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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: Third 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 Third Quarter 2022 (Q3 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.

It was requested in comments received following review of the DRAFT TTU First Quarter 2022 Groundwater Monitoring Results that a complete historical data summary table be developed and included in future reports. Pinyon is currently developing a groundwater monitoring database whereby preparation and presentation of historical data summary tables will be made possible. Pinyon expects to present the initial historical summary table as part of the Fourth Quarter/2022 Annual Report, which will be prepared following completion of the Fourth Quarter 2022 groundwater sampling.

1. SCOPE OF ACTIVITIES

With the exception of wells TTU-1 and TTU-2, groundwater monitoring and pumping/extraction wells were sampled between September 3 and 9, 2022. Due to issues associated with storage tank levels and power supply, wells TTU-1 and TTU-2 were not sampled until October 10 and 11, 2022. Well construction details are summarized in Table 1 and well locations are shown in Figure 2. Drilling logs and well construction diagrams are presented in Attachment 1.

1.1 Deviations from Work Plan

The Q3 2022 groundwater monitoring was conducted in accordance with the TTU SAP and NDS Facility QAPP, with the exception of the deviations outlined below:

- Due to inaccurate storage tank level gauges and power supply issues, wells TTU-1 and TTU-2 were sampled on October 10 (TTU-2) and October 11, 2022 (TTU-1) rather than during the initial sampling in September 2022.

- TTU-10 had a detectable perchlorate concentration of 37.0 µg/L, which is similar to the concentration from the original sample collected during Q1 2022 (31.8 µg/L). Based on the Q1 detection and the trigger level (TL) resampling criteria discussed in Section 2.2, Footnote 1, no resampling was conducted. However, if the results from the resampling of TTU-10 in Q1 are used instead of the original sample, the TL would apply with resampling warranted. An analysis of the apparent variability within TTU-10 will be conducted as part of the Q4 annual report. No other TL concentrations were observed in the Q3 2022 laboratory results.

1.2 Groundwater Elevation Measurement

Table 2 provides a summary of groundwater elevation gauging for the 3Q 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.

1.3 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 2. No issues with field parameter stabilization during purging were encountered during the 3Q 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 Q2 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) using Method 8260B, 1,4-dioxane using Method 8260B-SIM, and perchlorate using Method 314.0 Mod. The sample from 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.

1.4 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.

2. GROUNDWATER MONITORING RESULTS

Laboratory reports and chain-of-custody forms are presented in Attachment 3. The following data summary tables are provided:

- Table 1 – Former Thermal Treatment Unit 2022 Groundwater Well Network
- Table 2 – Groundwater Elevations - Third Quarter 2022
- Table 3 – Summary of Perchlorate Concentrations - Third Quarter 2022
- Table 4 – Summary of Detected VOC Concentrations - Third 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). The information made available to Pinyon has been added to Table 1. Missing data will be gathered during the Q4 2022 sampling event and included in the Annual Report.

The following figures are provided for reference and data presentation:

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

2.1 Estimated Groundwater Flow Direction

The groundwater gradient was measured between wells TTU-15 (1,320.06 feet above mean sea level (ft-msl)) and TTU-10 (1,139.93 ft-msl) at approximately 0.10 ft/ft (feet per foot). This gradient is similar to the 0.10 ft/ft reported during the Q2 2022 groundwater sampling event. The groundwater gradient suggests a westerly flow direction (Figure 2).

2.2 Groundwater Laboratory Results

The perchlorate data indicates results from 22 of the 25 wells sampled contained concentrations above the laboratory detection limit. These data are generally consistent with Q2 2022. Of 22 detectable concentrations, 6 samples were below the Arizona Department of Environmental Quality (ADEQ) Health Based Guidance

Level (HBGL) of 14 micro grams per liter (µg/L). Sixteen sampled wells exceeded the HBGL with the highest concentration of 913,000 µg/L measured in TTU-16.

The TCE data indicates that 16 of the 25 samples contained concentrations above the laboratory detection limit. Of those TCE concentrations, 14 exceeded the 5 µg/L Arizona Aquifer Water Quality Standard (AWQS). The highest TCE concentration (13,200 µg/L) was measured in TTU-20.

The 1,4-dioxane data indicates 15 of 25 samples contained concentrations above the laboratory detection limit, 14 of which also exceeded the 3.5 µg/L interim screening level. The highest concentration (3,820 µg/L) was measured in TTU-16.

The 1,1-dichloroethene (DCE) data indicates results from 14 of the 25 samples contained concentrations above the laboratory detection limit, Concentrations measured in 10 wells exceeded the 7 µg/L AWQS. The highest 1,1 DCE concentration (2,610 µg/L) was measured in TTU-20.

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.
- For TTU-6, if 1,4-dioxane exceeds 3.5 µg/L and/or other VOCs reach 50% of the AWQS.
- 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 concentration[1] of a COPC that was previously measured at a concentration exceeding the project screening level (e.g., AWQS).

With respect to the Q3 2022 sampling results, no TLs were exceeded with the possible exception of TTU-10, as discussed in section 1.1. [1]

2.3 Groundwater Concentration Versus Time

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

2.4 Discussion

Based on the Q3 2022 groundwater monitoring results, no TL trigger conditions were encountered for the contingency plan wells with the possible exception of TTU-10, as discussed in section 1.1. These conditions will continue to be tracked during future sampling events Using definition of order of magnitude changes established in Section 2.2, Footnote 1, no order of magnitude concentration increases were observed between the Q2 and Q3 of 2022 for any of the COPCs. Conditions in all wells will continue to be evaluated during future monitoring events and a detailed evaluation of the data, including data trends and an evaluation of the interim remedial measure will be provided in the Q4/Annual 2022 Report.

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[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 quarterly 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. For results where no detectable concentration is reported one-half of the method detection limit will be used for calculation of the average.

2.5 Data Validation

A Tier 1A 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 5.

3. CLOSING

Overall, the Q3 2022 groundwater monitoring data indicates primarily stable conditions associated with the site. The upcoming evaluation during the Q4 annual report of long- and short-term concentration trends, as well as the evaluation of the interim remedial measures, will provide a greater understanding of current plume containment and the associated risks to area groundwater production wells.

Sincerely,
Pinyon Environmental, Inc.

Jeremy Musson
Principal

Arianne Godwin
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Tables

Table 1 – Former Thermal Treatment Unit 2022 Groundwater Monitoring Well Network
Table 2 – Groundwater Elevation – Third Quarter 2022
Table 3 – Summary of Detected VOC Concentrations – Third Quarter 2022
Table 4 – Summary of Perchlorate Concentrations – Third Quarter 2022
Table 5 – Historical 1,4-Dioxane and TCE Concentrations

Figures

Figure 1 – Site Vicinity Map
Figure 2 – Groundwater Elevations and Contours – Third Quarter 2022
Figure 3 – Perchlorate Detections in Groundwater – Third Quarter 2022
Figure 4 – VOC Detections in Groundwater – Third Quarter 2022

Attachments

Attachment 1 – Drilling Logs and Well Construction Diagrams
Attachment 2 – Field Notes
Attachment 3 – Laboratory Analytical Reports
Attachment 4 – Concentration and Groundwater Elevation versus Time Plots
Attachment 5 – Data Validation Memo

Tables

TABLE 1:
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 1:
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	Nammo Defense Systems Inc.	P.O. Box 34299 Mesa, AZ 85288	Steel Open Borehole	8 8	19-110.7	19 None	110.7
TTU-EX-2	1/23/2020	33 29 57.61	-111 42 53.79	NP	NP	1316.40	NP	NP	55-231734	Extraction	Nammo Defense Systems Inc.	P.O. Box 34299 Mesa, AZ 85289	Steel Open Borehole	8 8	20-110	20 None	110
TTU-EX-3	1/24/2020	33 29 56.29	-111 42 54.12	NP	NP	1316.85	NP	NP	55-231731	Extraction	Nammo Defense Systems Inc.	P.O. Box 34299 Mesa, AZ 85290	Steel Open Borehole	8 8	20-101.45	20 None	111
TTU-EX-4	1/24/2020	33 29 55.46	-111 42 54.39	NP	NP	1319.96	NP	NP	55-231732	Extraction	Nammo Defense Systems Inc.	P.O. Box 34299 Mesa, AZ 85291	Steel Open Borehole	8 8	20-110.7	20 None	110.7
TTU-EX-5	1/24/2020	33 29 54.68	-111 42 54.62	NP	NP	1319.50	NP	NP	55-231736	Extraction	Nammo Defense Systems Inc.	P.O. Box 34299 Mesa, AZ 85292	Steel Open Borehole	8 8	20-110.8	20 None	110.8
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 amsl = 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

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: GROUNDWATER ELEVATIONS - THIRD QUARTER 2022

FORMER THERMAL TREATMENT UNIT

NAMMO DEFENSE SYSTEMS INC.

Location	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	10/11/2022	37.03	1,275.70
TTU-2	909087.852	761148.265	1314.44	10/10/2022	NC	N/A
TTU-3	909303.363	760888.204	1308.03	9/9/2022	90.65	1,217.38
TTU-4	909673.680	761041.975	1305.12	9/9/2022	53.05	1,252.07
TTU-5	908747.636	761102.227	1314.93	9/8/2022	80.84	1,234.09
TTU-6	909260.820	760560.096	1300.84	9/9/2022	128.69	1,172.15
TTU-7	909287.611	760527.269	1301.84	9/9/2022	133.87	1,167.97
TTU-8	909699.266	760514.908	1310.23	9/9/2022	151.60	1,158.63
TTU-9A	909974.490	761710.151	1318.04	9/8/2022	28.34	1,289.70
TTU-10	908960.114	760297.013	1302.42	9/9/2022	162.49	1,139.93
TTU-11	909029.758	761706.470	1339.20	9/3/2022	31.49	1,307.71
TTU-12	909105.990	761103.280	1312.21	9/9/2022	73.27	1,238.94
TTU-13	909405.920	761232.180	1310.79	9/8/2022	34.81	1,275.98
TTU-14	909224.260	761181.230	1319.30	9/9/2022	58.74	1,260.56
TTU-15	909185.100	762065.910	1350.85	9/8/2022	30.79	1,320.06
TTU-16	909124.980	761848.851	1338.55	9/8/2022	19.13	1,319.42
TTU-17	909370.903	762179.168	1347.49	9/8/2022	37.89	1,309.60
TTU-18	908215.829	761130.011	1320.25	NM	Assumed DRY	
TTU-19	909030.750	761687.700	1336.67	9/3/2022	29.49	1,307.18
TTU-20	909022.530	761681.990	1336.90	9/3/2022	31.21	1,305.69
TTU-EX-1	909350.574	761597.823	1321.69	9/8/2022	16.32	1,305.37
TTU-EX-2	909268.187	761493.214	1316.40	9/8/2022	23.66	1,292.74
TTU-EX-3	909134.941	761465.507	1316.85	9/8/2022	36.09	1,280.76
TTU-EX-4	909051.298	761442.876	1319.96	9/8/2022	41.95	1,278.01
TTU-EX-5	908971.770	761423.325	1319.50	9/8/2022	40.92	1,278.58
PF-1	909161.578	760140.434	1295.99	N/A	N/A	N/A
PF-2	909166.890	760122.250	1296.35	N/A	N/A	N/A

Notes:

intl ft - international foot

ft amsl - feet above mean sea level

ft btoc - feet below top of casing

NM - not measured

NC - not collected due to difficulty in obtaining accurate measurement - measuring tape was sticking to well sidewall

N/A - not applicable

TABLE 3: SUMMARY OF PERCHLORATE CONCENTRATIONS - THIRD QUARTER 2022

FORMER THERMAL TREATMENT UNIT
NAMMO DEFENSE SYSTEMS INC.

			Analyte	Perchlorate	
			EPA Method	314	6850
			Units	µg/L	
			HBGL	14	
Location	Sample Depth (ft btoc)	Sample Date	Sample Type	Concentration	
TTU-1	50	10/11/2022	Primary	**11,300**	--
DUP-01			Duplicate	**11,200**	--
TTU-2	114	10/10/2022	Primary	**157,000**	--
TTU-3	108	9/9/2022	Primary	**54.8**	--
TTU-4	57	9/9/2022	Primary	2.57 [J]	--
TTU-5	110	9/9/2022	Primary	1.25 [J]	--
TTU-6	143	9/9/2022	Primary	**42.1**	--
TTU-7	345	9/9/2022	Primary	1.04 [J]	--
TTU-8	164	9/9/2022	Primary	<4.00	--
DUP-03			Duplicate	0.614 [J]	--
TTU-9A	61	9/8/2022	Primary	6.57	--
TTU-10	165	9/9/2022	Primary	**37.0**	--
TTU-11	73	9/3/2022	Primary	<4.00	--
TTU-12	82	9/9/2022	Primary	**132,000**	--
TTU-13	51	9/8/2022	Primary	**36,900**	--
TTU-14	64	9/9/2022	Primary	**143,000**	--
TTU-15	75	9/8/2022	Primary	**5,510**	--
TTU-16	80	9/8/2022	Primary	**913,000**	--
TTU-17	80	9/8/2022	Primary	<4.00	--
TTU-19	73	9/3/2022	Primary	**67.6** [J, J3, J5]	--
TTU-20	73	9/3/2022	Primary	**528,000**	--
DUP-01			Duplicate	**537,000**	
TTU-EX-1	69	9/8/2022	Primary	**86,300**	--
TTU-EX-2	74	9/8/2022	Primary	**19,300**	--
TTU-EX-3	76	9/8/2022	Primary	**406,000**	--
TTU-EX-4	77	9/8/2022	Primary	**88,200**	--
TTU-EX-5	80	9/8/2022	Primary	<4.00	--
DUP-02			Duplicate	<4.00	
PF-2	400	9/9/2022	Primary	--	0.65

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.
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.

TABLE 4:
SUMMARY OF DETECTED VOC CONCENTRATIONS - THIRD QUARTER 2022
FORMER THERMAL TREATMENT UNIT
NAMMO DEFENSE SYSTEMS INC.

Sample ID	Sample Depth (ft btoc)	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	Chloroform	cis-1,2-dichloroethene	Dichloromethane (methylene chloride)	Diisopropyl ether	Isopropylbenzene	Napthalene	Propene	Tetrachloroethene	Toluene	trans-1,2-dichloroethene	1,1,2-trichloroethane	Trichloroethene	Vinyl chloride	4-ethyltoluene	2-butanone (MEK)	4-methyl-2-pentanone (MIBK)	1,2,4-trimethylbenzene	1,2,3-trimethylbenzene	1,3,5-trimethylbenzene	Xylene Total
		EPA Method	8260B SIM	8260B																												
		Unit	µg/L																													
		Screening Level	3.5$^{(1)}$	1800$^{(2)}$	2.8$^{(2)}$	7	600	NE	75	5	5	81$^{(2)}$	80$^{(3)}$	70	5	150$^{(2)}$	45$^{(2)}$	140	NE	5	1,000	100	5	5	2	NE	560$^{(2)}$	630$^{(2)}$	5.6$^{(2)}$	5.5$^{(2)}$	6.0$^{(2)}$	10,000
		Sample Date																														
PF-2	400	9/9/2022	<3	<50	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<5	<1	<1	<1	<2.5	<1	<1	<1	<1	<1	<1	<1	<10	<10	<1	<1	<1	<3
TTU-1	50	10/11/2022	**15.1**	<50.0	<1	1.06	<1	<1	<1	<1	<1	<1	<5	<1	<5	<1	<1	<5	<2.5^{J3}	<1	<1	<1	<1	**5.13**	<1^{J3}	<1	<10	<10	<1	<1	<1	<3
DUP-01			**14.5**	<50.0^{J4}	<1	1.26	<1	<1	<1	<1	<1	<1	<5	<1	<5	<1	<1	<5	<2.5^{J3}	<1	<1	<1	<1	**5.85**	<1^{J3}	<1	<10	<10	<1	<1	<1	<3
TTU-2	114	10/10/2011	**170**	<1,000^{J4}	<20.0	**86.3**	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0^{J3}	<100	<20.0	<100	<20.0	<20.0	<20.0	<50.0	<20.0	<20.0	<20.0^{J3}	<20.0	**596^{V}**	<20.0	<20.0	<200	<200	<20.0	<20.0	<20.0	<60.0
TTU-3	108	9/9/2022	<3	<50	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<5	<1	<1	<1	<2.5	<1	<1	<1	<1	<1	<1	<1	<10	<10	<1	<1	<1	<3
TTU-4	57	9/9/2022	<3	<50	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<5	<1	<1	<1	<2.5	<1	<1	<1	<1	<1	<1	<1	<10	<10	<1	<1	<1	<3
TTU-5	110	9/9/2022	<3	<50	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<5	<1	<1	<1	<2.5	<1	<1	<1	<1	<1	<1	<1	<10	<10	<1	<1	<1	<3
TTU-6	143	9/9/2022	<3	<50	<1	<1	<1	<1	<1	<1	<1	<!	<5	<1	<5	<1	<1	<1	<2.5	<1	<1	<1	<1	<1	<1	<1	<10	<10	<1	<1	<1	<3
TTU-7	345	9/9/2022	<3	<50	<1	<1	<1	<1	<1	<1	0.0960^{J}	<!	<5	<1	<5	<1	0.147^{J}	<1	4.11	<1	0.986^{J}	<1	<1	<1	<1	<1	<10	<10	<1	<1	<1	0.262^{J}
TTU-8	164	9/9/2022	<3	<50	<1	<1	<1	<1	<1	<1	<1	<!	<5	<1	<5	<1	<1	<1	<2.5	<1	<1	<1	<1	<1	<1	<1	<10	<10	<1	<1	<1	<3
DUP-03			<3	<50	<1	<1	<1	<1	<1	<1	<1	<!	<5	<1	<5	<1	<1	<1	<2.6	<1	<1	<1	<1	<1	<1	<1	<10	<10	<1	<1	<1	<3
TTU-9A	61	9/8/2022	<3	<50	<1	<1	<1	<1	<1	<1	<1	0.103^{J}	<5	<1	2.82^{J}	<1	<1	<1	<2.5	<1	<1	<1	<1	<1	<1	<1	<10	<10	<1	<1	<1	<3
TTU-10	165	9/9/2022	<3	<50	<1	<1	<1	<1	<1	<1	<1	<1	<5	<1	<5	<1	<1	<1	<2.5	<1	<1	<1	<1	<1	<1	<1	<10	<10	<1	<1	<1	<3
TTU-11	73	9/3/2022	<3	358$^{J, J3}$	<1	4.93^{J}	<1	<1	<1	<1	1.26^{J}	<1	<5	11.8	4.18^{J}	<1	<1	<1	<2.6	<1	<1	<1	<1	**58.2**	<1	<10	216	62.7^{J}	<10	<10	<10	<3
TTU-12	82	9/9/2022	**119**	<500	<1	**73.4**	<1	<1	<1	<1	<1	<1	<5	<1	<5	<1	<1	<1	<2.5	<1	<1	<1	<1	**529**	<1	<10	<100	<100	<10	<10	<10	<3
TTU-13	51	9/8/2022	**13.7**	<50	<1	3.06	<1	<1	<1	<1	<1	<1	<5	<1	<5	<1	<1	<1	<2.5	<1	<1	<1	<1	**7.06**	<1	<1	<10	<10	<1	<1	<1	<3
TTU-14	64	9/9/2022	**297**	<50	1.29	**155**	<1	<1	<1	<1	2.32	<1	2.12^{J}	2.12	<5	<1	<1	<1	<2.5	1.44	<1	<1	2.05	**1,020**	<1	<1	<10	<10	<1	<1	<1	<3
TTU-15	75	9/8/2022	**8.21**	<50	<1	0.694$^{J, J3}$	<1	<1	<1	<1	<1	<1	<5	0.937$^{J, J3}$	<5	<1	<1	<1	<2.5	<1	<1	<1	<1	**6.08**	<1	<1	<10	<10	<1	<1	<1	<3
TTU-16	80	9/8/2022	**3,820^{J3}**	<5000	<100	**478**	<100	<100	<100	<100	**30.2^{J}**	<100	<500	<100	**12,200**	<100	<100	<100	<250	<100	<100	<100	<100	**9,520**	<100	<100	<1000	<1000	<100	<100	<100	<300
TTU-17	80	9/8/2022	**242**	<50	<1	<1	<1	<1	<1	<1	<1	<1	<5	0.773^{J}	<5	<1	<1	<1	<2.5	<1	<1	<1	<1	2.10	<1	<1	<10	<10	<1	<1	<1	<3
TTU-19	73	9/3/2022	**152^{Q}**	170$^{J, J6}$	<1	**40.2**	<1	<1	<1	<1	3.68^{J}	<1	<5	61.6	**5.56^{J}**	<1	<1	<1	<2.6	<1	<1	2.11^{J}	<1	**293^{V}**	**2.28$^{J J5}$**	<5	329	3.4^{J}	<5	<5	<5	<3
TTU-20	73	9/3/2022	**1,140^{Q}**	<5000	**27.6^{J}**	**2,610^{J4}**	<1	<1	<1	<1	**77.9^{J}**	<1	17.2^{J}	**146**	<5	<1	<1	122^{J}	<2.5	<1	<1	18.9$^{J J4}$	<1	**13,200^{J4}**	<1	35.0^{J}	<1000	<1000	**105**	**42^{J}**	**27.7^{J}**	55.7^{J}
DUP-01			**1,250^{Q}**	<50	**28.8**	**2,230**	1.53	0.155^{J}	0.454^{J}	4.15	**77.7**	<2	19.8	**141**	<5	0.267^{J}	<1	<1	<2.6	**27.9**	1.42	22.2	**20.9^{J4}**	**10,700**	1.87	<1	<10	<10	<1	<1	<1	2.65^{J}
TTU-EX-1	69	9/8/2022	**68.2**	<50	0.194^{J}	**35.0**	<1	<1	<1	0.0867^{J}	0.104^{J}	<1	0.322^{J}	<1	<5	<1	<1	<1	<2.5	<1	<1	<1	0.292^{J}	**75.1**	<1	<1	<10	<10	<1	<1	<1	<3
TTU-EX-2	74	9/8/2022	**74.9**	<50	<1	**12.1**	<1	<1	<1	<1	0.104^{J}	<1	0.136^{J}	0.152^{J}	<5	<1	<1	<1	<2.5	<1	<1	<1	<1	**68.1**	<1	<1	<10	<10	<1	<1	<1	<3
TTU-EX-3	76	9/8/2022	**741**	<5,000	<1	**1,030**	<1	<1	<1	<1	**13.3^{J}**	<1	12.5^{J}	<1	<5	<1	<1	<1	<2.5	<1	<1	<1	<1	**7,220**	<1	<100	<1000	<1000	<100	<100	<100	<3
TTU-EX-4	77	9/8/2022	**41.4**	<1,000	<1	**92.1**	<1	<1	<1	<1	<1	<1	<5	2.56^{J}	<5	<1	<1	<1	<2.5	<1	<1	<1	<1	**698**	<1	<20.0	<200	<200	<20.0	<20.0	<20.0	<3
TTU-EX-5	80	9/8/2022	2.16^{J}	<50	<1	<1	<1	<1	<1	<1	<1	<1	<5	0.160^{J}	<5	<1	<1	<1	<2.5	<1	<1	<1	<1	4.96	<1	<1	<10	<10	<1	<1	<1	<3
DUP-02			<3	<50	<1	<1	<1	<1	<1	<1	<1	<1	<5	0.209^{J}	<5	<1	<1	<1	<2.6	<1	<1	<1	<1	**5.06**	<1	<1	<10	<10	<1	<1	<1	<4

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*
NS - Not Sampled
(1) - Interim Screening Level
(2) - Tap water regional screening levek, AWQS has not been established
(3) - The total trihalomethane (TTHM) standard is exceeded when the sum of the four compounds exceeds 80 µg/L as a rolling average

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 associarred batch QC was outside the established quality control range for accuracy
J5 - The sample matrix interfered with the ability to make any accurate determiniation, spike value is high
J6 - The sample matrix iterfered with the ability to make any accurate determinination, spike value is low
Q - Sample was prepared and/or analyzed past holding time as defined in the method. Concentration should be considered minimum values
V - The sample concentration is too high to evalulate accurate spike recoveries.

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

		Chemical Name	**1,4-Dioxane**	**Trichloroethene**
		EPA Method	**8260B SIM**	**8260B**
		Unit	**µg/l**	
Sample 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
	Primary	9/9/2022	<3	<1

TABLE 5:
HISTORICAL 1,4-DIOXANE AND TCE CONCENTRATIONS

FORMER THERMAL TREATMENT UNIT
NAMMO DEFENSE SYSTEMS INC.

		Chemical Name	**1,4-Dioxane**	**Trichloroethene**
		EPA Method	**8260B SIM**	**8260B**
		Unit	**µg/l**	
Sample ID	**Sample Type**	**Screening Level**	**3.5**$^{(1)}$	**5**
		Sample Date		
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
	Primary	10/11/2022	**15.1**	**5.13**
	Duplicate	10/11/2022	**14.5**	**5.85**

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

		Chemical Name	1,4-Dioxane	Trichloroethene
		EPA Method	8260B SIM	8260B
		Unit	µg/l	
Sample ID	Sample Type	Screening Level	3.5(1)	5
		Sample Date		
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**
	Primary	10/10/2022	**170**	**596^{V}**

TABLE 5:
HISTORICAL 1,4-DIOXANE AND TCE CONCENTRATIONS

FORMER THERMAL TREATMENT UNIT
NAMMO DEFENSE SYSTEMS INC.

		Chemical Name	**1,4-Dioxane**	**Trichloroethene**
		EPA Method	**8260B SIM**	**8260B**
		Unit	**µg/l**	
Sample 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 ^{J}
	Primary	6/14/2022	<3 ^{J3}	<1 ^{J3}
	Primary	9/9/2022	<3	<1

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

		Chemical Name	1,4-Dioxane	Trichloroethene
		EPA Method	8260B SIM	8260B
		Unit	µg/l	
Sample 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	NA
	Duplicate	7/21/2022	<3	NA
	Primary	9/9/2022	<3	<1

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

		Chemical Name	1,4-Dioxane	Trichloroethene
		EPA Method	8260B SIM	8260B
		Unit	µg/l	
Sample 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^{J}
	Primary	6/13/2022	**130**	<1
	Primary	7/21/2022	<3	NS
	Primary	9/9/2022	<3	<1

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

		Chemical Name	1,4-Dioxane	Trichloroethene
		EPA Method	8260B SIM	8260B
		Unit	µg/l	
Sample 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
	Primary	9/9/2022	<3	<1

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

		Chemical Name	1,4-Dioxane	Trichloroethene
		EPA Method	8260B SIM	8260B
		Unit	µg/l	
Sample 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
	Primary	9/9/2022	<3	<1

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

		Chemical Name	**1,4-Dioxane**	**Trichloroethene**
		EPA Method	**8260B SIM**	**8260B**
		Unit	**µg/l**	
Sample 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
	Primary	9/9/2022	<3	<1
	Duplicate	9/9/2022	<3	<1

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

		Chemical Name	**1,4-Dioxane**	**Trichloroethene**
		EPA Method	**8260B SIM**	**8260B**
		Unit	**µg/l**	
Sample 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 J
	Primary	6/13/2022	**4.82**	<1
	Primary	7/21/2022	<3	NS
	Primary	9/8/2022	<3	<1

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

		Chemical Name	**1,4-Dioxane**	**Trichloroethene**
		EPA Method	**8260B SIM**	**8260B**
		Unit	**µg/l**	
Sample 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
	Primary	9/9/2022	<3	<1

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

		Chemical Name	1,4-Dioxane	Trichloroethene
		EPA Method	8260B SIM	8260B
		Unit	µg/l	
Sample 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**
	Primary	9/3/2022	<3	**58.2**

TABLE 5:
HISTORICAL 1,4-DIOXANE AND TCE CONCENTRATIONS

FORMER THERMAL TREATMENT UNIT
NAMMO DEFENSE SYSTEMS INC.

		Chemical Name	1,4-Dioxane	Trichloroethene
		EPA Method	8260B SIM	8260B
		Unit	µg/l	
Sample 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** J	**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**
	Primary	9/9/2022	**119**	**529**

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

		Chemical Name	**1,4-Dioxane**	**Trichloroethene**
		EPA Method	**8260B SIM**	**8260B**
		Unit	**µg/l**	
Sample ID	**Sample Type**	**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**
	Primary	9/8/2022	**13.7**	**7.06**

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

		Chemical Name	**1,4-Dioxane**	**Trichloroethene**
		EPA Method	**8260B SIM**	**8260B**
		Unit	**µg/l**	
Sample 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**	**1,030**
	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**	**1,060**
	Primary	3/12/2020	**278**^{J}	**880**
	Primary	6/17/2020	**504**	**891**
	Primary	7/20/2020	**241**	**1,210**
	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**
	Primary	9/9/2022	**297**	**1,020**
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**
	Primary	9/8/2022	**8.21**	**6.08**

TABLE 5:
HISTORICAL 1,4-DIOXANE AND TCE CONCENTRATIONS

FORMER THERMAL TREATMENT UNIT
NAMMO DEFENSE SYSTEMS INC.

		Chemical Name	**1,4-Dioxane**	**Trichloroethene**
		EPA Method	**8260B SIM**	**8260B**
		Unit	**µg/l**	
Sample 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**
	Primary	9/8/2022	**3,820**^{J3}	**9,520**
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**	2.10
	Primary	9/8/2022	**242**	2.10
TTU-19	Primary	9/23/2021	**70.4**^{J}	**478**
	Primary	6/20/2021	<3	**189**
	Duplicate	6/20/2021	<3	**373**
	Primary	9/3/2022	**152**^{Q}	**293**
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**
	Primary	9/3/2022	**1,140**^{Q}	**13,200**^{J4}
	Duplicate	9/3/2022	**1,250**^{Q}	**10,700**

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

		Chemical Name	1,4-Dioxane	Trichloroethene
		EPA Method	8260B SIM	8260B
		Unit	µg/l	
Sample 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**
	Primary	9/8/2022	**68.2**	**75.1**
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**
	Primary	9/8/2022	**74.9**	**68.1**

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

		Chemical Name	1,4-Dioxane	Trichloroethene
		EPA Method	8260B SIM	8260B
		Unit	µg/l	
Sample ID	Sample Type	Screening Level	3.5(1)	5
		Sample Date		
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
	Primary	9/8/2022	741	7,720
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
	Duplicate	9/8/2022	41.4	698

TABLE 5:
HISTORICAL 1,4-DIOXANE AND TCE CONCENTRATIONS

FORMER THERMAL TREATMENT UNIT
NAMMO DEFENSE SYSTEMS INC.

		Chemical Name	**1,4-Dioxane**	**Trichloroethene**
		EPA Method	**8260B SIM**	**8260B**
		Unit	**µg/l**	
Sample ID	**Sample Type**	**Screening Level**	**$3.5^{(1)}$**	**5**
		Sample Date		
TTU-EX-5	Primary	3/13/2020	< 0.476	0.929 ^{J}
	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**
	Primary	9/8/2022	2.16^{J}	4.96
	Duplicate	9/8/2022	<3	**5.06**

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** /Shaded - Concentration exceeds its respective screening level*

(1) - Interim Screen Level

V = The sample concentration is too high to evalulate accurate spike recoveries

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

J3 = The associated batch QC was outside the established quality control range for precision

J4 = The associarred batch QC was outside the established quality control range for accuracy

T8 = Method used not listed in 40 CFR 136; alternate method chosen as acceptable per permit.

R7 = LFB/LFBD RPD exceeded the laboratory acceptance limit. Recovery met acceptance criteria

Q = Sample was prepared and/or analyzed past holding time as defined in the method. Concentration should be considered minimum values

Figures

PLOT DATE: 12/14/2022

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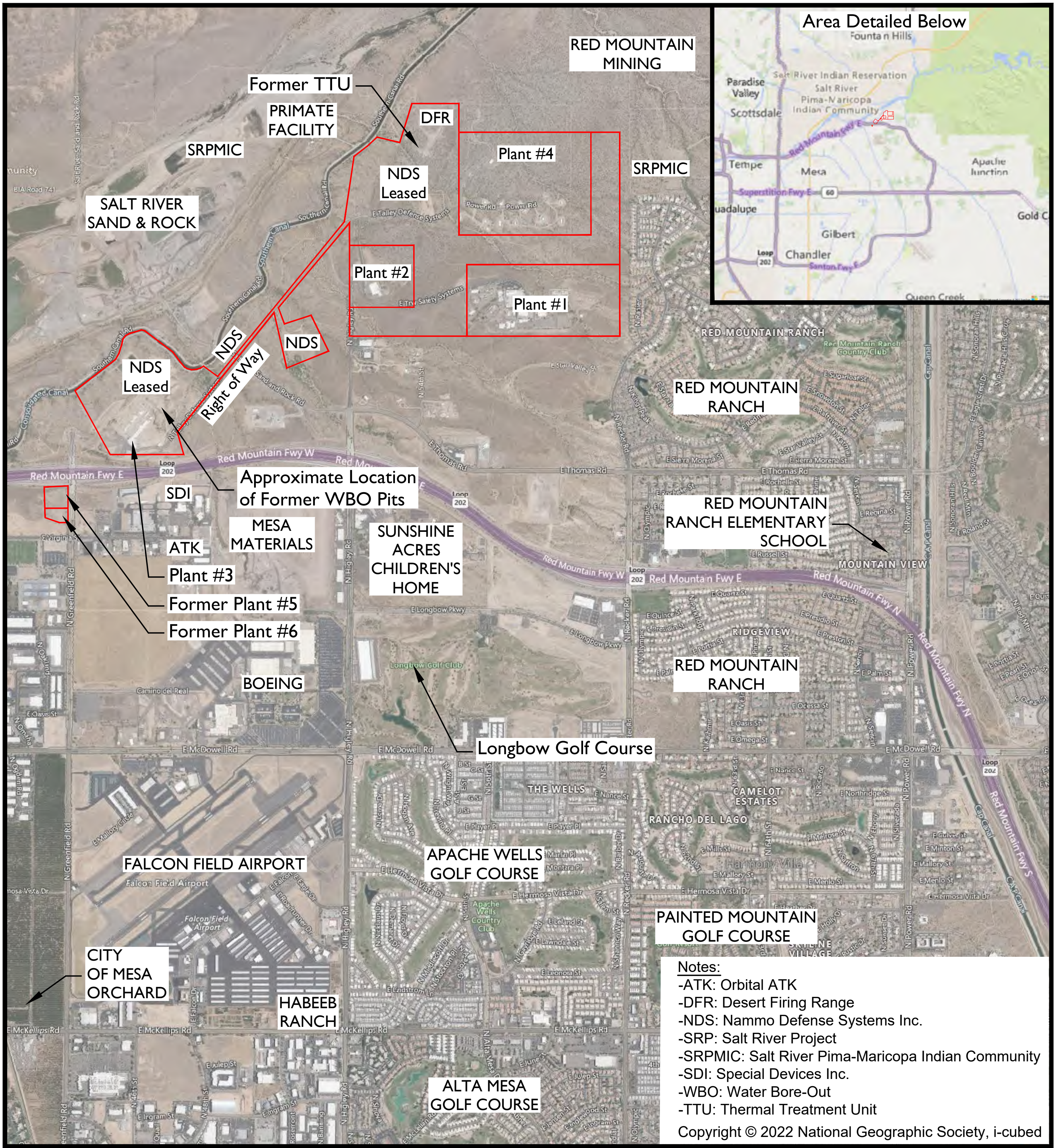


Notes:
- -ATK: Orbital ATK
- -DFR: Desert Firing Range
- -NDS: Nammo Defense Systems Inc.
- -SRP: Salt River Project
- -SRPMIC: Salt River Pima-Maricopa Indian Community
- -SDI: Special Devices Inc.
- -WBO: Water Bore-Out
- -TTU: Thermal Treatment Unit

N

LEGEND

▭ Approximate Property Boundary

0 5000' 10000'

SCALE: 1" = 5000'

Pinyon Environmental, Inc.

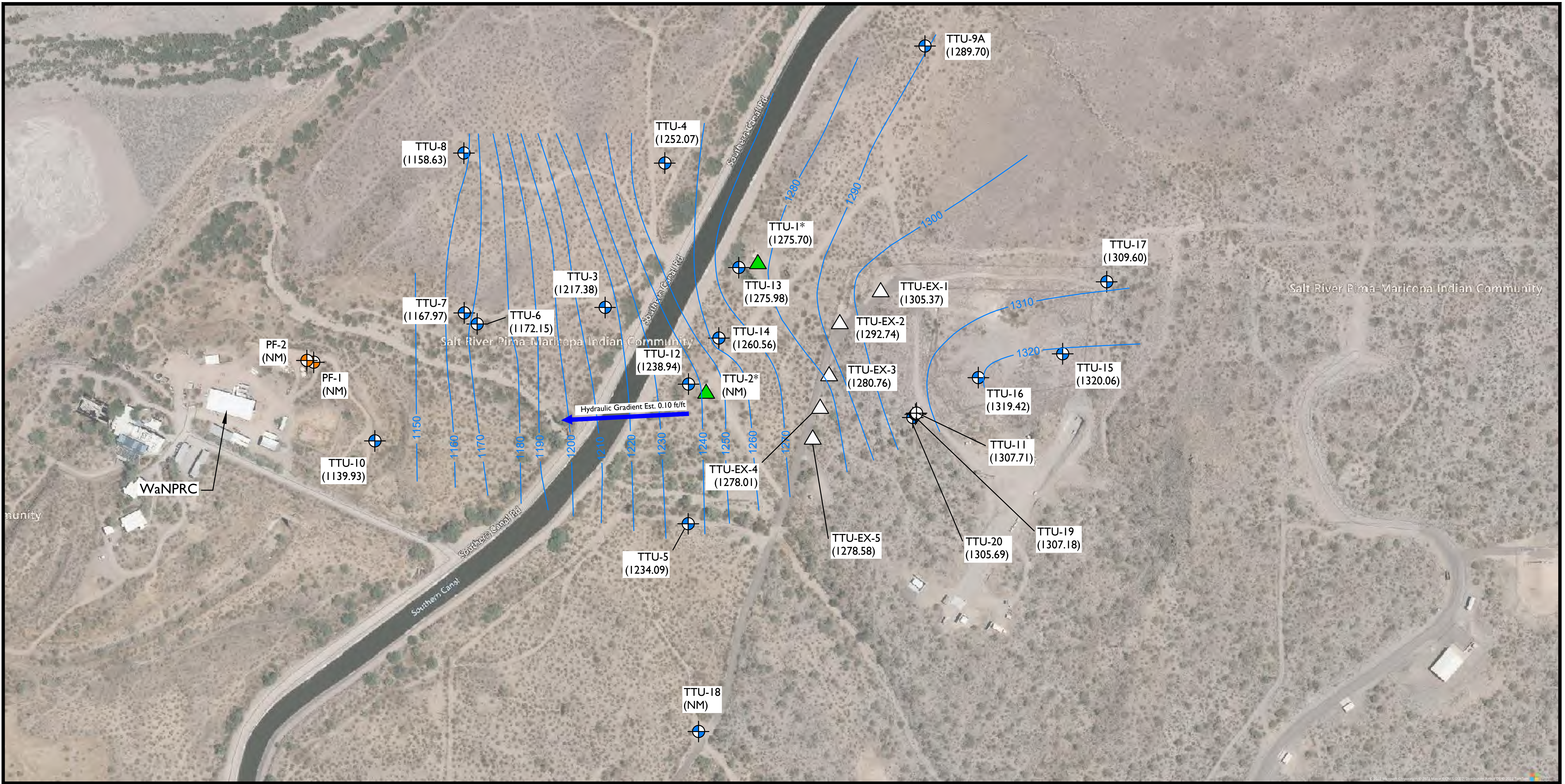
SITE VICINITY MAP

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: 12/14/2022

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

PLOT DATE: 12/14/2022



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 = Monitoring Well Location
1145.24 = Groundwater Elevation (ft. amsl)

1150 Groundwater Elevation Contour (ft amsl) (Contour Interval: 10ft)

← Estimated Regional Groundwater Flow Direction

N

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.
TTU-1 and TTU-2 were sampled several weeks after the other wells.
Therefore, the depth to groundwater data was not used to prepare this groundwater contour map.

* - Data not used in contour preparation
WaNPRC: Washington National Primate Research Center
NDS: Nammo Defense Systems Inc.

0 250' 500'
SCALE: 1" = 250'

Pinyon Environmental, Inc.

QUARTERLY GROUNDWATER CONTOUR MAP - THIRD 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	Drawn By: SJA	Figure: 2
Pinyon Project Number: 7/22-1522-01.REM001.4	Reviewed By: DW	Date: 12/14/2022

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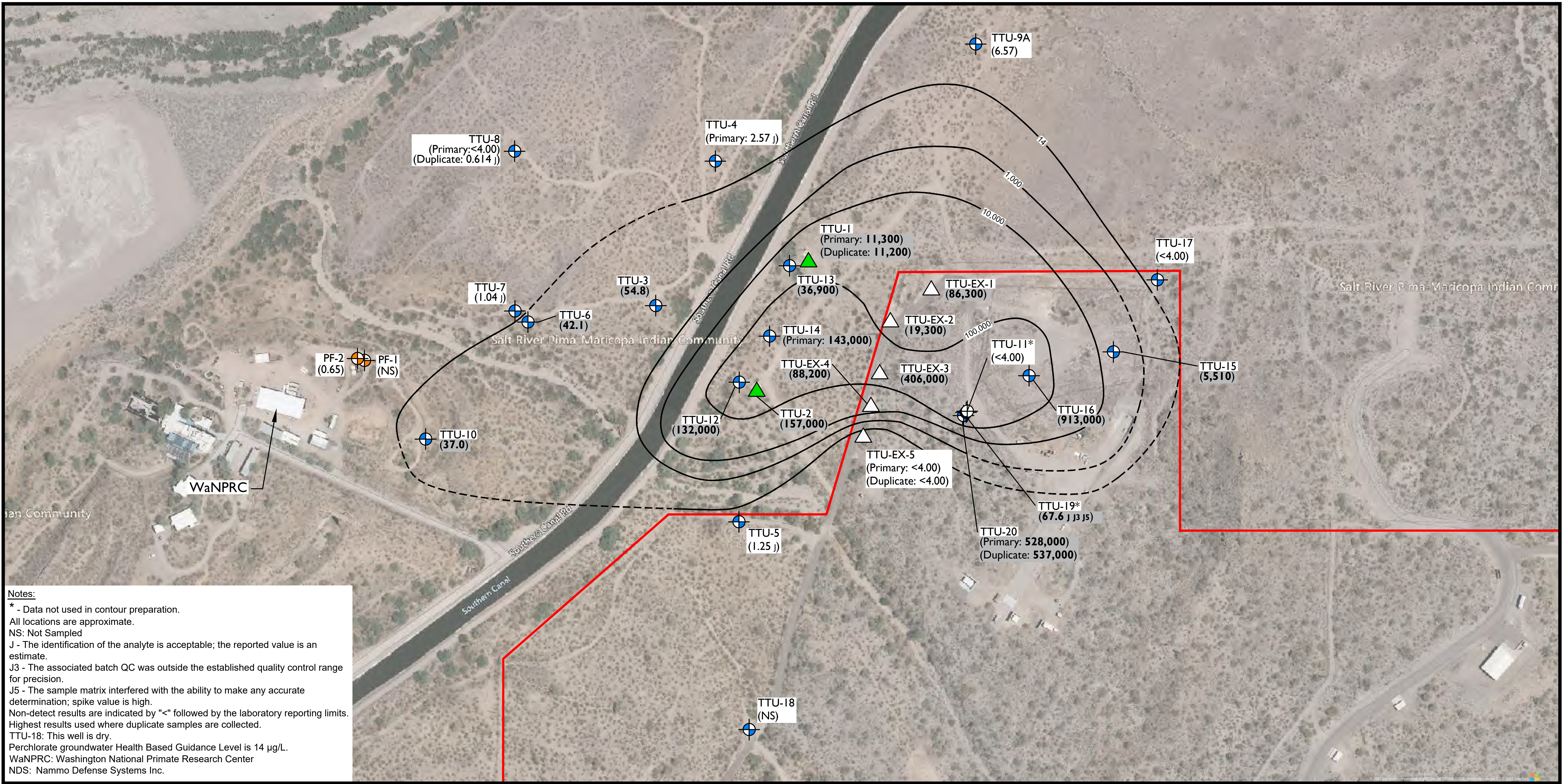
Coordinate System: NAD83 ARIZONA STATE PLANES, CENTRAL ZONE, US FOOT - AZ83-CF



Notes:
* - Data not used in contour preparation.
All locations are approximate.
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.
J5 - The sample matrix interfered with the ability to make any accurate determination; spike value is high.
Non-detect results are indicated by "<" followed by the laboratory reporting limits.
Highest results used where duplicate samples are collected.
TTU-18: This well is dry.
Perchlorate groundwater Health Based Guidance Level is 14 µg/L.
WaNPRC: Washington National Primate Research Center
NDS: Nammo Defense Systems Inc.

LEGEND

N

▲	Extraction Well	⊕	Monitoring / Injection Well	5.76	Exceeds the 14 µg/L Screening Level
⊕	Monitoring Well	△	Extraction Well Currently used for Monitoring	1000	Perchlorate Concentration Contour (µg/l)
⊕	Primate Production Well	TTU-1 = 14,000 =	Monitoring Well Location Perchlorate Concentration in micrograms per liter (µg/L)		
⊕	Extraction and Pilot Test Injection Well	🟥	NDS Leased Property Boundary with SRP-MIC		

0 250' 500'
SCALE: 1" = 250'

Pinyon
Environmental, Inc.

PERCHLORATE DETECTIONS IN GROUNDWATER - THIRD 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	Drawn By: SJA	Figure: 3
Pinyon Project Number: 7/22-1522-01.REM001.4	Reviewed By: DW	Date: 12/14/2022

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

PLOT DATE: 12/14/2022

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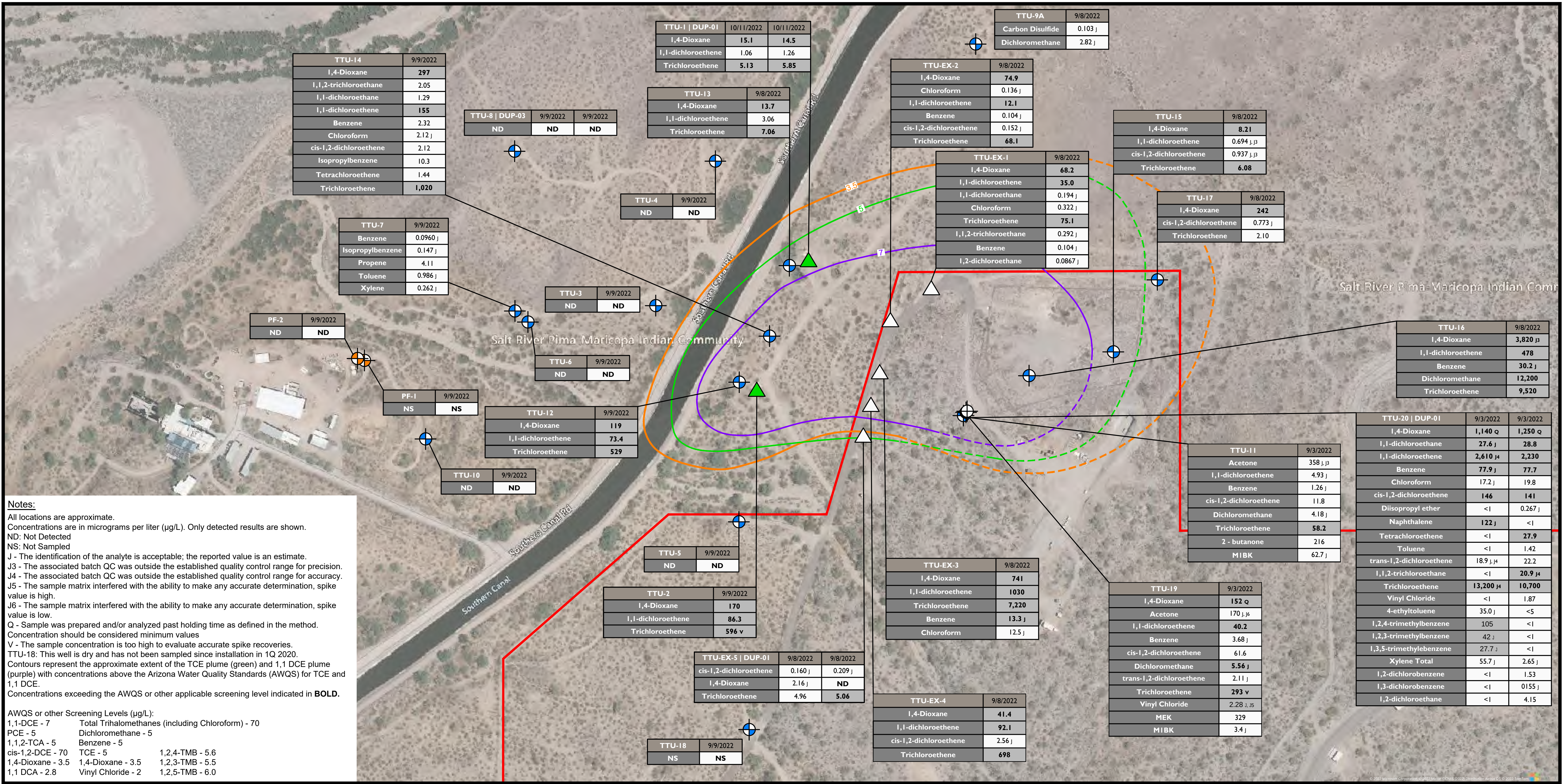
PLOT DATE: 12/14/2022



TTU-14	9/9/2022
1,4-Dioxane	**297**
1,1,2-trichloroethane	2.05
1,1-dichloroethane	1.29
1,1-dichloroethene	**155**
Benzene	2.32
Chloroform	2.12 J
cis-1,2-dichloroethene	2.12
Isopropylbenzene	10.3
Tetrachloroethene	1.44
Trichloroethene	**1,020**

TTU-8 | DUP-03	9/9/2022	9/9/2022
ND	ND	ND

TTU-1 | DUP-01	10/11/2022	10/11/2022
1,4-Dioxane	**15.1**	**14.5**
1,1-dichloroethene	1.06	1.26
Trichloroethene	**5.13**	**5.85**

TTU-13	9/8/2022
1,4-Dioxane	**13.7**
1,1-dichloroethene	3.06
Trichloroethene	**7.06**

TTU-9A	9/8/2022
Carbon Disulfide	0.103 J
Dichloromethane	2.82 J

TTU-EX-2	9/8/2022
1,4-Dioxane	**74.9**
Chloroform	0.136 J
1,1-dichloroethene	**12.1**
Benzene	0.104 J
cis-1,2-dichloroethene	0.152 J
Trichloroethene	**68.1**

TTU-15	9/8/2022
1,4-Dioxane	**8.21**
1,1-dichloroethene	0.694 J, J3
cis-1,2-dichloroethene	0.937 J, J3
Trichloroethene	**6.08**

TTU-EX-1	9/8/2022
1,4-Dioxane	**68.2**
1,1-dichloroethene	**35.0**
1,1-dichloroethane	0.194 J
Chloroform	0.322 J
Trichloroethene	**75.1**
1,1,2-trichloroethane	0.292 J
Benzene	0.104 J
1,2-dichloroethane	0.0867 J

TTU-17	9/8/2022
1,4-Dioxane	**242**
cis-1,2-dichloroethene	0.773 J
Trichloroethene	2.10

TTU-4	9/9/2022
ND	ND

TTU-7	9/9/2022
Benzene	0.0960 J
Isopropylbenzene	0.147 J
Propene	4.11
Toluene	0.986 J
Xylene	0.262 J

TTU-3	9/9/2022
ND	ND

PF-2	9/9/2022
ND	ND

TTU-6	9/9/2022
ND	ND

TTU-16	9/8/2022
1,4-Dioxane	**3,820 J3**
1,1-dichloroethene	**478**
Benzene	**30.2 J**
Dichloromethane	**12,200**
Trichloroethene	**9,520**

PF-1	9/9/2022
NS	NS

TTU-12	9/9/2022
1,4-Dioxane	**119**
1,1-dichloroethene	**73.4**
Trichloroethene	**529**

TTU-20 | DUP-01	9/3/2022	9/3/2022
1,4-Dioxane	**1,140 Q**	**1,250 Q**
1,1-dichloroethane	**27.6 J**	**28.8**
1,1-dichloroethene	**2,610 J4**	**2,230**
Benzene	**77.9 J**	**77.7**
Chloroform	17.2 J	19.8
cis-1,2-dichloroethene	**146**	**141**
Diisopropyl ether	<1	0.267 J
Naphthalene	**122 J**	<1
Tetrachloroethene	<1	**27.9**
Toluene	<1	1.42
trans-1,2-dichloroethene	18.9 J, J4	22.2
1,1,2-trichloroethane	<1	**20.9 J4**
Trichloroethene	**13,200 J4**	**10,700**
Vinyl Chloride	<1	1.87
4-ethyltoluene	35.0 J	<5
1,2,4-trimethylbenzene	105	<1
1,2,3-trimethylbenzene	42 J	<1
1,3,5-trimethylebenzene	27.7 J	<1
Xylene Total	55.7 J	2.65 J
1,2-dichlorobenzene	<1	1.53
1,3-dichlorobenzene	<1	0155 J
1,2-dichloroethane	<1	4.15

TTU-11	9/3/2022
Acetone	358 J, J3
1,1-dichloroethene	4.93 J
Benzene	1.26 J
cis-1,2-dichloroethene	11.8
Dichloromethane	4.18 J
Trichloroethene	**58.2**
2 - butanone	216
MIBK	62.7 J

TTU-10	9/9/2022
ND	ND

TTU-5	9/9/2022
ND	ND

TTU-EX-3	9/8/2022
1,4-Dioxane	**741**
1,1-dichloroethene	**1030**
Trichloroethene	**7,220**
Benzene	**13.3 J**
Chloroform	12.5 J

TTU-19	9/3/2022
1,4-Dioxane	**152 Q**
Acetone	170 J, J6
1,1-dichloroethene	**40.2**
Benzene	3.68 J
cis-1,2-dichloroethene	61.6
Dichloromethane	**5.56 J**
trans-1,2-dichloroethene	2.11 J
Trichloroethene	**293 V**
Vinyl Chloride	2.28 J, J5
MEK	329
MIBK	3.4 J

TTU-2	9/9/2022
1,4-Dioxane	**170**
1,1-dichloroethene	**86.3**
Trichloroethene	**596 V**

TTU-EX-5 | DUP-01	9/8/2022	9/8/2022
cis-1,2-dichloroethene	0.160 J	0.209 J
1,4-Dioxane	2.16 J	ND
Trichloroethene	4.96	**5.06**

TTU-EX-4	9/8/2022
1,4-Dioxane	**41.4**
1,1-dichloroethene	**92.1**
cis-1,2-dichloroethene	2.56 J
Trichloroethene	**698**

TTU-18	9/9/2022
NS	NS

Notes:

All locations are approximate.
Concentrations are in micrograms per liter (µg/L). Only detected results are shown.
ND: Not Detected
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.
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.
Q - Sample was prepared and/or analyzed past holding time as defined in the method. Concentration should be considered minimum values
V - The sample concentration is too high to evaluate accurate spike recoveries.
TTU-18: This well is dry and has not been sampled since installation in 1Q 2020.
Contours represent the approximate extent of the TCE plume (green) and 1,1 DCE plume (purple) with concentrations above the Arizona Water Quality Standards (AWQS) for TCE and 1,1 DCE.
Concentrations exceeding the AWQS or other applicable screening level indicated in **BOLD.**

AWQS or other Screening Levels (µg/L):

1,1-DCE - 7	Total Trihalomethanes (including Chloroform) - 70	
PCE - 5	Dichloromethane - 5	
1,1,2-TCA - 5	Benzene - 5	
cis-1,2-DCE - 70	TCE - 5	1,2,4-TMB - 5.6
1,4-Dioxane - 3.5	1,4-Dioxane - 3.5	1,2,3-TMB - 5.5
1,1 DCA - 2.8	Vinyl Chloride - 2	1,2,5-TMB - 6.0

LEGEND

N

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

0 250' 500'
SCALE: 1" = 250'

Pinyon
Environmental, Inc.

VOC DETECTIONS IN GROUNDWATER - THIRD 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: 4

Reviewed By: DW

Date: 12/14/2022

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

Attachments

Attachment 1 – Drilling Logs and Well Completion Diagrams

HALEY& ALDRICH

GROUNDWATER OBSERVATION WELL INSTALLATION REPORT

Well No. TTU-1
Boring No. TTU-1

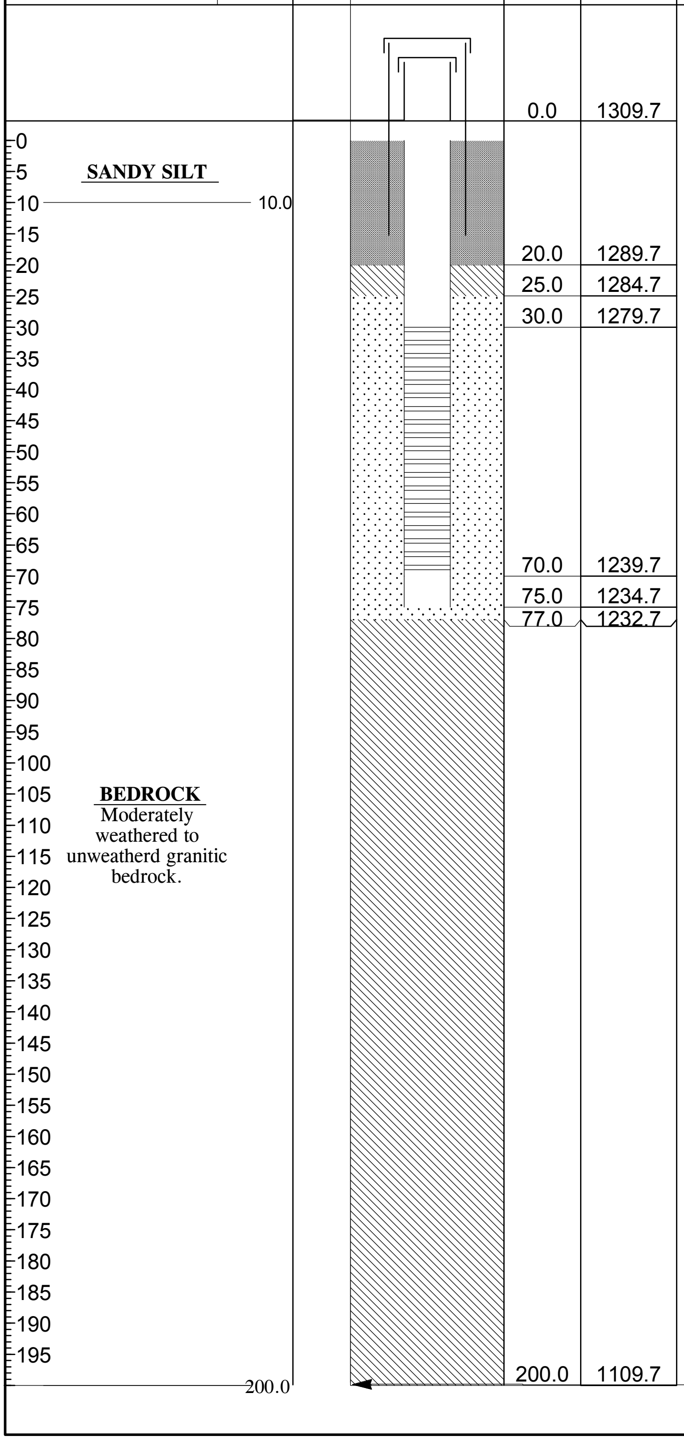
Project SRPMIC Well Installation
Location Mesa, AZ
Client Nammo Talley
Contractor WDC Exploration & Wells
Driller
Initial Water Level (depth bgs) 39.5 ft

Well Diagram

▯	Riser Pipe
▤	Screen
░	Filter Sand
▒	Cuttings
■	Grout
⁖	Concrete
▧	Bentonite Seal

File No. 39014
Date Installed 6 Jun 2012
H&A Rep. J. Bellamy
Location See Plan

Ground El. 1309.7
Datum NAVD 88



SANDY SILT

BEDROCK
Moderately weathered to unweatherd granitic bedrock.

DEPTH (ft.)	ELEVATION (ft.)
0.0	1309.7
20.0	1289.7
25.0	1284.7
30.0	1279.7
70.0	1239.7
75.0	1234.7
77.0	1232.7
200.0	1109.7

WELL CONSTRUCTION DETAILS

Type of protective cover Well Vault

Height of Guard Pipe above ground surface 3.1 ft

Height of top of riser above ground surface 2.5 ft

Type of protective casing Guard Pipe

Length 5.0 ft

Inside diameter 12.5 in

Depth of bottom of Guard Pipe 0.0 ft

Type of riser pipe Schedule 40 PVC

Inside diameter of riser pipe 4 in

Depth of bottom of riser pipe 30 ft

Type of Seals	Top of Seal (ft)	Thickness (ft)
Grout	1.8	18.2
Bentonite	20.0	5.0
Bentonite	77.0	123.0

Diameter of borehole 9.75 in

Depth to top of well screen 30 ft

Type of screen Machine slotted Sch 40 PVC

Screen gauge or size of openings 0.020 in

Diameter of screen 4.0 in

Type of Backfill around Screen No. 8-12 Co. SIlica Sand

Depth to bottom of well screen 70 ft

Bottom of silt trap N/A

Depth of bottom of borehole 200.0 ft

HALEY & ALDRICH

GROUNDWATER OBSERVATION WELL INSTALLATION REPORT

Well No. TTU-2
Boring No. TTU-2

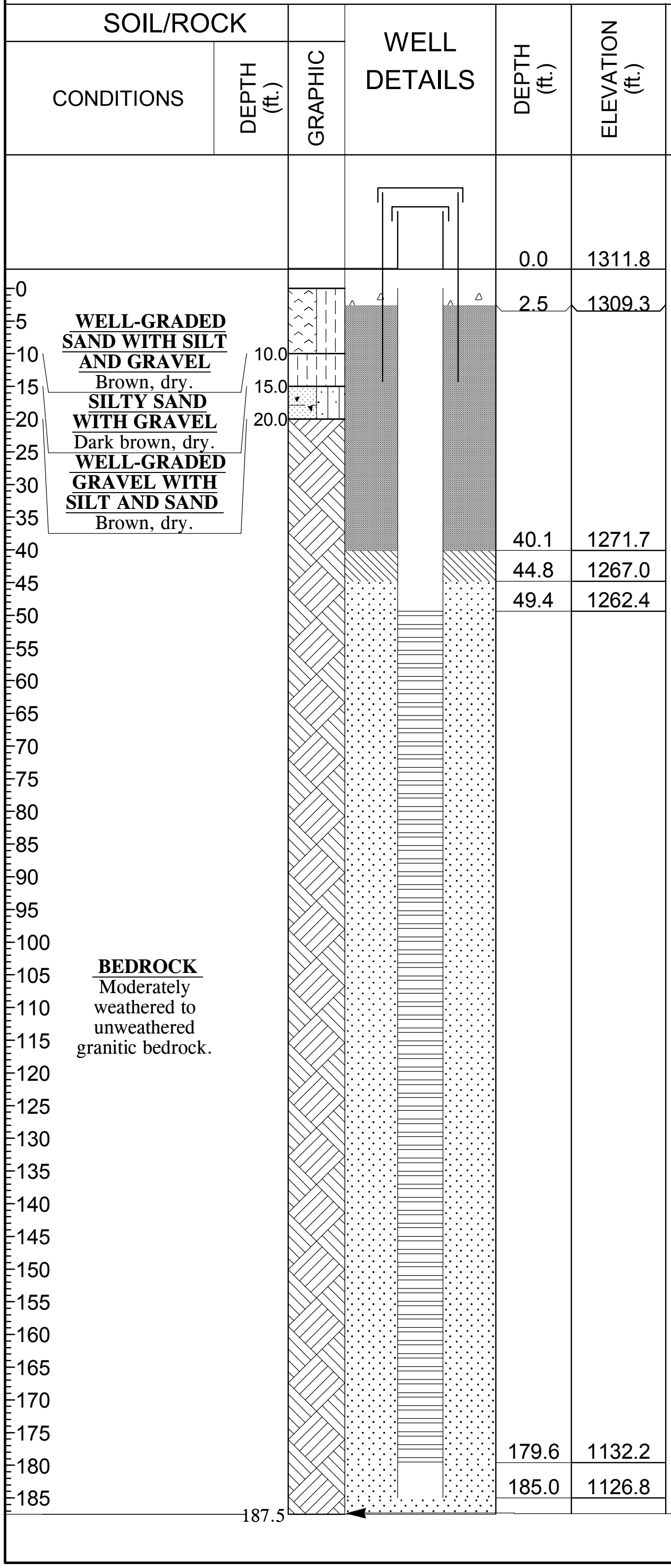
Project Nammo Talley TTU Closure
Location Mesa, AZ
Client Nammo Talley
Contractor National
Driller

Initial Water Level (depth bgs) 60.7 ft

Well Diagram
- ▥ Riser Pipe
- ▤ Screen
- ░ Filter Sand
- ▒ Cuttings
- ■ Grout
- ▓ Concrete
- ▧ Bentonite Seal

File No. 39014
Date Installed 17 Oct 2013
H&A Rep. T. Cole
Location See Plan

Ground El. 1311.8
Datum NAVD 88



WELL CONSTRUCTION DETAILS

Type of protective cover Well Vault

Height of Guard Pipe above ground surface 2.6 ft

Height of top of riser above ground surface 2.1 ft

Type of protective casing Guard Pipe

Length 5.0 ft

Inside diameter 12.5 in

Depth of bottom of Guard Pipe 2.4 ft

Type of riser pipe Schedule 40 PVC

Inside diameter of riser pipe 4.0 in

Depth of bottom of riser pipe 49.4 ft

Type of Seals	Top of Seal (ft)	Thickness (ft)
Grout	2.4	37.7
Bentonite	40.1	4.7
	-	-

Diameter of borehole 9 3/4 in

Depth to top of well screen 49.4 ft

Type of screen Machine slotted Sch 40 PVC

Screen gauge or size of openings 0.020 in.

Diameter of screen 4.0 in

Type of Backfill around Screen No. 8-12 Co. Silica Sand

Depth to bottom of well screen 179.6 ft

Bottom of silt trap N/A

Depth of bottom of borehole 187.5 ft

COMBUSTIBLE GAS WELL INST RPT HA-LIB07-1-BOS.GLB HA-TB+CORE+WELL-07-1.GDT G:\PROJECTS\NAMMO TALLEY\39014-TTU CLOSURE\PROJECT DATA\GINT\NAMMOTALLEYTTUWELLLOGS - COPY.GPJ 27 Feb 15

HALEY& ALDRICH

GROUNDWATER OBSERVATION WELL INSTALLATION REPORT

Well No. TTU-3
Boring No. TTU-3

Project Nammo Talley TTU Closure
Location Mesa, AZ
Client Nammo Talley
Contractor National
Driller

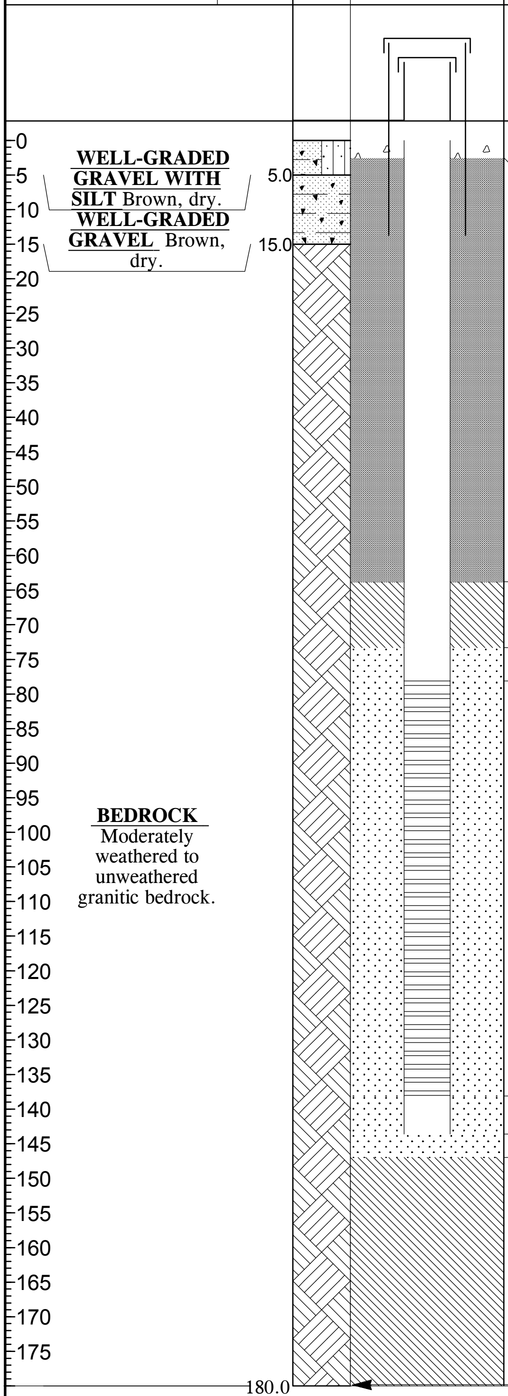
Initial Water Level (depth bgs) 92.3 ft

Well Diagram
- ▥ Riser Pipe
- ☰ Screen
- ░ Filter Sand
- ▒ Cuttings
- ■ Grout
- ▓ Concrete
- ▨ Bentonite Seal

File No. 39014
Date Installed 18 Oct 2013
H&A Rep. T. Cole
Location See Plan

Ground El. 1305.5
Datum NAVD 88

SOIL/ROCK CONDITIONS	DEPTH (ft.)
WELL-GRADED GRAVEL WITH SILT Brown, dry.	5.0
WELL-GRADED GRAVEL Brown, dry.	15.0
BEDROCK Moderately weathered to unweathered granitic bedrock.	180.0



DEPTH (ft.)	ELEVATION (ft.)
0.0	1305.5
2.5	1303.0
63.8	1241.7
73.3	1232.2
78.1	1227.4
138.1	1167.4
143.6	1161.9
147.0	1158.5
180.0	1125.5

WELL CONSTRUCTION DETAILS

Type of protective cover Well Vault

Height of Guard Pipe above ground surface 2.5 ft

Height of top of riser above ground surface 2.0 ft

Type of protective casing Guard Pipe

Length 5.0 ft

Inside diameter 12.5 in

Depth of bottom of Guard Pipe 2.5 ft

Type of riser pipe Schedule 40 PVC

Inside diameter of riser pipe 4.0 in

Depth of bottom of riser pipe 78.1 ft

Type of Seals	Top of Seal (ft)	Thickness (ft)
Grout	2.5	61.3
Bentonite	63.8	9.5
Bentonite	147.0	33.0

Diameter of borehole 9 3/4 in

Depth to top of well screen 78.1 ft

Type of screen Machine slotted Sch 40 PVC

Screen gauge or size of openings 0.020 in.

Diameter of screen 4.0 in

Type of Backfill around Screen No. 8-12 Co. Silica Sand

Depth to bottom of well screen 138.1 ft

Bottom of silt trap N/A

Depth of bottom of borehole 180.0 ft

HALEY & ALDRICH

GROUNDWATER OBSERVATION WELL INSTALLATION REPORT

Well No. TTU-4
Boring No. TTU-4

Project Nammo Talley TTU Closure
Location Mesa, AZ
Client Nammo Talley
Contractor National
Driller
Initial Water Level (depth bgs) 50.7 ft

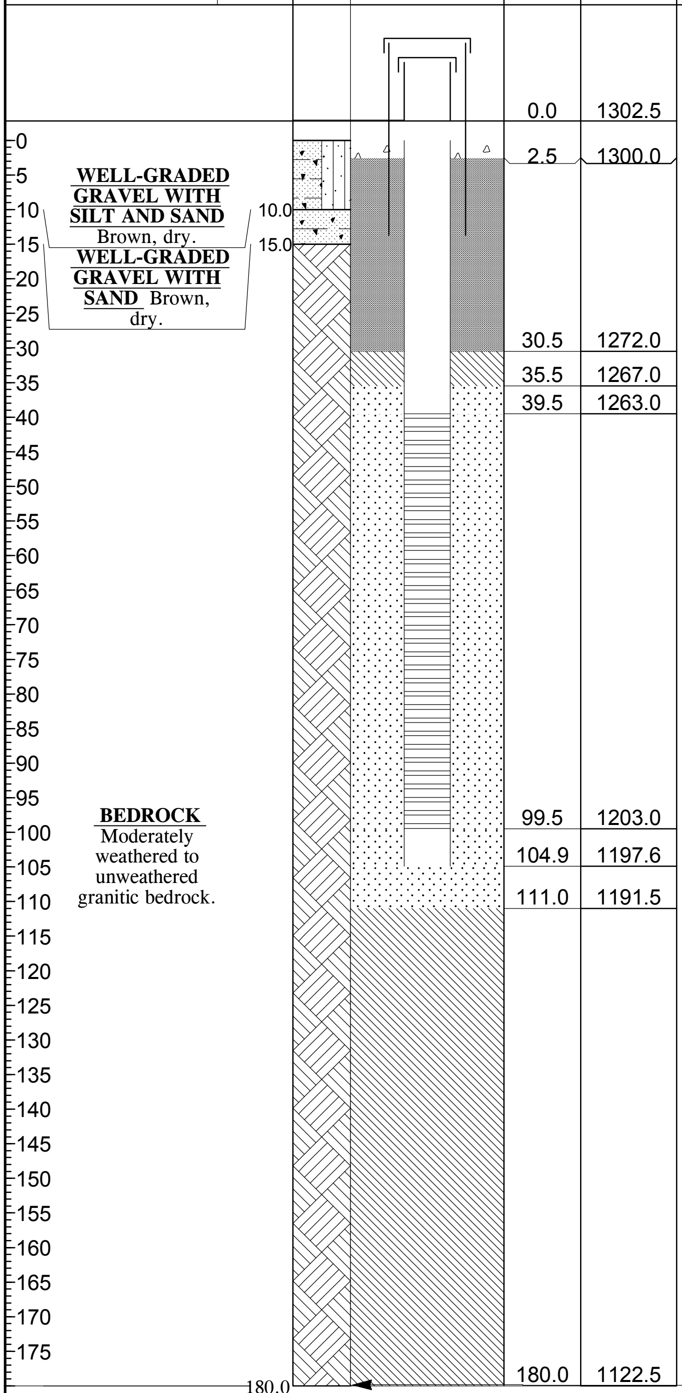
Well Diagram

◫	Riser Pipe
☰	Screen
░	Filter Sand
▒	Cuttings
■	Grout
▓	Concrete
▨	Bentonite Seal

File No. 39014
Date Installed 25 Oct 2013
H&A Rep. L. Candreva
Location See Plan

Ground El. 1302.5
Datum NAVD 88

SOIL/ROCK CONDITIONS	DEPTH (ft.)	GRAPHIC	WELL DETAILS	DEPTH (ft.)	ELEVATION (ft.)



WELL-GRADED GRAVEL WITH SILT AND SAND Brown, dry.

10.0

WELL-GRADED GRAVEL WITH SAND Brown, dry.

15.0

BEDROCK Moderately weathered to unweathered granitic bedrock.

180.0

DEPTH (ft.)	ELEVATION (ft.)
0.0	1302.5
2.5	1300.0
30.5	1272.0
35.5	1267.0
39.5	1263.0
99.5	1203.0
104.9	1197.6
111.0	1191.5
180.0	1122.5

WELL CONSTRUCTION DETAILS

Type of protective cover Well Vault

Height of Guard Pipe above ground surface 2.6 ft

Height of top of riser above ground surface 1.4 ft

Type of protective casing Guard Pipe

Length 5.0 ft

Inside diameter 12.5 in

Depth of bottom of Guard Pipe 2.4 ft

Type of riser pipe Schedule 40 PVC

Inside diameter of riser pipe 4.0 in

Depth of bottom of riser pipe 39.5 ft

Type of Seals	Top of Seal (ft)	Thickness (ft)
Grout	2.4	28.1
Bentonite	30.5	5.0
Bentonite	111.0	69.0

Diameter of borehole 9 3/4 in

Depth to top of well screen 39.5 ft

Type of screen Machine slotted Sch 40 PVC

Screen gauge or size of openings 0.020 in.

Diameter of screen 4.0 in

Type of Backfill around Screen No. 8-12 Co. Silica Sand

Depth to bottom of well screen 99.5 ft

Bottom of silt trap N/A

Depth of bottom of borehole 180.0 ft

HALEY& ALDRICH

GROUNDWATER OBSERVATION WELL INSTALLATION REPORT

Well No. TTU-5
Boring No. TTU-5

Project Nammo Talley TTU Closure
Location Mesa, AZ
Client Nammo Talley
Contractor National
Driller

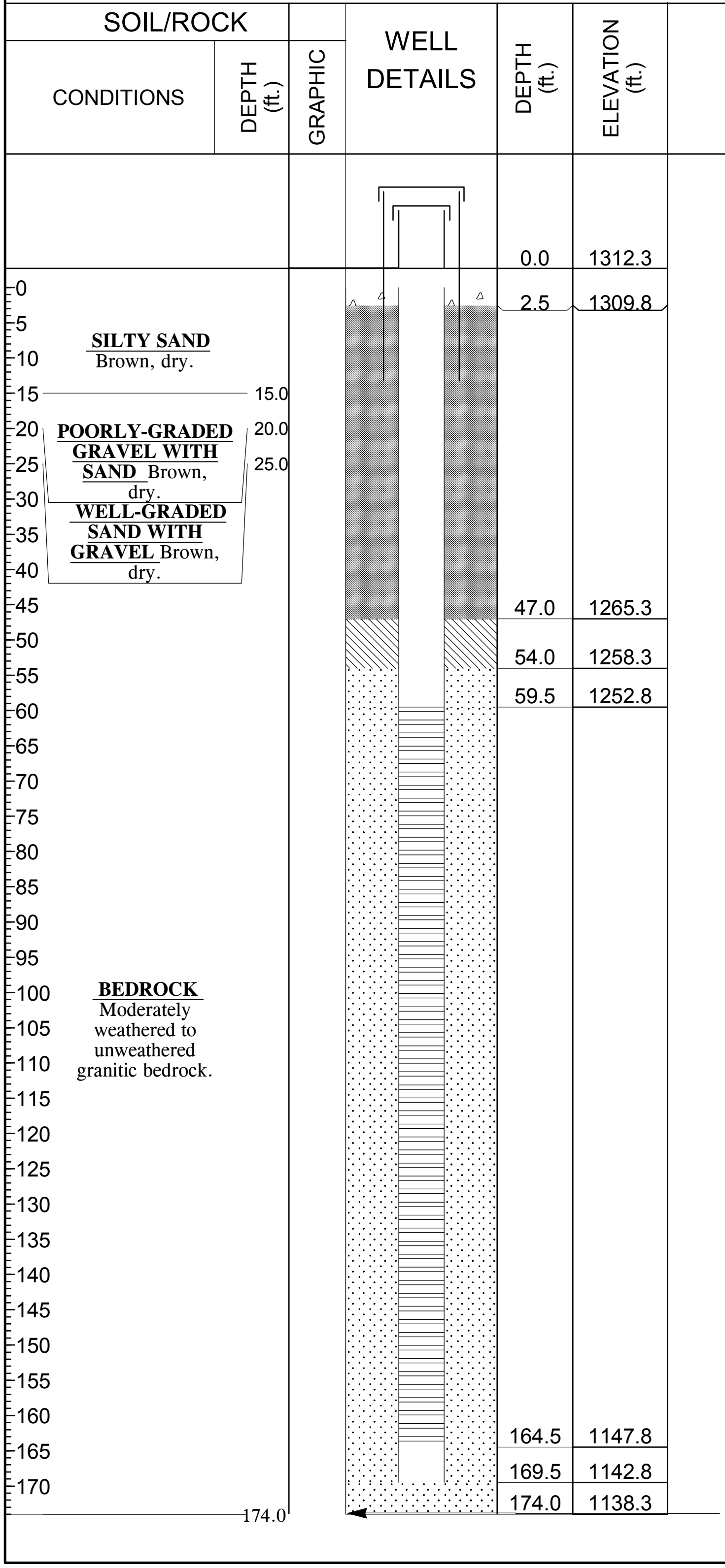
Initial Water Level (depth bgs) 132.2 ft

Well Diagram

- ▥ Riser Pipe
- ☰ Screen
- ░ Filter Sand
- ▒ Cuttings
- ■ Grout
- ▦ Concrete
- ▧ Bentonite Seal

File No. 39014
Date Installed 20 Sep 2014
H&A Rep. D. Andersen
Location See Plan

Ground El. 1312.3
Datum NAVD 88



WELL CONSTRUCTION DETAILS

Type of protective cover Well Vault

Height of Guard Pipe above ground surface 3.0 ft

Height of top of riser above ground surface 2.6 ft

Type of protective casing Guard Pipe

Length 5.0 ft

Inside diameter 12.5 in

Depth of bottom of Guard Pipe 2.0 ft

Type of riser pipe Schedule 40 PVC

Inside diameter of riser pipe 4.0 in

Depth of bottom of riser pipe 59.5 ft

Type of Seals	Top of Seal (ft)	Thickness (ft)
Grout	2.0	45.0
Bentonite	47.0	7.0
	-	-

Diameter of borehole 9 3/4 in

Depth to top of well screen 59.5 ft

Type of screen Machine slotted Sch 40 PVC

Screen gauge or size of openings 0.020 in.

