATE PLANES, CENTRAL ZONE, US FOOT - AZ83-CF



LEGEND

- ▲ Extraction Well
- Monitoring / Injection Well
- Monitoring Well
- Primate Production Well
- Extraction and Pilot Test Injection Well
- △ Extraction Well Currently used for Monitoring
- TTU-1 = Monitoring Well Location
- XXX = Monitoring Well Location Screening Levels
- NDS Leased Property Boundary with SRP-MIC
- 3.5 (dashed orange line) Extent of Estimated 1,4-Dioxane Concentration in Groundwater First Quarter 2022 (Dashed Where Inferred)
- 5.76 (dashed green line) Extent of Estimated Trichloroethene (TCE) Concentration in Groundwater First Quarter 2022 (Dashed Where Inferred)
- 7 (dashed purple line) Extent of Estimated 1,1-Dichloroethene (1,1-DCE) Concentration in Groundwater First Quarter 2022 (Dashed Where Inferred)
- 5.76 Exceeds Aquifer Water Quality Standards



Pinyon Environmental, Inc.

VOC DETECTIONS IN GROUNDWATER - SECOND QUARTER 2022

Nammo Defense Systems Inc.
Former Thermal Treatment Unit (TTU)
Mesa, Arizona

Site Location: Section 23, Township 12N, Range 6E, Gila-Salt River Meridian

Pinyon Project Number: 7/22-1522-01.REM001.4

Coordinate System: NAD83 ARIZONA STATE PLANES, CENTRAL ZONE, US FOOT - AZ83-CF

Drawn By: SJA Figure: 4

Reviewed By: DW Date: 10/10/2022

Attachments

Attachment I – Field Notes

Well Sampling Record						
Project Name		Nimrod TTU				
Project Number		722152201.008				
Well ID / ADWR #		TTU-EX-1				
Date Completed		1/29/20				
Casing Material		steel				
Casing Diameter (in)		8"				
Screen (ft btoc)		open				
Well Total Depth (ft btoc)		109				
Survey Information		elev. - 1321.64 ft msl // lat. - 33° 21' 58.4103" // long. - 110° 21' 52.55108"				
Deployment						
Date / Time		3/21/22 - 1533				
Type of Sampler		Hydrasleeve				
Size of Sampler		HS-2-IL				
DTW (ft btoc)		21.33				
Deployment Depth (ft btoc)		69				
Personnel		RUB, MJG				
Notes		murky H ₂ O w/ black flakes				
Retrieval and/or Sampling						
Date / Time		6/13/22 - 1000				
DTW (ft btoc)		44.56				
Sampler Integrity		good				
Personnel		JCB, JF				
Notes		H ₂ O clear, ~.5" seal @ bottom of sleeve				
Field Parameters						
Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
6/13/22-1008	28.76	7.16	91.6	3353	4.29	153
Sample ID		TTU-EX-1-69-20220613				
QAQC Samples		-				
Containers		(1) 125 mL Poly + (6) 40 mL VOAs				
Preservatives		HCl				
Analysis		perchlorate, VOCs, dioxin				
Sampler Reset		(Yes)			No	
Notes						

Well Sampling Record						
Project Name		DANMOTO TTU				
Project Number		722152701.002				
Well ID / ADWR #		TTU-EX-2				
Date Completed		1/28/20				
Casing Material		Steel				
Casing Diameter (in)		8"				
Screen (ft btoc)		open				
Well Total Depth (ft btoc)		110				
Survey Information		elev. - 1316.401 ft msl // lat. 33°29'57.60791" // long. -111°42'53.78896"				
Deployment						
Date / Time		3/21/22 @ 1503				
Type of Sampler		Hydro-sleeve				
Size of Sampler		HS-2-IL				
DTW (ft btoc)		29.65				
Deployment Depth (ft btoc)		74				
Personnel		B.S. M.J.G.				
Notes		2.5" sed @ bottom of sleeve; sleeve ~90% full				
Retrieval and/or Sampling						
Date / Time		6/13/22 - 0931				
DTW (ft btoc)		33.69				
Sampler Integrity		good				
Personnel		J.R.B. J.F.				
Notes		H2O 3/4 clear, 2.5" sed @ bottom of sleeve				
Field Parameters						
Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
6/13/22 - 0944	21.09	7.43	72.9	1831	2.30	111
Sample ID		TTU-EX-2-74-20220613				
QAQC Samples		-				
Containers		(1) 125 mL Poly + (6) 40 mL VOAs				
Preservatives		HCl				
Analysis		perchlorate, VOCs, dioxin				
Sampler Reset		(Yes)				No
Notes						



Well Sampling Record						
Project Name		NOMMO TTU				
Project Number		7/2/19/201.002				
Well ID / ADWR #		TTU-EX-3				
Date Completed		1/24/20				
Casing Material		Steel				
Casing Diameter (in)		8"				
Screen (ft btoc)		Open				
Well Total Depth (ft btoc)		11"				
Survey Information		Elev. -1316.55 ft msl / Lat. -33° 29' 56.21009" N / Long. -111° 42' 54.11922" W				
Deployment						
Date / Time		3/21/22 @ 1432				
Type of Sampler		Hydrasleeve				
Size of Sampler		HS-2-IL				
DTW (ft btoc)		33.46				
Deployment Depth (ft btoc)		76				
Personnel		KUB, MJB				
Notes						
Retrieval and/or Sampling						
Date / Time		6/13/22 - 0907				
DTW (ft btoc)		36.50				
Sampler Integrity		rusty, otherwise good				
Personnel		KUB, JF				
Notes		1" sand @ bottom of sleeve				
Field Parameters						
Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
6/13/22-0910	20.07	6.77	70.6	5.093	3.25	20.5
Sample ID		TTU-EX-3-76-20220613				
QAQC Samples		-				
Containers		(1) 125 mL Poly + (6) 210 mL UOAs				
Preservatives		HCl				
Analysis		perchlorate, VOCs, dioxin				
Sampler Reset		(Yes)			No	
Notes						

Pinyon

Environmental, Inc.

Well Sampling Record						
Project Name		NAMMO TTU				
Project Number		7/22/15/201.00/				
Well ID / ADWR #		TTU-EX-4				
Date Completed		1/25/20				
Casing Material		Steel				
Casing Diameter (in)		8"				
Screen (ft btoc)		open				
Well Total Depth (ft btoc)		112'				
Survey Information		elev. - 1319.959 ft. masl // lat. - 33° 29' 55.46297" // long. - 111° 42' 54.38840"				
Deployment						
Date / Time		2/21/22 @ 1359				
Type of Sampler		Hydrosteeve				
Size of Sampler		HS-2-TL				
DTW (ft btoc)		40.75				
Deployment Depth (ft btoc)		77				
Personnel		EUB, MSJG				
Notes		~1" sed @ bottom of sleeve				
Retrieval and/or Sampling						
Date / Time		6/13/22 - 0843				
DTW (ft btoc)		41.62				
Sampler Integrity		good				
Personnel		EUB, IF				
Notes		~1.5" sed @ bottom of sleeve, 3/4 of H2O clear				
Field Parameters						
Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
6/13/22-0843	29.90	7.11	44.1	2.170	1.53	50.3
Sample ID		TTU-EX-4-77-20220613				
QAQC Samples		DUP-01				
Containers		(2) 125 mL Polys, (12) 40 mL VOAs				
Preservatives		HCl				
Analysis		perchlorate, VOCs, dioxin				
Sampler Reset		(Yes)			No	
Notes						

Well Sampling Record						
Project Name		NAMMO TTU				
Project Number		722152201.002				
Well ID / ADWR #		TTU-EX-5-				
Date Completed		1/24/20				
Casing Material		Steel				
Casing Diameter (in)		8"				
Screen (ft btoc)		OPEN				
Well Total Depth (ft btoc)		112.4				
Survey Information		Elev. - 1319.499 ft msl // Lat. - 33° 29' 51.6764" N // Long. - 111° 47' 51.6211" W				
Deployment						
Date / Time		3/21/22 @ 1323				
Type of Sampler		Hydro-sleeve				
Size of Sampler		HS-2-IL				
DTW (ft btoc)		40.56				
Deployment Depth (ft btoc)		90				
Personnel		PCB, MS6				
Notes		1" sed @ bottom of sleeve				
Retrieval and/or Sampling						
Date / Time		6/13/22 - 0750				
DTW (ft btoc)		40.56				
Sampler Integrity		good				
Personnel		PCB, JF				
Notes		1.5" sed @ bottom of sleeve; H2O clear for 3/4 of sleeve				
Field Parameters						
Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
6/13/22 - 0752	27.42	7.26	-56.3	1.173	2.39	35.6
Sample ID		TTU-EX-5-80-20220613				
QAQC Samples		-				
Containers		(1) 125 mL Poly + (6) 40 mL VOA's				
Preservatives		HCl				
Analysis		perchlorate, VOA's, dioxin				
Sampler Reset		(yes)			No	
Notes						

6/16

Pinyon

Environmental, Inc.

Well Sampling Record						
Project Name		DUMMO TTU				
Project Number		722152201.002				
Well ID / ADWR #		TTU-1				
Date Completed		6/16/12				
Casing Material		PVC				
Casing Diameter (in)		4"				
Screen (ft btoc)		20-70				
Well Total Depth (ft btoc)		75				
Survey Information		Elev. - 1312.73 ft msl // Lat. - 33° 19' 59.138" N // Long. - 111° 41' 56.8704" W				
Deployment						
Date / Time						
Type of Sampler						
Size of Sampler						
DTW (ft btoc)						
Deployment Depth (ft btoc)						
Personnel						
Notes		pumping well, no deployment				
Retrieval and/or Sampling						
Date / Time		6/16/12 @ 1245				
DTW (ft btoc)		NR				
Sampler Integrity						
Personnel		RUB, IF				
Notes		unable to take DTW - couldn't get past 50', no indication of H ₂ O				
Field Parameters						
Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
6/16/12 - 1255	27.33	7.71	99.8	1306	5.02	7.20
Sample ID		TTU-1-60-10/10/12				
QAQC Samples		Dup - 0/0				
Containers		125 mL HDPE - Noppes (2), 40 mL Amb - HCl (12)				
Preservatives		HCl				
Analysis		VOCs, Perchlorate, 1,4-Dioxane				
Sampler Reset		Yes			No	
Notes		turned machine off as we left				

of H₂O
 ↓
 may need to take before turning machine on

Well Sampling Record						
Project Name		NIMMO TTU				
Project Number		722153301.002				
Well ID / ADWR #		TTU-02				
Date Completed		10/17/13				
Casing Material		PVC				
Casing Diameter (in)		4"				
Screen (ft btoc)		219.4-179.6				
Well Total Depth (ft btoc)		185				
Survey Information		Elev. - 134.44 ft msl / Lat. - 33° 29' 55.84" N / Long. - 111° 41' 57.84" W				
Deployment						
Date / Time						
Type of Sampler						
Size of Sampler						
DTW (ft btoc)						
Deployment Depth (ft btoc)						
Personnel						
Notes						
Retrieval and/or Sampling						
Date / Time		6/16/22 - 1324				
DTW (ft btoc)		N/A				
Sampler Integrity		PUB IF				
Personnel		PUB IF				
Notes		Unable to record DTW, see TTU-1 sheet for further explanation				
Field Parameters						
Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
6/16/22 - 1325	27.64	7.31	106.6	3575	5.46	1.99
Sample ID		TTU-02-14-202006				
QAQC Samples		MS/MSD				
Containers		125 mL HDPE - Nofes (2), 40 mL Aurb-HCL (12)				
Preservatives		HCl				
Analysis		VOCs, perchlorate, 1,4-Dioxane				
Sampler Reset		Yes		No		
Notes		fanned machine off as we left				

8480"

explanatic
unable to
go past
100' +
no reach



Well Sampling Record						
Project Name	DUMMO TTU					
Project Number	722152201.002					
Well ID / ADWR #	TTU-3					
Date Completed	10/18/13					
Casing Material	PVC					
Casing Diameter (in)	4"					
Screen (ft btoc)	78.1-138.1					
Well Total Depth (ft btoc)	143.6					
Survey Information	elev. -1208.03 ft msl // lat. 33°19'57.9845" // long. -111°43'00.9143"					
Deployment						
Date / Time	3/22/22 @ 1528					
Type of Sampler	Hydrosteele					
Size of Sampler	HS-2-IL					
DTW (ft btoc)	92.00					
Deployment Depth (ft btoc)	108					
Personnel	CRF					
Notes						
Retrieval and/or Sampling						
Date / Time	6/14/22 - 1124					
DTW (ft btoc)	91.13					
Sampler Integrity	good					
Personnel	JECB, IF					
Notes	H2O clear					
Field Parameters						
Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
6/14/22 - 1131	26.64	7.20	76.5	1365	5.05	18.8
Sample ID	TTU-3-108-20/20614					
QAQC Samples	-					
Containers	(1) 125 mL Poly + (6) 40 mL VOAs					
Preservatives	HCl					
Analysis	perchlorate, VOCs, dioxin					
Sampler Reset	(Yes)				No	
Notes						

Pinyon

Environmental, Inc.

Well Sampling Record						
Project Name		NORMNO TTU				
Project Number		722152101.002				
Well ID / ADWR #		TTU-4				
Date Completed		10/25/13				
Casing Material		PVC				
Casing Diameter (in)		4"				
Screen (ft btoc)		39.5-99.5				
Well Total Depth (ft btoc)		104.9				
Survey Information		elev.-1305.12 ft msl // lat.-33°30'01.6455" // long.-111°42'59.0998"				
Deployment						
Date / Time		3/22/22 @ 1332				
Type of Sampler		Hydra sleeve				
Size of Sampler		HS-2-IL				
DTW (ft btoc)		52.44				
Deployment Depth (ft btoc)		57				
Personnel		CRF				
Notes		H2O clear				
Retrieval and/or Sampling						
Date / Time		6/14/22 - 1016				
DTW (ft btoc)		52.90				
Sampler Integrity		good				
Personnel		JECB, IF				
Notes		sleeve only 1/2 full, H2O clear				
Field Parameters						
Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
6/14/22-1021	26.10	7.66	121.0	2266	2.42	33.1
Sample ID		TTU-4-57-20220614				
QAQC Samples		-				
Containers		(1) 125 mL Poly + (6) 40 mL VDAs				
Preservatives		HCl				
Analysis		perchlorate, VOCs, dioxin				
Sampler Reset		(Yes)			No	
Notes						

Well Sampling Record						
Project Name		DUMMO TTU				
Project Number		722152201.002				
Well ID / ADWR #		TTU-5				
Date Completed		9/10/14				
Casing Material		PVC				
Casing Diameter (in)		4"				
Screen (ft btoc)		59.5-164.5				
Well Total Depth (ft btoc)		169.5				
Survey Information		elev. - 1314.93 ft msl // lat. - 23° 19' 58" N // long. - 110° 47' 58.39" W				
Deployment						
Date / Time		3/21/22 - 1732				
Type of Sampler		Hydra sleeve				
Size of Sampler		HS-2-IL				
DTW (ft btoc)		78.19				
Deployment Depth (ft btoc)		110				
Personnel		JCB, MJC				
Notes		H2O clear				
Retrieval and/or Sampling						
Date / Time		6/13/22 - 1204				
DTW (ft btoc)		79.76				
Sampler Integrity		good				
Personnel		JCB, IF				
Notes		H2O clear, 0.5" sed @ bottom of sleeve				
Field Parameters						
Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
6/13/22 1212	28.76	7.40	57.9	741	3.18	3.11
Sample ID		TTU-5-110-20220613				
QAQC Samples		-				
Containers		(1) 125 mL Poly + (6) 40 mL VOA's				
Preservatives		HCl				
Analysis		perchlorate, VOCs, dioxin				
Sampler Reset		(Yes)				No
Notes						

Well Sampling Record						
Project Name		Nunnato TTU				
Project Number		T22152201.002				
Well ID / ADWR #		TTU-6				
Date Completed		10/7/14				
Casing Material		PVC				
Casing Diameter (in)		4"				
Screen (ft btoc)		110-175				
Well Total Depth (ft btoc)		180				
Survey Information		Elev. -1300.44 ft msl // lat. 33°29'57.5698" // long. -111°23'04.7900"				
Deployment						
Date / Time		3/22/22 @ 1503				
Type of Sampler		Hydro-screw				
Size of Sampler		H3-2-IL				
DTW (ft btoc)		131.00				
Deployment Depth (ft btoc)		143				
Personnel		CRF				
Notes						
Retrieval and/or Sampling						
Date / Time		6/14/22 - 1216				
DTW (ft btoc)		131.30				
Sampler Integrity		good				
Personnel		J Bob, IF				
Notes		H2O clear				
Field Parameters						
Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
6/14/22 - 1225	25.31	7.30	28.8	3083	1.31	15.4
Sample ID		TTU-6-143-20220614				
QAQC Samples		-				
Containers		(1) 125 mL Poly + (6) 40 mL VOAs				
Preservatives		HCl				
Analysis		Perchlorate, VOCs, dioxin				
Sampler Reset		Yes			No	
Notes						

Well Sampling Record						
Project Name		Nammo TTU				
Project Number		722152201.002				
Well ID / ADWR #		TTU-7				
Date Completed		10/8/2014				
Casing Material		Steel				
Casing Diameter (in)		8"				
Screen (ft btoc)		open 280-410				
Well Total Depth (ft btoc)		410				
Survey Information		Elev. -1301.84 ft msl // lat. -33°29'57.8355" // long. -111°43'05.1771"				
Deployment						
Date / Time		3/22/22 @ 1438				
Type of Sampler		Hydro-sleeve				
Size of Sampler		HS-2-TL				
DTW (ft btoc)		129.67 BCB				
Deployment Depth (ft btoc)		315 164				
Personnel		CRF				
Notes		1" sed @ bottom of sleeve; sulfur smell				
Retrieval and/or Sampling						
Date / Time		6/14/22 - 1152				
DTW (ft btoc)		131.52				
Sampler Integrity		good				
Personnel		JCB, JF				
Notes		black sediment in sleeve + on rope				
Field Parameters						
Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
6/14/22-1208	25.26	6.86	-24.8	3958	0.93	19.3
Sample ID		TTU-7-164-20220614				
QAQC Samples		- BCB				
Containers		(1) 125 mL Poly + (6) 40 mL UDAs				
Preservatives		HCl				
Analysis		perchlorate, VOCs, dioxin				
Sampler Reset		(Yes)			No	
Notes		ORP took a long time to stabilize				

Well Sampling Record						
Project Name		DUMMO TTU				
Project Number		722152401.002				
Well ID / ADWR #		TTU-5				
Date Completed		4/18/16				
Casing Material		PVC				
Casing Diameter (in)		4"				
Screen (ft btoc)		135-185				
Well Total Depth (ft btoc)		190				
Survey Information		elev. -1310.23 ft msl // lat. -33°30'01.9900" // long. -111°43'05.3134"				
Deployment						
Date / Time		3/22/22 @ 1408				
Type of Sampler		Hydrocleeve				
Size of Sampler		HS-2-IL				
DTW (ft btoc)		148.66				
Deployment Depth (ft btoc)		164				
Personnel		CRF				
Notes		sulfur smell				
Retrieval and/or Sampling						
Date / Time		6/14/22 - 1047				
DTW (ft btoc)		150.47				
Sampler Integrity		good				
Personnel		BUB, JF				
Notes						
Field Parameters						
Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
6/14/22-1059	27.48	7.24	-21.9	3224	2.56	33.3
Sample ID		TTU-5-164-20220614				
QAQC Samples		MS/MSD				
Containers		(2) 125 mL PONS + (12) 40 mL VOA's				
Preservatives		HCl				
Analysis		perchlorates, VOCs, dioxin				
Sampler Reset		(yes)			No	
Notes						

Well Sampling Record						
Project Name		Nunn TTU				
Project Number		722152201.002				
Well ID / ADWR #		TTU-9A				
Date Completed		6/16/16				
Casing Material		4" PVC				
Casing Diameter (in)		4"				
Screen (ft btoc)		21-99				
Well Total Depth (ft btoc)		101				
Survey Information		elev. - 1386.04 ft msl // lat. - 33° 30' 04.6089" N // long. - 110° 42' 51.1112" W				
Deployment						
Date / Time		3/22/22 @ 08:39				
Type of Sampler		Hydro-sieve				
Size of Sampler		HS-R-TL				
DTW (ft btoc)		29.00				
Deployment Depth (ft btoc)		61				
Personnel		CRF				
Notes		H2O clear				
Retrieval and/or Sampling						
Date / Time		6/13/22 - 1335				
DTW (ft btoc)		29.14				
Sampler Integrity		good				
Personnel		JCB, IF				
Notes		H2O clear				
Field Parameters						
Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
6/13/22-1345	28.75	7.71	121.5	1684	4.41	26.2
Sample ID		TTU-9A-61-20220613				
QA/QC Samples		-				
Containers		(1) 125 mL PONY + (6) 40 mL VOAS				
Preservatives		HCL				
Analysis		perchlorate, VOCs, dioxin				
Sampler Reset		(Yes)			No	
Notes						

Well Sampling Record						
Project Name		NAMMO ITU				
Project Number		72215/101002				
Well ID / ADWR #		ITU-10				
Date Completed		4/18/16				
Casing Material		PVC				
Casing Diameter (in)		4"				
Screen (ft btoc)		115-180				
Well Total Depth (ft btoc)		195				
Survey Information		elev. -1302.4 ft msl // lat. -33° 21' 54.5995" // long. -111° 43' 07.9057"				
Deployment						
Date / Time		3/22/22 @ 1251				
Type of Sampler		Hydro sleeve				
Size of Sampler		HS-2-II				
DTW (ft btoc)		153.24				
Deployment Depth (ft btoc)		147				
Personnel		CRF				
Notes		NO information on deployment lowered sample by 6", dtw was below sleeve				
Retrieval and/or Sampling						
Date / Time		6/14/22 - 1306				
DTW (ft btoc)		157.18				
Sampler Integrity		good				
Personnel		JBCB, IF				
Notes						
Field Parameters						
Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
6/14/22 - 1315	26.84	7.46	96	1543	4.62	279
Sample ID		ITU-10-147-20220614				
QAQC Samples		DUP-02				
Containers		(2) 125 mL Polys + (12) 40 mL VOAs				
Preservatives		HCl				
Analysis		perchlorate, VOCs, dioxin				
Sampler Reset		(Yes)			No	
Notes						

Well Sampling Record						
Project Name		Nunn TTU				
Project Number		7225/201				
Well ID / ADWR #		TTU-11				
Date Completed		9/11/15				
Casing Material		PVC				
Casing Diameter (in)		5"				
Screen (ft btoc)		21-89				
Well Total Depth (ft btoc)		94				
Survey Information		elev. - 1339.1 ft wtd. / lat. - 33° 19' 55.85" / long. - 111° 47' 51.47"				
Deployment						
Date / Time		X				
Type of Sampler						
Size of Sampler						
DTW (ft btoc)						
Deployment Depth (ft btoc)						
Personnel						
Notes						
		Deployed by Geoswater during 70/21 G4 phase				
Retrieval and/or Sampling						
Date / Time		6/20/22 @ 1407				
DTW (ft btoc)		30.22 → 31.92				
Sampler Integrity		good				
Personnel		OPER, IF				
Notes		effervescing quite a bit, smells terrible.				
Field Parameters						
Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
6/20/22 @ 1419	26.05	5.15	36.2	2893	1.09	91.2
			73	303		
Sample ID		TTU-11-72- 20220620 20220620				
QAQC Samples		MS/HSD				
Containers		(3) 125 mL Poly - No Pres, (7) 40 mL VOA - HCL, (1) 250 mL Poly - No Pres, (1) 250 Poly - HCL				
Preservatives		HCL				
Analysis		see below				
Sampler Reset		(Yes)			No	
Notes		<p>- Set HydroSleeve on 6/14 → back</p> <p>- Completed remaining samples on 6/20</p>				

- analyzed VOCs, dioxane, perchlorate, nitrites, select dissolved metals, dissolved gases, & TOC (microbial populations on another CC)

(1) 250 mL U NaOH + Zn.

Well Sampling Record						
Project Name		DUMMID TTU				
Project Number		702152101.002				
Well ID / ADWR #		TTU-12				
Date Completed		7/31/18				
Casing Material		Steel				
Casing Diameter (in)		5"				
Screen (ft btoc)		open to 190				
Well Total Depth (ft btoc)		190				
Survey Information		elev. - 512.21 ft msl // lat. - 35°19'56.0276" // long. - -111°42'58.35188"				
Deployment						
Date / Time		3/22/22 @ 1107				
Type of Sampler		Hydro-sleeve				
Size of Sampler		HS-2-IL				
DTW (ft btoc)		72.73				
Deployment Depth (ft btoc)		82				
Personnel		JCS, IF				
Notes		~1" of sed				
Retrieval and/or Sampling						
Date / Time		6/13/22 - 1235				
DTW (ft btoc)		75.14				
Sampler Integrity		good				
Personnel		JCS, IF				
Notes		HAD clear, ~.5" sed @ bottom of sleeve				
Field Parameters						
Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
6/13/22 - 1235	28.59	7.03	133.1	3423	4.36	23.0
Sample ID		TTU-12-51-70210613				
QAQC Samples		-				
Containers		(1) 125 mL Poly + (6) 40 mL WQAS				
Preservatives		HCl				
Analysis		perchlorate, VOCs, dioxin				
Sampler Reset		(Yes)			No	
Notes						

Well Sampling Record						
Project Name		NUMMO TTU				
Project Number		72252201.002				
Well ID / ADWR #		TTU-13				
Date Completed		7/20/18				
Casing Material		Steel				
Casing Diameter (in)		5"				
Screen (ft btoc)		open to 90				
Well Total Depth (ft btoc)		90				
Survey Information		elev. -1310.79 ft msl // lat. -32°29'58.9976" // long. -112°12'56.8497"				
Deployment						
Date / Time		3/22/22 @ 0911				
Type of Sampler		Hydro sleeve				
Size of Sampler		HS-2-II				
DTW (ft btoc)		42.45				
Deployment Depth (ft btoc)		51				
Personnel		CRF				
Notes		slightly cloudy, v. 15" sed @ bottom				
Retrieval and/or Sampling						
Date / Time		6/13/22 - 1306				
DTW (ft btoc)		44.22				
Sampler Integrity		good				
Personnel		J BURKE				
Notes		H2O clear				
Field Parameters						
Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
6/13/22 - 1310	31.70	7.11	105.6	1294	3.00	14.9
Sample ID		TTU-13-51-20220613				
QAQC Samples		MS/MSD				
Containers		(2) 125 mL Poly + (12) 40 mL VOA's				
Preservatives		HCL				
Analysis		perchlorate, VOC's, dioxin				
Sampler Reset		Yes			No	
Notes						

Well Sampling Record						
Project Name		NMMMD TTU				
Project Number		722152101.002				
Well ID / ADWR #		TTU-14				
Date Completed		7/19/18				
Casing Material		Steel				
Casing Diameter (in)		5"				
Screen (ft btoc)		open to 100				
Well Total Depth (ft btoc)		100				
Survey Information		Elev. - 1316.8 ft msl // lat. - 33° 29' 57.196" // long. - 111° 42' 57.4555"				
Deployment						
Date / Time		3/22/22 @ 1019				
Type of Sampler		Hydro-sleeve				
Size of Sampler		HS-2-IL				
DTW (ft btoc)		59.37				
Deployment Depth (ft btoc)		69				
Personnel		CRF				
Notes		~1" sed @ bottom of sleeve				
Retrieval and/or Sampling						
Date / Time		6/14/22 - 0651				
DTW (ft btoc)		61.61				
Sampler Integrity		good				
Personnel		JCB, IF				
Notes		~5" sed @ bottom of sleeve, brown; HAD clear				
Field Parameters						
Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
6/14/22 - 0651	24.82	7.06	163.0	3001	4.38	33.1
Sample ID		TTU-14-69-20220614				
QAQC Samples		-				
Containers		(1) 125 mL Poly + (6) 40 mL VOAs				
Preservatives		HCl				
Analysis		perchlorate, VOCs, dioxin				
Sampler Reset		(Yes)			No	
Notes						

Well Sampling Record						
Project Name		NORMO TTU				
Project Number		T22152201.002				
Well ID / ADWR #		TTU-15				
Date Completed		1/25/18				
Casing Material		Steel				
Casing Diameter (in)		N/A				
Screen (ft btoc)		OPEN				
Well Total Depth (ft btoc)		100				
Survey Information		elev. - 1350.85 ft MSL // lat. & long. N/A				
Deployment						
Date / Time		3/21/22 @ 1638				
Type of Sampler		Hydro-sleeve				
Size of Sampler		HS-2-IL				
DTW (ft btoc)		29.72				
Deployment Depth (ft btoc)		75				
Personnel		BOS, MJS				
Notes		2.5" sed @ bottom of sleeve				
Retrieval and/or Sampling						
Date / Time		6/13/22 - 1103				
DTW (ft btoc)		29.62				
Sampler Integrity		slightly rusty				
Personnel		BOS, IF				
Notes		2.5" red-brown sed @ bottom of sleeve				
Field Parameters						
Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
6/13/22 - 1106	29.55	7.28	82.1	2420	1.47	111
Sample ID		TTU-15-75-20220613				
QAQC Samples		-				
Containers		(1) 125 mL Poly + (6) 40 mL VOA's				
Preservatives		HCl				
Analysis		perchlorate, VOCs, dioxin				
Sampler Reset		(Yes)				No
Notes						

Well Sampling Record						
Project Name		DAMMO TTU				
Project Number		722152201.001				
Well ID / ADWR #		TTU-16				
Date Completed		1/23/10				
Casing Material		Steel				
Casing Diameter (in)		8"				
Screen (ft btoc)		open				
Well Total Depth (ft btoc)		96.6				
Survey Information		elev. -1336.571 ft msl // lat. -33°29'56.1945" // long. -111°42'49.9125"				
Deployment						
Date / Time		3/21/22 - 1712				
Type of Sampler		Hydrasleeve				
Size of Sampler		HS-2-IL				
DTW (ft btoc)		17.29				
Deployment Depth (ft btoc)		80				
Personnel		ECS, MSG				
Notes		red-brown H ₂ O, chemical smell				
Retrieval and/or Sampling						
Date / Time		6/13/22 - 1127				
DTW (ft btoc)		20.21				
Sampler Integrity		OK				
Personnel		ECS, IF				
Notes		H ₂ O copper colored & silty				
Field Parameters						
Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
6/13/22 - 1128	21.41	6.49	21.0	9845	1.29	above range
Sample ID		TTU-16-80-70220613				
QAQC Samples		-				
Containers		(1) 125 mL Poly + (6) 40 mL UOAs				
Preservatives		HCl				
Analysis		perchlorate, UOAs, dioxin				
Sampler Reset		Yes			No	
Notes						

Pinyon

Environmental, Inc.

Well Sampling Record						
Project Name		NORMAN TTU				
Project Number		722152201.002				
Well ID / ADWR #		TTU-17				
Date Completed		1/22/20				
Casing Material		Steel				
Casing Diameter (in)		8"				
Screen (ft btoc)		Open				
Well Total Depth (ft btoc)		102				
Survey Information		Elev.-1347.484 ft msl // Lat.-33°19'58.6002" // Long.-111°21'45.68675"				
Deployment						
Date / Time		3/21/22 @ 1606				
Type of Sampler		Hydro-sleeve				
Size of Sampler		HS-2-IL				
DTW (ft btoc)		31.00 BUS				
Deployment Depth (ft btoc)		Acct 80				
Personnel		J BUS, IF				
Notes		dark sediment, ~.5" @ bottom of sleeve				
Retrieval and/or Sampling						
Date / Time		6/13/22 - 1027				
DTW (ft btoc)		36.40				
Sampler Integrity		Good				
Personnel		J BUS, IF				
Notes		black sed. in sleeve				
Field Parameters						
Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
6/13/22 - 1028	20.03	7.28	7.28 -107.9 BUS	1126	1.38	66.3
Sample ID		TTU-17-80-20220613				
QAQC Samples		~				
Containers		(4) 125 mL Poly + (6) 40 mL VOAs				
Preservatives		HCl				
Analysis		perchlorate, VOCs, dioxin				
Sampler Reset		(Yes)			No	
Notes						

Well Sampling Record						
Project Name		Nammo TTU				
Project Number		722152201				
Well ID / ADWR #		TTU-19				
Date Completed		9/24/20				
Casing Material		PVC				
Casing Diameter (in)		4"				
Screen (ft btoc)		25-90				
Well Total Depth (ft btoc)		95				
Survey Information		Elev. - 1336.81 ft MSL // Lat. - 33° 29' 55.75498" // Long. - 111° 41' 51.49768"				
Deployment						
Date / Time		X				
Type of Sampler						
Size of Sampler						
DTW (ft btoc)						
Deployment Depth (ft btoc)						
Personnel						
Notes						
Notes		deployed by Geosyntec during 2021 Q4 phase.				
Retrieval and/or Sampling						
Date / Time		6/20/22 @ 1256				
DTW (ft btoc)		26.61				
Sampler Integrity		1700d				
Personnel		BCB, JF				
Notes		Disgusting smell, gel in water, a lot of air + effervesc				
Field Parameters						
Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
6/20/22 1254	26.03	5.78	-58.7	2196	0.89	303
Sample ID		TTU-19-73-20/200620				
QAQC Samples		DUP-12				
Containers		(4) Polys - 125 mL Nalres, (1) 40 mL VOAs-HCl, (1) 250 mL Poly-Nalres, (1) 250 mL Poly-HCl,				
Preservatives		HCl				
Analysis		VOCs, perchlorate, 1,4-Dioxane				
Sampler Reset		(Yes) No				
Notes		Set Hydrosleeve on 6/14 Sirem sample collected @ 1305 on 6/20/22 ↳ + rest of samples (perc, VOC, dioxin) 6/20				

of air + effervesc

(1) 250 mL NaOH + ZnA

Well Sampling Record						
Project Name		NORMO TTU				
Project Number		72215/201				
Well ID / ADWR #		TTU-20				
Date Completed		9/24/20				
Casing Material		PVC				
Casing Diameter (in)		4"				
Screen (ft btoc)		25-90 ECB				
Well Total Depth (ft btoc)		95 1336.9 ECB 33° 19' 55.17373" -111° 21' 51.57575"				
Survey Information		elev. -1336.91 ft. msl // lat. 33° 19' 55.17373" // long. -111° 21' 51.57575"				
Deployment						
Date / Time						
Type of Sampler						
Size of Sampler						
DTW (ft btoc)						
Deployment Depth (ft btoc)						
Personnel						
Notes						
Retrieval and/or Sampling						
Date / Time		6/14/22 6/14/22 → 6/16/22 @ 1144				
DTW (ft btoc)		30.21				
Sampler Integrity		good				
Personnel		ECB, JF				
Notes						
Field Parameters						
Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
6/16/22-1215	25.16	6.63	93.4	6128	2.00	27.8
<p>*VST in car w/ shade + A/C while rope was addressed</p> <p>*Rope got very tangled, a bit late for parameters</p>						
Sample ID		TTU-20-73-2022-(614, 6-TTU-20-73-20220606,				
QAQC Samples		-				
Containers		(3) 125mL Polys-NoPres, (7) 40mL VOAs-HCl, (1) 250mL Poly-NoPres, (1) 250mL Poly-NoOH+ZnF				
Preservatives		HCl				
Analysis		see below				
Sampler Reset		(Yes)			No	
Notes		6/14 - took half of necessary samples - reset hydro sleeve on 6/14 - took rest of samples 6/20 + 6/18				

6/14

- TOC
- ANIONS
- select dissolved metals
- dissolved gases

6/16

- VOCs
- Perchlorate
- i-4, Dioxane

Well Sampling Record						
Project Name		Nunnos TTU				
Project Number		722152201.002				
Well ID / ADWR #		PE-2				
Date Completed		N/A				
Casing Material		Steel				
Casing Diameter (in)		8"				
Screen (ft btoc)		OPEN				
Well Total Depth (ft btoc)		N/A				
Survey Information		N/A				
Deployment						
Date / Time		<div style="font-size: 4em; opacity: 0.5;">X</div>				
Type of Sampler						
Size of Sampler						
DTW (ft btoc)						
Deployment Depth (ft btoc)						
Personnel						
Notes		pumping well, no deployment				
Retrieval and/or Sampling						
Date / Time		6/14/22 - 1353 1353				
DTW (ft btoc)		-				
Sampler Integrity		-				
Personnel		PCB, IF				
Notes						
Field Parameters						
Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
6/14/22- 1334	25.97	7.38	96.7	1408	3.72	16.6
1339	25.85	7.39	95.2	1383	3.64	14.1
1344	25.85	7.41	102.1	1354	4.39	10.8
Sample ID		PE-2				
QAQC Samples		-				
Containers		1/5 mL HDPE - No Pres (1)				
Preservatives		NONE				
Analysis		perchlorate, 6850				
Sampler Reset		Yes			(No)	
Notes						

Well Sampling Record						
Project Name		NORMED TTU				
Project Number		722152201.002				
Well ID / ADWR #		Private Facility (PF-2)				
Date Completed		N/A				
Casing Material		Steel				
Casing Diameter (in)		6"				
Screen (ft btoc)		OPEN				
Well Total Depth (ft btoc)		N/A				
Survey Information		N/A				
Deployment						
Date / Time		<div style="font-size: 4em; opacity: 0.5;">X</div>				
Type of Sampler						
Size of Sampler						
DTW (ft btoc)						
Deployment Depth (ft btoc)						
Personnel						
Notes						
Notes		dedicated pumping deployment				
Retrieval and/or Sampling						
Date / Time		6/21/22 @ 1735				
DTW (ft btoc)		-				
Sampler Integrity		-				
Personnel		ECS, JF				
Notes		turned pump on @ 1207				
Field Parameters						
Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
6/21/22 - 1212	26.18	7.37	79.3	1551	3.50	11.7
1217	25.72	7.95	82.6	1331	3.85	5.89
1222	26.25	7.42	82.1	1353	3.87	11.9
Sample ID		PF-2-400-20220621				
QA/QC Samples		MS/MSS, DUP-13				
Containers		40 mL Auto-HCL (13)				
Preservatives		HCL				
Analysis		VOCs, diogen				
Sampler Reset		Yes		<input checked="" type="checkbox"/> No		
Notes						

Well Sampling Record						
Project Name		Nammo TTU				
Project Number		722157201.002				
Well ID / ADWR #		TTU-4				
Date Completed		7/21/22				
Casing Material		PVC				
Casing Diameter (in)		4"				
Screen (ft btoc)		39.5-99.5				
Well Total Depth (ft btoc)		104.9				
Survey Information		-				
Deployment						
Date / Time		6/14/22 @ 1016				
Type of Sampler		HydraSleeve				
Size of Sampler		1 ft.				
DTW (ft btoc)		52.90				
Deployment Depth (ft btoc)		57				
Personnel		I. Foster + B. Boesen				
Notes		Sleeve only 1/2 way full, H ₂ O clear				
Retrieval and/or Sampling						
Date / Time		7/21/22 @ 0956				
DTW (ft btoc)		53.04				
Sampler Integrity		Good				
Personnel		I. Foster + B. Boesen				
Notes		-				
Field Parameters						
Date / Time	Water Temp (°F)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
7/21/22 @ 1008	82.47	7.25	248.6	1994	41.23	0.46
Sample ID		TTU-4-57-20220721				
QAQC Samples		Dup-01				
Containers		(6) 40 mL VOA's				
Preservatives		HCl				
Analysis		1,4-Dioxane				
Sampler Reset		Yes			No	
Notes *Re-sample*						

Well Sampling Record						
Project Name		Nammo TTU				
Project Number		722152201.002				
Well ID / ADWR #		TTU-4IF5				
Date Completed		7/21/22				
Casing Material		PVC				
Casing Diameter (in)		4"				
Screen (ft btoc)		59.5-164.5				
Well Total Depth (ft btoc)		169.5				
Survey Information						
Deployment						
Date / Time		6/13/22 @ 1204				
Type of Sampler		HydraSleeve				
Size of Sampler		1 liter				
DTW (ft btoc)		79.76				
Deployment Depth (ft btoc)		110				
Personnel		BB + IF				
Notes		H ₂ O clear, 5" sed. @ bottom of sleeve				
Retrieval and/or Sampling						
Date / Time		7/21/22 @ 1123				
DTW (ft btoc)		80.54				
Sampler Integrity		Good				
Personnel		J. Foster + B. Boesen				
Notes		-				
Field Parameters						
Date / Time	Water Temp (°F)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
07/21/22 @ 1123	82.31	7.24	205.6	652	37.21	1.94
Sample ID		TTU-5-110-20220721				
QAQC Samples		-				
Containers		(3) 40 mL VOAS				
Preservatives		HCl				
Analysis		1,4 DIOXINE				
Sampler Reset		(Yes)			No	
Notes *Re-sample*						

Well Sampling Record						
Project Name		Nammo TTU				
Project Number		722152201.002				
Well ID / ADWR #		TTU-9a				
Date Completed		7/21/22				
Casing Material		PVC				
Casing Diameter (in)		4"				
Screen (ft btoc)		24-99				
Well Total Depth (ft btoc)		104				
Survey Information		-				
Deployment						
Date / Time		6/13/22 @ 1335				
Type of Sampler		Hydrasleeve				
Size of Sampler		1 liter				
DTW (ft btoc)		29.14				
Deployment Depth (ft btoc)		61				
Personnel		BB + IF				
Notes		H ₂ O clear				
Retrieval and/or Sampling						
Date / Time		7/21/22 @ 1053				
DTW (ft btoc)		29.00				
Sampler Integrity		GOOD				
Personnel		J. Foster + B. Boesen				
Notes		See below				
Field Parameters						
Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
7/21/22 @ 1103	81.00	7.41	198.0	1493	58.57	9.32
Sample ID		TTU-9a-61-20220721				
QAQC Samples		MS/MSD				
Containers		(6) 40 mL VDAS				
Preservatives		HCl				
Analysis		VOCs-IE 1,4-Dioxane				
Sampler Reset		(yes)			No	
Notes * Re-sample *						
- 10 1L Hydrasleeves, put in (2) 600 mL H.S. in sequence						

Daily Field Notes	
Project Name <u>Nammo</u>	Date <u>7/21/22</u>
Project Number <u>722152201.002</u>	Time of Arrival / Departure <u>0727/1151</u>
Location <u>Mesa, AZ</u>	Weather <u>80-100's</u>
Subject <u>Field Notes</u>	Site Conditions <u>Private property</u>
Personnel <u>I. Foster + B. Boesen</u>	
Equipment <u>VSI (CE100727), La Motte turbidity meter, Solinst OTW meter (505)</u>	
Calibration <u>N/A</u>	
Activities <u>gw sampling</u>	
<u>0727-onsite Nammo, getting keys from security.</u>	
<u>0752-onsite NT-15.</u>	
<u>0815 - collected NT-15 - 640 - 70770721</u>	
<u>0900 - collected NT-15 - 600 - 20770721</u>	
<u>0920 - offsite NT-15</u>	
<u>0946 - onsite TTU-4</u>	
<u>0956 - collected TTU-4-57 - 70770721 + DOP-01</u>	
<u>1011 - offsite TTU-4</u>	
<u>1038 - onsite TTU-9a</u>	
<u>1051 - offsite TTU-9a - 1103</u>	
<u>1107 - onsite TTU-5</u>	
<u>1123 - collected TTU-5-110 - 70770721</u>	
<u>1140 - offsite TTU-5</u>	
<u>1151 - returned keys + backpacks to Nammo security</u>	
<u>1151 - offsite Nammo</u>	
<div style="font-size: 2em; opacity: 0.5; transform: rotate(-45deg); pointer-events: none;"> all work done </div>	

Attachment 2 – Laboratory Analytical Reports

Pinyon Environmental

Sample Delivery Group: L1504535
Samples Received: 06/14/2022
Project Number: 722152201.002
Description: Nammo TTU Groundwater Monitoring

Report To: Jeremy Musson
4815 E. Carefree Highway
#108-274
Cave Creek, AZ 85331

Entire Report Reviewed By:



Jason Romer
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace 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 National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

TABLE OF CONTENTS

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	6
Sr: Sample Results	7
TTU-EXT-5-80-2022-613 L1504535-01	7
TTU-EXT-4-77-2022-613 L1504535-02	9
TTU-EXT-3-76-2022-613 L1504535-03	11
TTU-EXT-2-74-2022-613 L1504535-04	13
TTU-EXT-1-69-2022-613 L1504535-05	15
TTU-17-80-2022-613 L1504535-06	17
TTU-15-75-2022-613 L1504535-07	19
TTU-16-80-2022-613 L1504535-08	21
TTU-5-110-2022-613 L1504535-09	23
TTU-12-82-2022-613 L1504535-10	25
TTU-13-51-2022-613 L1504535-11	27
TTU-9A-61-2022-613 L1504535-12	29
DUP-01 L1504535-13	31
Qc: Quality Control Summary	33
Wet Chemistry by Method 314.0 Mod	33
Volatile Organic Compounds (GC/MS) by Method 8260B	37
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	45
Is: Internal Standard Summary	48
Volatile Organic Compounds (GC/MS) by Method 8260B	48
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	49
Gl: Glossary of Terms	51
Al: Accreditations & Locations	52
Sc: Sample Chain of Custody	53



SAMPLE SUMMARY

TTU-EXT-5-80-2022-613 L1504535-01 GW

Collected by Isabella Foster Collected date/time 06/13/22 07:50 Received date/time 06/14/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1881121	1	06/21/22 00:37	06/21/22 00:37	KEG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1884517	1	06/23/22 23:27	06/23/22 23:27	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1881003	1	06/17/22 16:13	06/17/22 16:13	ADM	Mt. Juliet, TN



TTU-EXT-4-77-2022-613 L1504535-02 GW

Collected by Isabella Foster Collected date/time 06/13/22 08:34 Received date/time 06/14/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1881121	5000	06/21/22 10:42	06/21/22 10:42	KEG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1884517	20	06/24/22 01:37	06/24/22 01:37	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1882718	1	06/22/22 12:12	06/22/22 12:12	DWR	Mt. Juliet, TN

TTU-EXT-3-76-2022-613 L1504535-03 GW

Collected by Isabella Foster Collected date/time 06/13/22 09:07 Received date/time 06/14/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1881121	10000	06/21/22 11:13	06/21/22 11:13	KEG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1884517	100	06/24/22 01:59	06/24/22 01:59	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1884513	10	06/24/22 14:08	06/24/22 14:08	DWR	Mt. Juliet, TN

TTU-EXT-2-74-2022-613 L1504535-04 GW

Collected by Isabella Foster Collected date/time 06/13/22 09:31 Received date/time 06/14/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1881121	1000	06/21/22 11:41	06/21/22 11:41	KEG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1884517	5	06/24/22 02:21	06/24/22 02:21	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1884513	5	06/24/22 14:28	06/24/22 14:28	DWR	Mt. Juliet, TN

TTU-EXT-1-69-2022-613 L1504535-05 GW

Collected by Isabella Foster Collected date/time 06/13/22 10:00 Received date/time 06/14/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1881121	5000	06/21/22 12:09	06/21/22 12:09	KEG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1884517	5	06/24/22 02:42	06/24/22 02:42	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1884513	5	06/24/22 14:48	06/24/22 14:48	DWR	Mt. Juliet, TN

TTU-17-80-2022-613 L1504535-06 GW

Collected by Isabella Foster Collected date/time 06/13/22 10:27 Received date/time 06/14/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1881121	1	06/21/22 02:59	06/21/22 02:59	KEG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1884517	1	06/23/22 23:48	06/23/22 23:48	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1882718	1	06/22/22 13:32	06/22/22 13:32	DWR	Mt. Juliet, TN

SAMPLE SUMMARY

TTU-15-75-2022-613 L1504535-07 GW

Collected by Isabella Foster Collected date/time 06/13/22 11:03 Received date/time 06/14/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1881121	100	06/21/22 12:38	06/21/22 12:38	KEG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1884517	1	06/24/22 00:10	06/24/22 00:10	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1882718	1	06/22/22 13:51	06/22/22 13:51	DWR	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

TTU-16-80-2022-613 L1504535-08 GW

Collected by Isabella Foster Collected date/time 06/13/22 11:27 Received date/time 06/14/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1881123	10000	06/23/22 10:32	06/23/22 10:32	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1884517	1000	06/24/22 03:04	06/24/22 03:04	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1884513	100	06/24/22 15:08	06/24/22 15:08	DWR	Mt. Juliet, TN

4 Cn

5 Sr

6 Qc

TTU-5-110-2022-613 L1504535-09 GW

Collected by Isabella Foster Collected date/time 06/13/22 12:04 Received date/time 06/14/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1881123	1	06/22/22 14:56	06/22/22 14:56	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1884517	1	06/24/22 00:32	06/24/22 00:32	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1882718	1	06/22/22 14:30	06/22/22 14:30	DWR	Mt. Juliet, TN

7 Is

8 Gl

9 Al

10 Sc

TTU-12-82-2022-613 L1504535-10 GW

Collected by Isabella Foster Collected date/time 06/13/22 12:35 Received date/time 06/14/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1881123	5000	06/23/22 11:03	06/23/22 11:03	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1884517	10	06/24/22 03:26	06/24/22 03:26	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1882718	1	06/22/22 14:51	06/22/22 14:51	DWR	Mt. Juliet, TN

TTU-13-51-2022-613 L1504535-11 GW

Collected by Isabella Foster Collected date/time 06/13/22 13:06 Received date/time 06/14/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1881123	1000	06/23/22 11:31	06/23/22 11:31	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1884517	1	06/24/22 00:54	06/24/22 00:54	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1882718	1	06/22/22 15:10	06/22/22 15:10	DWR	Mt. Juliet, TN

TTU-9A-61-2022-613 L1504535-12 GW

Collected by Isabella Foster Collected date/time 06/13/22 13:39 Received date/time 06/14/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1883531	1	06/23/22 12:56	06/23/22 12:56	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1884517	1	06/24/22 01:15	06/24/22 01:15	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1882718	1	06/22/22 15:30	06/22/22 15:30	DWR	Mt. Juliet, TN

SAMPLE SUMMARY

DUP-01 L1504535-13 GW

Collected by: Isabella Foster
 Collected date/time: 06/13/22 08:34
 Received date/time: 06/14/22 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1881123	5000	06/23/22 13:25	06/23/22 13:25	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1884517	10	06/24/22 03:47	06/24/22 03:47	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1882718	1	06/22/22 15:50	06/22/22 15:50	DWR	Mt. Juliet, TN

- ¹Cp
- ²Tc
- ³Ss
- ⁴Cn
- ⁵Sr
- ⁶Qc
- ⁷Is
- ⁸Gl
- ⁹Al
- ¹⁰Sc

CASE NARRATIVE

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



Jason Romer
Project Manager

Sample Delivery Group (SDG) Narrative

No extra volume received to perform Matrix Spike samples.

<u>Lab Sample ID</u>	<u>Project Sample ID</u>	<u>Method</u>
L1504535-03	TTU-EXT-3-76-2022-613	8260B-SIM
L1504535-04	TTU-EXT-2-74-2022-613	8260B-SIM
L1504535-05	TTU-EXT-1-69-2022-613	8260B-SIM
L1504535-08	TTU-16-80-2022-613	8260B-SIM



Wet Chemistry by Method 314.0 Mod

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Perchlorate	U		0.300	4.00	1	06/21/2022 00:37	WG1881121

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	06/23/2022 23:27	WG1884517
Acrolein	U		2.54	50.0	1	06/23/2022 23:27	WG1884517
Acrylonitrile	U		0.671	10.0	1	06/23/2022 23:27	WG1884517
Benzene	U		0.0941	1.00	1	06/23/2022 23:27	WG1884517
Bromobenzene	U		0.118	1.00	1	06/23/2022 23:27	WG1884517
Bromodichloromethane	U		0.136	1.00	1	06/23/2022 23:27	WG1884517
Bromoform	U		0.129	1.00	1	06/23/2022 23:27	WG1884517
Bromomethane	U		0.605	5.00	1	06/23/2022 23:27	WG1884517
1,3-Butadiene	U		0.299	2.00	1	06/23/2022 23:27	WG1884517
n-Butylbenzene	U		0.157	1.00	1	06/23/2022 23:27	WG1884517
sec-Butylbenzene	U		0.125	1.00	1	06/23/2022 23:27	WG1884517
tert-Butylbenzene	U		0.127	1.00	1	06/23/2022 23:27	WG1884517
Carbon tetrachloride	U		0.128	1.00	1	06/23/2022 23:27	WG1884517
Carbon disulfide	U		0.0962	1.00	1	06/23/2022 23:27	WG1884517
Chlorobenzene	U		0.116	1.00	1	06/23/2022 23:27	WG1884517
Chlorodibromomethane	U		0.140	1.00	1	06/23/2022 23:27	WG1884517
Chloroethane	U		0.192	5.00	1	06/23/2022 23:27	WG1884517
Chloroform	U		0.111	5.00	1	06/23/2022 23:27	WG1884517
Chloromethane	U		0.960	2.50	1	06/23/2022 23:27	WG1884517
Cyclohexane	U		0.188	1.00	1	06/23/2022 23:27	WG1884517
2-Chlorotoluene	U		0.106	1.00	1	06/23/2022 23:27	WG1884517
4-Chlorotoluene	U		0.114	1.00	1	06/23/2022 23:27	WG1884517
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	06/23/2022 23:27	WG1884517
1,2-Dibromoethane	U		0.126	1.00	1	06/23/2022 23:27	WG1884517
Dibromomethane	U		0.122	1.00	1	06/23/2022 23:27	WG1884517
1,2-Dichlorobenzene	U		0.107	1.00	1	06/23/2022 23:27	WG1884517
1,3-Dichlorobenzene	U		0.110	1.00	1	06/23/2022 23:27	WG1884517
1,4-Dichlorobenzene	U		0.120	1.00	1	06/23/2022 23:27	WG1884517
Dichlorodifluoromethane	U		0.374	5.00	1	06/23/2022 23:27	WG1884517
1,1-Dichloroethane	U		0.100	1.00	1	06/23/2022 23:27	WG1884517
1,2-Dichloroethane	U		0.0819	1.00	1	06/23/2022 23:27	WG1884517
1,1-Dichloroethene	U		0.188	1.00	1	06/23/2022 23:27	WG1884517
cis-1,2-Dichloroethene	0.236	<u>B J</u>	0.126	1.00	1	06/23/2022 23:27	WG1884517
trans-1,2-Dichloroethene	U		0.149	1.00	1	06/23/2022 23:27	WG1884517
1,2-Dichloropropane	U		0.149	1.00	1	06/23/2022 23:27	WG1884517
1,1-Dichloropropene	U		0.142	1.00	1	06/23/2022 23:27	WG1884517
1,3-Dichloropropane	U		0.110	1.00	1	06/23/2022 23:27	WG1884517
cis-1,3-Dichloropropene	U		0.111	1.00	1	06/23/2022 23:27	WG1884517
trans-1,3-Dichloropropene	U		0.118	1.00	1	06/23/2022 23:27	WG1884517
2,2-Dichloropropane	U		0.161	1.00	1	06/23/2022 23:27	WG1884517
Dicyclopentadiene	U		0.253	1.00	1	06/23/2022 23:27	WG1884517
Di-isopropyl ether	U		0.105	1.00	1	06/23/2022 23:27	WG1884517
Ethylbenzene	U		0.137	1.00	1	06/23/2022 23:27	WG1884517
4-Ethyltoluene	U		0.208	1.00	1	06/23/2022 23:27	WG1884517
Hexachloro-1,3-butadiene	U		0.337	1.00	1	06/23/2022 23:27	WG1884517
n-Hexane	U		0.749	10.0	1	06/23/2022 23:27	WG1884517
Isopropylbenzene	U		0.105	1.00	1	06/23/2022 23:27	WG1884517
p-Isopropyltoluene	U		0.120	1.00	1	06/23/2022 23:27	WG1884517
2-Butanone (MEK)	U		1.19	10.0	1	06/23/2022 23:27	WG1884517
Methyl Cyclohexane	U		0.660	1.00	1	06/23/2022 23:27	WG1884517

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

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	U		0.430	5.00	1	06/23/2022 23:27	WG1884517
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	06/23/2022 23:27	WG1884517
Methyl tert-butyl ether	U		0.101	1.00	1	06/23/2022 23:27	WG1884517
Naphthalene	U		1.00	5.00	1	06/23/2022 23:27	WG1884517
Propene	U		0.936	2.50	1	06/23/2022 23:27	WG1884517
n-Propylbenzene	U		0.0993	1.00	1	06/23/2022 23:27	WG1884517
Styrene	U		0.118	1.00	1	06/23/2022 23:27	WG1884517
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	06/23/2022 23:27	WG1884517
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	06/23/2022 23:27	WG1884517
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	06/23/2022 23:27	WG1884517
Tetrachloroethene	U		0.300	1.00	1	06/23/2022 23:27	WG1884517
Toluene	U		0.278	1.00	1	06/23/2022 23:27	WG1884517
1,2,3-Trichlorobenzene	U		0.230	1.00	1	06/23/2022 23:27	WG1884517
1,2,4-Trichlorobenzene	U		0.481	1.00	1	06/23/2022 23:27	WG1884517
1,1,1-Trichloroethane	U		0.149	1.00	1	06/23/2022 23:27	WG1884517
1,1,2-Trichloroethane	U		0.158	1.00	1	06/23/2022 23:27	WG1884517
Trichloroethene	5.58		0.190	1.00	1	06/23/2022 23:27	WG1884517
Trichlorofluoromethane	U		0.160	5.00	1	06/23/2022 23:27	WG1884517
1,2,3-Trichloropropane	U		0.237	2.50	1	06/23/2022 23:27	WG1884517
1,2,4-Trimethylbenzene	U		0.322	1.00	1	06/23/2022 23:27	WG1884517
1,2,3-Trimethylbenzene	U		0.104	1.00	1	06/23/2022 23:27	WG1884517
1,3,5-Trimethylbenzene	U		0.104	1.00	1	06/23/2022 23:27	WG1884517
Vinyl chloride	U		0.234	1.00	1	06/23/2022 23:27	WG1884517
Xylenes, Total	U		0.174	3.00	1	06/23/2022 23:27	WG1884517
(S) Toluene-d8	104			80.0-120		06/23/2022 23:27	WG1884517
(S) 4-Bromofluorobenzene	103			77.0-126		06/23/2022 23:27	WG1884517
(S) 1,2-Dichloroethane-d4	104			70.0-130		06/23/2022 23:27	WG1884517

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	U		0.597	3.00	1	06/17/2022 16:13	WG1881003
(S) Toluene-d8	105			77.0-127		06/17/2022 16:13	WG1881003

Wet Chemistry by Method 314.0 Mod

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Perchlorate	88300		1500	20000	5000	06/21/2022 10:42	WG1881121

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		226	1000	20	06/24/2022 01:37	WG1884517
Acrolein	U		50.8	1000	20	06/24/2022 01:37	WG1884517
Acrylonitrile	U		13.4	200	20	06/24/2022 01:37	WG1884517
Benzene	U		1.88	20.0	20	06/24/2022 01:37	WG1884517
Bromobenzene	U		2.36	20.0	20	06/24/2022 01:37	WG1884517
Bromodichloromethane	U		2.72	20.0	20	06/24/2022 01:37	WG1884517
Bromoform	U		2.58	20.0	20	06/24/2022 01:37	WG1884517
Bromomethane	U		12.1	100	20	06/24/2022 01:37	WG1884517
1,3-Butadiene	U		5.98	40.0	20	06/24/2022 01:37	WG1884517
n-Butylbenzene	U		3.14	20.0	20	06/24/2022 01:37	WG1884517
sec-Butylbenzene	U		2.50	20.0	20	06/24/2022 01:37	WG1884517
tert-Butylbenzene	U		2.54	20.0	20	06/24/2022 01:37	WG1884517
Carbon tetrachloride	U		2.56	20.0	20	06/24/2022 01:37	WG1884517
Carbon disulfide	U		1.92	20.0	20	06/24/2022 01:37	WG1884517
Chlorobenzene	U		2.32	20.0	20	06/24/2022 01:37	WG1884517
Chlorodibromomethane	U		2.80	20.0	20	06/24/2022 01:37	WG1884517
Chloroethane	U		3.84	100	20	06/24/2022 01:37	WG1884517
Chloroform	U		2.22	100	20	06/24/2022 01:37	WG1884517
Chloromethane	U		19.2	50.0	20	06/24/2022 01:37	WG1884517
Cyclohexane	U		3.76	20.0	20	06/24/2022 01:37	WG1884517
2-Chlorotoluene	U		2.12	20.0	20	06/24/2022 01:37	WG1884517
4-Chlorotoluene	U		2.28	20.0	20	06/24/2022 01:37	WG1884517
1,2-Dibromo-3-Chloropropane	U		5.52	100	20	06/24/2022 01:37	WG1884517
1,2-Dibromoethane	U		2.52	20.0	20	06/24/2022 01:37	WG1884517
Dibromomethane	U		2.44	20.0	20	06/24/2022 01:37	WG1884517
1,2-Dichlorobenzene	U		2.14	20.0	20	06/24/2022 01:37	WG1884517
1,3-Dichlorobenzene	U		2.20	20.0	20	06/24/2022 01:37	WG1884517
1,4-Dichlorobenzene	U		2.40	20.0	20	06/24/2022 01:37	WG1884517
Dichlorodifluoromethane	U		7.48	100	20	06/24/2022 01:37	WG1884517
1,1-Dichloroethane	U		2.00	20.0	20	06/24/2022 01:37	WG1884517
1,2-Dichloroethane	U		1.64	20.0	20	06/24/2022 01:37	WG1884517
1,1-Dichloroethene	81.6		3.76	20.0	20	06/24/2022 01:37	WG1884517
cis-1,2-Dichloroethene	3.09	<u>B J</u>	2.52	20.0	20	06/24/2022 01:37	WG1884517
trans-1,2-Dichloroethene	U		2.98	20.0	20	06/24/2022 01:37	WG1884517
1,2-Dichloropropane	U		2.98	20.0	20	06/24/2022 01:37	WG1884517
1,1-Dichloropropene	U		2.84	20.0	20	06/24/2022 01:37	WG1884517
1,3-Dichloropropane	U		2.20	20.0	20	06/24/2022 01:37	WG1884517
cis-1,3-Dichloropropene	U		2.22	20.0	20	06/24/2022 01:37	WG1884517
trans-1,3-Dichloropropene	U		2.36	20.0	20	06/24/2022 01:37	WG1884517
2,2-Dichloropropane	U		3.22	20.0	20	06/24/2022 01:37	WG1884517
Dicyclopentadiene	U		5.06	20.0	20	06/24/2022 01:37	WG1884517
Di-isopropyl ether	U		2.10	20.0	20	06/24/2022 01:37	WG1884517
Ethylbenzene	U		2.74	20.0	20	06/24/2022 01:37	WG1884517
4-Ethyltoluene	U		4.16	20.0	20	06/24/2022 01:37	WG1884517
Hexachloro-1,3-butadiene	U		6.74	20.0	20	06/24/2022 01:37	WG1884517
n-Hexane	U		15.0	200	20	06/24/2022 01:37	WG1884517
Isopropylbenzene	U		2.10	20.0	20	06/24/2022 01:37	WG1884517
p-Isopropyltoluene	U		2.40	20.0	20	06/24/2022 01:37	WG1884517
2-Butanone (MEK)	U		23.8	200	20	06/24/2022 01:37	WG1884517
Methyl Cyclohexane	U		13.2	20.0	20	06/24/2022 01:37	WG1884517



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	U		8.60	100	20	06/24/2022 01:37	WG1884517
4-Methyl-2-pentanone (MIBK)	U		9.56	200	20	06/24/2022 01:37	WG1884517
Methyl tert-butyl ether	U		2.02	20.0	20	06/24/2022 01:37	WG1884517
Naphthalene	U		20.0	100	20	06/24/2022 01:37	WG1884517
Propene	U		18.7	50.0	20	06/24/2022 01:37	WG1884517
n-Propylbenzene	U		1.99	20.0	20	06/24/2022 01:37	WG1884517
Styrene	U		2.36	20.0	20	06/24/2022 01:37	WG1884517
1,1,1,2-Tetrachloroethane	U		2.94	20.0	20	06/24/2022 01:37	WG1884517
1,1,2,2-Tetrachloroethane	U		2.66	20.0	20	06/24/2022 01:37	WG1884517
1,1,2-Trichlorotrifluoroethane	U		3.60	20.0	20	06/24/2022 01:37	WG1884517
Tetrachloroethene	U		6.00	20.0	20	06/24/2022 01:37	WG1884517
Toluene	U		5.56	20.0	20	06/24/2022 01:37	WG1884517
1,2,3-Trichlorobenzene	U		4.60	20.0	20	06/24/2022 01:37	WG1884517
1,2,4-Trichlorobenzene	U		9.62	20.0	20	06/24/2022 01:37	WG1884517
1,1,1-Trichloroethane	U		2.98	20.0	20	06/24/2022 01:37	WG1884517
1,1,2-Trichloroethane	U		3.16	20.0	20	06/24/2022 01:37	WG1884517
Trichloroethene	579		3.80	20.0	20	06/24/2022 01:37	WG1884517
Trichlorofluoromethane	U		3.20	100	20	06/24/2022 01:37	WG1884517
1,2,3-Trichloropropane	U		4.74	50.0	20	06/24/2022 01:37	WG1884517
1,2,4-Trimethylbenzene	U		6.44	20.0	20	06/24/2022 01:37	WG1884517
1,2,3-Trimethylbenzene	U		2.08	20.0	20	06/24/2022 01:37	WG1884517
1,3,5-Trimethylbenzene	U		2.08	20.0	20	06/24/2022 01:37	WG1884517
Vinyl chloride	U		4.68	20.0	20	06/24/2022 01:37	WG1884517
Xylenes, Total	U		3.48	60.0	20	06/24/2022 01:37	WG1884517
(S) Toluene-d8	105			80.0-120		06/24/2022 01:37	WG1884517
(S) 4-Bromofluorobenzene	103			77.0-126		06/24/2022 01:37	WG1884517
(S) 1,2-Dichloroethane-d4	107			70.0-130		06/24/2022 01:37	WG1884517

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

Sample Narrative:

L1504535-02 WG1884517: Target compounds too high to run at a lower dilution.

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	27.4		0.597	3.00	1	06/22/2022 12:12	WG1882718
(S) Toluene-d8	103			77.0-127		06/22/2022 12:12	WG1882718

Wet Chemistry by Method 314.0 Mod

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Perchlorate	375000		3000	40000	10000	06/21/2022 11:13	WG1881121

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		1130	5000	100	06/24/2022 01:59	WG1884517
Acrolein	U		254	5000	100	06/24/2022 01:59	WG1884517
Acrylonitrile	U		67.1	1000	100	06/24/2022 01:59	WG1884517
Benzene	U		9.41	100	100	06/24/2022 01:59	WG1884517
Bromobenzene	U		11.8	100	100	06/24/2022 01:59	WG1884517
Bromodichloromethane	U		13.6	100	100	06/24/2022 01:59	WG1884517
Bromoform	U		12.9	100	100	06/24/2022 01:59	WG1884517
Bromomethane	U		60.5	500	100	06/24/2022 01:59	WG1884517
1,3-Butadiene	U		29.9	200	100	06/24/2022 01:59	WG1884517
n-Butylbenzene	U		15.7	100	100	06/24/2022 01:59	WG1884517
sec-Butylbenzene	U		12.5	100	100	06/24/2022 01:59	WG1884517
tert-Butylbenzene	U		12.7	100	100	06/24/2022 01:59	WG1884517
Carbon tetrachloride	U		12.8	100	100	06/24/2022 01:59	WG1884517
Carbon disulfide	U		9.62	100	100	06/24/2022 01:59	WG1884517
Chlorobenzene	U		11.6	100	100	06/24/2022 01:59	WG1884517
Chlorodibromomethane	U		14.0	100	100	06/24/2022 01:59	WG1884517
Chloroethane	U		19.2	500	100	06/24/2022 01:59	WG1884517
Chloroform	U		11.1	500	100	06/24/2022 01:59	WG1884517
Chloromethane	U		96.0	250	100	06/24/2022 01:59	WG1884517
Cyclohexane	U		18.8	100	100	06/24/2022 01:59	WG1884517
2-Chlorotoluene	U		10.6	100	100	06/24/2022 01:59	WG1884517
4-Chlorotoluene	U		11.4	100	100	06/24/2022 01:59	WG1884517
1,2-Dibromo-3-Chloropropane	U		27.6	500	100	06/24/2022 01:59	WG1884517
1,2-Dibromoethane	U		12.6	100	100	06/24/2022 01:59	WG1884517
Dibromomethane	U		12.2	100	100	06/24/2022 01:59	WG1884517
1,2-Dichlorobenzene	U		10.7	100	100	06/24/2022 01:59	WG1884517
1,3-Dichlorobenzene	U		11.0	100	100	06/24/2022 01:59	WG1884517
1,4-Dichlorobenzene	U		12.0	100	100	06/24/2022 01:59	WG1884517
Dichlorodifluoromethane	U		37.4	500	100	06/24/2022 01:59	WG1884517
1,1-Dichloroethane	U		10.0	100	100	06/24/2022 01:59	WG1884517
1,2-Dichloroethane	U		8.19	100	100	06/24/2022 01:59	WG1884517
1,1-Dichloroethene	670		18.8	100	100	06/24/2022 01:59	WG1884517
cis-1,2-Dichloroethene	U		12.6	100	100	06/24/2022 01:59	WG1884517
trans-1,2-Dichloroethene	U		14.9	100	100	06/24/2022 01:59	WG1884517
1,2-Dichloropropane	U		14.9	100	100	06/24/2022 01:59	WG1884517
1,1-Dichloropropene	U		14.2	100	100	06/24/2022 01:59	WG1884517
1,3-Dichloropropane	U		11.0	100	100	06/24/2022 01:59	WG1884517
cis-1,3-Dichloropropene	U		11.1	100	100	06/24/2022 01:59	WG1884517
trans-1,3-Dichloropropene	U		11.8	100	100	06/24/2022 01:59	WG1884517
2,2-Dichloropropane	U		16.1	100	100	06/24/2022 01:59	WG1884517
Dicyclopentadiene	U		25.3	100	100	06/24/2022 01:59	WG1884517
Di-isopropyl ether	U		10.5	100	100	06/24/2022 01:59	WG1884517
Ethylbenzene	U		13.7	100	100	06/24/2022 01:59	WG1884517
4-Ethyltoluene	U		20.8	100	100	06/24/2022 01:59	WG1884517
Hexachloro-1,3-butadiene	U		33.7	100	100	06/24/2022 01:59	WG1884517
n-Hexane	U		74.9	1000	100	06/24/2022 01:59	WG1884517
Isopropylbenzene	U		10.5	100	100	06/24/2022 01:59	WG1884517
p-Isopropyltoluene	U		12.0	100	100	06/24/2022 01:59	WG1884517
2-Butanone (MEK)	U		119	1000	100	06/24/2022 01:59	WG1884517
Methyl Cyclohexane	U		66.0	100	100	06/24/2022 01:59	WG1884517

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	U		43.0	500	100	06/24/2022 01:59	WG1884517
4-Methyl-2-pentanone (MIBK)	U		47.8	1000	100	06/24/2022 01:59	WG1884517
Methyl tert-butyl ether	U		10.1	100	100	06/24/2022 01:59	WG1884517
Naphthalene	U		100	500	100	06/24/2022 01:59	WG1884517
Propene	U		93.6	250	100	06/24/2022 01:59	WG1884517
n-Propylbenzene	U		9.93	100	100	06/24/2022 01:59	WG1884517
Styrene	U		11.8	100	100	06/24/2022 01:59	WG1884517
1,1,1,2-Tetrachloroethane	U		14.7	100	100	06/24/2022 01:59	WG1884517
1,1,2,2-Tetrachloroethane	U		13.3	100	100	06/24/2022 01:59	WG1884517
1,1,2-Trichlorotrifluoroethane	U		18.0	100	100	06/24/2022 01:59	WG1884517
Tetrachloroethene	U		30.0	100	100	06/24/2022 01:59	WG1884517
Toluene	U		27.8	100	100	06/24/2022 01:59	WG1884517
1,2,3-Trichlorobenzene	U		23.0	100	100	06/24/2022 01:59	WG1884517
1,2,4-Trichlorobenzene	U		48.1	100	100	06/24/2022 01:59	WG1884517
1,1,1-Trichloroethane	U		14.9	100	100	06/24/2022 01:59	WG1884517
1,1,2-Trichloroethane	U		15.8	100	100	06/24/2022 01:59	WG1884517
Trichloroethene	6020		19.0	100	100	06/24/2022 01:59	WG1884517
Trichlorofluoromethane	U		16.0	500	100	06/24/2022 01:59	WG1884517
1,2,3-Trichloropropane	U		23.7	250	100	06/24/2022 01:59	WG1884517
1,2,4-Trimethylbenzene	U		32.2	100	100	06/24/2022 01:59	WG1884517
1,2,3-Trimethylbenzene	U		10.4	100	100	06/24/2022 01:59	WG1884517
1,3,5-Trimethylbenzene	U		10.4	100	100	06/24/2022 01:59	WG1884517
Vinyl chloride	U		23.4	100	100	06/24/2022 01:59	WG1884517
Xylenes, Total	U		17.4	300	100	06/24/2022 01:59	WG1884517
(S) Toluene-d8	104			80.0-120		06/24/2022 01:59	WG1884517
(S) 4-Bromofluorobenzene	101			77.0-126		06/24/2022 01:59	WG1884517
(S) 1,2-Dichloroethane-d4	105			70.0-130		06/24/2022 01:59	WG1884517

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

Sample Narrative:

L1504535-03 WG1884517: Target compounds too high to run at a lower dilution.

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	863	<u>J3</u>	5.97	30.0	10	06/24/2022 14:08	WG1884513
(S) Toluene-d8	102			77.0-127		06/24/2022 14:08	WG1884513

Wet Chemistry by Method 314.0 Mod

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Perchlorate	60200		300	4000	1000	06/21/2022 11:41	WG1881121

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		56.5	250	5	06/24/2022 02:21	WG1884517
Acrolein	U		12.7	250	5	06/24/2022 02:21	WG1884517
Acrylonitrile	U		3.36	50.0	5	06/24/2022 02:21	WG1884517
Benzene	0.587	J	0.471	5.00	5	06/24/2022 02:21	WG1884517
Bromobenzene	U		0.590	5.00	5	06/24/2022 02:21	WG1884517
Bromodichloromethane	U		0.680	5.00	5	06/24/2022 02:21	WG1884517
Bromoform	U		0.645	5.00	5	06/24/2022 02:21	WG1884517
Bromomethane	U		3.03	25.0	5	06/24/2022 02:21	WG1884517
1,3-Butadiene	U		1.49	10.0	5	06/24/2022 02:21	WG1884517
n-Butylbenzene	U		0.785	5.00	5	06/24/2022 02:21	WG1884517
sec-Butylbenzene	U		0.625	5.00	5	06/24/2022 02:21	WG1884517
tert-Butylbenzene	U		0.635	5.00	5	06/24/2022 02:21	WG1884517
Carbon tetrachloride	U		0.640	5.00	5	06/24/2022 02:21	WG1884517
Carbon disulfide	U		0.481	5.00	5	06/24/2022 02:21	WG1884517
Chlorobenzene	U		0.580	5.00	5	06/24/2022 02:21	WG1884517
Chlorodibromomethane	U		0.700	5.00	5	06/24/2022 02:21	WG1884517
Chloroethane	U		0.960	25.0	5	06/24/2022 02:21	WG1884517
Chloroform	U		0.555	25.0	5	06/24/2022 02:21	WG1884517
Chloromethane	U		4.80	12.5	5	06/24/2022 02:21	WG1884517
Cyclohexane	U		0.940	5.00	5	06/24/2022 02:21	WG1884517
2-Chlorotoluene	U		0.530	5.00	5	06/24/2022 02:21	WG1884517
4-Chlorotoluene	U		0.570	5.00	5	06/24/2022 02:21	WG1884517
1,2-Dibromo-3-Chloropropane	U		1.38	25.0	5	06/24/2022 02:21	WG1884517
1,2-Dibromoethane	U		0.630	5.00	5	06/24/2022 02:21	WG1884517
Dibromomethane	U		0.610	5.00	5	06/24/2022 02:21	WG1884517
1,2-Dichlorobenzene	U		0.535	5.00	5	06/24/2022 02:21	WG1884517
1,3-Dichlorobenzene	U		0.550	5.00	5	06/24/2022 02:21	WG1884517
1,4-Dichlorobenzene	U		0.600	5.00	5	06/24/2022 02:21	WG1884517
Dichlorodifluoromethane	U		1.87	25.0	5	06/24/2022 02:21	WG1884517
1,1-Dichloroethane	U		0.500	5.00	5	06/24/2022 02:21	WG1884517
1,2-Dichloroethane	U		0.409	5.00	5	06/24/2022 02:21	WG1884517
1,1-Dichloroethene	69.5		0.940	5.00	5	06/24/2022 02:21	WG1884517
cis-1,2-Dichloroethene	1.30	B J	0.630	5.00	5	06/24/2022 02:21	WG1884517
trans-1,2-Dichloroethene	U		0.745	5.00	5	06/24/2022 02:21	WG1884517
1,2-Dichloropropane	U		0.745	5.00	5	06/24/2022 02:21	WG1884517
1,1-Dichloropropene	U		0.710	5.00	5	06/24/2022 02:21	WG1884517
1,3-Dichloropropane	U		0.550	5.00	5	06/24/2022 02:21	WG1884517
cis-1,3-Dichloropropene	U		0.555	5.00	5	06/24/2022 02:21	WG1884517
trans-1,3-Dichloropropene	U		0.590	5.00	5	06/24/2022 02:21	WG1884517
2,2-Dichloropropane	U		0.805	5.00	5	06/24/2022 02:21	WG1884517
Dicyclopentadiene	U		1.27	5.00	5	06/24/2022 02:21	WG1884517
Di-isopropyl ether	U		0.525	5.00	5	06/24/2022 02:21	WG1884517
Ethylbenzene	U		0.685	5.00	5	06/24/2022 02:21	WG1884517
4-Ethyltoluene	U		1.04	5.00	5	06/24/2022 02:21	WG1884517
Hexachloro-1,3-butadiene	U		1.69	5.00	5	06/24/2022 02:21	WG1884517
n-Hexane	U		3.74	50.0	5	06/24/2022 02:21	WG1884517
Isopropylbenzene	U		0.525	5.00	5	06/24/2022 02:21	WG1884517
p-Isopropyltoluene	U		0.600	5.00	5	06/24/2022 02:21	WG1884517
2-Butanone (MEK)	U		5.95	50.0	5	06/24/2022 02:21	WG1884517
Methyl Cyclohexane	U		3.30	5.00	5	06/24/2022 02:21	WG1884517

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	U		2.15	25.0	5	06/24/2022 02:21	WG1884517
4-Methyl-2-pentanone (MIBK)	U		2.39	50.0	5	06/24/2022 02:21	WG1884517
Methyl tert-butyl ether	U		0.505	5.00	5	06/24/2022 02:21	WG1884517
Naphthalene	U		5.00	25.0	5	06/24/2022 02:21	WG1884517
Propene	U		4.68	12.5	5	06/24/2022 02:21	WG1884517
n-Propylbenzene	U		0.497	5.00	5	06/24/2022 02:21	WG1884517
Styrene	U		0.590	5.00	5	06/24/2022 02:21	WG1884517
1,1,1,2-Tetrachloroethane	U		0.735	5.00	5	06/24/2022 02:21	WG1884517
1,1,2,2-Tetrachloroethane	U		0.665	5.00	5	06/24/2022 02:21	WG1884517
1,1,2-Trichlorotrifluoroethane	U		0.900	5.00	5	06/24/2022 02:21	WG1884517
Tetrachloroethene	U		1.50	5.00	5	06/24/2022 02:21	WG1884517
Toluene	U		1.39	5.00	5	06/24/2022 02:21	WG1884517
1,2,3-Trichlorobenzene	U		1.15	5.00	5	06/24/2022 02:21	WG1884517
1,2,4-Trichlorobenzene	U		2.41	5.00	5	06/24/2022 02:21	WG1884517
1,1,1-Trichloroethane	U		0.745	5.00	5	06/24/2022 02:21	WG1884517
1,1,2-Trichloroethane	U		0.790	5.00	5	06/24/2022 02:21	WG1884517
Trichloroethene	315		0.950	5.00	5	06/24/2022 02:21	WG1884517
Trichlorofluoromethane	U		0.800	25.0	5	06/24/2022 02:21	WG1884517
1,2,3-Trichloropropane	U		1.19	12.5	5	06/24/2022 02:21	WG1884517
1,2,4-Trimethylbenzene	U		1.61	5.00	5	06/24/2022 02:21	WG1884517
1,2,3-Trimethylbenzene	U		0.520	5.00	5	06/24/2022 02:21	WG1884517
1,3,5-Trimethylbenzene	U		0.520	5.00	5	06/24/2022 02:21	WG1884517
Vinyl chloride	U		1.17	5.00	5	06/24/2022 02:21	WG1884517
Xylenes, Total	U		0.870	15.0	5	06/24/2022 02:21	WG1884517
(S) Toluene-d8	108			80.0-120		06/24/2022 02:21	WG1884517
(S) 4-Bromofluorobenzene	106			77.0-126		06/24/2022 02:21	WG1884517
(S) 1,2-Dichloroethane-d4	106			70.0-130		06/24/2022 02:21	WG1884517

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

Sample Narrative:

L1504535-04 WG1884517: Target compounds too high to run at a lower dilution.

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	189	<u>J3</u>	2.99	15.0	5	06/24/2022 14:28	WG1884513
(S) Toluene-d8	103			77.0-127		06/24/2022 14:28	WG1884513

Wet Chemistry by Method 314.0 Mod

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Perchlorate	58500		1500	20000	5000	06/21/2022 12:09	WG1881121

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		56.5	250	5	06/24/2022 02:42	WG1884517
Acrolein	U		12.7	250	5	06/24/2022 02:42	WG1884517
Acrylonitrile	U		3.36	50.0	5	06/24/2022 02:42	WG1884517
Benzene	U		0.471	5.00	5	06/24/2022 02:42	WG1884517
Bromobenzene	U		0.590	5.00	5	06/24/2022 02:42	WG1884517
Bromodichloromethane	U		0.680	5.00	5	06/24/2022 02:42	WG1884517
Bromoform	U		0.645	5.00	5	06/24/2022 02:42	WG1884517
Bromomethane	U		3.03	25.0	5	06/24/2022 02:42	WG1884517
1,3-Butadiene	U		1.49	10.0	5	06/24/2022 02:42	WG1884517
n-Butylbenzene	U		0.785	5.00	5	06/24/2022 02:42	WG1884517
sec-Butylbenzene	U		0.625	5.00	5	06/24/2022 02:42	WG1884517
tert-Butylbenzene	U		0.635	5.00	5	06/24/2022 02:42	WG1884517
Carbon tetrachloride	U		0.640	5.00	5	06/24/2022 02:42	WG1884517
Carbon disulfide	U		0.481	5.00	5	06/24/2022 02:42	WG1884517
Chlorobenzene	U		0.580	5.00	5	06/24/2022 02:42	WG1884517
Chlorodibromomethane	U		0.700	5.00	5	06/24/2022 02:42	WG1884517
Chloroethane	U		0.960	25.0	5	06/24/2022 02:42	WG1884517
Chloroform	0.920	J	0.555	25.0	5	06/24/2022 02:42	WG1884517
Chloromethane	U		4.80	12.5	5	06/24/2022 02:42	WG1884517
Cyclohexane	U		0.940	5.00	5	06/24/2022 02:42	WG1884517
2-Chlorotoluene	U		0.530	5.00	5	06/24/2022 02:42	WG1884517
4-Chlorotoluene	U		0.570	5.00	5	06/24/2022 02:42	WG1884517
1,2-Dibromo-3-Chloropropane	U		1.38	25.0	5	06/24/2022 02:42	WG1884517
1,2-Dibromoethane	U		0.630	5.00	5	06/24/2022 02:42	WG1884517
Dibromomethane	U		0.610	5.00	5	06/24/2022 02:42	WG1884517
1,2-Dichlorobenzene	U		0.535	5.00	5	06/24/2022 02:42	WG1884517
1,3-Dichlorobenzene	U		0.550	5.00	5	06/24/2022 02:42	WG1884517
1,4-Dichlorobenzene	U		0.600	5.00	5	06/24/2022 02:42	WG1884517
Dichlorodifluoromethane	U		1.87	25.0	5	06/24/2022 02:42	WG1884517
1,1-Dichloroethane	U		0.500	5.00	5	06/24/2022 02:42	WG1884517
1,2-Dichloroethane	U		0.409	5.00	5	06/24/2022 02:42	WG1884517
1,1-Dichloroethene	79.8		0.940	5.00	5	06/24/2022 02:42	WG1884517
cis-1,2-Dichloroethene	U		0.630	5.00	5	06/24/2022 02:42	WG1884517
trans-1,2-Dichloroethene	U		0.745	5.00	5	06/24/2022 02:42	WG1884517
1,2-Dichloropropane	U		0.745	5.00	5	06/24/2022 02:42	WG1884517
1,1-Dichloropropene	U		0.710	5.00	5	06/24/2022 02:42	WG1884517
1,3-Dichloropropane	U		0.550	5.00	5	06/24/2022 02:42	WG1884517
cis-1,3-Dichloropropene	U		0.555	5.00	5	06/24/2022 02:42	WG1884517
trans-1,3-Dichloropropene	U		0.590	5.00	5	06/24/2022 02:42	WG1884517
2,2-Dichloropropane	U		0.805	5.00	5	06/24/2022 02:42	WG1884517
Dicyclopentadiene	U		1.27	5.00	5	06/24/2022 02:42	WG1884517
Di-isopropyl ether	U		0.525	5.00	5	06/24/2022 02:42	WG1884517
Ethylbenzene	U		0.685	5.00	5	06/24/2022 02:42	WG1884517
4-Ethyltoluene	U		1.04	5.00	5	06/24/2022 02:42	WG1884517
Hexachloro-1,3-butadiene	U		1.69	5.00	5	06/24/2022 02:42	WG1884517
n-Hexane	U		3.74	50.0	5	06/24/2022 02:42	WG1884517
Isopropylbenzene	U		0.525	5.00	5	06/24/2022 02:42	WG1884517
p-Isopropyltoluene	U		0.600	5.00	5	06/24/2022 02:42	WG1884517
2-Butanone (MEK)	U		5.95	50.0	5	06/24/2022 02:42	WG1884517
Methyl Cyclohexane	U		3.30	5.00	5	06/24/2022 02:42	WG1884517

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	U		2.15	25.0	5	06/24/2022 02:42	WG1884517
4-Methyl-2-pentanone (MIBK)	U		2.39	50.0	5	06/24/2022 02:42	WG1884517
Methyl tert-butyl ether	U		0.505	5.00	5	06/24/2022 02:42	WG1884517
Naphthalene	U		5.00	25.0	5	06/24/2022 02:42	WG1884517
Propene	U		4.68	12.5	5	06/24/2022 02:42	WG1884517
n-Propylbenzene	U		0.497	5.00	5	06/24/2022 02:42	WG1884517
Styrene	U		0.590	5.00	5	06/24/2022 02:42	WG1884517
1,1,1,2-Tetrachloroethane	U		0.735	5.00	5	06/24/2022 02:42	WG1884517
1,1,2,2-Tetrachloroethane	U		0.665	5.00	5	06/24/2022 02:42	WG1884517
1,1,2-Trichlorotrifluoroethane	U		0.900	5.00	5	06/24/2022 02:42	WG1884517
Tetrachloroethene	U		1.50	5.00	5	06/24/2022 02:42	WG1884517
Toluene	U		1.39	5.00	5	06/24/2022 02:42	WG1884517
1,2,3-Trichlorobenzene	U		1.15	5.00	5	06/24/2022 02:42	WG1884517
1,2,4-Trichlorobenzene	U		2.41	5.00	5	06/24/2022 02:42	WG1884517
1,1,1-Trichloroethane	U		0.745	5.00	5	06/24/2022 02:42	WG1884517
1,1,2-Trichloroethane	U		0.790	5.00	5	06/24/2022 02:42	WG1884517
Trichloroethene	174		0.950	5.00	5	06/24/2022 02:42	WG1884517
Trichlorofluoromethane	U		0.800	25.0	5	06/24/2022 02:42	WG1884517
1,2,3-Trichloropropane	U		1.19	12.5	5	06/24/2022 02:42	WG1884517
1,2,4-Trimethylbenzene	U		1.61	5.00	5	06/24/2022 02:42	WG1884517
1,2,3-Trimethylbenzene	U		0.520	5.00	5	06/24/2022 02:42	WG1884517
1,3,5-Trimethylbenzene	U		0.520	5.00	5	06/24/2022 02:42	WG1884517
Vinyl chloride	U		1.17	5.00	5	06/24/2022 02:42	WG1884517
Xylenes, Total	U		0.870	15.0	5	06/24/2022 02:42	WG1884517
(S) Toluene-d8	105			80.0-120		06/24/2022 02:42	WG1884517
(S) 4-Bromofluorobenzene	102			77.0-126		06/24/2022 02:42	WG1884517
(S) 1,2-Dichloroethane-d4	108			70.0-130		06/24/2022 02:42	WG1884517

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

Sample Narrative:

L1504535-05 WG1884517: Target compounds too high to run at a lower dilution.