Diameter of screen 4.0 in

Type of Backfill around Screen No. 8-12 Co. Silica Sand

Depth to bottom of well screen 164.5 ft

Bottom of silt trap N/A

Depth of bottom of borehole 174.0 ft

HALEY& ALDRICH

GROUNDWATER OBSERVATION WELL INSTALLATION REPORT

Well No. TTU-6
Boring No. TTU-6

Project Nammo Talley TTU Closure
Location Mesa, AZ
Client Nammo Talley
Contractor National
Driller

Initial Water Level (depth bgs) 123.4 ft

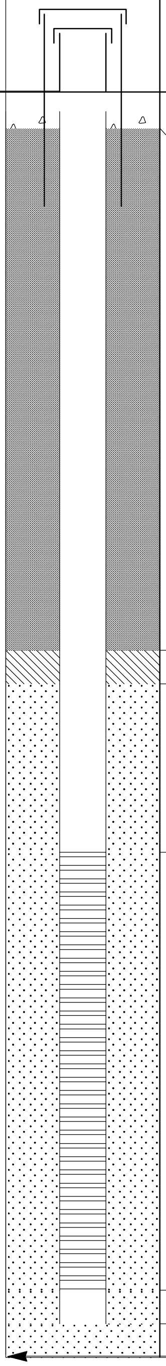
Well Diagram

◫	Riser Pipe
▤	Screen
░	Filter Sand
▒	Cuttings
■	Grout
▦	Concrete
▨	Bentonite Seal

File No. 39014
Date Installed 7 Oct 2014
H&A Rep. D. Andersen
Location See Plan

Ground El. 1299.4
Datum NAVD 88

SOIL/ROCK CONDITIONS	DEPTH (ft.)
SILTY SAND Brown, dry.	10.0
WELL-GRADED SAND Brown, dry.	15.0
WELL-GRADED SAND WITH SILT AND GRAVEL Brown, dry.	30.0
BEDROCK Moderately weathered to unweathered granitic bedrock.	185.0



DEPTH (ft.)	ELEVATION (ft.)
0.0	1299.4
2.5	1296.9
80.0	1219.4
85.0	1214.4
110.0	1189.4
175.0	1124.4
180.0	1119.4
185.0	1114.4

WELL CONSTRUCTION DETAILS

Type of protective cover Well Vault
Height of Guard Pipe above ground surface 2.5 ft
Height of top of riser above ground surface 1.5 ft
Type of protective casing Guard Pipe
Length 5.0 ft
Inside diameter 12.5 in
Depth of bottom of Guard Pipe 2.5 ft
Type of riser pipe Schedule 40 PVC
Inside diameter of riser pipe 4.0 in
Depth of bottom of riser pipe 110.0 ft

Type of Seals	Top of Seal (ft)	Thickness (ft)
Grout	2.5	77.5
Bentonite	80.0	5.0
	-	-

Diameter of borehole 9 3/4 in
Depth to top of well screen 110.0 ft
Type of screen Machine slotted Sch 40 PVC
Screen gauge or size of openings 0.020 in.
Diameter of screen 4.0 in
Type of Backfill around Screen No. 8-12 Co. Silica Sand
Depth to bottom of well screen 175 ft
Bottom of silt trap N/A
Depth of bottom of borehole 185.0 ft

HALEY & ALDRICH

GROUNDWATER OBSERVATION WELL INSTALLATION REPORT

Well No. TTU-7
Boring No. TTU-7

Project Nammo Talley TTU Closure
Location Mesa, AZ
Client Nammo Talley
Contractor National
Driller

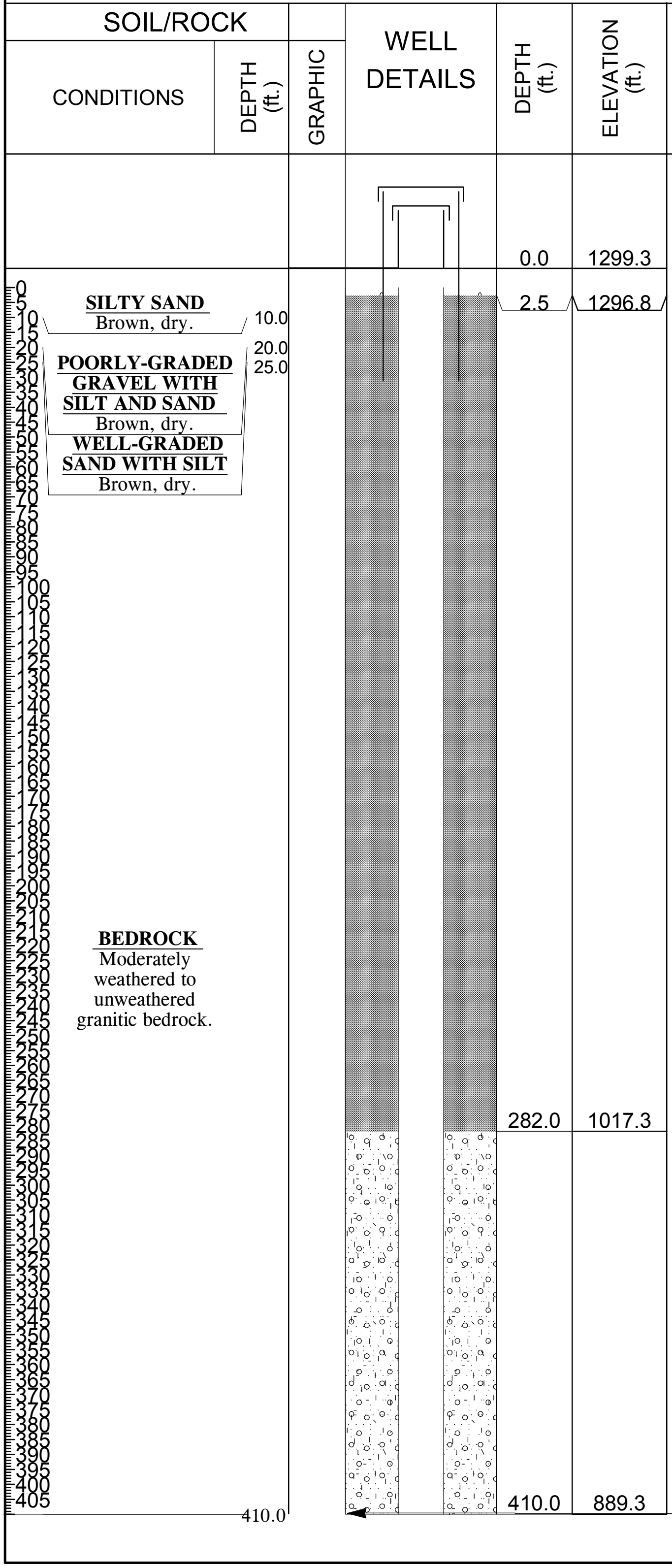
Initial Water Level (depth bgs) 136.3 ft

Well Diagram

▥	Riser Pipe
▤	Screen
░	Filter Sand
▒	Cuttings
■	Grout
⁖	Concrete
▨	Bentonite Seal

File No. 39014
Date Installed 8 Oct 2014
H&A Rep. D. Andersen
Location See Plan

Ground El. 1299.3
Datum NAVD 88



SILTY SAND
Brown, dry.

POORLY-GRADED GRAVEL WITH SILT AND SAND
Brown, dry.

WELL-GRADED SAND WITH SILT
Brown, dry.

BEDROCK
Moderately weathered to unweathered granitic bedrock.

WELL CONSTRUCTION DETAILS

Type of protective cover Well Vault

Height of Guard Pipe above ground surface 2.5 ft

Height of top of riser above ground surface 2.5 ft

Type of protective casing Guard Pipe

Length 284.5 ft

Inside diameter 8.5 in

Depth of bottom of Guard Pipe 282.0 ft

Type of riser pipe Steel Conductor Casing

Inside diameter of riser pipe 8.5 in

Depth of bottom of riser pipe 282.0 ft

Type of Seals	Top of Seal (ft)	Thickness (ft)
Grout	2.5	279.5
	-	-
	-	-

Diameter of borehole 8.0 in

Depth to top of well screen 282.0 ft

Type of screen OPEN

Screen gauge or size of openings N/A

Diameter of screen 8.0 in

Type of Backfill around Screen N/A

Depth to bottom of well screen 410 ft

Bottom of silt trap N/A

Depth of bottom of borehole 410.0 ft

GROUNDWATER OBSERVATION WELL INSTALLATION REPORT

Well No. TTU-8
Boring No. TTU-8

Project Nammo Talley TTU Closure
Location Mesa, AZ
Client Nammo Talley
Contractor Yellow Jacket Drilling
Driller Q. Stevens

Initial Water Level (depth bgs) ft

Well Diagram

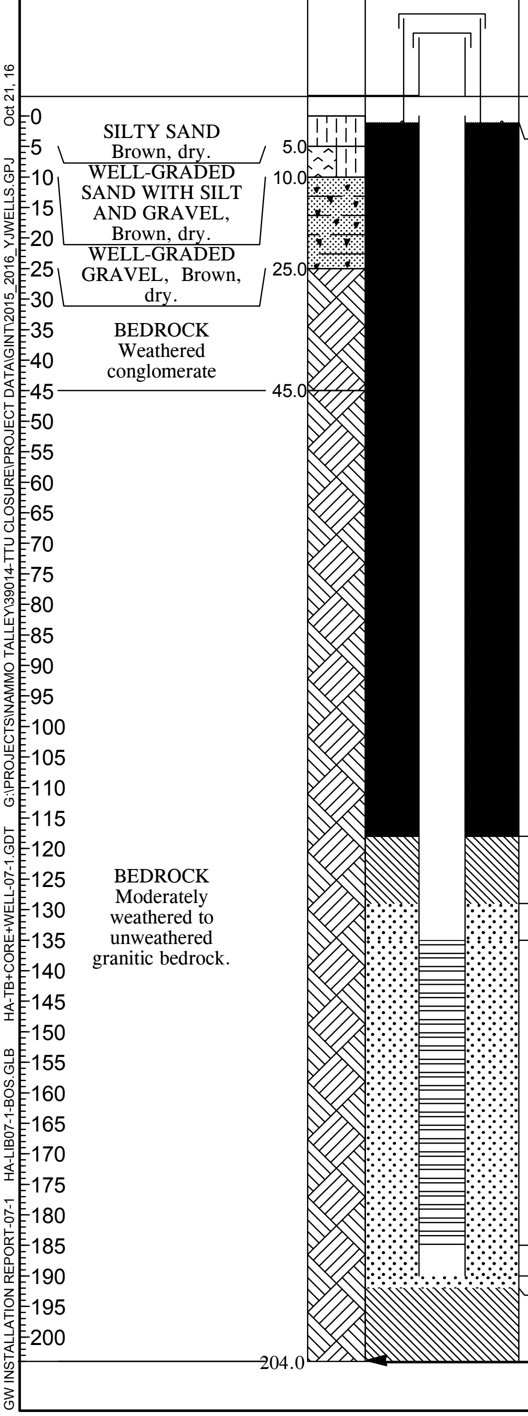
- ◫ Riser Pipe
- ▤ Screen
- ▒ Filter Sand
- ▓ Cuttings
- ■ Grout
- ⁘ Concrete
- ▧ Bentonite Seal

File No. 39014
Date Installed 18 Apr 2016
H&A Rep. D. Andersen
Location See Plan

Ground El. 1307.6
Datum NAVD 88

SOIL/ROCK

CONDITIONS	DEPTH (ft.)
SILTY SAND Brown, dry.	5.0
WELL-GRADED SAND WITH SILT AND GRAVEL, Brown, dry.	10.0
WELL-GRADED GRAVEL, Brown, dry.	25.0
BEDROCK Weathered conglomerate	45.0
BEDROCK Moderately weathered to unweathered granitic bedrock.	204.0



DEPTH (ft.)	ELEVATION (ft.)
0.0	1307.6
1.0	1306.6
118.0	1189.6
129.0	1178.6
135.0	1172.6
185.0	1122.6
190.0	1117.6
192.0	1115.6
204.0	1103.6

WELL CONSTRUCTION DETAILS

Type of protective cover Well Vault

Height of Guard Pipe above ground surface 2.9 ft

Height of top of riser above ground surface 2.6 ft

Type of protective casing Guard Pipe

Length 5.0 ft

Inside diameter 8.5 in

Depth of bottom of Guard Pipe 2.1 ft

Type of riser pipe Schedule 40 PVC

Inside diameter of riser pipe 4.0 in

Depth of bottom of riser pipe 135.0 ft

Type of Seals	Top of Seal (ft)	Thickness (ft)
Grout	1.0	117.0
Bentonite	118.0	11.0
Bentonite	192.0	12.0

Diameter of borehole 8.5 in

Depth to top of well screen 135.0 ft

Type of screen Machine slotted Sch 40 PVC

Screen gauge or size of openings 0.020 in.

Diameter of screen 4.0 in

Type of Backfill around Screen No. 8-12 Co. Silica Sand

Depth to bottom of well screen 185 ft

Bottom of silt trap 190.0 ft

Depth of bottom of borehole 204.0 ft

HALEY ALDRICH

GROUNDWATER OBSERVATION WELL INSTALLATION REPORT

Well No. TTU-9a
Boring No. TTU-9a

Project Nammo Talley TTU Closure
Location Mesa, AZ
Client Nammo Talley
Contractor Yellow Jacket Drilling
Driller

Initial Water Level (depth bgs) ft

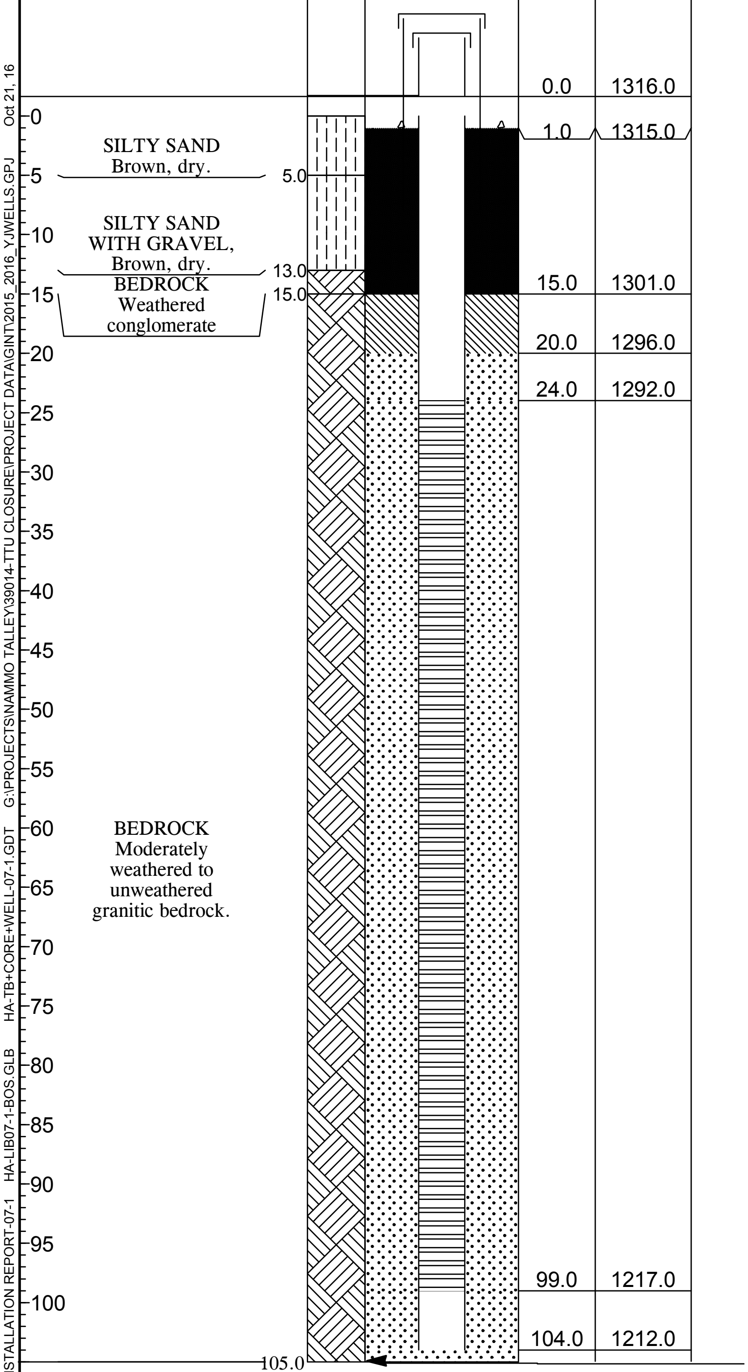
Well Diagram
□ Riser Pipe
▤ Screen
░ Filter Sand
▒ Cuttings
■ Grout
⁘ Concrete
▨ Bentonite Seal

File No. 39014
Date Installed 16 Jun 2016
H&A Rep. C. Price
Location See Plan

Ground El. 1316.0
Datum NAVD 88

SOIL/ROCK

CONDITIONS	DEPTH (ft.)
SILTY SAND Brown, dry.	5.0
SILTY SAND WITH GRAVEL, Brown, dry.	13.0
BEDROCK Weathered conglomerate	15.0
BEDROCK Moderately weathered to unweathered granitic bedrock.	105.0



WELL CONSTRUCTION DETAILS

Type of protective cover Well Vault

Depth of Guard Pipe below ground surface NA

Depth of top of riser below ground surface ft

Type of protective casing Guard Pipe

Length 5.0 ft

Inside diameter 8.5 in

Depth of bottom of Guard Pipe -

Type of riser pipe Schedule 40 PVC

Inside diameter of riser pipe 4.0 in

Depth of bottom of riser pipe 24.0 ft

Type of Seals	Top of Seal (ft)	Thickness (ft)
Grout	1.0	14.0
Bentonite	15.0	5.0
	-	-

Diameter of borehole 8.5 in

Depth to top of well screen 24.0 ft

Type of screen Machine slotted Sch 40 PVC

Screen gauge or size of openings 0.020 in.

Diameter of screen 4.0 in

Type of Backfill around Screen No. 8-12 Co. Silica Sand

Depth to bottom of well screen 99 ft

Bottom of silt trap 104.0 ft

Depth of bottom of borehole 105.0 ft

GROUNDWATER OBSERVATION WELL INSTALLATION REPORT

Well No. TTU-10
Boring No. TTU-10

Project Nammo Talley TTU Closure
Location Mesa, AZ
Client Nammo Talley
Contractor Yellow Jacket Drilling
Driller Q. Stevens

Initial Water Level (depth bgs) ft

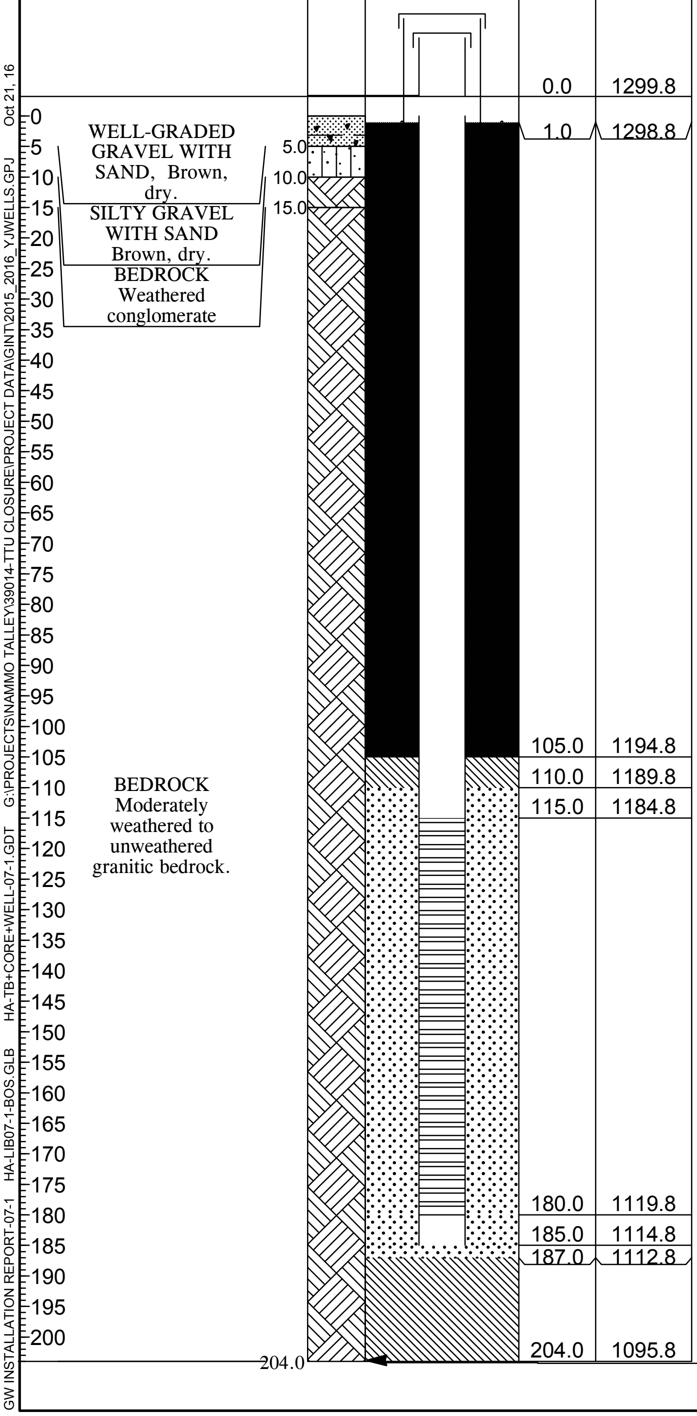
File No. 39014
Date Installed 18 Apr 2016
H&A Rep. D. Andersen
Location See Plan

Ground El. 1299.8
Datum NAVD 88

Well Diagram

- ☐ Riser Pipe
- ▤ Screen
- ░ Filter Sand
- ▒ Cuttings
- ■ Grout
- ⁘ Concrete
- ▧ Bentonite Seal

SOIL/ROCK CONDITIONS	DEPTH (ft.)
WELL-GRADED GRAVEL WITH SAND, Brown, dry.	5.0
SILTY GRAVEL WITH SAND Brown, dry.	10.0
BEDROCK Weathered conglomerate	15.0
BEDROCK Moderately weathered to unweathered granitic bedrock.	204.0



DEPTH (ft.)	ELEVATION (ft.)
0.0	1299.8
1.0	1298.8
105.0	1194.8
110.0	1189.8
115.0	1184.8
180.0	1119.8
185.0	1114.8
187.0	1112.8
204.0	1095.8

WELL CONSTRUCTION DETAILS

Type of protective cover Well Vault

Height of Guard Pipe above ground surface 3.1 ft

Height of top of riser above ground surface 2.7 ft

Type of protective casing Guard Pipe

Length 5.0 ft

Inside diameter 8.5 in

Depth of bottom of Guard Pipe 1.9 ft

Type of riser pipe Schedule 40 PVC

Inside diameter of riser pipe 4.0 in

Depth of bottom of riser pipe 115.0 ft

Type of Seals	Top of Seal (ft)	Thickness (ft)
Grout	1.0	104.0
Bentonite	105.0	5.0
Bentonite	187.0	17.0

Diameter of borehole 8.5 in

Depth to top of well screen 115.0 ft

Type of screen Machine slotted Sch 40 PVC

Screen gauge or size of openings 0.020 in.

Diameter of screen 4.0 in

Type of Backfill around Screen No. 8-12 Co. Silica Sand

Depth to bottom of well screen 180 ft

Bottom of silt trap 185.0 ft

Depth of bottom of borehole 204.0 ft

HALEY ALDRICH

GROUNDWATER OBSERVATION WELL INSTALLATION REPORT

Well No. TTU-11
Boring No. TTU-11

Project Nammo Talley TTU Closure
Location Mesa, AZ
Client Nammo Talley
Contractor Yellow Jacket Drilling
Driller Butch Eldred

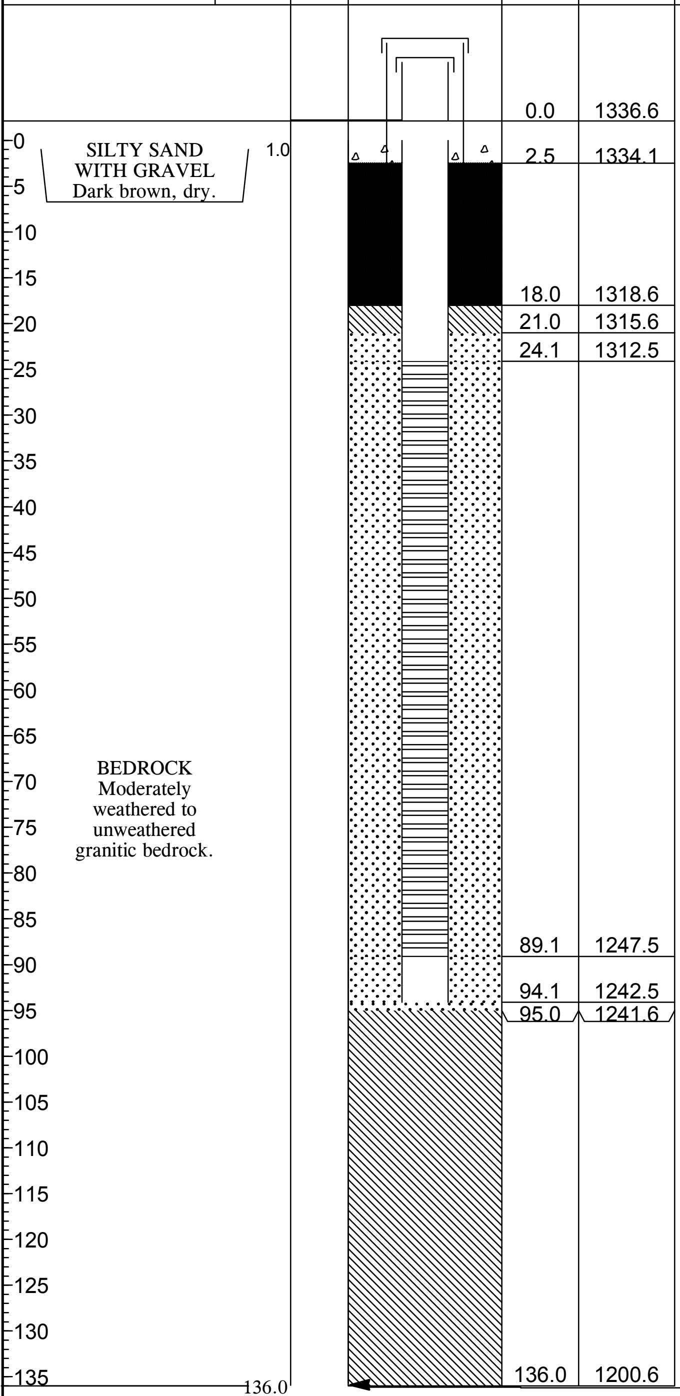
Initial Water Level (depth bgs) 33.8 ft

Well Diagram

▥	Riser Pipe
▤	Screen
░	Filter Sand
▓	Cuttings
■	Grout
▦	Concrete
▨	Bentonite Seal

File No. 39014
Date Installed 11 Sep 2015
H&A Rep. B. Kienenberger
Location See Plan

Ground El. 1336.6
Datum NAVD 88



SOIL/ROCK CONDITIONS	DEPTH (ft.)
SILTY SAND WITH GRAVEL Dark brown, dry.	1.0
BEDROCK Moderately weathered to unweathered granitic bedrock.	136.0

WELL DETAILS DEPTH (ft.)	ELEVATION (ft.)
0.0	1336.6
2.5	1334.1
18.0	1318.6
21.0	1315.6
24.1	1312.5
89.1	1247.5
94.1	1242.5
95.0	1241.6
136.0	1200.6

WELL CONSTRUCTION DETAILS

Type of protective cover Well Vault

Height of Guard Pipe above ground surface 3.0 ft

Height of top of riser above ground surface 2.6 ft

Type of protective casing Guard Pipe

Length 5.0 ft

Inside diameter 12.5 in.

Depth of bottom of Guard Pipe 2.0 ft

Type of riser pipe Schedule 40 PVC

Inside diameter of riser pipe 4.0 in

Depth of bottom of riser pipe 24.1 ft

Type of Seals	Top of Seal (ft)	Thickness (ft)
Grout	2.5	15.5
Bentonite	18.0	3.0
Bentonite	95.0	41.0

Diameter of borehole 8.0 in

Depth to top of well screen 24.1 ft

Type of screen Machine slotted Sch 40 PVC

Screen gauge or size of openings 0.020 in.

Diameter of screen 4.0 in

Type of Backfill around Screen No. 8-12 Co. Silica Sand

Depth to bottom of well screen 89.1 ft

Bottom of silt trap N/A

Depth of bottom of borehole 136.0 ft

TTU-12

Location: TTU-B12

Date: 7/19/18

Geologist: S. Hersel

Borehole Diameter: 5in

Page 1 *of* 3

Drilling Company and Rig: Resilient Drilling

Drilling and Sampling Method: Open hole HSA/Air rotary

Backfill Material:

Depth	USCS Name	USCS Symbol	% Gravel Coarse /Fine	% SAND			% Fines	Coarse-Grained Information			Fine-Grained Information			HCL Rxn
				CRS	MED	FN		Max.	Gravel Round	Sand Round	Plastic	Tough	Dilat/ Dry Strg	
0-15	~~SW-SP~~ well graded sand w/ silt	SW-SM	10	30	20	30	10	10mm	A-SA	A-SA	None	None	-	Stg

Comments:	Hardness	PID/Odor	Moisture/Shape/Hardness/Cement	Consistency	Color
			moist	loose	7.5yr 4/4

Depth	USCS Name	USCS Symbol	% Gravel Coarse /Fine	% SAND			% Fines	Coarse-Grained Information			Fine-Grained Information			HCL Rxn
				CRS	MED	FN		Max.	Gravel Round	Sand Round	Plastic	Tough	Dilat/ Dry Strg	
15-20	Silty sand	SM	10	50	20	10	10	12mm	A-SA	A-SA	None	None	-	Wk

Comments:	Hardness	PID/Odor	Moisture/Shape/Hardness/Cement	Consistency	Color
			moist	loose	7.5yr 4/3

Depth	USCS Name	USCS Symbol	% Gravel Coarse /Fine	% SAND			% Fines	Coarse-Grained Information			Fine-Grained Information			HCL Rxn
				CRS	MED	FN		Max.	Gravel Round	Sand Round	Plastic	Tough	Dilat/ Dry Strg	
20-25	silty sand w/ gravel	SM	30	40	15	10	10	11mm	A-SA	A-SA	None	None	-	Wk

Comments:	Hardness	PID/Odor	Moisture/Shape/Hardness/Cement	Consistency	Color
			moist	loose	7.5yr 4/3

Location: TTW-13

Page 2 *of* 3

Depth	USCS Name	USCS Symbol	% Gravel Coarse /Fine	% SAND			% Fines	Coarse-Grained Information			Fine-Grained Information			HCL Rxn
				CRS	MED	FN		Max.	Gravel Round	Sand Round	Plastic	Tough	Dilat/ Dry Strg	
25-60	well graded gravel w/ with silt + sand	GW-GM	55	15	15	10	5	18mm	A-SA	A-SA	None	None	-	None

Comments:	Hardness	PID/Odor	Moisture/Shape/Hardness/Cement	Consistency	Color
Granite - gravel consists of qtz + feldspar + plag - decomposed			moist	loose	10yr 3/4

Depth	USCS Name	USCS Symbol	% Gravel Coarse /Fine	% SAND			% Fines	Coarse-Grained Information			Fine-Grained Information			HCL Rxn
				CRS	MED	FN		Max.	Gravel Round	Sand Round	Plastic	Tough	Dilat/ Dry Strg	
60-65	well graded gravel w/sand	GW-GM	60	15	10	5	10	22mm	A-SA	A-SA	None	None	-	Wk

Comments:	Hardness	PID/Odor	Moisture/Shape/Hardness/Cement	Consistency	Color
Granite - decomposed			moist	loose	10yr 4/4

Depth	USCS Name	USCS Symbol	% Gravel Coarse /Fine	% SAND			% Fines	Coarse-Grained Information			Fine-Grained Information			HCL Rxn
				CRS	MED	FN		Max.	Gravel Round	Sand Round	Plastic	Tough	Dilat/ Dry Strg	
85-105	well graded gravel w/ sand	GW-GM	55	20	10	5	10	25mm	A-SA	A-SA	None	None	-	Wk

Comments:	Hardness	PID/Odor	Moisture/Shape/Hardness/Cement	Consistency	Color
Granite - decomposed			moist	loose	10yr 4/4

Depth	USCS Name	USCS Symbol	% Gravel Coarse /Fine	% SAND			% Fines	Coarse-Grained Information			Fine-Grained Information			HCL Rxn
				CRS	MED	FN		Max.	Gravel Round	Sand Round	Plastic	Tough	Dilat/ Dry Strg	
105-140	well graded gravel w/ Sand	GW-GM	50	20	10	10	10	20mm	A-SA	A-SA	None	None	-	Wk

Comments:	Hardness	PID/Odor	Moisture/Shape/Hardness/Cement	Consistency	Color
granite - decomposed			moist	loose	10yr 4/4

Location: TTV-12

Page 3 *of* 3

Depth	USCS Name	USCS Symbol	% Gravel Coarse /Fine	% SAND			% Fines	Coarse-Grained Information			Fine-Grained Information			HCL Rxn
				CRS	MED	FN		Max.	Gravel Round	Sand Round	Plastic	Tough	Dilat/ Dry Strg	
140-180	well graded gravel w/ sand	GW-GM	55	20	10	10	5	22mm	A-SA	A-SA	None	None	—	Wk

Comments:	Hardness	PID/Odor	Moisture/Shape/Hardness/Cement	Consistency	Color
Granite-decomposed			moist	loose	10 yr 4/4

Depth	USCS Name	USCS Symbol	% Gravel Coarse /Fine	% SAND			% Fines	Coarse-Grained Information			Fine-Grained Information			HCL Rxn
				CRS	MED	FN		Max.	Gravel Round	Sand Round	Plastic	Tough	Dilat/ Dry Strg	

Comments:	Hardness	PID/Odor	Moisture/Shape/Hardness/Cement	Consistency	Color

Depth	USCS Name	USCS Symbol	% Gravel Coarse /Fine	% SAND			% Fines	Coarse-Grained Information			Fine-Grained Information			HCL Rxn
				CRS	MED	FN		Max.	Gravel Round	Sand Round	Plastic	Tough	Dilat/ Dry Strg	

Comments:	Hardness	PID/Odor	Moisture/Shape/Hardness/Cement	Consistency	Color

Depth	USCS Name	USCS Symbol	% Gravel Coarse /Fine	% SAND			% Fines	Coarse-Grained Information			Fine-Grained Information			HCL Rxn
				CRS	MED	FN		Max.	Gravel Round	Sand Round	Plastic	Tough	Dilat/ Dry Strg	

Comments:	Hardness	PID/Odor	Moisture/Shape/Hardness/Cement	Consistency	Color

TTU-13

Location: TTU - 13

Date: 7/20/18

Geologist: S. Hensel

Borehole Diameter: 5 in

Page 1 *of* 2

Drilling Company and Rig: Resident Drilling

Drilling and Sampling Method: Open hole HSA/Air rotary

Backfill Material:

Depth	USCS Name	USCS Symbol	% Gravel Coarse /Fine	% SAND			% Fines	Coarse-Grained Information			Fine-Grained Information			HCL Rxn
				CRS	MED	FN		Max.	Gravel Round	Sand Round	Plastic	Tough	Dilat/ Dry Strg	
0-10	well graded sand with silt	SW-SM	5	30	25	25	15	13mm	A-SA	A-SA	None	None	-	Stg

Comments:

Hardness	PID/Odor	Moisture/Shape/Hardness/Cement	Consistency	Color
		~~moist~~ Dry	loose	7.5 YR 4/4

Depth	USCS Name	USCS Symbol	% Gravel Coarse /Fine	% SAND			% Fines	Coarse-Grained Information			Fine-Grained Information			HCL Rxn
				CRS	MED	FN		Max.	Gravel Round	Sand Round	Plastic	Tough	Dilat/ Dry Strg	
10-20	Silty sand w/gravel	SM	25	35	20	18	10	22mm	A-SA	A-SR	None	None	-	Wk

Comments:

Hardness	PID/Odor	Moisture/Shape/Hardness/Cement	Consistency	Color
		moist	loose	7.5 YR 4/4

Depth	USCS Name	USCS Symbol	% Gravel Coarse /Fine	% SAND			% Fines	Coarse-Grained Information			Fine-Grained Information			HCL Rxn
				CRS	MED	FN		Max.	Gravel Round	Sand Round	Plastic	Tough	Dilat/ Dry Strg	
20-30	well graded gravel w/ silt and sand	GW-GM	60	20	10	5	5	25mm	SA-SR	A-SA	None	None	-	WK

Comments:
Granite - gravel consists of
qtz - feldspar - plag
- decomposed

Hardness	PID/Odor	Moisture/Shape/Hardness/Cement	Consistency	Color
		moist	loose	10 yr 4/3

Location: TTU-13

Page 2 of 2

Depth	USCS Name	USCS Symbol	% Gravel Coarse /Fine	% SAND			% Fines	Coarse-Grained Information			Fine-Grained Information			HCL Rxn
				CRS	MED	FN		Max.	Gravel Round	Sand Round	Plastic	Tough	Dilat/ Dry Strg	
30-45	well graded gravel w/ sand	~~Gw-Gm~~ Gw-GM	70	10	10	5	5	20mm	A-SA	A-SA	None	None	-	Non

Comments:	Hardness	PID/Odor	Moisture/Shape/Hardness/Cement	Consistency	Color
Granite - decomposed			moist	loose	10yr 4/4

Depth	USCS Name	USCS Symbol	% Gravel Coarse /Fine	% SAND			% Fines	Coarse-Grained Information			Fine-Grained Information			HCL Rxn
				CRS	MED	FN		Max.	Gravel Round	Sand Round	Plastic	Tough	Dilat/ Dry Strg	
45-80	well graded gravel w/ sand	Gw-GM	60	20	10	5	5	18mm	A-SA	A-SA	None	None	-	wk

Comments:	Hardness	PID/Odor	Moisture/Shape/Hardness/Cement	Consistency	Color
Granite - decomposed			moist	loose	10 yr 4/4

Depth	USCS Name	USCS Symbol	% Gravel Coarse /Fine	% SAND			% Fines	Coarse-Grained Information			Fine-Grained Information			HCL Rxn
				CRS	MED	FN		Max.	Gravel Round	Sand Round	Plastic	Tough	Dilat/ Dry Strg	

Comments:	Hardness	PID/Odor	Moisture/Shape/Hardness/Cement	Consistency	Color

Depth	USCS Name	USCS Symbol	% Gravel Coarse /Fine	% SAND			% Fines	Coarse-Grained Information			Fine-Grained Information			HCL Rxn
				CRS	MED	FN		Max.	Gravel Round	Sand Round	Plastic	Tough	Dilat/ Dry Strg	

Comments:	Hardness	PID/Odor	Moisture/Shape/Hardness/Cement	Consistency	Color

HALEY & ALDRICH

GROUNDWATER OBSERVATION WELL INSTALLATION REPORT

Well No. TTU-14
Boring No. TTU-14

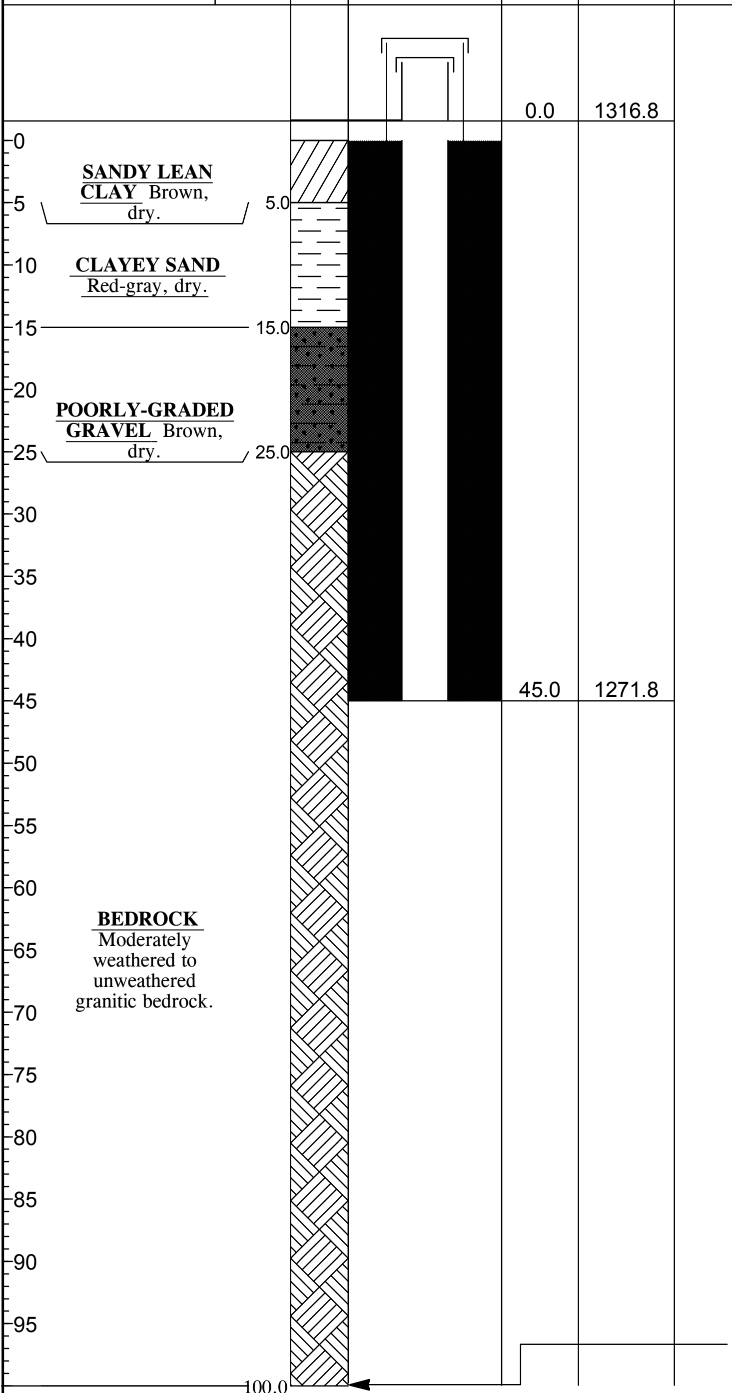
Project Nammo Talley TTU Closure
Location Mesa, AZ
Client Nammo Talley
Contractor Resilient Drilling
Driller
Initial Water Level (depth bgs) 54.3 ft

Well Diagram
- ▯ Riser Pipe
- ▤ Screen
- ░ Filter Sand
- ▒ Cuttings
- ■ Grout
- ▦ Concrete
- ▨ Bentonite Seal

File No. 39014
Date Installed 19 Jul 2018
H&A Rep. S. Hensel
Location See Plan

Ground El. 1316.8
Datum NAVD 88

SOIL/ROCK CONDITIONS	DEPTH (ft.)	GRAPHIC	WELL DETAILS	DEPTH (ft.)	ELEVATION (ft.)



SANDY LEAN CLAY Brown, dry. 5.0

CLAYEY SAND Red-gray, dry. 15.0

POORLY-GRADED GRAVEL Brown, dry. 25.0

BEDROCK Moderately weathered to unweathered granitic bedrock.

WELL CONSTRUCTION DETAILS

Type of protective cover Well Vault

Height of Guard Pipe above ground surface 0.60 ft

Height of top of riser above ground surface 2.50 ft

Type of protective casing Guard Pipe

Length 45.0 ft

Inside diameter 5.5 in

Depth of bottom of Guard Pipe 44.4 ft

Type of riser pipe -

Inside diameter of riser pipe -

Depth of bottom of riser pipe -

Type of Seals	Top of Seal (ft)	Thickness (ft)
Grout	0.0 ft	45.0 ft
-	-	-
-	-	-

Diameter of borehole 5 in

Type of screen OPEN

Screen gauge or size of openings -

Diameter of screen -

Depth to top of well screen -

Depth to bottom of well screen -

Bottom of silt trap -

Depth of bottom of borehole 100.0 ft

COMMENTS: -

TTU-15

J

Arizona Department of Water Resources
Water Management Division
P.O. Box 36020 Phoenix, Arizona 85067-6020
(602) 771-8627 • (602) 771-8690 fax
· www.azwater.gov ·

Well Driller Report and Well Log

FILE NUMBER

WELL REGISTRATION NUMBER
55 - 228014

PERMIT NUMBER (IF ISSUED)

THIS REPORT MUST BE FILED WITHIN **30 DAYS** OF COMPLETING THE WELL.

PLEASE PRINT CLEARLY USING BLACK OR BLUE INK.

RECEIVED
APR 0 5 2018
ADWR

SECTION 1. DRILLING AUTHORIZATION

Drilling Firm

Mail To:

NAME: **Resilient Drilling Services, LLC**
ADDRESS: **2615 S. 40th St., Suite B**
CITY / STATE / ZIP: **Phoenix, AZ 85034**
DWR LICENSE NUMBER: **855**
TELEPHONE NUMBER: **(602) 218-8848**
FAX: **(844) 265-4426**

SECTION 2. REGISTRY INFORMATION

Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: **Nammo Talley, Inc.**
MAILING ADDRESS: **P.O. Box 34299**
CITY / STATE / ZIP CODE: **Mesa, AZ 85277-4299**
CONTACT PERSON NAME AND TITLE: **Brad Anderer, Health, Environmental & Safety Mgr.**
TELEPHONE NUMBER: **(480) 898-2600**
FAX: **(480) 898-2410**
WELL NAME (e.g., MW-1, PZ-3, Lot 25 Well, Smith Well, etc.): **TTU-15**

Location of Well

WELL LOCATION ADDRESS (IF ANY):

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
2 N	**6 E**	**23**	**NE ¼**	**SW ¼**	**SW ¼**

LATITUDE: ° ' "N (Degrees, Minutes, Seconds)
LONGITUDE: ° ' "W (Degrees, Minutes, Seconds)

METHOD OF LATITUDE/LONGITUDE (CHECK ONE)
☐ *GPS: Hand-Held ☐ *GPS: Survey-Grade

LAND SURFACE ELEVATION AT WELL: Feet Above Sea Level

METHOD OF ELEVATION (CHECK ONE)
☐ *GPS: Hand-Held ☐ *GPS: Survey-Grade

*GEOGRAPHIC COORDINATE DATUM (CHECK ONE)
☐ NAD-83 ☐ Other *(please specify)*:

COUNTY: **Maricopa - ASLD**

ASSESSOR'S PARCEL ID NUMBER

BOOK	MAP	PARCEL
141	**91**	**146**

SECTION 3. WELL CONSTRUCTION DETAILS

Drill Method

CHECK ALL THAT APPLY
- ☐ Air Rotary
- ☐ Bored or Augered
- ☐ Cable Tool
- ☐ Dual Rotary
- ☐ Mud Rotary
- ☐ Reverse Circulation
- ☐ Driven
- ☐ Jetted
- ☐ Air Percussion / Odex Tubing
- ☒ Other *(please specify)*: **Tubex 115mm**

Method of Well Development

CHECK ALL THAT APPLY
- ☐ Airlift
- ☒ Bail
- ☐ Surge Block
- ☐ Surge Pump
- ☐ Other *(please specify)*:

Method of Sealing at Reduction Points

CHECK ONE
- ☐ None
- ☐ Packed
- ☐ Swedged
- ☐ Welded
- ☐ Other *(please specify)*: **N/A**

Condition of Well

CHECK ONE
- ☒ Capped
- ☐ Pump Installed

Construction Dates

DATE WELL CONSTRUCTION STARTED: **12/5/2017**
DATE WELL CONSTRUCTION COMPLETED: **1/25/2018**

I state that this notice is filed in compliance with A.R.S. § 45-596 and is complete and correct to the best of my knowledge and belief.

SIGNATURE OF QUALIFYING PARTY: For Greg Jones
DATE: 3/14/18

Well Driller Report and Well Log

WELL REGISTRATION NUMBER
55 - 228014

SECTION 4. WELL CONSTRUCTION DESIGN (AS BUILT) (attach additional page if needed)

Depth

DEPTH OF BORING **100'** Feet Below Land Surface

DEPTH OF COMPLETED WELL **100'** Feet Below Land Surface

Water Level Information

STATIC WATER LEVEL **Approx 30'** Feet Below Land Surface

DATE MEASURED **12/6/2017**

TIME MEASURED

IF FLOWING WELL, METHOD OF FLOW REGULATION ☐ Valve ☐ Other:

Borehole			Installed Casing														
DEPTH FROM SURFACE			DEPTH FROM SURFACE			MATERIAL TYPE (T)				PERFORATION TYPE (T)							
FROM (feet)	TO (feet)	BOREHOLE DIAMETER (inches)	FROM (feet)	TO (feet)	OUTER DIAMETER (inches)	STEEL	PVC	ABS	IF OTHER TYPE, DESCRIBE	BLANK OR NONE	WIRE WRAP	SHUTTER SCREEN	MILLS KNIFE	SLOTTED	IF OTHER TYPE, DESCRIBE	SLOT SIZE IF ANY (inches)
0'	10'	10"	0'	10'	5"	x				x						
10'	100'	4.5"		Open Hole												

Installed Annular Material

DEPTH FROM SURFACE		ANNULAR MATERIAL TYPE (T)				BENTONITE				FILTER PACK		
FROM (feet)	TO (feet)	NONE	CONCRETE	NEAT CEMENT OR CEMENT GROUT	CEMENT-BENTONITE GROUT	GROUT	CHIPS	PELLETS	IF OTHER TYPE OF ANNULAR MATERIAL, DESCRIBE	SAND	GRAVEL	SIZE
0'	10'			x								

Well Driller Report and Well Log

WELL REGISTRATION NUMBER
55 - **228014**

SECTION 5. GEOLOGIC LOG OF WELL

DEPTH FROM SURFACE		Description	Check (T) every interval where water was encountered (if known)
FROM (feet)	TO (feet)	Describe material, grain size, color, etc.	
0'	10'	Gravelly Sand	
10'	100'	Granite	

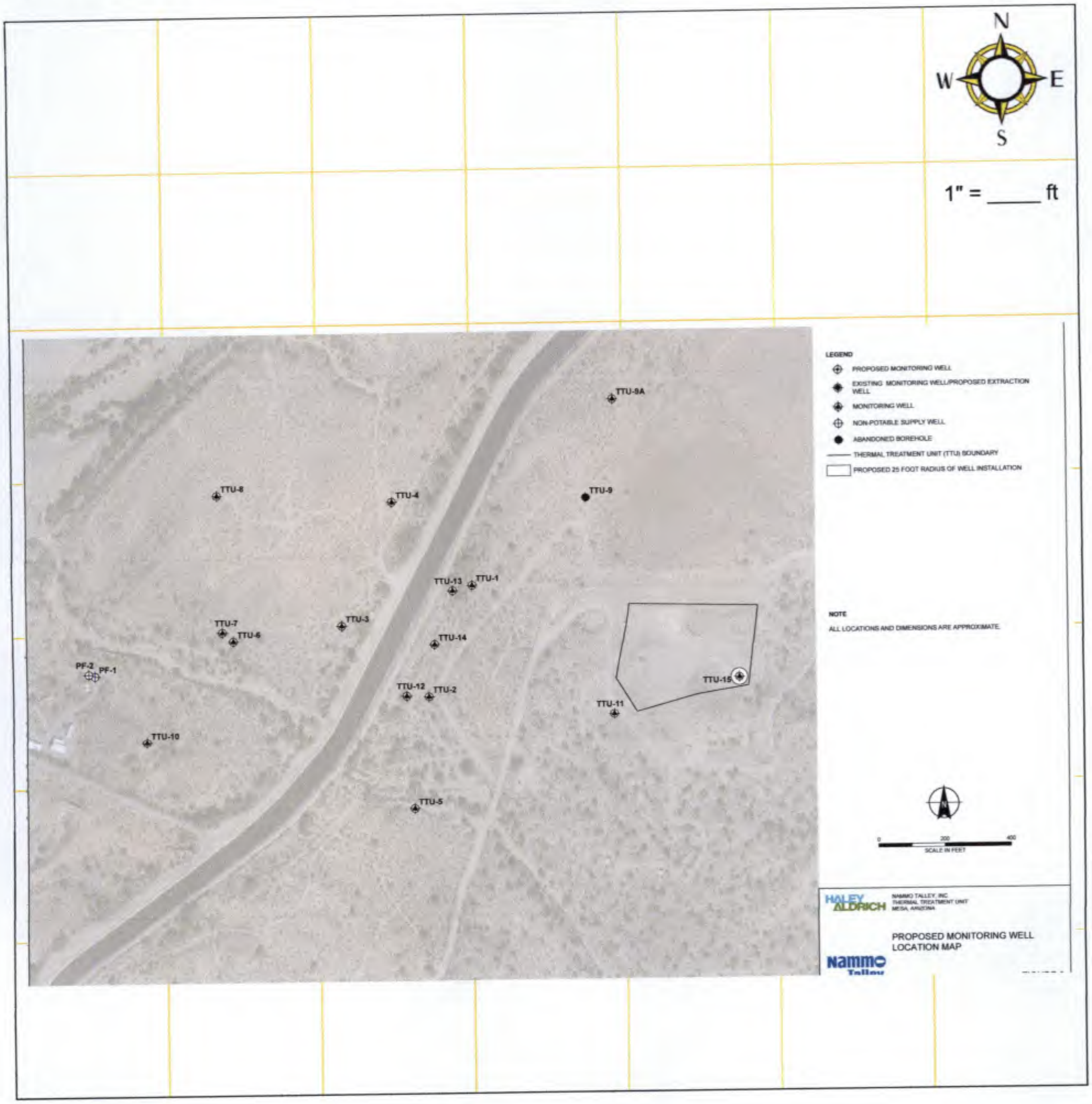
Well Driller Report and Well Log

WELL REGISTRATION NUMBER
55 - 228014

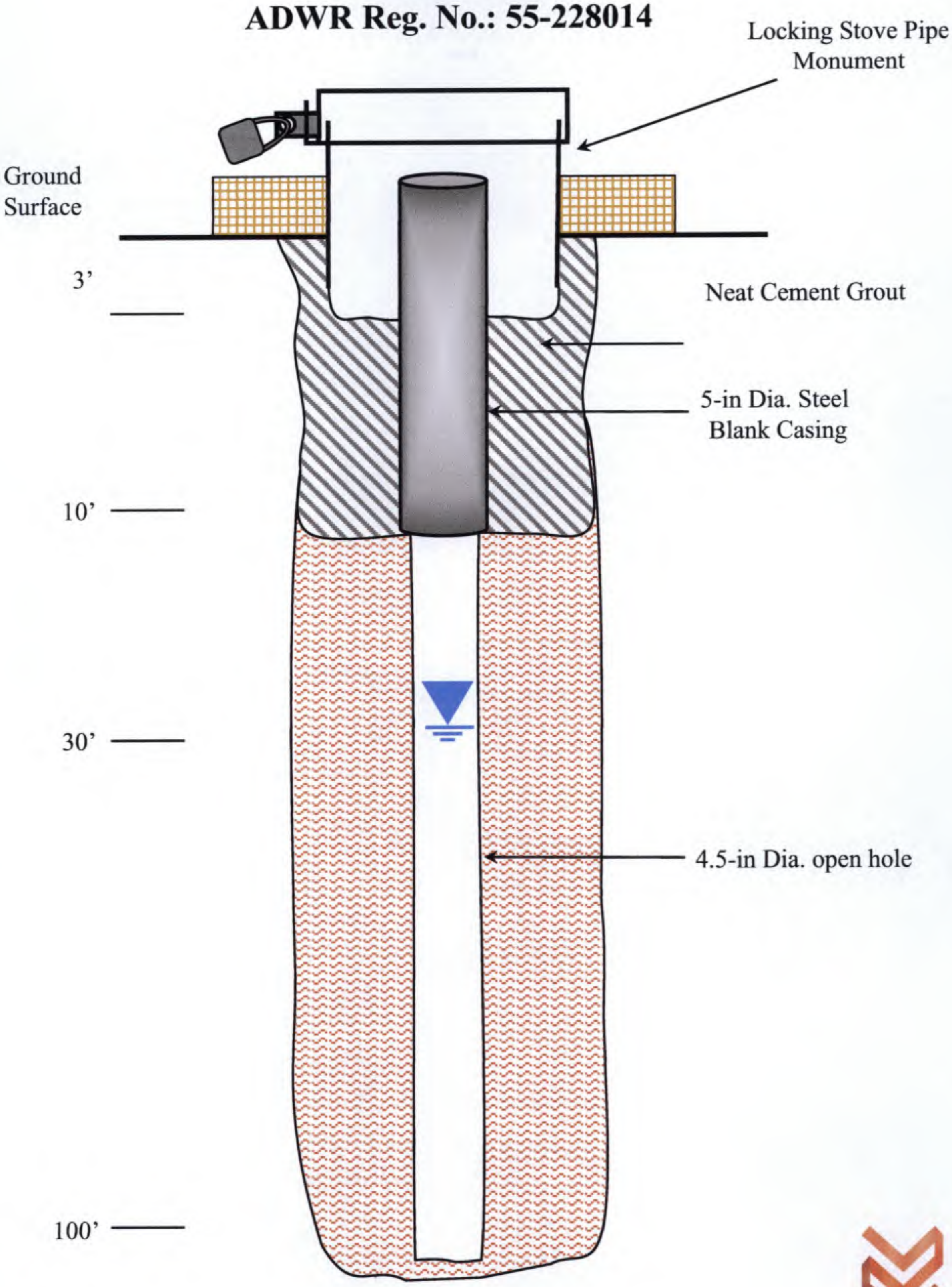
SECTION 6. WELL SITE PLAN

NAME OF WELL OWNER **Nammo Talley, Inc.**	COUNTY ASSESSOR'S PARCEL ID NUMBER BOOK **ASLD 141**	MAP **91**	PARCEL **146**

- ❖ Please draw the following: (1) the boundaries of property on which the well was located; (2) the well location; (3) the locations of all septic tank systems and sewer systems on the property or within 100 feet of the well location, even if on neighboring properties; and (4) any permanent structures on the property that may aid in locating the well.
- ❖ Please indicate the distance between the well location and any septic tank system or sewer system.



Well Completion Diagram
Well ID: TTU-15
ADWR Reg. No.: 55-228014



Not to Scale

RESILIENT
DRILLING

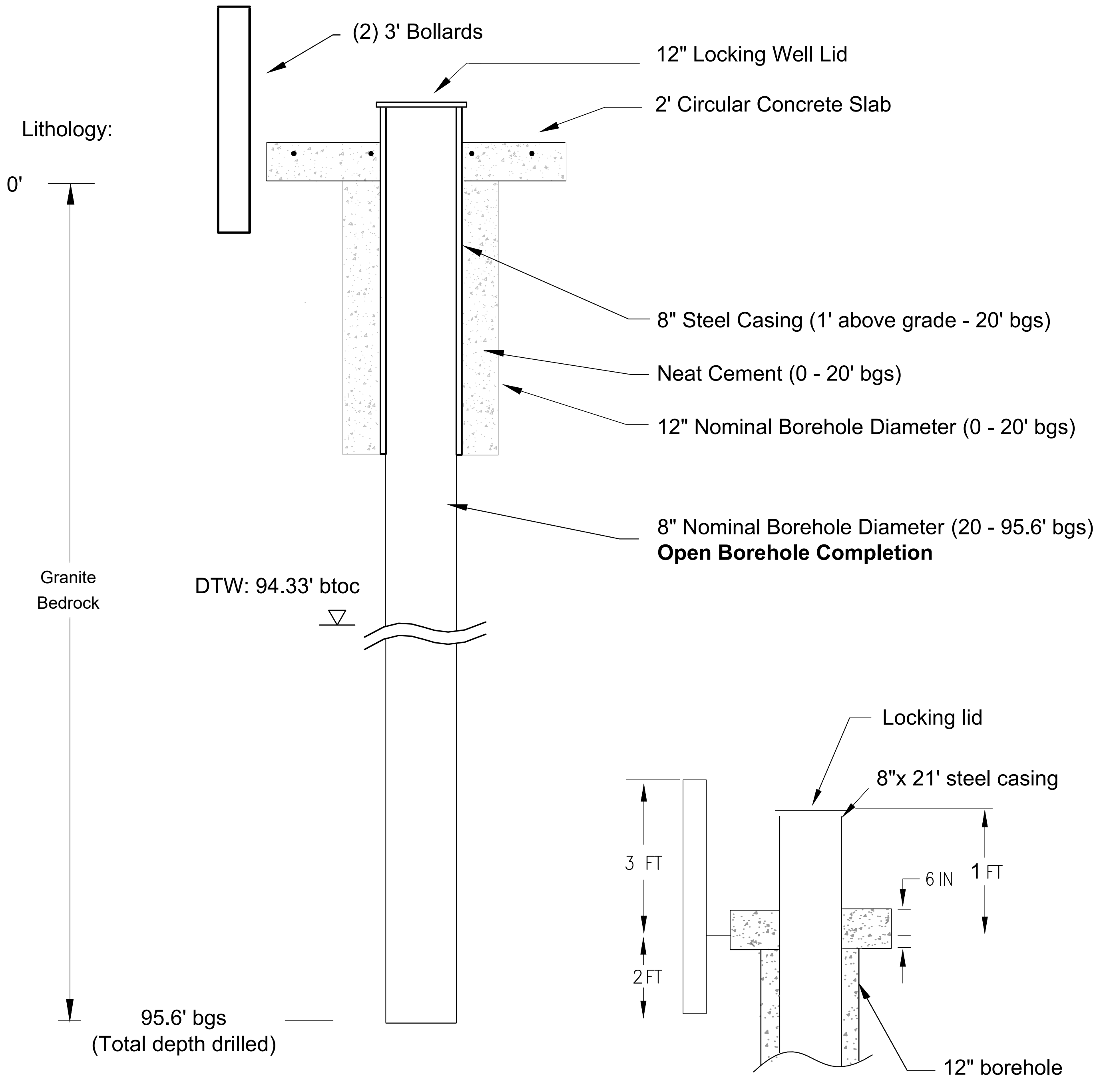
Geosyntec consultants

Client: Nammo Defense Systems, Inc
Project: SP0101M
Address: Former Thermal Treatment Unit

MONITORING WELL
TTU-16
WELL LOG & AS-BUILT CONSTRUCTION DETAIL

Drilling Start Date:	01/27/2020	Boring Depth (ft):	95.6	Well Depth (ft):	95.6
Drilling End Date:	01/28/2020	Boring Diameter (in):	12" to 20', 8" to 95.6'	Well Diameter (in):	8"
Drilling Company:	Hard Core Drilling Professionals	Sampling Method(s):	grab	Screen Slot (in):	N/A
Drilling Method:	ARCH	DTW During Drilling (ft):	dry	Riser Material:	N/A
Drilling Equipment:	Speedstar 30K Truck	DTW After Drilling (ft):	94.33	Screen Material:	N/A
Driller:	G. Gutierrez	Top of Casing Elev. (ft):	1338.55	Seal Material(s):	N/A
Logged By:	T. Luttermoser	Location (X,Y):	33.49894, -111.713776	Filter Type:	N/A

Not applicable, open borehole completion.



TTU-16 Completion Detail

Not to Scale
DTW - depth to water
btoc - below top of casing
bgs - below ground surface

Geosyntec consultants

Client: Nammo Defense Systems, Inc
Project: SP0101M
Address: Former Thermal Treatment Unit

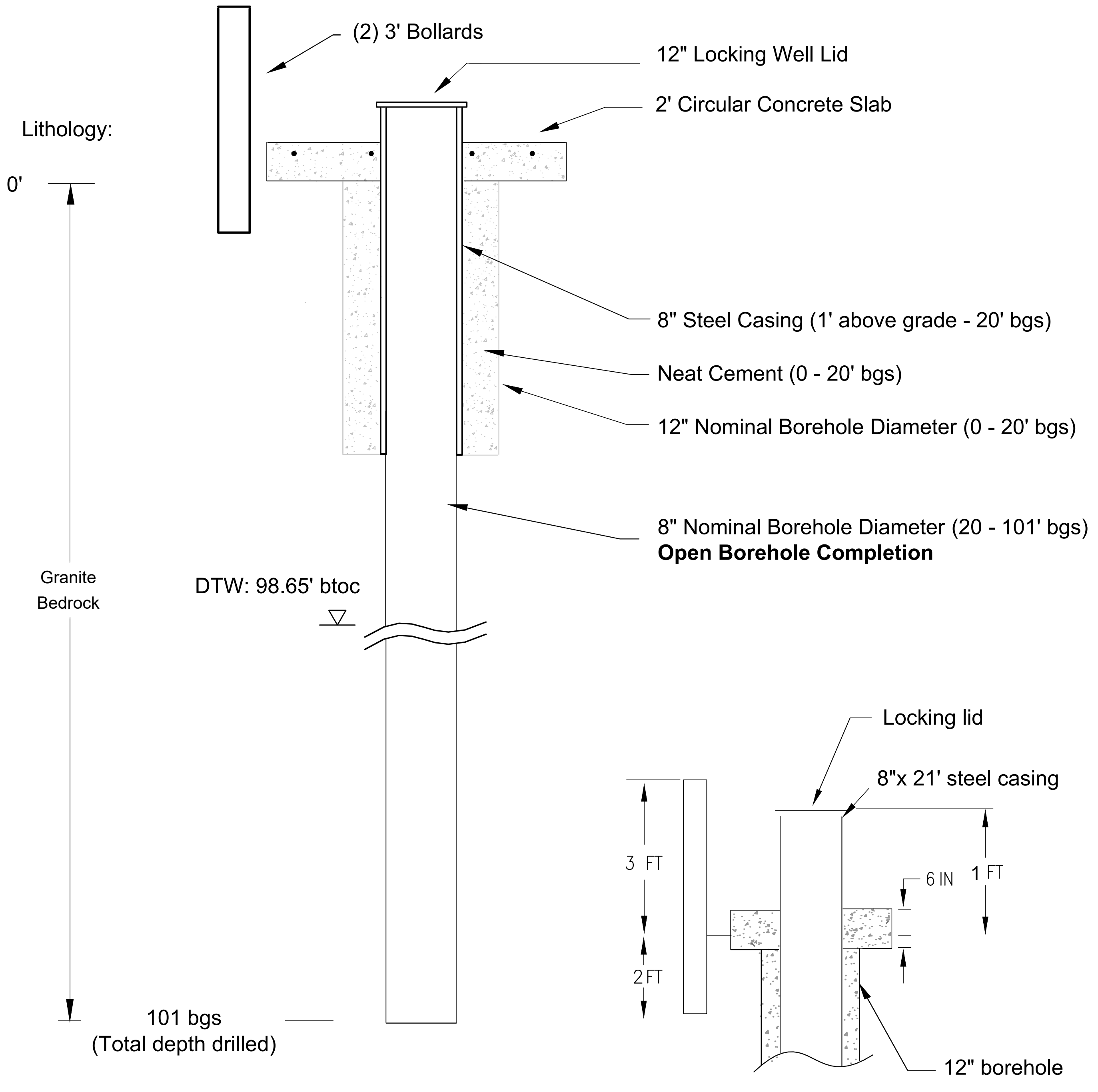
MONITORING WELL
TTU-17
WELL LOG & AS-BUILT CONSTRUCTION DETAIL

Drilling Start Date: 01/27/2020
Drilling End Date: 01/28/2020
Drilling Company: Hard Core Drilling Professionals
Drilling Method: ARCH
Drilling Equipment: Speedstar 30K Truck
Driller: G. Gutierrez
Logged By: T. Luttermoser

Boring Depth (ft): 101
Boring Diameter (in): 12" to 20', 8" to 101'
Sampling Method(s): grab
DTW During Drilling (ft): dry
DTW After Drilling (ft): 98.65
Top of Casing Elev. (ft): 1347.49
Location (X,Y): 33.499614, -111.712691

Well Depth (ft): 101
Well Diameter (in): 8"
Screen Slot (in): N/A
Riser Material: N/A
Screen Material: N/A
Seal Material(s): N/A
Filter Type: N/A

Not applicable, open borehole completion.



TTU-17 Completion Detail

Not to Scale
DTW - depth to water
btoc - below top of casing
bgs - below ground surface

Geosyntec consultants

Client: Nammo Defense Systems, Inc
Project: SP0101M
Address: Former Thermal Treatment Unit

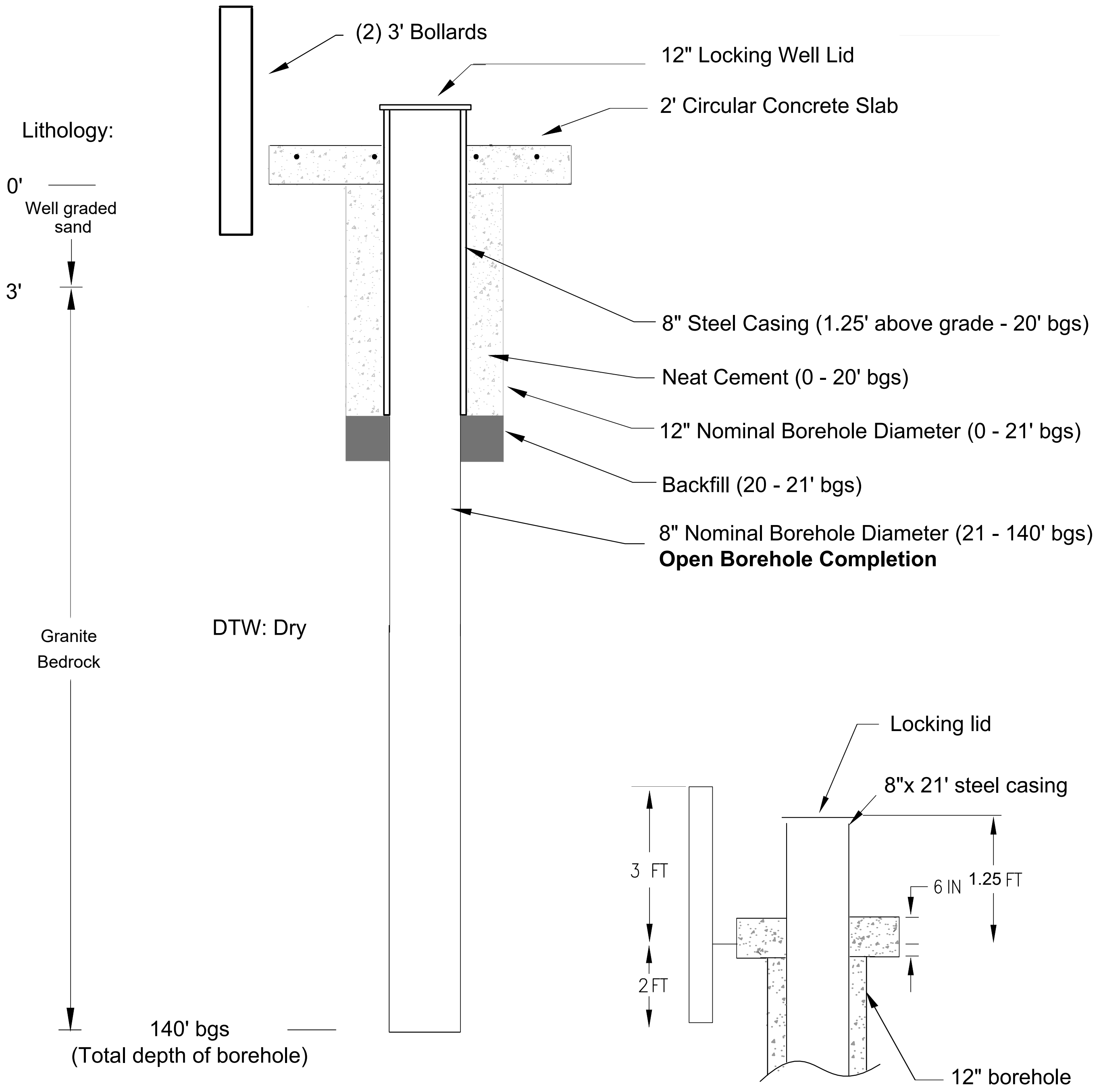
MONITORING WELL
TTU-18
WELL LOG & AS-BUILT
CONSTRUCTION DETAIL

Drilling Start Date: 01/22/2020
Drilling End Date: 01/25/2020
Drilling Company: Hard Core Drilling Professionals
Drilling Method: ARCH
Drilling Equipment: Speedstar 30K Truck
Driller: G. Gutierrez
Logged By: M. Williams

Boring Depth (ft): 140
Boring Diameter (in): 12" to 21', 8" to 140'
Sampling Method(s): grab
DTW During Drilling (ft): dry
DTW After Drilling (ft): dry
Top of Casing Elev. (ft): 1320.25
Location (X,Y): 33.496445, -111.716139

Well Depth (ft): 140
Well Diameter (in): 8"
Screen Slot (in): N/A
Riser Material: N/A
Screen Material: N/A
Seal Material(s): N/A
Filter Type: N/A

Not applicable, open borehole completion.