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	324	<u>J3</u>	2.99	15.0	5	06/24/2022 14:48	WG1884513
(S) Toluene-d8	103			77.0-127		06/24/2022 14:48	WG1884513

Wet Chemistry by Method 314.0 Mod

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Perchlorate	9.45		0.300	4.00	1	06/21/2022 02:59	WG1881121

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	06/23/2022 23:48	WG1884517
Acrolein	U		2.54	50.0	1	06/23/2022 23:48	WG1884517
Acrylonitrile	U		0.671	10.0	1	06/23/2022 23:48	WG1884517
Benzene	U		0.0941	1.00	1	06/23/2022 23:48	WG1884517
Bromobenzene	U		0.118	1.00	1	06/23/2022 23:48	WG1884517
Bromodichloromethane	U		0.136	1.00	1	06/23/2022 23:48	WG1884517
Bromoform	U		0.129	1.00	1	06/23/2022 23:48	WG1884517
Bromomethane	U		0.605	5.00	1	06/23/2022 23:48	WG1884517
1,3-Butadiene	U		0.299	2.00	1	06/23/2022 23:48	WG1884517
n-Butylbenzene	U		0.157	1.00	1	06/23/2022 23:48	WG1884517
sec-Butylbenzene	U		0.125	1.00	1	06/23/2022 23:48	WG1884517
tert-Butylbenzene	U		0.127	1.00	1	06/23/2022 23:48	WG1884517
Carbon tetrachloride	U		0.128	1.00	1	06/23/2022 23:48	WG1884517
Carbon disulfide	U		0.0962	1.00	1	06/23/2022 23:48	WG1884517
Chlorobenzene	U		0.116	1.00	1	06/23/2022 23:48	WG1884517
Chlorodibromomethane	U		0.140	1.00	1	06/23/2022 23:48	WG1884517
Chloroethane	U		0.192	5.00	1	06/23/2022 23:48	WG1884517
Chloroform	U		0.111	5.00	1	06/23/2022 23:48	WG1884517
Chloromethane	U		0.960	2.50	1	06/23/2022 23:48	WG1884517
Cyclohexane	U		0.188	1.00	1	06/23/2022 23:48	WG1884517
2-Chlorotoluene	U		0.106	1.00	1	06/23/2022 23:48	WG1884517
4-Chlorotoluene	U		0.114	1.00	1	06/23/2022 23:48	WG1884517
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	06/23/2022 23:48	WG1884517
1,2-Dibromoethane	U		0.126	1.00	1	06/23/2022 23:48	WG1884517
Dibromomethane	U		0.122	1.00	1	06/23/2022 23:48	WG1884517
1,2-Dichlorobenzene	U		0.107	1.00	1	06/23/2022 23:48	WG1884517
1,3-Dichlorobenzene	U		0.110	1.00	1	06/23/2022 23:48	WG1884517
1,4-Dichlorobenzene	U		0.120	1.00	1	06/23/2022 23:48	WG1884517
Dichlorodifluoromethane	U		0.374	5.00	1	06/23/2022 23:48	WG1884517
1,1-Dichloroethane	U		0.100	1.00	1	06/23/2022 23:48	WG1884517
1,2-Dichloroethane	U		0.0819	1.00	1	06/23/2022 23:48	WG1884517
1,1-Dichloroethene	U		0.188	1.00	1	06/23/2022 23:48	WG1884517
cis-1,2-Dichloroethene	1.08	<u>B</u>	0.126	1.00	1	06/23/2022 23:48	WG1884517
trans-1,2-Dichloroethene	U		0.149	1.00	1	06/23/2022 23:48	WG1884517
1,2-Dichloropropane	U		0.149	1.00	1	06/23/2022 23:48	WG1884517
1,1-Dichloropropene	U		0.142	1.00	1	06/23/2022 23:48	WG1884517
1,3-Dichloropropane	U		0.110	1.00	1	06/23/2022 23:48	WG1884517
cis-1,3-Dichloropropene	U		0.111	1.00	1	06/23/2022 23:48	WG1884517
trans-1,3-Dichloropropene	U		0.118	1.00	1	06/23/2022 23:48	WG1884517
2,2-Dichloropropane	U		0.161	1.00	1	06/23/2022 23:48	WG1884517
Dicyclopentadiene	U		0.253	1.00	1	06/23/2022 23:48	WG1884517
Di-isopropyl ether	U		0.105	1.00	1	06/23/2022 23:48	WG1884517
Ethylbenzene	U		0.137	1.00	1	06/23/2022 23:48	WG1884517
4-Ethyltoluene	U		0.208	1.00	1	06/23/2022 23:48	WG1884517
Hexachloro-1,3-butadiene	U		0.337	1.00	1	06/23/2022 23:48	WG1884517
n-Hexane	U		0.749	10.0	1	06/23/2022 23:48	WG1884517
Isopropylbenzene	U		0.105	1.00	1	06/23/2022 23:48	WG1884517
p-Isopropyltoluene	U		0.120	1.00	1	06/23/2022 23:48	WG1884517
2-Butanone (MEK)	U		1.19	10.0	1	06/23/2022 23:48	WG1884517
Methyl Cyclohexane	U		0.660	1.00	1	06/23/2022 23:48	WG1884517

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	U		0.430	5.00	1	06/23/2022 23:48	WG1884517
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	06/23/2022 23:48	WG1884517
Methyl tert-butyl ether	U		0.101	1.00	1	06/23/2022 23:48	WG1884517
Naphthalene	U		1.00	5.00	1	06/23/2022 23:48	WG1884517
Propene	U		0.936	2.50	1	06/23/2022 23:48	WG1884517
n-Propylbenzene	U		0.0993	1.00	1	06/23/2022 23:48	WG1884517
Styrene	U		0.118	1.00	1	06/23/2022 23:48	WG1884517
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	06/23/2022 23:48	WG1884517
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	06/23/2022 23:48	WG1884517
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	06/23/2022 23:48	WG1884517
Tetrachloroethene	U		0.300	1.00	1	06/23/2022 23:48	WG1884517
Toluene	U		0.278	1.00	1	06/23/2022 23:48	WG1884517
1,2,3-Trichlorobenzene	U		0.230	1.00	1	06/23/2022 23:48	WG1884517
1,2,4-Trichlorobenzene	U		0.481	1.00	1	06/23/2022 23:48	WG1884517
1,1,1-Trichloroethane	U		0.149	1.00	1	06/23/2022 23:48	WG1884517
1,1,2-Trichloroethane	U		0.158	1.00	1	06/23/2022 23:48	WG1884517
Trichloroethene	2.10		0.190	1.00	1	06/23/2022 23:48	WG1884517
Trichlorofluoromethane	U		0.160	5.00	1	06/23/2022 23:48	WG1884517
1,2,3-Trichloropropane	U		0.237	2.50	1	06/23/2022 23:48	WG1884517
1,2,4-Trimethylbenzene	U		0.322	1.00	1	06/23/2022 23:48	WG1884517
1,2,3-Trimethylbenzene	U		0.104	1.00	1	06/23/2022 23:48	WG1884517
1,3,5-Trimethylbenzene	U		0.104	1.00	1	06/23/2022 23:48	WG1884517
Vinyl chloride	U		0.234	1.00	1	06/23/2022 23:48	WG1884517
Xylenes, Total	U		0.174	3.00	1	06/23/2022 23:48	WG1884517
(S) Toluene-d8	105			80.0-120		06/23/2022 23:48	WG1884517
(S) 4-Bromofluorobenzene	101			77.0-126		06/23/2022 23:48	WG1884517
(S) 1,2-Dichloroethane-d4	103			70.0-130		06/23/2022 23:48	WG1884517

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

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	10.1		0.597	3.00	1	06/22/2022 13:32	WG1882718
(S) Toluene-d8	101			77.0-127		06/22/2022 13:32	WG1882718

Wet Chemistry by Method 314.0 Mod

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Perchlorate	5500		30.0	400	100	06/21/2022 12:38	WG1881121

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	06/24/2022 00:10	WG1884517
Acrolein	U		2.54	50.0	1	06/24/2022 00:10	WG1884517
Acrylonitrile	U		0.671	10.0	1	06/24/2022 00:10	WG1884517
Benzene	U		0.0941	1.00	1	06/24/2022 00:10	WG1884517
Bromobenzene	U		0.118	1.00	1	06/24/2022 00:10	WG1884517
Bromodichloromethane	U		0.136	1.00	1	06/24/2022 00:10	WG1884517
Bromoform	U		0.129	1.00	1	06/24/2022 00:10	WG1884517
Bromomethane	U		0.605	5.00	1	06/24/2022 00:10	WG1884517
1,3-Butadiene	U		0.299	2.00	1	06/24/2022 00:10	WG1884517
n-Butylbenzene	U		0.157	1.00	1	06/24/2022 00:10	WG1884517
sec-Butylbenzene	U		0.125	1.00	1	06/24/2022 00:10	WG1884517
tert-Butylbenzene	U		0.127	1.00	1	06/24/2022 00:10	WG1884517
Carbon tetrachloride	U		0.128	1.00	1	06/24/2022 00:10	WG1884517
Carbon disulfide	U		0.0962	1.00	1	06/24/2022 00:10	WG1884517
Chlorobenzene	U		0.116	1.00	1	06/24/2022 00:10	WG1884517
Chlorodibromomethane	U		0.140	1.00	1	06/24/2022 00:10	WG1884517
Chloroethane	U		0.192	5.00	1	06/24/2022 00:10	WG1884517
Chloroform	U		0.111	5.00	1	06/24/2022 00:10	WG1884517
Chloromethane	U		0.960	2.50	1	06/24/2022 00:10	WG1884517
Cyclohexane	U		0.188	1.00	1	06/24/2022 00:10	WG1884517
2-Chlorotoluene	U		0.106	1.00	1	06/24/2022 00:10	WG1884517
4-Chlorotoluene	U		0.114	1.00	1	06/24/2022 00:10	WG1884517
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	06/24/2022 00:10	WG1884517
1,2-Dibromoethane	U		0.126	1.00	1	06/24/2022 00:10	WG1884517
Dibromomethane	U		0.122	1.00	1	06/24/2022 00:10	WG1884517
1,2-Dichlorobenzene	U		0.107	1.00	1	06/24/2022 00:10	WG1884517
1,3-Dichlorobenzene	U		0.110	1.00	1	06/24/2022 00:10	WG1884517
1,4-Dichlorobenzene	U		0.120	1.00	1	06/24/2022 00:10	WG1884517
Dichlorodifluoromethane	U		0.374	5.00	1	06/24/2022 00:10	WG1884517
1,1-Dichloroethane	U		0.100	1.00	1	06/24/2022 00:10	WG1884517
1,2-Dichloroethane	U		0.0819	1.00	1	06/24/2022 00:10	WG1884517
1,1-Dichloroethene	0.696		0.188	1.00	1	06/24/2022 00:10	WG1884517
cis-1,2-Dichloroethene	1.43	U	0.126	1.00	1	06/24/2022 00:10	WG1884517
trans-1,2-Dichloroethene	U		0.149	1.00	1	06/24/2022 00:10	WG1884517
1,2-Dichloropropane	U		0.149	1.00	1	06/24/2022 00:10	WG1884517
1,1-Dichloropropene	U		0.142	1.00	1	06/24/2022 00:10	WG1884517
1,3-Dichloropropane	U		0.110	1.00	1	06/24/2022 00:10	WG1884517
cis-1,3-Dichloropropene	U		0.111	1.00	1	06/24/2022 00:10	WG1884517
trans-1,3-Dichloropropene	U		0.118	1.00	1	06/24/2022 00:10	WG1884517
2,2-Dichloropropane	U		0.161	1.00	1	06/24/2022 00:10	WG1884517
Dicyclopentadiene	U		0.253	1.00	1	06/24/2022 00:10	WG1884517
Di-isopropyl ether	U		0.105	1.00	1	06/24/2022 00:10	WG1884517
Ethylbenzene	U		0.137	1.00	1	06/24/2022 00:10	WG1884517
4-Ethyltoluene	U		0.208	1.00	1	06/24/2022 00:10	WG1884517
Hexachloro-1,3-butadiene	U		0.337	1.00	1	06/24/2022 00:10	WG1884517
n-Hexane	U		0.749	10.0	1	06/24/2022 00:10	WG1884517
Isopropylbenzene	U		0.105	1.00	1	06/24/2022 00:10	WG1884517
p-Isopropyltoluene	U		0.120	1.00	1	06/24/2022 00:10	WG1884517
2-Butanone (MEK)	U		1.19	10.0	1	06/24/2022 00:10	WG1884517
Methyl Cyclohexane	U		0.660	1.00	1	06/24/2022 00:10	WG1884517

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

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	0.487	J	0.430	5.00	1	06/24/2022 00:10	WG1884517
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	06/24/2022 00:10	WG1884517
Methyl tert-butyl ether	U		0.101	1.00	1	06/24/2022 00:10	WG1884517
Naphthalene	U		1.00	5.00	1	06/24/2022 00:10	WG1884517
Propene	U		0.936	2.50	1	06/24/2022 00:10	WG1884517
n-Propylbenzene	U		0.0993	1.00	1	06/24/2022 00:10	WG1884517
Styrene	U		0.118	1.00	1	06/24/2022 00:10	WG1884517
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	06/24/2022 00:10	WG1884517
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	06/24/2022 00:10	WG1884517
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	06/24/2022 00:10	WG1884517
Tetrachloroethene	U		0.300	1.00	1	06/24/2022 00:10	WG1884517
Toluene	U		0.278	1.00	1	06/24/2022 00:10	WG1884517
1,2,3-Trichlorobenzene	U		0.230	1.00	1	06/24/2022 00:10	WG1884517
1,2,4-Trichlorobenzene	U		0.481	1.00	1	06/24/2022 00:10	WG1884517
1,1,1-Trichloroethane	U		0.149	1.00	1	06/24/2022 00:10	WG1884517
1,1,2-Trichloroethane	U		0.158	1.00	1	06/24/2022 00:10	WG1884517
Trichloroethene	6.23		0.190	1.00	1	06/24/2022 00:10	WG1884517
Trichlorofluoromethane	U		0.160	5.00	1	06/24/2022 00:10	WG1884517
1,2,3-Trichloropropane	U		0.237	2.50	1	06/24/2022 00:10	WG1884517
1,2,4-Trimethylbenzene	U		0.322	1.00	1	06/24/2022 00:10	WG1884517
1,2,3-Trimethylbenzene	U		0.104	1.00	1	06/24/2022 00:10	WG1884517
1,3,5-Trimethylbenzene	U		0.104	1.00	1	06/24/2022 00:10	WG1884517
Vinyl chloride	U		0.234	1.00	1	06/24/2022 00:10	WG1884517
Xylenes, Total	U		0.174	3.00	1	06/24/2022 00:10	WG1884517
(S) Toluene-d8	107			80.0-120		06/24/2022 00:10	WG1884517
(S) 4-Bromofluorobenzene	103			77.0-126		06/24/2022 00:10	WG1884517
(S) 1,2-Dichloroethane-d4	104			70.0-130		06/24/2022 00:10	WG1884517

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

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	9.83		0.597	3.00	1	06/22/2022 13:51	WG1882718
(S) Toluene-d8	101			77.0-127		06/22/2022 13:51	WG1882718

Wet Chemistry by Method 314.0 Mod

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Perchlorate	763000		3000	40000	10000	06/23/2022 10:32	WG1881123

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11300	50000	1000	06/24/2022 03:04	WG1884517
Acrolein	U		2540	50000	1000	06/24/2022 03:04	WG1884517
Acrylonitrile	U		671	10000	1000	06/24/2022 03:04	WG1884517
Benzene	324	J	94.1	1000	1000	06/24/2022 03:04	WG1884517
Bromobenzene	U		118	1000	1000	06/24/2022 03:04	WG1884517
Bromodichloromethane	U		136	1000	1000	06/24/2022 03:04	WG1884517
Bromoform	U		129	1000	1000	06/24/2022 03:04	WG1884517
Bromomethane	U		605	5000	1000	06/24/2022 03:04	WG1884517
1,3-Butadiene	U		299	2000	1000	06/24/2022 03:04	WG1884517
n-Butylbenzene	U		157	1000	1000	06/24/2022 03:04	WG1884517
sec-Butylbenzene	U		125	1000	1000	06/24/2022 03:04	WG1884517
tert-Butylbenzene	U		127	1000	1000	06/24/2022 03:04	WG1884517
Carbon tetrachloride	U		128	1000	1000	06/24/2022 03:04	WG1884517
Carbon disulfide	U		96.2	1000	1000	06/24/2022 03:04	WG1884517
Chlorobenzene	U		116	1000	1000	06/24/2022 03:04	WG1884517
Chlorodibromomethane	U		140	1000	1000	06/24/2022 03:04	WG1884517
Chloroethane	U		192	5000	1000	06/24/2022 03:04	WG1884517
Chloroform	U		111	5000	1000	06/24/2022 03:04	WG1884517
Chloromethane	U		960	2500	1000	06/24/2022 03:04	WG1884517
Cyclohexane	U		188	1000	1000	06/24/2022 03:04	WG1884517
2-Chlorotoluene	U		106	1000	1000	06/24/2022 03:04	WG1884517
4-Chlorotoluene	U		114	1000	1000	06/24/2022 03:04	WG1884517
1,2-Dibromo-3-Chloropropane	U		276	5000	1000	06/24/2022 03:04	WG1884517
1,2-Dibromoethane	U		126	1000	1000	06/24/2022 03:04	WG1884517
Dibromomethane	U		122	1000	1000	06/24/2022 03:04	WG1884517
1,2-Dichlorobenzene	U		107	1000	1000	06/24/2022 03:04	WG1884517
1,3-Dichlorobenzene	U		110	1000	1000	06/24/2022 03:04	WG1884517
1,4-Dichlorobenzene	U		120	1000	1000	06/24/2022 03:04	WG1884517
Dichlorodifluoromethane	U		374	5000	1000	06/24/2022 03:04	WG1884517
1,1-Dichloroethane	U		100	1000	1000	06/24/2022 03:04	WG1884517
1,2-Dichloroethane	U		81.9	1000	1000	06/24/2022 03:04	WG1884517
1,1-Dichloroethene	4660		188	1000	1000	06/24/2022 03:04	WG1884517
cis-1,2-Dichloroethene	U		126	1000	1000	06/24/2022 03:04	WG1884517
trans-1,2-Dichloroethene	U		149	1000	1000	06/24/2022 03:04	WG1884517
1,2-Dichloropropane	U		149	1000	1000	06/24/2022 03:04	WG1884517
1,1-Dichloropropene	U		142	1000	1000	06/24/2022 03:04	WG1884517
1,3-Dichloropropane	U		110	1000	1000	06/24/2022 03:04	WG1884517
cis-1,3-Dichloropropene	U		111	1000	1000	06/24/2022 03:04	WG1884517
trans-1,3-Dichloropropene	U		118	1000	1000	06/24/2022 03:04	WG1884517
2,2-Dichloropropane	U		161	1000	1000	06/24/2022 03:04	WG1884517
Dicyclopentadiene	U		253	1000	1000	06/24/2022 03:04	WG1884517
Di-isopropyl ether	U		105	1000	1000	06/24/2022 03:04	WG1884517
Ethylbenzene	U		137	1000	1000	06/24/2022 03:04	WG1884517
4-Ethyltoluene	U		208	1000	1000	06/24/2022 03:04	WG1884517
Hexachloro-1,3-butadiene	U		337	1000	1000	06/24/2022 03:04	WG1884517
n-Hexane	U		749	10000	1000	06/24/2022 03:04	WG1884517
Isopropylbenzene	U		105	1000	1000	06/24/2022 03:04	WG1884517
p-Isopropyltoluene	U		120	1000	1000	06/24/2022 03:04	WG1884517
2-Butanone (MEK)	U		1190	10000	1000	06/24/2022 03:04	WG1884517
Methyl Cyclohexane	U		660	1000	1000	06/24/2022 03:04	WG1884517

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	127000		430	5000	1000	06/24/2022 03:04	WG1884517
4-Methyl-2-pentanone (MIBK)	U		478	10000	1000	06/24/2022 03:04	WG1884517
Methyl tert-butyl ether	U		101	1000	1000	06/24/2022 03:04	WG1884517
Naphthalene	U		1000	5000	1000	06/24/2022 03:04	WG1884517
Propene	U		936	2500	1000	06/24/2022 03:04	WG1884517
n-Propylbenzene	U		99.3	1000	1000	06/24/2022 03:04	WG1884517
Styrene	U		118	1000	1000	06/24/2022 03:04	WG1884517
1,1,1,2-Tetrachloroethane	U		147	1000	1000	06/24/2022 03:04	WG1884517
1,1,2,2-Tetrachloroethane	U		133	1000	1000	06/24/2022 03:04	WG1884517
1,1,2-Trichlorotrifluoroethane	U		180	1000	1000	06/24/2022 03:04	WG1884517
Tetrachloroethene	U		300	1000	1000	06/24/2022 03:04	WG1884517
Toluene	U		278	1000	1000	06/24/2022 03:04	WG1884517
1,2,3-Trichlorobenzene	U		230	1000	1000	06/24/2022 03:04	WG1884517
1,2,4-Trichlorobenzene	U		481	1000	1000	06/24/2022 03:04	WG1884517
1,1,1-Trichloroethane	U		149	1000	1000	06/24/2022 03:04	WG1884517
1,1,2-Trichloroethane	U		158	1000	1000	06/24/2022 03:04	WG1884517
Trichloroethene	96500		190	1000	1000	06/24/2022 03:04	WG1884517
Trichlorofluoromethane	U		160	5000	1000	06/24/2022 03:04	WG1884517
1,2,3-Trichloropropane	U		237	2500	1000	06/24/2022 03:04	WG1884517
1,2,4-Trimethylbenzene	U		322	1000	1000	06/24/2022 03:04	WG1884517
1,2,3-Trimethylbenzene	U		104	1000	1000	06/24/2022 03:04	WG1884517
1,3,5-Trimethylbenzene	U		104	1000	1000	06/24/2022 03:04	WG1884517
Vinyl chloride	U		234	1000	1000	06/24/2022 03:04	WG1884517
Xylenes, Total	U		174	3000	1000	06/24/2022 03:04	WG1884517
(S) Toluene-d8	106			80.0-120		06/24/2022 03:04	WG1884517
(S) 4-Bromofluorobenzene	104			77.0-126		06/24/2022 03:04	WG1884517
(S) 1,2-Dichloroethane-d4	104			70.0-130		06/24/2022 03:04	WG1884517

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

Sample Narrative:

L1504535-08 WG1884517: Target compounds too high to run at a lower dilution.

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	3600	<u>J3</u>	59.7	300	100	06/24/2022 15:08	WG1884513
(S) Toluene-d8	103			77.0-127		06/24/2022 15:08	WG1884513

Wet Chemistry by Method 314.0 Mod

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Perchlorate	63.6		0.300	4.00	1	06/22/2022 14:56	WG1881123

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	06/24/2022 00:32	WG1884517
Acrolein	U		2.54	50.0	1	06/24/2022 00:32	WG1884517
Acrylonitrile	U		0.671	10.0	1	06/24/2022 00:32	WG1884517
Benzene	U		0.0941	1.00	1	06/24/2022 00:32	WG1884517
Bromobenzene	U		0.118	1.00	1	06/24/2022 00:32	WG1884517
Bromodichloromethane	U		0.136	1.00	1	06/24/2022 00:32	WG1884517
Bromoform	U		0.129	1.00	1	06/24/2022 00:32	WG1884517
Bromomethane	U		0.605	5.00	1	06/24/2022 00:32	WG1884517
1,3-Butadiene	U		0.299	2.00	1	06/24/2022 00:32	WG1884517
n-Butylbenzene	U		0.157	1.00	1	06/24/2022 00:32	WG1884517
sec-Butylbenzene	U		0.125	1.00	1	06/24/2022 00:32	WG1884517
tert-Butylbenzene	U		0.127	1.00	1	06/24/2022 00:32	WG1884517
Carbon tetrachloride	U		0.128	1.00	1	06/24/2022 00:32	WG1884517
Carbon disulfide	U		0.0962	1.00	1	06/24/2022 00:32	WG1884517
Chlorobenzene	U		0.116	1.00	1	06/24/2022 00:32	WG1884517
Chlorodibromomethane	U		0.140	1.00	1	06/24/2022 00:32	WG1884517
Chloroethane	U		0.192	5.00	1	06/24/2022 00:32	WG1884517
Chloroform	U		0.111	5.00	1	06/24/2022 00:32	WG1884517
Chloromethane	U		0.960	2.50	1	06/24/2022 00:32	WG1884517
Cyclohexane	U		0.188	1.00	1	06/24/2022 00:32	WG1884517
2-Chlorotoluene	U		0.106	1.00	1	06/24/2022 00:32	WG1884517
4-Chlorotoluene	U		0.114	1.00	1	06/24/2022 00:32	WG1884517
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	06/24/2022 00:32	WG1884517
1,2-Dibromoethane	U		0.126	1.00	1	06/24/2022 00:32	WG1884517
Dibromomethane	U		0.122	1.00	1	06/24/2022 00:32	WG1884517
1,2-Dichlorobenzene	U		0.107	1.00	1	06/24/2022 00:32	WG1884517
1,3-Dichlorobenzene	U		0.110	1.00	1	06/24/2022 00:32	WG1884517
1,4-Dichlorobenzene	U		0.120	1.00	1	06/24/2022 00:32	WG1884517
Dichlorodifluoromethane	U		0.374	5.00	1	06/24/2022 00:32	WG1884517
1,1-Dichloroethane	U		0.100	1.00	1	06/24/2022 00:32	WG1884517
1,2-Dichloroethane	U		0.0819	1.00	1	06/24/2022 00:32	WG1884517
1,1-Dichloroethene	U		0.188	1.00	1	06/24/2022 00:32	WG1884517
cis-1,2-Dichloroethene	U		0.126	1.00	1	06/24/2022 00:32	WG1884517
trans-1,2-Dichloroethene	U		0.149	1.00	1	06/24/2022 00:32	WG1884517
1,2-Dichloropropane	U		0.149	1.00	1	06/24/2022 00:32	WG1884517
1,1-Dichloropropene	U		0.142	1.00	1	06/24/2022 00:32	WG1884517
1,3-Dichloropropane	U		0.110	1.00	1	06/24/2022 00:32	WG1884517
cis-1,3-Dichloropropene	U		0.111	1.00	1	06/24/2022 00:32	WG1884517
trans-1,3-Dichloropropene	U		0.118	1.00	1	06/24/2022 00:32	WG1884517
2,2-Dichloropropane	U		0.161	1.00	1	06/24/2022 00:32	WG1884517
Dicyclopentadiene	U		0.253	1.00	1	06/24/2022 00:32	WG1884517
Di-isopropyl ether	U		0.105	1.00	1	06/24/2022 00:32	WG1884517
Ethylbenzene	U		0.137	1.00	1	06/24/2022 00:32	WG1884517
4-Ethyltoluene	U		0.208	1.00	1	06/24/2022 00:32	WG1884517
Hexachloro-1,3-butadiene	U		0.337	1.00	1	06/24/2022 00:32	WG1884517
n-Hexane	U		0.749	10.0	1	06/24/2022 00:32	WG1884517
Isopropylbenzene	U		0.105	1.00	1	06/24/2022 00:32	WG1884517
p-Isopropyltoluene	U		0.120	1.00	1	06/24/2022 00:32	WG1884517
2-Butanone (MEK)	U		1.19	10.0	1	06/24/2022 00:32	WG1884517
Methyl Cyclohexane	U		0.660	1.00	1	06/24/2022 00:32	WG1884517

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	U		0.430	5.00	1	06/24/2022 00:32	WG1884517
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	06/24/2022 00:32	WG1884517
Methyl tert-butyl ether	U		0.101	1.00	1	06/24/2022 00:32	WG1884517
Naphthalene	U		1.00	5.00	1	06/24/2022 00:32	WG1884517
Propene	U		0.936	2.50	1	06/24/2022 00:32	WG1884517
n-Propylbenzene	U		0.0993	1.00	1	06/24/2022 00:32	WG1884517
Styrene	U		0.118	1.00	1	06/24/2022 00:32	WG1884517
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	06/24/2022 00:32	WG1884517
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	06/24/2022 00:32	WG1884517
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	06/24/2022 00:32	WG1884517
Tetrachloroethene	U		0.300	1.00	1	06/24/2022 00:32	WG1884517
Toluene	U		0.278	1.00	1	06/24/2022 00:32	WG1884517
1,2,3-Trichlorobenzene	U		0.230	1.00	1	06/24/2022 00:32	WG1884517
1,2,4-Trichlorobenzene	U		0.481	1.00	1	06/24/2022 00:32	WG1884517
1,1,1-Trichloroethane	U		0.149	1.00	1	06/24/2022 00:32	WG1884517
1,1,2-Trichloroethane	U		0.158	1.00	1	06/24/2022 00:32	WG1884517
Trichloroethene	U		0.190	1.00	1	06/24/2022 00:32	WG1884517
Trichlorofluoromethane	U		0.160	5.00	1	06/24/2022 00:32	WG1884517
1,2,3-Trichloropropane	U		0.237	2.50	1	06/24/2022 00:32	WG1884517
1,2,4-Trimethylbenzene	U		0.322	1.00	1	06/24/2022 00:32	WG1884517
1,2,3-Trimethylbenzene	U		0.104	1.00	1	06/24/2022 00:32	WG1884517
1,3,5-Trimethylbenzene	U		0.104	1.00	1	06/24/2022 00:32	WG1884517
Vinyl chloride	U		0.234	1.00	1	06/24/2022 00:32	WG1884517
Xylenes, Total	U		0.174	3.00	1	06/24/2022 00:32	WG1884517
(S) Toluene-d8	107			80.0-120		06/24/2022 00:32	WG1884517
(S) 4-Bromofluorobenzene	104			77.0-126		06/24/2022 00:32	WG1884517
(S) 1,2-Dichloroethane-d4	105			70.0-130		06/24/2022 00:32	WG1884517



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	130		0.597	3.00	1	06/22/2022 14:30	WG1882718
(S) Toluene-d8	104			77.0-127		06/22/2022 14:30	WG1882718

Wet Chemistry by Method 314.0 Mod

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Perchlorate	132000		1500	20000	5000	06/23/2022 11:03	WG1881123

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		113	500	10	06/24/2022 03:26	WG1884517
Acrolein	U		25.4	500	10	06/24/2022 03:26	WG1884517
Acrylonitrile	U		6.71	100	10	06/24/2022 03:26	WG1884517
Benzene	U		0.941	10.0	10	06/24/2022 03:26	WG1884517
Bromobenzene	U		1.18	10.0	10	06/24/2022 03:26	WG1884517
Bromodichloromethane	U		1.36	10.0	10	06/24/2022 03:26	WG1884517
Bromoform	U		1.29	10.0	10	06/24/2022 03:26	WG1884517
Bromomethane	U		6.05	50.0	10	06/24/2022 03:26	WG1884517
1,3-Butadiene	U		2.99	20.0	10	06/24/2022 03:26	WG1884517
n-Butylbenzene	U		1.57	10.0	10	06/24/2022 03:26	WG1884517
sec-Butylbenzene	U		1.25	10.0	10	06/24/2022 03:26	WG1884517
tert-Butylbenzene	U		1.27	10.0	10	06/24/2022 03:26	WG1884517
Carbon tetrachloride	U		1.28	10.0	10	06/24/2022 03:26	WG1884517
Carbon disulfide	U		0.962	10.0	10	06/24/2022 03:26	WG1884517
Chlorobenzene	U		1.16	10.0	10	06/24/2022 03:26	WG1884517
Chlorodibromomethane	U		1.40	10.0	10	06/24/2022 03:26	WG1884517
Chloroethane	U		1.92	50.0	10	06/24/2022 03:26	WG1884517
Chloroform	U		1.11	50.0	10	06/24/2022 03:26	WG1884517
Chloromethane	U		9.60	25.0	10	06/24/2022 03:26	WG1884517
Cyclohexane	U		1.88	10.0	10	06/24/2022 03:26	WG1884517
2-Chlorotoluene	U		1.06	10.0	10	06/24/2022 03:26	WG1884517
4-Chlorotoluene	U		1.14	10.0	10	06/24/2022 03:26	WG1884517
1,2-Dibromo-3-Chloropropane	U		2.76	50.0	10	06/24/2022 03:26	WG1884517
1,2-Dibromoethane	U		1.26	10.0	10	06/24/2022 03:26	WG1884517
Dibromomethane	U		1.22	10.0	10	06/24/2022 03:26	WG1884517
1,2-Dichlorobenzene	U		1.07	10.0	10	06/24/2022 03:26	WG1884517
1,3-Dichlorobenzene	U		1.10	10.0	10	06/24/2022 03:26	WG1884517
1,4-Dichlorobenzene	U		1.20	10.0	10	06/24/2022 03:26	WG1884517
Dichlorodifluoromethane	U		3.74	50.0	10	06/24/2022 03:26	WG1884517
1,1-Dichloroethane	U		1.00	10.0	10	06/24/2022 03:26	WG1884517
1,2-Dichloroethane	U		0.819	10.0	10	06/24/2022 03:26	WG1884517
1,1-Dichloroethene	58.3		1.88	10.0	10	06/24/2022 03:26	WG1884517
cis-1,2-Dichloroethene	U		1.26	10.0	10	06/24/2022 03:26	WG1884517
trans-1,2-Dichloroethene	U		1.49	10.0	10	06/24/2022 03:26	WG1884517
1,2-Dichloropropane	U		1.49	10.0	10	06/24/2022 03:26	WG1884517
1,1-Dichloropropene	U		1.42	10.0	10	06/24/2022 03:26	WG1884517
1,3-Dichloropropane	U		1.10	10.0	10	06/24/2022 03:26	WG1884517
cis-1,3-Dichloropropene	U		1.11	10.0	10	06/24/2022 03:26	WG1884517
trans-1,3-Dichloropropene	U		1.18	10.0	10	06/24/2022 03:26	WG1884517
2,2-Dichloropropane	U		1.61	10.0	10	06/24/2022 03:26	WG1884517
Dicyclopentadiene	U		2.53	10.0	10	06/24/2022 03:26	WG1884517
Di-isopropyl ether	U		1.05	10.0	10	06/24/2022 03:26	WG1884517
Ethylbenzene	U		1.37	10.0	10	06/24/2022 03:26	WG1884517
4-Ethyltoluene	U		2.08	10.0	10	06/24/2022 03:26	WG1884517
Hexachloro-1,3-butadiene	U		3.37	10.0	10	06/24/2022 03:26	WG1884517
n-Hexane	U		7.49	100	10	06/24/2022 03:26	WG1884517
Isopropylbenzene	U		1.05	10.0	10	06/24/2022 03:26	WG1884517
p-Isopropyltoluene	U		1.20	10.0	10	06/24/2022 03:26	WG1884517
2-Butanone (MEK)	U		11.9	100	10	06/24/2022 03:26	WG1884517
Methyl Cyclohexane	U		6.60	10.0	10	06/24/2022 03:26	WG1884517



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	U		4.30	50.0	10	06/24/2022 03:26	WG1884517
4-Methyl-2-pentanone (MIBK)	U		4.78	100	10	06/24/2022 03:26	WG1884517
Methyl tert-butyl ether	U		1.01	10.0	10	06/24/2022 03:26	WG1884517
Naphthalene	U		10.0	50.0	10	06/24/2022 03:26	WG1884517
Propene	U		9.36	25.0	10	06/24/2022 03:26	WG1884517
n-Propylbenzene	U		0.993	10.0	10	06/24/2022 03:26	WG1884517
Styrene	U		1.18	10.0	10	06/24/2022 03:26	WG1884517
1,1,1,2-Tetrachloroethane	U		1.47	10.0	10	06/24/2022 03:26	WG1884517
1,1,2,2-Tetrachloroethane	U		1.33	10.0	10	06/24/2022 03:26	WG1884517
1,1,2-Trichlorotrifluoroethane	U		1.80	10.0	10	06/24/2022 03:26	WG1884517
Tetrachloroethene	U		3.00	10.0	10	06/24/2022 03:26	WG1884517
Toluene	U		2.78	10.0	10	06/24/2022 03:26	WG1884517
1,2,3-Trichlorobenzene	U		2.30	10.0	10	06/24/2022 03:26	WG1884517
1,2,4-Trichlorobenzene	U		4.81	10.0	10	06/24/2022 03:26	WG1884517
1,1,1-Trichloroethane	U		1.49	10.0	10	06/24/2022 03:26	WG1884517
1,1,2-Trichloroethane	U		1.58	10.0	10	06/24/2022 03:26	WG1884517
Trichloroethene	487		1.90	10.0	10	06/24/2022 03:26	WG1884517
Trichlorofluoromethane	U		1.60	50.0	10	06/24/2022 03:26	WG1884517
1,2,3-Trichloropropane	U		2.37	25.0	10	06/24/2022 03:26	WG1884517
1,2,4-Trimethylbenzene	U		3.22	10.0	10	06/24/2022 03:26	WG1884517
1,2,3-Trimethylbenzene	U		1.04	10.0	10	06/24/2022 03:26	WG1884517
1,3,5-Trimethylbenzene	U		1.04	10.0	10	06/24/2022 03:26	WG1884517
Vinyl chloride	U		2.34	10.0	10	06/24/2022 03:26	WG1884517
Xylenes, Total	U		1.74	30.0	10	06/24/2022 03:26	WG1884517
(S) Toluene-d8	106			80.0-120		06/24/2022 03:26	WG1884517
(S) 4-Bromofluorobenzene	101			77.0-126		06/24/2022 03:26	WG1884517
(S) 1,2-Dichloroethane-d4	103			70.0-130		06/24/2022 03:26	WG1884517

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

Sample Narrative:

L1504535-10 WG1884517: Target compounds too high to run at a lower dilution.

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	170		0.597	3.00	1	06/22/2022 14:51	WG1882718
(S) Toluene-d8	103			77.0-127		06/22/2022 14:51	WG1882718

Wet Chemistry by Method 314.0 Mod

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Perchlorate	17100	<u>V</u>	300	4000	1000	06/23/2022 11:31	WG1881123

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	06/24/2022 00:54	WG1884517
Acrolein	U		2.54	50.0	1	06/24/2022 00:54	WG1884517
Acrylonitrile	U		0.671	10.0	1	06/24/2022 00:54	WG1884517
Benzene	U		0.0941	1.00	1	06/24/2022 00:54	WG1884517
Bromobenzene	U		0.118	1.00	1	06/24/2022 00:54	WG1884517
Bromodichloromethane	U		0.136	1.00	1	06/24/2022 00:54	WG1884517
Bromoform	U		0.129	1.00	1	06/24/2022 00:54	WG1884517
Bromomethane	U		0.605	5.00	1	06/24/2022 00:54	WG1884517
1,3-Butadiene	U		0.299	2.00	1	06/24/2022 00:54	WG1884517
n-Butylbenzene	U		0.157	1.00	1	06/24/2022 00:54	WG1884517
sec-Butylbenzene	U		0.125	1.00	1	06/24/2022 00:54	WG1884517
tert-Butylbenzene	U		0.127	1.00	1	06/24/2022 00:54	WG1884517
Carbon tetrachloride	U		0.128	1.00	1	06/24/2022 00:54	WG1884517
Carbon disulfide	U		0.0962	1.00	1	06/24/2022 00:54	WG1884517
Chlorobenzene	U		0.116	1.00	1	06/24/2022 00:54	WG1884517
Chlorodibromomethane	U		0.140	1.00	1	06/24/2022 00:54	WG1884517
Chloroethane	U		0.192	5.00	1	06/24/2022 00:54	WG1884517
Chloroform	U		0.111	5.00	1	06/24/2022 00:54	WG1884517
Chloromethane	U		0.960	2.50	1	06/24/2022 00:54	WG1884517
Cyclohexane	U		0.188	1.00	1	06/24/2022 00:54	WG1884517
2-Chlorotoluene	U		0.106	1.00	1	06/24/2022 00:54	WG1884517
4-Chlorotoluene	U		0.114	1.00	1	06/24/2022 00:54	WG1884517
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	06/24/2022 00:54	WG1884517
1,2-Dibromoethane	U		0.126	1.00	1	06/24/2022 00:54	WG1884517
Dibromomethane	U		0.122	1.00	1	06/24/2022 00:54	WG1884517
1,2-Dichlorobenzene	U		0.107	1.00	1	06/24/2022 00:54	WG1884517
1,3-Dichlorobenzene	U		0.110	1.00	1	06/24/2022 00:54	WG1884517
1,4-Dichlorobenzene	U		0.120	1.00	1	06/24/2022 00:54	WG1884517
Dichlorodifluoromethane	U		0.374	5.00	1	06/24/2022 00:54	WG1884517
1,1-Dichloroethane	U		0.100	1.00	1	06/24/2022 00:54	WG1884517
1,2-Dichloroethane	U		0.0819	1.00	1	06/24/2022 00:54	WG1884517
1,1-Dichloroethene	1.79		0.188	1.00	1	06/24/2022 00:54	WG1884517
cis-1,2-Dichloroethene	U		0.126	1.00	1	06/24/2022 00:54	WG1884517
trans-1,2-Dichloroethene	U		0.149	1.00	1	06/24/2022 00:54	WG1884517
1,2-Dichloropropane	U		0.149	1.00	1	06/24/2022 00:54	WG1884517
1,1-Dichloropropene	U		0.142	1.00	1	06/24/2022 00:54	WG1884517
1,3-Dichloropropane	U		0.110	1.00	1	06/24/2022 00:54	WG1884517
cis-1,3-Dichloropropene	U		0.111	1.00	1	06/24/2022 00:54	WG1884517
trans-1,3-Dichloropropene	U		0.118	1.00	1	06/24/2022 00:54	WG1884517
2,2-Dichloropropane	U		0.161	1.00	1	06/24/2022 00:54	WG1884517
Dicyclopentadiene	U		0.253	1.00	1	06/24/2022 00:54	WG1884517
Di-isopropyl ether	U		0.105	1.00	1	06/24/2022 00:54	WG1884517
Ethylbenzene	U		0.137	1.00	1	06/24/2022 00:54	WG1884517
4-Ethyltoluene	U		0.208	1.00	1	06/24/2022 00:54	WG1884517
Hexachloro-1,3-butadiene	U		0.337	1.00	1	06/24/2022 00:54	WG1884517
n-Hexane	U		0.749	10.0	1	06/24/2022 00:54	WG1884517
Isopropylbenzene	U		0.105	1.00	1	06/24/2022 00:54	WG1884517
p-Isopropyltoluene	U		0.120	1.00	1	06/24/2022 00:54	WG1884517
2-Butanone (MEK)	U		1.19	10.0	1	06/24/2022 00:54	WG1884517
Methyl Cyclohexane	U		0.660	1.00	1	06/24/2022 00:54	WG1884517

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	U		0.430	5.00	1	06/24/2022 00:54	WG1884517
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	06/24/2022 00:54	WG1884517
Methyl tert-butyl ether	U		0.101	1.00	1	06/24/2022 00:54	WG1884517
Naphthalene	U		1.00	5.00	1	06/24/2022 00:54	WG1884517
Propene	U		0.936	2.50	1	06/24/2022 00:54	WG1884517
n-Propylbenzene	U		0.0993	1.00	1	06/24/2022 00:54	WG1884517
Styrene	U		0.118	1.00	1	06/24/2022 00:54	WG1884517
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	06/24/2022 00:54	WG1884517
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	06/24/2022 00:54	WG1884517
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	06/24/2022 00:54	WG1884517
Tetrachloroethene	U		0.300	1.00	1	06/24/2022 00:54	WG1884517
Toluene	U		0.278	1.00	1	06/24/2022 00:54	WG1884517
1,2,3-Trichlorobenzene	U		0.230	1.00	1	06/24/2022 00:54	WG1884517
1,2,4-Trichlorobenzene	U		0.481	1.00	1	06/24/2022 00:54	WG1884517
1,1,1-Trichloroethane	U		0.149	1.00	1	06/24/2022 00:54	WG1884517
1,1,2-Trichloroethane	U		0.158	1.00	1	06/24/2022 00:54	WG1884517
Trichloroethene	5.52		0.190	1.00	1	06/24/2022 00:54	WG1884517
Trichlorofluoromethane	U		0.160	5.00	1	06/24/2022 00:54	WG1884517
1,2,3-Trichloropropane	U		0.237	2.50	1	06/24/2022 00:54	WG1884517
1,2,4-Trimethylbenzene	U		0.322	1.00	1	06/24/2022 00:54	WG1884517
1,2,3-Trimethylbenzene	U		0.104	1.00	1	06/24/2022 00:54	WG1884517
1,3,5-Trimethylbenzene	U		0.104	1.00	1	06/24/2022 00:54	WG1884517
Vinyl chloride	U		0.234	1.00	1	06/24/2022 00:54	WG1884517
Xylenes, Total	U		0.174	3.00	1	06/24/2022 00:54	WG1884517
(S) Toluene-d8	105			80.0-120		06/24/2022 00:54	WG1884517
(S) 4-Bromofluorobenzene	103			77.0-126		06/24/2022 00:54	WG1884517
(S) 1,2-Dichloroethane-d4	109			70.0-130		06/24/2022 00:54	WG1884517

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

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	28.9		0.597	3.00	1	06/22/2022 15:10	WG1882718
(S) Toluene-d8	103			77.0-127		06/22/2022 15:10	WG1882718

Wet Chemistry by Method 314.0 Mod

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Perchlorate	7.02	J5	0.300	4.00	1	06/23/2022 12:56	WG1883531

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	06/24/2022 01:15	WG1884517
Acrolein	U		2.54	50.0	1	06/24/2022 01:15	WG1884517
Acrylonitrile	U		0.671	10.0	1	06/24/2022 01:15	WG1884517
Benzene	U		0.0941	1.00	1	06/24/2022 01:15	WG1884517
Bromobenzene	U		0.118	1.00	1	06/24/2022 01:15	WG1884517
Bromodichloromethane	U		0.136	1.00	1	06/24/2022 01:15	WG1884517
Bromoform	U		0.129	1.00	1	06/24/2022 01:15	WG1884517
Bromomethane	U		0.605	5.00	1	06/24/2022 01:15	WG1884517
1,3-Butadiene	U		0.299	2.00	1	06/24/2022 01:15	WG1884517
n-Butylbenzene	U		0.157	1.00	1	06/24/2022 01:15	WG1884517
sec-Butylbenzene	U		0.125	1.00	1	06/24/2022 01:15	WG1884517
tert-Butylbenzene	U		0.127	1.00	1	06/24/2022 01:15	WG1884517
Carbon tetrachloride	U		0.128	1.00	1	06/24/2022 01:15	WG1884517
Carbon disulfide	U		0.0962	1.00	1	06/24/2022 01:15	WG1884517
Chlorobenzene	U		0.116	1.00	1	06/24/2022 01:15	WG1884517
Chlorodibromomethane	U		0.140	1.00	1	06/24/2022 01:15	WG1884517
Chloroethane	U		0.192	5.00	1	06/24/2022 01:15	WG1884517
Chloroform	U		0.111	5.00	1	06/24/2022 01:15	WG1884517
Chloromethane	U		0.960	2.50	1	06/24/2022 01:15	WG1884517
Cyclohexane	U		0.188	1.00	1	06/24/2022 01:15	WG1884517
2-Chlorotoluene	U		0.106	1.00	1	06/24/2022 01:15	WG1884517
4-Chlorotoluene	U		0.114	1.00	1	06/24/2022 01:15	WG1884517
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	06/24/2022 01:15	WG1884517
1,2-Dibromoethane	U		0.126	1.00	1	06/24/2022 01:15	WG1884517
Dibromomethane	U		0.122	1.00	1	06/24/2022 01:15	WG1884517
1,2-Dichlorobenzene	U		0.107	1.00	1	06/24/2022 01:15	WG1884517
1,3-Dichlorobenzene	U		0.110	1.00	1	06/24/2022 01:15	WG1884517
1,4-Dichlorobenzene	U		0.120	1.00	1	06/24/2022 01:15	WG1884517
Dichlorodifluoromethane	U		0.374	5.00	1	06/24/2022 01:15	WG1884517
1,1-Dichloroethane	U		0.100	1.00	1	06/24/2022 01:15	WG1884517
1,2-Dichloroethane	U		0.0819	1.00	1	06/24/2022 01:15	WG1884517
1,1-Dichloroethene	U		0.188	1.00	1	06/24/2022 01:15	WG1884517
cis-1,2-Dichloroethene	U		0.126	1.00	1	06/24/2022 01:15	WG1884517
trans-1,2-Dichloroethene	U		0.149	1.00	1	06/24/2022 01:15	WG1884517
1,2-Dichloropropane	U		0.149	1.00	1	06/24/2022 01:15	WG1884517
1,1-Dichloropropene	U		0.142	1.00	1	06/24/2022 01:15	WG1884517
1,3-Dichloropropane	U		0.110	1.00	1	06/24/2022 01:15	WG1884517
cis-1,3-Dichloropropene	U		0.111	1.00	1	06/24/2022 01:15	WG1884517
trans-1,3-Dichloropropene	U		0.118	1.00	1	06/24/2022 01:15	WG1884517
2,2-Dichloropropane	U		0.161	1.00	1	06/24/2022 01:15	WG1884517
Dicyclopentadiene	U		0.253	1.00	1	06/24/2022 01:15	WG1884517
Di-isopropyl ether	U		0.105	1.00	1	06/24/2022 01:15	WG1884517
Ethylbenzene	U		0.137	1.00	1	06/24/2022 01:15	WG1884517
4-Ethyltoluene	U		0.208	1.00	1	06/24/2022 01:15	WG1884517
Hexachloro-1,3-butadiene	U		0.337	1.00	1	06/24/2022 01:15	WG1884517
n-Hexane	U		0.749	10.0	1	06/24/2022 01:15	WG1884517
Isopropylbenzene	U		0.105	1.00	1	06/24/2022 01:15	WG1884517
p-Isopropyltoluene	U		0.120	1.00	1	06/24/2022 01:15	WG1884517
2-Butanone (MEK)	U		1.19	10.0	1	06/24/2022 01:15	WG1884517
Methyl Cyclohexane	U		0.660	1.00	1	06/24/2022 01:15	WG1884517



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	U		0.430	5.00	1	06/24/2022 01:15	WG1884517
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	06/24/2022 01:15	WG1884517
Methyl tert-butyl ether	U		0.101	1.00	1	06/24/2022 01:15	WG1884517
Naphthalene	U		1.00	5.00	1	06/24/2022 01:15	WG1884517
Propene	U		0.936	2.50	1	06/24/2022 01:15	WG1884517
n-Propylbenzene	U		0.0993	1.00	1	06/24/2022 01:15	WG1884517
Styrene	U		0.118	1.00	1	06/24/2022 01:15	WG1884517
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	06/24/2022 01:15	WG1884517
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	06/24/2022 01:15	WG1884517
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	06/24/2022 01:15	WG1884517
Tetrachloroethene	U		0.300	1.00	1	06/24/2022 01:15	WG1884517
Toluene	U		0.278	1.00	1	06/24/2022 01:15	WG1884517
1,2,3-Trichlorobenzene	U		0.230	1.00	1	06/24/2022 01:15	WG1884517
1,2,4-Trichlorobenzene	U		0.481	1.00	1	06/24/2022 01:15	WG1884517
1,1,1-Trichloroethane	U		0.149	1.00	1	06/24/2022 01:15	WG1884517
1,1,2-Trichloroethane	U		0.158	1.00	1	06/24/2022 01:15	WG1884517
Trichloroethene	U		0.190	1.00	1	06/24/2022 01:15	WG1884517
Trichlorofluoromethane	U		0.160	5.00	1	06/24/2022 01:15	WG1884517
1,2,3-Trichloropropane	U		0.237	2.50	1	06/24/2022 01:15	WG1884517
1,2,4-Trimethylbenzene	U		0.322	1.00	1	06/24/2022 01:15	WG1884517
1,2,3-Trimethylbenzene	U		0.104	1.00	1	06/24/2022 01:15	WG1884517
1,3,5-Trimethylbenzene	U		0.104	1.00	1	06/24/2022 01:15	WG1884517
Vinyl chloride	U		0.234	1.00	1	06/24/2022 01:15	WG1884517
Xylenes, Total	U		0.174	3.00	1	06/24/2022 01:15	WG1884517
(S) Toluene-d8	104			80.0-120		06/24/2022 01:15	WG1884517
(S) 4-Bromofluorobenzene	101			77.0-126		06/24/2022 01:15	WG1884517
(S) 1,2-Dichloroethane-d4	107			70.0-130		06/24/2022 01:15	WG1884517

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

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	4.82		0.597	3.00	1	06/22/2022 15:30	WG1882718
(S) Toluene-d8	103			77.0-127		06/22/2022 15:30	WG1882718

Wet Chemistry by Method 314.0 Mod

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Perchlorate	94700		1500	20000	5000	06/23/2022 13:25	WG1881123

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		113	500	10	06/24/2022 03:47	WG1884517
Acrolein	U		25.4	500	10	06/24/2022 03:47	WG1884517
Acrylonitrile	U		6.71	100	10	06/24/2022 03:47	WG1884517
Benzene	U		0.941	10.0	10	06/24/2022 03:47	WG1884517
Bromobenzene	U		1.18	10.0	10	06/24/2022 03:47	WG1884517
Bromodichloromethane	U		1.36	10.0	10	06/24/2022 03:47	WG1884517
Bromoform	U		1.29	10.0	10	06/24/2022 03:47	WG1884517
Bromomethane	U		6.05	50.0	10	06/24/2022 03:47	WG1884517
1,3-Butadiene	U		2.99	20.0	10	06/24/2022 03:47	WG1884517
n-Butylbenzene	U		1.57	10.0	10	06/24/2022 03:47	WG1884517
sec-Butylbenzene	U		1.25	10.0	10	06/24/2022 03:47	WG1884517
tert-Butylbenzene	U		1.27	10.0	10	06/24/2022 03:47	WG1884517
Carbon tetrachloride	U		1.28	10.0	10	06/24/2022 03:47	WG1884517
Carbon disulfide	U		0.962	10.0	10	06/24/2022 03:47	WG1884517
Chlorobenzene	U		1.16	10.0	10	06/24/2022 03:47	WG1884517
Chlorodibromomethane	U		1.40	10.0	10	06/24/2022 03:47	WG1884517
Chloroethane	U		1.92	50.0	10	06/24/2022 03:47	WG1884517
Chloroform	1.37	<u>J</u>	1.11	50.0	10	06/24/2022 03:47	WG1884517
Chloromethane	U		9.60	25.0	10	06/24/2022 03:47	WG1884517
Cyclohexane	U		1.88	10.0	10	06/24/2022 03:47	WG1884517
2-Chlorotoluene	U		1.06	10.0	10	06/24/2022 03:47	WG1884517
4-Chlorotoluene	U		1.14	10.0	10	06/24/2022 03:47	WG1884517
1,2-Dibromo-3-Chloropropane	U		2.76	50.0	10	06/24/2022 03:47	WG1884517
1,2-Dibromoethane	U		1.26	10.0	10	06/24/2022 03:47	WG1884517
Dibromomethane	U		1.22	10.0	10	06/24/2022 03:47	WG1884517
1,2-Dichlorobenzene	U		1.07	10.0	10	06/24/2022 03:47	WG1884517
1,3-Dichlorobenzene	U		1.10	10.0	10	06/24/2022 03:47	WG1884517
1,4-Dichlorobenzene	U		1.20	10.0	10	06/24/2022 03:47	WG1884517
Dichlorodifluoromethane	U		3.74	50.0	10	06/24/2022 03:47	WG1884517
1,1-Dichloroethane	U		1.00	10.0	10	06/24/2022 03:47	WG1884517
1,2-Dichloroethane	U		0.819	10.0	10	06/24/2022 03:47	WG1884517
1,1-Dichloroethene	89.4		1.88	10.0	10	06/24/2022 03:47	WG1884517
cis-1,2-Dichloroethene	2.61	<u>B J</u>	1.26	10.0	10	06/24/2022 03:47	WG1884517
trans-1,2-Dichloroethene	U		1.49	10.0	10	06/24/2022 03:47	WG1884517
1,2-Dichloropropane	U		1.49	10.0	10	06/24/2022 03:47	WG1884517
1,1-Dichloropropene	U		1.42	10.0	10	06/24/2022 03:47	WG1884517
1,3-Dichloropropane	U		1.10	10.0	10	06/24/2022 03:47	WG1884517
cis-1,3-Dichloropropene	U		1.11	10.0	10	06/24/2022 03:47	WG1884517
trans-1,3-Dichloropropene	U		1.18	10.0	10	06/24/2022 03:47	WG1884517
2,2-Dichloropropane	U		1.61	10.0	10	06/24/2022 03:47	WG1884517
Dicyclopentadiene	U		2.53	10.0	10	06/24/2022 03:47	WG1884517
Di-isopropyl ether	U		1.05	10.0	10	06/24/2022 03:47	WG1884517
Ethylbenzene	U		1.37	10.0	10	06/24/2022 03:47	WG1884517
4-Ethyltoluene	U		2.08	10.0	10	06/24/2022 03:47	WG1884517
Hexachloro-1,3-butadiene	U		3.37	10.0	10	06/24/2022 03:47	WG1884517
n-Hexane	U		7.49	100	10	06/24/2022 03:47	WG1884517
Isopropylbenzene	U		1.05	10.0	10	06/24/2022 03:47	WG1884517
p-Isopropyltoluene	U		1.20	10.0	10	06/24/2022 03:47	WG1884517
2-Butanone (MEK)	U		11.9	100	10	06/24/2022 03:47	WG1884517
Methyl Cyclohexane	U		6.60	10.0	10	06/24/2022 03:47	WG1884517



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	U		4.30	50.0	10	06/24/2022 03:47	WG1884517
4-Methyl-2-pentanone (MIBK)	U		4.78	100	10	06/24/2022 03:47	WG1884517
Methyl tert-butyl ether	U		1.01	10.0	10	06/24/2022 03:47	WG1884517
Naphthalene	U		10.0	50.0	10	06/24/2022 03:47	WG1884517
Propene	U		9.36	25.0	10	06/24/2022 03:47	WG1884517
n-Propylbenzene	U		0.993	10.0	10	06/24/2022 03:47	WG1884517
Styrene	U		1.18	10.0	10	06/24/2022 03:47	WG1884517
1,1,1,2-Tetrachloroethane	U		1.47	10.0	10	06/24/2022 03:47	WG1884517
1,1,2,2-Tetrachloroethane	U		1.33	10.0	10	06/24/2022 03:47	WG1884517
1,1,2-Trichlorotrifluoroethane	U		1.80	10.0	10	06/24/2022 03:47	WG1884517
Tetrachloroethene	U		3.00	10.0	10	06/24/2022 03:47	WG1884517
Toluene	U		2.78	10.0	10	06/24/2022 03:47	WG1884517
1,2,3-Trichlorobenzene	U		2.30	10.0	10	06/24/2022 03:47	WG1884517
1,2,4-Trichlorobenzene	U		4.81	10.0	10	06/24/2022 03:47	WG1884517
1,1,1-Trichloroethane	U		1.49	10.0	10	06/24/2022 03:47	WG1884517
1,1,2-Trichloroethane	U		1.58	10.0	10	06/24/2022 03:47	WG1884517
Trichloroethene	635		1.90	10.0	10	06/24/2022 03:47	WG1884517
Trichlorofluoromethane	U		1.60	50.0	10	06/24/2022 03:47	WG1884517
1,2,3-Trichloropropane	U		2.37	25.0	10	06/24/2022 03:47	WG1884517
1,2,4-Trimethylbenzene	U		3.22	10.0	10	06/24/2022 03:47	WG1884517
1,2,3-Trimethylbenzene	U		1.04	10.0	10	06/24/2022 03:47	WG1884517
1,3,5-Trimethylbenzene	U		1.04	10.0	10	06/24/2022 03:47	WG1884517
Vinyl chloride	U		2.34	10.0	10	06/24/2022 03:47	WG1884517
Xylenes, Total	U		1.74	30.0	10	06/24/2022 03:47	WG1884517
(S) Toluene-d8	105			80.0-120		06/24/2022 03:47	WG1884517
(S) 4-Bromofluorobenzene	102			77.0-126		06/24/2022 03:47	WG1884517
(S) 1,2-Dichloroethane-d4	106			70.0-130		06/24/2022 03:47	WG1884517

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

Sample Narrative:

L1504535-13 WG1884517: Target compounds too high to run at a lower dilution.

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	26.1		0.597	3.00	1	06/22/2022 15:50	WG1882718
(S) Toluene-d8	103			77.0-127		06/22/2022 15:50	WG1882718

Method Blank (MB)

(MB) R3805929-1 06/20/22 11:14

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Perchlorate	U		0.300	4.00

¹Cp

²Tc

³Ss

L1503862-20 Original Sample (OS) • Duplicate (DUP)

(OS) L1503862-20 06/20/22 23:40 • (DUP) R3805929-3 06/21/22 00:08

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Perchlorate	U	U	1	0.000		15

⁴Cn

⁵Sr

L1504535-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1504535-06 06/21/22 02:59 • (DUP) R3805929-4 06/21/22 03:27

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Perchlorate	9.45	9.98	1	5.41		15

⁶Qc

⁷Is

⁸Gl

Laboratory Control Sample (LCS)

(LCS) R3805929-2 06/20/22 12:11

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Perchlorate	10.0	10.7	107	90.0-110	

⁹Al

¹⁰Sc

Method Blank (MB)

(MB) R3810198-1 06/22/22 11:31

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Perchlorate	U		0.300	4.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

L1504535-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1504535-09 06/22/22 14:56 • (DUP) R3810198-3 06/22/22 15:25

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Perchlorate	63.6	63.3	1	0.417		15

⁷Is

⁸Gl

⁹Al

L1505669-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1505669-05 06/23/22 03:43 • (DUP) R3810198-6 06/23/22 05:09

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Perchlorate	U	U	1	0.000		15

¹⁰Sc

Laboratory Control Sample (LCS)

(LCS) R3810198-2 06/22/22 12:27

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Perchlorate	10.0	9.96	99.6	90.0-110	

L1504535-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1504535-11 06/23/22 11:31 • (MS) R3810198-7 06/23/22 11:59 • (MSD) R3810198-8 06/23/22 12:28

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Perchlorate	10.0	17100	16600	16500	0.000	0.000	1000	80.0-120	✓	✓	0.688	15

Method Blank (MB)

(MB) R3810199-2 06/22/22 12:56

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Perchlorate	U		0.300	4.00

Laboratory Control Sample (LCS)

(LCS) R3810199-1 06/22/22 12:27

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Perchlorate	10.0	9.96	99.6	90.0-110	

L1504991-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1504991-03 06/22/22 20:37 • (MS) R3810199-3 06/22/22 21:06 • (MSD) R3810199-4 06/22/22 21:34

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 %
Perchlorate	10.0	1.84	10.3	10.3	84.8	84.8	1	80.0-120			0.0271	15

L1504991-05 Original Sample (OS) • Matrix Spike (MS)

(OS) L1504991-05 06/22/22 23:28 • (MS) R3810199-6 06/23/22 06:06

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Perchlorate	10.0	1.90	13.4	115	1	80.0-120	

L1504991-06 Original Sample (OS) • Matrix Spike (MS)

(OS) L1504991-06 06/22/22 23:56 • (MS) R3810199-7 06/23/22 06:34

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Perchlorate	10.0	7.15	16.4	92.7	1	80.0-120	

L1504991-07 Original Sample (OS) • Matrix Spike (MS)

(OS) L1504991-07 06/23/22 00:25 • (MS) R3810199-8 06/23/22 07:02

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Perchlorate	10.0	U	9.67	96.7	1	80.0-120	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Is

⁸Gl

⁹Al

¹⁰Sc

L1505669-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1505669-01 06/23/22 01:50 • (MS) R3810199-9 06/23/22 07:31

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Perchlorate	10.0	1.47	10.3	88.0	1	80.0-120	

L1505669-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1505669-03 06/23/22 02:47 • (MS) R3810199-10 06/23/22 07:59

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Perchlorate	10.0	15.8	25.8	99.1	1	80.0-120	

L1504991-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1504991-02 06/22/22 20:09 • (MS) R3810199-11 06/23/22 16:15

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Perchlorate	10.0	12.1	11.8	0.000	1	80.0-120	<u>J6</u>

L1504535-12 Original Sample (OS) • Matrix Spike (MS)

(OS) L1504535-12 06/23/22 12:56 • (MS) R3810199-12 06/23/22 16:43

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Perchlorate	10.0	7.02	39.8	327	1	80.0-120	<u>J5</u>

L1504991-08 Original Sample (OS) • Matrix Spike (MS)

(OS) L1504991-08 06/23/22 14:50 • (MS) R3810199-13 06/23/22 17:12

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Perchlorate	10.0	U	10.6	106	1	80.0-120	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Is

⁸Gl

⁹Al

¹⁰Sc

Method Blank (MB)

(MB) R3807160-3 06/23/22 19:31

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		11.3	50.0
Acrolein	U		2.54	50.0
Acrylonitrile	U		0.671	10.0
Benzene	U		0.0941	1.00
Bromobenzene	U		0.118	1.00
Bromodichloromethane	U		0.136	1.00
Bromoform	U		0.129	1.00
Bromomethane	U		0.605	5.00
1,3-Butadiene	U		0.299	2.00
n-Butylbenzene	U		0.157	1.00
sec-Butylbenzene	U		0.125	1.00
tert-Butylbenzene	U		0.127	1.00
Carbon tetrachloride	U		0.128	1.00
Carbon disulfide	U		0.0962	1.00
Chlorobenzene	U		0.116	1.00
Chlorodibromomethane	U		0.140	1.00
Chloroethane	U		0.192	5.00
Chloroform	U		0.111	5.00
Chloromethane	U		0.960	2.50
Cyclohexane	U		0.188	1.00
2-Chlorotoluene	U		0.106	1.00
4-Chlorotoluene	U		0.114	1.00
1,2-Dibromo-3-Chloropropane	U		0.276	5.00
1,2-Dibromoethane	U		0.126	1.00
Dibromomethane	U		0.122	1.00
1,2-Dichlorobenzene	U		0.107	1.00
1,3-Dichlorobenzene	U		0.110	1.00
1,4-Dichlorobenzene	U		0.120	1.00
Dichlorodifluoromethane	U		0.374	5.00
1,1-Dichloroethane	U		0.100	1.00
1,2-Dichloroethane	U		0.0819	1.00
1,1-Dichloroethene	U		0.188	1.00
cis-1,2-Dichloroethene	0.318	U	0.126	1.00
trans-1,2-Dichloroethene	U		0.149	1.00
1,2-Dichloropropane	U		0.149	1.00
1,1-Dichloropropene	U		0.142	1.00
1,3-Dichloropropane	U		0.110	1.00
cis-1,3-Dichloropropene	U		0.111	1.00
trans-1,3-Dichloropropene	U		0.118	1.00
2,2-Dichloropropane	U		0.161	1.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Is

⁸Gl

⁹Al

¹⁰Sc

Method Blank (MB)

(MB) R3807160-3 06/23/22 19:31

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Dicyclopentadiene	U		0.253	1.00
Di-isopropyl ether	U		0.105	1.00
Ethylbenzene	U		0.137	1.00
4-Ethyltoluene	U		0.208	1.00
Hexachloro-1,3-butadiene	U		0.337	1.00
n-Hexane	U		0.749	10.0
Isopropylbenzene	U		0.105	1.00
p-Isopropyltoluene	U		0.120	1.00
2-Butanone (MEK)	U		1.19	10.0
Methyl Cyclohexane	U		0.660	1.00
Methylene Chloride	U		0.430	5.00
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0
Methyl tert-butyl ether	U		0.101	1.00
Naphthalene	U		1.00	5.00
Propene	U		0.936	2.50
n-Propylbenzene	U		0.0993	1.00
Styrene	U		0.118	1.00
1,1,1,2-Tetrachloroethane	U		0.147	1.00
1,1,2,2-Tetrachloroethane	U		0.133	1.00
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00
Tetrachloroethene	U		0.300	1.00
Toluene	U		0.278	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.481	1.00
1,1,1-Trichloroethane	U		0.149	1.00
1,1,2-Trichloroethane	U		0.158	1.00
Trichloroethene	U		0.190	1.00
Trichlorofluoromethane	U		0.160	5.00
1,2,3-Trichloropropane	U		0.237	2.50
1,2,4-Trimethylbenzene	U		0.322	1.00
1,2,3-Trimethylbenzene	U		0.104	1.00
1,3,5-Trimethylbenzene	U		0.104	1.00
Vinyl chloride	U		0.234	1.00
Xylenes, Total	U		0.174	3.00
(S) Toluene-d8	107			80.0-120
(S) 4-Bromofluorobenzene	103			77.0-126
(S) 1,2-Dichloroethane-d4	102			70.0-130

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

(LCS) R3807160-1 06/23/22 18:26 • (LCSD) R3807160-2 06/23/22 18:48

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	24.3	26.4	97.2	106	19.0-160			8.28	27
Acrolein	25.0	21.9	21.5	87.6	86.0	30.0-160			1.84	26
Acrylonitrile	25.0	24.7	22.6	98.8	90.4	55.0-149			8.88	20
Benzene	5.00	5.16	4.66	103	93.2	70.0-123			10.2	20
Bromobenzene	5.00	5.06	4.86	101	97.2	73.0-121			4.03	20
Bromodichloromethane	5.00	5.03	4.63	101	92.6	75.0-120			8.28	20
Bromoform	5.00	5.15	4.67	103	93.4	68.0-132			9.78	20
Bromomethane	5.00	7.06	5.58	141	112	30.0-160			23.4	25
1,3-Butadiene	5.00	5.33	4.71	107	94.2	45.0-147			12.4	20
n-Butylbenzene	5.00	4.86	4.54	97.2	90.8	73.0-125			6.81	20
sec-Butylbenzene	5.00	5.02	4.74	100	94.8	75.0-125			5.74	20
tert-Butylbenzene	5.00	4.85	4.52	97.0	90.4	76.0-124			7.04	20
Carbon tetrachloride	5.00	5.79	5.24	116	105	68.0-126			9.97	20
Carbon disulfide	5.00	5.28	4.46	106	89.2	61.0-128			16.8	20
Chlorobenzene	5.00	5.36	4.98	107	99.6	80.0-121			7.35	20
Chlorodibromomethane	5.00	5.10	4.93	102	98.6	77.0-125			3.39	20
Chloroethane	5.00	5.23	4.91	105	98.2	47.0-150			6.31	20
Chloroform	5.00	5.24	4.78	105	95.6	73.0-120			9.18	20
Chloromethane	5.00	2.55	2.36	51.0	47.2	41.0-142			7.74	20
Cyclohexane	5.00	5.33	5.05	107	101	71.0-124			5.39	20
2-Chlorotoluene	5.00	5.27	4.68	105	93.6	76.0-123			11.9	20
4-Chlorotoluene	5.00	4.94	4.48	98.8	89.6	75.0-122			9.77	20
1,2-Dibromo-3-Chloropropane	5.00	4.76	4.38	95.2	87.6	58.0-134			8.32	20
1,2-Dibromoethane	5.00	5.05	4.84	101	96.8	80.0-122			4.25	20
Dibromomethane	5.00	5.19	4.68	104	93.6	80.0-120			10.3	20
1,2-Dichlorobenzene	5.00	4.90	4.78	98.0	95.6	79.0-121			2.48	20
1,3-Dichlorobenzene	5.00	5.06	4.75	101	95.0	79.0-120			6.32	20
1,4-Dichlorobenzene	5.00	5.02	4.60	100	92.0	79.0-120			8.73	20
Dichlorodifluoromethane	5.00	6.03	5.30	121	106	51.0-149			12.9	20
1,1-Dichloroethane	5.00	5.24	4.41	105	88.2	70.0-126			17.2	20
1,2-Dichloroethane	5.00	5.52	5.11	110	102	70.0-128			7.71	20
1,1-Dichloroethene	5.00	5.12	4.53	102	90.6	71.0-124			12.2	20
cis-1,2-Dichloroethene	5.00	5.82	5.10	116	102	73.0-120			13.2	20
trans-1,2-Dichloroethene	5.00	5.26	4.66	105	93.2	73.0-120			12.1	20
1,2-Dichloropropane	5.00	5.08	4.76	102	95.2	77.0-125			6.50	20
1,1-Dichloropropene	5.00	5.49	4.86	110	97.2	74.0-126			12.2	20
1,3-Dichloropropane	5.00	5.05	4.88	101	97.6	80.0-120			3.42	20
cis-1,3-Dichloropropene	5.00	4.87	4.60	97.4	92.0	80.0-123			5.70	20
trans-1,3-Dichloropropene	5.00	4.92	4.90	98.4	98.0	78.0-124			0.407	20
2,2-Dichloropropane	5.00	4.25	4.60	85.0	92.0	58.0-130			7.91	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

(LCS) R3807160-1 06/23/22 18:26 • (LCSD) R3807160-2 06/23/22 18:48

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Dicyclopentadiene	5.00	5.04	4.65	101	93.0	74.0-126			8.05	20
Di-isopropyl ether	5.00	5.06	4.67	101	93.4	58.0-138			8.02	20
Ethylbenzene	5.00	5.22	4.85	104	97.0	79.0-123			7.35	20
4-Ethyltoluene	5.00	5.18	4.76	104	95.2	74.0-127			8.45	20
Hexachloro-1,3-butadiene	5.00	4.63	4.63	92.6	92.6	54.0-138			0.000	20
n-Hexane	5.00	5.70	5.07	114	101	57.0-133			11.7	20
Isopropylbenzene	5.00	5.25	4.85	105	97.0	76.0-127			7.92	20
p-Isopropyltoluene	5.00	5.13	4.71	103	94.2	76.0-125			8.54	20
2-Butanone (MEK)	25.0	25.5	24.7	102	98.8	44.0-160			3.19	20
Methyl Cyclohexane	5.00	5.14	4.79	103	95.8	68.0-126			7.05	20
Methylene Chloride	5.00	5.44	4.70	109	94.0	67.0-120			14.6	20
4-Methyl-2-pentanone (MIBK)	25.0	24.5	23.5	98.0	94.0	68.0-142			4.17	20
Methyl tert-butyl ether	5.00	5.04	4.82	101	96.4	68.0-125			4.46	20
Naphthalene	5.00	4.95	4.27	99.0	85.4	54.0-135			14.8	20
Propene	5.00	4.79	4.33	95.8	86.6	30.0-160			10.1	20
n-Propylbenzene	5.00	5.15	4.80	103	96.0	77.0-124			7.04	20
Styrene	5.00	5.07	4.76	101	95.2	73.0-130			6.31	20
1,1,1,2-Tetrachloroethane	5.00	5.34	4.96	107	99.2	75.0-125			7.38	20
1,1,2,2-Tetrachloroethane	5.00	4.86	4.73	97.2	94.6	65.0-130			2.71	20
1,1,2-Trichlorotrifluoroethane	5.00	5.21	4.94	104	98.8	69.0-132			5.32	20
Tetrachloroethene	5.00	5.27	4.87	105	97.4	72.0-132			7.89	20
Toluene	5.00	5.35	4.81	107	96.2	79.0-120			10.6	20
1,2,3-Trichlorobenzene	5.00	4.92	4.79	98.4	95.8	50.0-138			2.68	20
1,2,4-Trichlorobenzene	5.00	4.63	4.44	92.6	88.8	57.0-137			4.19	20
1,1,1-Trichloroethane	5.00	5.48	4.98	110	99.6	73.0-124			9.56	20
1,1,2-Trichloroethane	5.00	4.89	4.74	97.8	94.8	80.0-120			3.12	20
Trichloroethene	5.00	5.32	5.03	106	101	78.0-124			5.60	20
Trichlorofluoromethane	5.00	6.10	5.77	122	115	59.0-147			5.56	20
1,2,3-Trichloropropane	5.00	5.19	4.97	104	99.4	73.0-130			4.33	20
1,2,4-Trimethylbenzene	5.00	5.32	4.83	106	96.6	76.0-121			9.66	20
1,2,3-Trimethylbenzene	5.00	4.96	4.71	99.2	94.2	77.0-120			5.17	20
1,3,5-Trimethylbenzene	5.00	5.14	4.64	103	92.8	76.0-122			10.2	20
Vinyl chloride	5.00	5.25	4.66	105	93.2	67.0-131			11.9	20
Xylenes, Total	15.0	16.1	14.9	107	99.3	79.0-123			7.74	20
(S) Toluene-d8				104	106	80.0-120				
(S) 4-Bromofluorobenzene				102	103	77.0-126				
(S) 1,2-Dichloroethane-d4				102	104	70.0-130				

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

L1504411-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1504411-01 06/23/22 22:22 • (MS) R3807160-4 06/24/22 04:09 • (MSD) R3807160-5 06/24/22 04:31

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 %
Acetone	25.0	U	29.5	22.4	118	89.6	1	10.0-160			27.4	35
Acrolein	25.0	U	26.9	20.1	108	80.4	1	10.0-160			28.9	39
Acrylonitrile	25.0	U	24.6	18.7	98.4	74.8	1	21.0-160			27.3	32
Benzene	5.00	U	3.73	2.08	74.6	41.6	1	17.0-158		13	56.8	27
Bromobenzene	5.00	U	3.98	2.52	79.6	50.4	1	30.0-149		13	44.9	28
Bromodichloromethane	5.00	U	4.14	2.55	82.8	51.0	1	31.0-150		13	47.5	27
Bromoform	5.00	U	4.88	3.20	97.6	64.0	1	29.0-150		13	41.6	29
Bromomethane	5.00	U	3.02	1.85	60.4	37.0	1	10.0-160		13	48.0	38
1,3-Butadiene	5.00	U	3.93	1.97	78.6	39.4	1	10.0-160		13	66.4	22
n-Butylbenzene	5.00	U	3.55	2.04	71.0	40.8	1	31.0-150		13	54.0	30
sec-Butylbenzene	5.00	U	3.82	2.37	76.4	47.4	1	33.0-155		13	46.8	29
tert-Butylbenzene	5.00	U	3.80	2.59	76.0	51.8	1	34.0-153		13	37.9	28
Carbon tetrachloride	5.00	U	4.46	2.16	89.2	43.2	1	23.0-159		13	69.5	28
Carbon disulfide	5.00	U	2.88	1.50	57.6	30.0	1	10.0-156		13	63.0	28
Chlorobenzene	5.00	U	4.17	2.39	83.4	47.8	1	33.0-152		13	54.3	27
Chlorodibromomethane	5.00	U	4.65	2.92	93.0	58.4	1	37.0-149		13	45.7	27
Chloroethane	5.00	U	3.84	1.99	76.8	39.8	1	10.0-160		13	63.5	30
Chloroform	5.00	U	4.07	2.34	81.4	46.8	1	29.0-154		13	54.0	28
Chloromethane	5.00	U	1.38	U	27.6	0.000	1	10.0-160		13 6	200	29
Cyclohexane	5.00	U	3.55	1.95	71.0	39.0	1	19.0-160		13	58.2	23
2-Chlorotoluene	5.00	U	3.98	2.55	79.6	51.0	1	32.0-153		13	43.8	28
4-Chlorotoluene	5.00	U	3.83	2.23	76.6	44.6	1	32.0-150		13	52.8	28
1,2-Dibromo-3-Chloropropane	5.00	U	4.91	3.46	98.2	69.2	1	22.0-151		13	34.6	34
1,2-Dibromoethane	5.00	U	4.67	3.12	93.4	62.4	1	34.0-147		13	39.8	27
Dibromomethane	5.00	U	4.24	2.78	84.8	55.6	1	30.0-151		13	41.6	27
1,2-Dichlorobenzene	5.00	U	3.86	2.64	77.2	52.8	1	34.0-149		13	37.5	28
1,3-Dichlorobenzene	5.00	U	3.97	2.38	79.4	47.6	1	36.0-146		13	50.1	27
1,4-Dichlorobenzene	5.00	U	3.86	2.45	77.2	49.0	1	35.0-142		13	44.7	27
Dichlorodifluoromethane	5.00	U	3.93	1.66	78.6	33.2	1	10.0-160		13	81.2	29
1,1-Dichloroethane	5.00	U	3.86	2.05	77.2	41.0	1	25.0-158		13	61.3	27
1,2-Dichloroethane	5.00	U	4.56	3.15	91.2	63.0	1	29.0-151		13	36.6	27
1,1-Dichloroethene	5.00	U	3.60	1.65	72.0	33.0	1	11.0-160		13	74.3	29
cis-1,2-Dichloroethene	5.00	U	3.62	2.32	72.4	46.4	1	10.0-160		13	43.8	27
trans-1,2-Dichloroethene	5.00	U	3.44	1.76	68.8	35.2	1	17.0-153		13	64.6	27
1,2-Dichloropropane	5.00	U	3.83	2.20	76.6	44.0	1	30.0-156		13	54.1	27
1,1-Dichloropropene	5.00	U	3.76	1.89	75.2	37.8	1	25.0-158		13	66.2	27
1,3-Dichloropropane	5.00	U	4.51	2.93	90.2	58.6	1	38.0-147		13	42.5	27
cis-1,3-Dichloropropene	5.00	U	4.03	2.47	80.6	49.4	1	34.0-149		13	48.0	28
trans-1,3-Dichloropropene	5.00	U	4.17	2.71	83.4	54.2	1	32.0-149		13	42.4	28
2,2-Dichloropropane	5.00	U	3.87	1.87	77.4	37.4	1	24.0-152		13	69.7	29

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

L1504411-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1504411-01 06/23/22 22:22 • (MS) R3807160-4 06/24/22 04:09 • (MSD) R3807160-5 06/24/22 04:31

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 %
Dicyclopentadiene	5.00	U	3.77	2.30	75.4	46.0	1	51.0-139		J3 J6	48.4	20
Di-isopropyl ether	5.00	U	4.31	2.61	86.2	52.2	1	21.0-160		J3	49.1	28
Ethylbenzene	5.00	U	3.82	2.18	76.4	43.6	1	30.0-155		J3	54.7	27
4-Ethyltoluene	5.00	U	3.70	2.20	74.0	44.0	1	10.0-160		J3	50.8	20
Hexachloro-1,3-butadiene	5.00	U	3.79	2.25	75.8	45.0	1	20.0-154		J3	51.0	34
n-Hexane	5.00	U	3.84	2.18	76.8	43.6	1	10.0-153		J3	55.1	28
Isopropylbenzene	5.00	U	3.83	2.32	76.6	46.4	1	28.0-157		J3	49.1	27
p-Isopropyltoluene	5.00	U	3.66	2.12	73.2	42.4	1	30.0-154		J3	53.3	29
2-Butanone (MEK)	25.0	U	28.4	20.5	114	82.0	1	10.0-160		J3	32.3	32
Methyl Cyclohexane	5.00	U	3.31	1.77	66.2	35.4	1	11.0-160		J3	60.6	24
Methylene Chloride	5.00	U	3.87	2.43	77.4	48.6	1	23.0-144		J3	45.7	28
4-Methyl-2-pentanone (MIBK)	25.0	U	27.3	19.6	109	78.4	1	29.0-160		J3	32.8	29
Methyl tert-butyl ether	5.00	U	4.66	3.14	93.2	62.8	1	28.0-150		J3	39.0	29
Naphthalene	5.00	U	3.80	2.66	76.0	53.2	1	12.0-156		J3	35.3	35
Propene	5.00	U	3.11	1.44	56.9	23.5	1	10.0-160		J3	73.4	29
n-Propylbenzene	5.00	U	3.77	2.25	75.4	45.0	1	31.0-154		J3	50.5	28
Styrene	5.00	U	3.97	2.31	79.4	46.2	1	33.0-155		J3	52.9	28
1,1,1,2-Tetrachloroethane	5.00	U	4.36	2.64	87.2	52.8	1	36.0-151		J3	49.1	29
1,1,2,2-Tetrachloroethane	5.00	U	5.08	3.53	102	70.6	1	33.0-150		J3	36.0	28
1,1,2-Trichlorotrifluoroethane	5.00	U	3.92	1.88	78.4	37.6	1	23.0-160		J3	70.3	30
Tetrachloroethene	5.00	U	3.77	2.09	75.4	41.8	1	10.0-160		J3	57.3	27
Toluene	5.00	U	3.80	2.08	76.0	41.6	1	26.0-154		J3	58.5	28
1,2,3-Trichlorobenzene	5.00	U	3.59	2.66	71.8	53.2	1	17.0-150		J3	29.8	36
1,2,4-Trichlorobenzene	5.00	U	3.26	2.29	65.2	45.8	1	24.0-150		J3	35.0	33
1,1,1-Trichloroethane	5.00	U	4.19	2.24	83.8	44.8	1	23.0-160		J3	60.7	28
1,1,2-Trichloroethane	5.00	U	4.51	2.85	90.2	57.0	1	35.0-147		J3	45.1	27
Trichloroethene	5.00	U	3.90	2.05	78.0	41.0	1	10.0-160		J3	62.2	25
Trichlorofluoromethane	5.00	U	4.78	2.29	95.6	45.8	1	17.0-160		J3	70.4	31
1,2,3-Trichloropropane	5.00	U	5.32	3.84	106	76.8	1	34.0-151		J3	32.3	29
1,2,4-Trimethylbenzene	5.00	U	3.74	2.32	74.8	46.4	1	26.0-154		J3	46.9	27
1,2,3-Trimethylbenzene	5.00	U	3.82	2.40	76.4	48.0	1	32.0-149		J3	45.7	28
1,3,5-Trimethylbenzene	5.00	U	3.71	2.29	74.2	45.8	1	28.0-153		J3	47.3	27
Vinyl chloride	5.00	U	3.62	1.81	72.4	36.2	1	10.0-160		J3	66.7	27
Xylenes, Total	15.0	U	11.5	6.86	76.7	45.7	1	29.0-154		J3	50.5	28
(S) Toluene-d8					104	104		80.0-120				
(S) 4-Bromofluorobenzene					102	101		77.0-126				
(S) 1,2-Dichloroethane-d4					108	106		70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

L1504535-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1504535-11 06/24/22 00:54 • (MS) R3807160-6 06/24/22 04:52 • (MSD) R3807160-7 06/24/22 05:14

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	U	27.4	27.2	110	109	1	10.0-160			0.733	35
Acrolein	25.0	U	24.8	25.1	99.2	100	1	10.0-160			1.20	39
Acrylonitrile	25.0	U	22.7	23.3	90.8	93.2	1	21.0-160			2.61	32
Benzene	5.00	U	4.10	4.05	82.0	81.0	1	17.0-158			1.23	27
Bromobenzene	5.00	U	4.08	4.38	81.6	87.6	1	30.0-149			7.09	28
Bromodichloromethane	5.00	U	4.46	4.26	89.2	85.2	1	31.0-150			4.59	27
Bromoform	5.00	U	4.83	4.64	96.6	92.8	1	29.0-150			4.01	29
Bromomethane	5.00	U	3.89	2.78	77.8	55.6	1	10.0-160			33.3	38
1,3-Butadiene	5.00	U	4.39	4.22	87.8	84.4	1	10.0-160			3.95	22
n-Butylbenzene	5.00	U	3.70	3.88	74.0	77.6	1	31.0-150			4.75	30
sec-Butylbenzene	5.00	U	4.16	4.17	83.2	83.4	1	33.0-155			0.240	29
tert-Butylbenzene	5.00	U	3.99	3.89	79.8	77.8	1	34.0-153			2.54	28
Carbon tetrachloride	5.00	U	4.94	4.60	98.8	92.0	1	23.0-159			7.13	28
Carbon disulfide	5.00	U	3.23	3.22	64.6	64.4	1	10.0-156			0.310	28
Chlorobenzene	5.00	U	4.37	4.22	87.4	84.4	1	33.0-152			3.49	27
Chlorodibromomethane	5.00	U	4.61	4.54	92.2	90.8	1	37.0-149			1.53	27
Chloroethane	5.00	U	4.17	4.22	83.4	84.4	1	10.0-160			1.19	30
Chloroform	5.00	U	4.57	4.59	91.4	91.8	1	29.0-154			0.437	28
Chloromethane	5.00	U	1.71	1.59	34.2	31.8	1	10.0-160			7.27	29
Cyclohexane	5.00	U	4.11	4.01	82.2	80.2	1	19.0-160			2.46	23
2-Chlorotoluene	5.00	U	4.33	4.25	86.6	85.0	1	32.0-153			1.86	28
4-Chlorotoluene	5.00	U	3.96	4.00	79.2	80.0	1	32.0-150			1.01	28
1,2-Dibromo-3-Chloropropane	5.00	U	4.52	4.01	90.4	80.2	1	22.0-151			12.0	34
1,2-Dibromoethane	5.00	U	4.51	4.45	90.2	89.0	1	34.0-147			1.34	27
Dibromomethane	5.00	U	4.28	4.42	85.6	88.4	1	30.0-151			3.22	27
1,2-Dichlorobenzene	5.00	U	4.25	4.10	85.0	82.0	1	34.0-149			3.59	28
1,3-Dichlorobenzene	5.00	U	3.99	4.08	79.8	81.6	1	36.0-146			2.23	27
1,4-Dichlorobenzene	5.00	U	4.10	3.91	82.0	78.2	1	35.0-142			4.74	27
Dichlorodifluoromethane	5.00	U	4.53	4.57	90.6	91.4	1	10.0-160			0.879	29
1,1-Dichloroethane	5.00	U	4.35	4.28	87.0	85.6	1	25.0-158			1.62	27
1,2-Dichloroethane	5.00	U	4.74	4.83	94.8	96.6	1	29.0-151			1.88	27
1,1-Dichloroethene	5.00	1.79	6.10	6.03	86.2	84.8	1	11.0-160			1.15	29
cis-1,2-Dichloroethene	5.00	U	4.17	4.21	83.4	84.2	1	10.0-160			0.955	27
trans-1,2-Dichloroethene	5.00	U	3.70	3.85	74.0	77.0	1	17.0-153			3.97	27
1,2-Dichloropropane	5.00	U	4.08	4.20	81.6	84.0	1	30.0-156			2.90	27
1,1-Dichloropropene	5.00	U	4.18	4.30	83.6	86.0	1	25.0-158			2.83	27
1,3-Dichloropropane	5.00	U	4.62	4.47	92.4	89.4	1	38.0-147			3.30	27
cis-1,3-Dichloropropene	5.00	U	4.02	4.19	80.4	83.8	1	34.0-149			4.14	28
trans-1,3-Dichloropropene	5.00	U	4.25	4.38	85.0	87.6	1	32.0-149			3.01	28
2,2-Dichloropropane	5.00	U	4.25	3.95	85.0	79.0	1	24.0-152			7.32	29

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

L1504535-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1504535-11 06/24/22 00:54 • (MS) R3807160-6 06/24/22 04:52 • (MSD) R3807160-7 06/24/22 05:14

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 %
Dicyclopentadiene	5.00	U	3.28	3.42	65.6	68.4	1	51.0-139			4.18	20
Di-isopropyl ether	5.00	U	4.55	4.47	91.0	89.4	1	21.0-160			1.77	28
Ethylbenzene	5.00	U	3.99	4.11	79.8	82.2	1	30.0-155			2.96	27
4-Ethyltoluene	5.00	U	3.98	4.00	79.6	80.0	1	10.0-160			0.501	20
Hexachloro-1,3-butadiene	5.00	U	3.70	3.95	74.0	79.0	1	20.0-154			6.54	34
n-Hexane	5.00	U	3.82	4.14	76.4	82.8	1	10.0-153			8.04	28
Isopropylbenzene	5.00	U	4.24	4.19	84.8	83.8	1	28.0-157			1.19	27
p-Isopropyltoluene	5.00	U	4.08	4.11	81.6	82.2	1	30.0-154			0.733	29
2-Butanone (MEK)	25.0	U	25.1	25.2	100	101	1	10.0-160			0.398	32
Methyl Cyclohexane	5.00	U	3.75	3.84	75.0	76.8	1	11.0-160			2.37	24
Methylene Chloride	5.00	U	4.41	4.24	88.2	84.8	1	23.0-144			3.93	28
4-Methyl-2-pentanone (MIBK)	25.0	U	24.6	24.5	98.4	98.0	1	29.0-160			0.407	29
Methyl tert-butyl ether	5.00	U	4.65	4.61	93.0	92.2	1	28.0-150			0.864	29
Naphthalene	5.00	U	3.69	3.72	73.8	74.4	1	12.0-156			0.810	35
Propene	5.00	U	3.64	3.74	72.8	74.8	1	10.0-160			2.71	29
n-Propylbenzene	5.00	U	4.03	4.07	80.6	81.4	1	31.0-154			0.988	28
Styrene	5.00	U	4.05	3.96	81.0	79.2	1	33.0-155			2.25	28
1,1,1,2-Tetrachloroethane	5.00	U	4.49	4.49	89.8	89.8	1	36.0-151			0.000	29
1,1,2,2-Tetrachloroethane	5.00	U	4.81	4.64	96.2	92.8	1	33.0-150			3.60	28
1,1,2-Trichlorotrifluoroethane	5.00	U	4.54	4.58	90.8	91.6	1	23.0-160			0.877	30
Tetrachloroethene	5.00	U	4.19	4.41	83.8	88.2	1	10.0-160			5.12	27
Toluene	5.00	U	4.06	4.06	81.2	81.2	1	26.0-154			0.000	28
1,2,3-Trichlorobenzene	5.00	U	4.08	4.17	81.6	83.4	1	17.0-150			2.18	36
1,2,4-Trichlorobenzene	5.00	U	3.65	3.93	73.0	78.6	1	24.0-150			7.39	33
1,1,1-Trichloroethane	5.00	U	4.62	4.65	92.4	93.0	1	23.0-160			0.647	28
1,1,2-Trichloroethane	5.00	U	4.62	4.47	92.4	89.4	1	35.0-147			3.30	27
Trichloroethene	5.00	5.52	9.66	9.95	82.8	88.6	1	10.0-160			2.96	25
Trichlorofluoromethane	5.00	U	5.32	5.15	106	103	1	17.0-160			3.25	31
1,2,3-Trichloropropane	5.00	U	4.84	4.92	96.8	98.4	1	34.0-151			1.64	29
1,2,4-Trimethylbenzene	5.00	U	3.99	4.11	79.8	82.2	1	26.0-154			2.96	27
1,2,3-Trimethylbenzene	5.00	U	4.09	3.96	81.8	79.2	1	32.0-149			3.23	28
1,3,5-Trimethylbenzene	5.00	U	3.96	4.09	79.2	81.8	1	28.0-153			3.23	27
Vinyl chloride	5.00	U	3.98	4.04	79.6	80.8	1	10.0-160			1.50	27
Xylenes, Total	15.0	U	12.4	12.5	82.7	83.3	1	29.0-154			0.803	28
(S) Toluene-d8					104	104		80.0-120				
(S) 4-Bromofluorobenzene					102	101		77.0-126				
(S) 1,2-Dichloroethane-d4					106	106		70.0-130				

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

Method Blank (MB)

(MB) R3804579-3 06/17/22 11:05

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
1,4-Dioxane	U		0.597	3.00
<i>(S) Toluene-d8</i>	102			77.0-127

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

(LCS) R3804579-1 06/17/22 10:06 • (LCSD) R3804579-2 06/17/22 10:26

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
1,4-Dioxane	50.0	46.5	45.0	93.0	90.0	55.0-138			3.28	24
<i>(S) Toluene-d8</i>				103	103	77.0-127				

L1505894-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1505894-07 06/17/22 18:13 • (MS) R3804579-4 06/17/22 18:33 • (MSD) R3804579-5 06/17/22 18:52

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
1,4-Dioxane	50.0	54.7	126	114	143	119	1	13.0-160			10.0	31
<i>(S) Toluene-d8</i>					104	104		77.0-127				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

Method Blank (MB)

(MB) R3806676-3 06/22/22 11:34

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
1,4-Dioxane	U		0.597	3.00
(S) Toluene-d8	101			77.0-127

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

(LCS) R3806676-1 06/22/22 10:34 • (LCSD) R3806676-2 06/22/22 10:54

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
1,4-Dioxane	50.0	56.6	47.9	113	95.8	55.0-138			16.7	24
(S) Toluene-d8				101	101	77.0-127				

L1504535-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1504535-11 06/22/22 15:10 • (MS) R3806676-4 06/22/22 18:49 • (MSD) R3806676-5 06/22/22 19:10

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
1,4-Dioxane	50.0	28.9	80.6	84.5	103	111	1	13.0-160			4.72	31
(S) Toluene-d8					100	102		77.0-127				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

Method Blank (MB)

(MB) R3807576-3 06/24/22 11:08

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
1,4-Dioxane	U		0.597	3.00
(S) Toluene-d8	101			77.0-127

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

(LCS) R3807576-1 06/24/22 10:08 • (LCSD) R3807576-2 06/24/22 10:28

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
1,4-Dioxane	50.0	54.8	38.2	110	76.4	55.0-138		J3	35.7	24
(S) Toluene-d8				101	101	77.0-127				

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Is

⁸Gl

⁹Al

¹⁰Sc

INTERNAL STANDARD SUMMARY

Instrument: VOCMS30 • File ID: 0623_30

06/23/22 18:26

Sample ID	File ID	8260-FLUOROBENZENE Response	8260-CHLOROBENZENE-D5 Response	8260-1,4-DICHLOROBENZENE-D4 Response
Standard	0623_30	294570	123807	118198
Upper Limit		589140	247614	236396
Lower Limit		147285	61904	59099
LCS R3807160-1 WG1884517 1x	0623_30LCS	294570	123807	118198
LCSD R3807160-2 WG1884517 1x	0623_31	302375	124629	121110
BLANK R3807160-3 WG1884517 1x	0623_33A	293814	118769	113610
L1504535-01 WG1884517 1x	0623_41	280247	115694	106599
L1504535-06 WG1884517 1x	0623_42	290588	119726	113484
L1504535-07 WG1884517 1x	0623_43	285645	115954	110238
L1504535-09 WG1884517 1x	0623_44	292123	116930	113653
L1504535-11 WG1884517 1x	0623_45	289827	120108	111786
L1504535-12 WG1884517 1x	0623_46	279107	116019	109374
L1504535-02 WG1884517 20x	0623_47	280798	114286	110467
L1504535-03 WG1884517 100x	0623_48	278511	113696	105282
L1504535-04 WG1884517 5x	0623_49	277976	112440	110314
L1504535-05 WG1884517 5x	0623_50	272431	112768	107259
L1504535-08 WG1884517 1000x	0623_51	267465	109415	104066
L1504535-10 WG1884517 10x	0623_52	278655	113910	106168
L1504535-13 WG1884517 10x	0623_53	274424	113223	106310
MS R3807160-4 WG1884517 1x	0623_54	278454	115750	110443
MSD R3807160-5 WG1884517 1x	0623_55	281048	116715	110656
MS R3807160-6 WG1884517 1x	0623_56	280021	115560	112111
MSD R3807160-7 WG1884517 1x	0623_57	280041	117245	112259

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

INTERNAL STANDARD SUMMARY

Instrument: VOCMS27 • File ID: 0617_03

06/17/22 09:46

Sample ID	File ID	8260-FLUOROBENZENE Response
Standard	0617_03	333768
Upper Limit		667536
Lower Limit		166884
LCS R3804579-1 WG1881003 1x	0617_04	332114
LCSD R3804579-2 WG1881003 1x	0617_05	345483
BLANK R3804579-3 WG1881003 1x	0617_07	295340
L1504535-01 WG1881003 1x	0617_21	311668
MS R3804579-4 WG1881003 1x	0617_28	263607
MSD R3804579-5 WG1881003 1x	0617_29	299763

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Is

Instrument: VOCMS27 • File ID: 0622_03

06/22/22 10:15

Sample ID	File ID	8260-FLUOROBENZENE Response
Standard	0622_03	956930
Upper Limit		1913860
Lower Limit		478465
LCS R3806676-1 WG1882718 1x	0622_04	930710
LCSD R3806676-2 WG1882718 1x	0622_05	1039969
BLANK R3806676-3 WG1882718 1x	0622_07	970798
L1504535-02 WG1882718 1x	0622_08	955936
L1504535-06 WG1882718 1x	0622_12	1011299
L1504535-07 WG1882718 1x	0622_13	1156669
L1504535-09 WG1882718 1x	0622_15	1023468
L1504535-10 WG1882718 1x	0622_16	1107484
L1504535-11 WG1882718 1x	0622_17	947905
L1504535-12 WG1882718 1x	0622_18	937393
L1504535-13 WG1882718 1x	0622_19	1064907
MS R3806676-4 WG1882718 1x	0622_28	950246
MSD R3806676-5 WG1882718 1x	0622_29	898601

⁸Gl

⁹Al

¹⁰Sc

INTERNAL STANDARD SUMMARY

Instrument: VOCMS27 • File ID: 0624_03

06/24/22 09:49

Sample ID	File ID	8260-FLUOROBENZENE Response
Standard	0624_03	1072170
Upper Limit		2144340
Lower Limit		536085
LCS R3807576-1 WG1884513 1x	0624_04	931218
LCSD R3807576-2 WG1884513 1x	0624_05	1192699
BLANK R3807576-3 WG1884513 1x	0624_07	851977
L1504535-03 WG1884513 10x	0624_09	1054243
L1504535-04 WG1884513 5x	0624_10	1113802
L1504535-05 WG1884513 5x	0624_11	938624
L1504535-08 WG1884513 100x	0624_12	1304339

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Is

⁸Gl

⁹Al

¹⁰Sc

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

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

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
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.
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	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Company Name/Address: **Pinyon Environmental**
 4815 E. Carefree Highway
 #108-274
 Cave Creek, AZ 85331

Billing Information:
 Accounts Payable
 3222 S Vance Street
 Suite 200
 Lakewood, CO 80227

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/hubs/pas-standard-terms.pdf>

Report to: **Jeremy Musson**
Christopher Funk

Email To: **funk@pinyon-env.com**; **musson@pinyon-env.com**; **guarnieri@pinyon-env.com**

Project Description: **Nammo TTU Groundwater Monitoring**

City/State Collected: **Mesa, AZ**

Please Circle: PT MT CT ET

Phone: **602-290-4774**

Client Project #: **722152201.002**

Lab Project #: **PINYONMAZ-722152201**

Collected by (print): **Isabella Foster**

Site/Facility ID #

P.O. #

Collected by (signature): *[Signature]*

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

Quote #

Date Results Needed: **Standard**

Immediately Packed on Ice N ___ Y **X**

No. of Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	PERCHLORATE 125mlHDPE-NoPres	V8260AZ 40mlAmb-HCl	V8260LL14D 40mlAmb-HCl	Analysis / Container / Preservative	Chain of Custody
TTU-EXT-5-80-2022-613		GW	80	6/13/22	0750	7	X	X	X		-01
TTU-EXT-4-77-2022-613		GW	77		0834						-02
TTU-EXT-3-76-2022-613		GW	76		0907						-03
TTU-EXT-2-74-2022-613		GW	74		0931						-04
TTU-EXT-1-69-2022-613		GW	69		1000						-05
TTU-17-80-2022-613		GW	80		1027						-06
TTU-15-75-2022-613		GW	75		1103						-07
TTU-16-80-2022-613		GW	80		1127						-08
TTU-5-110-2022-613		GW	110		1204						-09
TTU-12-82-2022-613		GW	82		1235						-10

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

Remarks:

Samples returned via: ___ UPS ___ FedEx ___ Courier

Tracking # **4882 8633 5735**

Relinquished by: (Signature) *[Signature]* Date: **6/13/22** Time: **1537**

Received by: (Signature) *[Signature]* Trip Blank Received: **Yes/No**
 HCl/MeOH
 TBR

Temp: °C Bottles Received: **3.5+0=3.5 28**

Relinquished by: (Signature) *[Signature]* Date: **6/13/22** Time: **1800**

Received by: (Signature) *[Signature]* Date: **6/14/22** Time: **845**

Relinquished by: (Signature) *[Signature]* Date: **6/14/22** Time: **845**

Received for lab by: (Signature) *[Signature]* Date: **6/14/22** Time: **845**

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

PNPAZ

Company Name/Address: Pinyon Environmental 4815 E. Carefree Highway #108-274 Cave Creek, AZ 85331			Billing Information: Accounts Payable 3222 S Vance Street Suite 200 Lakewood, CO 80227			Pres Chk		Analysis / Container / Preservative											Chain of Custody Page <u>2</u> of <u>2</u>		
Report to: Jeremy Husson Christopher Funk			Email To: funk@pinyon-env.com; guarneri@pinyon-					PERCHLORATE 125m/HDPE-NoPres V8260AZ 40m/Amb-HCl V8260LL14D 40m/Amb-HCl											Pace PEOPLE ADVANCING SCIENCE		
Project Description: Nammo TTU Groundwater Monitoring			City/State Collected: Mesa, AZ		Please Circle: PT MT CT ET		MT JULIET, TN														
Phone: 602-290-4774			Client Project # 722152201.002		Lab Project # PINYONMAZ-722152201		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/mubfs/pas-standard-terms.pdf														
Collected by (print): Isabella Foster			Site/Facility ID #		P.O. #		SDG # L504535														
Collected by (signature):			Rush? (Lab MUST Be Notified) ___ Same Day ___ Five Day ___ Next Day ___ 5 Day (Rad Only) ___ Two Day ___ 10 Day (Rad Only) ___ Three Day		Quote #		Table #														
Immediately Packed on Ice N ___ Y <u>X</u>					Date Results Needed Standard		Acctnum: PINYONMAZ Template: T205653 Prelogin: P931176 PM: 288 - Daphne Richards PB:														
Sample ID			Comp/Grab	Matrix *	Depth	Date	Time												No. of Cntrs	Shipped Via:	
																			Remarks Sample # (lab only)		
TTU-13-51-2022-613				GW	51	6/13/22	1306	14	X	X	X			HS/MSD	-11						
TTU-9A-61-2027-613				GW	61	1	1339	7	1	1	1				-12						
Dup-01				GW	-	1	0834	7	1	1	1				-13						
Trip Blank				GW	-	-	-	-							-14						

* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other _____				Remarks:				pH _____ Temp _____ Flow _____ Other _____							
Samples returned via: ___ UPS ___ FedEx ___ Courier _____				Tracking # 4882 8633 5735				Sample Receipt Checklist COC Seal Present/Intact: ___ NP <u>Y</u> ___ N COC Signed/Accurate: <u>Y</u> ___ N Bottles arrive intact: <u>Y</u> ___ N Correct bottles used: <u>Y</u> ___ N Sufficient volume sent: <u>Y</u> ___ N If Applicable VOA Zero Headspace: <u>Y</u> ___ N Preservation Correct/Checked: <u>Y</u> ___ N RAD Screen < 0.5 mR/hr: <u>Y</u> ___ N							
Relinquished by: (Signature) <i>Isabella Foster</i>		Date: 6/13/22		Time: 1537		Received by: (Signature) <i>[Signature]</i>		Trip Blank Received: <u>Yes</u> / <u>No</u> HCL / MeOH TBR							
Relinquished by: (Signature) <i>[Signature]</i>		Date: 6/13/22		Time: 1800		Received by: (Signature) <i>[Signature]</i>		Temp: °C 35.70 = 35.70		Bottles Received: 70		If preservation required by Login: Date/Time			
Relinquished by: (Signature) <i>[Signature]</i>		Date:		Time:		Received for lab by: (Signature) <i>[Signature]</i>		Date: 6/14/22		Time: 075		Hold:		Condition: NCF / <u>OK</u>	

PNPA2

Pinyon Environmental

Sample Delivery Group: L1504918
Samples Received: 06/15/2022
Project Number: 722152201
Description: Nammo TTU Groundwater Monitoring

Report To: Jeremy Musson
4815 E. Carefree Highway
#108-274
Cave Creek, AZ 85331

Entire Report Reviewed By:



Daphne Richards
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

TABLE OF CONTENTS

Cp: Cover Page	1	¹ Cp
Tc: Table of Contents	2	² Tc
Ss: Sample Summary	3	³ Ss
Cn: Case Narrative	4	⁴ Cn
Gl: Glossary of Terms	5	⁵ Gl
Al: Accreditations & Locations	6	⁶ Al
Sc: Sample Chain of Custody	7	⁷ Sc

SAMPLE SUMMARY

PF-2-2022-614 L1504918-01 GW

Collected by: _____ Collected date/time: 06/14/22 13:53 Received date/time: 06/15/22 09:53

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
--------	-------	----------	-----------------------	--------------------	---------	----------

Subcontracted Analyses	WG1879653	1	06/28/22 00:00	06/28/22 00:00	-	Subcontract
------------------------	-----------	---	----------------	----------------	---	-------------

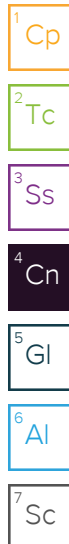
- ¹Cp
- ²Tc
- ³Ss
- ⁴Cn
- ⁵Gl
- ⁶Al
- ⁷Sc

CASE NARRATIVE

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



Daphne Richards
Project Manager



Report Revision History

Level II Report - Version 1: 06/28/22 10:27

Project Narrative

Report style

L1504918 -01 contains subout data that is included after the chain of custody.

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.

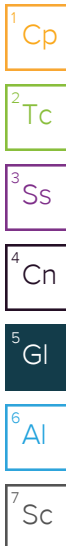
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

SDG	Sample Delivery Group.
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

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.



ACCREDITATIONS & LOCATIONS

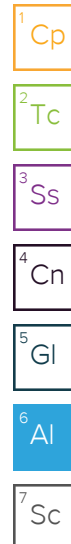
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Company Name/Address:
Pinyon Environmental
 4815 E. Carefree Highway
 #108-274
 Cave Creek, AZ 85331

Billing Information:
 Accounts Payable
 3222 S Vance Street
 Suite 200
 Lakewood, CO 80227

Pres
 Chk

Analysis / Container / Preservative
 Chain of Custody Page 1 of 1

Report to:
Christopher Funk

Email To: **funk@pinyon-env.com; guarnieri@pinyon-**

Project Description:
Nammo TTU Groundwater Monitoring

City/State Collected:

Please Circle:
 PT MT CT ET

Phone: **602-290-4774**

Client Project #
722152201.002

Lab Project #
PINYONMAZ-722152201

Collected by (print):
Belle Foster

Site/Facility ID #

P.O. #

Collected by (signature):
[Signature]
 Immediately
 Packed on Ice N Y

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

Quote #
 Date Results Needed
Standard

No. of
 Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
TTU-14-64-2022-614		GW	64	6/14/22	0842	7
TTU-4-57-2022-614		GW	57	6/14/22	1016	7
TTU-8-164-2022-614		GW	164	6/14/22	1047	14
TTU-3-108-2022-614		GW	108	6/14/22	1124	7
TTU-7-164-2022-614		GW	164	6/14/22	1152	7
TTU-6-143-2022-614		GW	143	6/14/22	1216	7
TTU-10-147-2022-614		GW	147	6/14/22	1306	7
DUP-02		GW	-	6/14/22	1306	7
PF-2-2022-614		GW	-	6/14/22	1353	7
Trip Blank		GW	-	-	-	1

PERCHLORATE 125mlHDPE-NoPres	V8260AZ 40mlAmb-HCl	V8260LL14D 40mlAmb-HCl	Perchlorate 6850
✓	✓	✓	
✓	✓	✓	
✓	✓	✓	
✓	✓	✓	
✓	✓	✓	
✓	✓	✓	
✓	✓	✓	
✓	✓	✓	
✓	✓	✓	
			✓

Pace
 PEOPLE ADVANCING SCIENCE

MT JULIET, TN
 12085 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 # **L1504918**

Table #

Acctnum: **PINYONMAZ**
 Template: **T205653**
 Prelogin: **P931176**
 PM: 288 - Daphne Richards
 PB:

Shipped Via:

Remarks Sample # (lab only)

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

Remarks:
Perchlorate 6850 subbed to Eurofins-Sacramento, CA pH _____ Temp _____
 Flow _____ Other _____

Samples returned via:
 UPS FedEx Courier _____ Tracking # _____

Sample Receipt Checklist

COC Seal Present/Intact: NP Y N
 COC Signed/Accurate: Y N
 Bottles arrive intact: Y N
 Correct bottles used: Y N
 Sufficient volume sent: Y N

If Applicable

VOA Zero Headspace: Y N
 Preservation Correct/Checked: Y N
 RAD Screen <0.5 nR/hr: Y N

Relinquished by: (Signature) *[Signature]* Date: 6/14/22 Time: 1531
 Received by: (Signature) *[Signature]*

Relinquished by: (Signature) Date: Time: Received by: (Signature)

Relinquished by: (Signature) Date: Time: Received for lab by: (Signature)

Trip Blank Received: Yes / No
 HCl / MeOH
 TBR

Temp: °C Bottles Received: If preservation required by Login: Date/Time

Hold: Condition: NCF / OK

ANALYTICAL REPORT

Eurofins Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-89098-1
Client Project/Site: Perchlorate

For:
Pace Analytical National
12065 Lebanon Rd
Mt Juliet, Tennessee 37122

Attn: Jimmy Huckaba



Authorized for release by:
6/27/2022 3:55:12 PM

Jill Kellmann, Client Service Manager
(916)374-4402
Jill.Kellmann@et.eurofinsus.com

LINKS

Review your project
results through



Have a Question?



Visit us at:

www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	6
QC Sample Results	7
QC Association Summary	8
Lab Chronicle	9
Certification Summary	10
Method Summary	11
Sample Summary	12
Chain of Custody	13
Receipt Checklists	15

Definitions/Glossary

Client: Pace Analytical National
Project/Site: Perchlorate

Job ID: 320-89098-1

Qualifiers

LCMS

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Pace Analytical National
Project/Site: Perchlorate

Job ID: 320-89098-1

Job ID: 320-89098-1

Laboratory: Eurofins Sacramento

Narrative

Receipt

The sample was received on 6/15/2022 9:35 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 5.7° C.

LCMS

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Detection Summary

Client: Pace Analytical National
Project/Site: Perchlorate

Job ID: 320-89098-1

Client Sample ID: PF-2-2022-614

Lab Sample ID: 320-89098-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perchlorate	0.44	J	0.50	0.085	ug/L	1		6850	Total/NA

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Client Sample Results

Client: Pace Analytical National
Project/Site: Perchlorate

Job ID: 320-89098-1

Client Sample ID: PF-2-2022-614

Lab Sample ID: 320-89098-1

Date Collected: 06/14/22 13:53

Matrix: Water

Date Received: 06/15/22 09:35

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	0.44	J	0.50	0.085	ug/L		06/22/22 06:30	06/22/22 16:40	1

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

QC Sample Results

Client: Pace Analytical National
Project/Site: Perchlorate

Job ID: 320-89098-1

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Lab Sample ID: MB 320-597534/1-A
Matrix: Water
Analysis Batch: 597600

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 597534

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50	0.085	ug/L		06/22/22 06:30	06/22/22 13:33	1

Lab Sample ID: LCS 320-597534/2-A
Matrix: Water
Analysis Batch: 597600

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 597534

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	5.00	4.96		ug/L		99	80 - 120

Lab Sample ID: 320-89098-1 MS
Matrix: Water
Analysis Batch: 597600

Client Sample ID: PF-2-2022-614
Prep Type: Total/NA
Prep Batch: 597534

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	0.44	J	5.00	5.55		ug/L		102	80 - 120

Lab Sample ID: 320-89098-1 MSD
Matrix: Water
Analysis Batch: 597600

Client Sample ID: PF-2-2022-614
Prep Type: Total/NA
Prep Batch: 597534

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perchlorate	0.44	J	5.00	5.57		ug/L		103	80 - 120	0	15

QC Association Summary

Client: Pace Analytical National
Project/Site: Perchlorate

Job ID: 320-89098-1

LCMS

Prep Batch: 597534

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-89098-1	PF-2-2022-614	Total/NA	Water	Filtration	
MB 320-597534/1-A	Method Blank	Total/NA	Water	Filtration	
LCS 320-597534/2-A	Lab Control Sample	Total/NA	Water	Filtration	
320-89098-1 MS	PF-2-2022-614	Total/NA	Water	Filtration	
320-89098-1 MSD	PF-2-2022-614	Total/NA	Water	Filtration	

Analysis Batch: 597600

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-89098-1	PF-2-2022-614	Total/NA	Water	6850	597534
MB 320-597534/1-A	Method Blank	Total/NA	Water	6850	597534
LCS 320-597534/2-A	Lab Control Sample	Total/NA	Water	6850	597534
320-89098-1 MS	PF-2-2022-614	Total/NA	Water	6850	597534
320-89098-1 MSD	PF-2-2022-614	Total/NA	Water	6850	597534

Lab Chronicle

Client: Pace Analytical National
Project/Site: Perchlorate

Job ID: 320-89098-1

Client Sample ID: PF-2-2022-614

Lab Sample ID: 320-89098-1

Date Collected: 06/14/22 13:53

Matrix: Water

Date Received: 06/15/22 09:35

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Filtration			4.00 mL	4.00 mL	597534	06/22/22 06:30	HJA	TAL SAC
Total/NA	Analysis	6850		1			597600	06/22/22 16:40	D1R	TAL SAC

Laboratory References:

TAL SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Accreditation/Certification Summary

Client: Pace Analytical National
Project/Site: Perchlorate

Job ID: 320-89098-1

Laboratory: Eurofins Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	02-20-24
ANAB	Dept. of Defense ELAP	L2468	01-20-24
ANAB	Dept. of Energy	L2468.01	01-20-24
ANAB	ISO/IEC 17025	L2468	01-20-24
Arizona	State	AZ0708	08-11-22
Arkansas DEQ	State	88-0691	06-17-22 *
California	State	2897	01-31-23
Colorado	State	CA0004	08-31-22
Florida	NELAP	E87570	06-30-22
Georgia	State	4040	01-30-23
Hawaii	State	<cert No.>	01-29-23
Illinois	NELAP	200060	03-17-24
Kansas	NELAP	E-10375	10-31-22
Louisiana	NELAP	01944	06-30-22
Louisiana (All)	NELAP	01944	06-30-22
Maine	State	CA00004	04-14-24
Michigan	State	9947	01-31-23
Nevada	State	CA00044	08-31-22
New Hampshire	NELAP	2997	04-18-23
New Jersey	NELAP	CA005	06-30-22
New York	NELAP	11666	04-01-23
Ohio	State	41252	01-29-23
Oregon	NELAP	4040	01-29-23
Texas	NELAP	T104704399-19-13	05-31-23
US Fish & Wildlife	US Federal Programs	58448	04-30-23
USDA	US Federal Programs	P330-18-00239	01-23-23
Utah	NELAP	CA000442021-12	02-28-23
Virginia	NELAP	460278	03-14-23
Washington	State	C581	05-05-23
West Virginia (DW)	State	9930C	12-31-22
Wisconsin	State	998204680	08-31-22
Wyoming	State Program	8TMS-L	01-28-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Sacramento

Method Summary

Client: Pace Analytical National
Project/Site: Perchlorate

Job ID: 320-89098-1

Method	Method Description	Protocol	Laboratory
6850	Perchlorate by LC/MS or LC/MS/MS	EPA	TAL SAC
Filtration	Sample Filtration	None	TAL SAC

Protocol References:

EPA = US Environmental Protection Agency

None = None

Laboratory References:

TAL SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Sample Summary

Client: Pace Analytical National
Project/Site: Perchlorate

Job ID: 320-89098-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-89098-1	PF-2-2022-614	Water	06/14/22 13:53	06/15/22 09:35

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Sub-Contract Chain of Custody

Batch Date/Time: 06/15/22 09:57
Sub-Contract Lab: TAWSCA
Address: 880 Riverside Parkway
City/State: West Sacramento, CA
 95605
Contact:
 Jill.Kellmann@et.eurofinsus.com
Owner Lab: PACEMTJL
Address: 12065 Lebanon Rd.
City/State: Mt. Juliet, TN 37122
Phone: (615) 773-9756
Fax: (615) 758-5859



12065 Lebanon Rd.
 Mt. Juliet, TN 37122
 Phone: (615) 773-9756
 Fax: (615) 758-5859

WO: WG1879653
Email: MTJLSuboutTeam@pacelabs.com
Results Due Date: 06/29/22
ESC Purchase Order #: L1504918
Send Reports to: James C Huckaba

Sample ID Container ID	Matrix	State	Collect Date	Description	Sample Number Lab Use Only	Sample Comments Lab Use Only
PF-2-2022-614	GW	AZ	06/14/22 13:53	Perchlorate by 6850	2. L1504918-01	

Relinquished by: _____ Date: _____

Received by: _____ Date: _____

Relinquished by: _____ Date: _____

Received by: JTB Date: 6/15/22 9:35 S-7c

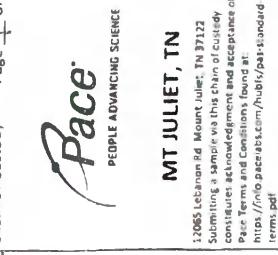


320-89098 Chain of Custody

Rec By: [Signature] PETSco 6-15-22
 0930

S-7c

1094



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.paceabs.com/hubs/past-standard-
terms.pdf

SDG #
Table #
Acctnum: PINYONMAZ
Template: T205653
Prelogin: P931176
PIM: 288 - Daphne Richards
PB:
Shipped Via:
Remarks: Sample # (lab only)

Analysis / Container / Preservative	Pres Chk
PERCHLORATE 125mIHDPPE-NOFRES	
V8260AZ 40mlamb-HCI	
V8260LL14D 40mlamb-HCI	
PERNICIDIC ACID 0850	

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Rush? (Lab MUST Be Notified)		
							Same Day	Five Day	Next Day
TTU-14-69-2022-614		GW	69	6/14/22	0648	7			
TTU-4-57-2022-614		GW	57	6/14/22	1016	7			
TTU-8-164-2022-614		GW	164	6/14/22	1047	14			
TTU-3-108-2022-614		GW	108	6/14/22	1124	7			
TTU-7-164-2022-614		GW	164	6/14/22	1152	7			
TTU-6-143-2022-614		GW	143	6/14/22	1216	7			
TTU-10-147-2022-614		GW	147	6/14/22	1326	7			
OVP-02		GW	-	6/14/22	1306	7			
PF-2-2022-614		GW	-	6/14/22	1353	7			
Trip Blank		GW	-	-	-	1			

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

VCA Zero Headspace: Y N

Preservation Correct/Checked: Y N

RAD Screen <0.5 mR/hr: Y N

pH _____ Temp _____

Flow _____ Other _____

Trip Blank Received: Yes No

HCL / MeOH TBR

Temp: _____ °C Bottles Received:

If preservation required by Login: Date/Time

Billing Information:
Accounts Payable
3222 S Vance Street
Suite 200
Lakewood, CO 80227

Email To: funk@pinyon-env.com; guarneri@pinyon-env.com

City/State Collected: _____

Client Project # 722152201.002

Lab Project # PINYONMAZ-722152201

Site/Facility ID # _____

Quote # _____

Date Results Needed: Standard

Collected by (print): Belle Foster

Collected by (signature): *Belle Foster*

Immediately Packed on Ice: N Y

City/State Collected: _____

City/State Collected: _____

City/State Collected: _____

Relinquished by: (Signature) *Christopher Funk*

Relinquished by: (Signature) *Christopher Funk*

Relinquished by: (Signature) *Christopher Funk*

Relinquished by: (Signature) *Christopher Funk*

Relinquished by: (Signature) *Christopher Funk*

Relinquished by: (Signature) *Christopher Funk*



Login Sample Receipt Checklist

Client: Pace Analytical National

Job Number: 320-89098-1

Login Number: 89098

List Source: Eurofins Sacramento

List Number: 1

Creator: Her, David A

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	False	Method requires headspace.
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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

Pinyon Environmental

Sample Delivery Group: L1504971
Samples Received: 06/15/2022
Project Number: 722152201.002
Description: Nammo TTU Groundwater Monitoring

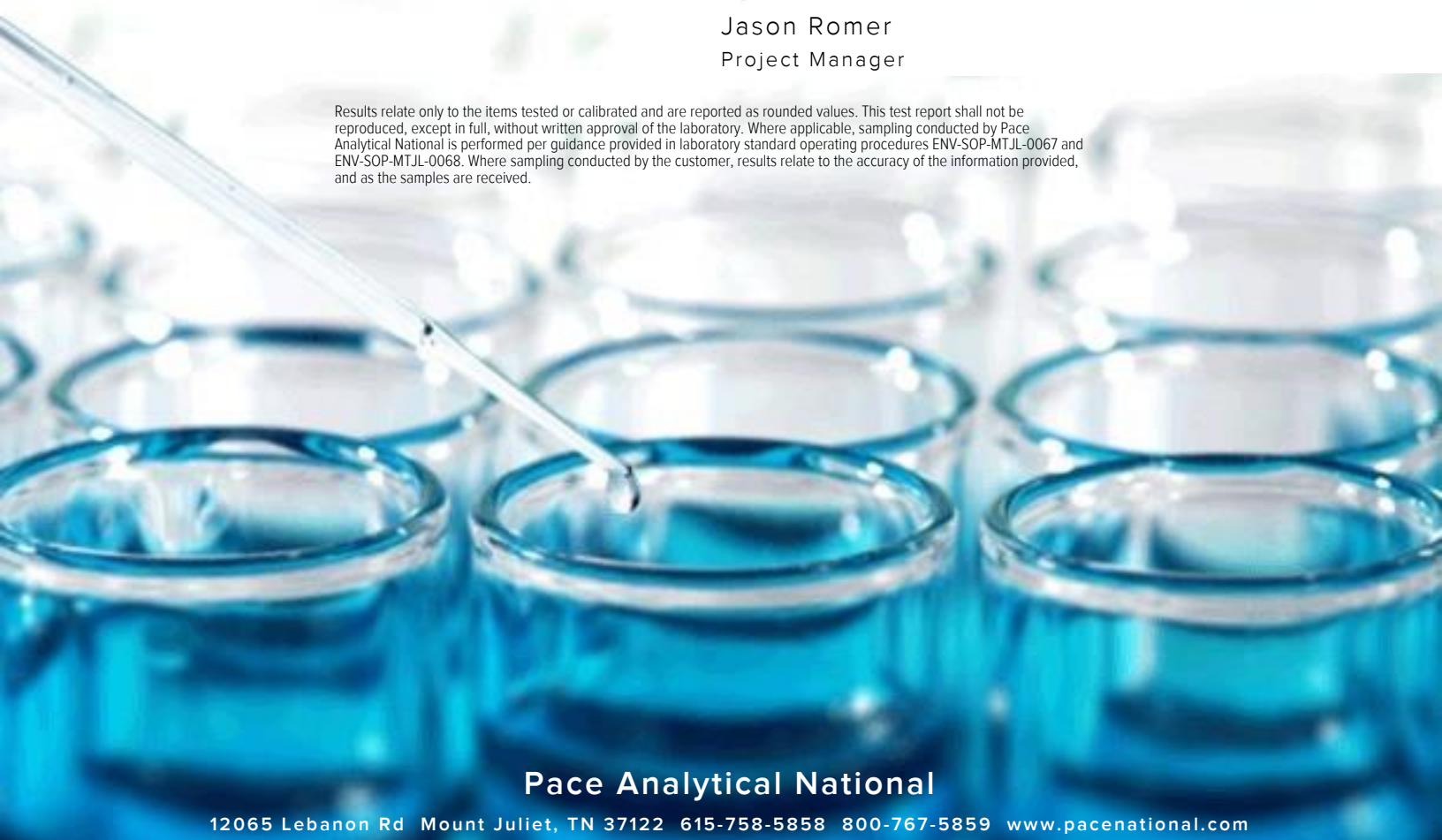
Report To: Jeremy Musson
4815 E. Carefree Highway
#108-274
Cave Creek, AZ 85331

Entire Report Reviewed By:



Jason Romer
Project Manager










Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace 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

TABLE OF CONTENTS

Cp: Cover Page	1	
Tc: Table of Contents	2	
Ss: Sample Summary	3	
Cn: Case Narrative	4	
Sr: Sample Results	5	
TTU-20-73-2022-614 L1504971-01	5	
Qc: Quality Control Summary	6	
Wet Chemistry by Method 4500S2 D-2011	6	
Wet Chemistry by Method 9056A	7	
Wet Chemistry by Method 9060A	9	
Metals (ICP) by Method 6010D	10	
Volatile Organic Compounds (GC) by Method RSK175	11	
Gl: Glossary of Terms	13	
Al: Accreditations & Locations	14	
Sc: Sample Chain of Custody	15	

SAMPLE SUMMARY

TTU-20-73-2022-614 L1504971-01 GW

Collected by: Isabella Foster
 Collected date/time: 06/14/22 08:22
 Received date/time: 06/15/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500S2 D-2011	WG1882496	1	06/21/22 04:20	06/21/22 04:20	CRB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1879790	10	06/16/22 00:30	06/16/22 00:30	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1879790	100	06/16/22 00:43	06/16/22 00:43	ELN	Mt. Juliet, TN
Wet Chemistry by Method 9060A	WG1883673	1	06/22/22 21:42	06/22/22 21:42	KMO	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1884005	1	06/29/22 13:29	07/05/22 10:17	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1881370	1	06/18/22 10:36	06/18/22 10:36	CMS	Mt. Juliet, TN

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

CASE NARRATIVE

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



Jason Romer
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Sulfide	U		25.0	50.0	1	06/21/2022 04:20	WG1882496

¹ Cp

² Tc

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Bromide	9130	<u>BJ</u>	3530	10000	10	06/16/2022 00:30	WG1879790
Chloride	574000		3790	10000	10	06/16/2022 00:30	WG1879790
Nitrate as (N)	452000		4800	10000	100	06/16/2022 00:43	WG1879790
Nitrite as (N)	U		420	1000	10	06/16/2022 00:30	WG1879790
Sulfate	260000		5940	50000	10	06/16/2022 00:30	WG1879790

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
TOC (Total Organic Carbon)	9340		102	1000	1	06/22/2022 21:42	WG1883673

⁷ Gl

⁸ Al

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Iron,Dissolved	U		18.0	100	1	07/05/2022 10:17	WG1884005
Manganese,Dissolved	761		0.934	10.0	1	07/05/2022 10:17	WG1884005

⁹ Sc

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis date / time	Batch
Methane	U		2.91	10.0	1	06/18/2022 10:36	WG1881370
Ethane	U		4.07	13.0	1	06/18/2022 10:36	WG1881370
Ethene	U		4.26	13.0	1	06/18/2022 10:36	WG1881370

Method Blank (MB)

(MB) R3805276-1 06/21/22 04:20

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		25.0	50.0

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1504979-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1504979-02 06/21/22 04:20 • (DUP) R3805276-3 06/21/22 04:20

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	U	U	1	0.000		20

L1505495-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1505495-03 06/21/22 04:25 • (DUP) R3805276-6 06/21/22 04:25

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	U	U	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3805276-2 06/21/22 04:20

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfide	500	469	93.8	85.0-115	

L1504979-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1504979-07 06/21/22 04:22 • (MS) R3805276-4 06/21/22 04:23 • (MSD) R3805276-5 06/21/22 04:23

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Sulfide	500	U	487	499	97.4	99.8	1	80.0-120			2.43	20

Method Blank (MB)

(MB) R3804028-1 06/15/22 23:18

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Bromide	425	U	353	1000
Chloride	U		379	1000
Nitrate	U		48.0	100
Nitrite	U		42.0	100
Sulfate	U		594	5000

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1504979-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1504979-02 06/16/22 02:32 • (DUP) R3804028-3 06/16/22 02:46

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Bromide	U	U	1	0.000		15
Chloride	54100	53900	1	0.478		15
Nitrate	132	132	1	0.531		15
Nitrite	U	U	1	0.000		15
Sulfate	1720	1690	1	1.75	U	15

L1505010-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1505010-01 06/16/22 08:12 • (DUP) R3804028-7 06/16/22 08:25

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Bromide	419	418	1	0.143	U	15
Chloride	3030	3080	1	1.61		15
Nitrate	225	229	1	1.81		15
Nitrite	U	U	1	0.000		15
Sulfate	12200	12800	1	4.44		15

Laboratory Control Sample (LCS)

(LCS) R3804028-2 06/15/22 23:31

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Bromide	40000	39800	99.4	80.0-120	
Chloride	40000	40200	100	80.0-120	
Nitrate	8000	8140	102	80.0-120	
Nitrite	8000	8170	102	80.0-120	

Laboratory Control Sample (LCS)

(LCS) R3804028-2 06/15/22 23:31

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Sulfate	40000	40500	101	80.0-120	

L1504979-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1504979-02 06/16/22 02:32 • (MS) R3804028-4 06/16/22 02:59

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>
Bromide	50000	U	49100	98.2	1	80.0-120	
Chloride	50000	54100	103000	97.8	1	80.0-120	<u>E</u>
Nitrate	5000	132	5060	98.6	1	80.0-120	
Nitrite	5000	U	5170	103	1	80.0-120	
Sulfate	50000	1720	52100	101	1	80.0-120	

L1504998-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1504998-01 06/16/22 04:34 • (MS) R3804028-5 06/16/22 05:15 • (MSD) R3804028-6 06/16/22 05:29

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Bromide	50000	553	49200	49600	97.3	98.1	1	80.0-120			0.823	15
Chloride	50000	91700	139000	140000	95.3	97.4	1	80.0-120	<u>E</u>	<u>E</u>	0.746	15
Nitrate	5000	2930	8110	8170	103	105	1	80.0-120			0.763	15
Nitrite	5000	U	5150	5190	103	104	1	80.0-120			0.764	15
Sulfate	50000	247000	286000	289000	78.8	85.0	1	80.0-120	<u>E V</u>	<u>E</u>	1.08	15

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3806587-2 06/22/22 12:54

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
TOC (Total Organic Carbon)	282	↓	102	1000

1 Cp

2 Tc

3 Ss

L1504971-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1504971-01 06/22/22 21:42 • (DUP) R3806587-6 06/22/22 21:55

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
TOC	9340	9280	1	0.730		20

4 Cn

5 Sr

Laboratory Control Sample (LCS)

(LCS) R3806587-1 06/22/22 12:42

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
TOC	75000	78200	104	85.0-115	

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3811062-1 07/05/22 09:36

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Iron,Dissolved	U		18.0	100
Manganese,Dissolved	U		0.934	10.0

¹Cp

²Tc

³Ss

Laboratory Control Sample (LCS)

(LCS) R3811062-2 07/05/22 09:39

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Iron,Dissolved	10000	9890	98.9	80.0-120	
Manganese,Dissolved	1000	940	94.0	80.0-120	

⁴Cn

⁵Sr

⁶Qc

L1503853-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1503853-01 07/05/22 09:42 • (MS) R3811062-4 07/05/22 09:47 • (MSD) R3811062-5 07/05/22 09:49

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Iron,Dissolved	10000	19.4	10000	9940	99.9	99.2	1	75.0-125			0.665	20
Manganese,Dissolved	1000	118	1060	1050	94.1	93.2	1	75.0-125			0.908	20

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3804638-2 06/18/22 10:03

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Methane	U		2.91	10.0
Ethane	U		4.07	13.0
Ethene	U		4.26	13.0

L1504979-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1504979-06 06/18/22 11:03 • (DUP) R3804638-3 06/18/22 11:09

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	U	U	1	0.000		20
Ethane	U	U	1	0.000		20
Ethene	U	U	1	0.000		20

L1505000-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1505000-05 06/18/22 13:53 • (DUP) R3804638-4 06/18/22 13:56

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Methane	130	130	1	0.000		20
Ethane	U	U	1	0.000		20
Ethene	U	U	1	0.000		20

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

(LCS) R3804638-1 06/18/22 10:00 • (LCSD) R3804638-7 06/18/22 14:06

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	%	%	%			%	%
Methane	67.8	70.3	74.0	104	109	85.0-115			5.13	20
Ethane	129	123	127	95.3	98.4	85.0-115			3.20	20
Ethene	127	123	128	96.9	101	85.0-115			3.98	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

L1504998-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1504998-01 06/18/22 12:55 • (MS) R3804638-5 06/18/22 14:00 • (MSD) R3804638-6 06/18/22 14:03

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 %
Methane	67.8	U	73.8	72.0	109	106	1	50.0-150			2.47	20
Ethane	129	U	127	128	98.4	99.2	1	50.0-150			0.784	20
Ethene	127	U	128	129	101	102	1	50.0-150			0.778	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

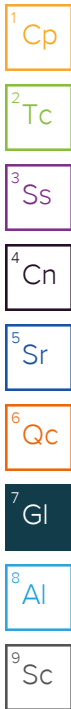
The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

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

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

Qualifier	Description
B	The same analyte is found in the associated blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
V	The sample concentration is too high to evaluate accurate spike recoveries.



ACCREDITATIONS & LOCATIONS

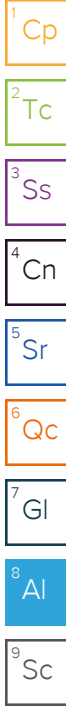
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Company Name/Address: Pinyon Environmental		Billing Information:	Pres Chk	Analysis / Container / Preservative						Chain of Custody Page 1 of 1
4815 E. Carefree Highway #108-274 Cave Creek, AZ 85331		Accounts Payable 3222 S Vance Street Suite 200 Lakewood, CO 80227								
Report to: Marcus Guarnieri, Isabella Foster		Email To: guarnieri@pinyon-env.com; Foster@pinyon-								



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/hubs/pas-standards/terms.pdf>

SDG # **1504968**
1246

Acctnum: **PINYONMAZ**
Template: **T205653**
Prelogin: **P931908**
PM: **288 - Daphne Richards**
PB:

Project Description: Nammo TTU Groundwater Monitoring	City/State Collected: Mesa, AZ	Please Circle: PT MT CT ET				
Phone: 602-290-4774	Client Project # 722152201.002	Lab Project # PINYONMAZ-722152201				
Collected by (print): Isabella Foster	Site/Facility ID #	P.O. #				
Collected by (signature): <i>Isabella Foster</i>	Rush? (Lab MUST Be Notified) <input type="checkbox"/> Same Day <input type="checkbox"/> Five Day <input type="checkbox"/> Next Day <input type="checkbox"/> 5 Day (Rad Only) <input type="checkbox"/> Two Day <input type="checkbox"/> 10 Day (Rad Only) <input type="checkbox"/> Three Day	Quote # standard				
Immediately Packed on Ice N <input type="checkbox"/> Y <input checked="" type="checkbox"/>		Date Results Needed				
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Br, Cl, NO2, NO3, SO4	125ml HDPE - NoPres	Diss. Fe, Mn	250ml HDPE - NoPres	PERCHLORATE	125ml HDPE - NoPres	RSK175	40ml Amb HCl	SUBPER6850	125ml HDPE - NoPres	SULFIDE	250ml Amb-S-NaOH+ZnAc	TOC	250ml HDPE - HCl	V8260AZ	40ml Amb - HCl	V8260LL14D	40ml Amb - HCl	Remarks	Sample # (lab only)		
TTU-20-73-2022-614		GW	73	6/14/22	0822	6	X	X				X	X	X	X	X	X										-01	
		GW																										
		GW																										
		GW																										
		GW																										
		GW																										
		GW																										
		GW																										
		GW																										
		GW																										

* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other _____	Remarks: SUBPER6850 to be subbed to Eurofins - Sacramento, CA	pH _____ Temp _____	Sample Receipt Checklist	
Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier _____	Tracking # 582966989319	Flow _____ Other _____	COC Seal Present/Intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	COC Signed/Accurate: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Relinquished by: (Signature) <i>Isabella Foster</i>	Date: 6-14-22	Time: 1531	Bottles arrive intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	Correct bottles used: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N
Relinquished by: (Signature) <i>Isabella Foster</i>	Date: 6-14-22	Time: 1709	Sufficient volume sent: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	VOA Zero Headspace: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N
Relinquished by: (Signature) <i>Isabella Foster</i>	Date: _____	Time: _____	Received by: (Signature) <i>Felix</i>	Temp: 2.5-2.5 °C
			Received for lab by: (Signature) <i>Joyce Palmer</i>	Bottles Received: 6
				If preservation required by Login: Date/Time
				Hold: _____ Condition: NCF / OK

PUPA 2

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

Pinyon Environmental

Sample Delivery Group: L1504991
Samples Received: 06/15/2022
Project Number: 722152201.002
Description: Nammo TTU Groundwater Monitoring

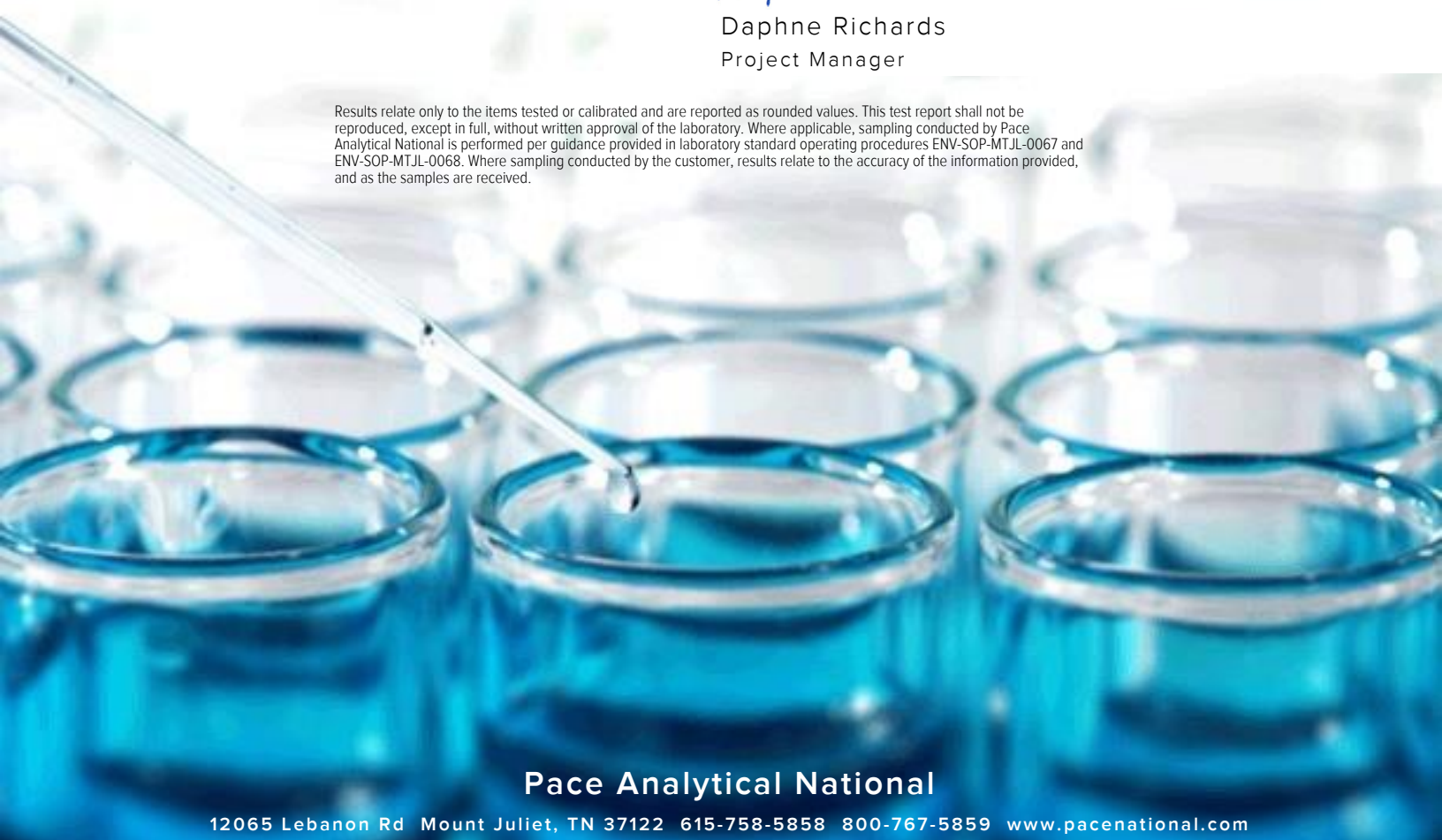
Report To: Jeremy Musson
4815 E. Carefree Highway
#108-274
Cave Creek, AZ 85331

Entire Report Reviewed By:



Daphne Richards
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

TABLE OF CONTENTS

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	5
Sr: Sample Results	6
TTU-14-64-2022-614 L1504991-01	6
TTU-4-57-2022-614 L1504991-02	8
TTU-8-164-2022-614 L1504991-03	10
TTU-3-108-2022-614 L1504991-04	12
TTU-7-345-2022-614 L1504991-05	14
TTU-6-143-2022-614 L1504991-06	16
TTU-10-153-2022-614 L1504991-07	18
DUP-02 L1504991-08	20
TRIP BLANK L1504991-09	22
Qc: Quality Control Summary	24
Wet Chemistry by Method 314.0 Mod	24
Volatile Organic Compounds (GC/MS) by Method 8260B	27
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	40
Is: Internal Standard Summary	44
Volatile Organic Compounds (GC/MS) by Method 8260B	44
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	46
Gl: Glossary of Terms	48
Al: Accreditations & Locations	49
Sc: Sample Chain of Custody	50



SAMPLE SUMMARY

TTU-14-64-2022-614 L1504991-01 GW

Collected by Belle Foster Collected date/time 06/14/22 06:42 Received date/time 06/15/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1881123	5000	06/23/22 13:53	06/23/22 13:53	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1883877	1	06/23/22 06:32	06/23/22 06:32	TJJ	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1884962	20	06/24/22 17:02	06/24/22 17:02	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1884513	5	06/24/22 15:28	06/24/22 15:28	DWR	Mt. Juliet, TN

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

TTU-4-57-2022-614 L1504991-02 GW

Collected by Belle Foster Collected date/time 06/14/22 10:16 Received date/time 06/15/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1883531	1	06/22/22 20:09	06/22/22 20:09	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1883877	1	06/23/22 07:36	06/23/22 07:36	TJJ	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1882718	1	06/22/22 16:30	06/22/22 16:30	DWR	Mt. Juliet, TN

TTU-8-164-2022-614 L1504991-03 GW

Collected by Belle Foster Collected date/time 06/14/22 10:47 Received date/time 06/15/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1883531	1	06/22/22 20:37	06/22/22 20:37	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1883877	1	06/23/22 07:57	06/23/22 07:57	TJJ	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1885635	1	06/27/22 00:14	06/27/22 00:14	ACG	Mt. Juliet, TN

TTU-3-108-2022-614 L1504991-04 GW

Collected by Belle Foster Collected date/time 06/14/22 11:24 Received date/time 06/15/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1881123	5	06/23/22 14:21	06/23/22 14:21	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1883877	1	06/23/22 08:18	06/23/22 08:18	TJJ	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1885092	1	06/24/22 16:07	06/24/22 16:07	DWR	Mt. Juliet, TN

TTU-7-345-2022-614 L1504991-05 GW

Foster

Collected by Belle Collected date/time 06/14/22 11:52 Received date/time 06/15/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1883531	1	06/22/22 23:28	06/22/22 23:28	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1883877	1	06/23/22 08:39	06/23/22 08:39	TJJ	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1885092	1	06/24/22 16:28	06/24/22 16:28	DWR	Mt. Juliet, TN

TTU-6-143-2022-614 L1504991-06 GW

Collected by Belle Foster Collected date/time 06/14/22 12:16 Received date/time 06/15/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1883531	1	06/22/22 23:56	06/22/22 23:56	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1884247	1	06/24/22 15:21	06/24/22 15:21	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1885092	1	06/24/22 16:47	06/24/22 16:47	DWR	Mt. Juliet, TN

SAMPLE SUMMARY

TTU-10-153-2022-614 L1504991-07 GW

Collected by Belle Foster Collected date/time 06/14/22 13:06 Received date/time 06/15/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1883531	1	06/23/22 00:25	06/23/22 00:25	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1884247	1	06/24/22 15:41	06/24/22 15:41	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1885092	1	06/24/22 17:07	06/24/22 17:07	DWR	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

DUP-02 L1504991-08 GW

Collected by Belle Foster Collected date/time 06/14/22 13:06 Received date/time 06/15/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1883531	1	06/23/22 14:50	06/23/22 14:50	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1884247	1	06/24/22 16:02	06/24/22 16:02	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1885092	1	06/24/22 17:28	06/24/22 17:28	DWR	Mt. Juliet, TN

TRIP BLANK L1504991-09 GW

Collected by Belle Foster Collected date/time 06/14/22 00:00 Received date/time 06/15/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1884247	1	06/24/22 11:54	06/24/22 11:54	DWR	Mt. Juliet, TN

CASE NARRATIVE

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



Daphne Richards
Project Manager

Sample Delivery Group (SDG) Narrative

No extra volume received to perform Matrix Spike samples.

<u>Lab Sample ID</u>	<u>Project Sample ID</u>	<u>Method</u>
L1504991-01	TTU-14-69-2022-614	8260B, 8260B-SIM



Wet Chemistry by Method 314.0 Mod

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Perchlorate	136000		1500	20000	5000	06/23/2022 13:53	WG1881123

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	06/23/2022 06:32	WG1883877
Acrolein	U		2.54	50.0	1	06/23/2022 06:32	WG1883877
Acrylonitrile	U		0.671	10.0	1	06/23/2022 06:32	WG1883877
Benzene	1.95		0.0941	1.00	1	06/23/2022 06:32	WG1883877
Bromobenzene	U		0.118	1.00	1	06/23/2022 06:32	WG1883877
Bromodichloromethane	U		0.136	1.00	1	06/23/2022 06:32	WG1883877
Bromoform	U	J4	0.129	1.00	1	06/23/2022 06:32	WG1883877
Bromomethane	U		0.605	5.00	1	06/23/2022 06:32	WG1883877
1,3-Butadiene	U		0.299	2.00	1	06/23/2022 06:32	WG1883877
n-Butylbenzene	U		0.157	1.00	1	06/23/2022 06:32	WG1883877
sec-Butylbenzene	U		0.125	1.00	1	06/23/2022 06:32	WG1883877
tert-Butylbenzene	U		0.127	1.00	1	06/23/2022 06:32	WG1883877
Carbon tetrachloride	U		0.128	1.00	1	06/23/2022 06:32	WG1883877
Carbon disulfide	U		0.0962	1.00	1	06/23/2022 06:32	WG1883877
Chlorobenzene	U		0.116	1.00	1	06/23/2022 06:32	WG1883877
Chlorodibromomethane	U	J4	0.140	1.00	1	06/23/2022 06:32	WG1883877
Chloroethane	U	J3	0.192	5.00	1	06/23/2022 06:32	WG1883877
Chloroform	1.96	J	0.111	5.00	1	06/23/2022 06:32	WG1883877
Chloromethane	U		0.960	2.50	1	06/23/2022 06:32	WG1883877
Cyclohexane	U		0.188	1.00	1	06/23/2022 06:32	WG1883877
2-Chlorotoluene	U		0.106	1.00	1	06/23/2022 06:32	WG1883877
4-Chlorotoluene	U		0.114	1.00	1	06/23/2022 06:32	WG1883877
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	06/23/2022 06:32	WG1883877
1,2-Dibromoethane	U		0.126	1.00	1	06/23/2022 06:32	WG1883877
Dibromomethane	U		0.122	1.00	1	06/23/2022 06:32	WG1883877
1,2-Dichlorobenzene	U		0.107	1.00	1	06/23/2022 06:32	WG1883877
1,3-Dichlorobenzene	U		0.110	1.00	1	06/23/2022 06:32	WG1883877
1,4-Dichlorobenzene	U		0.120	1.00	1	06/23/2022 06:32	WG1883877
Dichlorodifluoromethane	U		0.374	5.00	1	06/23/2022 06:32	WG1883877
1,1-Dichloroethane	1.22		0.100	1.00	1	06/23/2022 06:32	WG1883877
1,2-Dichloroethane	U		0.0819	1.00	1	06/23/2022 06:32	WG1883877
1,1-Dichloroethene	125	J3	0.188	1.00	1	06/23/2022 06:32	WG1883877
cis-1,2-Dichloroethene	2.02		0.126	1.00	1	06/23/2022 06:32	WG1883877
trans-1,2-Dichloroethene	U		0.149	1.00	1	06/23/2022 06:32	WG1883877
1,2-Dichloropropane	U		0.149	1.00	1	06/23/2022 06:32	WG1883877
1,1-Dichloropropene	U		0.142	1.00	1	06/23/2022 06:32	WG1883877
1,3-Dichloropropane	U		0.110	1.00	1	06/23/2022 06:32	WG1883877
cis-1,3-Dichloropropene	U		0.111	1.00	1	06/23/2022 06:32	WG1883877
trans-1,3-Dichloropropene	U		0.118	1.00	1	06/23/2022 06:32	WG1883877
2,2-Dichloropropane	U		0.161	1.00	1	06/23/2022 06:32	WG1883877
Dicyclopentadiene	U		0.253	1.00	1	06/23/2022 06:32	WG1883877
Di-isopropyl ether	U		0.105	1.00	1	06/23/2022 06:32	WG1883877
Ethylbenzene	U		0.137	1.00	1	06/23/2022 06:32	WG1883877
4-Ethyltoluene	U		0.208	1.00	1	06/23/2022 06:32	WG1883877
Hexachloro-1,3-butadiene	U	J3	0.337	1.00	1	06/23/2022 06:32	WG1883877
n-Hexane	U		0.749	10.0	1	06/23/2022 06:32	WG1883877
Isopropylbenzene	U		0.105	1.00	1	06/23/2022 06:32	WG1883877
p-Isopropyltoluene	U		0.120	1.00	1	06/23/2022 06:32	WG1883877
2-Butanone (MEK)	U	J3	1.19	10.0	1	06/23/2022 06:32	WG1883877
Methyl Cyclohexane	10.3		0.660	1.00	1	06/23/2022 06:32	WG1883877

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	U		0.430	5.00	1	06/23/2022 06:32	WG1883877
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	06/23/2022 06:32	WG1883877
Methyl tert-butyl ether	U		0.101	1.00	1	06/23/2022 06:32	WG1883877
Naphthalene	U		1.00	5.00	1	06/23/2022 06:32	WG1883877
Propene	U		0.936	2.50	1	06/23/2022 06:32	WG1883877
n-Propylbenzene	U		0.0993	1.00	1	06/23/2022 06:32	WG1883877
Styrene	U		0.118	1.00	1	06/23/2022 06:32	WG1883877
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	06/23/2022 06:32	WG1883877
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	06/23/2022 06:32	WG1883877
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	06/23/2022 06:32	WG1883877
Tetrachloroethene	1.46		0.300	1.00	1	06/23/2022 06:32	WG1883877
Toluene	U		0.278	1.00	1	06/23/2022 06:32	WG1883877
1,2,3-Trichlorobenzene	U		0.230	1.00	1	06/23/2022 06:32	WG1883877
1,2,4-Trichlorobenzene	U		0.481	1.00	1	06/23/2022 06:32	WG1883877
1,1,1-Trichloroethane	U		0.149	1.00	1	06/23/2022 06:32	WG1883877
1,1,2-Trichloroethane	2.09		0.158	1.00	1	06/23/2022 06:32	WG1883877
Trichloroethene	1040		3.80	20.0	20	06/24/2022 17:02	WG1884962
Trichlorofluoromethane	U		0.160	5.00	1	06/23/2022 06:32	WG1883877
1,2,3-Trichloropropane	U		0.237	2.50	1	06/23/2022 06:32	WG1883877
1,2,4-Trimethylbenzene	U		0.322	1.00	1	06/23/2022 06:32	WG1883877
1,2,3-Trimethylbenzene	U		0.104	1.00	1	06/23/2022 06:32	WG1883877
1,3,5-Trimethylbenzene	U		0.104	1.00	1	06/23/2022 06:32	WG1883877
Vinyl chloride	U		0.234	1.00	1	06/23/2022 06:32	WG1883877
Xylenes, Total	U		0.174	3.00	1	06/23/2022 06:32	WG1883877
(S) Toluene-d8	102			80.0-120		06/23/2022 06:32	WG1883877
(S) Toluene-d8	105			80.0-120		06/24/2022 17:02	WG1884962
(S) 4-Bromofluorobenzene	101			77.0-126		06/23/2022 06:32	WG1883877
(S) 4-Bromofluorobenzene	105			77.0-126		06/24/2022 17:02	WG1884962
(S) 1,2-Dichloroethane-d4	105			70.0-130		06/23/2022 06:32	WG1883877
(S) 1,2-Dichloroethane-d4	100			70.0-130		06/24/2022 17:02	WG1884962

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

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	297	<u>J3</u>	2.99	15.0	5	06/24/2022 15:28	WG1884513
(S) Toluene-d8	103			77.0-127		06/24/2022 15:28	WG1884513

Wet Chemistry by Method 314.0 Mod

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Perchlorate	12.1	<u>J6</u>	0.300	4.00	1	06/22/2022 20:09	<u>WG1883531</u>

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	06/23/2022 07:36	<u>WG1883877</u>
Acrolein	U		2.54	50.0	1	06/23/2022 07:36	<u>WG1883877</u>
Acrylonitrile	U		0.671	10.0	1	06/23/2022 07:36	<u>WG1883877</u>
Benzene	U		0.0941	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
Bromobenzene	U		0.118	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
Bromodichloromethane	U		0.136	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
Bromoform	U	<u>J4</u>	0.129	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
Bromomethane	U		0.605	5.00	1	06/23/2022 07:36	<u>WG1883877</u>
1,3-Butadiene	U		0.299	2.00	1	06/23/2022 07:36	<u>WG1883877</u>
n-Butylbenzene	U		0.157	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
sec-Butylbenzene	U		0.125	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
tert-Butylbenzene	U		0.127	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
Carbon tetrachloride	U		0.128	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
Carbon disulfide	U		0.0962	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
Chlorobenzene	U		0.116	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
Chlorodibromomethane	U	<u>J4</u>	0.140	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
Chloroethane	U	<u>J3</u>	0.192	5.00	1	06/23/2022 07:36	<u>WG1883877</u>
Chloroform	U		0.111	5.00	1	06/23/2022 07:36	<u>WG1883877</u>
Chloromethane	U		0.960	2.50	1	06/23/2022 07:36	<u>WG1883877</u>
Cyclohexane	U		0.188	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
2-Chlorotoluene	U		0.106	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
4-Chlorotoluene	U		0.114	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	06/23/2022 07:36	<u>WG1883877</u>
1,2-Dibromoethane	U		0.126	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
Dibromomethane	U		0.122	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
1,2-Dichlorobenzene	U		0.107	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
1,3-Dichlorobenzene	U		0.110	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
1,4-Dichlorobenzene	U		0.120	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
Dichlorodifluoromethane	U		0.374	5.00	1	06/23/2022 07:36	<u>WG1883877</u>
1,1-Dichloroethane	U		0.100	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
1,2-Dichloroethane	U		0.0819	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
1,1-Dichloroethene	U	<u>J3</u>	0.188	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
cis-1,2-Dichloroethene	U		0.126	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
trans-1,2-Dichloroethene	U		0.149	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
1,2-Dichloropropane	U		0.149	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
1,1-Dichloropropene	U		0.142	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
1,3-Dichloropropane	U		0.110	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
cis-1,3-Dichloropropene	U		0.111	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
trans-1,3-Dichloropropene	U		0.118	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
2,2-Dichloropropane	U		0.161	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
Dicyclopentadiene	U		0.253	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
Di-isopropyl ether	U		0.105	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
Ethylbenzene	U		0.137	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
4-Ethyltoluene	U		0.208	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
Hexachloro-1,3-butadiene	U	<u>J3</u>	0.337	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
n-Hexane	U		0.749	10.0	1	06/23/2022 07:36	<u>WG1883877</u>
Isopropylbenzene	U		0.105	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
p-Isopropyltoluene	U		0.120	1.00	1	06/23/2022 07:36	<u>WG1883877</u>
2-Butanone (MEK)	U	<u>J3</u>	1.19	10.0	1	06/23/2022 07:36	<u>WG1883877</u>
Methyl Cyclohexane	U		0.660	1.00	1	06/23/2022 07:36	<u>WG1883877</u>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	0.483	<u>J</u>	0.430	5.00	1	06/23/2022 07:36	WG1883877
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	06/23/2022 07:36	WG1883877
Methyl tert-butyl ether	U		0.101	1.00	1	06/23/2022 07:36	WG1883877
Naphthalene	U		1.00	5.00	1	06/23/2022 07:36	WG1883877
Propene	U		0.936	2.50	1	06/23/2022 07:36	WG1883877
n-Propylbenzene	U		0.0993	1.00	1	06/23/2022 07:36	WG1883877
Styrene	U		0.118	1.00	1	06/23/2022 07:36	WG1883877
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	06/23/2022 07:36	WG1883877
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	06/23/2022 07:36	WG1883877
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	06/23/2022 07:36	WG1883877
Tetrachloroethene	U		0.300	1.00	1	06/23/2022 07:36	WG1883877
Toluene	U		0.278	1.00	1	06/23/2022 07:36	WG1883877
1,2,3-Trichlorobenzene	U		0.230	1.00	1	06/23/2022 07:36	WG1883877
1,2,4-Trichlorobenzene	U		0.481	1.00	1	06/23/2022 07:36	WG1883877
1,1,1-Trichloroethane	U		0.149	1.00	1	06/23/2022 07:36	WG1883877
1,1,2-Trichloroethane	U		0.158	1.00	1	06/23/2022 07:36	WG1883877
Trichloroethene	U	<u>J3</u>	0.190	1.00	1	06/23/2022 07:36	WG1883877
Trichlorofluoromethane	U		0.160	5.00	1	06/23/2022 07:36	WG1883877
1,2,3-Trichloropropane	U		0.237	2.50	1	06/23/2022 07:36	WG1883877
1,2,4-Trimethylbenzene	U		0.322	1.00	1	06/23/2022 07:36	WG1883877
1,2,3-Trimethylbenzene	U		0.104	1.00	1	06/23/2022 07:36	WG1883877
1,3,5-Trimethylbenzene	U		0.104	1.00	1	06/23/2022 07:36	WG1883877
Vinyl chloride	U		0.234	1.00	1	06/23/2022 07:36	WG1883877
Xylenes, Total	U		0.174	3.00	1	06/23/2022 07:36	WG1883877
(S) Toluene-d8	110			80.0-120		06/23/2022 07:36	WG1883877
(S) 4-Bromofluorobenzene	99.3			77.0-126		06/23/2022 07:36	WG1883877
(S) 1,2-Dichloroethane-d4	107			70.0-130		06/23/2022 07:36	WG1883877

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	11.1		0.597	3.00	1	06/22/2022 16:30	WG1882718
(S) Toluene-d8	101			77.0-127		06/22/2022 16:30	WG1882718

Wet Chemistry by Method 314.0 Mod

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Perchlorate	1.84	J	0.300	4.00	1	06/22/2022 20:37	WG1883531

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	06/23/2022 07:57	WG1883877
Acrolein	U		2.54	50.0	1	06/23/2022 07:57	WG1883877
Acrylonitrile	U		0.671	10.0	1	06/23/2022 07:57	WG1883877
Benzene	U		0.0941	1.00	1	06/23/2022 07:57	WG1883877
Bromobenzene	U		0.118	1.00	1	06/23/2022 07:57	WG1883877
Bromodichloromethane	U		0.136	1.00	1	06/23/2022 07:57	WG1883877
Bromoform	U	J4	0.129	1.00	1	06/23/2022 07:57	WG1883877
Bromomethane	U		0.605	5.00	1	06/23/2022 07:57	WG1883877
1,3-Butadiene	U		0.299	2.00	1	06/23/2022 07:57	WG1883877
n-Butylbenzene	U		0.157	1.00	1	06/23/2022 07:57	WG1883877
sec-Butylbenzene	U		0.125	1.00	1	06/23/2022 07:57	WG1883877
tert-Butylbenzene	U		0.127	1.00	1	06/23/2022 07:57	WG1883877
Carbon tetrachloride	U		0.128	1.00	1	06/23/2022 07:57	WG1883877
Carbon disulfide	U		0.0962	1.00	1	06/23/2022 07:57	WG1883877
Chlorobenzene	U		0.116	1.00	1	06/23/2022 07:57	WG1883877
Chlorodibromomethane	U	J4	0.140	1.00	1	06/23/2022 07:57	WG1883877
Chloroethane	U	J5	0.192	5.00	1	06/23/2022 07:57	WG1883877
Chloroform	U		0.111	5.00	1	06/23/2022 07:57	WG1883877
Chloromethane	U		0.960	2.50	1	06/23/2022 07:57	WG1883877
Cyclohexane	U		0.188	1.00	1	06/23/2022 07:57	WG1883877
2-Chlorotoluene	U		0.106	1.00	1	06/23/2022 07:57	WG1883877
4-Chlorotoluene	U		0.114	1.00	1	06/23/2022 07:57	WG1883877
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	06/23/2022 07:57	WG1883877
1,2-Dibromoethane	U		0.126	1.00	1	06/23/2022 07:57	WG1883877
Dibromomethane	U		0.122	1.00	1	06/23/2022 07:57	WG1883877
1,2-Dichlorobenzene	U		0.107	1.00	1	06/23/2022 07:57	WG1883877
1,3-Dichlorobenzene	U		0.110	1.00	1	06/23/2022 07:57	WG1883877
1,4-Dichlorobenzene	U		0.120	1.00	1	06/23/2022 07:57	WG1883877
Dichlorodifluoromethane	U		0.374	5.00	1	06/23/2022 07:57	WG1883877
1,1-Dichloroethane	U		0.100	1.00	1	06/23/2022 07:57	WG1883877
1,2-Dichloroethane	U		0.0819	1.00	1	06/23/2022 07:57	WG1883877
1,1-Dichloroethene	U		0.188	1.00	1	06/23/2022 07:57	WG1883877
cis-1,2-Dichloroethene	U		0.126	1.00	1	06/23/2022 07:57	WG1883877
trans-1,2-Dichloroethene	U		0.149	1.00	1	06/23/2022 07:57	WG1883877
1,2-Dichloropropane	U		0.149	1.00	1	06/23/2022 07:57	WG1883877
1,1-Dichloropropene	U		0.142	1.00	1	06/23/2022 07:57	WG1883877
1,3-Dichloropropane	U		0.110	1.00	1	06/23/2022 07:57	WG1883877
cis-1,3-Dichloropropene	U		0.111	1.00	1	06/23/2022 07:57	WG1883877
trans-1,3-Dichloropropene	U		0.118	1.00	1	06/23/2022 07:57	WG1883877
2,2-Dichloropropane	U		0.161	1.00	1	06/23/2022 07:57	WG1883877
Dicyclopentadiene	U		0.253	1.00	1	06/23/2022 07:57	WG1883877
Di-isopropyl ether	U		0.105	1.00	1	06/23/2022 07:57	WG1883877
Ethylbenzene	U		0.137	1.00	1	06/23/2022 07:57	WG1883877
4-Ethyltoluene	U		0.208	1.00	1	06/23/2022 07:57	WG1883877
Hexachloro-1,3-butadiene	U		0.337	1.00	1	06/23/2022 07:57	WG1883877
n-Hexane	U		0.749	10.0	1	06/23/2022 07:57	WG1883877
Isopropylbenzene	U		0.105	1.00	1	06/23/2022 07:57	WG1883877
p-Isopropyltoluene	U		0.120	1.00	1	06/23/2022 07:57	WG1883877
2-Butanone (MEK)	U		1.19	10.0	1	06/23/2022 07:57	WG1883877
Methyl Cyclohexane	U		0.660	1.00	1	06/23/2022 07:57	WG1883877

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	U		0.430	5.00	1	06/23/2022 07:57	WG1883877
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	06/23/2022 07:57	WG1883877
Methyl tert-butyl ether	U		0.101	1.00	1	06/23/2022 07:57	WG1883877
Naphthalene	U	J3 J5	1.00	5.00	1	06/23/2022 07:57	WG1883877
Propene	U		0.936	2.50	1	06/23/2022 07:57	WG1883877
n-Propylbenzene	U	J5	0.0993	1.00	1	06/23/2022 07:57	WG1883877
Styrene	U		0.118	1.00	1	06/23/2022 07:57	WG1883877
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	06/23/2022 07:57	WG1883877
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	06/23/2022 07:57	WG1883877
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	06/23/2022 07:57	WG1883877
Tetrachloroethene	U		0.300	1.00	1	06/23/2022 07:57	WG1883877
Toluene	U		0.278	1.00	1	06/23/2022 07:57	WG1883877
1,2,3-Trichlorobenzene	U		0.230	1.00	1	06/23/2022 07:57	WG1883877
1,2,4-Trichlorobenzene	U		0.481	1.00	1	06/23/2022 07:57	WG1883877
1,1,1-Trichloroethane	U		0.149	1.00	1	06/23/2022 07:57	WG1883877
1,1,2-Trichloroethane	U		0.158	1.00	1	06/23/2022 07:57	WG1883877
Trichloroethene	U		0.190	1.00	1	06/23/2022 07:57	WG1883877
Trichlorofluoromethane	U		0.160	5.00	1	06/23/2022 07:57	WG1883877
1,2,3-Trichloropropane	U		0.237	2.50	1	06/23/2022 07:57	WG1883877
1,2,4-Trimethylbenzene	U		0.322	1.00	1	06/23/2022 07:57	WG1883877
1,2,3-Trimethylbenzene	U		0.104	1.00	1	06/23/2022 07:57	WG1883877
1,3,5-Trimethylbenzene	U		0.104	1.00	1	06/23/2022 07:57	WG1883877
Vinyl chloride	U		0.234	1.00	1	06/23/2022 07:57	WG1883877
Xylenes, Total	U		0.174	3.00	1	06/23/2022 07:57	WG1883877
(S) Toluene-d8	113			80.0-120		06/23/2022 07:57	WG1883877
(S) 4-Bromofluorobenzene	110			77.0-126		06/23/2022 07:57	WG1883877
(S) 1,2-Dichloroethane-d4	103			70.0-130		06/23/2022 07:57	WG1883877

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

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	U		0.597	3.00	1	06/27/2022 00:14	WG1885635
(S) Toluene-d8	103			77.0-127		06/27/2022 00:14	WG1885635

Wet Chemistry by Method 314.0 Mod

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Perchlorate	134		1.50	20.0	5	06/23/2022 14:21	WG1881123

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	06/23/2022 08:18	WG1883877
Acrolein	U		2.54	50.0	1	06/23/2022 08:18	WG1883877
Acrylonitrile	U		0.671	10.0	1	06/23/2022 08:18	WG1883877
Benzene	U		0.0941	1.00	1	06/23/2022 08:18	WG1883877
Bromobenzene	U		0.118	1.00	1	06/23/2022 08:18	WG1883877
Bromodichloromethane	U		0.136	1.00	1	06/23/2022 08:18	WG1883877
Bromoform	U	J4	0.129	1.00	1	06/23/2022 08:18	WG1883877
Bromomethane	U		0.605	5.00	1	06/23/2022 08:18	WG1883877
1,3-Butadiene	U		0.299	2.00	1	06/23/2022 08:18	WG1883877
n-Butylbenzene	U		0.157	1.00	1	06/23/2022 08:18	WG1883877
sec-Butylbenzene	U		0.125	1.00	1	06/23/2022 08:18	WG1883877
tert-Butylbenzene	U		0.127	1.00	1	06/23/2022 08:18	WG1883877
Carbon tetrachloride	U		0.128	1.00	1	06/23/2022 08:18	WG1883877
Carbon disulfide	U		0.0962	1.00	1	06/23/2022 08:18	WG1883877
Chlorobenzene	U		0.116	1.00	1	06/23/2022 08:18	WG1883877
Chlorodibromomethane	U	J4	0.140	1.00	1	06/23/2022 08:18	WG1883877
Chloroethane	U	J3	0.192	5.00	1	06/23/2022 08:18	WG1883877
Chloroform	U		0.111	5.00	1	06/23/2022 08:18	WG1883877
Chloromethane	U		0.960	2.50	1	06/23/2022 08:18	WG1883877
Cyclohexane	U		0.188	1.00	1	06/23/2022 08:18	WG1883877
2-Chlorotoluene	U		0.106	1.00	1	06/23/2022 08:18	WG1883877
4-Chlorotoluene	U		0.114	1.00	1	06/23/2022 08:18	WG1883877
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	06/23/2022 08:18	WG1883877
1,2-Dibromoethane	U		0.126	1.00	1	06/23/2022 08:18	WG1883877
Dibromomethane	U		0.122	1.00	1	06/23/2022 08:18	WG1883877
1,2-Dichlorobenzene	U		0.107	1.00	1	06/23/2022 08:18	WG1883877
1,3-Dichlorobenzene	U		0.110	1.00	1	06/23/2022 08:18	WG1883877
1,4-Dichlorobenzene	U		0.120	1.00	1	06/23/2022 08:18	WG1883877
Dichlorodifluoromethane	U		0.374	5.00	1	06/23/2022 08:18	WG1883877
1,1-Dichloroethane	U		0.100	1.00	1	06/23/2022 08:18	WG1883877
1,2-Dichloroethane	U		0.0819	1.00	1	06/23/2022 08:18	WG1883877
1,1-Dichloroethene	U	J3	0.188	1.00	1	06/23/2022 08:18	WG1883877
cis-1,2-Dichloroethene	U		0.126	1.00	1	06/23/2022 08:18	WG1883877
trans-1,2-Dichloroethene	U		0.149	1.00	1	06/23/2022 08:18	WG1883877
1,2-Dichloropropane	U		0.149	1.00	1	06/23/2022 08:18	WG1883877
1,1-Dichloropropene	U		0.142	1.00	1	06/23/2022 08:18	WG1883877
1,3-Dichloropropane	U		0.110	1.00	1	06/23/2022 08:18	WG1883877
cis-1,3-Dichloropropene	U		0.111	1.00	1	06/23/2022 08:18	WG1883877
trans-1,3-Dichloropropene	U		0.118	1.00	1	06/23/2022 08:18	WG1883877
2,2-Dichloropropane	U		0.161	1.00	1	06/23/2022 08:18	WG1883877
Dicyclopentadiene	U		0.253	1.00	1	06/23/2022 08:18	WG1883877
Di-isopropyl ether	U		0.105	1.00	1	06/23/2022 08:18	WG1883877
Ethylbenzene	U		0.137	1.00	1	06/23/2022 08:18	WG1883877
4-Ethyltoluene	U		0.208	1.00	1	06/23/2022 08:18	WG1883877
Hexachloro-1,3-butadiene	U	J3	0.337	1.00	1	06/23/2022 08:18	WG1883877
n-Hexane	U		0.749	10.0	1	06/23/2022 08:18	WG1883877
Isopropylbenzene	U		0.105	1.00	1	06/23/2022 08:18	WG1883877
p-Isopropyltoluene	U		0.120	1.00	1	06/23/2022 08:18	WG1883877
2-Butanone (MEK)	U	J3	1.19	10.0	1	06/23/2022 08:18	WG1883877
Methyl Cyclohexane	U		0.660	1.00	1	06/23/2022 08:18	WG1883877

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	U		0.430	5.00	1	06/23/2022 08:18	WG1883877
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	06/23/2022 08:18	WG1883877
Methyl tert-butyl ether	U		0.101	1.00	1	06/23/2022 08:18	WG1883877
Naphthalene	U		1.00	5.00	1	06/23/2022 08:18	WG1883877
Propene	U		0.936	2.50	1	06/23/2022 08:18	WG1883877
n-Propylbenzene	U		0.0993	1.00	1	06/23/2022 08:18	WG1883877
Styrene	U		0.118	1.00	1	06/23/2022 08:18	WG1883877
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	06/23/2022 08:18	WG1883877
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	06/23/2022 08:18	WG1883877
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	06/23/2022 08:18	WG1883877
Tetrachloroethene	U		0.300	1.00	1	06/23/2022 08:18	WG1883877
Toluene	U		0.278	1.00	1	06/23/2022 08:18	WG1883877
1,2,3-Trichlorobenzene	U		0.230	1.00	1	06/23/2022 08:18	WG1883877
1,2,4-Trichlorobenzene	U		0.481	1.00	1	06/23/2022 08:18	WG1883877
1,1,1-Trichloroethane	U		0.149	1.00	1	06/23/2022 08:18	WG1883877
1,1,2-Trichloroethane	U		0.158	1.00	1	06/23/2022 08:18	WG1883877
Trichloroethene	U	<u>J3</u>	0.190	1.00	1	06/23/2022 08:18	WG1883877
Trichlorofluoromethane	U		0.160	5.00	1	06/23/2022 08:18	WG1883877
1,2,3-Trichloropropane	U		0.237	2.50	1	06/23/2022 08:18	WG1883877
1,2,4-Trimethylbenzene	U		0.322	1.00	1	06/23/2022 08:18	WG1883877
1,2,3-Trimethylbenzene	U		0.104	1.00	1	06/23/2022 08:18	WG1883877
1,3,5-Trimethylbenzene	U		0.104	1.00	1	06/23/2022 08:18	WG1883877
Vinyl chloride	U		0.234	1.00	1	06/23/2022 08:18	WG1883877
Xylenes, Total	U		0.174	3.00	1	06/23/2022 08:18	WG1883877
(S) Toluene-d8	111			80.0-120		06/23/2022 08:18	WG1883877
(S) 4-Bromofluorobenzene	99.3			77.0-126		06/23/2022 08:18	WG1883877
(S) 1,2-Dichloroethane-d4	104			70.0-130		06/23/2022 08:18	WG1883877

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

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	U	<u>J3</u>	0.597	3.00	1	06/24/2022 16:07	WG1885092
(S) Toluene-d8	101			77.0-127		06/24/2022 16:07	WG1885092

Wet Chemistry by Method 314.0 Mod

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Perchlorate	1.90	<u>J</u>	0.300	4.00	1	06/22/2022 23:28	WG1883531

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	06/23/2022 08:39	WG1883877
Acrolein	U		2.54	50.0	1	06/23/2022 08:39	WG1883877
Acrylonitrile	U		0.671	10.0	1	06/23/2022 08:39	WG1883877
Benzene	U		0.0941	1.00	1	06/23/2022 08:39	WG1883877
Bromobenzene	U		0.118	1.00	1	06/23/2022 08:39	WG1883877
Bromodichloromethane	U		0.136	1.00	1	06/23/2022 08:39	WG1883877
Bromoform	U	<u>J4</u>	0.129	1.00	1	06/23/2022 08:39	WG1883877
Bromomethane	U		0.605	5.00	1	06/23/2022 08:39	WG1883877
1,3-Butadiene	U		0.299	2.00	1	06/23/2022 08:39	WG1883877
n-Butylbenzene	U		0.157	1.00	1	06/23/2022 08:39	WG1883877
sec-Butylbenzene	U		0.125	1.00	1	06/23/2022 08:39	WG1883877
tert-Butylbenzene	U		0.127	1.00	1	06/23/2022 08:39	WG1883877
Carbon tetrachloride	U		0.128	1.00	1	06/23/2022 08:39	WG1883877
Carbon disulfide	U		0.0962	1.00	1	06/23/2022 08:39	WG1883877
Chlorobenzene	U		0.116	1.00	1	06/23/2022 08:39	WG1883877
Chlorodibromomethane	U	<u>J4</u>	0.140	1.00	1	06/23/2022 08:39	WG1883877
Chloroethane	U	<u>J3</u>	0.192	5.00	1	06/23/2022 08:39	WG1883877
Chloroform	U		0.111	5.00	1	06/23/2022 08:39	WG1883877
Chloromethane	U		0.960	2.50	1	06/23/2022 08:39	WG1883877
Cyclohexane	U		0.188	1.00	1	06/23/2022 08:39	WG1883877
2-Chlorotoluene	U		0.106	1.00	1	06/23/2022 08:39	WG1883877
4-Chlorotoluene	U		0.114	1.00	1	06/23/2022 08:39	WG1883877
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	06/23/2022 08:39	WG1883877
1,2-Dibromoethane	U		0.126	1.00	1	06/23/2022 08:39	WG1883877
Dibromomethane	U		0.122	1.00	1	06/23/2022 08:39	WG1883877
1,2-Dichlorobenzene	U		0.107	1.00	1	06/23/2022 08:39	WG1883877
1,3-Dichlorobenzene	U		0.110	1.00	1	06/23/2022 08:39	WG1883877
1,4-Dichlorobenzene	U		0.120	1.00	1	06/23/2022 08:39	WG1883877
Dichlorodifluoromethane	U		0.374	5.00	1	06/23/2022 08:39	WG1883877
1,1-Dichloroethane	U		0.100	1.00	1	06/23/2022 08:39	WG1883877
1,2-Dichloroethane	U		0.0819	1.00	1	06/23/2022 08:39	WG1883877
1,1-Dichloroethene	U	<u>J3</u>	0.188	1.00	1	06/23/2022 08:39	WG1883877
cis-1,2-Dichloroethene	U		0.126	1.00	1	06/23/2022 08:39	WG1883877
trans-1,2-Dichloroethene	U		0.149	1.00	1	06/23/2022 08:39	WG1883877
1,2-Dichloropropane	U		0.149	1.00	1	06/23/2022 08:39	WG1883877
1,1-Dichloropropene	U		0.142	1.00	1	06/23/2022 08:39	WG1883877
1,3-Dichloropropane	U		0.110	1.00	1	06/23/2022 08:39	WG1883877
cis-1,3-Dichloropropene	U		0.111	1.00	1	06/23/2022 08:39	WG1883877
trans-1,3-Dichloropropene	U		0.118	1.00	1	06/23/2022 08:39	WG1883877
2,2-Dichloropropane	U		0.161	1.00	1	06/23/2022 08:39	WG1883877
Dicyclopentadiene	U		0.253	1.00	1	06/23/2022 08:39	WG1883877
Di-isopropyl ether	U		0.105	1.00	1	06/23/2022 08:39	WG1883877
Ethylbenzene	U		0.137	1.00	1	06/23/2022 08:39	WG1883877
4-Ethyltoluene	U		0.208	1.00	1	06/23/2022 08:39	WG1883877
Hexachloro-1,3-butadiene	U	<u>J3</u>	0.337	1.00	1	06/23/2022 08:39	WG1883877
n-Hexane	U		0.749	10.0	1	06/23/2022 08:39	WG1883877
Isopropylbenzene	0.107	<u>J</u>	0.105	1.00	1	06/23/2022 08:39	WG1883877
p-Isopropyltoluene	U		0.120	1.00	1	06/23/2022 08:39	WG1883877
2-Butanone (MEK)	U	<u>J3</u>	1.19	10.0	1	06/23/2022 08:39	WG1883877
Methyl Cyclohexane	U		0.660	1.00	1	06/23/2022 08:39	WG1883877

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	U		0.430	5.00	1	06/23/2022 08:39	WG1883877
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	06/23/2022 08:39	WG1883877
Methyl tert-butyl ether	U		0.101	1.00	1	06/23/2022 08:39	WG1883877
Naphthalene	U		1.00	5.00	1	06/23/2022 08:39	WG1883877
Propene	2.44	<u>J</u>	0.936	2.50	1	06/23/2022 08:39	WG1883877
n-Propylbenzene	U		0.0993	1.00	1	06/23/2022 08:39	WG1883877
Styrene	U		0.118	1.00	1	06/23/2022 08:39	WG1883877
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	06/23/2022 08:39	WG1883877
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	06/23/2022 08:39	WG1883877
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	06/23/2022 08:39	WG1883877
Tetrachloroethene	U		0.300	1.00	1	06/23/2022 08:39	WG1883877
Toluene	0.950	<u>J</u>	0.278	1.00	1	06/23/2022 08:39	WG1883877
1,2,3-Trichlorobenzene	U		0.230	1.00	1	06/23/2022 08:39	WG1883877
1,2,4-Trichlorobenzene	U		0.481	1.00	1	06/23/2022 08:39	WG1883877
1,1,1-Trichloroethane	U		0.149	1.00	1	06/23/2022 08:39	WG1883877
1,1,2-Trichloroethane	U		0.158	1.00	1	06/23/2022 08:39	WG1883877
Trichloroethene	U	<u>J3</u>	0.190	1.00	1	06/23/2022 08:39	WG1883877
Trichlorofluoromethane	U		0.160	5.00	1	06/23/2022 08:39	WG1883877
1,2,3-Trichloropropane	U		0.237	2.50	1	06/23/2022 08:39	WG1883877
1,2,4-Trimethylbenzene	U		0.322	1.00	1	06/23/2022 08:39	WG1883877
1,2,3-Trimethylbenzene	U		0.104	1.00	1	06/23/2022 08:39	WG1883877
1,3,5-Trimethylbenzene	U		0.104	1.00	1	06/23/2022 08:39	WG1883877
Vinyl chloride	U		0.234	1.00	1	06/23/2022 08:39	WG1883877
Xylenes, Total	U		0.174	3.00	1	06/23/2022 08:39	WG1883877
(S) Toluene-d8	108			80.0-120		06/23/2022 08:39	WG1883877
(S) 4-Bromofluorobenzene	98.4			77.0-126		06/23/2022 08:39	WG1883877
(S) 1,2-Dichloroethane-d4	96.0			70.0-130		06/23/2022 08:39	WG1883877

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

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	U	<u>J3</u>	0.597	3.00	1	06/24/2022 16:28	WG1885092
(S) Toluene-d8	101			77.0-127		06/24/2022 16:28	WG1885092

Wet Chemistry by Method 314.0 Mod

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Perchlorate	7.15		0.300	4.00	1	06/22/2022 23:56	WG1883531

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	06/24/2022 15:21	WG1884247
Acrolein	U		2.54	50.0	1	06/24/2022 15:21	WG1884247
Acrylonitrile	U		0.671	10.0	1	06/24/2022 15:21	WG1884247
Benzene	U		0.0941	1.00	1	06/24/2022 15:21	WG1884247
Bromobenzene	U		0.118	1.00	1	06/24/2022 15:21	WG1884247
Bromodichloromethane	U		0.136	1.00	1	06/24/2022 15:21	WG1884247
Bromoform	U		0.129	1.00	1	06/24/2022 15:21	WG1884247
Bromomethane	U		0.605	5.00	1	06/24/2022 15:21	WG1884247
1,3-Butadiene	U		0.299	2.00	1	06/24/2022 15:21	WG1884247
n-Butylbenzene	U		0.157	1.00	1	06/24/2022 15:21	WG1884247
sec-Butylbenzene	U		0.125	1.00	1	06/24/2022 15:21	WG1884247
tert-Butylbenzene	U		0.127	1.00	1	06/24/2022 15:21	WG1884247
Carbon tetrachloride	U		0.128	1.00	1	06/24/2022 15:21	WG1884247
Carbon disulfide	U		0.0962	1.00	1	06/24/2022 15:21	WG1884247
Chlorobenzene	U		0.116	1.00	1	06/24/2022 15:21	WG1884247
Chlorodibromomethane	U		0.140	1.00	1	06/24/2022 15:21	WG1884247
Chloroethane	U		0.192	5.00	1	06/24/2022 15:21	WG1884247
Chloroform	U		0.111	5.00	1	06/24/2022 15:21	WG1884247
Chloromethane	U		0.960	2.50	1	06/24/2022 15:21	WG1884247
Cyclohexane	U		0.188	1.00	1	06/24/2022 15:21	WG1884247
2-Chlorotoluene	U		0.106	1.00	1	06/24/2022 15:21	WG1884247
4-Chlorotoluene	U		0.114	1.00	1	06/24/2022 15:21	WG1884247
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	06/24/2022 15:21	WG1884247
1,2-Dibromoethane	U		0.126	1.00	1	06/24/2022 15:21	WG1884247
Dibromomethane	U		0.122	1.00	1	06/24/2022 15:21	WG1884247
1,2-Dichlorobenzene	U		0.107	1.00	1	06/24/2022 15:21	WG1884247
1,3-Dichlorobenzene	U		0.110	1.00	1	06/24/2022 15:21	WG1884247
1,4-Dichlorobenzene	U		0.120	1.00	1	06/24/2022 15:21	WG1884247
Dichlorodifluoromethane	U		0.374	5.00	1	06/24/2022 15:21	WG1884247
1,1-Dichloroethane	U		0.100	1.00	1	06/24/2022 15:21	WG1884247
1,2-Dichloroethane	U		0.0819	1.00	1	06/24/2022 15:21	WG1884247
1,1-Dichloroethene	U		0.188	1.00	1	06/24/2022 15:21	WG1884247
cis-1,2-Dichloroethene	U		0.126	1.00	1	06/24/2022 15:21	WG1884247
trans-1,2-Dichloroethene	U		0.149	1.00	1	06/24/2022 15:21	WG1884247
1,2-Dichloropropane	U		0.149	1.00	1	06/24/2022 15:21	WG1884247
1,1-Dichloropropene	U		0.142	1.00	1	06/24/2022 15:21	WG1884247
1,3-Dichloropropane	U		0.110	1.00	1	06/24/2022 15:21	WG1884247
cis-1,3-Dichloropropene	U		0.111	1.00	1	06/24/2022 15:21	WG1884247
trans-1,3-Dichloropropene	U		0.118	1.00	1	06/24/2022 15:21	WG1884247
2,2-Dichloropropane	U		0.161	1.00	1	06/24/2022 15:21	WG1884247
Dicyclopentadiene	U		0.253	1.00	1	06/24/2022 15:21	WG1884247
Di-isopropyl ether	U		0.105	1.00	1	06/24/2022 15:21	WG1884247
Ethylbenzene	U		0.137	1.00	1	06/24/2022 15:21	WG1884247
4-Ethyltoluene	U		0.208	1.00	1	06/24/2022 15:21	WG1884247
Hexachloro-1,3-butadiene	U		0.337	1.00	1	06/24/2022 15:21	WG1884247
n-Hexane	U		0.749	10.0	1	06/24/2022 15:21	WG1884247
Isopropylbenzene	U		0.105	1.00	1	06/24/2022 15:21	WG1884247
p-Isopropyltoluene	U		0.120	1.00	1	06/24/2022 15:21	WG1884247
2-Butanone (MEK)	U		1.19	10.0	1	06/24/2022 15:21	WG1884247
Methyl Cyclohexane	U		0.660	1.00	1	06/24/2022 15:21	WG1884247

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	0.478	<u>B</u> <u>J</u>	0.430	5.00	1	06/24/2022 15:21	WG1884247
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	06/24/2022 15:21	WG1884247
Methyl tert-butyl ether	U		0.101	1.00	1	06/24/2022 15:21	WG1884247
Naphthalene	1.18	<u>J</u>	1.00	5.00	1	06/24/2022 15:21	WG1884247
Propene	U		0.936	2.50	1	06/24/2022 15:21	WG1884247
n-Propylbenzene	U		0.0993	1.00	1	06/24/2022 15:21	WG1884247
Styrene	U		0.118	1.00	1	06/24/2022 15:21	WG1884247
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	06/24/2022 15:21	WG1884247
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	06/24/2022 15:21	WG1884247
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	06/24/2022 15:21	WG1884247
Tetrachloroethene	U		0.300	1.00	1	06/24/2022 15:21	WG1884247
Toluene	U		0.278	1.00	1	06/24/2022 15:21	WG1884247
1,2,3-Trichlorobenzene	U		0.230	1.00	1	06/24/2022 15:21	WG1884247
1,2,4-Trichlorobenzene	U		0.481	1.00	1	06/24/2022 15:21	WG1884247
1,1,1-Trichloroethane	U		0.149	1.00	1	06/24/2022 15:21	WG1884247
1,1,2-Trichloroethane	U		0.158	1.00	1	06/24/2022 15:21	WG1884247
Trichloroethene	U		0.190	1.00	1	06/24/2022 15:21	WG1884247
Trichlorofluoromethane	U		0.160	5.00	1	06/24/2022 15:21	WG1884247
1,2,3-Trichloropropane	U		0.237	2.50	1	06/24/2022 15:21	WG1884247
1,2,4-Trimethylbenzene	U		0.322	1.00	1	06/24/2022 15:21	WG1884247
1,2,3-Trimethylbenzene	U		0.104	1.00	1	06/24/2022 15:21	WG1884247
1,3,5-Trimethylbenzene	U		0.104	1.00	1	06/24/2022 15:21	WG1884247
Vinyl chloride	U		0.234	1.00	1	06/24/2022 15:21	WG1884247
Xylenes, Total	U		0.174	3.00	1	06/24/2022 15:21	WG1884247
(S) Toluene-d8	104			80.0-120		06/24/2022 15:21	WG1884247
(S) 4-Bromofluorobenzene	96.3			77.0-126		06/24/2022 15:21	WG1884247
(S) 1,2-Dichloroethane-d4	95.6			70.0-130		06/24/2022 15:21	WG1884247

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

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	U	<u>J</u> <u>3</u>	0.597	3.00	1	06/24/2022 16:47	WG1885092
(S) Toluene-d8	101			77.0-127		06/24/2022 16:47	WG1885092

Wet Chemistry by Method 314.0 Mod

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Perchlorate	U		0.300	4.00	1	06/23/2022 00:25	WG1883531