TTU-18 Completion Detail

Not to Scale
btoc - below top of casing
bgs - below ground surface

Geosyntec consultants

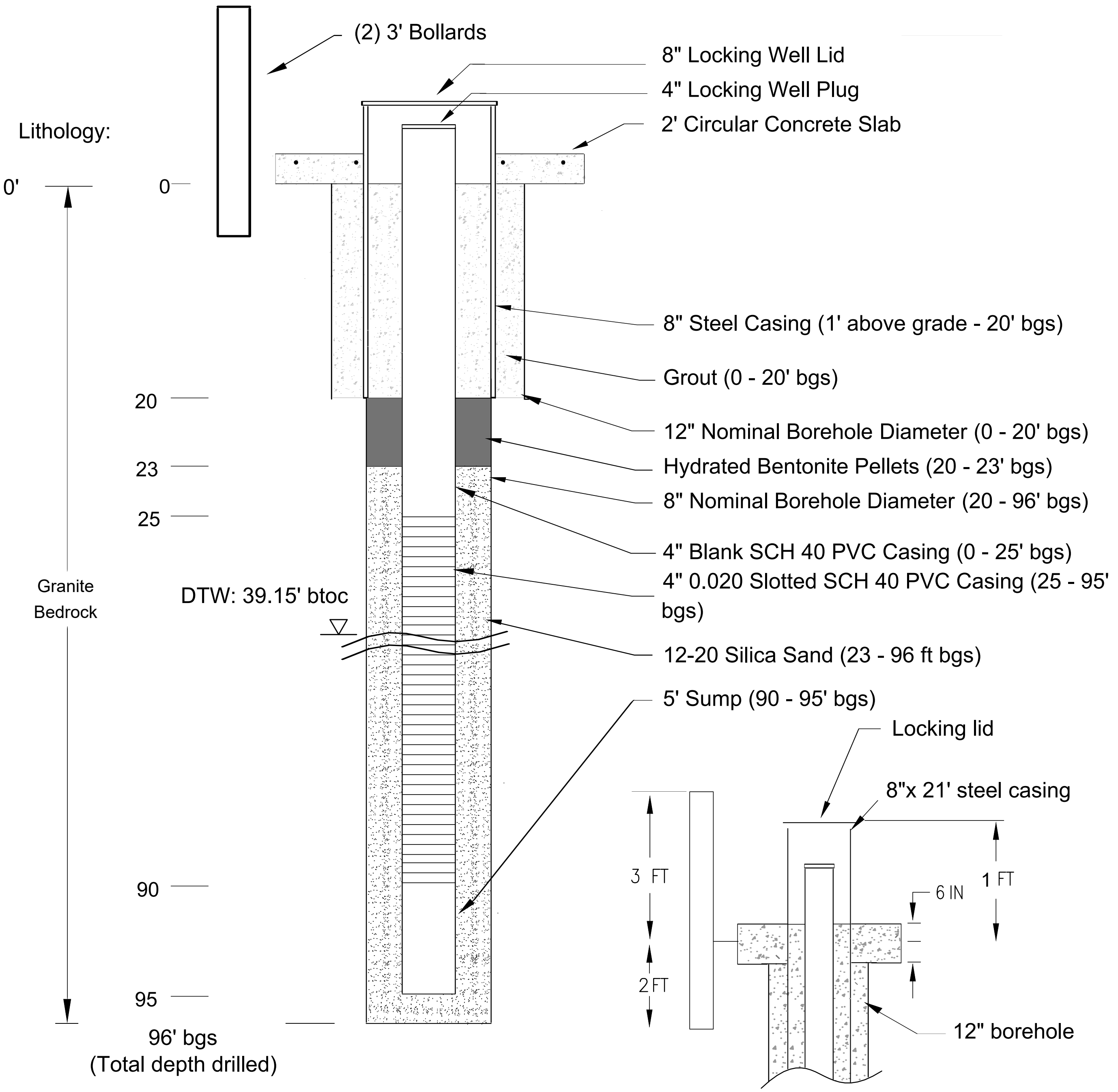
Client: Nammo Defense Systems, Inc.
Project: DE0437
Address: Former Thermal Treatment Unit

MONITORING WELL
TTU-19
WELL LOG & AS-BUILT
CONSTRUCTION DETAIL

Drilling Start Date: 09/22/2020
Drilling End Date: 09/24/2020
Drilling Company: Integrity Drilling Services, LLC.
Drilling Method: Air Rotary
Drilling Equipment: Foremost DR-24
Driller: C. Ashley
Logged By: T. Luttermoser

Boring Depth (ft): 96
Boring Diameter (in): 12" to 20', 8" to 96'
Sampling Method(s): grab
DTW During Drilling (ft): dry
DTW After Drilling (ft): 50
Top of Casing Elev. (ft): 1336.67
Location (X,Y): 33.498682, -111.714305

Well Depth (ft): 95
Well Diameter (in): 4
Screen Slot (in): 0.020
Riser Material: PVC
Screen Material: PVC
Seal Material(s): Bent. Pellets, Grout
Filter Type: 12-20 Silica Sand



TTU-19 Completion Detail

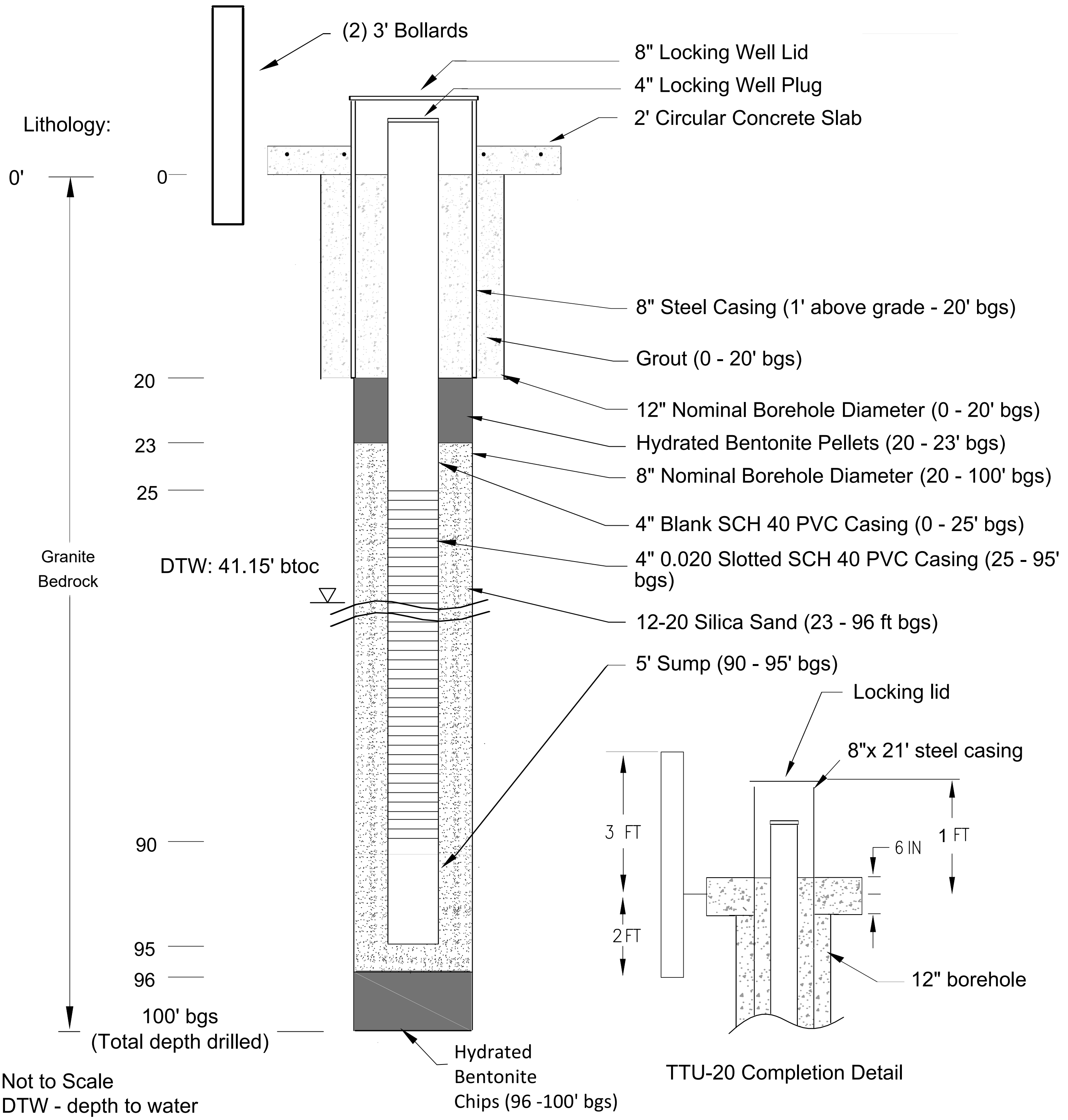
Not to Scale
DTW - depth to water
btoc - below top of casing
bgs - below ground surface

Geosyntec consultants

Client: Nammo Defense Systems, Inc.
Project: DE0437
Address: Former Thermal Treatment Unit

MONITORING WELL
TTU-20
WELL LOG & AS-BUILT
CONSTRUCTION DETAIL

Drilling Start Date:	09/21/2020	Boring Depth (ft):	100	Well Depth (ft):	95
Drilling End Date:	09/24/2020	Boring Diameter (in):	12" to 20', 8" to 100'	Well Diameter (in):	4
Drilling Company:	Integrity Drilling Services, LLC.	Sampling Method(s):	grab	Screen Slot (in):	0.020
Drilling Method:	Air Rotary	DTW During Drilling (ft):	dry	Riser Material:	PVC
Drilling Equipment:	Foremost DR-24	DTW After Drilling (ft):	41.15	Screen Material:	PVC
Driller:	C. Ashley	Top of Casing Elev. (ft):	1336.76	Seal Material(s):	Bent. Pellets, Grout
Logged By:	T. Luttermoser	Location (X,Y):	33.498659, -111.714327	Filter Type:	12-20 Silica Sand



TTU-20 Completion Detail

Not to Scale
DTW - depth to water
btoc - below top of casing
bgs - below ground surface

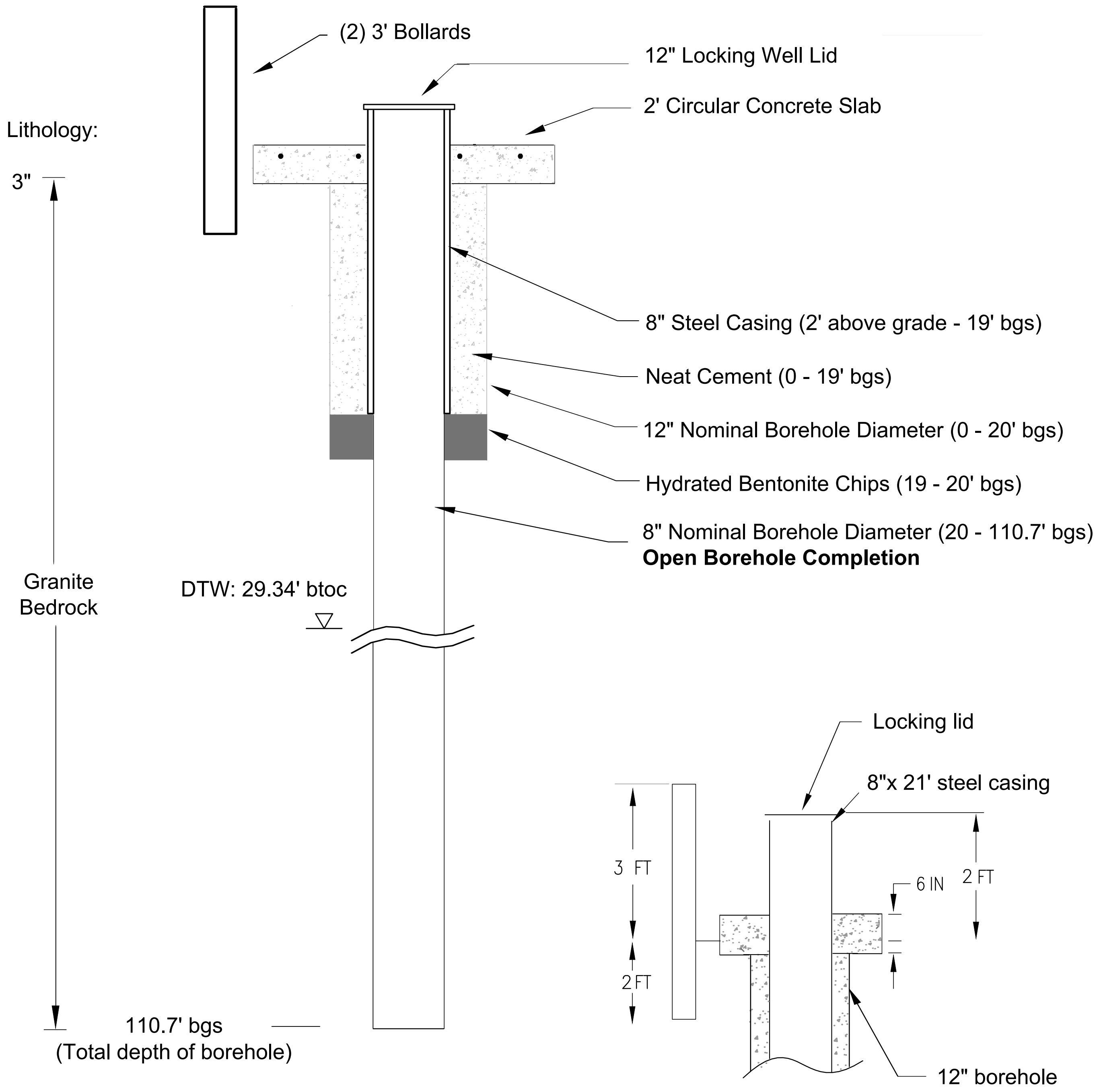
Geosyntec consultants

Client: Nammo Defense Systems, Inc
Project: SP0101M
Address: Former Thermal Treatment Unit

EXTRACTION WELL
TTU-EX-1
WELL LOG & AS-BUILT
CONSTRUCTION DETAIL

Drilling Start Date:	01/22/2020	Boring Depth (ft):	110.7	Well Depth (ft):	110.7' btoc
Drilling End Date:	01/25/2020	Boring Diameter (in):	12" to 20', 8" to 110.7'	Well Diameter (in):	8"
Drilling Company:	Hard Core Drilling Professionals	Sampling Method(s):	grab	Screen Slot (in):	N/A
Drilling Method:	ARCH	DTW During Drilling (ft):	dry	Riser Material:	N/A
Drilling Equipment:	Speedstar 30K Truck	DTW After Drilling (ft):	29.34	Screen Material:	N/A
Driller:	G. Gutierrez	Top of Casing Elev. (ft):	1321.69	Seal Material(s):	N/A
Logged By:	M. Williams	Location (X,Y):	33.49944, -111.714722	Filter Type:	N/A

Not applicable, open borehole completion.



TTU-EX-1 Completion Detail

DTW - depth to water
btoc - below top of casing
bgs - below ground surface

Geosyntec consultants

Client: Nammo Defense Systems, Inc
Project: SP0101M
Address: Former Thermal Treatment Unit

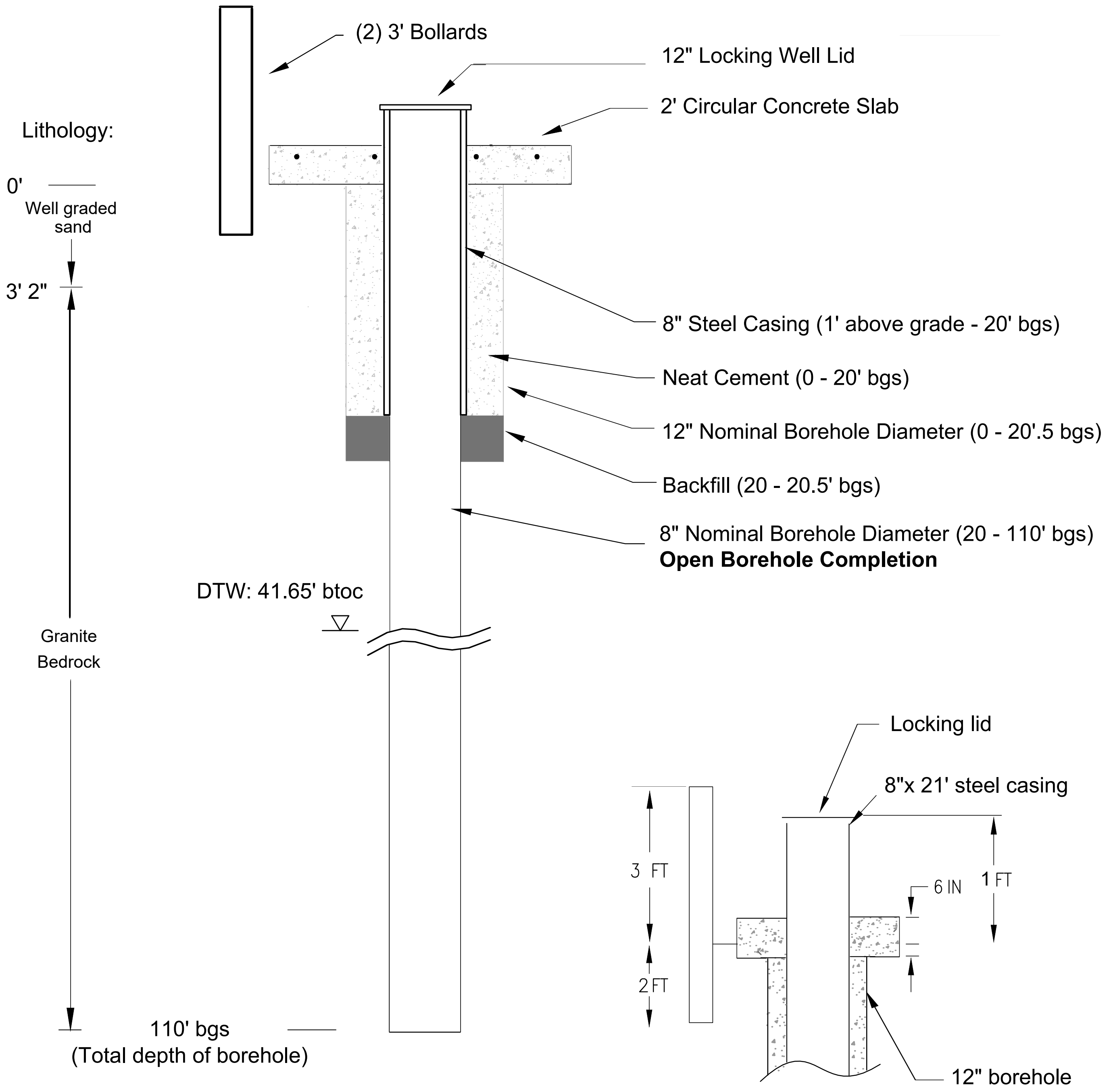
EXTRACTION WELL
TTU-EX-2
WELL LOG & AS-BUILT
CONSTRUCTION DETAIL

Drilling Start Date: 01/20/2020
Drilling End Date: 01/23/2020
Drilling Company: Hard Core Drilling Professionals
Drilling Method: ARCH
Drilling Equipment: Speedstar 30K Truck
Driller: G. Gutierrez
Logged By: M. Williams

Boring Depth (ft): 110
Boring Diameter (in): 12" to 20.5', 8" to 110'
Sampling Method(s): grab
DTW During Drilling (ft): dry
DTW After Drilling (ft): 41.65
Top of Casing Elev. (ft): 1316.40
Location (X,Y): 33.499336, -111.714941

Well Depth (ft): 110
Well Diameter (in): 8"
Screen Slot (in): N/A
Riser Material: N/A
Screen Material: N/A
Seal Material(s): N/A
Filter Type: N/A

Not applicable, open borehole completion.



TTU-EX-2 Completion Detail

Not to Scale
DTW - depth to water
btoc - below top of casing
bgs - below ground surface

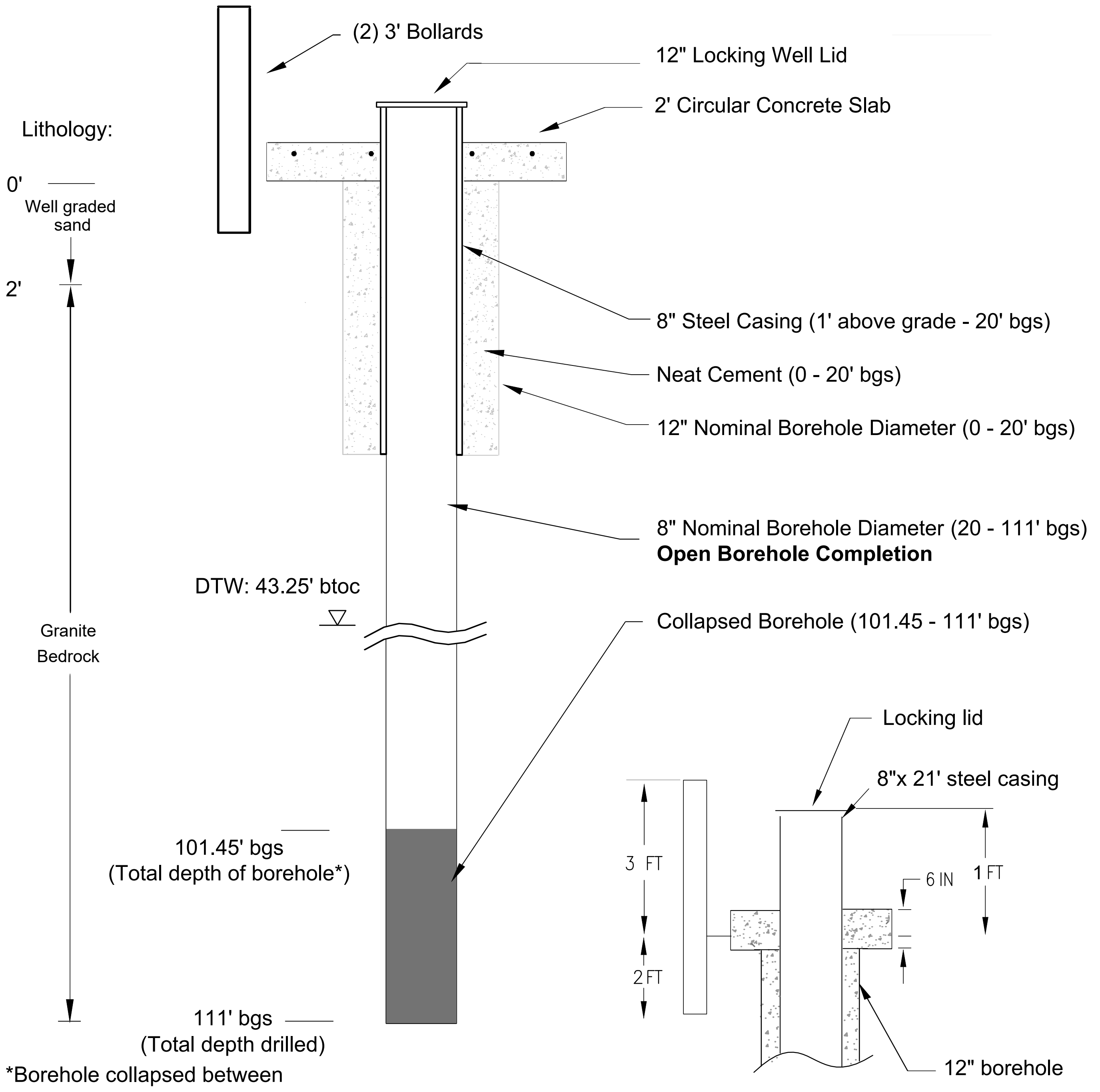
Geosyntec consultants

Client: Nammo Defense Systems, Inc
Project: SP0101M
Address: Former Thermal Treatment Unit

EXTRACTION WELL
TTU-EX-3
WELL LOG & AS-BUILT
CONSTRUCTION DETAIL

Drilling Start Date:	01/21/2020	Boring Depth (ft):	111	Well Depth (ft):	101.45
Drilling End Date:	01/24/2020	Boring Diameter (in):	12" to 20', 8" to 111'	Well Diameter (in):	8"
Drilling Company:	Hard Core Drilling Professionals	Sampling Method(s):	grab	Screen Slot (in):	N/A
Drilling Method:	ARCH	DTW During Drilling (ft):	dry	Riser Material:	N/A
Drilling Equipment:	Speedstar 30K Truck	DTW After Drilling (ft):	43.25	Screen Material:	N/A
Driller:	G. Gutierrez	Top of Casing Elev. (ft):	1316.85	Seal Material(s):	N/A
Logged By:	M. Williams	Location (X,Y):	33.49869, -111.715033	Filter Type:	N/A

Not applicable, open borehole completion.



TTU-EX-3 Completion Detail

*Borehole collapsed between 1/27/2020 and 2/4/2020.
Not to Scale
DTW - depth to water
btoc - below top of casing
bgs - below ground surface

Geosyntec consultants

Client: Nammo Defense Systems, Inc
Project: SP0101M
Address: Former Thermal Treatment Unit

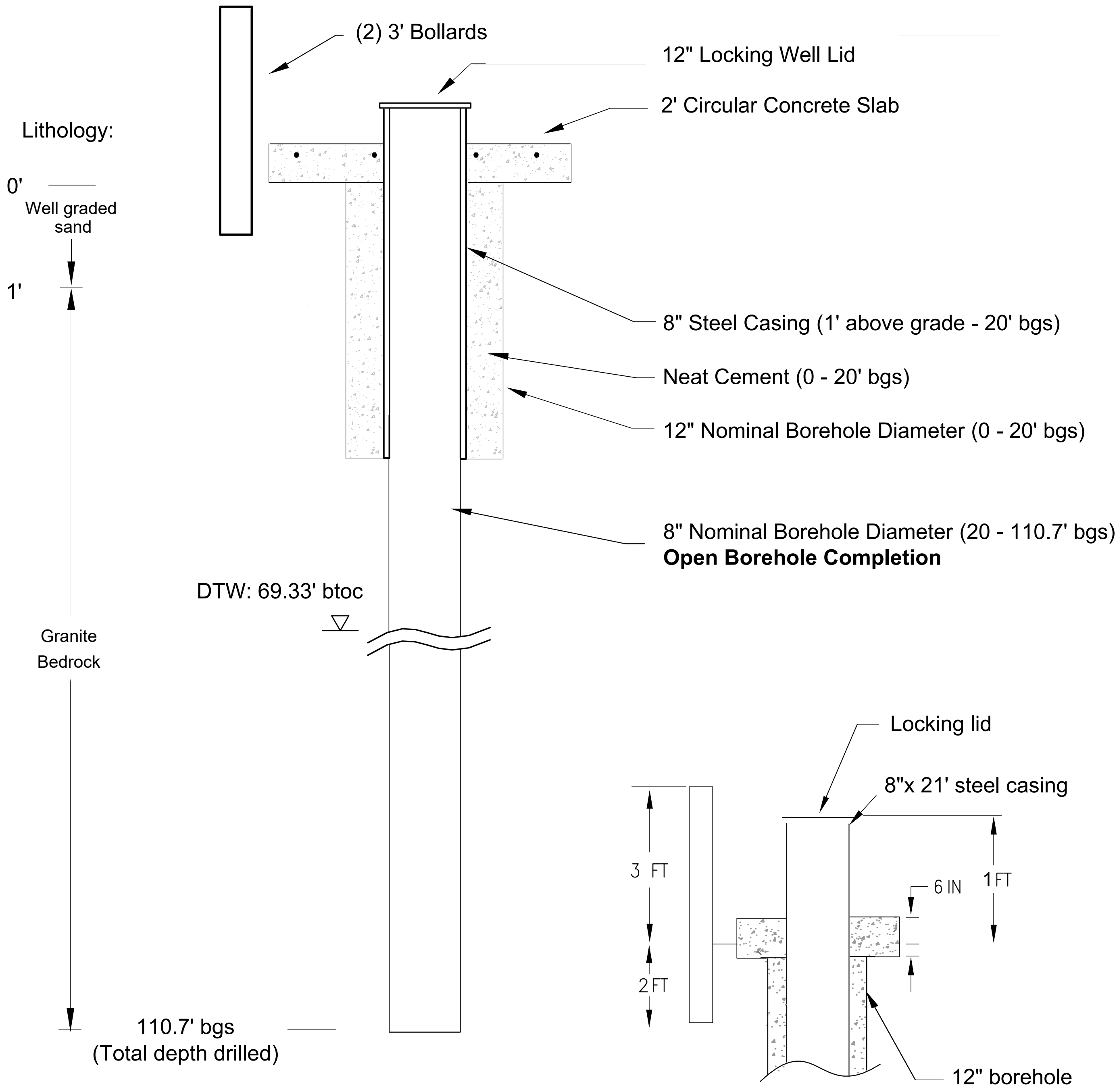
EXTRACTION WELL
TTU-EX-4
WELL LOG & AS-BUILT CONSTRUCTION DETAIL

Drilling Start Date:	01/21/2020
Drilling End Date:	01/24/2020
Drilling Company:	Hard Core Drilling Professionals
Drilling Method:	ARCH
Drilling Equipment:	Speedstar 30K Truck
Driller:	G. Gutierrez
Logged By:	M. Williams

Boring Depth (ft):	110.7
Boring Diameter (in):	12" to 20', 8" to 110.7'
Sampling Method(s):	grab
DTW During Drilling (ft):	dry
DTW After Drilling (ft):	69.33
Top of Casing Elev. (ft):	1319.96
Location (X,Y):	33.49874, -111.715108

Well Depth (ft):	110.7' btoc
Well Diameter (in):	8"
Screen Slot (in):	N/A
Riser Material:	N/A
Screen Material:	N/A
Seal Material(s):	N/A
Filter Type:	N/A

Not applicable, open borehole completion.



TTU-EX-4 Completion Detail

Not to Scale
DTW - depth to water
btoc - below top of casing
bgs - below ground surface

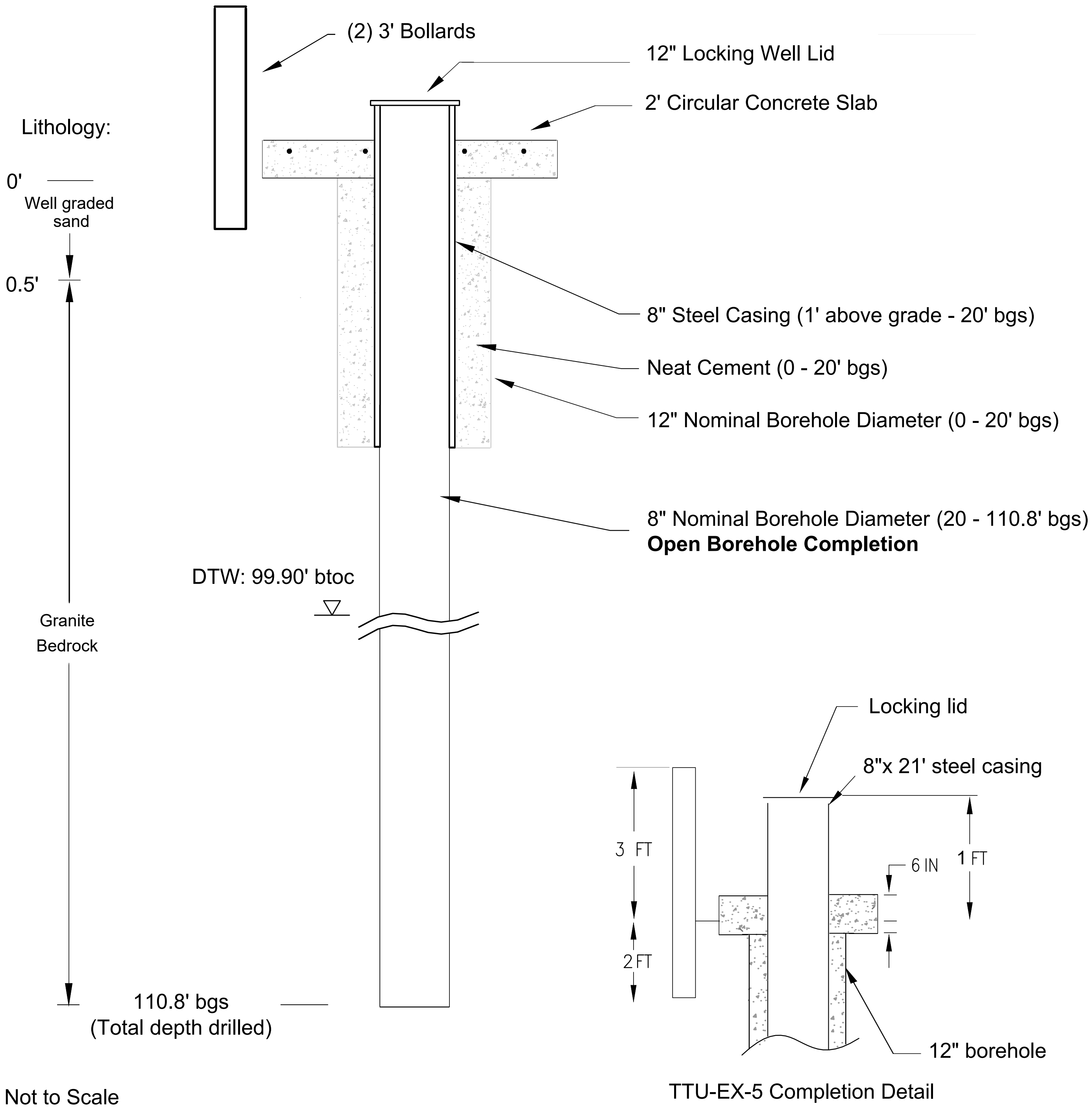
Geosyntec consultants

Client:	Nammo Defense Systems, Inc
Project:	SP0101M
Address:	Former Thermal Treatment Unit

EXTRACTION WELL
TTU-EX-5
WELL LOG & AS-BUILT
CONSTRUCTION DETAIL

Drilling Start Date:	01/22/2020	Boring Depth (ft):	110.8	Well Depth (ft):	110.8' btoc
Drilling End Date:	01/24/2020	Boring Diameter (in):	12" to 20', 8" to 110.8'	Well Diameter (in):	8"
Drilling Company:	Hard Core Drilling Professionals	Sampling Method(s):	grab	Screen Slot (in):	N/A
Drilling Method:	ARCH	DTW During Drilling (ft):	dry	Riser Material:	N/A
Drilling Equipment:	Speedstar 30K Truck	DTW After Drilling (ft):	99.90	Screen Material:	N/A
Driller:	G. Gutierrez	Top of Casing Elev. (ft):	1319.50	Seal Material(s):	N/A
Logged By:	M. Williams	Location (X,Y):	33.498493, -111.715173	Filter Type:	N/A

Not applicable, open borehole completion.



TTU-EX-5 Completion Detail

Not to Scale
DTW - depth to water
btoc - below top of casing
bgs - below ground surface

PF-2

GREAT SEAL OF THE STATE OF ARIZONA 1912

[redacted]

Well Driller Report and Well Log

[redacted]

PLEASE PRINT CLEARLY USING BLACK OR BLUE INK.

FILE NUMBER

WELL REGISTRATION NUMBER
55 -

PERMIT NUMBER (IF ISSUED)
SALT RIVER PIMA-MARICOPA SC-13-03866

SECTION 1. DRILLING AUTHORIZATION

Drilling Firm

Mail To:

NAME: AZ PRESTON DRILLING, LLC
ADDRESS: 8957 E. PALM LANE
CITY / STATE / ZIP: MESA, AZ 85207

DWR LICENSE NUMBER: #619
TELEPHONE NUMBER: 480-986-6285
FAX:

SECTION 2. REGISTRY INFORMATION

Well Owner

FULL NAME OF COMPANY, ORGANIZATION, OR INDIVIDUAL: UNIVERSITY OF WASHINGTON
MAILING ADDRESS: 4202 N. HIGLEY ROAD
CITY / STATE / ZIP CODE: MESA, AZ 85215
CONTACT PERSON NAME AND TITLE: KEN DURK / AZ BREEDING COLONY
TELEPHONE NUMBER: 206-616-4318
FAX:
WELL NAME (e.g., MW-1, PZ-3, Lot 25 Well, Smith Well, etc.):

Location of Well

WELL LOCATION ADDRESS (IF ANY):

TOWNSHIP (N/S)	RANGE (E/W)	SECTION	160 ACRE	40 ACRE	10 ACRE
			¼	¼	¼

LATITUDE: ° Degrees ' Minutes "N Seconds
LONGITUDE: ° Degrees ' Minutes "W Seconds

METHOD OF LATITUDE/LONGITUDE (CHECK ONE)
☐ *GPS: Hand-Held ☐ *GPS: Survey-Grade

LAND SURFACE ELEVATION AT WELL
Feet Above Sea Level

METHOD OF ELEVATION (CHECK ONE)
☐ *GPS: Hand-Held ☐ *GPS: Survey-Grade

*GEOGRAPHIC COORDINATE DATUM (CHECK ONE)
☐ NAD-83 ☐ Other (*please specify*):

COUNTY:

ASSESSOR'S PARCEL ID NUMBER
BOOK | MAP | PARCEL

SECTION 3. WELL CONSTRUCTION DETAILS

Drill Method

CHECK ALL THAT APPLY
- ☑ Air Rotary
- ☐ Bored or Augered
- ☐ Cable Tool
- ☐ Dual Rotary
- ☐ Mud Rotary
- ☐ Reverse Circulation
- ☐ Driven
- ☐ Jetted
- ☐ Air Percussion / Odex Tubing
- ☐ Other (*please specify*):

Method of Well Development

CHECK ALL THAT APPLY
- ☑ Airlift
- ☐ Bail
- ☐ Surge Block
- ☐ Surge Pump
- ☐ Other (*please specify*):

Method of Sealing at Reduction Points

CHECK ONE
- ☑ None
- ☐ Packed
- ☐ Swedged
- ☐ Welded
- ☐ Other (*please specify*):

Condition of Well

CHECK ONE
- ☑ Capped
- ☐ Pump Installed

Construction Dates

DATE WELL CONSTRUCTION STARTED: 3-26-13
DATE WELL CONSTRUCTION COMPLETED: 3-27-13

I state that this notice is filed in compliance with A.R.S. § 45-596 and is complete and correct to the best of my knowledge and belief.

SIGNATURE OF QUALIFYING PARTY: Tony P
DATE: 3-27-13

WELL REGISTRATION NUMBER
55 -

SECTION 4. WELL CONSTRUCTION DESIGN (AS BUILT) (attach additional page if needed)

Depth

DEPTH OF BORING 400' Feet Below Land Surface

DEPTH OF COMPLETED WELL 400' Feet Below Land Surface

Water Level Information

STATIC WATER LEVEL 117 Feet Below Land Surface

DATE MEASURED 3-27-13

TIME MEASURED 3:00 pm

IF FLOWING WELL, METHOD OF FLOW REGULATION ☐ Valve ☐ Other:

Borehole			Installed Casing													
DEPTH FROM SURFACE			DEPTH FROM SURFACE			MATERIAL TYPE (T)				PERFORATION TYPE (T)						
FROM (feet)	TO (feet)	BOREHOLE DIAMETER (inches)	FROM (feet)	TO (feet)	OUTER DIAMETER (inches)	STEEL	PVC	ABS	IF OTHER TYPE, DESCRIBE	BLANK OR NONE	WIRE WRAP	SHUTTER SCREEN	MILLS KNIFE	SLOTTED	IF OTHER TYPE, DESCRIBE	SLOT SIZE IF ANY (inches)
0	20'	12 1/4"	+1'	20'	8 5/8	✓				✓						
20	400'	8"	+1'	300'	6 5/8	✓				✓						
			300'	400'	6 5/8	✓								✓		1/8"X3"

DEPTH FROM SURFACE		Installed Annular Material										
		ANNULAR MATERIAL TYPE (T)				BENTONITE				FILTER PACK		
FROM (feet)	TO (feet)	NONE	CONCRETE	NEAT CEMENT OR CEMENT GROUT	CEMENT-BENTONITE GROUT	GROUT	CHIPS	PELLETS	IF OTHER TYPE OF ANNULAR MATERIAL, DESCRIBE	SAND	GRAVEL	SIZE
0	20'			✓								

Well Driller Report and Well Log

WELL REGISTRATION NUMBER
55 -

SECTION 5. GEOLOGIC LOG OF WELL

DEPTH FROM SURFACE		**Description**	Check (T) every interval where water was encountered (if known)
FROM (feet)	TO (feet)	Describe material, grain size, color, etc.	
0	15'	Boulders, SAND, clAy	
15'	30'	Decomposed GRANITE	
30'	130'	GREY GRANITE	
130	150'	FRACTURED GRANITE	✓
150'	240'	GREY GRANITE	
240'	300'	FRACTURED GREY GRANITE	✓✓
300'	400'	GREY & PINK GRANITES	✓

Attachment 2 – Field Notes

Pinyon Environmental, Inc.

Well Sampling Record

Project Name	Nammo TTU
Project Number	722152201.002
Well ID / ADWR #	TTU-20 / 55-232968
Date Completed	9/24/2020
Casing Material	PVC
Casing Diameter (in)	4
Screen (ft btoc)	25-90
Well Total Depth (ft btoc)	95
Survey Information	Northing: 909022.530 / Easting: 761681.990

Deployment

Date / Time	6/16/2022 @ 1144
Type of Sampler	HydraSleeve
Size of Sampler	HS-2-1L
DTW (ft btoc)	30.21
Deployment Depth (ft btoc)	73
Personnel	BCB & IGF
Notes	

Retrieval and/or Sampling

Date / Time	9/3/22 @0844
DTW (ft btoc)	31.21
Sampler Integrity	Good
Personnel	IGF + BCB
Notes	effervescing H2O

Field Parameters

Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
9/3/22 @ 0854	20.3	6.58	23.2	4690	2.56	15.1

Sample ID	TTU-20-73- 20220903	
QAQC Samples	Dup-01	
Containers	(2) 125 mL HDPE (no pres.) & (12) 40 mL amber VOAs	
Preservatives	HCl	
Analysis	Perchlorate / VOCs / 1,4-Dioxane	
Sampler Reset	~~Yes~~	[✓ No]
Notes	Sampler not reset; tether ~~removes~~ removed for later PFAS testing BCB	

Pinyon
Environmental, Inc.

Well Sampling Record

Project Name	Nammo TTU
Project Number	722152201.002
Well ID / ADWR #	TTU-19 / 55-232969
Date Completed	9/24/2020
Casing Material	PVC
Casing Diameter (in)	4
Screen (ft btoc)	25-90
Well Total Depth (ft btoc)	95
Survey Information	Northing: 909030.750 / Easting: 761687.700

Deployment

Date / Time	6/20/2022 @ 1256
Type of Sampler	HydraSleeve
Size of Sampler	HS-2-1L
DTW (ft btoc)	26.61
Deployment Depth (ft btoc)	73
Personnel	BCB & IGF
Notes	Gross smell, gel in water, effervescing a lot

Retrieval and/or Sampling

Date / Time	9/3/22 @ 1031
DTW (ft btoc)	29.49
Sampler Integrity	Good
Personnel	IGF, BCB
Notes	Smelly, oily water w/floating sediment

Field Parameters

Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
9/3/22 @ 1048	32.3	6.09	-132.7	1533	2.62	150

Sample ID	TTU-19-73-20220903	
QAQC Samples	MS/MSD	
Containers	(2) 125 mL HDPE (no pres.) & (2) 40 mL amber VOAs	
Preservatives	HCl	
Analysis	Perchlorate / VOCs / 1,4-Dioxane	
Sampler Reset	Yes	[✓ No]

Notes
Pulled tether for PFAS sampling

Pinyon
Environmental, Inc.

Well Sampling Record

Project Name	Nammo TTU
Project Number	722152201.002
Well ID / ADWR #	TTU-11 / 55-918534
Date Completed	9/11/2015
Casing Material	PVC
Casing Diameter (in)	4
Screen (ft btoc)	24-89
Well Total Depth (ft btoc)	94
Survey Information	Northing: 909029.758 / Easting: 761706.470

Deployment

Date / Time	6/20/2022 @ 1407
Type of Sampler	HydraSleeve
Size of Sampler	HS-2-1L
DTW (ft btoc)	31.92
Deployment Depth (ft btoc)	73
Personnel	BCB & IGF
Notes	Effervescing quite a bit, smells terrible

Retrieval and/or Sampling

Date / Time	9/3/22 @ 0930
DTW (ft btoc)	31.49
Sampler Integrity	Good
Personnel	IGF + BCB
Notes	awful smell, floating chunks of something unknown

Field Parameters

Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
9/3/22 @ 0940	31.4	5.47	-185.0	1618	1.79	102.9

Sample ID	TTU-11-73-20220903
QAQC Samples	—
Containers	(1) 125 mL HDPE (no pres.) & (6) 40 mL amber VOAs
Preservatives	HCl
Analysis	Perchlorate / VOCs / 1,4-Dioxane
Sampler Reset	Yes [✓ No]

Notes

Tether removed for PFAS

Pinyon
Environmental, Inc.

Well Sampling Record

Project Name	Nammo TTU
Project Number	722152201.002
Well ID / ADWR #	TTU-EXT-5 / 55-231736
Date Completed	1/24/2020
Casing Material	
Casing Diameter (in)	8
Screen (ft btoc)	OPEN
Well Total Depth (ft btoc)	112.4
Survey Information	Northing: 908971.770 / Easting: 761423.325

Deployment

Date / Time	6/13/2022 @ 0750
Type of Sampler	HydraSleeve
Size of Sampler	HS-2-1L
DTW (ft btoc)	40.58
Deployment Depth (ft btoc)	80
Personnel	BCB & IGF
Notes	1.5" Sediment @ bottom of sleeve, ¾ of water clear

Retrieval and/or Sampling

Date / Time	9/8/22 @ 0719
DTW (ft btoc)	40.92
Sampler Integrity	good
Personnel	IGF + BCB
Notes	~1" sed @ bottom of sampler, H2O cloudy

Field Parameters

Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
9/8/22 @ 0728	27.1	7.09	6.2	1104	2.12	24.0

Sample ID	TTU-EXT-5-80-20220908	
QAQC Samples	DUP-02	
Containers	(2) 125 mL HDPE (no pres.) & (12) 40 mL amber VOAs	
Preservatives	HCl	
Analysis	Perchlorate / VOCs / 1,4-Dioxane	
Sampler Reset	Yes	[✓ No]

Notes
Sampler + tether removed for later PFAS sampling

Pinyon
Environmental, Inc.

Well Sampling Record

Project Name	Nammo TTU
Project Number	722152201.002
Well ID / ADWR #	TTU-EXT-4 / 55-231732
Date Completed	1/25/2020
Casing Material	
Casing Diameter (in)	8
Screen (ft btoc)	OPEN
Well Total Depth (ft btoc)	112
Survey Information	Northing: 909051.298 / Easting: 761442.876

Deployment

Date / Time	6/13/2022 @ 0834
Type of Sampler	HydraSleeve
Size of Sampler	HS-2-1L
DTW (ft btoc)	41.62
Deployment Depth (ft btoc)	77
Personnel	BCB & IGF
Notes	1.5" Sediment @ bottom of sleeve, ¾ of water clear

Retrieval and/or Sampling

Date / Time	9/8/22 @ 0754
DTW (ft btoc)	41.95
Sampler Integrity	Good
Personnel	IGF + BCB
Notes	Small amount of sediment, silty toward bottom

Field Parameters

Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
9/8/22 @ 0802	27.3	6.87	42.1	2128	1.59	32.2

Sample ID	TTU-EXT-4-77-20220908
QAQC Samples	—
Containers	(1) 125 mL HDPE (no pres.) & (6) 40 mL amber VOAs
Preservatives	HCl
Analysis	Perchlorate / VOCs / 1,4-Dioxane
Sampler Reset	Yes [✓ No]
Notes	

Pinyon
Environmental, Inc.

Well Sampling Record

Project Name	Nammo TTU
Project Number	722152201.002
Well ID / ADWR #	TTU-EXT-3 / 55-231731
Date Completed	1/24/2020
Casing Material	
Casing Diameter (in)	8
Screen (ft btoc)	OPEN
Well Total Depth (ft btoc)	111
Survey Information	Northing: 909134.941 / Easting: 761465.507

Deployment

Date / Time	6/13/2022 @ 0907
Type of Sampler	HydraSleeve
Size of Sampler	HS-2-1L
DTW (ft btoc)	36.50
Deployment Depth (ft btoc)	76
Personnel	BCB & IGF
Notes	About 1" of sediment @ the bottom of sleeve

Retrieval and/or Sampling

Date / Time	9/8/22 @ 0819
DTW (ft btoc)	36.09
Sampler Integrity	Good
Personnel	IGF + BCB
Notes	1" rocks + sediment @ bottom of HS

Field Parameters

Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
9/8/22 @ 0830	26.8	6.57	68.8	5321 *this is what it read, no error	2.24	13.5

Sample ID	TTU-EXT-3-76-20220908
QAQC Samples	—
Containers	(1) 125 mL HDPE (no pres.) & (6) 40 mL amber VOAs
Preservatives	HCl
Analysis	Perchlorate / VOCs / 1,4-Dioxane
Sampler Reset	Yes [✓ No]
Notes	

Pinyon
Environmental, Inc.

Well Sampling Record

Project Name	Nammo TTU
Project Number	722152201.002
Well ID / ADWR #	TTU-EXT-2 / 55-231734
Date Completed	1/28/2020
Casing Material	
Casing Diameter (in)	8
Screen (ft btoc)	OPEN
Well Total Depth (ft btoc)	110
Survey Information	Northing: 909268.187 / Easting: 761493.214

Deployment

Date / Time	6/13/2022 @ 0931
Type of Sampler	HydraSleeve
Size of Sampler	HS-2-1L
DTW (ft btoc)	33.69
Deployment Depth (ft btoc)	74
Personnel	BCB & IGF
Notes	Water ¾ clear, 5" sediment @ the bottom of sleeve

Retrieval and/or Sampling

Date / Time	9/8/22 @ 0846
DTW (ft btoc)	23.66
Sampler Integrity	Good
Personnel	IGF + BCB
Notes	< 1" sediment @ bottom, very silty

Field Parameters

Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
9/8/22 @ 0855	26.7	7.77	29.2	1316	3.28	86.5

Sample ID	TTU-EXT-2-74-20220908
QAQC Samples	–
Containers	(1) 125 mL HDPE (no pres.) & (6) 40 mL amber VOAs
Preservatives	HCl
Analysis	Perchlorate / VOCs / 1,4-Dioxane
Sampler Reset	Yes [✓ No]

Notes

Pinyon
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Well Sampling Record

Project Name	Nammo TTU
Project Number	722152201.002
Well ID / ADWR #	TTU-EXT-1 / 55-231733
Date Completed	1/29/2020
Casing Material	
Casing Diameter (in)	8
Screen (ft btoc)	OPEN
Well Total Depth (ft btoc)	109
Survey Information	Northing: 909350.574 / Easting: 761597.823

Deployment

Date / Time	6/13/2022 @ 1000
Type of Sampler	HydraSleeve
Size of Sampler	HS-2-1L
DTW (ft btoc)	44.58
Deployment Depth (ft btoc)	69
Personnel	BCB & IGF
Notes	Water clear; 5" sediment @ bottom of sleeve

Retrieval and/or Sampling

Date / Time	9/8/22 @ 0910
DTW (ft btoc)	16.32
Sampler Integrity	Good
Personnel	IGF + BCB
Notes	bottom ~~1/3~~ BCB 1/3rd of sampler rusty colored, H_2O cloudy

Field Parameters

Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
9/8/22 @ 0919	26.4	7.13	33.7	2311	3.94	116

Sample ID	TTU-EXT-1-69-20220908
QAQC Samples	—
Containers	(1) 125 mL HDPE (no pres.) & (6) 40 mL amber VOAs
Preservatives	HCl
Analysis	Perchlorate / VOCs / 1,4-Dioxane
Sampler Reset	Yes [✓ No]

Notes

Pinyon
Environmental, Inc.

Well Sampling Record

Project Name	Nammo TTU
Project Number	722152201.002
Well ID / ADWR #	TTU-17 / 55-23173
Date Completed	1/22/2020
Casing Material	Steel
Casing Diameter (in)	8
Screen (ft btoc)	OPEN
Well Total Depth (ft btoc)	102
Survey Information	Northing: 909370.903 / Easting: 762179.168

Deployment

Date / Time	6/13/2022 @ 1027
Type of Sampler	HydraSleeve
Size of Sampler	HS-2-1L
DTW (ft btoc)	36.40
Deployment Depth (ft btoc)	80
Personnel	BCB & IGF
Notes	Black sediment in sleeve

Retrieval and/or Sampling

Date / Time	9/8/22 @ 0947
DTW (ft btoc)	37.89
Sampler Integrity	Good
Personnel	IGF + BCB
Notes	Light rotten smell, black sediment in sleeve

Field Parameters

Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
9/8/22 @ 0956	26.7	7.11	-150.8	1076	1.62	36.0

Sample ID	TTU-17-80-20220908
QAQC Samples	—
Containers	(1) 125 mL HDPE (no pres.) & (6) 40 mL amber VOAs
Preservatives	HCl
Analysis	Perchlorate / VOCs / 1,4-Dioxane
Sampler Reset	Yes [✓ No]

Notes

Pinyon
Environmental, Inc.

Well Sampling Record	
Project Name	Nammo TTU
Project Number	722152201.002
Well ID / ADWR #	TTU-15 / 55-228014
Date Completed	1/25/2018
Casing Material	Steel
Casing Diameter (in)	N/A
Screen (ft btoc)	Open
Well Total Depth (ft btoc)	100
Survey Information	Northing: 909185.100 / Easting: 762065.910
Deployment	
Date / Time	6/13/2022 @ 1103
Type of Sampler	HydraSleeve
Size of Sampler	HS-2-1L
DTW (ft btoc)	28.72
Deployment Depth (ft btoc)	75
Personnel	BCB & IGF
Notes	0.5" Red/brown sediment @ bottom of sleeve
Retrieval and/or Sampling	
Date / Time	9/8/22 @ 1019
DTW (ft btoc)	30.79
Sampler Integrity	Good
Personnel	IGF + BCB
Notes	Clear w/ copper particles

Field Parameters

Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
9/8/22 @ 1028	26.4	7.15	-27.3	2347	1.95	6.38

Sample ID	TTU-15-75-20220908	
QAQC Samples	MS/MSD	
Containers	(2) 125 mL HDPE (no pres.) & (6) 40 mL amber VOAs	
Preservatives	HCl	
Analysis	Perchlorate / VOCs / 1,4-Dioxane	
Sampler Reset	Yes	[✓ No]

Notes

Pinyon
Environmental, Inc.

Well Sampling Record

Project Name	Nammo TTU
Project Number	722152201.002
Well ID / ADWR #	TTU-16 / 55-231730
Date Completed	1/23/2020
Casing Material	Steel
Casing Diameter (in)	8
Screen (ft btoc)	OPEN
Well Total Depth (ft btoc)	96.6
Survey Information	Northing: 909124.980 / Easting: 76.1848.851

Deployment

Date / Time	6/13/2022 @ 1127
Type of Sampler	HydraSleeve
Size of Sampler	HS-2-1L
DTW (ft btoc)	20.21
Deployment Depth (ft btoc)	80
Personnel	BCB & IGF
Notes	Water copper colored & silty

Retrieval and/or Sampling

Date / Time	9/8/22@ 1108
DTW (ft btoc)	19.13
Sampler Integrity	Good
Personnel	BCB, IGF
Notes	H_2O is copper colored

Field Parameters

Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
9/8/22 @ 1117	28.4	6.29	81.4	9991 *Not a typo	1.66	1046

Sample ID	TTU-16-80- 20220908	
QAQC Samples	–	
Containers	(1) 125 mL HDPE (no pres.) & (6) 40 mL amber VOAs	
Preservatives	HCl	
Analysis	Perchlorate / VOCs / 1,4-Dioxane	
Sampler Reset	Yes	[✓ No]

Notes

Pinyon
Environmental, Inc.

Well Sampling Record

Project Name	Nammo TTU
Project Number	722152201.002
Well ID / ADWR #	TTU-9A / NA
Date Completed	6/16/2016
Casing Material	PVC
Casing Diameter (in)	4
Screen (ft btoc)	24-99
Well Total Depth (ft btoc)	104
Survey Information	Northing: 909974.490 / Easting: 761710.151

Deployment

Date / Time	6/13/2022 @ 0839
Type of Sampler	HydraSleeve
Size of Sampler	HS-2-1L
DTW (ft btoc)	29.00
Deployment Depth (ft btoc)	61
Personnel	BCB & IGF
Notes	Water clear

Retrieval and/or Sampling

Date / Time	9/8/22 @ 1145
DTW (ft btoc)	28.34
Sampler Integrity	Good
Personnel	IGF + BCB
Notes	Water clear

Field Parameters

Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
9/8/22 @ 1153	28.3	7.60	78.9	1607	4.08	5.10

Sample ID	TTU-9A-61-20220908
QAQC Samples	–
Containers	(1) 125 mL HDPE (no pres.) & (6) 40 mL amber VOAs
Preservatives	HCl
Analysis	Perchlorate / VOCs / 1,4-Dioxane
Sampler Reset	Yes [✓ No]

Notes

Pinyon
Environmental, Inc.

Well Sampling Record

Project Name	Nammo TTU
Project Number	722152201.002
Well ID / ADWR #	TTU-5 / NA
Date Completed	9/20/2014
Casing Material	PVC
Casing Diameter (in)	4
Screen (ft btoc)	59.5-164.5
Well Total Depth (ft btoc)	169.5
Survey Information	Northing: 908747.636 / Easting: 761102.227

Deployment

Date / Time	6/13/2022 @ 1204
Type of Sampler	HydraSleeve
Size of Sampler	HS-2-1L
DTW (ft btoc)	78.19
Deployment Depth (ft btoc)	110
Personnel	BCB & IGF
Notes	Water clear; 0.5" sediment @ bottom of sleeve

Retrieval and/or Sampling

Date / Time	9/8/22 @ 1246
DTW (ft btoc)	80.84
Sampler Integrity	good
Personnel	BCB, IGF
Notes	H2O clear

Field Parameters

Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
9/8/22 @ 1253	27.4	7.35	78.2	711	2.93	1.66

Sample ID	TTU-5-110-20220908
QAQC Samples	–
Containers	(1) 125 mL HDPE (no pres.) & (6) 40 mL amber VOAs
Preservatives	HCl
Analysis	Perchlorate / VOCs / 1,4-Dioxane
Sampler Reset	Yes [✓ No]

Notes
did not remove transducer from well

Pinyon
Environmental, Inc.

Well Sampling Record

Project Name	Nammo TTU
Project Number	722152201.002
Well ID / ADWR #	TTU-13 / NA
Date Completed	7/20/2018
Casing Material	Steel
Casing Diameter (in)	5
Screen (ft btoc)	Open to 80
Well Total Depth (ft btoc)	80
Survey Information	Northing: 909405.920 / Easting: 761232.180

Deployment

Date / Time	6/13/2022 @ 1306
Type of Sampler	HydraSleeve
Size of Sampler	HS-2-1L
DTW (ft btoc)	44.22
Deployment Depth (ft btoc)	51
Personnel	BCB & IGF
Notes	Water clear

Retrieval and/or Sampling

Date / Time	9/8/22 @
DTW (ft btoc)	34.81
Sampler Integrity	Good
Personnel	IGF + BCB
Notes	H_2O clear

Field Parameters

Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
9/8/22 @ 1216	25.7	6.99	80.0	1192	3.12	3.27

Sample ID	TTU-13-51-20220908
QAQC Samples	—
Containers	(1) 125 mL HDPE (no pres.) & (6) 40 mL amber VOAs
Preservatives	HCl
Analysis	Perchlorate / VOCs / 1,4-Dioxane
Sampler Reset	Yes [✓ No]

Notes

Pinyon
Environmental, Inc.

Well Sampling Record

Project Name	Nammo TTU
Project Number	722152201.002
Well ID / ADWR #	TTU-14 / NA
Date Completed	7/19/2018
Casing Material	Steel
Casing Diameter (in)	5
Screen (ft btoc)	Open to 100
Well Total Depth (ft btoc)	100
Survey Information	Northing: 909224.260 / Easting: 761848.230

Deployment

Date / Time	6/14/2022 @ 0642
Type of Sampler	HydraSleeve
Size of Sampler	HS 2 1L
DTW (ft btoc)	61.61
Deployment Depth (ft btoc)	64
Personnel	BCB & IGF
Notes	0.5" Sediment @ bottom of sleeve

Retrieval and/or Sampling

Date / Time	9/9/22 @ 0745
DTW (ft btoc)	58.74
Sampler Integrity	good
Personnel	IGF + BCB
Notes	H2O clear

Field Parameters

Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
9/9/22 @ 0755	26.7	6.78	130.3	3000	3.06	9.77

Sample ID	TTU-14-64-20220909
QAQC Samples	–
Containers	(1) 125 mL HDPE (no pres.) & (6) 40 mL amber VOAs
Preservatives	HCl
Analysis	Perchlorate / VOCs / 1,4-Dioxane
Sampler Reset	Yes [✓ No]
Notes	

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Well Sampling Record

Project Name	Nammo TTU
Project Number	722152201.002
Well ID / ADWR #	TTU-12 / NA
Date Completed	7/31/2018
Casing Material	Steel
Casing Diameter (in)	5
Screen (ft btoc)	Open to 180
Well Total Depth (ft btoc)	180
Survey Information	Northing: 909105.990 / Easting: 761103.280

Deployment

Date / Time	6/13/2022 @ 1235
Type of Sampler	HydraSleeve
Size of Sampler	HS-2-1L
DTW (ft btoc)	75.14
Deployment Depth (ft btoc)	82
Personnel	BCB & IGF
Notes	Water clear; 0.5" sediment @ bottom of sleeve

Retrieval and/or Sampling

Date / Time	9/9/22 @ 0810
DTW (ft btoc)	73.27
Sampler Integrity	Good
Personnel	IGF + BCB
Notes	H_2O clear

Field Parameters

Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
9/9/22 @ 0818	25.0	6.71	97.5	3366	4.06	4.78

Sample ID	TTU-12-82-20220909
QAQC Samples	—
Containers	(1) 125 mL HDPE (no pres.) & (6) 40 mL amber VOAs
Preservatives	HCl
Analysis	Perchlorate / VOCs / 1,4-Dioxane
Sampler Reset	Yes [✓ No]

Notes

Pinyon
Environmental, Inc.

Well Sampling Record

Project Name	Nammo TTU
Project Number	722152201.002
Well ID / ADWR #	TTU-8 / NA
Date Completed	4/18/2016
Casing Material	PVC
Casing Diameter (in)	4
Screen (ft btoc)	135-185
Well Total Depth (ft btoc)	190
Survey Information	Northing: 909699.266 / Easting: 760514.908

Deployment

Date / Time	6/14/2022 @ 1047
Type of Sampler	HydraSleeve
Size of Sampler	HS-2-1L
DTW (ft btoc)	150.47
Deployment Depth (ft btoc)	164
Personnel	BCB & IGF
Notes	None

Retrieval and/or Sampling

Date / Time	9/9/22 @ 1000
DTW (ft btoc)	151.60
Sampler Integrity	good
Personnel	BCB, IGF
Notes	—

Field Parameters

Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
9/9/22 @ 1010	26.4	7.00	-42.3	3220	2.14	12.3

Sample ID	TTU-8-164-20220909
QAQC Samples	DUP-03
Containers	(2) 125 mL HDPE (no pres.) & (12) 40 mL amber VOAs
Preservatives	HCl
Analysis	Perchlorate / VOCs / 1,4-Dioxane
Sampler Reset	Yes [✓ No]
Notes	

Pinyon
Environmental, Inc.

Well Sampling Record

Project Name	Nammo TTU
Project Number	722152201.002
Well ID / ADWR #	TTU-7 / NA
Date Completed	10/8/2014
Casing Material	Steel
Casing Diameter (in)	8.5
Screen (ft btoc)	280-410
Well Total Depth (ft btoc)	410
Survey Information	Northing: 909287.611 / Easting: 760527.269

Deployment

Date / Time	6/14/2022 @ 1152
Type of Sampler	HydraSleeve
Size of Sampler	HS-2-1L
DTW (ft btoc)	131.52
Deployment Depth (ft btoc)	345
Personnel	BCB & IGF
Notes	Black sediment in sleeve & on rope

Retrieval and/or Sampling

Date / Time	9/9/22 @ 1100
DTW (ft btoc)	133.87
Sampler Integrity	good
Personnel	IGF + BCB
Notes	Black sediment @ bottom, 1"

Field Parameters

Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
9/9/22 @ 1110	26.0	7.10	-83.4	3919	1.79	12.1

Sample ID	TTU-7-345-20220909
QAQC Samples	—
Containers	(1) 125 mL HDPE (no pres.) & (6) 40 mL amber VOAs
Preservatives	HCl
Analysis	Perchlorate / VOCs / 1,4-Dioxane
Sampler Reset	Yes [✓ No]

Notes

Pinyon
Environmental, Inc.

Well Sampling Record

Project Name	Nammo TTU
Project Number	722152201.002
Well ID / ADWR #	TTU-4 / NA
Date Completed	10/25/2013
Casing Material	PVC
Casing Diameter (in)	4
Screen (ft btoc)	39.5-99.5
Well Total Depth (ft btoc)	104.9
Survey Information	Northing: 909673.680 / Easting: 761041.975

Deployment

Date / Time	6/14/2022 @ 1016
Type of Sampler	HydraSleeve
Size of Sampler	HS-2-1L
DTW (ft btoc)	52.90
Deployment Depth (ft btoc)	57
Personnel	BCB & IGF
Notes	Sleeve only ½ way full, water clear

Retrieval and/or Sampling

Date / Time	9/9/22 @ 1032
DTW (ft btoc)	53.05
Sampler Integrity	Good
Personnel	IGF + BCB
Notes	H_2O clear

Field Parameters

Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
9/9/22 @ 1040	26.2	7.49	12.5	2222	2.24	2.29

Sample ID	TTU-4-57-2022090~~3~~IF9
QAQC Samples	–
Containers	(1) 125 mL HDPE (no pres.) & (6) 40 mL amber VOAs
Preservatives	HCl
Analysis	Perchlorate / VOCs / 1,4-Dioxane
Sampler Reset	Yes [✓ No]

Notes

Pinyon
Environmental, Inc.

Well Sampling Record

Project Name	Nammo TTU
Project Number	722152201.002
Well ID / ADWR #	TTU-3 / NA
Date Completed	10/18/2013
Casing Material	PVC
Casing Diameter (in)	4
Screen (ft btoc)	78.1-138.1
Well Total Depth (ft btoc)	143.6
Survey Information	Northing: 909303.363 / Easting: 760888.204

Deployment

Date / Time	6/14/2022 @ 1124
Type of Sampler	HydraSleeve
Size of Sampler	HS-2-1L
DTW (ft btoc)	91.13
Deployment Depth (ft btoc)	108
Personnel	BCB & IGF
Notes	Water clear

Retrieval and/or Sampling

Date / Time	9/9/22 @ 1158
DTW (ft btoc)	90.65
Sampler Integrity	Good
Personnel	BCB, IGF
Notes	H_2O very clear

Field Parameters

Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
9/9/22 @ 1207	25.6	6.98	28.8	1434	4.42	4.21

Sample ID	TTU-3-108-20220909
QAQC Samples	—
Containers	(1) 125 mL HDPE (no pres.) & (6) 40 mL amber VOAs
Preservatives	HCl
Analysis	Perchlorate / VOCs / 1,4-Dioxane
Sampler Reset	Yes [✓ No]

Notes

Pinyon
Environmental, Inc.

Well Sampling Record

Project Name	Nammo TTU
Project Number	722152201.002
Well ID / ADWR #	TTU-6 / NA
Date Completed	10/7/2014
Casing Material	PVC
Casing Diameter (in)	4
Screen (ft btoc)	110-175
Well Total Depth (ft btoc)	180
Survey Information	Northing: 909260.820 / Easting: 760560.096

Deployment

Date / Time	6/14/2022 @ 1216
Type of Sampler	HydraSleeve
Size of Sampler	HS-2-1L
DTW (ft btoc)	131.30
Deployment Depth (ft btoc)	143
Personnel	BCB & IGF
Notes	Water clear

Retrieval and/or Sampling

Date / Time	9/9/22 @ 1135
DTW (ft btoc)	128.69
Sampler Integrity	Good
Personnel	IGF + BCB
Notes	H_2O clear

Field Parameters

Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (μS/cm)	DO (mg/L)	Turbidity
9/9/22 @ 1143	26.8	7.13	-4.8	1925	2.70	3.96

Sample ID	TTU-6-143-20220909
QAQC Samples	MS/MSD
Containers	(2) 125 mL HDPE (no pres.) & (12) 40 mL amber VOAs
Preservatives	HCl
Analysis	Perchlorate / VOCs / 1,4-Dioxane
Sampler Reset	Yes [✓ No]
Notes	

Pinyon
Environmental, Inc.

Well Sampling Record

Project Name	Nammo TTU
Project Number	722152201.002
Well ID / ADWR #	TTU-10 / NA
Date Completed	4/18/2016
Casing Material	PVC
Casing Diameter (in)	4
Screen (ft btoc)	115-180
Well Total Depth (ft btoc)	185
Survey Information	Northing: 908960.114 / Easting: 760297.013

Deployment

Date / Time	6/14/2022 @ 1306
Type of Sampler	HydraSleeve
Size of Sampler	HS-2-1L
DTW (ft btoc)	157.18
Deployment Depth (ft btoc)	153
Personnel	BCB & IGF
Notes	None

Retrieval and/or Sampling

Date / Time	~~9/8/22 @~~ IF 9/9/22 @ 1246
DTW (ft btoc)	162.49
Sampler Integrity	Good
Personnel	IGF + BCB
Notes	H_2O clear

Field Parameters

Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
~~9/8/22~~ IF ~~@~~ 9/9/22 @ 1254	26.3	7.30	28.2	1472	3.78	4.67

Sample ID	~~TTU-10-153-20220908~~ IF TTU-10-165-20220909
QAQC Samples	–
Containers	(1) 125 mL HDPE (no pres.) & (6) 40 mL amber VOAs
Preservatives	HCl
Analysis	Perchlorate / VOCs / 1,4-Dioxane
Sampler Reset	Yes [✓ No]
Notes	Set @ 1426, 9/8/22 (H2O level too low, nothing in sampler) → set at 161 ft

*9/9/22, sampler empty, re-set to 165' + took sample directly after setting very gently.

Pinyon
Environmental, Inc.

Well Sampling Record

Project Name	Nammo TTU
Project Number	722152201.002
Well ID / ADWR #	PF-2
Date Completed	N/A
Casing Material	Steel
Casing Diameter (in)	6 5/8
Screen (ft btoc)	300-400
Well Total Depth (ft btoc)	400
Survey Information	Northing: 909166.890 / Easting: 760122.250

Deployment

Date / Time	NA
Type of Sampler	Production Well; spigot
Size of Sampler	NA
DTW (ft btoc)	NA
Deployment Depth (ft btoc)	400
Personnel	NA
Notes	Purge 15 minutes. Take parameters (starting and 15 min. after)

Retrieval and/or Sampling

Date / Time	9/9/22 @ 1330 (Pace samples), 1342 (Eurofins)
DTW (ft btoc)	N/A
Sampler Integrity	-
Personnel	BCB, IGF
Notes	—

Field Parameters

	Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
1304 →	9/9/22	25.3	7.24	24.4	1287	3.27	5.35
~~1309~~ BCB	1309	25.1	7.26	24.1	1251	3.46	14.2
	1314	25.5	7.23	25.9	1257	3.52	1.87
	1319	26.0	7.23	33.7	1261	2.97	1.11

each sample calibrated to 1.00 before testing

Sample ID	PF-2-400-20220909
QAQC Samples	—
Containers	(1) ~~125~~ 250 mL HDPE (no pres.) & (6) 40 mL amber VOAs
Preservatives	HCl
Analysis	Perchlorate (Method 6850, filtered) / VOCs / 1,4-Dioxane → Pace Samples
Sampler Reset	Yes [✓ No]

Notes

Well on @ 1301; off @ ~~14~~ IF 1345

Pinyon
Environmental, Inc.

Well Sampling Record

Project Name	Nammo TTU
Project Number	722152201.002
Well ID / ADWR #	TTU-2 / NA
Date Completed	10/17/2013
Casing Material	PVC
Casing Diameter (in)	4
Screen (ft btoc)	49.4-179.6
Well Total Depth (ft btoc)	185
Survey Information	Northing: 909087.852 / Easting: 761148.265

Deployment

Date / Time	NA
Type of Sampler	Production Well; spigot
Size of Sampler	NA
DTW (ft btoc)	NR
Deployment Depth (ft btoc)	114.5
Personnel	BCB & IGF
Notes	Unable to collect DTW, collect before turning on.

Retrieval and/or Sampling

Date / Time	10/10/22 @ 1543
DTW (ft btoc)	~~DTW~~ Meter got stuck twice (in the well) around 27' down, unable to collect
Sampler Integrity	NA
Personnel	IGF
Notes	

Field Parameters

Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
10/10/22 @ 1556 IGF	24.8	6.83	33.7	3388	5.66	0.32 *Calibrated to 1.00 (3) times to make sure accuracy

Sample ID	TTU-2-114- 20221010	
QAQC Samples	MS/MSD	
Containers	(4) 125 mL HDPE (no pres.) & (12 40 mL amber VOAs	
Preservatives	HCl	
Analysis	Perchlorate / VOCs / 1,4-Dioxane	
Sampler Reset	Yes	[✓ No]

Notes
**Make sure well has been off for 1 week. When sampling, turn on and let run for 1 hour before sampling. ~~Turn off after.~~

Pump on @ 1613 IGF 5, pump on (Emailed Mark about sampling) being complete + well being on

Pinyon
Environmental, Inc.

Well Sampling Record

Project Name	Nammo TTU
Project Number	722152201.002
Well ID / ADWR #	TTU-1 / 55-914440
Date Completed	6/6/2012
Casing Material	PVC
Casing Diameter (in)	4
Screen (ft btoc)	30-70
Well Total Depth (ft btoc)	75
Survey Information	Northing: 909420.734 / Easting: 761281.203

Deployment

Date / Time	NA
Type of Sampler	Production Well; spigot
Size of Sampler	NA
DTW (ft btoc)	NR
Deployment Depth (ft btoc)	50
Personnel	BCB & IGF
Notes	Unable to collect DTW, collect before turning on.

Retrieval and/or Sampling

Date / Time	~~10/10/22 @~~ 10/11/22 @ 1646
DTW (ft btoc)	37.03
Sampler Integrity	NA
Personnel	I. Foster
Notes	

Field Parameters

Date / Time	Water Temp (°C)	pH (SU)	ORP (mV)	Sp Cond (µS/cm)	DO (mg/L)	Turbidity
10/11/22 1700	27.2	7.47	61.0	1044	4.50	0.31 *calibrated to 1.00 twice

Sample ID	TTU-1-50-20221011	
QAQC Samples	Dup-01	
Containers	(2) 125 mL HDPE (no pres.) & (12) 40 mL amber VOAs	
Preservatives	HCl	
Analysis	Perchlorate / VOCs / 1,4-Dioxane	
Sampler Reset	Yes	[✓ No]

Notes

Make sure well has been off for 1 week. When sampling, turn on and let run for 1 hour before sampling. ~~Turn off after.~~

Not off for a week before sampling

Well on both days (10/10 + 10/11) upon arrival~see field notes* for more details*

Attachment 3 – Laboratory Analytical Reports

ANALYTICAL REPORT

September 21, 2022

Pinyon Environmental

Sample Delivery Group:	L1533315
Samples Received:	09/07/2022
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 R Richards

Daphne Richards
Project Manager

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

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SAMPLE SUMMARY

TTU-11-73-20220903 L1533315-01 GW

Collected by	Collected date/time	Received date/time
Isabella Foster	09/03/22 09:30	09/07/22 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1928871	1	09/10/22 03:42	09/10/22 03:42	SL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1924204	10	09/11/22 00:01	09/11/22 00:01	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1927005	10	09/16/22 00:46	09/16/22 00:46	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1926249	1	09/14/22 18:47	09/14/22 18:47	JHH	Mt. Juliet, TN

TTU-19-73-20220903 L1533315-02 GW

Collected by	Collected date/time	Received date/time
Isabella Foster	09/03/22 10:31	09/07/22 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1924008	20	09/10/22 04:06	09/10/22 04:06	SL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1924204	5	09/11/22 00:22	09/11/22 00:22	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1927005	5	09/16/22 01:08	09/16/22 01:08	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1928820	10	09/20/22 14:12	09/20/22 14:12	ADM	Mt. Juliet, TN

TTU-20-73-20220903 L1533315-03 GW

Collected by	Collected date/time	Received date/time
Isabella Foster	09/03/22 08:44	09/07/22 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1924008	10000	09/10/22 06:06	09/10/22 06:06	SL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1926870	100	09/16/22 01:20	09/16/22 01:20	JAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1928820	10	09/20/22 14:32	09/20/22 14:32	ADM	Mt. Juliet, TN

DUP-01 L1533315-04 GW

Collected by	Collected date/time	Received date/time
Isabella Foster	09/03/22 08:44	09/07/22 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1924008	10000	09/10/22 06:30	09/10/22 06:30	SL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1924204	1	09/10/22 23:41	09/10/22 23:41	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1927005	200	09/16/22 01:29	09/16/22 01:29	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1928820	10	09/20/22 14:52	09/20/22 14:52	ADM	Mt. Juliet, TN

TRIP BLANK 2 L1533315-05 GW

Collected by	Collected date/time	Received date/time
Isabella Foster	09/03/22 00:00	09/07/22 08:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1924204	1	09/10/22 19:08	09/10/22 19:08	ACG	Mt. Juliet, TN

CASE NARRATIVE

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

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 R Richards

Daphne Richards
Project Manager

Sample Delivery Group (SDG) Narrative

pH outside of method requirement.

Lab Sample ID	Project Sample ID	Method
L1533315-01	TTU-11-73-20220903	8260B
L1533315-02	TTU-19-73-20220903	8260B

No extra volume received to perform Matrix Spike samples.

Lab Sample ID	Project Sample ID	Method
L1533315-01	TTU-11-73-20220903	8260B, 8260B-SIM
L1533315-02	TTU-19-73-20220903	8260B
L1533315-04	DUP-01	8260B

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

Wet Chemistry by Method 314.0 Mod

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Perchlorate	U	J6	0.300	4.00	1	09/10/2022 03:42	WG1928871

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	358	J J3	113	500	10	09/11/2022 00:01	WG1924204
Acrolein	U		25.4	500	10	09/11/2022 00:01	WG1924204
Acrylonitrile	U		6.71	100	10	09/11/2022 00:01	WG1924204
Benzene	1.26	J	0.941	10.0	10	09/11/2022 00:01	WG1924204
Bromobenzene	U	J3	1.18	10.0	10	09/11/2022 00:01	WG1924204
Bromodichloromethane	U		1.36	10.0	10	09/11/2022 00:01	WG1924204
Bromoform	U		1.29	10.0	10	09/11/2022 00:01	WG1924204
Bromomethane	U		6.05	50.0	10	09/11/2022 00:01	WG1924204
1,3-Butadiene	U	J3	2.99	20.0	10	09/11/2022 00:01	WG1924204
n-Butylbenzene	U		1.57	10.0	10	09/11/2022 00:01	WG1924204
sec-Butylbenzene	U		1.25	10.0	10	09/11/2022 00:01	WG1924204
tert-Butylbenzene	U		1.27	10.0	10	09/11/2022 00:01	WG1924204
Carbon tetrachloride	U		1.28	10.0	10	09/11/2022 00:01	WG1924204
Carbon disulfide	U		0.962	10.0	10	09/11/2022 00:01	WG1924204
Chlorobenzene	U		1.16	10.0	10	09/11/2022 00:01	WG1924204
Chlorodibromomethane	U		1.40	10.0	10	09/11/2022 00:01	WG1924204
Chloroethane	U	J3	1.92	50.0	10	09/11/2022 00:01	WG1924204
Chloroform	U		1.11	50.0	10	09/11/2022 00:01	WG1924204
Chloromethane	U		9.60	25.0	10	09/11/2022 00:01	WG1924204
Cyclohexane	U		1.88	10.0	10	09/11/2022 00:01	WG1924204
2-Chlorotoluene	U		1.06	10.0	10	09/11/2022 00:01	WG1924204
4-Chlorotoluene	U		1.14	10.0	10	09/11/2022 00:01	WG1924204
1,2-Dibromo-3-Chloropropane	U		2.76	50.0	10	09/11/2022 00:01	WG1924204
1,2-Dibromoethane	U		1.26	10.0	10	09/11/2022 00:01	WG1924204
Dibromomethane	U		1.22	10.0	10	09/11/2022 00:01	WG1924204
1,2-Dichlorobenzene	U		1.07	10.0	10	09/11/2022 00:01	WG1924204
1,3-Dichlorobenzene	U		1.10	10.0	10	09/11/2022 00:01	WG1924204
1,4-Dichlorobenzene	U		1.20	10.0	10	09/11/2022 00:01	WG1924204
Dichlorodifluoromethane	U		3.74	50.0	10	09/11/2022 00:01	WG1924204
1,1-Dichloroethane	U		1.00	10.0	10	09/11/2022 00:01	WG1924204
1,2-Dichloroethane	U		0.819	10.0	10	09/11/2022 00:01	WG1924204
1,1-Dichloroethene	4.93	J	1.88	10.0	10	09/16/2022 00:46	WG1927005
cis-1,2-Dichloroethene	11.8		1.26	10.0	10	09/11/2022 00:01	WG1924204
trans-1,2-Dichloroethene	U		1.49	10.0	10	09/11/2022 00:01	WG1924204
1,2-Dichloropropane	U		1.49	10.0	10	09/11/2022 00:01	WG1924204
1,1-Dichloropropene	U		1.42	10.0	10	09/11/2022 00:01	WG1924204
1,3-Dichloropropane	U		1.10	10.0	10	09/11/2022 00:01	WG1924204
cis-1,3-Dichloropropene	U		1.11	10.0	10	09/11/2022 00:01	WG1924204
trans-1,3-Dichloropropene	U		1.18	10.0	10	09/11/2022 00:01	WG1924204
2,2-Dichloropropane	U		1.61	10.0	10	09/11/2022 00:01	WG1924204
Dicyclopentadiene	U		2.53	10.0	10	09/11/2022 00:01	WG1924204
Di-isopropyl ether	U		1.05	10.0	10	09/11/2022 00:01	WG1924204
Ethylbenzene	U		1.37	10.0	10	09/11/2022 00:01	WG1924204
4-Ethyltoluene	U		2.08	10.0	10	09/11/2022 00:01	WG1924204
Hexachloro-1,3-butadiene	U	J3	3.37	10.0	10	09/11/2022 00:01	WG1924204
n-Hexane	U		7.49	100	10	09/11/2022 00:01	WG1924204
Isopropylbenzene	U		1.05	10.0	10	09/11/2022 00:01	WG1924204
p-Isopropyltoluene	U		1.20	10.0	10	09/11/2022 00:01	WG1924204
2-Butanone (MEK)	216		11.9	100	10	09/11/2022 00:01	WG1924204
Methyl Cyclohexane	U		6.60	10.0	10	09/11/2022 00:01	WG1924204

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Collected date/time: 09/03/22 09:30

SAMPLE RESULTS - 01

L1533315

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	4.81	J	4.30	50.0	10	09/11/2022 00:01	WG1924204
4-Methyl-2-pentanone (MIBK)	62.7	J	4.78	100	10	09/11/2022 00:01	WG1924204
Methyl tert-butyl ether	U		1.01	10.0	10	09/11/2022 00:01	WG1924204
Naphthalene	U	J3	10.0	50.0	10	09/11/2022 00:01	WG1924204
Propene	U	J3 J4	9.36	25.0	10	09/11/2022 00:01	WG1924204
n-Propylbenzene	U		0.993	10.0	10	09/11/2022 00:01	WG1924204
Styrene	U		1.18	10.0	10	09/11/2022 00:01	WG1924204
1,1,1,2-Tetrachloroethane	U		1.47	10.0	10	09/11/2022 00:01	WG1924204
1,1,2,2-Tetrachloroethane	U		1.33	10.0	10	09/11/2022 00:01	WG1924204
1,1,2-Trichlorotrifluoroethane	U	J4	1.80	10.0	10	09/11/2022 00:01	WG1924204
Tetrachloroethene	U		3.00	10.0	10	09/11/2022 00:01	WG1924204
Toluene	U		2.78	10.0	10	09/11/2022 00:01	WG1924204
1,2,3-Trichlorobenzene	U	J3	2.30	10.0	10	09/11/2022 00:01	WG1924204
1,2,4-Trichlorobenzene	U	J3	4.81	10.0	10	09/11/2022 00:01	WG1924204
1,1,1-Trichloroethane	U		1.49	10.0	10	09/11/2022 00:01	WG1924204
1,1,2-Trichloroethane	U	J4	1.58	10.0	10	09/11/2022 00:01	WG1924204
Trichloroethene	58.2		1.90	10.0	10	09/16/2022 00:46	WG1927005
Trichlorofluoromethane	U		1.60	50.0	10	09/11/2022 00:01	WG1924204
1,2,3-Trichloropropane	U		2.37	25.0	10	09/11/2022 00:01	WG1924204
1,2,4-Trimethylbenzene	U		3.22	10.0	10	09/11/2022 00:01	WG1924204
1,2,3-Trimethylbenzene	U		1.04	10.0	10	09/11/2022 00:01	WG1924204
1,3,5-Trimethylbenzene	U		1.04	10.0	10	09/11/2022 00:01	WG1924204
Vinyl chloride	U		2.34	10.0	10	09/11/2022 00:01	WG1924204
Xylenes, Total	U		1.74	30.0	10	09/11/2022 00:01	WG1924204
(S) Toluene-d8	*116*			*80.0-120*		*09/11/2022 00:01*	WG1924204
(S) Toluene-d8	*111*			*80.0-120*		*09/16/2022 00:46*	WG1927005
(S) 4-Bromofluorobenzene	*89.9*			*77.0-126*		*09/11/2022 00:01*	WG1924204
(S) 4-Bromofluorobenzene	*105*			*77.0-126*		*09/16/2022 00:46*	WG1927005
(S) 1,2-Dichloroethane-d4	*87.2*			*70.0-130*		*09/11/2022 00:01*	WG1924204
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*		*09/16/2022 00:46*	WG1927005

Sample Narrative:

L1533315-01 WG1924204: Lowest possible dilution due to sample foaming.

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	J3	0.597	3.00	1	09/14/2022 18:47	WG1926249
(S) Toluene-d8	*107*			*77.0-127*		*09/14/2022 18:47*	WG1926249

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

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

Wet Chemistry by Method 314.0 Mod

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
Perchlorate	67.6	J J3 J5	6.00	80.0	20	09/10/2022 04:06	WG1924008

Sample Narrative:

L1533315-02 WG1924008: Sample history: 20x dilution

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
Acetone	170	J J6	56.5	250	5	09/11/2022 00:22	WG1924204
Acrolein	U		12.7	250	5	09/11/2022 00:22	WG1924204
Acrylonitrile	U		3.36	50.0	5	09/11/2022 00:22	WG1924204
Benzene	3.68	J	0.471	5.00	5	09/11/2022 00:22	WG1924204
Bromobenzene	U		0.590	5.00	5	09/11/2022 00:22	WG1924204
Bromodichloromethane	U		0.680	5.00	5	09/11/2022 00:22	WG1924204
Bromoform	U		0.645	5.00	5	09/11/2022 00:22	WG1924204
Bromomethane	U		3.03	25.0	5	09/11/2022 00:22	WG1924204
1,3-Butadiene	U	J5	1.49	10.0	5	09/11/2022 00:22	WG1924204
n-Butylbenzene	U		0.785	5.00	5	09/11/2022 00:22	WG1924204
sec-Butylbenzene	U		0.625	5.00	5	09/11/2022 00:22	WG1924204
tert-Butylbenzene	U		0.635	5.00	5	09/11/2022 00:22	WG1924204
Carbon tetrachloride	U		0.640	5.00	5	09/11/2022 00:22	WG1924204
Carbon disulfide	U		0.481	5.00	5	09/11/2022 00:22	WG1924204
Chlorobenzene	U		0.580	5.00	5	09/11/2022 00:22	WG1924204
Chlorodibromomethane	U		0.700	5.00	5	09/11/2022 00:22	WG1924204
Chloroethane	U		0.960	25.0	5	09/11/2022 00:22	WG1924204
Chloroform	U		0.555	25.0	5	09/11/2022 00:22	WG1924204
Chloromethane	U		4.80	12.5	5	09/11/2022 00:22	WG1924204
Cyclohexane	U		0.940	5.00	5	09/11/2022 00:22	WG1924204
2-Chlorotoluene	U		0.530	5.00	5	09/11/2022 00:22	WG1924204
4-Chlorotoluene	U		0.570	5.00	5	09/11/2022 00:22	WG1924204
1,2-Dibromo-3-Chloropropane	U		1.38	25.0	5	09/11/2022 00:22	WG1924204
1,2-Dibromoethane	U		0.630	5.00	5	09/11/2022 00:22	WG1924204
Dibromomethane	U		0.610	5.00	5	09/11/2022 00:22	WG1924204
1,2-Dichlorobenzene	U		0.535	5.00	5	09/11/2022 00:22	WG1924204
1,3-Dichlorobenzene	U		0.550	5.00	5	09/11/2022 00:22	WG1924204
1,4-Dichlorobenzene	U		0.600	5.00	5	09/11/2022 00:22	WG1924204
Dichlorodifluoromethane	U	J5	1.87	25.0	5	09/11/2022 00:22	WG1924204
1,1-Dichloroethane	U		0.500	5.00	5	09/11/2022 00:22	WG1924204
1,2-Dichloroethane	U		0.409	5.00	5	09/11/2022 00:22	WG1924204
1,1-Dichloroethene	40.2		0.940	5.00	5	09/16/2022 01:08	WG1927005
cis-1,2-Dichloroethene	61.6		0.630	5.00	5	09/11/2022 00:22	WG1924204
trans-1,2-Dichloroethene	2.11	J	0.745	5.00	5	09/11/2022 00:22	WG1924204
1,2-Dichloropropane	U		0.745	5.00	5	09/11/2022 00:22	WG1924204
1,1-Dichloropropene	U		0.710	5.00	5	09/11/2022 00:22	WG1924204
1,3-Dichloropropane	U		0.550	5.00	5	09/11/2022 00:22	WG1924204
cis-1,3-Dichloropropene	U		0.555	5.00	5	09/11/2022 00:22	WG1924204
trans-1,3-Dichloropropene	U		0.590	5.00	5	09/11/2022 00:22	WG1924204
2,2-Dichloropropane	U		0.805	5.00	5	09/11/2022 00:22	WG1924204
Dicyclopentadiene	U		1.27	5.00	5	09/11/2022 00:22	WG1924204
Di-isopropyl ether	U		0.525	5.00	5	09/11/2022 00:22	WG1924204
Ethylbenzene	U		0.685	5.00	5	09/11/2022 00:22	WG1924204
4-Ethyltoluene	U		1.04	5.00	5	09/11/2022 00:22	WG1924204
Hexachloro-1,3-butadiene	U		1.69	5.00	5	09/11/2022 00:22	WG1924204
n-Hexane	U		3.74	50.0	5	09/11/2022 00:22	WG1924204
Isopropylbenzene	U		0.525	5.00	5	09/11/2022 00:22	WG1924204

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SAMPLE RESULTS - 02

L1533315

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
p-Isopropyltoluene	U		0.600	5.00	5	09/11/2022 00:22	WG1924204
2-Butanone (MEK)	329		5.95	50.0	5	09/11/2022 00:22	WG1924204
Methyl Cyclohexane	U		3.30	5.00	5	09/11/2022 00:22	WG1924204
Methylene Chloride	5.56	J	2.15	25.0	5	09/11/2022 00:22	WG1924204
4-Methyl-2-pentanone (MIBK)	3.40	J	2.39	50.0	5	09/11/2022 00:22	WG1924204
Methyl tert-butyl ether	U		0.505	5.00	5	09/11/2022 00:22	WG1924204
Naphthalene	U		5.00	25.0	5	09/11/2022 00:22	WG1924204
Propene	U	J4 J5	4.68	12.5	5	09/11/2022 00:22	WG1924204
n-Propylbenzene	U		0.497	5.00	5	09/11/2022 00:22	WG1924204
Styrene	U		0.590	5.00	5	09/11/2022 00:22	WG1924204
1,1,1,2-Tetrachloroethane	U		0.735	5.00	5	09/11/2022 00:22	WG1924204
1,1,2,2-Tetrachloroethane	U		0.665	5.00	5	09/11/2022 00:22	WG1924204
1,1,2-Trichlorotrifluoroethane	U	J4 J5	0.900	5.00	5	09/11/2022 00:22	WG1924204
Tetrachloroethene	U		1.50	5.00	5	09/11/2022 00:22	WG1924204
Toluene	U		1.39	5.00	5	09/11/2022 00:22	WG1924204
1,2,3-Trichlorobenzene	U		1.15	5.00	5	09/11/2022 00:22	WG1924204
1,2,4-Trichlorobenzene	U		2.41	5.00	5	09/11/2022 00:22	WG1924204
1,1,1-Trichloroethane	U		0.745	5.00	5	09/11/2022 00:22	WG1924204
1,1,2-Trichloroethane	U	J4	0.790	5.00	5	09/11/2022 00:22	WG1924204
Trichloroethene	293	V	0.950	5.00	5	09/11/2022 00:22	WG1924204
Trichlorofluoromethane	U	J5	0.800	25.0	5	09/11/2022 00:22	WG1924204
1,2,3-Trichloropropane	U		1.19	12.5	5	09/11/2022 00:22	WG1924204
1,2,4-Trimethylbenzene	U		1.61	5.00	5	09/11/2022 00:22	WG1924204
1,2,3-Trimethylbenzene	U		0.520	5.00	5	09/11/2022 00:22	WG1924204
1,3,5-Trimethylbenzene	U		0.520	5.00	5	09/11/2022 00:22	WG1924204
Vinyl chloride	2.28	J J5	1.17	5.00	5	09/11/2022 00:22	WG1924204
Xylenes, Total	U		0.870	15.0	5	09/11/2022 00:22	WG1924204
(S) Toluene-d8	*119*			*80.0-120*		*09/11/2022 00:22*	WG1924204
(S) Toluene-d8	*110*			*80.0-120*		*09/16/2022 01:08*	WG1927005
(S) 4-Bromofluorobenzene	*92.7*			*77.0-126*		*09/11/2022 00:22*	WG1924204
(S) 4-Bromofluorobenzene	*109*			*77.0-126*		*09/16/2022 01:08*	WG1927005
(S) 1,2-Dichloroethane-d4	*92.8*			*70.0-130*		*09/11/2022 00:22*	WG1924204
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*		*09/16/2022 01:08*	WG1927005

Sample Narrative:

L1533315-02 WG1924204: Lowest possible dilution due to sample foaming.

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
1,4-Dioxane	152	Q	5.97	30.0	10	09/20/2022 14:12	WG1928820
(S) Toluene-d8	*102*			*77.0-127*		*09/20/2022 14:12*	WG1928820

Sample Narrative:

L1533315-02 WG1928820: Non-target compounds too high to run at a lower dilution.

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

Wet Chemistry by Method 314.0 Mod

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Perchlorate	528000		3000	40000	10000	09/10/2022 06:06	WG1924008

Sample Narrative:

L1533315-03 WG1924008: Sample history: 10000x dilution

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		1130	5000	100	09/16/2022 01:20	WG1926870
Acrolein	U		254	5000	100	09/16/2022 01:20	WG1926870
Acrylonitrile	U		67.1	1000	100	09/16/2022 01:20	WG1926870
Benzene	77.9	J	9.41	100	100	09/16/2022 01:20	WG1926870
Bromobenzene	U		11.8	100	100	09/16/2022 01:20	WG1926870
Bromodichloromethane	U		13.6	100	100	09/16/2022 01:20	WG1926870
Bromoform	U		12.9	100	100	09/16/2022 01:20	WG1926870
Bromomethane	U		60.5	500	100	09/16/2022 01:20	WG1926870
1,3-Butadiene	U		29.9	200	100	09/16/2022 01:20	WG1926870
n-Butylbenzene	U		15.7	100	100	09/16/2022 01:20	WG1926870
sec-Butylbenzene	U		12.5	100	100	09/16/2022 01:20	WG1926870
tert-Butylbenzene	U		12.7	100	100	09/16/2022 01:20	WG1926870
Carbon tetrachloride	U		12.8	100	100	09/16/2022 01:20	WG1926870
Carbon disulfide	U		9.62	100	100	09/16/2022 01:20	WG1926870
Chlorobenzene	U		11.6	100	100	09/16/2022 01:20	WG1926870
Chlorodibromomethane	U		14.0	100	100	09/16/2022 01:20	WG1926870
Chloroethane	U		19.2	500	100	09/16/2022 01:20	WG1926870
Chloroform	17.2	J	11.1	500	100	09/16/2022 01:20	WG1926870
Chloromethane	U		96.0	250	100	09/16/2022 01:20	WG1926870
Cyclohexane	U		18.8	100	100	09/16/2022 01:20	WG1926870
2-Chlorotoluene	U		10.6	100	100	09/16/2022 01:20	WG1926870
4-Chlorotoluene	U		11.4	100	100	09/16/2022 01:20	WG1926870
1,2-Dibromo-3-Chloropropane	U		27.6	500	100	09/16/2022 01:20	WG1926870
1,2-Dibromoethane	U		12.6	100	100	09/16/2022 01:20	WG1926870
Dibromomethane	U		12.2	100	100	09/16/2022 01:20	WG1926870
1,2-Dichlorobenzene	U		10.7	100	100	09/16/2022 01:20	WG1926870
1,3-Dichlorobenzene	U		11.0	100	100	09/16/2022 01:20	WG1926870
1,4-Dichlorobenzene	U		12.0	100	100	09/16/2022 01:20	WG1926870
Dichlorodifluoromethane	U		37.4	500	100	09/16/2022 01:20	WG1926870
1,1-Dichloroethane	27.6	J	10.0	100	100	09/16/2022 01:20	WG1926870
1,2-Dichloroethane	U		8.19	100	100	09/16/2022 01:20	WG1926870
1,1-Dichloroethene	2610	J4	18.8	100	100	09/16/2022 01:20	WG1926870
cis-1,2-Dichloroethene	146		12.6	100	100	09/16/2022 01:20	WG1926870
trans-1,2-Dichloroethene	18.9	J J4	14.9	100	100	09/16/2022 01:20	WG1926870
1,2-Dichloropropane	U		14.9	100	100	09/16/2022 01:20	WG1926870
1,1-Dichloropropene	U		14.2	100	100	09/16/2022 01:20	WG1926870
1,3-Dichloropropane	U		11.0	100	100	09/16/2022 01:20	WG1926870
cis-1,3-Dichloropropene	U		11.1	100	100	09/16/2022 01:20	WG1926870
trans-1,3-Dichloropropene	U		11.8	100	100	09/16/2022 01:20	WG1926870
2,2-Dichloropropane	U		16.1	100	100	09/16/2022 01:20	WG1926870
Dicyclopentadiene	U		25.3	100	100	09/16/2022 01:20	WG1926870
Di-isopropyl ether	U		10.5	100	100	09/16/2022 01:20	WG1926870
Ethylbenzene	U		13.7	100	100	09/16/2022 01:20	WG1926870
4-Ethyltoluene	35.0	J	20.8	100	100	09/16/2022 01:20	WG1926870
Hexachloro-1,3-butadiene	U		33.7	100	100	09/16/2022 01:20	WG1926870
n-Hexane	U		74.9	1000	100	09/16/2022 01:20	WG1926870
Isopropylbenzene	U		10.5	100	100	09/16/2022 01:20	WG1926870

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

TTU-20-73-20220903

Collected date/time: 09/03/22 08:44

SAMPLE RESULTS - 03

L1533315

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
p-Isopropyltoluene	U		12.0	100	100	09/16/2022 01:20	WG1926870
2-Butanone (MEK)	U		119	1000	100	09/16/2022 01:20	WG1926870
Methyl Cyclohexane	U		66.0	100	100	09/16/2022 01:20	WG1926870
Methylene Chloride	116	J	43.0	500	100	09/16/2022 01:20	WG1926870
4-Methyl-2-pentanone (MIBK)	U		47.8	1000	100	09/16/2022 01:20	WG1926870
Methyl tert-butyl ether	U		10.1	100	100	09/16/2022 01:20	WG1926870
Naphthalene	122	J	100	500	100	09/16/2022 01:20	WG1926870
Propene	U		93.6	250	100	09/16/2022 01:20	WG1926870
n-Propylbenzene	U		9.93	100	100	09/16/2022 01:20	WG1926870
Styrene	U		11.8	100	100	09/16/2022 01:20	WG1926870
1,1,1,2-Tetrachloroethane	U		14.7	100	100	09/16/2022 01:20	WG1926870
1,1,2,2-Tetrachloroethane	U		13.3	100	100	09/16/2022 01:20	WG1926870
1,1,2-Trichlorotrifluoroethane	U		18.0	100	100	09/16/2022 01:20	WG1926870
Tetrachloroethene	U		30.0	100	100	09/16/2022 01:20	WG1926870
Toluene	U		27.8	100	100	09/16/2022 01:20	WG1926870
1,2,3-Trichlorobenzene	U		23.0	100	100	09/16/2022 01:20	WG1926870
1,2,4-Trichlorobenzene	U		48.1	100	100	09/16/2022 01:20	WG1926870
1,1,1-Trichloroethane	U		14.9	100	100	09/16/2022 01:20	WG1926870
1,1,2-Trichloroethane	U		15.8	100	100	09/16/2022 01:20	WG1926870
Trichloroethene	13200	J4	19.0	100	100	09/16/2022 01:20	WG1926870
Trichlorofluoromethane	U		16.0	500	100	09/16/2022 01:20	WG1926870
1,2,3-Trichloropropane	U		23.7	250	100	09/16/2022 01:20	WG1926870
1,2,4-Trimethylbenzene	105		32.2	100	100	09/16/2022 01:20	WG1926870
1,2,3-Trimethylbenzene	42.0	J	10.4	100	100	09/16/2022 01:20	WG1926870
1,3,5-Trimethylbenzene	27.7	J	10.4	100	100	09/16/2022 01:20	WG1926870
Vinyl chloride	U		23.4	100	100	09/16/2022 01:20	WG1926870
Xylenes, Total	55.7	J	17.4	300	100	09/16/2022 01:20	WG1926870
(S) Toluene-d8	*107*			*80.0-120*		*09/16/2022 01:20*	WG1926870
(S) 4-Bromofluorobenzene	*116*			*77.0-126*		*09/16/2022 01:20*	WG1926870
(S) 1,2-Dichloroethane-d4	*95.1*			*70.0-130*		*09/16/2022 01:20*	WG1926870

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	1140	Q	5.97	30.0	10	09/20/2022 14:32	WG1928820
(S) Toluene-d8	*104*			*77.0-127*		*09/20/2022 14:32*	WG1928820

DUP-01

Collected date/time: 09/03/22 08:44

SAMPLE RESULTS - 04

L1533315

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

Wet Chemistry by Method 314.0 Mod

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Perchlorate	537000		3000	40000	10000	09/10/2022 06:30	WG1924008

Sample Narrative:

L1533315-04 WG1924008: Sample history: 10000x dilution

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U	J3	11.3	50.0	1	09/10/2022 23:41	WG1924204
Acrolein	U		2.54	50.0	1	09/10/2022 23:41	WG1924204
Acrylonitrile	U		0.671	10.0	1	09/10/2022 23:41	WG1924204
Benzene	77.7		0.0941	1.00	1	09/10/2022 23:41	WG1924204
Bromobenzene	U	J3	0.118	1.00	1	09/10/2022 23:41	WG1924204
Bromodichloromethane	U		0.136	1.00	1	09/10/2022 23:41	WG1924204
Bromoform	U		0.129	1.00	1	09/10/2022 23:41	WG1924204
Bromomethane	U		0.605	5.00	1	09/10/2022 23:41	WG1924204
1,3-Butadiene	U	J3	0.299	2.00	1	09/10/2022 23:41	WG1924204
n-Butylbenzene	U		0.157	1.00	1	09/10/2022 23:41	WG1924204
sec-Butylbenzene	U		0.125	1.00	1	09/10/2022 23:41	WG1924204
tert-Butylbenzene	U		0.127	1.00	1	09/10/2022 23:41	WG1924204
Carbon tetrachloride	U		0.128	1.00	1	09/10/2022 23:41	WG1924204
Carbon disulfide	U		0.0962	1.00	1	09/10/2022 23:41	WG1924204
Chlorobenzene	U		0.116	1.00	1	09/10/2022 23:41	WG1924204
Chlorodibromomethane	U		0.140	1.00	1	09/10/2022 23:41	WG1924204
Chloroethane	U	J3	0.192	5.00	1	09/10/2022 23:41	WG1924204
Chloroform	19.8		0.111	5.00	1	09/10/2022 23:41	WG1924204
Chloromethane	U		0.960	2.50	1	09/10/2022 23:41	WG1924204
Cyclohexane	U		0.188	1.00	1	09/10/2022 23:41	WG1924204
2-Chlorotoluene	U		0.106	1.00	1	09/10/2022 23:41	WG1924204
4-Chlorotoluene	U		0.114	1.00	1	09/10/2022 23:41	WG1924204
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	09/10/2022 23:41	WG1924204
1,2-Dibromoethane	U		0.126	1.00	1	09/10/2022 23:41	WG1924204
Dibromomethane	U		0.122	1.00	1	09/10/2022 23:41	WG1924204
1,2-Dichlorobenzene	1.53		0.107	1.00	1	09/10/2022 23:41	WG1924204
1,3-Dichlorobenzene	0.155	J	0.110	1.00	1	09/10/2022 23:41	WG1924204
1,4-Dichlorobenzene	0.454	J	0.120	1.00	1	09/10/2022 23:41	WG1924204
Dichlorodifluoromethane	U		0.374	5.00	1	09/10/2022 23:41	WG1924204
1,1-Dichloroethane	28.8		0.100	1.00	1	09/10/2022 23:41	WG1924204
1,2-Dichloroethane	4.15		0.0819	1.00	1	09/10/2022 23:41	WG1924204
1,1-Dichloroethene	2230		37.6	200	200	09/16/2022 01:29	WG1927005
cis-1,2-Dichloroethene	141		0.126	1.00	1	09/10/2022 23:41	WG1924204
trans-1,2-Dichloroethene	22.2		0.149	1.00	1	09/10/2022 23:41	WG1924204
1,2-Dichloropropane	U		0.149	1.00	1	09/10/2022 23:41	WG1924204
1,1-Dichloropropene	U		0.142	1.00	1	09/10/2022 23:41	WG1924204
1,3-Dichloropropane	U		0.110	1.00	1	09/10/2022 23:41	WG1924204
cis-1,3-Dichloropropene	U		0.111	1.00	1	09/10/2022 23:41	WG1924204
trans-1,3-Dichloropropene	U		0.118	1.00	1	09/10/2022 23:41	WG1924204
2,2-Dichloropropane	U		0.161	1.00	1	09/10/2022 23:41	WG1924204
Dicyclopentadiene	U		0.253	1.00	1	09/10/2022 23:41	WG1924204
Di-isopropyl ether	0.267	J	0.105	1.00	1	09/10/2022 23:41	WG1924204
Ethylbenzene	U		0.137	1.00	1	09/10/2022 23:41	WG1924204
4-Ethyltoluene	U		0.208	1.00	1	09/10/2022 23:41	WG1924204
Hexachloro-1,3-butadiene	U	J3	0.337	1.00	1	09/10/2022 23:41	WG1924204
n-Hexane	U		0.749	10.0	1	09/10/2022 23:41	WG1924204
Isopropylbenzene	U		0.105	1.00	1	09/10/2022 23:41	WG1924204

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
p-Isopropyltoluene	U		0.120	1.00	1	09/10/2022 23:41	WG1924204
2-Butanone (MEK)	U		1.19	10.0	1	09/10/2022 23:41	WG1924204
Methyl Cyclohexane	U		0.660	1.00	1	09/10/2022 23:41	WG1924204
Methylene Chloride	112		0.430	5.00	1	09/10/2022 23:41	WG1924204
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	09/10/2022 23:41	WG1924204
Methyl tert-butyl ether	U		0.101	1.00	1	09/10/2022 23:41	WG1924204
Naphthalene	U	J3	1.00	5.00	1	09/10/2022 23:41	WG1924204
Propene	U	J3 J4	0.936	2.50	1	09/10/2022 23:41	WG1924204
n-Propylbenzene	U		0.0993	1.00	1	09/10/2022 23:41	WG1924204
Styrene	U		0.118	1.00	1	09/10/2022 23:41	WG1924204
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	09/10/2022 23:41	WG1924204
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	09/10/2022 23:41	WG1924204
1,1,2-Trichlorotrifluoroethane	U	J4	0.180	1.00	1	09/10/2022 23:41	WG1924204
Tetrachloroethene	27.9		0.300	1.00	1	09/10/2022 23:41	WG1924204
Toluene	1.42		0.278	1.00	1	09/10/2022 23:41	WG1924204
1,2,3-Trichlorobenzene	U	J3	0.230	1.00	1	09/10/2022 23:41	WG1924204
1,2,4-Trichlorobenzene	U	J3	0.481	1.00	1	09/10/2022 23:41	WG1924204
1,1,1-Trichloroethane	U		0.149	1.00	1	09/10/2022 23:41	WG1924204
1,1,2-Trichloroethane	20.9	J4	0.158	1.00	1	09/10/2022 23:41	WG1924204
Trichloroethene	10700		38.0	200	200	09/16/2022 01:29	WG1927005
Trichlorofluoromethane	U		0.160	5.00	1	09/10/2022 23:41	WG1924204
1,2,3-Trichloropropane	U		0.237	2.50	1	09/10/2022 23:41	WG1924204
1,2,4-Trimethylbenzene	U		0.322	1.00	1	09/10/2022 23:41	WG1924204
1,2,3-Trimethylbenzene	U		0.104	1.00	1	09/10/2022 23:41	WG1924204
1,3,5-Trimethylbenzene	U		0.104	1.00	1	09/10/2022 23:41	WG1924204
Vinyl chloride	1.87		0.234	1.00	1	09/10/2022 23:41	WG1924204
Xylenes, Total	2.65	J	0.174	3.00	1	09/10/2022 23:41	WG1924204
(S) Toluene-d8	*115*			*80.0-120*		*09/10/2022 23:41*	WG1924204
(S) Toluene-d8	*111*			*80.0-120*		*09/16/2022 01:29*	WG1927005
(S) 4-Bromofluorobenzene	*92.3*			*77.0-126*		*09/10/2022 23:41*	WG1924204
(S) 4-Bromofluorobenzene	*102*			*77.0-126*		*09/16/2022 01:29*	WG1927005
(S) 1,2-Dichloroethane-d4	*92.4*			*70.0-130*		*09/10/2022 23:41*	WG1924204
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*09/16/2022 01:29*	WG1927005

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
1,4-Dioxane	1250	Q	5.97	30.0	10	09/20/2022 14:52	WG1928820
(S) Toluene-d8	*104*			*77.0-127*		*09/20/2022 14:52*	WG1928820

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

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
Acetone	U	J3	11.3	50.0	1	09/10/2022 19:08	WG1924204
Acrolein	U		2.54	50.0	1	09/10/2022 19:08	WG1924204
Acrylonitrile	U		0.671	10.0	1	09/10/2022 19:08	WG1924204
Benzene	U		0.0941	1.00	1	09/10/2022 19:08	WG1924204
Bromobenzene	U	J3	0.118	1.00	1	09/10/2022 19:08	WG1924204
Bromodichloromethane	U		0.136	1.00	1	09/10/2022 19:08	WG1924204
Bromoform	U		0.129	1.00	1	09/10/2022 19:08	WG1924204
Bromomethane	U		0.605	5.00	1	09/10/2022 19:08	WG1924204
1,3-Butadiene	U	J3	0.299	2.00	1	09/10/2022 19:08	WG1924204
n-Butylbenzene	U		0.157	1.00	1	09/10/2022 19:08	WG1924204
sec-Butylbenzene	U		0.125	1.00	1	09/10/2022 19:08	WG1924204
tert-Butylbenzene	U		0.127	1.00	1	09/10/2022 19:08	WG1924204
Carbon tetrachloride	U		0.128	1.00	1	09/10/2022 19:08	WG1924204
Carbon disulfide	U		0.0962	1.00	1	09/10/2022 19:08	WG1924204
Chlorobenzene	U		0.116	1.00	1	09/10/2022 19:08	WG1924204
Chlorodibromomethane	U		0.140	1.00	1	09/10/2022 19:08	WG1924204
Chloroethane	U	J3	0.192	5.00	1	09/10/2022 19:08	WG1924204
Chloroform	U		0.111	5.00	1	09/10/2022 19:08	WG1924204
Chloromethane	U		0.960	2.50	1	09/10/2022 19:08	WG1924204
Cyclohexane	U		0.188	1.00	1	09/10/2022 19:08	WG1924204
2-Chlorotoluene	U		0.106	1.00	1	09/10/2022 19:08	WG1924204
4-Chlorotoluene	U		0.114	1.00	1	09/10/2022 19:08	WG1924204
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	09/10/2022 19:08	WG1924204
1,2-Dibromoethane	U		0.126	1.00	1	09/10/2022 19:08	WG1924204
Dibromomethane	U		0.122	1.00	1	09/10/2022 19:08	WG1924204
1,2-Dichlorobenzene	U		0.107	1.00	1	09/10/2022 19:08	WG1924204
1,3-Dichlorobenzene	U		0.110	1.00	1	09/10/2022 19:08	WG1924204
1,4-Dichlorobenzene	U		0.120	1.00	1	09/10/2022 19:08	WG1924204
Dichlorodifluoromethane	U		0.374	5.00	1	09/10/2022 19:08	WG1924204
1,1-Dichloroethane	U		0.100	1.00	1	09/10/2022 19:08	WG1924204
1,2-Dichloroethane	U		0.0819	1.00	1	09/10/2022 19:08	WG1924204
1,1-Dichloroethene	U		0.188	1.00	1	09/10/2022 19:08	WG1924204
cis-1,2-Dichloroethene	U		0.126	1.00	1	09/10/2022 19:08	WG1924204
trans-1,2-Dichloroethene	U		0.149	1.00	1	09/10/2022 19:08	WG1924204
1,2-Dichloropropane	U		0.149	1.00	1	09/10/2022 19:08	WG1924204
1,1-Dichloropropene	U		0.142	1.00	1	09/10/2022 19:08	WG1924204
1,3-Dichloropropane	U		0.110	1.00	1	09/10/2022 19:08	WG1924204
cis-1,3-Dichloropropene	U		0.111	1.00	1	09/10/2022 19:08	WG1924204
trans-1,3-Dichloropropene	U		0.118	1.00	1	09/10/2022 19:08	WG1924204
2,2-Dichloropropane	U		0.161	1.00	1	09/10/2022 19:08	WG1924204
Dicyclopentadiene	U		0.253	1.00	1	09/10/2022 19:08	WG1924204
Di-isopropyl ether	U		0.105	1.00	1	09/10/2022 19:08	WG1924204
Ethylbenzene	U		0.137	1.00	1	09/10/2022 19:08	WG1924204
4-Ethyltoluene	U		0.208	1.00	1	09/10/2022 19:08	WG1924204
Hexachloro-1,3-butadiene	U	J3	0.337	1.00	1	09/10/2022 19:08	WG1924204
n-Hexane	U		0.749	10.0	1	09/10/2022 19:08	WG1924204
Isopropylbenzene	U		0.105	1.00	1	09/10/2022 19:08	WG1924204
p-Isopropyltoluene	U		0.120	1.00	1	09/10/2022 19:08	WG1924204
2-Butanone (MEK)	U		1.19	10.0	1	09/10/2022 19:08	WG1924204
Methyl Cyclohexane	U		0.660	1.00	1	09/10/2022 19:08	WG1924204
Methylene Chloride	U		0.430	5.00	1	09/10/2022 19:08	WG1924204
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	09/10/2022 19:08	WG1924204
Methyl tert-butyl ether	U		0.101	1.00	1	09/10/2022 19:08	WG1924204
Naphthalene	U	J3	1.00	5.00	1	09/10/2022 19:08	WG1924204
Propene	U	J3 J4	0.936	2.50	1	09/10/2022 19:08	WG1924204
n-Propylbenzene	U		0.0993	1.00	1	09/10/2022 19:08	WG1924204

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	09/10/2022 19:08	WG1924204
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	09/10/2022 19:08	WG1924204
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	09/10/2022 19:08	WG1924204
1,1,2-Trichlorotrifluoroethane	U	J4	0.180	1.00	1	09/10/2022 19:08	WG1924204
Tetrachloroethene	U		0.300	1.00	1	09/10/2022 19:08	WG1924204
Toluene	U		0.278	1.00	1	09/10/2022 19:08	WG1924204
1,2,3-Trichlorobenzene	U	J3	0.230	1.00	1	09/10/2022 19:08	WG1924204
1,2,4-Trichlorobenzene	U	J3	0.481	1.00	1	09/10/2022 19:08	WG1924204
1,1,1-Trichloroethane	U		0.149	1.00	1	09/10/2022 19:08	WG1924204
1,1,2-Trichloroethane	U	J4	0.158	1.00	1	09/10/2022 19:08	WG1924204
Trichloroethene	U		0.190	1.00	1	09/10/2022 19:08	WG1924204
Trichlorofluoromethane	U		0.160	5.00	1	09/10/2022 19:08	WG1924204
1,2,3-Trichloropropane	U		0.237	2.50	1	09/10/2022 19:08	WG1924204
1,2,4-Trimethylbenzene	U		0.322	1.00	1	09/10/2022 19:08	WG1924204
1,2,3-Trimethylbenzene	U		0.104	1.00	1	09/10/2022 19:08	WG1924204
1,3,5-Trimethylbenzene	U		0.104	1.00	1	09/10/2022 19:08	WG1924204
Vinyl chloride	U		0.234	1.00	1	09/10/2022 19:08	WG1924204
Xylenes, Total	U		0.174	3.00	1	09/10/2022 19:08	WG1924204
(S) Toluene-d8	*115*			*80.0-120*		*09/10/2022 19:08*	WG1924204
(S) 4-Bromofluorobenzene	*90.8*			*77.0-126*		*09/10/2022 19:08*	WG1924204
(S) 1,2-Dichloroethane-d4	*94.3*			*70.0-130*		*09/10/2022 19:08*	WG1924204

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

Method Blank (MB)

(MB) R3837798-1 09/09/22 21:14

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

L1533314-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1533314-02 09/10/22 00:31 • (DUP) R3837798-5 09/10/22 01:43

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

Laboratory Control Sample (LCS)

(LCS) R3837798-2 09/09/22 22:02

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

L1533314-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1533314-01 09/09/22 23:20 • (MS) R3837798-3 09/09/22 23:43 • (MSD) R3837798-4 09/10/22 00:07

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 %
Perchlorate	50.0	147	202	182	110	69.9	5	80.0-120		J6	10.4	15

Sample Narrative:

OS: Sample history: 5x dilution

L1533315-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1533315-02 09/10/22 04:06 • (MS) R3837798-10 09/10/22 04:30 • (MSD) R3837798-11 09/10/22 04:54

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	200	67.6	456	389	194	161	20	80.0-120	J5	J3 J5	15.8	15

Sample Narrative:

OS: Sample history: 20x dilution

QUALITY CONTROL SUMMARY

L1533315-01

Method Blank (MB)

(MB) R3838899-2 09/09/22 22:29

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) R3838899-1 09/09/22 22:02

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

L1533315-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1533315-01 09/10/22 03:42 • (MS) R3838899-3 09/10/22 07:17

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Perchlorate	10.0	U	U	0.000	1	80.0-120	J6

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

Method Blank (MB)

(MB) R3837604-3 09/10/22 17:44

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

QUALITY CONTROL SUMMARY

Method Blank (MB)

(MB) R3837604-3 09/10/22 17:44

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	*119*			*80.0-120*
(S) 4-Bromofluorobenzene	*90.7*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*95.6*			*70.0-130*

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

(LCS) R3837604-1 09/10/22 16:41 • (LCSD) R3837604-2 09/10/22 17:02

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	27.3	17.6	109	70.4	19.0-160		J3	43.2	27
Acrolein	25.0	13.1	16.7	52.4	66.8	30.0-160			24.2	26
Acrylonitrile	25.0	26.8	23.6	107	94.4	55.0-149			12.7	20
Benzene	5.00	5.45	5.73	109	115	70.0-123			5.01	20
Bromobenzene	5.00	4.65	5.71	93.0	114	73.0-121		J3	20.5	20
Bromodichloromethane	5.00	4.87	5.13	97.4	103	75.0-120			5.20	20
Bromoform	5.00	4.51	4.49	90.2	89.8	68.0-132			0.444	20
Bromomethane	5.00	5.61	6.54	112	131	30.0-160			15.3	25
1,3-Butadiene	5.00	5.06	7.32	101	146	45.0-147		J3	36.5	20
n-Butylbenzene	5.00	4.99	4.33	99.8	86.6	73.0-125			14.2	20
sec-Butylbenzene	5.00	5.01	5.78	100	116	75.0-125			14.3	20
tert-Butylbenzene	5.00	4.73	5.60	94.6	112	76.0-124			16.8	20
Carbon tetrachloride	5.00	4.84	5.40	96.8	108	68.0-126			10.9	20
Carbon disulfide	5.00	4.91	5.96	98.2	119	61.0-128			19.3	20
Chlorobenzene	5.00	5.52	5.79	110	116	80.0-121			4.77	20
Chlorodibromomethane	5.00	4.53	4.99	90.6	99.8	77.0-125			9.66	20
Chloroethane	5.00	3.51	5.62	70.2	112	47.0-150		J3	46.2	20
Chloroform	5.00	5.55	5.47	111	109	73.0-120			1.45	20
Chloromethane	5.00	4.69	5.58	93.8	112	41.0-142			17.3	20
Cyclohexane	5.00	5.65	5.88	113	118	71.0-124			3.99	20
2-Chlorotoluene	5.00	4.96	5.76	99.2	115	76.0-123			14.9	20
4-Chlorotoluene	5.00	4.77	5.55	95.4	111	75.0-122			15.1	20
1,2-Dibromo-3-Chloropropane	5.00	4.36	4.15	87.2	83.0	58.0-134			4.94	20
1,2-Dibromoethane	5.00	5.40	5.23	108	105	80.0-122			3.20	20
Dibromomethane	5.00	5.13	5.49	103	110	80.0-120			6.78	20
1,2-Dichlorobenzene	5.00	5.44	4.96	109	99.2	79.0-121			9.23	20
1,3-Dichlorobenzene	5.00	5.10	5.15	102	103	79.0-120			0.976	20
1,4-Dichlorobenzene	5.00	5.32	5.52	106	110	79.0-120			3.69	20
Dichlorodifluoromethane	5.00	5.44	6.16	109	123	51.0-149			12.4	20
1,1-Dichloroethane	5.00	5.24	5.49	105	110	70.0-126			4.66	20
1,2-Dichloroethane	5.00	4.91	5.08	98.2	102	70.0-128			3.40	20
1,1-Dichloroethene	5.00	5.60	5.89	112	118	71.0-124			5.05	20
cis-1,2-Dichloroethene	5.00	5.47	5.66	109	113	73.0-120			3.41	20
trans-1,2-Dichloroethene	5.00	5.46	5.87	109	117	73.0-120			7.24	20
1,2-Dichloropropane	5.00	5.11	5.32	102	106	77.0-125			4.03	20
1,1-Dichloropropene	5.00	5.29	5.62	106	112	74.0-126			6.05	20
1,3-Dichloropropane	5.00	5.30	5.76	106	115	80.0-120			8.32	20
cis-1,3-Dichloropropene	5.00	4.55	4.80	91.0	96.0	80.0-123			5.35	20
trans-1,3-Dichloropropene	5.00	4.52	4.87	90.4	97.4	78.0-124			7.45	20
2,2-Dichloropropane	5.00	4.47	4.90	89.4	98.0	58.0-130			9.18	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) R3837604-1 09/10/22 16:41 • (LCSD) R3837604-2 09/10/22 17:02

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	ug/l	ug/l	ug/l	%	%	%			%	%
Dicyclopentadiene	5.00	5.01	5.40	100	108	74.0-126			7.49	20
Di-isopropyl ether	5.00	4.87	5.11	97.4	102	58.0-138			4.81	20
Ethylbenzene	5.00	5.47	5.80	109	116	79.0-123			5.86	20
4-Ethyltoluene	5.00	4.80	5.50	96.0	110	74.0-127			13.6	20
Hexachloro-1,3-butadiene	5.00	5.00	3.34	100	66.8	54.0-138		J3	39.8	20
n-Hexane	5.00	4.55	5.26	91.0	105	57.0-133			14.5	20
Isopropylbenzene	5.00	5.27	5.03	105	101	76.0-127			4.66	20
p-Isopropyltoluene	5.00	4.96	5.02	99.2	100	76.0-125			1.20	20
2-Butanone (MEK)	25.0	26.7	23.8	107	95.2	44.0-160			11.5	20
Methyl Cyclohexane	5.00	5.06	5.45	101	109	68.0-126			7.42	20
Methylene Chloride	5.00	5.62	5.85	112	117	67.0-120			4.01	20
4-Methyl-2-pentanone (MIBK)	25.0	26.5	27.2	106	109	68.0-142			2.61	20
Methyl tert-butyl ether	5.00	4.88	5.04	97.6	101	68.0-125			3.23	20
Naphthalene	5.00	5.58	3.47	112	69.4	54.0-135		J3	46.6	20
Propene	5.00	4.48	8.69	89.6	174	30.0-160		J3 J4	63.9	20
n-Propylbenzene	5.00	5.09	5.96	102	119	77.0-124			15.7	20
Styrene	5.00	5.17	5.14	103	103	73.0-130			0.582	20
1,1,1,2-Tetrachloroethane	5.00	5.00	5.12	100	102	75.0-125			2.37	20
1,1,2,2-Tetrachloroethane	5.00	4.72	5.46	94.4	109	65.0-130			14.5	20
1,1,2-Trichlorotrifluoroethane	5.00	6.05	6.95	121	139	69.0-132		J4	13.8	20
Tetrachloroethene	5.00	5.32	6.09	106	122	72.0-132			13.5	20
Toluene	5.00	5.30	5.86	106	117	79.0-120			10.0	20
1,2,3-Trichlorobenzene	5.00	5.59	3.77	112	75.4	50.0-138		J3	38.9	20
1,2,4-Trichlorobenzene	5.00	4.90	3.04	98.0	60.8	57.0-137		J3	46.9	20
1,1,1-Trichloroethane	5.00	5.09	5.60	102	112	73.0-124			9.54	20
1,1,2-Trichloroethane	5.00	5.25	6.24	105	125	80.0-120		J4	17.2	20
Trichloroethene	5.00	5.63	6.12	113	122	78.0-124			8.34	20
Trichlorofluoromethane	5.00	5.49	6.51	110	130	59.0-147			17.0	20
1,2,3-Trichloropropane	5.00	5.03	5.52	101	110	73.0-130			9.29	20
1,2,4-Trimethylbenzene	5.00	4.88	4.78	97.6	95.6	76.0-121			2.07	20
1,2,3-Trimethylbenzene	5.00	5.10	5.04	102	101	77.0-120			1.18	20
1,3,5-Trimethylbenzene	5.00	4.85	5.41	97.0	108	76.0-122			10.9	20
Vinyl chloride	5.00	5.57	6.57	111	131	67.0-131			16.5	20
Xylenes, Total	15.0	15.9	16.5	106	110	79.0-123			3.70	20
(S) Toluene-d8				*109*	*116*	*80.0-120*				
(S) 4-Bromofluorobenzene				*99.9*	*93.4*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*93.6*	*95.9*	*70.0-130*				

L1533308-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1533308-04 09/10/22 21:14 • (MS) R3837604-4 09/11/22 01:05 • (MSD) R3837604-5 09/11/22 01:26

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Acetone	25.0	U	19.6	23.2	78.4	92.8	1	10.0-160			16.8	35
Acrolein	25.0	U	19.3	23.1	77.2	92.4	1	10.0-160			17.9	39
Acrylonitrile	25.0	U	29.9	30.4	120	122	1	21.0-160			1.66	32
Benzene	5.00	U	7.08	7.07	142	141	1	17.0-158			0.141	27
Bromobenzene	5.00	U	7.25	7.71	145	154	1	30.0-149		J5	6.15	28
Bromodichloromethane	5.00	U	6.12	6.49	122	130	1	31.0-150			5.87	27
Bromoform	5.00	U	4.93	5.14	98.6	103	1	29.0-150			4.17	29
Bromomethane	5.00	U	7.89	7.12	158	142	1	10.0-160			10.3	38
1,3-Butadiene	5.00	U	8.67	9.25	173	185	1	10.0-160	J5	J5	6.47	22
n-Butylbenzene	5.00	U	5.75	5.85	115	117	1	31.0-150			1.72	30
sec-Butylbenzene	5.00	U	6.65	6.99	133	140	1	33.0-155			4.99	29
tert-Butylbenzene	5.00	U	7.05	7.38	141	148	1	34.0-153			4.57	28
Carbon tetrachloride	5.00	U	6.49	7.33	130	147	1	23.0-159			12.2	28
Carbon disulfide	5.00	U	7.42	7.52	148	150	1	10.0-156			1.34	28
Chlorobenzene	5.00	U	7.08	7.14	142	143	1	33.0-152			0.844	27
Chlorodibromomethane	5.00	U	6.18	5.99	124	120	1	37.0-149			3.12	27
Chloroethane	5.00	U	6.49	6.70	130	134	1	10.0-160			3.18	30
Chloroform	5.00	U	6.85	7.02	137	140	1	29.0-154			2.45	28
Chloromethane	5.00	U	6.67	7.16	133	143	1	10.0-160			7.09	29
Cyclohexane	5.00	U	7.44	7.51	149	150	1	19.0-160			0.936	23
2-Chlorotoluene	5.00	U	7.03	7.61	141	152	1	32.0-153			7.92	28
4-Chlorotoluene	5.00	U	6.99	7.21	140	144	1	32.0-150			3.10	28
1,2-Dibromo-3-Chloropropane	5.00	U	5.19	4.84	104	96.8	1	22.0-151			6.98	34
1,2-Dibromoethane	5.00	U	6.85	6.93	137	139	1	34.0-147			1.16	27
Dibromomethane	5.00	U	6.73	6.68	135	134	1	30.0-151			0.746	27
1,2-Dichlorobenzene	5.00	U	6.18	6.35	124	127	1	34.0-149			2.71	28
1,3-Dichlorobenzene	5.00	U	6.35	6.71	127	134	1	36.0-146			5.51	27
1,4-Dichlorobenzene	5.00	U	6.27	7.06	125	141	1	35.0-142			11.9	27
Dichlorodifluoromethane	5.00	U	6.72	7.02	134	140	1	10.0-160			4.37	29
1,1-Dichloroethane	5.00	U	6.71	6.95	134	139	1	25.0-158			3.51	27
1,2-Dichloroethane	5.00	0.0966	6.31	6.44	124	127	1	29.0-151			2.04	27
1,1-Dichloroethene	5.00	U	7.57	8.07	151	161	1	11.0-160		J5	6.39	29
cis-1,2-Dichloroethene	5.00	U	7.10	7.25	142	145	1	10.0-160			2.09	27
trans-1,2-Dichloroethene	5.00	U	7.15	7.16	143	143	1	17.0-153			0.140	27
1,2-Dichloropropane	5.00	U	6.90	6.63	138	133	1	30.0-156			3.99	27
1,1-Dichloropropene	5.00	U	7.22	7.27	144	145	1	25.0-158			0.690	27
1,3-Dichloropropane	5.00	U	6.95	6.77	139	135	1	38.0-147			2.62	27
cis-1,3-Dichloropropene	5.00	U	5.62	5.50	112	110	1	34.0-149			2.16	28
trans-1,3-Dichloropropene	5.00	U	5.94	5.86	119	117	1	32.0-149			1.36	28
2,2-Dichloropropane	5.00	U	6.44	6.66	129	133	1	24.0-152			3.36	29

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

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

L1533308-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1533308-04 09/10/22 21:14 • (MS) R3837604-4 09/11/22 01:05 • (MSD) R3837604-5 09/11/22 01:26

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Dicyclopentadiene	5.00	U	0.953	2.48	19.1	49.6	1	51.0-139	J6	J3 J6	89.0	20
Di-isopropyl ether	5.00	U	6.10	6.12	122	122	1	21.0-160			0.327	28
Ethylbenzene	5.00	U	7.19	6.73	144	135	1	30.0-155			6.61	27
4-Ethyltoluene	5.00	U	6.66	7.27	133	145	1	10.0-160			8.76	20
Hexachloro-1,3-butadiene	5.00	U	4.04	3.99	80.8	79.8	1	20.0-154			1.25	34
n-Hexane	5.00	U	5.65	6.20	113	124	1	10.0-153			9.28	28
Isopropylbenzene	5.00	U	6.15	6.43	123	129	1	28.0-157			4.45	27
p-Isopropyltoluene	5.00	U	6.33	6.57	127	131	1	30.0-154			3.72	29
2-Butanone (MEK)	25.0	U	28.9	30.0	116	120	1	10.0-160			3.74	32
Methyl Cyclohexane	5.00	U	6.12	6.61	122	132	1	11.0-160			7.70	24
Methylene Chloride	5.00	U	7.20	6.87	144	137	1	23.0-144			4.69	28
4-Methyl-2-pentanone (MIBK)	25.0	U	33.9	33.5	136	134	1	29.0-160			1.19	29
Methyl tert-butyl ether	5.00	U	5.89	6.02	118	120	1	28.0-150			2.18	29
Naphthalene	5.00	U	4.36	4.28	87.2	85.6	1	12.0-156			1.85	35
Propene	5.00	U	7.53	9.83	151	197	1	10.0-160		J5	26.5	29
n-Propylbenzene	5.00	U	7.30	7.88	146	158	1	31.0-154		J5	7.64	28
Styrene	5.00	U	4.96	6.09	99.2	122	1	33.0-155			20.5	28
1,1,1,2-Tetrachloroethane	5.00	U	6.39	6.35	128	127	1	36.0-151			0.628	29
1,1,2,2-Tetrachloroethane	5.00	U	7.84	8.17	157	163	1	33.0-150	J5	J5	4.12	28
1,1,2-Trichlorotrifluoroethane	5.00	U	7.99	8.05	160	161	1	23.0-160		J5	0.748	30
Tetrachloroethene	5.00	U	7.78	7.81	156	156	1	10.0-160			0.385	27
Toluene	5.00	U	7.28	7.48	146	150	1	26.0-154			2.71	28
1,2,3-Trichlorobenzene	5.00	U	4.35	4.20	87.0	84.0	1	17.0-150			3.51	36
1,2,4-Trichlorobenzene	5.00	U	3.96	3.61	79.2	72.2	1	24.0-150			9.25	33
1,1,1-Trichloroethane	5.00	U	7.14	7.31	143	146	1	23.0-160			2.35	28
1,1,2-Trichloroethane	5.00	U	7.24	7.30	145	146	1	35.0-147			0.825	27
Trichloroethene	5.00	U	7.77	7.94	155	159	1	10.0-160			2.16	25
Trichlorofluoromethane	5.00	U	7.93	8.56	159	171	1	17.0-160		J5	7.64	31
1,2,3-Trichloropropane	5.00	U	7.54	7.85	151	157	1	34.0-151		J5	4.03	29
1,2,4-Trimethylbenzene	5.00	U	6.09	6.63	122	133	1	26.0-154			8.49	27
1,2,3-Trimethylbenzene	5.00	U	6.13	6.30	123	126	1	32.0-149			2.74	28
1,3,5-Trimethylbenzene	5.00	U	6.54	7.01	131	140	1	28.0-153			6.94	27
Vinyl chloride	5.00	U	8.50	8.25	170	165	1	10.0-160	J5	J5	2.99	27
Xylenes, Total	15.0	U	20.1	20.2	134	135	1	29.0-154			0.496	28
(S) Toluene-d8					*115*	*114*		*80.0-120*				
(S) 4-Bromofluorobenzene					*92.9*	*89.6*		*77.0-126*				
(S) 1,2-Dichloroethane-d4					*92.6*	*95.3*		*70.0-130*				

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

L1533314-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1533314-01 09/10/22 21:35 • (MS) R3837604-6 09/11/22 01:47 • (MSD) R3837604-7 09/11/22 02:08

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	24.3	24.9	97.2	99.6	1	10.0-160			2.44	35
Acrolein	25.0	U	27.3	32.0	109	128	1	10.0-160			15.9	39
Acrylonitrile	25.0	U	32.2	32.9	129	132	1	21.0-160			2.15	32
Benzene	5.00	U	7.64	7.37	153	147	1	17.0-158			3.60	27
Bromobenzene	5.00	U	7.51	7.85	150	157	1	30.0-149	J5	J5	4.43	28
Bromodichloromethane	5.00	U	6.52	6.26	130	125	1	31.0-150			4.07	27
Bromoform	5.00	U	4.92	5.46	98.4	109	1	29.0-150			10.4	29
Bromomethane	5.00	U	7.79	7.32	156	146	1	10.0-160			6.22	38
1,3-Butadiene	5.00	U	10.7	10.6	214	212	1	10.0-160	J5	J5	0.939	22
n-Butylbenzene	5.00	U	6.19	5.88	124	118	1	31.0-150			5.14	30
sec-Butylbenzene	5.00	U	7.85	7.48	157	150	1	33.0-155	J5		4.83	29
tert-Butylbenzene	5.00	U	7.87	7.60	157	152	1	34.0-153	J5		3.49	28
Carbon tetrachloride	5.00	U	6.22	7.61	124	152	1	23.0-159			20.1	28
Carbon disulfide	5.00	U	7.73	7.57	155	151	1	10.0-156			2.09	28
Chlorobenzene	5.00	U	7.41	7.21	148	144	1	33.0-152			2.74	27
Chlorodibromomethane	5.00	U	6.02	6.20	120	124	1	37.0-149			2.95	27
Chloroethane	5.00	U	7.45	7.26	149	145	1	10.0-160			2.58	30
Chloroform	5.00	0.294	7.76	7.42	149	143	1	29.0-154			4.48	28
Chloromethane	5.00	U	7.39	7.44	148	149	1	10.0-160			0.674	29
Cyclohexane	5.00	U	8.09	8.23	162	165	1	19.0-160	J5	J5	1.72	23
2-Chlorotoluene	5.00	U	7.55	7.93	151	159	1	32.0-153		J5	4.91	28
4-Chlorotoluene	5.00	U	7.12	7.30	142	146	1	32.0-150			2.50	28
1,2-Dibromo-3-Chloropropane	5.00	U	5.23	5.04	105	101	1	22.0-151			3.70	34
1,2-Dibromoethane	5.00	U	7.21	7.11	144	142	1	34.0-147			1.40	27
Dibromomethane	5.00	U	6.90	6.94	138	139	1	30.0-151			0.578	27
1,2-Dichlorobenzene	5.00	U	6.60	6.62	132	132	1	34.0-149			0.303	28
1,3-Dichlorobenzene	5.00	U	6.53	6.81	131	136	1	36.0-146			4.20	27
1,4-Dichlorobenzene	5.00	U	6.77	6.66	135	133	1	35.0-142			1.64	27
Dichlorodifluoromethane	5.00	U	7.32	7.39	146	148	1	10.0-160			0.952	29
1,1-Dichloroethane	5.00	U	7.44	7.08	149	142	1	25.0-158			4.96	27
1,2-Dichloroethane	5.00	U	6.67	6.46	133	129	1	29.0-151			3.20	27
1,1-Dichloroethene	5.00	0.870	9.29	8.99	168	162	1	11.0-160	J5	J5	3.28	29
cis-1,2-Dichloroethene	5.00	U	7.53	7.52	151	150	1	10.0-160			0.133	27
trans-1,2-Dichloroethene	5.00	U	7.28	7.54	146	151	1	17.0-153			3.51	27
1,2-Dichloropropane	5.00	U	6.85	6.90	137	138	1	30.0-156			0.727	27
1,1-Dichloropropene	5.00	U	7.65	7.51	153	150	1	25.0-158			1.85	27
1,3-Dichloropropane	5.00	U	7.31	7.24	146	145	1	38.0-147			0.962	27
cis-1,3-Dichloropropene	5.00	U	5.89	5.96	118	119	1	34.0-149			1.18	28
trans-1,3-Dichloropropene	5.00	U	5.93	6.17	119	123	1	32.0-149			3.97	28
2,2-Dichloropropane	5.00	U	6.35	6.66	127	133	1	24.0-152			4.77	29

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

L1533314-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1533314-01 09/10/22 21:35 • (MS) R3837604-6 09/11/22 01:47 • (MSD) R3837604-7 09/11/22 02:08

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	7.41	7.36	148	147	1	51.0-139	J5	J5	0.677	20
Di-isopropyl ether	5.00	U	6.31	6.60	126	132	1	21.0-160			4.49	28
Ethylbenzene	5.00	U	7.00	7.29	140	146	1	30.0-155			4.06	27
4-Ethyltoluene	5.00	U	7.52	7.41	150	148	1	10.0-160			1.47	20
Hexachloro-1,3-butadiene	5.00	U	4.76	4.22	95.2	84.4	1	20.0-154			12.0	34
n-Hexane	5.00	U	5.93	6.18	119	124	1	10.0-153			4.13	28
Isopropylbenzene	5.00	U	6.60	6.58	132	132	1	28.0-157			0.303	27
p-Isopropyltoluene	5.00	U	7.12	6.82	142	136	1	30.0-154			4.30	29
2-Butanone (MEK)	25.0	U	31.7	31.4	127	126	1	10.0-160			0.951	32
Methyl Cyclohexane	5.00	U	6.37	6.93	127	139	1	11.0-160			8.42	24
Methylene Chloride	5.00	U	7.68	7.57	154	151	1	23.0-144	J5	J5	1.44	28
4-Methyl-2-pentanone (MIBK)	25.0	U	34.2	34.5	137	138	1	29.0-160			0.873	29
Methyl tert-butyl ether	5.00	U	5.93	6.42	119	128	1	28.0-150			7.94	29
Naphthalene	5.00	U	4.88	4.19	97.6	83.8	1	12.0-156			15.2	35
Propene	5.00	U	12.0	11.7	240	234	1	10.0-160	J5	J5	2.53	29
n-Propylbenzene	5.00	U	7.85	7.97	157	159	1	31.0-154	J5	J5	1.52	28
Styrene	5.00	U	6.39	6.49	128	130	1	33.0-155			1.55	28
1,1,1,2-Tetrachloroethane	5.00	U	6.43	6.76	129	135	1	36.0-151			5.00	29
1,1,2,2-Tetrachloroethane	5.00	U	8.25	8.63	165	173	1	33.0-150	J5	J5	4.50	28
1,1,2-Trichlorotrifluoroethane	5.00	U	7.94	9.00	159	180	1	23.0-160		J5	12.5	30
Tetrachloroethene	5.00	U	8.03	7.51	161	150	1	10.0-160	J5		6.69	27
Toluene	5.00	U	7.62	7.71	152	154	1	26.0-154			1.17	28
1,2,3-Trichlorobenzene	5.00	U	5.24	4.48	105	89.6	1	17.0-150			15.6	36
1,2,4-Trichlorobenzene	5.00	U	4.09	3.42	81.8	68.4	1	24.0-150			17.8	33
1,1,1-Trichloroethane	5.00	U	6.97	7.38	139	148	1	23.0-160			5.71	28
1,1,2-Trichloroethane	5.00	U	7.33	7.46	147	149	1	35.0-147		J5	1.76	27
Trichloroethene	5.00	1.52	10.1	10.0	172	170	1	10.0-160	J5	J5	0.995	25
Trichlorofluoromethane	5.00	U	8.69	9.05	174	181	1	17.0-160	J5	J5	4.06	31
1,2,3-Trichloropropane	5.00	U	7.72	8.35	154	167	1	34.0-151	J5	J5	7.84	29
1,2,4-Trimethylbenzene	5.00	U	6.48	6.55	130	131	1	26.0-154			1.07	27
1,2,3-Trimethylbenzene	5.00	U	6.72	6.31	134	126	1	32.0-149			6.29	28
1,3,5-Trimethylbenzene	5.00	U	7.19	7.25	144	145	1	28.0-153			0.831	27
Vinyl chloride	5.00	U	9.11	8.87	182	177	1	10.0-160	J5	J5	2.67	27
Xylenes, Total	15.0	U	20.3	20.7	135	138	1	29.0-154			1.95	28
(S) Toluene-d8					*113*	*113*		*80.0-120*				
(S) 4-Bromofluorobenzene					*88.3*	*91.9*		*77.0-126*				
(S) 1,2-Dichloroethane-d4					*97.5*	*96.4*		*70.0-130*				

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

L1533315-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1533315-02 09/11/22 00:22 • (MS) R3837604-8 09/11/22 02:29 • (MSD) R3837604-9 09/11/22 02:50

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	125	170	213	178	34.4	6.40	5	10.0-160		J6	17.9	35
Acrolein	125	U	75.7	75.7	60.6	60.6	5	10.0-160			0.000	39
Acrylonitrile	125	U	80.1	95.2	64.1	76.2	5	21.0-160			17.2	32
Benzene	25.0	3.68	36.3	36.4	130	131	5	17.0-158			0.275	27
Bromobenzene	25.0	U	32.0	34.6	128	138	5	30.0-149			7.81	28
Bromodichloromethane	25.0	U	27.9	28.8	112	115	5	31.0-150			3.17	27
Bromoform	25.0	U	21.7	22.1	86.8	88.4	5	29.0-150			1.83	29
Bromomethane	25.0	U	34.8	34.7	139	139	5	10.0-160			0.288	38
1,3-Butadiene	25.0	U	47.5	53.3	190	213	5	10.0-160	J5	J5	11.5	22
n-Butylbenzene	25.0	U	28.8	30.3	115	121	5	31.0-150			5.08	30
sec-Butylbenzene	25.0	U	32.3	32.6	129	130	5	33.0-155			0.925	29
tert-Butylbenzene	25.0	U	32.7	33.6	131	134	5	34.0-153			2.71	28
Carbon tetrachloride	25.0	U	30.4	31.6	122	126	5	23.0-159			3.87	28
Carbon disulfide	25.0	U	34.6	37.7	138	151	5	10.0-156			8.58	28
Chlorobenzene	25.0	U	32.5	33.4	130	134	5	33.0-152			2.73	27
Chlorodibromomethane	25.0	U	27.0	27.4	108	110	5	37.0-149			1.47	27
Chloroethane	25.0	U	33.9	36.6	136	146	5	10.0-160			7.66	30
Chloroform	25.0	U	31.5	32.9	126	132	5	29.0-154			4.35	28
Chloromethane	25.0	U	32.1	34.0	128	136	5	10.0-160			5.75	29
Cyclohexane	25.0	U	35.7	37.3	143	149	5	19.0-160			4.38	23
2-Chlorotoluene	25.0	U	32.5	34.4	130	138	5	32.0-153			5.68	28
4-Chlorotoluene	25.0	U	32.4	32.0	130	128	5	32.0-150			1.24	28
1,2-Dibromo-3-Chloropropane	25.0	U	24.6	27.5	98.4	110	5	22.0-151			11.1	34
1,2-Dibromoethane	25.0	U	30.7	31.9	123	128	5	34.0-147			3.83	27
Dibromomethane	25.0	U	30.3	29.5	121	118	5	30.0-151			2.68	27
1,2-Dichlorobenzene	25.0	U	29.8	32.2	119	129	5	34.0-149			7.74	28
1,3-Dichlorobenzene	25.0	U	30.6	31.6	122	126	5	36.0-146			3.22	27
1,4-Dichlorobenzene	25.0	U	31.0	32.1	124	128	5	35.0-142			3.49	27
Dichlorodifluoromethane	25.0	U	38.0	40.3	152	161	5	10.0-160		J5	5.87	29
1,1-Dichloroethane	25.0	U	30.6	33.3	122	133	5	25.0-158			8.45	27
1,2-Dichloroethane	25.0	U	27.2	27.5	109	110	5	29.0-151			1.10	27
1,1-Dichloroethene	25.0	44.1	77.7	78.1	134	136	5	11.0-160			0.513	29
cis-1,2-Dichloroethene	25.0	61.6	94.3	92.5	131	124	5	10.0-160			1.93	27
trans-1,2-Dichloroethene	25.0	2.11	35.7	36.2	134	136	5	17.0-153			1.39	27
1,2-Dichloropropane	25.0	U	29.8	32.1	119	128	5	30.0-156			7.43	27
1,1-Dichloropropene	25.0	U	33.9	34.9	136	140	5	25.0-158			2.91	27
1,3-Dichloropropane	25.0	U	31.5	32.8	126	131	5	38.0-147			4.04	27
cis-1,3-Dichloropropene	25.0	U	26.0	26.7	104	107	5	34.0-149			2.66	28
trans-1,3-Dichloropropene	25.0	U	26.6	28.6	106	114	5	32.0-149			7.25	28
2,2-Dichloropropane	25.0	U	27.5	31.8	110	127	5	24.0-152			14.5	29

L1533315-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1533315-02 09/11/22 00:22 • (MS) R3837604-8 09/11/22 02:29 • (MSD) R3837604-9 09/11/22 02:50

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	25.0	U	31.6	31.6	126	126	5	51.0-139			0.000	20
Di-isopropyl ether	25.0	U	27.5	28.3	110	113	5	21.0-160			2.87	28
Ethylbenzene	25.0	U	31.0	34.0	124	136	5	30.0-155			9.23	27
4-Ethyltoluene	25.0	U	32.8	33.1	131	132	5	10.0-160			0.910	20
Hexachloro-1,3-butadiene	25.0	U	23.4	23.5	93.6	94.0	5	20.0-154			0.426	34
n-Hexane	25.0	U	31.3	30.1	125	120	5	10.0-153			3.91	28
Isopropylbenzene	25.0	U	29.8	32.1	119	128	5	28.0-157			7.43	27
p-Isopropyltoluene	25.0	U	30.4	31.7	122	127	5	30.0-154			4.19	29
2-Butanone (MEK)	125	329	487	397	126	54.4	5	10.0-160			20.4	32
Methyl Cyclohexane	25.0	U	34.0	35.0	136	140	5	11.0-160			2.90	24
Methylene Chloride	25.0	5.56	34.1	36.7	114	125	5	23.0-144			7.34	28
4-Methyl-2-pentanone (MIBK)	125	3.40	138	141	108	110	5	29.0-160			2.15	29
Methyl tert-butyl ether	25.0	U	23.2	27.2	92.8	109	5	28.0-150			15.9	29
Naphthalene	25.0	U	24.9	28.5	99.6	114	5	12.0-156			13.5	35
Propene	25.0	U	60.0	66.7	240	267	5	10.0-160	J5	J5	10.6	29
n-Propylbenzene	25.0	U	34.5	34.9	138	140	5	31.0-154			1.15	28
Styrene	25.0	U	28.5	29.7	114	119	5	33.0-155			4.12	28
1,1,1,2-Tetrachloroethane	25.0	U	30.0	28.8	120	115	5	36.0-151			4.08	29
1,1,2,2-Tetrachloroethane	25.0	U	31.8	35.3	127	141	5	33.0-150			10.4	28
1,1,2-Trichlorotrifluoroethane	25.0	U	42.5	44.1	170	176	5	23.0-160	J5	J5	3.70	30
Tetrachloroethene	25.0	U	37.9	37.7	152	151	5	10.0-160			0.529	27
Toluene	25.0	U	34.0	34.0	136	136	5	26.0-154			0.000	28
1,2,3-Trichlorobenzene	25.0	U	25.9	28.3	104	113	5	17.0-150			8.86	36
1,2,4-Trichlorobenzene	25.0	U	21.3	23.0	85.2	92.0	5	24.0-150			7.67	33
1,1,1-Trichloroethane	25.0	U	31.4	33.7	126	135	5	23.0-160			7.07	28
1,1,2-Trichloroethane	25.0	U	32.3	34.2	129	137	5	35.0-147			5.71	27
Trichloroethene	25.0	293	309	295	64.0	8.00	5	10.0-160		V	4.64	25
Trichlorofluoromethane	25.0	U	41.2	41.9	165	168	5	17.0-160	J5	J5	1.68	31
1,2,3-Trichloropropane	25.0	U	31.9	35.1	128	140	5	34.0-151			9.55	29
1,2,4-Trimethylbenzene	25.0	U	31.7	31.8	127	127	5	26.0-154			0.315	27
1,2,3-Trimethylbenzene	25.0	U	29.5	33.0	118	132	5	32.0-149			11.2	28
1,3,5-Trimethylbenzene	25.0	U	32.0	32.2	128	129	5	28.0-153			0.623	27
Vinyl chloride	25.0	2.28	42.0	44.1	159	167	5	10.0-160		J5	4.88	27
Xylenes, Total	75.0	U	92.7	96.9	124	129	5	29.0-154			4.43	28
(S) Toluene-d8					*114*	*114*		*80.0-120*				
(S) 4-Bromofluorobenzene					*95.3*	*95.3*		*77.0-126*				
(S) 1,2-Dichloroethane-d4					*93.2*	*87.7*		*70.0-130*				

Sample Narrative:

OS: Lowest possible dilution due to sample foaming.

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

Method Blank (MB)

(MB) R3838082-3 09/15/22 23:38

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

Method Blank (MB)

(MB) R3838082-3 09/15/22 23:38

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	*110*			*80.0-120*
(S) 4-Bromofluorobenzene	*113*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*94.3*			*70.0-130*

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

(LCS) R3838082-1 09/15/22 22:33 • (LCSD) R3838082-2 09/15/22 22:55

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	20.9	21.7	83.6	86.8	19.0-160			3.76	27
Acrolein	25.0	27.6	29.7	110	119	30.0-160			7.33	26
Acrylonitrile	25.0	24.7	25.1	98.8	100	55.0-149			1.61	20
Benzene	5.00	5.53	5.80	111	116	70.0-123			4.77	20
Bromobenzene	5.00	3.79	3.91	75.8	78.2	73.0-121			3.12	20
Bromodichloromethane	5.00	4.97	4.93	99.4	98.6	75.0-120			0.808	20
Bromoform	5.00	5.42	5.38	108	108	68.0-132			0.741	20
Bromomethane	5.00	2.20	2.37	44.0	47.4	30.0-160			7.44	25
1,3-Butadiene	5.00	4.21	4.65	84.2	93.0	45.0-147			9.93	20
n-Butylbenzene	5.00	3.83	3.98	76.6	79.6	73.0-125			3.84	20
sec-Butylbenzene	5.00	4.19	4.33	83.8	86.6	75.0-125			3.29	20
tert-Butylbenzene	5.00	4.16	4.45	83.2	89.0	76.0-124			6.74	20
Carbon tetrachloride	5.00	5.17	5.62	103	112	68.0-126			8.34	20
Carbon disulfide	5.00	5.06	5.60	101	112	61.0-128			10.1	20
Chlorobenzene	5.00	5.62	5.80	112	116	80.0-121			3.15	20
Chlorodibromomethane	5.00	5.02	4.89	100	97.8	77.0-125			2.62	20
Chloroethane	5.00	4.99	5.58	99.8	112	47.0-150			11.2	20
Chloroform	5.00	5.42	5.41	108	108	73.0-120			0.185	20
Chloromethane	5.00	2.65	3.03	53.0	60.6	41.0-142			13.4	20
Cyclohexane	5.00	5.58	5.86	112	117	71.0-124			4.90	20
2-Chlorotoluene	5.00	4.15	4.28	83.0	85.6	76.0-123			3.08	20
4-Chlorotoluene	5.00	3.89	4.09	77.8	81.8	75.0-122			5.01	20
1,2-Dibromo-3-Chloropropane	5.00	3.91	4.00	78.2	80.0	58.0-134			2.28	20
1,2-Dibromoethane	5.00	5.15	5.42	103	108	80.0-122			5.11	20
Dibromomethane	5.00	5.53	5.25	111	105	80.0-120			5.19	20
1,2-Dichlorobenzene	5.00	4.54	4.48	90.8	89.6	79.0-121			1.33	20
1,3-Dichlorobenzene	5.00	4.53	4.84	90.6	96.8	79.0-120			6.62	20
1,4-Dichlorobenzene	5.00	4.65	4.42	93.0	88.4	79.0-120			5.07	20
Dichlorodifluoromethane	5.00	5.26	5.37	105	107	51.0-149			2.07	20
1,1-Dichloroethane	5.00	4.90	5.47	98.0	109	70.0-126			11.0	20
1,2-Dichloroethane	5.00	4.54	4.50	90.8	90.0	70.0-128			0.885	20
1,1-Dichloroethene	5.00	5.90	6.43	118	129	71.0-124		J4	8.60	20
cis-1,2-Dichloroethene	5.00	5.66	5.97	113	119	73.0-120			5.33	20
trans-1,2-Dichloroethene	5.00	6.07	6.09	121	122	73.0-120	J4	J4	0.329	20
1,2-Dichloropropane	5.00	5.16	5.35	103	107	77.0-125			3.62	20
1,1-Dichloropropene	5.00	5.07	5.58	101	112	74.0-126			9.58	20
1,3-Dichloropropane	5.00	4.90	4.83	98.0	96.6	80.0-120			1.44	20
cis-1,3-Dichloropropene	5.00	4.91	5.03	98.2	101	80.0-123			2.41	20
trans-1,3-Dichloropropene	5.00	4.45	4.46	89.0	89.2	78.0-124			0.224	20
2,2-Dichloropropane	5.00	4.38	4.49	87.6	89.8	58.0-130			2.48	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) R3838082-1 09/15/22 22:33 • (LCSD) R3838082-2 09/15/22 22:55

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	3.85	3.97	77.0	79.4	74.0-126			3.07	20
Di-isopropyl ether	5.00	4.30	4.56	86.0	91.2	58.0-138			5.87	20
Ethylbenzene	5.00	5.32	5.49	106	110	79.0-123			3.15	20
4-Ethyltoluene	5.00	4.12	4.24	82.4	84.8	74.0-127			2.87	20
Hexachloro-1,3-butadiene	5.00	4.66	5.01	93.2	100	54.0-138			7.24	20
n-Hexane	5.00	4.75	4.63	95.0	92.6	57.0-133			2.56	20
Isopropylbenzene	5.00	5.34	5.61	107	112	76.0-127			4.93	20
p-Isopropyltoluene	5.00	4.23	4.29	84.6	85.8	76.0-125			1.41	20
2-Butanone (MEK)	25.0	20.0	21.1	80.0	84.4	44.0-160			5.35	20
Methyl Cyclohexane	5.00	5.38	5.68	108	114	68.0-126			5.42	20
Methylene Chloride	5.00	5.49	5.71	110	114	67.0-120			3.93	20
4-Methyl-2-pentanone (MIBK)	25.0	20.1	20.8	80.4	83.2	68.0-142			3.42	20
Methyl tert-butyl ether	5.00	4.76	5.08	95.2	102	68.0-125			6.50	20
Naphthalene	5.00	3.64	4.00	72.8	80.0	54.0-135			9.42	20
Propene	5.00	3.22	3.41	64.4	68.2	30.0-160			5.73	20
n-Propylbenzene	5.00	4.06	4.16	81.2	83.2	77.0-124			2.43	20
Styrene	5.00	5.08	5.32	102	106	73.0-130			4.62	20
1,1,1,2-Tetrachloroethane	5.00	5.39	5.35	108	107	75.0-125			0.745	20
1,1,2,2-Tetrachloroethane	5.00	3.86	3.84	77.2	76.8	65.0-130			0.519	20
1,1,2-Trichlorotrifluoroethane	5.00	5.79	6.17	116	123	69.0-132			6.35	20
Tetrachloroethene	5.00	5.89	6.12	118	122	72.0-132			3.83	20
Toluene	5.00	5.18	5.39	104	108	79.0-120			3.97	20
1,2,3-Trichlorobenzene	5.00	4.48	4.49	89.6	89.8	50.0-138			0.223	20
1,2,4-Trichlorobenzene	5.00	4.43	4.78	88.6	95.6	57.0-137			7.60	20
1,1,1-Trichloroethane	5.00	5.37	5.53	107	111	73.0-124			2.94	20
1,1,2-Trichloroethane	5.00	5.37	5.36	107	107	80.0-120			0.186	20
Trichloroethene	5.00	5.89	6.49	118	130	78.0-124		J4	9.69	20
Trichlorofluoromethane	5.00	5.80	5.94	116	119	59.0-147			2.39	20
1,2,3-Trichloropropane	5.00	4.11	4.33	82.2	86.6	73.0-130			5.21	20
1,2,4-Trimethylbenzene	5.00	3.96	4.08	79.2	81.6	76.0-121			2.99	20
1,2,3-Trimethylbenzene	5.00	4.16	4.34	83.2	86.8	77.0-120			4.24	20
1,3,5-Trimethylbenzene	5.00	4.02	4.24	80.4	84.8	76.0-122			5.33	20
Vinyl chloride	5.00	5.35	5.72	107	114	67.0-131			6.68	20
Xylenes, Total	15.0	16.3	16.6	109	111	79.0-123			1.82	20
(S) Toluene-d8				*107*	*105*	*80.0-120*				
(S) 4-Bromofluorobenzene				*114*	*114*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*95.4*	*93.3*	*70.0-130*				

L1533498-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1533498-01 09/16/22 00:15 • (MS) R3838082-4 09/16/22 09:34 • (MSD) R3838082-5 09/16/22 09:55

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	24.6	26.2	98.4	105	1	10.0-160			6.30	35
Acrolein	25.0	U	34.3	40.5	137	162	1	10.0-160		J5	16.6	39
Acrylonitrile	25.0	U	27.8	28.9	111	116	1	21.0-160			3.88	32
Benzene	5.00	U	4.82	6.91	96.4	138	1	17.0-158		J3	35.6	27
Bromobenzene	5.00	U	3.55	4.50	71.0	90.0	1	30.0-149			23.6	28
Bromodichloromethane	5.00	U	4.65	6.15	93.0	123	1	31.0-150		J3	27.8	27
Bromoform	5.00	U	5.55	6.60	111	132	1	29.0-150			17.3	29
Bromomethane	5.00	U	1.69	3.07	33.8	61.4	1	10.0-160		J3	58.0	38
1,3-Butadiene	5.00	U	3.73	5.81	74.6	116	1	10.0-160		J3	43.6	22
n-Butylbenzene	5.00	U	3.14	4.35	62.8	87.0	1	31.0-150		J3	32.3	30
sec-Butylbenzene	5.00	U	3.47	5.32	69.4	106	1	33.0-155		J3	42.1	29
tert-Butylbenzene	5.00	U	3.53	5.31	70.6	106	1	34.0-153		J3	40.3	28
Carbon tetrachloride	5.00	U	4.78	7.27	95.6	145	1	23.0-159		J3	41.3	28
Carbon disulfide	5.00	U	4.29	6.76	85.8	135	1	10.0-156		J3	44.7	28
Chlorobenzene	5.00	U	4.84	6.81	96.8	136	1	33.0-152		J3	33.8	27
Chlorodibromomethane	5.00	U	4.80	5.68	96.0	114	1	37.0-149			16.8	27
Chloroethane	5.00	U	4.61	6.81	92.2	136	1	10.0-160		J3	38.5	30
Chloroform	5.00	U	4.56	6.41	91.2	128	1	29.0-154		J3	33.7	28
Chloromethane	5.00	U	2.20	3.30	44.0	66.0	1	10.0-160		J3	40.0	29
Cyclohexane	5.00	U	4.75	7.36	95.0	147	1	19.0-160		J3	43.1	23
2-Chlorotoluene	5.00	U	3.53	5.04	70.6	101	1	32.0-153		J3	35.2	28
4-Chlorotoluene	5.00	U	3.24	4.55	64.8	91.0	1	32.0-150		J3	33.6	28
1,2-Dibromo-3-Chloropropane	5.00	U	4.56	5.05	91.2	101	1	22.0-151			10.2	34
1,2-Dibromoethane	5.00	U	5.05	6.42	101	128	1	34.0-147			23.9	27
Dibromomethane	5.00	U	5.32	6.57	106	131	1	30.0-151			21.0	27
1,2-Dichlorobenzene	5.00	U	3.95	5.49	79.0	110	1	34.0-149		J3	32.6	28
1,3-Dichlorobenzene	5.00	U	3.97	5.24	79.4	105	1	36.0-146		J3	27.6	27
1,4-Dichlorobenzene	5.00	U	4.00	5.33	80.0	107	1	35.0-142		J3	28.5	27
Dichlorodifluoromethane	5.00	U	4.21	6.78	84.2	136	1	10.0-160		J3	46.8	29
1,1-Dichloroethane	5.00	U	4.35	6.38	87.0	128	1	25.0-158		J3	37.8	27
1,2-Dichloroethane	5.00	0.939	5.31	6.49	87.4	111	1	29.0-151			20.0	27
1,1-Dichloroethene	5.00	U	5.18	7.63	104	153	1	11.0-160		J3	38.3	29
cis-1,2-Dichloroethene	5.00	U	5.05	7.13	101	143	1	10.0-160		J3	34.2	27
trans-1,2-Dichloroethene	5.00	U	5.08	7.28	102	146	1	17.0-153		J3	35.6	27
1,2-Dichloropropane	5.00	U	4.67	6.44	93.4	129	1	30.0-156		J3	31.9	27
1,1-Dichloropropene	5.00	U	4.57	6.79	91.4	136	1	25.0-158		J3	39.1	27
1,3-Dichloropropane	5.00	U	4.61	5.76	92.2	115	1	38.0-147			22.2	27
cis-1,3-Dichloropropene	5.00	U	4.42	5.90	88.4	118	1	34.0-149		J3	28.7	28
trans-1,3-Dichloropropene	5.00	U	4.13	5.05	82.6	101	1	32.0-149			20.0	28
2,2-Dichloropropane	5.00	U	3.75	5.81	75.0	116	1	24.0-152		J3	43.1	29

L1533498-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1533498-01 09/16/22 00:15 • (MS) R3838082-4 09/16/22 09:34 • (MSD) R3838082-5 09/16/22 09:55

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	2.64	4.06	52.8	81.2	1	51.0-139		J3	42.4	20
Di-isopropyl ether	5.00	U	4.21	5.51	84.2	110	1	21.0-160			26.7	28
Ethylbenzene	5.00	U	4.50	6.63	90.0	133	1	30.0-155		J3	38.3	27
4-Ethyltoluene	5.00	U	3.27	4.87	65.4	97.4	1	10.0-160		J3	39.3	20
Hexachloro-1,3-butadiene	5.00	U	4.25	6.09	85.0	122	1	20.0-154		J3	35.6	34
n-Hexane	5.00	U	3.86	5.97	77.2	119	1	10.0-153		J3	42.9	28
Isopropylbenzene	5.00	U	4.22	6.56	84.4	131	1	28.0-157		J3	43.4	27
p-Isopropyltoluene	5.00	U	3.44	5.09	68.8	102	1	30.0-154		J3	38.7	29
2-Butanone (MEK)	25.0	U	26.3	27.8	105	111	1	10.0-160			5.55	32
Methyl Cyclohexane	5.00	U	4.80	6.92	96.0	138	1	11.0-160		J3	36.2	24
Methylene Chloride	5.00	U	5.03	6.75	101	135	1	23.0-144		J3	29.2	28
4-Methyl-2-pentanone (MIBK)	25.0	U	25.0	27.2	100	109	1	29.0-160			8.43	29
Methyl tert-butyl ether	5.00	0.342	5.58	6.42	105	122	1	28.0-150			14.0	29
Naphthalene	5.00	U	3.87	4.92	77.4	98.4	1	12.0-156			23.9	35
Propene	5.00	U	2.80	4.41	56.0	88.2	1	10.0-160		J3	44.7	29
n-Propylbenzene	5.00	U	3.27	4.91	65.4	98.2	1	31.0-154		J3	40.1	28
Styrene	5.00	U	4.39	5.89	87.8	118	1	33.0-155		J3	29.2	28
1,1,1,2-Tetrachloroethane	5.00	U	4.75	6.37	95.0	127	1	36.0-151		J3	29.1	29
1,1,2,2-Tetrachloroethane	5.00	U	4.53	5.07	90.6	101	1	33.0-150			11.2	28
1,1,2-Trichlorotrifluoroethane	5.00	U	5.04	7.73	101	155	1	23.0-160		J3	42.1	30
Tetrachloroethene	5.00	U	5.02	7.35	100	147	1	10.0-160		J3	37.7	27
Toluene	5.00	U	4.24	6.38	84.8	128	1	26.0-154		J3	40.3	28
1,2,3-Trichlorobenzene	5.00	U	4.02	5.03	80.4	101	1	17.0-150			22.3	36
1,2,4-Trichlorobenzene	5.00	U	3.97	5.30	79.4	106	1	24.0-150			28.7	33
1,1,1-Trichloroethane	5.00	U	4.43	6.91	88.6	138	1	23.0-160		J3	43.7	28
1,1,2-Trichloroethane	5.00	U	5.47	6.29	109	126	1	35.0-147			13.9	27
Trichloroethene	5.00	U	5.10	7.75	102	155	1	10.0-160		J3	41.2	25
Trichlorofluoromethane	5.00	U	4.87	7.81	97.4	156	1	17.0-160		J3	46.4	31
1,2,3-Trichloropropane	5.00	U	4.87	5.38	97.4	108	1	34.0-151			9.95	29
1,2,4-Trimethylbenzene	5.00	U	3.33	4.73	66.6	94.6	1	26.0-154		J3	34.7	27
1,2,3-Trimethylbenzene	5.00	U	3.57	4.93	71.4	98.6	1	32.0-149		J3	32.0	28
1,3,5-Trimethylbenzene	5.00	U	3.35	4.81	67.0	96.2	1	28.0-153		J3	35.8	27
Vinyl chloride	5.00	U	4.38	6.76	87.6	135	1	10.0-160		J3	42.7	27
Xylenes, Total	15.0	U	13.5	19.3	90.0	129	1	29.0-154		J3	35.4	28
(S) Toluene-d8					*103*	*106*		*80.0-120*				
(S) 4-Bromofluorobenzene					*113*	*113*		*77.0-126*				
(S) 1,2-Dichloroethane-d4					*96.5*	*96.8*		*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) R3837974-3 09/15/22 23:56

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
1,1-Dichloroethene	U		0.188	1.00
Trichloroethene	U		0.190	1.00
(S) Toluene-d8	*109*			*80.0-120*
(S) 4-Bromofluorobenzene	*99.9*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*104*			*70.0-130*

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

(LCS) R3837974-1 09/15/22 22:51 • (LCSD) R3837974-2 09/15/22 23:14

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 %
1,1-Dichloroethene	5.00	5.32	4.65	106	93.0	71.0-124			13.4	20
Trichloroethene	5.00	4.69	4.80	93.8	96.0	78.0-124			2.32	20
(S) Toluene-d8				*108*	*109*	*80.0-120*				
(S) 4-Bromofluorobenzene				*103*	*105*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*112*	*109*	*70.0-130*				

Method Blank (MB)

(MB) R3838834-3 09/14/22 14:54

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
1,4-Dioxane	U		0.597	3.00
(S) Toluene-d8	*98.1*			*77.0-127*

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

(LCS) R3838834-1 09/14/22 13:53 • (LCSD) R3838834-2 09/14/22 14:13

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
1,4-Dioxane	50.0	46.5	35.8	93.0	71.6	55.0-138		J3	26.0	24
(S) Toluene-d8				*98.4*	*97.8*	*77.0-127*				

Method Blank (MB)

(MB) R3839351-3 09/20/22 13:29

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
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) R3839351-1 09/20/22 12:29 • (LCSD) R3839351-2 09/20/22 12:49

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 %
1,4-Dioxane	50.0	43.4	39.9	86.8	79.8	55.0-138			8.40	24
(S) Toluene-d8				*101*	*102*	*77.0-127*				

L1533315-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1533315-02 09/20/22 14:12 • (MS) R3839351-4 09/20/22 16:32 • (MSD) R3839351-5 09/20/22 16:52

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 %
1,4-Dioxane	500	152	533	677	76.2	105	10	13.0-160			23.8	31
(S) Toluene-d8					*104*	*104*		*77.0-127*				

Sample Narrative:

OS: Non-target compounds too high to run at a lower dilution.