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	06/24/2022 15:41	WG1884247
Acrolein	U		2.54	50.0	1	06/24/2022 15:41	WG1884247
Acrylonitrile	U		0.671	10.0	1	06/24/2022 15:41	WG1884247
Benzene	U		0.0941	1.00	1	06/24/2022 15:41	WG1884247
Bromobenzene	U		0.118	1.00	1	06/24/2022 15:41	WG1884247
Bromodichloromethane	U		0.136	1.00	1	06/24/2022 15:41	WG1884247
Bromoform	U		0.129	1.00	1	06/24/2022 15:41	WG1884247
Bromomethane	U		0.605	5.00	1	06/24/2022 15:41	WG1884247
1,3-Butadiene	U		0.299	2.00	1	06/24/2022 15:41	WG1884247
n-Butylbenzene	U		0.157	1.00	1	06/24/2022 15:41	WG1884247
sec-Butylbenzene	U		0.125	1.00	1	06/24/2022 15:41	WG1884247
tert-Butylbenzene	U		0.127	1.00	1	06/24/2022 15:41	WG1884247
Carbon tetrachloride	U		0.128	1.00	1	06/24/2022 15:41	WG1884247
Carbon disulfide	U		0.0962	1.00	1	06/24/2022 15:41	WG1884247
Chlorobenzene	U		0.116	1.00	1	06/24/2022 15:41	WG1884247
Chlorodibromomethane	U		0.140	1.00	1	06/24/2022 15:41	WG1884247
Chloroethane	U		0.192	5.00	1	06/24/2022 15:41	WG1884247
Chloroform	U		0.111	5.00	1	06/24/2022 15:41	WG1884247
Chloromethane	U		0.960	2.50	1	06/24/2022 15:41	WG1884247
Cyclohexane	U		0.188	1.00	1	06/24/2022 15:41	WG1884247
2-Chlorotoluene	U		0.106	1.00	1	06/24/2022 15:41	WG1884247
4-Chlorotoluene	U		0.114	1.00	1	06/24/2022 15:41	WG1884247
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	06/24/2022 15:41	WG1884247
1,2-Dibromoethane	U		0.126	1.00	1	06/24/2022 15:41	WG1884247
Dibromomethane	U		0.122	1.00	1	06/24/2022 15:41	WG1884247
1,2-Dichlorobenzene	U		0.107	1.00	1	06/24/2022 15:41	WG1884247
1,3-Dichlorobenzene	U		0.110	1.00	1	06/24/2022 15:41	WG1884247
1,4-Dichlorobenzene	U		0.120	1.00	1	06/24/2022 15:41	WG1884247
Dichlorodifluoromethane	U		0.374	5.00	1	06/24/2022 15:41	WG1884247
1,1-Dichloroethane	U		0.100	1.00	1	06/24/2022 15:41	WG1884247
1,2-Dichloroethane	U		0.0819	1.00	1	06/24/2022 15:41	WG1884247
1,1-Dichloroethene	U		0.188	1.00	1	06/24/2022 15:41	WG1884247
cis-1,2-Dichloroethene	U		0.126	1.00	1	06/24/2022 15:41	WG1884247
trans-1,2-Dichloroethene	U		0.149	1.00	1	06/24/2022 15:41	WG1884247
1,2-Dichloropropane	U		0.149	1.00	1	06/24/2022 15:41	WG1884247
1,1-Dichloropropene	U		0.142	1.00	1	06/24/2022 15:41	WG1884247
1,3-Dichloropropane	U		0.110	1.00	1	06/24/2022 15:41	WG1884247
cis-1,3-Dichloropropene	U		0.111	1.00	1	06/24/2022 15:41	WG1884247
trans-1,3-Dichloropropene	U		0.118	1.00	1	06/24/2022 15:41	WG1884247
2,2-Dichloropropane	U		0.161	1.00	1	06/24/2022 15:41	WG1884247
Dicyclopentadiene	U		0.253	1.00	1	06/24/2022 15:41	WG1884247
Di-isopropyl ether	U		0.105	1.00	1	06/24/2022 15:41	WG1884247
Ethylbenzene	U		0.137	1.00	1	06/24/2022 15:41	WG1884247
4-Ethyltoluene	U		0.208	1.00	1	06/24/2022 15:41	WG1884247
Hexachloro-1,3-butadiene	U		0.337	1.00	1	06/24/2022 15:41	WG1884247
n-Hexane	U		0.749	10.0	1	06/24/2022 15:41	WG1884247
Isopropylbenzene	U		0.105	1.00	1	06/24/2022 15:41	WG1884247
p-Isopropyltoluene	U		0.120	1.00	1	06/24/2022 15:41	WG1884247
2-Butanone (MEK)	U		1.19	10.0	1	06/24/2022 15:41	WG1884247
Methyl Cyclohexane	U		0.660	1.00	1	06/24/2022 15:41	WG1884247

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	U		0.430	5.00	1	06/24/2022 15:41	WG1884247
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	06/24/2022 15:41	WG1884247
Methyl tert-butyl ether	U		0.101	1.00	1	06/24/2022 15:41	WG1884247
Naphthalene	U		1.00	5.00	1	06/24/2022 15:41	WG1884247
Propene	U		0.936	2.50	1	06/24/2022 15:41	WG1884247
n-Propylbenzene	U		0.0993	1.00	1	06/24/2022 15:41	WG1884247
Styrene	U		0.118	1.00	1	06/24/2022 15:41	WG1884247
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	06/24/2022 15:41	WG1884247
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	06/24/2022 15:41	WG1884247
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	06/24/2022 15:41	WG1884247
Tetrachloroethene	U		0.300	1.00	1	06/24/2022 15:41	WG1884247
Toluene	U		0.278	1.00	1	06/24/2022 15:41	WG1884247
1,2,3-Trichlorobenzene	U		0.230	1.00	1	06/24/2022 15:41	WG1884247
1,2,4-Trichlorobenzene	U		0.481	1.00	1	06/24/2022 15:41	WG1884247
1,1,1-Trichloroethane	U		0.149	1.00	1	06/24/2022 15:41	WG1884247
1,1,2-Trichloroethane	U		0.158	1.00	1	06/24/2022 15:41	WG1884247
Trichloroethene	U		0.190	1.00	1	06/24/2022 15:41	WG1884247
Trichlorofluoromethane	U		0.160	5.00	1	06/24/2022 15:41	WG1884247
1,2,3-Trichloropropane	U		0.237	2.50	1	06/24/2022 15:41	WG1884247
1,2,4-Trimethylbenzene	U		0.322	1.00	1	06/24/2022 15:41	WG1884247
1,2,3-Trimethylbenzene	U		0.104	1.00	1	06/24/2022 15:41	WG1884247
1,3,5-Trimethylbenzene	U		0.104	1.00	1	06/24/2022 15:41	WG1884247
Vinyl chloride	U		0.234	1.00	1	06/24/2022 15:41	WG1884247
Xylenes, Total	U		0.174	3.00	1	06/24/2022 15:41	WG1884247
(S) Toluene-d8	105			80.0-120		06/24/2022 15:41	WG1884247
(S) 4-Bromofluorobenzene	96.7			77.0-126		06/24/2022 15:41	WG1884247
(S) 1,2-Dichloroethane-d4	96.1			70.0-130		06/24/2022 15:41	WG1884247

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

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	U	<u>J3</u>	0.597	3.00	1	06/24/2022 17:07	WG1885092
(S) Toluene-d8	101			77.0-127		06/24/2022 17:07	WG1885092

Wet Chemistry by Method 314.0 Mod

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Perchlorate	U		0.300	4.00	1	06/23/2022 14:50	WG1883531

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	06/24/2022 16:02	WG1884247
Acrolein	U		2.54	50.0	1	06/24/2022 16:02	WG1884247
Acrylonitrile	U		0.671	10.0	1	06/24/2022 16:02	WG1884247
Benzene	U		0.0941	1.00	1	06/24/2022 16:02	WG1884247
Bromobenzene	U		0.118	1.00	1	06/24/2022 16:02	WG1884247
Bromodichloromethane	U		0.136	1.00	1	06/24/2022 16:02	WG1884247
Bromoform	U		0.129	1.00	1	06/24/2022 16:02	WG1884247
Bromomethane	U		0.605	5.00	1	06/24/2022 16:02	WG1884247
1,3-Butadiene	U		0.299	2.00	1	06/24/2022 16:02	WG1884247
n-Butylbenzene	U		0.157	1.00	1	06/24/2022 16:02	WG1884247
sec-Butylbenzene	U		0.125	1.00	1	06/24/2022 16:02	WG1884247
tert-Butylbenzene	U		0.127	1.00	1	06/24/2022 16:02	WG1884247
Carbon tetrachloride	U		0.128	1.00	1	06/24/2022 16:02	WG1884247
Carbon disulfide	U		0.0962	1.00	1	06/24/2022 16:02	WG1884247
Chlorobenzene	U		0.116	1.00	1	06/24/2022 16:02	WG1884247
Chlorodibromomethane	U		0.140	1.00	1	06/24/2022 16:02	WG1884247
Chloroethane	U		0.192	5.00	1	06/24/2022 16:02	WG1884247
Chloroform	U		0.111	5.00	1	06/24/2022 16:02	WG1884247
Chloromethane	U		0.960	2.50	1	06/24/2022 16:02	WG1884247
Cyclohexane	U		0.188	1.00	1	06/24/2022 16:02	WG1884247
2-Chlorotoluene	U		0.106	1.00	1	06/24/2022 16:02	WG1884247
4-Chlorotoluene	U		0.114	1.00	1	06/24/2022 16:02	WG1884247
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	06/24/2022 16:02	WG1884247
1,2-Dibromoethane	U		0.126	1.00	1	06/24/2022 16:02	WG1884247
Dibromomethane	U		0.122	1.00	1	06/24/2022 16:02	WG1884247
1,2-Dichlorobenzene	U		0.107	1.00	1	06/24/2022 16:02	WG1884247
1,3-Dichlorobenzene	U		0.110	1.00	1	06/24/2022 16:02	WG1884247
1,4-Dichlorobenzene	U		0.120	1.00	1	06/24/2022 16:02	WG1884247
Dichlorodifluoromethane	U		0.374	5.00	1	06/24/2022 16:02	WG1884247
1,1-Dichloroethane	U		0.100	1.00	1	06/24/2022 16:02	WG1884247
1,2-Dichloroethane	U		0.0819	1.00	1	06/24/2022 16:02	WG1884247
1,1-Dichloroethene	U		0.188	1.00	1	06/24/2022 16:02	WG1884247
cis-1,2-Dichloroethene	U		0.126	1.00	1	06/24/2022 16:02	WG1884247
trans-1,2-Dichloroethene	U		0.149	1.00	1	06/24/2022 16:02	WG1884247
1,2-Dichloropropane	U		0.149	1.00	1	06/24/2022 16:02	WG1884247
1,1-Dichloropropene	U		0.142	1.00	1	06/24/2022 16:02	WG1884247
1,3-Dichloropropane	U		0.110	1.00	1	06/24/2022 16:02	WG1884247
cis-1,3-Dichloropropene	U		0.111	1.00	1	06/24/2022 16:02	WG1884247
trans-1,3-Dichloropropene	U		0.118	1.00	1	06/24/2022 16:02	WG1884247
2,2-Dichloropropane	U		0.161	1.00	1	06/24/2022 16:02	WG1884247
Dicyclopentadiene	U		0.253	1.00	1	06/24/2022 16:02	WG1884247
Di-isopropyl ether	U		0.105	1.00	1	06/24/2022 16:02	WG1884247
Ethylbenzene	U		0.137	1.00	1	06/24/2022 16:02	WG1884247
4-Ethyltoluene	U		0.208	1.00	1	06/24/2022 16:02	WG1884247
Hexachloro-1,3-butadiene	U		0.337	1.00	1	06/24/2022 16:02	WG1884247
n-Hexane	U		0.749	10.0	1	06/24/2022 16:02	WG1884247
Isopropylbenzene	U		0.105	1.00	1	06/24/2022 16:02	WG1884247
p-Isopropyltoluene	U		0.120	1.00	1	06/24/2022 16:02	WG1884247
2-Butanone (MEK)	U		1.19	10.0	1	06/24/2022 16:02	WG1884247
Methyl Cyclohexane	U		0.660	1.00	1	06/24/2022 16:02	WG1884247

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

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	U		0.430	5.00	1	06/24/2022 16:02	WG1884247
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	06/24/2022 16:02	WG1884247
Methyl tert-butyl ether	U		0.101	1.00	1	06/24/2022 16:02	WG1884247
Naphthalene	U		1.00	5.00	1	06/24/2022 16:02	WG1884247
Propene	U		0.936	2.50	1	06/24/2022 16:02	WG1884247
n-Propylbenzene	U		0.0993	1.00	1	06/24/2022 16:02	WG1884247
Styrene	U		0.118	1.00	1	06/24/2022 16:02	WG1884247
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	06/24/2022 16:02	WG1884247
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	06/24/2022 16:02	WG1884247
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	06/24/2022 16:02	WG1884247
Tetrachloroethene	U		0.300	1.00	1	06/24/2022 16:02	WG1884247
Toluene	U		0.278	1.00	1	06/24/2022 16:02	WG1884247
1,2,3-Trichlorobenzene	U		0.230	1.00	1	06/24/2022 16:02	WG1884247
1,2,4-Trichlorobenzene	U		0.481	1.00	1	06/24/2022 16:02	WG1884247
1,1,1-Trichloroethane	U		0.149	1.00	1	06/24/2022 16:02	WG1884247
1,1,2-Trichloroethane	U		0.158	1.00	1	06/24/2022 16:02	WG1884247
Trichloroethene	U		0.190	1.00	1	06/24/2022 16:02	WG1884247
Trichlorofluoromethane	U		0.160	5.00	1	06/24/2022 16:02	WG1884247
1,2,3-Trichloropropane	U		0.237	2.50	1	06/24/2022 16:02	WG1884247
1,2,4-Trimethylbenzene	U		0.322	1.00	1	06/24/2022 16:02	WG1884247
1,2,3-Trimethylbenzene	U		0.104	1.00	1	06/24/2022 16:02	WG1884247
1,3,5-Trimethylbenzene	U		0.104	1.00	1	06/24/2022 16:02	WG1884247
Vinyl chloride	U		0.234	1.00	1	06/24/2022 16:02	WG1884247
Xylenes, Total	U		0.174	3.00	1	06/24/2022 16:02	WG1884247
(S) Toluene-d8	104			80.0-120		06/24/2022 16:02	WG1884247
(S) 4-Bromofluorobenzene	95.9			77.0-126		06/24/2022 16:02	WG1884247
(S) 1,2-Dichloroethane-d4	96.4			70.0-130		06/24/2022 16:02	WG1884247

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

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	U	<u>J3</u>	0.597	3.00	1	06/24/2022 17:28	WG1885092
(S) Toluene-d8	101			77.0-127		06/24/2022 17:28	WG1885092

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	06/24/2022 11:54	WG1884247
Acrolein	U		2.54	50.0	1	06/24/2022 11:54	WG1884247
Acrylonitrile	U		0.671	10.0	1	06/24/2022 11:54	WG1884247
Benzene	0.0978	J	0.0941	1.00	1	06/24/2022 11:54	WG1884247
Bromobenzene	U		0.118	1.00	1	06/24/2022 11:54	WG1884247
Bromodichloromethane	U		0.136	1.00	1	06/24/2022 11:54	WG1884247
Bromoform	U		0.129	1.00	1	06/24/2022 11:54	WG1884247
Bromomethane	U		0.605	5.00	1	06/24/2022 11:54	WG1884247
1,3-Butadiene	U		0.299	2.00	1	06/24/2022 11:54	WG1884247
n-Butylbenzene	U		0.157	1.00	1	06/24/2022 11:54	WG1884247
sec-Butylbenzene	U		0.125	1.00	1	06/24/2022 11:54	WG1884247
tert-Butylbenzene	U		0.127	1.00	1	06/24/2022 11:54	WG1884247
Carbon tetrachloride	U		0.128	1.00	1	06/24/2022 11:54	WG1884247
Carbon disulfide	0.131	J	0.0962	1.00	1	06/24/2022 11:54	WG1884247
Chlorobenzene	U		0.116	1.00	1	06/24/2022 11:54	WG1884247
Chlorodibromomethane	U		0.140	1.00	1	06/24/2022 11:54	WG1884247
Chloroethane	U		0.192	5.00	1	06/24/2022 11:54	WG1884247
Chloroform	U		0.111	5.00	1	06/24/2022 11:54	WG1884247
Chloromethane	U		0.960	2.50	1	06/24/2022 11:54	WG1884247
Cyclohexane	U		0.188	1.00	1	06/24/2022 11:54	WG1884247
2-Chlorotoluene	U		0.106	1.00	1	06/24/2022 11:54	WG1884247
4-Chlorotoluene	U		0.114	1.00	1	06/24/2022 11:54	WG1884247
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	06/24/2022 11:54	WG1884247
1,2-Dibromoethane	U		0.126	1.00	1	06/24/2022 11:54	WG1884247
Dibromomethane	U		0.122	1.00	1	06/24/2022 11:54	WG1884247
1,2-Dichlorobenzene	U		0.107	1.00	1	06/24/2022 11:54	WG1884247
1,3-Dichlorobenzene	U		0.110	1.00	1	06/24/2022 11:54	WG1884247
1,4-Dichlorobenzene	U		0.120	1.00	1	06/24/2022 11:54	WG1884247
Dichlorodifluoromethane	U		0.374	5.00	1	06/24/2022 11:54	WG1884247
1,1-Dichloroethane	U		0.100	1.00	1	06/24/2022 11:54	WG1884247
1,2-Dichloroethane	U		0.0819	1.00	1	06/24/2022 11:54	WG1884247
1,1-Dichloroethene	U		0.188	1.00	1	06/24/2022 11:54	WG1884247
cis-1,2-Dichloroethene	U		0.126	1.00	1	06/24/2022 11:54	WG1884247
trans-1,2-Dichloroethene	U		0.149	1.00	1	06/24/2022 11:54	WG1884247
1,2-Dichloropropane	U		0.149	1.00	1	06/24/2022 11:54	WG1884247
1,1-Dichloropropene	U		0.142	1.00	1	06/24/2022 11:54	WG1884247
1,3-Dichloropropane	U		0.110	1.00	1	06/24/2022 11:54	WG1884247
cis-1,3-Dichloropropene	U		0.111	1.00	1	06/24/2022 11:54	WG1884247
trans-1,3-Dichloropropene	U		0.118	1.00	1	06/24/2022 11:54	WG1884247
2,2-Dichloropropane	U		0.161	1.00	1	06/24/2022 11:54	WG1884247
Dicyclopentadiene	U		0.253	1.00	1	06/24/2022 11:54	WG1884247
Di-isopropyl ether	U		0.105	1.00	1	06/24/2022 11:54	WG1884247
Ethylbenzene	U		0.137	1.00	1	06/24/2022 11:54	WG1884247
4-Ethyltoluene	U		0.208	1.00	1	06/24/2022 11:54	WG1884247
Hexachloro-1,3-butadiene	U		0.337	1.00	1	06/24/2022 11:54	WG1884247
n-Hexane	U		0.749	10.0	1	06/24/2022 11:54	WG1884247
Isopropylbenzene	U		0.105	1.00	1	06/24/2022 11:54	WG1884247
p-Isopropyltoluene	U		0.120	1.00	1	06/24/2022 11:54	WG1884247
2-Butanone (MEK)	U		1.19	10.0	1	06/24/2022 11:54	WG1884247
Methyl Cyclohexane	U		0.660	1.00	1	06/24/2022 11:54	WG1884247
Methylene Chloride	U		0.430	5.00	1	06/24/2022 11:54	WG1884247
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	06/24/2022 11:54	WG1884247
Methyl tert-butyl ether	U		0.101	1.00	1	06/24/2022 11:54	WG1884247
Naphthalene	U		1.00	5.00	1	06/24/2022 11:54	WG1884247
Propene	1.04	J	0.936	2.50	1	06/24/2022 11:54	WG1884247
n-Propylbenzene	U		0.0993	1.00	1	06/24/2022 11:54	WG1884247

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Styrene	U		0.118	1.00	1	06/24/2022 11:54	WG1884247
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	06/24/2022 11:54	WG1884247
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	06/24/2022 11:54	WG1884247
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	06/24/2022 11:54	WG1884247
Tetrachloroethene	U		0.300	1.00	1	06/24/2022 11:54	WG1884247
Toluene	U		0.278	1.00	1	06/24/2022 11:54	WG1884247
1,2,3-Trichlorobenzene	U		0.230	1.00	1	06/24/2022 11:54	WG1884247
1,2,4-Trichlorobenzene	U		0.481	1.00	1	06/24/2022 11:54	WG1884247
1,1,1-Trichloroethane	U		0.149	1.00	1	06/24/2022 11:54	WG1884247
1,1,2-Trichloroethane	U		0.158	1.00	1	06/24/2022 11:54	WG1884247
Trichloroethene	U		0.190	1.00	1	06/24/2022 11:54	WG1884247
Trichlorofluoromethane	U		0.160	5.00	1	06/24/2022 11:54	WG1884247
1,2,3-Trichloropropane	U		0.237	2.50	1	06/24/2022 11:54	WG1884247
1,2,4-Trimethylbenzene	U		0.322	1.00	1	06/24/2022 11:54	WG1884247
1,2,3-Trimethylbenzene	U		0.104	1.00	1	06/24/2022 11:54	WG1884247
1,3,5-Trimethylbenzene	U		0.104	1.00	1	06/24/2022 11:54	WG1884247
Vinyl chloride	U		0.234	1.00	1	06/24/2022 11:54	WG1884247
Xylenes, Total	U		0.174	3.00	1	06/24/2022 11:54	WG1884247
(S) Toluene-d8	105			80.0-120		06/24/2022 11:54	WG1884247
(S) 4-Bromofluorobenzene	98.0			77.0-126		06/24/2022 11:54	WG1884247
(S) 1,2-Dichloroethane-d4	102			70.0-130		06/24/2022 11:54	WG1884247

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

Method Blank (MB)

(MB) R3810198-1 06/22/22 11:31

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Perchlorate	U		0.300	4.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

L1504535-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1504535-09 06/22/22 14:56 • (DUP) R3810198-3 06/22/22 15:25

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Perchlorate	63.6	63.3	1	0.417		15

⁷Is

⁸Gl

⁹Al

L1505669-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1505669-05 06/23/22 03:43 • (DUP) R3810198-6 06/23/22 05:09

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Perchlorate	U	U	1	0.000		15

¹⁰Sc

Laboratory Control Sample (LCS)

(LCS) R3810198-2 06/22/22 12:27

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Perchlorate	10.0	9.96	99.6	90.0-110	

L1504535-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1504535-11 06/23/22 11:31 • (MS) R3810198-7 06/23/22 11:59 • (MSD) R3810198-8 06/23/22 12:28

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Perchlorate	10.0	17100	16600	16500	0.000	0.000	1000	80.0-120	√	√	0.688	15

Method Blank (MB)

(MB) R3810199-2 06/22/22 12:56

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Perchlorate	U		0.300	4.00

Laboratory Control Sample (LCS)

(LCS) R3810199-1 06/22/22 12:27

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Perchlorate	10.0	9.96	99.6	90.0-110	

L1504991-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1504991-03 06/22/22 20:37 • (MS) R3810199-3 06/22/22 21:06 • (MSD) R3810199-4 06/22/22 21:34

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 %
Perchlorate	10.0	1.84	10.3	10.3	84.8	84.8	1	80.0-120			0.0271	15

L1504991-05 Original Sample (OS) • Matrix Spike (MS)

(OS) L1504991-05 06/22/22 23:28 • (MS) R3810199-6 06/23/22 06:06

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Perchlorate	10.0	1.90	13.4	115	1	80.0-120	

L1504991-06 Original Sample (OS) • Matrix Spike (MS)

(OS) L1504991-06 06/22/22 23:56 • (MS) R3810199-7 06/23/22 06:34

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Perchlorate	10.0	7.15	16.4	92.7	1	80.0-120	

L1504991-07 Original Sample (OS) • Matrix Spike (MS)

(OS) L1504991-07 06/23/22 00:25 • (MS) R3810199-8 06/23/22 07:02

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Perchlorate	10.0	U	9.67	96.7	1	80.0-120	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Is

⁸Gl

⁹Al

¹⁰Sc

L1505669-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1505669-01 06/23/22 01:50 • (MS) R3810199-9 06/23/22 07:31

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Perchlorate	10.0	1.47	10.3	88.0	1	80.0-120	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

L1505669-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1505669-03 06/23/22 02:47 • (MS) R3810199-10 06/23/22 07:59

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Perchlorate	10.0	15.8	25.8	99.1	1	80.0-120	

⁷Is

⁸Gl

⁹Al

L1504991-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1504991-02 06/22/22 20:09 • (MS) R3810199-11 06/23/22 16:15

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Perchlorate	10.0	12.1	11.8	0.000	1	80.0-120	<u>J6</u>

¹⁰Sc

L1504535-12 Original Sample (OS) • Matrix Spike (MS)

(OS) L1504535-12 06/23/22 12:56 • (MS) R3810199-12 06/23/22 16:43

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Perchlorate	10.0	7.02	39.8	327	1	80.0-120	<u>J5</u>

L1504991-08 Original Sample (OS) • Matrix Spike (MS)

(OS) L1504991-08 06/23/22 14:50 • (MS) R3810199-13 06/23/22 17:12

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Perchlorate	10.0	U	10.6	106	1	80.0-120	

Method Blank (MB)

(MB) R3806943-2 06/23/22 05:50

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		11.3	50.0
Acrolein	U		2.54	50.0
Acrylonitrile	U		0.671	10.0
Benzene	U		0.0941	1.00
Bromobenzene	U		0.118	1.00
Bromodichloromethane	U		0.136	1.00
Bromoform	U		0.129	1.00
Bromomethane	U		0.605	5.00
1,3-Butadiene	U		0.299	2.00
n-Butylbenzene	U		0.157	1.00
sec-Butylbenzene	U		0.125	1.00
tert-Butylbenzene	U		0.127	1.00
Carbon tetrachloride	U		0.128	1.00
Carbon disulfide	U		0.0962	1.00
Chlorobenzene	U		0.116	1.00
Chlorodibromomethane	U		0.140	1.00
Chloroethane	U		0.192	5.00
Chloroform	U		0.111	5.00
Chloromethane	U		0.960	2.50
Cyclohexane	U		0.188	1.00
2-Chlorotoluene	U		0.106	1.00
4-Chlorotoluene	U		0.114	1.00
1,2-Dibromo-3-Chloropropane	U		0.276	5.00
1,2-Dibromoethane	U		0.126	1.00
Dibromomethane	U		0.122	1.00
1,2-Dichlorobenzene	U		0.107	1.00
1,3-Dichlorobenzene	U		0.110	1.00
1,4-Dichlorobenzene	U		0.120	1.00
Dichlorodifluoromethane	U		0.374	5.00
1,1-Dichloroethane	U		0.100	1.00
1,2-Dichloroethane	U		0.0819	1.00
1,1-Dichloroethene	U		0.188	1.00
cis-1,2-Dichloroethene	U		0.126	1.00
trans-1,2-Dichloroethene	U		0.149	1.00
1,2-Dichloropropane	U		0.149	1.00
1,1-Dichloropropene	U		0.142	1.00
1,3-Dichloropropane	U		0.110	1.00
cis-1,3-Dichloropropene	U		0.111	1.00
trans-1,3-Dichloropropene	U		0.118	1.00
2,2-Dichloropropane	U		0.161	1.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Is

⁸Gl

⁹Al

¹⁰Sc

Method Blank (MB)

(MB) R3806943-2 06/23/22 05:50

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Dicyclopentadiene	U		0.253	1.00
Di-isopropyl ether	U		0.105	1.00
Ethylbenzene	U		0.137	1.00
4-Ethyltoluene	U		0.208	1.00
Hexachloro-1,3-butadiene	U		0.337	1.00
n-Hexane	U		0.749	10.0
Isopropylbenzene	U		0.105	1.00
p-Isopropyltoluene	U		0.120	1.00
2-Butanone (MEK)	U		1.19	10.0
Methyl Cyclohexane	U		0.660	1.00
Methylene Chloride	U		0.430	5.00
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0
Methyl tert-butyl ether	U		0.101	1.00
Naphthalene	U		1.00	5.00
Propene	U		0.936	2.50
n-Propylbenzene	U		0.0993	1.00
Styrene	U		0.118	1.00
1,1,1,2-Tetrachloroethane	U		0.147	1.00
1,1,2,2-Tetrachloroethane	U		0.133	1.00
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00
Tetrachloroethene	U		0.300	1.00
Toluene	U		0.278	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.481	1.00
1,1,1-Trichloroethane	U		0.149	1.00
1,1,2-Trichloroethane	U		0.158	1.00
Trichloroethene	U		0.190	1.00
Trichlorofluoromethane	U		0.160	5.00
1,2,3-Trichloropropane	U		0.237	2.50
1,2,4-Trimethylbenzene	U		0.322	1.00
1,2,3-Trimethylbenzene	U		0.104	1.00
1,3,5-Trimethylbenzene	U		0.104	1.00
Vinyl chloride	U		0.234	1.00
Xylenes, Total	U		0.174	3.00
(S) Toluene-d8	112			80.0-120
(S) 4-Bromofluorobenzene	110			77.0-126
(S) 1,2-Dichloroethane-d4	101			70.0-130

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Is

⁸ Gl

⁹ Al

¹⁰ Sc

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

(LCS) R3806943-1 06/23/22 05:07 • (LCSD) R3806943-3 06/23/22 06:53

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Acetone	25.0	21.0	21.4	84.0	85.6	19.0-160			1.89	27
Acrolein	25.0	34.7	35.2	139	141	30.0-160			1.43	26
Acrylonitrile	25.0	23.4	25.6	93.6	102	55.0-149			8.98	20
Benzene	5.00	4.74	5.02	94.8	100	70.0-123			5.74	20
Bromobenzene	5.00	4.97	5.53	99.4	111	73.0-121			10.7	20
Bromodichloromethane	5.00	4.06	4.52	81.2	90.4	75.0-120			10.7	20
Bromoform	5.00	3.11	2.91	62.2	58.2	68.0-132	J4	J4	6.64	20
Bromomethane	5.00	6.06	6.41	121	128	30.0-160			5.61	25
1,3-Butadiene	5.00	5.40	5.71	108	114	45.0-147			5.58	20
n-Butylbenzene	5.00	4.83	5.39	96.6	108	73.0-125			11.0	20
sec-Butylbenzene	5.00	4.89	5.41	97.8	108	75.0-125			10.1	20
tert-Butylbenzene	5.00	4.84	5.22	96.8	104	76.0-124			7.55	20
Carbon tetrachloride	5.00	4.52	4.36	90.4	87.2	68.0-126			3.60	20
Carbon disulfide	5.00	4.30	4.57	86.0	91.4	61.0-128			6.09	20
Chlorobenzene	5.00	4.85	4.91	97.0	98.2	80.0-121			1.23	20
Chlorodibromomethane	5.00	3.64	3.84	72.8	76.8	77.0-125	J4	J4	5.35	20
Chloroethane	5.00	4.62	6.01	92.4	120	47.0-150		J3	26.2	20
Chloroform	5.00	4.75	5.17	95.0	103	73.0-120			8.47	20
Chloromethane	5.00	3.98	4.72	79.6	94.4	41.0-142			17.0	20
Cyclohexane	5.00	4.48	4.88	89.6	97.6	71.0-124			8.55	20
2-Chlorotoluene	5.00	5.07	5.69	101	114	76.0-123			11.5	20
4-Chlorotoluene	5.00	4.80	5.23	96.0	105	75.0-122			8.57	20
1,2-Dibromo-3-Chloropropane	5.00	3.07	3.13	61.4	62.6	58.0-134			1.94	20
1,2-Dibromoethane	5.00	4.48	4.60	89.6	92.0	80.0-122			2.64	20
Dibromomethane	5.00	4.46	5.14	89.2	103	80.0-120			14.2	20
1,2-Dichlorobenzene	5.00	4.80	4.96	96.0	99.2	79.0-121			3.28	20
1,3-Dichlorobenzene	5.00	4.77	4.89	95.4	97.8	79.0-120			2.48	20
1,4-Dichlorobenzene	5.00	4.46	4.62	89.2	92.4	79.0-120			3.52	20
Dichlorodifluoromethane	5.00	4.34	4.94	86.8	98.8	51.0-149			12.9	20
1,1-Dichloroethane	5.00	4.78	4.92	95.6	98.4	70.0-126			2.89	20
1,2-Dichloroethane	5.00	4.48	4.88	89.6	97.6	70.0-128			8.55	20
1,1-Dichloroethene	5.00	4.16	5.16	83.2	103	71.0-124		J3	21.5	20
cis-1,2-Dichloroethene	5.00	4.20	4.48	84.0	89.6	73.0-120			6.45	20
trans-1,2-Dichloroethene	5.00	4.35	4.80	87.0	96.0	73.0-120			9.84	20
1,2-Dichloropropane	5.00	4.32	5.13	86.4	103	77.0-125			17.1	20
1,1-Dichloropropene	5.00	4.95	5.32	99.0	106	74.0-126			7.21	20
1,3-Dichloropropane	5.00	4.53	5.10	90.6	102	80.0-120			11.8	20
cis-1,3-Dichloropropene	5.00	4.42	4.58	88.4	91.6	80.0-123			3.56	20
trans-1,3-Dichloropropene	5.00	4.11	4.50	82.2	90.0	78.0-124			9.06	20
2,2-Dichloropropane	5.00	3.85	4.49	77.0	89.8	58.0-130			15.3	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

(LCS) R3806943-1 06/23/22 05:07 • (LCSD) R3806943-3 06/23/22 06:53

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Dicyclopentadiene	5.00	4.99	5.23	99.8	105	74.0-126			4.70	20
Di-isopropyl ether	5.00	4.55	5.05	91.0	101	58.0-138			10.4	20
Ethylbenzene	5.00	4.82	4.75	96.4	95.0	79.0-123			1.46	20
4-Ethyltoluene	5.00	5.10	5.87	102	117	74.0-127			14.0	20
Hexachloro-1,3-butadiene	5.00	4.11	5.16	82.2	103	54.0-138		J3	22.7	20
n-Hexane	5.00	4.64	5.35	92.8	107	57.0-133			14.2	20
Isopropylbenzene	5.00	4.81	4.87	96.2	97.4	76.0-127			1.24	20
p-Isopropyltoluene	5.00	4.93	5.12	98.6	102	76.0-125			3.78	20
2-Butanone (MEK)	25.0	20.4	26.8	81.6	107	44.0-160		J3	27.1	20
Methyl Cyclohexane	5.00	4.37	4.76	87.4	95.2	68.0-126			8.54	20
Methylene Chloride	5.00	4.66	4.90	93.2	98.0	67.0-120			5.02	20
4-Methyl-2-pentanone (MIBK)	25.0	27.7	28.8	111	115	68.0-142			3.89	20
Methyl tert-butyl ether	5.00	4.39	4.83	87.8	96.6	68.0-125			9.54	20
Naphthalene	5.00	4.31	4.05	86.2	81.0	54.0-135			6.22	20
Propene	5.00	4.33	4.75	86.6	95.0	30.0-160			9.25	20
n-Propylbenzene	5.00	5.04	5.69	101	114	77.0-124			12.1	20
Styrene	5.00	4.34	4.45	86.8	89.0	73.0-130			2.50	20
1,1,1,2-Tetrachloroethane	5.00	4.22	4.20	84.4	84.0	75.0-125			0.475	20
1,1,2,2-Tetrachloroethane	5.00	4.59	5.49	91.8	110	65.0-130			17.9	20
1,1,2-Trichlorotrifluoroethane	5.00	4.88	5.56	97.6	111	69.0-132			13.0	20
Tetrachloroethene	5.00	5.05	5.20	101	104	72.0-132			2.93	20
Toluene	5.00	5.04	5.05	101	101	79.0-120			0.198	20
1,2,3-Trichlorobenzene	5.00	4.17	4.25	83.4	85.0	50.0-138			1.90	20
1,2,4-Trichlorobenzene	5.00	4.01	4.21	80.2	84.2	57.0-137			4.87	20
1,1,1-Trichloroethane	5.00	4.50	4.64	90.0	92.8	73.0-124			3.06	20
1,1,2-Trichloroethane	5.00	4.24	4.37	84.8	87.4	80.0-120			3.02	20
Trichloroethene	5.00	4.54	5.65	90.8	113	78.0-124		J3	21.8	20
Trichlorofluoromethane	5.00	5.38	5.99	108	120	59.0-147			10.7	20
1,2,3-Trichloropropane	5.00	4.42	5.25	88.4	105	73.0-130			17.2	20
1,2,4-Trimethylbenzene	5.00	4.81	4.91	96.2	98.2	76.0-121			2.06	20
1,2,3-Trimethylbenzene	5.00	4.69	5.00	93.8	100	77.0-120			6.40	20
1,3,5-Trimethylbenzene	5.00	4.68	5.56	93.6	111	76.0-122			17.2	20
Vinyl chloride	5.00	4.52	5.17	90.4	103	67.0-131			13.4	20
Xylenes, Total	15.0	15.0	14.8	100	98.7	79.0-123			1.34	20
(S) Toluene-d8				111	110	80.0-120				
(S) 4-Bromofluorobenzene				94.1	100	77.0-126				
(S) 1,2-Dichloroethane-d4				107	107	70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

L1504991-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1504991-03 06/23/22 07:57 • (MS) R3806943-4 06/23/22 13:58 • (MSD) R3806943-5 06/23/22 14:19

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 %
Acetone	25.0	U	28.7	26.0	115	104	1	10.0-160			9.87	35
Acrolein	25.0	U	38.4	36.1	154	144	1	10.0-160			6.17	39
Acrylonitrile	25.0	U	28.3	27.2	113	109	1	21.0-160			3.96	32
Benzene	5.00	U	6.30	5.96	126	119	1	17.0-158			5.55	27
Bromobenzene	5.00	U	6.31	5.69	126	114	1	30.0-149			10.3	28
Bromodichloromethane	5.00	U	5.27	5.23	105	105	1	31.0-150			0.762	27
Bromoform	5.00	U	3.42	3.56	68.4	71.2	1	29.0-150			4.01	29
Bromomethane	5.00	U	6.49	6.17	130	123	1	10.0-160			5.06	38
1,3-Butadiene	5.00	U	7.49	6.94	150	139	1	10.0-160			7.62	22
n-Butylbenzene	5.00	U	5.99	5.62	120	112	1	31.0-150			6.37	30
sec-Butylbenzene	5.00	U	6.35	6.22	127	124	1	33.0-155			2.07	29
tert-Butylbenzene	5.00	U	6.00	5.86	120	117	1	34.0-153			2.36	28
Carbon tetrachloride	5.00	U	5.44	5.73	109	115	1	23.0-159			5.19	28
Carbon disulfide	5.00	U	4.60	4.55	92.0	91.0	1	10.0-156			1.09	28
Chlorobenzene	5.00	U	5.65	5.79	113	116	1	33.0-152			2.45	27
Chlorodibromomethane	5.00	U	4.13	4.72	82.6	94.4	1	37.0-149			13.3	27
Chloroethane	5.00	U	10.3	8.93	206	179	1	10.0-160	J5	J5	14.2	30
Chloroform	5.00	U	6.10	5.69	122	114	1	29.0-154			6.96	28
Chloromethane	5.00	U	5.22	4.81	104	96.2	1	10.0-160			8.18	29
Cyclohexane	5.00	U	5.64	5.35	113	107	1	19.0-160			5.28	23
2-Chlorotoluene	5.00	U	6.17	6.08	123	122	1	32.0-153			1.47	28
4-Chlorotoluene	5.00	U	5.70	5.59	114	112	1	32.0-150			1.95	28
1,2-Dibromo-3-Chloropropane	5.00	U	3.56	3.74	71.2	74.8	1	22.0-151			4.93	34
1,2-Dibromoethane	5.00	U	5.23	5.62	105	112	1	34.0-147			7.19	27
Dibromomethane	5.00	U	5.79	5.23	116	105	1	30.0-151			10.2	27
1,2-Dichlorobenzene	5.00	U	6.00	5.76	120	115	1	34.0-149			4.08	28
1,3-Dichlorobenzene	5.00	U	5.77	5.74	115	115	1	36.0-146			0.521	27
1,4-Dichlorobenzene	5.00	U	5.38	5.29	108	106	1	35.0-142			1.69	27
Dichlorodifluoromethane	5.00	U	5.23	4.90	105	98.0	1	10.0-160			6.52	29
1,1-Dichloroethane	5.00	U	5.97	5.88	119	118	1	25.0-158			1.52	27
1,2-Dichloroethane	5.00	U	5.72	5.67	114	113	1	29.0-151			0.878	27
1,1-Dichloroethene	5.00	U	5.81	5.58	116	112	1	11.0-160			4.04	29
cis-1,2-Dichloroethene	5.00	U	5.25	5.21	105	104	1	10.0-160			0.765	27
trans-1,2-Dichloroethene	5.00	U	5.24	5.04	105	101	1	17.0-153			3.89	27
1,2-Dichloropropane	5.00	U	5.73	5.69	115	114	1	30.0-156			0.701	27
1,1-Dichloropropene	5.00	U	6.20	6.06	124	121	1	25.0-158			2.28	27
1,3-Dichloropropane	5.00	U	5.44	5.68	109	114	1	38.0-147			4.32	27
cis-1,3-Dichloropropene	5.00	U	4.95	4.62	99.0	92.4	1	34.0-149			6.90	28
trans-1,3-Dichloropropene	5.00	U	4.50	4.98	90.0	99.6	1	32.0-149			10.1	28
2,2-Dichloropropane	5.00	U	5.06	4.75	101	95.0	1	24.0-152			6.32	29

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

L1504991-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1504991-03 06/23/22 07:57 • (MS) R3806943-4 06/23/22 13:58 • (MSD) R3806943-5 06/23/22 14:19

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 %
Dicyclopentadiene	5.00	U	5.98	6.02	120	120	1	51.0-139			0.667	20
Di-isopropyl ether	5.00	U	6.12	5.63	122	113	1	21.0-160			8.34	28
Ethylbenzene	5.00	U	5.99	5.89	120	118	1	30.0-155			1.68	27
4-Ethyltoluene	5.00	U	6.04	5.91	121	118	1	10.0-160			2.18	20
Hexachloro-1,3-butadiene	5.00	U	4.66	5.23	93.2	105	1	20.0-154			11.5	34
n-Hexane	5.00	U	4.52	4.05	90.4	81.0	1	10.0-153			11.0	28
Isopropylbenzene	5.00	U	5.86	6.06	117	121	1	28.0-157			3.36	27
p-Isopropyltoluene	5.00	U	5.71	5.73	114	115	1	30.0-154			0.350	29
2-Butanone (MEK)	25.0	U	30.9	30.6	124	122	1	10.0-160			0.976	32
Methyl Cyclohexane	5.00	U	5.94	5.03	119	101	1	11.0-160			16.6	24
Methylene Chloride	5.00	U	5.76	5.02	115	100	1	23.0-144			13.7	28
4-Methyl-2-pentanone (MIBK)	25.0	U	32.7	35.5	131	142	1	29.0-160			8.21	29
Methyl tert-butyl ether	5.00	U	5.88	5.48	118	110	1	28.0-150			7.04	29
Naphthalene	5.00	U	25.6	9.17	512	183	1	12.0-156	J5	J3 J5	94.5	35
Propene	5.00	U	6.96	6.36	139	127	1	10.0-160			9.01	29
n-Propylbenzene	5.00	U	8.38	6.35	168	127	1	31.0-154	J5		27.6	28
Styrene	5.00	U	5.20	5.45	104	109	1	33.0-155			4.69	28
1,1,1,2-Tetrachloroethane	5.00	U	4.93	5.19	98.6	104	1	36.0-151			5.14	29
1,1,2,2-Tetrachloroethane	5.00	U	5.75	5.62	115	112	1	33.0-150			2.29	28
1,1,2-Trichlorotrifluoroethane	5.00	U	6.54	5.97	131	119	1	23.0-160			9.11	30
Tetrachloroethene	5.00	U	5.57	6.05	111	121	1	10.0-160			8.26	27
Toluene	5.00	U	5.75	6.34	115	127	1	26.0-154			9.76	28
1,2,3-Trichlorobenzene	5.00	U	4.87	5.03	97.4	101	1	17.0-150			3.23	36
1,2,4-Trichlorobenzene	5.00	U	4.65	4.78	93.0	95.6	1	24.0-150			2.76	33
1,1,1-Trichloroethane	5.00	U	5.72	5.62	114	112	1	23.0-160			1.76	28
1,1,2-Trichloroethane	5.00	U	5.15	5.43	103	109	1	35.0-147			5.29	27
Trichloroethene	5.00	U	5.62	5.67	112	113	1	10.0-160			0.886	25
Trichlorofluoromethane	5.00	U	7.74	7.27	155	145	1	17.0-160			6.26	31
1,2,3-Trichloropropane	5.00	U	5.62	5.67	112	113	1	34.0-151			0.886	29
1,2,4-Trimethylbenzene	5.00	U	5.76	5.57	115	111	1	26.0-154			3.35	27
1,2,3-Trimethylbenzene	5.00	U	5.54	5.55	111	111	1	32.0-149			0.180	28
1,3,5-Trimethylbenzene	5.00	U	5.60	5.65	112	113	1	28.0-153			0.889	27
Vinyl chloride	5.00	U	6.25	5.98	125	120	1	10.0-160			4.42	27
Xylenes, Total	15.0	U	17.4	17.9	116	119	1	29.0-154			2.83	28
(S) Toluene-d8					107	115		80.0-120				
(S) 4-Bromofluorobenzene					95.4	102		77.0-126				
(S) 1,2-Dichloroethane-d4					109	109		70.0-130				

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Is

⁸Gl

⁹Al

¹⁰Sc

Method Blank (MB)

(MB) R3807269-3 06/24/22 10:39

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		11.3	50.0
Acrolein	U		2.54	50.0
Acrylonitrile	U		0.671	10.0
Benzene	U		0.0941	1.00
Bromobenzene	U		0.118	1.00
Bromodichloromethane	U		0.136	1.00
Bromoform	U		0.129	1.00
Bromomethane	U		0.605	5.00
1,3-Butadiene	U		0.299	2.00
n-Butylbenzene	U		0.157	1.00
sec-Butylbenzene	U		0.125	1.00
tert-Butylbenzene	U		0.127	1.00
Carbon tetrachloride	U		0.128	1.00
Carbon disulfide	U		0.0962	1.00
Chlorobenzene	U		0.116	1.00
Chlorodibromomethane	U		0.140	1.00
Chloroethane	U		0.192	5.00
Chloroform	U		0.111	5.00
Chloromethane	U		0.960	2.50
Cyclohexane	U		0.188	1.00
2-Chlorotoluene	U		0.106	1.00
4-Chlorotoluene	U		0.114	1.00
1,2-Dibromo-3-Chloropropane	U		0.276	5.00
1,2-Dibromoethane	U		0.126	1.00
Dibromomethane	U		0.122	1.00
1,2-Dichlorobenzene	U		0.107	1.00
1,3-Dichlorobenzene	U		0.110	1.00
1,4-Dichlorobenzene	U		0.120	1.00
Dichlorodifluoromethane	U		0.374	5.00
1,1-Dichloroethane	U		0.100	1.00
1,2-Dichloroethane	U		0.0819	1.00
1,1-Dichloroethene	U		0.188	1.00
cis-1,2-Dichloroethene	U		0.126	1.00
trans-1,2-Dichloroethene	U		0.149	1.00
1,2-Dichloropropane	U		0.149	1.00
1,1-Dichloropropene	U		0.142	1.00
1,3-Dichloropropane	U		0.110	1.00
cis-1,3-Dichloropropene	U		0.111	1.00
trans-1,3-Dichloropropene	U		0.118	1.00
2,2-Dichloropropane	U		0.161	1.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Is

⁸Gl

⁹Al

¹⁰Sc

Method Blank (MB)

(MB) R3807269-3 06/24/22 10:39

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Dicyclopentadiene	U		0.253	1.00
Di-isopropyl ether	U		0.105	1.00
Ethylbenzene	U		0.137	1.00
4-Ethyltoluene	U		0.208	1.00
Hexachloro-1,3-butadiene	U		0.337	1.00
n-Hexane	U		0.749	10.0
Isopropylbenzene	U		0.105	1.00
p-Isopropyltoluene	U		0.120	1.00
2-Butanone (MEK)	U		1.19	10.0
Methyl Cyclohexane	U		0.660	1.00
Methylene Chloride	0.716	U	0.430	5.00
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0
Methyl tert-butyl ether	U		0.101	1.00
Naphthalene	U		1.00	5.00
Propene	U		0.936	2.50
n-Propylbenzene	U		0.0993	1.00
Styrene	U		0.118	1.00
1,1,1,2-Tetrachloroethane	U		0.147	1.00
1,1,2,2-Tetrachloroethane	U		0.133	1.00
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00
Tetrachloroethene	U		0.300	1.00
Toluene	U		0.278	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.481	1.00
1,1,1-Trichloroethane	U		0.149	1.00
1,1,2-Trichloroethane	U		0.158	1.00
Trichloroethene	U		0.190	1.00
Trichlorofluoromethane	U		0.160	5.00
1,2,3-Trichloropropane	U		0.237	2.50
1,2,4-Trimethylbenzene	U		0.322	1.00
1,2,3-Trimethylbenzene	U		0.104	1.00
1,3,5-Trimethylbenzene	U		0.104	1.00
Vinyl chloride	U		0.234	1.00
Xylenes, Total	U		0.174	3.00
(S) Toluene-d8	105			80.0-120
(S) 4-Bromofluorobenzene	97.7			77.0-126
(S) 1,2-Dichloroethane-d4	93.6			70.0-130

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Is

⁸Gl

⁹Al

¹⁰Sc

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

(LCS) R3807269-1 06/24/22 09:37 • (LCSD) R3807269-2 06/24/22 09:58

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	30.3	29.8	121	119	19.0-160			1.66	27
Acrolein	25.0	19.2	18.3	76.8	73.2	30.0-160			4.80	26
Acrylonitrile	25.0	21.5	21.5	86.0	86.0	55.0-149			0.000	20
Benzene	5.00	4.90	4.37	98.0	87.4	70.0-123			11.4	20
Bromobenzene	5.00	5.04	4.68	101	93.6	73.0-121			7.41	20
Bromodichloromethane	5.00	4.35	4.07	87.0	81.4	75.0-120			6.65	20
Bromoform	5.00	4.18	3.99	83.6	79.8	68.0-132			4.65	20
Bromomethane	5.00	5.10	5.66	102	113	30.0-160			10.4	25
1,3-Butadiene	5.00	5.06	4.35	101	87.0	45.0-147			15.1	20
n-Butylbenzene	5.00	4.95	4.37	99.0	87.4	73.0-125			12.4	20
sec-Butylbenzene	5.00	5.13	4.49	103	89.8	75.0-125			13.3	20
tert-Butylbenzene	5.00	4.95	4.45	99.0	89.0	76.0-124			10.6	20
Carbon tetrachloride	5.00	5.44	4.94	109	98.8	68.0-126			9.63	20
Carbon disulfide	5.00	4.85	4.28	97.0	85.6	61.0-128			12.5	20
Chlorobenzene	5.00	4.63	4.21	92.6	84.2	80.0-121			9.50	20
Chlorodibromomethane	5.00	4.24	4.14	84.8	82.8	77.0-125			2.39	20
Chloroethane	5.00	5.28	4.40	106	88.0	47.0-150			18.2	20
Chloroform	5.00	4.53	4.23	90.6	84.6	73.0-120			6.85	20
Chloromethane	5.00	2.72	2.41	54.4	48.2	41.0-142			12.1	20
Cyclohexane	5.00	5.07	4.76	101	95.2	71.0-124			6.31	20
2-Chlorotoluene	5.00	5.04	4.60	101	92.0	76.0-123			9.13	20
4-Chlorotoluene	5.00	5.12	4.62	102	92.4	75.0-122			10.3	20
1,2-Dibromo-3-Chloropropane	5.00	3.33	3.53	66.6	70.6	58.0-134			5.83	20
1,2-Dibromoethane	5.00	4.14	4.08	82.8	81.6	80.0-122			1.46	20
Dibromomethane	5.00	4.51	4.37	90.2	87.4	80.0-120			3.15	20
1,2-Dichlorobenzene	5.00	4.96	4.51	99.2	90.2	79.0-121			9.50	20
1,3-Dichlorobenzene	5.00	5.02	4.66	100	93.2	79.0-120			7.44	20
1,4-Dichlorobenzene	5.00	4.84	4.42	96.8	88.4	79.0-120			9.07	20
Dichlorodifluoromethane	5.00	5.87	5.12	117	102	51.0-149			13.6	20
1,1-Dichloroethane	5.00	4.69	4.30	93.8	86.0	70.0-126			8.68	20
1,2-Dichloroethane	5.00	4.66	4.53	93.2	90.6	70.0-128			2.83	20
1,1-Dichloroethene	5.00	4.91	4.38	98.2	87.6	71.0-124			11.4	20
cis-1,2-Dichloroethene	5.00	4.70	4.47	94.0	89.4	73.0-120			5.02	20
trans-1,2-Dichloroethene	5.00	4.92	4.45	98.4	89.0	73.0-120			10.0	20
1,2-Dichloropropane	5.00	4.69	4.38	93.8	87.6	77.0-125			6.84	20
1,1-Dichloropropene	5.00	4.97	4.55	99.4	91.0	74.0-126			8.82	20
1,3-Dichloropropane	5.00	4.46	4.35	89.2	87.0	80.0-120			2.50	20
cis-1,3-Dichloropropene	5.00	4.67	4.43	93.4	88.6	80.0-123			5.27	20
trans-1,3-Dichloropropene	5.00	4.26	4.04	85.2	80.8	78.0-124			5.30	20
2,2-Dichloropropane	5.00	5.00	4.46	100	89.2	58.0-130			11.4	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

(LCS) R3807269-1 06/24/22 09:37 • (LCSD) R3807269-2 06/24/22 09:58

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Dicyclopentadiene	5.00	4.73	4.23	94.6	84.6	74.0-126			11.2	20
Di-isopropyl ether	5.00	4.63	4.46	92.6	89.2	58.0-138			3.74	20
Ethylbenzene	5.00	4.61	4.21	92.2	84.2	79.0-123			9.07	20
4-Ethyltoluene	5.00	5.12	4.57	102	91.4	74.0-127			11.4	20
Hexachloro-1,3-butadiene	5.00	4.77	4.47	95.4	89.4	54.0-138			6.49	20
n-Hexane	5.00	5.54	4.77	111	95.4	57.0-133			14.9	20
Isopropylbenzene	5.00	4.83	4.30	96.6	86.0	76.0-127			11.6	20
p-Isopropyltoluene	5.00	5.07	4.54	101	90.8	76.0-125			11.0	20
2-Butanone (MEK)	25.0	21.4	21.1	85.6	84.4	44.0-160			1.41	20
Methyl Cyclohexane	5.00	5.02	4.53	100	90.6	68.0-126			10.3	20
Methylene Chloride	5.00	4.75	4.54	95.0	90.8	67.0-120			4.52	20
4-Methyl-2-pentanone (MIBK)	25.0	20.8	20.0	83.2	80.0	68.0-142			3.92	20
Methyl tert-butyl ether	5.00	4.37	4.34	87.4	86.8	68.0-125			0.689	20
Naphthalene	5.00	3.44	3.43	68.8	68.6	54.0-135			0.291	20
Propene	5.00	5.71	5.01	114	100	30.0-160			13.1	20
n-Propylbenzene	5.00	5.11	4.50	102	90.0	77.0-124			12.7	20
Styrene	5.00	4.73	4.34	94.6	86.8	73.0-130			8.60	20
1,1,1,2-Tetrachloroethane	5.00	4.72	4.43	94.4	88.6	75.0-125			6.34	20
1,1,2,2-Tetrachloroethane	5.00	4.61	4.47	92.2	89.4	65.0-130			3.08	20
1,1,2-Trichlorotrifluoroethane	5.00	5.29	4.71	106	94.2	69.0-132			11.6	20
Tetrachloroethene	5.00	4.97	4.48	99.4	89.6	72.0-132			10.4	20
Toluene	5.00	4.91	4.43	98.2	88.6	79.0-120			10.3	20
1,2,3-Trichlorobenzene	5.00	3.35	3.34	67.0	66.8	50.0-138			0.299	20
1,2,4-Trichlorobenzene	5.00	4.19	4.10	83.8	82.0	57.0-137			2.17	20
1,1,1-Trichloroethane	5.00	5.03	4.47	101	89.4	73.0-124			11.8	20
1,1,2-Trichloroethane	5.00	4.64	4.36	92.8	87.2	80.0-120			6.22	20
Trichloroethene	5.00	4.89	4.36	97.8	87.2	78.0-124			11.5	20
Trichlorofluoromethane	5.00	5.28	4.93	106	98.6	59.0-147			6.86	20
1,2,3-Trichloropropane	5.00	4.46	4.24	89.2	84.8	73.0-130			5.06	20
1,2,4-Trimethylbenzene	5.00	4.71	4.26	94.2	85.2	76.0-121			10.0	20
1,2,3-Trimethylbenzene	5.00	5.04	4.56	101	91.2	77.0-120			10.0	20
1,3,5-Trimethylbenzene	5.00	5.02	4.41	100	88.2	76.0-122			12.9	20
Vinyl chloride	5.00	4.99	4.45	99.8	89.0	67.0-131			11.4	20
Xylenes, Total	15.0	14.0	12.7	93.3	84.7	79.0-123			9.74	20
(S) Toluene-d8				105	104	80.0-120				
(S) 4-Bromofluorobenzene				96.9	96.4	77.0-126				
(S) 1,2-Dichloroethane-d4				96.4	97.2	70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

L1505254-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1505254-06 06/24/22 17:04 • (MS) R3807269-4 06/24/22 19:49 • (MSD) R3807269-5 06/24/22 20:10

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	55.2	78.5	85.7	93.2	122	1	10.0-160			8.77	35
Acrolein	25.0	U	17.3	17.8	69.2	71.2	1	10.0-160			2.85	39
Acrylonitrile	25.0	U	21.2	23.1	84.8	92.4	1	21.0-160			8.58	32
Benzene	5.00	U	2.01	2.08	40.2	41.6	1	17.0-158			3.42	27
Bromobenzene	5.00	U	2.74	3.20	54.8	64.0	1	30.0-149			15.5	28
Bromodichloromethane	5.00	U	2.54	2.85	50.8	57.0	1	31.0-150			11.5	27
Bromoform	5.00	U	2.90	3.11	58.0	62.2	1	29.0-150			6.99	29
Bromomethane	5.00	U	2.49	2.56	49.8	51.2	1	10.0-160			2.77	38
1,3-Butadiene	5.00	U	1.83	1.67	36.6	33.4	1	10.0-160			9.14	22
n-Butylbenzene	5.00	U	2.02	1.93	40.4	38.6	1	31.0-150			4.56	30
sec-Butylbenzene	5.00	U	2.11	2.05	42.2	41.0	1	33.0-155			2.88	29
tert-Butylbenzene	5.00	U	2.11	2.14	42.2	42.8	1	34.0-153			1.41	28
Carbon tetrachloride	5.00	U	1.98	1.89	39.6	37.8	1	23.0-159			4.65	28
Carbon disulfide	5.00	7.35	8.33	8.33	19.6	19.6	1	10.0-156			0.000	28
Chlorobenzene	5.00	U	2.23	2.35	44.6	47.0	1	33.0-152			5.24	27
Chlorodibromomethane	5.00	U	2.88	3.12	57.6	62.4	1	37.0-149			8.00	27
Chloroethane	5.00	U	2.26	2.40	45.2	48.0	1	10.0-160			6.01	30
Chloroform	5.00	72.7	71.7	69.8	0.000	0.000	1	29.0-154	∇	∇	2.69	28
Chloromethane	5.00	U	1.11	1.09	22.2	21.8	1	10.0-160			1.82	29
Cyclohexane	5.00	U	5.68	5.45	114	109	1	19.0-160			4.13	23
2-Chlorotoluene	5.00	U	2.38	2.44	47.6	48.8	1	32.0-153			2.49	28
4-Chlorotoluene	5.00	U	2.45	2.65	49.0	53.0	1	32.0-150			7.84	28
1,2-Dibromo-3-Chloropropane	5.00	U	3.74	4.39	74.8	87.8	1	22.0-151			16.0	34
1,2-Dibromoethane	5.00	U	3.17	3.47	63.4	69.4	1	34.0-147			9.04	27
Dibromomethane	5.00	U	3.11	3.49	62.2	69.8	1	30.0-151			11.5	27
1,2-Dichlorobenzene	5.00	U	2.96	3.24	59.2	64.8	1	34.0-149			9.03	28
1,3-Dichlorobenzene	5.00	U	2.58	2.85	51.6	57.0	1	36.0-146			9.94	27
1,4-Dichlorobenzene	5.00	U	2.68	3.03	53.6	60.6	1	35.0-142			12.3	27
Dichlorodifluoromethane	5.00	U	1.94	1.69	38.8	33.8	1	10.0-160			13.8	29
1,1-Dichloroethane	5.00	U	2.00	2.05	40.0	41.0	1	25.0-158			2.47	27
1,2-Dichloroethane	5.00	U	2.91	3.24	58.2	64.8	1	29.0-151			10.7	27
1,1-Dichloroethene	5.00	U	1.80	1.61	36.0	32.2	1	11.0-160			11.1	29
cis-1,2-Dichloroethene	5.00	U	2.24	2.39	44.8	47.8	1	10.0-160			6.48	27
trans-1,2-Dichloroethene	5.00	U	1.76	1.76	35.2	35.2	1	17.0-153			0.000	27
1,2-Dichloropropane	5.00	U	2.43	2.66	48.6	53.2	1	30.0-156			9.04	27
1,1-Dichloropropene	5.00	U	1.82	1.71	36.4	34.2	1	25.0-158			6.23	27
1,3-Dichloropropane	5.00	U	3.21	3.52	64.2	70.4	1	38.0-147			9.21	27
cis-1,3-Dichloropropene	5.00	U	2.44	2.65	48.8	53.0	1	34.0-149			8.25	28
trans-1,3-Dichloropropene	5.00	U	2.54	2.82	50.8	56.4	1	32.0-149			10.4	28
2,2-Dichloropropane	5.00	U	1.41	1.34	28.2	26.8	1	24.0-152			5.09	29

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

L1505254-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1505254-06 06/24/22 17:04 • (MS) R3807269-4 06/24/22 19:49 • (MSD) R3807269-5 06/24/22 20:10

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 %
Dicyclopentadiene	5.00	U	1.90	1.92	38.0	38.4	1	51.0-139	J6	J6	1.05	20
Di-isopropyl ether	5.00	U	2.92	3.24	58.4	64.8	1	21.0-160			10.4	28
Ethylbenzene	5.00	0.183	2.76	2.38	51.5	43.9	1	30.0-155			14.8	27
4-Ethyltoluene	5.00	U	2.39	2.34	47.8	46.8	1	10.0-160			2.11	20
Hexachloro-1,3-butadiene	5.00	U	1.72	1.60	34.4	32.0	1	20.0-154			7.23	34
n-Hexane	5.00	U	2.08	2.15	41.6	43.0	1	10.0-153			3.31	28
Isopropylbenzene	5.00	U	2.13	2.08	42.6	41.6	1	28.0-157			2.38	27
p-Isopropyltoluene	5.00	5.94	7.78	10.5	36.8	91.2	1	30.0-154		J3	29.8	29
2-Butanone (MEK)	25.0	25.4	50.3	53.7	99.6	113	1	10.0-160			6.54	32
Methyl Cyclohexane	5.00	U	1.68	1.64	33.6	32.8	1	11.0-160			2.41	24
Methylene Chloride	5.00	2.38	4.64	4.61	45.2	44.6	1	23.0-144			0.649	28
4-Methyl-2-pentanone (MIBK)	25.0	0.853	23.6	25.5	91.0	98.6	1	29.0-160			7.74	29
Methyl tert-butyl ether	5.00	U	3.36	3.68	67.2	73.6	1	28.0-150			9.09	29
Naphthalene	5.00	U	10.0	4.16	200	83.2	1	12.0-156	J5	J3	82.5	35
Propene	5.00	U	2.62	2.72	52.4	54.4	1	10.0-160			3.75	29
n-Propylbenzene	5.00	U	2.30	2.25	46.0	45.0	1	31.0-154			2.20	28
Styrene	5.00	U	2.24	2.38	44.8	47.6	1	33.0-155			6.06	28
1,1,1,2-Tetrachloroethane	5.00	U	2.63	2.81	52.6	56.2	1	36.0-151			6.62	29
1,1,2,2-Tetrachloroethane	5.00	U	4.19	4.67	83.8	93.4	1	33.0-150			10.8	28
1,1,2-Trichlorotrifluoroethane	5.00	U	1.95	1.80	39.0	36.0	1	23.0-160			8.00	30
Tetrachloroethene	5.00	U	1.94	1.77	38.8	35.4	1	10.0-160			9.16	27
Toluene	5.00	8.81	10.4	12.8	31.8	79.8	1	26.0-154			20.7	28
1,2,3-Trichlorobenzene	5.00	U	2.37	2.56	47.4	51.2	1	17.0-150			7.71	36
1,2,4-Trichlorobenzene	5.00	U	2.51	2.68	50.2	53.6	1	24.0-150			6.55	33
1,1,1-Trichloroethane	5.00	U	1.91	1.86	38.2	37.2	1	23.0-160			2.65	28
1,1,2-Trichloroethane	5.00	U	3.45	3.63	69.0	72.6	1	35.0-147			5.08	27
Trichloroethene	5.00	U	1.82	1.86	36.4	37.2	1	10.0-160			2.17	25
Trichlorofluoromethane	5.00	U	1.94	1.81	38.8	36.2	1	17.0-160			6.93	31
1,2,3-Trichloropropane	5.00	U	3.96	4.52	79.2	90.4	1	34.0-151			13.2	29
1,2,4-Trimethylbenzene	5.00	U	2.68	2.45	53.6	49.0	1	26.0-154			8.97	27
1,2,3-Trimethylbenzene	5.00	U	2.71	2.78	54.2	55.6	1	32.0-149			2.55	28
1,3,5-Trimethylbenzene	5.00	U	2.28	2.27	45.6	45.4	1	28.0-153			0.440	27
Vinyl chloride	5.00	U	1.69	1.57	33.8	31.4	1	10.0-160			7.36	27
Xylenes, Total	15.0	U	7.00	6.74	46.7	44.9	1	29.0-154			3.78	28
(S) Toluene-d8					105	103		80.0-120				
(S) 4-Bromofluorobenzene					97.2	95.4		77.0-126				
(S) 1,2-Dichloroethane-d4					96.8	95.1		70.0-130				

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

Method Blank (MB)

(MB) R3807461-3 06/24/22 10:37

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Trichloroethene	U		0.190	1.00
(S) Toluene-d8	110			80.0-120
(S) 4-Bromofluorobenzene	110			77.0-126
(S) 1,2-Dichloroethane-d4	100			70.0-130

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

(LCS) R3807461-1 06/24/22 09:40 • (LCSD) R3807461-2 06/24/22 09:59

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 %
Trichloroethene	5.00	5.84	5.88	117	118	78.0-124			0.683	20
(S) Toluene-d8				104	103	80.0-120				
(S) 4-Bromofluorobenzene				107	105	77.0-126				
(S) 1,2-Dichloroethane-d4				107	106	70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

Method Blank (MB)

(MB) R3806676-3 06/22/22 11:34

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
1,4-Dioxane	U		0.597	3.00
(S) Toluene-d8	101			77.0-127

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

(LCS) R3806676-1 06/22/22 10:34 • (LCSD) R3806676-2 06/22/22 10:54

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
1,4-Dioxane	50.0	56.6	47.9	113	95.8	55.0-138			16.7	24
(S) Toluene-d8				101	101	77.0-127				

L1504535-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1504535-11 06/22/22 15:10 • (MS) R3806676-4 06/22/22 18:49 • (MSD) R3806676-5 06/22/22 19:10

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
1,4-Dioxane	50.0	28.9	80.6	84.5	103	111	1	13.0-160			4.72	31
(S) Toluene-d8					100	102		77.0-127				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

Method Blank (MB)

(MB) R3807576-3 06/24/22 11:08

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
1,4-Dioxane	U		0.597	3.00
(S) Toluene-d8	101			77.0-127

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

(LCS) R3807576-1 06/24/22 10:08 • (LCSD) R3807576-2 06/24/22 10:28

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	%	%	%			%	%
1,4-Dioxane	50.0	54.8	38.2	110	76.4	55.0-138		J3	35.7	24
(S) Toluene-d8				101	101	77.0-127				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

Method Blank (MB)

(MB) R3807577-3 06/24/22 11:08

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
1,4-Dioxane	U		0.597	3.00
(S) Toluene-d8	101			77.0-127

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

(LCS) R3807577-1 06/24/22 10:08 • (LCSD) R3807577-2 06/24/22 10:28

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
1,4-Dioxane	50.0	54.8	38.2	110	76.4	55.0-138		J3	35.7	24
(S) Toluene-d8				101	101	77.0-127				

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

Method Blank (MB)

(MB) R3808161-3 06/26/22 23:27

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
1,4-Dioxane	U		0.597	3.00
(S) Toluene-d8	103			77.0-127

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

(LCS) R3808161-1 06/26/22 22:27 • (LCSD) R3808161-2 06/26/22 22:47

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
1,4-Dioxane	50.0	52.9	49.4	106	98.8	55.0-138			6.84	24
(S) Toluene-d8				103	103	77.0-127				

L1504991-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1504991-03 06/27/22 00:14 • (MS) R3808161-4 06/27/22 05:51 • (MSD) R3808161-5 06/27/22 06:10

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
1,4-Dioxane	50.0	U	53.2	47.2	106	94.4	1	13.0-160			12.0	31
(S) Toluene-d8					103	103		77.0-127				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

INTERNAL STANDARD SUMMARY

Instrument: VOCMS20 • File ID: 0624A_02

06/24/22 09:40

Sample ID	File ID	8260-FLUOROBENZENE	8260-CHLOROBENZENE-D5	8260-1,4-DICHLOROBENZENE-D4
		Response	Response	Response
Standard	0624A_02	441867	157399	291691
Upper Limit		883734	314798	583382
Lower Limit		220934	78700	145846
LCS R3807461-1 WG1884962 1x	0624A_02LCS C	441867	157399	291691
LCSD R3807461-2 WG1884962 1x	0624A_03C	450048	163183	310620
BLANK R3807461-3 WG1884962 1x	0624A_05B	423759	146024	274618
L1504991-01 WG1884962 20x	0624A_22	403162	143771	273022

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Is

⁸ Gl

⁹ Al

¹⁰ Sc

Instrument: VOCMS21 • File ID: 0623_02

06/23/22 04:46

Sample ID	File ID	8260-FLUOROBENZENE	8260-CHLOROBENZENE-D5	8260-1,4-DICHLOROBENZENE-D4
		Response	Response	Response
Standard	0623_02	192608	88765	79776
Upper Limit		385216	177530	159552
Lower Limit		96304	44383	39888
LCS R3806943-1 WG1883877 1x	0623_03	203751	89876	84157
BLANK R3806943-2 WG1883877 1x	0623_05	202083	81544	84345
L1504991-01 WG1883877 1x	0623_07	196507	87275	74342
LCSD R3806943-3 WG1883877 1x	0623_08	196576	88939	81320
L1504991-02 WG1883877 1x	0623_10	201735	89017	83918
L1504991-03 WG1883877 1x	0623_11	191880	77707	81961
L1504991-04 WG1883877 1x	0623_12	190470	85339	76597
L1504991-05 WG1883877 1x	0623_13	206582	86894	74964
MS R3806943-4 WG1883877 1x	0623_28	209004	95296	88267
MSD R3806943-5 WG1883877 1x	0623_29	223190	90382	91114

INTERNAL STANDARD SUMMARY

Instrument: VOCMS36 • File ID: 0624_27

06/24/22 09:37

Sample ID	File ID	8260-FLUOROBENZENE Response	8260-CHLOROBENZENE-D5 Response	8260-1,4-DICHLOROBENZENE-D4 Response
Standard	0624_27	387936	174351	162597
Upper Limit		775872	348702	325194
Lower Limit		193968	87176	81299
LCS R3807269-1 WG1884247 1x	0624_27LCS	387936	174351	162597
LCSD R3807269-2 WG1884247 1x	0624_28	384270	174515	164618
BLANK R3807269-3 WG1884247 1x	0624_30	386999	169640	160052
L1504991-09 WG1884247 1x	0624_31	404058	180331	170446
L1504991-06 WG1884247 1x	0624_41	371066	166516	152285
L1504991-07 WG1884247 1x	0624_42	374491	165743	152070
L1504991-08 WG1884247 1x	0624_43	374733	166644	152697
MS R3807269-4 WG1884247 1x	0624_54	387874	171188	160781
MSD R3807269-5 WG1884247 1x	0624_55	389207	174421	159358

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Is

⁸ Gl

⁹ Al

¹⁰ Sc

INTERNAL STANDARD SUMMARY

Instrument: VOCMS27 • File ID: 0622_03

06/22/22 10:15

Sample ID	File ID	8260-FLUOROBENZENE Response
Standard	0622_03	956930
Upper Limit		1913860
Lower Limit		478465
LCS R3806676-1 WG1882718 1x	0622_04	930710
LCSD R3806676-2 WG1882718 1x	0622_05	1039969
BLANK R3806676-3 WG1882718 1x	0622_07	970798
L1504991-02 WG1882718 1x	0622_21	1102700
MS R3806676-4 WG1882718 1x	0622_28	950246
MSD R3806676-5 WG1882718 1x	0622_29	898601

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Is

Instrument: VOCMS27 • File ID: 0624_03

06/24/22 09:49

Sample ID	File ID	8260-FLUOROBENZENE Response
Standard	0624_03	1072170
Upper Limit		2144340
Lower Limit		536085
LCS R3807576-1 WG1884513 1x	0624_04	931218
LCS R3807577-1 WG1885092 1x	0624_04A	931218
LCSD R3807576-2 WG1884513 1x	0624_05	1192699
LCSD R3807577-2 WG1885092 1x	0624_05A	1192699
BLANK R3807576-3 WG1884513 1x	0624_07	851977
BLANK R3807577-3 WG1885092 1x	0624_07A	851977
L1504991-01 WG1884513 5x	0624_13	1123045
L1504991-04 WG1885092 1x	0624_15	1023016
L1504991-05 WG1885092 1x	0624_16	1217467
L1504991-06 WG1885092 1x	0624_17	1162239
L1504991-07 WG1885092 1x	0624_18	1095669
L1504991-08 WG1885092 1x	0624_19	1105996

⁸Gl

⁹Al

¹⁰Sc

INTERNAL STANDARD SUMMARY

Instrument: VOCMS27 • File ID: 0626_03

06/26/22 22:07

Sample ID	File ID	8260-FLUOROBENZENE Response
Standard	0626_03	1168901
Upper Limit		2337802
Lower Limit		584451
LCS R3808161-1 WG1885635 1x	0626_04A	1146593
LCSD R3808161-2 WG1885635 1x	0626_05A	1113153
BLANK R3808161-3 WG1885635 1x	0626_07A	1289181
L1504991-03 WG1885635 1x	0626_08	898457
MS R3808161-4 WG1885635 1x	0626_25	1144440
MSD R3808161-5 WG1885635 1x	0626_26	1133878

- ¹Cp
- ²Tc
- ³Ss
- ⁴Cn
- ⁵Sr
- ⁶Qc
- ⁷Is
- ⁸Gl
- ⁹Al
- ¹⁰Sc

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

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

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
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.
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	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Company Name/Address: **Pinyon Environmental**
 4815 E. Carefree Highway
 #108-274
 Cave Creek, AZ 85331

Billing Information:
 Accounts Payable
 3222 S Vance Street
 Suite 200
 Lakewood, CO 80227

Report to:
Christopher Funk

Project Description:
Nammo TTU Groundwater Monitoring

City/State Collected: _____ Please Circle: PT MT CT ET

Phone: 602-290-4774

Client Project # **722152201.002**

Lab Project # **PINYONMAZ-722152201**

Collected by (print): **Belle Foster**

Collected by (signature): *[Signature]*

Immediately Packed on Ice N Y

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

Quote # _____ Date Results Needed **Standard**

No. of Cntrs _____

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	PERCHLORATE 125mlHDPE-NoPres	V8260AZ 40mlAmb-HCl	V8260LL14D 40mlAmb-HCl	Perchlorate 6850
TTU-4-57-2022-614		GW	69	6/14/22	0642	7	✓	✓	✓	
TTU-8-164-2022-614		GW	164	6/14/22	1047	14	✓	✓	✓	
TTU-3-108-2022-614		GW	108	6/14/22	1124	7	✓	✓	✓	
TTU-7-164-2022-614		GW	164	6/14/22	1152	7	✓	✓	✓	
TTU-6-143-2022-614		GW	143	6/14/22	1216	7	✓	✓	✓	
TTU-10-147-2022-614		GW	147	6/14/22	1306	7	✓	✓	✓	
DUP-02		GW	-	6/14/22	1306	7	✓	✓	✓	
PF-2-2022-614		GW	-	6/14/22	1353	7				✓
Trip Blank		GW	-	-	-	1				

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs	PERCHLORATE 125mlHDPE-NoPres	V8260AZ 40mlAmb-HCl	V8260LL14D 40mlAmb-HCl	Perchlorate 6850
TTU-4-57-2022-614		GW	69	6/14/22	0642	7	✓	✓	✓	
TTU-8-164-2022-614		GW	164	6/14/22	1047	14	✓	✓	✓	
TTU-3-108-2022-614		GW	108	6/14/22	1124	7	✓	✓	✓	
TTU-7-164-2022-614		GW	164	6/14/22	1152	7	✓	✓	✓	
TTU-6-143-2022-614		GW	143	6/14/22	1216	7	✓	✓	✓	
TTU-10-147-2022-614		GW	147	6/14/22	1306	7	✓	✓	✓	
DUP-02		GW	-	6/14/22	1306	7	✓	✓	✓	
PF-2-2022-614		GW	-	6/14/22	1353	7				✓
Trip Blank		GW	-	-	-	1				

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

Remarks: **Perchlorate 6850 subbed to Eurofins-Sacramento, CA**

Samples returned via: ___ UPS ___ FedEx ___ Courier

Tracking # **582966969319**

Temp _____ Flow _____ Other _____

Relinquished by: (Signature) *[Signature]* Date: 6/14/22 Time: 1531

Received by: (Signature) *[Signature]* Trip Blank Received: Yes/No HCl/MeOH TBR

Relinquished by: (Signature) *[Signature]* Date: 6/14/22 Time: 1800

Received by: (Signature) *[Signature]* Temp: 25.0 = 25.63 °C Bottles Received: _____

Relinquished by: (Signature) *[Signature]* Date: _____ Time: _____

Received for lab by: (Signature) **Lyle Freeman** Date: 6/15/22 Time: 0945

If preservation required by Login: Date/Time _____

Hold: _____ Condition: 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>

SDG # **150491**

1247

Acctnum: **PINYONMAZ**

Template: **T205653**

Prelogin: **P931176**

PM: **288 - Daphne Richards**

PB: _____

Shipped Via: _____

Remarks _____ Sample # (lab only) _____

Pinyon Environmental

Sample Delivery Group: L1506299
Samples Received: 06/17/2022
Project Number: 722152201.002
Description: Nammo TTU Groundwater Monitoring

Report To: Jeremy Musson
4815 E. Carefree Highway
#108-274
Cave Creek, AZ 85331

Entire Report Reviewed By:









Daphne Richards
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

TABLE OF CONTENTS

Cp: Cover Page	1	
Tc: Table of Contents	2	
Ss: Sample Summary	3	
Cn: Case Narrative	4	
Sr: Sample Results	5	
TTU-20-73-20220616 L1506299-01	5	
TTU-1-50-20220616 L1506299-02	7	
TTU-2-114-20220616 L1506299-03	9	
DUP-06 L1506299-04	11	
Qc: Quality Control Summary	13	
Wet Chemistry by Method 314.0 Mod	13	
Volatile Organic Compounds (GC/MS) by Method 8260B	15	
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	22	
Is: Internal Standard Summary	24	
Volatile Organic Compounds (GC/MS) by Method 8260B	24	
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	26	
Gl: Glossary of Terms	27	
Al: Accreditations & Locations	28	
Sc: Sample Chain of Custody	29	

SAMPLE SUMMARY

TTU-20-73-20220616 L1506299-01 GW

Collected by Ben Boesen Collected date/time 06/16/22 11:44 Received date/time 06/17/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1891334	10000	07/07/22 18:48	07/07/22 18:48	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1885284	1	06/26/22 07:05	06/26/22 07:05	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1887020	250	06/29/22 06:34	06/29/22 06:34	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1888703	50	07/01/22 15:51	07/01/22 15:51	DWR	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

TTU-1-50-20220616 L1506299-02 GW

Collected by Ben Boesen Collected date/time 06/16/22 12:45 Received date/time 06/17/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1883354	500	06/24/22 23:20	06/24/22 23:20	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1885284	1	06/26/22 07:27	06/26/22 07:27	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1887020	1	06/29/22 01:45	06/29/22 01:45	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1888703	1	07/01/22 15:11	07/01/22 15:11	DWR	Mt. Juliet, TN

5 Sr

6 Qc

7 Is

8 Gl

TTU-2-114-20220616 L1506299-03 GW

Collected by Ben Boesen Collected date/time 06/16/22 13:14 Received date/time 06/17/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1883354	5000	06/24/22 23:44	06/24/22 23:44	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1885284	1	06/26/22 07:48	06/26/22 07:48	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1887020	20	06/29/22 06:55	06/29/22 06:55	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1888703	10	07/01/22 16:11	07/01/22 16:11	DWR	Mt. Juliet, TN

9 Al

10 Sc

DUP-06 L1506299-04 GW

Collected by Ben Boesen Collected date/time 06/16/22 12:45 Received date/time 06/17/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1891334	500	07/07/22 20:13	07/07/22 20:13	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1885284	1	06/26/22 08:10	06/26/22 08:10	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1887020	1	06/29/22 02:05	06/29/22 02:05	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1883858	1	06/23/22 15:35	06/23/22 15:35	JAH	Mt. Juliet, TN

CASE NARRATIVE

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



Daphne Richards
Project Manager

Report Revision History

Level II Report - Version 1: 07/13/22 08:55

Project Narrative

Qualifier correction



Wet Chemistry by Method 314.0 Mod

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Perchlorate	454000		3000	40000	10000	07/07/2022 18:48	WG1891334

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	06/26/2022 07:05	WG1885284
Acrolein	U		2.54	50.0	1	06/26/2022 07:05	WG1885284
Acrylonitrile	U		0.671	10.0	1	06/26/2022 07:05	WG1885284
Benzene	72.7		0.0941	1.00	1	06/26/2022 07:05	WG1885284
Bromobenzene	U		0.118	1.00	1	06/26/2022 07:05	WG1885284
Bromodichloromethane	U		0.136	1.00	1	06/26/2022 07:05	WG1885284
Bromoform	U		0.129	1.00	1	06/26/2022 07:05	WG1885284
Bromomethane	U		0.605	5.00	1	06/26/2022 07:05	WG1885284
1,3-Butadiene	U		0.299	2.00	1	06/26/2022 07:05	WG1885284
n-Butylbenzene	U		0.157	1.00	1	06/26/2022 07:05	WG1885284
sec-Butylbenzene	U		0.125	1.00	1	06/26/2022 07:05	WG1885284
tert-Butylbenzene	U		0.127	1.00	1	06/26/2022 07:05	WG1885284
Carbon tetrachloride	U		0.128	1.00	1	06/26/2022 07:05	WG1885284
Carbon disulfide	U		0.0962	1.00	1	06/26/2022 07:05	WG1885284
Chlorobenzene	0.947	J	0.116	1.00	1	06/26/2022 07:05	WG1885284
Chlorodibromomethane	U		0.140	1.00	1	06/26/2022 07:05	WG1885284
Chloroethane	U		0.192	5.00	1	06/26/2022 07:05	WG1885284
Chloroform	20.1		0.111	5.00	1	06/26/2022 07:05	WG1885284
Chloromethane	U		0.960	2.50	1	06/26/2022 07:05	WG1885284
Cyclohexane	1.15		0.188	1.00	1	06/26/2022 07:05	WG1885284
2-Chlorotoluene	U		0.106	1.00	1	06/26/2022 07:05	WG1885284
4-Chlorotoluene	U		0.114	1.00	1	06/26/2022 07:05	WG1885284
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	06/26/2022 07:05	WG1885284
1,2-Dibromoethane	U		0.126	1.00	1	06/26/2022 07:05	WG1885284
Dibromomethane	U		0.122	1.00	1	06/26/2022 07:05	WG1885284
1,2-Dichlorobenzene	1.46		0.107	1.00	1	06/26/2022 07:05	WG1885284
1,3-Dichlorobenzene	0.134	J	0.110	1.00	1	06/26/2022 07:05	WG1885284
1,4-Dichlorobenzene	0.422	J	0.120	1.00	1	06/26/2022 07:05	WG1885284
Dichlorodifluoromethane	U		0.374	5.00	1	06/26/2022 07:05	WG1885284
1,1-Dichloroethane	29.0		0.100	1.00	1	06/26/2022 07:05	WG1885284
1,2-Dichloroethane	4.66		0.0819	1.00	1	06/26/2022 07:05	WG1885284
1,1-Dichloroethene	2120		47.0	250	250	06/29/2022 06:34	WG1887020
cis-1,2-Dichloroethene	112		0.126	1.00	1	06/26/2022 07:05	WG1885284
trans-1,2-Dichloroethene	19.5		0.149	1.00	1	06/26/2022 07:05	WG1885284
1,2-Dichloropropane	U		0.149	1.00	1	06/26/2022 07:05	WG1885284
1,1-Dichloropropene	U		0.142	1.00	1	06/26/2022 07:05	WG1885284
1,3-Dichloropropane	U		0.110	1.00	1	06/26/2022 07:05	WG1885284
cis-1,3-Dichloropropene	U		0.111	1.00	1	06/26/2022 07:05	WG1885284
trans-1,3-Dichloropropene	U		0.118	1.00	1	06/26/2022 07:05	WG1885284
2,2-Dichloropropane	U		0.161	1.00	1	06/26/2022 07:05	WG1885284
Dicyclopentadiene	U		0.253	1.00	1	06/26/2022 07:05	WG1885284
Di-isopropyl ether	0.262	J	0.105	1.00	1	06/26/2022 07:05	WG1885284
Ethylbenzene	U		0.137	1.00	1	06/26/2022 07:05	WG1885284
4-Ethyltoluene	U		0.208	1.00	1	06/26/2022 07:05	WG1885284
Hexachloro-1,3-butadiene	U		0.337	1.00	1	06/26/2022 07:05	WG1885284
n-Hexane	U		0.749	10.0	1	06/26/2022 07:05	WG1885284
Isopropylbenzene	U		0.105	1.00	1	06/26/2022 07:05	WG1885284
p-Isopropyltoluene	U		0.120	1.00	1	06/26/2022 07:05	WG1885284
2-Butanone (MEK)	U		1.19	10.0	1	06/26/2022 07:05	WG1885284
Methyl Cyclohexane	U		0.660	1.00	1	06/26/2022 07:05	WG1885284

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

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	147		0.430	5.00	1	06/26/2022 07:05	WG1885284
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	06/26/2022 07:05	WG1885284
Methyl tert-butyl ether	U		0.101	1.00	1	06/26/2022 07:05	WG1885284
Naphthalene	U		1.00	5.00	1	06/26/2022 07:05	WG1885284
Propene	U		0.936	2.50	1	06/26/2022 07:05	WG1885284
n-Propylbenzene	U		0.0993	1.00	1	06/26/2022 07:05	WG1885284
Styrene	U		0.118	1.00	1	06/26/2022 07:05	WG1885284
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	06/26/2022 07:05	WG1885284
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	06/26/2022 07:05	WG1885284
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	06/26/2022 07:05	WG1885284
Tetrachloroethene	21.9		0.300	1.00	1	06/26/2022 07:05	WG1885284
Toluene	1.28		0.278	1.00	1	06/26/2022 07:05	WG1885284
1,2,3-Trichlorobenzene	U		0.230	1.00	1	06/26/2022 07:05	WG1885284
1,2,4-Trichlorobenzene	U		0.481	1.00	1	06/26/2022 07:05	WG1885284
1,1,1-Trichloroethane	U		0.149	1.00	1	06/26/2022 07:05	WG1885284
1,1,2-Trichloroethane	18.2		0.158	1.00	1	06/26/2022 07:05	WG1885284
Trichloroethene	10800		47.5	250	250	06/29/2022 06:34	WG1887020
Trichlorofluoromethane	U		0.160	5.00	1	06/26/2022 07:05	WG1885284
1,2,3-Trichloropropane	U		0.237	2.50	1	06/26/2022 07:05	WG1885284
1,2,4-Trimethylbenzene	U		0.322	1.00	1	06/26/2022 07:05	WG1885284
1,2,3-Trimethylbenzene	U		0.104	1.00	1	06/26/2022 07:05	WG1885284
1,3,5-Trimethylbenzene	U		0.104	1.00	1	06/26/2022 07:05	WG1885284
Vinyl chloride	1.36		0.234	1.00	1	06/26/2022 07:05	WG1885284
Xylenes, Total	2.72	<u>U</u>	0.174	3.00	1	06/26/2022 07:05	WG1885284
(S) Toluene-d8	104			80.0-120		06/26/2022 07:05	WG1885284
(S) Toluene-d8	107			80.0-120		06/29/2022 06:34	WG1887020
(S) 4-Bromofluorobenzene	102			77.0-126		06/26/2022 07:05	WG1885284
(S) 4-Bromofluorobenzene	96.0			77.0-126		06/29/2022 06:34	WG1887020
(S) 1,2-Dichloroethane-d4	106			70.0-130		06/26/2022 07:05	WG1885284
(S) 1,2-Dichloroethane-d4	95.6			70.0-130		06/29/2022 06:34	WG1887020

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

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	1540	<u>Q</u>	29.9	150	50	07/01/2022 15:51	WG1888703
(S) Toluene-d8	102			77.0-127		07/01/2022 15:51	WG1888703

Wet Chemistry by Method 314.0 Mod

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Perchlorate	38700		150	2000	500	06/24/2022 23:20	WG1883354

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	06/26/2022 07:27	WG1885284
Acrolein	U		2.54	50.0	1	06/26/2022 07:27	WG1885284
Acrylonitrile	U		0.671	10.0	1	06/26/2022 07:27	WG1885284
Benzene	U		0.0941	1.00	1	06/26/2022 07:27	WG1885284
Bromobenzene	U		0.118	1.00	1	06/26/2022 07:27	WG1885284
Bromodichloromethane	U		0.136	1.00	1	06/26/2022 07:27	WG1885284
Bromoform	U		0.129	1.00	1	06/26/2022 07:27	WG1885284
Bromomethane	U		0.605	5.00	1	06/26/2022 07:27	WG1885284
1,3-Butadiene	U		0.299	2.00	1	06/26/2022 07:27	WG1885284
n-Butylbenzene	U		0.157	1.00	1	06/26/2022 07:27	WG1885284
sec-Butylbenzene	U		0.125	1.00	1	06/26/2022 07:27	WG1885284
tert-Butylbenzene	U		0.127	1.00	1	06/26/2022 07:27	WG1885284
Carbon tetrachloride	U		0.128	1.00	1	06/26/2022 07:27	WG1885284
Carbon disulfide	U		0.0962	1.00	1	06/26/2022 07:27	WG1885284
Chlorobenzene	U		0.116	1.00	1	06/26/2022 07:27	WG1885284
Chlorodibromomethane	U		0.140	1.00	1	06/26/2022 07:27	WG1885284
Chloroethane	U		0.192	5.00	1	06/26/2022 07:27	WG1885284
Chloroform	U		0.111	5.00	1	06/26/2022 07:27	WG1885284
Chloromethane	U		0.960	2.50	1	06/26/2022 07:27	WG1885284
Cyclohexane	U		0.188	1.00	1	06/26/2022 07:27	WG1885284
2-Chlorotoluene	U		0.106	1.00	1	06/26/2022 07:27	WG1885284
4-Chlorotoluene	U		0.114	1.00	1	06/26/2022 07:27	WG1885284
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	06/26/2022 07:27	WG1885284
1,2-Dibromoethane	U		0.126	1.00	1	06/26/2022 07:27	WG1885284
Dibromomethane	U		0.122	1.00	1	06/26/2022 07:27	WG1885284
1,2-Dichlorobenzene	U		0.107	1.00	1	06/26/2022 07:27	WG1885284
1,3-Dichlorobenzene	U		0.110	1.00	1	06/26/2022 07:27	WG1885284
1,4-Dichlorobenzene	U		0.120	1.00	1	06/26/2022 07:27	WG1885284
Dichlorodifluoromethane	U		0.374	5.00	1	06/26/2022 07:27	WG1885284
1,1-Dichloroethane	U		0.100	1.00	1	06/26/2022 07:27	WG1885284
1,2-Dichloroethane	U		0.0819	1.00	1	06/26/2022 07:27	WG1885284
1,1-Dichloroethene	0.786	J	0.188	1.00	1	06/29/2022 01:45	WG1887020
cis-1,2-Dichloroethene	U		0.126	1.00	1	06/26/2022 07:27	WG1885284
trans-1,2-Dichloroethene	U		0.149	1.00	1	06/26/2022 07:27	WG1885284
1,2-Dichloropropane	U		0.149	1.00	1	06/26/2022 07:27	WG1885284
1,1-Dichloropropene	U		0.142	1.00	1	06/26/2022 07:27	WG1885284
1,3-Dichloropropane	U		0.110	1.00	1	06/26/2022 07:27	WG1885284
cis-1,3-Dichloropropene	U		0.111	1.00	1	06/26/2022 07:27	WG1885284
trans-1,3-Dichloropropene	U		0.118	1.00	1	06/26/2022 07:27	WG1885284
2,2-Dichloropropane	U		0.161	1.00	1	06/26/2022 07:27	WG1885284
Dicyclopentadiene	U		0.253	1.00	1	06/26/2022 07:27	WG1885284
Di-isopropyl ether	U		0.105	1.00	1	06/26/2022 07:27	WG1885284
Ethylbenzene	U		0.137	1.00	1	06/26/2022 07:27	WG1885284
4-Ethyltoluene	U		0.208	1.00	1	06/26/2022 07:27	WG1885284
Hexachloro-1,3-butadiene	U		0.337	1.00	1	06/26/2022 07:27	WG1885284
n-Hexane	U		0.749	10.0	1	06/26/2022 07:27	WG1885284
Isopropylbenzene	U		0.105	1.00	1	06/26/2022 07:27	WG1885284
p-Isopropyltoluene	U		0.120	1.00	1	06/26/2022 07:27	WG1885284
2-Butanone (MEK)	U		1.19	10.0	1	06/26/2022 07:27	WG1885284
Methyl Cyclohexane	U		0.660	1.00	1	06/26/2022 07:27	WG1885284