Instrument: VOCMS6 • File ID: 0915_35

09/15/22 22:33

Sample ID	File ID	8260-FLUOROBENZENE	8260-CHLOROBENZENE-D5	8260-1,4-DICHLOROBENZENE-D4
		Response	Response	Response
Standard	0915_35	367514	162142	165728
Upper Limit		735028	324284	331456
Lower Limit		183757	81071	82864
LCS R3838082-1 WG1926870 1x	0915_35LCSA	367514	162142	165728
LCSD R3838082-2 WG1926870 1x	0915_36A	372049	165172	171111
BLANK R3838082-3 WG1926870 1x	0915_38A	382477	157068	158959
L1533315-03 WG1926870 100x	0915_42	380797	161518	167729
MS R3838082-4 WG1926870 1x	0915_65	364526	162385	166347
MSD R3838082-5 WG1926870 1x	0915_66	353978	160292	164460

Instrument: VOCMS21 • File ID: 0915A_36

09/15/22 22:51

Sample ID	File ID	8260-FLUOROBENZENE	8260-CHLOROBENZENE-D5	8260-1,4-DICHLOROBENZENE-D4
		Response	Response	Response
Standard	0915A_36	154847	72619	66655
Upper Limit		309694	145238	133310
Lower Limit		77424	36310	33328
LCS R3837974-1 WG1927005 1x	0915A_36LCS	154847	72619	66655
LCSD R3837974-2 WG1927005 1x	0915A_37	146042	67211	62889
BLANK R3837974-3 WG1927005 1x	0915A_39A	136541	61206	54215
L1533315-01 WG1927005 10x	0915A_41	135768	62685	58251
L1533315-02 WG1927005 5x	0915A_42	141767	63026	62057
L1533315-04 WG1927005 200x	0915A_43	138629	61841	55052

Instrument: VOCMS33 • File ID: 0910_27

09/10/22 16:41

Sample ID	File ID	8260-FLUOROBENZENE	8260-CHLOROBENZENE-D5	8260-1,4-DICHLOROBENZENE-D4
		Response	Response	Response
Standard	0910_27	323788	134138	127146
Upper Limit		647576	268276	254292
Lower Limit		161894	67069	63573
LCS R3837604-1 WG1924204 1x	0910_27LCS	323788	134138	127146

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

Instrument: VOCMS33 • File ID: 0910_27

09/10/22 16:41

Sample ID	File ID	8260-FLUOROBENZENE Response	8260-CHLOROBENZENE-D5 Response	8260-1,4-DICHLOROBENZENE-D4 Response
LCSD R3837604-2 WG1924204 1x	0910_28	303265	116629	83562
BLANK R3837604-3 WG1924204 1x	0910_30	316653	116412	80090
L1533315-05 WG1924204 1x	0910_34	305309	115490	82141
L1533315-04 WG1924204 1x	0910_47	313475	118687	83115
L1533315-01 WG1924204 10x	0910_48	298826	110777	75569
L1533315-02 WG1924204 5x	0910_49	295251	109797	81115
MS R3837604-4 WG1924204 1x	0910_51	305191	115748	83485
MSD R3837604-5 WG1924204 1x	0910_52	305577	117719	79638
MS R3837604-6 WG1924204 1x	0910_53	298305	117312	80692
MSD R3837604-7 WG1924204 1x	0910_54	304845	117960	77982
MS R3837604-8 WG1924204 5x	0910_55	302657	115224	83128
MSD R3837604-9 WG1924204 5x	0910_56	302464	119870	88381

INTERNAL STANDARD SUMMARY

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

Instrument: VOCMS27 • File ID: 0914_09

09/14/22 12:33

Sample ID	File ID	8260-FLUOROBENZENE
		Response
Standard	0914_09	1231638
Upper Limit		2463276
Lower Limit		615819
LCS R3838834-1 WG1926249 1x	0914_10	1152744
LCSD R3838834-2 WG1926249 1x	0914_11	1315186
BLANK R3838834-3 WG1926249 1x	0914_13	1092656
L1533315-01 WG1926249 1x	0914_22	1296615

Instrument: VOCMS27 • File ID: 0920_03

09/20/22 12:10

Sample ID	File ID	8260-FLUOROBENZENE
		Response
Standard	0920_03	1243769
Upper Limit		2487538
Lower Limit		621885
LCS R3839351-1 WG1928820 1x	0920_04	1003291
LCSD R3839351-2 WG1928820 1x	0920_05A	1259141
BLANK R3839351-3 WG1928820 1x	0920_07	1022301
L1533315-02 WG1928820 10x	0920_08	1360352
L1533315-03 WG1928820 10x	0920_09	1069199
L1533315-04 WG1928820 10x	0920_10	1316207
MS R3839351-4 WG1928820 10x	0920_15	1171874
MSD R3839351-5 WG1928820 10x	0920_16	982442

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

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.
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
Alaska	17-026
Arizona	AZ0612
Arkansas	88-0469
California	2932
Colorado	TN00003
Connecticut	PH-0197
Florida	E87487
Georgia	NELAP
Georgia [1]	923
Idaho	TN00003
Illinois	200008
Indiana	C-TN-01
Iowa	364
Kansas	E-10277
Kentucky [1,6]	KY90010
Kentucky [2]	16
Louisiana	AI30792
Louisiana	LA018
Maine	TN00003
Maryland	324
Massachusetts	M-TN003
Michigan	9958
Minnesota	047-999-395
Mississippi	TN00003
Missouri	340
Montana	CERT0086
Nebraska	NE-OS-15-05
Nevada	TN000032021-1
New Hampshire	2975
New Jersey–NELAP	TN002
New Mexico [1]	TN00003
New York	11742
North Carolina	Env375
North Carolina [1]	DW21704
North Carolina [3]	41
North Dakota	R-140
Ohio–VAP	CL0069
Oklahoma	9915
Oregon	TN200002
Pennsylvania	68-02979
Rhode Island	LAO00356
South Carolina	84004002
South Dakota	n/a
Tennessee [1,4]	2006
Texas	T104704245-20-18
Texas [5]	LAB0152
Utah	TN000032021-11
Vermont	VT2006
Virginia	110033
Washington	C847
West Virginia	233
Wisconsin	998093910
Wyoming	A2LA

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

[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.

Chain of Custody Page 1 of 1

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 # 1533315

G201

Acctnum: **PINYONMAZ**
Template:**T205653**
Prelogin: **P947435**
PM: **288 - Daphne Richards**
PB:
Shipped Via:

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

Report to:
Jeremy Musson

Email To: **guarnieri@pinyon-env.com;musson@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): Isabella Foster

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N____ Y X

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

Quote #

Date Results Needed: Standard TAT

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	PERCHLORATE 125mlHDPE-NoPres	V8260AZ 40mlAmb-HCl	V8260LL14D 40mlAmb-HCl								Remarks	Sample # (lab only)
TTU-11-73-20220903		GW	73	9/3/22	0930	7	X	X	X									-01
TTU-19-73-20220903		GW	73		1031	14	X	X	X								MS/MSD	-02
TTU-20-73-20220903		GW	73		0844	7	X	X	X									-03
DUP-01		GW	73		0844	7	X	X	X									-04
Trip Blank 2		GW	—	—	—	1		X										-05
		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 #

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: ✓ __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: ✓Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: [✓ Yes] / No 1 [✓ HCL] / MeoH TBR
	9/6/22	0624		

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: °C	Bottles Received:	If preservation required by Login: Date/Time
	9/6/22	1800		NSM 1.4-0=1.1	35	

Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date:	Time:	Hold:	Condition:
				09/07/22	0800		NCF / [✓ OK]

PNPAZ

ANALYTICAL REPORT

September 29, 2022

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:	L1534502
Samples Received:	09/10/2022
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 R Richards

Daphne Richards
Project Manager

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

TABLE OF CONTENTS

SAMPLE SUMMARY

TTU-EXT-1-69-20220908 L1534502-01 GW

Collected by	Collected date/time	Received date/time
Ben Boesen	09/08/22 09:10	09/10/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1929502	1000	09/22/22 22:56	09/22/22 22:56	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1926858	1	09/15/22 22:05	09/15/22 22:05	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1926871	1	09/15/22 19:31	09/15/22 19:31	ACG	Mt. Juliet, TN

TTU-EXT-2-74-20220908 L1534502-02 GW

Collected by	Collected date/time	Received date/time
Ben Boesen	09/08/22 08:46	09/10/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1929502	500	09/22/22 02:32	09/22/22 02:32	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1926858	1	09/15/22 22:24	09/15/22 22:24	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1926871	1	09/15/22 19:51	09/15/22 19:51	ACG	Mt. Juliet, TN

TTU-EXT-3-76-20220908 L1534502-03 GW

Collected by	Collected date/time	Received date/time
Ben Boesen	09/08/22 08:19	09/10/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1929502	10000	09/22/22 03:29	09/22/22 03:29	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1925636	100	09/13/22 21:40	09/13/22 21:40	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1926871	1	09/15/22 20:11	09/15/22 20:11	ACG	Mt. Juliet, TN

TTU-EXT-4-77-20220908 L1534502-04 GW

Collected by	Collected date/time	Received date/time
Ben Boesen	09/08/22 07:54	09/10/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1929502	1000	09/23/22 00:10	09/23/22 00:10	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1926858	20	09/15/22 22:43	09/15/22 22:43	AV	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1926871	1	09/15/22 20:31	09/15/22 20:31	ACG	Mt. Juliet, TN

TTU-EXT-5-80-20220908 L1534502-05 GW

Collected by	Collected date/time	Received date/time
Ben Boesen	09/08/22 07:19	09/10/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1929502	1	09/22/22 05:23	09/22/22 05:23	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1925636	1	09/13/22 17:50	09/13/22 17:50	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1926871	1	09/15/22 20:51	09/15/22 20:51	ACG	Mt. Juliet, TN

DUP-02 L1534502-06 GW

Collected by	Collected date/time	Received date/time
Ben Boesen	09/08/22 07:19	09/10/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1929502	1	09/22/22 05:51	09/22/22 05:51	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1925636	1	09/13/22 18:11	09/13/22 18:11	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1926871	1	09/15/22 21:11	09/15/22 21:11	ACG	Mt. Juliet, TN

TTU-3-108-20220909 L1534502-07 GW

Collected by	Collected date/time	Received date/time
Ben Boesen	09/09/22 11:58	09/10/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1931315	1	09/22/22 06:20	09/22/22 06:20	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1925636	1	09/13/22 18:32	09/13/22 18:32	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1926871	1	09/15/22 21:31	09/15/22 21:31	ACG	Mt. Juliet, TN

TTU-4-57-20220909 L1534502-08 GW

Collected by	Collected date/time	Received date/time
Ben Boesen	09/09/22 10:32	09/10/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1931315	1	09/22/22 06:48	09/22/22 06:48	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1925636	1	09/13/22 18:53	09/13/22 18:53	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1926871	1	09/15/22 21:51	09/15/22 21:51	ACG	Mt. Juliet, TN

TTU-5-110-20220908 L1534502-09 GW

Collected by	Collected date/time	Received date/time
Ben Boesen	09/09/22 12:46	09/10/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1931315	1	09/22/22 07:17	09/22/22 07:17	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1925636	1	09/13/22 19:13	09/13/22 19:13	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1926871	1	09/15/22 22:11	09/15/22 22:11	ACG	Mt. Juliet, TN

TTU-6-143-20220909 L1534502-10 GW

Collected by	Collected date/time	Received date/time
Ben Boesen	09/09/22 11:35	09/10/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1929502	5	09/22/22 07:45	09/22/22 07:45	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1925636	1	09/13/22 19:34	09/13/22 19:34	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1926871	1	09/15/22 22:31	09/15/22 22:31	ACG	Mt. Juliet, TN

TTU-7-345-20220909 L1534502-11 GW

Collected by	Collected date/time	Received date/time
Ben Boesen	09/09/22 11:00	09/10/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1931315	1	09/22/22 09:10	09/22/22 09:10	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1925636	1	09/13/22 19:55	09/13/22 19:55	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1926871	1	09/15/22 22:51	09/15/22 22:51	ACG	Mt. Juliet, TN

TTU-8-164-20220909 L1534502-12 GW

Collected by	Collected date/time	Received date/time
Ben Boesen	09/09/22 10:00	09/10/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1931315	1	09/22/22 10:35	09/22/22 10:35	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1925636	1	09/13/22 20:16	09/13/22 20:16	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1926871	1	09/15/22 23:11	09/15/22 23:11	ACG	Mt. Juliet, TN

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

DUP-03 L1534502-13 GW

Collected by	Collected date/time	Received date/time
Ben Boesen	09/09/22 10:00	09/10/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1931315	1	09/22/22 11:04	09/22/22 11:04	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1925636	1	09/13/22 20:37	09/13/22 20:37	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1926871	1	09/15/22 23:31	09/15/22 23:31	ACG	Mt. Juliet, TN

TTU-9A-61-20220908 L1534502-14 GW

Collected by	Collected date/time	Received date/time
Ben Boesen	09/08/22 11:45	09/10/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1931315	1	09/22/22 11:32	09/22/22 11:32	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1925641	1	09/14/22 13:39	09/14/22 13:39	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1926871	1	09/15/22 23:51	09/15/22 23:51	ACG	Mt. Juliet, TN

TTU-10-165-20220909 L1534502-15 GW

Collected by	Collected date/time	Received date/time
Ben Boesen	09/09/22 12:46	09/10/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1929502	1	09/22/22 12:01	09/22/22 12:01	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1925641	1	09/14/22 14:01	09/14/22 14:01	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1926871	1	09/16/22 00:11	09/16/22 00:11	ACG	Mt. Juliet, TN

TTU-12-82-20220909 L1534502-16 GW

Collected by	Collected date/time	Received date/time
Ben Boesen	09/09/22 08:10	09/10/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1929502	5000	09/22/22 12:57	09/22/22 12:57	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1925641	10	09/14/22 16:56	09/14/22 16:56	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1926871	1	09/16/22 00:31	09/16/22 00:31	ACG	Mt. Juliet, TN

TTU-13-51-20220908 L1534502-17 GW

Collected by	Collected date/time	Received date/time
Ben Boesen	09/08/22 12:10	09/10/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1929502	500	09/22/22 13:26	09/22/22 13:26	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1925641	1	09/14/22 14:22	09/14/22 14:22	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1926871	1	09/16/22 00:51	09/16/22 00:51	ACG	Mt. Juliet, TN

TTU-14-64-20220909 L1534502-18 GW

Collected by	Collected date/time	Received date/time
Ben Boesen	09/09/22 07:45	09/10/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1929502	5000	09/22/22 13:54	09/22/22 13:54	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1925641	1	09/14/22 14:44	09/14/22 14:44	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1928174	25	09/18/22 21:51	09/18/22 21:51	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1926871	1	09/16/22 01:11	09/16/22 01:11	ACG	Mt. Juliet, TN

SAMPLE SUMMARY

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

TTU-15-75-20220908 L1534502-19 GW

Collected by	Collected date/time	Received date/time
Ben Boesen	09/08/22 10:19	09/10/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1929502	100	09/22/22 14:23	09/22/22 14:23	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1925641	1	09/14/22 15:06	09/14/22 15:06	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1928174	1	09/18/22 21:10	09/18/22 21:10	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1930402	1	09/22/22 17:34	09/22/22 17:34	ADM	Mt. Juliet, TN

TTU-16-80-20220908 L1534502-20 GW

Collected by	Collected date/time	Received date/time
Ben Boesen	09/08/22 11:08	09/10/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1929502	10000	09/22/22 16:45	09/22/22 16:45	ELN	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1925641	100	09/14/22 17:17	09/14/22 17:17	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1930191	50	09/22/22 17:14	09/22/22 17:14	ADM	Mt. Juliet, TN

TTU-17-80-20220908 L1534502-21 GW

Collected by	Collected date/time	Received date/time
Ben Boesen	09/08/22 09:47	09/10/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1930280	1	09/26/22 17:20	09/26/22 17:20	SL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1925641	1	09/14/22 15:28	09/14/22 15:28	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1928174	1	09/18/22 21:30	09/18/22 21:30	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1926871	1	09/16/22 01:51	09/16/22 01:51	ACG	Mt. Juliet, TN

PF-2-400-20220909 L1534502-22 GW

Collected by	Collected date/time	Received date/time
Ben Boesen	09/09/22 13:30	09/10/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1925641	1	09/14/22 15:50	09/14/22 15:50	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1928694	1	09/19/22 17:40	09/19/22 17:40	ADM	Mt. Juliet, TN

TRIP BLANK L1534502-23 GW

Collected by	Collected date/time	Received date/time
Ben Boesen	09/08/22 00:00	09/10/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1925641	1	09/14/22 11:29	09/14/22 11:29	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 R Richards

Daphne Richards
Project Manager

Sample Delivery Group (SDG) Narrative

No extra volume received to perform Matrix Spike samples.

Lab Sample ID	Project Sample ID	Method
L1534502-01	TTU-EXT-1-69-20220908	8260B
L1534502-02	TTU-EXT-2-74-20220908	8260B
L1534502-04	TTU-EXT-4-77-20220908	8260B
L1534502-20	TTU-16-80-20220908	8260B-SIM

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

Wet Chemistry by Method 314.0 Mod

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Perchlorate	86300		300	4000	1000	09/22/2022 22:56	WG1929502

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	09/15/2022 22:05	WG1926858
Acrolein	U		2.54	50.0	1	09/15/2022 22:05	WG1926858
Acrylonitrile	U		0.671	10.0	1	09/15/2022 22:05	WG1926858
Benzene	0.104	J	0.0941	1.00	1	09/15/2022 22:05	WG1926858
Bromobenzene	U		0.118	1.00	1	09/15/2022 22:05	WG1926858
Bromodichloromethane	U		0.136	1.00	1	09/15/2022 22:05	WG1926858
Bromoform	U		0.129	1.00	1	09/15/2022 22:05	WG1926858
Bromomethane	U		0.605	5.00	1	09/15/2022 22:05	WG1926858
1,3-Butadiene	U		0.299	2.00	1	09/15/2022 22:05	WG1926858
n-Butylbenzene	U		0.157	1.00	1	09/15/2022 22:05	WG1926858
sec-Butylbenzene	U		0.125	1.00	1	09/15/2022 22:05	WG1926858
tert-Butylbenzene	U		0.127	1.00	1	09/15/2022 22:05	WG1926858
Carbon tetrachloride	U		0.128	1.00	1	09/15/2022 22:05	WG1926858
Carbon disulfide	U		0.0962	1.00	1	09/15/2022 22:05	WG1926858
Chlorobenzene	U		0.116	1.00	1	09/15/2022 22:05	WG1926858
Chlorodibromomethane	U		0.140	1.00	1	09/15/2022 22:05	WG1926858
Chloroethane	U		0.192	5.00	1	09/15/2022 22:05	WG1926858
Chloroform	0.322	J	0.111	5.00	1	09/15/2022 22:05	WG1926858
Chloromethane	U		0.960	2.50	1	09/15/2022 22:05	WG1926858
Cyclohexane	U		0.188	1.00	1	09/15/2022 22:05	WG1926858
2-Chlorotoluene	U		0.106	1.00	1	09/15/2022 22:05	WG1926858
4-Chlorotoluene	U		0.114	1.00	1	09/15/2022 22:05	WG1926858
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	09/15/2022 22:05	WG1926858
1,2-Dibromoethane	U		0.126	1.00	1	09/15/2022 22:05	WG1926858
Dibromomethane	U		0.122	1.00	1	09/15/2022 22:05	WG1926858
1,2-Dichlorobenzene	U		0.107	1.00	1	09/15/2022 22:05	WG1926858
1,3-Dichlorobenzene	U		0.110	1.00	1	09/15/2022 22:05	WG1926858
1,4-Dichlorobenzene	U		0.120	1.00	1	09/15/2022 22:05	WG1926858
Dichlorodifluoromethane	U		0.374	5.00	1	09/15/2022 22:05	WG1926858
1,1-Dichloroethane	0.194	J	0.100	1.00	1	09/15/2022 22:05	WG1926858
1,2-Dichloroethane	0.0867	J	0.0819	1.00	1	09/15/2022 22:05	WG1926858
1,1-Dichloroethene	35.0		0.188	1.00	1	09/15/2022 22:05	WG1926858
cis-1,2-Dichloroethene	U		0.126	1.00	1	09/15/2022 22:05	WG1926858
trans-1,2-Dichloroethene	U		0.149	1.00	1	09/15/2022 22:05	WG1926858
1,2-Dichloropropane	U		0.149	1.00	1	09/15/2022 22:05	WG1926858
1,1-Dichloropropene	U		0.142	1.00	1	09/15/2022 22:05	WG1926858
1,3-Dichloropropane	U		0.110	1.00	1	09/15/2022 22:05	WG1926858
cis-1,3-Dichloropropene	U		0.111	1.00	1	09/15/2022 22:05	WG1926858
trans-1,3-Dichloropropene	U		0.118	1.00	1	09/15/2022 22:05	WG1926858
2,2-Dichloropropane	U		0.161	1.00	1	09/15/2022 22:05	WG1926858
Dicyclopentadiene	U		0.253	1.00	1	09/15/2022 22:05	WG1926858
Di-isopropyl ether	U		0.105	1.00	1	09/15/2022 22:05	WG1926858
Ethylbenzene	U		0.137	1.00	1	09/15/2022 22:05	WG1926858
4-Ethyltoluene	U		0.208	1.00	1	09/15/2022 22:05	WG1926858
Hexachloro-1,3-butadiene	U		0.337	1.00	1	09/15/2022 22:05	WG1926858
n-Hexane	U		0.749	10.0	1	09/15/2022 22:05	WG1926858
Isopropylbenzene	U		0.105	1.00	1	09/15/2022 22:05	WG1926858
p-Isopropyltoluene	U		0.120	1.00	1	09/15/2022 22:05	WG1926858
2-Butanone (MEK)	U		1.19	10.0	1	09/15/2022 22:05	WG1926858
Methyl Cyclohexane	U		0.660	1.00	1	09/15/2022 22:05	WG1926858

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	09/15/2022 22:05	WG1926858
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	09/15/2022 22:05	WG1926858
Methyl tert-butyl ether	U		0.101	1.00	1	09/15/2022 22:05	WG1926858
Naphthalene	U		1.00	5.00	1	09/15/2022 22:05	WG1926858
Propene	U		0.936	2.50	1	09/15/2022 22:05	WG1926858
n-Propylbenzene	U		0.0993	1.00	1	09/15/2022 22:05	WG1926858
Styrene	U		0.118	1.00	1	09/15/2022 22:05	WG1926858
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	09/15/2022 22:05	WG1926858
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	09/15/2022 22:05	WG1926858
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	09/15/2022 22:05	WG1926858
Tetrachloroethene	U		0.300	1.00	1	09/15/2022 22:05	WG1926858
Toluene	U		0.278	1.00	1	09/15/2022 22:05	WG1926858
1,2,3-Trichlorobenzene	U		0.230	1.00	1	09/15/2022 22:05	WG1926858
1,2,4-Trichlorobenzene	U		0.481	1.00	1	09/15/2022 22:05	WG1926858
1,1,1-Trichloroethane	U		0.149	1.00	1	09/15/2022 22:05	WG1926858
1,1,2-Trichloroethane	0.292	J	0.158	1.00	1	09/15/2022 22:05	WG1926858
Trichloroethene	75.1		0.190	1.00	1	09/15/2022 22:05	WG1926858
Trichlorofluoromethane	U		0.160	5.00	1	09/15/2022 22:05	WG1926858
1,2,3-Trichloropropane	U		0.237	2.50	1	09/15/2022 22:05	WG1926858
1,2,4-Trimethylbenzene	U		0.322	1.00	1	09/15/2022 22:05	WG1926858
1,2,3-Trimethylbenzene	U		0.104	1.00	1	09/15/2022 22:05	WG1926858
1,3,5-Trimethylbenzene	U		0.104	1.00	1	09/15/2022 22:05	WG1926858
Vinyl chloride	U		0.234	1.00	1	09/15/2022 22:05	WG1926858
Xylenes, Total	U		0.174	3.00	1	09/15/2022 22:05	WG1926858
(S) Toluene-d8	*114*			*80.0-120*		*09/15/2022 22:05*	WG1926858
(S) 4-Bromofluorobenzene	*106*			*77.0-126*		*09/15/2022 22:05*	WG1926858
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*09/15/2022 22:05*	WG1926858

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	68.2		0.597	3.00	1	09/15/2022 19:31	WG1926871
(S) Toluene-d8	*100*			*77.0-127*		*09/15/2022 19:31*	WG1926871

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

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

Wet Chemistry by Method 314.0 Mod

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Perchlorate	19300		150	2000	500	09/22/2022 02:32	WG1929502

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	09/15/2022 22:24	WG1926858
Acrolein	U		2.54	50.0	1	09/15/2022 22:24	WG1926858
Acrylonitrile	U		0.671	10.0	1	09/15/2022 22:24	WG1926858
Benzene	0.104	J	0.0941	1.00	1	09/15/2022 22:24	WG1926858
Bromobenzene	U		0.118	1.00	1	09/15/2022 22:24	WG1926858
Bromodichloromethane	U		0.136	1.00	1	09/15/2022 22:24	WG1926858
Bromoform	U		0.129	1.00	1	09/15/2022 22:24	WG1926858
Bromomethane	U		0.605	5.00	1	09/15/2022 22:24	WG1926858
1,3-Butadiene	U		0.299	2.00	1	09/15/2022 22:24	WG1926858
n-Butylbenzene	U		0.157	1.00	1	09/15/2022 22:24	WG1926858
sec-Butylbenzene	U		0.125	1.00	1	09/15/2022 22:24	WG1926858
tert-Butylbenzene	U		0.127	1.00	1	09/15/2022 22:24	WG1926858
Carbon tetrachloride	U		0.128	1.00	1	09/15/2022 22:24	WG1926858
Carbon disulfide	U		0.0962	1.00	1	09/15/2022 22:24	WG1926858
Chlorobenzene	U		0.116	1.00	1	09/15/2022 22:24	WG1926858
Chlorodibromomethane	U		0.140	1.00	1	09/15/2022 22:24	WG1926858
Chloroethane	U		0.192	5.00	1	09/15/2022 22:24	WG1926858
Chloroform	0.136	J	0.111	5.00	1	09/15/2022 22:24	WG1926858
Chloromethane	U		0.960	2.50	1	09/15/2022 22:24	WG1926858
Cyclohexane	U		0.188	1.00	1	09/15/2022 22:24	WG1926858
2-Chlorotoluene	U		0.106	1.00	1	09/15/2022 22:24	WG1926858
4-Chlorotoluene	U		0.114	1.00	1	09/15/2022 22:24	WG1926858
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	09/15/2022 22:24	WG1926858
1,2-Dibromoethane	U		0.126	1.00	1	09/15/2022 22:24	WG1926858
Dibromomethane	U		0.122	1.00	1	09/15/2022 22:24	WG1926858
1,2-Dichlorobenzene	U		0.107	1.00	1	09/15/2022 22:24	WG1926858
1,3-Dichlorobenzene	U		0.110	1.00	1	09/15/2022 22:24	WG1926858
1,4-Dichlorobenzene	U		0.120	1.00	1	09/15/2022 22:24	WG1926858
Dichlorodifluoromethane	U		0.374	5.00	1	09/15/2022 22:24	WG1926858
1,1-Dichloroethane	U		0.100	1.00	1	09/15/2022 22:24	WG1926858
1,2-Dichloroethane	U		0.0819	1.00	1	09/15/2022 22:24	WG1926858
1,1-Dichloroethene	12.1		0.188	1.00	1	09/15/2022 22:24	WG1926858
cis-1,2-Dichloroethene	0.152	J	0.126	1.00	1	09/15/2022 22:24	WG1926858
trans-1,2-Dichloroethene	U		0.149	1.00	1	09/15/2022 22:24	WG1926858
1,2-Dichloropropane	U		0.149	1.00	1	09/15/2022 22:24	WG1926858
1,1-Dichloropropene	U		0.142	1.00	1	09/15/2022 22:24	WG1926858
1,3-Dichloropropane	U		0.110	1.00	1	09/15/2022 22:24	WG1926858
cis-1,3-Dichloropropene	U		0.111	1.00	1	09/15/2022 22:24	WG1926858
trans-1,3-Dichloropropene	U		0.118	1.00	1	09/15/2022 22:24	WG1926858
2,2-Dichloropropane	U		0.161	1.00	1	09/15/2022 22:24	WG1926858
Dicyclopentadiene	U		0.253	1.00	1	09/15/2022 22:24	WG1926858
Di-isopropyl ether	U		0.105	1.00	1	09/15/2022 22:24	WG1926858
Ethylbenzene	U		0.137	1.00	1	09/15/2022 22:24	WG1926858
4-Ethyltoluene	U		0.208	1.00	1	09/15/2022 22:24	WG1926858
Hexachloro-1,3-butadiene	U		0.337	1.00	1	09/15/2022 22:24	WG1926858
n-Hexane	U		0.749	10.0	1	09/15/2022 22:24	WG1926858
Isopropylbenzene	U		0.105	1.00	1	09/15/2022 22:24	WG1926858
p-Isopropyltoluene	U		0.120	1.00	1	09/15/2022 22:24	WG1926858
2-Butanone (MEK)	U		1.19	10.0	1	09/15/2022 22:24	WG1926858
Methyl Cyclohexane	U		0.660	1.00	1	09/15/2022 22:24	WG1926858

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	09/15/2022 22:24	WG1926858
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	09/15/2022 22:24	WG1926858
Methyl tert-butyl ether	U		0.101	1.00	1	09/15/2022 22:24	WG1926858
Naphthalene	U		1.00	5.00	1	09/15/2022 22:24	WG1926858
Propene	U		0.936	2.50	1	09/15/2022 22:24	WG1926858
n-Propylbenzene	U		0.0993	1.00	1	09/15/2022 22:24	WG1926858
Styrene	U		0.118	1.00	1	09/15/2022 22:24	WG1926858
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	09/15/2022 22:24	WG1926858
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	09/15/2022 22:24	WG1926858
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	09/15/2022 22:24	WG1926858
Tetrachloroethene	U		0.300	1.00	1	09/15/2022 22:24	WG1926858
Toluene	U		0.278	1.00	1	09/15/2022 22:24	WG1926858
1,2,3-Trichlorobenzene	U		0.230	1.00	1	09/15/2022 22:24	WG1926858
1,2,4-Trichlorobenzene	U		0.481	1.00	1	09/15/2022 22:24	WG1926858
1,1,1-Trichloroethane	U		0.149	1.00	1	09/15/2022 22:24	WG1926858
1,1,2-Trichloroethane	U		0.158	1.00	1	09/15/2022 22:24	WG1926858
Trichloroethene	68.1		0.190	1.00	1	09/15/2022 22:24	WG1926858
Trichlorofluoromethane	U		0.160	5.00	1	09/15/2022 22:24	WG1926858
1,2,3-Trichloropropane	U		0.237	2.50	1	09/15/2022 22:24	WG1926858
1,2,4-Trimethylbenzene	U		0.322	1.00	1	09/15/2022 22:24	WG1926858
1,2,3-Trimethylbenzene	U		0.104	1.00	1	09/15/2022 22:24	WG1926858
1,3,5-Trimethylbenzene	U		0.104	1.00	1	09/15/2022 22:24	WG1926858
Vinyl chloride	U		0.234	1.00	1	09/15/2022 22:24	WG1926858
Xylenes, Total	U		0.174	3.00	1	09/15/2022 22:24	WG1926858
(S) Toluene-d8	*117*			*80.0-120*		*09/15/2022 22:24*	WG1926858
(S) 4-Bromofluorobenzene	*102*			*77.0-126*		*09/15/2022 22:24*	WG1926858
(S) 1,2-Dichloroethane-d4	*106*			*70.0-130*		*09/15/2022 22:24*	WG1926858

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	74.9		0.597	3.00	1	09/15/2022 19:51	WG1926871
(S) Toluene-d8	*101*			*77.0-127*		*09/15/2022 19:51*	WG1926871

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

Wet Chemistry by Method 314.0 Mod

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
Perchlorate	406000		3000	40000	10000	09/22/2022 03:29	WG1929502

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
Acetone	U		1130	5000	100	09/13/2022 21:40	WG1925636
Acrolein	U		254	5000	100	09/13/2022 21:40	WG1925636
Acrylonitrile	U		67.1	1000	100	09/13/2022 21:40	WG1925636
Benzene	13.3	J	9.41	100	100	09/13/2022 21:40	WG1925636
Bromobenzene	U		11.8	100	100	09/13/2022 21:40	WG1925636
Bromodichloromethane	U		13.6	100	100	09/13/2022 21:40	WG1925636
Bromoform	U		12.9	100	100	09/13/2022 21:40	WG1925636
Bromomethane	U		60.5	500	100	09/13/2022 21:40	WG1925636
1,3-Butadiene	U		29.9	200	100	09/13/2022 21:40	WG1925636
n-Butylbenzene	U		15.7	100	100	09/13/2022 21:40	WG1925636
sec-Butylbenzene	U		12.5	100	100	09/13/2022 21:40	WG1925636
tert-Butylbenzene	U	J4	12.7	100	100	09/13/2022 21:40	WG1925636
Carbon tetrachloride	U		12.8	100	100	09/13/2022 21:40	WG1925636
Carbon disulfide	U		9.62	100	100	09/13/2022 21:40	WG1925636
Chlorobenzene	U		11.6	100	100	09/13/2022 21:40	WG1925636
Chlorodibromomethane	U		14.0	100	100	09/13/2022 21:40	WG1925636
Chloroethane	U		19.2	500	100	09/13/2022 21:40	WG1925636
Chloroform	12.5	J	11.1	500	100	09/13/2022 21:40	WG1925636
Chloromethane	U		96.0	250	100	09/13/2022 21:40	WG1925636
Cyclohexane	U		18.8	100	100	09/13/2022 21:40	WG1925636
2-Chlorotoluene	U		10.6	100	100	09/13/2022 21:40	WG1925636
4-Chlorotoluene	U		11.4	100	100	09/13/2022 21:40	WG1925636
1,2-Dibromo-3-Chloropropane	U		27.6	500	100	09/13/2022 21:40	WG1925636
1,2-Dibromoethane	U		12.6	100	100	09/13/2022 21:40	WG1925636
Dibromomethane	U		12.2	100	100	09/13/2022 21:40	WG1925636
1,2-Dichlorobenzene	U		10.7	100	100	09/13/2022 21:40	WG1925636
1,3-Dichlorobenzene	U		11.0	100	100	09/13/2022 21:40	WG1925636
1,4-Dichlorobenzene	U		12.0	100	100	09/13/2022 21:40	WG1925636
Dichlorodifluoromethane	U		37.4	500	100	09/13/2022 21:40	WG1925636
1,1-Dichloroethane	U		10.0	100	100	09/13/2022 21:40	WG1925636
1,2-Dichloroethane	U		8.19	100	100	09/13/2022 21:40	WG1925636
1,1-Dichloroethene	1030		18.8	100	100	09/13/2022 21:40	WG1925636
cis-1,2-Dichloroethene	U		12.6	100	100	09/13/2022 21:40	WG1925636
trans-1,2-Dichloroethene	U		14.9	100	100	09/13/2022 21:40	WG1925636
1,2-Dichloropropane	U		14.9	100	100	09/13/2022 21:40	WG1925636
1,1-Dichloropropene	U		14.2	100	100	09/13/2022 21:40	WG1925636
1,3-Dichloropropane	U		11.0	100	100	09/13/2022 21:40	WG1925636
cis-1,3-Dichloropropene	U		11.1	100	100	09/13/2022 21:40	WG1925636
trans-1,3-Dichloropropene	U		11.8	100	100	09/13/2022 21:40	WG1925636
2,2-Dichloropropane	U		16.1	100	100	09/13/2022 21:40	WG1925636
Dicyclopentadiene	U		25.3	100	100	09/13/2022 21:40	WG1925636
Di-isopropyl ether	U		10.5	100	100	09/13/2022 21:40	WG1925636
Ethylbenzene	U		13.7	100	100	09/13/2022 21:40	WG1925636
4-Ethyltoluene	U		20.8	100	100	09/13/2022 21:40	WG1925636
Hexachloro-1,3-butadiene	U		33.7	100	100	09/13/2022 21:40	WG1925636
n-Hexane	U		74.9	1000	100	09/13/2022 21:40	WG1925636
Isopropylbenzene	U		10.5	100	100	09/13/2022 21:40	WG1925636
p-Isopropyltoluene	U		12.0	100	100	09/13/2022 21:40	WG1925636
2-Butanone (MEK)	U	J3	119	1000	100	09/13/2022 21:40	WG1925636
Methyl Cyclohexane	U		66.0	100	100	09/13/2022 21:40	WG1925636

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	09/13/2022 21:40	WG1925636
4-Methyl-2-pentanone (MIBK)	U		47.8	1000	100	09/13/2022 21:40	WG1925636
Methyl tert-butyl ether	U		10.1	100	100	09/13/2022 21:40	WG1925636
Naphthalene	U		100	500	100	09/13/2022 21:40	WG1925636
Propene	U		93.6	250	100	09/13/2022 21:40	WG1925636
n-Propylbenzene	U		9.93	100	100	09/13/2022 21:40	WG1925636
Styrene	U		11.8	100	100	09/13/2022 21:40	WG1925636
1,1,1,2-Tetrachloroethane	U		14.7	100	100	09/13/2022 21:40	WG1925636
1,1,2,2-Tetrachloroethane	U		13.3	100	100	09/13/2022 21:40	WG1925636
1,1,2-Trichlorotrifluoroethane	U		18.0	100	100	09/13/2022 21:40	WG1925636
Tetrachloroethene	U		30.0	100	100	09/13/2022 21:40	WG1925636
Toluene	U		27.8	100	100	09/13/2022 21:40	WG1925636
1,2,3-Trichlorobenzene	U		23.0	100	100	09/13/2022 21:40	WG1925636
1,2,4-Trichlorobenzene	U		48.1	100	100	09/13/2022 21:40	WG1925636
1,1,1-Trichloroethane	U		14.9	100	100	09/13/2022 21:40	WG1925636
1,1,2-Trichloroethane	U		15.8	100	100	09/13/2022 21:40	WG1925636
Trichloroethene	7220		19.0	100	100	09/13/2022 21:40	WG1925636
Trichlorofluoromethane	U		16.0	500	100	09/13/2022 21:40	WG1925636
1,2,3-Trichloropropane	U		23.7	250	100	09/13/2022 21:40	WG1925636
1,2,4-Trimethylbenzene	U		32.2	100	100	09/13/2022 21:40	WG1925636
1,2,3-Trimethylbenzene	U		10.4	100	100	09/13/2022 21:40	WG1925636
1,3,5-Trimethylbenzene	U		10.4	100	100	09/13/2022 21:40	WG1925636
Vinyl chloride	U		23.4	100	100	09/13/2022 21:40	WG1925636
Xylenes, Total	U		17.4	300	100	09/13/2022 21:40	WG1925636
(S) Toluene-d8	*107*			*80.0-120*		*09/13/2022 21:40*	WG1925636
(S) 4-Bromofluorobenzene	*106*			*77.0-126*		*09/13/2022 21:40*	WG1925636
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*09/13/2022 21:40*	WG1925636

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	741		0.597	3.00	1	09/15/2022 20:11	WG1926871
(S) Toluene-d8	*101*			*77.0-127*		*09/15/2022 20:11*	WG1926871

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

Wet Chemistry by Method 314.0 Mod

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Perchlorate	88200		300	4000	1000	09/23/2022 00:10	WG1929502

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		226	1000	20	09/15/2022 22:43	WG1926858
Acrolein	U		50.8	1000	20	09/15/2022 22:43	WG1926858
Acrylonitrile	U		13.4	200	20	09/15/2022 22:43	WG1926858
Benzene	U		1.88	20.0	20	09/15/2022 22:43	WG1926858
Bromobenzene	U		2.36	20.0	20	09/15/2022 22:43	WG1926858
Bromodichloromethane	U		2.72	20.0	20	09/15/2022 22:43	WG1926858
Bromoform	U		2.58	20.0	20	09/15/2022 22:43	WG1926858
Bromomethane	U		12.1	100	20	09/15/2022 22:43	WG1926858
1,3-Butadiene	U		5.98	40.0	20	09/15/2022 22:43	WG1926858
n-Butylbenzene	U		3.14	20.0	20	09/15/2022 22:43	WG1926858
sec-Butylbenzene	U		2.50	20.0	20	09/15/2022 22:43	WG1926858
tert-Butylbenzene	U		2.54	20.0	20	09/15/2022 22:43	WG1926858
Carbon tetrachloride	U		2.56	20.0	20	09/15/2022 22:43	WG1926858
Carbon disulfide	U		1.92	20.0	20	09/15/2022 22:43	WG1926858
Chlorobenzene	U		2.32	20.0	20	09/15/2022 22:43	WG1926858
Chlorodibromomethane	U		2.80	20.0	20	09/15/2022 22:43	WG1926858
Chloroethane	U		3.84	100	20	09/15/2022 22:43	WG1926858
Chloroform	U		2.22	100	20	09/15/2022 22:43	WG1926858
Chloromethane	U		19.2	50.0	20	09/15/2022 22:43	WG1926858
Cyclohexane	U		3.76	20.0	20	09/15/2022 22:43	WG1926858
2-Chlorotoluene	U		2.12	20.0	20	09/15/2022 22:43	WG1926858
4-Chlorotoluene	U		2.28	20.0	20	09/15/2022 22:43	WG1926858
1,2-Dibromo-3-Chloropropane	U		5.52	100	20	09/15/2022 22:43	WG1926858
1,2-Dibromoethane	U		2.52	20.0	20	09/15/2022 22:43	WG1926858
Dibromomethane	U		2.44	20.0	20	09/15/2022 22:43	WG1926858
1,2-Dichlorobenzene	U		2.14	20.0	20	09/15/2022 22:43	WG1926858
1,3-Dichlorobenzene	U		2.20	20.0	20	09/15/2022 22:43	WG1926858
1,4-Dichlorobenzene	U		2.40	20.0	20	09/15/2022 22:43	WG1926858
Dichlorodifluoromethane	U		7.48	100	20	09/15/2022 22:43	WG1926858
1,1-Dichloroethane	U		2.00	20.0	20	09/15/2022 22:43	WG1926858
1,2-Dichloroethane	U		1.64	20.0	20	09/15/2022 22:43	WG1926858
1,1-Dichloroethene	92.1		3.76	20.0	20	09/15/2022 22:43	WG1926858
cis-1,2-Dichloroethene	2.56	J	2.52	20.0	20	09/15/2022 22:43	WG1926858
trans-1,2-Dichloroethene	U		2.98	20.0	20	09/15/2022 22:43	WG1926858
1,2-Dichloropropane	U		2.98	20.0	20	09/15/2022 22:43	WG1926858
1,1-Dichloropropene	U		2.84	20.0	20	09/15/2022 22:43	WG1926858
1,3-Dichloropropane	U		2.20	20.0	20	09/15/2022 22:43	WG1926858
cis-1,3-Dichloropropene	U		2.22	20.0	20	09/15/2022 22:43	WG1926858
trans-1,3-Dichloropropene	U		2.36	20.0	20	09/15/2022 22:43	WG1926858
2,2-Dichloropropane	U		3.22	20.0	20	09/15/2022 22:43	WG1926858
Dicyclopentadiene	U		5.06	20.0	20	09/15/2022 22:43	WG1926858
Di-isopropyl ether	U		2.10	20.0	20	09/15/2022 22:43	WG1926858
Ethylbenzene	U		2.74	20.0	20	09/15/2022 22:43	WG1926858
4-Ethyltoluene	U		4.16	20.0	20	09/15/2022 22:43	WG1926858
Hexachloro-1,3-butadiene	U		6.74	20.0	20	09/15/2022 22:43	WG1926858
n-Hexane	U		15.0	200	20	09/15/2022 22:43	WG1926858
Isopropylbenzene	U		2.10	20.0	20	09/15/2022 22:43	WG1926858
p-Isopropyltoluene	U		2.40	20.0	20	09/15/2022 22:43	WG1926858
2-Butanone (MEK)	U		23.8	200	20	09/15/2022 22:43	WG1926858
Methyl Cyclohexane	U		13.2	20.0	20	09/15/2022 22:43	WG1926858

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	09/15/2022 22:43	WG1926858
4-Methyl-2-pentanone (MIBK)	U		9.56	200	20	09/15/2022 22:43	WG1926858
Methyl tert-butyl ether	U		2.02	20.0	20	09/15/2022 22:43	WG1926858
Naphthalene	U		20.0	100	20	09/15/2022 22:43	WG1926858
Propene	U		18.7	50.0	20	09/15/2022 22:43	WG1926858
n-Propylbenzene	U		1.99	20.0	20	09/15/2022 22:43	WG1926858
Styrene	U		2.36	20.0	20	09/15/2022 22:43	WG1926858
1,1,1,2-Tetrachloroethane	U		2.94	20.0	20	09/15/2022 22:43	WG1926858
1,1,2,2-Tetrachloroethane	U		2.66	20.0	20	09/15/2022 22:43	WG1926858
1,1,2-Trichlorotrifluoroethane	U		3.60	20.0	20	09/15/2022 22:43	WG1926858
Tetrachloroethene	U		6.00	20.0	20	09/15/2022 22:43	WG1926858
Toluene	U		5.56	20.0	20	09/15/2022 22:43	WG1926858
1,2,3-Trichlorobenzene	U		4.60	20.0	20	09/15/2022 22:43	WG1926858
1,2,4-Trichlorobenzene	U		9.62	20.0	20	09/15/2022 22:43	WG1926858
1,1,1-Trichloroethane	U		2.98	20.0	20	09/15/2022 22:43	WG1926858
1,1,2-Trichloroethane	U		3.16	20.0	20	09/15/2022 22:43	WG1926858
Trichloroethene	698		3.80	20.0	20	09/15/2022 22:43	WG1926858
Trichlorofluoromethane	U		3.20	100	20	09/15/2022 22:43	WG1926858
1,2,3-Trichloropropane	U		4.74	50.0	20	09/15/2022 22:43	WG1926858
1,2,4-Trimethylbenzene	U		6.44	20.0	20	09/15/2022 22:43	WG1926858
1,2,3-Trimethylbenzene	U		2.08	20.0	20	09/15/2022 22:43	WG1926858
1,3,5-Trimethylbenzene	U		2.08	20.0	20	09/15/2022 22:43	WG1926858
Vinyl chloride	U		4.68	20.0	20	09/15/2022 22:43	WG1926858
Xylenes, Total	U		3.48	60.0	20	09/15/2022 22:43	WG1926858
(S) Toluene-d8	*116*			*80.0-120*		*09/15/2022 22:43*	WG1926858
(S) 4-Bromofluorobenzene	*104*			*77.0-126*		*09/15/2022 22:43*	WG1926858
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*		*09/15/2022 22:43*	WG1926858

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	41.4		0.597	3.00	1	09/15/2022 20:31	WG1926871
(S) Toluene-d8	*101*			*77.0-127*		*09/15/2022 20:31*	WG1926871

TTU-EXT-5-80-20220908

Collected date/time: 09/08/22 07:19

SAMPLE RESULTS - 05

L1534502

Wet Chemistry by Method 314.0 Mod

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Perchlorate	U		0.300	4.00	1	09/22/2022 05:23	WG1929502

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	09/13/2022 17:50	WG1925636
Acrolein	U		2.54	50.0	1	09/13/2022 17:50	WG1925636
Acrylonitrile	U		0.671	10.0	1	09/13/2022 17:50	WG1925636
Benzene	U		0.0941	1.00	1	09/13/2022 17:50	WG1925636
Bromobenzene	U		0.118	1.00	1	09/13/2022 17:50	WG1925636
Bromodichloromethane	U		0.136	1.00	1	09/13/2022 17:50	WG1925636
Bromoform	U		0.129	1.00	1	09/13/2022 17:50	WG1925636
Bromomethane	U		0.605	5.00	1	09/13/2022 17:50	WG1925636
1,3-Butadiene	U		0.299	2.00	1	09/13/2022 17:50	WG1925636
n-Butylbenzene	U		0.157	1.00	1	09/13/2022 17:50	WG1925636
sec-Butylbenzene	U		0.125	1.00	1	09/13/2022 17:50	WG1925636
tert-Butylbenzene	U	J4	0.127	1.00	1	09/13/2022 17:50	WG1925636
Carbon tetrachloride	U		0.128	1.00	1	09/13/2022 17:50	WG1925636
Carbon disulfide	U		0.0962	1.00	1	09/13/2022 17:50	WG1925636
Chlorobenzene	U		0.116	1.00	1	09/13/2022 17:50	WG1925636
Chlorodibromomethane	U		0.140	1.00	1	09/13/2022 17:50	WG1925636
Chloroethane	U		0.192	5.00	1	09/13/2022 17:50	WG1925636
Chloroform	U		0.111	5.00	1	09/13/2022 17:50	WG1925636
Chloromethane	U		0.960	2.50	1	09/13/2022 17:50	WG1925636
Cyclohexane	U		0.188	1.00	1	09/13/2022 17:50	WG1925636
2-Chlorotoluene	U		0.106	1.00	1	09/13/2022 17:50	WG1925636
4-Chlorotoluene	U		0.114	1.00	1	09/13/2022 17:50	WG1925636
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	09/13/2022 17:50	WG1925636
1,2-Dibromoethane	U		0.126	1.00	1	09/13/2022 17:50	WG1925636
Dibromomethane	U		0.122	1.00	1	09/13/2022 17:50	WG1925636
1,2-Dichlorobenzene	U		0.107	1.00	1	09/13/2022 17:50	WG1925636
1,3-Dichlorobenzene	U		0.110	1.00	1	09/13/2022 17:50	WG1925636
1,4-Dichlorobenzene	U		0.120	1.00	1	09/13/2022 17:50	WG1925636
Dichlorodifluoromethane	U		0.374	5.00	1	09/13/2022 17:50	WG1925636
1,1-Dichloroethane	U		0.100	1.00	1	09/13/2022 17:50	WG1925636
1,2-Dichloroethane	U		0.0819	1.00	1	09/13/2022 17:50	WG1925636
1,1-Dichloroethene	U		0.188	1.00	1	09/13/2022 17:50	WG1925636
cis-1,2-Dichloroethene	0.160	J	0.126	1.00	1	09/13/2022 17:50	WG1925636
trans-1,2-Dichloroethene	U		0.149	1.00	1	09/13/2022 17:50	WG1925636
1,2-Dichloropropane	U		0.149	1.00	1	09/13/2022 17:50	WG1925636
1,1-Dichloropropene	U		0.142	1.00	1	09/13/2022 17:50	WG1925636
1,3-Dichloropropane	U		0.110	1.00	1	09/13/2022 17:50	WG1925636
cis-1,3-Dichloropropene	U		0.111	1.00	1	09/13/2022 17:50	WG1925636
trans-1,3-Dichloropropene	U		0.118	1.00	1	09/13/2022 17:50	WG1925636
2,2-Dichloropropane	U		0.161	1.00	1	09/13/2022 17:50	WG1925636
Dicyclopentadiene	U		0.253	1.00	1	09/13/2022 17:50	WG1925636
Di-isopropyl ether	U		0.105	1.00	1	09/13/2022 17:50	WG1925636
Ethylbenzene	U		0.137	1.00	1	09/13/2022 17:50	WG1925636
4-Ethyltoluene	U		0.208	1.00	1	09/13/2022 17:50	WG1925636
Hexachloro-1,3-butadiene	U		0.337	1.00	1	09/13/2022 17:50	WG1925636
n-Hexane	U		0.749	10.0	1	09/13/2022 17:50	WG1925636
Isopropylbenzene	U		0.105	1.00	1	09/13/2022 17:50	WG1925636
p-Isopropyltoluene	U		0.120	1.00	1	09/13/2022 17:50	WG1925636
2-Butanone (MEK)	U	J3	1.19	10.0	1	09/13/2022 17:50	WG1925636
Methyl Cyclohexane	U		0.660	1.00	1	09/13/2022 17:50	WG1925636

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
Methylene Chloride	U		0.430	5.00	1	09/13/2022 17:50	WG1925636
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	09/13/2022 17:50	WG1925636
Methyl tert-butyl ether	U		0.101	1.00	1	09/13/2022 17:50	WG1925636
Naphthalene	U		1.00	5.00	1	09/13/2022 17:50	WG1925636
Propene	U		0.936	2.50	1	09/13/2022 17:50	WG1925636
n-Propylbenzene	U		0.0993	1.00	1	09/13/2022 17:50	WG1925636
Styrene	U		0.118	1.00	1	09/13/2022 17:50	WG1925636
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	09/13/2022 17:50	WG1925636
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	09/13/2022 17:50	WG1925636
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	09/13/2022 17:50	WG1925636
Tetrachloroethene	U		0.300	1.00	1	09/13/2022 17:50	WG1925636
Toluene	U		0.278	1.00	1	09/13/2022 17:50	WG1925636
1,2,3-Trichlorobenzene	U		0.230	1.00	1	09/13/2022 17:50	WG1925636
1,2,4-Trichlorobenzene	U		0.481	1.00	1	09/13/2022 17:50	WG1925636
1,1,1-Trichloroethane	U		0.149	1.00	1	09/13/2022 17:50	WG1925636
1,1,2-Trichloroethane	U		0.158	1.00	1	09/13/2022 17:50	WG1925636
Trichloroethene	4.96		0.190	1.00	1	09/13/2022 17:50	WG1925636
Trichlorofluoromethane	U		0.160	5.00	1	09/13/2022 17:50	WG1925636
1,2,3-Trichloropropane	U		0.237	2.50	1	09/13/2022 17:50	WG1925636
1,2,4-Trimethylbenzene	U		0.322	1.00	1	09/13/2022 17:50	WG1925636
1,2,3-Trimethylbenzene	U		0.104	1.00	1	09/13/2022 17:50	WG1925636
1,3,5-Trimethylbenzene	U		0.104	1.00	1	09/13/2022 17:50	WG1925636
Vinyl chloride	U		0.234	1.00	1	09/13/2022 17:50	WG1925636
Xylenes, Total	U		0.174	3.00	1	09/13/2022 17:50	WG1925636
(S) Toluene-d8	*98.8*			*80.0-120*		*09/13/2022 17:50*	WG1925636
(S) 4-Bromofluorobenzene	*104*			*77.0-126*		*09/13/2022 17:50*	WG1925636
(S) 1,2-Dichloroethane-d4	*102*			*70.0-130*		*09/13/2022 17:50*	WG1925636

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
1,4-Dioxane	2.16	J	0.597	3.00	1	09/15/2022 20:51	WG1926871
(S) Toluene-d8	*99.0*			*77.0-127*		*09/15/2022 20:51*	WG1926871

Wet Chemistry by Method 314.0 Mod

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
Perchlorate	U		0.300	4.00	1	09/22/2022 05:51	WG1929502

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	09/13/2022 18:11	WG1925636
Acrolein	U		2.54	50.0	1	09/13/2022 18:11	WG1925636
Acrylonitrile	U		0.671	10.0	1	09/13/2022 18:11	WG1925636
Benzene	U		0.0941	1.00	1	09/13/2022 18:11	WG1925636
Bromobenzene	U		0.118	1.00	1	09/13/2022 18:11	WG1925636
Bromodichloromethane	U		0.136	1.00	1	09/13/2022 18:11	WG1925636
Bromoform	U		0.129	1.00	1	09/13/2022 18:11	WG1925636
Bromomethane	U		0.605	5.00	1	09/13/2022 18:11	WG1925636
1,3-Butadiene	U		0.299	2.00	1	09/13/2022 18:11	WG1925636
n-Butylbenzene	U		0.157	1.00	1	09/13/2022 18:11	WG1925636
sec-Butylbenzene	U		0.125	1.00	1	09/13/2022 18:11	WG1925636
tert-Butylbenzene	U	J4	0.127	1.00	1	09/13/2022 18:11	WG1925636
Carbon tetrachloride	U		0.128	1.00	1	09/13/2022 18:11	WG1925636
Carbon disulfide	U		0.0962	1.00	1	09/13/2022 18:11	WG1925636
Chlorobenzene	U		0.116	1.00	1	09/13/2022 18:11	WG1925636
Chlorodibromomethane	U		0.140	1.00	1	09/13/2022 18:11	WG1925636
Chloroethane	U		0.192	5.00	1	09/13/2022 18:11	WG1925636
Chloroform	U		0.111	5.00	1	09/13/2022 18:11	WG1925636
Chloromethane	U		0.960	2.50	1	09/13/2022 18:11	WG1925636
Cyclohexane	U		0.188	1.00	1	09/13/2022 18:11	WG1925636
2-Chlorotoluene	U		0.106	1.00	1	09/13/2022 18:11	WG1925636
4-Chlorotoluene	U		0.114	1.00	1	09/13/2022 18:11	WG1925636
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	09/13/2022 18:11	WG1925636
1,2-Dibromoethane	U		0.126	1.00	1	09/13/2022 18:11	WG1925636
Dibromomethane	U		0.122	1.00	1	09/13/2022 18:11	WG1925636
1,2-Dichlorobenzene	U		0.107	1.00	1	09/13/2022 18:11	WG1925636
1,3-Dichlorobenzene	U		0.110	1.00	1	09/13/2022 18:11	WG1925636
1,4-Dichlorobenzene	U		0.120	1.00	1	09/13/2022 18:11	WG1925636
Dichlorodifluoromethane	U		0.374	5.00	1	09/13/2022 18:11	WG1925636
1,1-Dichloroethane	U		0.100	1.00	1	09/13/2022 18:11	WG1925636
1,2-Dichloroethane	U		0.0819	1.00	1	09/13/2022 18:11	WG1925636
1,1-Dichloroethene	U		0.188	1.00	1	09/13/2022 18:11	WG1925636
cis-1,2-Dichloroethene	0.209	J	0.126	1.00	1	09/13/2022 18:11	WG1925636
trans-1,2-Dichloroethene	U		0.149	1.00	1	09/13/2022 18:11	WG1925636
1,2-Dichloropropane	U		0.149	1.00	1	09/13/2022 18:11	WG1925636
1,1-Dichloropropene	U		0.142	1.00	1	09/13/2022 18:11	WG1925636
1,3-Dichloropropane	U		0.110	1.00	1	09/13/2022 18:11	WG1925636
cis-1,3-Dichloropropene	U		0.111	1.00	1	09/13/2022 18:11	WG1925636
trans-1,3-Dichloropropene	U		0.118	1.00	1	09/13/2022 18:11	WG1925636
2,2-Dichloropropane	U		0.161	1.00	1	09/13/2022 18:11	WG1925636
Dicyclopentadiene	U		0.253	1.00	1	09/13/2022 18:11	WG1925636
Di-isopropyl ether	U		0.105	1.00	1	09/13/2022 18:11	WG1925636
Ethylbenzene	U		0.137	1.00	1	09/13/2022 18:11	WG1925636
4-Ethyltoluene	U		0.208	1.00	1	09/13/2022 18:11	WG1925636
Hexachloro-1,3-butadiene	U		0.337	1.00	1	09/13/2022 18:11	WG1925636
n-Hexane	U		0.749	10.0	1	09/13/2022 18:11	WG1925636
Isopropylbenzene	U		0.105	1.00	1	09/13/2022 18:11	WG1925636
p-Isopropyltoluene	U		0.120	1.00	1	09/13/2022 18:11	WG1925636
2-Butanone (MEK)	U	J3	1.19	10.0	1	09/13/2022 18:11	WG1925636
Methyl Cyclohexane	U		0.660	1.00	1	09/13/2022 18:11	WG1925636

DUP-02

SAMPLE RESULTS - 06

Collected date/time: 09/08/22 07:19

L1534502

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	09/13/2022 18:11	WG1925636
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	09/13/2022 18:11	WG1925636
Methyl tert-butyl ether	U		0.101	1.00	1	09/13/2022 18:11	WG1925636
Naphthalene	U		1.00	5.00	1	09/13/2022 18:11	WG1925636
Propene	U		0.936	2.50	1	09/13/2022 18:11	WG1925636
n-Propylbenzene	U		0.0993	1.00	1	09/13/2022 18:11	WG1925636
Styrene	U		0.118	1.00	1	09/13/2022 18:11	WG1925636
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	09/13/2022 18:11	WG1925636
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	09/13/2022 18:11	WG1925636
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	09/13/2022 18:11	WG1925636
Tetrachloroethene	U		0.300	1.00	1	09/13/2022 18:11	WG1925636
Toluene	U		0.278	1.00	1	09/13/2022 18:11	WG1925636
1,2,3-Trichlorobenzene	U		0.230	1.00	1	09/13/2022 18:11	WG1925636
1,2,4-Trichlorobenzene	U		0.481	1.00	1	09/13/2022 18:11	WG1925636
1,1,1-Trichloroethane	U		0.149	1.00	1	09/13/2022 18:11	WG1925636
1,1,2-Trichloroethane	U		0.158	1.00	1	09/13/2022 18:11	WG1925636
Trichloroethene	5.06		0.190	1.00	1	09/13/2022 18:11	WG1925636
Trichlorofluoromethane	U		0.160	5.00	1	09/13/2022 18:11	WG1925636
1,2,3-Trichloropropane	U		0.237	2.50	1	09/13/2022 18:11	WG1925636
1,2,4-Trimethylbenzene	U		0.322	1.00	1	09/13/2022 18:11	WG1925636
1,2,3-Trimethylbenzene	U		0.104	1.00	1	09/13/2022 18:11	WG1925636
1,3,5-Trimethylbenzene	U		0.104	1.00	1	09/13/2022 18:11	WG1925636
Vinyl chloride	U		0.234	1.00	1	09/13/2022 18:11	WG1925636
Xylenes, Total	U		0.174	3.00	1	09/13/2022 18:11	WG1925636
(S) Toluene-d8	*100*			*80.0-120*		*09/13/2022 18:11*	WG1925636
(S) 4-Bromofluorobenzene	*106*			*77.0-126*		*09/13/2022 18:11*	WG1925636
(S) 1,2-Dichloroethane-d4	*97.6*			*70.0-130*		*09/13/2022 18:11*	WG1925636

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	09/15/2022 21:11	WG1926871
(S) Toluene-d8	*99.8*			*77.0-127*		*09/15/2022 21:11*	WG1926871

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

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

Wet Chemistry by Method 314.0 Mod

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
Perchlorate	54.8		0.300	4.00	1	09/22/2022 06:20	WG1931315

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	09/13/2022 18:32	WG1925636
Acrolein	U		2.54	50.0	1	09/13/2022 18:32	WG1925636
Acrylonitrile	U		0.671	10.0	1	09/13/2022 18:32	WG1925636
Benzene	U		0.0941	1.00	1	09/13/2022 18:32	WG1925636
Bromobenzene	U		0.118	1.00	1	09/13/2022 18:32	WG1925636
Bromodichloromethane	U		0.136	1.00	1	09/13/2022 18:32	WG1925636
Bromoform	U		0.129	1.00	1	09/13/2022 18:32	WG1925636
Bromomethane	U		0.605	5.00	1	09/13/2022 18:32	WG1925636
1,3-Butadiene	U		0.299	2.00	1	09/13/2022 18:32	WG1925636
n-Butylbenzene	U		0.157	1.00	1	09/13/2022 18:32	WG1925636
sec-Butylbenzene	U		0.125	1.00	1	09/13/2022 18:32	WG1925636
tert-Butylbenzene	U	J4	0.127	1.00	1	09/13/2022 18:32	WG1925636
Carbon tetrachloride	U		0.128	1.00	1	09/13/2022 18:32	WG1925636
Carbon disulfide	U		0.0962	1.00	1	09/13/2022 18:32	WG1925636
Chlorobenzene	U		0.116	1.00	1	09/13/2022 18:32	WG1925636
Chlorodibromomethane	U		0.140	1.00	1	09/13/2022 18:32	WG1925636
Chloroethane	U		0.192	5.00	1	09/13/2022 18:32	WG1925636
Chloroform	U		0.111	5.00	1	09/13/2022 18:32	WG1925636
Chloromethane	U		0.960	2.50	1	09/13/2022 18:32	WG1925636
Cyclohexane	U		0.188	1.00	1	09/13/2022 18:32	WG1925636
2-Chlorotoluene	U		0.106	1.00	1	09/13/2022 18:32	WG1925636
4-Chlorotoluene	U		0.114	1.00	1	09/13/2022 18:32	WG1925636
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	09/13/2022 18:32	WG1925636
1,2-Dibromoethane	U		0.126	1.00	1	09/13/2022 18:32	WG1925636
Dibromomethane	U		0.122	1.00	1	09/13/2022 18:32	WG1925636
1,2-Dichlorobenzene	U		0.107	1.00	1	09/13/2022 18:32	WG1925636
1,3-Dichlorobenzene	U		0.110	1.00	1	09/13/2022 18:32	WG1925636
1,4-Dichlorobenzene	U		0.120	1.00	1	09/13/2022 18:32	WG1925636
Dichlorodifluoromethane	U		0.374	5.00	1	09/13/2022 18:32	WG1925636
1,1-Dichloroethane	U		0.100	1.00	1	09/13/2022 18:32	WG1925636
1,2-Dichloroethane	U		0.0819	1.00	1	09/13/2022 18:32	WG1925636
1,1-Dichloroethene	U		0.188	1.00	1	09/13/2022 18:32	WG1925636
cis-1,2-Dichloroethene	U		0.126	1.00	1	09/13/2022 18:32	WG1925636
trans-1,2-Dichloroethene	U		0.149	1.00	1	09/13/2022 18:32	WG1925636
1,2-Dichloropropane	U		0.149	1.00	1	09/13/2022 18:32	WG1925636
1,1-Dichloropropene	U		0.142	1.00	1	09/13/2022 18:32	WG1925636
1,3-Dichloropropane	U		0.110	1.00	1	09/13/2022 18:32	WG1925636
cis-1,3-Dichloropropene	U		0.111	1.00	1	09/13/2022 18:32	WG1925636
trans-1,3-Dichloropropene	U		0.118	1.00	1	09/13/2022 18:32	WG1925636
2,2-Dichloropropane	U		0.161	1.00	1	09/13/2022 18:32	WG1925636
Dicyclopentadiene	U		0.253	1.00	1	09/13/2022 18:32	WG1925636
Di-isopropyl ether	U		0.105	1.00	1	09/13/2022 18:32	WG1925636
Ethylbenzene	U		0.137	1.00	1	09/13/2022 18:32	WG1925636
4-Ethyltoluene	U		0.208	1.00	1	09/13/2022 18:32	WG1925636
Hexachloro-1,3-butadiene	U		0.337	1.00	1	09/13/2022 18:32	WG1925636
n-Hexane	U		0.749	10.0	1	09/13/2022 18:32	WG1925636
Isopropylbenzene	U		0.105	1.00	1	09/13/2022 18:32	WG1925636
p-Isopropyltoluene	U		0.120	1.00	1	09/13/2022 18:32	WG1925636
2-Butanone (MEK)	U	J3	1.19	10.0	1	09/13/2022 18:32	WG1925636
Methyl Cyclohexane	U		0.660	1.00	1	09/13/2022 18:32	WG1925636

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
Methylene Chloride	U		0.430	5.00	1	09/13/2022 18:32	WG1925636
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	09/13/2022 18:32	WG1925636
Methyl tert-butyl ether	U		0.101	1.00	1	09/13/2022 18:32	WG1925636
Naphthalene	U		1.00	5.00	1	09/13/2022 18:32	WG1925636
Propene	U		0.936	2.50	1	09/13/2022 18:32	WG1925636
n-Propylbenzene	U		0.0993	1.00	1	09/13/2022 18:32	WG1925636
Styrene	U		0.118	1.00	1	09/13/2022 18:32	WG1925636
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	09/13/2022 18:32	WG1925636
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	09/13/2022 18:32	WG1925636
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	09/13/2022 18:32	WG1925636
Tetrachloroethene	U		0.300	1.00	1	09/13/2022 18:32	WG1925636
Toluene	U		0.278	1.00	1	09/13/2022 18:32	WG1925636
1,2,3-Trichlorobenzene	U		0.230	1.00	1	09/13/2022 18:32	WG1925636
1,2,4-Trichlorobenzene	U		0.481	1.00	1	09/13/2022 18:32	WG1925636
1,1,1-Trichloroethane	U		0.149	1.00	1	09/13/2022 18:32	WG1925636
1,1,2-Trichloroethane	U		0.158	1.00	1	09/13/2022 18:32	WG1925636
Trichloroethene	U		0.190	1.00	1	09/13/2022 18:32	WG1925636
Trichlorofluoromethane	U		0.160	5.00	1	09/13/2022 18:32	WG1925636
1,2,3-Trichloropropane	U		0.237	2.50	1	09/13/2022 18:32	WG1925636
1,2,4-Trimethylbenzene	U		0.322	1.00	1	09/13/2022 18:32	WG1925636
1,2,3-Trimethylbenzene	U		0.104	1.00	1	09/13/2022 18:32	WG1925636
1,3,5-Trimethylbenzene	U		0.104	1.00	1	09/13/2022 18:32	WG1925636
Vinyl chloride	U		0.234	1.00	1	09/13/2022 18:32	WG1925636
Xylenes, Total	U		0.174	3.00	1	09/13/2022 18:32	WG1925636
(S) Toluene-d8	*104*			*80.0-120*		*09/13/2022 18:32*	WG1925636
(S) 4-Bromofluorobenzene	*104*			*77.0-126*		*09/13/2022 18:32*	WG1925636
(S) 1,2-Dichloroethane-d4	*100*			*70.0-130*		*09/13/2022 18:32*	WG1925636

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
1,4-Dioxane	U		0.597	3.00	1	09/15/2022 21:31	WG1926871
(S) Toluene-d8	*100*			*77.0-127*		*09/15/2022 21:31*	WG1926871

SAMPLE RESULTS - 08

L1534502

Wet Chemistry by Method 314.0 Mod

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Perchlorate	2.57	J	0.300	4.00	1	09/22/2022 06:48	WG1931315

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	09/13/2022 18:53	WG1925636
Acrolein	U		2.54	50.0	1	09/13/2022 18:53	WG1925636
Acrylonitrile	U		0.671	10.0	1	09/13/2022 18:53	WG1925636
Benzene	U		0.0941	1.00	1	09/13/2022 18:53	WG1925636
Bromobenzene	U		0.118	1.00	1	09/13/2022 18:53	WG1925636
Bromodichloromethane	U		0.136	1.00	1	09/13/2022 18:53	WG1925636
Bromoform	U		0.129	1.00	1	09/13/2022 18:53	WG1925636
Bromomethane	U		0.605	5.00	1	09/13/2022 18:53	WG1925636
1,3-Butadiene	U		0.299	2.00	1	09/13/2022 18:53	WG1925636
n-Butylbenzene	U		0.157	1.00	1	09/13/2022 18:53	WG1925636
sec-Butylbenzene	U		0.125	1.00	1	09/13/2022 18:53	WG1925636
tert-Butylbenzene	U	J4	0.127	1.00	1	09/13/2022 18:53	WG1925636
Carbon tetrachloride	U		0.128	1.00	1	09/13/2022 18:53	WG1925636
Carbon disulfide	U		0.0962	1.00	1	09/13/2022 18:53	WG1925636
Chlorobenzene	U		0.116	1.00	1	09/13/2022 18:53	WG1925636
Chlorodibromomethane	U		0.140	1.00	1	09/13/2022 18:53	WG1925636
Chloroethane	U		0.192	5.00	1	09/13/2022 18:53	WG1925636
Chloroform	U		0.111	5.00	1	09/13/2022 18:53	WG1925636
Chloromethane	U		0.960	2.50	1	09/13/2022 18:53	WG1925636
Cyclohexane	U		0.188	1.00	1	09/13/2022 18:53	WG1925636
2-Chlorotoluene	U		0.106	1.00	1	09/13/2022 18:53	WG1925636
4-Chlorotoluene	U		0.114	1.00	1	09/13/2022 18:53	WG1925636
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	09/13/2022 18:53	WG1925636
1,2-Dibromoethane	U		0.126	1.00	1	09/13/2022 18:53	WG1925636
Dibromomethane	U		0.122	1.00	1	09/13/2022 18:53	WG1925636
1,2-Dichlorobenzene	U		0.107	1.00	1	09/13/2022 18:53	WG1925636
1,3-Dichlorobenzene	U		0.110	1.00	1	09/13/2022 18:53	WG1925636
1,4-Dichlorobenzene	U		0.120	1.00	1	09/13/2022 18:53	WG1925636
Dichlorodifluoromethane	U		0.374	5.00	1	09/13/2022 18:53	WG1925636
1,1-Dichloroethane	U		0.100	1.00	1	09/13/2022 18:53	WG1925636
1,2-Dichloroethane	U		0.0819	1.00	1	09/13/2022 18:53	WG1925636
1,1-Dichloroethene	U		0.188	1.00	1	09/13/2022 18:53	WG1925636
cis-1,2-Dichloroethene	U		0.126	1.00	1	09/13/2022 18:53	WG1925636
trans-1,2-Dichloroethene	U		0.149	1.00	1	09/13/2022 18:53	WG1925636
1,2-Dichloropropane	U		0.149	1.00	1	09/13/2022 18:53	WG1925636
1,1-Dichloropropene	U		0.142	1.00	1	09/13/2022 18:53	WG1925636
1,3-Dichloropropane	U		0.110	1.00	1	09/13/2022 18:53	WG1925636
cis-1,3-Dichloropropene	U		0.111	1.00	1	09/13/2022 18:53	WG1925636
trans-1,3-Dichloropropene	U		0.118	1.00	1	09/13/2022 18:53	WG1925636
2,2-Dichloropropane	U		0.161	1.00	1	09/13/2022 18:53	WG1925636
Dicyclopentadiene	U		0.253	1.00	1	09/13/2022 18:53	WG1925636
Di-isopropyl ether	U		0.105	1.00	1	09/13/2022 18:53	WG1925636
Ethylbenzene	U		0.137	1.00	1	09/13/2022 18:53	WG1925636
4-Ethyltoluene	U		0.208	1.00	1	09/13/2022 18:53	WG1925636
Hexachloro-1,3-butadiene	U		0.337	1.00	1	09/13/2022 18:53	WG1925636
n-Hexane	U		0.749	10.0	1	09/13/2022 18:53	WG1925636
Isopropylbenzene	U		0.105	1.00	1	09/13/2022 18:53	WG1925636
p-Isopropyltoluene	U		0.120	1.00	1	09/13/2022 18:53	WG1925636
2-Butanone (MEK)	U	J3	1.19	10.0	1	09/13/2022 18:53	WG1925636
Methyl Cyclohexane	U		0.660	1.00	1	09/13/2022 18:53	WG1925636

TTU-4-57-20220909 SAMPLE RESULTS - 08

Collected date/time: 09/09/22 10:32

L1534502

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	09/13/2022 18:53	WG1925636
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	09/13/2022 18:53	WG1925636
Methyl tert-butyl ether	U		0.101	1.00	1	09/13/2022 18:53	WG1925636
Naphthalene	U		1.00	5.00	1	09/13/2022 18:53	WG1925636
Propene	U		0.936	2.50	1	09/13/2022 18:53	WG1925636
n-Propylbenzene	U		0.0993	1.00	1	09/13/2022 18:53	WG1925636
Styrene	U		0.118	1.00	1	09/13/2022 18:53	WG1925636
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	09/13/2022 18:53	WG1925636
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	09/13/2022 18:53	WG1925636
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	09/13/2022 18:53	WG1925636
Tetrachloroethene	U		0.300	1.00	1	09/13/2022 18:53	WG1925636
Toluene	U		0.278	1.00	1	09/13/2022 18:53	WG1925636
1,2,3-Trichlorobenzene	U		0.230	1.00	1	09/13/2022 18:53	WG1925636
1,2,4-Trichlorobenzene	U		0.481	1.00	1	09/13/2022 18:53	WG1925636
1,1,1-Trichloroethane	U		0.149	1.00	1	09/13/2022 18:53	WG1925636
1,1,2-Trichloroethane	U		0.158	1.00	1	09/13/2022 18:53	WG1925636
Trichloroethene	U		0.190	1.00	1	09/13/2022 18:53	WG1925636
Trichlorofluoromethane	U		0.160	5.00	1	09/13/2022 18:53	WG1925636
1,2,3-Trichloropropane	U		0.237	2.50	1	09/13/2022 18:53	WG1925636
1,2,4-Trimethylbenzene	U		0.322	1.00	1	09/13/2022 18:53	WG1925636
1,2,3-Trimethylbenzene	U		0.104	1.00	1	09/13/2022 18:53	WG1925636
1,3,5-Trimethylbenzene	U		0.104	1.00	1	09/13/2022 18:53	WG1925636
Vinyl chloride	U		0.234	1.00	1	09/13/2022 18:53	WG1925636
Xylenes, Total	U		0.174	3.00	1	09/13/2022 18:53	WG1925636
(S) Toluene-d8	*104*			*80.0-120*		*09/13/2022 18:53*	WG1925636
(S) 4-Bromofluorobenzene	*112*			*77.0-126*		*09/13/2022 18:53*	WG1925636
(S) 1,2-Dichloroethane-d4	*102*			*70.0-130*		*09/13/2022 18:53*	WG1925636

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	09/15/2022 21:51	WG1926871
(S) Toluene-d8	*98.7*			*77.0-127*		*09/15/2022 21:51*	WG1926871