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	U		0.430	5.00	1	06/26/2022 07:27	WG1885284
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	06/26/2022 07:27	WG1885284
Methyl tert-butyl ether	U		0.101	1.00	1	06/26/2022 07:27	WG1885284
Naphthalene	U		1.00	5.00	1	06/26/2022 07:27	WG1885284
Propene	U		0.936	2.50	1	06/26/2022 07:27	WG1885284
n-Propylbenzene	U		0.0993	1.00	1	06/26/2022 07:27	WG1885284
Styrene	U		0.118	1.00	1	06/26/2022 07:27	WG1885284
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	06/26/2022 07:27	WG1885284
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	06/26/2022 07:27	WG1885284
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	06/26/2022 07:27	WG1885284
Tetrachloroethene	U		0.300	1.00	1	06/26/2022 07:27	WG1885284
Toluene	U		0.278	1.00	1	06/26/2022 07:27	WG1885284
1,2,3-Trichlorobenzene	U		0.230	1.00	1	06/26/2022 07:27	WG1885284
1,2,4-Trichlorobenzene	U		0.481	1.00	1	06/26/2022 07:27	WG1885284
1,1,1-Trichloroethane	U		0.149	1.00	1	06/26/2022 07:27	WG1885284
1,1,2-Trichloroethane	U		0.158	1.00	1	06/26/2022 07:27	WG1885284
Trichloroethene	4.42		0.190	1.00	1	06/29/2022 01:45	WG1887020
Trichlorofluoromethane	U		0.160	5.00	1	06/26/2022 07:27	WG1885284
1,2,3-Trichloropropane	U		0.237	2.50	1	06/26/2022 07:27	WG1885284
1,2,4-Trimethylbenzene	U		0.322	1.00	1	06/26/2022 07:27	WG1885284
1,2,3-Trimethylbenzene	U		0.104	1.00	1	06/26/2022 07:27	WG1885284
1,3,5-Trimethylbenzene	U		0.104	1.00	1	06/26/2022 07:27	WG1885284
Vinyl chloride	U		0.234	1.00	1	06/26/2022 07:27	WG1885284
Xylenes, Total	U		0.174	3.00	1	06/26/2022 07:27	WG1885284
(S) Toluene-d8	106			80.0-120		06/26/2022 07:27	WG1885284
(S) Toluene-d8	106			80.0-120		06/29/2022 01:45	WG1887020
(S) 4-Bromofluorobenzene	103			77.0-126		06/26/2022 07:27	WG1885284
(S) 4-Bromofluorobenzene	95.2			77.0-126		06/29/2022 01:45	WG1887020
(S) 1,2-Dichloroethane-d4	105			70.0-130		06/26/2022 07:27	WG1885284
(S) 1,2-Dichloroethane-d4	94.9			70.0-130		06/29/2022 01:45	WG1887020

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

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	17.5	<u>Q</u>	0.597	3.00	1	07/01/2022 15:11	WG1888703
(S) Toluene-d8	100			77.0-127		07/01/2022 15:11	WG1888703

Wet Chemistry by Method 314.0 Mod

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Perchlorate	169000	<u>V</u>	1500	20000	5000	06/24/2022 23:44	WG1883354

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	06/26/2022 07:48	WG1885284
Acrolein	U		2.54	50.0	1	06/26/2022 07:48	WG1885284
Acrylonitrile	U		0.671	10.0	1	06/26/2022 07:48	WG1885284
Benzene	1.13		0.0941	1.00	1	06/26/2022 07:48	WG1885284
Bromobenzene	U		0.118	1.00	1	06/26/2022 07:48	WG1885284
Bromodichloromethane	U		0.136	1.00	1	06/26/2022 07:48	WG1885284
Bromoform	U		0.129	1.00	1	06/26/2022 07:48	WG1885284
Bromomethane	U		0.605	5.00	1	06/26/2022 07:48	WG1885284
1,3-Butadiene	U		0.299	2.00	1	06/26/2022 07:48	WG1885284
n-Butylbenzene	U		0.157	1.00	1	06/26/2022 07:48	WG1885284
sec-Butylbenzene	U		0.125	1.00	1	06/26/2022 07:48	WG1885284
tert-Butylbenzene	U		0.127	1.00	1	06/26/2022 07:48	WG1885284
Carbon tetrachloride	U		0.128	1.00	1	06/26/2022 07:48	WG1885284
Carbon disulfide	U		0.0962	1.00	1	06/26/2022 07:48	WG1885284
Chlorobenzene	U		0.116	1.00	1	06/26/2022 07:48	WG1885284
Chlorodibromomethane	U		0.140	1.00	1	06/26/2022 07:48	WG1885284
Chloroethane	U		0.192	5.00	1	06/26/2022 07:48	WG1885284
Chloroform	1.77	<u>J</u>	0.111	5.00	1	06/26/2022 07:48	WG1885284
Chloromethane	U		0.960	2.50	1	06/26/2022 07:48	WG1885284
Cyclohexane	U		0.188	1.00	1	06/26/2022 07:48	WG1885284
2-Chlorotoluene	U		0.106	1.00	1	06/26/2022 07:48	WG1885284
4-Chlorotoluene	U		0.114	1.00	1	06/26/2022 07:48	WG1885284
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	06/26/2022 07:48	WG1885284
1,2-Dibromoethane	U		0.126	1.00	1	06/26/2022 07:48	WG1885284
Dibromomethane	U		0.122	1.00	1	06/26/2022 07:48	WG1885284
1,2-Dichlorobenzene	U		0.107	1.00	1	06/26/2022 07:48	WG1885284
1,3-Dichlorobenzene	U		0.110	1.00	1	06/26/2022 07:48	WG1885284
1,4-Dichlorobenzene	U		0.120	1.00	1	06/26/2022 07:48	WG1885284
Dichlorodifluoromethane	U		0.374	5.00	1	06/26/2022 07:48	WG1885284
1,1-Dichloroethane	0.899	<u>J</u>	0.100	1.00	1	06/26/2022 07:48	WG1885284
1,2-Dichloroethane	U	<u>J3 J6</u>	0.0819	1.00	1	06/26/2022 07:48	WG1885284
1,1-Dichloroethene	42.2		0.188	1.00	1	06/26/2022 07:48	WG1885284
cis-1,2-Dichloroethene	1.43		0.126	1.00	1	06/26/2022 07:48	WG1885284
trans-1,2-Dichloroethene	0.152	<u>J</u>	0.149	1.00	1	06/26/2022 07:48	WG1885284
1,2-Dichloropropane	U		0.149	1.00	1	06/26/2022 07:48	WG1885284
1,1-Dichloropropene	U		0.142	1.00	1	06/26/2022 07:48	WG1885284
1,3-Dichloropropane	U		0.110	1.00	1	06/26/2022 07:48	WG1885284
cis-1,3-Dichloropropene	U		0.111	1.00	1	06/26/2022 07:48	WG1885284
trans-1,3-Dichloropropene	U		0.118	1.00	1	06/26/2022 07:48	WG1885284
2,2-Dichloropropane	U		0.161	1.00	1	06/26/2022 07:48	WG1885284
Dicyclopentadiene	U	<u>J6</u>	0.253	1.00	1	06/26/2022 07:48	WG1885284
Di-isopropyl ether	U		0.105	1.00	1	06/26/2022 07:48	WG1885284
Ethylbenzene	U		0.137	1.00	1	06/26/2022 07:48	WG1885284
4-Ethyltoluene	U		0.208	1.00	1	06/26/2022 07:48	WG1885284
Hexachloro-1,3-butadiene	U		0.337	1.00	1	06/26/2022 07:48	WG1885284
n-Hexane	U		0.749	10.0	1	06/26/2022 07:48	WG1885284
Isopropylbenzene	U		0.105	1.00	1	06/26/2022 07:48	WG1885284
p-Isopropyltoluene	U		0.120	1.00	1	06/26/2022 07:48	WG1885284
2-Butanone (MEK)	U		1.19	10.0	1	06/26/2022 07:48	WG1885284
Methyl Cyclohexane	U	<u>J5</u>	0.660	1.00	1	06/26/2022 07:48	WG1885284

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

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	U		0.430	5.00	1	06/26/2022 07:48	WG1885284
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	06/26/2022 07:48	WG1885284
Methyl tert-butyl ether	U		0.101	1.00	1	06/26/2022 07:48	WG1885284
Naphthalene	U		1.00	5.00	1	06/26/2022 07:48	WG1885284
Propene	U		0.936	2.50	1	06/26/2022 07:48	WG1885284
n-Propylbenzene	U		0.0993	1.00	1	06/26/2022 07:48	WG1885284
Styrene	U		0.118	1.00	1	06/26/2022 07:48	WG1885284
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	06/26/2022 07:48	WG1885284
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	06/26/2022 07:48	WG1885284
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	06/26/2022 07:48	WG1885284
Tetrachloroethene	0.654	<u>J</u>	0.300	1.00	1	06/26/2022 07:48	WG1885284
Toluene	U		0.278	1.00	1	06/26/2022 07:48	WG1885284
1,2,3-Trichlorobenzene	U		0.230	1.00	1	06/26/2022 07:48	WG1885284
1,2,4-Trichlorobenzene	U		0.481	1.00	1	06/26/2022 07:48	WG1885284
1,1,1-Trichloroethane	U		0.149	1.00	1	06/26/2022 07:48	WG1885284
1,1,2-Trichloroethane	1.90		0.158	1.00	1	06/26/2022 07:48	WG1885284
Trichloroethene	443		3.80	20.0	20	06/29/2022 06:55	WG1887020
Trichlorofluoromethane	U	<u>J5</u>	0.160	5.00	1	06/26/2022 07:48	WG1885284
1,2,3-Trichloropropane	U		0.237	2.50	1	06/26/2022 07:48	WG1885284
1,2,4-Trimethylbenzene	U		0.322	1.00	1	06/26/2022 07:48	WG1885284
1,2,3-Trimethylbenzene	U		0.104	1.00	1	06/26/2022 07:48	WG1885284
1,3,5-Trimethylbenzene	U		0.104	1.00	1	06/26/2022 07:48	WG1885284
Vinyl chloride	U		0.234	1.00	1	06/26/2022 07:48	WG1885284
Xylenes, Total	U		0.174	3.00	1	06/26/2022 07:48	WG1885284
(S) Toluene-d8	104			80.0-120		06/26/2022 07:48	WG1885284
(S) Toluene-d8	107			80.0-120		06/29/2022 06:55	WG1887020
(S) 4-Bromofluorobenzene	101			77.0-126		06/26/2022 07:48	WG1885284
(S) 4-Bromofluorobenzene	95.1			77.0-126		06/29/2022 06:55	WG1887020
(S) 1,2-Dichloroethane-d4	108			70.0-130		06/26/2022 07:48	WG1885284
(S) 1,2-Dichloroethane-d4	96.6			70.0-130		06/29/2022 06:55	WG1887020

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

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	246	<u>Q</u>	5.97	30.0	10	07/01/2022 16:11	WG1888703
(S) Toluene-d8	102			77.0-127		07/01/2022 16:11	WG1888703

Wet Chemistry by Method 314.0 Mod

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Perchlorate	13200		150	2000	500	07/07/2022 20:13	WG1891334

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	06/26/2022 08:10	WG1885284
Acrolein	U		2.54	50.0	1	06/26/2022 08:10	WG1885284
Acrylonitrile	U		0.671	10.0	1	06/26/2022 08:10	WG1885284
Benzene	U		0.0941	1.00	1	06/26/2022 08:10	WG1885284
Bromobenzene	U		0.118	1.00	1	06/26/2022 08:10	WG1885284
Bromodichloromethane	U		0.136	1.00	1	06/26/2022 08:10	WG1885284
Bromoform	U		0.129	1.00	1	06/26/2022 08:10	WG1885284
Bromomethane	U		0.605	5.00	1	06/26/2022 08:10	WG1885284
1,3-Butadiene	U		0.299	2.00	1	06/26/2022 08:10	WG1885284
n-Butylbenzene	U		0.157	1.00	1	06/26/2022 08:10	WG1885284
sec-Butylbenzene	U		0.125	1.00	1	06/26/2022 08:10	WG1885284
tert-Butylbenzene	U		0.127	1.00	1	06/26/2022 08:10	WG1885284
Carbon tetrachloride	U		0.128	1.00	1	06/26/2022 08:10	WG1885284
Carbon disulfide	U		0.0962	1.00	1	06/26/2022 08:10	WG1885284
Chlorobenzene	U		0.116	1.00	1	06/26/2022 08:10	WG1885284
Chlorodibromomethane	U		0.140	1.00	1	06/26/2022 08:10	WG1885284
Chloroethane	U		0.192	5.00	1	06/26/2022 08:10	WG1885284
Chloroform	U		0.111	5.00	1	06/26/2022 08:10	WG1885284
Chloromethane	U		0.960	2.50	1	06/26/2022 08:10	WG1885284
Cyclohexane	U		0.188	1.00	1	06/26/2022 08:10	WG1885284
2-Chlorotoluene	U		0.106	1.00	1	06/26/2022 08:10	WG1885284
4-Chlorotoluene	U		0.114	1.00	1	06/26/2022 08:10	WG1885284
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	06/26/2022 08:10	WG1885284
1,2-Dibromoethane	U		0.126	1.00	1	06/26/2022 08:10	WG1885284
Dibromomethane	U		0.122	1.00	1	06/26/2022 08:10	WG1885284
1,2-Dichlorobenzene	U		0.107	1.00	1	06/26/2022 08:10	WG1885284
1,3-Dichlorobenzene	U		0.110	1.00	1	06/26/2022 08:10	WG1885284
1,4-Dichlorobenzene	U		0.120	1.00	1	06/26/2022 08:10	WG1885284
Dichlorodifluoromethane	U		0.374	5.00	1	06/26/2022 08:10	WG1885284
1,1-Dichloroethane	U		0.100	1.00	1	06/26/2022 08:10	WG1885284
1,2-Dichloroethane	U		0.0819	1.00	1	06/26/2022 08:10	WG1885284
1,1-Dichloroethene	0.902	J	0.188	1.00	1	06/26/2022 08:10	WG1885284
cis-1,2-Dichloroethene	U		0.126	1.00	1	06/26/2022 08:10	WG1885284
trans-1,2-Dichloroethene	U		0.149	1.00	1	06/26/2022 08:10	WG1885284
1,2-Dichloropropane	U		0.149	1.00	1	06/26/2022 08:10	WG1885284
1,1-Dichloropropene	U		0.142	1.00	1	06/26/2022 08:10	WG1885284
1,3-Dichloropropane	U		0.110	1.00	1	06/26/2022 08:10	WG1885284
cis-1,3-Dichloropropene	U		0.111	1.00	1	06/26/2022 08:10	WG1885284
trans-1,3-Dichloropropene	U		0.118	1.00	1	06/26/2022 08:10	WG1885284
2,2-Dichloropropane	U		0.161	1.00	1	06/26/2022 08:10	WG1885284
Dicyclopentadiene	U		0.253	1.00	1	06/26/2022 08:10	WG1885284
Di-isopropyl ether	U		0.105	1.00	1	06/26/2022 08:10	WG1885284
Ethylbenzene	U		0.137	1.00	1	06/26/2022 08:10	WG1885284
4-Ethyltoluene	U		0.208	1.00	1	06/26/2022 08:10	WG1885284
Hexachloro-1,3-butadiene	U		0.337	1.00	1	06/26/2022 08:10	WG1885284
n-Hexane	U		0.749	10.0	1	06/26/2022 08:10	WG1885284
Isopropylbenzene	U		0.105	1.00	1	06/26/2022 08:10	WG1885284
p-Isopropyltoluene	U		0.120	1.00	1	06/26/2022 08:10	WG1885284
2-Butanone (MEK)	U		1.19	10.0	1	06/26/2022 08:10	WG1885284
Methyl Cyclohexane	U		0.660	1.00	1	06/26/2022 08:10	WG1885284

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	U		0.430	5.00	1	06/26/2022 08:10	WG1885284
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	06/26/2022 08:10	WG1885284
Methyl tert-butyl ether	U		0.101	1.00	1	06/26/2022 08:10	WG1885284
Naphthalene	U		1.00	5.00	1	06/26/2022 08:10	WG1885284
Propene	U		0.936	2.50	1	06/26/2022 08:10	WG1885284
n-Propylbenzene	U		0.0993	1.00	1	06/26/2022 08:10	WG1885284
Styrene	U		0.118	1.00	1	06/26/2022 08:10	WG1885284
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	06/26/2022 08:10	WG1885284
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	06/26/2022 08:10	WG1885284
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	06/26/2022 08:10	WG1885284
Tetrachloroethene	U		0.300	1.00	1	06/26/2022 08:10	WG1885284
Toluene	U		0.278	1.00	1	06/26/2022 08:10	WG1885284
1,2,3-Trichlorobenzene	U		0.230	1.00	1	06/26/2022 08:10	WG1885284
1,2,4-Trichlorobenzene	U		0.481	1.00	1	06/26/2022 08:10	WG1885284
1,1,1-Trichloroethane	U		0.149	1.00	1	06/26/2022 08:10	WG1885284
1,1,2-Trichloroethane	U		0.158	1.00	1	06/26/2022 08:10	WG1885284
Trichloroethene	4.12		0.190	1.00	1	06/29/2022 02:05	WG1887020
Trichlorofluoromethane	U		0.160	5.00	1	06/26/2022 08:10	WG1885284
1,2,3-Trichloropropane	U		0.237	2.50	1	06/26/2022 08:10	WG1885284
1,2,4-Trimethylbenzene	U		0.322	1.00	1	06/26/2022 08:10	WG1885284
1,2,3-Trimethylbenzene	U		0.104	1.00	1	06/26/2022 08:10	WG1885284
1,3,5-Trimethylbenzene	U		0.104	1.00	1	06/26/2022 08:10	WG1885284
Vinyl chloride	U		0.234	1.00	1	06/26/2022 08:10	WG1885284
Xylenes, Total	U		0.174	3.00	1	06/26/2022 08:10	WG1885284
(S) Toluene-d8	104			80.0-120		06/26/2022 08:10	WG1885284
(S) Toluene-d8	107			80.0-120		06/29/2022 02:05	WG1887020
(S) 4-Bromofluorobenzene	99.6			77.0-126		06/26/2022 08:10	WG1885284
(S) 4-Bromofluorobenzene	96.8			77.0-126		06/29/2022 02:05	WG1887020
(S) 1,2-Dichloroethane-d4	108			70.0-130		06/26/2022 08:10	WG1885284
(S) 1,2-Dichloroethane-d4	96.0			70.0-130		06/29/2022 02:05	WG1887020

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

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	35.5		0.597	3.00	1	06/23/2022 15:35	WG1883858
(S) Toluene-d8	101			77.0-127		06/23/2022 15:35	WG1883858

Method Blank (MB)

(MB) R3811786-1 06/24/22 16:34

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Perchlorate	U		0.300	4.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

L1505669-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1505669-06 06/24/22 18:33 • (DUP) R3811786-3 06/24/22 18:57

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Perchlorate	U	U	1	0.000		15

⁷Is

⁸Gl

⁹Al

L1506302-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1506302-04 06/25/22 02:55 • (DUP) R3811786-10 06/25/22 03:19

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Perchlorate	U	U	1	0.000		15

¹⁰Sc

Laboratory Control Sample (LCS)

(LCS) R3811786-2 06/24/22 17:21

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Perchlorate	10.0	9.79	97.9	90.0-110	

L1505669-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1505669-07 06/24/22 19:21 • (MS) R3811786-4 06/24/22 19:45 • (MSD) R3811786-5 06/24/22 20:08

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Perchlorate	10.0	U	10.5	10.9	105	109	1	80.0-120			3.67	15

L1506299-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1506299-03 06/24/22 23:44 • (MS) R3811786-8 06/25/22 00:07 • (MSD) R3811786-9 06/25/22 00:31

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Perchlorate	10.0	169000	166000	174000	0.000	48100	5000	80.0-120	∨	∨	4.33	15

Method Blank (MB)

(MB) R3813772-1 07/07/22 14:09

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Perchlorate	U		0.300	4.00

¹Cp

²Tc

³Ss

L1505669-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1505669-10 07/07/22 16:52 • (DUP) R3813772-3 07/07/22 17:22

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Perchlorate	3870	3880	500	0.284		15

⁴Cn

⁵Sr

Laboratory Control Sample (LCS)

(LCS) R3813772-2 07/07/22 15:06

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Perchlorate	10.0	9.20	92.0	90.0-110	

⁶Qc

⁷Is

⁸Gl

L1506302-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1506302-05 07/07/22 21:10 • (MS) R3813772-4 07/07/22 21:38 • (MSD) R3813772-5 07/07/22 22:06

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Perchlorate	10.0	U	9.61	9.42	96.1	94.2	1	80.0-120			2.00	15

⁹Al

¹⁰Sc

Method Blank (MB)

(MB) R3808558-3 06/26/22 03:08

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		11.3	50.0
Acrolein	U		2.54	50.0
Acrylonitrile	U		0.671	10.0
Benzene	U		0.0941	1.00
Bromobenzene	U		0.118	1.00
Bromodichloromethane	U		0.136	1.00
Bromoform	U		0.129	1.00
Bromomethane	U		0.605	5.00
1,3-Butadiene	U		0.299	2.00
n-Butylbenzene	U		0.157	1.00
sec-Butylbenzene	U		0.125	1.00
tert-Butylbenzene	U		0.127	1.00
Carbon tetrachloride	U		0.128	1.00
Carbon disulfide	U		0.0962	1.00
Chlorobenzene	U		0.116	1.00
Chlorodibromomethane	U		0.140	1.00
Chloroethane	U		0.192	5.00
Chloroform	U		0.111	5.00
Chloromethane	U		0.960	2.50
Cyclohexane	U		0.188	1.00
2-Chlorotoluene	U		0.106	1.00
4-Chlorotoluene	U		0.114	1.00
1,2-Dibromo-3-Chloropropane	U		0.276	5.00
1,2-Dibromoethane	U		0.126	1.00
Dibromomethane	U		0.122	1.00
1,2-Dichlorobenzene	U		0.107	1.00
1,3-Dichlorobenzene	U		0.110	1.00
1,4-Dichlorobenzene	U		0.120	1.00
Dichlorodifluoromethane	U		0.374	5.00
1,1-Dichloroethane	U		0.100	1.00
1,2-Dichloroethane	U		0.0819	1.00
1,1-Dichloroethene	U		0.188	1.00
cis-1,2-Dichloroethene	U		0.126	1.00
trans-1,2-Dichloroethene	U		0.149	1.00
1,2-Dichloropropane	U		0.149	1.00
1,1-Dichloropropene	U		0.142	1.00
1,3-Dichloropropane	U		0.110	1.00
cis-1,3-Dichloropropene	U		0.111	1.00
trans-1,3-Dichloropropene	U		0.118	1.00
2,2-Dichloropropane	U		0.161	1.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Is

⁸Gl

⁹Al

¹⁰Sc

Method Blank (MB)

(MB) R3808558-3 06/26/22 03:08

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Dicyclopentadiene	U		0.253	1.00
Di-isopropyl ether	U		0.105	1.00
Ethylbenzene	U		0.137	1.00
4-Ethyltoluene	U		0.208	1.00
Hexachloro-1,3-butadiene	U		0.337	1.00
n-Hexane	U		0.749	10.0
Isopropylbenzene	U		0.105	1.00
p-Isopropyltoluene	U		0.120	1.00
2-Butanone (MEK)	U		1.19	10.0
Methyl Cyclohexane	U		0.660	1.00
Methylene Chloride	U		0.430	5.00
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0
Methyl tert-butyl ether	U		0.101	1.00
Naphthalene	U		1.00	5.00
Propene	U		0.936	2.50
n-Propylbenzene	U		0.0993	1.00
Styrene	U		0.118	1.00
1,1,1,2-Tetrachloroethane	U		0.147	1.00
1,1,2,2-Tetrachloroethane	U		0.133	1.00
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00
Tetrachloroethene	U		0.300	1.00
Toluene	U		0.278	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.481	1.00
1,1,1-Trichloroethane	U		0.149	1.00
1,1,2-Trichloroethane	U		0.158	1.00
Trichlorofluoromethane	U		0.160	5.00
1,2,3-Trichloropropane	U		0.237	2.50
1,2,4-Trimethylbenzene	U		0.322	1.00
1,2,3-Trimethylbenzene	U		0.104	1.00
1,3,5-Trimethylbenzene	U		0.104	1.00
Vinyl chloride	U		0.234	1.00
Xylenes, Total	U		0.174	3.00
(S) Toluene-d8	105			80.0-120
(S) 4-Bromofluorobenzene	99.4			77.0-126
(S) 1,2-Dichloroethane-d4	109			70.0-130

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Is

⁸Gl

⁹Al

¹⁰Sc

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

(LCS) R3808558-1 06/26/22 02:03 • (LCSD) R3808558-2 06/26/22 02:24

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Acetone	25.0	30.2	29.9	121	120	19.0-160			0.998	27
Acrolein	25.0	23.2	23.9	92.8	95.6	30.0-160			2.97	26
Acrylonitrile	25.0	26.1	24.8	104	99.2	55.0-149			5.11	20
Benzene	5.00	5.21	4.85	104	97.0	70.0-123			7.16	20
Bromobenzene	5.00	5.06	4.89	101	97.8	73.0-121			3.42	20
Bromodichloromethane	5.00	5.12	4.92	102	98.4	75.0-120			3.98	20
Bromoform	5.00	4.77	4.89	95.4	97.8	68.0-132			2.48	20
Bromomethane	5.00	4.77	4.21	95.4	84.2	30.0-160			12.5	25
1,3-Butadiene	5.00	6.23	5.65	125	113	45.0-147			9.76	20
n-Butylbenzene	5.00	4.84	4.29	96.8	85.8	73.0-125			12.0	20
sec-Butylbenzene	5.00	4.95	4.59	99.0	91.8	75.0-125			7.55	20
tert-Butylbenzene	5.00	4.74	4.53	94.8	90.6	76.0-124			4.53	20
Carbon tetrachloride	5.00	5.90	5.56	118	111	68.0-126			5.93	20
Carbon disulfide	5.00	5.38	4.87	108	97.4	61.0-128			9.95	20
Chlorobenzene	5.00	5.02	4.90	100	98.0	80.0-121			2.42	20
Chlorodibromomethane	5.00	5.09	4.90	102	98.0	77.0-125			3.80	20
Chloroethane	5.00	5.66	5.14	113	103	47.0-150			9.63	20
Chloroform	5.00	5.56	5.22	111	104	73.0-120			6.31	20
Chloromethane	5.00	2.72	2.58	54.4	51.6	41.0-142			5.28	20
Cyclohexane	5.00	5.43	4.80	109	96.0	71.0-124			12.3	20
2-Chlorotoluene	5.00	5.28	4.97	106	99.4	76.0-123			6.05	20
4-Chlorotoluene	5.00	4.88	4.65	97.6	93.0	75.0-122			4.83	20
1,2-Dibromo-3-Chloropropane	5.00	4.37	4.22	87.4	84.4	58.0-134			3.49	20
1,2-Dibromoethane	5.00	5.12	4.87	102	97.4	80.0-122			5.01	20
Dibromomethane	5.00	5.03	5.00	101	100	80.0-120			0.598	20
1,2-Dichlorobenzene	5.00	4.67	4.68	93.4	93.6	79.0-121			0.214	20
1,3-Dichlorobenzene	5.00	4.79	4.67	95.8	93.4	79.0-120			2.54	20
1,4-Dichlorobenzene	5.00	4.94	4.90	98.8	98.0	79.0-120			0.813	20
Dichlorodifluoromethane	5.00	6.00	5.54	120	111	51.0-149			7.97	20
1,1-Dichloroethane	5.00	5.35	5.06	107	101	70.0-126			5.57	20
1,2-Dichloroethane	5.00	6.05	5.61	121	112	70.0-128			7.55	20
1,1-Dichloroethene	5.00	5.12	4.88	102	97.6	71.0-124			4.80	20
cis-1,2-Dichloroethene	5.00	5.05	4.95	101	99.0	73.0-120			2.00	20
trans-1,2-Dichloroethene	5.00	5.22	4.69	104	93.8	73.0-120			10.7	20
1,2-Dichloropropane	5.00	4.93	4.82	98.6	96.4	77.0-125			2.26	20
1,1-Dichloropropene	5.00	5.55	5.13	111	103	74.0-126			7.87	20
1,3-Dichloropropane	5.00	5.06	4.98	101	99.6	80.0-120			1.59	20
cis-1,3-Dichloropropene	5.00	4.94	4.61	98.8	92.2	80.0-123			6.91	20
trans-1,3-Dichloropropene	5.00	4.83	4.64	96.6	92.8	78.0-124			4.01	20
2,2-Dichloropropane	5.00	4.69	4.39	93.8	87.8	58.0-130			6.61	20

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Is

⁸ Gl

⁹ Al

¹⁰ Sc

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

(LCS) R3808558-1 06/26/22 02:03 • (LCSD) R3808558-2 06/26/22 02:24

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 %
Dicyclopentadiene	5.00	5.06	4.69	101	93.8	74.0-126			7.59	20
Di-isopropyl ether	5.00	5.07	5.01	101	100	58.0-138			1.19	20
Ethylbenzene	5.00	5.11	4.71	102	94.2	79.0-123			8.15	20
4-Ethyltoluene	5.00	4.91	4.75	98.2	95.0	74.0-127			3.31	20
Hexachloro-1,3-butadiene	5.00	4.60	4.43	92.0	88.6	54.0-138			3.77	20
n-Hexane	5.00	5.63	5.11	113	102	57.0-133			9.68	20
Isopropylbenzene	5.00	5.01	4.69	100	93.8	76.0-127			6.60	20
p-Isopropyltoluene	5.00	5.04	4.64	101	92.8	76.0-125			8.26	20
2-Butanone (MEK)	25.0	27.8	25.5	111	102	44.0-160			8.63	20
Methyl Cyclohexane	5.00	5.06	4.50	101	90.0	68.0-126			11.7	20
Methylene Chloride	5.00	5.34	5.22	107	104	67.0-120			2.27	20
4-Methyl-2-pentanone (MIBK)	25.0	25.3	24.9	101	99.6	68.0-142			1.59	20
Methyl tert-butyl ether	5.00	5.05	5.21	101	104	68.0-125			3.12	20
Naphthalene	5.00	3.79	3.90	75.8	78.0	54.0-135			2.86	20
Propene	5.00	5.71	5.23	114	105	30.0-160			8.78	20
n-Propylbenzene	5.00	5.08	4.72	102	94.4	77.0-124			7.35	20
Styrene	5.00	4.87	4.53	97.4	90.6	73.0-130			7.23	20
1,1,1,2-Tetrachloroethane	5.00	5.09	5.05	102	101	75.0-125			0.789	20
1,1,2,2-Tetrachloroethane	5.00	4.51	4.75	90.2	95.0	65.0-130			5.18	20
1,1,2-Trichlorotrifluoroethane	5.00	5.47	4.94	109	98.8	69.0-132			10.2	20
Tetrachloroethene	5.00	5.39	4.76	108	95.2	72.0-132			12.4	20
Toluene	5.00	5.08	4.71	102	94.2	79.0-120			7.56	20
1,2,3-Trichlorobenzene	5.00	4.56	4.54	91.2	90.8	50.0-138			0.440	20
1,2,4-Trichlorobenzene	5.00	4.16	4.14	83.2	82.8	57.0-137			0.482	20
1,1,1-Trichloroethane	5.00	5.86	5.26	117	105	73.0-124			10.8	20
1,1,2-Trichloroethane	5.00	4.90	4.70	98.0	94.0	80.0-120			4.17	20
Trichlorofluoromethane	5.00	6.55	6.09	131	122	59.0-147			7.28	20
1,2,3-Trichloropropane	5.00	5.42	5.17	108	103	73.0-130			4.72	20
1,2,4-Trimethylbenzene	5.00	4.86	4.62	97.2	92.4	76.0-121			5.06	20
1,2,3-Trimethylbenzene	5.00	4.76	4.60	95.2	92.0	77.0-120			3.42	20
1,3,5-Trimethylbenzene	5.00	4.98	4.72	99.6	94.4	76.0-122			5.36	20
Vinyl chloride	5.00	5.78	5.15	116	103	67.0-131			11.5	20
Xylenes, Total	15.0	15.4	14.1	103	94.0	79.0-123			8.81	20
(S) Toluene-d8				102	104	80.0-120				
(S) 4-Bromofluorobenzene				97.6	101	77.0-126				
(S) 1,2-Dichloroethane-d4				110	109	70.0-130				

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

L1506299-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1506299-03 06/26/22 07:48 • (MS) R3808558-4 06/26/22 11:24 • (MSD) R3808558-5 06/26/22 11:46

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	U	29.8	25.5	119	102	1	10.0-160			15.6	35
Acrolein	25.0	U	26.6	28.7	106	115	1	10.0-160			7.59	39
Acrylonitrile	25.0	U	28.0	29.0	112	116	1	21.0-160			3.51	32
Benzene	5.00	1.13	6.76	7.24	113	122	1	17.0-158			6.86	27
Bromobenzene	5.00	U	5.81	5.84	116	117	1	30.0-149			0.515	28
Bromodichloromethane	5.00	U	5.73	6.11	115	122	1	31.0-150			6.42	27
Bromoform	5.00	U	5.53	5.71	111	114	1	29.0-150			3.20	29
Bromomethane	5.00	U	2.92	3.39	58.4	67.8	1	10.0-160			14.9	38
1,3-Butadiene	5.00	U	6.72	7.85	134	157	1	10.0-160			15.5	22
n-Butylbenzene	5.00	U	5.26	5.42	105	108	1	31.0-150			3.00	30
sec-Butylbenzene	5.00	U	5.54	5.89	111	118	1	33.0-155			6.12	29
tert-Butylbenzene	5.00	U	5.38	5.98	108	120	1	34.0-153			10.6	28
Carbon tetrachloride	5.00	U	6.77	7.39	135	148	1	23.0-159			8.76	28
Carbon disulfide	5.00	U	5.80	6.18	116	124	1	10.0-156			6.34	28
Chlorobenzene	5.00	U	5.61	6.13	112	123	1	33.0-152			8.86	27
Chlorodibromomethane	5.00	U	5.85	6.17	117	123	1	37.0-149			5.32	27
Chloroethane	5.00	U	6.32	6.81	126	136	1	10.0-160			7.46	30
Chloroform	5.00	1.77	7.82	8.47	121	134	1	29.0-154			7.98	28
Chloromethane	5.00	U	2.46	2.60	49.2	52.0	1	10.0-160			5.53	29
Cyclohexane	5.00	U	6.26	6.83	125	137	1	19.0-160			8.71	23
2-Chlorotoluene	5.00	U	5.88	5.94	118	119	1	32.0-153			1.02	28
4-Chlorotoluene	5.00	U	5.18	5.71	104	114	1	32.0-150			9.73	28
1,2-Dibromo-3-Chloropropane	5.00	U	5.16	5.46	103	109	1	22.0-151			5.65	34
1,2-Dibromoethane	5.00	U	5.50	5.80	110	116	1	34.0-147			5.31	27
Dibromomethane	5.00	U	5.53	6.15	111	123	1	30.0-151			10.6	27
1,2-Dichlorobenzene	5.00	U	5.23	5.64	105	113	1	34.0-149			7.54	28
1,3-Dichlorobenzene	5.00	U	5.44	5.66	109	113	1	36.0-146			3.96	27
1,4-Dichlorobenzene	5.00	U	5.42	5.68	108	114	1	35.0-142			4.68	27
Dichlorodifluoromethane	5.00	U	6.95	7.47	139	149	1	10.0-160			7.21	29
1,1-Dichloroethane	5.00	0.899	6.89	7.26	120	127	1	25.0-158			5.23	27
1,2-Dichloroethane	5.00	U	6.39	0.411	128	8.22	1	29.0-151	J3 J6		176	27
1,1-Dichloroethene	5.00	42.2	46.5	49.2	86.0	140	1	11.0-160			5.64	29
cis-1,2-Dichloroethene	5.00	1.43	7.20	7.65	115	124	1	10.0-160			6.06	27
trans-1,2-Dichloroethene	5.00	0.152	5.86	6.19	114	121	1	17.0-153			5.48	27
1,2-Dichloropropane	5.00	U	5.59	6.11	112	122	1	30.0-156			8.89	27
1,1-Dichloropropene	5.00	U	6.19	6.80	124	136	1	25.0-158			9.39	27
1,3-Dichloropropane	5.00	U	5.45	6.02	109	120	1	38.0-147			9.94	27
cis-1,3-Dichloropropene	5.00	U	5.28	5.80	106	116	1	34.0-149			9.39	28
trans-1,3-Dichloropropene	5.00	U	5.38	5.73	108	115	1	32.0-149			6.30	28
2,2-Dichloropropane	5.00	U	5.29	5.56	106	111	1	24.0-152			4.98	29

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

L1506299-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1506299-03 06/26/22 07:48 • (MS) R3808558-4 06/26/22 11:24 • (MSD) R3808558-5 06/26/22 11:46

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 %
Dicyclopentadiene	5.00	U	1.89	1.94	37.8	38.8	1	51.0-139	J6	J6	2.61	20
Di-isopropyl ether	5.00	U	5.78	6.24	116	125	1	21.0-160			7.65	28
Ethylbenzene	5.00	U	5.57	5.88	111	118	1	30.0-155			5.41	27
4-Ethyltoluene	5.00	U	5.42	5.74	108	115	1	10.0-160			5.73	20
Hexachloro-1,3-butadiene	5.00	U	5.00	5.45	100	109	1	20.0-154			8.61	34
n-Hexane	5.00	U	6.01	6.32	120	126	1	10.0-153			5.03	28
Isopropylbenzene	5.00	U	5.63	6.03	113	121	1	28.0-157			6.86	27
p-Isopropyltoluene	5.00	U	5.58	5.75	112	115	1	30.0-154			3.00	29
2-Butanone (MEK)	25.0	U	25.8	28.6	103	114	1	10.0-160			10.3	32
Methyl Cyclohexane	5.00	U	9.46	10.0	189	200	1	11.0-160	J5	J5	5.55	24
Methylene Chloride	5.00	U	5.73	6.30	115	126	1	23.0-144			9.48	28
4-Methyl-2-pentanone (MIBK)	25.0	U	28.2	29.3	113	117	1	29.0-160			3.83	29
Methyl tert-butyl ether	5.00	U	5.67	6.04	113	121	1	28.0-150			6.32	29
Naphthalene	5.00	U	4.85	4.89	97.0	97.8	1	12.0-156			0.821	35
Propene	5.00	U	6.00	5.53	120	111	1	10.0-160			8.15	29
n-Propylbenzene	5.00	U	5.54	5.98	111	120	1	31.0-154			7.64	28
Styrene	5.00	U	5.11	5.46	102	109	1	33.0-155			6.62	28
1,1,1,2-Tetrachloroethane	5.00	U	5.82	6.05	116	121	1	36.0-151			3.88	29
1,1,2,2-Tetrachloroethane	5.00	U	5.45	5.90	109	118	1	33.0-150			7.93	28
1,1,2-Trichlorotrifluoroethane	5.00	U	6.55	6.99	131	140	1	23.0-160			6.50	30
Tetrachloroethene	5.00	0.654	6.65	6.89	120	125	1	10.0-160			3.55	27
Toluene	5.00	U	5.52	5.78	110	116	1	26.0-154			4.60	28
1,2,3-Trichlorobenzene	5.00	U	5.38	5.08	108	102	1	17.0-150			5.74	36
1,2,4-Trichlorobenzene	5.00	U	5.06	4.95	101	99.0	1	24.0-150			2.20	33
1,1,1-Trichloroethane	5.00	U	6.68	6.97	134	139	1	23.0-160			4.25	28
1,1,2-Trichloroethane	5.00	1.90	7.26	7.66	107	115	1	35.0-147			5.36	27
Trichlorofluoromethane	5.00	U	7.92	8.61	158	172	1	17.0-160		J5	8.35	31
1,2,3-Trichloropropane	5.00	U	5.72	6.06	114	121	1	34.0-151			5.77	29
1,2,4-Trimethylbenzene	5.00	U	5.37	5.83	107	117	1	26.0-154			8.21	27
1,2,3-Trimethylbenzene	5.00	U	5.38	5.75	108	115	1	32.0-149			6.65	28
1,3,5-Trimethylbenzene	5.00	U	5.55	5.84	111	117	1	28.0-153			5.09	27
Vinyl chloride	5.00	U	6.37	6.78	127	136	1	10.0-160			6.24	27
Xylenes, Total	15.0	U	16.8	17.8	112	119	1	29.0-154			5.78	28
(S) Toluene-d8					100	101		80.0-120				
(S) 4-Bromofluorobenzene					99.2	98.6		77.0-126				
(S) 1,2-Dichloroethane-d4					106	109		70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

Method Blank (MB)

(MB) R3809530-3 06/28/22 22:34

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
1,1-Dichloroethene	U		0.188	1.00
Trichloroethene	U		0.190	1.00
(S) Toluene-d8	107			80.0-120
(S) 4-Bromofluorobenzene	96.2			77.0-126
(S) 1,2-Dichloroethane-d4	95.8			70.0-130

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

(LCS) R3809530-1 06/28/22 21:32 • (LCSD) R3809530-2 06/28/22 21:53

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	%	%	%			%	%
1,1-Dichloroethene	5.00	5.00	4.55	100	91.0	71.0-124			9.42	20
Trichloroethene	5.00	4.96	4.57	99.2	91.4	78.0-124			8.18	20
(S) Toluene-d8				103	104	80.0-120				
(S) 4-Bromofluorobenzene				95.4	94.9	77.0-126				
(S) 1,2-Dichloroethane-d4				97.4	97.9	70.0-130				

L1506078-11 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1506078-11 06/29/22 01:24 • (MS) R3809530-4 06/29/22 07:15 • (MSD) R3809530-5 06/29/22 07:36

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	%	%		%			%	%
1,1-Dichloroethene	5.00	U	4.10	4.81	82.0	96.2	1	11.0-160			15.9	29
Trichloroethene	5.00	U	3.83	4.58	76.6	91.6	1	10.0-160			17.8	25
(S) Toluene-d8					103	99.0		80.0-120				
(S) 4-Bromofluorobenzene					94.9	95.4		77.0-126				
(S) 1,2-Dichloroethane-d4					98.1	99.5		70.0-130				



Method Blank (MB)

(MB) R3808024-2 06/23/22 10:50

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
1,4-Dioxane	U		0.597	3.00
(S) Toluene-d8	100			77.0-127

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

(LCS) R3808024-1 06/23/22 09:07 • (LCSD) R3808024-3 06/23/22 11:18

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
1,4-Dioxane	50.0	55.7	50.8	111	102	55.0-138			9.20	24
(S) Toluene-d8				101	101	77.0-127				

L1505669-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1505669-07 06/23/22 13:16 • (MS) R3808024-4 06/23/22 19:35 • (MSD) R3808024-5 06/23/22 19:55

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
1,4-Dioxane	50.0	U	48.9	49.3	97.8	98.6	1	13.0-160			0.815	31
(S) Toluene-d8					101	101		77.0-127				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

Method Blank (MB)

(MB) R3810389-2 07/01/22 14:51

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
1,4-Dioxane	U		0.597	3.00
(S) Toluene-d8	100			77.0-127

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

(LCS) R3810389-1 07/01/22 14:11 • (LCSD) R3810389-5 07/01/22 17:30

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
1,4-Dioxane	50.0	41.4	38.2	82.8	76.4	55.0-138			8.04	24
(S) Toluene-d8				100	100	77.0-127				

L1506299-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1506299-03 07/01/22 16:11 • (MS) R3810389-3 07/01/22 16:51 • (MSD) R3810389-4 07/01/22 17:10

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
1,4-Dioxane	500	246	651	577	81.0	66.2	10	13.0-160			12.1	31
(S) Toluene-d8					102	102		77.0-127				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

INTERNAL STANDARD SUMMARY

Instrument: VOCMS30 • File ID: 0625_02

06/25/22 03:46

Sample ID	File ID	8260-FLUOROBENZENE Response	8260-CHLOROBENZENE-D5 Response	8260-1,4-DICHLOROBENZENE-D4 Response
Standard	0625_02	250577	105917	97830
Upper Limit		501154	211834	195660
Lower Limit		125289	52959	48915
LCS R3808558-1 WG1885284 1x	0625_02LCS	251865	107687	103508
LCSD R3808558-2 WG1885284 1x	0626_03	245819	104995	100469
BLANK R3808558-3 WG1885284 1x	0626_05	251175	105305	98481
L1506299-01 WG1885284 1x	0626_16	260409	111240	105196
L1506299-02 WG1885284 1x	0626_17	266903	109094	101105
L1506299-03 WG1885284 1x	0626_18	255687	104182	98354
L1506299-04 WG1885284 1x	0626_19	260920	109051	102548
MS R3808558-4 WG1885284 1x	0626_28	260244	110940	105446
MSD R3808558-5 WG1885284 1x	0626_29	257023	110838	105909

Instrument: VOCMS30 • File ID: 0625_02

06/26/22 02:03

Sample ID	File ID	8260-FLUOROBENZENE Response	8260-CHLOROBENZENE-D5 Response	8260-1,4-DICHLOROBENZENE-D4 Response
Standard	0625_02	251865	107687	103508
Upper Limit		503730	215374	207016
Lower Limit		125933	53844	51754
LCS R3808558-1 WG1885284 1x	0625_02LCS	251865	107687	103508
LCSD R3808558-2 WG1885284 1x	0626_03	245819	104995	100469
BLANK R3808558-3 WG1885284 1x	0626_05	251175	105305	98481
L1506299-01 WG1885284 1x	0626_16	260409	111240	105196
L1506299-02 WG1885284 1x	0626_17	266903	109094	101105
L1506299-03 WG1885284 1x	0626_18	255687	104182	98354
L1506299-04 WG1885284 1x	0626_19	260920	109051	102548
MS R3808558-4 WG1885284 1x	0626_28	260244	110940	105446
MSD R3808558-5 WG1885284 1x	0626_29	257023	110838	105909

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Is

⁸ Gl

⁹ Al

¹⁰ Sc

INTERNAL STANDARD SUMMARY

Instrument: VOCMS36 • File ID: 0628_35

06/28/22 21:32

Sample ID	File ID	8260-FLUOROBENZENE Response	8260-CHLOROBENZENE-D5 Response	8260-1,4-DICHLOROBENZENE-D4 Response
Standard	0628_35	334924	149344	139916
Upper Limit		669848	298688	279832
Lower Limit		167462	74672	69958
LCS R3809530-1 WG1887020 1x	0628_35LCSB	334924	149344	139916
LCSD R3809530-2 WG1887020 1x	0628_36B	377416	170378	158149
BLANK R3809530-3 WG1887020 1x	0628_38B	374604	161025	147597
L1506299-02 WG1887020 1x	0628_46	368230	161098	147607
L1506299-04 WG1887020 1x	0628_47	366110	157987	147835
L1506299-01 WG1887020 250x	0628_60	353642	154019	140310
L1506299-03 WG1887020 20x	0628_61	347186	151527	139177
MS R3809530-4 WG1887020 1x	0628_62	358717	162273	154580
MSD R3809530-5 WG1887020 1x	0628_63	373030	174224	167358

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Is

⁸ Gl

⁹ Al

¹⁰ Sc

INTERNAL STANDARD SUMMARY

Instrument: VOCMS27 • File ID: 0623_02

06/23/22 08:47

Sample ID	File ID	8260-FLUOROBENZENE Response
Standard	0623_02	1007638
Upper Limit		2015276
Lower Limit		503819
LCS R3808024-1 WG1883858 1x	0623_03	1095287
BLANK R3808024-2 WG1883858 1x	0623_06	786809
LCSD R3808024-3 WG1883858 1x	0623_07	1187657
L1506299-04 WG1883858 1x	0623_19	1068412
MS R3808024-4 WG1883858 1x	0623_29	1208708
MSD R3808024-5 WG1883858 1x	0623_30	1140104

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Is

Instrument: VOCMS27 • File ID: 0701_04

07/01/22 13:51

Sample ID	File ID	8260-FLUOROBENZENE Response
Standard	0701_04	1247284
Upper Limit		2494568
Lower Limit		623642
LCS R3810389-1 WG1888703 1x	0701_05	1140414
BLANK R3810389-2 WG1888703 1x	0701_07	1195920
L1506299-02 WG1888703 1x	0701_08	1299565
L1506299-01 WG1888703 50x	0701_10	1223696
L1506299-03 WG1888703 10x	0701_11	1081223
MS R3810389-3 WG1888703 10x	0701_13	1047850
MSD R3810389-4 WG1888703 10x	0701_14	1252620
LCSD R3810389-5 WG1888703 1x	0701_15	1209998

⁸Gl

⁹Al

¹⁰Sc

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

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

Qualifier Description

J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
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.
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	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Company Name/Address: Pinyon Environmental 4815 E. Carefree Highway #108-274 Cave Creek, AZ 85331		Billing Information: Accounts Payable 3222 S Vance Street Suite 200 Lakewood, CO 80227		Pres Chk	Analysis / Container / Preservative					Chain of Custody Page <u>1</u> of <u>1</u>
--	--	--	--	-------------	-------------------------------------	--	--	--	--	--

Report to: Christopher Funk	Email To: funk@pinyon-env.com;guarnieri@pinyon-
---------------------------------------	--

Project Description: Nammo TTU Groundwater Monitoring	City/State Collected: Mesa, AZ	Please Circle: <input checked="" type="radio"/> MT <input type="radio"/> CT <input type="radio"/> ET
---	---------------------------------------	---

Phone: 602-290-4774	Client Project # 722152201.002	Lab Project # PINYONMAZ-722152201
----------------------------	--	---

Collected by (print): Ben Boesen	Site/Facility ID #	P.O. #
--	--------------------	--------

Collected by (signature): 	Rush? (Lab MUST Be Notified) <input type="checkbox"/> Same Day <input type="checkbox"/> Five Day <input type="checkbox"/> Next Day <input type="checkbox"/> 5 Day (Rad Only) <input type="checkbox"/> Two Day <input type="checkbox"/> 10 Day (Rad Only) <input type="checkbox"/> Three Day	Quote #	Date Results Needed Standard	No. of Cntrs
-------------------------------	--	---------	--	-----------------

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	PERCHLORATE 125mlHDPE-NoPres	VB260AZ 40mlAmb-HCl	VB260LL14D 40mlAmb-HCl	Chain of Custody
-----------	-----------	----------	-------	------	------	--------------	------------------------------	---------------------	------------------------	------------------

TTU-20-73-20220616		GW	73	6/16/22	1144	7	✓	✓	✓	
TTU-1-50-20220616		GW	50	6/16/22	1245	7	✓	✓	✓	
TRIP BLANK TTU-2-114-20220616		GW	114	6/16/22	1314	14	✓	✓	✓	MS/MSD
TRIP BLANK		GW	-	-	-	-				
DUP-06		GW	-	6/16/22	1245	7	✓	✓	✓	

* Matrix: SS - Soil AIR - Air F - Filter GW - Groundwater B - Bioassay WW - WasteWater DW - Drinking Water OT - Other	Remarks:	pH _____ Temp _____ Flow _____ Other _____	Sample Receipt Checklist COC Seal Present/Intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N COC Signed/Accurate: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Bottles arrive intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Correct bottles used: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Sufficient volume sent: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N If Applicable VOA Zero Headspace: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Preservation Correct/Checked: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N RAD Screen <0.5 mR/hr: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N
--	----------	---	--

Relinquished by: (Signature) 	Date: 6/16/22	Time: 1439	Received by: (Signature) 	Trip Blank Received: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> HCL / MeOH TBR
Relinquished by: (Signature) 	Date: 6/16/22	Time: 1800	Received by: (Signature) 	Temp: 0.17 °C 2.1 to = 2.1 Bottles Received: 35
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature) 	Date: 06/17/22 Time: 09:00

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 # **21506249**

Table # **E124**

Acctnum: **PINYONMAZ**

Template: **T205653**

Prelogin: **P931176**

PM: **288 - Daphne Richards**

PB:

Shipped Via:

Remarks | Sample # (lab only)

Pinyon Environmental

Sample Delivery Group: L1507025
Samples Received: 06/21/2022
Project Number: 722152201.002
Description: Nammo TTU Groundwater Monitoring

Report To: Jeremy Musson
4815 E. Carefree Highway
#108-274
Cave Creek, AZ 85331

Entire Report Reviewed By:



Daphne Richards
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

TABLE OF CONTENTS

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	4
Sr: Sample Results	5
TTU-19-73-20220620 L1507025-01	5
DUP-12 L1507025-02	8
TTU-11-73-20220620 L1507025-03	10
Qc: Quality Control Summary	13
Wet Chemistry by Method 314.0 Mod	13
Wet Chemistry by Method 4500S2 D-2011	16
Wet Chemistry by Method 9056A	17
Wet Chemistry by Method 9060A	19
Metals (ICP) by Method 6010D	21
Volatile Organic Compounds (GC) by Method RSK175	22
Volatile Organic Compounds (GC/MS) by Method 8260B	25
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	31
Is: Internal Standard Summary	32
Volatile Organic Compounds (GC/MS) by Method 8260B	32
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	33
Gl: Glossary of Terms	34
Al: Accreditations & Locations	35
Sc: Sample Chain of Custody	36



SAMPLE SUMMARY

TTU-19-73-20220620 L1507025-01 GW

Collected by
Ben Boesen

Collected date/time
06/20/22 12:56

Received date/time
06/21/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1884431	20	07/13/22 12:08	07/13/22 12:08	ELN	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1884086	1	06/23/22 15:49	06/23/22 15:49	JAR	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1882713	10	06/21/22 20:00	06/21/22 20:00	JD	Mt. Juliet, TN
Wet Chemistry by Method 9060A	WG1898062	50	07/20/22 16:30	07/20/22 16:30	SJF	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1887179	1	07/06/22 03:07	07/06/22 09:28	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1887179	5	07/06/22 03:07	07/06/22 14:33	ZSA	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1885892	1	06/28/22 09:27	06/28/22 09:27	CMS	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1887006	10	06/29/22 09:20	06/29/22 09:20	CMS	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1886419	10	06/28/22 09:00	06/28/22 09:00	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1885425	1	06/25/22 18:09	06/25/22 18:09	JAH	Mt. Juliet, TN



DUP-12 L1507025-02 GW

Collected by
Ben Boesen

Collected date/time
06/20/22 12:56

Received date/time
06/21/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1884431	20	07/13/22 13:33	07/13/22 13:33	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1886419	10	06/28/22 09:21	06/28/22 09:21	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1885425	1	06/25/22 18:29	06/25/22 18:29	JAH	Mt. Juliet, TN

TTU-11-73-20220620 L1507025-03 GW

Collected by
Ben Boesen

Collected date/time
06/20/22 14:07

Received date/time
06/21/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1894626	1	07/13/22 04:02	07/13/22 04:02	ELN	Mt. Juliet, TN
Wet Chemistry by Method 4500S2 D-2011	WG1884086	1	06/23/22 15:52	06/23/22 15:52	JAR	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG1882713	10	06/21/22 20:15	06/21/22 20:15	JD	Mt. Juliet, TN
Wet Chemistry by Method 9060A	WG1893515	50	07/13/22 17:55	07/13/22 17:55	SJF	Mt. Juliet, TN
Metals (ICP) by Method 6010D	WG1887179	1	07/06/22 03:07	07/06/22 09:31	CCE	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1885892	1	06/28/22 10:33	06/28/22 10:33	CMS	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method RSK175	WG1887006	10	06/29/22 09:24	06/29/22 09:24	CMS	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1886419	10	06/28/22 09:42	06/28/22 09:42	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1885425	1	06/25/22 18:48	06/25/22 18:48	JAH	Mt. Juliet, TN

CASE NARRATIVE

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

Daphne Richards
Project Manager

Report Revision History

Level II Report - Version 1: 07/21/22 16:25

Project Narrative

Qualifier missing on TOC -01

Sample Delivery Group (SDG) Narrative

The following analysis were performed from an unpreserved, insufficiently or inadequately preserved sample.

<u>Lab Sample ID</u>	<u>Project Sample ID</u>	<u>Method</u>
L1507025-01	TTU-19-73-20220620	4500S2 D-2011
L1507025-03	TTU-11-73-20220620	4500S2 D-2011

pH outside of method requirement.

<u>Lab Sample ID</u>	<u>Project Sample ID</u>	<u>Method</u>
L1507025-01	TTU-19-73-20220620	8260B



Wet Chemistry by Method 314.0 Mod

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Perchlorate	295		6.00	80.0	20	07/13/2022 12:08	WG1884431

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

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfide	82.0	<u>J6</u>	25.0	50.0	1	06/23/2022 15:49	WG1884086

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Bromide	55400		3530	10000	10	06/21/2022 20:00	WG1882713
Chloride	103000		3790	10000	10	06/21/2022 20:00	WG1882713
Nitrate as (N)	U		480	1000	10	06/21/2022 20:00	WG1882713
Nitrite as (N)	U		420	1000	10	06/21/2022 20:00	WG1882713
Sulfate	U		5940	50000	10	06/21/2022 20:00	WG1882713

Sample Narrative:

L1507025-01 WG1882713: Dilution due to matrix.

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	1390000	<u>Q</u>	5100	50000	50	07/20/2022 16:30	WG1898062

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron,Dissolved	170000		18.0	100	1	07/06/2022 09:28	WG1887179
Manganese,Dissolved	25200		4.67	50.0	5	07/06/2022 14:33	WG1887179

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	19300		29.1	100	10	06/29/2022 09:20	WG1887006
Ethane	U		4.07	13.0	1	06/28/2022 09:27	WG1885892
Ethene	U		4.26	13.0	1	06/28/2022 09:27	WG1885892

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	367	<u>J</u>	113	500	10	06/28/2022 09:00	WG1886419
Acrolein	U		25.4	500	10	06/28/2022 09:00	WG1886419
Acrylonitrile	U		6.71	100	10	06/28/2022 09:00	WG1886419
Benzene	2.79	<u>J</u>	0.941	10.0	10	06/28/2022 09:00	WG1886419
Bromobenzene	U		1.18	10.0	10	06/28/2022 09:00	WG1886419
Bromodichloromethane	U		1.36	10.0	10	06/28/2022 09:00	WG1886419
Bromoform	U	<u>J4</u>	1.29	10.0	10	06/28/2022 09:00	WG1886419
Bromomethane	U		6.05	50.0	10	06/28/2022 09:00	WG1886419
1,3-Butadiene	U		2.99	20.0	10	06/28/2022 09:00	WG1886419
n-Butylbenzene	U		1.57	10.0	10	06/28/2022 09:00	WG1886419
sec-Butylbenzene	U		1.25	10.0	10	06/28/2022 09:00	WG1886419
tert-Butylbenzene	U		1.27	10.0	10	06/28/2022 09:00	WG1886419
Carbon tetrachloride	U		1.28	10.0	10	06/28/2022 09:00	WG1886419

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Carbon disulfide	U		0.962	10.0	10	06/28/2022 09:00	WG1886419
Chlorobenzene	U		1.16	10.0	10	06/28/2022 09:00	WG1886419
Chlorodibromomethane	U	J4	1.40	10.0	10	06/28/2022 09:00	WG1886419
Chloroethane	U	J4	1.92	50.0	10	06/28/2022 09:00	WG1886419
Chloroform	U		1.11	50.0	10	06/28/2022 09:00	WG1886419
Chloromethane	U		9.60	25.0	10	06/28/2022 09:00	WG1886419
Cyclohexane	U		1.88	10.0	10	06/28/2022 09:00	WG1886419
2-Chlorotoluene	U		1.06	10.0	10	06/28/2022 09:00	WG1886419
4-Chlorotoluene	U		1.14	10.0	10	06/28/2022 09:00	WG1886419
1,2-Dibromo-3-Chloropropane	U		2.76	50.0	10	06/28/2022 09:00	WG1886419
1,2-Dibromoethane	U		1.26	10.0	10	06/28/2022 09:00	WG1886419
Dibromomethane	U		1.22	10.0	10	06/28/2022 09:00	WG1886419
1,2-Dichlorobenzene	U		1.07	10.0	10	06/28/2022 09:00	WG1886419
1,3-Dichlorobenzene	U		1.10	10.0	10	06/28/2022 09:00	WG1886419
1,4-Dichlorobenzene	U		1.20	10.0	10	06/28/2022 09:00	WG1886419
Dichlorodifluoromethane	U		3.74	50.0	10	06/28/2022 09:00	WG1886419
1,1-Dichloroethane	U		1.00	10.0	10	06/28/2022 09:00	WG1886419
1,2-Dichloroethane	U		0.819	10.0	10	06/28/2022 09:00	WG1886419
1,1-Dichloroethene	22.9		1.88	10.0	10	06/28/2022 09:00	WG1886419
cis-1,2-Dichloroethene	34.6		1.26	10.0	10	06/28/2022 09:00	WG1886419
trans-1,2-Dichloroethene	U		1.49	10.0	10	06/28/2022 09:00	WG1886419
1,2-Dichloropropane	U		1.49	10.0	10	06/28/2022 09:00	WG1886419
1,1-Dichloropropene	U		1.42	10.0	10	06/28/2022 09:00	WG1886419
1,3-Dichloropropane	U		1.10	10.0	10	06/28/2022 09:00	WG1886419
cis-1,3-Dichloropropene	U		1.11	10.0	10	06/28/2022 09:00	WG1886419
trans-1,3-Dichloropropene	U		1.18	10.0	10	06/28/2022 09:00	WG1886419
2,2-Dichloropropane	U		1.61	10.0	10	06/28/2022 09:00	WG1886419
Dicyclopentadiene	U		2.53	10.0	10	06/28/2022 09:00	WG1886419
Di-isopropyl ether	U		1.05	10.0	10	06/28/2022 09:00	WG1886419
Ethylbenzene	2.18	IC	1.37	10.0	10	06/28/2022 09:00	WG1886419
4-Ethyltoluene	4.42	IC	2.08	10.0	10	06/28/2022 09:00	WG1886419
Hexachloro-1,3-butadiene	U		3.37	10.0	10	06/28/2022 09:00	WG1886419
n-Hexane	U		7.49	100	10	06/28/2022 09:00	WG1886419
Isopropylbenzene	U		1.05	10.0	10	06/28/2022 09:00	WG1886419
p-Isopropyltoluene	U		1.20	10.0	10	06/28/2022 09:00	WG1886419
2-Butanone (MEK)	548		11.9	100	10	06/28/2022 09:00	WG1886419
Methyl Cyclohexane	U		6.60	10.0	10	06/28/2022 09:00	WG1886419
Methylene Chloride	8.03	IC	4.30	50.0	10	06/28/2022 09:00	WG1886419
4-Methyl-2-pentanone (MIBK)	U		4.78	100	10	06/28/2022 09:00	WG1886419
Methyl tert-butyl ether	U		1.01	10.0	10	06/28/2022 09:00	WG1886419
Naphthalene	11.1	IC	10.0	50.0	10	06/28/2022 09:00	WG1886419
Propene	U		9.36	25.0	10	06/28/2022 09:00	WG1886419
n-Propylbenzene	1.03	IC	0.993	10.0	10	06/28/2022 09:00	WG1886419
Styrene	U		1.18	10.0	10	06/28/2022 09:00	WG1886419
1,1,1,2-Tetrachloroethane	U		1.47	10.0	10	06/28/2022 09:00	WG1886419
1,1,2,2-Tetrachloroethane	U		1.33	10.0	10	06/28/2022 09:00	WG1886419
1,1,2-Trichlorotrifluoroethane	U		1.80	10.0	10	06/28/2022 09:00	WG1886419
Tetrachloroethene	U		3.00	10.0	10	06/28/2022 09:00	WG1886419
Toluene	U		2.78	10.0	10	06/28/2022 09:00	WG1886419
1,2,3-Trichlorobenzene	U		2.30	10.0	10	06/28/2022 09:00	WG1886419
1,2,4-Trichlorobenzene	U		4.81	10.0	10	06/28/2022 09:00	WG1886419
1,1,1-Trichloroethane	U		1.49	10.0	10	06/28/2022 09:00	WG1886419
1,1,2-Trichloroethane	U		1.58	10.0	10	06/28/2022 09:00	WG1886419
Trichloroethene	189		1.90	10.0	10	06/28/2022 09:00	WG1886419
Trichlorofluoromethane	U		1.60	50.0	10	06/28/2022 09:00	WG1886419
1,2,3-Trichloropropane	U		2.37	25.0	10	06/28/2022 09:00	WG1886419

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2,4-Trimethylbenzene	11.3		3.22	10.0	10	06/28/2022 09:00	WG1886419
1,2,3-Trimethylbenzene	U		1.04	10.0	10	06/28/2022 09:00	WG1886419
1,3,5-Trimethylbenzene	2.55	J	1.04	10.0	10	06/28/2022 09:00	WG1886419
Vinyl chloride	U		2.34	10.0	10	06/28/2022 09:00	WG1886419
Xylenes, Total	8.87	J	1.74	30.0	10	06/28/2022 09:00	WG1886419
(S) Toluene-d8	109			80.0-120		06/28/2022 09:00	WG1886419
(S) 4-Bromofluorobenzene	105			77.0-126		06/28/2022 09:00	WG1886419
(S) 1,2-Dichloroethane-d4	105			70.0-130		06/28/2022 09:00	WG1886419

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

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,4-Dioxane	U		0.597	3.00	1	06/25/2022 18:09	WG1885425
(S) Toluene-d8	110			77.0-127		06/25/2022 18:09	WG1885425

Wet Chemistry by Method 314.0 Mod

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Perchlorate	42.9	J	6.00	80.0	20	07/13/2022 13:33	WG1884431

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	280	J	113	500	10	06/28/2022 09:21	WG1886419
Acrolein	U		25.4	500	10	06/28/2022 09:21	WG1886419
Acrylonitrile	U		6.71	100	10	06/28/2022 09:21	WG1886419
Benzene	4.31	J	0.941	10.0	10	06/28/2022 09:21	WG1886419
Bromobenzene	U		1.18	10.0	10	06/28/2022 09:21	WG1886419
Bromodichloromethane	U		1.36	10.0	10	06/28/2022 09:21	WG1886419
Bromoform	U	J4	1.29	10.0	10	06/28/2022 09:21	WG1886419
Bromomethane	U		6.05	50.0	10	06/28/2022 09:21	WG1886419
1,3-Butadiene	U		2.99	20.0	10	06/28/2022 09:21	WG1886419
n-Butylbenzene	U		1.57	10.0	10	06/28/2022 09:21	WG1886419
sec-Butylbenzene	U		1.25	10.0	10	06/28/2022 09:21	WG1886419
tert-Butylbenzene	U		1.27	10.0	10	06/28/2022 09:21	WG1886419
Carbon tetrachloride	U		1.28	10.0	10	06/28/2022 09:21	WG1886419
Carbon disulfide	U		0.962	10.0	10	06/28/2022 09:21	WG1886419
Chlorobenzene	U		1.16	10.0	10	06/28/2022 09:21	WG1886419
Chlorodibromomethane	U	J4	1.40	10.0	10	06/28/2022 09:21	WG1886419
Chloroethane	U	J4	1.92	50.0	10	06/28/2022 09:21	WG1886419
Chloroform	U		1.11	50.0	10	06/28/2022 09:21	WG1886419
Chloromethane	U		9.60	25.0	10	06/28/2022 09:21	WG1886419
Cyclohexane	U		1.88	10.0	10	06/28/2022 09:21	WG1886419
2-Chlorotoluene	U		1.06	10.0	10	06/28/2022 09:21	WG1886419
4-Chlorotoluene	U		1.14	10.0	10	06/28/2022 09:21	WG1886419
1,2-Dibromo-3-Chloropropane	U		2.76	50.0	10	06/28/2022 09:21	WG1886419
1,2-Dibromoethane	U		1.26	10.0	10	06/28/2022 09:21	WG1886419
Dibromomethane	U		1.22	10.0	10	06/28/2022 09:21	WG1886419
1,2-Dichlorobenzene	U		1.07	10.0	10	06/28/2022 09:21	WG1886419
1,3-Dichlorobenzene	U		1.10	10.0	10	06/28/2022 09:21	WG1886419
1,4-Dichlorobenzene	U		1.20	10.0	10	06/28/2022 09:21	WG1886419
Dichlorodifluoromethane	U		3.74	50.0	10	06/28/2022 09:21	WG1886419
1,1-Dichloroethane	U		1.00	10.0	10	06/28/2022 09:21	WG1886419
1,2-Dichloroethane	U		0.819	10.0	10	06/28/2022 09:21	WG1886419
1,1-Dichloroethene	41.8		1.88	10.0	10	06/28/2022 09:21	WG1886419
cis-1,2-Dichloroethene	23.4		1.26	10.0	10	06/28/2022 09:21	WG1886419
trans-1,2-Dichloroethene	U		1.49	10.0	10	06/28/2022 09:21	WG1886419
1,2-Dichloropropane	U		1.49	10.0	10	06/28/2022 09:21	WG1886419
1,1-Dichloropropene	U		1.42	10.0	10	06/28/2022 09:21	WG1886419
1,3-Dichloropropane	U		1.10	10.0	10	06/28/2022 09:21	WG1886419
cis-1,3-Dichloropropene	U		1.11	10.0	10	06/28/2022 09:21	WG1886419
trans-1,3-Dichloropropene	U		1.18	10.0	10	06/28/2022 09:21	WG1886419
2,2-Dichloropropane	U		1.61	10.0	10	06/28/2022 09:21	WG1886419
Dicyclopentadiene	U		2.53	10.0	10	06/28/2022 09:21	WG1886419
Di-isopropyl ether	U		1.05	10.0	10	06/28/2022 09:21	WG1886419
Ethylbenzene	U		1.37	10.0	10	06/28/2022 09:21	WG1886419
4-Ethyltoluene	U		2.08	10.0	10	06/28/2022 09:21	WG1886419
Hexachloro-1,3-butadiene	U		3.37	10.0	10	06/28/2022 09:21	WG1886419
n-Hexane	U		7.49	100	10	06/28/2022 09:21	WG1886419
Isopropylbenzene	U		1.05	10.0	10	06/28/2022 09:21	WG1886419
p-Isopropyltoluene	U		1.20	10.0	10	06/28/2022 09:21	WG1886419
2-Butanone (MEK)	350		11.9	100	10	06/28/2022 09:21	WG1886419
Methyl Cyclohexane	U		6.60	10.0	10	06/28/2022 09:21	WG1886419

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

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Methylene Chloride	10.8	<u>J</u>	4.30	50.0	10	06/28/2022 09:21	WG1886419
4-Methyl-2-pentanone (MIBK)	U		4.78	100	10	06/28/2022 09:21	WG1886419
Methyl tert-butyl ether	U		1.01	10.0	10	06/28/2022 09:21	WG1886419
Naphthalene	U		10.0	50.0	10	06/28/2022 09:21	WG1886419
Propene	U		9.36	25.0	10	06/28/2022 09:21	WG1886419
n-Propylbenzene	U		0.993	10.0	10	06/28/2022 09:21	WG1886419
Styrene	U		1.18	10.0	10	06/28/2022 09:21	WG1886419
1,1,1,2-Tetrachloroethane	U		1.47	10.0	10	06/28/2022 09:21	WG1886419
1,1,2,2-Tetrachloroethane	U		1.33	10.0	10	06/28/2022 09:21	WG1886419
1,1,2-Trichlorotrifluoroethane	U		1.80	10.0	10	06/28/2022 09:21	WG1886419
Tetrachloroethene	U		3.00	10.0	10	06/28/2022 09:21	WG1886419
Toluene	U		2.78	10.0	10	06/28/2022 09:21	WG1886419
1,2,3-Trichlorobenzene	U		2.30	10.0	10	06/28/2022 09:21	WG1886419
1,2,4-Trichlorobenzene	U		4.81	10.0	10	06/28/2022 09:21	WG1886419
1,1,1-Trichloroethane	U		1.49	10.0	10	06/28/2022 09:21	WG1886419
1,1,2-Trichloroethane	U		1.58	10.0	10	06/28/2022 09:21	WG1886419
Trichloroethene	373		1.90	10.0	10	06/28/2022 09:21	WG1886419
Trichlorofluoromethane	U		1.60	50.0	10	06/28/2022 09:21	WG1886419
1,2,3-Trichloropropane	U		2.37	25.0	10	06/28/2022 09:21	WG1886419
1,2,4-Trimethylbenzene	U		3.22	10.0	10	06/28/2022 09:21	WG1886419
1,2,3-Trimethylbenzene	U		1.04	10.0	10	06/28/2022 09:21	WG1886419
1,3,5-Trimethylbenzene	U		1.04	10.0	10	06/28/2022 09:21	WG1886419
Vinyl chloride	U		2.34	10.0	10	06/28/2022 09:21	WG1886419
Xylenes, Total	U		1.74	30.0	10	06/28/2022 09:21	WG1886419
(S) Toluene-d8	107			80.0-120		06/28/2022 09:21	WG1886419
(S) 4-Bromofluorobenzene	102			77.0-126		06/28/2022 09:21	WG1886419
(S) 1,2-Dichloroethane-d4	110			70.0-130		06/28/2022 09:21	WG1886419

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

Sample Narrative:

L1507025-02 WG1886419: Dilution due to foam.

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	U		0.597	3.00	1	06/25/2022 18:29	WG1885425
(S) Toluene-d8	112			77.0-127		06/25/2022 18:29	WG1885425

Wet Chemistry by Method 314.0 Mod

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Perchlorate	U	J5	0.300	4.00	1	07/13/2022 04:02	WG1894626

Wet Chemistry by Method 4500S2 D-2011

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Sulfide	698		25.0	50.0	1	06/23/2022 15:52	WG1884086

Wet Chemistry by Method 9056A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Bromide	103000		3530	10000	10	06/21/2022 20:15	WG1882713
Chloride	88300		3790	10000	10	06/21/2022 20:15	WG1882713
Nitrate as (N)	U		480	1000	10	06/21/2022 20:15	WG1882713
Nitrite as (N)	U		420	1000	10	06/21/2022 20:15	WG1882713
Sulfate	19800	J	5940	50000	10	06/21/2022 20:15	WG1882713

Sample Narrative:

L1507025-03 WG1882713: Dilution due to matrix.

Wet Chemistry by Method 9060A

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
TOC (Total Organic Carbon)	3150000		5100	50000	50	07/13/2022 17:55	WG1893515

Metals (ICP) by Method 6010D

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Iron,Dissolved	246000		18.0	100	1	07/06/2022 09:31	WG1887179
Manganese,Dissolved	7370		0.934	10.0	1	07/06/2022 09:31	WG1887179

Volatile Organic Compounds (GC) by Method RSK175

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Methane	23000		29.1	100	10	06/29/2022 09:24	WG1887006
Ethane	U		4.07	13.0	1	06/28/2022 10:33	WG1885892
Ethene	U		4.26	13.0	1	06/28/2022 10:33	WG1885892

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	1120		113	500	10	06/28/2022 09:42	WG1886419
Acrolein	U		25.4	500	10	06/28/2022 09:42	WG1886419
Acrylonitrile	U		6.71	100	10	06/28/2022 09:42	WG1886419
Benzene	U		0.941	10.0	10	06/28/2022 09:42	WG1886419
Bromobenzene	U		1.18	10.0	10	06/28/2022 09:42	WG1886419
Bromodichloromethane	U		1.36	10.0	10	06/28/2022 09:42	WG1886419
Bromoform	U	J4	1.29	10.0	10	06/28/2022 09:42	WG1886419
Bromomethane	U		6.05	50.0	10	06/28/2022 09:42	WG1886419
1,3-Butadiene	U		2.99	20.0	10	06/28/2022 09:42	WG1886419
n-Butylbenzene	U		1.57	10.0	10	06/28/2022 09:42	WG1886419
sec-Butylbenzene	U		1.25	10.0	10	06/28/2022 09:42	WG1886419
tert-Butylbenzene	U		1.27	10.0	10	06/28/2022 09:42	WG1886419
Carbon tetrachloride	U		1.28	10.0	10	06/28/2022 09:42	WG1886419



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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Carbon disulfide	U		0.962	10.0	10	06/28/2022 09:42	WG1886419
Chlorobenzene	U		1.16	10.0	10	06/28/2022 09:42	WG1886419
Chlorodibromomethane	U	J4	1.40	10.0	10	06/28/2022 09:42	WG1886419
Chloroethane	U	J4	1.92	50.0	10	06/28/2022 09:42	WG1886419
Chloroform	U		1.11	50.0	10	06/28/2022 09:42	WG1886419
Chloromethane	U		9.60	25.0	10	06/28/2022 09:42	WG1886419
Cyclohexane	U		1.88	10.0	10	06/28/2022 09:42	WG1886419
2-Chlorotoluene	U		1.06	10.0	10	06/28/2022 09:42	WG1886419
4-Chlorotoluene	U		1.14	10.0	10	06/28/2022 09:42	WG1886419
1,2-Dibromo-3-Chloropropane	U		2.76	50.0	10	06/28/2022 09:42	WG1886419
1,2-Dibromoethane	U		1.26	10.0	10	06/28/2022 09:42	WG1886419
Dibromomethane	U		1.22	10.0	10	06/28/2022 09:42	WG1886419
1,2-Dichlorobenzene	U		1.07	10.0	10	06/28/2022 09:42	WG1886419
1,3-Dichlorobenzene	U		1.10	10.0	10	06/28/2022 09:42	WG1886419
1,4-Dichlorobenzene	U		1.20	10.0	10	06/28/2022 09:42	WG1886419
Dichlorodifluoromethane	U		3.74	50.0	10	06/28/2022 09:42	WG1886419
1,1-Dichloroethane	U		1.00	10.0	10	06/28/2022 09:42	WG1886419
1,2-Dichloroethane	U		0.819	10.0	10	06/28/2022 09:42	WG1886419
1,1-Dichloroethene	5.80	IL	1.88	10.0	10	06/28/2022 09:42	WG1886419
cis-1,2-Dichloroethene	9.94	IL	1.26	10.0	10	06/28/2022 09:42	WG1886419
trans-1,2-Dichloroethene	U		1.49	10.0	10	06/28/2022 09:42	WG1886419
1,2-Dichloropropane	U		1.49	10.0	10	06/28/2022 09:42	WG1886419
1,1-Dichloropropene	U		1.42	10.0	10	06/28/2022 09:42	WG1886419
1,3-Dichloropropane	U		1.10	10.0	10	06/28/2022 09:42	WG1886419
cis-1,3-Dichloropropene	U		1.11	10.0	10	06/28/2022 09:42	WG1886419
trans-1,3-Dichloropropene	U		1.18	10.0	10	06/28/2022 09:42	WG1886419
2,2-Dichloropropane	U		1.61	10.0	10	06/28/2022 09:42	WG1886419
Dicyclopentadiene	U		2.53	10.0	10	06/28/2022 09:42	WG1886419
Di-isopropyl ether	U		1.05	10.0	10	06/28/2022 09:42	WG1886419
Ethylbenzene	U		1.37	10.0	10	06/28/2022 09:42	WG1886419
4-Ethyltoluene	U		2.08	10.0	10	06/28/2022 09:42	WG1886419
Hexachloro-1,3-butadiene	U		3.37	10.0	10	06/28/2022 09:42	WG1886419
n-Hexane	U		7.49	100	10	06/28/2022 09:42	WG1886419
Isopropylbenzene	U		1.05	10.0	10	06/28/2022 09:42	WG1886419
p-Isopropyltoluene	U		1.20	10.0	10	06/28/2022 09:42	WG1886419
2-Butanone (MEK)	484		11.9	100	10	06/28/2022 09:42	WG1886419
Methyl Cyclohexane	U		6.60	10.0	10	06/28/2022 09:42	WG1886419
Methylene Chloride	7.65	IL	4.30	50.0	10	06/28/2022 09:42	WG1886419
4-Methyl-2-pentanone (MIBK)	49.8	IL	4.78	100	10	06/28/2022 09:42	WG1886419
Methyl tert-butyl ether	U		1.01	10.0	10	06/28/2022 09:42	WG1886419
Naphthalene	U		10.0	50.0	10	06/28/2022 09:42	WG1886419
Propene	U		9.36	25.0	10	06/28/2022 09:42	WG1886419
n-Propylbenzene	U		0.993	10.0	10	06/28/2022 09:42	WG1886419
Styrene	U		1.18	10.0	10	06/28/2022 09:42	WG1886419
1,1,1,2-Tetrachloroethane	U		1.47	10.0	10	06/28/2022 09:42	WG1886419
1,1,2,2-Tetrachloroethane	U		1.33	10.0	10	06/28/2022 09:42	WG1886419
1,1,2-Trichlorotrifluoroethane	U		1.80	10.0	10	06/28/2022 09:42	WG1886419
Tetrachloroethene	U		3.00	10.0	10	06/28/2022 09:42	WG1886419
Toluene	U		2.78	10.0	10	06/28/2022 09:42	WG1886419
1,2,3-Trichlorobenzene	U		2.30	10.0	10	06/28/2022 09:42	WG1886419
1,2,4-Trichlorobenzene	U		4.81	10.0	10	06/28/2022 09:42	WG1886419
1,1,1-Trichloroethane	U		1.49	10.0	10	06/28/2022 09:42	WG1886419
1,1,2-Trichloroethane	U		1.58	10.0	10	06/28/2022 09:42	WG1886419
Trichloroethene	56.3		1.90	10.0	10	06/28/2022 09:42	WG1886419
Trichlorofluoromethane	U		1.60	50.0	10	06/28/2022 09:42	WG1886419
1,2,3-Trichloropropane	U		2.37	25.0	10	06/28/2022 09:42	WG1886419

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,2,4-Trimethylbenzene	U		3.22	10.0	10	06/28/2022 09:42	WG1886419
1,2,3-Trimethylbenzene	U		1.04	10.0	10	06/28/2022 09:42	WG1886419
1,3,5-Trimethylbenzene	U		1.04	10.0	10	06/28/2022 09:42	WG1886419
Vinyl chloride	U		2.34	10.0	10	06/28/2022 09:42	WG1886419
Xylenes, Total	U		1.74	30.0	10	06/28/2022 09:42	WG1886419
(S) Toluene-d8	107			80.0-120		06/28/2022 09:42	WG1886419
(S) 4-Bromofluorobenzene	103			77.0-126		06/28/2022 09:42	WG1886419
(S) 1,2-Dichloroethane-d4	109			70.0-130		06/28/2022 09:42	WG1886419

Sample Narrative:

L1507025-03 WG1886419: Dilution due to foam.