Wet Chemistry by Method 314.0 Mod

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
Perchlorate	1.25	J	0.300	4.00	1	09/22/2022 07:17	WG1931315

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	09/13/2022 19:13	WG1925636
Acrolein	U		2.54	50.0	1	09/13/2022 19:13	WG1925636
Acrylonitrile	U		0.671	10.0	1	09/13/2022 19:13	WG1925636
Benzene	U		0.0941	1.00	1	09/13/2022 19:13	WG1925636
Bromobenzene	U		0.118	1.00	1	09/13/2022 19:13	WG1925636
Bromodichloromethane	U		0.136	1.00	1	09/13/2022 19:13	WG1925636
Bromoform	U		0.129	1.00	1	09/13/2022 19:13	WG1925636
Bromomethane	U		0.605	5.00	1	09/13/2022 19:13	WG1925636
1,3-Butadiene	U		0.299	2.00	1	09/13/2022 19:13	WG1925636
n-Butylbenzene	U		0.157	1.00	1	09/13/2022 19:13	WG1925636
sec-Butylbenzene	U		0.125	1.00	1	09/13/2022 19:13	WG1925636
tert-Butylbenzene	U	J4	0.127	1.00	1	09/13/2022 19:13	WG1925636
Carbon tetrachloride	U		0.128	1.00	1	09/13/2022 19:13	WG1925636
Carbon disulfide	U		0.0962	1.00	1	09/13/2022 19:13	WG1925636
Chlorobenzene	U		0.116	1.00	1	09/13/2022 19:13	WG1925636
Chlorodibromomethane	U		0.140	1.00	1	09/13/2022 19:13	WG1925636
Chloroethane	U		0.192	5.00	1	09/13/2022 19:13	WG1925636
Chloroform	U		0.111	5.00	1	09/13/2022 19:13	WG1925636
Chloromethane	U		0.960	2.50	1	09/13/2022 19:13	WG1925636
Cyclohexane	U		0.188	1.00	1	09/13/2022 19:13	WG1925636
2-Chlorotoluene	U		0.106	1.00	1	09/13/2022 19:13	WG1925636
4-Chlorotoluene	U		0.114	1.00	1	09/13/2022 19:13	WG1925636
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	09/13/2022 19:13	WG1925636
1,2-Dibromoethane	U		0.126	1.00	1	09/13/2022 19:13	WG1925636
Dibromomethane	U		0.122	1.00	1	09/13/2022 19:13	WG1925636
1,2-Dichlorobenzene	U		0.107	1.00	1	09/13/2022 19:13	WG1925636
1,3-Dichlorobenzene	U		0.110	1.00	1	09/13/2022 19:13	WG1925636
1,4-Dichlorobenzene	U		0.120	1.00	1	09/13/2022 19:13	WG1925636
Dichlorodifluoromethane	U		0.374	5.00	1	09/13/2022 19:13	WG1925636
1,1-Dichloroethane	U		0.100	1.00	1	09/13/2022 19:13	WG1925636
1,2-Dichloroethane	U		0.0819	1.00	1	09/13/2022 19:13	WG1925636
1,1-Dichloroethene	U		0.188	1.00	1	09/13/2022 19:13	WG1925636
cis-1,2-Dichloroethene	U		0.126	1.00	1	09/13/2022 19:13	WG1925636
trans-1,2-Dichloroethene	U		0.149	1.00	1	09/13/2022 19:13	WG1925636
1,2-Dichloropropane	U		0.149	1.00	1	09/13/2022 19:13	WG1925636
1,1-Dichloropropene	U		0.142	1.00	1	09/13/2022 19:13	WG1925636
1,3-Dichloropropane	U		0.110	1.00	1	09/13/2022 19:13	WG1925636
cis-1,3-Dichloropropene	U		0.111	1.00	1	09/13/2022 19:13	WG1925636
trans-1,3-Dichloropropene	U		0.118	1.00	1	09/13/2022 19:13	WG1925636
2,2-Dichloropropane	U		0.161	1.00	1	09/13/2022 19:13	WG1925636
Dicyclopentadiene	U		0.253	1.00	1	09/13/2022 19:13	WG1925636
Di-isopropyl ether	U		0.105	1.00	1	09/13/2022 19:13	WG1925636
Ethylbenzene	U		0.137	1.00	1	09/13/2022 19:13	WG1925636
4-Ethyltoluene	U		0.208	1.00	1	09/13/2022 19:13	WG1925636
Hexachloro-1,3-butadiene	U		0.337	1.00	1	09/13/2022 19:13	WG1925636
n-Hexane	U		0.749	10.0	1	09/13/2022 19:13	WG1925636
Isopropylbenzene	U		0.105	1.00	1	09/13/2022 19:13	WG1925636
p-Isopropyltoluene	U		0.120	1.00	1	09/13/2022 19:13	WG1925636
2-Butanone (MEK)	U	J3	1.19	10.0	1	09/13/2022 19:13	WG1925636
Methyl Cyclohexane	U		0.660	1.00	1	09/13/2022 19:13	WG1925636

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
Methylene Chloride	U		0.430	5.00	1	09/13/2022 19:13	WG1925636
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	09/13/2022 19:13	WG1925636
Methyl tert-butyl ether	U		0.101	1.00	1	09/13/2022 19:13	WG1925636
Naphthalene	U		1.00	5.00	1	09/13/2022 19:13	WG1925636
Propene	U		0.936	2.50	1	09/13/2022 19:13	WG1925636
n-Propylbenzene	U		0.0993	1.00	1	09/13/2022 19:13	WG1925636
Styrene	U		0.118	1.00	1	09/13/2022 19:13	WG1925636
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	09/13/2022 19:13	WG1925636
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	09/13/2022 19:13	WG1925636
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	09/13/2022 19:13	WG1925636
Tetrachloroethene	U		0.300	1.00	1	09/13/2022 19:13	WG1925636
Toluene	U		0.278	1.00	1	09/13/2022 19:13	WG1925636
1,2,3-Trichlorobenzene	U		0.230	1.00	1	09/13/2022 19:13	WG1925636
1,2,4-Trichlorobenzene	U		0.481	1.00	1	09/13/2022 19:13	WG1925636
1,1,1-Trichloroethane	U		0.149	1.00	1	09/13/2022 19:13	WG1925636
1,1,2-Trichloroethane	U		0.158	1.00	1	09/13/2022 19:13	WG1925636
Trichloroethene	U		0.190	1.00	1	09/13/2022 19:13	WG1925636
Trichlorofluoromethane	U		0.160	5.00	1	09/13/2022 19:13	WG1925636
1,2,3-Trichloropropane	U		0.237	2.50	1	09/13/2022 19:13	WG1925636
1,2,4-Trimethylbenzene	U		0.322	1.00	1	09/13/2022 19:13	WG1925636
1,2,3-Trimethylbenzene	U		0.104	1.00	1	09/13/2022 19:13	WG1925636
1,3,5-Trimethylbenzene	U		0.104	1.00	1	09/13/2022 19:13	WG1925636
Vinyl chloride	U		0.234	1.00	1	09/13/2022 19:13	WG1925636
Xylenes, Total	U		0.174	3.00	1	09/13/2022 19:13	WG1925636
(S) Toluene-d8	*99.9*			*80.0-120*		*09/13/2022 19:13*	WG1925636
(S) 4-Bromofluorobenzene	*101*			*77.0-126*		*09/13/2022 19:13*	WG1925636
(S) 1,2-Dichloroethane-d4	*102*			*70.0-130*		*09/13/2022 19:13*	WG1925636

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
1,4-Dioxane	U		0.597	3.00	1	09/15/2022 22:11	WG1926871
(S) Toluene-d8	*99.7*			*77.0-127*		*09/15/2022 22:11*	WG1926871

TTU-6-143-20220909

Collected date/time: 09/09/22 11:35

SAMPLE RESULTS - 10

L1534502

Wet Chemistry by Method 314.0 Mod

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Perchlorate	42.1		1.50	20.0	5	09/22/2022 07:45	WG1929502

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	09/13/2022 19:34	WG1925636
Acrolein	U		2.54	50.0	1	09/13/2022 19:34	WG1925636
Acrylonitrile	U		0.671	10.0	1	09/13/2022 19:34	WG1925636
Benzene	U		0.0941	1.00	1	09/13/2022 19:34	WG1925636
Bromobenzene	U		0.118	1.00	1	09/13/2022 19:34	WG1925636
Bromodichloromethane	U		0.136	1.00	1	09/13/2022 19:34	WG1925636
Bromoform	U		0.129	1.00	1	09/13/2022 19:34	WG1925636
Bromomethane	U		0.605	5.00	1	09/13/2022 19:34	WG1925636
1,3-Butadiene	U		0.299	2.00	1	09/13/2022 19:34	WG1925636
n-Butylbenzene	U		0.157	1.00	1	09/13/2022 19:34	WG1925636
sec-Butylbenzene	U		0.125	1.00	1	09/13/2022 19:34	WG1925636
tert-Butylbenzene	U	J4	0.127	1.00	1	09/13/2022 19:34	WG1925636
Carbon tetrachloride	U		0.128	1.00	1	09/13/2022 19:34	WG1925636
Carbon disulfide	U		0.0962	1.00	1	09/13/2022 19:34	WG1925636
Chlorobenzene	U		0.116	1.00	1	09/13/2022 19:34	WG1925636
Chlorodibromomethane	U		0.140	1.00	1	09/13/2022 19:34	WG1925636
Chloroethane	U		0.192	5.00	1	09/13/2022 19:34	WG1925636
Chloroform	U		0.111	5.00	1	09/13/2022 19:34	WG1925636
Chloromethane	U	J3	0.960	2.50	1	09/13/2022 19:34	WG1925636
Cyclohexane	U		0.188	1.00	1	09/13/2022 19:34	WG1925636
2-Chlorotoluene	U		0.106	1.00	1	09/13/2022 19:34	WG1925636
4-Chlorotoluene	U		0.114	1.00	1	09/13/2022 19:34	WG1925636
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	09/13/2022 19:34	WG1925636
1,2-Dibromoethane	U		0.126	1.00	1	09/13/2022 19:34	WG1925636
Dibromomethane	U		0.122	1.00	1	09/13/2022 19:34	WG1925636
1,2-Dichlorobenzene	U		0.107	1.00	1	09/13/2022 19:34	WG1925636
1,3-Dichlorobenzene	U		0.110	1.00	1	09/13/2022 19:34	WG1925636
1,4-Dichlorobenzene	U		0.120	1.00	1	09/13/2022 19:34	WG1925636
Dichlorodifluoromethane	U		0.374	5.00	1	09/13/2022 19:34	WG1925636
1,1-Dichloroethane	U		0.100	1.00	1	09/13/2022 19:34	WG1925636
1,2-Dichloroethane	U		0.0819	1.00	1	09/13/2022 19:34	WG1925636
1,1-Dichloroethene	U		0.188	1.00	1	09/13/2022 19:34	WG1925636
cis-1,2-Dichloroethene	U		0.126	1.00	1	09/13/2022 19:34	WG1925636
trans-1,2-Dichloroethene	U		0.149	1.00	1	09/13/2022 19:34	WG1925636
1,2-Dichloropropane	U		0.149	1.00	1	09/13/2022 19:34	WG1925636
1,1-Dichloropropene	U		0.142	1.00	1	09/13/2022 19:34	WG1925636
1,3-Dichloropropane	U		0.110	1.00	1	09/13/2022 19:34	WG1925636
cis-1,3-Dichloropropene	U		0.111	1.00	1	09/13/2022 19:34	WG1925636
trans-1,3-Dichloropropene	U		0.118	1.00	1	09/13/2022 19:34	WG1925636
2,2-Dichloropropane	U		0.161	1.00	1	09/13/2022 19:34	WG1925636
Dicyclopentadiene	U	J6	0.253	1.00	1	09/13/2022 19:34	WG1925636
Di-isopropyl ether	U		0.105	1.00	1	09/13/2022 19:34	WG1925636
Ethylbenzene	U		0.137	1.00	1	09/13/2022 19:34	WG1925636
4-Ethyltoluene	U		0.208	1.00	1	09/13/2022 19:34	WG1925636
Hexachloro-1,3-butadiene	U		0.337	1.00	1	09/13/2022 19:34	WG1925636
n-Hexane	U		0.749	10.0	1	09/13/2022 19:34	WG1925636
Isopropylbenzene	U		0.105	1.00	1	09/13/2022 19:34	WG1925636
p-Isopropyltoluene	U		0.120	1.00	1	09/13/2022 19:34	WG1925636
2-Butanone (MEK)	U		1.19	10.0	1	09/13/2022 19:34	WG1925636
Methyl Cyclohexane	U		0.660	1.00	1	09/13/2022 19:34	WG1925636

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

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
Methylene Chloride	U		0.430	5.00	1	09/13/2022 19:34	WG1925636
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	09/13/2022 19:34	WG1925636
Methyl tert-butyl ether	U		0.101	1.00	1	09/13/2022 19:34	WG1925636
Naphthalene	U		1.00	5.00	1	09/13/2022 19:34	WG1925636
Propene	U		0.936	2.50	1	09/13/2022 19:34	WG1925636
n-Propylbenzene	U		0.0993	1.00	1	09/13/2022 19:34	WG1925636
Styrene	U		0.118	1.00	1	09/13/2022 19:34	WG1925636
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	09/13/2022 19:34	WG1925636
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	09/13/2022 19:34	WG1925636
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	09/13/2022 19:34	WG1925636
Tetrachloroethene	U		0.300	1.00	1	09/13/2022 19:34	WG1925636
Toluene	U		0.278	1.00	1	09/13/2022 19:34	WG1925636
1,2,3-Trichlorobenzene	U		0.230	1.00	1	09/13/2022 19:34	WG1925636
1,2,4-Trichlorobenzene	U		0.481	1.00	1	09/13/2022 19:34	WG1925636
1,1,1-Trichloroethane	U		0.149	1.00	1	09/13/2022 19:34	WG1925636
1,1,2-Trichloroethane	U		0.158	1.00	1	09/13/2022 19:34	WG1925636
Trichloroethene	U		0.190	1.00	1	09/13/2022 19:34	WG1925636
Trichlorofluoromethane	U	J3	0.160	5.00	1	09/13/2022 19:34	WG1925636
1,2,3-Trichloropropane	U		0.237	2.50	1	09/13/2022 19:34	WG1925636
1,2,4-Trimethylbenzene	U		0.322	1.00	1	09/13/2022 19:34	WG1925636
1,2,3-Trimethylbenzene	U		0.104	1.00	1	09/13/2022 19:34	WG1925636
1,3,5-Trimethylbenzene	U		0.104	1.00	1	09/13/2022 19:34	WG1925636
Vinyl chloride	U		0.234	1.00	1	09/13/2022 19:34	WG1925636
Xylenes, Total	U		0.174	3.00	1	09/13/2022 19:34	WG1925636
(S) Toluene-d8	*103*			*80.0-120*		*09/13/2022 19:34*	WG1925636
(S) 4-Bromofluorobenzene	*108*			*77.0-126*		*09/13/2022 19:34*	WG1925636
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*09/13/2022 19:34*	WG1925636

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
1,4-Dioxane	U	J3	0.597	3.00	1	09/15/2022 22:31	WG1926871
(S) Toluene-d8	*99.2*			*77.0-127*		*09/15/2022 22:31*	WG1926871

Wet Chemistry by Method 314.0 Mod

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Perchlorate	1.04	J	0.300	4.00	1	09/22/2022 09:10	WG1931315

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	09/13/2022 19:55	WG1925636
Acrolein	U		2.54	50.0	1	09/13/2022 19:55	WG1925636
Acrylonitrile	U		0.671	10.0	1	09/13/2022 19:55	WG1925636
Benzene	0.0960	J	0.0941	1.00	1	09/13/2022 19:55	WG1925636
Bromobenzene	U		0.118	1.00	1	09/13/2022 19:55	WG1925636
Bromodichloromethane	U		0.136	1.00	1	09/13/2022 19:55	WG1925636
Bromoform	U		0.129	1.00	1	09/13/2022 19:55	WG1925636
Bromomethane	U		0.605	5.00	1	09/13/2022 19:55	WG1925636
1,3-Butadiene	U		0.299	2.00	1	09/13/2022 19:55	WG1925636
n-Butylbenzene	U		0.157	1.00	1	09/13/2022 19:55	WG1925636
sec-Butylbenzene	U		0.125	1.00	1	09/13/2022 19:55	WG1925636
tert-Butylbenzene	U	J4	0.127	1.00	1	09/13/2022 19:55	WG1925636
Carbon tetrachloride	U		0.128	1.00	1	09/13/2022 19:55	WG1925636
Carbon disulfide	U		0.0962	1.00	1	09/13/2022 19:55	WG1925636
Chlorobenzene	U		0.116	1.00	1	09/13/2022 19:55	WG1925636
Chlorodibromomethane	U		0.140	1.00	1	09/13/2022 19:55	WG1925636
Chloroethane	U		0.192	5.00	1	09/13/2022 19:55	WG1925636
Chloroform	U		0.111	5.00	1	09/13/2022 19:55	WG1925636
Chloromethane	U		0.960	2.50	1	09/13/2022 19:55	WG1925636
Cyclohexane	U		0.188	1.00	1	09/13/2022 19:55	WG1925636
2-Chlorotoluene	U		0.106	1.00	1	09/13/2022 19:55	WG1925636
4-Chlorotoluene	U		0.114	1.00	1	09/13/2022 19:55	WG1925636
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	09/13/2022 19:55	WG1925636
1,2-Dibromoethane	U		0.126	1.00	1	09/13/2022 19:55	WG1925636
Dibromomethane	U		0.122	1.00	1	09/13/2022 19:55	WG1925636
1,2-Dichlorobenzene	U		0.107	1.00	1	09/13/2022 19:55	WG1925636
1,3-Dichlorobenzene	U		0.110	1.00	1	09/13/2022 19:55	WG1925636
1,4-Dichlorobenzene	U		0.120	1.00	1	09/13/2022 19:55	WG1925636
Dichlorodifluoromethane	U		0.374	5.00	1	09/13/2022 19:55	WG1925636
1,1-Dichloroethane	U		0.100	1.00	1	09/13/2022 19:55	WG1925636
1,2-Dichloroethane	U		0.0819	1.00	1	09/13/2022 19:55	WG1925636
1,1-Dichloroethene	U		0.188	1.00	1	09/13/2022 19:55	WG1925636
cis-1,2-Dichloroethene	U		0.126	1.00	1	09/13/2022 19:55	WG1925636
trans-1,2-Dichloroethene	U		0.149	1.00	1	09/13/2022 19:55	WG1925636
1,2-Dichloropropane	U		0.149	1.00	1	09/13/2022 19:55	WG1925636
1,1-Dichloropropene	U		0.142	1.00	1	09/13/2022 19:55	WG1925636
1,3-Dichloropropane	U		0.110	1.00	1	09/13/2022 19:55	WG1925636
cis-1,3-Dichloropropene	U		0.111	1.00	1	09/13/2022 19:55	WG1925636
trans-1,3-Dichloropropene	U		0.118	1.00	1	09/13/2022 19:55	WG1925636
2,2-Dichloropropane	U		0.161	1.00	1	09/13/2022 19:55	WG1925636
Dicyclopentadiene	U		0.253	1.00	1	09/13/2022 19:55	WG1925636
Di-isopropyl ether	U		0.105	1.00	1	09/13/2022 19:55	WG1925636
Ethylbenzene	U		0.137	1.00	1	09/13/2022 19:55	WG1925636
4-Ethyltoluene	U		0.208	1.00	1	09/13/2022 19:55	WG1925636
Hexachloro-1,3-butadiene	U		0.337	1.00	1	09/13/2022 19:55	WG1925636
n-Hexane	U		0.749	10.0	1	09/13/2022 19:55	WG1925636
Isopropylbenzene	0.147	J	0.105	1.00	1	09/13/2022 19:55	WG1925636
p-Isopropyltoluene	U		0.120	1.00	1	09/13/2022 19:55	WG1925636
2-Butanone (MEK)	U	J3	1.19	10.0	1	09/13/2022 19:55	WG1925636
Methyl Cyclohexane	U		0.660	1.00	1	09/13/2022 19:55	WG1925636

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	09/13/2022 19:55	WG1925636
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	09/13/2022 19:55	WG1925636
Methyl tert-butyl ether	U		0.101	1.00	1	09/13/2022 19:55	WG1925636
Naphthalene	U		1.00	5.00	1	09/13/2022 19:55	WG1925636
Propene	4.11		0.936	2.50	1	09/13/2022 19:55	WG1925636
n-Propylbenzene	U		0.0993	1.00	1	09/13/2022 19:55	WG1925636
Styrene	U		0.118	1.00	1	09/13/2022 19:55	WG1925636
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	09/13/2022 19:55	WG1925636
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	09/13/2022 19:55	WG1925636
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	09/13/2022 19:55	WG1925636
Tetrachloroethene	U		0.300	1.00	1	09/13/2022 19:55	WG1925636
Toluene	0.986	J	0.278	1.00	1	09/13/2022 19:55	WG1925636
1,2,3-Trichlorobenzene	U		0.230	1.00	1	09/13/2022 19:55	WG1925636
1,2,4-Trichlorobenzene	U		0.481	1.00	1	09/13/2022 19:55	WG1925636
1,1,1-Trichloroethane	U		0.149	1.00	1	09/13/2022 19:55	WG1925636
1,1,2-Trichloroethane	U		0.158	1.00	1	09/13/2022 19:55	WG1925636
Trichloroethene	U		0.190	1.00	1	09/13/2022 19:55	WG1925636
Trichlorofluoromethane	U		0.160	5.00	1	09/13/2022 19:55	WG1925636
1,2,3-Trichloropropane	U		0.237	2.50	1	09/13/2022 19:55	WG1925636
1,2,4-Trimethylbenzene	U		0.322	1.00	1	09/13/2022 19:55	WG1925636
1,2,3-Trimethylbenzene	U		0.104	1.00	1	09/13/2022 19:55	WG1925636
1,3,5-Trimethylbenzene	U		0.104	1.00	1	09/13/2022 19:55	WG1925636
Vinyl chloride	U		0.234	1.00	1	09/13/2022 19:55	WG1925636
Xylenes, Total	0.262	J	0.174	3.00	1	09/13/2022 19:55	WG1925636
(S) Toluene-d8	*102*			*80.0-120*		*09/13/2022 19:55*	WG1925636
(S) 4-Bromofluorobenzene	*105*			*77.0-126*		*09/13/2022 19:55*	WG1925636
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*09/13/2022 19:55*	WG1925636

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	09/15/2022 22:51	WG1926871
(S) Toluene-d8	*99.2*			*77.0-127*		*09/15/2022 22:51*	WG1926871

TTU-8-164-20220909

Collected date/time: 09/09/22 10:00

SAMPLE RESULTS - 12

L1534502

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

Wet Chemistry by Method 314.0 Mod

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
Perchlorate	U		0.300	4.00	1	09/22/2022 10:35	WG1931315

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	09/13/2022 20:16	WG1925636
Acrolein	U		2.54	50.0	1	09/13/2022 20:16	WG1925636
Acrylonitrile	U		0.671	10.0	1	09/13/2022 20:16	WG1925636
Benzene	U		0.0941	1.00	1	09/13/2022 20:16	WG1925636
Bromobenzene	U		0.118	1.00	1	09/13/2022 20:16	WG1925636
Bromodichloromethane	U		0.136	1.00	1	09/13/2022 20:16	WG1925636
Bromoform	U		0.129	1.00	1	09/13/2022 20:16	WG1925636
Bromomethane	U		0.605	5.00	1	09/13/2022 20:16	WG1925636
1,3-Butadiene	U		0.299	2.00	1	09/13/2022 20:16	WG1925636
n-Butylbenzene	U		0.157	1.00	1	09/13/2022 20:16	WG1925636
sec-Butylbenzene	U		0.125	1.00	1	09/13/2022 20:16	WG1925636
tert-Butylbenzene	U	J4	0.127	1.00	1	09/13/2022 20:16	WG1925636
Carbon tetrachloride	U		0.128	1.00	1	09/13/2022 20:16	WG1925636
Carbon disulfide	U		0.0962	1.00	1	09/13/2022 20:16	WG1925636
Chlorobenzene	U		0.116	1.00	1	09/13/2022 20:16	WG1925636
Chlorodibromomethane	U		0.140	1.00	1	09/13/2022 20:16	WG1925636
Chloroethane	U		0.192	5.00	1	09/13/2022 20:16	WG1925636
Chloroform	U		0.111	5.00	1	09/13/2022 20:16	WG1925636
Chloromethane	U		0.960	2.50	1	09/13/2022 20:16	WG1925636
Cyclohexane	U		0.188	1.00	1	09/13/2022 20:16	WG1925636
2-Chlorotoluene	U		0.106	1.00	1	09/13/2022 20:16	WG1925636
4-Chlorotoluene	U		0.114	1.00	1	09/13/2022 20:16	WG1925636
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	09/13/2022 20:16	WG1925636
1,2-Dibromoethane	U		0.126	1.00	1	09/13/2022 20:16	WG1925636
Dibromomethane	U		0.122	1.00	1	09/13/2022 20:16	WG1925636
1,2-Dichlorobenzene	U		0.107	1.00	1	09/13/2022 20:16	WG1925636
1,3-Dichlorobenzene	U		0.110	1.00	1	09/13/2022 20:16	WG1925636
1,4-Dichlorobenzene	U		0.120	1.00	1	09/13/2022 20:16	WG1925636
Dichlorodifluoromethane	U		0.374	5.00	1	09/13/2022 20:16	WG1925636
1,1-Dichloroethane	U		0.100	1.00	1	09/13/2022 20:16	WG1925636
1,2-Dichloroethane	U		0.0819	1.00	1	09/13/2022 20:16	WG1925636
1,1-Dichloroethene	U		0.188	1.00	1	09/13/2022 20:16	WG1925636
cis-1,2-Dichloroethene	U		0.126	1.00	1	09/13/2022 20:16	WG1925636
trans-1,2-Dichloroethene	U		0.149	1.00	1	09/13/2022 20:16	WG1925636
1,2-Dichloropropane	U		0.149	1.00	1	09/13/2022 20:16	WG1925636
1,1-Dichloropropene	U		0.142	1.00	1	09/13/2022 20:16	WG1925636
1,3-Dichloropropane	U		0.110	1.00	1	09/13/2022 20:16	WG1925636
cis-1,3-Dichloropropene	U		0.111	1.00	1	09/13/2022 20:16	WG1925636
trans-1,3-Dichloropropene	U		0.118	1.00	1	09/13/2022 20:16	WG1925636
2,2-Dichloropropane	U		0.161	1.00	1	09/13/2022 20:16	WG1925636
Dicyclopentadiene	U		0.253	1.00	1	09/13/2022 20:16	WG1925636
Di-isopropyl ether	U		0.105	1.00	1	09/13/2022 20:16	WG1925636
Ethylbenzene	U		0.137	1.00	1	09/13/2022 20:16	WG1925636
4-Ethyltoluene	U		0.208	1.00	1	09/13/2022 20:16	WG1925636
Hexachloro-1,3-butadiene	U		0.337	1.00	1	09/13/2022 20:16	WG1925636
n-Hexane	U		0.749	10.0	1	09/13/2022 20:16	WG1925636
Isopropylbenzene	U		0.105	1.00	1	09/13/2022 20:16	WG1925636
p-Isopropyltoluene	U		0.120	1.00	1	09/13/2022 20:16	WG1925636
2-Butanone (MEK)	U	J3	1.19	10.0	1	09/13/2022 20:16	WG1925636
Methyl Cyclohexane	U		0.660	1.00	1	09/13/2022 20:16	WG1925636

SAMPLE RESULTS - 12

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
Methylene Chloride	U		0.430	5.00	1	09/13/2022 20:16	WG1925636
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	09/13/2022 20:16	WG1925636
Methyl tert-butyl ether	U		0.101	1.00	1	09/13/2022 20:16	WG1925636
Naphthalene	U		1.00	5.00	1	09/13/2022 20:16	WG1925636
Propene	U		0.936	2.50	1	09/13/2022 20:16	WG1925636
n-Propylbenzene	U		0.0993	1.00	1	09/13/2022 20:16	WG1925636
Styrene	U		0.118	1.00	1	09/13/2022 20:16	WG1925636
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	09/13/2022 20:16	WG1925636
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	09/13/2022 20:16	WG1925636
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	09/13/2022 20:16	WG1925636
Tetrachloroethene	U		0.300	1.00	1	09/13/2022 20:16	WG1925636
Toluene	U		0.278	1.00	1	09/13/2022 20:16	WG1925636
1,2,3-Trichlorobenzene	U		0.230	1.00	1	09/13/2022 20:16	WG1925636
1,2,4-Trichlorobenzene	U		0.481	1.00	1	09/13/2022 20:16	WG1925636
1,1,1-Trichloroethane	U		0.149	1.00	1	09/13/2022 20:16	WG1925636
1,1,2-Trichloroethane	U		0.158	1.00	1	09/13/2022 20:16	WG1925636
Trichloroethene	U		0.190	1.00	1	09/13/2022 20:16	WG1925636
Trichlorofluoromethane	U		0.160	5.00	1	09/13/2022 20:16	WG1925636
1,2,3-Trichloropropane	U		0.237	2.50	1	09/13/2022 20:16	WG1925636
1,2,4-Trimethylbenzene	U		0.322	1.00	1	09/13/2022 20:16	WG1925636
1,2,3-Trimethylbenzene	U		0.104	1.00	1	09/13/2022 20:16	WG1925636
1,3,5-Trimethylbenzene	U		0.104	1.00	1	09/13/2022 20:16	WG1925636
Vinyl chloride	U		0.234	1.00	1	09/13/2022 20:16	WG1925636
Xylenes, Total	U		0.174	3.00	1	09/13/2022 20:16	WG1925636
(S) Toluene-d8	*104*			*80.0-120*		*09/13/2022 20:16*	WG1925636
(S) 4-Bromofluorobenzene	*106*			*77.0-126*		*09/13/2022 20:16*	WG1925636
(S) 1,2-Dichloroethane-d4	*98.9*			*70.0-130*		*09/13/2022 20:16*	WG1925636

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
1,4-Dioxane	U		0.597	3.00	1	09/15/2022 23:11	WG1926871
(S) Toluene-d8	*99.1*			*77.0-127*		*09/15/2022 23:11*	WG1926871

SAMPLE RESULTS - 13

Wet Chemistry by Method 314.0 Mod

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Perchlorate	0.614	J	0.300	4.00	1	09/22/2022 11:04	WG1931315

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	09/13/2022 20:37	WG1925636
Acrolein	U		2.54	50.0	1	09/13/2022 20:37	WG1925636
Acrylonitrile	U		0.671	10.0	1	09/13/2022 20:37	WG1925636
Benzene	U		0.0941	1.00	1	09/13/2022 20:37	WG1925636
Bromobenzene	U		0.118	1.00	1	09/13/2022 20:37	WG1925636
Bromodichloromethane	U		0.136	1.00	1	09/13/2022 20:37	WG1925636
Bromoform	U		0.129	1.00	1	09/13/2022 20:37	WG1925636
Bromomethane	U		0.605	5.00	1	09/13/2022 20:37	WG1925636
1,3-Butadiene	U		0.299	2.00	1	09/13/2022 20:37	WG1925636
n-Butylbenzene	U		0.157	1.00	1	09/13/2022 20:37	WG1925636
sec-Butylbenzene	U		0.125	1.00	1	09/13/2022 20:37	WG1925636
tert-Butylbenzene	U	J4	0.127	1.00	1	09/13/2022 20:37	WG1925636
Carbon tetrachloride	U		0.128	1.00	1	09/13/2022 20:37	WG1925636
Carbon disulfide	U		0.0962	1.00	1	09/13/2022 20:37	WG1925636
Chlorobenzene	U		0.116	1.00	1	09/13/2022 20:37	WG1925636
Chlorodibromomethane	U		0.140	1.00	1	09/13/2022 20:37	WG1925636
Chloroethane	U		0.192	5.00	1	09/13/2022 20:37	WG1925636
Chloroform	U		0.111	5.00	1	09/13/2022 20:37	WG1925636
Chloromethane	U		0.960	2.50	1	09/13/2022 20:37	WG1925636
Cyclohexane	U		0.188	1.00	1	09/13/2022 20:37	WG1925636
2-Chlorotoluene	U		0.106	1.00	1	09/13/2022 20:37	WG1925636
4-Chlorotoluene	U		0.114	1.00	1	09/13/2022 20:37	WG1925636
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	09/13/2022 20:37	WG1925636
1,2-Dibromoethane	U		0.126	1.00	1	09/13/2022 20:37	WG1925636
Dibromomethane	U		0.122	1.00	1	09/13/2022 20:37	WG1925636
1,2-Dichlorobenzene	U		0.107	1.00	1	09/13/2022 20:37	WG1925636
1,3-Dichlorobenzene	U		0.110	1.00	1	09/13/2022 20:37	WG1925636
1,4-Dichlorobenzene	U		0.120	1.00	1	09/13/2022 20:37	WG1925636
Dichlorodifluoromethane	U		0.374	5.00	1	09/13/2022 20:37	WG1925636
1,1-Dichloroethane	U		0.100	1.00	1	09/13/2022 20:37	WG1925636
1,2-Dichloroethane	U		0.0819	1.00	1	09/13/2022 20:37	WG1925636
1,1-Dichloroethene	U		0.188	1.00	1	09/13/2022 20:37	WG1925636
cis-1,2-Dichloroethene	U		0.126	1.00	1	09/13/2022 20:37	WG1925636
trans-1,2-Dichloroethene	U		0.149	1.00	1	09/13/2022 20:37	WG1925636
1,2-Dichloropropane	U		0.149	1.00	1	09/13/2022 20:37	WG1925636
1,1-Dichloropropene	U		0.142	1.00	1	09/13/2022 20:37	WG1925636
1,3-Dichloropropane	U		0.110	1.00	1	09/13/2022 20:37	WG1925636
cis-1,3-Dichloropropene	U		0.111	1.00	1	09/13/2022 20:37	WG1925636
trans-1,3-Dichloropropene	U		0.118	1.00	1	09/13/2022 20:37	WG1925636
2,2-Dichloropropane	U		0.161	1.00	1	09/13/2022 20:37	WG1925636
Dicyclopentadiene	U		0.253	1.00	1	09/13/2022 20:37	WG1925636
Di-isopropyl ether	U		0.105	1.00	1	09/13/2022 20:37	WG1925636
Ethylbenzene	U		0.137	1.00	1	09/13/2022 20:37	WG1925636
4-Ethyltoluene	U		0.208	1.00	1	09/13/2022 20:37	WG1925636
Hexachloro-1,3-butadiene	U		0.337	1.00	1	09/13/2022 20:37	WG1925636
n-Hexane	U		0.749	10.0	1	09/13/2022 20:37	WG1925636
Isopropylbenzene	U		0.105	1.00	1	09/13/2022 20:37	WG1925636
p-Isopropyltoluene	U		0.120	1.00	1	09/13/2022 20:37	WG1925636
2-Butanone (MEK)	U	J3	1.19	10.0	1	09/13/2022 20:37	WG1925636
Methyl Cyclohexane	U		0.660	1.00	1	09/13/2022 20:37	WG1925636

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	09/13/2022 20:37	WG1925636
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	09/13/2022 20:37	WG1925636
Methyl tert-butyl ether	U		0.101	1.00	1	09/13/2022 20:37	WG1925636
Naphthalene	U		1.00	5.00	1	09/13/2022 20:37	WG1925636
Propene	U		0.936	2.50	1	09/13/2022 20:37	WG1925636
n-Propylbenzene	U		0.0993	1.00	1	09/13/2022 20:37	WG1925636
Styrene	U		0.118	1.00	1	09/13/2022 20:37	WG1925636
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	09/13/2022 20:37	WG1925636
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	09/13/2022 20:37	WG1925636
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	09/13/2022 20:37	WG1925636
Tetrachloroethene	U		0.300	1.00	1	09/13/2022 20:37	WG1925636
Toluene	U		0.278	1.00	1	09/13/2022 20:37	WG1925636
1,2,3-Trichlorobenzene	U		0.230	1.00	1	09/13/2022 20:37	WG1925636
1,2,4-Trichlorobenzene	U		0.481	1.00	1	09/13/2022 20:37	WG1925636
1,1,1-Trichloroethane	U		0.149	1.00	1	09/13/2022 20:37	WG1925636
1,1,2-Trichloroethane	U		0.158	1.00	1	09/13/2022 20:37	WG1925636
Trichloroethene	U		0.190	1.00	1	09/13/2022 20:37	WG1925636
Trichlorofluoromethane	U		0.160	5.00	1	09/13/2022 20:37	WG1925636
1,2,3-Trichloropropane	U		0.237	2.50	1	09/13/2022 20:37	WG1925636
1,2,4-Trimethylbenzene	U		0.322	1.00	1	09/13/2022 20:37	WG1925636
1,2,3-Trimethylbenzene	U		0.104	1.00	1	09/13/2022 20:37	WG1925636
1,3,5-Trimethylbenzene	U		0.104	1.00	1	09/13/2022 20:37	WG1925636
Vinyl chloride	U		0.234	1.00	1	09/13/2022 20:37	WG1925636
Xylenes, Total	U		0.174	3.00	1	09/13/2022 20:37	WG1925636
(S) Toluene-d8	*99.6*			*80.0-120*		*09/13/2022 20:37*	WG1925636
(S) 4-Bromofluorobenzene	*101*			*77.0-126*		*09/13/2022 20:37*	WG1925636
(S) 1,2-Dichloroethane-d4	*98.3*			*70.0-130*		*09/13/2022 20:37*	WG1925636

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	09/15/2022 23:31	WG1926871
(S) Toluene-d8	*99.2*			*77.0-127*		*09/15/2022 23:31*	WG1926871

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

Wet Chemistry by Method 314.0 Mod

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
Perchlorate	6.57		0.300	4.00	1	09/22/2022 11:32	WG1931315

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
Acetone	U		11.3	50.0	1	09/14/2022 13:39	WG1925641
Acrolein	U		2.54	50.0	1	09/14/2022 13:39	WG1925641
Acrylonitrile	U		0.671	10.0	1	09/14/2022 13:39	WG1925641
Benzene	U		0.0941	1.00	1	09/14/2022 13:39	WG1925641
Bromobenzene	U		0.118	1.00	1	09/14/2022 13:39	WG1925641
Bromodichloromethane	U		0.136	1.00	1	09/14/2022 13:39	WG1925641
Bromoform	U		0.129	1.00	1	09/14/2022 13:39	WG1925641
Bromomethane	U		0.605	5.00	1	09/14/2022 13:39	WG1925641
1,3-Butadiene	U		0.299	2.00	1	09/14/2022 13:39	WG1925641
n-Butylbenzene	U		0.157	1.00	1	09/14/2022 13:39	WG1925641
sec-Butylbenzene	U		0.125	1.00	1	09/14/2022 13:39	WG1925641
tert-Butylbenzene	U		0.127	1.00	1	09/14/2022 13:39	WG1925641
Carbon tetrachloride	U		0.128	1.00	1	09/14/2022 13:39	WG1925641
Carbon disulfide	0.103	J	0.0962	1.00	1	09/14/2022 13:39	WG1925641
Chlorobenzene	U		0.116	1.00	1	09/14/2022 13:39	WG1925641
Chlorodibromomethane	U		0.140	1.00	1	09/14/2022 13:39	WG1925641
Chloroethane	U		0.192	5.00	1	09/14/2022 13:39	WG1925641
Chloroform	U		0.111	5.00	1	09/14/2022 13:39	WG1925641
Chloromethane	U		0.960	2.50	1	09/14/2022 13:39	WG1925641
Cyclohexane	U		0.188	1.00	1	09/14/2022 13:39	WG1925641
2-Chlorotoluene	U		0.106	1.00	1	09/14/2022 13:39	WG1925641
4-Chlorotoluene	U		0.114	1.00	1	09/14/2022 13:39	WG1925641
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	09/14/2022 13:39	WG1925641
1,2-Dibromoethane	U		0.126	1.00	1	09/14/2022 13:39	WG1925641
Dibromomethane	U		0.122	1.00	1	09/14/2022 13:39	WG1925641
1,2-Dichlorobenzene	U		0.107	1.00	1	09/14/2022 13:39	WG1925641
1,3-Dichlorobenzene	U		0.110	1.00	1	09/14/2022 13:39	WG1925641
1,4-Dichlorobenzene	U		0.120	1.00	1	09/14/2022 13:39	WG1925641
Dichlorodifluoromethane	U		0.374	5.00	1	09/14/2022 13:39	WG1925641
1,1-Dichloroethane	U		0.100	1.00	1	09/14/2022 13:39	WG1925641
1,2-Dichloroethane	U		0.0819	1.00	1	09/14/2022 13:39	WG1925641
1,1-Dichloroethene	U		0.188	1.00	1	09/14/2022 13:39	WG1925641
cis-1,2-Dichloroethene	U		0.126	1.00	1	09/14/2022 13:39	WG1925641
trans-1,2-Dichloroethene	U		0.149	1.00	1	09/14/2022 13:39	WG1925641
1,2-Dichloropropane	U		0.149	1.00	1	09/14/2022 13:39	WG1925641
1,1-Dichloropropene	U		0.142	1.00	1	09/14/2022 13:39	WG1925641
1,3-Dichloropropane	U		0.110	1.00	1	09/14/2022 13:39	WG1925641
cis-1,3-Dichloropropene	U		0.111	1.00	1	09/14/2022 13:39	WG1925641
trans-1,3-Dichloropropene	U	J4	0.118	1.00	1	09/14/2022 13:39	WG1925641
2,2-Dichloropropane	U		0.161	1.00	1	09/14/2022 13:39	WG1925641
Dicyclopentadiene	U		0.253	1.00	1	09/14/2022 13:39	WG1925641
Di-isopropyl ether	U		0.105	1.00	1	09/14/2022 13:39	WG1925641
Ethylbenzene	U		0.137	1.00	1	09/14/2022 13:39	WG1925641
4-Ethyltoluene	U		0.208	1.00	1	09/14/2022 13:39	WG1925641
Hexachloro-1,3-butadiene	U		0.337	1.00	1	09/14/2022 13:39	WG1925641
n-Hexane	U		0.749	10.0	1	09/14/2022 13:39	WG1925641
Isopropylbenzene	U		0.105	1.00	1	09/14/2022 13:39	WG1925641
p-Isopropyltoluene	U		0.120	1.00	1	09/14/2022 13:39	WG1925641
2-Butanone (MEK)	U		1.19	10.0	1	09/14/2022 13:39	WG1925641
Methyl Cyclohexane	U		0.660	1.00	1	09/14/2022 13:39	WG1925641

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	2.82	J	0.430	5.00	1	09/14/2022 13:39	WG1925641
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	09/14/2022 13:39	WG1925641
Methyl tert-butyl ether	U		0.101	1.00	1	09/14/2022 13:39	WG1925641
Naphthalene	U		1.00	5.00	1	09/14/2022 13:39	WG1925641
Propene	U		0.936	2.50	1	09/14/2022 13:39	WG1925641
n-Propylbenzene	U		0.0993	1.00	1	09/14/2022 13:39	WG1925641
Styrene	U		0.118	1.00	1	09/14/2022 13:39	WG1925641
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	09/14/2022 13:39	WG1925641
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	09/14/2022 13:39	WG1925641
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	09/14/2022 13:39	WG1925641
Tetrachloroethene	U		0.300	1.00	1	09/14/2022 13:39	WG1925641
Toluene	U		0.278	1.00	1	09/14/2022 13:39	WG1925641
1,2,3-Trichlorobenzene	U		0.230	1.00	1	09/14/2022 13:39	WG1925641
1,2,4-Trichlorobenzene	U		0.481	1.00	1	09/14/2022 13:39	WG1925641
1,1,1-Trichloroethane	U		0.149	1.00	1	09/14/2022 13:39	WG1925641
1,1,2-Trichloroethane	U		0.158	1.00	1	09/14/2022 13:39	WG1925641
Trichloroethene	U		0.190	1.00	1	09/14/2022 13:39	WG1925641
Trichlorofluoromethane	U		0.160	5.00	1	09/14/2022 13:39	WG1925641
1,2,3-Trichloropropane	U		0.237	2.50	1	09/14/2022 13:39	WG1925641
1,2,4-Trimethylbenzene	U		0.322	1.00	1	09/14/2022 13:39	WG1925641
1,2,3-Trimethylbenzene	U		0.104	1.00	1	09/14/2022 13:39	WG1925641
1,3,5-Trimethylbenzene	U		0.104	1.00	1	09/14/2022 13:39	WG1925641
Vinyl chloride	U		0.234	1.00	1	09/14/2022 13:39	WG1925641
Xylenes, Total	U		0.174	3.00	1	09/14/2022 13:39	WG1925641
(S) Toluene-d8	*114*			*80.0-120*		*09/14/2022 13:39*	WG1925641
(S) 4-Bromofluorobenzene	*106*			*77.0-126*		*09/14/2022 13:39*	WG1925641
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*		*09/14/2022 13:39*	WG1925641

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	09/15/2022 23:51	WG1926871
(S) Toluene-d8	*99.0*			*77.0-127*		*09/15/2022 23:51*	WG1926871

TTU-10-165-20220909

Collected date/time: 09/09/22 12:46

SAMPLE RESULTS - 15

L1534502

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

Wet Chemistry by Method 314.0 Mod

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Perchlorate	37.0		0.300	4.00	1	09/22/2022 12:01	WG1929502

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	09/14/2022 14:01	WG1925641
Acrolein	U		2.54	50.0	1	09/14/2022 14:01	WG1925641
Acrylonitrile	U		0.671	10.0	1	09/14/2022 14:01	WG1925641
Benzene	U		0.0941	1.00	1	09/14/2022 14:01	WG1925641
Bromobenzene	U		0.118	1.00	1	09/14/2022 14:01	WG1925641
Bromodichloromethane	U		0.136	1.00	1	09/14/2022 14:01	WG1925641
Bromoform	U		0.129	1.00	1	09/14/2022 14:01	WG1925641
Bromomethane	U		0.605	5.00	1	09/14/2022 14:01	WG1925641
1,3-Butadiene	U		0.299	2.00	1	09/14/2022 14:01	WG1925641
n-Butylbenzene	U		0.157	1.00	1	09/14/2022 14:01	WG1925641
sec-Butylbenzene	U		0.125	1.00	1	09/14/2022 14:01	WG1925641
tert-Butylbenzene	U		0.127	1.00	1	09/14/2022 14:01	WG1925641
Carbon tetrachloride	U		0.128	1.00	1	09/14/2022 14:01	WG1925641
Carbon disulfide	U		0.0962	1.00	1	09/14/2022 14:01	WG1925641
Chlorobenzene	U		0.116	1.00	1	09/14/2022 14:01	WG1925641
Chlorodibromomethane	U		0.140	1.00	1	09/14/2022 14:01	WG1925641
Chloroethane	U		0.192	5.00	1	09/14/2022 14:01	WG1925641
Chloroform	U		0.111	5.00	1	09/14/2022 14:01	WG1925641
Chloromethane	U		0.960	2.50	1	09/14/2022 14:01	WG1925641
Cyclohexane	U		0.188	1.00	1	09/14/2022 14:01	WG1925641
2-Chlorotoluene	U		0.106	1.00	1	09/14/2022 14:01	WG1925641
4-Chlorotoluene	U		0.114	1.00	1	09/14/2022 14:01	WG1925641
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	09/14/2022 14:01	WG1925641
1,2-Dibromoethane	U		0.126	1.00	1	09/14/2022 14:01	WG1925641
Dibromomethane	U		0.122	1.00	1	09/14/2022 14:01	WG1925641
1,2-Dichlorobenzene	U		0.107	1.00	1	09/14/2022 14:01	WG1925641
1,3-Dichlorobenzene	U		0.110	1.00	1	09/14/2022 14:01	WG1925641
1,4-Dichlorobenzene	U		0.120	1.00	1	09/14/2022 14:01	WG1925641
Dichlorodifluoromethane	U		0.374	5.00	1	09/14/2022 14:01	WG1925641
1,1-Dichloroethane	U		0.100	1.00	1	09/14/2022 14:01	WG1925641
1,2-Dichloroethane	U		0.0819	1.00	1	09/14/2022 14:01	WG1925641
1,1-Dichloroethene	U		0.188	1.00	1	09/14/2022 14:01	WG1925641
cis-1,2-Dichloroethene	U		0.126	1.00	1	09/14/2022 14:01	WG1925641
trans-1,2-Dichloroethene	U		0.149	1.00	1	09/14/2022 14:01	WG1925641
1,2-Dichloropropane	U		0.149	1.00	1	09/14/2022 14:01	WG1925641
1,1-Dichloropropene	U		0.142	1.00	1	09/14/2022 14:01	WG1925641
1,3-Dichloropropane	U		0.110	1.00	1	09/14/2022 14:01	WG1925641
cis-1,3-Dichloropropene	U		0.111	1.00	1	09/14/2022 14:01	WG1925641
trans-1,3-Dichloropropene	U	J4	0.118	1.00	1	09/14/2022 14:01	WG1925641
2,2-Dichloropropane	U		0.161	1.00	1	09/14/2022 14:01	WG1925641
Dicyclopentadiene	U		0.253	1.00	1	09/14/2022 14:01	WG1925641
Di-isopropyl ether	U		0.105	1.00	1	09/14/2022 14:01	WG1925641
Ethylbenzene	U		0.137	1.00	1	09/14/2022 14:01	WG1925641
4-Ethyltoluene	U		0.208	1.00	1	09/14/2022 14:01	WG1925641
Hexachloro-1,3-butadiene	U		0.337	1.00	1	09/14/2022 14:01	WG1925641
n-Hexane	U		0.749	10.0	1	09/14/2022 14:01	WG1925641
Isopropylbenzene	U		0.105	1.00	1	09/14/2022 14:01	WG1925641
p-Isopropyltoluene	U		0.120	1.00	1	09/14/2022 14:01	WG1925641
2-Butanone (MEK)	U		1.19	10.0	1	09/14/2022 14:01	WG1925641
Methyl Cyclohexane	U		0.660	1.00	1	09/14/2022 14:01	WG1925641

TTU-10-165-20220909

Collected date/time: 09/09/22 12:46

SAMPLE RESULTS - 15

L1534502

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	09/14/2022 14:01	WG1925641
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	09/14/2022 14:01	WG1925641
Methyl tert-butyl ether	U		0.101	1.00	1	09/14/2022 14:01	WG1925641
Naphthalene	U		1.00	5.00	1	09/14/2022 14:01	WG1925641
Propene	U		0.936	2.50	1	09/14/2022 14:01	WG1925641
n-Propylbenzene	U		0.0993	1.00	1	09/14/2022 14:01	WG1925641
Styrene	U		0.118	1.00	1	09/14/2022 14:01	WG1925641
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	09/14/2022 14:01	WG1925641
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	09/14/2022 14:01	WG1925641
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	09/14/2022 14:01	WG1925641
Tetrachloroethene	U		0.300	1.00	1	09/14/2022 14:01	WG1925641
Toluene	U		0.278	1.00	1	09/14/2022 14:01	WG1925641
1,2,3-Trichlorobenzene	U		0.230	1.00	1	09/14/2022 14:01	WG1925641
1,2,4-Trichlorobenzene	U		0.481	1.00	1	09/14/2022 14:01	WG1925641
1,1,1-Trichloroethane	U		0.149	1.00	1	09/14/2022 14:01	WG1925641
1,1,2-Trichloroethane	U		0.158	1.00	1	09/14/2022 14:01	WG1925641
Trichloroethene	U		0.190	1.00	1	09/14/2022 14:01	WG1925641
Trichlorofluoromethane	U		0.160	5.00	1	09/14/2022 14:01	WG1925641
1,2,3-Trichloropropane	U		0.237	2.50	1	09/14/2022 14:01	WG1925641
1,2,4-Trimethylbenzene	U		0.322	1.00	1	09/14/2022 14:01	WG1925641
1,2,3-Trimethylbenzene	U		0.104	1.00	1	09/14/2022 14:01	WG1925641
1,3,5-Trimethylbenzene	U		0.104	1.00	1	09/14/2022 14:01	WG1925641
Vinyl chloride	U		0.234	1.00	1	09/14/2022 14:01	WG1925641
Xylenes, Total	U		0.174	3.00	1	09/14/2022 14:01	WG1925641
(S) Toluene-d8	*111*			*80.0-120*		*09/14/2022 14:01*	WG1925641
(S) 4-Bromofluorobenzene	*97.8*			*77.0-126*		*09/14/2022 14:01*	WG1925641
(S) 1,2-Dichloroethane-d4	*104*			*70.0-130*		*09/14/2022 14:01*	WG1925641

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	09/16/2022 00:11	WG1926871
(S) Toluene-d8	*98.1*			*77.0-127*		*09/16/2022 00:11*	WG1926871

TTU-12-82-20220909
Collected date/time: 09/09/22 08:10

SAMPLE RESULTS - 16

L1534502

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

Wet Chemistry by Method 314.0 Mod

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Perchlorate	132000		1500	20000	5000	09/22/2022 12:57	WG1929502

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		113	500	10	09/14/2022 16:56	WG1925641
Acrolein	U		25.4	500	10	09/14/2022 16:56	WG1925641
Acrylonitrile	U		6.71	100	10	09/14/2022 16:56	WG1925641
Benzene	U		0.941	10.0	10	09/14/2022 16:56	WG1925641
Bromobenzene	U		1.18	10.0	10	09/14/2022 16:56	WG1925641
Bromodichloromethane	U		1.36	10.0	10	09/14/2022 16:56	WG1925641
Bromoform	U		1.29	10.0	10	09/14/2022 16:56	WG1925641
Bromomethane	U		6.05	50.0	10	09/14/2022 16:56	WG1925641
1,3-Butadiene	U		2.99	20.0	10	09/14/2022 16:56	WG1925641
n-Butylbenzene	U		1.57	10.0	10	09/14/2022 16:56	WG1925641
sec-Butylbenzene	U		1.25	10.0	10	09/14/2022 16:56	WG1925641
tert-Butylbenzene	U		1.27	10.0	10	09/14/2022 16:56	WG1925641
Carbon tetrachloride	U		1.28	10.0	10	09/14/2022 16:56	WG1925641
Carbon disulfide	U		0.962	10.0	10	09/14/2022 16:56	WG1925641
Chlorobenzene	U		1.16	10.0	10	09/14/2022 16:56	WG1925641
Chlorodibromomethane	U		1.40	10.0	10	09/14/2022 16:56	WG1925641
Chloroethane	U		1.92	50.0	10	09/14/2022 16:56	WG1925641
Chloroform	U		1.11	50.0	10	09/14/2022 16:56	WG1925641
Chloromethane	U		9.60	25.0	10	09/14/2022 16:56	WG1925641
Cyclohexane	U		1.88	10.0	10	09/14/2022 16:56	WG1925641
2-Chlorotoluene	U		1.06	10.0	10	09/14/2022 16:56	WG1925641
4-Chlorotoluene	U		1.14	10.0	10	09/14/2022 16:56	WG1925641
1,2-Dibromo-3-Chloropropane	U		2.76	50.0	10	09/14/2022 16:56	WG1925641
1,2-Dibromoethane	U		1.26	10.0	10	09/14/2022 16:56	WG1925641
Dibromomethane	U		1.22	10.0	10	09/14/2022 16:56	WG1925641
1,2-Dichlorobenzene	U		1.07	10.0	10	09/14/2022 16:56	WG1925641
1,3-Dichlorobenzene	U		1.10	10.0	10	09/14/2022 16:56	WG1925641
1,4-Dichlorobenzene	U		1.20	10.0	10	09/14/2022 16:56	WG1925641
Dichlorodifluoromethane	U		3.74	50.0	10	09/14/2022 16:56	WG1925641
1,1-Dichloroethane	U		1.00	10.0	10	09/14/2022 16:56	WG1925641
1,2-Dichloroethane	U		0.819	10.0	10	09/14/2022 16:56	WG1925641
1,1-Dichloroethene	73.4		1.88	10.0	10	09/14/2022 16:56	WG1925641
cis-1,2-Dichloroethene	U		1.26	10.0	10	09/14/2022 16:56	WG1925641
trans-1,2-Dichloroethene	U		1.49	10.0	10	09/14/2022 16:56	WG1925641
1,2-Dichloropropane	U		1.49	10.0	10	09/14/2022 16:56	WG1925641
1,1-Dichloropropene	U		1.42	10.0	10	09/14/2022 16:56	WG1925641
1,3-Dichloropropane	U		1.10	10.0	10	09/14/2022 16:56	WG1925641
cis-1,3-Dichloropropene	U		1.11	10.0	10	09/14/2022 16:56	WG1925641
trans-1,3-Dichloropropene	U	J4	1.18	10.0	10	09/14/2022 16:56	WG1925641
2,2-Dichloropropane	U		1.61	10.0	10	09/14/2022 16:56	WG1925641
Dicyclopentadiene	U		2.53	10.0	10	09/14/2022 16:56	WG1925641
Di-isopropyl ether	U		1.05	10.0	10	09/14/2022 16:56	WG1925641
Ethylbenzene	U		1.37	10.0	10	09/14/2022 16:56	WG1925641
4-Ethyltoluene	U		2.08	10.0	10	09/14/2022 16:56	WG1925641
Hexachloro-1,3-butadiene	U		3.37	10.0	10	09/14/2022 16:56	WG1925641
n-Hexane	U		7.49	100	10	09/14/2022 16:56	WG1925641
Isopropylbenzene	U		1.05	10.0	10	09/14/2022 16:56	WG1925641
p-Isopropyltoluene	U		1.20	10.0	10	09/14/2022 16:56	WG1925641
2-Butanone (MEK)	U		11.9	100	10	09/14/2022 16:56	WG1925641
Methyl Cyclohexane	U		6.60	10.0	10	09/14/2022 16:56	WG1925641

TTU-12-82-20220909

Collected date/time: 09/09/22 08:10

SAMPLE RESULTS - 16

L1534502

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	09/14/2022 16:56	WG1925641
4-Methyl-2-pentanone (MIBK)	U		4.78	100	10	09/14/2022 16:56	WG1925641
Methyl tert-butyl ether	U		1.01	10.0	10	09/14/2022 16:56	WG1925641
Naphthalene	U		10.0	50.0	10	09/14/2022 16:56	WG1925641
Propene	U		9.36	25.0	10	09/14/2022 16:56	WG1925641
n-Propylbenzene	U		0.993	10.0	10	09/14/2022 16:56	WG1925641
Styrene	U		1.18	10.0	10	09/14/2022 16:56	WG1925641
1,1,1,2-Tetrachloroethane	U		1.47	10.0	10	09/14/2022 16:56	WG1925641
1,1,2,2-Tetrachloroethane	U		1.33	10.0	10	09/14/2022 16:56	WG1925641
1,1,2-Trichlorotrifluoroethane	U		1.80	10.0	10	09/14/2022 16:56	WG1925641
Tetrachloroethene	U		3.00	10.0	10	09/14/2022 16:56	WG1925641
Toluene	U		2.78	10.0	10	09/14/2022 16:56	WG1925641
1,2,3-Trichlorobenzene	U		2.30	10.0	10	09/14/2022 16:56	WG1925641
1,2,4-Trichlorobenzene	U		4.81	10.0	10	09/14/2022 16:56	WG1925641
1,1,1-Trichloroethane	U		1.49	10.0	10	09/14/2022 16:56	WG1925641
1,1,2-Trichloroethane	U		1.58	10.0	10	09/14/2022 16:56	WG1925641
Trichloroethene	529		1.90	10.0	10	09/14/2022 16:56	WG1925641
Trichlorofluoromethane	U		1.60	50.0	10	09/14/2022 16:56	WG1925641
1,2,3-Trichloropropane	U		2.37	25.0	10	09/14/2022 16:56	WG1925641
1,2,4-Trimethylbenzene	U		3.22	10.0	10	09/14/2022 16:56	WG1925641
1,2,3-Trimethylbenzene	U		1.04	10.0	10	09/14/2022 16:56	WG1925641
1,3,5-Trimethylbenzene	U		1.04	10.0	10	09/14/2022 16:56	WG1925641
Vinyl chloride	U		2.34	10.0	10	09/14/2022 16:56	WG1925641
Xylenes, Total	U		1.74	30.0	10	09/14/2022 16:56	WG1925641
(S) Toluene-d8	*114*			*80.0-120*		*09/14/2022 16:56*	WG1925641
(S) 4-Bromofluorobenzene	*99.4*			*77.0-126*		*09/14/2022 16:56*	WG1925641
(S) 1,2-Dichloroethane-d4	*106*			*70.0-130*		*09/14/2022 16:56*	WG1925641

Sample Narrative:

L1534502-16 WG1925641: 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	119		0.597	3.00	1	09/16/2022 00:31	WG1926871
(S) Toluene-d8	*101*			*77.0-127*		*09/16/2022 00:31*	WG1926871

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

Wet Chemistry by Method 314.0 Mod

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Perchlorate	36900		150	2000	500	09/22/2022 13:26	WG1929502

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	09/14/2022 14:22	WG1925641
Acrolein	U		2.54	50.0	1	09/14/2022 14:22	WG1925641
Acrylonitrile	U		0.671	10.0	1	09/14/2022 14:22	WG1925641
Benzene	U		0.0941	1.00	1	09/14/2022 14:22	WG1925641
Bromobenzene	U		0.118	1.00	1	09/14/2022 14:22	WG1925641
Bromodichloromethane	U		0.136	1.00	1	09/14/2022 14:22	WG1925641
Bromoform	U		0.129	1.00	1	09/14/2022 14:22	WG1925641
Bromomethane	U		0.605	5.00	1	09/14/2022 14:22	WG1925641
1,3-Butadiene	U		0.299	2.00	1	09/14/2022 14:22	WG1925641
n-Butylbenzene	U		0.157	1.00	1	09/14/2022 14:22	WG1925641
sec-Butylbenzene	U		0.125	1.00	1	09/14/2022 14:22	WG1925641
tert-Butylbenzene	U		0.127	1.00	1	09/14/2022 14:22	WG1925641
Carbon tetrachloride	U		0.128	1.00	1	09/14/2022 14:22	WG1925641
Carbon disulfide	U		0.0962	1.00	1	09/14/2022 14:22	WG1925641
Chlorobenzene	U		0.116	1.00	1	09/14/2022 14:22	WG1925641
Chlorodibromomethane	U		0.140	1.00	1	09/14/2022 14:22	WG1925641
Chloroethane	U		0.192	5.00	1	09/14/2022 14:22	WG1925641
Chloroform	U		0.111	5.00	1	09/14/2022 14:22	WG1925641
Chloromethane	U		0.960	2.50	1	09/14/2022 14:22	WG1925641
Cyclohexane	U		0.188	1.00	1	09/14/2022 14:22	WG1925641
2-Chlorotoluene	U		0.106	1.00	1	09/14/2022 14:22	WG1925641
4-Chlorotoluene	U		0.114	1.00	1	09/14/2022 14:22	WG1925641
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	09/14/2022 14:22	WG1925641
1,2-Dibromoethane	U		0.126	1.00	1	09/14/2022 14:22	WG1925641
Dibromomethane	U		0.122	1.00	1	09/14/2022 14:22	WG1925641
1,2-Dichlorobenzene	U		0.107	1.00	1	09/14/2022 14:22	WG1925641
1,3-Dichlorobenzene	U		0.110	1.00	1	09/14/2022 14:22	WG1925641
1,4-Dichlorobenzene	U		0.120	1.00	1	09/14/2022 14:22	WG1925641
Dichlorodifluoromethane	U		0.374	5.00	1	09/14/2022 14:22	WG1925641
1,1-Dichloroethane	U		0.100	1.00	1	09/14/2022 14:22	WG1925641
1,2-Dichloroethane	U		0.0819	1.00	1	09/14/2022 14:22	WG1925641
1,1-Dichloroethene	3.06		0.188	1.00	1	09/14/2022 14:22	WG1925641
cis-1,2-Dichloroethene	U		0.126	1.00	1	09/14/2022 14:22	WG1925641
trans-1,2-Dichloroethene	U		0.149	1.00	1	09/14/2022 14:22	WG1925641
1,2-Dichloropropane	U		0.149	1.00	1	09/14/2022 14:22	WG1925641
1,1-Dichloropropene	U		0.142	1.00	1	09/14/2022 14:22	WG1925641
1,3-Dichloropropane	U		0.110	1.00	1	09/14/2022 14:22	WG1925641
cis-1,3-Dichloropropene	U		0.111	1.00	1	09/14/2022 14:22	WG1925641
trans-1,3-Dichloropropene	U	J4	0.118	1.00	1	09/14/2022 14:22	WG1925641
2,2-Dichloropropane	U		0.161	1.00	1	09/14/2022 14:22	WG1925641
Dicyclopentadiene	U		0.253	1.00	1	09/14/2022 14:22	WG1925641
Di-isopropyl ether	U		0.105	1.00	1	09/14/2022 14:22	WG1925641
Ethylbenzene	U		0.137	1.00	1	09/14/2022 14:22	WG1925641
4-Ethyltoluene	U		0.208	1.00	1	09/14/2022 14:22	WG1925641
Hexachloro-1,3-butadiene	U		0.337	1.00	1	09/14/2022 14:22	WG1925641
n-Hexane	U		0.749	10.0	1	09/14/2022 14:22	WG1925641
Isopropylbenzene	U		0.105	1.00	1	09/14/2022 14:22	WG1925641
p-Isopropyltoluene	U		0.120	1.00	1	09/14/2022 14:22	WG1925641
2-Butanone (MEK)	U		1.19	10.0	1	09/14/2022 14:22	WG1925641
Methyl Cyclohexane	U		0.660	1.00	1	09/14/2022 14:22	WG1925641

TTU-13-51-20220908

Collected date/time: 09/08/22 12:10

SAMPLE RESULTS - 17

L1534502

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	09/14/2022 14:22	WG1925641
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	09/14/2022 14:22	WG1925641
Methyl tert-butyl ether	U		0.101	1.00	1	09/14/2022 14:22	WG1925641
Naphthalene	U		1.00	5.00	1	09/14/2022 14:22	WG1925641
Propene	U		0.936	2.50	1	09/14/2022 14:22	WG1925641
n-Propylbenzene	U		0.0993	1.00	1	09/14/2022 14:22	WG1925641
Styrene	U		0.118	1.00	1	09/14/2022 14:22	WG1925641
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	09/14/2022 14:22	WG1925641
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	09/14/2022 14:22	WG1925641
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	09/14/2022 14:22	WG1925641
Tetrachloroethene	U		0.300	1.00	1	09/14/2022 14:22	WG1925641
Toluene	U		0.278	1.00	1	09/14/2022 14:22	WG1925641
1,2,3-Trichlorobenzene	U		0.230	1.00	1	09/14/2022 14:22	WG1925641
1,2,4-Trichlorobenzene	U		0.481	1.00	1	09/14/2022 14:22	WG1925641
1,1,1-Trichloroethane	U		0.149	1.00	1	09/14/2022 14:22	WG1925641
1,1,2-Trichloroethane	U		0.158	1.00	1	09/14/2022 14:22	WG1925641
Trichloroethene	7.06		0.190	1.00	1	09/14/2022 14:22	WG1925641
Trichlorofluoromethane	U		0.160	5.00	1	09/14/2022 14:22	WG1925641
1,2,3-Trichloropropane	U		0.237	2.50	1	09/14/2022 14:22	WG1925641
1,2,4-Trimethylbenzene	U		0.322	1.00	1	09/14/2022 14:22	WG1925641
1,2,3-Trimethylbenzene	U		0.104	1.00	1	09/14/2022 14:22	WG1925641
1,3,5-Trimethylbenzene	U		0.104	1.00	1	09/14/2022 14:22	WG1925641
Vinyl chloride	U		0.234	1.00	1	09/14/2022 14:22	WG1925641
Xylenes, Total	U		0.174	3.00	1	09/14/2022 14:22	WG1925641
(S) Toluene-d8	*113*			*80.0-120*		*09/14/2022 14:22*	WG1925641
(S) 4-Bromofluorobenzene	*102*			*77.0-126*		*09/14/2022 14:22*	WG1925641
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*09/14/2022 14:22*	WG1925641

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	13.7		0.597	3.00	1	09/16/2022 00:51	WG1926871
(S) Toluene-d8	*98.4*			*77.0-127*		*09/16/2022 00:51*	WG1926871

Wet Chemistry by Method 314.0 Mod

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Perchlorate	143000		1500	20000	5000	09/22/2022 13:54	WG1929502

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	09/14/2022 14:44	WG1925641
Acrolein	U		2.54	50.0	1	09/14/2022 14:44	WG1925641
Acrylonitrile	U		0.671	10.0	1	09/14/2022 14:44	WG1925641
Benzene	2.32		0.0941	1.00	1	09/14/2022 14:44	WG1925641
Bromobenzene	U		0.118	1.00	1	09/14/2022 14:44	WG1925641
Bromodichloromethane	U		0.136	1.00	1	09/14/2022 14:44	WG1925641
Bromoform	U		0.129	1.00	1	09/14/2022 14:44	WG1925641
Bromomethane	U		0.605	5.00	1	09/14/2022 14:44	WG1925641
1,3-Butadiene	U		0.299	2.00	1	09/14/2022 14:44	WG1925641
n-Butylbenzene	U		0.157	1.00	1	09/14/2022 14:44	WG1925641
sec-Butylbenzene	U		0.125	1.00	1	09/14/2022 14:44	WG1925641
tert-Butylbenzene	U		0.127	1.00	1	09/14/2022 14:44	WG1925641
Carbon tetrachloride	U		0.128	1.00	1	09/14/2022 14:44	WG1925641
Carbon disulfide	U		0.0962	1.00	1	09/14/2022 14:44	WG1925641
Chlorobenzene	U		0.116	1.00	1	09/14/2022 14:44	WG1925641
Chlorodibromomethane	U		0.140	1.00	1	09/14/2022 14:44	WG1925641
Chloroethane	U		0.192	5.00	1	09/14/2022 14:44	WG1925641
Chloroform	2.12	J	0.111	5.00	1	09/14/2022 14:44	WG1925641
Chloromethane	U		0.960	2.50	1	09/14/2022 14:44	WG1925641
Cyclohexane	U		0.188	1.00	1	09/14/2022 14:44	WG1925641
2-Chlorotoluene	U		0.106	1.00	1	09/14/2022 14:44	WG1925641
4-Chlorotoluene	U		0.114	1.00	1	09/14/2022 14:44	WG1925641
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	09/14/2022 14:44	WG1925641
1,2-Dibromoethane	U		0.126	1.00	1	09/14/2022 14:44	WG1925641
Dibromomethane	U		0.122	1.00	1	09/14/2022 14:44	WG1925641
1,2-Dichlorobenzene	U		0.107	1.00	1	09/14/2022 14:44	WG1925641
1,3-Dichlorobenzene	U		0.110	1.00	1	09/14/2022 14:44	WG1925641
1,4-Dichlorobenzene	U		0.120	1.00	1	09/14/2022 14:44	WG1925641
Dichlorodifluoromethane	U		0.374	5.00	1	09/14/2022 14:44	WG1925641
1,1-Dichloroethane	1.29		0.100	1.00	1	09/14/2022 14:44	WG1925641
1,2-Dichloroethane	U		0.0819	1.00	1	09/14/2022 14:44	WG1925641
1,1-Dichloroethene	155		0.188	1.00	1	09/14/2022 14:44	WG1925641
cis-1,2-Dichloroethene	2.12		0.126	1.00	1	09/14/2022 14:44	WG1925641
trans-1,2-Dichloroethene	U		0.149	1.00	1	09/14/2022 14:44	WG1925641
1,2-Dichloropropane	U		0.149	1.00	1	09/14/2022 14:44	WG1925641
1,1-Dichloropropene	U		0.142	1.00	1	09/14/2022 14:44	WG1925641
1,3-Dichloropropane	U		0.110	1.00	1	09/14/2022 14:44	WG1925641
cis-1,3-Dichloropropene	U		0.111	1.00	1	09/14/2022 14:44	WG1925641
trans-1,3-Dichloropropene	U	J4	0.118	1.00	1	09/14/2022 14:44	WG1925641
2,2-Dichloropropane	U		0.161	1.00	1	09/14/2022 14:44	WG1925641
Dicyclopentadiene	U		0.253	1.00	1	09/14/2022 14:44	WG1925641
Di-isopropyl ether	U		0.105	1.00	1	09/14/2022 14:44	WG1925641
Ethylbenzene	U		0.137	1.00	1	09/14/2022 14:44	WG1925641
4-Ethyltoluene	U		0.208	1.00	1	09/14/2022 14:44	WG1925641
Hexachloro-1,3-butadiene	U		0.337	1.00	1	09/14/2022 14:44	WG1925641
n-Hexane	U		0.749	10.0	1	09/14/2022 14:44	WG1925641
Isopropylbenzene	U		0.105	1.00	1	09/14/2022 14:44	WG1925641
p-Isopropyltoluene	U		0.120	1.00	1	09/14/2022 14:44	WG1925641
2-Butanone (MEK)	U		1.19	10.0	1	09/14/2022 14:44	WG1925641
Methyl Cyclohexane	U		0.660	1.00	1	09/14/2022 14:44	WG1925641

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
Methylene Chloride	U		0.430	5.00	1	09/14/2022 14:44	WG1925641
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	09/14/2022 14:44	WG1925641
Methyl tert-butyl ether	U		0.101	1.00	1	09/14/2022 14:44	WG1925641
Naphthalene	U		1.00	5.00	1	09/14/2022 14:44	WG1925641
Propene	U		0.936	2.50	1	09/14/2022 14:44	WG1925641
n-Propylbenzene	U		0.0993	1.00	1	09/14/2022 14:44	WG1925641
Styrene	U		0.118	1.00	1	09/14/2022 14:44	WG1925641
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	09/14/2022 14:44	WG1925641
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	09/14/2022 14:44	WG1925641
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	09/14/2022 14:44	WG1925641
Tetrachloroethene	1.44		0.300	1.00	1	09/14/2022 14:44	WG1925641
Toluene	U		0.278	1.00	1	09/14/2022 14:44	WG1925641
1,2,3-Trichlorobenzene	U		0.230	1.00	1	09/14/2022 14:44	WG1925641
1,2,4-Trichlorobenzene	U		0.481	1.00	1	09/14/2022 14:44	WG1925641
1,1,1-Trichloroethane	U		0.149	1.00	1	09/14/2022 14:44	WG1925641
1,1,2-Trichloroethane	2.05		0.158	1.00	1	09/14/2022 14:44	WG1925641
Trichloroethene	1020		4.75	25.0	25	09/18/2022 21:51	WG1928174
Trichlorofluoromethane	U		0.160	5.00	1	09/14/2022 14:44	WG1925641
1,2,3-Trichloropropane	U		0.237	2.50	1	09/14/2022 14:44	WG1925641
1,2,4-Trimethylbenzene	U		0.322	1.00	1	09/14/2022 14:44	WG1925641
1,2,3-Trimethylbenzene	U		0.104	1.00	1	09/14/2022 14:44	WG1925641
1,3,5-Trimethylbenzene	U		0.104	1.00	1	09/14/2022 14:44	WG1925641
Vinyl chloride	U		0.234	1.00	1	09/14/2022 14:44	WG1925641
Xylenes, Total	U		0.174	3.00	1	09/14/2022 14:44	WG1925641
(S) Toluene-d8	*113*			*80.0-120*		*09/14/2022 14:44*	WG1925641
(S) Toluene-d8	*96.9*			*80.0-120*		*09/18/2022 21:51*	WG1928174
(S) 4-Bromofluorobenzene	*103*			*77.0-126*		*09/14/2022 14:44*	WG1925641
(S) 4-Bromofluorobenzene	*96.5*			*77.0-126*		*09/18/2022 21:51*	WG1928174
(S) 1,2-Dichloroethane-d4	*101*			*70.0-130*		*09/14/2022 14:44*	WG1925641
(S) 1,2-Dichloroethane-d4	*112*			*70.0-130*		*09/18/2022 21:51*	WG1928174

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
1,4-Dioxane	297		0.597	3.00	1	09/16/2022 01:11	WG1926871
(S) Toluene-d8	*100*			*77.0-127*		*09/16/2022 01:11*	WG1926871

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

Wet Chemistry by Method 314.0 Mod

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Perchlorate	5510		30.0	400	100	09/22/2022 14:23	WG1929502

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	09/14/2022 15:06	WG1925641
Acrolein	U		2.54	50.0	1	09/14/2022 15:06	WG1925641
Acrylonitrile	U		0.671	10.0	1	09/14/2022 15:06	WG1925641
Benzene	U	J3	0.0941	1.00	1	09/14/2022 15:06	WG1925641
Bromobenzene	U		0.118	1.00	1	09/14/2022 15:06	WG1925641
Bromodichloromethane	U	J3	0.136	1.00	1	09/14/2022 15:06	WG1925641
Bromoform	U		0.129	1.00	1	09/14/2022 15:06	WG1925641
Bromomethane	U		0.605	5.00	1	09/14/2022 15:06	WG1925641
1,3-Butadiene	U	J3	0.299	2.00	1	09/14/2022 15:06	WG1925641
n-Butylbenzene	U		0.157	1.00	1	09/14/2022 15:06	WG1925641
sec-Butylbenzene	U		0.125	1.00	1	09/14/2022 15:06	WG1925641
tert-Butylbenzene	U	J3	0.127	1.00	1	09/14/2022 15:06	WG1925641
Carbon tetrachloride	U	J3	0.128	1.00	1	09/14/2022 15:06	WG1925641
Carbon disulfide	U		0.0962	1.00	1	09/14/2022 15:06	WG1925641
Chlorobenzene	U		0.116	1.00	1	09/14/2022 15:06	WG1925641
Chlorodibromomethane	U		0.140	1.00	1	09/14/2022 15:06	WG1925641
Chloroethane	U	J3	0.192	5.00	1	09/14/2022 15:06	WG1925641
Chloroform	U	J3	0.111	5.00	1	09/14/2022 15:06	WG1925641
Chloromethane	U	J3	0.960	2.50	1	09/14/2022 15:06	WG1925641
Cyclohexane	U	J3	0.188	1.00	1	09/14/2022 15:06	WG1925641
2-Chlorotoluene	U	J3	0.106	1.00	1	09/14/2022 15:06	WG1925641
4-Chlorotoluene	U	J3	0.114	1.00	1	09/14/2022 15:06	WG1925641
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	09/14/2022 15:06	WG1925641
1,2-Dibromoethane	U		0.126	1.00	1	09/14/2022 15:06	WG1925641
Dibromomethane	U		0.122	1.00	1	09/14/2022 15:06	WG1925641
1,2-Dichlorobenzene	U		0.107	1.00	1	09/14/2022 15:06	WG1925641
1,3-Dichlorobenzene	U	J3	0.110	1.00	1	09/14/2022 15:06	WG1925641
1,4-Dichlorobenzene	U		0.120	1.00	1	09/14/2022 15:06	WG1925641
Dichlorodifluoromethane	U	J3	0.374	5.00	1	09/14/2022 15:06	WG1925641
1,1-Dichloroethane	U	J3	0.100	1.00	1	09/14/2022 15:06	WG1925641
1,2-Dichloroethane	U		0.0819	1.00	1	09/14/2022 15:06	WG1925641
1,1-Dichloroethene	0.694	J J3	0.188	1.00	1	09/14/2022 15:06	WG1925641
cis-1,2-Dichloroethene	0.937	J J3	0.126	1.00	1	09/14/2022 15:06	WG1925641
trans-1,2-Dichloroethene	U	J3	0.149	1.00	1	09/14/2022 15:06	WG1925641
1,2-Dichloropropane	U	J3	0.149	1.00	1	09/14/2022 15:06	WG1925641
1,1-Dichloropropene	U	J3	0.142	1.00	1	09/14/2022 15:06	WG1925641
1,3-Dichloropropane	U		0.110	1.00	1	09/14/2022 15:06	WG1925641
cis-1,3-Dichloropropene	U		0.111	1.00	1	09/14/2022 15:06	WG1925641
trans-1,3-Dichloropropene	U	J3 J4	0.118	1.00	1	09/14/2022 15:06	WG1925641
2,2-Dichloropropane	U	J3	0.161	1.00	1	09/14/2022 15:06	WG1925641
Dicyclopentadiene	U	J3	0.253	1.00	1	09/14/2022 15:06	WG1925641
Di-isopropyl ether	U		0.105	1.00	1	09/14/2022 15:06	WG1925641
Ethylbenzene	U		0.137	1.00	1	09/14/2022 15:06	WG1925641
4-Ethyltoluene	U	J3	0.208	1.00	1	09/14/2022 15:06	WG1925641
Hexachloro-1,3-butadiene	U		0.337	1.00	1	09/14/2022 15:06	WG1925641
n-Hexane	U		0.749	10.0	1	09/14/2022 15:06	WG1925641
Isopropylbenzene	U	J3	0.105	1.00	1	09/14/2022 15:06	WG1925641
p-Isopropyltoluene	U		0.120	1.00	1	09/14/2022 15:06	WG1925641
2-Butanone (MEK)	U		1.19	10.0	1	09/14/2022 15:06	WG1925641
Methyl Cyclohexane	U	J3	0.660	1.00	1	09/14/2022 15:06	WG1925641

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	J3	0.430	5.00	1	09/14/2022 15:06	WG1925641
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	09/14/2022 15:06	WG1925641
Methyl tert-butyl ether	U		0.101	1.00	1	09/14/2022 15:06	WG1925641
Naphthalene	U		1.00	5.00	1	09/14/2022 15:06	WG1925641
Propene	U		0.936	2.50	1	09/14/2022 15:06	WG1925641
n-Propylbenzene	U	J3	0.0993	1.00	1	09/14/2022 15:06	WG1925641
Styrene	U	J3	0.118	1.00	1	09/14/2022 15:06	WG1925641
1,1,1,2-Tetrachloroethane	U	J3	0.147	1.00	1	09/14/2022 15:06	WG1925641
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	09/14/2022 15:06	WG1925641
1,1,2-Trichlorotrifluoroethane	U	J3	0.180	1.00	1	09/14/2022 15:06	WG1925641
Tetrachloroethene	U	J3	0.300	1.00	1	09/14/2022 15:06	WG1925641
Toluene	U	J3	0.278	1.00	1	09/14/2022 15:06	WG1925641
1,2,3-Trichlorobenzene	U		0.230	1.00	1	09/14/2022 15:06	WG1925641
1,2,4-Trichlorobenzene	U		0.481	1.00	1	09/14/2022 15:06	WG1925641
1,1,1-Trichloroethane	U	J3	0.149	1.00	1	09/14/2022 15:06	WG1925641
1,1,2-Trichloroethane	U		0.158	1.00	1	09/14/2022 15:06	WG1925641
Trichloroethene	6.08		0.190	1.00	1	09/18/2022 21:10	WG1928174
Trichlorofluoromethane	U	J3	0.160	5.00	1	09/14/2022 15:06	WG1925641
1,2,3-Trichloropropane	U		0.237	2.50	1	09/14/2022 15:06	WG1925641
1,2,4-Trimethylbenzene	U	J3	0.322	1.00	1	09/14/2022 15:06	WG1925641
1,2,3-Trimethylbenzene	U		0.104	1.00	1	09/14/2022 15:06	WG1925641
1,3,5-Trimethylbenzene	U	J3	0.104	1.00	1	09/14/2022 15:06	WG1925641
Vinyl chloride	U	J3	0.234	1.00	1	09/14/2022 15:06	WG1925641
Xylenes, Total	U	J3	0.174	3.00	1	09/14/2022 15:06	WG1925641
(S) Toluene-d8	*113*			*80.0-120*		*09/14/2022 15:06*	WG1925641
(S) Toluene-d8	*96.7*			*80.0-120*		*09/18/2022 21:10*	WG1928174
(S) 4-Bromofluorobenzene	*99.7*			*77.0-126*		*09/14/2022 15:06*	WG1925641
(S) 4-Bromofluorobenzene	*97.6*			*77.0-126*		*09/18/2022 21:10*	WG1928174
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*		*09/14/2022 15:06*	WG1925641
(S) 1,2-Dichloroethane-d4	*111*			*70.0-130*		*09/18/2022 21:10*	WG1928174

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	8.21		0.597	3.00	1	09/22/2022 17:34	WG1930402
(S) Toluene-d8	*103*			*77.0-127*		*09/22/2022 17:34*	WG1930402

TTU-16-80-20220908

Collected date/time: 09/08/22 11:08

SAMPLE RESULTS - 20

L1534502

Wet Chemistry by Method 314.0 Mod

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Perchlorate	913000		3000	40000	10000	09/22/2022 16:45	WG1929502

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		1130	5000	100	09/14/2022 17:17	WG1925641
Acrolein	U		254	5000	100	09/14/2022 17:17	WG1925641
Acrylonitrile	U		67.1	1000	100	09/14/2022 17:17	WG1925641
Benzene	30.2	J	9.41	100	100	09/14/2022 17:17	WG1925641
Bromobenzene	U		11.8	100	100	09/14/2022 17:17	WG1925641
Bromodichloromethane	U		13.6	100	100	09/14/2022 17:17	WG1925641
Bromoform	U		12.9	100	100	09/14/2022 17:17	WG1925641
Bromomethane	U		60.5	500	100	09/14/2022 17:17	WG1925641
1,3-Butadiene	U		29.9	200	100	09/14/2022 17:17	WG1925641
n-Butylbenzene	U		15.7	100	100	09/14/2022 17:17	WG1925641
sec-Butylbenzene	U		12.5	100	100	09/14/2022 17:17	WG1925641
tert-Butylbenzene	U		12.7	100	100	09/14/2022 17:17	WG1925641
Carbon tetrachloride	U		12.8	100	100	09/14/2022 17:17	WG1925641
Carbon disulfide	U		9.62	100	100	09/14/2022 17:17	WG1925641
Chlorobenzene	U		11.6	100	100	09/14/2022 17:17	WG1925641
Chlorodibromomethane	U		14.0	100	100	09/14/2022 17:17	WG1925641
Chloroethane	U		19.2	500	100	09/14/2022 17:17	WG1925641
Chloroform	U		11.1	500	100	09/14/2022 17:17	WG1925641
Chloromethane	U		96.0	250	100	09/14/2022 17:17	WG1925641
Cyclohexane	U		18.8	100	100	09/14/2022 17:17	WG1925641
2-Chlorotoluene	U		10.6	100	100	09/14/2022 17:17	WG1925641
4-Chlorotoluene	U		11.4	100	100	09/14/2022 17:17	WG1925641
1,2-Dibromo-3-Chloropropane	U		27.6	500	100	09/14/2022 17:17	WG1925641
1,2-Dibromoethane	U		12.6	100	100	09/14/2022 17:17	WG1925641
Dibromomethane	U		12.2	100	100	09/14/2022 17:17	WG1925641
1,2-Dichlorobenzene	U		10.7	100	100	09/14/2022 17:17	WG1925641
1,3-Dichlorobenzene	U		11.0	100	100	09/14/2022 17:17	WG1925641
1,4-Dichlorobenzene	U		12.0	100	100	09/14/2022 17:17	WG1925641
Dichlorodifluoromethane	U		37.4	500	100	09/14/2022 17:17	WG1925641
1,1-Dichloroethane	U		10.0	100	100	09/14/2022 17:17	WG1925641
1,2-Dichloroethane	U		8.19	100	100	09/14/2022 17:17	WG1925641
1,1-Dichloroethene	478		18.8	100	100	09/14/2022 17:17	WG1925641
cis-1,2-Dichloroethene	U		12.6	100	100	09/14/2022 17:17	WG1925641
trans-1,2-Dichloroethene	U		14.9	100	100	09/14/2022 17:17	WG1925641
1,2-Dichloropropane	U		14.9	100	100	09/14/2022 17:17	WG1925641
1,1-Dichloropropene	U		14.2	100	100	09/14/2022 17:17	WG1925641
1,3-Dichloropropane	U		11.0	100	100	09/14/2022 17:17	WG1925641
cis-1,3-Dichloropropene	U		11.1	100	100	09/14/2022 17:17	WG1925641
trans-1,3-Dichloropropene	U	J4	11.8	100	100	09/14/2022 17:17	WG1925641
2,2-Dichloropropane	U		16.1	100	100	09/14/2022 17:17	WG1925641
Dicyclopentadiene	U		25.3	100	100	09/14/2022 17:17	WG1925641
Di-isopropyl ether	U		10.5	100	100	09/14/2022 17:17	WG1925641
Ethylbenzene	U		13.7	100	100	09/14/2022 17:17	WG1925641
4-Ethyltoluene	U		20.8	100	100	09/14/2022 17:17	WG1925641
Hexachloro-1,3-butadiene	U		33.7	100	100	09/14/2022 17:17	WG1925641
n-Hexane	U		74.9	1000	100	09/14/2022 17:17	WG1925641
Isopropylbenzene	U		10.5	100	100	09/14/2022 17:17	WG1925641
p-Isopropyltoluene	U		12.0	100	100	09/14/2022 17:17	WG1925641
2-Butanone (MEK)	U		119	1000	100	09/14/2022 17:17	WG1925641
Methyl Cyclohexane	U		66.0	100	100	09/14/2022 17:17	WG1925641

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	12200		43.0	500	100	09/14/2022 17:17	WG1925641
4-Methyl-2-pentanone (MIBK)	U		47.8	1000	100	09/14/2022 17:17	WG1925641
Methyl tert-butyl ether	U		10.1	100	100	09/14/2022 17:17	WG1925641
Naphthalene	U		100	500	100	09/14/2022 17:17	WG1925641
Propene	U		93.6	250	100	09/14/2022 17:17	WG1925641
n-Propylbenzene	U		9.93	100	100	09/14/2022 17:17	WG1925641
Styrene	U		11.8	100	100	09/14/2022 17:17	WG1925641
1,1,1,2-Tetrachloroethane	U		14.7	100	100	09/14/2022 17:17	WG1925641
1,1,2,2-Tetrachloroethane	U		13.3	100	100	09/14/2022 17:17	WG1925641
1,1,2-Trichlorotrifluoroethane	U		18.0	100	100	09/14/2022 17:17	WG1925641
Tetrachloroethene	U		30.0	100	100	09/14/2022 17:17	WG1925641
Toluene	U		27.8	100	100	09/14/2022 17:17	WG1925641
1,2,3-Trichlorobenzene	U		23.0	100	100	09/14/2022 17:17	WG1925641
1,2,4-Trichlorobenzene	U		48.1	100	100	09/14/2022 17:17	WG1925641
1,1,1-Trichloroethane	U		14.9	100	100	09/14/2022 17:17	WG1925641
1,1,2-Trichloroethane	U		15.8	100	100	09/14/2022 17:17	WG1925641
Trichloroethene	9520		19.0	100	100	09/14/2022 17:17	WG1925641
Trichlorofluoromethane	U		16.0	500	100	09/14/2022 17:17	WG1925641
1,2,3-Trichloropropane	U		23.7	250	100	09/14/2022 17:17	WG1925641
1,2,4-Trimethylbenzene	U		32.2	100	100	09/14/2022 17:17	WG1925641
1,2,3-Trimethylbenzene	U		10.4	100	100	09/14/2022 17:17	WG1925641
1,3,5-Trimethylbenzene	U		10.4	100	100	09/14/2022 17:17	WG1925641
Vinyl chloride	U		23.4	100	100	09/14/2022 17:17	WG1925641
Xylenes, Total	U		17.4	300	100	09/14/2022 17:17	WG1925641
(S) Toluene-d8	*110*			*80.0-120*		*09/14/2022 17:17*	WG1925641
(S) 4-Bromofluorobenzene	*99.6*			*77.0-126*		*09/14/2022 17:17*	WG1925641
(S) 1,2-Dichloroethane-d4	*103*			*70.0-130*		*09/14/2022 17:17*	WG1925641

Sample Narrative:

L1534502-20 WG1925641: 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	3820	J3	29.9	150	50	09/22/2022 17:14	WG1930191
(S) Toluene-d8	*103*			*77.0-127*		*09/22/2022 17:14*	WG1930191

TTU-17-80-20220908

Collected date/time: 09/08/22 09:47

SAMPLE RESULTS - 21

L1534502

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

Wet Chemistry by Method 314.0 Mod

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Perchlorate	U		0.300	4.00	1	09/26/2022 17:20	WG1930280

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	09/14/2022 15:28	WG1925641
Acrolein	U		2.54	50.0	1	09/14/2022 15:28	WG1925641
Acrylonitrile	U		0.671	10.0	1	09/14/2022 15:28	WG1925641
Benzene	U		0.0941	1.00	1	09/14/2022 15:28	WG1925641
Bromobenzene	U		0.118	1.00	1	09/14/2022 15:28	WG1925641
Bromodichloromethane	U		0.136	1.00	1	09/14/2022 15:28	WG1925641
Bromoform	U		0.129	1.00	1	09/14/2022 15:28	WG1925641
Bromomethane	U		0.605	5.00	1	09/14/2022 15:28	WG1925641
1,3-Butadiene	U		0.299	2.00	1	09/14/2022 15:28	WG1925641
n-Butylbenzene	U		0.157	1.00	1	09/14/2022 15:28	WG1925641
sec-Butylbenzene	U		0.125	1.00	1	09/14/2022 15:28	WG1925641
tert-Butylbenzene	U		0.127	1.00	1	09/14/2022 15:28	WG1925641
Carbon tetrachloride	U		0.128	1.00	1	09/14/2022 15:28	WG1925641
Carbon disulfide	U		0.0962	1.00	1	09/14/2022 15:28	WG1925641
Chlorobenzene	U		0.116	1.00	1	09/14/2022 15:28	WG1925641
Chlorodibromomethane	U		0.140	1.00	1	09/14/2022 15:28	WG1925641
Chloroethane	U		0.192	5.00	1	09/14/2022 15:28	WG1925641
Chloroform	U		0.111	5.00	1	09/14/2022 15:28	WG1925641
Chloromethane	U		0.960	2.50	1	09/14/2022 15:28	WG1925641
Cyclohexane	U		0.188	1.00	1	09/14/2022 15:28	WG1925641
2-Chlorotoluene	U		0.106	1.00	1	09/14/2022 15:28	WG1925641
4-Chlorotoluene	U		0.114	1.00	1	09/14/2022 15:28	WG1925641
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	09/14/2022 15:28	WG1925641
1,2-Dibromoethane	U		0.126	1.00	1	09/14/2022 15:28	WG1925641
Dibromomethane	U		0.122	1.00	1	09/14/2022 15:28	WG1925641
1,2-Dichlorobenzene	U		0.107	1.00	1	09/14/2022 15:28	WG1925641
1,3-Dichlorobenzene	U		0.110	1.00	1	09/14/2022 15:28	WG1925641
1,4-Dichlorobenzene	U		0.120	1.00	1	09/14/2022 15:28	WG1925641
Dichlorodifluoromethane	U		0.374	5.00	1	09/14/2022 15:28	WG1925641
1,1-Dichloroethane	U		0.100	1.00	1	09/14/2022 15:28	WG1925641
1,2-Dichloroethane	U		0.0819	1.00	1	09/14/2022 15:28	WG1925641
1,1-Dichloroethene	U		0.188	1.00	1	09/14/2022 15:28	WG1925641
cis-1,2-Dichloroethene	0.773	J	0.126	1.00	1	09/14/2022 15:28	WG1925641
trans-1,2-Dichloroethene	U		0.149	1.00	1	09/14/2022 15:28	WG1925641
1,2-Dichloropropane	U		0.149	1.00	1	09/14/2022 15:28	WG1925641
1,1-Dichloropropene	U		0.142	1.00	1	09/14/2022 15:28	WG1925641
1,3-Dichloropropane	U		0.110	1.00	1	09/14/2022 15:28	WG1925641
cis-1,3-Dichloropropene	U		0.111	1.00	1	09/14/2022 15:28	WG1925641
trans-1,3-Dichloropropene	U	J4	0.118	1.00	1	09/14/2022 15:28	WG1925641
2,2-Dichloropropane	U		0.161	1.00	1	09/14/2022 15:28	WG1925641
Dicyclopentadiene	U		0.253	1.00	1	09/14/2022 15:28	WG1925641
Di-isopropyl ether	U		0.105	1.00	1	09/14/2022 15:28	WG1925641
Ethylbenzene	U		0.137	1.00	1	09/14/2022 15:28	WG1925641
4-Ethyltoluene	U		0.208	1.00	1	09/14/2022 15:28	WG1925641
Hexachloro-1,3-butadiene	U		0.337	1.00	1	09/14/2022 15:28	WG1925641
n-Hexane	U		0.749	10.0	1	09/14/2022 15:28	WG1925641
Isopropylbenzene	U		0.105	1.00	1	09/14/2022 15:28	WG1925641
p-Isopropyltoluene	U		0.120	1.00	1	09/14/2022 15:28	WG1925641
2-Butanone (MEK)	U		1.19	10.0	1	09/14/2022 15:28	WG1925641
Methyl Cyclohexane	U		0.660	1.00	1	09/14/2022 15:28	WG1925641

TTU-17-80-20220908

Collected date/time: 09/08/22 09:47

SAMPLE RESULTS - 21

L1534502

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
Methylene Chloride	U		0.430	5.00	1	09/14/2022 15:28	WG1925641
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	09/14/2022 15:28	WG1925641
Methyl tert-butyl ether	U		0.101	1.00	1	09/14/2022 15:28	WG1925641
Naphthalene	U		1.00	5.00	1	09/14/2022 15:28	WG1925641
Propene	U		0.936	2.50	1	09/14/2022 15:28	WG1925641
n-Propylbenzene	U		0.0993	1.00	1	09/14/2022 15:28	WG1925641
Styrene	U		0.118	1.00	1	09/14/2022 15:28	WG1925641
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	09/14/2022 15:28	WG1925641
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	09/14/2022 15:28	WG1925641
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	09/14/2022 15:28	WG1925641
Tetrachloroethene	U		0.300	1.00	1	09/14/2022 15:28	WG1925641
Toluene	U		0.278	1.00	1	09/14/2022 15:28	WG1925641
1,2,3-Trichlorobenzene	U		0.230	1.00	1	09/14/2022 15:28	WG1925641
1,2,4-Trichlorobenzene	U		0.481	1.00	1	09/14/2022 15:28	WG1925641
1,1,1-Trichloroethane	U		0.149	1.00	1	09/14/2022 15:28	WG1925641
1,1,2-Trichloroethane	U		0.158	1.00	1	09/14/2022 15:28	WG1925641
Trichloroethene	2.10		0.190	1.00	1	09/18/2022 21:30	WG1928174
Trichlorofluoromethane	U		0.160	5.00	1	09/14/2022 15:28	WG1925641
1,2,3-Trichloropropane	U		0.237	2.50	1	09/14/2022 15:28	WG1925641
1,2,4-Trimethylbenzene	U		0.322	1.00	1	09/14/2022 15:28	WG1925641
1,2,3-Trimethylbenzene	U		0.104	1.00	1	09/14/2022 15:28	WG1925641
1,3,5-Trimethylbenzene	U		0.104	1.00	1	09/14/2022 15:28	WG1925641
Vinyl chloride	U		0.234	1.00	1	09/14/2022 15:28	WG1925641
Xylenes, Total	U		0.174	3.00	1	09/14/2022 15:28	WG1925641
(S) Toluene-d8	*110*			*80.0-120*		*09/14/2022 15:28*	WG1925641
(S) Toluene-d8	*96.4*			*80.0-120*		*09/18/2022 21:30*	WG1928174
(S) 4-Bromofluorobenzene	*96.6*			*77.0-126*		*09/14/2022 15:28*	WG1925641
(S) 4-Bromofluorobenzene	*98.6*			*77.0-126*		*09/18/2022 21:30*	WG1928174
(S) 1,2-Dichloroethane-d4	*106*			*70.0-130*		*09/14/2022 15:28*	WG1925641
(S) 1,2-Dichloroethane-d4	*110*			*70.0-130*		*09/18/2022 21:30*	WG1928174

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
1,4-Dioxane	242		0.597	3.00	1	09/16/2022 01:51	WG1926871
(S) Toluene-d8	*101*			*77.0-127*		*09/16/2022 01:51*	WG1926871

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	09/14/2022 15:50	WG1925641
Acrolein	U		2.54	50.0	1	09/14/2022 15:50	WG1925641
Acrylonitrile	U		0.671	10.0	1	09/14/2022 15:50	WG1925641
Benzene	U		0.0941	1.00	1	09/14/2022 15:50	WG1925641
Bromobenzene	U		0.118	1.00	1	09/14/2022 15:50	WG1925641
Bromodichloromethane	U		0.136	1.00	1	09/14/2022 15:50	WG1925641
Bromoform	U		0.129	1.00	1	09/14/2022 15:50	WG1925641
Bromomethane	U		0.605	5.00	1	09/14/2022 15:50	WG1925641
1,3-Butadiene	U		0.299	2.00	1	09/14/2022 15:50	WG1925641
n-Butylbenzene	U		0.157	1.00	1	09/14/2022 15:50	WG1925641
sec-Butylbenzene	U		0.125	1.00	1	09/14/2022 15:50	WG1925641
tert-Butylbenzene	U		0.127	1.00	1	09/14/2022 15:50	WG1925641
Carbon tetrachloride	U		0.128	1.00	1	09/14/2022 15:50	WG1925641
Carbon disulfide	U		0.0962	1.00	1	09/14/2022 15:50	WG1925641
Chlorobenzene	U		0.116	1.00	1	09/14/2022 15:50	WG1925641
Chlorodibromomethane	U		0.140	1.00	1	09/14/2022 15:50	WG1925641
Chloroethane	U		0.192	5.00	1	09/14/2022 15:50	WG1925641
Chloroform	U		0.111	5.00	1	09/14/2022 15:50	WG1925641
Chloromethane	U		0.960	2.50	1	09/14/2022 15:50	WG1925641
Cyclohexane	U		0.188	1.00	1	09/14/2022 15:50	WG1925641
2-Chlorotoluene	U		0.106	1.00	1	09/14/2022 15:50	WG1925641
4-Chlorotoluene	U		0.114	1.00	1	09/14/2022 15:50	WG1925641
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	09/14/2022 15:50	WG1925641
1,2-Dibromoethane	U		0.126	1.00	1	09/14/2022 15:50	WG1925641
Dibromomethane	U		0.122	1.00	1	09/14/2022 15:50	WG1925641
1,2-Dichlorobenzene	U		0.107	1.00	1	09/14/2022 15:50	WG1925641
1,3-Dichlorobenzene	U		0.110	1.00	1	09/14/2022 15:50	WG1925641
1,4-Dichlorobenzene	U		0.120	1.00	1	09/14/2022 15:50	WG1925641
Dichlorodifluoromethane	U		0.374	5.00	1	09/14/2022 15:50	WG1925641
1,1-Dichloroethane	U		0.100	1.00	1	09/14/2022 15:50	WG1925641
1,2-Dichloroethane	U		0.0819	1.00	1	09/14/2022 15:50	WG1925641
1,1-Dichloroethene	U		0.188	1.00	1	09/14/2022 15:50	WG1925641
cis-1,2-Dichloroethene	U		0.126	1.00	1	09/14/2022 15:50	WG1925641
trans-1,2-Dichloroethene	U		0.149	1.00	1	09/14/2022 15:50	WG1925641
1,2-Dichloropropane	U		0.149	1.00	1	09/14/2022 15:50	WG1925641
1,1-Dichloropropene	U		0.142	1.00	1	09/14/2022 15:50	WG1925641
1,3-Dichloropropane	U		0.110	1.00	1	09/14/2022 15:50	WG1925641
cis-1,3-Dichloropropene	U		0.111	1.00	1	09/14/2022 15:50	WG1925641
trans-1,3-Dichloropropene	U	J4	0.118	1.00	1	09/14/2022 15:50	WG1925641
2,2-Dichloropropane	U		0.161	1.00	1	09/14/2022 15:50	WG1925641
Dicyclopentadiene	U		0.253	1.00	1	09/14/2022 15:50	WG1925641
Di-isopropyl ether	U		0.105	1.00	1	09/14/2022 15:50	WG1925641
Ethylbenzene	U		0.137	1.00	1	09/14/2022 15:50	WG1925641
4-Ethyltoluene	U		0.208	1.00	1	09/14/2022 15:50	WG1925641
Hexachloro-1,3-butadiene	U		0.337	1.00	1	09/14/2022 15:50	WG1925641
n-Hexane	U		0.749	10.0	1	09/14/2022 15:50	WG1925641
Isopropylbenzene	U		0.105	1.00	1	09/14/2022 15:50	WG1925641
p-Isopropyltoluene	U		0.120	1.00	1	09/14/2022 15:50	WG1925641
2-Butanone (MEK)	U		1.19	10.0	1	09/14/2022 15:50	WG1925641
Methyl Cyclohexane	U		0.660	1.00	1	09/14/2022 15:50	WG1925641
Methylene Chloride	U		0.430	5.00	1	09/14/2022 15:50	WG1925641
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	09/14/2022 15:50	WG1925641
Methyl tert-butyl ether	U		0.101	1.00	1	09/14/2022 15:50	WG1925641
Naphthalene	U		1.00	5.00	1	09/14/2022 15:50	WG1925641
Propene	U		0.936	2.50	1	09/14/2022 15:50	WG1925641
n-Propylbenzene	U		0.0993	1.00	1	09/14/2022 15:50	WG1925641

PF-2-400-20220909

Collected date/time: 09/09/22 13:30

SAMPLE RESULTS - 22

L1534502

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	09/14/2022 15:50	WG1925641
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	09/14/2022 15:50	WG1925641
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	09/14/2022 15:50	WG1925641
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	09/14/2022 15:50	WG1925641
Tetrachloroethene	U		0.300	1.00	1	09/14/2022 15:50	WG1925641
Toluene	U		0.278	1.00	1	09/14/2022 15:50	WG1925641
1,2,3-Trichlorobenzene	U		0.230	1.00	1	09/14/2022 15:50	WG1925641
1,2,4-Trichlorobenzene	U		0.481	1.00	1	09/14/2022 15:50	WG1925641
1,1,1-Trichloroethane	U		0.149	1.00	1	09/14/2022 15:50	WG1925641
1,1,2-Trichloroethane	U		0.158	1.00	1	09/14/2022 15:50	WG1925641
Trichloroethene	U		0.190	1.00	1	09/14/2022 15:50	WG1925641
Trichlorofluoromethane	U		0.160	5.00	1	09/14/2022 15:50	WG1925641
1,2,3-Trichloropropane	U		0.237	2.50	1	09/14/2022 15:50	WG1925641
1,2,4-Trimethylbenzene	U		0.322	1.00	1	09/14/2022 15:50	WG1925641
1,2,3-Trimethylbenzene	U		0.104	1.00	1	09/14/2022 15:50	WG1925641
1,3,5-Trimethylbenzene	U		0.104	1.00	1	09/14/2022 15:50	WG1925641
Vinyl chloride	U		0.234	1.00	1	09/14/2022 15:50	WG1925641
Xylenes, Total	U		0.174	3.00	1	09/14/2022 15:50	WG1925641
(S) Toluene-d8	*113*			*80.0-120*		*09/14/2022 15:50*	WG1925641
(S) 4-Bromofluorobenzene	*99.7*			*77.0-126*		*09/14/2022 15:50*	WG1925641
(S) 1,2-Dichloroethane-d4	*108*			*70.0-130*		*09/14/2022 15:50*	WG1925641

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	J3	0.597	3.00	1	09/19/2022 17:40	WG1928694
(S) Toluene-d8	*102*			*77.0-127*		*09/19/2022 17:40*	WG1928694

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U		11.3	50.0	1	09/14/2022 11:29	WG1925641
Acrolein	U		2.54	50.0	1	09/14/2022 11:29	WG1925641
Acrylonitrile	U		0.671	10.0	1	09/14/2022 11:29	WG1925641
Benzene	U		0.0941	1.00	1	09/14/2022 11:29	WG1925641
Bromobenzene	U		0.118	1.00	1	09/14/2022 11:29	WG1925641
Bromodichloromethane	U		0.136	1.00	1	09/14/2022 11:29	WG1925641
Bromoform	U		0.129	1.00	1	09/14/2022 11:29	WG1925641
Bromomethane	U		0.605	5.00	1	09/14/2022 11:29	WG1925641
1,3-Butadiene	U		0.299	2.00	1	09/14/2022 11:29	WG1925641
n-Butylbenzene	U		0.157	1.00	1	09/14/2022 11:29	WG1925641
sec-Butylbenzene	U		0.125	1.00	1	09/14/2022 11:29	WG1925641
tert-Butylbenzene	U		0.127	1.00	1	09/14/2022 11:29	WG1925641
Carbon tetrachloride	U		0.128	1.00	1	09/14/2022 11:29	WG1925641
Carbon disulfide	U		0.0962	1.00	1	09/14/2022 11:29	WG1925641
Chlorobenzene	U		0.116	1.00	1	09/14/2022 11:29	WG1925641
Chlorodibromomethane	U		0.140	1.00	1	09/14/2022 11:29	WG1925641
Chloroethane	U		0.192	5.00	1	09/14/2022 11:29	WG1925641
Chloroform	U		0.111	5.00	1	09/14/2022 11:29	WG1925641
Chloromethane	U		0.960	2.50	1	09/14/2022 11:29	WG1925641
Cyclohexane	U		0.188	1.00	1	09/14/2022 11:29	WG1925641
2-Chlorotoluene	U		0.106	1.00	1	09/14/2022 11:29	WG1925641
4-Chlorotoluene	U		0.114	1.00	1	09/14/2022 11:29	WG1925641
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	09/14/2022 11:29	WG1925641
1,2-Dibromoethane	U		0.126	1.00	1	09/14/2022 11:29	WG1925641
Dibromomethane	U		0.122	1.00	1	09/14/2022 11:29	WG1925641
1,2-Dichlorobenzene	U		0.107	1.00	1	09/14/2022 11:29	WG1925641
1,3-Dichlorobenzene	U		0.110	1.00	1	09/14/2022 11:29	WG1925641
1,4-Dichlorobenzene	U		0.120	1.00	1	09/14/2022 11:29	WG1925641
Dichlorodifluoromethane	U		0.374	5.00	1	09/14/2022 11:29	WG1925641
1,1-Dichloroethane	U		0.100	1.00	1	09/14/2022 11:29	WG1925641
1,2-Dichloroethane	U		0.0819	1.00	1	09/14/2022 11:29	WG1925641
1,1-Dichloroethene	U		0.188	1.00	1	09/14/2022 11:29	WG1925641
cis-1,2-Dichloroethene	U		0.126	1.00	1	09/14/2022 11:29	WG1925641
trans-1,2-Dichloroethene	U		0.149	1.00	1	09/14/2022 11:29	WG1925641
1,2-Dichloropropane	U		0.149	1.00	1	09/14/2022 11:29	WG1925641
1,1-Dichloropropene	U		0.142	1.00	1	09/14/2022 11:29	WG1925641
1,3-Dichloropropane	U		0.110	1.00	1	09/14/2022 11:29	WG1925641
cis-1,3-Dichloropropene	U		0.111	1.00	1	09/14/2022 11:29	WG1925641
trans-1,3-Dichloropropene	U	J4	0.118	1.00	1	09/14/2022 11:29	WG1925641
2,2-Dichloropropane	U		0.161	1.00	1	09/14/2022 11:29	WG1925641
Dicyclopentadiene	U		0.253	1.00	1	09/14/2022 11:29	WG1925641
Di-isopropyl ether	U		0.105	1.00	1	09/14/2022 11:29	WG1925641
Ethylbenzene	U		0.137	1.00	1	09/14/2022 11:29	WG1925641
4-Ethyltoluene	U		0.208	1.00	1	09/14/2022 11:29	WG1925641
Hexachloro-1,3-butadiene	U		0.337	1.00	1	09/14/2022 11:29	WG1925641
n-Hexane	U		0.749	10.0	1	09/14/2022 11:29	WG1925641
Isopropylbenzene	U		0.105	1.00	1	09/14/2022 11:29	WG1925641
p-Isopropyltoluene	U		0.120	1.00	1	09/14/2022 11:29	WG1925641
2-Butanone (MEK)	U		1.19	10.0	1	09/14/2022 11:29	WG1925641
Methyl Cyclohexane	U		0.660	1.00	1	09/14/2022 11:29	WG1925641
Methylene Chloride	U		0.430	5.00	1	09/14/2022 11:29	WG1925641
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	09/14/2022 11:29	WG1925641
Methyl tert-butyl ether	U		0.101	1.00	1	09/14/2022 11:29	WG1925641
Naphthalene	U		1.00	5.00	1	09/14/2022 11:29	WG1925641
Propene	U		0.936	2.50	1	09/14/2022 11:29	WG1925641
n-Propylbenzene	U		0.0993	1.00	1	09/14/2022 11:29	WG1925641

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	09/14/2022 11:29	WG1925641
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	09/14/2022 11:29	WG1925641
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	09/14/2022 11:29	WG1925641
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	09/14/2022 11:29	WG1925641
Tetrachloroethene	U		0.300	1.00	1	09/14/2022 11:29	WG1925641
Toluene	U		0.278	1.00	1	09/14/2022 11:29	WG1925641
1,2,3-Trichlorobenzene	U		0.230	1.00	1	09/14/2022 11:29	WG1925641
1,2,4-Trichlorobenzene	U		0.481	1.00	1	09/14/2022 11:29	WG1925641
1,1,1-Trichloroethane	U		0.149	1.00	1	09/14/2022 11:29	WG1925641
1,1,2-Trichloroethane	U		0.158	1.00	1	09/14/2022 11:29	WG1925641
Trichloroethene	U		0.190	1.00	1	09/14/2022 11:29	WG1925641
Trichlorofluoromethane	U		0.160	5.00	1	09/14/2022 11:29	WG1925641
1,2,3-Trichloropropane	U		0.237	2.50	1	09/14/2022 11:29	WG1925641
1,2,4-Trimethylbenzene	U		0.322	1.00	1	09/14/2022 11:29	WG1925641
1,2,3-Trimethylbenzene	U		0.104	1.00	1	09/14/2022 11:29	WG1925641
1,3,5-Trimethylbenzene	U		0.104	1.00	1	09/14/2022 11:29	WG1925641
Vinyl chloride	U		0.234	1.00	1	09/14/2022 11:29	WG1925641
Xylenes, Total	U		0.174	3.00	1	09/14/2022 11:29	WG1925641
(S) Toluene-d8	*111*			*80.0-120*		*09/14/2022 11:29*	WG1925641
(S) 4-Bromofluorobenzene	*98.9*			*77.0-126*		*09/14/2022 11:29*	WG1925641
(S) 1,2-Dichloroethane-d4	*103*			*70.0-130*		*09/14/2022 11:29*	WG1925641

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

Method Blank (MB)

(MB) R3840607-1 09/21/22 23:42

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

L1534502-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1534502-02 09/22/22 02:32 • (DUP) R3840607-3 09/22/22 03:01

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Perchlorate	19300	19600	500	1.46		15

L1534502-15 Original Sample (OS) • Duplicate (DUP)

(OS) L1534502-15 09/22/22 12:01 • (DUP) R3840607-6 09/22/22 12:29

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	ug/l	ug/l		%		%
Perchlorate	37.0	37.1	1	0.246		15

Laboratory Control Sample (LCS)

(LCS) R3840607-2 09/22/22 00:39

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	ug/l	ug/l	%	%	
Perchlorate	10.0	9.49	94.9	90.0-110	

L1534502-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534502-10 09/22/22 07:45 • (MS) R3840607-4 09/22/22 08:13 • (MSD) R3840607-5 09/22/22 08:42

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	%	%		%			%	%
Perchlorate	50.0	42.1	89.1	88.6	94.1	93.0	5	80.0-120			0.572	15

L1534502-19 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534502-19 09/22/22 14:23 • (MS) R3840607-7 09/22/22 14:51 • (MSD) R3840607-8 09/22/22 16:16

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	%	%		%			%	%
Perchlorate	1000	5510	6650	6660	114	115	100	80.0-120			0.0836	15

Method Blank (MB)

(MB) R3842551-1 09/26/22 13:11

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

L1534097-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1534097-01 09/26/22 16:21 • (DUP) R3842551-3 09/26/22 16:52

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

L1536392-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1536392-04 09/27/22 04:13 • (DUP) R3842551-4 09/27/22 04:42

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	ug/l	ug/l		%		%
Perchlorate	2.29	1.67	1	0.000		15

Laboratory Control Sample (LCS)

(LCS) R3842551-2 09/26/22 14:07

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	ug/l	ug/l	%	%	
Perchlorate	10.0	9.18	91.8	90.0-110	

Method Blank (MB)

(MB) R3840609-2 09/22/22 01:07

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) R3840609-1 09/22/22 00:39

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Perchlorate	10.0	9.49	94.9	90.0-110	

L1534502-07 Original Sample (OS) • Matrix Spike (MS)

(OS) L1534502-07 09/22/22 06:20 • (MS) R3840609-3 09/22/22 17:13

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Perchlorate	10.0	54.8	64.2	93.5	1	80.0-120	

L1534502-08 Original Sample (OS) • Matrix Spike (MS)

(OS) L1534502-08 09/22/22 06:48 • (MS) R3840609-4 09/22/22 17:42

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Perchlorate	10.0	2.57	11.7	91.4	1	80.0-120	

L1534502-09 Original Sample (OS) • Matrix Spike (MS)

(OS) L1534502-09 09/22/22 07:17 • (MS) R3840609-5 09/22/22 18:10

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Perchlorate	10.0	1.25	10.1	89.0	1	80.0-120	

L1534502-11 Original Sample (OS) • Matrix Spike (MS)

(OS) L1534502-11 09/22/22 09:10 • (MS) R3840609-6 09/22/22 18:38

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Perchlorate	10.0	1.04	10.1	90.2	1	80.0-120	

L1534502-12 Original Sample (OS) • Matrix Spike (MS)

(OS) L1534502-12 09/22/22 10:35 • (MS) R3840609-7 09/22/22 19:07

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Perchlorate	10.0	U	10.2	102	1	80.0-120	

L1534502-13 Original Sample (OS) • Matrix Spike (MS)

(OS) L1534502-13 09/22/22 11:04 • (MS) R3840609-8 09/22/22 19:35

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Perchlorate	10.0	0.614	10.6	99.4	1	80.0-120	

L1534502-14 Original Sample (OS) • Matrix Spike (MS)

(OS) L1534502-14 09/22/22 11:32 • (MS) R3840609-9 09/22/22 20:04

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Perchlorate	10.0	6.57	16.5	99.5	1	80.0-120	

Method Blank (MB)

(MB) R3837498-3 09/13/22 11:19

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

Method Blank (MB)

(MB) R3837498-3 09/13/22 11:19

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	*103*			*80.0-120*
(S) 4-Bromofluorobenzene	*106*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*99.8*			*70.0-130*

QUALITY CONTROL SUMMARY

L1534502-03,05,06,07,08,09,10,11,12,13

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

(LCS) R3837498-1 09/13/22 09:55 • (LCSD) R3837498-2 09/13/22 10:16

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	11.9	13.0	47.6	52.0	19.0-160			8.84	27
Acrolein	25.0	25.7	29.5	103	118	30.0-160			13.8	26
Acrylonitrile	25.0	19.5	21.8	78.0	87.2	55.0-149			11.1	20
Benzene	5.00	5.35	5.11	107	102	70.0-123			4.59	20
Bromobenzene	5.00	4.89	5.06	97.8	101	73.0-121			3.42	20
Bromodichloromethane	5.00	4.12	4.53	82.4	90.6	75.0-120			9.48	20
Bromoform	5.00	4.67	4.85	93.4	97.0	68.0-132			3.78	20
Bromomethane	5.00	3.42	3.95	68.4	79.0	30.0-160			14.4	25
1,3-Butadiene	5.00	4.81	4.74	96.2	94.8	45.0-147			1.47	20
n-Butylbenzene	5.00	5.02	4.68	100	93.6	73.0-125			7.01	20
sec-Butylbenzene	5.00	4.91	4.81	98.2	96.2	75.0-125			2.06	20
tert-Butylbenzene	5.00	3.63	3.62	72.6	72.4	76.0-124	J4	J4	0.276	20
Carbon tetrachloride	5.00	4.63	4.76	92.6	95.2	68.0-126			2.77	20
Carbon disulfide	5.00	4.44	4.44	88.8	88.8	61.0-128			0.000	20
Chlorobenzene	5.00	4.74	4.59	94.8	91.8	80.0-121			3.22	20
Chlorodibromomethane	5.00	4.29	4.58	85.8	91.6	77.0-125			6.54	20
Chloroethane	5.00	4.75	4.76	95.0	95.2	47.0-150			0.210	20
Chloroform	5.00	4.59	4.47	91.8	89.4	73.0-120			2.65	20
Chloromethane	5.00	4.60	5.34	92.0	107	41.0-142			14.9	20
Cyclohexane	5.00	4.89	4.68	97.8	93.6	71.0-124			4.39	20
2-Chlorotoluene	5.00	4.75	4.65	95.0	93.0	76.0-123			2.13	20
4-Chlorotoluene	5.00	4.36	4.14	87.2	82.8	75.0-122			5.18	20
1,2-Dibromo-3-Chloropropane	5.00	4.07	4.62	81.4	92.4	58.0-134			12.7	20
1,2-Dibromoethane	5.00	4.35	4.31	87.0	86.2	80.0-122			0.924	20
Dibromomethane	5.00	4.45	4.48	89.0	89.6	80.0-120			0.672	20
1,2-Dichlorobenzene	5.00	4.81	4.92	96.2	98.4	79.0-121			2.26	20
1,3-Dichlorobenzene	5.00	4.93	4.88	98.6	97.6	79.0-120			1.02	20
1,4-Dichlorobenzene	5.00	5.21	4.84	104	96.8	79.0-120			7.36	20
Dichlorodifluoromethane	5.00	5.11	4.86	102	97.2	51.0-149			5.02	20
1,1-Dichloroethane	5.00	4.26	4.30	85.2	86.0	70.0-126			0.935	20
1,2-Dichloroethane	5.00	4.97	4.82	99.4	96.4	70.0-128			3.06	20
1,1-Dichloroethene	5.00	4.77	4.97	95.4	99.4	71.0-124			4.11	20
cis-1,2-Dichloroethene	5.00	4.70	4.39	94.0	87.8	73.0-120			6.82	20
trans-1,2-Dichloroethene	5.00	4.35	4.37	87.0	87.4	73.0-120			0.459	20
1,2-Dichloropropane	5.00	4.47	4.38	89.4	87.6	77.0-125			2.03	20
1,1-Dichloropropene	5.00	4.59	4.40	91.8	88.0	74.0-126			4.23	20
1,3-Dichloropropane	5.00	4.96	4.71	99.2	94.2	80.0-120			5.17	20
cis-1,3-Dichloropropene	5.00	4.28	4.37	85.6	87.4	80.0-123			2.08	20
trans-1,3-Dichloropropene	5.00	4.33	4.43	86.6	88.6	78.0-124			2.28	20
2,2-Dichloropropane	5.00	5.13	4.93	103	98.6	58.0-130			3.98	20

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

(LCS) R3837498-1 09/13/22 09:55 • (LCSD) R3837498-2 09/13/22 10:16

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	3.92	3.81	78.4	76.2	74.0-126			2.85	20
Di-isopropyl ether	5.00	5.60	5.46	112	109	58.0-138			2.53	20
Ethylbenzene	5.00	4.49	4.54	89.8	90.8	79.0-123			1.11	20
4-Ethyltoluene	5.00	4.98	4.87	99.6	97.4	74.0-127			2.23	20
Hexachloro-1,3-butadiene	5.00	4.83	4.68	96.6	93.6	54.0-138			3.15	20
n-Hexane	5.00	4.92	4.39	98.4	87.8	57.0-133			11.4	20
Isopropylbenzene	5.00	4.51	4.43	90.2	88.6	76.0-127			1.79	20
p-Isopropyltoluene	5.00	4.69	4.44	93.8	88.8	76.0-125			5.48	20
2-Butanone (MEK)	25.0	18.8	23.0	75.2	92.0	44.0-160		J3	20.1	20
Methyl Cyclohexane	5.00	5.07	4.48	101	89.6	68.0-126			12.4	20
Methylene Chloride	5.00	4.38	4.48	87.6	89.6	67.0-120			2.26	20
4-Methyl-2-pentanone (MIBK)	25.0	23.2	25.2	92.8	101	68.0-142			8.26	20
Methyl tert-butyl ether	5.00	5.17	5.09	103	102	68.0-125			1.56	20
Naphthalene	5.00	4.99	5.15	99.8	103	54.0-135			3.16	20
Propene	5.00	7.14	7.32	143	146	30.0-160			2.49	20
n-Propylbenzene	5.00	4.97	4.82	99.4	96.4	77.0-124			3.06	20
Styrene	5.00	4.97	5.02	99.4	100	73.0-130			1.00	20
1,1,1,2-Tetrachloroethane	5.00	4.22	4.16	84.4	83.2	75.0-125			1.43	20
1,1,2,2-Tetrachloroethane	5.00	4.76	4.93	95.2	98.6	65.0-130			3.51	20
1,1,2-Trichlorotrifluoroethane	5.00	5.32	5.05	106	101	69.0-132			5.21	20
Tetrachloroethene	5.00	4.26	4.17	85.2	83.4	72.0-132			2.14	20
Toluene	5.00	4.85	4.79	97.0	95.8	79.0-120			1.24	20
1,2,3-Trichlorobenzene	5.00	4.63	4.81	92.6	96.2	50.0-138			3.81	20
1,2,4-Trichlorobenzene	5.00	4.89	4.89	97.8	97.8	57.0-137			0.000	20
1,1,1-Trichloroethane	5.00	4.50	4.57	90.0	91.4	73.0-124			1.54	20
1,1,2-Trichloroethane	5.00	4.71	4.60	94.2	92.0	80.0-120			2.36	20
Trichloroethene	5.00	4.83	4.76	96.6	95.2	78.0-124			1.46	20
Trichlorofluoromethane	5.00	5.16	5.27	103	105	59.0-147			2.11	20
1,2,3-Trichloropropane	5.00	4.53	4.99	90.6	99.8	73.0-130			9.66	20
1,2,4-Trimethylbenzene	5.00	4.89	4.99	97.8	99.8	76.0-121			2.02	20
1,2,3-Trimethylbenzene	5.00	4.88	4.85	97.6	97.0	77.0-120			0.617	20
1,3,5-Trimethylbenzene	5.00	4.71	4.56	94.2	91.2	76.0-122			3.24	20
Vinyl chloride	5.00	4.13	4.23	82.6	84.6	67.0-131			2.39	20
Xylenes, Total	15.0	14.2	14.1	94.7	94.0	79.0-123			0.707	20
(S) Toluene-d8				*98.7*	*99.3*	*80.0-120*				
(S) 4-Bromofluorobenzene				*99.9*	*105*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*96.9*	*99.3*	*70.0-130*				

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

L1534502-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534502-10 09/13/22 19:34 • (MS) R3837498-4 09/13/22 22:23 • (MSD) R3837498-5 09/13/22 22:45

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
Acetone	25.0	U	21.2	21.2	84.8	84.8	1	10.0-160			0.000	35
Acrolein	25.0	U	25.3	25.1	101	100	1	10.0-160			0.794	39
Acrylonitrile	25.0	U	24.9	24.1	99.6	96.4	1	21.0-160			3.27	32
Benzene	5.00	U	3.41	3.63	68.2	72.6	1	17.0-158			6.25	27
Bromobenzene	5.00	U	4.05	4.11	81.0	82.2	1	30.0-149			1.47	28
Bromodichloromethane	5.00	U	3.83	3.89	76.6	77.8	1	31.0-150			1.55	27
Bromoform	5.00	U	5.08	5.50	102	110	1	29.0-150			7.94	29
Bromomethane	5.00	U	1.88	2.15	37.6	43.0	1	10.0-160			13.4	38
1,3-Butadiene	5.00	U	2.35	2.28	47.0	45.6	1	10.0-160			3.02	22
n-Butylbenzene	5.00	U	3.25	3.33	65.0	66.6	1	31.0-150			2.43	30
sec-Butylbenzene	5.00	U	3.10	3.28	62.0	65.6	1	33.0-155			5.64	29
tert-Butylbenzene	5.00	U	2.47	2.59	49.4	51.8	1	34.0-153			4.74	28
Carbon tetrachloride	5.00	U	3.27	3.41	65.4	68.2	1	23.0-159			4.19	28
Carbon disulfide	5.00	U	1.50	1.51	30.0	30.2	1	10.0-156			0.664	28
Chlorobenzene	5.00	U	3.70	3.83	74.0	76.6	1	33.0-152			3.45	27
Chlorodibromomethane	5.00	U	4.07	4.44	81.4	88.8	1	37.0-149			8.70	27
Chloroethane	5.00	U	2.73	2.86	54.6	57.2	1	10.0-160			4.65	30
Chloroform	5.00	U	3.46	3.57	69.2	71.4	1	29.0-154			3.13	28
Chloromethane	5.00	U	1.77	2.68	35.4	53.6	1	10.0-160		J3	40.9	29
Cyclohexane	5.00	U	2.32	2.48	46.4	49.6	1	19.0-160			6.67	23
2-Chlorotoluene	5.00	U	3.25	3.47	65.0	69.4	1	32.0-153			6.55	28
4-Chlorotoluene	5.00	U	2.91	3.12	58.2	62.4	1	32.0-150			6.97	28
1,2-Dibromo-3-Chloropropane	5.00	U	4.93	4.93	98.6	98.6	1	22.0-151			0.000	34
1,2-Dibromoethane	5.00	U	4.01	4.32	80.2	86.4	1	34.0-147			7.44	27
Dibromomethane	5.00	U	3.80	3.82	76.0	76.4	1	30.0-151			0.525	27
1,2-Dichlorobenzene	5.00	U	3.92	4.41	78.4	88.2	1	34.0-149			11.8	28
1,3-Dichlorobenzene	5.00	U	4.00	4.05	80.0	81.0	1	36.0-146			1.24	27
1,4-Dichlorobenzene	5.00	U	3.92	4.18	78.4	83.6	1	35.0-142			6.42	27
Dichlorodifluoromethane	5.00	U	2.51	2.41	50.2	48.2	1	10.0-160			4.07	29
1,1-Dichloroethane	5.00	U	3.08	3.14	61.6	62.8	1	25.0-158			1.93	27
1,2-Dichloroethane	5.00	U	3.88	4.13	77.6	82.6	1	29.0-151			6.24	27
1,1-Dichloroethene	5.00	U	2.82	2.98	56.4	59.6	1	11.0-160			5.52	29
cis-1,2-Dichloroethene	5.00	U	3.26	3.20	65.2	64.0	1	10.0-160			1.86	27
trans-1,2-Dichloroethene	5.00	U	2.43	2.59	48.6	51.8	1	17.0-153			6.37	27
1,2-Dichloropropane	5.00	U	3.53	3.47	70.6	69.4	1	30.0-156			1.71	27
1,1-Dichloropropene	5.00	U	2.68	2.86	53.6	57.2	1	25.0-158			6.50	27
1,3-Dichloropropane	5.00	U	4.33	4.53	86.6	90.6	1	38.0-147			4.51	27
cis-1,3-Dichloropropene	5.00	U	3.37	3.61	67.4	72.2	1	34.0-149			6.88	28
trans-1,3-Dichloropropene	5.00	U	3.85	3.70	77.0	74.0	1	32.0-149			3.97	28
2,2-Dichloropropane	5.00	U	3.36	3.33	67.2	66.6	1	24.0-152			0.897	29

L1534502-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534502-10 09/13/22 19:34 • (MS) R3837498-4 09/13/22 22:23 • (MSD) R3837498-5 09/13/22 22:45

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	2.50	2.56	50.0	51.2	1	51.0-139	J6		2.37	20
Di-isopropyl ether	5.00	U	4.31	4.53	86.2	90.6	1	21.0-160			4.98	28
Ethylbenzene	5.00	U	3.17	3.45	63.4	69.0	1	30.0-155			8.46	27
4-Ethyltoluene	5.00	U	3.08	3.37	61.6	67.4	1	10.0-160			8.99	20
Hexachloro-1,3-butadiene	5.00	U	3.45	3.96	69.0	79.2	1	20.0-154			13.8	34
n-Hexane	5.00	U	2.05	2.10	41.0	42.0	1	10.0-153			2.41	28
Isopropylbenzene	5.00	U	3.15	3.16	63.0	63.2	1	28.0-157			0.317	27
p-Isopropyltoluene	5.00	U	3.15	3.20	63.0	64.0	1	30.0-154			1.57	29
2-Butanone (MEK)	25.0	U	29.5	28.8	118	115	1	10.0-160			2.40	32
Methyl Cyclohexane	5.00	U	2.16	1.99	43.2	39.8	1	11.0-160			8.19	24
Methylene Chloride	5.00	U	3.03	3.34	60.6	66.8	1	23.0-144			9.73	28
4-Methyl-2-pentanone (MIBK)	25.0	U	27.2	28.2	109	113	1	29.0-160			3.61	29
Methyl tert-butyl ether	5.00	U	4.41	4.65	88.2	93.0	1	28.0-150			5.30	29
Naphthalene	5.00	U	4.15	4.44	83.0	88.8	1	12.0-156			6.75	35
Propene	5.00	U	2.15	2.41	43.0	48.2	1	10.0-160			11.4	29
n-Propylbenzene	5.00	U	3.24	3.41	64.8	68.2	1	31.0-154			5.11	28
Styrene	5.00	U	3.75	4.03	75.0	80.6	1	33.0-155			7.20	28
1,1,1,2-Tetrachloroethane	5.00	U	3.76	3.61	75.2	72.2	1	36.0-151			4.07	29
1,1,2,2-Tetrachloroethane	5.00	U	5.08	5.51	102	110	1	33.0-150			8.12	28
1,1,2-Trichlorotrifluoroethane	5.00	U	3.64	3.72	72.8	74.4	1	23.0-160			2.17	30
Tetrachloroethene	5.00	U	2.72	2.94	54.4	58.8	1	10.0-160			7.77	27
Toluene	5.00	U	3.33	3.44	66.6	68.8	1	26.0-154			3.25	28
1,2,3-Trichlorobenzene	5.00	U	3.75	3.96	75.0	79.2	1	17.0-150			5.45	36
1,2,4-Trichlorobenzene	5.00	U	3.92	3.88	78.4	77.6	1	24.0-150			1.03	33
1,1,1-Trichloroethane	5.00	U	3.23	3.25	64.6	65.0	1	23.0-160			0.617	28
1,1,2-Trichloroethane	5.00	U	4.58	4.47	91.6	89.4	1	35.0-147			2.43	27
Trichloroethene	5.00	U	3.12	3.27	62.4	65.4	1	10.0-160			4.69	25
Trichlorofluoromethane	5.00	U	0.982	3.27	19.6	65.4	1	17.0-160		J3	108	31
1,2,3-Trichloropropane	5.00	U	5.07	5.20	101	104	1	34.0-151			2.53	29
1,2,4-Trimethylbenzene	5.00	U	3.23	3.37	64.6	67.4	1	26.0-154			4.24	27
1,2,3-Trimethylbenzene	5.00	U	3.58	3.62	71.6	72.4	1	32.0-149			1.11	28
1,3,5-Trimethylbenzene	5.00	U	3.13	3.33	62.6	66.6	1	28.0-153			6.19	27
Vinyl chloride	5.00	U	2.21	2.34	44.2	46.8	1	10.0-160			5.71	27
Xylenes, Total	15.0	U	9.89	10.3	65.9	68.7	1	29.0-154			4.06	28
(S) Toluene-d8					*96.1*	*97.1*		*80.0-120*				
(S) 4-Bromofluorobenzene					*104*	*105*		*77.0-126*				
(S) 1,2-Dichloroethane-d4					*98.9*	*95.9*		*70.0-130*				

QUALITY CONTROL SUMMARY

Method Blank (MB)

(MB) R3838411-3 09/14/22 10:02

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

Method Blank (MB)

(MB) R3838411-3 09/14/22 10:02

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	*114*			*80.0-120*
(S) 4-Bromofluorobenzene	*103*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*107*			*70.0-130*

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

(LCS) R3838411-1 09/14/22 08:56 • (LCSD) R3838411-2 09/14/22 09:18

Analyte	Spike Amount ug/l	LCS Result ug/l	LCSD Result ug/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	27.8	27.2	111	109	19.0-160			2.18	27
Acrolein	25.0	33.8	33.9	135	136	30.0-160			0.295	26
Acrylonitrile	25.0	25.7	27.3	103	109	55.0-149			6.04	20
Benzene	5.00	5.58	5.13	112	103	70.0-123			8.40	20
Bromobenzene	5.00	4.71	4.81	94.2	96.2	73.0-121			2.10	20
Bromodichloromethane	5.00	4.68	4.64	93.6	92.8	75.0-120			0.858	20
Bromoform	5.00	3.48	3.71	69.6	74.2	68.0-132			6.40	20
Bromomethane	5.00	3.25	3.18	65.0	63.6	30.0-160			2.18	25
1,3-Butadiene	5.00	4.49	4.03	89.8	80.6	45.0-147			10.8	20
n-Butylbenzene	5.00	4.62	5.15	92.4	103	73.0-125			10.8	20
sec-Butylbenzene	5.00	5.24	5.25	105	105	75.0-125			0.191	20
tert-Butylbenzene	5.00	5.09	5.17	102	103	76.0-124			1.56	20
Carbon tetrachloride	5.00	5.34	4.56	107	91.2	68.0-126			15.8	20
Carbon disulfide	5.00	4.92	4.64	98.4	92.8	61.0-128			5.86	20
Chlorobenzene	5.00	4.77	4.93	95.4	98.6	80.0-121			3.30	20
Chlorodibromomethane	5.00	3.90	4.35	78.0	87.0	77.0-125			10.9	20
Chloroethane	5.00	3.21	2.88	64.2	57.6	47.0-150			10.8	20
Chloroform	5.00	5.18	4.99	104	99.8	73.0-120			3.74	20
Chloromethane	5.00	3.93	3.79	78.6	75.8	41.0-142			3.63	20
Cyclohexane	5.00	5.55	5.18	111	104	71.0-124			6.90	20
2-Chlorotoluene	5.00	4.89	4.89	97.8	97.8	76.0-123			0.000	20
4-Chlorotoluene	5.00	4.58	4.86	91.6	97.2	75.0-122			5.93	20
1,2-Dibromo-3-Chloropropane	5.00	2.91	3.44	58.2	68.8	58.0-134			16.7	20
1,2-Dibromoethane	5.00	4.51	4.48	90.2	89.6	80.0-122			0.667	20
Dibromomethane	5.00	5.18	4.84	104	96.8	80.0-120			6.79	20
1,2-Dichlorobenzene	5.00	5.15	5.13	103	103	79.0-121			0.389	20
1,3-Dichlorobenzene	5.00	4.53	4.72	90.6	94.4	79.0-120			4.11	20
1,4-Dichlorobenzene	5.00	5.35	4.61	107	92.2	79.0-120			14.9	20
Dichlorodifluoromethane	5.00	4.83	4.21	96.6	84.2	51.0-149			13.7	20
1,1-Dichloroethane	5.00	5.32	5.08	106	102	70.0-126			4.62	20
1,2-Dichloroethane	5.00	4.85	4.96	97.0	99.2	70.0-128			2.24	20
1,1-Dichloroethene	5.00	5.46	4.98	109	99.6	71.0-124			9.20	20
cis-1,2-Dichloroethene	5.00	4.99	4.93	99.8	98.6	73.0-120			1.21	20
trans-1,2-Dichloroethene	5.00	5.33	5.11	107	102	73.0-120			4.21	20
1,2-Dichloropropane	5.00	5.34	4.92	107	98.4	77.0-125			8.19	20
1,1-Dichloropropene	5.00	5.46	5.11	109	102	74.0-126			6.62	20
1,3-Dichloropropane	5.00	5.04	5.25	101	105	80.0-120			4.08	20
cis-1,3-Dichloropropene	5.00	4.70	4.50	94.0	90.0	80.0-123			4.35	20
trans-1,3-Dichloropropene	5.00	3.69	3.93	73.8	78.6	78.0-124	J4		6.30	20
2,2-Dichloropropane	5.00	3.94	3.81	78.8	76.2	58.0-130			3.35	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) R3838411-1 09/14/22 08:56 • (LCSD) R3838411-2 09/14/22 09:18

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	5.39	5.45	108	109	74.0-126			1.11	20
Di-isopropyl ether	5.00	5.49	5.35	110	107	58.0-138			2.58	20
Ethylbenzene	5.00	4.68	4.99	93.6	99.8	79.0-123			6.41	20
4-Ethyltoluene	5.00	5.06	5.12	101	102	74.0-127			1.18	20
Hexachloro-1,3-butadiene	5.00	5.17	5.07	103	101	54.0-138			1.95	20
n-Hexane	5.00	5.21	4.65	104	93.0	57.0-133			11.4	20
Isopropylbenzene	5.00	4.90	5.09	98.0	102	76.0-127			3.80	20
p-Isopropyltoluene	5.00	5.18	5.20	104	104	76.0-125			0.385	20
2-Butanone (MEK)	25.0	28.5	28.1	114	112	44.0-160			1.41	20
Methyl Cyclohexane	5.00	4.97	4.92	99.4	98.4	68.0-126			1.01	20
Methylene Chloride	5.00	4.93	4.92	98.6	98.4	67.0-120			0.203	20
4-Methyl-2-pentanone (MIBK)	25.0	24.6	27.4	98.4	110	68.0-142			10.8	20
Methyl tert-butyl ether	5.00	5.01	4.95	100	99.0	68.0-125			1.20	20
Naphthalene	5.00	3.72	4.38	74.4	87.6	54.0-135			16.3	20
Propene	5.00	5.14	5.03	103	101	30.0-160			2.16	20
n-Propylbenzene	5.00	5.24	5.05	105	101	77.0-124			3.69	20
Styrene	5.00	4.15	4.19	83.0	83.8	73.0-130			0.959	20
1,1,1,2-Tetrachloroethane	5.00	4.64	4.43	92.8	88.6	75.0-125			4.63	20
1,1,2,2-Tetrachloroethane	5.00	4.75	4.86	95.0	97.2	65.0-130			2.29	20
1,1,2-Trichlorotrifluoroethane	5.00	5.41	5.03	108	101	69.0-132			7.28	20
Tetrachloroethene	5.00	4.66	5.03	93.2	101	72.0-132			7.64	20
Toluene	5.00	5.08	5.17	102	103	79.0-120			1.76	20
1,2,3-Trichlorobenzene	5.00	4.75	5.30	95.0	106	50.0-138			10.9	20
1,2,4-Trichlorobenzene	5.00	4.64	4.81	92.8	96.2	57.0-137			3.60	20
1,1,1-Trichloroethane	5.00	5.03	4.85	101	97.0	73.0-124			3.64	20
1,1,2-Trichloroethane	5.00	4.88	5.08	97.6	102	80.0-120			4.02	20
Trichloroethene	5.00	5.13	5.08	103	102	78.0-124			0.979	20
Trichlorofluoromethane	5.00	4.85	4.12	97.0	82.4	59.0-147			16.3	20
1,2,3-Trichloropropane	5.00	4.56	5.08	91.2	102	73.0-130			10.8	20
1,2,4-Trimethylbenzene	5.00	4.81	4.97	96.2	99.4	76.0-121			3.27	20
1,2,3-Trimethylbenzene	5.00	5.13	5.19	103	104	77.0-120			1.16	20
1,3,5-Trimethylbenzene	5.00	4.98	5.41	99.6	108	76.0-122			8.28	20
Vinyl chloride	5.00	4.90	4.39	98.0	87.8	67.0-131			11.0	20
Xylenes, Total	15.0	14.7	14.4	98.0	96.0	79.0-123			2.06	20
(S) Toluene-d8				*107*	*107*	*80.0-120*				
(S) 4-Bromofluorobenzene				*101*	*103*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*106*	*107*	*70.0-130*				

L1534502-19 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534502-19 09/14/22 15:06 • (MS) R3838411-4 09/14/22 18:22 • (MSD) R3838411-5 09/14/22 18:44

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Acetone	25.0	U	29.9	29.2	120	117	1	10.0-160			2.37	35
Acrolein	25.0	U	22.4	17.2	89.6	68.8	1	10.0-160			26.3	39
Acrylonitrile	25.0	U	28.1	25.1	112	100	1	21.0-160			11.3	32
Benzene	5.00	U	4.67	3.36	93.4	67.2	1	17.0-158		J3	32.6	27
Bromobenzene	5.00	U	4.57	3.46	91.4	69.2	1	30.0-149			27.6	28
Bromodichloromethane	5.00	U	4.72	3.38	94.4	67.6	1	31.0-150		J3	33.1	27
Bromoform	5.00	U	3.42	2.79	68.4	55.8	1	29.0-150			20.3	29
Bromomethane	5.00	U	2.17	1.63	43.4	32.6	1	10.0-160			28.4	38
1,3-Butadiene	5.00	U	3.24	2.29	64.8	45.8	1	10.0-160		J3	34.4	22
n-Butylbenzene	5.00	U	4.54	3.44	90.8	68.8	1	31.0-150			27.6	30
sec-Butylbenzene	5.00	U	5.14	3.87	103	77.4	1	33.0-155			28.2	29
tert-Butylbenzene	5.00	U	4.91	3.70	98.2	74.0	1	34.0-153		J3	28.1	28
Carbon tetrachloride	5.00	U	4.62	2.84	92.4	56.8	1	23.0-159		J3	47.7	28
Carbon disulfide	5.00	U	2.02	1.53	40.4	30.6	1	10.0-156			27.6	28
Chlorobenzene	5.00	U	4.54	3.47	90.8	69.4	1	33.0-152			26.7	27
Chlorodibromomethane	5.00	U	3.96	3.29	79.2	65.8	1	37.0-149			18.5	27
Chloroethane	5.00	U	2.14	1.01	42.8	20.2	1	10.0-160		J3	71.7	30
Chloroform	5.00	U	5.05	3.78	101	75.6	1	29.0-154		J3	28.8	28
Chloromethane	5.00	U	2.71	1.96	54.2	39.2	1	10.0-160		J3	32.1	29
Cyclohexane	5.00	U	3.51	2.48	70.2	49.6	1	19.0-160		J3	34.4	23
2-Chlorotoluene	5.00	U	4.65	3.26	93.0	65.2	1	32.0-153		J3	35.1	28
4-Chlorotoluene	5.00	U	4.37	3.16	87.4	63.2	1	32.0-150		J3	32.1	28
1,2-Dibromo-3-Chloropropane	5.00	U	2.94	3.09	58.8	61.8	1	22.0-151			4.98	34
1,2-Dibromoethane	5.00	U	4.39	3.72	87.8	74.4	1	34.0-147			16.5	27
Dibromomethane	5.00	U	4.92	3.88	98.4	77.6	1	30.0-151			23.6	27
1,2-Dichlorobenzene	5.00	U	5.01	3.98	100	79.6	1	34.0-149			22.9	28
1,3-Dichlorobenzene	5.00	U	4.66	3.29	93.2	65.8	1	36.0-146		J3	34.5	27
1,4-Dichlorobenzene	5.00	U	4.15	3.34	83.0	66.8	1	35.0-142			21.6	27
Dichlorodifluoromethane	5.00	U	3.67	2.49	73.4	49.8	1	10.0-160		J3	38.3	29
1,1-Dichloroethane	5.00	U	4.80	3.52	96.0	70.4	1	25.0-158		J3	30.8	27
1,2-Dichloroethane	5.00	U	4.73	3.62	94.6	72.4	1	29.0-151			26.6	27
1,1-Dichloroethene	5.00	0.694	4.84	3.45	82.9	55.1	1	11.0-160		J3	33.5	29
cis-1,2-Dichloroethene	5.00	0.937	6.05	4.29	102	67.1	1	10.0-160		J3	34.0	27
trans-1,2-Dichloroethene	5.00	U	3.59	2.69	71.8	53.8	1	17.0-153		J3	28.7	27
1,2-Dichloropropane	5.00	U	4.64	3.51	92.8	70.2	1	30.0-156		J3	27.7	27
1,1-Dichloropropene	5.00	U	4.39	3.03	87.8	60.6	1	25.0-158		J3	36.7	27
1,3-Dichloropropane	5.00	U	4.81	4.07	96.2	81.4	1	38.0-147			16.7	27
cis-1,3-Dichloropropene	5.00	U	3.93	3.05	78.6	61.0	1	34.0-149			25.2	28
trans-1,3-Dichloropropene	5.00	U	3.44	2.53	68.8	50.6	1	32.0-149		J3	30.5	28
2,2-Dichloropropane	5.00	U	3.25	2.35	65.0	47.0	1	24.0-152		J3	32.1	29

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

L1534502-19 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534502-19 09/14/22 15:06 • (MS) R3838411-4 09/14/22 18:22 • (MSD) R3838411-5 09/14/22 18:44

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Dicyclopentadiene	5.00	U	4.32	2.91	86.4	58.2	1	51.0-139		J3	39.0	20
Di-isopropyl ether	5.00	U	5.06	4.28	101	85.6	1	21.0-160			16.7	28
Ethylbenzene	5.00	U	4.27	3.39	85.4	67.8	1	30.0-155			23.0	27
4-Ethyltoluene	5.00	U	4.63	3.24	92.6	64.8	1	10.0-160		J3	35.3	20
Hexachloro-1,3-butadiene	5.00	U	4.78	4.17	95.6	83.4	1	20.0-154			13.6	34
n-Hexane	5.00	U	2.75	2.09	55.0	41.8	1	10.0-153			27.3	28
Isopropylbenzene	5.00	U	4.69	3.39	93.8	67.8	1	28.0-157		J3	32.2	27
p-Isopropyltoluene	5.00	U	4.79	3.62	95.8	72.4	1	30.0-154			27.8	29
2-Butanone (MEK)	25.0	U	29.6	26.9	118	108	1	10.0-160			9.56	32
Methyl Cyclohexane	5.00	U	3.12	2.24	62.4	44.8	1	11.0-160		J3	32.8	24
Methylene Chloride	5.00	U	4.11	2.99	82.2	59.8	1	23.0-144		J3	31.5	28
4-Methyl-2-pentanone (MIBK)	25.0	U	27.6	25.7	110	103	1	29.0-160			7.13	29
Methyl tert-butyl ether	5.00	U	5.03	4.35	101	87.0	1	28.0-150			14.5	29
Naphthalene	5.00	U	4.00	3.37	80.0	67.4	1	12.0-156			17.1	35
Propene	5.00	U	3.47	2.62	69.4	52.4	1	10.0-160			27.9	29
n-Propylbenzene	5.00	U	4.83	3.49	96.6	69.8	1	31.0-154		J3	32.2	28
Styrene	5.00	U	4.17	2.80	83.4	56.0	1	33.0-155		J3	39.3	28
1,1,1,2-Tetrachloroethane	5.00	U	4.52	3.33	90.4	66.6	1	36.0-151		J3	30.3	29
1,1,2,2-Tetrachloroethane	5.00	U	5.16	4.88	103	97.6	1	33.0-150			5.58	28
1,1,2-Trichlorotrifluoroethane	5.00	U	5.19	3.32	104	66.4	1	23.0-160		J3	43.9	30
Tetrachloroethene	5.00	U	4.12	2.65	82.4	53.0	1	10.0-160		J3	43.4	27
Toluene	5.00	U	4.41	3.23	88.2	64.6	1	26.0-154		J3	30.9	28
1,2,3-Trichlorobenzene	5.00	U	4.78	4.07	95.6	81.4	1	17.0-150			16.0	36
1,2,4-Trichlorobenzene	5.00	U	4.48	3.76	89.6	75.2	1	24.0-150			17.5	33
1,1,1-Trichloroethane	5.00	U	4.76	3.39	95.2	67.8	1	23.0-160		J3	33.6	28
1,1,2-Trichloroethane	5.00	U	5.13	4.02	103	80.4	1	35.0-147			24.3	27
Trichloroethene	5.00	6.40	9.81	8.67	68.2	45.4	1	10.0-160			12.3	25
Trichlorofluoromethane	5.00	U	3.99	2.63	79.8	52.6	1	17.0-160		J3	41.1	31
1,2,3-Trichloropropane	5.00	U	5.00	4.19	100	83.8	1	34.0-151			17.6	29
1,2,4-Trimethylbenzene	5.00	U	4.63	3.39	92.6	67.8	1	26.0-154		J3	30.9	27
1,2,3-Trimethylbenzene	5.00	U	4.78	3.67	95.6	73.4	1	32.0-149			26.3	28
1,3,5-Trimethylbenzene	5.00	U	5.00	3.34	100	66.8	1	28.0-153		J3	39.8	27
Vinyl chloride	5.00	U	3.46	2.31	69.2	46.2	1	10.0-160		J3	39.9	27
Xylenes, Total	15.0	U	13.3	9.53	88.7	63.5	1	29.0-154		J3	33.0	28
(S) Toluene-d8					*108*	*109*		*80.0-120*				
(S) 4-Bromofluorobenzene					*101*	*103*		*77.0-126*				
(S) 1,2-Dichloroethane-d4					*104*	*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) R3837934-3 09/15/22 14:26

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

Method Blank (MB)

(MB) R3837934-3 09/15/22 14:26

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	*113*			*80.0-120*
(S) 4-Bromofluorobenzene	*105*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*105*			*70.0-130*

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

(LCS) R3837934-1 09/15/22 13:29 • (LCSD) R3837934-2 09/15/22 13:48

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	18.8	18.9	75.2	75.6	19.0-160			0.531	27
Acrolein	25.0	12.8	11.8	51.2	47.2	30.0-160			8.13	26
Acrylonitrile	25.0	20.6	20.1	82.4	80.4	55.0-149			2.46	20
Benzene	5.00	5.12	5.17	102	103	70.0-123			0.972	20
Bromobenzene	5.00	4.78	5.04	95.6	101	73.0-121			5.30	20
Bromodichloromethane	5.00	4.62	4.80	92.4	96.0	75.0-120			3.82	20
Bromoform	5.00	4.05	3.96	81.0	79.2	68.0-132			2.25	20
Bromomethane	5.00	5.27	5.45	105	109	30.0-160			3.36	25
1,3-Butadiene	5.00	4.88	5.10	97.6	102	45.0-147			4.41	20
n-Butylbenzene	5.00	4.81	5.15	96.2	103	73.0-125			6.83	20
sec-Butylbenzene	5.00	5.20	5.40	104	108	75.0-125			3.77	20
tert-Butylbenzene	5.00	5.07	5.29	101	106	76.0-124			4.25	20
Carbon tetrachloride	5.00	4.89	4.96	97.8	99.2	68.0-126			1.42	20
Carbon disulfide	5.00	4.90	5.14	98.0	103	61.0-128			4.78	20
Chlorobenzene	5.00	4.98	5.14	99.6	103	80.0-121			3.16	20
Chlorodibromomethane	5.00	4.19	4.31	83.8	86.2	77.0-125			2.82	20
Chloroethane	5.00	4.96	5.67	99.2	113	47.0-150			13.4	20
Chloroform	5.00	5.11	5.20	102	104	73.0-120			1.75	20
Chloromethane	5.00	5.08	5.08	102	102	41.0-142			0.000	20
Cyclohexane	5.00	5.00	5.21	100	104	71.0-124			4.11	20
2-Chlorotoluene	5.00	4.77	5.10	95.4	102	76.0-123			6.69	20
4-Chlorotoluene	5.00	4.79	5.06	95.8	101	75.0-122			5.48	20
1,2-Dibromo-3-Chloropropane	5.00	4.18	4.20	83.6	84.0	58.0-134			0.477	20
1,2-Dibromoethane	5.00	4.65	4.68	93.0	93.6	80.0-122			0.643	20
Dibromomethane	5.00	4.69	4.76	93.8	95.2	80.0-120			1.48	20
1,2-Dichlorobenzene	5.00	4.70	4.81	94.0	96.2	79.0-121			2.31	20
1,3-Dichlorobenzene	5.00	4.88	5.08	97.6	102	79.0-120			4.02	20
1,4-Dichlorobenzene	5.00	4.91	4.84	98.2	96.8	79.0-120			1.44	20
Dichlorodifluoromethane	5.00	4.81	4.84	96.2	96.8	51.0-149			0.622	20
1,1-Dichloroethane	5.00	5.04	5.12	101	102	70.0-126			1.57	20
1,2-Dichloroethane	5.00	4.65	4.75	93.0	95.0	70.0-128			2.13	20
1,1-Dichloroethene	5.00	4.99	5.22	99.8	104	71.0-124			4.51	20
cis-1,2-Dichloroethene	5.00	5.00	5.16	100	103	73.0-120			3.15	20
trans-1,2-Dichloroethene	5.00	5.29	5.44	106	109	73.0-120			2.80	20
1,2-Dichloropropane	5.00	5.00	5.09	100	102	77.0-125			1.78	20
1,1-Dichloropropene	5.00	5.05	5.31	101	106	74.0-126			5.02	20
1,3-Dichloropropane	5.00	4.76	4.91	95.2	98.2	80.0-120			3.10	20
cis-1,3-Dichloropropene	5.00	4.53	4.58	90.6	91.6	80.0-123			1.10	20
trans-1,3-Dichloropropene	5.00	4.33	4.49	86.6	89.8	78.0-124			3.63	20
2,2-Dichloropropane	5.00	5.71	5.60	114	112	58.0-130			1.95	20

WG1926858

QUALITY CONTROL SUMMARY

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

L1534502-01,02,04

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

(LCS) R3837934-1 09/15/22 13:29 • (LCSD) R3837934-2 09/15/22 13:48

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	ug/l	ug/l	ug/l	%	%	%			%	%
Dicyclopentadiene	5.00	5.01	5.24	100	105	74.0-126			4.49	20
Di-isopropyl ether	5.00	4.93	5.05	98.6	101	58.0-138			2.40	20
Ethylbenzene	5.00	5.02	5.27	100	105	79.0-123			4.86	20
4-Ethyltoluene	5.00	5.02	5.22	100	104	74.0-127			3.91	20
Hexachloro-1,3-butadiene	5.00	4.74	4.92	94.8	98.4	54.0-138			3.73	20
n-Hexane	5.00	5.08	5.22	102	104	57.0-133			2.72	20
Isopropylbenzene	5.00	5.15	5.27	103	105	76.0-127			2.30	20
p-Isopropyltoluene	5.00	5.05	5.37	101	107	76.0-125			6.14	20
2-Butanone (MEK)	25.0	20.2	20.5	80.8	82.0	44.0-160			1.47	20
Methyl Cyclohexane	5.00	5.04	5.28	101	106	68.0-126			4.65	20
Methylene Chloride	5.00	4.91	5.14	98.2	103	67.0-120			4.58	20
4-Methyl-2-pentanone (MIBK)	25.0	23.9	24.0	95.6	96.0	68.0-142			0.418	20
Methyl tert-butyl ether	5.00	4.91	4.84	98.2	96.8	68.0-125			1.44	20
Naphthalene	5.00	4.02	4.02	80.4	80.4	54.0-135			0.000	20
Propene	5.00	3.42	3.71	68.4	74.2	30.0-160			8.13	20
n-Propylbenzene	5.00	4.92	5.16	98.4	103	77.0-124			4.76	20
Styrene	5.00	4.95	5.07	99.0	101	73.0-130			2.40	20
1,1,1,2-Tetrachloroethane	5.00	4.59	4.71	91.8	94.2	75.0-125			2.58	20
1,1,2,2-Tetrachloroethane	5.00	4.47	4.64	89.4	92.8	65.0-130			3.73	20
1,1,2-Trichlorotrifluoroethane	5.00	4.89	5.11	97.8	102	69.0-132			4.40	20
Tetrachloroethene	5.00	5.13	5.55	103	111	72.0-132			7.87	20
Toluene	5.00	4.89	5.07	97.8	101	79.0-120			3.61	20
1,2,3-Trichlorobenzene	5.00	4.81	4.86	96.2	97.2	50.0-138			1.03	20
1,2,4-Trichlorobenzene	5.00	4.49	4.46	89.8	89.2	57.0-137			0.670	20
1,1,1-Trichloroethane	5.00	4.93	5.12	98.6	102	73.0-124			3.78	20
1,1,2-Trichloroethane	5.00	4.79	4.95	95.8	99.0	80.0-120			3.29	20
Trichloroethene	5.00	5.02	5.27	100	105	78.0-124			4.86	20
Trichlorofluoromethane	5.00	5.06	5.15	101	103	59.0-147			1.76	20
1,2,3-Trichloropropane	5.00	4.62	4.78	92.4	95.6	73.0-130			3.40	20
1,2,4-Trimethylbenzene	5.00	4.90	5.15	98.0	103	76.0-121			4.98	20
1,2,3-Trimethylbenzene	5.00	4.91	5.06	98.2	101	77.0-120			3.01	20
1,3,5-Trimethylbenzene	5.00	4.66	4.99	93.2	99.8	76.0-122			6.84	20
Vinyl chloride	5.00	4.94	4.97	98.8	99.4	67.0-131			0.605	20
Xylenes, Total	15.0	15.3	15.9	102	106	79.0-123			3.85	20
(S) Toluene-d8				*111*	*112*	*80.0-120*				
(S) 4-Bromofluorobenzene				*104*	*108*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*107*	*107*	*70.0-130*				

Method Blank (MB)

(MB) R3840126-3 09/18/22 19:32

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
Trichloroethene	U		0.190	1.00
(S) Toluene-d8	*97.2*			*80.0-120*
(S) 4-Bromofluorobenzene	*98.4*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*111*			*70.0-130*

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

(LCS) R3840126-1 09/18/22 18:09 • (LCSD) R3840126-2 09/18/22 19:10

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	5.01	5.10	100	102	78.0-124			1.78	20
(S) Toluene-d8				*95.1*	*95.1*	*80.0-120*				
(S) 4-Bromofluorobenzene				*99.2*	*99.7*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*111*	*110*	*70.0-130*				

Method Blank (MB)