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,4-Dioxane	U		0.597	3.00	1	06/25/2022 18:48	WG1885425
(S) Toluene-d8	113			77.0-127		06/25/2022 18:48	WG1885425

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

Method Blank (MB)

(MB) R3814479-1 07/12/22 14:18

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Perchlorate	U		0.300	4.00

¹Cp

²Tc

³Ss

L1506990-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1506990-01 07/12/22 21:52 • (DUP) R3814479-3 07/12/22 22:21

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Perchlorate	1.35	1.21	1	10.9	↓	15

⁴Cn

⁵Sr

Laboratory Control Sample (LCS)

(LCS) R3814479-2 07/12/22 15:15

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Perchlorate	10.0	9.56	95.6	90.0-110	

⁶Qc

⁷Is

⁸Gl

⁹Al

¹⁰Sc

Method Blank (MB)

(MB) R3814480-2 07/12/22 15:43

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Perchlorate	U		0.300	4.00

Laboratory Control Sample (LCS)

(LCS) R3814480-1 07/12/22 15:15

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Perchlorate	10.0	9.56	95.6	90.0-110	

L1506302-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1506302-01 07/12/22 17:06 • (MS) R3814480-3 07/12/22 17:37 • (MSD) R3814480-4 07/12/22 18:05

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Perchlorate	10.0	3.31	12.2	13.0	88.8	97.1	1	80.0-120			6.62	15

L1506698-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1506698-01 07/12/22 18:33 • (MS) R3814480-5 07/12/22 19:02 • (MSD) R3814480-6 07/12/22 20:27

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Perchlorate	10.0	1.96	11.2	11.3	92.2	93.8	1	80.0-120			1.40	15

L1507800-17 Original Sample (OS) • Matrix Spike (MS)

(OS) L1507800-17 07/13/22 07:49 • (MS) R3814480-13 07/13/22 14:58

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Perchlorate	10.0	4.32	16.2	119	1	80.0-120	

L1507800-24 Original Sample (OS) • Matrix Spike (MS)

(OS) L1507800-24 07/13/22 08:17 • (MS) R3814480-14 07/13/22 15:27

Analyte	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Perchlorate	10.0	5.19	14.0	87.8	1	80.0-120	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Is

⁸Gl

⁹Al

¹⁰Sc

L1507025-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1507025-03 07/13/22 04:02 • (MS) R3814480-11 07/13/22 09:43

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>
Perchlorate	10.0	U	117	1170	1	80.0-120	<u>EJ5</u>

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Is

⁸Gl

⁹Al

¹⁰Sc

Method Blank (MB)

(MB) R3806761-1 06/23/22 15:42

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Sulfide	U		25.0	50.0

¹Cp

²Tc

³Ss

⁴Cn

L1505495-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1505495-05 06/23/22 15:43 • (DUP) R3806761-3 06/23/22 15:43

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Sulfide	U	U	1	0.000		20

⁵Sr

⁶Qc

Laboratory Control Sample (LCS)

(LCS) R3806761-2 06/23/22 15:42

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Sulfide	500	491	98.2	85.0-115	

⁷Is

⁸Gl

L1507025-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1507025-01 06/23/22 15:49 • (MS) R3806761-4 06/23/22 15:50 • (MSD) R3806761-5 06/23/22 15:51

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Sulfide	500	82.0	395	456	62.6	74.8	1	80.0-120	<u>J6</u>	<u>J6</u>	14.3	20

⁹Al

¹⁰Sc

Method Blank (MB)

(MB) R3806090-1 06/21/22 08:59

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Bromide	U		353	1000
Chloride	U		379	1000
Nitrate	U		48.0	100
Nitrite	U		42.0	100
Sulfate	U		594	5000

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

L1506915-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1506915-01 06/21/22 12:04 • (DUP) R3806090-3 06/21/22 12:18

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Bromide	U	U	1	0.000		15
Chloride	2680	2670	1	0.416		15
Nitrate	672	665	1	0.942		15
Nitrite	U	U	1	0.000		15
Sulfate	1110	1130	1	1.54	U	15

⁶Qc

⁷Is

⁸Gl

L1507014-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1507014-01 06/21/22 16:01 • (DUP) R3806090-6 06/21/22 16:16

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Bromide	U	U	1	0.000		15
Chloride	4730	4700	1	0.689		15
Nitrate	1940	1900	1	2.27		15
Nitrite	U	U	1	0.000		15
Sulfate	1940	1910	1	1.58	U	15

⁹Al

¹⁰Sc

Laboratory Control Sample (LCS)

(LCS) R3806090-2 06/21/22 09:14

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Bromide	40000	40200	101	80.0-120	
Chloride	40000	40600	102	80.0-120	
Nitrate	8000	8360	105	80.0-120	
Nitrite	8000	8330	104	80.0-120	

Laboratory Control Sample (LCS)

(LCS) R3806090-2 06/21/22 09:14

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Sulfate	40000	40900	102	80.0-120	

L1506915-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1506915-02 06/21/22 12:33 • (MS) R3806090-4 06/21/22 12:48 • (MSD) R3806090-5 06/21/22 13:03

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Bromide	50000	5130	45400	46300	80.6	82.3	10	80.0-120			1.84	15
Chloride	50000	1470000	1430000	1460000	0.000	0.000	10	80.0-120	<u>E V</u>	<u>E V</u>	1.87	15
Nitrate	5000	90700	90700	92500	0.000	35.3	10	80.0-120	<u>V</u>	<u>V</u>	1.94	15
Nitrite	5000	U	4650	4730	93.0	94.7	10	80.0-120			1.81	15
Sulfate	50000	309000	346000	353000	72.2	86.5	10	80.0-120	<u>V</u>		2.06	15

L1507014-02 Original Sample (OS) • Matrix Spike (MS)

(OS) L1507014-02 06/21/22 16:31 • (MS) R3806090-7 06/21/22 16:46

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>
Bromide	50000	U	50600	101	1	80.0-120	
Chloride	50000	2630	53400	102	1	80.0-120	
Nitrate	5000	115	5210	102	1	80.0-120	
Nitrite	5000	U	5190	104	1	80.0-120	
Sulfate	50000	1080	51200	100	1	80.0-120	

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

Method Blank (MB)

(MB) R3814668-2 07/13/22 11:17

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TOC (Total Organic Carbon)	U		102	1000

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Is

⁸Gl

⁹Al

¹⁰Sc

L1506071-10 Original Sample (OS) • Duplicate (DUP)

(OS) L1506071-10 07/13/22 16:20 • (DUP) R3814668-3 07/13/22 16:43

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
TOC (Total Organic Carbon)	10800	11100	1	2.83		20

L1508130-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1508130-01 07/13/22 20:13 • (DUP) R3814668-6 07/13/22 20:25

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
TOC (Total Organic Carbon)	586	U	1	200	P1	20

Laboratory Control Sample (LCS)

(LCS) R3814668-1 07/13/22 11:05

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
TOC (Total Organic Carbon)	75000	76600	102	85.0-115	

L1507355-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1507355-02 07/13/22 18:07 • (MS) R3814668-4 07/13/22 18:28 • (MSD) R3814668-5 07/13/22 18:48

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	50000	991	57500	62300	113	123	1	80.0-120		J5	8.06	20

L1508130-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1508130-06 07/13/22 21:55 • (MS) R3814668-7 07/13/22 22:12 • (MSD) R3814668-8 07/13/22 22:34

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TOC (Total Organic Carbon)	50000	423	62400	62100	124	123	1	80.0-120	J5	J5	0.418	20

Method Blank (MB)

(MB) R3817516-2 07/20/22 14:20

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
TOC (Total Organic Carbon)	656	↓	102	1000

¹Cp

²Tc

³Ss

L1508820-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1508820-07 07/20/22 17:17 • (DUP) R3817516-3 07/20/22 17:45

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
TOC	4060	4250	1	4.45		20

⁴Cn

⁵Sr

L1508820-14 Original Sample (OS) • Duplicate (DUP)

(OS) L1508820-14 07/20/22 21:37 • (DUP) R3817516-6 07/20/22 22:05

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
TOC	9470	9520	1	0.495		20

⁶Qc

⁷Is

Laboratory Control Sample (LCS)

(LCS) R3817516-1 07/20/22 14:05

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
TOC	75000	68300	91.0	85.0-115	

⁸Gl

⁹Al

L1508820-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1508820-09 07/20/22 18:30 • (MS) R3817516-4 07/20/22 18:56 • (MSD) R3817516-5 07/20/22 19:24

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TOC	50000	3660	58800	57000	110	107	1	80.0-120			3.13	20

L1509260-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1509260-01 07/21/22 02:32 • (MS) R3817516-7 07/21/22 03:02 • (MSD) R3817516-8 07/21/22 03:31

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
TOC	50000	12900	68800	68700	112	112	1	80.0-120			0.0873	20

¹⁰Sc

Method Blank (MB)

(MB) R3811446-1 07/06/22 08:53

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Iron,Dissolved	41.6	U	18.0	100
Manganese,Dissolved	U		0.934	10.0

Laboratory Control Sample (LCS)

(LCS) R3811446-2 07/06/22 08:55

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Iron,Dissolved	10000	9650	96.5	80.0-120	
Manganese,Dissolved	1000	928	92.8	80.0-120	

L1507008-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1507008-01 07/06/22 08:58 • (MS) R3811446-4 07/06/22 09:03 • (MSD) R3811446-5 07/06/22 09:06

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Iron,Dissolved	10000	U	9560	9470	95.6	94.7	1	75.0-125			0.977	20
Manganese,Dissolved	1000	4250	5030	5040	78.1	79.4	1	75.0-125			0.262	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Is

⁸Gl

⁹Al

¹⁰Sc

Method Blank (MB)

(MB) R3808389-2 06/28/22 08:58

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Ethane	U		4.07	13.0
Ethene	U		4.26	13.0

L1507042-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1507042-07 06/28/22 11:12 • (DUP) R3808389-3 06/28/22 11:15

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ethane	32.8	32.8	1	0.000		20
Ethene	146	144	1	1.38		20

L1507042-21 Original Sample (OS) • Duplicate (DUP)

(OS) L1507042-21 06/28/22 12:00 • (DUP) R3808389-4 06/28/22 12:25

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Ethane	U	U	1	0.000		20
Ethene	U	U	1	0.000		20

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

(LCS) R3808389-1 06/28/22 08:49 • (LCSD) R3808389-9 06/28/22 12:44

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Ethane	129	126	116	97.7	89.9	85.0-115			8.26	20
Ethene	127	126	116	99.2	91.3	85.0-115			8.26	20

L1507042-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1507042-02 06/28/22 10:52 • (MS) R3808389-5 06/28/22 12:29 • (MSD) R3808389-6 06/28/22 12:31

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Ethane	129	U	130	125	101	96.9	1	50.0-150			3.92	20
Ethene	127	U	131	126	103	99.2	1	50.0-150			3.89	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

L1507042-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1507042-05 06/28/22 11:07 • (MS) R3808389-7 06/28/22 12:35 • (MSD) R3808389-8 06/28/22 12:40

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Ethane	129	U	130	129	101	100	1	50.0-150			0.772	20
Ethene	127	U	131	130	103	102	1	50.0-150			0.766	20

- ¹Cp
- ²Tc
- ³Ss
- ⁴Cn
- ⁵Sr
- ⁶Qc
- ⁷Is
- ⁸Gl
- ⁹Al
- ¹⁰Sc

Method Blank (MB)

(MB) R3808948-2 06/29/22 09:15

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
Methane	U		2.91	10.0

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Is

⁸Gl

⁹Al

¹⁰Sc

L1507175-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1507175-05 06/29/22 10:47 • (DUP) R3808948-3 06/29/22 10:51

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Methane	14400	14200	10	1.40		20

L1507428-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1507428-03 06/29/22 11:35 • (DUP) R3808948-4 06/29/22 11:40

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Methane	30.4	33.0	1	8.20		20

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

(LCS) R3808948-1 06/29/22 09:13 • (LCSD) R3808948-7 06/29/22 11:56

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Methane	67.8	69.3	72.2	102	106	85.0-115			4.10	20

L1507324-14 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1507324-14 06/29/22 11:17 • (MS) R3808948-5 06/29/22 11:48 • (MSD) R3808948-6 06/29/22 11:50

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Methane	67.8	U	77.2	77.3	114	114	1	50.0-150			0.129	20

Method Blank (MB)

(MB) R3809656-3 06/28/22 03:21

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		11.3	50.0
Acrolein	U		2.54	50.0
Acrylonitrile	U		0.671	10.0
Benzene	U		0.0941	1.00
Bromobenzene	U		0.118	1.00
Bromodichloromethane	U		0.136	1.00
Bromoform	U		0.129	1.00
Bromomethane	U		0.605	5.00
1,3-Butadiene	U		0.299	2.00
n-Butylbenzene	U		0.157	1.00
sec-Butylbenzene	U		0.125	1.00
tert-Butylbenzene	U		0.127	1.00
Carbon tetrachloride	U		0.128	1.00
Carbon disulfide	U		0.0962	1.00
Chlorobenzene	U		0.116	1.00
Chlorodibromomethane	U		0.140	1.00
Chloroethane	U		0.192	5.00
Chloroform	U		0.111	5.00
Chloromethane	U		0.960	2.50
Cyclohexane	U		0.188	1.00
2-Chlorotoluene	U		0.106	1.00
4-Chlorotoluene	U		0.114	1.00
1,2-Dibromo-3-Chloropropane	U		0.276	5.00
1,2-Dibromoethane	U		0.126	1.00
Dibromomethane	U		0.122	1.00
1,2-Dichlorobenzene	U		0.107	1.00
1,3-Dichlorobenzene	U		0.110	1.00
1,4-Dichlorobenzene	U		0.120	1.00
Dichlorodifluoromethane	U		0.374	5.00
1,1-Dichloroethane	U		0.100	1.00
1,2-Dichloroethane	U		0.0819	1.00
1,1-Dichloroethene	U		0.188	1.00
cis-1,2-Dichloroethene	U		0.126	1.00
trans-1,2-Dichloroethene	U		0.149	1.00
1,2-Dichloropropane	U		0.149	1.00
1,1-Dichloropropene	U		0.142	1.00
1,3-Dichloropropane	U		0.110	1.00
cis-1,3-Dichloropropene	U		0.111	1.00
trans-1,3-Dichloropropene	U		0.118	1.00
2,2-Dichloropropane	U		0.161	1.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Is

⁸Gl

⁹Al

¹⁰Sc

Method Blank (MB)

(MB) R3809656-3 06/28/22 03:21

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	ug/l		ug/l	ug/l
Dicyclopentadiene	U		0.253	1.00
Di-isopropyl ether	U		0.105	1.00
Ethylbenzene	U		0.137	1.00
4-Ethyltoluene	U		0.208	1.00
Hexachloro-1,3-butadiene	U		0.337	1.00
n-Hexane	U		0.749	10.0
Isopropylbenzene	U		0.105	1.00
p-Isopropyltoluene	U		0.120	1.00
2-Butanone (MEK)	U		1.19	10.0
Methyl Cyclohexane	U		0.660	1.00
Methylene Chloride	U		0.430	5.00
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0
Methyl tert-butyl ether	U		0.101	1.00
Naphthalene	U		1.00	5.00
Propene	U		0.936	2.50
n-Propylbenzene	U		0.0993	1.00
Styrene	U		0.118	1.00
1,1,1,2-Tetrachloroethane	U		0.147	1.00
1,1,2,2-Tetrachloroethane	U		0.133	1.00
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00
Tetrachloroethene	U		0.300	1.00
Toluene	U		0.278	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.481	1.00
1,1,1-Trichloroethane	U		0.149	1.00
1,1,2-Trichloroethane	U		0.158	1.00
Trichloroethene	U		0.190	1.00
Trichlorofluoromethane	U		0.160	5.00
1,2,3-Trichloropropane	U		0.237	2.50
1,2,4-Trimethylbenzene	U		0.322	1.00
1,2,3-Trimethylbenzene	U		0.104	1.00
1,3,5-Trimethylbenzene	U		0.104	1.00
Vinyl chloride	U		0.234	1.00
Xylenes, Total	U		0.174	3.00
(S) Toluene-d8	109			80.0-120
(S) 4-Bromofluorobenzene	98.3			77.0-126
(S) 1,2-Dichloroethane-d4	113			70.0-130

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Is

⁸Gl

⁹Al

¹⁰Sc

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

(LCS) R3809656-1 06/28/22 02:17 • (LCSD) R3809656-2 06/28/22 02:39

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	21.9	23.4	87.6	93.6	19.0-160			6.62	27
Acrolein	25.0	32.3	32.4	129	130	30.0-160			0.309	26
Acrylonitrile	25.0	24.3	24.0	97.2	96.0	55.0-149			1.24	20
Benzene	5.00	4.76	5.12	95.2	102	70.0-123			7.29	20
Bromobenzene	5.00	4.89	4.96	97.8	99.2	73.0-121			1.42	20
Bromodichloromethane	5.00	4.18	4.58	83.6	91.6	75.0-120			9.13	20
Bromoform	5.00	3.29	3.31	65.8	66.2	68.0-132	J4	J4	0.606	20
Bromomethane	5.00	6.11	5.93	122	119	30.0-160			2.99	25
1,3-Butadiene	5.00	5.85	6.08	117	122	45.0-147			3.86	20
n-Butylbenzene	5.00	5.10	5.18	102	104	73.0-125			1.56	20
sec-Butylbenzene	5.00	5.23	5.29	105	106	75.0-125			1.14	20
tert-Butylbenzene	5.00	5.05	4.99	101	99.8	76.0-124			1.20	20
Carbon tetrachloride	5.00	4.49	4.82	89.8	96.4	68.0-126			7.09	20
Carbon disulfide	5.00	4.36	4.64	87.2	92.8	61.0-128			6.22	20
Chlorobenzene	5.00	4.73	4.88	94.6	97.6	80.0-121			3.12	20
Chlorodibromomethane	5.00	3.77	3.89	75.4	77.8	77.0-125	J4		3.13	20
Chloroethane	5.00	7.52	8.06	150	161	47.0-150		J4	6.93	20
Chloroform	5.00	4.92	5.14	98.4	103	73.0-120			4.37	20
Chloromethane	5.00	4.29	4.43	85.8	88.6	41.0-142			3.21	20
Cyclohexane	5.00	4.60	4.61	92.0	92.2	71.0-124			0.217	20
2-Chlorotoluene	5.00	5.13	5.28	103	106	76.0-123			2.88	20
4-Chlorotoluene	5.00	4.90	4.89	98.0	97.8	75.0-122			0.204	20
1,2-Dibromo-3-Chloropropane	5.00	3.07	3.21	61.4	64.2	58.0-134			4.46	20
1,2-Dibromoethane	5.00	4.55	4.52	91.0	90.4	80.0-122			0.662	20
Dibromomethane	5.00	4.54	4.87	90.8	97.4	80.0-120			7.01	20
1,2-Dichlorobenzene	5.00	5.04	5.00	101	100	79.0-121			0.797	20
1,3-Dichlorobenzene	5.00	4.79	5.03	95.8	101	79.0-120			4.89	20
1,4-Dichlorobenzene	5.00	4.70	5.13	94.0	103	79.0-120			8.75	20
Dichlorodifluoromethane	5.00	3.92	4.08	78.4	81.6	51.0-149			4.00	20
1,1-Dichloroethane	5.00	4.75	5.19	95.0	104	70.0-126			8.85	20
1,2-Dichloroethane	5.00	4.75	4.74	95.0	94.8	70.0-128			0.211	20
1,1-Dichloroethene	5.00	4.65	4.73	93.0	94.6	71.0-124			1.71	20
cis-1,2-Dichloroethene	5.00	4.25	4.55	85.0	91.0	73.0-120			6.82	20
trans-1,2-Dichloroethene	5.00	4.54	4.52	90.8	90.4	73.0-120			0.442	20
1,2-Dichloropropane	5.00	4.95	4.89	99.0	97.8	77.0-125			1.22	20
1,1-Dichloropropene	5.00	5.16	5.34	103	107	74.0-126			3.43	20
1,3-Dichloropropane	5.00	4.66	4.87	93.2	97.4	80.0-120			4.41	20
cis-1,3-Dichloropropene	5.00	4.18	4.26	83.6	85.2	80.0-123			1.90	20
trans-1,3-Dichloropropene	5.00	3.98	4.31	79.6	86.2	78.0-124			7.96	20
2,2-Dichloropropane	5.00	4.21	4.65	84.2	93.0	58.0-130			9.93	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

(LCS) R3809656-1 06/28/22 02:17 • (LCSD) R3809656-2 06/28/22 02:39

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Dicyclopentadiene	5.00	4.96	5.17	99.2	103	74.0-126			4.15	20
Di-isopropyl ether	5.00	4.92	4.89	98.4	97.8	58.0-138			0.612	20
Ethylbenzene	5.00	4.91	5.01	98.2	100	79.0-123			2.02	20
4-Ethyltoluene	5.00	5.10	5.32	102	106	74.0-127			4.22	20
Hexachloro-1,3-butadiene	5.00	4.93	5.23	98.6	105	54.0-138			5.91	20
n-Hexane	5.00	4.86	5.14	97.2	103	57.0-133			5.60	20
Isopropylbenzene	5.00	4.86	4.95	97.2	99.0	76.0-127			1.83	20
p-Isopropyltoluene	5.00	5.03	5.05	101	101	76.0-125			0.397	20
2-Butanone (MEK)	25.0	25.4	26.7	102	107	44.0-160			4.99	20
Methyl Cyclohexane	5.00	4.41	4.96	88.2	99.2	68.0-126			11.7	20
Methylene Chloride	5.00	4.61	4.65	92.2	93.0	67.0-120			0.864	20
4-Methyl-2-pentanone (MIBK)	25.0	27.4	27.6	110	110	68.0-142			0.727	20
Methyl tert-butyl ether	5.00	4.59	4.83	91.8	96.6	68.0-125			5.10	20
Naphthalene	5.00	4.16	4.06	83.2	81.2	54.0-135			2.43	20
Propene	5.00	4.75	5.15	95.0	103	30.0-160			8.08	20
n-Propylbenzene	5.00	5.21	5.22	104	104	77.0-124			0.192	20
Styrene	5.00	4.26	4.30	85.2	86.0	73.0-130			0.935	20
1,1,1,2-Tetrachloroethane	5.00	4.16	4.30	83.2	86.0	75.0-125			3.31	20
1,1,2,2-Tetrachloroethane	5.00	4.40	4.69	88.0	93.8	65.0-130			6.38	20
1,1,2-Trichlorotrifluoroethane	5.00	5.26	5.36	105	107	69.0-132			1.88	20
Tetrachloroethene	5.00	5.02	4.89	100	97.8	72.0-132			2.62	20
Toluene	5.00	4.82	5.12	96.4	102	79.0-120			6.04	20
1,2,3-Trichlorobenzene	5.00	4.20	4.45	84.0	89.0	50.0-138			5.78	20
1,2,4-Trichlorobenzene	5.00	4.07	4.33	81.4	86.6	57.0-137			6.19	20
1,1,1-Trichloroethane	5.00	4.71	4.60	94.2	92.0	73.0-124			2.36	20
1,1,2-Trichloroethane	5.00	4.35	4.31	87.0	86.2	80.0-120			0.924	20
Trichloroethene	5.00	4.89	5.11	97.8	102	78.0-124			4.40	20
Trichlorofluoromethane	5.00	5.61	5.99	112	120	59.0-147			6.55	20
1,2,3-Trichloropropane	5.00	4.60	4.82	92.0	96.4	73.0-130			4.67	20
1,2,4-Trimethylbenzene	5.00	4.97	4.93	99.4	98.6	76.0-121			0.808	20
1,2,3-Trimethylbenzene	5.00	4.62	4.81	92.4	96.2	77.0-120			4.03	20
1,3,5-Trimethylbenzene	5.00	4.73	5.07	94.6	101	76.0-122			6.94	20
Vinyl chloride	5.00	5.11	5.23	102	105	67.0-131			2.32	20
Xylenes, Total	15.0	14.5	14.5	96.7	96.7	79.0-123			0.000	20
(S) Toluene-d8				105	109	80.0-120				
(S) 4-Bromofluorobenzene				99.4	100	77.0-126				
(S) 1,2-Dichloroethane-d4				105	111	70.0-130				

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Is

⁸Gl

⁹Al

¹⁰Sc

L1507049-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1507049-01 06/28/22 04:46 • (MS) R3809656-4 06/28/22 10:46 • (MSD) R3809656-5 06/28/22 11:07

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	U	26.9	25.7	108	103	1	10.0-160			4.56	35
Acrolein	25.0	U	41.6	38.8	166	155	1	10.0-160	J5		6.97	39
Acrylonitrile	25.0	U	29.1	28.6	116	114	1	21.0-160			1.73	32
Benzene	5.00	U	5.99	5.84	120	117	1	17.0-158			2.54	27
Bromobenzene	5.00	U	5.93	5.52	119	110	1	30.0-149			7.16	28
Bromodichloromethane	5.00	U	5.18	5.02	104	100	1	31.0-150			3.14	27
Bromoform	5.00	U	4.29	4.04	85.8	80.8	1	29.0-150			6.00	29
Bromomethane	5.00	U	6.90	7.01	138	140	1	10.0-160			1.58	38
1,3-Butadiene	5.00	U	6.48	7.04	130	141	1	10.0-160			8.28	22
n-Butylbenzene	5.00	U	5.59	5.76	112	115	1	31.0-150			3.00	30
sec-Butylbenzene	5.00	U	6.10	6.11	122	122	1	33.0-155			0.164	29
tert-Butylbenzene	5.00	U	6.13	5.87	123	117	1	34.0-153			4.33	28
Carbon tetrachloride	5.00	U	5.85	5.95	117	119	1	23.0-159			1.69	28
Carbon disulfide	5.00	U	4.90	4.67	98.0	93.4	1	10.0-156			4.81	28
Chlorobenzene	5.00	U	5.80	5.70	116	114	1	33.0-152			1.74	27
Chlorodibromomethane	5.00	U	4.64	4.48	92.8	89.6	1	37.0-149			3.51	27
Chloroethane	5.00	U	8.34	7.72	167	154	1	10.0-160	J5		7.72	30
Chloroform	5.00	U	6.53	6.32	131	126	1	29.0-154			3.27	28
Chloromethane	5.00	U	5.18	5.26	104	105	1	10.0-160			1.53	29
Cyclohexane	5.00	U	5.86	5.57	117	111	1	19.0-160			5.07	23
2-Chlorotoluene	5.00	U	5.95	5.91	119	118	1	32.0-153			0.675	28
4-Chlorotoluene	5.00	U	5.73	5.44	115	109	1	32.0-150			5.19	28
1,2-Dibromo-3-Chloropropane	5.00	U	4.13	4.05	82.6	81.0	1	22.0-151			1.96	34
1,2-Dibromoethane	5.00	U	5.45	5.17	109	103	1	34.0-147			5.27	27
Dibromomethane	5.00	U	5.58	5.66	112	113	1	30.0-151			1.42	27
1,2-Dichlorobenzene	5.00	U	5.50	5.49	110	110	1	34.0-149			0.182	28
1,3-Dichlorobenzene	5.00	U	5.97	5.63	119	113	1	36.0-146			5.86	27
1,4-Dichlorobenzene	5.00	U	5.11	4.94	102	98.8	1	35.0-142			3.38	27
Dichlorodifluoromethane	5.00	U	5.90	5.61	118	112	1	10.0-160			5.04	29
1,1-Dichloroethane	5.00	U	5.86	5.85	117	117	1	25.0-158			0.171	27
1,2-Dichloroethane	5.00	U	5.97	5.77	119	115	1	29.0-151			3.41	27
1,1-Dichloroethene	5.00	1.35	7.42	7.11	121	115	1	11.0-160			4.27	29
cis-1,2-Dichloroethene	5.00	U	5.62	4.85	112	97.0	1	10.0-160			14.7	27
trans-1,2-Dichloroethene	5.00	U	5.32	4.99	106	99.8	1	17.0-153			6.40	27
1,2-Dichloropropane	5.00	U	6.17	5.90	123	118	1	30.0-156			4.47	27
1,1-Dichloropropene	5.00	U	6.38	6.15	128	123	1	25.0-158			3.67	27
1,3-Dichloropropane	5.00	U	5.68	5.59	114	112	1	38.0-147			1.60	27
cis-1,3-Dichloropropene	5.00	U	5.18	4.90	104	98.0	1	34.0-149			5.56	28
trans-1,3-Dichloropropene	5.00	U	4.84	4.86	96.8	97.2	1	32.0-149			0.412	28
2,2-Dichloropropane	5.00	U	5.78	5.48	116	110	1	24.0-152			5.33	29

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

L1507049-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1507049-01 06/28/22 04:46 • (MS) R3809656-4 06/28/22 10:46 • (MSD) R3809656-5 06/28/22 11:07

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 %
Dicyclopentadiene	5.00	U	5.80	5.58	116	112	1	51.0-139			3.87	20
Di-isopropyl ether	5.00	U	6.21	5.80	124	116	1	21.0-160			6.83	28
Ethylbenzene	5.00	U	5.89	5.98	118	120	1	30.0-155			1.52	27
4-Ethyltoluene	5.00	U	5.97	5.87	119	117	1	10.0-160			1.69	20
Hexachloro-1,3-butadiene	5.00	U	5.55	5.49	111	110	1	20.0-154			1.09	34
n-Hexane	5.00	U	4.86	4.77	97.2	95.4	1	10.0-153			1.87	28
Isopropylbenzene	5.00	U	5.79	5.82	116	116	1	28.0-157			0.517	27
p-Isopropyltoluene	5.00	U	5.75	5.55	115	111	1	30.0-154			3.54	29
2-Butanone (MEK)	25.0	U	29.9	29.6	120	118	1	10.0-160			1.01	32
Methyl Cyclohexane	5.00	U	5.40	4.99	108	99.8	1	11.0-160			7.89	24
Methylene Chloride	5.00	U	5.53	5.41	111	108	1	23.0-144			2.19	28
4-Methyl-2-pentanone (MIBK)	25.0	U	32.3	32.3	129	129	1	29.0-160			0.000	29
Methyl tert-butyl ether	5.00	U	5.81	5.74	116	115	1	28.0-150			1.21	29
Naphthalene	5.00	U	4.70	4.97	94.0	99.4	1	12.0-156			5.58	35
Propene	5.00	U	6.49	6.01	130	120	1	10.0-160			7.68	29
n-Propylbenzene	5.00	U	6.01	5.77	120	115	1	31.0-154			4.07	28
Styrene	5.00	U	4.97	5.20	99.4	104	1	33.0-155			4.52	28
1,1,1,2-Tetrachloroethane	5.00	U	5.15	5.09	103	102	1	36.0-151			1.17	29
1,1,2,2-Tetrachloroethane	5.00	U	5.61	5.46	112	109	1	33.0-150			2.71	28
1,1,2-Trichlorotrifluoroethane	5.00	U	6.68	6.36	134	127	1	23.0-160			4.91	30
Tetrachloroethene	5.00	U	5.58	5.75	112	115	1	10.0-160			3.00	27
Toluene	5.00	U	5.77	5.86	115	117	1	26.0-154			1.55	28
1,2,3-Trichlorobenzene	5.00	U	4.17	4.70	83.4	94.0	1	17.0-150			12.0	36
1,2,4-Trichlorobenzene	5.00	U	4.37	4.97	87.4	99.4	1	24.0-150			12.8	33
1,1,1-Trichloroethane	5.00	U	5.74	5.73	115	115	1	23.0-160			0.174	28
1,1,2-Trichloroethane	5.00	U	4.93	5.09	98.6	102	1	35.0-147			3.19	27
Trichloroethene	5.00	4.18	10.1	9.58	118	108	1	10.0-160			5.28	25
Trichlorofluoromethane	5.00	U	7.63	7.48	153	150	1	17.0-160			1.99	31
1,2,3-Trichloropropane	5.00	U	5.48	5.47	110	109	1	34.0-151			0.183	29
1,2,4-Trimethylbenzene	5.00	U	5.57	5.56	111	111	1	26.0-154			0.180	27
1,2,3-Trimethylbenzene	5.00	U	5.55	5.29	111	106	1	32.0-149			4.80	28
1,3,5-Trimethylbenzene	5.00	U	5.67	5.25	113	105	1	28.0-153			7.69	27
Vinyl chloride	5.00	U	6.44	6.32	129	126	1	10.0-160			1.88	27
Xylenes, Total	15.0	U	17.1	17.2	114	115	1	29.0-154			0.583	28
(S) Toluene-d8					106	108		80.0-120				
(S) 4-Bromofluorobenzene					101	106		77.0-126				
(S) 1,2-Dichloroethane-d4					111	111		70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

Method Blank (MB)

(MB) R3809137-3 06/25/22 14:01

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
1,4-Dioxane	U		0.597	3.00
(S) Toluene-d8	102			77.0-127

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

(LCS) R3809137-1 06/25/22 13:01 • (LCSD) R3809137-2 06/25/22 13:21

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
1,4-Dioxane	50.0	46.1	44.1	92.2	88.2	55.0-138			4.43	24
(S) Toluene-d8				102	102	77.0-127				

L1506526-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1506526-03 06/25/22 15:30 • (MS) R3809137-4 06/25/22 21:27 • (MSD) R3809137-5 06/25/22 21:47

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
1,4-Dioxane	50.0	0.857	45.1	45.3	88.5	88.9	1	13.0-160			0.442	31
(S) Toluene-d8					103	103		77.0-127				

L1506526-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1506526-04 06/25/22 15:50 • (MS) R3809137-6 06/25/22 22:07 • (MSD) R3809137-7 06/25/22 22:27

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
1,4-Dioxane	50.0	U	39.7	48.8	79.4	97.6	1	13.0-160			20.6	31
(S) Toluene-d8					102	101		77.0-127				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

INTERNAL STANDARD SUMMARY

Instrument: VOCMS21 • File ID: 0628_02

06/28/22 01:56

Sample ID	File ID	8260-FLUOROBENZENE Response	8260-CHLOROBENZENE-D5 Response	8260-1,4-DICHLOROBENZENE-D4 Response
Standard	0628_02	240986	103650	97914
Upper Limit		481972	207300	195828
Lower Limit		120493	51825	48957
LCS R3809656-1 WG1886419 1x	0628_03	236904	103361	101787
LCSD R3809656-2 WG1886419 1x	0628_04	229890	100032	100828
BLANK R3809656-3 WG1886419 1x	0628_06	219365	94857	91045
L1507025-01 WG1886419 10x	0628_22	237608	101530	103317
L1507025-02 WG1886419 10x	0628_23	227791	99194	100314
L1507025-03 WG1886419 10x	0628_24	226610	99611	101539
MS R3809656-4 WG1886419 1x	0628_27	230515	103887	102365
MSD R3809656-5 WG1886419 1x	0628_29	227235	99570	101619

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Is

⁸ Gl

⁹ Al

¹⁰ Sc

INTERNAL STANDARD SUMMARY

Instrument: VOCMS27 • File ID: 0625_04

06/25/22 12:42

Sample ID	File ID	8260-FLUOROBENZENE Response
Standard	0625_04	955758
Upper Limit		1911516
Lower Limit		477879
LCS R3809137-1 WG1885425 1x	0625_05	957511
LCSD R3809137-2 WG1885425 1x	0625_06	1128472
BLANK R3809137-3 WG1885425 1x	0625_08	1098906
L1507025-01 WG1885425 1x	0625_19	712580
L1507025-02 WG1885425 1x	0625_20	933377
L1507025-03 WG1885425 1x	0625_21	937244
MS R3809137-4 WG1885425 1x	0625_29	1167820
MSD R3809137-5 WG1885425 1x	0625_30	1064910
MS R3809137-6 WG1885425 1x	0625_31	1229665
MSD R3809137-7 WG1885425 1x	0625_32	1056826

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Is

⁸Gl

⁹Al

¹⁰Sc

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

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

Qualifier	Description
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
Q	Sample was prepared and/or analyzed past holding time as defined in the method. Concentrations should be considered minimum values.
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	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Is

⁸ Gl

⁹ Al

¹⁰ Sc

Company Name/Address: **Pinyon Environmental**
 4815 E. Carefree Highway
 #108-274
 Cave Creek, AZ 85331

Billing Information:
 Accounts Payable
 3222 S Vance Street
 Suite 200
 Lakewood, CO 80227

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/hubs/pas-standard-terms.pdf>

Report to: **Marcus Guarnieri, Isabella Foster**

Email To: guarnieri@pinyon-env.com; Foster@pinyon-env.com

Project Description: **Nammo TTU Groundwater Monitoring**

City/State Collected: **Mesa, AZ**

Please Circle: PT MT CT ET

Client Project #: **722152201.002**

Lab Project #: **PINYONMAZ-722152201**

Phone: **602-290-4774**

Collected by (print): *Ben Booser*

Site/Facility ID #

P.O. #

Collected by (signature): *Ben Booser*

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

Date Results Needed: **Standard**

Immediately Packed on Ice N Y

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	Br, Cl, NO2, NO3, SO4 125mlHDPE-NoPres	Diss. Fe, Mn 250mlHDPE-NoPres	PERCHLORATE 125mlHDPE-NoPres	RSK175 40mlAmb HCl	SUBPER6850 125mlHDPE-NoPres	SULFIDE 250mlAmb-S-NaOH+ZnAC	TOC 250mlHDPE-HCl	V8260AZ 40mlAmb-HCl	V8260LL14D 40mlAmb-HCl
TTU-11-73-20220620		GW	73	6/20/22	1256	13	✓	✓	✓	✓	✓	✓	✓	✓	✓
DUP-12		GW	-	6/20/22	1256	7			✓					✓	✓
TTU-11-73-20220620		GW	73	6/20/22	1407	13	✓	✓	✓	✓	✓	✓	✓	✓	✓
		GW													
		GW													
		GW													
		GW													
		GW													

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

Remarks: **SUBPER6850 to be subbed to Eurofins - Sacramento, CA**

pH _____ Temp _____
 Flow _____ Other _____

Samples returned via: UPS FedEx Courier

Tracking # **5829 4696 9683**

Sample Receipt Checklist

COC Seal Present/Intact: 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) *Ben Booser* Date: **6/20/22** Time: **1608**

Received by: (Signature) *[Signature]* Trip Blank Received: Yes No

Relinquished by: (Signature) *[Signature]* Date: **06/20/22** Time: **1800**

Received by: (Signature) *FedEx* Temp: **24.7°C** Bottles Received: **33**

Relinquished by: (Signature) *[Signature]* Date: _____ Time: _____

Received for lab by: (Signature) *[Signature]* Date: **6.21.22** Time: **0945**

If preservation required by Login: Date/Time

Hold: _____ Condition: **NCF / OK**

P.01A7

Pinyon Environmental

Sample Delivery Group: L1507028
Samples Received: 06/21/2022
Project Number: 722152201.002
Description: Nammo TTU Groundwater Monitoring

Report To: Jeremy Musson
4815 E. Carefree Highway
#108-274
Cave Creek, AZ 85331

Entire Report Reviewed By:



Daphne Richards
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

TABLE OF CONTENTS

Cp: Cover Page	1	¹Cp
Tc: Table of Contents	2	²Tc
Ss: Sample Summary	3	³Ss
Cn: Case Narrative	4	⁴Cn
Gl: Glossary of Terms	5	⁵Gl
Al: Accreditations & Locations	6	⁶Al
Sc: Sample Chain of Custody	7	⁷Sc

SAMPLE SUMMARY

TTU-19-73-20220620 L1507028-01 GW

Collected by: Ben Boesen
 Collected date/time: 06/20/22 12:56
 Received date/time: 06/21/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG1882858	1	07/11/22 00:00	07/11/22 00:00	-	Subcontract

TTU-11-73-20220620 L1507028-02 GW

Collected by: Ben Boesen
 Collected date/time: 06/20/22 14:07
 Received date/time: 06/21/22 09:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Subcontracted Analyses	WG1882858	1	07/11/22 00:00	07/11/22 00:00	-	Subcontract

1 Cp

2 Tc

3 Ss

4 Cn

5 Gl

6 Al

7 Sc

CASE NARRATIVE

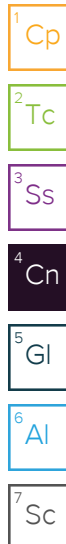
All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples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



Daphne Richards
Project Manager

Project Narrative

L1507028 -01, -02 contains subout data that is included after the chain of custody.



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

SDG	Sample Delivery Group.
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

The remainder of this page intentionally left blank, there are no qualifiers applied to this SDG.

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Gl

⁶ Al

⁷ Sc

ACCREDITATIONS & LOCATIONS

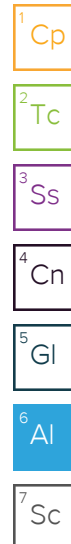
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

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	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.


* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Company Name/Address:
Pinyon Environmental
 4815 E. Carefree Highway
 #108-274
 Cave Creek, AZ 85331

Billing Information:
 Accounts Payable
 3222 S Vance Street
 Suite 200
 Lakewood, CO 80227

Analysis / Container / Preservative
 Pres Chk
 M L2

Chain of Custody Page 1 of 1

 PEOPLE ADVANCING SCIENCE

Report to:
Marcus Guarnieri, Isabella Foster

Email To: guarnieri@pinyon-env.com; Foster@pinyon-

Project Description:
Nammo TTU Groundwater Monitoring

City/State Collected: **Mesa, AZ**

Please Circle:
 PT MT CT ET

Phone: 602-290-4774

Client Project #
722152201.002

Lab Project #
PINYONMAZ-722152201

Collected by (print):
Ben Bassan

Site/Facility ID #

P.O. #

Collected by (signature):
Ben Bassan

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

Quote #

Immediately Packed on Ice N Y

Date Results Needed
Standard

No. of Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
TTU-11-73-20110610		GW	73	6/20/22	1256	13
DUP-12		GW	-	6/20/22	1256	7
TTU-11-73-20110610		GW	73	6/20/22	1407	13
		GW				
		GW				
		GW				
		GW				
		GW				
		GW				

Br, Cl, NO2, NO3, SO4	125ml HDPE-NoPres	Diss. Fe, Mn 250ml HDPE-NoPres	PERCHLORATE 125ml HDPE-NoPres	RSK175 40ml Amb HCl	SUPER6850 125ml HDPE-NoPres	SULFIDE 250ml Amb-S-NaOH+ZnAc	TOC 250ml HDPE-HCl	V8260AZ 40ml Amb-HCl	V8260LL14D 40ml Amb-HCl
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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 # **L1507028**
K031

Acctnum: **PINYONMAZ**
 Template: **T205653**
 Prelogin: **P931908**
 PM: 288 - Daphne Richards
 PB:

Shipped Via:
 Remarks | Sample # (lab only)

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

Remarks: SUBPER6850 to be subbed to Eurofins - Sacramento, CA

Sample Receipt Checklist
 COC Seal Present/Intact: NP N
 COC Signed/Accurate: Y N
 Bottles arrive intact: Y N
 Correct bottles used: Y N
 Sufficient volume sent: Y N
 If Applicable
 VOA Zero Headspace: Y N
 Preservation Correct/Checked: Y N
 RAD Screen <0.5 mR/hr: Y N

Samples returned via:
 UPS FedEx Courier

Tracking # **5829 6696 9683**

Relinquished by: (Signature)
Ben Bassan

Date: **6/20/22**

Time: **1608**

Received by: (Signature)
[Signature]

Trip Blank Received: Yes No
 HCL MeOH TBR

Relinquished by: (Signature)
[Signature]

Date: **06/20/22**

Time: **1800**

Received by: (Signature)
 FedEx

Temp: **24.7** °C
 3.4 + 0 = 3.4 **33**

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)
[Signature]

Date: **6-21-22** Time: **0945**

Condition: NCF / OK

ANALYTICAL REPORT

Eurofins Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-89262-1
Client Project/Site: Perchlorate

For:
Pace Analytical National
12065 Lebanon Rd
Mt Juliet, Tennessee 37122

Attn: Jimmy Huckaba



Authorized for release by:
7/11/2022 1:34:12 PM

Jill Kellmann, Client Service Manager
(916)374-4402
Jill.Kellmann@et.eurofinsus.com

LINKS

Review your project
results through



Have a Question?



Visit us at:

www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	6
QC Sample Results	7
QC Association Summary	8
Lab Chronicle	9
Certification Summary	10
Method Summary	11
Sample Summary	12
Chain of Custody	13
Receipt Checklists	14

Definitions/Glossary

Client: Pace Analytical National
Project/Site: Perchlorate

Job ID: 320-89262-1

Qualifiers

LCMS

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Pace Analytical National
Project/Site: Perchlorate

Job ID: 320-89262-1

Job ID: 320-89262-1

Laboratory: Eurofins Sacramento

Narrative

Receipt

The samples were received on 6/22/2022 9:30 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.0° C.

LCMS

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

Method Filtration: The following samples in preparation batch 320-598551 were observed to have floating particulates present in the sample bottle. TTU-19-73-20220620 (320-89262-1), TTU-11-73-20220620 (320-89262-2), (320-89262-A-1 MS) and (320-89262-A-1 MSD)

Method Filtration: The following samples in preparation batch 320-598551 were observed to be light yellow in color prior to extraction. TTU-19-73-20220620 (320-89262-1), TTU-11-73-20220620 (320-89262-2), (320-89262-A-1 MS) and (320-89262-A-1 MSD)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.



Detection Summary

Client: Pace Analytical National
Project/Site: Perchlorate

Job ID: 320-89262-1

Client Sample ID: TTU-19-73-20220620

Lab Sample ID: 320-89262-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perchlorate	110		5.0	0.85	ug/L	10		6850	Total/NA

Client Sample ID: TTU-11-73-20220620

Lab Sample ID: 320-89262-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perchlorate	1.0		0.50	0.085	ug/L	1		6850	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Sacramento

Client Sample Results

Client: Pace Analytical National
Project/Site: Perchlorate

Job ID: 320-89262-1

Client Sample ID: TTU-19-73-20220620

Lab Sample ID: 320-89262-1

Date Collected: 06/20/22 12:56

Matrix: Water

Date Received: 06/22/22 09:30

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	110		5.0	0.85	ug/L		06/25/22 06:35	07/01/22 05:53	10

Client Sample ID: TTU-11-73-20220620

Lab Sample ID: 320-89262-2

Date Collected: 06/20/22 14:07

Matrix: Water

Date Received: 06/22/22 09:30

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	1.0		0.50	0.085	ug/L		06/25/22 06:35	06/25/22 19:54	1

QC Sample Results

Client: Pace Analytical National
Project/Site: Perchlorate

Job ID: 320-89262-1

Method: 6850 - Perchlorate by LC/MS or LC/MS/MS

Lab Sample ID: MB 320-598551/1-A
Matrix: Water
Analysis Batch: 598695

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 598551

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50	0.085	ug/L		06/25/22 06:35	06/25/22 17:45	1

Lab Sample ID: LCS 320-598551/2-A
Matrix: Water
Analysis Batch: 598695

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 598551

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	5.00	4.99		ug/L		100	80 - 120

Lab Sample ID: 320-89262-1 MS
Matrix: Water
Analysis Batch: 599958

Client Sample ID: TTU-19-73-20220620
Prep Type: Total/NA
Prep Batch: 598551

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perchlorate	110		5.00	114	4	ug/L		84	80 - 120

Lab Sample ID: 320-89262-1 MSD
Matrix: Water
Analysis Batch: 599958

Client Sample ID: TTU-19-73-20220620
Prep Type: Total/NA
Prep Batch: 598551

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perchlorate	110		5.00	114	4	ug/L		83	80 - 120	0	15

QC Association Summary

Client: Pace Analytical National
Project/Site: Perchlorate

Job ID: 320-89262-1

LCMS

Prep Batch: 598551

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-89262-1	TTU-19-73-20220620	Total/NA	Water	Filtration	
320-89262-2	TTU-11-73-20220620	Total/NA	Water	Filtration	
MB 320-598551/1-A	Method Blank	Total/NA	Water	Filtration	
LCS 320-598551/2-A	Lab Control Sample	Total/NA	Water	Filtration	
320-89262-1 MS	TTU-19-73-20220620	Total/NA	Water	Filtration	
320-89262-1 MSD	TTU-19-73-20220620	Total/NA	Water	Filtration	

Analysis Batch: 598695

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-89262-2	TTU-11-73-20220620	Total/NA	Water	6850	598551
MB 320-598551/1-A	Method Blank	Total/NA	Water	6850	598551
LCS 320-598551/2-A	Lab Control Sample	Total/NA	Water	6850	598551

Analysis Batch: 599958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-89262-1	TTU-19-73-20220620	Total/NA	Water	6850	598551
320-89262-1 MS	TTU-19-73-20220620	Total/NA	Water	6850	598551
320-89262-1 MSD	TTU-19-73-20220620	Total/NA	Water	6850	598551

Lab Chronicle

Client: Pace Analytical National
Project/Site: Perchlorate

Job ID: 320-89262-1

Client Sample ID: TTU-19-73-20220620

Lab Sample ID: 320-89262-1

Date Collected: 06/20/22 12:56

Matrix: Water

Date Received: 06/22/22 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Filtration			4.00 mL	4.00 mL	598551	06/25/22 06:35	HJA	TAL SAC
Total/NA	Analysis	6850		10			599958	07/01/22 05:53	D1R	TAL SAC

Client Sample ID: TTU-11-73-20220620

Lab Sample ID: 320-89262-2

Date Collected: 06/20/22 14:07

Matrix: Water

Date Received: 06/22/22 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Filtration			4.00 mL	4.00 mL	598551	06/25/22 06:35	HJA	TAL SAC
Total/NA	Analysis	6850		1			598695	06/25/22 19:54	D1R	TAL SAC

Laboratory References:

TAL SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Accreditation/Certification Summary

Client: Pace Analytical National
Project/Site: Perchlorate

Job ID: 320-89262-1

Laboratory: Eurofins Sacramento

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	17-020	02-20-24
ANAB	Dept. of Defense ELAP	L2468	01-20-24
ANAB	Dept. of Energy	L2468.01	01-20-24
ANAB	ISO/IEC 17025	L2468	01-20-24
Arizona	State	AZ0708	08-11-22
Arkansas DEQ	State	88-0691	06-17-22 *
California	State	2897	01-31-23
Colorado	State	CA0004	08-31-22
Florida	NELAP	E87570	06-30-23
Georgia	State	4040	01-30-23
Hawaii	State	<cert No.>	01-29-23
Illinois	NELAP	200060	03-17-24
Kansas	NELAP	E-10375	10-31-22
Louisiana (All)	NELAP	01944	06-30-22 *
Maine	State	CA00004	04-14-24
Michigan	State	9947	01-31-23
Nevada	State	CA00044	08-31-22
New Hampshire	NELAP	2997	04-18-23
New Jersey	NELAP	CA005	06-30-23
New York	NELAP	11666	04-01-23
Ohio	State	41252	01-29-23
Oregon	NELAP	4040	01-29-23
Texas	NELAP	T104704399-19-13	05-31-23
US Fish & Wildlife	US Federal Programs	58448	04-30-23
USDA	US Federal Programs	P330-18-00239	01-23-23
Utah	NELAP	CA000442021-12	02-28-23
Virginia	NELAP	460278	03-14-23
Washington	State	C581	05-05-23
West Virginia (DW)	State	9930C	12-31-22
Wisconsin	State	998204680	08-31-22
Wyoming	State Program	8TMS-L	01-28-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Sacramento

Method Summary

Client: Pace Analytical National
Project/Site: Perchlorate

Job ID: 320-89262-1

Method	Method Description	Protocol	Laboratory
6850	Perchlorate by LC/MS or LC/MS/MS	EPA	TAL SAC
Filtration	Sample Filtration	None	TAL SAC

Protocol References:

EPA = US Environmental Protection Agency

None = None

Laboratory References:

TAL SAC = Eurofins Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Sample Summary

Client: Pace Analytical National
Project/Site: Perchlorate

Job ID: 320-89262-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-89262-1	TTU-19-73-20220620	Water	06/20/22 12:56	06/22/22 09:30
320-89262-2	TTU-11-73-20220620	Water	06/20/22 14:07	06/22/22 09:30

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14

Sub-Contract Chain of Custody

Batch Date/Time: 06/21/22 12:57

Sub-Contract Lab: TAWSCA

Address: 880 Riverside Parkway

City/State: West Sacramento, CA

95605

Contact:

Jill.Kellmann@et.eurofinsus.com

Owner Lab: PACEMTJL

Address: 12065 Lebanon Rd.

City/State: Mt. Juliet, TN 37122

Phone: (615) 773-9756

Fax: (615) 758-5859



12065 Lebanon Rd.

Mt. Juliet, TN 37122

Phone: (615) 773-9756

Fax: (615) 758-5859

WO: WG1882858

Email: MTJLSuboutTeam@pacelabs.com

Results Due Date: 07/06/22

ESC Purchase Order #: L1507028

Send Reports to: James C Huckaba

Sample ID Container ID	Matrix	State	Collect Date	Description	Sample Number Lab Use Only	Sample Comments Lab Use Only
TTU-19-73-20220620 40034469	GW	AZ	06/20/22 12:56	Perchlorate by 6850	1. L1507028-01	
TTU-11-73-20220620 40034470	GW	AZ	06/20/22 14:07	Perchlorate by 6850	2. L1507028-02	

*= Container used for multiple Samples and/or Analyses

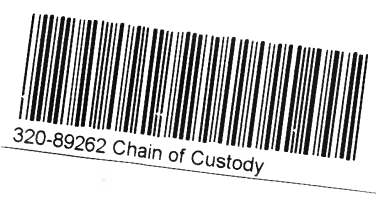
Relinquished by: [Signature] Date 6-21-2022

Received by: [Signature] Date 6-21-22 0930

Relinquished by: _____ Date _____

Received by: _____ Date _____

1.02



Login Sample Receipt Checklist

Client: Pace Analytical National

Job Number: 320-89262-1

Login Number: 89262

List Source: Eurofins Sacramento

List Number: 1

Creator: Maldonado, Letzi A

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	SEAL
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Pinyon Environmental

Sample Delivery Group: L1507761
Samples Received: 06/22/2022
Project Number: 722152201.002
Description: Nammo TTU Groundwater Monitoring

Report To: Christopher Funk
4815 E. Carefree Highway
#108-274
Cave Creek, AZ 85331











Entire Report Reviewed By:



Daphne Richards
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

TABLE OF CONTENTS

Cp: Cover Page	1	
Tc: Table of Contents	2	
Ss: Sample Summary	3	
Cn: Case Narrative	4	
Sr: Sample Results	5	
PF-2-400-20220621 L1507761-01	5	
DUP-13 L1507761-02	7	
Qc: Quality Control Summary	9	
Volatile Organic Compounds (GC/MS) by Method 8260B	9	
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	15	
Is: Internal Standard Summary	16	
Volatile Organic Compounds (GC/MS) by Method 8260B	16	
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	17	
Gl: Glossary of Terms	18	
Al: Accreditations & Locations	19	
Sc: Sample Chain of Custody	20	

SAMPLE SUMMARY

PF-2-400-20220621 L1507761-01 GW

Collected by: Isabella Foster
 Collected date/time: 06/21/22 12:35
 Received date/time: 06/22/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1888472	1	06/30/22 22:26	06/30/22 22:26	TJJ	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1885800	1	06/27/22 02:13	06/27/22 02:13	ACG	Mt. Juliet, TN

DUP-13 L1507761-02 GW

Collected by: Isabella Foster
 Collected date/time: 06/21/22 12:35
 Received date/time: 06/22/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1888472	1	06/30/22 22:48	06/30/22 22:48	TJJ	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1885800	1	06/27/22 02:33	06/27/22 02:33	ACG	Mt. Juliet, TN

- 1
Cp
- 2
Tc
- 3
Ss
- 4
Cn
- 5
Sr
- 6
Qc
- 7
Is
- 8
Gl
- 9
Al
- 10
Sc

CASE NARRATIVE

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



Daphne Richards
Project Manager

Report Revision History

Level II Report - Version 1: 07/04/22 09:14

Project Narrative

Report style

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Is

⁸Gl

⁹Al

¹⁰Sc

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	06/30/2022 22:26	WG1888472
Acrolein	U		2.54	50.0	1	06/30/2022 22:26	WG1888472
Acrylonitrile	U		0.671	10.0	1	06/30/2022 22:26	WG1888472
Benzene	U		0.0941	1.00	1	06/30/2022 22:26	WG1888472
Bromobenzene	U		0.118	1.00	1	06/30/2022 22:26	WG1888472
Bromodichloromethane	U		0.136	1.00	1	06/30/2022 22:26	WG1888472
Bromoform	U		0.129	1.00	1	06/30/2022 22:26	WG1888472
Bromomethane	U		0.605	5.00	1	06/30/2022 22:26	WG1888472
1,3-Butadiene	U	J3	0.299	2.00	1	06/30/2022 22:26	WG1888472
n-Butylbenzene	U	J3	0.157	1.00	1	06/30/2022 22:26	WG1888472
sec-Butylbenzene	U		0.125	1.00	1	06/30/2022 22:26	WG1888472
tert-Butylbenzene	U		0.127	1.00	1	06/30/2022 22:26	WG1888472
Carbon tetrachloride	U		0.128	1.00	1	06/30/2022 22:26	WG1888472
Carbon disulfide	U		0.0962	1.00	1	06/30/2022 22:26	WG1888472
Chlorobenzene	U		0.116	1.00	1	06/30/2022 22:26	WG1888472
Chlorodibromomethane	U		0.140	1.00	1	06/30/2022 22:26	WG1888472
Chloroethane	U	J4 J5	0.192	5.00	1	06/30/2022 22:26	WG1888472
Chloroform	U		0.111	5.00	1	06/30/2022 22:26	WG1888472
Chloromethane	U		0.960	2.50	1	06/30/2022 22:26	WG1888472
Cyclohexane	U		0.188	1.00	1	06/30/2022 22:26	WG1888472
2-Chlorotoluene	U	J3	0.106	1.00	1	06/30/2022 22:26	WG1888472
4-Chlorotoluene	U	J3	0.114	1.00	1	06/30/2022 22:26	WG1888472
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	06/30/2022 22:26	WG1888472
1,2-Dibromoethane	U		0.126	1.00	1	06/30/2022 22:26	WG1888472
Dibromomethane	U	J3	0.122	1.00	1	06/30/2022 22:26	WG1888472
1,2-Dichlorobenzene	U		0.107	1.00	1	06/30/2022 22:26	WG1888472
1,3-Dichlorobenzene	U	J3	0.110	1.00	1	06/30/2022 22:26	WG1888472
1,4-Dichlorobenzene	U		0.120	1.00	1	06/30/2022 22:26	WG1888472
Dichlorodifluoromethane	U		0.374	5.00	1	06/30/2022 22:26	WG1888472
1,1-Dichloroethane	U		0.100	1.00	1	06/30/2022 22:26	WG1888472
1,2-Dichloroethane	U		0.0819	1.00	1	06/30/2022 22:26	WG1888472
1,1-Dichloroethene	U		0.188	1.00	1	06/30/2022 22:26	WG1888472
cis-1,2-Dichloroethene	U		0.126	1.00	1	06/30/2022 22:26	WG1888472
trans-1,2-Dichloroethene	U		0.149	1.00	1	06/30/2022 22:26	WG1888472
1,2-Dichloropropane	U		0.149	1.00	1	06/30/2022 22:26	WG1888472
1,1-Dichloropropene	U		0.142	1.00	1	06/30/2022 22:26	WG1888472
1,3-Dichloropropane	U		0.110	1.00	1	06/30/2022 22:26	WG1888472
cis-1,3-Dichloropropene	U		0.111	1.00	1	06/30/2022 22:26	WG1888472
trans-1,3-Dichloropropene	U		0.118	1.00	1	06/30/2022 22:26	WG1888472
2,2-Dichloropropane	U		0.161	1.00	1	06/30/2022 22:26	WG1888472
Dicyclopentadiene	U	J3	0.253	1.00	1	06/30/2022 22:26	WG1888472
Di-isopropyl ether	U		0.105	1.00	1	06/30/2022 22:26	WG1888472
Ethylbenzene	U		0.137	1.00	1	06/30/2022 22:26	WG1888472
4-Ethyltoluene	U	J3	0.208	1.00	1	06/30/2022 22:26	WG1888472
Hexachloro-1,3-butadiene	U		0.337	1.00	1	06/30/2022 22:26	WG1888472
n-Hexane	U	J3	0.749	10.0	1	06/30/2022 22:26	WG1888472
Isopropylbenzene	U	J3	0.105	1.00	1	06/30/2022 22:26	WG1888472
p-Isopropyltoluene	U	J3	0.120	1.00	1	06/30/2022 22:26	WG1888472
2-Butanone (MEK)	U		1.19	10.0	1	06/30/2022 22:26	WG1888472
Methyl Cyclohexane	U	J3	0.660	1.00	1	06/30/2022 22:26	WG1888472
Methylene Chloride	U		0.430	5.00	1	06/30/2022 22:26	WG1888472
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	06/30/2022 22:26	WG1888472
Methyl tert-butyl ether	U		0.101	1.00	1	06/30/2022 22:26	WG1888472
Naphthalene	U	J3	1.00	5.00	1	06/30/2022 22:26	WG1888472
Propene	U		0.936	2.50	1	06/30/2022 22:26	WG1888472
n-Propylbenzene	U	J3	0.0993	1.00	1	06/30/2022 22:26	WG1888472

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Styrene	U		0.118	1.00	1	06/30/2022 22:26	WG1888472
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	06/30/2022 22:26	WG1888472
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	06/30/2022 22:26	WG1888472
1,1,2-Trichlorotrifluoroethane	U	<u>J3</u>	0.180	1.00	1	06/30/2022 22:26	WG1888472
Tetrachloroethene	U	<u>J3</u>	0.300	1.00	1	06/30/2022 22:26	WG1888472
Toluene	U		0.278	1.00	1	06/30/2022 22:26	WG1888472
1,2,3-Trichlorobenzene	U		0.230	1.00	1	06/30/2022 22:26	WG1888472
1,2,4-Trichlorobenzene	U	<u>J3</u>	0.481	1.00	1	06/30/2022 22:26	WG1888472
1,1,1-Trichloroethane	U		0.149	1.00	1	06/30/2022 22:26	WG1888472
1,1,2-Trichloroethane	U		0.158	1.00	1	06/30/2022 22:26	WG1888472
Trichloroethene	U	<u>J3</u>	0.190	1.00	1	06/30/2022 22:26	WG1888472
Trichlorofluoromethane	U		0.160	5.00	1	06/30/2022 22:26	WG1888472
1,2,3-Trichloropropane	U		0.237	2.50	1	06/30/2022 22:26	WG1888472
1,2,4-Trimethylbenzene	U	<u>J3</u>	0.322	1.00	1	06/30/2022 22:26	WG1888472
1,2,3-Trimethylbenzene	U		0.104	1.00	1	06/30/2022 22:26	WG1888472
1,3,5-Trimethylbenzene	U	<u>J3</u>	0.104	1.00	1	06/30/2022 22:26	WG1888472
Vinyl chloride	U		0.234	1.00	1	06/30/2022 22:26	WG1888472
Xylenes, Total	U		0.174	3.00	1	06/30/2022 22:26	WG1888472
(S) Toluene-d8	109			80.0-120		06/30/2022 22:26	WG1888472
(S) 4-Bromofluorobenzene	99.9			77.0-126		06/30/2022 22:26	WG1888472
(S) 1,2-Dichloroethane-d4	108			70.0-130		06/30/2022 22:26	WG1888472

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

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	U		0.597	3.00	1	06/27/2022 02:13	WG1885800
(S) Toluene-d8	103			77.0-127		06/27/2022 02:13	WG1885800

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	06/30/2022 22:48	WG1888472
Acrolein	U		2.54	50.0	1	06/30/2022 22:48	WG1888472
Acrylonitrile	U		0.671	10.0	1	06/30/2022 22:48	WG1888472
Benzene	U		0.0941	1.00	1	06/30/2022 22:48	WG1888472
Bromobenzene	U		0.118	1.00	1	06/30/2022 22:48	WG1888472
Bromodichloromethane	U		0.136	1.00	1	06/30/2022 22:48	WG1888472
Bromoform	U		0.129	1.00	1	06/30/2022 22:48	WG1888472
Bromomethane	U		0.605	5.00	1	06/30/2022 22:48	WG1888472
1,3-Butadiene	U		0.299	2.00	1	06/30/2022 22:48	WG1888472
n-Butylbenzene	U		0.157	1.00	1	06/30/2022 22:48	WG1888472
sec-Butylbenzene	U		0.125	1.00	1	06/30/2022 22:48	WG1888472
tert-Butylbenzene	U		0.127	1.00	1	06/30/2022 22:48	WG1888472
Carbon tetrachloride	U		0.128	1.00	1	06/30/2022 22:48	WG1888472
Carbon disulfide	U		0.0962	1.00	1	06/30/2022 22:48	WG1888472
Chlorobenzene	U		0.116	1.00	1	06/30/2022 22:48	WG1888472
Chlorodibromomethane	U		0.140	1.00	1	06/30/2022 22:48	WG1888472
Chloroethane	U	J4	0.192	5.00	1	06/30/2022 22:48	WG1888472
Chloroform	U		0.111	5.00	1	06/30/2022 22:48	WG1888472
Chloromethane	U		0.960	2.50	1	06/30/2022 22:48	WG1888472
Cyclohexane	U		0.188	1.00	1	06/30/2022 22:48	WG1888472
2-Chlorotoluene	U		0.106	1.00	1	06/30/2022 22:48	WG1888472
4-Chlorotoluene	U		0.114	1.00	1	06/30/2022 22:48	WG1888472
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	06/30/2022 22:48	WG1888472
1,2-Dibromoethane	U		0.126	1.00	1	06/30/2022 22:48	WG1888472
Dibromomethane	U		0.122	1.00	1	06/30/2022 22:48	WG1888472
1,2-Dichlorobenzene	U		0.107	1.00	1	06/30/2022 22:48	WG1888472
1,3-Dichlorobenzene	U		0.110	1.00	1	06/30/2022 22:48	WG1888472
1,4-Dichlorobenzene	U		0.120	1.00	1	06/30/2022 22:48	WG1888472
Dichlorodifluoromethane	U		0.374	5.00	1	06/30/2022 22:48	WG1888472
1,1-Dichloroethane	U		0.100	1.00	1	06/30/2022 22:48	WG1888472
1,2-Dichloroethane	U		0.0819	1.00	1	06/30/2022 22:48	WG1888472
1,1-Dichloroethene	U		0.188	1.00	1	06/30/2022 22:48	WG1888472
cis-1,2-Dichloroethene	U		0.126	1.00	1	06/30/2022 22:48	WG1888472
trans-1,2-Dichloroethene	U		0.149	1.00	1	06/30/2022 22:48	WG1888472
1,2-Dichloropropane	U		0.149	1.00	1	06/30/2022 22:48	WG1888472
1,1-Dichloropropene	U		0.142	1.00	1	06/30/2022 22:48	WG1888472
1,3-Dichloropropane	U		0.110	1.00	1	06/30/2022 22:48	WG1888472
cis-1,3-Dichloropropene	U		0.111	1.00	1	06/30/2022 22:48	WG1888472
trans-1,3-Dichloropropene	U		0.118	1.00	1	06/30/2022 22:48	WG1888472
2,2-Dichloropropane	U		0.161	1.00	1	06/30/2022 22:48	WG1888472
Dicyclopentadiene	U		0.253	1.00	1	06/30/2022 22:48	WG1888472
Di-isopropyl ether	U		0.105	1.00	1	06/30/2022 22:48	WG1888472
Ethylbenzene	U		0.137	1.00	1	06/30/2022 22:48	WG1888472
4-Ethyltoluene	U		0.208	1.00	1	06/30/2022 22:48	WG1888472
Hexachloro-1,3-butadiene	U		0.337	1.00	1	06/30/2022 22:48	WG1888472
n-Hexane	U		0.749	10.0	1	06/30/2022 22:48	WG1888472
Isopropylbenzene	U		0.105	1.00	1	06/30/2022 22:48	WG1888472
p-Isopropyltoluene	U		0.120	1.00	1	06/30/2022 22:48	WG1888472
2-Butanone (MEK)	U		1.19	10.0	1	06/30/2022 22:48	WG1888472
Methyl Cyclohexane	U		0.660	1.00	1	06/30/2022 22:48	WG1888472
Methylene Chloride	U		0.430	5.00	1	06/30/2022 22:48	WG1888472
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	06/30/2022 22:48	WG1888472
Methyl tert-butyl ether	U		0.101	1.00	1	06/30/2022 22:48	WG1888472
Naphthalene	U		1.00	5.00	1	06/30/2022 22:48	WG1888472
Propene	U		0.936	2.50	1	06/30/2022 22:48	WG1888472
n-Propylbenzene	U		0.0993	1.00	1	06/30/2022 22:48	WG1888472

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Styrene	U		0.118	1.00	1	06/30/2022 22:48	WG1888472
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	06/30/2022 22:48	WG1888472
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	06/30/2022 22:48	WG1888472
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	06/30/2022 22:48	WG1888472
Tetrachloroethene	U		0.300	1.00	1	06/30/2022 22:48	WG1888472
Toluene	U		0.278	1.00	1	06/30/2022 22:48	WG1888472
1,2,3-Trichlorobenzene	U		0.230	1.00	1	06/30/2022 22:48	WG1888472
1,2,4-Trichlorobenzene	U		0.481	1.00	1	06/30/2022 22:48	WG1888472
1,1,1-Trichloroethane	U		0.149	1.00	1	06/30/2022 22:48	WG1888472
1,1,2-Trichloroethane	U		0.158	1.00	1	06/30/2022 22:48	WG1888472
Trichloroethene	U		0.190	1.00	1	06/30/2022 22:48	WG1888472
Trichlorofluoromethane	U		0.160	5.00	1	06/30/2022 22:48	WG1888472
1,2,3-Trichloropropane	U		0.237	2.50	1	06/30/2022 22:48	WG1888472
1,2,4-Trimethylbenzene	U		0.322	1.00	1	06/30/2022 22:48	WG1888472
1,2,3-Trimethylbenzene	U		0.104	1.00	1	06/30/2022 22:48	WG1888472
1,3,5-Trimethylbenzene	U		0.104	1.00	1	06/30/2022 22:48	WG1888472
Vinyl chloride	U		0.234	1.00	1	06/30/2022 22:48	WG1888472
Xylenes, Total	U		0.174	3.00	1	06/30/2022 22:48	WG1888472
(S) Toluene-d8	108			80.0-120		06/30/2022 22:48	WG1888472
(S) 4-Bromofluorobenzene	103			77.0-126		06/30/2022 22:48	WG1888472
(S) 1,2-Dichloroethane-d4	107			70.0-130		06/30/2022 22:48	WG1888472

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

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	U		0.597	3.00	1	06/27/2022 02:33	WG1885800
(S) Toluene-d8	103			77.0-127		06/27/2022 02:33	WG1885800

Method Blank (MB)

(MB) R3810250-3 06/30/22 21:30

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		11.3	50.0
Acrolein	U		2.54	50.0
Acrylonitrile	U		0.671	10.0
Benzene	U		0.0941	1.00
Bromobenzene	U		0.118	1.00
Bromodichloromethane	U		0.136	1.00
Bromoform	U		0.129	1.00
Bromomethane	U		0.605	5.00
1,3-Butadiene	U		0.299	2.00
n-Butylbenzene	U		0.157	1.00
sec-Butylbenzene	U		0.125	1.00
tert-Butylbenzene	U		0.127	1.00
Carbon tetrachloride	U		0.128	1.00
Carbon disulfide	U		0.0962	1.00
Chlorobenzene	U		0.116	1.00
Chlorodibromomethane	U		0.140	1.00
Chloroethane	U		0.192	5.00
Chloroform	U		0.111	5.00
Chloromethane	U		0.960	2.50
Cyclohexane	U		0.188	1.00
2-Chlorotoluene	U		0.106	1.00
4-Chlorotoluene	U		0.114	1.00
1,2-Dibromo-3-Chloropropane	U		0.276	5.00
1,2-Dibromoethane	U		0.126	1.00
Dibromomethane	U		0.122	1.00
1,2-Dichlorobenzene	U		0.107	1.00
1,3-Dichlorobenzene	U		0.110	1.00
1,4-Dichlorobenzene	U		0.120	1.00
Dichlorodifluoromethane	U		0.374	5.00
1,1-Dichloroethane	U		0.100	1.00
1,2-Dichloroethane	U		0.0819	1.00
1,1-Dichloroethene	U		0.188	1.00
cis-1,2-Dichloroethene	U		0.126	1.00
trans-1,2-Dichloroethene	U		0.149	1.00
1,2-Dichloropropane	U		0.149	1.00
1,1-Dichloropropene	U		0.142	1.00
1,3-Dichloropropane	U		0.110	1.00
cis-1,3-Dichloropropene	U		0.111	1.00
trans-1,3-Dichloropropene	U		0.118	1.00
2,2-Dichloropropane	U		0.161	1.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Is

⁸Gl

⁹Al

¹⁰Sc

Method Blank (MB)

(MB) R3810250-3 06/30/22 21:30

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Dicyclopentadiene	U		0.253	1.00
Di-isopropyl ether	U		0.105	1.00
Ethylbenzene	U		0.137	1.00
4-Ethyltoluene	U		0.208	1.00
Hexachloro-1,3-butadiene	U		0.337	1.00
n-Hexane	U		0.749	10.0
Isopropylbenzene	U		0.105	1.00
p-Isopropyltoluene	U		0.120	1.00
2-Butanone (MEK)	U		1.19	10.0
Methyl Cyclohexane	U		0.660	1.00
Methylene Chloride	U		0.430	5.00
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0
Methyl tert-butyl ether	U		0.101	1.00
Naphthalene	U		1.00	5.00
Propene	U		0.936	2.50
n-Propylbenzene	U		0.0993	1.00
Styrene	U		0.118	1.00
1,1,1,2-Tetrachloroethane	U		0.147	1.00
1,1,2,2-Tetrachloroethane	U		0.133	1.00
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00
Tetrachloroethene	U		0.300	1.00
Toluene	U		0.278	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.481	1.00
1,1,1-Trichloroethane	U		0.149	1.00
1,1,2-Trichloroethane	U		0.158	1.00
Trichloroethene	U		0.190	1.00
Trichlorofluoromethane	U		0.160	5.00
1,2,3-Trichloropropane	U		0.237	2.50
1,2,4-Trimethylbenzene	U		0.322	1.00
1,2,3-Trimethylbenzene	U		0.104	1.00
1,3,5-Trimethylbenzene	U		0.104	1.00
Vinyl chloride	U		0.234	1.00
Xylenes, Total	U		0.174	3.00
(S) Toluene-d8	108			80.0-120
(S) 4-Bromofluorobenzene	98.8			77.0-126
(S) 1,2-Dichloroethane-d4	107			70.0-130

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Is

⁸Gl

⁹Al

¹⁰Sc

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

(LCS) R3810250-1 06/30/22 20:26 • (LCSD) R3810250-2 06/30/22 20:47

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD %	RPD Limits %
Acetone	25.0	25.3	25.3	101	101	19.0-160			0.000	27
Acrolein	25.0	32.7	31.5	131	126	30.0-160			3.74	26
Acrylonitrile	25.0	26.0	25.3	104	101	55.0-149			2.73	20
Benzene	5.00	5.08	4.77	102	95.4	70.0-123			6.29	20
Bromobenzene	5.00	5.44	4.96	109	99.2	73.0-121			9.23	20
Bromodichloromethane	5.00	4.57	4.49	91.4	89.8	75.0-120			1.77	20
Bromoform	5.00	3.56	3.51	71.2	70.2	68.0-132			1.41	20
Bromomethane	5.00	5.56	5.67	111	113	30.0-160			1.96	25
1,3-Butadiene	5.00	5.45	5.27	109	105	45.0-147			3.36	20
n-Butylbenzene	5.00	5.23	5.19	105	104	73.0-125			0.768	20
sec-Butylbenzene	5.00	5.29	5.21	106	104	75.0-125			1.52	20
tert-Butylbenzene	5.00	5.34	5.12	107	102	76.0-124			4.21	20
Carbon tetrachloride	5.00	5.14	4.81	103	96.2	68.0-126			6.63	20
Carbon disulfide	5.00	4.90	4.26	98.0	85.2	61.0-128			14.0	20
Chlorobenzene	5.00	5.17	4.71	103	94.2	80.0-121			9.31	20
Chlorodibromomethane	5.00	4.14	4.00	82.8	80.0	77.0-125			3.44	20
Chloroethane	5.00	7.77	7.47	155	149	47.0-150	J4		3.94	20
Chloroform	5.00	5.16	4.95	103	99.0	73.0-120			4.15	20
Chloromethane	5.00	5.06	4.73	101	94.6	41.0-142			6.74	20
Cyclohexane	5.00	5.32	4.56	106	91.2	71.0-124			15.4	20
2-Chlorotoluene	5.00	5.46	5.21	109	104	76.0-123			4.69	20
4-Chlorotoluene	5.00	5.07	4.66	101	93.2	75.0-122			8.43	20
1,2-Dibromo-3-Chloropropane	5.00	3.23	3.14	64.6	62.8	58.0-134			2.83	20
1,2-Dibromoethane	5.00	4.66	4.48	93.2	89.6	80.0-122			3.94	20
Dibromomethane	5.00	4.90	4.71	98.0	94.2	80.0-120			3.95	20
1,2-Dichlorobenzene	5.00	5.08	4.97	102	99.4	79.0-121			2.19	20
1,3-Dichlorobenzene	5.00	5.00	5.06	100	101	79.0-120			1.19	20
1,4-Dichlorobenzene	5.00	4.74	4.47	94.8	89.4	79.0-120			5.86	20
Dichlorodifluoromethane	5.00	5.11	4.59	102	91.8	51.0-149			10.7	20
1,1-Dichloroethane	5.00	5.30	4.89	106	97.8	70.0-126			8.05	20
1,2-Dichloroethane	5.00	4.95	4.76	99.0	95.2	70.0-128			3.91	20
1,1-Dichloroethene	5.00	4.85	4.39	97.0	87.8	71.0-124			9.96	20
cis-1,2-Dichloroethene	5.00	4.51	4.15	90.2	83.0	73.0-120			8.31	20
trans-1,2-Dichloroethene	5.00	4.75	4.24	95.0	84.8	73.0-120			11.3	20
1,2-Dichloropropane	5.00	4.88	4.95	97.6	99.0	77.0-125			1.42	20
1,1-Dichloropropene	5.00	5.44	5.33	109	107	74.0-126			2.04	20
1,3-Dichloropropane	5.00	4.87	4.84	97.4	96.8	80.0-120			0.618	20
cis-1,3-Dichloropropene	5.00	4.65	4.15	93.0	83.0	80.0-123			11.4	20
trans-1,3-Dichloropropene	5.00	4.35	4.28	87.0	85.6	78.0-124			1.62	20
2,2-Dichloropropane	5.00	4.35	4.08	87.0	81.6	58.0-130			6.41	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

(LCS) R3810250-1 06/30/22 20:26 • (LCSD) R3810250-2 06/30/22 20:47

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 %
Dicyclopentadiene	5.00	5.37	5.00	107	100	74.0-126			7.14	20
Di-isopropyl ether	5.00	5.17	4.83	103	96.6	58.0-138			6.80	20
Ethylbenzene	5.00	5.20	4.89	104	97.8	79.0-123			6.14	20
4-Ethyltoluene	5.00	5.46	5.30	109	106	74.0-127			2.97	20
Hexachloro-1,3-butadiene	5.00	4.57	4.59	91.4	91.8	54.0-138			0.437	20
n-Hexane	5.00	5.48	4.95	110	99.0	57.0-133			10.2	20
Isopropylbenzene	5.00	5.23	4.93	105	98.6	76.0-127			5.91	20
p-Isopropyltoluene	5.00	5.24	4.92	105	98.4	76.0-125			6.30	20
2-Butanone (MEK)	25.0	23.4	26.4	93.6	106	44.0-160			12.0	20
Methyl Cyclohexane	5.00	5.32	4.76	106	95.2	68.0-126			11.1	20
Methylene Chloride	5.00	4.89	4.42	97.8	88.4	67.0-120			10.1	20
4-Methyl-2-pentanone (MIBK)	25.0	28.4	28.1	114	112	68.0-142			1.06	20
Methyl tert-butyl ether	5.00	4.94	4.66	98.8	93.2	68.0-125			5.83	20
Naphthalene	5.00	3.82	3.91	76.4	78.2	54.0-135			2.33	20
Propene	5.00	4.28	3.67	85.6	73.4	30.0-160			15.3	20
n-Propylbenzene	5.00	5.58	5.27	112	105	77.0-124			5.71	20
Styrene	5.00	4.64	4.58	92.8	91.6	73.0-130			1.30	20
1,1,1,2-Tetrachloroethane	5.00	4.51	4.26	90.2	85.2	75.0-125			5.70	20
1,1,2,2-Tetrachloroethane	5.00	4.63	4.41	92.6	88.2	65.0-130			4.87	20
1,1,2-Trichlorotrifluoroethane	5.00	5.51	5.22	110	104	69.0-132			5.41	20
Tetrachloroethene	5.00	5.41	4.96	108	99.2	72.0-132			8.68	20
Toluene	5.00	5.29	5.13	106	103	79.0-120			3.07	20
1,2,3-Trichlorobenzene	5.00	3.77	4.01	75.4	80.2	50.0-138			6.17	20
1,2,4-Trichlorobenzene	5.00	3.86	4.21	77.2	84.2	57.0-137			8.67	20
1,1,1-Trichloroethane	5.00	5.07	4.76	101	95.2	73.0-124			6.31	20
1,1,2-Trichloroethane	5.00	4.69	4.42	93.8	88.4	80.0-120			5.93	20
Trichloroethene	5.00	5.43	4.81	109	96.2	78.0-124			12.1	20
Trichlorofluoromethane	5.00	6.69	5.56	134	111	59.0-147			18.4	20
1,2,3-Trichloropropane	5.00	4.93	4.39	98.6	87.8	73.0-130			11.6	20
1,2,4-Trimethylbenzene	5.00	5.20	4.84	104	96.8	76.0-121			7.17	20
1,2,3-Trimethylbenzene	5.00	5.00	4.56	100	91.2	77.0-120			9.21	20
1,3,5-Trimethylbenzene	5.00	5.06	4.91	101	98.2	76.0-122			3.01	20
Vinyl chloride	5.00	5.68	5.38	114	108	67.0-131			5.42	20
Xylenes, Total	15.0	15.8	14.4	105	96.0	79.0-123			9.27	20
(S) Toluene-d8				107	109	80.0-120				
(S) 4-Bromofluorobenzene				101	104	77.0-126				
(S) 1,2-Dichloroethane-d4				109	105	70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

L1507761-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1507761-01 06/30/22 22:26 • (MS) R3810250-4 07/01/22 05:31 • (MSD) R3810250-5 07/01/22 05:52

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	U	18.5	21.9	74.0	87.6	1	10.0-160			16.8	35
Acrolein	25.0	U	25.6	31.8	102	127	1	10.0-160			21.6	39
Acrylonitrile	25.0	U	20.5	23.7	82.0	94.8	1	21.0-160			14.5	32
Benzene	5.00	U	4.04	4.79	80.8	95.8	1	17.0-158			17.0	27
Bromobenzene	5.00	U	3.70	4.66	74.0	93.2	1	30.0-149			23.0	28
Bromodichloromethane	5.00	U	3.65	4.21	73.0	84.2	1	31.0-150			14.2	27
Bromoform	5.00	U	2.58	3.01	51.6	60.2	1	29.0-150			15.4	29
Bromomethane	5.00	U	4.60	4.82	92.0	96.4	1	10.0-160			4.67	38
1,3-Butadiene	5.00	U	4.76	6.14	95.2	123	1	10.0-160		J3	25.3	22
n-Butylbenzene	5.00	U	2.91	4.68	58.2	93.6	1	31.0-150		J3	46.6	30
sec-Butylbenzene	5.00	U	3.78	5.03	75.6	101	1	33.0-155			28.4	29
tert-Butylbenzene	5.00	U	3.83	4.92	76.6	98.4	1	34.0-153			24.9	28
Carbon tetrachloride	5.00	U	3.70	4.78	74.0	95.6	1	23.0-159			25.5	28
Carbon disulfide	5.00	U	3.10	3.78	62.0	75.6	1	10.0-156			19.8	28
Chlorobenzene	5.00	U	3.55	4.49	71.0	89.8	1	33.0-152			23.4	27
Chlorodibromomethane	5.00	U	2.96	3.54	59.2	70.8	1	37.0-149			17.8	27
Chloroethane	5.00	U	8.37	9.65	167	193	1	10.0-160	J5	J5	14.2	30
Chloroform	5.00	U	4.32	5.19	86.4	104	1	29.0-154			18.3	28
Chloromethane	5.00	U	4.10	4.41	82.0	88.2	1	10.0-160			7.29	29
Cyclohexane	5.00	U	3.43	4.27	68.6	85.4	1	19.0-160			21.8	23
2-Chlorotoluene	5.00	U	3.53	4.83	70.6	96.6	1	32.0-153		J3	31.1	28
4-Chlorotoluene	5.00	U	3.26	4.41	65.2	88.2	1	32.0-150		J3	30.0	28
1,2-Dibromo-3-Chloropropane	5.00	U	2.09	2.69	41.8	53.8	1	22.0-151			25.1	34
1,2-Dibromoethane	5.00	U	3.34	4.23	66.8	84.6	1	34.0-147			23.5	27
Dibromomethane	5.00	U	3.45	4.71	69.0	94.2	1	30.0-151		J3	30.9	27
1,2-Dichlorobenzene	5.00	U	3.42	4.46	68.4	89.2	1	34.0-149			26.4	28
1,3-Dichlorobenzene	5.00	U	3.11	4.38	62.2	87.6	1	36.0-146		J3	33.9	27
1,4-Dichlorobenzene	5.00	U	3.47	4.22	69.4	84.4	1	35.0-142			19.5	27
Dichlorodifluoromethane	5.00	U	3.20	4.26	64.0	85.2	1	10.0-160			28.4	29
1,1-Dichloroethane	5.00	U	3.99	4.92	79.8	98.4	1	25.0-158			20.9	27
1,2-Dichloroethane	5.00	U	3.81	4.68	76.2	93.6	1	29.0-151			20.5	27
1,1-Dichloroethene	5.00	U	3.79	4.75	75.8	95.0	1	11.0-160			22.5	29
cis-1,2-Dichloroethene	5.00	U	3.48	4.38	69.6	87.6	1	10.0-160			22.9	27
trans-1,2-Dichloroethene	5.00	U	3.29	4.30	65.8	86.0	1	17.0-153			26.6	27
1,2-Dichloropropane	5.00	U	3.79	4.67	75.8	93.4	1	30.0-156			20.8	27
1,1-Dichloropropene	5.00	U	3.83	4.94	76.6	98.8	1	25.0-158			25.3	27
1,3-Dichloropropane	5.00	U	3.76	4.48	75.2	89.6	1	38.0-147			17.5	27
cis-1,3-Dichloropropene	5.00	U	3.13	3.83	62.6	76.6	1	34.0-149			20.1	28
trans-1,3-Dichloropropene	5.00	U	2.77	3.59	55.4	71.8	1	32.0-149			25.8	28
2,2-Dichloropropane	5.00	U	3.98	4.83	79.6	96.6	1	24.0-152			19.3	29

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

L1507761-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1507761-01 06/30/22 22:26 • (MS) R3810250-4 07/01/22 05:31 • (MSD) R3810250-5 07/01/22 05:52

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 %
Dicyclopentadiene	5.00	U	3.72	4.87	74.4	97.4	1	51.0-139		J3	26.8	20
Di-isopropyl ether	5.00	U	4.14	4.91	82.8	98.2	1	21.0-160			17.0	28
Ethylbenzene	5.00	U	3.49	4.49	69.8	89.8	1	30.0-155			25.1	27
4-Ethyltoluene	5.00	U	3.41	4.64	68.2	92.8	1	10.0-160		J3	30.6	20
Hexachloro-1,3-butadiene	5.00	U	3.11	4.11	62.2	82.2	1	20.0-154			27.7	34
n-Hexane	5.00	U	2.52	3.95	50.4	79.0	1	10.0-153		J3	44.2	28
Isopropylbenzene	5.00	U	3.50	4.61	70.0	92.2	1	28.0-157		J3	27.4	27
p-Isopropyltoluene	5.00	U	3.33	4.71	66.6	94.2	1	30.0-154		J3	34.3	29
2-Butanone (MEK)	25.0	U	20.3	26.3	81.2	105	1	10.0-160			25.8	32
Methyl Cyclohexane	5.00	U	2.81	4.31	56.2	86.2	1	11.0-160		J3	42.1	24
Methylene Chloride	5.00	U	3.88	4.48	77.6	89.6	1	23.0-144			14.4	28
4-Methyl-2-pentanone (MIBK)	25.0	U	21.3	26.4	85.2	106	1	29.0-160			21.4	29
Methyl tert-butyl ether	5.00	U	3.75	4.89	75.0	97.8	1	28.0-150			26.4	29
Naphthalene	5.00	U	2.21	3.57	44.2	71.4	1	12.0-156		J3	47.1	35
Propene	5.00	U	4.04	5.38	80.8	108	1	10.0-160			28.5	29
n-Propylbenzene	5.00	U	3.44	4.79	68.8	95.8	1	31.0-154		J3	32.8	28
Styrene	5.00	U	3.06	4.00	61.2	80.0	1	33.0-155			26.6	28
1,1,1,2-Tetrachloroethane	5.00	U	3.46	4.10	69.2	82.0	1	36.0-151			16.9	29
1,1,2,2-Tetrachloroethane	5.00	U	3.73	4.53	74.6	90.6	1	33.0-150			19.4	28
1,1,2-Trichlorotrifluoroethane	5.00	U	3.58	5.40	71.6	108	1	23.0-160		J3	40.5	30
Tetrachloroethene	5.00	U	3.22	4.44	64.4	88.8	1	10.0-160		J3	31.9	27
Toluene	5.00	U	3.74	4.76	74.8	95.2	1	26.0-154			24.0	28
1,2,3-Trichlorobenzene	5.00	U	2.55	3.53	51.0	70.6	1	17.0-150			32.2	36
1,2,4-Trichlorobenzene	5.00	U	2.26	3.62	45.2	72.4	1	24.0-150		J3	46.3	33
1,1,1-Trichloroethane	5.00	U	3.88	4.89	77.6	97.8	1	23.0-160			23.0	28
1,1,2-Trichloroethane	5.00	U	3.28	4.24	65.6	84.8	1	35.0-147			25.5	27
Trichloroethene	5.00	U	3.39	4.60	67.8	92.0	1	10.0-160		J3	30.3	25
Trichlorofluoromethane	5.00	U	4.56	6.03	91.2	121	1	17.0-160			27.8	31
1,2,3-Trichloropropane	5.00	U	3.52	4.70	70.4	94.0	1	34.0-151			28.7	29
1,2,4-Trimethylbenzene	5.00	U	3.16	4.58	63.2	91.6	1	26.0-154		J3	36.7	27
1,2,3-Trimethylbenzene	5.00	U	3.33	4.36	66.6	87.2	1	32.0-149			26.8	28
1,3,5-Trimethylbenzene	5.00	U	3.22	4.60	64.4	92.0	1	28.0-153		J3	35.3	27
Vinyl chloride	5.00	U	4.16	5.19	83.2	104	1	10.0-160			22.0	27
Xylenes, Total	15.0	U	10.4	13.6	69.3	90.7	1	29.0-154			26.7	28
(S) Toluene-d8					107	104		80.0-120				
(S) 4-Bromofluorobenzene					101	99.1		77.0-126				
(S) 1,2-Dichloroethane-d4					107	107		70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

Method Blank (MB)

(MB) R3808162-3 06/26/22 23:27

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
1,4-Dioxane	U		0.597	3.00
(S) Toluene-d8	103			77.0-127

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

(LCS) R3808162-1 06/26/22 22:27 • (LCSD) R3808162-2 06/26/22 22:47

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
1,4-Dioxane	50.0	52.9	49.4	106	98.8	55.0-138			6.84	24
(S) Toluene-d8				103	103	77.0-127				

L1507761-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1507761-01 06/27/22 02:13 • (MS) R3808162-4 06/27/22 06:30 • (MSD) R3808162-5 06/27/22 06:50

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
1,4-Dioxane	50.0	U	59.4	47.1	119	94.2	1	13.0-160			23.1	31
(S) Toluene-d8					102	103		77.0-127				

L1507758-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1507758-03 06/27/22 01:53 • (MS) R3808162-6 06/27/22 07:10 • (MSD) R3808162-7 06/27/22 07:30

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
1,4-Dioxane	50.0	1.05	54.4	57.7	107	113	1	13.0-160			5.89	31
(S) Toluene-d8					103	103		77.0-127				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

INTERNAL STANDARD SUMMARY

Instrument: VOCMS21 • File ID: 0630_31

06/30/22 20:26

Sample ID	File ID	8260-FLUOROBENZENE Response	8260-CHLOROBENZENE-D5 Response	8260-1,4-DICHLOROBENZENE-D4 Response
Standard	0630_31	235093	103230	102419
Upper Limit		470186	206460	204838
Lower Limit		117547	51615	51210
LCS R3810250-1 WG1888472 1x	0630_31LCS	235093	103230	102419
LCSD R3810250-2 WG1888472 1x	0630_32	236304	100062	102184
BLANK R3810250-3 WG1888472 1x	0630_34	229322	97720	90848
L1507761-01 WG1888472 1x	0630_35	236655	98770	94925
L1507761-02 WG1888472 1x	0630_36	237169	99268	99535
MS R3810250-4 WG1888472 1x	0630_55	225878	99249	97023
MSD R3810250-5 WG1888472 1x	0630_56	232388	102587	99452

- ¹Cp
- ²Tc
- ³Ss
- ⁴Cn
- ⁵Sr
- ⁶Qc
- ⁷Is
- ⁸Gl
- ⁹Al
- ¹⁰Sc

INTERNAL STANDARD SUMMARY

Instrument: VOCMS27 • File ID: 0626_03

06/26/22 22:07

Sample ID	File ID	8260-FLUOROBENZENE Response
Standard	0626_03	1168901
Upper Limit		2337802
Lower Limit		584451
LCS R3808162-1 WG1885800 1x	0626_04	1146593
LCSD R3808162-2 WG1885800 1x	0626_05	1113153
BLANK R3808162-3 WG1885800 1x	0626_07	1289181
L1507761-01 WG1885800 1x	0626_14	1030314
L1507761-02 WG1885800 1x	0626_15	1157097
MS R3808162-4 WG1885800 1x	0626_27	975570
MSD R3808162-5 WG1885800 1x	0626_28	1187131
MS R3808162-6 WG1885800 1x	0626_29	1133302
MSD R3808162-7 WG1885800 1x	0626_30	1043802

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Is

⁸Gl

⁹Al

¹⁰Sc

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

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

Qualifier Description

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.



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	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Company Name/Address: **Pinyon Environmental**
 4815 E. Carefree Highway
 #108-274
 Cave Creek, AZ 85331

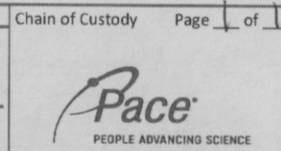
Billing Information:
 Accounts Payable
 3222 S Vance Street
 Suite 200
 Lakewood, CO 80227

Report to:
Christopher Funk

Project Description:
Nammo TTU Groundwater Monitoring

City/State Collected: _____ Please Circle: PT MT CT ET

Phone: **602-290-4774** Client Project # **722152201.002** Lab Project # **PINYONMAZ-722152201**



Chain of Custody Page 1 of 1

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>

Collected by (print): **Isabella Foster**

Collected by (signature): *[Signature]*

Immediately Packed on Ice N Y

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

Quote # **Standard**

Date Results Needed _____ No. of Cntrs _____

PERCHLORATE 125mlHDPE-NoPres	V8260AZ 40mlAmb-HCI	V8260LL14D 40mlAmb-HCI	Analysis / Container / Preservative																		

SDG # **U1507761**
E194

Acctnum: **PINYONMAZ**
 Template: **T205653**
 Prelogin: **P931176**
 PM: **288 - Daphne Richards**
 PB: _____

Shipped Via: _____

Remarks _____ Sample # (lab only) _____

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs																
PF-Z-400-20120621		GW	400	6/21/22	1235	12																
Dup-13		GW	-	↓	↓	6																
		GW																				
		GW																				
		GW																				
		GW																				
		GW																				
		GW																				
		GW																				

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

Remarks: _____

pH _____ Temp _____
 Flow _____ Other _____

Samples returned via: UPS FedEx Courier _____

Tracking # **5529 6696 9591**

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) *[Signature]* Date: **06/21/22** Time: **1509**

Received by: (Signature) _____ Trip Blank Received: Yes No

HCL / MeOH TBR

Relinquished by: (Signature) *[Signature]* Date: **06/21/22** Time: **1800**

Received by: (Signature) **FedEx** Temp: **11.04 °C** Bottles Received: **18**

If preservation required by Login: Date/Time

Relinquished by: (Signature) _____ Date: _____ Time: _____

Received for lab by: (Signature) *[Signature]* Date: **06/22/22** Time: **09:00**

Hold: _____ Condition: NCF OK

0.007



Pinyon Environmental

Sample Delivery Group: L1517593
Samples Received: 07/22/2022
Project Number: 722152201
Description: Nammo TTU Groundwater Monitoring

Report To: Jeremy Musson
4815 E. Carefree Highway
#108-274
Cave Creek, AZ 85331

Entire Report Reviewed By:



Daphne Richards
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

TABLE OF CONTENTS

Cp: Cover Page	1
Tc: Table of Contents	2
Ss: Sample Summary	3
Cn: Case Narrative	4
Sr: Sample Results	5
TTU-4-57-20220721 L1517593-01	5
TTU-9A-61-20220721 L1517593-02	7
TTU-5-110-20220721 L1517593-03	9
DUP-01 L1517593-04	11
Qc: Quality Control Summary	13
Volatile Organic Compounds (GC/MS) by Method 8260B	13
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	19
Is: Internal Standard Summary	21
Volatile Organic Compounds (GC/MS) by Method 8260B	21
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	22
Gl: Glossary of Terms	23
Al: Accreditations & Locations	24
Sc: Sample Chain of Custody	25



SAMPLE SUMMARY

TTU-4-57-20220721 L1517593-01 GW

Collected by: Ben Boesen
 Collected date/time: 07/21/22 09:56
 Received date/time: 07/22/22 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1903006	1	07/30/22 16:14	07/30/22 16:14	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1900287	1	07/25/22 19:07	07/25/22 19:07	ADM	Mt. Juliet, TN

TTU-9A-61-20220721 L1517593-02 GW

Collected by: Ben Boesen
 Collected date/time: 07/21/22 10:53
 Received date/time: 07/22/22 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1903006	1	07/30/22 16:36	07/30/22 16:36	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1899822	1	07/23/22 15:55	07/23/22 15:55	DWR	Mt. Juliet, TN

TTU-5-110-20220721 L1517593-03 GW

Collected by: Ben Boesen
 Collected date/time: 07/21/22 11:23
 Received date/time: 07/22/22 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1903006	1	07/30/22 16:57	07/30/22 16:57	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1899822	1	07/23/22 16:15	07/23/22 16:15	DWR	Mt. Juliet, TN

DUP-01 L1517593-04 GW

Collected by: Ben Boesen
 Collected date/time: 07/21/22 09:56
 Received date/time: 07/22/22 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1903006	1	07/30/22 17:19	07/30/22 17:19	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1899822	1	07/23/22 16:35	07/23/22 16:35	DWR	Mt. Juliet, TN



CASE NARRATIVE

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



Daphne Richards
Project Manager

Report Revision History

Level II Report - Version 1: 07/28/22 11:38

Project Narrative

VOCs



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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	07/30/2022 16:14	WG1903006
Acrolein	U		2.54	50.0	1	07/30/2022 16:14	WG1903006
Acrylonitrile	U		0.671	10.0	1	07/30/2022 16:14	WG1903006
Benzene	U		0.0941	1.00	1	07/30/2022 16:14	WG1903006
Bromobenzene	U		0.118	1.00	1	07/30/2022 16:14	WG1903006
Bromodichloromethane	U		0.136	1.00	1	07/30/2022 16:14	WG1903006
Bromoform	U		0.129	1.00	1	07/30/2022 16:14	WG1903006
Bromomethane	U	J3	0.605	5.00	1	07/30/2022 16:14	WG1903006
1,3-Butadiene	U		0.299	2.00	1	07/30/2022 16:14	WG1903006
n-Butylbenzene	U		0.157	1.00	1	07/30/2022 16:14	WG1903006
sec-Butylbenzene	U		0.125	1.00	1	07/30/2022 16:14	WG1903006
tert-Butylbenzene	U		0.127	1.00	1	07/30/2022 16:14	WG1903006
Carbon tetrachloride	U		0.128	1.00	1	07/30/2022 16:14	WG1903006
Carbon disulfide	U		0.0962	1.00	1	07/30/2022 16:14	WG1903006
Chlorobenzene	U		0.116	1.00	1	07/30/2022 16:14	WG1903006
Chlorodibromomethane	U		0.140	1.00	1	07/30/2022 16:14	WG1903006
Chloroethane	U		0.192	5.00	1	07/30/2022 16:14	WG1903006
Chloroform	U		0.111	5.00	1	07/30/2022 16:14	WG1903006
Chloromethane	U		0.960	2.50	1	07/30/2022 16:14	WG1903006
Cyclohexane	U		0.188	1.00	1	07/30/2022 16:14	WG1903006
2-Chlorotoluene	U		0.106	1.00	1	07/30/2022 16:14	WG1903006
4-Chlorotoluene	U		0.114	1.00	1	07/30/2022 16:14	WG1903006
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	07/30/2022 16:14	WG1903006
1,2-Dibromoethane	U		0.126	1.00	1	07/30/2022 16:14	WG1903006
Dibromomethane	U		0.122	1.00	1	07/30/2022 16:14	WG1903006
1,2-Dichlorobenzene	U		0.107	1.00	1	07/30/2022 16:14	WG1903006
1,3-Dichlorobenzene	U		0.110	1.00	1	07/30/2022 16:14	WG1903006
1,4-Dichlorobenzene	U		0.120	1.00	1	07/30/2022 16:14	WG1903006
Dichlorodifluoromethane	U		0.374	5.00	1	07/30/2022 16:14	WG1903006
1,1-Dichloroethane	U		0.100	1.00	1	07/30/2022 16:14	WG1903006
1,2-Dichloroethane	U		0.0819	1.00	1	07/30/2022 16:14	WG1903006
1,1-Dichloroethene	U		0.188	1.00	1	07/30/2022 16:14	WG1903006
cis-1,2-Dichloroethene	U		0.126	1.00	1	07/30/2022 16:14	WG1903006
trans-1,2-Dichloroethene	U		0.149	1.00	1	07/30/2022 16:14	WG1903006
1,2-Dichloropropane	U		0.149	1.00	1	07/30/2022 16:14	WG1903006
1,1-Dichloropropene	U		0.142	1.00	1	07/30/2022 16:14	WG1903006
1,3-Dichloropropane	U		0.110	1.00	1	07/30/2022 16:14	WG1903006
cis-1,3-Dichloropropene	U		0.111	1.00	1	07/30/2022 16:14	WG1903006
trans-1,3-Dichloropropene	U		0.118	1.00	1	07/30/2022 16:14	WG1903006
2,2-Dichloropropane	U		0.161	1.00	1	07/30/2022 16:14	WG1903006
Dicyclopentadiene	U		0.253	1.00	1	07/30/2022 16:14	WG1903006
Di-isopropyl ether	U		0.105	1.00	1	07/30/2022 16:14	WG1903006
Ethylbenzene	U		0.137	1.00	1	07/30/2022 16:14	WG1903006
4-Ethyltoluene	U		0.208	1.00	1	07/30/2022 16:14	WG1903006
Hexachloro-1,3-butadiene	U		0.337	1.00	1	07/30/2022 16:14	WG1903006
n-Hexane	U	J4	0.749	10.0	1	07/30/2022 16:14	WG1903006
Isopropylbenzene	U		0.105	1.00	1	07/30/2022 16:14	WG1903006
p-Isopropyltoluene	U		0.120	1.00	1	07/30/2022 16:14	WG1903006
2-Butanone (MEK)	U		1.19	10.0	1	07/30/2022 16:14	WG1903006
Methyl Cyclohexane	U		0.660	1.00	1	07/30/2022 16:14	WG1903006
Methylene Chloride	U		0.430	5.00	1	07/30/2022 16:14	WG1903006
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	07/30/2022 16:14	WG1903006
Methyl tert-butyl ether	U		0.101	1.00	1	07/30/2022 16:14	WG1903006
Naphthalene	U	J4	1.00	5.00	1	07/30/2022 16:14	WG1903006
Propene	U		0.936	2.50	1	07/30/2022 16:14	WG1903006
n-Propylbenzene	U		0.0993	1.00	1	07/30/2022 16:14	WG1903006

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Styrene	U		0.118	1.00	1	07/30/2022 16:14	WG1903006
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	07/30/2022 16:14	WG1903006
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	07/30/2022 16:14	WG1903006
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	07/30/2022 16:14	WG1903006
Tetrachloroethene	U		0.300	1.00	1	07/30/2022 16:14	WG1903006
Toluene	U		0.278	1.00	1	07/30/2022 16:14	WG1903006
1,2,3-Trichlorobenzene	U		0.230	1.00	1	07/30/2022 16:14	WG1903006
1,2,4-Trichlorobenzene	U		0.481	1.00	1	07/30/2022 16:14	WG1903006
1,1,1-Trichloroethane	U		0.149	1.00	1	07/30/2022 16:14	WG1903006
1,1,2-Trichloroethane	U		0.158	1.00	1	07/30/2022 16:14	WG1903006
Trichloroethene	U		0.190	1.00	1	07/30/2022 16:14	WG1903006
Trichlorofluoromethane	U		0.160	5.00	1	07/30/2022 16:14	WG1903006
1,2,3-Trichloropropane	U		0.237	2.50	1	07/30/2022 16:14	WG1903006
1,2,4-Trimethylbenzene	U		0.322	1.00	1	07/30/2022 16:14	WG1903006
1,2,3-Trimethylbenzene	U		0.104	1.00	1	07/30/2022 16:14	WG1903006
1,3,5-Trimethylbenzene	U		0.104	1.00	1	07/30/2022 16:14	WG1903006
Vinyl chloride	U		0.234	1.00	1	07/30/2022 16:14	WG1903006
Xylenes, Total	U		0.174	3.00	1	07/30/2022 16:14	WG1903006
(S) Toluene-d8	104			80.0-120		07/30/2022 16:14	WG1903006
(S) 4-Bromofluorobenzene	97.2			77.0-126		07/30/2022 16:14	WG1903006
(S) 1,2-Dichloroethane-d4	107			70.0-130		07/30/2022 16:14	WG1903006

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

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	U		0.597	3.00	1	07/25/2022 19:07	WG1900287
(S) Toluene-d8	100			77.0-127		07/25/2022 19:07	WG1900287

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	07/30/2022 16:36	WG1903006
Acrolein	U		2.54	50.0	1	07/30/2022 16:36	WG1903006
Acrylonitrile	U		0.671	10.0	1	07/30/2022 16:36	WG1903006
Benzene	U		0.0941	1.00	1	07/30/2022 16:36	WG1903006
Bromobenzene	U		0.118	1.00	1	07/30/2022 16:36	WG1903006
Bromodichloromethane	U		0.136	1.00	1	07/30/2022 16:36	WG1903006
Bromoform	U		0.129	1.00	1	07/30/2022 16:36	WG1903006
Bromomethane	U	J3	0.605	5.00	1	07/30/2022 16:36	WG1903006
1,3-Butadiene	U		0.299	2.00	1	07/30/2022 16:36	WG1903006
n-Butylbenzene	U		0.157	1.00	1	07/30/2022 16:36	WG1903006
sec-Butylbenzene	U		0.125	1.00	1	07/30/2022 16:36	WG1903006
tert-Butylbenzene	U		0.127	1.00	1	07/30/2022 16:36	WG1903006
Carbon tetrachloride	U		0.128	1.00	1	07/30/2022 16:36	WG1903006
Carbon disulfide	U		0.0962	1.00	1	07/30/2022 16:36	WG1903006
Chlorobenzene	U		0.116	1.00	1	07/30/2022 16:36	WG1903006
Chlorodibromomethane	U		0.140	1.00	1	07/30/2022 16:36	WG1903006
Chloroethane	U		0.192	5.00	1	07/30/2022 16:36	WG1903006
Chloroform	U		0.111	5.00	1	07/30/2022 16:36	WG1903006
Chloromethane	U		0.960	2.50	1	07/30/2022 16:36	WG1903006
Cyclohexane	U		0.188	1.00	1	07/30/2022 16:36	WG1903006
2-Chlorotoluene	U		0.106	1.00	1	07/30/2022 16:36	WG1903006
4-Chlorotoluene	U		0.114	1.00	1	07/30/2022 16:36	WG1903006
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	07/30/2022 16:36	WG1903006
1,2-Dibromoethane	U		0.126	1.00	1	07/30/2022 16:36	WG1903006
Dibromomethane	U		0.122	1.00	1	07/30/2022 16:36	WG1903006
1,2-Dichlorobenzene	U		0.107	1.00	1	07/30/2022 16:36	WG1903006
1,3-Dichlorobenzene	U		0.110	1.00	1	07/30/2022 16:36	WG1903006
1,4-Dichlorobenzene	U		0.120	1.00	1	07/30/2022 16:36	WG1903006
Dichlorodifluoromethane	U		0.374	5.00	1	07/30/2022 16:36	WG1903006
1,1-Dichloroethane	U		0.100	1.00	1	07/30/2022 16:36	WG1903006
1,2-Dichloroethane	U		0.0819	1.00	1	07/30/2022 16:36	WG1903006
1,1-Dichloroethene	U		0.188	1.00	1	07/30/2022 16:36	WG1903006
cis-1,2-Dichloroethene	U		0.126	1.00	1	07/30/2022 16:36	WG1903006
trans-1,2-Dichloroethene	U		0.149	1.00	1	07/30/2022 16:36	WG1903006
1,2-Dichloropropane	U		0.149	1.00	1	07/30/2022 16:36	WG1903006
1,1-Dichloropropene	U		0.142	1.00	1	07/30/2022 16:36	WG1903006
1,3-Dichloropropane	U		0.110	1.00	1	07/30/2022 16:36	WG1903006
cis-1,3-Dichloropropene	U		0.111	1.00	1	07/30/2022 16:36	WG1903006
trans-1,3-Dichloropropene	U		0.118	1.00	1	07/30/2022 16:36	WG1903006
2,2-Dichloropropane	U		0.161	1.00	1	07/30/2022 16:36	WG1903006
Dicyclopentadiene	U		0.253	1.00	1	07/30/2022 16:36	WG1903006
Di-isopropyl ether	U		0.105	1.00	1	07/30/2022 16:36	WG1903006
Ethylbenzene	U		0.137	1.00	1	07/30/2022 16:36	WG1903006
4-Ethyltoluene	U		0.208	1.00	1	07/30/2022 16:36	WG1903006
Hexachloro-1,3-butadiene	U		0.337	1.00	1	07/30/2022 16:36	WG1903006
n-Hexane	U	J4	0.749	10.0	1	07/30/2022 16:36	WG1903006
Isopropylbenzene	U		0.105	1.00	1	07/30/2022 16:36	WG1903006
p-Isopropyltoluene	U		0.120	1.00	1	07/30/2022 16:36	WG1903006
2-Butanone (MEK)	U		1.19	10.0	1	07/30/2022 16:36	WG1903006
Methyl Cyclohexane	U		0.660	1.00	1	07/30/2022 16:36	WG1903006
Methylene Chloride	U		0.430	5.00	1	07/30/2022 16:36	WG1903006
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	07/30/2022 16:36	WG1903006
Methyl tert-butyl ether	U		0.101	1.00	1	07/30/2022 16:36	WG1903006
Naphthalene	U	J4	1.00	5.00	1	07/30/2022 16:36	WG1903006
Propene	U		0.936	2.50	1	07/30/2022 16:36	WG1903006
n-Propylbenzene	U		0.0993	1.00	1	07/30/2022 16:36	WG1903006

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Styrene	U		0.118	1.00	1	07/30/2022 16:36	WG1903006
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	07/30/2022 16:36	WG1903006
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	07/30/2022 16:36	WG1903006
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	07/30/2022 16:36	WG1903006
Tetrachloroethene	U		0.300	1.00	1	07/30/2022 16:36	WG1903006
Toluene	U		0.278	1.00	1	07/30/2022 16:36	WG1903006
1,2,3-Trichlorobenzene	U		0.230	1.00	1	07/30/2022 16:36	WG1903006
1,2,4-Trichlorobenzene	U		0.481	1.00	1	07/30/2022 16:36	WG1903006
1,1,1-Trichloroethane	U		0.149	1.00	1	07/30/2022 16:36	WG1903006
1,1,2-Trichloroethane	U		0.158	1.00	1	07/30/2022 16:36	WG1903006
Trichloroethene	0.221	U	0.190	1.00	1	07/30/2022 16:36	WG1903006
Trichlorofluoromethane	U		0.160	5.00	1	07/30/2022 16:36	WG1903006
1,2,3-Trichloropropane	U		0.237	2.50	1	07/30/2022 16:36	WG1903006
1,2,4-Trimethylbenzene	U		0.322	1.00	1	07/30/2022 16:36	WG1903006
1,2,3-Trimethylbenzene	U		0.104	1.00	1	07/30/2022 16:36	WG1903006
1,3,5-Trimethylbenzene	U		0.104	1.00	1	07/30/2022 16:36	WG1903006
Vinyl chloride	U		0.234	1.00	1	07/30/2022 16:36	WG1903006
Xylenes, Total	U		0.174	3.00	1	07/30/2022 16:36	WG1903006
(S) Toluene-d8	102			80.0-120		07/30/2022 16:36	WG1903006
(S) 4-Bromofluorobenzene	98.9			77.0-126		07/30/2022 16:36	WG1903006
(S) 1,2-Dichloroethane-d4	104			70.0-130		07/30/2022 16:36	WG1903006

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

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	U		0.597	3.00	1	07/23/2022 15:55	WG1899822
(S) Toluene-d8	101			77.0-127		07/23/2022 15:55	WG1899822

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	07/30/2022 16:57	WG1903006
Acrolein	U		2.54	50.0	1	07/30/2022 16:57	WG1903006
Acrylonitrile	U		0.671	10.0	1	07/30/2022 16:57	WG1903006
Benzene	U		0.0941	1.00	1	07/30/2022 16:57	WG1903006
Bromobenzene	U		0.118	1.00	1	07/30/2022 16:57	WG1903006
Bromodichloromethane	U		0.136	1.00	1	07/30/2022 16:57	WG1903006
Bromoform	U		0.129	1.00	1	07/30/2022 16:57	WG1903006
Bromomethane	U	J3	0.605	5.00	1	07/30/2022 16:57	WG1903006
1,3-Butadiene	U		0.299	2.00	1	07/30/2022 16:57	WG1903006
n-Butylbenzene	U		0.157	1.00	1	07/30/2022 16:57	WG1903006
sec-Butylbenzene	U		0.125	1.00	1	07/30/2022 16:57	WG1903006
tert-Butylbenzene	U		0.127	1.00	1	07/30/2022 16:57	WG1903006
Carbon tetrachloride	U		0.128	1.00	1	07/30/2022 16:57	WG1903006
Carbon disulfide	U		0.0962	1.00	1	07/30/2022 16:57	WG1903006
Chlorobenzene	U		0.116	1.00	1	07/30/2022 16:57	WG1903006
Chlorodibromomethane	U		0.140	1.00	1	07/30/2022 16:57	WG1903006
Chloroethane	U		0.192	5.00	1	07/30/2022 16:57	WG1903006
Chloroform	U		0.111	5.00	1	07/30/2022 16:57	WG1903006
Chloromethane	U		0.960	2.50	1	07/30/2022 16:57	WG1903006
Cyclohexane	U		0.188	1.00	1	07/30/2022 16:57	WG1903006
2-Chlorotoluene	U		0.106	1.00	1	07/30/2022 16:57	WG1903006
4-Chlorotoluene	U		0.114	1.00	1	07/30/2022 16:57	WG1903006
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	07/30/2022 16:57	WG1903006
1,2-Dibromoethane	U		0.126	1.00	1	07/30/2022 16:57	WG1903006
Dibromomethane	U		0.122	1.00	1	07/30/2022 16:57	WG1903006
1,2-Dichlorobenzene	U		0.107	1.00	1	07/30/2022 16:57	WG1903006
1,3-Dichlorobenzene	U		0.110	1.00	1	07/30/2022 16:57	WG1903006
1,4-Dichlorobenzene	U		0.120	1.00	1	07/30/2022 16:57	WG1903006
Dichlorodifluoromethane	U		0.374	5.00	1	07/30/2022 16:57	WG1903006
1,1-Dichloroethane	U		0.100	1.00	1	07/30/2022 16:57	WG1903006
1,2-Dichloroethane	U		0.0819	1.00	1	07/30/2022 16:57	WG1903006
1,1-Dichloroethene	U		0.188	1.00	1	07/30/2022 16:57	WG1903006
cis-1,2-Dichloroethene	U		0.126	1.00	1	07/30/2022 16:57	WG1903006
trans-1,2-Dichloroethene	U		0.149	1.00	1	07/30/2022 16:57	WG1903006
1,2-Dichloropropane	U		0.149	1.00	1	07/30/2022 16:57	WG1903006
1,1-Dichloropropene	U		0.142	1.00	1	07/30/2022 16:57	WG1903006
1,3-Dichloropropane	U		0.110	1.00	1	07/30/2022 16:57	WG1903006
cis-1,3-Dichloropropene	U		0.111	1.00	1	07/30/2022 16:57	WG1903006
trans-1,3-Dichloropropene	U		0.118	1.00	1	07/30/2022 16:57	WG1903006
2,2-Dichloropropane	U		0.161	1.00	1	07/30/2022 16:57	WG1903006
Dicyclopentadiene	U		0.253	1.00	1	07/30/2022 16:57	WG1903006
Di-isopropyl ether	U		0.105	1.00	1	07/30/2022 16:57	WG1903006
Ethylbenzene	U		0.137	1.00	1	07/30/2022 16:57	WG1903006
4-Ethyltoluene	U		0.208	1.00	1	07/30/2022 16:57	WG1903006
Hexachloro-1,3-butadiene	U		0.337	1.00	1	07/30/2022 16:57	WG1903006
n-Hexane	U	J4	0.749	10.0	1	07/30/2022 16:57	WG1903006
Isopropylbenzene	U		0.105	1.00	1	07/30/2022 16:57	WG1903006
p-Isopropyltoluene	U		0.120	1.00	1	07/30/2022 16:57	WG1903006
2-Butanone (MEK)	U		1.19	10.0	1	07/30/2022 16:57	WG1903006
Methyl Cyclohexane	U		0.660	1.00	1	07/30/2022 16:57	WG1903006
Methylene Chloride	U		0.430	5.00	1	07/30/2022 16:57	WG1903006
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	07/30/2022 16:57	WG1903006
Methyl tert-butyl ether	U		0.101	1.00	1	07/30/2022 16:57	WG1903006
Naphthalene	U	J4	1.00	5.00	1	07/30/2022 16:57	WG1903006
Propene	U		0.936	2.50	1	07/30/2022 16:57	WG1903006
n-Propylbenzene	U		0.0993	1.00	1	07/30/2022 16:57	WG1903006

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Styrene	U		0.118	1.00	1	07/30/2022 16:57	WG1903006
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	07/30/2022 16:57	WG1903006
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	07/30/2022 16:57	WG1903006
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	07/30/2022 16:57	WG1903006
Tetrachloroethene	U		0.300	1.00	1	07/30/2022 16:57	WG1903006
Toluene	U		0.278	1.00	1	07/30/2022 16:57	WG1903006
1,2,3-Trichlorobenzene	U		0.230	1.00	1	07/30/2022 16:57	WG1903006
1,2,4-Trichlorobenzene	U		0.481	1.00	1	07/30/2022 16:57	WG1903006
1,1,1-Trichloroethane	U		0.149	1.00	1	07/30/2022 16:57	WG1903006
1,1,2-Trichloroethane	U		0.158	1.00	1	07/30/2022 16:57	WG1903006
Trichloroethene	U		0.190	1.00	1	07/30/2022 16:57	WG1903006
Trichlorofluoromethane	U		0.160	5.00	1	07/30/2022 16:57	WG1903006
1,2,3-Trichloropropane	U		0.237	2.50	1	07/30/2022 16:57	WG1903006
1,2,4-Trimethylbenzene	U		0.322	1.00	1	07/30/2022 16:57	WG1903006
1,2,3-Trimethylbenzene	U		0.104	1.00	1	07/30/2022 16:57	WG1903006
1,3,5-Trimethylbenzene	U		0.104	1.00	1	07/30/2022 16:57	WG1903006
Vinyl chloride	U		0.234	1.00	1	07/30/2022 16:57	WG1903006
Xylenes, Total	U		0.174	3.00	1	07/30/2022 16:57	WG1903006
(S) Toluene-d8	105			80.0-120		07/30/2022 16:57	WG1903006
(S) 4-Bromofluorobenzene	101			77.0-126		07/30/2022 16:57	WG1903006
(S) 1,2-Dichloroethane-d4	107			70.0-130		07/30/2022 16:57	WG1903006

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

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
1,4-Dioxane	U		0.597	3.00	1	07/23/2022 16:15	WG1899822
(S) Toluene-d8	101			77.0-127		07/23/2022 16:15	WG1899822

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

Analyte	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	07/30/2022 17:19	WG1903006
Acrolein	U		2.54	50.0	1	07/30/2022 17:19	WG1903006
Acrylonitrile	U		0.671	10.0	1	07/30/2022 17:19	WG1903006
Benzene	U		0.0941	1.00	1	07/30/2022 17:19	WG1903006
Bromobenzene	U		0.118	1.00	1	07/30/2022 17:19	WG1903006
Bromodichloromethane	U		0.136	1.00	1	07/30/2022 17:19	WG1903006
Bromoform	U		0.129	1.00	1	07/30/2022 17:19	WG1903006
Bromomethane	U	J3	0.605	5.00	1	07/30/2022 17:19	WG1903006
1,3-Butadiene	U		0.299	2.00	1	07/30/2022 17:19	WG1903006
n-Butylbenzene	U		0.157	1.00	1	07/30/2022 17:19	WG1903006
sec-Butylbenzene	U		0.125	1.00	1	07/30/2022 17:19	WG1903006
tert-Butylbenzene	U		0.127	1.00	1	07/30/2022 17:19	WG1903006
Carbon tetrachloride	U		0.128	1.00	1	07/30/2022 17:19	WG1903006
Carbon disulfide	U		0.0962	1.00	1	07/30/2022 17:19	WG1903006
Chlorobenzene	U		0.116	1.00	1	07/30/2022 17:19	WG1903006
Chlorodibromomethane	U		0.140	1.00	1	07/30/2022 17:19	WG1903006
Chloroethane	U		0.192	5.00	1	07/30/2022 17:19	WG1903006
Chloroform	U		0.111	5.00	1	07/30/2022 17:19	WG1903006
Chloromethane	U		0.960	2.50	1	07/30/2022 17:19	WG1903006
Cyclohexane	U		0.188	1.00	1	07/30/2022 17:19	WG1903006
2-Chlorotoluene	U		0.106	1.00	1	07/30/2022 17:19	WG1903006
4-Chlorotoluene	U		0.114	1.00	1	07/30/2022 17:19	WG1903006
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	07/30/2022 17:19	WG1903006
1,2-Dibromoethane	U		0.126	1.00	1	07/30/2022 17:19	WG1903006
Dibromomethane	U		0.122	1.00	1	07/30/2022 17:19	WG1903006
1,2-Dichlorobenzene	U		0.107	1.00	1	07/30/2022 17:19	WG1903006
1,3-Dichlorobenzene	U		0.110	1.00	1	07/30/2022 17:19	WG1903006
1,4-Dichlorobenzene	U		0.120	1.00	1	07/30/2022 17:19	WG1903006
Dichlorodifluoromethane	U		0.374	5.00	1	07/30/2022 17:19	WG1903006
1,1-Dichloroethane	U		0.100	1.00	1	07/30/2022 17:19	WG1903006
1,2-Dichloroethane	U		0.0819	1.00	1	07/30/2022 17:19	WG1903006
1,1-Dichloroethene	U		0.188	1.00	1	07/30/2022 17:19	WG1903006
cis-1,2-Dichloroethene	U		0.126	1.00	1	07/30/2022 17:19	WG1903006
trans-1,2-Dichloroethene	U		0.149	1.00	1	07/30/2022 17:19	WG1903006
1,2-Dichloropropane	U		0.149	1.00	1	07/30/2022 17:19	WG1903006
1,1-Dichloropropene	U		0.142	1.00	1	07/30/2022 17:19	WG1903006
1,3-Dichloropropane	U		0.110	1.00	1	07/30/2022 17:19	WG1903006
cis-1,3-Dichloropropene	U		0.111	1.00	1	07/30/2022 17:19	WG1903006
trans-1,3-Dichloropropene	U		0.118	1.00	1	07/30/2022 17:19	WG1903006
2,2-Dichloropropane	U		0.161	1.00	1	07/30/2022 17:19	WG1903006
Dicyclopentadiene	U		0.253	1.00	1	07/30/2022 17:19	WG1903006
Di-isopropyl ether	U		0.105	1.00	1	07/30/2022 17:19	WG1903006
Ethylbenzene	U		0.137	1.00	1	07/30/2022 17:19	WG1903006
4-Ethyltoluene	U		0.208	1.00	1	07/30/2022 17:19	WG1903006
Hexachloro-1,3-butadiene	U		0.337	1.00	1	07/30/2022 17:19	WG1903006
n-Hexane	U	J4	0.749	10.0	1	07/30/2022 17:19	WG1903006
Isopropylbenzene	U		0.105	1.00	1	07/30/2022 17:19	WG1903006
p-Isopropyltoluene	U		0.120	1.00	1	07/30/2022 17:19	WG1903006
2-Butanone (MEK)	U		1.19	10.0	1	07/30/2022 17:19	WG1903006
Methyl Cyclohexane	U		0.660	1.00	1	07/30/2022 17:19	WG1903006
Methylene Chloride	U		0.430	5.00	1	07/30/2022 17:19	WG1903006
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	07/30/2022 17:19	WG1903006
Methyl tert-butyl ether	U		0.101	1.00	1	07/30/2022 17:19	WG1903006
Naphthalene	U	J4	1.00	5.00	1	07/30/2022 17:19	WG1903006
Propene	U		0.936	2.50	1	07/30/2022 17:19	WG1903006
n-Propylbenzene	U		0.0993	1.00	1	07/30/2022 17:19	WG1903006

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Styrene	U		0.118	1.00	1	07/30/2022 17:19	WG1903006
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	07/30/2022 17:19	WG1903006
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	07/30/2022 17:19	WG1903006
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	07/30/2022 17:19	WG1903006
Tetrachloroethene	U		0.300	1.00	1	07/30/2022 17:19	WG1903006
Toluene	U		0.278	1.00	1	07/30/2022 17:19	WG1903006
1,2,3-Trichlorobenzene	U		0.230	1.00	1	07/30/2022 17:19	WG1903006
1,2,4-Trichlorobenzene	U		0.481	1.00	1	07/30/2022 17:19	WG1903006
1,1,1-Trichloroethane	U		0.149	1.00	1	07/30/2022 17:19	WG1903006
1,1,2-Trichloroethane	U		0.158	1.00	1	07/30/2022 17:19	WG1903006
Trichloroethene	U		0.190	1.00	1	07/30/2022 17:19	WG1903006
Trichlorofluoromethane	U		0.160	5.00	1	07/30/2022 17:19	WG1903006
1,2,3-Trichloropropane	U		0.237	2.50	1	07/30/2022 17:19	WG1903006
1,2,4-Trimethylbenzene	U		0.322	1.00	1	07/30/2022 17:19	WG1903006
1,2,3-Trimethylbenzene	U		0.104	1.00	1	07/30/2022 17:19	WG1903006
1,3,5-Trimethylbenzene	U		0.104	1.00	1	07/30/2022 17:19	WG1903006
Vinyl chloride	U		0.234	1.00	1	07/30/2022 17:19	WG1903006
Xylenes, Total	U		0.174	3.00	1	07/30/2022 17:19	WG1903006
(S) Toluene-d8	102			80.0-120		07/30/2022 17:19	WG1903006
(S) 4-Bromofluorobenzene	97.9			77.0-126		07/30/2022 17:19	WG1903006
(S) 1,2-Dichloroethane-d4	108			70.0-130		07/30/2022 17:19	WG1903006

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

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
1,4-Dioxane	U		0.597	3.00	1	07/23/2022 16:35	WG1899822
(S) Toluene-d8	101			77.0-127		07/23/2022 16:35	WG1899822

Method Blank (MB)

(MB) R3821294-3 07/30/22 14:10

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Acetone	U		11.3	50.0
Acrolein	U		2.54	50.0
Acrylonitrile	U		0.671	10.0
Benzene	U		0.0941	1.00
Bromobenzene	U		0.118	1.00
Bromodichloromethane	U		0.136	1.00
Bromoform	U		0.129	1.00
Bromomethane	U		0.605	5.00
1,3-Butadiene	U		0.299	2.00
n-Butylbenzene	U		0.157	1.00
sec-Butylbenzene	U		0.125	1.00
tert-Butylbenzene	U		0.127	1.00
Carbon tetrachloride	U		0.128	1.00
Carbon disulfide	U		0.0962	1.00
Chlorobenzene	U		0.116	1.00
Chlorodibromomethane	U		0.140	1.00
Chloroethane	U		0.192	5.00
Chloroform	U		0.111	5.00
Chloromethane	U		0.960	2.50
Cyclohexane	U		0.188	1.00
2-Chlorotoluene	U		0.106	1.00
4-Chlorotoluene	U		0.114	1.00
1,2-Dibromo-3-Chloropropane	U		0.276	5.00
1,2-Dibromoethane	U		0.126	1.00
Dibromomethane	U		0.122	1.00
1,2-Dichlorobenzene	U		0.107	1.00
1,3-Dichlorobenzene	U		0.110	1.00
1,4-Dichlorobenzene	U		0.120	1.00
Dichlorodifluoromethane	U		0.374	5.00
1,1-Dichloroethane	U		0.100	1.00
1,2-Dichloroethane	U		0.0819	1.00
1,1-Dichloroethene	U		0.188	1.00
cis-1,2-Dichloroethene	U		0.126	1.00
trans-1,2-Dichloroethene	U		0.149	1.00
1,2-Dichloropropane	U		0.149	1.00
1,1-Dichloropropene	U		0.142	1.00
1,3-Dichloropropane	U		0.110	1.00
cis-1,3-Dichloropropene	U		0.111	1.00
trans-1,3-Dichloropropene	U		0.118	1.00
2,2-Dichloropropane	U		0.161	1.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Is

⁸Gl

⁹Al

¹⁰Sc

Method Blank (MB)

(MB) R3821294-3 07/30/22 14:10

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Dicyclopentadiene	U		0.253	1.00
Di-isopropyl ether	U		0.105	1.00
Ethylbenzene	U		0.137	1.00
4-Ethyltoluene	U		0.208	1.00
Hexachloro-1,3-butadiene	U		0.337	1.00
n-Hexane	U		0.749	10.0
Isopropylbenzene	U		0.105	1.00
p-Isopropyltoluene	U		0.120	1.00
2-Butanone (MEK)	U		1.19	10.0
Methyl Cyclohexane	U		0.660	1.00
Methylene Chloride	U		0.430	5.00
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0
Methyl tert-butyl ether	U		0.101	1.00
Naphthalene	U		1.00	5.00
Propene	U		0.936	2.50
n-Propylbenzene	U		0.0993	1.00
Styrene	U		0.118	1.00
1,1,1,2-Tetrachloroethane	U		0.147	1.00
1,1,2,2-Tetrachloroethane	U		0.133	1.00
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00
Tetrachloroethene	U		0.300	1.00
Toluene	U		0.278	1.00
1,2,3-Trichlorobenzene	U		0.230	1.00
1,2,4-Trichlorobenzene	U		0.481	1.00
1,1,1-Trichloroethane	U		0.149	1.00
1,1,2-Trichloroethane	U		0.158	1.00
Trichloroethene	U		0.190	1.00
Trichlorofluoromethane	U		0.160	5.00
1,2,3-Trichloropropane	U		0.237	2.50
1,2,4-Trimethylbenzene	U		0.322	1.00
1,2,3-Trimethylbenzene	U		0.104	1.00
1,3,5-Trimethylbenzene	U		0.104	1.00
Vinyl chloride	U		0.234	1.00
Xylenes, Total	U		0.174	3.00
(S) Toluene-d8	104			80.0-120
(S) 4-Bromofluorobenzene	98.6			77.0-126
(S) 1,2-Dichloroethane-d4	102			70.0-130

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Is

⁸Gl

⁹Al

¹⁰Sc

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

(LCS) R3821294-1 07/30/22 13:04 • (LCSD) R3821294-2 07/30/22 13:26

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	34.8	35.4	139	142	19.0-160			1.71	27
Acrolein	25.0	35.4	36.3	142	145	30.0-160			2.51	26
Acrylonitrile	25.0	30.5	30.6	122	122	55.0-149			0.327	20
Benzene	5.00	4.68	4.88	93.6	97.6	70.0-123			4.18	20
Bromobenzene	5.00	4.22	4.43	84.4	88.6	73.0-121			4.86	20
Bromodichloromethane	5.00	4.30	4.50	86.0	90.0	75.0-120			4.55	20
Bromoform	5.00	4.02	3.98	80.4	79.6	68.0-132			1.00	20
Bromomethane	5.00	1.80	2.35	36.0	47.0	30.0-160		J3	26.5	25
1,3-Butadiene	5.00	6.33	6.23	127	125	45.0-147			1.59	20
n-Butylbenzene	5.00	3.75	3.88	75.0	77.6	73.0-125			3.41	20
sec-Butylbenzene	5.00	3.98	4.13	79.6	82.6	75.0-125			3.70	20
tert-Butylbenzene	5.00	3.91	3.91	78.2	78.2	76.0-124			0.000	20
Carbon tetrachloride	5.00	4.62	4.70	92.4	94.0	68.0-126			1.72	20
Carbon disulfide	5.00	4.93	5.02	98.6	100	61.0-128			1.81	20
Chlorobenzene	5.00	4.65	4.67	93.0	93.4	80.0-121			0.429	20
Chlorodibromomethane	5.00	4.46	4.31	89.2	86.2	77.0-125			3.42	20
Chloroethane	5.00	4.61	4.58	92.2	91.6	47.0-150			0.653	20
Chloroform	5.00	4.55	4.64	91.0	92.8	73.0-120			1.96	20
Chloromethane	5.00	3.10	3.12	62.0	62.4	41.0-142			0.643	20
Cyclohexane	5.00	4.30	4.58	86.0	91.6	71.0-124			6.31	20
2-Chlorotoluene	5.00	4.27	4.40	85.4	88.0	76.0-123			3.00	20
4-Chlorotoluene	5.00	4.07	4.11	81.4	82.2	75.0-122			0.978	20
1,2-Dibromo-3-Chloropropane	5.00	3.41	3.32	68.2	66.4	58.0-134			2.67	20
1,2-Dibromoethane	5.00	4.71	4.46	94.2	89.2	80.0-122			5.45	20
Dibromomethane	5.00	4.71	4.90	94.2	98.0	80.0-120			3.95	20
1,2-Dichlorobenzene	5.00	4.18	4.32	83.6	86.4	79.0-121			3.29	20
1,3-Dichlorobenzene	5.00	4.27	4.27	85.4	85.4	79.0-120			0.000	20
1,4-Dichlorobenzene	5.00	4.26	4.14	85.2	82.8	79.0-120			2.86	20
Dichlorodifluoromethane	5.00	5.02	4.96	100	99.2	51.0-149			1.20	20
1,1-Dichloroethane	5.00	5.07	5.28	101	106	70.0-126			4.06	20
1,2-Dichloroethane	5.00	5.30	5.32	106	106	70.0-128			0.377	20
1,1-Dichloroethene	5.00	4.69	4.21	93.8	84.2	71.0-124			10.8	20
cis-1,2-Dichloroethene	5.00	4.53	4.68	90.6	93.6	73.0-120			3.26	20
trans-1,2-Dichloroethene	5.00	4.75	4.64	95.0	92.8	73.0-120			2.34	20
1,2-Dichloropropane	5.00	5.23	5.46	105	109	77.0-125			4.30	20
1,1-Dichloropropene	5.00	4.75	4.76	95.0	95.2	74.0-126			0.210	20
1,3-Dichloropropane	5.00	4.42	4.62	88.4	92.4	80.0-120			4.42	20
cis-1,3-Dichloropropene	5.00	4.45	4.52	89.0	90.4	80.0-123			1.56	20
trans-1,3-Dichloropropene	5.00	4.26	4.20	85.2	84.0	78.0-124			1.42	20
2,2-Dichloropropane	5.00	4.33	4.37	86.6	87.4	58.0-130			0.920	20

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Is

⁸ Gl

⁹ Al

¹⁰ Sc

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

(LCS) R3821294-1 07/30/22 13:04 • (LCSD) R3821294-2 07/30/22 13:26

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 %
Dicyclopentadiene	5.00	4.23	4.31	84.6	86.2	74.0-126			1.87	20
Di-isopropyl ether	5.00	6.18	6.10	124	122	58.0-138			1.30	20
Ethylbenzene	5.00	4.31	4.41	86.2	88.2	79.0-123			2.29	20
4-Ethyltoluene	5.00	4.20	4.08	84.0	81.6	74.0-127			2.90	20
Hexachloro-1,3-butadiene	5.00	2.96	3.13	59.2	62.6	54.0-138			5.58	20
n-Hexane	5.00	6.89	6.64	138	133	57.0-133	J4		3.70	20
Isopropylbenzene	5.00	4.17	4.21	83.4	84.2	76.0-127			0.955	20
p-Isopropyltoluene	5.00	4.03	4.23	80.6	84.6	76.0-125			4.84	20
2-Butanone (MEK)	25.0	31.9	33.0	128	132	44.0-160			3.39	20
Methyl Cyclohexane	5.00	4.38	4.29	87.6	85.8	68.0-126			2.08	20
Methylene Chloride	5.00	5.12	5.06	102	101	67.0-120			1.18	20
4-Methyl-2-pentanone (MIBK)	25.0	28.5	28.4	114	114	68.0-142			0.351	20
Methyl tert-butyl ether	5.00	4.46	4.53	89.2	90.6	68.0-125			1.56	20
Naphthalene	5.00	2.26	2.45	45.2	49.0	54.0-135	J4	J4	8.07	20
Propene	5.00	6.35	6.44	127	129	30.0-160			1.41	20
n-Propylbenzene	5.00	4.08	4.30	81.6	86.0	77.0-124			5.25	20
Styrene	5.00	4.31	4.27	86.2	85.4	73.0-130			0.932	20
1,1,1,2-Tetrachloroethane	5.00	4.46	4.39	89.2	87.8	75.0-125			1.58	20
1,1,2,2-Tetrachloroethane	5.00	4.18	4.40	83.6	88.0	65.0-130			5.13	20
1,1,2-Trichlorotrifluoroethane	5.00	4.71	4.76	94.2	95.2	69.0-132			1.06	20
Tetrachloroethene	5.00	4.39	4.47	87.8	89.4	72.0-132			1.81	20
Toluene	5.00	4.38	4.57	87.6	91.4	79.0-120			4.25	20
1,2,3-Trichlorobenzene	5.00	2.78	2.88	55.6	57.6	50.0-138			3.53	20
1,2,4-Trichlorobenzene	5.00	3.20	3.16	64.0	63.2	57.0-137			1.26	20
1,1,1-Trichloroethane	5.00	4.71	4.63	94.2	92.6	73.0-124			1.71	20
1,1,2-Trichloroethane	5.00	4.31	4.39	86.2	87.8	80.0-120			1.84	20
Trichloroethene	5.00	4.76	4.70	95.2	94.0	78.0-124			1.27	20
Trichlorofluoromethane	5.00	4.89	4.78	97.8	95.6	59.0-147			2.28	20
1,2,3-Trichloropropane	5.00	4.44	4.61	88.8	92.2	73.0-130			3.76	20
1,2,4-Trimethylbenzene	5.00	3.92	4.17	78.4	83.4	76.0-121			6.18	20
1,2,3-Trimethylbenzene	5.00	4.02	4.07	80.4	81.4	77.0-120			1.24	20
1,3,5-Trimethylbenzene	5.00	4.03	4.09	80.6	81.8	76.0-122			1.48	20
Vinyl chloride	5.00	4.94	5.01	98.8	100	67.0-131			1.41	20
Xylenes, Total	15.0	13.0	13.1	86.7	87.3	79.0-123			0.766	20
(S) Toluene-d8				103	102	80.0-120				
(S) 4-Bromofluorobenzene				101	98.6	77.0-126				
(S) 1,2-Dichloroethane-d4				103	104	70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

L1517591-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1517591-01 07/30/22 15:30 • (MS) R3821294-4 07/30/22 22:46 • (MSD) R3821294-5 07/30/22 23:07

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	19.1	62.4	59.6	173	162	1	10.0-160	J5	J5	4.59	35
Acrolein	25.0	U	51.0	52.1	204	208	1	10.0-160	J5	J5	2.13	39
Acrylonitrile	25.0	U	43.7	44.7	175	179	1	21.0-160	J5	J5	2.26	32
Benzene	5.00	U	6.83	7.01	137	140	1	17.0-158			2.60	27
Bromobenzene	5.00	U	5.91	6.46	118	129	1	30.0-149			8.89	28
Bromodichloromethane	5.00	U	6.36	6.52	127	130	1	31.0-150			2.48	27
Bromoform	5.00	U	5.35	5.93	107	119	1	29.0-150			10.3	29
Bromomethane	5.00	U	3.04	3.43	60.8	68.6	1	10.0-160			12.1	38
1,3-Butadiene	5.00	U	9.20	9.62	184	192	1	10.0-160	J5	J5	4.46	22
n-Butylbenzene	5.00	U	5.02	5.18	100	104	1	31.0-150			3.14	30
sec-Butylbenzene	5.00	U	5.53	5.88	111	118	1	33.0-155			6.13	29
tert-Butylbenzene	5.00	U	5.51	5.87	110	117	1	34.0-153			6.33	28
Carbon tetrachloride	5.00	U	7.43	7.64	149	153	1	23.0-159			2.79	28
Carbon disulfide	5.00	U	6.62	6.89	132	138	1	10.0-156			4.00	28
Chlorobenzene	5.00	U	6.50	7.24	130	145	1	33.0-152			10.8	27
Chlorodibromomethane	5.00	U	6.36	6.75	127	135	1	37.0-149			5.95	27
Chloroethane	5.00	U	6.79	6.60	136	132	1	10.0-160			2.84	30
Chloroform	5.00	0.194	7.01	7.30	136	142	1	29.0-154			4.05	28
Chloromethane	5.00	U	4.20	4.46	84.0	89.2	1	10.0-160			6.00	29
Cyclohexane	5.00	U	6.90	7.16	138	143	1	19.0-160			3.70	23
2-Chlorotoluene	5.00	U	6.34	6.51	127	130	1	32.0-153			2.65	28
4-Chlorotoluene	5.00	U	5.71	5.98	114	120	1	32.0-150			4.62	28
1,2-Dibromo-3-Chloropropane	5.00	U	4.69	5.22	93.8	104	1	22.0-151			10.7	34
1,2-Dibromoethane	5.00	U	6.22	6.60	124	132	1	34.0-147			5.93	27
Dibromomethane	5.00	U	6.39	6.81	128	136	1	30.0-151			6.36	27
1,2-Dichlorobenzene	5.00	U	5.67	6.16	113	123	1	34.0-149			8.28	28
1,3-Dichlorobenzene	5.00	U	5.68	6.28	114	126	1	36.0-146			10.0	27
1,4-Dichlorobenzene	5.00	U	5.91	5.89	118	118	1	35.0-142			0.339	27
Dichlorodifluoromethane	5.00	U	6.86	6.86	137	137	1	10.0-160			0.000	29
1,1-Dichloroethane	5.00	U	7.14	7.76	143	155	1	25.0-158			8.32	27
1,2-Dichloroethane	5.00	U	7.17	7.54	143	151	1	29.0-151			5.03	27
1,1-Dichloroethene	5.00	0.761	7.82	8.33	141	151	1	11.0-160			6.32	29
cis-1,2-Dichloroethene	5.00	U	6.47	6.78	129	136	1	10.0-160			4.68	27
trans-1,2-Dichloroethene	5.00	U	6.57	6.71	131	134	1	17.0-153			2.11	27
1,2-Dichloropropane	5.00	U	7.53	7.84	151	157	1	30.0-156		J5	4.03	27
1,1-Dichloropropene	5.00	U	7.00	7.45	140	149	1	25.0-158			6.23	27
1,3-Dichloropropane	5.00	U	6.59	6.72	132	134	1	38.0-147			1.95	27
cis-1,3-Dichloropropene	5.00	U	5.57	6.15	111	123	1	34.0-149			9.90	28
trans-1,3-Dichloropropene	5.00	U	5.58	6.20	112	124	1	32.0-149			10.5	28
2,2-Dichloropropane	5.00	U	5.25	5.27	105	105	1	24.0-152			0.380	29

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

L1517591-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1517591-01 07/30/22 15:30 • (MS) R3821294-4 07/30/22 22:46 • (MSD) R3821294-5 07/30/22 23:07

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 %
Dicyclopentadiene	5.00	U	5.91	6.16	118	123	1	51.0-139			4.14	20
Di-isopropyl ether	5.00	U	8.84	9.20	177	184	1	21.0-160	J5	J5	3.99	28
Ethylbenzene	5.00	U	6.50	6.47	130	129	1	30.0-155			0.463	27
4-Ethyltoluene	5.00	U	5.54	5.95	111	119	1	10.0-160			7.14	20
Hexachloro-1,3-butadiene	5.00	U	3.70	3.65	74.0	73.0	1	20.0-154			1.36	34
n-Hexane	5.00	U	8.05	7.92	161	158	1	10.0-153	J5	J5	1.63	28
Isopropylbenzene	5.00	U	5.99	6.64	120	133	1	28.0-157			10.3	27
p-Isopropyltoluene	5.00	U	5.38	5.86	108	117	1	30.0-154			8.54	29
2-Butanone (MEK)	25.0	U	46.7	45.9	187	184	1	10.0-160	J5	J5	1.73	32
Methyl Cyclohexane	5.00	U	6.00	6.17	120	123	1	11.0-160			2.79	24
Methylene Chloride	5.00	U	6.99	7.11	140	142	1	23.0-144			1.70	28
4-Methyl-2-pentanone (MIBK)	25.0	U	42.2	44.9	169	180	1	29.0-160	J5	J5	6.20	29
Methyl tert-butyl ether	5.00	U	6.20	6.51	124	130	1	28.0-150			4.88	29
Naphthalene	5.00	U	3.08	3.47	61.6	69.4	1	12.0-156			11.9	35
Propene	5.00	U	10.7	10.7	214	214	1	10.0-160	J5	J5	0.000	29
n-Propylbenzene	5.00	U	6.03	6.26	121	125	1	31.0-154			3.74	28
Styrene	5.00	U	6.08	6.40	122	128	1	33.0-155			5.13	28
1,1,1,2-Tetrachloroethane	5.00	U	6.32	6.86	126	137	1	36.0-151			8.19	29
1,1,2,2-Tetrachloroethane	5.00	U	6.04	6.59	121	132	1	33.0-150			8.71	28
1,1,2-Trichlorotrifluoroethane	5.00	U	7.13	7.06	143	141	1	23.0-160			0.987	30
Tetrachloroethene	5.00	U	6.41	6.86	128	137	1	10.0-160			6.78	27
Toluene	5.00	U	6.33	6.90	127	138	1	26.0-154			8.62	28
1,2,3-Trichlorobenzene	5.00	U	3.53	4.00	70.6	80.0	1	17.0-150			12.5	36
1,2,4-Trichlorobenzene	5.00	U	3.90	4.20	78.0	84.0	1	24.0-150			7.41	33
1,1,1-Trichloroethane	5.00	U	6.86	7.37	137	147	1	23.0-160			7.17	28
1,1,2-Trichloroethane	5.00	U	6.27	6.72	125	134	1	35.0-147			6.93	27
Trichloroethene	5.00	3.60	10.2	10.9	132	146	1	10.0-160			6.64	25
Trichlorofluoromethane	5.00	U	7.50	8.25	150	165	1	17.0-160		J5	9.52	31
1,2,3-Trichloropropane	5.00	U	6.31	6.45	126	129	1	34.0-151			2.19	29
1,2,4-Trimethylbenzene	5.00	U	5.73	5.97	115	119	1	26.0-154			4.10	27
1,2,3-Trimethylbenzene	5.00	U	5.45	5.84	109	117	1	32.0-149			6.91	28
1,3,5-Trimethylbenzene	5.00	U	5.68	5.99	114	120	1	28.0-153			5.31	27
Vinyl chloride	5.00	U	7.30	7.33	146	147	1	10.0-160			0.410	27
Xylenes, Total	15.0	U	19.0	20.4	127	136	1	29.0-154			7.11	28
(S) Toluene-d8					102	104		80.0-120				
(S) 4-Bromofluorobenzene					98.2	98.6		77.0-126				
(S) 1,2-Dichloroethane-d4					104	102		70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

Method Blank (MB)

(MB) R3818660-3 07/23/22 12:16

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
1,4-Dioxane	U		0.597	3.00
(S) Toluene-d8	101			77.0-127

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

(LCS) R3818660-1 07/23/22 10:05 • (LCSD) R3818660-2 07/23/22 10:25

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
1,4-Dioxane	50.0	49.7	45.3	99.4	90.6	55.0-138			9.26	24
(S) Toluene-d8				103	103	77.0-127				

L1517593-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1517593-02 07/23/22 15:55 • (MS) R3818660-4 07/23/22 21:14 • (MSD) R3818660-5 07/23/22 21:33

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
1,4-Dioxane	50.0	U	37.0	41.0	74.0	82.0	1	13.0-160			10.3	31
(S) Toluene-d8					100	100		77.0-127				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

Method Blank (MB)

(MB) R3819999-3 07/25/22 11:23

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
1,4-Dioxane	U		0.597	3.00
(S) Toluene-d8	100			77.0-127

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

(LCS) R3819999-1 07/25/22 09:24 • (LCSD) R3819999-2 07/25/22 09:44

Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
1,4-Dioxane	50.0	51.0	42.6	102	85.2	55.0-138			17.9	24
(S) Toluene-d8				101	101	77.0-127				

L1517591-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1517591-01 07/25/22 18:27 • (MS) R3819999-4 07/25/22 19:27 • (MSD) R3819999-5 07/25/22 19:47

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
1,4-Dioxane	50.0	U	50.6	46.9	101	93.8	1	13.0-160			7.59	31
(S) Toluene-d8					101	100		77.0-127				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Is

8 Gl

9 Al

10 Sc

INTERNAL STANDARD SUMMARY

Instrument: VOCMS30 • File ID: 0730_03

07/30/22 13:04

Sample ID	File ID	8260-FLUOROBENZENE Response	8260-CHLOROBENZENE-D5 Response	8260-1,4-DICHLOROBENZENE-D4 Response
Standard	0730_03	271177	116512	113306
Upper Limit		542354	233024	226612
Lower Limit		135589	58256	56653
LCS R3821294-1 WG1903006 1x	0730_03LCS	271177	116512	113306
LCSD R3821294-2 WG1903006 1x	0730_04	269493	116236	112319
BLANK R3821294-3 WG1903006 1x	0730_06	274210	113574	109236
L1517593-01 WG1903006 1x	0730_10	263661	110327	103279
L1517593-02 WG1903006 1x	0730_11	259233	111911	105013
L1517593-03 WG1903006 1x	0730_12	249345	104924	100522
L1517593-04 WG1903006 1x	0730_13	251978	109506	100006
MS R3821294-4 WG1903006 1x	0730_28	257730	110285	105410
MSD R3821294-5 WG1903006 1x	0730_29	258599	108312	105537

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Is

⁸ Gl

⁹ Al

¹⁰ Sc

INTERNAL STANDARD SUMMARY

Instrument: VOCMS27 • File ID: 0723_03

07/23/22 09:45

Sample ID	File ID	8260-FLUOROBENZENE Response
Standard	0723_03	1203243
Upper Limit		2406486
Lower Limit		601622
LCS R3818660-1 WG1899822 1x	0723_04A	1117094
LCSD R3818660-2 WG1899822 1x	0723_05A	1075582
BLANK R3818660-3 WG1899822 1x	0723_07	928526
L1517593-02 WG1899822 1x	0723_18	967552
L1517593-03 WG1899822 1x	0723_19	1263674
L1517593-04 WG1899822 1x	0723_20	1071566
MS R3818660-4 WG1899822 1x	0723_34	1215310
MSD R3818660-5 WG1899822 1x	0723_35	1203017

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Is

⁸ Gl

⁹ Al

¹⁰ Sc

Instrument: VOCMS27 • File ID: 0724_43

07/25/22 09:04

Sample ID	File ID	8260-FLUOROBENZENE Response
Standard	0724_43	1263144
Upper Limit		2526288
Lower Limit		631572
LCS R3819999-1 WG1900287 1x	0724_44	1125285
LCSD R3819999-2 WG1900287 1x	0724_45	1329187
BLANK R3819999-3 WG1900287 1x	0724_47	1014104
L1517593-01 WG1900287 1x	0724_66	1040803
MS R3819999-4 WG1900287 1x	0724_67	1112571
MSD R3819999-5 WG1900287 1x	0724_68	1205016

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

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

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J4	The associated batch QC was outside the established quality control range for accuracy.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.



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	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.



Pinyon Environmental
 4815 E. Carefree Highway
 #108-274
 Cave Creek, AZ 85831

Billing Information:
 Accounts Payable
 3011 S Vance Street
 Suite 200
 Lakewood, CO 80227

Report to:
Jeremy Musson

Email To:
musson@pinyon-env.com

Project Description:
Nawaho TTU Groundwater Monitoring

City/State Collected: **Mesa, AZ**
 Please Circle: PT MT CT ET

Phone:
602-240-4774

Client Project #
722152201

Lab Project #
PINYONMAZ-722152201

Collected by (print):
Ben Boesen

Site/Facility ID #

P.O. #

Collected by (signature):

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

Quote #
 Date Results Needed

Immediately Packed on Ice N Y

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	Analysis / Container / Preservative	Chain of Custody
TTU-4-57-20220721		GW	57	7/21/22	0956	3		
TTU-9a-61-20220721		GW	61	7/21/22	1053	6		
TTU-5-110-20220721		GW	110	7/21/22	1123	3		
DUP-01		GW	57	7/21/22	0956	3		

V876DL14D 40ml-Amb-HCl

Page ___ of ___

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

SDG # **L1517593**
L-166

Acctnum:
 Template:
 Prelogin:
 PM:
 PB:
 Shipped Via:
 Remarks Sample # (lab only)

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

Remarks:
 Samples returned via:
 UPS FedEx Courier

Tracking #
 pH _____ Temp _____
 Flow _____ Other _____

Sample Receipt Checklist
 COC Seal Present/Intact: 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: **7/21/22** Time: **1245**

Received by: (Signature)

 Date: **07/21/22** Time: **1800**

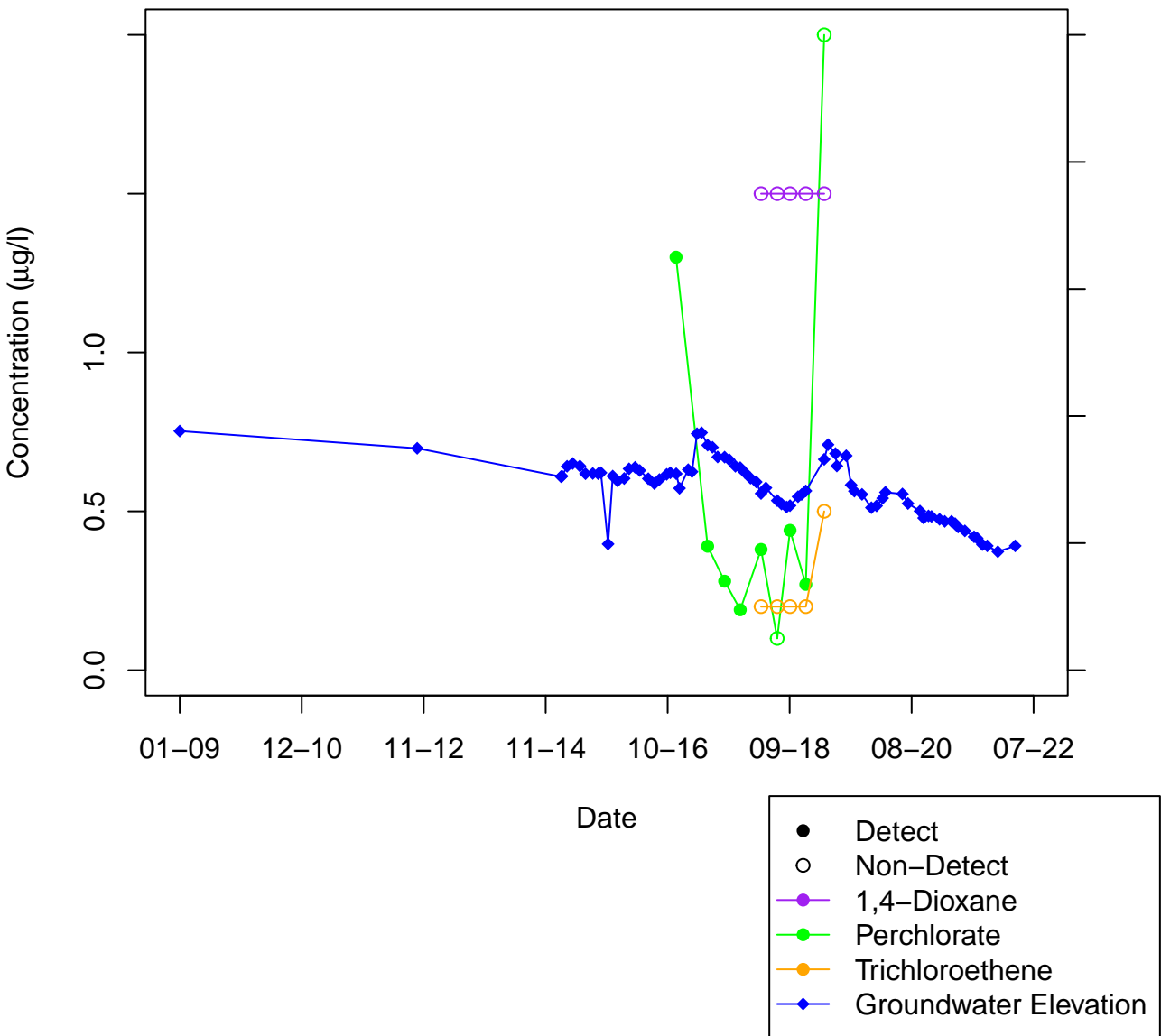
Received by: (Signature)

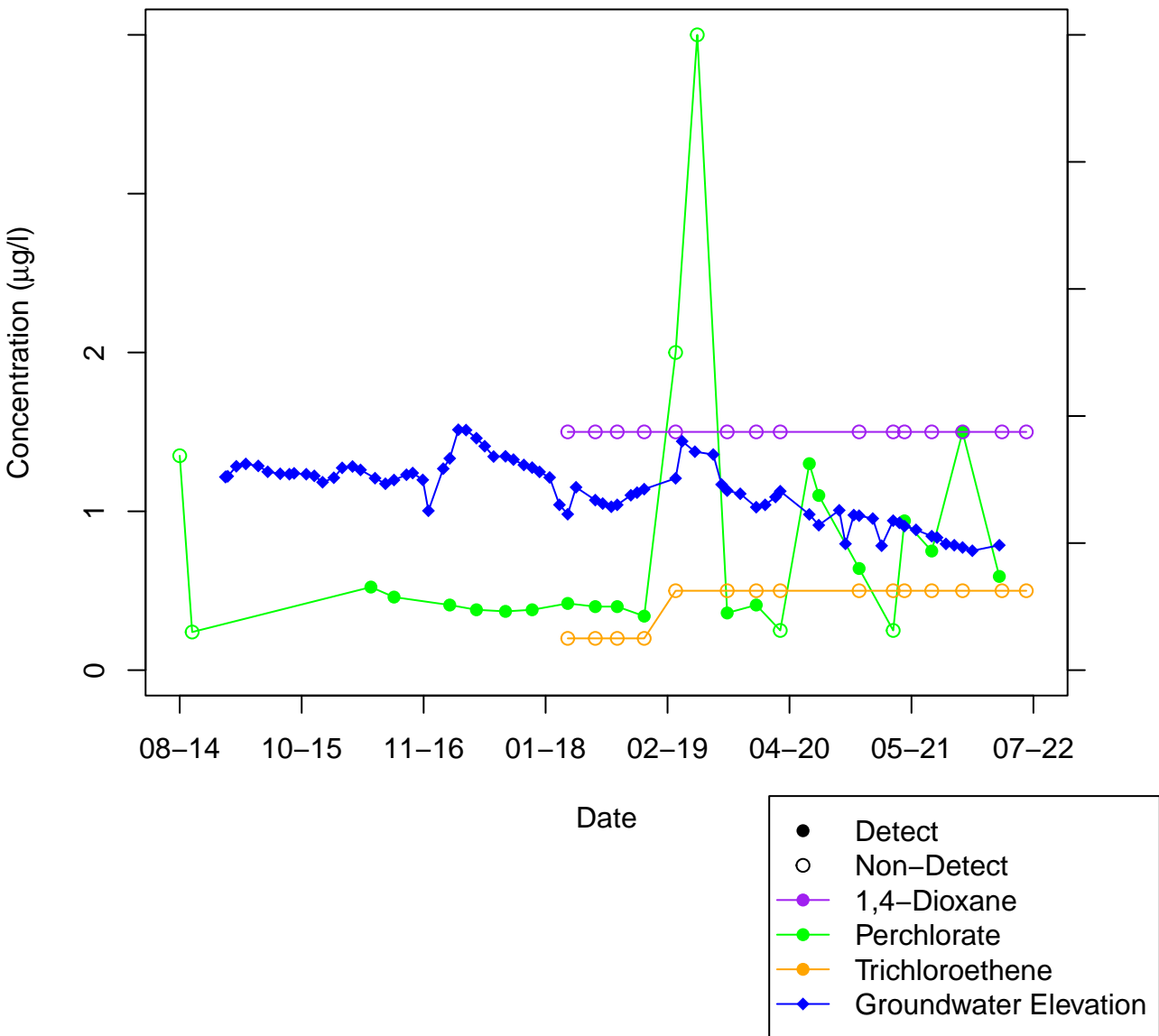
 Date: **7/22/22** Time: **0304**

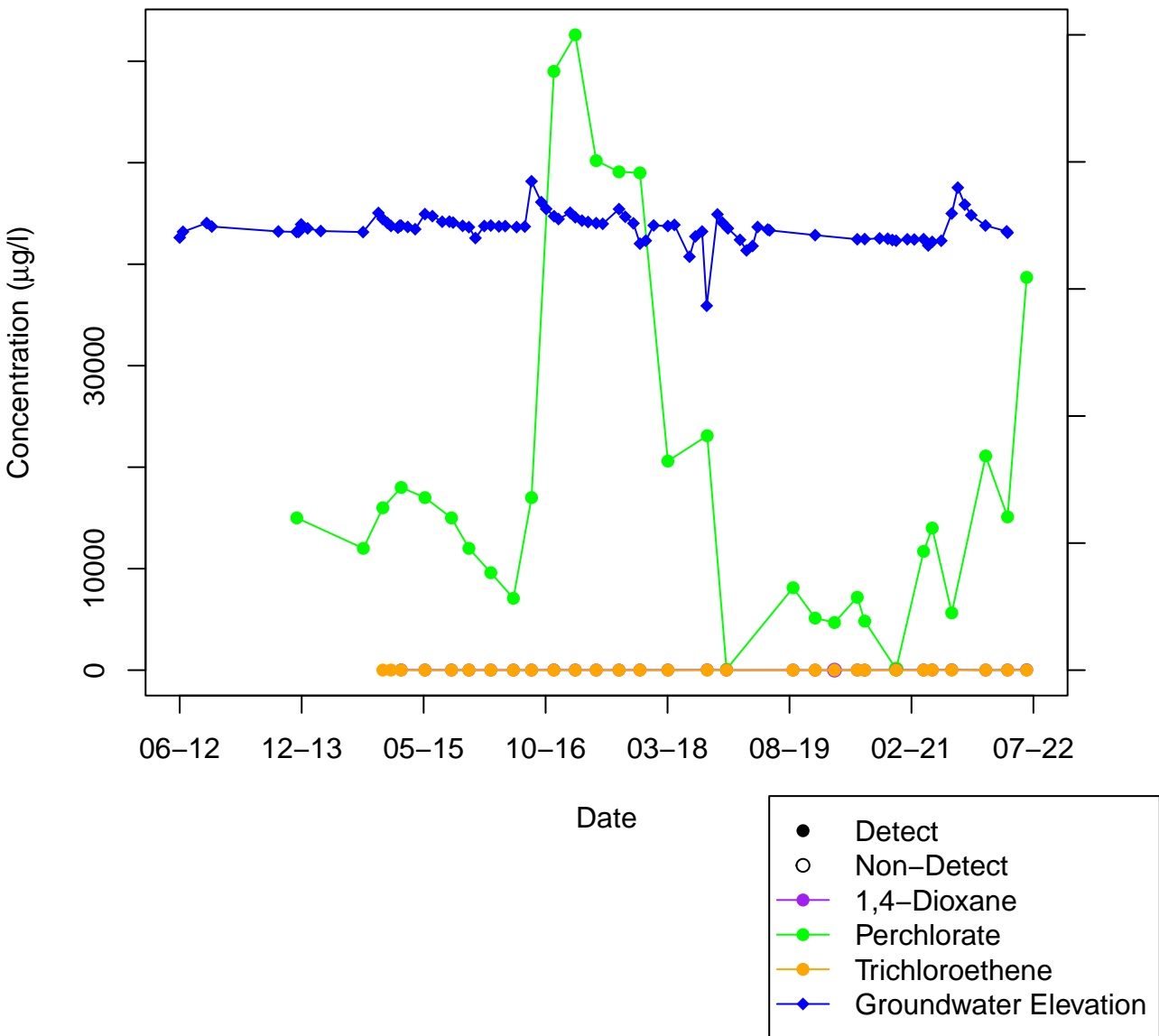
Trip Blank Received: Yes No
 HCL/MeOH TBR
 Temp: **2.2+0-2.2** °C
 Bottles Received: **15**

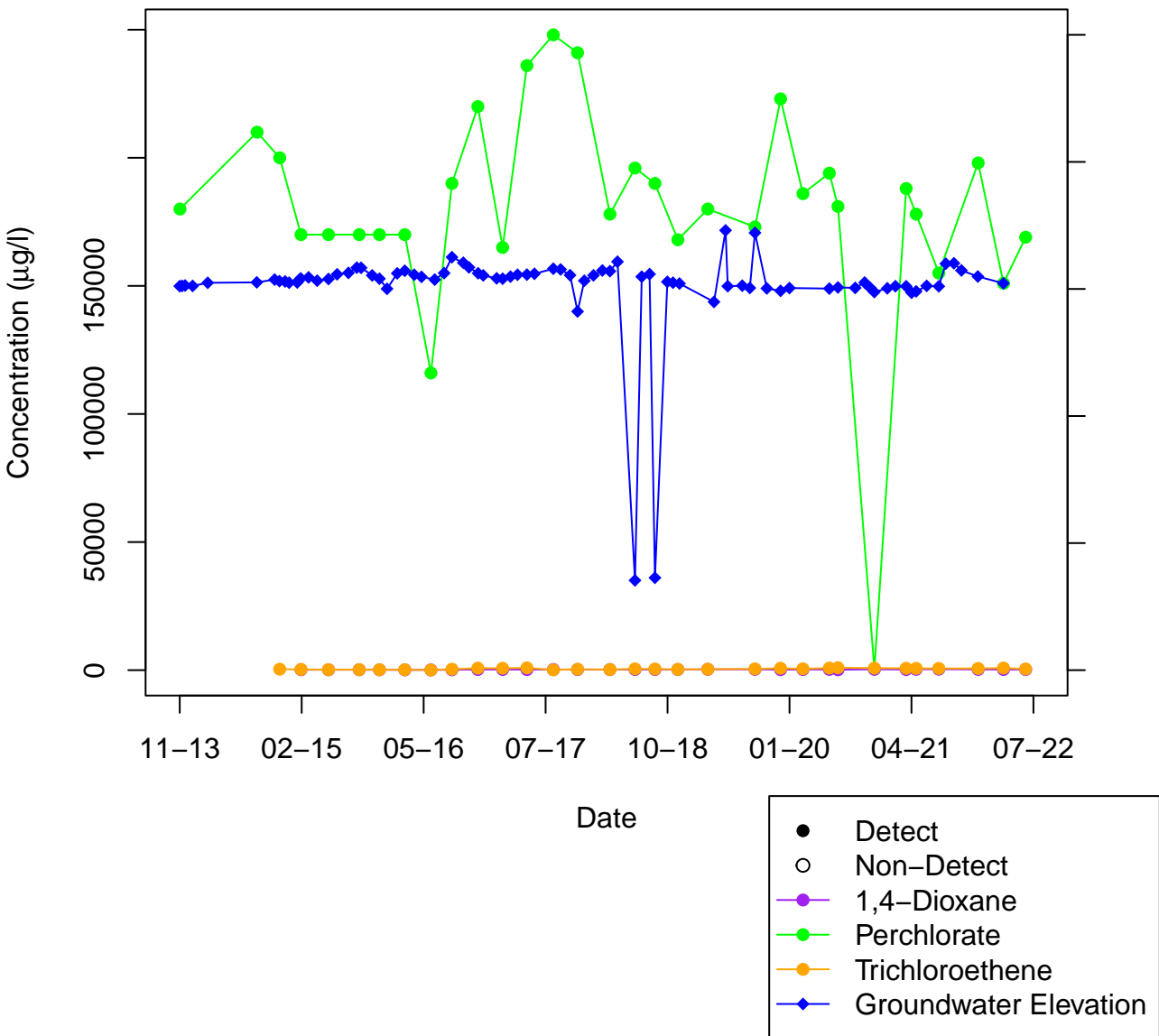
If preservation required by Login: Date/Time
 Hold:
 Condition: NCF / OK

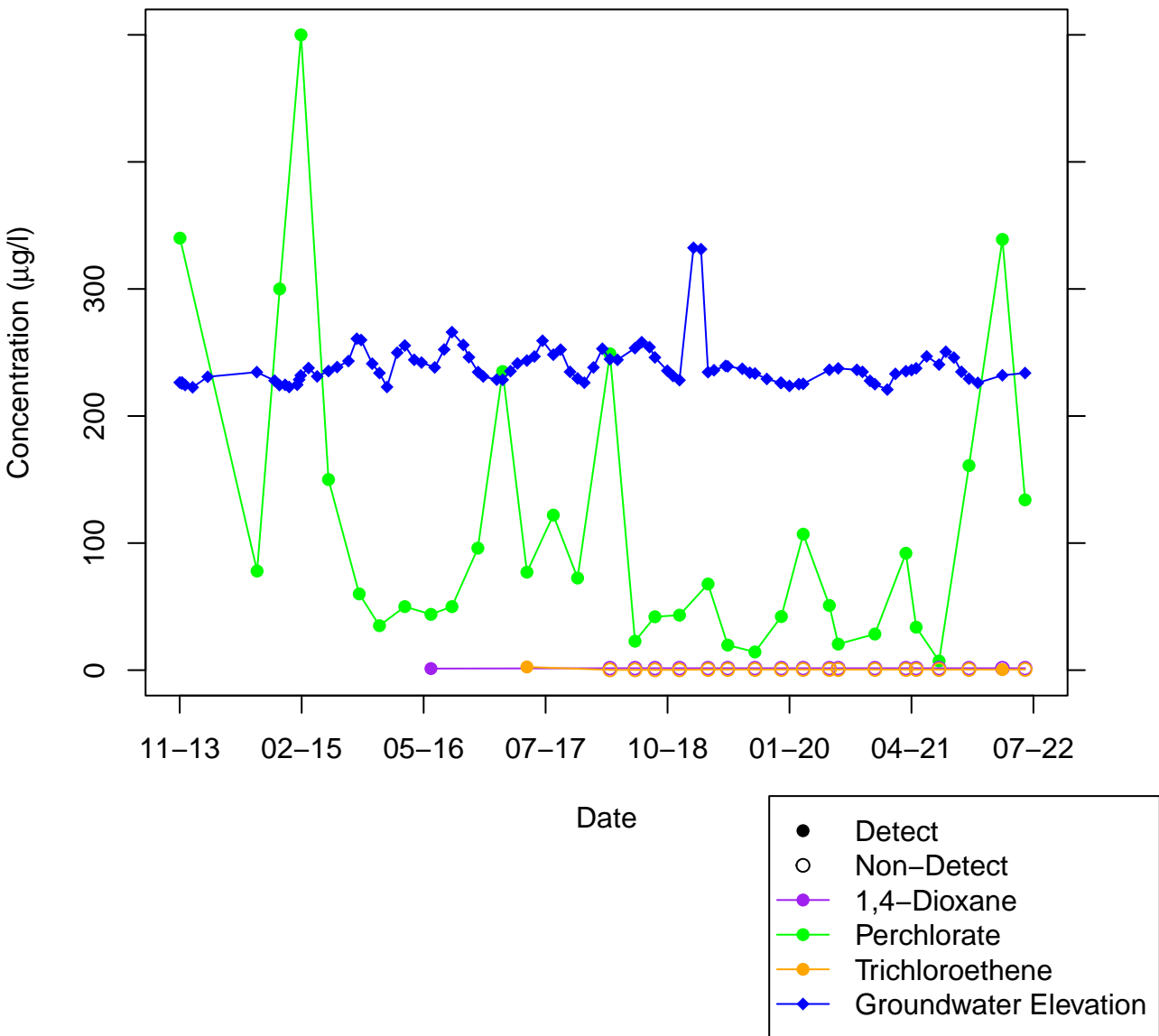
Attachment 3 – Concentration and Groundwater Elevation versus Time Plots

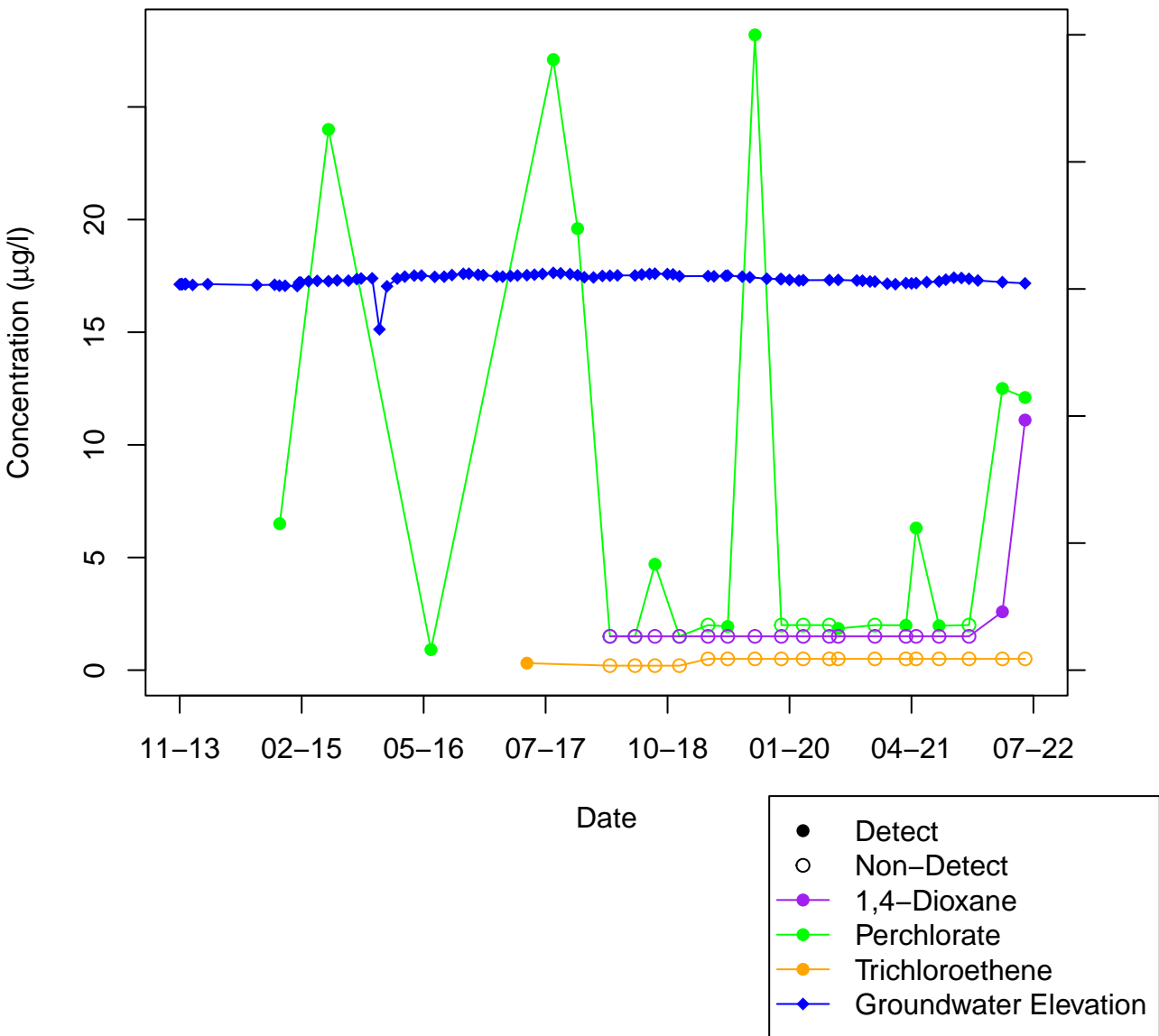


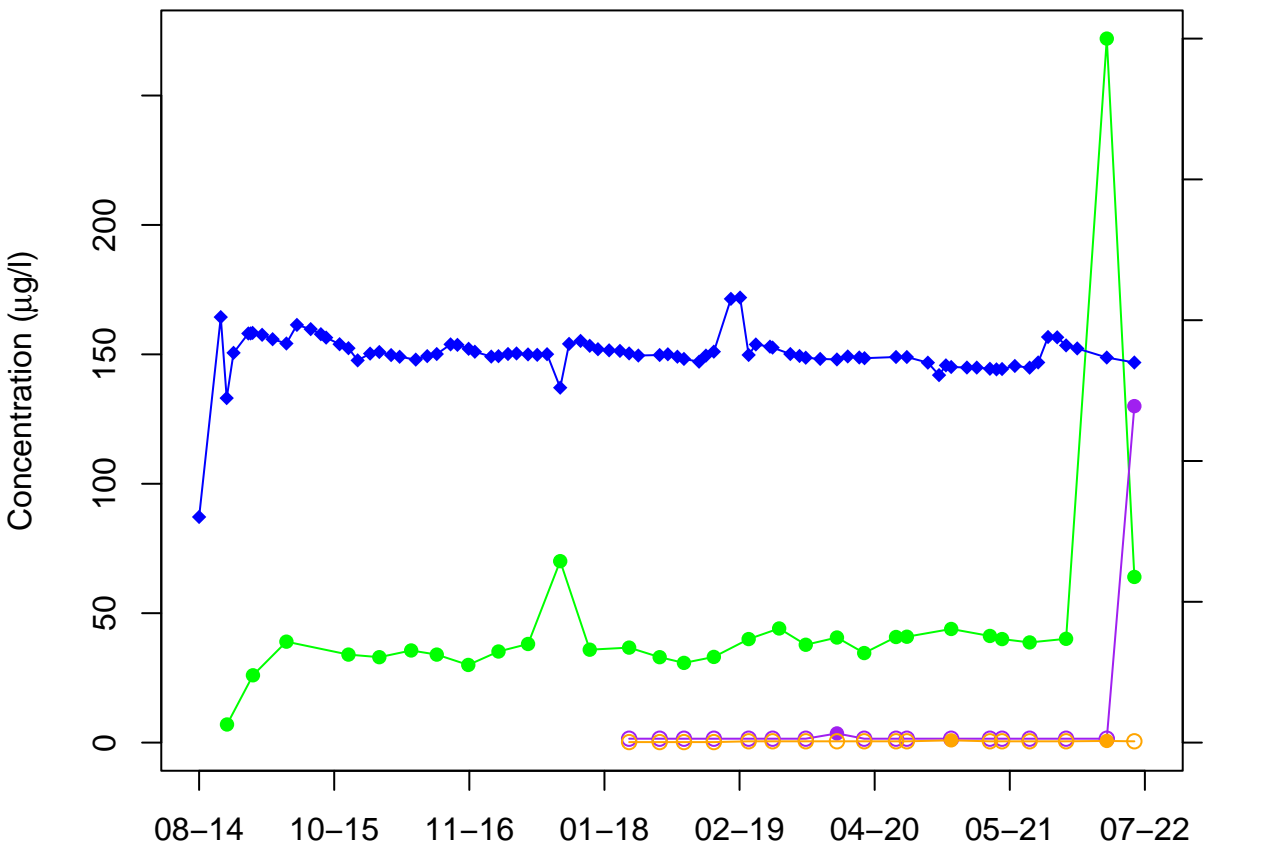


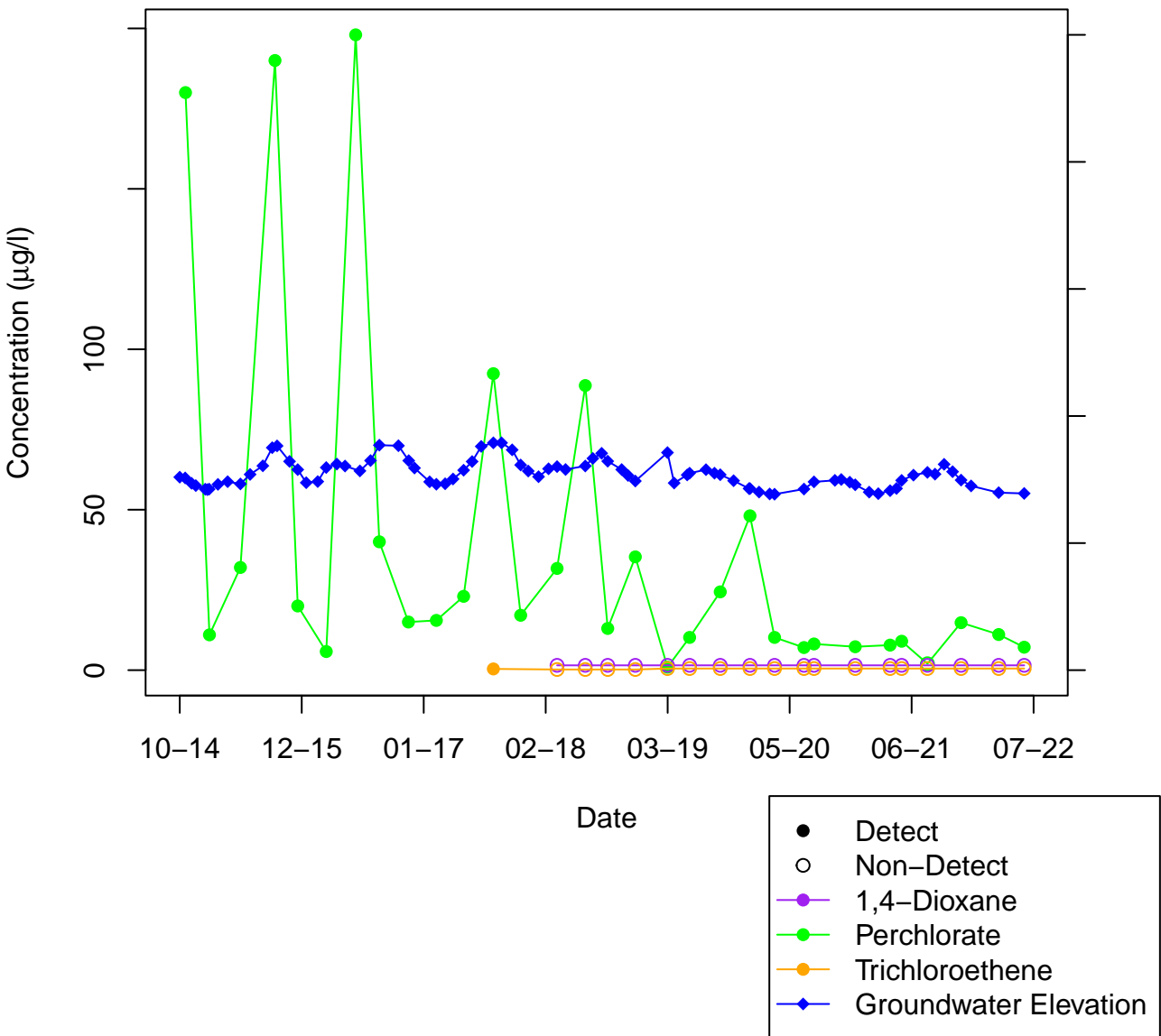


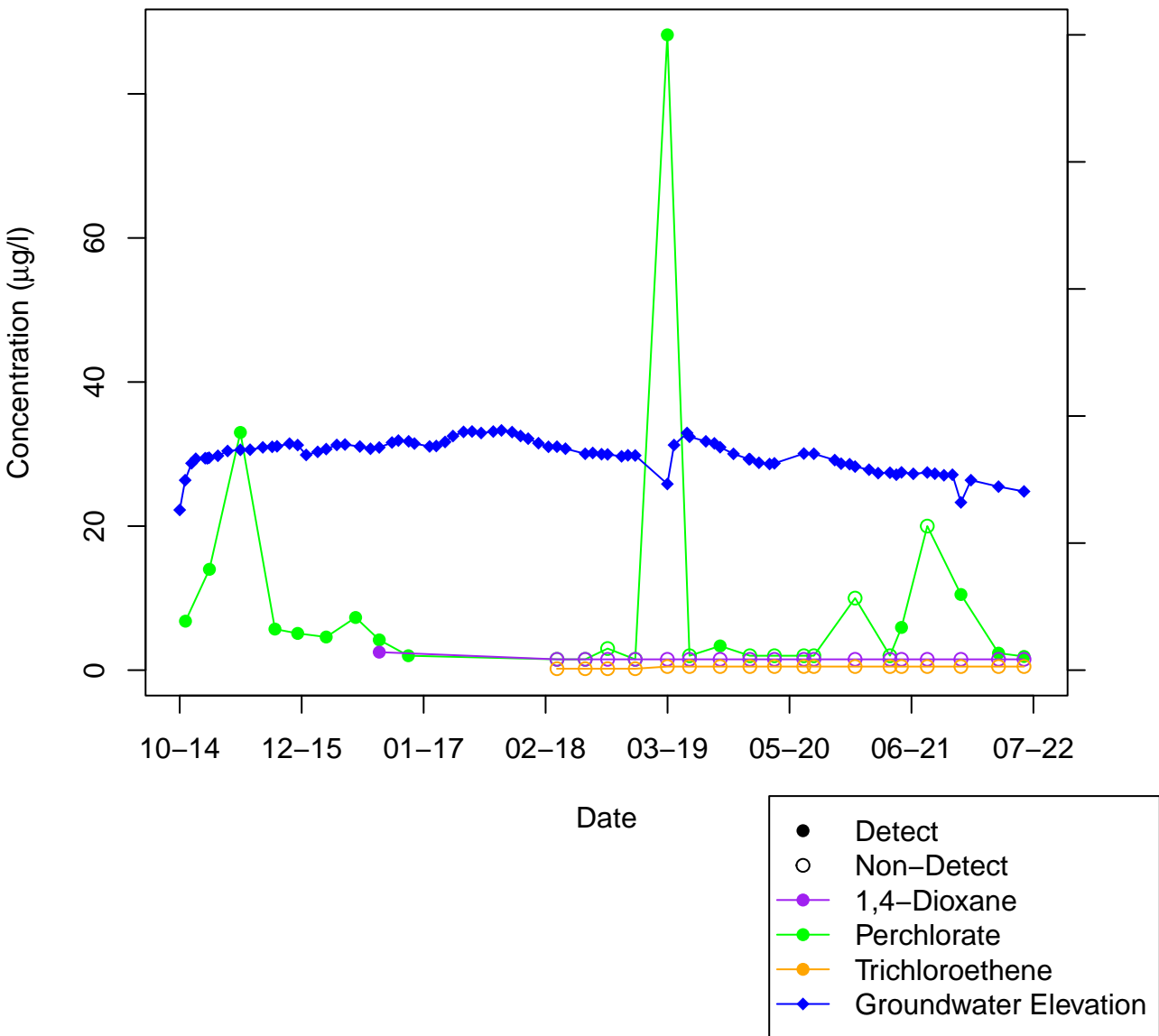


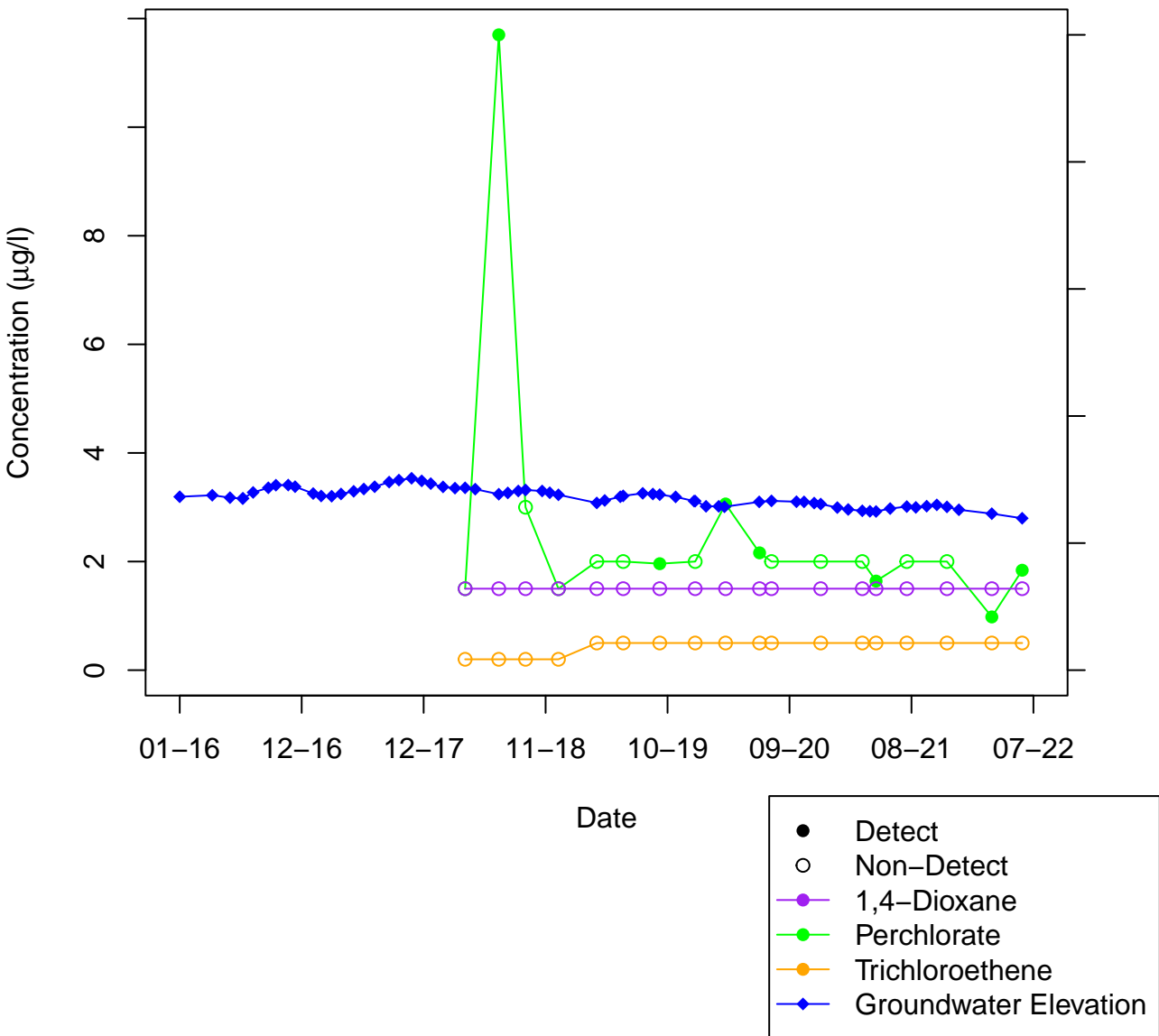


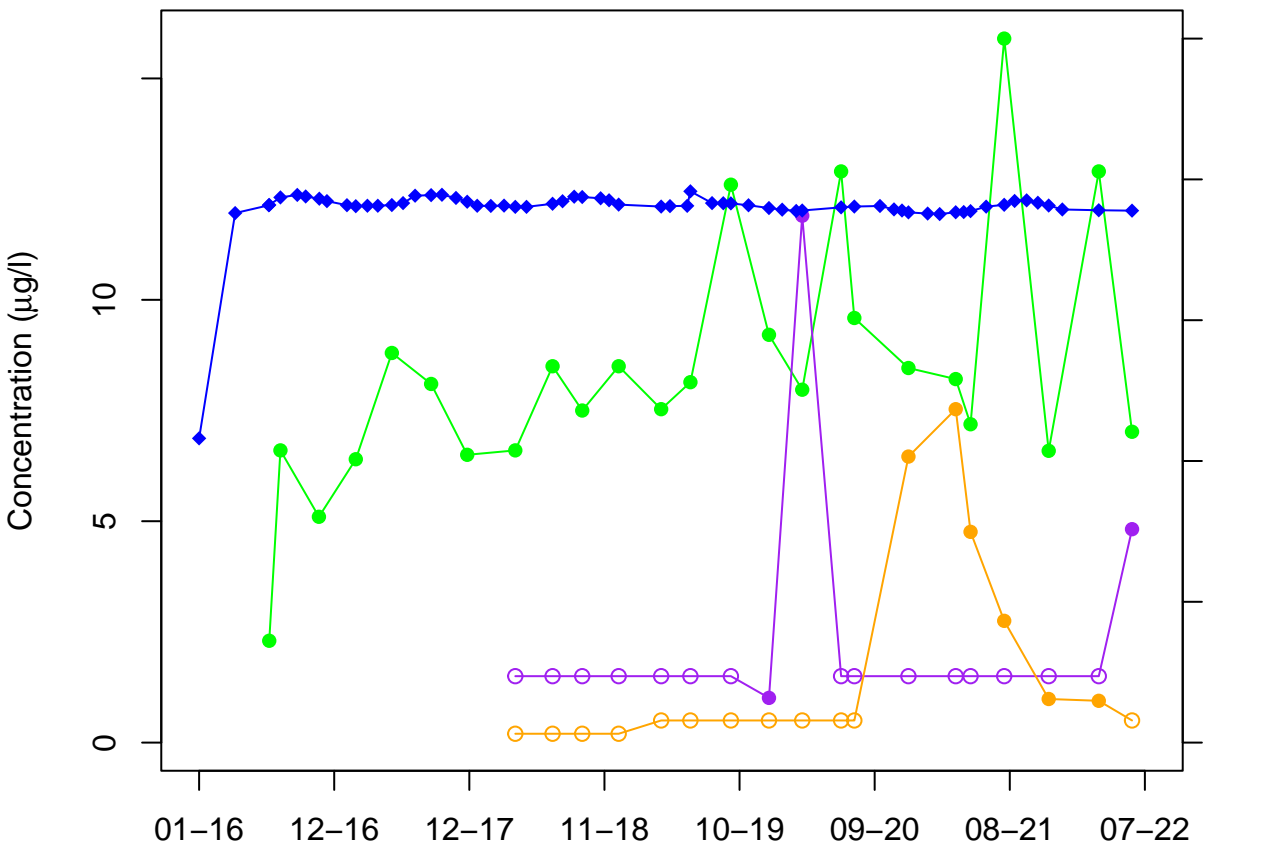




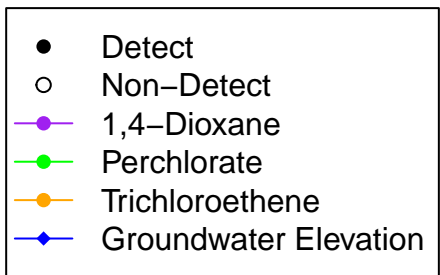


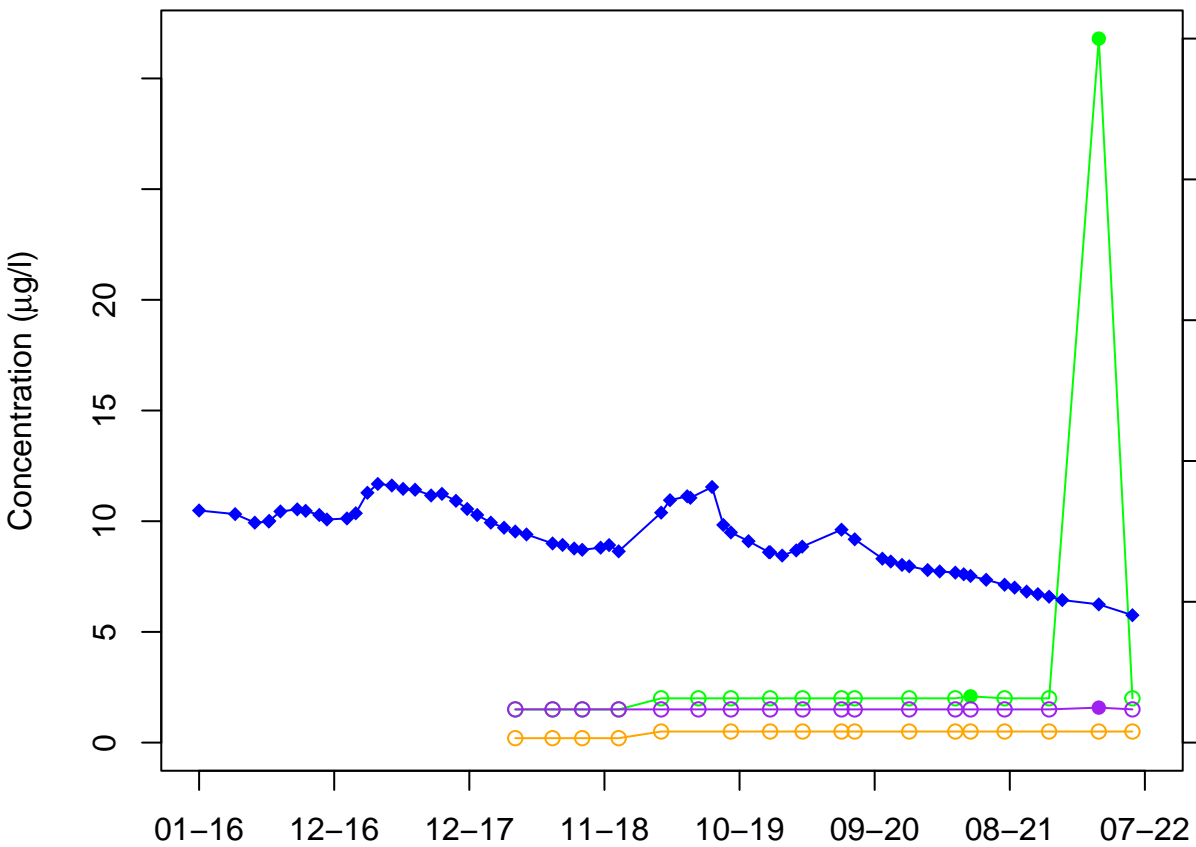






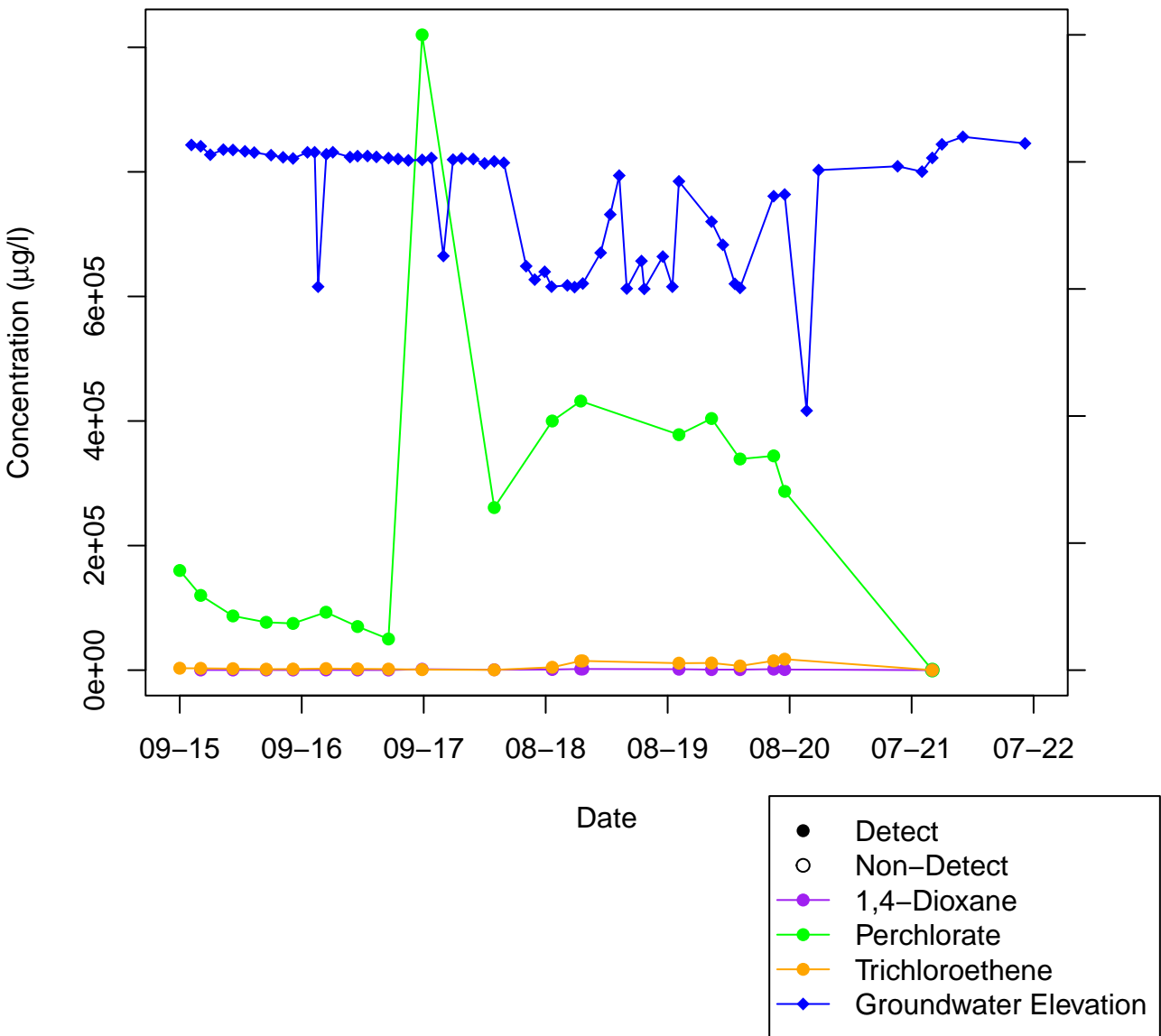
Date

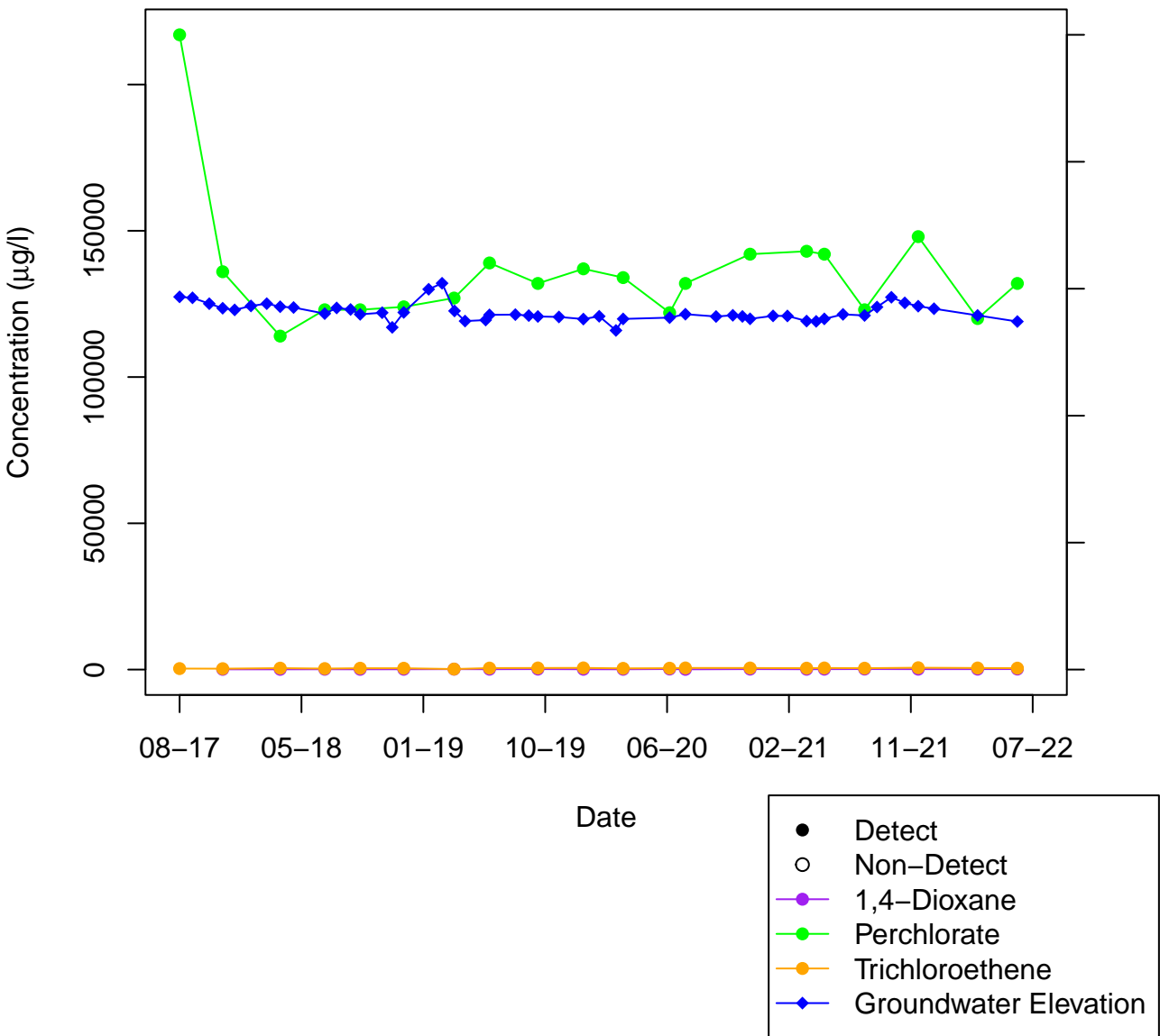


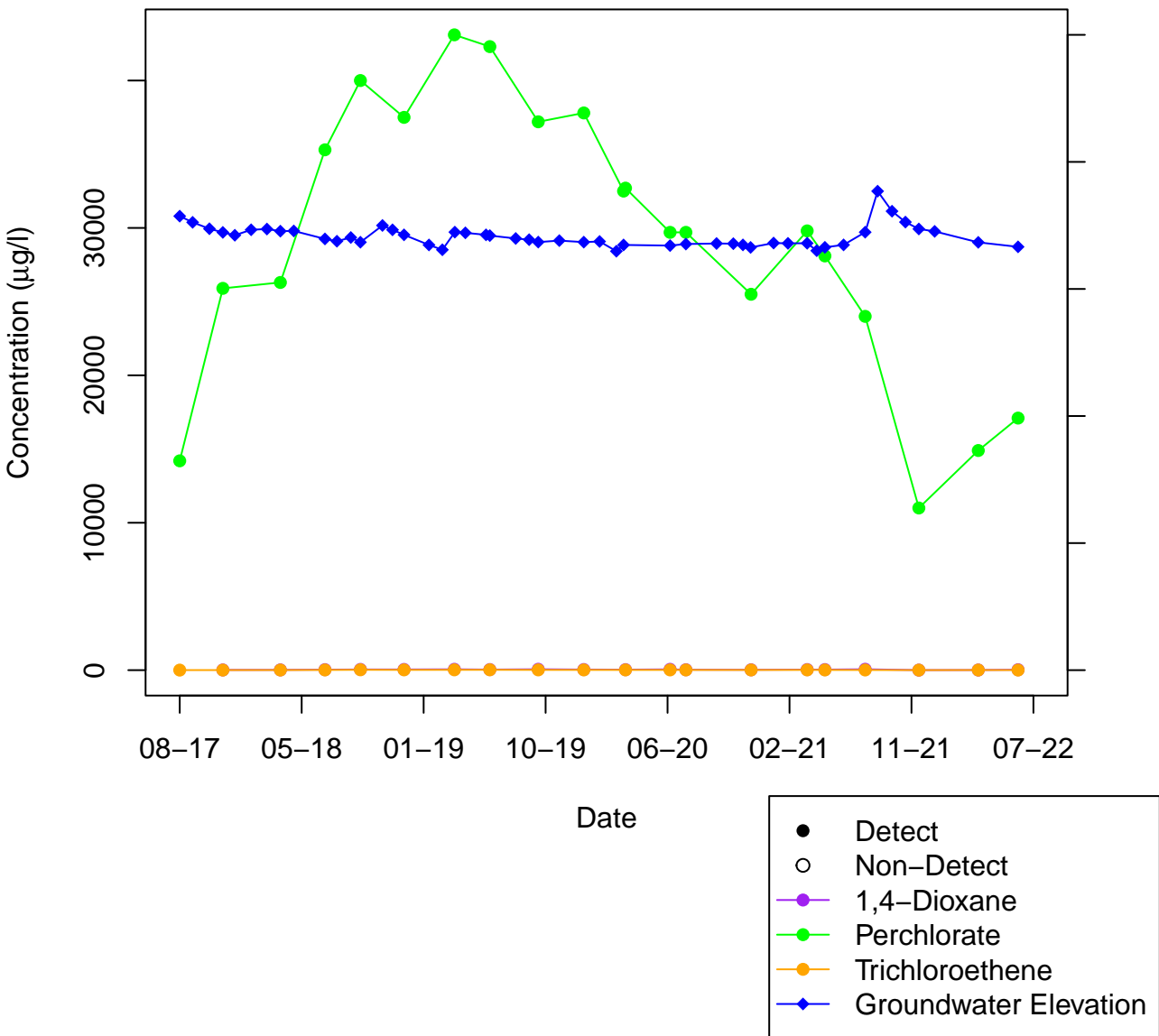


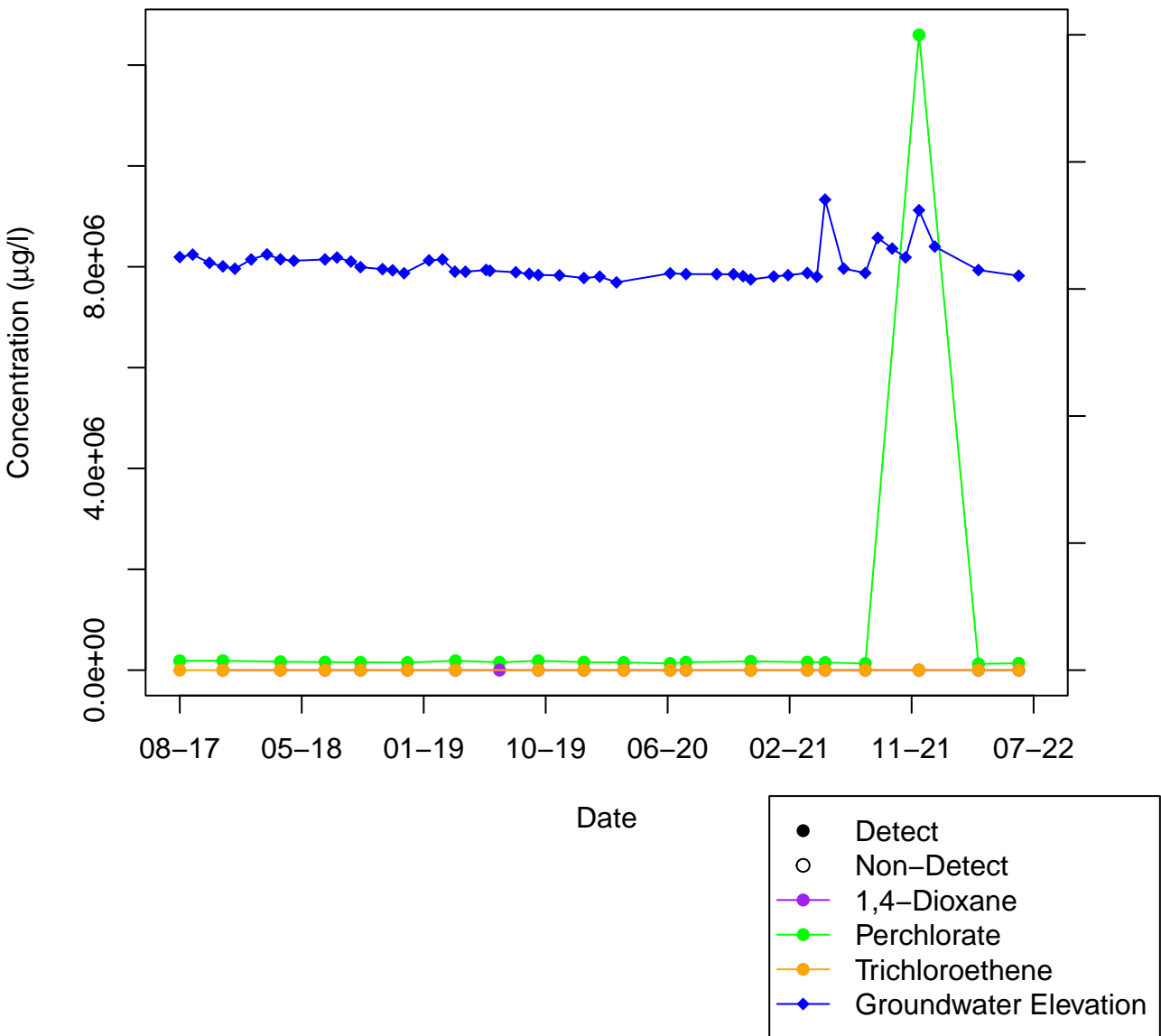
Date

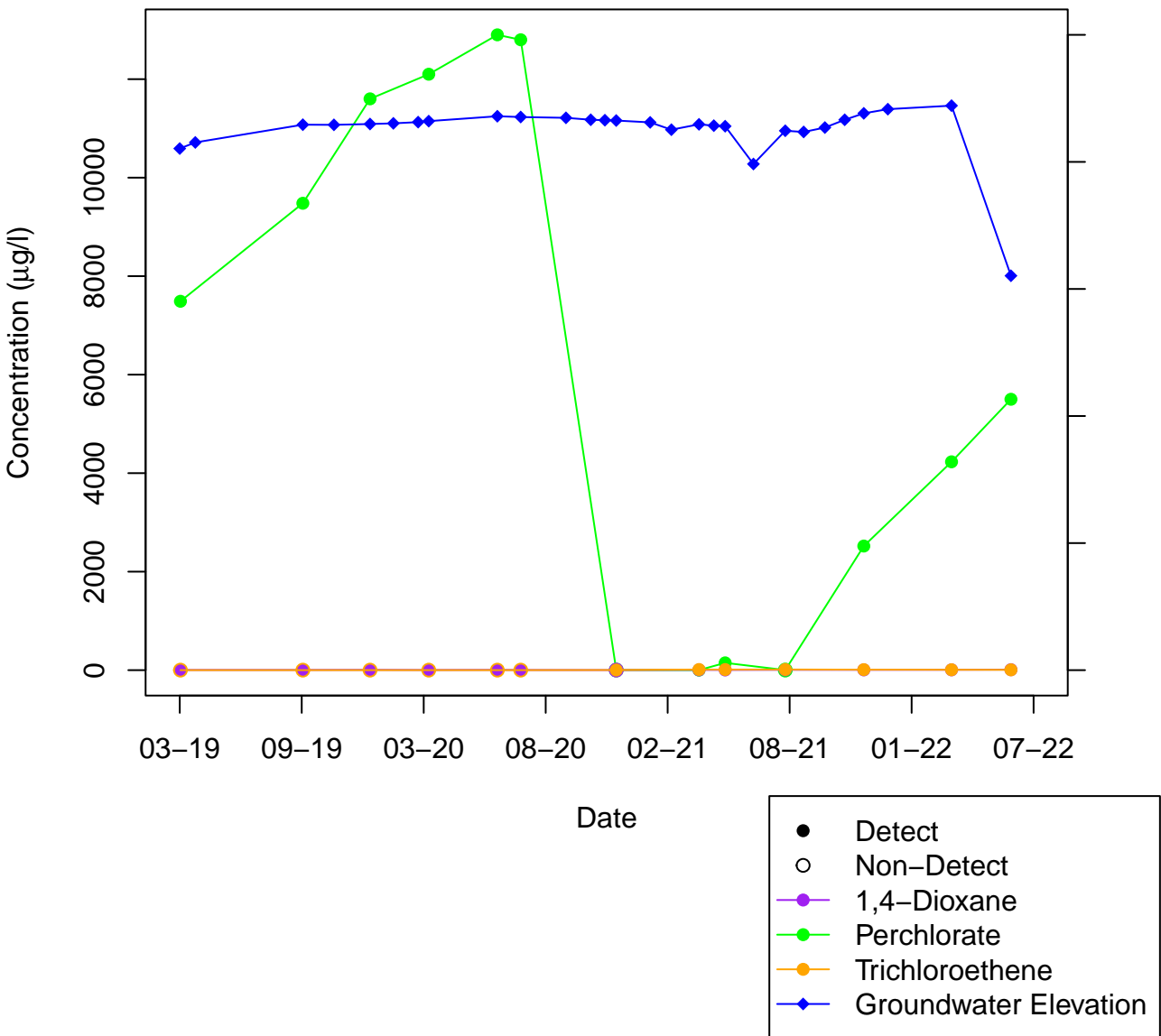
- Detect
- Non-Detect
- 1,4-Dioxane
- Perchlorate
- Trichloroethene
- Groundwater Elevation

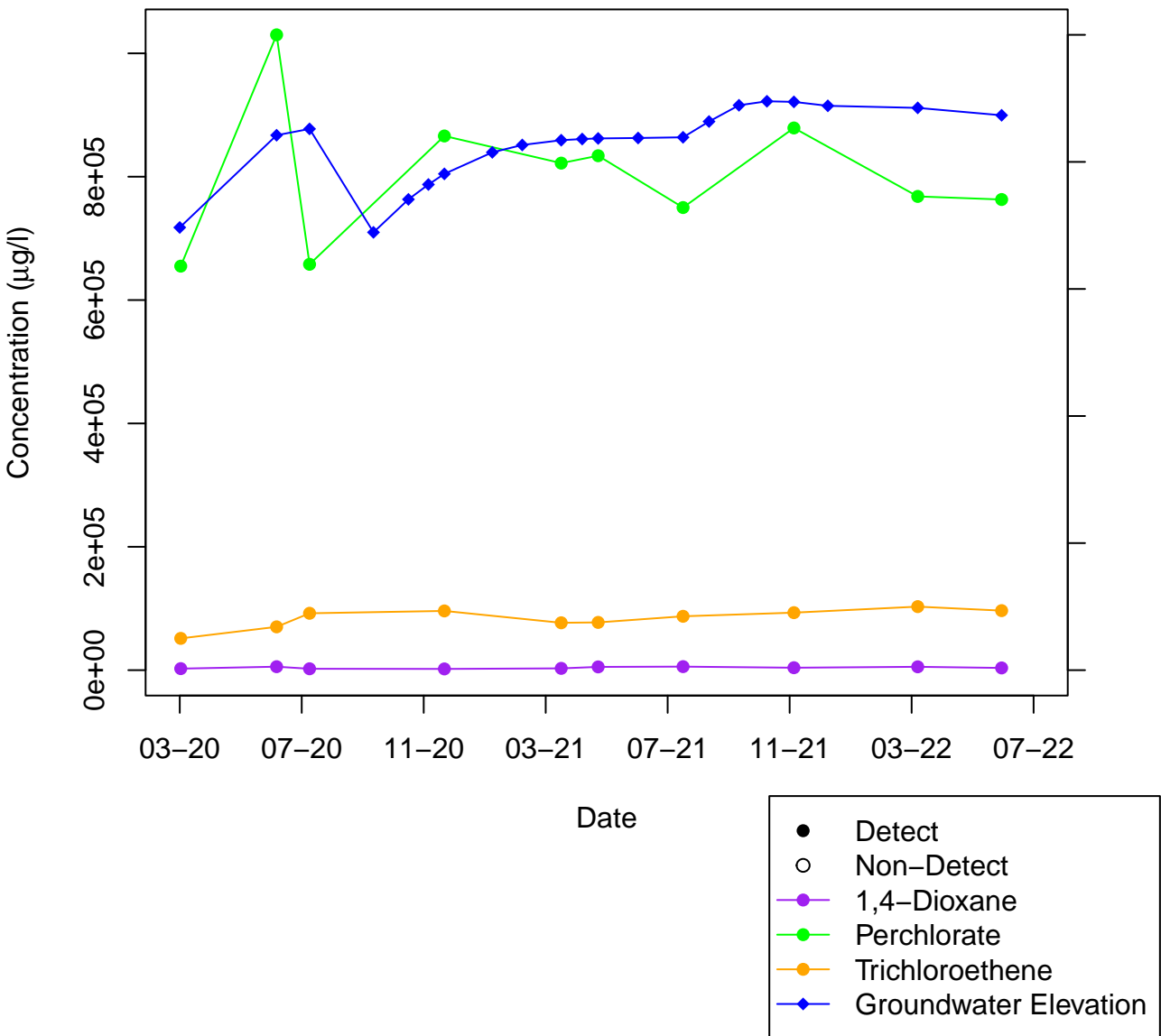


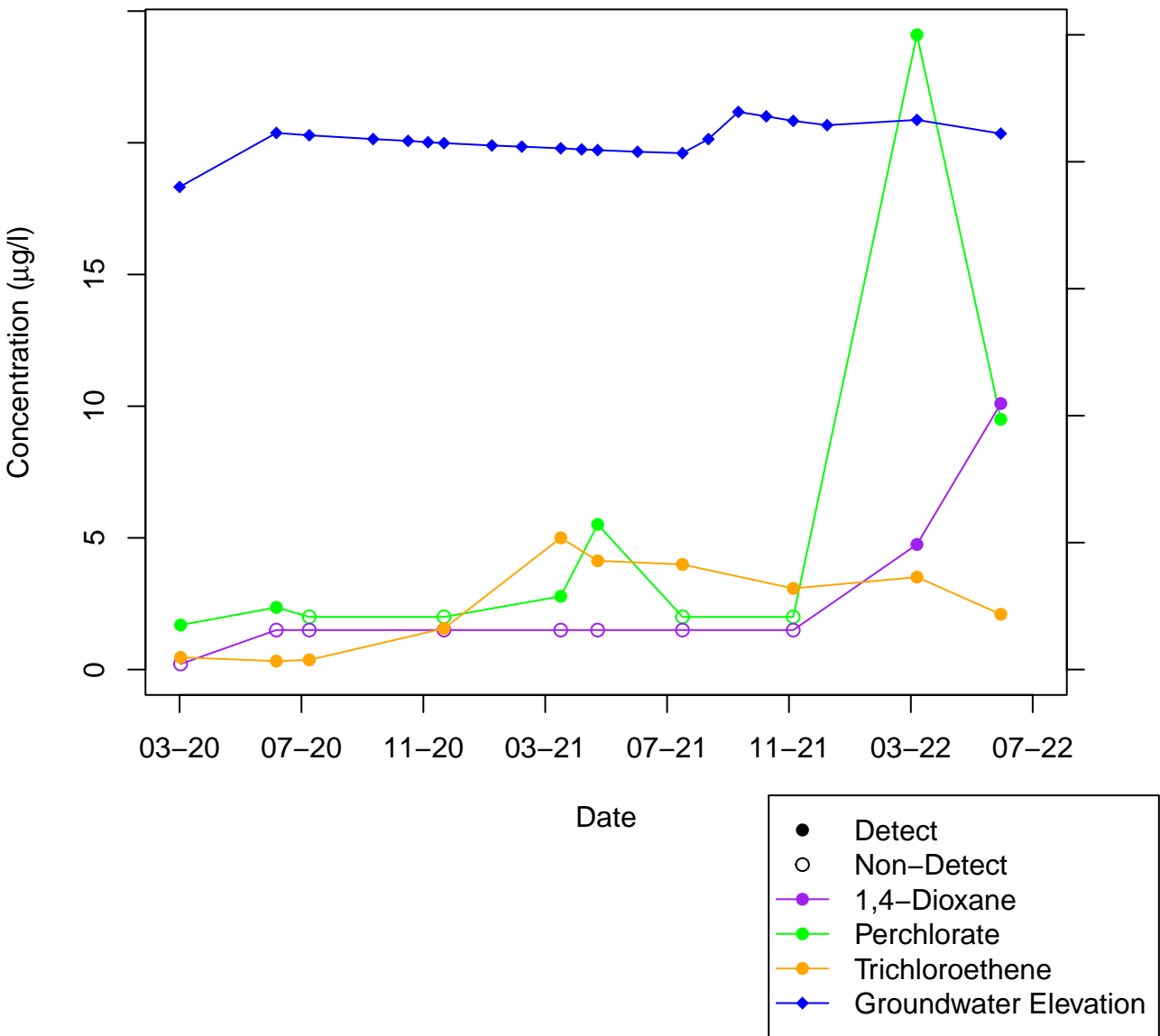


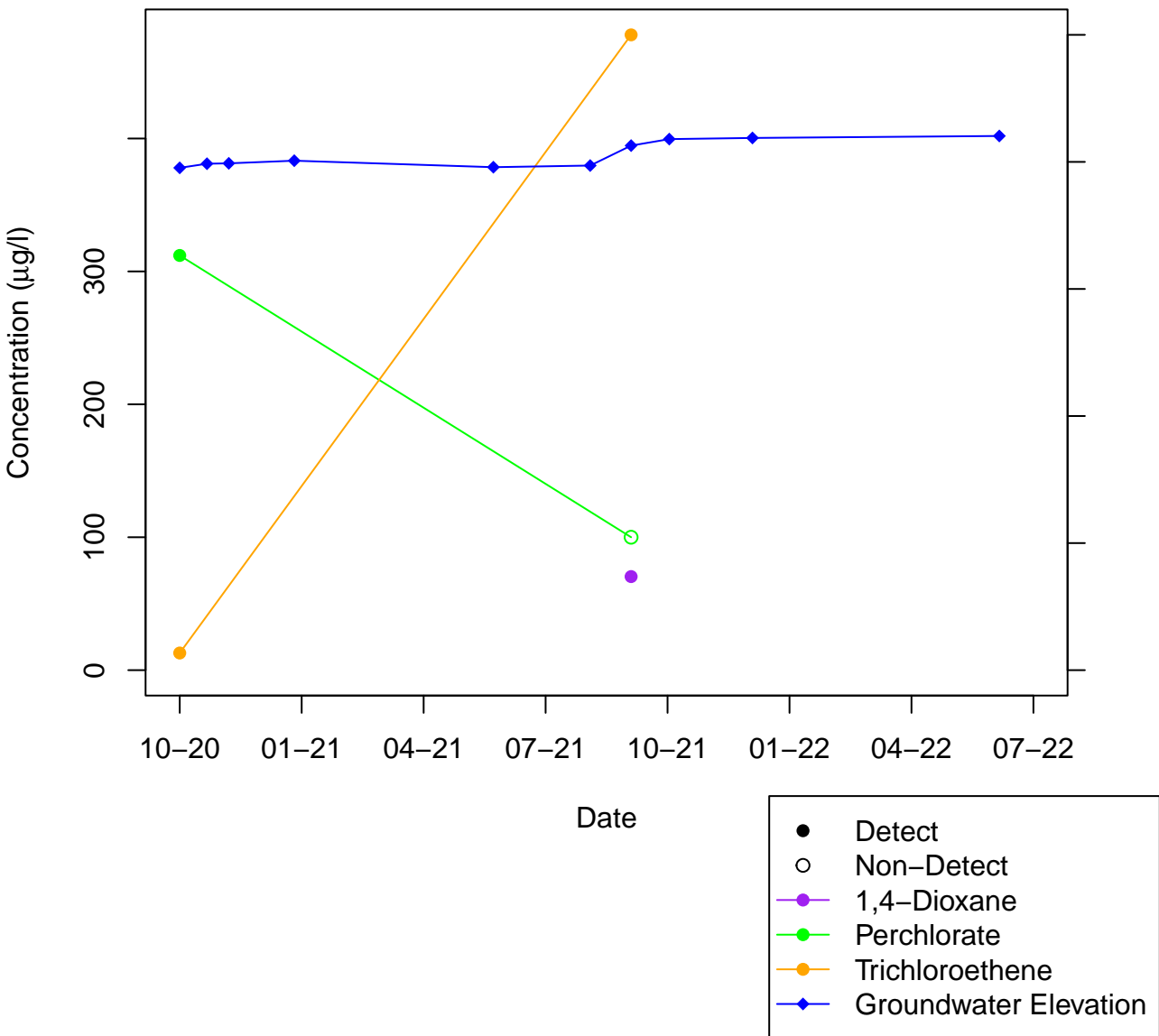


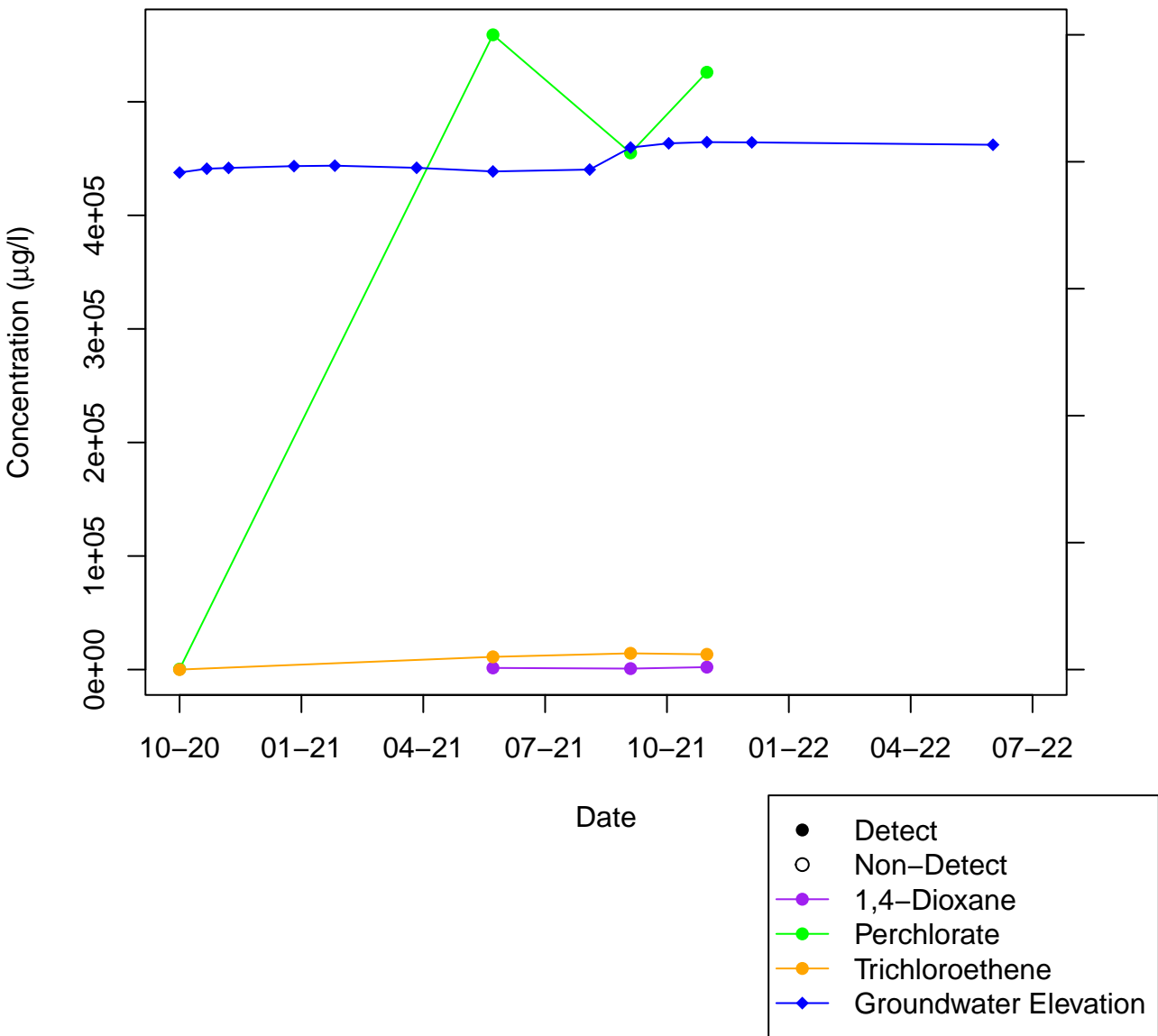


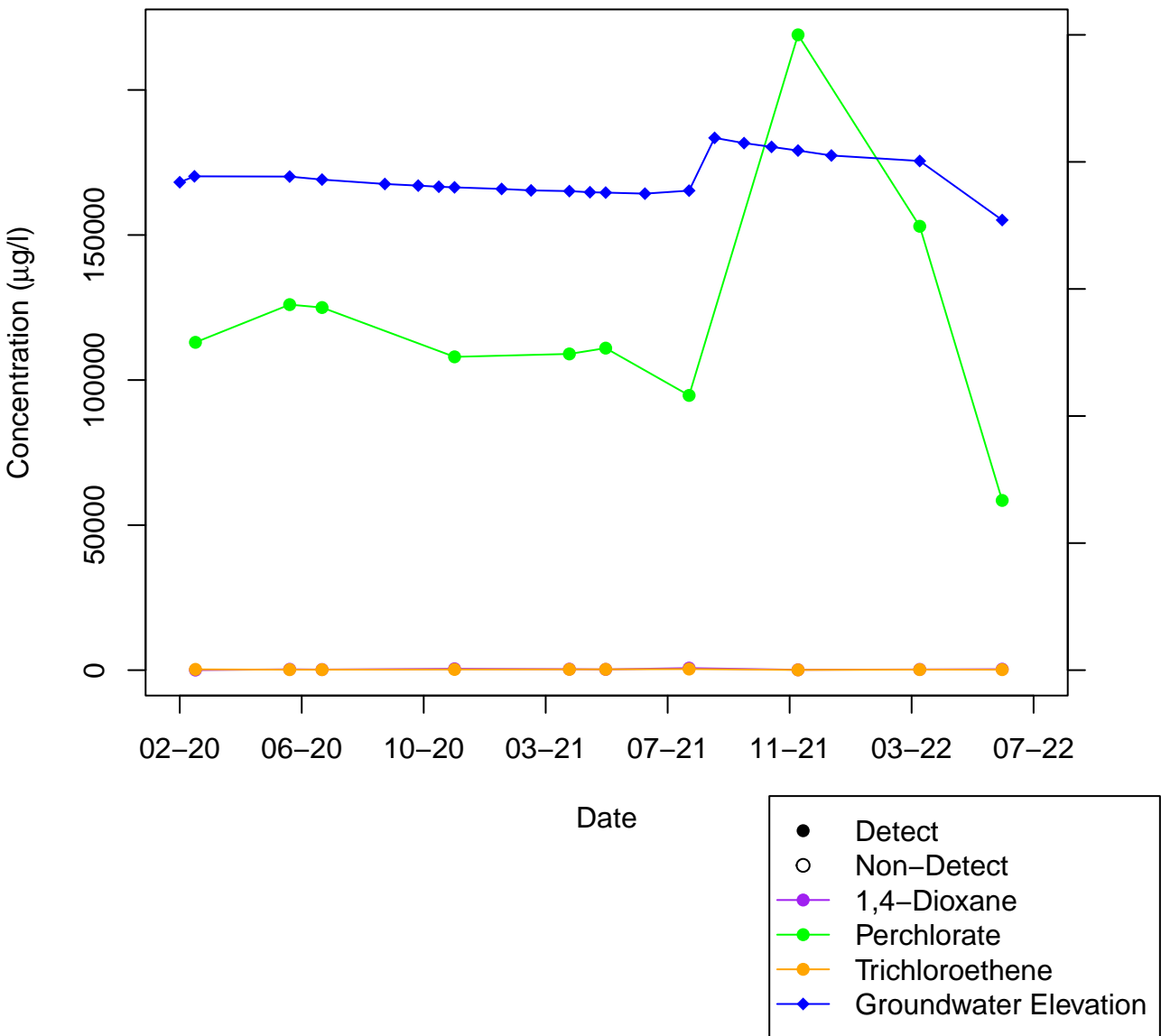


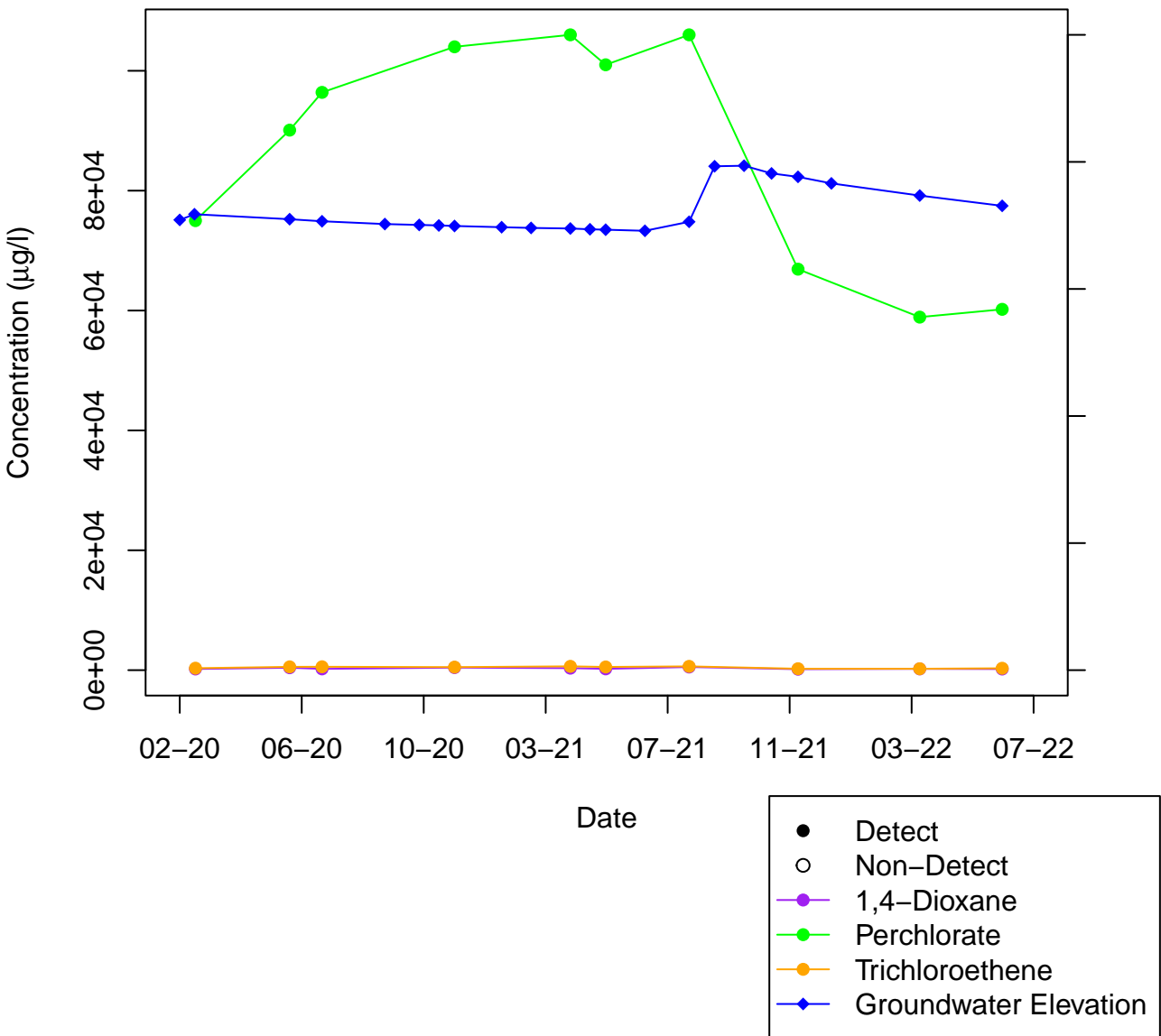


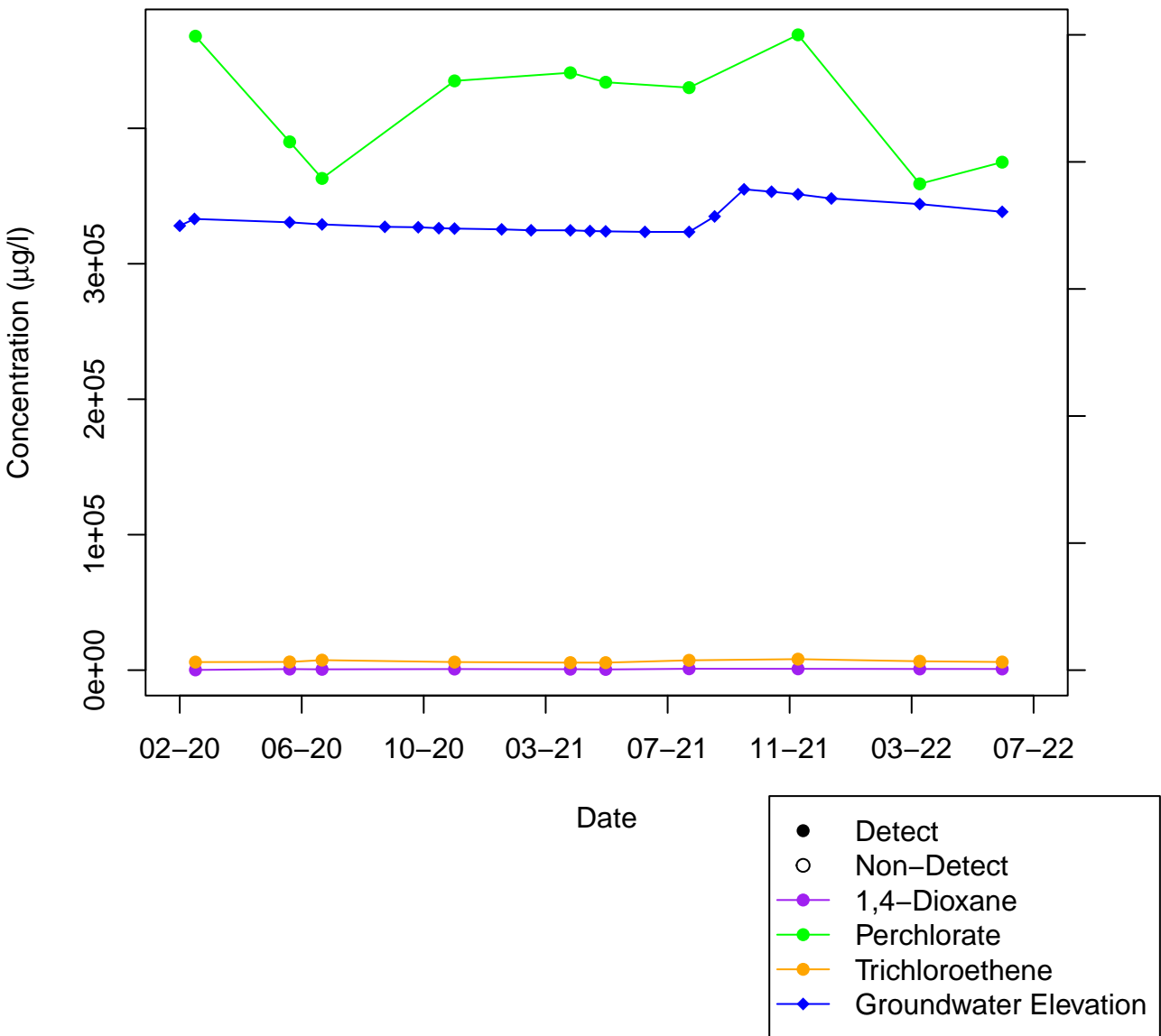


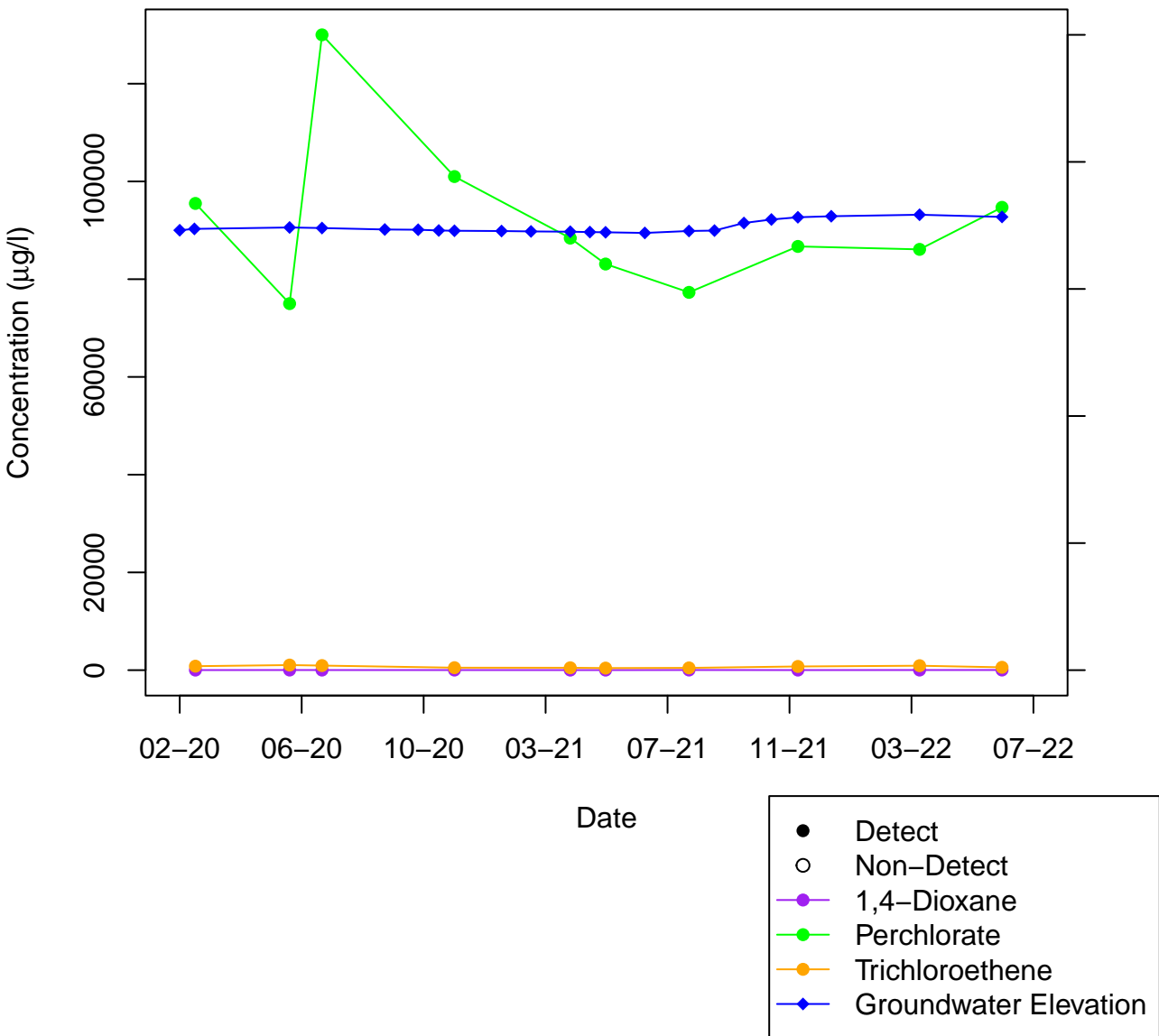


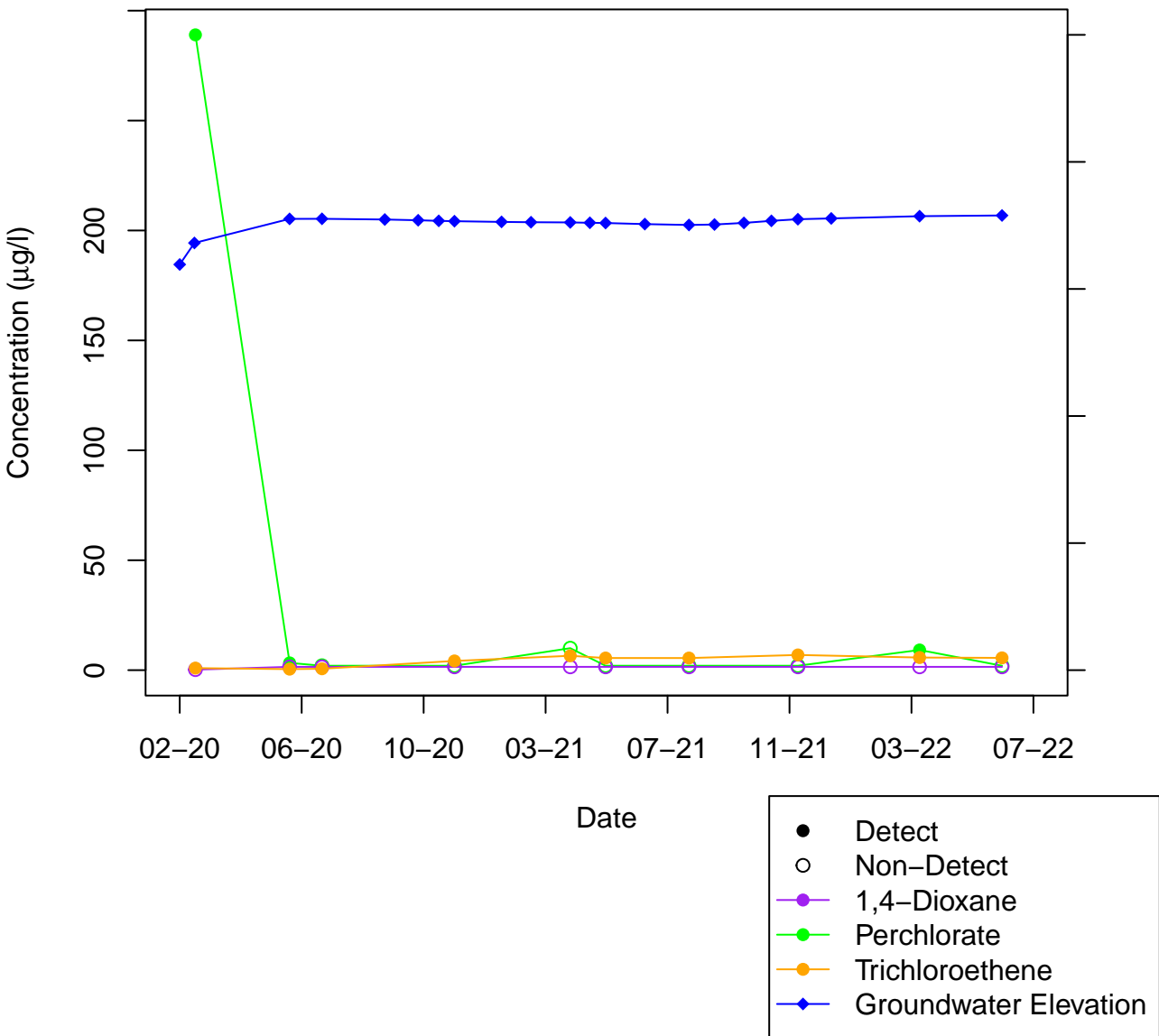












Attachment 4 – Data Validation Memo

Memorandum

Date: September 22, 2022
To: Angel Soto, Nammo Defense Systems Inc.
From: Mary G. Weiss
Subject: Nammo Defense Systems (NDS) Inc. – Former Thermal Treatment Unit (TTU) Second Quarter 2022 Groundwater Sampling Tier IA Data Validation – Level II Data Deliverables, Pace Analytical Sample Delivery Groups (SDGs) L1504535, L1504918, L1504971, L1504991, L1506299, L1507025, L1507028, L1507761, L1517593

Introduction

Pinyon Environmental, Inc. (Pinyon), completed groundwater sampling activities for the Nammo Defense Systems (NDS) Inc. Former Thermal Treatment Unit (TTU) Site in June and July of 2022. Subsequently, Pinyon performed a Tier IA data validation of the groundwater samples collected during the sampling event as part of the NDS TTU second quarter 2022 reporting.

Analytical data was reviewed by Pinyon based on the following documents:

Quality Assurance Project Plan, Nammo Defense Systems Inc. Facility, Mesa Arizona, April 28, 2022

United States Environmental Protection Agency (EPA) National Functional Guidelines for Organic Superfund Methods Data Review, January 2017 (EPA-540-R-2017-002)

Draft Region 9 Superfund Data Evaluation/Validation Guidance, December 2001 (R9QA/006.1)

Arizona Department of Environmental Quality (ADEQ) Remedial Projects Section Quality Assurance Program Plan (QAPP), February 2017

To reduce the occurrence of transcription errors, Pinyon has retained the laboratory qualifiers for use in the completed data validation rather than adhering to the data qualifiers defined in the *Quality Assurance Project Plan: Nammo Defense Systems Inc. Facility, (NDS Facility QAPP)*.

Preliminary Review

Groundwater samples were submitted to Pace Analytical Laboratory (Pace), Mount Juliet, Tennessee under Pinyon chain-of-custody (COC) for the following analyses:

- Perchlorate by EPA Modified Method 314.0
- Perchlorate by EPA Method 6850 (PF-2 only)

Data Validation Technical Memorandum

Nammo Defense Systems (NDS) Inc. – Former Thermal Treatment Unit (TTU)
First Quarter 2022 Groundwater Sampling

- Volatile Organic Compounds (VOCs) by EPA Method 8260B
- 1,4-Dioxane by EPA Method 8260B using selective ion monitoring (SIM) mode

Quarter 2 2022 – June 2022

A total of 31 primary samples, 6 duplicate samples, 1 trip blank sample, and 5 Matrix Spike (MS) and Matrix Spike Duplicate (MSD) samples were collected between June 13 and July 21, 2022 (Table 1). The samples were relinquished to a representative at the laboratory on June 13, June 14, June 16, June 20, June 21, and July 21, 2022.

Samples arrived at the laboratory for analysis on June 14, June 15, June 17, June 21, June 22, and July 22, 2022. Upon arrival at the laboratory for analysis, the temperatures of the coolers were recorded. Sample temperatures ranged between 1.6°C and 5.7°C. The laboratory noted that one trip blank was received and preserved with hydrochloric acid (HCl).

The collection time for the trip blank was not recorded on the COC. The laboratory assigned a date of 6/14/22 and time of 00:00 to the trip blank.

The laboratory made note of “No extra volume received to perform Matrix Spike samples” for analysis of 1,4-dioxane by 8260B-SIM for the following samples:

- LI504535-03 (TTU-EXT-3-76-2022-613)
- LI504535-04 (TTU-EXT-2-74-2022-613)
- LI504535-05 (TTU-EXT-1-69-2022-613)
- LI504535-08 (TTU-16-80-2022-613)
- LI504991-01 (TTU-14-69-2022-614)

The laboratory made note of “No extra volume received to perform Matrix Spike samples” for analysis of VOCs by 8260B for LI504991-01 (TTU-14-69-2022-614).

Based on conversations with the laboratory, there was no extra sample volume to rerun MS samples for original samples that required dilution; however, there was sufficient volume to run the original sample. As one MS/MSD was reported for the sample delivery groups (SDGs) associated with the above samples, laboratory quality control requirements were met.

The laboratory made note of “pH outside of method requirement for analysis” for analysis of VOCs by 8260B for LI507025-01 (TTU-19-73-20220620). Based on conversations with the laboratory, the above item is the result of the sample having a pH greater than 2 standardized units (S.U.) upon receipt. According to the laboratory, the sample can be analyzed by 8260B as deviations of pH impact the extent of a sample’s hold time but not reported concentration. As the sample as analyzed within hold time, the above item does not impact sample validity.

The laboratory utilized a subcontractor laboratory to analyze the laboratory samples LI504918-01 (PF-2), LI507028-01 (TTU-19), and LI507028-02 (TTU-11) for perchlorate by EPA Method 6850. The samples were placed under Pace COC and submitted to Eurofins Scientific (Eurofins), Phoenix, Arizona. The sample was relinquished to a representative of the laboratory on June 15 and June 22, 2022 and arrived at the laboratory for analysis on June 15 and June 22, 2022. Upon arrival at the laboratory for analysis, the temperature of the cooler was recorded and noted as 5.7°C and 3.4°C, respectively.

Equipment Blanks

Table 4 in the NDS Facility QAPP specifies that equipment blanks should be collected at a rate of one per day when non-dedicated equipment is used. Non-dedicated equipment was not used for the quarterly sampling event; therefore, equipment blanks were not collected.

Perchlorate

Overall Assessment

The samples were analyzed for perchlorate by EPA Methods 314.0 and 6850 (Table I). The data reported for perchlorate are considered to be usable with the identified qualifiers. Results for the target analytes for this specific project are usable and valid.

Preservation and Holding Times

Holding times (time between sample collection and analysis) for the samples ranged from 5 to 23 days (Table 2). This is within the acceptable range of 28 days for preserved water samples.

Method Blank

One method blank was analyzed for each batch of analysis completed. This resulted in nine method blanks (batches WGI881121, WGI881123, WGI891334, WGI883531, WGI883354, WGI884431, WGI894626, 597534, and 598551). Perchlorate was not detected in the method blank above the laboratory method reporting limit. Corresponding laboratory results were qualified as appropriate.

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Matrix Spike/Matrix Spike Duplicate (MS/MSD) sample sets were analyzed at the frequency for the number and types of samples analyzed (one MS/MSD set per batch of 20 samples). Five sample MS/MSD sets were reported using samples PF-2, TTU-2, TTU-8, TTU-13, and TTU-19. Seven sample set specific MSs were reported using samples DUP-02, TTU-4, TTU-6, TTU-7, TTU-9A, TTU-10, and TTU-11.

The percent recovery (%R) and relative percent difference (RPD) results for the MS samples and MS/MSD samples sets were within the limits stated in the laboratory report or results were appropriately qualified. The qualifiers were applied to the MS, MSD, and corresponding sample results as appropriate.

Laboratory Control Sample (LCS)

One laboratory control sample (LCS) was analyzed for each batch of analysis completed, resulting in nine LCSs. The %R and RPD results were within the limits stated in the laboratory report or results were appropriately qualified. The qualifiers were applied to the LCS, and corresponding sample results as appropriate.

Laboratory Duplicate

Two laboratory duplicates were analyzed. The laboratory duplicates were analyzed using original sample from Lab ID L1504535-06 (TTU-17) and L1504535-09 (TTU-5) for perchlorate. The RPD results were within the limits stated in the laboratory report or results were appropriately qualified.

Field Duplicate

A total of six field duplicates were collected and analyzed (Table 3). Of the six field duplicates, four were analyzed for perchlorate. This meets the requirements of 1 per batch of 20 samples. The field duplicates match as follows:

- LI504535-13 (DUP-01) = LI504535-02 (TTU-EX-4)
- LI504991-08 (DUP-02) = LI504991-07 (TTU-10)
- LI506299-04 (DUP-06) = LI506299-02 (TTU-1)
- LI507025-02 (DUP-12) = LI507025-01 (TTU-19)

For the samples and duplicates in the above list, perchlorate was not detected in the original sample and not detected in the duplicate for laboratory sample LI504991-07 (TTU-10). The RPD was not calculated for those results.

The RPD was calculated, as follows, for the other duplicate results.

$$RPD = \frac{|Result_{Duplicate} - Result_{Original}|}{\frac{Result_{Duplicate} + Result_{Original}}{2}} \times 100$$

RPD for the sample and duplicate from TTU-EX-4 was less than 30%. The RPD for the sample and duplicate from TTU-1 and TTU-19 were greater than 30% and as such qualified with a J (The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.). This does not impact the validity of the results.

Sensitivity

The samples were reported to MDLs and no elevated non-detect results were reported. MDLs and RDLs for perchlorate met the respective Arizona Department of Environmental Quality (ADEQ) Health-Based Guidance Level (HBGL) of 14 µg/L in Table 2 of the NDS Facility QAPP. Concentrations greater than the MDL and less than the RDL were flagged by the laboratory with J to indicate the concentrations were estimated.

VOCs

Overall Assessment

The samples were analyzed for VOCs by EPA Method 8260B (Table 1 **Error! Reference source not found.**). The data reported for VOCs are considered to be usable with the identified qualifiers. Results for the target analytes for this specific project are usable and valid.

Holding Times

Holding times (time between sample collection and analysis) for the samples ranged from 8 to 13 days (Table 2). This is within the acceptable range of 14 days for preserved water samples.

Method Blank

One method blank was analyzed for each batch of analysis completed. This resulted in nine method blanks (batches WGI883877, WGI884517, WGI884247, WGI884962, WGI885284, WGI886419, WGI887020, WGI888472, and WGI903006).

VOCs were not detected in the method blanks above the laboratory method reporting limit with the following exceptions:

- Analyte cis-1,2-Dichloroethene in method blank R3807160-3 for batch WGI884517. Detected concentrations for these analytes were estimated and flagged by the laboratory with J.
- Analyte methylene chloride in method blank R3807269-3 for batch WGI884247. Detected concentrations for these analytes were estimated and flagged by the laboratory with J.

Corresponding laboratory results were qualified as appropriate.

MS/MSD

The MS/MSD sample sets were analyzed at the frequency for the number and types of samples analyzed (one MS/MSD set per batch of 20 samples). Four sample MS/MSD sets were reported using samples PF-2, TTU-2, TTU-8, TTU-13.

The %R and RPD results were within the limits stated in the laboratory report or results were appropriately qualified. The qualifiers were applied to the MS, MSD, and corresponding sample results as appropriate.

LCS

One laboratory control sample/laboratory control sample duplicate (LCS/LCSD) was analyzed for each batch of analysis completed, resulting in nine LCS/LCSD. The %R and RPD results were within the limits stated in the laboratory report or results were appropriately qualified. The qualifiers were applied to the LCS, LCSD, and corresponding sample results as appropriate.

Surrogates

The surrogate recoveries were within the limits stated in the laboratory reports for the SDGs.

Field Duplicate

A total of six field duplicates were collected and analyzed (Table 3). This meets the requirements of 1 per batch of 20 samples. The field duplicates match as follows:

- LI504535-13 (DUP-01) = LI504535-02 (TTU-EX-4)
- LI504991-08 (DUP-02) = LI504991-07 (TTU-10)
- LI506299-04 (DUP-6) = LI506299-02 (TTU-1)
- LI507025-02 (DUP-12) = LI507025-01 (TTU-19)
- LI507761-02 (DUP-13) = LI507761-01 (PF-2)
- LI517593-04 (DUP-01) = LI517593-01 (TTU-4)

For the samples and duplicates in the above list, chloroform was detected in duplicate L1504535-13 (DUP-01) and not detected in original sample L1504535-02 (TTU-EX-4). The RPD was not calculated for this result.

For the samples and duplicates in the above list, the following analytes were detected in original sample L1507025-01 (TTU-19) and not detected in duplicate L1507025-02 (DUP-12):

- 1,2,4-trimethylbenzene
- 1,3,5-trimethylbenzene
- 1-methyl-4 ethyl benzene
- ethylbenzene
- n-propylbenzene
- naphthalene
- total xylenes

The RPD was not calculated for these results.

VOCs were neither detected in the original samples nor the duplicate for laboratory samples for the following:

- L1504991-08 (DUP-02) = L1504991-07 (TTU-10)
- L1507761-02 (DUP-13) = L1507761-01 (PF-2)
- L1517593-04 (DUP-01) = L1517593-01 (TTU-4)

The RPD was not calculated for these results.

For the remaining samples and analytes, RPD was calculated, as follows, for the other duplicate results.

$$RPD = \frac{|Result_{Duplicate} - Result_{Original}|}{\frac{Result_{Duplicate} + Result_{Original}}{2}} \times 100$$

RPD for each pair was up to 29%, excluding results for benzene; 1,1-dichloroethene; cis-1,2-dichloroethene; methyl ethyl ketone, and trichloroethene for the sample and duplicate from TTU-19. These results were qualified with a J (The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.). The results for 5 original sample analyte and duplicate analyte pairs were estimated concentrations and qualified by the laboratory as J. The results for cis-1,2-dichloroethene for L1504535-02 (TTU-EX-4) and L1504535-13 (DUP-01) were qualified by the laboratory as B (the same analyte is found in the associated blank.). This does not impact the validity of the results. The laboratory results were appropriately qualified.

Trip Blank

One trip blank was collected during the sampling event. Trip blanks are a requirement of the NDS Facility QAPP. Benzene, carbon disulfide, and propene were detected in the trip blank (L1504991-09) above MDLs but

below RDLs and is considered to be estimated values. This does not impact the validity of the results. The laboratory results were appropriately qualified.

Sensitivity

The samples were reported to MDLs. Elevated non-detect results were reported for samples L1504535-02 (TTU-EXT-4) and L1504535-03 (TTU-EXT-3) due to required sample dilution. Undiluted MDLs and RDLs for 1,1-dichloroethene met the AWQS of 7.0 µg/L in Table 2 of the QAPP. Concentrations greater than the MDL and less than the RDL were flagged by the laboratory with J to indicate the concentrations were estimated.

1,4-Dioxane

Overall Assessment

The samples were analyzed for 1,4-Dioxane by EPA Method 8260B-SIM (Table 1). The data reported for 1,4-Dioxane is considered to be usable with the identified qualifiers. Results for the target analytes for this specific project are usable and valid.

Holding Times

Holding times (time between sample collection and analysis) for the samples ranged from 2 to 15 days (Table 2). Samples L1506299-01 (TTU-20), L1506299-02 (TTU-1), and L1506299-03 (TTU-2) were reported by the laboratory as analyzed outside of the acceptable range of 14 days for preserved water samples. Per conversations with the laboratory, the inconsistency is the result of a needing to complete two rounds of analysis for the samples. According to the laboratory, the internal standard utilized during the analysis ran out. Data from the first analysis would not be accurate; therefore, a second analysis was completed. As the time out-of-hold is one day and the results reported for the three samples are within historical concentrations for 1,4-dioxane for each respective well, the results for these three wells are usable and valid.

Method Blank

One method blank was analyzed for each batch of analysis completed. This resulted in 11 method blanks (batches WGI881003, WGI885425, WGI882718, WGI884513, WGI885800, WGI888703, WGI885092, WGI883858, WGI885635, WGI899822, and WGI900287). Concentrations of 1,4-dioxane were not detected in the method blanks above the laboratory method reporting limit. Corresponding laboratory results were qualified as appropriate.

MS/MSD

The MS/MSD sample sets were analyzed at the frequency for the number and types of samples analyzed (one MS/MSD set per batch of 20 samples). Five sample MS/MSD sets were reported using samples PF-2, TTU-2, TTU-8, TTU-9A, and TTU-13.

The %R and RPD results were within the limits stated in the laboratory report or results were appropriately qualified. The qualifiers were applied to the MS, MSD, and corresponding sample results as appropriate.

LCS

One LCS/LCSD was analyzed for each batch of analysis completed, resulting in 11 LCS/LCSD. The %R and RPD results were within the limits stated in the laboratory report or results were appropriately qualified. The qualifiers were applied to the LCS, LCSD, and corresponding sample results as appropriate.

Field Duplicate

A total of six field duplicates were collected and analyzed (Table 3). This meets the requirements of 1 per batch of 20 samples. The field duplicates match as follows:

- L1504535-13 (DUP-01) = L1504535-02 (TTU-EX-4)
- L1504991-08 (DUP-02) = L1504991-07 (TTU-10)
- L1506299-04 (DUP-6) = L1506299-02 (TTU-1)
- L1507025-02 (DUP-12) = L1507025-01 (TTU-19)
- L1507761-02 (DUP-13) = L1507761-01 (PF-2)
- L1517593-04 (DUP-01) = L1517593-01 (TTU-4)

1,4-Dioxane was neither detected in the original samples nor the duplicate for laboratory samples for the following:

- L1504991-08 (DUP-02) = L1504991-07 (TTU-10)
- L1507025-02 (DUP-12) = L1507025-01 (TTU-19)
- L1507761-02 (DUP-13) = L1507761-01 (PF-2)
- L1517593-04 (DUP-01) = L1517593-01 (TTU-4)

The RPD was not calculated for these results.

The RPD was calculated, as follows, for the other duplicate results.

$$RPD = \frac{|Result_{Duplicate} - Result_{Original}|}{\frac{Result_{Duplicate} + Result_{Original}}{2}} \times 100$$

RPD for the sample and duplicate from TTU-EX-4 was less than 30%. The RPD for the sample and duplicate from TTU-1 was 68% and qualified with a J (The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.). This does not impact the validity of the results. The laboratory results were appropriately qualified

Sensitivity

The samples were reported to MDLs, and no elevated non-detect results were reported. Site specific technical and regulatory standards for 1,4-dioxane were not included in Table 2 of the NDS Facility QAPP.

Tables:

Table 1. Sample Summary

Table 2. Analysis Summary

Table 3. Field Duplicates – Detections Only

Table I
Sample Summary
Nammo Defense Systems
Former Thermal Treatment Unit
Second Quarter 2022 Groundwater Sampling

Laboratory Sample ID	Client Sample ID	Sample Depth (feet)	Sample Type	Matrix	Date Collected	Requested Analysis			
						VOCs	1,4-Dioxane	Perchlorate	Perchlorate
						8260B	8260B SIM	314.0 Mod	6850
L1504535-01	TTU-EX-5	80	Normal	Water	6/13/2022	X	X	X	-
L1504535-02	TTU-EX-4	77	Normal	Water	6/13/2022	X	X	X	-
L1504535-03	TTU-EX-3	76	Normal	Water	6/13/2022	X	X	X	-
L1504535-04	TTU-EX-2	74	Normal	Water	6/13/2022	X	X	X	-
L1504535-05	TTU-EX-1	69	Normal	Water	6/13/2022	X	X	X	-
L1504535-06	TTU-17	80	Normal	Water	6/13/2022	X	X	X	-
R3805929-4	TTU-17	NA	LAB_D	Water	NA	-	-	X	-
L1504535-07	TTU-15	75	Normal	Water	6/13/2022	X	X	X	-
L1504535-08	TTU-16	80	Normal	Water	6/13/2022	X	X	X	-
L1504535-09	TTU-5	110	Normal	Water	6/13/2022	X	X	X	-
R3810198-3	TTU-5	NA	LAB_D	Water	NA	-	-	X	-
L1504535-10	TTU-12	82	Normal	Water	6/13/2022	X	X	X	-
L1504535-11	TTU-13	51	Normal	Water	6/13/2022	X	X	X	-
R3806676-4	TTU-13	NA	MS	Water	NA	-	X	-	-
R3806676-5	TTU-13	NA	MS_D	Water	NA	-	X	-	-
R3807160-6	TTU-13	NA	MS	Water	NA	X	-	-	-
R3807160-7	TTU-13	NA	MS_D	Water	NA	X	-	-	-
R3810198-7	TTU-13	NA	MS	Water	NA	-	-	X	-
R3810198-8	TTU-13	NA	MS_D	Water	NA	-	-	X	-
L1504535-12	TTU-9A	61	Normal	Water	6/13/2022	X	X	X	-
R3810199-12	TTU-9A	NA	MS	Water	NA	-	-	X	-
L1504535-13	DUP-01	NR	Normal	Water	6/13/2022	X	X	X	-
L1504918-01	PF-2	NR	Normal	Water	6/14/2022	-	-	-	X
320-89098-1 MS	PF-2	NA	MS	Water	NA	-	-	-	X
320-89098-1 MSD	PF-2	NA	MS_D	Water	NA	-	-	-	X
L1504991-01	TTU-14	69	Normal	Water	6/14/2022	X	X	X	-
L1504991-02	TTU-4	57	Normal	Water	6/14/2022	X	X	X	-
R3810199-11	TTU-4	NA	MS	Water	NA	-	-	X	-
L1504991-03	TTU-8	164	Normal	Water	6/14/2022	X	X	X	-
R3806943-4	TTU-8	NA	MS	Water	NA	X	-	-	-
R3806943-5	TTU-8	NA	MS_D	Water	NA	X	-	-	-
R3808161-4	TTU-8	NA	MS	Water	NA	-	X	-	-
R3808161-5	TTU-8	NA	MS_D	Water	NA	-	X	-	-
R3810199-3	TTU-8	NA	MS	Water	NA	-	-	X	-
R3810199-4	TTU-8	NA	MS_D	Water	NA	-	-	X	-
L1504991-04	TTU-3	108	Normal	Water	6/14/2022	X	X	X	-
L1504991-05	TTU-7	164	Normal	Water	6/14/2022	X	X	X	-
R3810199-6	TTU-7	NA	MS	Water	NA	-	-	X	-
L1504991-06	TTU-6	143	Normal	Water	6/14/2022	X	X	X	-
R3810199-7	TTU-6	NA	MS	Water	NA	-	-	X	-
L1504991-07	TTU-10	147	Normal	Water	6/14/2022	X	X	X	-
R3810199-8	TTU-10	NA	MS	Water	NA	-	-	X	-
L1504991-08	DUP-02	NR	Normal	Water	6/14/2022	X	X	X	-
R3810199-13	DUP-02	NA	MS	Water	NA	-	-	X	-
L1504991-09	TRIP BLANK	NR	Normal	Water	6/14/2022	X	-	-	-
L1506299-01	TTU-20	73	Normal	Water	6/16/2022	X	X	X	-
L1506299-02	TTU-1	50	Normal	Water	6/16/2022	X	X	X	-
L1506299-03	TTU-2	114	Normal	Water	6/16/2022	X	X	X	-

Table I
Sample Summary
Nammo Defense Systems
Former Thermal Treatment Unit
Second Quarter 2022 Groundwater Sampling

Laboratory Sample ID	Client Sample ID	Sample Depth (feet)	Sample Type	Matrix	Date Collected	Requested Analysis			
						VOCs	1,4-Dioxane	Perchlorate	Perchlorate
						8260B	8260B SIM	314.0 Mod	6850
R3808558-4	TTU-2	NA	MS	Water	NA	X	-	-	-
R3808558-5	TTU-2	NA	MS_D	Water	NA	X	-	-	-
R3810389-3	TTU-2	NA	MS	Water	NA	-	X	-	-
R3810389-4	TTU-2	NA	MS_D	Water	NA	-	X	-	-
R3811786-8	TTU-2	NA	MS	Water	NA	-	-	X	-
R3811786-9	TTU-2	NA	MS_D	Water	NA	-	-	X	-
L1506299-04	DUP-06	NR	Normal	Water	6/16/2022	X	X	X	-
L1507025-01	TTU-19	73	Normal	Water	6/20/2022	X	X	X	-
R3806761-4	TTU-19	NA	MS	Water	NA	-	-	-	-
R3806761-5	TTU-19	NA	MS_D	Water	NA	-	-	-	-
L1507025-02	DUP-12	NR	Normal	Water	6/20/2022	X	X	X	-
L1507025-03	TTU-11	73	Normal	Water	6/20/2022	X	X	X	-
R3814480-11	TTU-11	NA	MS	Water	NA	-	-	X	-
L1507028-01	TTU-19	73	Normal	Water	6/20/2022	-	-	-	X
320-89262-1 MS	TTU-19	NA	MS	Water	NA	-	-	-	X
320-89262-1 MSD	TTU-19	NA	MS_D	Water	NA	-	-	-	X
L1507028-02	TTU-11	73	Normal	Water	6/20/2022	-	-	-	X
L1507761-01	PF-2	400	Normal	Water	6/21/2022	X	X	-	-
R3810250-4	PF-2	NA	MS	Water	NA	X	-	-	-
R3810250-5	PF-2	NA	MS_D	Water	NA	X	-	-	-
R3808162-4	PF-2	NA	MS	Water	NA	-	X	-	-
R3808162-5	PF-2	NA	MS_D	Water	NA	-	X	-	-
L1507761-02	DUP-13	NR	Normal	Water	6/21/2022	X	X	-	-
L1517593-01	TTU-4	57	Normal	Water	7/21/2022	X	X	-	-
L1517593-02	TTU-9A	61	Normal	Water	7/21/2022	X	X	-	-
R3818660-4	TTU-9A	NA	MS	Water	NA	-	X	-	-
R3818660-5	TTU-9A	NA	MS_D	Water	NA	-	X	-	-
L1517593-03	TTU-5	110	Normal	Water	7/21/2022	X	X	-	-
L1517593-04	DUP-01	NR	Normal	Water	7/21/2022	X	X	-	-

Notes:

- MS = Matrix Spike
- MS_D = Matrix Spike Duplicate
- LAB_D = Laboratory Duplicate
- NR = Not Recorded
- NA = Not Applicable
- VOCs = Volatile Organic Compounds
- SIM = Selected Ion Monitoring
- Mod = Modified
- = Analysis not requested
- X = Analysis requested

Table 2
Analysis Summary
Nammo Defense Systems
Former Thermal Treatment Unit
Second Quarter 2022 Groundwater Sampling

Laboratory Sample ID	Client Sample ID	Date Collected	Preparation Date	Date Analyzed	Analysis Batch	Holding Time (days)	Notes
Perchlorate by 314.0 Mod							
LI504535-01	TTU-EX-5-80-20220613	6/13/2022	6/21/2022	6/21/2022	WG1881121	8	
LI504535-02	TTU-EX-4-77-20220613	6/13/2022	6/21/2022	6/21/2022	WG1881121	8	Sample required dilution.
LI504535-03	TTU-EX-3-76-20220613	6/13/2022	6/21/2022	6/21/2022	WG1881121	8	Sample required dilution.
LI504535-04	TTU-EX-2-74-2022-613	6/13/2022	6/21/2022	6/21/2022	WG1881121	8	Sample required dilution.
LI504535-05	TTU-EX-1-69-20220613	6/13/2022	6/21/2022	6/21/2022	WG1881121	8	Sample required dilution.
LI504535-06	TTU-17-80-20220613	6/13/2022	6/21/2022	6/21/2022	WG1881121	8	
LI504535-07	TTU-15-75-20220613	6/13/2022	6/21/2022	6/21/2022	WG1881121	8	Sample required dilution.
LI504535-08	TTU-16-80-20220613	6/13/2022	6/23/2022	6/23/2022	WG1881123	10	Sample required dilution.
LI504535-09	TTU-5-110-20220613	6/13/2022	6/22/2022	6/22/2022	WG1881123	9	
LI504535-10	TTU-12-82-20220613	6/13/2022	6/23/2022	6/23/2022	WG1881123	10	Sample required dilution.
LI504535-11	TTU-13-51-20220613	6/13/2022	6/23/2022	6/23/2022	WG1881123	10	Sample required dilution.
LI504535-12	TTU-9A-61-20220613	6/13/2022	6/23/2022	6/23/2022	WG1883531	10	
LI504535-13	DUP-01	6/13/2022	6/23/2022	6/23/2022	WG1881123	10	Sample required dilution.
LI504991-01	TTU-14-69-20220614	6/14/2022	6/23/2022	6/23/2022	WG1881123	9	Sample required dilution.
LI504991-02	TTU-4-57-20220614	6/14/2022	6/22/2022	6/22/2022	WG1883531	8	
LI504991-03	TTU-8-164-20220614	6/14/2022	6/22/2022	6/22/2022	WG1883531	8	
LI504991-04	TTU-3-108-20220614	6/14/2022	6/23/2022	6/23/2022	WG1881123	9	Sample required dilution.
LI504991-05	TTU-7-164-20220614	6/14/2022	6/22/2022	6/22/2022	WG1883531	8	
LI504991-06	TTU-6-143-20220614	6/14/2022	6/22/2022	6/22/2022	WG1883531	8	
LI504991-07	TTU-10-147-20220614	6/14/2022	6/23/2022	6/23/2022	WG1883531	9	
LI504991-08	DUP-02	6/14/2022	6/23/2022	6/23/2022	WG1883531	9	
LI506299-01	TTU-20-73-20220616	6/16/2022	7/7/2022	7/7/2022	WG1891334	21	Sample required dilution.
LI506299-02	TTU-1-50-20220616	6/16/2022	6/24/2022	6/24/2022	WG1883354	8	Sample required dilution.
LI506299-03	TTU-2-114-20220616	6/16/2022	6/24/2022	6/24/2022	WG1883354	8	Sample required dilution.
LI506299-04	DUP-06	6/16/2022	7/7/2022	7/7/2022	WG1891334	21	Sample required dilution.
LI507025-01	TTU-19-73-20220620	6/20/2022	7/13/2022	7/13/2022	WG1884431	23	Sample required dilution.
LI507025-02	DUP-12	6/20/2022	7/13/2022	7/13/2022	WG1884431	23	Sample required dilution.
LI507025-03	TTU-11-73-20220620	6/20/2022	7/13/2022	7/13/2022	WG1894626	23	
Perchlorate by 6850							
LI504918-01	PF-2-2022-614	6/14/2022	6/22/2022	6/22/2022	597534	8	
LI507028-01	TTU-19-73-20220620	6/20/2022	6/25/2022	7/11/2022	598551	21	Sample required dilution.
LI507028-02	TTU-11-73-20220620	6/20/2022	6/25/2022	6/25/2022	598551	5	
Volatile Organic Compounds by 8260B							
LI504535-01	TTU-EX-5-80-20220613	6/13/2022	6/23/2022	6/23/2022	WG1884517	10	
LI504535-02	TTU-EX-4-77-20220613	6/13/2022	6/24/2022	6/24/2022	WG1884517	11	Sample required dilution.
LI504535-03	TTU-EX-3-76-20220613	6/13/2022	6/24/2022	6/24/2022	WG1884517	11	Sample required dilution.
LI504535-04	TTU-EX-2-74-2022-613	6/13/2022	6/24/2022	6/24/2022	WG1884517	11	Sample required dilution.
LI504535-05	TTU-EX-1-69-20220613	6/13/2022	6/24/2022	6/24/2022	WG1884517	11	Sample required dilution.
LI504535-06	TTU-17-80-20220613	6/13/2022	6/23/2022	6/23/2022	WG1884517	10	
LI504535-07	TTU-15-75-20220613	6/13/2022	6/24/2022	6/24/2022	WG1884517	11	
LI504535-08	TTU-16-80-20220613	6/13/2022	6/24/2022	6/24/2022	WG1884517	11	Sample required dilution.
LI504535-09	TTU-5-110-20220613	6/13/2022	6/24/2022	6/24/2022	WG1884517	11	
LI504535-10	TTU-12-82-20220613	6/13/2022	6/24/2022	6/24/2022	WG1884517	11	Sample required dilution.
LI504535-11	TTU-13-51-20220613	6/13/2022	6/24/2022	6/24/2022	WG1884517	11	
LI504535-12	TTU-9A-61-20220613	6/13/2022	6/24/2022	6/24/2022	WG1884517	11	
LI504535-13	DUP-01	6/13/2022	6/24/2022	6/24/2022	WG1884517	11	Sample required dilution.
LI504991-01	TTU-14-69-20220614	6/14/2022	6/23/2022	6/23/2022	WG1883877	9	
			6/24/2022	6/24/2022	WG1884962	10	Sample required dilution.
LI504991-02	TTU-4-57-20220614	6/14/2022	6/23/2022	6/23/2022	WG1883877	9	
LI504991-03	TTU-8-164-20220614	6/14/2022	6/23/2022	6/23/2022	WG1883877	9	
LI504991-04	TTU-3-108-20220614	6/14/2022	6/23/2022	6/23/2022	WG1883877	9	
LI504991-05	TTU-7-164-20220614	6/14/2022	6/23/2022	6/23/2022	WG1883877	9	
LI504991-06	TTU-6-143-20220614	6/14/2022	6/24/2022	6/24/2022	WG1884247	10	
LI504991-07	TTU-10-147-20220614	6/14/2022	6/24/2022	6/24/2022	WG1884247	10	
LI504991-08	DUP-02	6/14/2022	6/24/2022	6/24/2022	WG1884247	10	
LI506299-01	TTU-20-73-20220616	6/16/2022	6/26/2022	6/26/2022	WG1885284	10	
			6/29/2022	6/29/2022	WG1887020	13	Sample required dilution.
LI506299-02	TTU-1-50-20220616	6/16/2022	6/26/2022	6/26/2022	WG1885284	10	
			6/29/2022	6/29/2022	WG1887020	13	
LI506299-03	TTU-2-114-20220616	6/16/2022	6/26/2022	6/26/2022	WG1885284	10	
			6/29/2022	6/29/2022	WG1887020	13	Sample required dilution.
LI506299-04	DUP-06	6/16/2022	6/26/2022	6/26/2022	WG1885284	10	
			6/29/2022	6/29/2022	WG1887020	13	
LI507025-01	TTU-19-73-20220620	6/20/2022	6/28/2022	6/28/2022	WG1886419	8	Sample required dilution.
LI507025-02	DUP-12	6/20/2022	6/28/2022	6/28/2022	WG1886419	8	Sample required dilution.

Table 2
Analysis Summary
Nammo Defense Systems
Former Thermal Treatment Unit
Second Quarter 2022 Groundwater Sampling

Laboratory Sample ID	Client Sample ID	Date Collected	Preparation Date	Date Analyzed	Analysis Batch	Holding Time (days)	Notes
Volatile Organic Compounds by 8260B							
LI507025-03	TTU-11-73-20220620	6/20/2022	6/28/2022	6/28/2022	WG1886419	8	Sample required dilution.
LI507761-01	PF-2-400-20220621	6/21/2022	6/30/2022	6/30/2022	WG1888472	9	
LI507761-02	DUP-13	6/21/2022	6/30/2022	6/30/2022	WG1888472	9	
LI517593-01	TTU-4-57-20220721	7/21/2022	7/30/2022	7/30/2022	WG1903006	9	
LI517593-02	TTU-9A-61-20220721	7/21/2022	7/30/2022	7/30/2022	WG1903006	9	
LI517593-03	TTU-5-110-20220721	7/21/2022	7/30/2022	7/30/2022	WG1903006	9	
LI517593-04	DUP-01	7/21/2022	7/30/2022	7/30/2022	WG1903006	9	
1,4-Dioxane by 8260B-SIM							
LI504535-01	TTU-EX-5-80-20220613	6/13/2022	6/17/2022	6/17/2022	WG1881003	4	
LI504535-02	TTU-EX-4-77-20220613	6/13/2022	6/22/2022	6/22/2022	WG1882718	9	
LI504535-03	TTU-EX-3-76-20220613	6/13/2022	6/24/2022	6/24/2022	WG1884513	11	Sample required dilution.
LI504535-04	TTU-EX-2-74-2022-613	6/13/2022	6/24/2022	6/24/2022	WG1884513	11	Sample required dilution.
LI504535-05	TTU-EX-1-69-20220613	6/13/2022	6/24/2022	6/24/2022	WG1884513	11	Sample required dilution.
LI504535-06	TTU-17-80-20220613	6/13/2022	6/22/2022	6/22/2022	WG1882718	9	
LI504535-07	TTU-15-75-20220613	6/13/2022	6/22/2022	6/22/2022	WG1882718	9	
LI504535-08	TTU-16-80-20220613	6/13/2022	6/24/2022	6/24/2022	WG1884513	11	Sample required dilution.
LI504535-09	TTU-5-110-20220613	6/13/2022	6/22/2022	6/22/2022	WG1882718	9	
LI504535-10	TTU-12-82-20220613	6/13/2022	6/22/2022	6/22/2022	WG1882718	9	
LI504535-11	TTU-13-51-20220613	6/13/2022	6/22/2022	6/22/2022	WG1882718	9	
LI504535-12	TTU-9A-61-20220613	6/13/2022	6/22/2022	6/22/2022	WG1882718	9	
LI504535-13	DUP-01	6/13/2022	6/22/2022	6/22/2022	WG1882718	9	
LI504991-01	TTU-14-69-20220614	6/14/2022	6/24/2022	6/24/2022	WG1884513	10	Sample required dilution.
LI504991-02	TTU-4-57-20220614	6/14/2022	6/22/2022	6/22/2022	WG1882718	8	
LI504991-03	TTU-8-164-20220614	6/14/2022	6/27/2022	6/27/2022	WG1885635	13	
LI504991-04	TTU-3-108-20220614	6/14/2022	6/24/2022	6/24/2022	WG1885092	10	
LI504991-05	TTU-7-164-20220614	6/14/2022	6/24/2022	6/24/2022	WG1885092	10	
LI504991-06	TTU-6-143-20220614	6/14/2022	6/24/2022	6/24/2022	WG1885092	10	
LI504991-07	TTU-10-147-20220614	6/14/2022	6/24/2022	6/24/2022	WG1885092	10	
LI504991-08	DUP-02	6/14/2022	6/24/2022	6/24/2022	WG1885092	10	
LI506299-01	TTU-20-73-20220616	6/16/2022	7/1/2022	7/1/2022	WG1888703	15	Sample required dilution.
LI506299-02	TTU-1-50-20220616	6/16/2022	7/1/2022	7/1/2022	WG1888703	15	
LI506299-03	TTU-2-114-20220616	6/16/2022	7/1/2022	7/1/2022	WG1888703	15	Sample required dilution.
LI506299-04	DUP-06	6/16/2022	6/23/2022	6/23/2022	WG1883858	7	
LI507025-01	TTU-19-73-20220620	6/20/2022	6/25/2022	6/25/2022	WG1885425	5	
LI507025-02	DUP-12	6/20/2022	6/25/2022	6/25/2022	WG1885425	5	
LI507025-03	TTU-11-73-20220620	6/20/2022	6/25/2022	6/25/2022	WG1885425	5	
LI507761-01	PF-2-400-20220621	6/21/2022	6/27/2022	6/27/2022	WG1885800	6	
LI507761-02	DUP-13	6/21/2022	6/27/2022	6/27/2022	WG1885800	6	
LI517593-01	TTU-4-57-20220721	7/21/2022	7/25/2022	7/25/2022	WG1900287	4	
LI517593-02	TTU-9A-61-20220721	7/21/2022	7/23/2022	7/23/2022	WG1899822	2	
LI517593-03	TTU-5-110-20220721	7/21/2022	7/23/2022	7/23/2022	WG1899822	2	
LI517593-04	DUP-01	7/21/2022	7/23/2022	7/23/2022	WG1899822	2	

Notes:

SIM = Selected Ion Monitoring

Mod = Modified

Table 3
Field Duplicates - Detections Only
Nammo Defense Systems
Former Thermal Treatment Unit
Second Quarter 2022 Groundwater Sampling

Analyte	Original Sample ID	Laboratory Result (µg/L)	Laboratory Flag	Duplicate Sample ID	Duplicate Laboratory Result (µg/L)	Duplicate Laboratory Flag	RPD (%)	Laboratory Result Validation Qualifier	Duplicate Laboratory Result Validation Qualifier	Reason for Validation Qualifier
Perchlorate	L1504535-02 (TTU-EX-4)	88,300	-	L1504535-13 (DUP-01)	94,700	-	7%	-	-	NA
1,4-Dioxane	L1504535-02 (TTU-EX-4)	27.4	-	L1504535-13 (DUP-01)	26.1	-	5%	-	-	NA
1,1-Dichloroethene	L1504535-02 (TTU-EX-4)	81.6	-	L1504535-13 (DUP-01)	89.4	-	9%	-	-	NA
Chloroform	L1504535-02 (TTU-EX-4)	<2.22	-	L1504535-13 (DUP-01)	1.37	J	NC	-	-	NA
cis-1,2-Dichloroethene	L1504535-02 (TTU-EX-4)	3.09	BJ	L1504535-13 (DUP-01)	2.61	BJ	17%	-	-	NA
Trichloroethene	L1504535-02 (TTU-EX-4)	579	-	L1504535-13 (DUP-01)	635	-	9%	-	-	NA
Perchlorate	L1506299-02 (TTU-1)	38,700	-	L1506299-04 (DUP-6)	13,200	-	98%	J	J	I
1,4-Dioxane	L1506299-02 (TTU-1)	17.5	Q	L1506299-04 (DUP-6)	35.5	-	68%	J	J	I
1,1-Dichloroethene	L1506299-02 (TTU-1)	0.786	J	L1506299-04 (DUP-6)	0.902	J	14%	-	-	NA
Trichloroethene	L1506299-02 (TTU-1)	4.42	-	L1506299-04 (DUP-6)	4.12	-	7%	-	-	NA
Perchlorate	L1507025-01 (TTU-19)	295	-	L1507025-02 (DUP-12)	42.9	J	149%	J	J	I
Acetone	L1507025-01 (TTU-19)	367	J	L1507025-02 (DUP-12)	280	J	27%	-	-	NA
Benzene	L1507025-01 (TTU-19)	2.79	J	L1507025-02 (DUP-12)	4.31	J	43%	J	J	I
1,1-Dichloroethene	L1507025-01 (TTU-19)	22.9	-	L1507025-02 (DUP-12)	41.8	-	58%	J	J	I
cis-1,2-Dichloroethene	L1507025-01 (TTU-19)	34.6	-	L1507025-02 (DUP-12)	23.4	-	39%	J	J	I
Dichloromethane	L1507025-01 (TTU-19)	8.03	J	L1507025-02 (DUP-12)	10.8	J	29%	-	-	NA
Ethylbenzene	L1507025-01 (TTU-19)	2.18	J	L1507025-02 (DUP-12)	<1.37	-	NC	-	-	NA
1-Methyl-4 ethyl benzene	L1507025-01 (TTU-19)	4.42	J	L1507025-02 (DUP-12)	<2.08	-	NC	-	-	NA
Methyl Ethyl Ketone	L1507025-01 (TTU-19)	548	-	L1507025-02 (DUP-12)	350	-	44%	J	J	I
Naphthalene	L1507025-01 (TTU-19)	11.1	J	L1507025-02 (DUP-12)	<10.0	-	NC	-	-	NA
n-Propylbenzene	L1507025-01 (TTU-19)	1.03	J	L1507025-02 (DUP-12)	<0.993	-	NC	-	-	NA
Trichloroethene	L1507025-01 (TTU-19)	189	-	L1507025-02 (DUP-12)	373	-	65%	J	J	I
1,2,4-Trimethylbenzene	L1507025-01 (TTU-19)	11.3	-	L1507025-02 (DUP-12)	<3.22	-	NC	-	-	NA
1,3,5-Trimethylbenzene	L1507025-01 (TTU-19)	2.55	J	L1507025-02 (DUP-12)	<1.04	-	NC	-	-	NA
Total Xylenes	L1507025-01 (TTU-19)	8.87	J	L1507025-02 (DUP-12)	<1.74	-	NC	-	-	NA

Notes:

RPD - Relative Percent Difference

NC - Not Calculated

NA - Not Applicable

µg/L - micrograms per liter

B - The same analyte is found in the associated blank.

J - The identification of the analyte is acceptable; the reported value is an estimate.

Q - Sample was prepared and/or analyzed past holding time as defined in the method. Concentrations should be considered minimum values.

I - Field duplicate RPD exceeded 30%.

< - Less than

% - Percent