(MB) R3839848-3 09/15/22 18:02

	MB Result	**MB Qualifier**	MB MDL	MB RDL
Analyte	ug/l		ug/l	ug/l
1,4-Dioxane	U		0.597	3.00
(S) Toluene-d8	*99.8*			*77.0-127*

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

(LCS) R3839848-1 09/15/22 16:40 • (LCSD) R3839848-2 09/15/22 17:22

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	**LCS Qualifier**	**LCSD Qualifier**	RPD	RPD Limits
Analyte	ug/l	ug/l	ug/l	%	%	%			%	%
1,4-Dioxane	50.0	29.9	30.5	59.8	61.0	55.0-138			1.99	24
(S) Toluene-d8				*98.9*	*97.7*	*77.0-127*				

L1534502-10 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534502-10 09/15/22 22:31 • (MS) R3839848-4 09/16/22 02:11 • (MSD) R3839848-5 09/16/22 02:31

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	**MS Qualifier**	**MSD Qualifier**	RPD	RPD Limits
Analyte	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
1,4-Dioxane	50.0	U	70.4	47.4	141	94.8	1	13.0-160		J3	39.0	31
(S) Toluene-d8					*100*	*99.4*		*77.0-127*				

Method Blank (MB)

(MB) R3840007-2 09/19/22 15:29

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL 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) R3840007-1 09/19/22 14:01 • (LCSD) R3840007-3 09/19/22 15:49

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 %
1,4-Dioxane	50.0	46.7	34.4	93.4	68.8	55.0-138		J3	30.3	24
(S) Toluene-d8				*102*	*102*	*77.0-127*				

Method Blank (MB)

(MB) R3840617-3 09/22/22 16:36

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
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) R3840617-1 09/22/22 15:08 • (LCSD) R3840617-2 09/22/22 15:27

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 %
1,4-Dioxane	50.0	50.4	38.7	101	77.4	55.0-138		J3	26.3	24
(S) Toluene-d8				*103*	*103*	*77.0-127*				

Method Blank (MB)

(MB) R3840618-3 09/22/22 16:36

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	ug/l		ug/l	ug/l
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) R3840618-1 09/22/22 15:08 • (LCSD) R3840618-2 09/22/22 15:27

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	ug/l	ug/l	ug/l	%	%	%			%	%
1,4-Dioxane	50.0	50.4	38.7	101	77.4	55.0-138		J3	26.3	24
(S) Toluene-d8				*103*	*103*	*77.0-127*				

L1534502-19 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1534502-19 09/22/22 17:34 • (MS) R3840618-4 09/22/22 17:54 • (MSD) R3840618-5 09/22/22 18:14

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	ug/l	ug/l	ug/l	ug/l	%	%		%			%	%
1,4-Dioxane	50.0	8.21	49.5	38.1	82.6	59.8	1	13.0-160			26.0	31
(S) Toluene-d8					*102*	*103*		*77.0-127*				

Instrument: VOCMS21 • File ID: 0914_02

09/14/22 08:56

Sample ID	File ID	8260-FLUOROBENZENE Response	8260-CHLOROBENZENE-D5 Response	8260-1,4-DICHLOROBENZENE-D4 Response
Standard	0914_02	135225	63691	56731
Upper Limit		270450	127382	113462
Lower Limit		67613	31846	28366
LCS R3838411-1 WG1925641 1x	0914_02LCS	135225	63691	56731
LCSD R3838411-2 WG1925641 1x	0914_03	136515	60847	55102
BLANK R3838411-3 WG1925641 1x	0914_05	130580	56712	52826
L1534502-23 WG1925641 1x	0914_09	129166	56927	49060
L1534502-14 WG1925641 1x	0914_15	131086	56824	54289
L1534502-15 WG1925641 1x	0914_16	129408	58037	50374
L1534502-17 WG1925641 1x	0914_17	130771	57406	49748
L1534502-18 WG1925641 1x	0914_18	129733	56067	48968
L1534502-19 WG1925641 1x	0914_19	129901	56666	51120
L1534502-21 WG1925641 1x	0914_20	129463	57058	49687
L1534502-22 WG1925641 1x	0914_21	127876	56970	49902
L1534502-16 WG1925641 10x	0914_24	128211	56500	47465
L1534502-20 WG1925641 100x	0914_25	129468	56919	51202
MS R3838411-4 WG1925641 1x	0914_28	138665	64467	58436
MSD R3838411-5 WG1925641 1x	0914_29	137159	63176	57264

Instrument: VOCMS25 • File ID: 0915_27

09/15/22 13:29

Sample ID	File ID	8260-FLUOROBENZENE Response	8260-CHLOROBENZENE-D5 Response	8260-1,4-DICHLOROBENZENE-D4 Response
Standard	0915_27	465033	195734	204321
Upper Limit		930066	391468	408642
Lower Limit		232517	97867	102161
LCS R3837934-1 WG1926858 1x	0915_27LCSB	465033	195734	204321
LCSD R3837934-2 WG1926858 1x	0915_28B	473840	198745	204695
BLANK R3837934-3 WG1926858 1x	0915_30B	488386	199812	198939
L1534502-01 WG1926858 1x	0915_54	471518	188776	184298
L1534502-02 WG1926858 1x	0915_55	466640	184599	157836
L1534502-04 WG1926858 20x	0915_56	486903	194384	176267

Instrument: VOCMS26 • File ID: 0918A_02

09/18/22 18:09

Sample ID	File ID	8260-FLUOROBENZENE Response	8260-CHLOROBENZENE-D5 Response	8260-1,4-DICHLOROBENZENE-D4 Response
Standard	0918A_02	384267	186697	181326
Upper Limit		768534	373394	362652
Lower Limit		192134	93349	90663
LCS R3840126-1 WG1928174 1x	0918A_02LCSA	384267	186697	181326
LCSD R3840126-2 WG1928174 1x	0918A_05A	397024	192820	188749
BLANK R3840126-3 WG1928174 1x	0918A_06A	384459	183981	172699
L1534502-19 WG1928174 1x	0918A_10	364485	175411	161618
L1534502-21 WG1928174 1x	0918A_11	358402	167671	161045
L1534502-18 WG1928174 25x	0918A_12	360002	172686	164111

Instrument: VOCMS39 • File ID: 0913_02

09/13/22 09:55

Sample ID	File ID	8260-FLUOROBENZENE Response	8260-CHLOROBENZENE-D5 Response	8260-1,4-DICHLOROBENZENE-D4 Response
Standard	0913_02	318900.80	117263.10	120215.40
Upper Limit		637802	234526	240431
Lower Limit		159450	58632	60108
LCS R3837498-1 WG1925636 1x	0913_02LCS	318900.80	117263.10	120215.40
LCSD R3837498-2 WG1925636 1x	0913_03	326116.70	122575.90	127066.20
BLANK R3837498-3 WG1925636 1x	0913_06	283768.20	99561.50	114624.50
L1534502-05 WG1925636 1x	0913_15	260542.70	96467.40	98766
L1534502-06 WG1925636 1x	0913_16	265736.90	93721.50	102806.80
L1534502-07 WG1925636 1x	0913_17	260909.30	91380.30	97058.70
L1534502-08 WG1925636 1x	0913_18	272013	91407.30	107219.60
L1534502-09 WG1925636 1x	0913_19	246856.60	87229.70	93605.70
L1534502-10 WG1925636 1x	0913_20	254466.30	87381.70	102946.40
L1534502-11 WG1925636 1x	0913_21	251509.70	86339.80	95473.40
L1534502-12 WG1925636 1x	0913_22	244242.30	81023	89155.40
L1534502-13 WG1925636 1x	0913_23	249392.20	85623.10	94941
L1534502-03 WG1925636 100x	0913_26	250813	83040.50	91814.50
MS R3837498-4 WG1925636 1x	0913_28	261474.50	96165.10	109965.70
MSD R3837498-5 WG1925636 1x	0913_29	266276.60	96646.60	104636

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

Instrument: VOCMS27 • File ID: 0915A_02

09/15/22 16:20

Sample ID	File ID	8260-FLUOROBENZENE Response
Standard	0915A_02	1401343
Upper Limit		2802686
Lower Limit		700672
LCS R3839848-1 WG1926871 1x	0915A_03	1578470
LCSD R3839848-2 WG1926871 1x	0915A_04	1490008
BLANK R3839848-3 WG1926871 1x	0915A_06	1291998
L1534502-01 WG1926871 1x	0915A_07	1644881
L1534502-02 WG1926871 1x	0915A_08	1426538
L1534502-03 WG1926871 1x	0915A_09	1138477
L1534502-04 WG1926871 1x	0915A_10	1334868
L1534502-05 WG1926871 1x	0915A_11	1375384
L1534502-06 WG1926871 1x	0915A_12	972690
L1534502-07 WG1926871 1x	0915A_13	1123076
L1534502-08 WG1926871 1x	0915A_14	1215824
L1534502-09 WG1926871 1x	0915A_15	1283018
L1534502-10 WG1926871 1x	0915A_16	1388917
L1534502-11 WG1926871 1x	0915A_17	1368315
L1534502-12 WG1926871 1x	0915A_18	1302708
L1534502-13 WG1926871 1x	0915A_19	1243084
L1534502-14 WG1926871 1x	0915A_20	1321779
L1534502-15 WG1926871 1x	0915A_21	1143084
L1534502-16 WG1926871 1x	0915A_22	1244053
L1534502-17 WG1926871 1x	0915A_23	1314318
L1534502-18 WG1926871 1x	0915A_24	1255771
L1534502-21 WG1926871 1x	0915A_26	1388712
MS R3839848-4 WG1926871 1x	0915A_27	1086072
MSD R3839848-5 WG1926871 1x	0915A_28	1141735

Instrument: VOCMS27 • File ID: 0919_04

09/19/22 13:41

Sample ID	File ID	8260-FLUOROBENZENE Response
Standard	0919_04	1252321
Upper Limit		2504642
Lower Limit		626161

Instrument: VOCMS27 • File ID: 0919_04

09/19/22 13:41

Sample ID	File ID	8260-FLUOROBENZENE Response
LCS R3840007-1 WG1928694 1x	0919_05	1358259
BLANK R3840007-2 WG1928694 1x	0919_07	1332131
LCSD R3840007-3 WG1928694 1x	0919_08	1321181
L1534502-22 WG1928694 1x	0919_13	1089481

Instrument: VOCMS27 • File ID: 0922_03

09/22/22 14:48

Sample ID	File ID	8260-FLUOROBENZENE Response
Standard	0922_03	1227321
Upper Limit		2454642
Lower Limit		613661
LCS R3840618-1 WG1930402 1x	0922_04	1044160
LCS R3840617-1 WG1930191 1x	0922_04A	1044160
LCSD R3840618-2 WG1930402 1x	0922_05	1057299
LCSD R3840617-2 WG1930191 1x	0922_05A	1057299
BLANK R3840618-3 WG1930402 1x	0922_07	1142948
BLANK R3840617-3 WG1930191 1x	0922_07A	1142948
L1534502-20 WG1930191 50x	0922_08	1152634
L1534502-19 WG1930402 1x	0922_09	1318289
MS R3840618-4 WG1930402 1x	0922_10	897953
MSD R3840618-5 WG1930402 1x	0922_11	1115491

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.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

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	LAO00356
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 3

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 # 1534502

E075

Acctnum: **PINYONMAZ**
Template:**T205653**
Prelogin: **P947435**
PM: **288 - Daphne Richards**
PB:
Shipped Via:

Report to:
Jeremy Musson

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

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately
Packed on Ice N ____ Y ✓

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

Quote #

Date Results Needed
Standard TAT

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	PERCHLORATE 125mlHDPE-NoPres	V8260AZ 40mlAmb-HCl	V8260LL14D 40mlAmb-HCl								Remarks	Sample # (lab only)
TTU-EXT-1-69-20220908		GW	69	9/8/22	0910	7	✓	✓	✓									-01
TTU-EXT-2-74-20220908		GW	74	9/8/22	0846	7	✓	✓	✓									-02
TTU-EXT-3-76-20220908		GW	76	9/8/22	0819	7	✓	✓	✓									-03
TTU-EXT-4-77-20220908		GW	77	9/8/22	0754	7	✓	✓	✓									-04
TTU-EXT-5-80-20220908		GW	80	9/8/22	0714	7	✓	✓	✓									-05
DUP-02		GW	80	9/8/22	0719	7	✓	✓	✓									-06
TTU-3-108-20220909		GW	108	9/9/22	1158	7	✓	✓	✓									-07
TTU-4-57-20220909		GW	57	9/9/22	1032	7	✓	✓	✓									-08
TTU-5-110-20220908		GW	110	9/8/22	1246	7	✓	✓	✓									-09
TTU-6-143-20220909		GW	143	9/9/22	1135	14	✓	✓	✓								MS/MSD	-10

* 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 #

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: ✓Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: ✓Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: [✓ Yes] / No [✓ HCL] / MeoH TBR 1	
Relinquished by : (Signature)	Date: 9/9/22	Time: 1617	Received by: (Signature)	Temp: °C Bottles Received: 167	If preservation required by Login: Date/Time
	Date: 9/9/22	Time: 1800			
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Matt	Date: 9-10-22 Time: 09^00	Hold:	Condition: NCF / [✓ OK]

Company Name/Address:
Pinyon Environmental

4815 E. Carefree Highway
#108-274
Cave Creek. AZ 85331

Report to:
Jeremy Musson

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

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

Pres Chk

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 Boesen

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N ____ Y ✓

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

Quote #

Date Results Needed: Standard TAT

Chain of Custody Page 2 of 3

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 # L1534502

Table #

Acctnum: **PINYONMAZ**
Template: **T205653**
Prelogin: **P947435**
PM: **288 - Daphne Richards**
PB:
Shipped Via:

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	PERCHLORATE 125mlHDPE-NoPres	V8260AZ 40mlAmb-HCl	V8260LL14D 40mlAmb-HCl								Remarks	Sample # (lab only)
TTU-7-345-20220909		GW	345	9/9/22	1100	7	✓	✓	✓									-11
TTU-8-164-20220909		GW	164	9/9/22	1000	7	✓	✓	✓									-12
DUP-03		GW	164	9/9/22	1000	7	✓	✓	✓									-13
TTU-9A-61-20220908		GW	61	9/8/22	1145	7	✓	✓	✓									-14
TTU-10-165-20220909		GW	165	9/9/22	1246	7	✓	✓	✓									-15
TTU-12-82-20220909		GW	82	9/9/22	0810	7	✓	✓	✓									-16
TTU-13-51-20220908		GW	51	9/8/22	1210	7	✓	✓	✓									-17
TTU-14-64-20220909		GW	64	9/9/22	0745	7	✓	✓	✓									-18
TTU-15-75-20220908		GW	75	9/8/22	1019	14	✓	✓	✓								MS/MSD	-19
TTU-16-80-20220908		GW	80	9/8/22	1108	7	✓	✓	✓									-20

* 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: __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

Samples returned via:
__ UPS __ FedEx __ Courier ________

Tracking #

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)		
	9/9/22	1615		Trip Blank Received: [✓ Yes] / No [✓ HCL] / MeoH TBR 1	
Relinquished by : (Signature)	Date: 9/9/22	Time: 1800	Received by: (Signature)	Temp: °C Bottles Received: 167	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 9-10-22 Time: 0900	Hold: Condition: NCF / [✓ OK]

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	Chain of Custody Page 3 of 3 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
Report to: Jeremy Musson	Email To: guarnieri@pinyon-env.com;musson@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

Site/Facility ID #

P.O. #

Collected by (print): Ben Boesen

Collected by (signature):

Immediately Packed on Ice N___ Y ✓

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

Quote #

Date Results Needed: Standard TAT

SDG # 1534502

Table #

Acctnum: PINYONMAZ

Template: T205653

Prelogin: P947435

PM: 288 - Daphne Richards

PB:

Shipped Via:

Analysis / Container / Preservative

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	PERCHLORATE 125mlHDPE-NoPres	V8260AZ 40mlAmb-HCl	V8260LL14D 40mlAmb-HCl								Remarks	Sample # (lab only)
TTU-17-80-20220908		GW	80	9/8/22	0947	7	✓	✓	✓									-21
PF-2-400-20220909		GW	400	9/9/22	1330	6		✓	✓									-22
Trip Blank		GW				1		✓										-23
Temp Blank		GW				~~1~~0												
		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 #

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: ✓Y __N
If Applicable
VOA Zero Headspace: ✓Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: ✓Y __N

Relinquished by : (Signature)	Date: 9/9/22	Time: 1617	Received by: (Signature)	Trip Blank Received: [✓ Yes] / No HCL / MeOH TBR 1
Relinquished by : (Signature)	Date: 9/9/22	Time: 1800	Received by: (Signature)	Temp: °C Bottles Received: 167
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) Matt	Date: 9-10-22 Time: 0900

If preservation required by Login: Date/Time

Hold:

Condition: NCF / [✓ OK]

L1534502

Tracking Numbers	Temperature
5913 6269 4211	NSA7 2.5
4233	NSA7 3.3

ANALYTICAL REPORT

October 20, 2022

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: L1545901
Samples Received: 10/13/2022
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 R Richards

Daphne Richards
Project Manager

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

TABLE OF CONTENTS

SAMPLE SUMMARY

TTU-2-114-20221010 L1545901-01 GW

Collected by	Collected date/time	Received date/time
Isabella Foster	10/10/22 15:43	10/13/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1944313	5000	10/18/22 04:37	10/18/22 04:37	SL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1943510	20	10/16/22 04:18	10/16/22 04:18	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1942212	10	10/13/22 16:34	10/13/22 16:34	ADM	Mt. Juliet, TN

TTU-1-50-20221011 L1545901-02 GW

Collected by	Collected date/time	Received date/time
Isabella Foster	10/11/22 16:46	10/13/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1944313	500	10/18/22 03:35	10/18/22 03:35	SL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1943510	1	10/15/22 23:52	10/15/22 23:52	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1942212	1	10/13/22 15:54	10/13/22 15:54	ADM	Mt. Juliet, TN

DUP-01 L1545901-03 GW

Collected by	Collected date/time	Received date/time
Isabella Foster	10/11/22 16:46	10/13/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG1944313	500	10/18/22 06:02	10/18/22 06:02	SL	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1943510	1	10/16/22 00:13	10/16/22 00:13	DAH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B-SIM	WG1942212	1	10/13/22 16:14	10/13/22 16:14	ADM	Mt. Juliet, TN

TRIP BLANK L1545901-04 GW

Collected by	Collected date/time	Received date/time
Isabella Foster	10/11/22 00:00	10/13/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Volatile Organic Compounds (GC/MS) by Method 8260B	WG1943510	1	10/15/22 23:11	10/15/22 23:11	DAH	Mt. Juliet, TN

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

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 R Richards

Daphne Richards
Project Manager

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

Wet Chemistry by Method 314.0 Mod

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Perchlorate	157000		1500	20000	5000	10/18/2022 04:37	WG1944313

Sample Narrative:

L1545901-01 WG1944313: 5000x

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U	J4	226	1000	20	10/16/2022 04:18	WG1943510
Acrolein	U	J5	50.8	1000	20	10/16/2022 04:18	WG1943510
Acrylonitrile	U	J4	13.4	200	20	10/16/2022 04:18	WG1943510
Benzene	U		1.88	20.0	20	10/16/2022 04:18	WG1943510
Bromobenzene	U		2.36	20.0	20	10/16/2022 04:18	WG1943510
Bromodichloromethane	U		2.72	20.0	20	10/16/2022 04:18	WG1943510
Bromoform	U		2.58	20.0	20	10/16/2022 04:18	WG1943510
Bromomethane	U		12.1	100	20	10/16/2022 04:18	WG1943510
1,3-Butadiene	U		5.98	40.0	20	10/16/2022 04:18	WG1943510
n-Butylbenzene	U		3.14	20.0	20	10/16/2022 04:18	WG1943510
sec-Butylbenzene	U		2.50	20.0	20	10/16/2022 04:18	WG1943510
tert-Butylbenzene	U		2.54	20.0	20	10/16/2022 04:18	WG1943510
Carbon tetrachloride	U		2.56	20.0	20	10/16/2022 04:18	WG1943510
Carbon disulfide	U	J3	1.92	20.0	20	10/16/2022 04:18	WG1943510
Chlorobenzene	U		2.32	20.0	20	10/16/2022 04:18	WG1943510
Chlorodibromomethane	U		2.80	20.0	20	10/16/2022 04:18	WG1943510
Chloroethane	U		3.84	100	20	10/16/2022 04:18	WG1943510
Chloroform	U		2.22	100	20	10/16/2022 04:18	WG1943510
Chloromethane	U		19.2	50.0	20	10/16/2022 04:18	WG1943510
Cyclohexane	U		3.76	20.0	20	10/16/2022 04:18	WG1943510
2-Chlorotoluene	U		2.12	20.0	20	10/16/2022 04:18	WG1943510
4-Chlorotoluene	U		2.28	20.0	20	10/16/2022 04:18	WG1943510
1,2-Dibromo-3-Chloropropane	U		5.52	100	20	10/16/2022 04:18	WG1943510
1,2-Dibromoethane	U		2.52	20.0	20	10/16/2022 04:18	WG1943510
Dibromomethane	U		2.44	20.0	20	10/16/2022 04:18	WG1943510
1,2-Dichlorobenzene	U		2.14	20.0	20	10/16/2022 04:18	WG1943510
1,3-Dichlorobenzene	U		2.20	20.0	20	10/16/2022 04:18	WG1943510
1,4-Dichlorobenzene	U		2.40	20.0	20	10/16/2022 04:18	WG1943510
Dichlorodifluoromethane	U		7.48	100	20	10/16/2022 04:18	WG1943510
1,1-Dichloroethane	U		2.00	20.0	20	10/16/2022 04:18	WG1943510
1,2-Dichloroethane	U		1.64	20.0	20	10/16/2022 04:18	WG1943510
1,1-Dichloroethene	86.3		3.76	20.0	20	10/16/2022 04:18	WG1943510
cis-1,2-Dichloroethene	U		2.52	20.0	20	10/16/2022 04:18	WG1943510
trans-1,2-Dichloroethene	U	J3	2.98	20.0	20	10/16/2022 04:18	WG1943510
1,2-Dichloropropane	U		2.98	20.0	20	10/16/2022 04:18	WG1943510
1,1-Dichloropropene	U		2.84	20.0	20	10/16/2022 04:18	WG1943510
1,3-Dichloropropane	U		2.20	20.0	20	10/16/2022 04:18	WG1943510
cis-1,3-Dichloropropene	U		2.22	20.0	20	10/16/2022 04:18	WG1943510
trans-1,3-Dichloropropene	U		2.36	20.0	20	10/16/2022 04:18	WG1943510
2,2-Dichloropropane	U		3.22	20.0	20	10/16/2022 04:18	WG1943510
Dicyclopentadiene	U		5.06	20.0	20	10/16/2022 04:18	WG1943510
Di-isopropyl ether	U		2.10	20.0	20	10/16/2022 04:18	WG1943510
Ethylbenzene	U		2.74	20.0	20	10/16/2022 04:18	WG1943510
4-Ethyltoluene	U		4.16	20.0	20	10/16/2022 04:18	WG1943510
Hexachloro-1,3-butadiene	U		6.74	20.0	20	10/16/2022 04:18	WG1943510
n-Hexane	U	J4	15.0	200	20	10/16/2022 04:18	WG1943510
Isopropylbenzene	U		2.10	20.0	20	10/16/2022 04:18	WG1943510

TTU-2-114-20221010

Collected date/time: 10/10/22 15:43

SAMPLE RESULTS - 01

L1545901

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
p-Isopropyltoluene	U		2.40	20.0	20	10/16/2022 04:18	WG1943510
2-Butanone (MEK)	U		23.8	200	20	10/16/2022 04:18	WG1943510
Methyl Cyclohexane	U		13.2	20.0	20	10/16/2022 04:18	WG1943510
Methylene Chloride	U		8.60	100	20	10/16/2022 04:18	WG1943510
4-Methyl-2-pentanone (MIBK)	U		9.56	200	20	10/16/2022 04:18	WG1943510
Methyl tert-butyl ether	U		2.02	20.0	20	10/16/2022 04:18	WG1943510
Naphthalene	U		20.0	100	20	10/16/2022 04:18	WG1943510
Propene	U		18.7	50.0	20	10/16/2022 04:18	WG1943510
n-Propylbenzene	U		1.99	20.0	20	10/16/2022 04:18	WG1943510
Styrene	U		2.36	20.0	20	10/16/2022 04:18	WG1943510
1,1,1,2-Tetrachloroethane	U		2.94	20.0	20	10/16/2022 04:18	WG1943510
1,1,2,2-Tetrachloroethane	U		2.66	20.0	20	10/16/2022 04:18	WG1943510
1,1,2-Trichlorotrifluoroethane	U		3.60	20.0	20	10/16/2022 04:18	WG1943510
Tetrachloroethene	U		6.00	20.0	20	10/16/2022 04:18	WG1943510
Toluene	U		5.56	20.0	20	10/16/2022 04:18	WG1943510
1,2,3-Trichlorobenzene	U		4.60	20.0	20	10/16/2022 04:18	WG1943510
1,2,4-Trichlorobenzene	U		9.62	20.0	20	10/16/2022 04:18	WG1943510
1,1,1-Trichloroethane	U		2.98	20.0	20	10/16/2022 04:18	WG1943510
1,1,2-Trichloroethane	U		3.16	20.0	20	10/16/2022 04:18	WG1943510
Trichloroethene	596	V	3.80	20.0	20	10/16/2022 04:18	WG1943510
Trichlorofluoromethane	U		3.20	100	20	10/16/2022 04:18	WG1943510
1,2,3-Trichloropropane	U		4.74	50.0	20	10/16/2022 04:18	WG1943510
1,2,4-Trimethylbenzene	U		6.44	20.0	20	10/16/2022 04:18	WG1943510
1,2,3-Trimethylbenzene	U		2.08	20.0	20	10/16/2022 04:18	WG1943510
1,3,5-Trimethylbenzene	U		2.08	20.0	20	10/16/2022 04:18	WG1943510
Vinyl chloride	U		4.68	20.0	20	10/16/2022 04:18	WG1943510
Xylenes, Total	U		3.48	60.0	20	10/16/2022 04:18	WG1943510
(S) Toluene-d8	*111*			*80.0-120*		*10/16/2022 04:18*	WG1943510
(S) 4-Bromofluorobenzene	*92.0*			*77.0-126*		*10/16/2022 04:18*	WG1943510
(S) 1,2-Dichloroethane-d4	*125*			*70.0-130*		*10/16/2022 04:18*	WG1943510

Sample Narrative:

L1545901-01 WG1943510: Non-target compounds too high to run at a lower dilution.

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
1,4-Dioxane	170		5.97	30.0	10	10/13/2022 16:34	WG1942212
(S) Toluene-d8	*97.8*			*77.0-127*		*10/13/2022 16:34*	WG1942212

Wet Chemistry by Method 314.0 Mod

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Perchlorate	11300		150	2000	500	10/18/2022 03:35	WG1944313

Sample Narrative:

L1545901-02 WG1944313: 500x

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U	J4	11.3	50.0	1	10/15/2022 23:52	WG1943510
Acrolein	U		2.54	50.0	1	10/15/2022 23:52	WG1943510
Acrylonitrile	U	J4	0.671	10.0	1	10/15/2022 23:52	WG1943510
Benzene	U		0.0941	1.00	1	10/15/2022 23:52	WG1943510
Bromobenzene	U		0.118	1.00	1	10/15/2022 23:52	WG1943510
Bromodichloromethane	U		0.136	1.00	1	10/15/2022 23:52	WG1943510
Bromoform	U		0.129	1.00	1	10/15/2022 23:52	WG1943510
Bromomethane	U		0.605	5.00	1	10/15/2022 23:52	WG1943510
1,3-Butadiene	U		0.299	2.00	1	10/15/2022 23:52	WG1943510
n-Butylbenzene	U		0.157	1.00	1	10/15/2022 23:52	WG1943510
sec-Butylbenzene	U		0.125	1.00	1	10/15/2022 23:52	WG1943510
tert-Butylbenzene	U		0.127	1.00	1	10/15/2022 23:52	WG1943510
Carbon tetrachloride	U		0.128	1.00	1	10/15/2022 23:52	WG1943510
Carbon disulfide	U		0.0962	1.00	1	10/15/2022 23:52	WG1943510
Chlorobenzene	U		0.116	1.00	1	10/15/2022 23:52	WG1943510
Chlorodibromomethane	U		0.140	1.00	1	10/15/2022 23:52	WG1943510
Chloroethane	U		0.192	5.00	1	10/15/2022 23:52	WG1943510
Chloroform	U		0.111	5.00	1	10/15/2022 23:52	WG1943510
Chloromethane	U		0.960	2.50	1	10/15/2022 23:52	WG1943510
Cyclohexane	U		0.188	1.00	1	10/15/2022 23:52	WG1943510
2-Chlorotoluene	U		0.106	1.00	1	10/15/2022 23:52	WG1943510
4-Chlorotoluene	U		0.114	1.00	1	10/15/2022 23:52	WG1943510
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	10/15/2022 23:52	WG1943510
1,2-Dibromoethane	U		0.126	1.00	1	10/15/2022 23:52	WG1943510
Dibromomethane	U		0.122	1.00	1	10/15/2022 23:52	WG1943510
1,2-Dichlorobenzene	U		0.107	1.00	1	10/15/2022 23:52	WG1943510
1,3-Dichlorobenzene	U		0.110	1.00	1	10/15/2022 23:52	WG1943510
1,4-Dichlorobenzene	U		0.120	1.00	1	10/15/2022 23:52	WG1943510
Dichlorodifluoromethane	U	J3	0.374	5.00	1	10/15/2022 23:52	WG1943510
1,1-Dichloroethane	U		0.100	1.00	1	10/15/2022 23:52	WG1943510
1,2-Dichloroethane	U		0.0819	1.00	1	10/15/2022 23:52	WG1943510
1,1-Dichloroethene	1.06		0.188	1.00	1	10/15/2022 23:52	WG1943510
cis-1,2-Dichloroethene	U		0.126	1.00	1	10/15/2022 23:52	WG1943510
trans-1,2-Dichloroethene	U		0.149	1.00	1	10/15/2022 23:52	WG1943510
1,2-Dichloropropane	U		0.149	1.00	1	10/15/2022 23:52	WG1943510
1,1-Dichloropropene	U		0.142	1.00	1	10/15/2022 23:52	WG1943510
1,3-Dichloropropane	U		0.110	1.00	1	10/15/2022 23:52	WG1943510
cis-1,3-Dichloropropene	U		0.111	1.00	1	10/15/2022 23:52	WG1943510
trans-1,3-Dichloropropene	U		0.118	1.00	1	10/15/2022 23:52	WG1943510
2,2-Dichloropropane	U		0.161	1.00	1	10/15/2022 23:52	WG1943510
Dicyclopentadiene	U		0.253	1.00	1	10/15/2022 23:52	WG1943510
Di-isopropyl ether	U		0.105	1.00	1	10/15/2022 23:52	WG1943510
Ethylbenzene	U		0.137	1.00	1	10/15/2022 23:52	WG1943510
4-Ethyltoluene	U		0.208	1.00	1	10/15/2022 23:52	WG1943510
Hexachloro-1,3-butadiene	U		0.337	1.00	1	10/15/2022 23:52	WG1943510
n-Hexane	U	J4	0.749	10.0	1	10/15/2022 23:52	WG1943510
Isopropylbenzene	U		0.105	1.00	1	10/15/2022 23:52	WG1943510

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
p-Isopropyltoluene	U		0.120	1.00	1	10/15/2022 23:52	WG1943510
2-Butanone (MEK)	U		1.19	10.0	1	10/15/2022 23:52	WG1943510
Methyl Cyclohexane	U		0.660	1.00	1	10/15/2022 23:52	WG1943510
Methylene Chloride	U		0.430	5.00	1	10/15/2022 23:52	WG1943510
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	10/15/2022 23:52	WG1943510
Methyl tert-butyl ether	U		0.101	1.00	1	10/15/2022 23:52	WG1943510
Naphthalene	U		1.00	5.00	1	10/15/2022 23:52	WG1943510
Propene	U	J3	0.936	2.50	1	10/15/2022 23:52	WG1943510
n-Propylbenzene	U		0.0993	1.00	1	10/15/2022 23:52	WG1943510
Styrene	U		0.118	1.00	1	10/15/2022 23:52	WG1943510
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	10/15/2022 23:52	WG1943510
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	10/15/2022 23:52	WG1943510
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	10/15/2022 23:52	WG1943510
Tetrachloroethene	U		0.300	1.00	1	10/15/2022 23:52	WG1943510
Toluene	U		0.278	1.00	1	10/15/2022 23:52	WG1943510
1,2,3-Trichlorobenzene	U		0.230	1.00	1	10/15/2022 23:52	WG1943510
1,2,4-Trichlorobenzene	U		0.481	1.00	1	10/15/2022 23:52	WG1943510
1,1,1-Trichloroethane	U		0.149	1.00	1	10/15/2022 23:52	WG1943510
1,1,2-Trichloroethane	U		0.158	1.00	1	10/15/2022 23:52	WG1943510
Trichloroethene	5.13		0.190	1.00	1	10/15/2022 23:52	WG1943510
Trichlorofluoromethane	U		0.160	5.00	1	10/15/2022 23:52	WG1943510
1,2,3-Trichloropropane	U		0.237	2.50	1	10/15/2022 23:52	WG1943510
1,2,4-Trimethylbenzene	U		0.322	1.00	1	10/15/2022 23:52	WG1943510
1,2,3-Trimethylbenzene	U		0.104	1.00	1	10/15/2022 23:52	WG1943510
1,3,5-Trimethylbenzene	U		0.104	1.00	1	10/15/2022 23:52	WG1943510
Vinyl chloride	U	J3	0.234	1.00	1	10/15/2022 23:52	WG1943510
Xylenes, Total	U		0.174	3.00	1	10/15/2022 23:52	WG1943510
(S) Toluene-d8	*111*			*80.0-120*		*10/15/2022 23:52*	WG1943510
(S) 4-Bromofluorobenzene	*93.9*			*77.0-126*		*10/15/2022 23:52*	WG1943510
(S) 1,2-Dichloroethane-d4	*127*			*70.0-130*		*10/15/2022 23:52*	WG1943510

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	15.1		0.597	3.00	1	10/13/2022 15:54	WG1942212
(S) Toluene-d8	*101*			*77.0-127*		*10/13/2022 15:54*	WG1942212

DUP-01

Collected date/time: 10/11/22 16:46

SAMPLE RESULTS - 03

L1545901

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

Wet Chemistry by Method 314.0 Mod

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Perchlorate	11200		150	2000	500	10/18/2022 06:02	WG1944313

Sample Narrative:

L1545901-03 WG1944313: 500x

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

Analyte	Result ug/l	Qualifier	MDL ug/l	RDL ug/l	Dilution	Analysis date / time	Batch
Acetone	U	J4	11.3	50.0	1	10/16/2022 00:13	WG1943510
Acrolein	U		2.54	50.0	1	10/16/2022 00:13	WG1943510
Acrylonitrile	U	J4	0.671	10.0	1	10/16/2022 00:13	WG1943510
Benzene	U		0.0941	1.00	1	10/16/2022 00:13	WG1943510
Bromobenzene	U		0.118	1.00	1	10/16/2022 00:13	WG1943510
Bromodichloromethane	U		0.136	1.00	1	10/16/2022 00:13	WG1943510
Bromoform	U		0.129	1.00	1	10/16/2022 00:13	WG1943510
Bromomethane	U		0.605	5.00	1	10/16/2022 00:13	WG1943510
1,3-Butadiene	U		0.299	2.00	1	10/16/2022 00:13	WG1943510
n-Butylbenzene	U		0.157	1.00	1	10/16/2022 00:13	WG1943510
sec-Butylbenzene	U		0.125	1.00	1	10/16/2022 00:13	WG1943510
tert-Butylbenzene	U		0.127	1.00	1	10/16/2022 00:13	WG1943510
Carbon tetrachloride	U		0.128	1.00	1	10/16/2022 00:13	WG1943510
Carbon disulfide	U		0.0962	1.00	1	10/16/2022 00:13	WG1943510
Chlorobenzene	U		0.116	1.00	1	10/16/2022 00:13	WG1943510
Chlorodibromomethane	U		0.140	1.00	1	10/16/2022 00:13	WG1943510
Chloroethane	U		0.192	5.00	1	10/16/2022 00:13	WG1943510
Chloroform	U		0.111	5.00	1	10/16/2022 00:13	WG1943510
Chloromethane	U		0.960	2.50	1	10/16/2022 00:13	WG1943510
Cyclohexane	U		0.188	1.00	1	10/16/2022 00:13	WG1943510
2-Chlorotoluene	U		0.106	1.00	1	10/16/2022 00:13	WG1943510
4-Chlorotoluene	U		0.114	1.00	1	10/16/2022 00:13	WG1943510
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	10/16/2022 00:13	WG1943510
1,2-Dibromoethane	U		0.126	1.00	1	10/16/2022 00:13	WG1943510
Dibromomethane	U		0.122	1.00	1	10/16/2022 00:13	WG1943510
1,2-Dichlorobenzene	U		0.107	1.00	1	10/16/2022 00:13	WG1943510
1,3-Dichlorobenzene	U		0.110	1.00	1	10/16/2022 00:13	WG1943510
1,4-Dichlorobenzene	U		0.120	1.00	1	10/16/2022 00:13	WG1943510
Dichlorodifluoromethane	U	J3	0.374	5.00	1	10/16/2022 00:13	WG1943510
1,1-Dichloroethane	U		0.100	1.00	1	10/16/2022 00:13	WG1943510
1,2-Dichloroethane	U		0.0819	1.00	1	10/16/2022 00:13	WG1943510
1,1-Dichloroethene	1.26		0.188	1.00	1	10/16/2022 00:13	WG1943510
cis-1,2-Dichloroethene	U		0.126	1.00	1	10/16/2022 00:13	WG1943510
trans-1,2-Dichloroethene	U		0.149	1.00	1	10/16/2022 00:13	WG1943510
1,2-Dichloropropane	U		0.149	1.00	1	10/16/2022 00:13	WG1943510
1,1-Dichloropropene	U		0.142	1.00	1	10/16/2022 00:13	WG1943510
1,3-Dichloropropane	U		0.110	1.00	1	10/16/2022 00:13	WG1943510
cis-1,3-Dichloropropene	U		0.111	1.00	1	10/16/2022 00:13	WG1943510
trans-1,3-Dichloropropene	U		0.118	1.00	1	10/16/2022 00:13	WG1943510
2,2-Dichloropropane	U		0.161	1.00	1	10/16/2022 00:13	WG1943510
Dicyclopentadiene	U		0.253	1.00	1	10/16/2022 00:13	WG1943510
Di-isopropyl ether	U		0.105	1.00	1	10/16/2022 00:13	WG1943510
Ethylbenzene	U		0.137	1.00	1	10/16/2022 00:13	WG1943510
4-Ethyltoluene	U		0.208	1.00	1	10/16/2022 00:13	WG1943510
Hexachloro-1,3-butadiene	U		0.337	1.00	1	10/16/2022 00:13	WG1943510
n-Hexane	U	J4	0.749	10.0	1	10/16/2022 00:13	WG1943510
Isopropylbenzene	U		0.105	1.00	1	10/16/2022 00:13	WG1943510

DUP-01

Collected date/time: 10/11/22 16:46

SAMPLE RESULTS - 03

L1545901

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
p-Isopropyltoluene	U		0.120	1.00	1	10/16/2022 00:13	WG1943510
2-Butanone (MEK)	U		1.19	10.0	1	10/16/2022 00:13	WG1943510
Methyl Cyclohexane	U		0.660	1.00	1	10/16/2022 00:13	WG1943510
Methylene Chloride	U		0.430	5.00	1	10/16/2022 00:13	WG1943510
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	10/16/2022 00:13	WG1943510
Methyl tert-butyl ether	U		0.101	1.00	1	10/16/2022 00:13	WG1943510
Naphthalene	U		1.00	5.00	1	10/16/2022 00:13	WG1943510
Propene	U	J3	0.936	2.50	1	10/16/2022 00:13	WG1943510
n-Propylbenzene	U		0.0993	1.00	1	10/16/2022 00:13	WG1943510
Styrene	U		0.118	1.00	1	10/16/2022 00:13	WG1943510
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	10/16/2022 00:13	WG1943510
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	10/16/2022 00:13	WG1943510
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	10/16/2022 00:13	WG1943510
Tetrachloroethene	U		0.300	1.00	1	10/16/2022 00:13	WG1943510
Toluene	U		0.278	1.00	1	10/16/2022 00:13	WG1943510
1,2,3-Trichlorobenzene	U		0.230	1.00	1	10/16/2022 00:13	WG1943510
1,2,4-Trichlorobenzene	U		0.481	1.00	1	10/16/2022 00:13	WG1943510
1,1,1-Trichloroethane	U		0.149	1.00	1	10/16/2022 00:13	WG1943510
1,1,2-Trichloroethane	U		0.158	1.00	1	10/16/2022 00:13	WG1943510
Trichloroethene	5.85		0.190	1.00	1	10/16/2022 00:13	WG1943510
Trichlorofluoromethane	U		0.160	5.00	1	10/16/2022 00:13	WG1943510
1,2,3-Trichloropropane	U		0.237	2.50	1	10/16/2022 00:13	WG1943510
1,2,4-Trimethylbenzene	U		0.322	1.00	1	10/16/2022 00:13	WG1943510
1,2,3-Trimethylbenzene	U		0.104	1.00	1	10/16/2022 00:13	WG1943510
1,3,5-Trimethylbenzene	U		0.104	1.00	1	10/16/2022 00:13	WG1943510
Vinyl chloride	U	J3	0.234	1.00	1	10/16/2022 00:13	WG1943510
Xylenes, Total	U		0.174	3.00	1	10/16/2022 00:13	WG1943510
(S) Toluene-d8	*109*			*80.0-120*		*10/16/2022 00:13*	WG1943510
(S) 4-Bromofluorobenzene	*92.1*			*77.0-126*		*10/16/2022 00:13*	WG1943510
(S) 1,2-Dichloroethane-d4	*129*			*70.0-130*		*10/16/2022 00:13*	WG1943510

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
1,4-Dioxane	14.5		0.597	3.00	1	10/13/2022 16:14	WG1942212
(S) Toluene-d8	*101*			*77.0-127*		*10/13/2022 16:14*	WG1942212

TRIP BLANK

Collected date/time: 10/11/22 00:00

SAMPLE RESULTS - 04

L1545901

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

	Result	Qualifier	MDL	RDL	Dilution	Analysis	Batch
Analyte	ug/l		ug/l	ug/l		date / time	
Acetone	U	J4	11.3	50.0	1	10/15/2022 23:11	WG1943510
Acrolein	U		2.54	50.0	1	10/15/2022 23:11	WG1943510
Acrylonitrile	U	J4	0.671	10.0	1	10/15/2022 23:11	WG1943510
Benzene	U		0.0941	1.00	1	10/15/2022 23:11	WG1943510
Bromobenzene	U		0.118	1.00	1	10/15/2022 23:11	WG1943510
Bromodichloromethane	U		0.136	1.00	1	10/15/2022 23:11	WG1943510
Bromoform	U		0.129	1.00	1	10/15/2022 23:11	WG1943510
Bromomethane	U		0.605	5.00	1	10/15/2022 23:11	WG1943510
1,3-Butadiene	U		0.299	2.00	1	10/15/2022 23:11	WG1943510
n-Butylbenzene	U		0.157	1.00	1	10/15/2022 23:11	WG1943510
sec-Butylbenzene	U		0.125	1.00	1	10/15/2022 23:11	WG1943510
tert-Butylbenzene	U		0.127	1.00	1	10/15/2022 23:11	WG1943510
Carbon tetrachloride	U		0.128	1.00	1	10/15/2022 23:11	WG1943510
Carbon disulfide	U		0.0962	1.00	1	10/15/2022 23:11	WG1943510
Chlorobenzene	U		0.116	1.00	1	10/15/2022 23:11	WG1943510
Chlorodibromomethane	U		0.140	1.00	1	10/15/2022 23:11	WG1943510
Chloroethane	U		0.192	5.00	1	10/15/2022 23:11	WG1943510
Chloroform	U		0.111	5.00	1	10/15/2022 23:11	WG1943510
Chloromethane	U		0.960	2.50	1	10/15/2022 23:11	WG1943510
Cyclohexane	U		0.188	1.00	1	10/15/2022 23:11	WG1943510
2-Chlorotoluene	U		0.106	1.00	1	10/15/2022 23:11	WG1943510
4-Chlorotoluene	U		0.114	1.00	1	10/15/2022 23:11	WG1943510
1,2-Dibromo-3-Chloropropane	U		0.276	5.00	1	10/15/2022 23:11	WG1943510
1,2-Dibromoethane	U		0.126	1.00	1	10/15/2022 23:11	WG1943510
Dibromomethane	U		0.122	1.00	1	10/15/2022 23:11	WG1943510
1,2-Dichlorobenzene	U		0.107	1.00	1	10/15/2022 23:11	WG1943510
1,3-Dichlorobenzene	U		0.110	1.00	1	10/15/2022 23:11	WG1943510
1,4-Dichlorobenzene	U		0.120	1.00	1	10/15/2022 23:11	WG1943510
Dichlorodifluoromethane	U	J3	0.374	5.00	1	10/15/2022 23:11	WG1943510
1,1-Dichloroethane	U		0.100	1.00	1	10/15/2022 23:11	WG1943510
1,2-Dichloroethane	U		0.0819	1.00	1	10/15/2022 23:11	WG1943510
1,1-Dichloroethene	U		0.188	1.00	1	10/15/2022 23:11	WG1943510
cis-1,2-Dichloroethene	U		0.126	1.00	1	10/15/2022 23:11	WG1943510
trans-1,2-Dichloroethene	U		0.149	1.00	1	10/15/2022 23:11	WG1943510
1,2-Dichloropropane	U		0.149	1.00	1	10/15/2022 23:11	WG1943510
1,1-Dichloropropene	U		0.142	1.00	1	10/15/2022 23:11	WG1943510
1,3-Dichloropropane	U		0.110	1.00	1	10/15/2022 23:11	WG1943510
cis-1,3-Dichloropropene	U		0.111	1.00	1	10/15/2022 23:11	WG1943510
trans-1,3-Dichloropropene	U		0.118	1.00	1	10/15/2022 23:11	WG1943510
2,2-Dichloropropane	U		0.161	1.00	1	10/15/2022 23:11	WG1943510
Dicyclopentadiene	U		0.253	1.00	1	10/15/2022 23:11	WG1943510
Di-isopropyl ether	U		0.105	1.00	1	10/15/2022 23:11	WG1943510
Ethylbenzene	U		0.137	1.00	1	10/15/2022 23:11	WG1943510
4-Ethyltoluene	U		0.208	1.00	1	10/15/2022 23:11	WG1943510
Hexachloro-1,3-butadiene	U		0.337	1.00	1	10/15/2022 23:11	WG1943510
n-Hexane	U	J4	0.749	10.0	1	10/15/2022 23:11	WG1943510
Isopropylbenzene	U		0.105	1.00	1	10/15/2022 23:11	WG1943510
p-Isopropyltoluene	U		0.120	1.00	1	10/15/2022 23:11	WG1943510
2-Butanone (MEK)	U		1.19	10.0	1	10/15/2022 23:11	WG1943510
Methyl Cyclohexane	U		0.660	1.00	1	10/15/2022 23:11	WG1943510
Methylene Chloride	U		0.430	5.00	1	10/15/2022 23:11	WG1943510
4-Methyl-2-pentanone (MIBK)	U		0.478	10.0	1	10/15/2022 23:11	WG1943510
Methyl tert-butyl ether	U		0.101	1.00	1	10/15/2022 23:11	WG1943510
Naphthalene	U		1.00	5.00	1	10/15/2022 23:11	WG1943510
Propene	U	J3	0.936	2.50	1	10/15/2022 23:11	WG1943510
n-Propylbenzene	U		0.0993	1.00	1	10/15/2022 23:11	WG1943510

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	10/15/2022 23:11	WG1943510
1,1,1,2-Tetrachloroethane	U		0.147	1.00	1	10/15/2022 23:11	WG1943510
1,1,2,2-Tetrachloroethane	U		0.133	1.00	1	10/15/2022 23:11	WG1943510
1,1,2-Trichlorotrifluoroethane	U		0.180	1.00	1	10/15/2022 23:11	WG1943510
Tetrachloroethene	U		0.300	1.00	1	10/15/2022 23:11	WG1943510
Toluene	0.289	J	0.278	1.00	1	10/15/2022 23:11	WG1943510
1,2,3-Trichlorobenzene	U		0.230	1.00	1	10/15/2022 23:11	WG1943510
1,2,4-Trichlorobenzene	U		0.481	1.00	1	10/15/2022 23:11	WG1943510
1,1,1-Trichloroethane	U		0.149	1.00	1	10/15/2022 23:11	WG1943510
1,1,2-Trichloroethane	U		0.158	1.00	1	10/15/2022 23:11	WG1943510
Trichloroethene	U		0.190	1.00	1	10/15/2022 23:11	WG1943510
Trichlorofluoromethane	U		0.160	5.00	1	10/15/2022 23:11	WG1943510
1,2,3-Trichloropropane	U		0.237	2.50	1	10/15/2022 23:11	WG1943510
1,2,4-Trimethylbenzene	U		0.322	1.00	1	10/15/2022 23:11	WG1943510
1,2,3-Trimethylbenzene	U		0.104	1.00	1	10/15/2022 23:11	WG1943510
1,3,5-Trimethylbenzene	U		0.104	1.00	1	10/15/2022 23:11	WG1943510
Vinyl chloride	U	J3	0.234	1.00	1	10/15/2022 23:11	WG1943510
Xylenes, Total	U		0.174	3.00	1	10/15/2022 23:11	WG1943510
(S) Toluene-d8	*109*			*80.0-120*		*10/15/2022 23:11*	WG1943510
(S) 4-Bromofluorobenzene	*93.8*			*77.0-126*		*10/15/2022 23:11*	WG1943510
(S) 1,2-Dichloroethane-d4	*127*			*70.0-130*		*10/15/2022 23:11*	WG1943510

Method Blank (MB)

(MB) R3850102-1 10/18/22 00:45

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

L1545901-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1545901-02 10/18/22 03:35 • (DUP) R3850102-5 10/18/22 04:06

Analyte	Original Result ug/l	DUP Result ug/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Perchlorate	11300	11300	500	0.265		15

Sample Narrative:

OS: 500x

Laboratory Control Sample (LCS)

(LCS) R3850102-2 10/18/22 01:41

Analyte	Spike Amount ug/l	LCS Result ug/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Perchlorate	10.0	9.52	95.2	90.0-110	

L1545901-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1545901-01 10/18/22 04:37 • (MS) R3850102-3 10/18/22 02:38 • (MSD) R3850102-4 10/18/22 03:07

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 %
Perchlorate	50000	157000	200000	202000	87.4	90.1	5000	80.0-120			0.673	15

Sample Narrative:

OS: 5000x

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

Method Blank (MB)

(MB) R3850916-3 10/15/22 21:58

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

Method Blank (MB)

(MB) R3850916-3 10/15/22 21:58

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	*111*			*80.0-120*
(S) 4-Bromofluorobenzene	*92.0*			*77.0-126*
(S) 1,2-Dichloroethane-d4	*125*			*70.0-130*

QUALITY CONTROL SUMMARY

L1545901-01,02,03,04

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

(LCS) R3850916-1 10/15/22 20:57 • (LCSD) R3850916-2 10/15/22 21:17

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	ug/l	ug/l	ug/l	%	%	%			%	%
Acetone	25.0	39.6	46.0	158	184	19.0-160		J4	15.0	27
Acrolein	25.0	27.5	29.9	110	120	30.0-160			8.36	26
Acrylonitrile	25.0	35.7	38.3	143	153	55.0-149		J4	7.03	20
Benzene	5.00	4.70	5.04	94.0	101	70.0-123			6.98	20
Bromobenzene	5.00	4.39	4.56	87.8	91.2	73.0-121			3.80	20
Bromodichloromethane	5.00	4.59	4.82	91.8	96.4	75.0-120			4.89	20
Bromoform	5.00	4.14	4.31	82.8	86.2	68.0-132			4.02	20
Bromomethane	5.00	3.19	3.63	63.8	72.6	30.0-160			12.9	25
1,3-Butadiene	5.00	2.74	3.28	54.8	65.6	45.0-147			17.9	20
n-Butylbenzene	5.00	4.37	4.87	87.4	97.4	73.0-125			10.8	20
sec-Butylbenzene	5.00	4.19	4.61	83.8	92.2	75.0-125			9.55	20
tert-Butylbenzene	5.00	4.09	4.40	81.8	88.0	76.0-124			7.30	20
Carbon tetrachloride	5.00	4.47	5.07	89.4	101	68.0-126			12.6	20
Carbon disulfide	5.00	4.01	4.66	80.2	93.2	61.0-128			15.0	20
Chlorobenzene	5.00	4.64	4.92	92.8	98.4	80.0-121			5.86	20
Chlorodibromomethane	5.00	4.35	4.44	87.0	88.8	77.0-125			2.05	20
Chloroethane	5.00	4.13	4.88	82.6	97.6	47.0-150			16.6	20
Chloroform	5.00	4.65	5.06	93.0	101	73.0-120			8.44	20
Chloromethane	5.00	5.82	6.54	116	131	41.0-142			11.7	20
Cyclohexane	5.00	4.14	4.94	82.8	98.8	71.0-124			17.6	20
2-Chlorotoluene	5.00	4.36	4.61	87.2	92.2	76.0-123			5.57	20
4-Chlorotoluene	5.00	4.24	4.48	84.8	89.6	75.0-122			5.50	20
1,2-Dibromo-3-Chloropropane	5.00	4.36	4.59	87.2	91.8	58.0-134			5.14	20
1,2-Dibromoethane	5.00	4.56	4.75	91.2	95.0	80.0-122			4.08	20
Dibromomethane	5.00	4.88	5.13	97.6	103	80.0-120			5.00	20
1,2-Dichlorobenzene	5.00	4.85	5.07	97.0	101	79.0-121			4.44	20
1,3-Dichlorobenzene	5.00	4.59	4.87	91.8	97.4	79.0-120			5.92	20
1,4-Dichlorobenzene	5.00	4.73	4.92	94.6	98.4	79.0-120			3.94	20
Dichlorodifluoromethane	5.00	4.26	5.40	85.2	108	51.0-149		J3	23.6	20
1,1-Dichloroethane	5.00	5.48	6.08	110	122	70.0-126			10.4	20
1,2-Dichloroethane	5.00	5.87	6.09	117	122	70.0-128			3.68	20
1,1-Dichloroethene	5.00	4.09	4.80	81.8	96.0	71.0-124			16.0	20
cis-1,2-Dichloroethene	5.00	4.57	4.86	91.4	97.2	73.0-120			6.15	20
trans-1,2-Dichloroethene	5.00	4.42	4.95	88.4	99.0	73.0-120			11.3	20
1,2-Dichloropropane	5.00	5.92	6.14	118	123	77.0-125			3.65	20
1,1-Dichloropropene	5.00	4.62	5.20	92.4	104	74.0-126			11.8	20
1,3-Dichloropropane	5.00	4.91	4.88	98.2	97.6	80.0-120			0.613	20
cis-1,3-Dichloropropene	5.00	4.38	4.62	87.6	92.4	80.0-123			5.33	20
trans-1,3-Dichloropropene	5.00	4.35	4.35	87.0	87.0	78.0-124			0.000	20
2,2-Dichloropropane	5.00	4.05	4.48	81.0	89.6	58.0-130			10.1	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) R3850916-1 10/15/22 20:57 • (LCSD) R3850916-2 10/15/22 21:17

	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD	RPD Limits
Analyte	ug/l	ug/l	ug/l	%	%	%			%	%
Dicyclopentadiene	5.00	4.76	5.13	95.2	103	74.0-126			7.48	20
Di-isopropyl ether	5.00	5.76	6.11	115	122	58.0-138			5.90	20
Ethylbenzene	5.00	4.39	4.69	87.8	93.8	79.0-123			6.61	20
4-Ethyltoluene	5.00	4.04	4.36	80.8	87.2	74.0-127			7.62	20
Hexachloro-1,3-butadiene	5.00	4.01	4.39	80.2	87.8	54.0-138			9.05	20
n-Hexane	5.00	5.83	6.88	117	138	57.0-133		J4	16.5	20
Isopropylbenzene	5.00	4.37	4.78	87.4	95.6	76.0-127			8.96	20
p-Isopropyltoluene	5.00	4.14	4.46	82.8	89.2	76.0-125			7.44	20
2-Butanone (MEK)	25.0	32.0	34.6	128	138	44.0-160			7.81	20
Methyl Cyclohexane	5.00	4.33	4.99	86.6	99.8	68.0-126			14.2	20
Methylene Chloride	5.00	4.36	4.68	87.2	93.6	67.0-120			7.08	20
4-Methyl-2-pentanone (MIBK)	25.0	30.4	31.6	122	126	68.0-142			3.87	20
Methyl tert-butyl ether	5.00	4.87	5.18	97.4	104	68.0-125			6.17	20
Naphthalene	5.00	3.86	4.24	77.2	84.8	54.0-135			9.38	20
Propene	5.00	2.02	2.55	40.4	51.0	30.0-160		J3	23.2	20
n-Propylbenzene	5.00	4.15	4.48	83.0	89.6	77.0-124			7.65	20
Styrene	5.00	4.28	4.22	85.6	84.4	73.0-130			1.41	20
1,1,1,2-Tetrachloroethane	5.00	4.76	4.92	95.2	98.4	75.0-125			3.31	20
1,1,2,2-Tetrachloroethane	5.00	4.15	4.45	83.0	89.0	65.0-130			6.98	20
1,1,2-Trichlorotrifluoroethane	5.00	4.23	4.88	84.6	97.6	69.0-132			14.3	20
Tetrachloroethene	5.00	4.45	4.90	89.0	98.0	72.0-132			9.63	20
Toluene	5.00	4.59	4.82	91.8	96.4	79.0-120			4.89	20
1,2,3-Trichlorobenzene	5.00	3.81	4.12	76.2	82.4	50.0-138			7.82	20
1,2,4-Trichlorobenzene	5.00	4.02	4.49	80.4	89.8	57.0-137			11.0	20
1,1,1-Trichloroethane	5.00	4.58	5.05	91.6	101	73.0-124			9.76	20
1,1,2-Trichloroethane	5.00	4.73	4.67	94.6	93.4	80.0-120			1.28	20
Trichloroethene	5.00	5.01	5.25	100	105	78.0-124			4.68	20
Trichlorofluoromethane	5.00	3.28	3.98	65.6	79.6	59.0-147			19.3	20
1,2,3-Trichloropropane	5.00	4.79	5.00	95.8	100	73.0-130			4.29	20
1,2,4-Trimethylbenzene	5.00	4.15	4.36	83.0	87.2	76.0-121			4.94	20
1,2,3-Trimethylbenzene	5.00	4.50	4.79	90.0	95.8	77.0-120			6.24	20
1,3,5-Trimethylbenzene	5.00	4.09	4.45	81.8	89.0	76.0-122			8.43	20
Vinyl chloride	5.00	4.33	5.36	86.6	107	67.0-131		J3	21.3	20
Xylenes, Total	15.0	13.4	14.2	89.3	94.7	79.0-123			5.80	20
(S) Toluene-d8				*108*	*105*	*80.0-120*				
(S) 4-Bromofluorobenzene				*94.8*	*94.3*	*77.0-126*				
(S) 1,2-Dichloroethane-d4				*126*	*126*	*70.0-130*				

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

L1545901-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1545901-01 10/16/22 04:18 • (MS) R3850916-4 10/16/22 06:00 • (MSD) R3850916-5 10/16/22 06:20

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	500	U	709	613	142	123	20	10.0-160			14.5	35
Acrolein	500	U	919	912	184	182	20	10.0-160	J5	J5	0.765	39
Acrylonitrile	500	U	625	508	125	102	20	21.0-160			20.7	32
Benzene	100	U	61.8	70.9	61.8	70.9	20	17.0-158			13.7	27
Bromobenzene	100	U	57.5	58.9	57.5	58.9	20	30.0-149			2.41	28
Bromodichloromethane	100	U	61.1	65.9	61.1	65.9	20	31.0-150			7.56	27
Bromoform	100	U	61.3	57.3	61.3	57.3	20	29.0-150			6.75	29
Bromomethane	100	U	40.0	46.4	40.0	46.4	20	10.0-160			14.8	38
1,3-Butadiene	100	U	43.5	49.8	43.5	49.8	20	10.0-160			13.5	22
n-Butylbenzene	100	U	53.1	58.0	53.1	58.0	20	31.0-150			8.82	30
sec-Butylbenzene	100	U	53.4	58.1	53.4	58.1	20	33.0-155			8.43	29
tert-Butylbenzene	100	U	51.6	56.3	51.6	56.3	20	34.0-153			8.71	28
Carbon tetrachloride	100	U	57.1	66.0	57.1	66.0	20	23.0-159			14.5	28
Carbon disulfide	100	U	41.0	56.7	41.0	56.7	20	10.0-156		J3	32.1	28
Chlorobenzene	100	U	61.8	67.1	61.8	67.1	20	33.0-152			8.22	27
Chlorodibromomethane	100	U	60.6	61.9	60.6	61.9	20	37.0-149			2.12	27
Chloroethane	100	U	55.1	63.4	55.1	63.4	20	10.0-160			14.0	30
Chloroform	100	U	65.2	72.9	65.2	72.9	20	29.0-154			11.2	28
Chloromethane	100	U	67.8	72.5	67.8	72.5	20	10.0-160			6.70	29
Cyclohexane	100	U	49.1	58.2	49.1	58.2	20	19.0-160			17.0	23
2-Chlorotoluene	100	U	55.9	61.2	55.9	61.2	20	32.0-153			9.05	28
4-Chlorotoluene	100	U	52.8	56.6	52.8	56.6	20	32.0-150			6.95	28
1,2-Dibromo-3-Chloropropane	100	U	72.3	58.8	72.3	58.8	20	22.0-151			20.6	34
1,2-Dibromoethane	100	U	65.0	65.2	65.0	65.2	20	34.0-147			0.307	27
Dibromomethane	100	U	67.1	69.9	67.1	69.9	20	30.0-151			4.09	27
1,2-Dichlorobenzene	100	U	66.4	64.4	66.4	64.4	20	34.0-149			3.06	28
1,3-Dichlorobenzene	100	U	61.6	62.9	61.6	62.9	20	36.0-146			2.09	27
1,4-Dichlorobenzene	100	U	62.2	64.8	62.2	64.8	20	35.0-142			4.09	27
Dichlorodifluoromethane	100	U	48.3	54.3	48.3	54.3	20	10.0-160			11.7	29
1,1-Dichloroethane	100	U	69.3	85.1	69.3	85.1	20	25.0-158			20.5	27
1,2-Dichloroethane	100	U	81.4	82.6	81.4	82.6	20	29.0-151			1.46	27
1,1-Dichloroethene	100	86.3	120	151	33.7	64.7	20	11.0-160			22.9	29
cis-1,2-Dichloroethene	100	U	60.9	70.1	60.9	70.1	20	10.0-160			14.0	27
trans-1,2-Dichloroethene	100	U	49.5	66.6	49.5	66.6	20	17.0-153		J3	29.5	27
1,2-Dichloropropane	100	U	79.4	85.7	79.4	85.7	20	30.0-156			7.63	27
1,1-Dichloropropene	100	U	52.4	66.9	52.4	66.9	20	25.0-158			24.3	27
1,3-Dichloropropane	100	U	68.6	66.6	68.6	66.6	20	38.0-147			2.96	27
cis-1,3-Dichloropropene	100	U	57.5	60.1	57.5	60.1	20	34.0-149			4.42	28
trans-1,3-Dichloropropene	100	U	58.2	59.4	58.2	59.4	20	32.0-149			2.04	28
2,2-Dichloropropane	100	U	62.2	69.8	62.2	69.8	20	24.0-152			11.5	29

L1545901-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1545901-01 10/16/22 04:18 • (MS) R3850916-4 10/16/22 06:00 • (MSD) R3850916-5 10/16/22 06:20

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	100	U	61.7	65.7	61.7	65.7	20	51.0-139			6.28	20
Di-isopropyl ether	100	U	76.3	80.8	76.3	80.8	20	21.0-160			5.73	28
Ethylbenzene	100	U	55.6	64.0	55.6	64.0	20	30.0-155			14.0	27
4-Ethyltoluene	100	U	50.1	53.4	50.1	53.4	20	10.0-160			6.38	20
Hexachloro-1,3-butadiene	100	U	48.9	51.4	48.9	51.4	20	20.0-154			4.99	34
n-Hexane	100	U	58.6	77.2	58.6	77.2	20	10.0-153			27.4	28
Isopropylbenzene	100	U	55.7	63.5	55.7	63.5	20	28.0-157			13.1	27
p-Isopropyltoluene	100	U	51.2	55.0	51.2	55.0	20	30.0-154			7.16	29
2-Butanone (MEK)	500	U	511	476	102	95.2	20	10.0-160			7.09	32
Methyl Cyclohexane	100	U	48.3	60.2	48.3	60.2	20	11.0-160			21.9	24
Methylene Chloride	100	U	54.1	64.1	54.1	64.1	20	23.0-144			16.9	28
4-Methyl-2-pentanone (MIBK)	500	U	492	423	98.4	84.6	20	29.0-160			15.1	29
Methyl tert-butyl ether	100	U	64.5	68.0	64.5	68.0	20	28.0-150			5.28	29
Naphthalene	100	U	57.3	50.9	57.3	50.9	20	12.0-156			11.8	35
Propene	100	U	45.3	48.1	45.3	48.1	20	10.0-160			6.00	29
n-Propylbenzene	100	U	51.2	56.0	51.2	56.0	20	31.0-154			8.96	28
Styrene	100	U	52.9	57.1	52.9	57.1	20	33.0-155			7.64	28
1,1,1,2-Tetrachloroethane	100	U	63.9	68.0	63.9	68.0	20	36.0-151			6.22	29
1,1,2,2-Tetrachloroethane	100	U	73.9	62.9	73.9	62.9	20	33.0-150			16.1	28
1,1,2-Trichlorotrifluoroethane	100	U	48.0	59.6	48.0	59.6	20	23.0-160			21.6	30
Tetrachloroethene	100	U	55.4	61.9	55.4	61.9	20	10.0-160			11.1	27
Toluene	100	U	59.2	66.2	59.2	66.2	20	26.0-154			11.2	28
1,2,3-Trichlorobenzene	100	U	56.3	52.2	56.3	52.2	20	17.0-150			7.56	36
1,2,4-Trichlorobenzene	100	U	54.2	51.9	54.2	51.9	20	24.0-150			4.34	33
1,1,1-Trichloroethane	100	U	56.7	70.8	56.7	70.8	20	23.0-160			22.1	28
1,1,2-Trichloroethane	100	U	70.5	68.4	70.5	68.4	20	35.0-147			3.02	27
Trichloroethene	100	596	595	676	0.000	80.0	20	10.0-160	V		12.7	25
Trichlorofluoromethane	100	U	41.4	47.0	41.4	47.0	20	17.0-160			12.7	31
1,2,3-Trichloropropane	100	U	72.2	64.8	72.2	64.8	20	34.0-151			10.8	29
1,2,4-Trimethylbenzene	100	U	51.5	54.7	51.5	54.7	20	26.0-154			6.03	27
1,2,3-Trimethylbenzene	100	U	59.6	61.0	59.6	61.0	20	32.0-149			2.32	28
1,3,5-Trimethylbenzene	100	U	51.5	54.2	51.5	54.2	20	28.0-153			5.11	27
Vinyl chloride	100	U	53.9	66.3	53.9	66.3	20	10.0-160			20.6	27
Xylenes, Total	300	U	167	188	55.7	62.7	20	29.0-154			11.8	28
(S) Toluene-d8					*107*	*108*		*80.0-120*				
(S) 4-Bromofluorobenzene					*93.4*	*96.5*		*77.0-126*				
(S) 1,2-Dichloroethane-d4					*126*	*125*		*70.0-130*				

Sample Narrative:

OS: Non-target compounds too high to run at a lower dilution.

QUALITY CONTROL SUMMARY

L1545901-01,02,03

Method Blank (MB)

(MB) R3849991-3 10/13/22 12:55

Analyte	MB Result ug/l	MB Qualifier	MB MDL ug/l	MB RDL ug/l
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) R3849991-1 10/13/22 11:54 • (LCSD) R3849991-2 10/13/22 12:14

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 %
1,4-Dioxane	50.0	51.5	63.3	103	127	55.0-138			20.6	24
(S) Toluene-d8				*103*	*98.4*	*77.0-127*				

L1545901-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1545901-01 10/13/22 16:34 • (MS) R3849991-4 10/13/22 16:54 • (MSD) R3849991-5 10/13/22 17:14

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 %
1,4-Dioxane	500	170	808	735	128	113	10	13.0-160			9.46	31
(S) Toluene-d8					*103*	*101*		*77.0-127*				

INTERNAL STANDARD SUMMARY

Instrument: VOCMS35 • File ID: 1015_26

10/15/22 20:57

Sample ID	File ID	8260-FLUOROBENZENE Response	8260-CHLOROBENZENE-D5 Response	8260-1,4-DICHLOROBENZENE-D4 Response
Standard	1015_26	354563	145568	131097
Upper Limit		709126	291136	262194
Lower Limit		177282	72784	65549
LCS R3850916-1 WG1943510 1x	1015_26LCS	354563	145568	131097
LCSD R3850916-2 WG1943510 1x	1015_27	348456	146840	134311
BLANK R3850916-3 WG1943510 1x	1015_29	340889	133913	115563
L1545901-04 WG1943510 1x	1015_30	345976	137945	124727
L1545901-02 WG1943510 1x	1015_32	344809	135874	119553
L1545901-03 WG1943510 1x	1015_33	335447	135281	120155
L1545901-01 WG1943510 20x	1015_45	338238	135961	122068
MS R3850916-4 WG1943510 20x	1015_50	347782	143646	128325
MSD R3850916-5 WG1943510 20x	1015_51	356642	145023	133783

Instrument: VOCMS27 • File ID: 1013_04

10/13/22 11:34

Sample ID	File ID	8260-FLUOROBENZENE Response
Standard	1013_04	689397
Upper Limit		1378794
Lower Limit		344699
LCS R3849991-1 WG1942212 1x	1013_05	805994
LCSD R3849991-2 WG1942212 1x	1013_06	614738
BLANK R3849991-3 WG1942212 1x	1013_08	834076
L1545901-02 WG1942212 1x	1013_12	714419
L1545901-03 WG1942212 1x	1013_13	764367
L1545901-01 WG1942212 10x	1013_14	941245
MS R3849991-4 WG1942212 10x	1013_15	692064
MSD R3849991-5 WG1942212 10x	1013_16	744768

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

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

ACCREDITATIONS & LOCATIONS

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

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	LAO00356
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

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

Report to:
Christopher Funk

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

Project Description: TTU
Nammo WBO 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**

SDG # L1545901
A243

Collected by (print): Isabella Foster

Site/Facility ID #

P.O. #

Collected by (signature): Foster

Immediately Packed on Ice N ___ Y X

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

Quote #

Date Results Needed

Acctnum: **PINYONMAZ**
Template: **T205686**
Prelogin: **P912514**
PM: **288 - Daphne Richards**
PB:
Shipped Via:

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	PERCHLORATE 125mlHDPE-NoPres	V8260AZ 40mlAmb-HCl	V8260LL14D 40mlAmb-HCl	Remarks	Sample # (lab only)
TTU-2-114-20221010	G	GW	114	10/10/22	1543	14	X	X	X	MS/MSD	-01
TTU-1-50-20221011	G	GW	50	10/11/22	1646	7	X	X	X		-02
Dup-01	G	GW	–	–	–	7	X	X	X		-03
Trip Blank	G	GW	–	–	–	1		X			-04
		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:
want results back by 10/19.

pH ______ Temp ______
Flow ______ Other ______

Samples returned via:
__ UPS __ FedEx __ Courier ________

Tracking # 5349 7836 8064

Sample Receipt Checklist
COC Seal Present/Intact: __NP ✓Y __N
COC Signed/Accurate: ✓Y __N
Bottles arrive intact: ✓Y __N
Correct bottles used: ✓Y __N
Sufficient volume sent: __Y __N
If Applicable
VOA Zero Headspace: ✓Y __N
Preservation Correct/Checked: __Y __N
RAD Screen <0.5 mR/hr: ✓Y __N

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)
Foster	10/11/22	1852	0900 10-12
Relinquished by : (Signature)	10-12-22	1800	Received by: (Signature) FedEx
Relinquished by : (Signature)	Date:	Time:	Received for lab by. (Signature)

Trip Blank Received: [✓ Yes] / No 1
[✓ HCL] / MeoH
TBR

Temp GB46 °C 4.5
Bottles Received: 26

Date: 10/13/22 Time: 900

If preservation required by Login: Date/Time

Hold:

Condition: NCF / [✓ OK]

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ANALYTICAL REPORT

Eurofins Phoenix
4625 East Cotton Center Boulevard
Suite #189
Phoenix, AZ 85040
Tel: (602)437-3340

Laboratory Job ID: 550-190229-1
Client Project/Site: Nammo

For:
Pinyon Environmental, Inc.
2801 E Camelback Road
Suite 200
Phoenix, Arizona 85016

Attn: Jeremy Husson

Danielle Roberts

Authorized for release by:
9/19/2022 5:10:44 AM

Danielle Roberts, Senior Project Manager
(657)210-6355
Danielle.Roberts@et.eurofinsus.com

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.

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Table of Contents

Definitions/Glossary

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	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

Job ID: 550-190229-1

Laboratory: Eurofins Phoenix

Narrative

Job Narrative
550-190229-1

Comments

No additional comments.

Receipt

The sample was received on 9/9/2022 3:53 PM. 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 1.8º 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.

Sample Summary

Client: Pinyon Environmental, Inc.
Project/Site: Nammo

Job ID: 550-190229-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
550-190229-1	PF-2-400-20220909	Water	09/09/22 13:42	09/09/22 15:53

Detection Summary

Client: Pinyon Environmental, Inc.
Project/Site: Nammo

Job ID: 550-190229-1

Client Sample ID: PF-2-400-20220909

Lab Sample ID: 550-190229-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Perchlorate	0.65		0.50		ug/L	1		6850	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: PF-2-400-20220909

Lab Sample ID: 550-190229-1

Date Collected: 09/09/22 13:42

Matrix: Water

Date Received: 09/09/22 15:53

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	**0.65**		0.50		ug/L		09/13/22 16:18	09/14/22 18:55	1

QC Sample Results

Client: Pinyon Environmental, Inc.
Project/Site: Nammo

Job ID: 550-190229-1

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

Lab Sample ID: MB 320-616396/1-A
Matrix: Water
Analysis Batch: 616859

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 616396

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		0.50		ug/L		09/13/22 16:18	09/14/22 17:29	1

Lab Sample ID: LCS 320-616396/2-A
Matrix: Water
Analysis Batch: 616859

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 616396

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Perchlorate			5.00	5.81		ug/L		116	80 - 120		

Lab Sample ID: 550-190229-1 MS
Matrix: Water
Analysis Batch: 616859

Client Sample ID: PF-2-400-20220909
Prep Type: Total/NA
Prep Batch: 616396

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Perchlorate	0.65		5.00	6.26		ug/L		112	80 - 120		

Lab Sample ID: 550-190229-1 MSD
Matrix: Water
Analysis Batch: 616859

Client Sample ID: PF-2-400-20220909
Prep Type: Total/NA
Prep Batch: 616396

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perchlorate	0.65		5.00	6.38		ug/L		115	80 - 120	2	15

LCMS

Filtration Batch: 616396

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-190229-1	PF-2-400-20220909	Total/NA	Water	Filtration	
MB 320-616396/1-A	Method Blank	Total/NA	Water	Filtration	
LCS 320-616396/2-A	Lab Control Sample	Total/NA	Water	Filtration	
550-190229-1 MS	PF-2-400-20220909	Total/NA	Water	Filtration	
550-190229-1 MSD	PF-2-400-20220909	Total/NA	Water	Filtration	

Analysis Batch: 616859

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
550-190229-1	PF-2-400-20220909	Total/NA	Water	6850	616396
MB 320-616396/1-A	Method Blank	Total/NA	Water	6850	616396
LCS 320-616396/2-A	Lab Control Sample	Total/NA	Water	6850	616396
550-190229-1 MS	PF-2-400-20220909	Total/NA	Water	6850	616396
550-190229-1 MSD	PF-2-400-20220909	Total/NA	Water	6850	616396

Lab Chronicle

Client: Pinyon Environmental, Inc.
Project/Site: Nammo

Job ID: 550-190229-1

Client Sample ID: PF-2-400-20220909

Date Collected: 09/09/22 13:42
Date Received: 09/09/22 15:53

Lab Sample ID: 550-190229-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Filtration	Filtration			616396	LN	EET SAC	09/13/22 16:18
Total/NA	Analysis	6850		1	616859	JY1	EET SAC	09/14/22 18:55

Laboratory References:

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

Accreditation/Certification Summary

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	08-11-23
Arkansas DEQ	State	88-0691	06-17-22 *
California	State	2897	01-31-23
Colorado	State	CA0004	08-31-23
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	NELAP	01944	06-30-23
Louisiana (All)	NELAP	01944	06-30-23
Maine	State	CA00004	04-14-24
Michigan	State	9947	01-31-23
Nevada	State	CA00044	07-31-23
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	08-31-23
Wyoming	State Program	8TMS-L	01-28-19 *

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

Method Summary

Client: Pinyon Environmental, Inc.
Project/Site: Nammo

Job ID: 550-190229-1

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

Protocol References:

EPA = US Environmental Protection Agency
None = None

Laboratory References:

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

Address: ____________________

Chain of Custody Record

597711

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190229

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☒ Other:

TAL-8210

Client Contact	**Project Manager:** Jeremy Husson	**Site Contact:**	**Date:** 9/9/22
Company Name: Pinyon Environmental	**Tel/Email:** Musson@pinyon-env.com	**Lab Contact:** Danielle Roberts	**Carrier:**
Address: 2801 E. Camelback Rd. Suite 200	**Analysis Turnaround Time**		
City/State/Zip: Phoenix AZ 85016	☒ CALENDAR DAYS ☐ WORKING DAYS		
Phone: (303)980-5200	TAT if different from Below ______		
Fax: NA	☒ 2 weeks		
Project Name: Nammo	☐ 1 week		
Site:	☐ 2 days		
P O #	☐ 1 day		

COC No: 1 of 1 COCs

Sampler: Isabella Foster

For Lab Use Only:

Walk-in Client:

Lab Sampling:

Job / SDG No.:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	Perchlorate 6850	Sample Specific Notes:
PF-2-400-20220909	9/9/22	1342	G	GW	1	Y	N	X	-01

550-190229 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other ______

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for ______ Months

Special Instructions/QC Requirements & Comments:

1.8°c IVF COO

Custody Seals Intact: ☐ Yes ☐ No

Custody Seal No.:

Cooler Temp. (°C): Obs'd: ______ Corr'd: ______ Therm ID No.: ______

Relinquished by:	Company: Pinyon	Date/Time: 9/9/22 1528	Received by:	Company: Pinyon	Date/Time: 9/9/22 1528
Relinquished by:	Company: Pinyon	Date/Time: 9/9/22 1553	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company: EETA PHX	Date/Time: 9/9/22 1553

Eurofins Phoenix
4625 East Cotton Center Boulevard Suite #189
Phoenix, AZ 85040
Phone: 602-437-3340

Chain of Custody Record

eurofins Environment Testing America

Client Information (Sub Contract Lab)
Client Contact: Shipping/Receiving
Company: Eurofins Environment Testing Northern Ca
Address: 880 Riverside Parkway, ,
City: West Sacramento
State, Zip: CA, 95605
Phone: 916-373-5600(Tel) 916-372-1059(Fax)
Email:
Project Name: Nammo
Site:

Sampler:
Phone:
Due Date Requested: 9/22/2022
TAT Requested (days):
PO #:
WO #:
Project #: 55017941
SSOW#:

Lab PM: Roberts, Danielle C
E-Mail: Danielle.Roberts@et.eurofinsus.com
Carrier Tracking No(s):
State of Origin: Arizona
Accreditations Required (See note): State Program - Arizona

COC No: 550-34917.1
Page: Page 1 of 1
Job #: 550-190229-1

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA

M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Y - Trizma
Z - other (specify)

Other:

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6850/Filtration_14D Perchlorate Only	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
PF-2-400-20220909 (550-190229-1)	9/9/22	13:42 Arizona		Water			X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Southwest, LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Southwest, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Southwest, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing Southwest, LLC.

Possible Hazard Identification
Unconfirmed
Deliverable Requested: I, II, III, IV, Other (specify)
Primary Deliverable Rank: 2

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ______ *Months*
Special Instructions/QC Requirements:

Empty Kit Relinquished by:
Date:
Time:
Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	09-09-22 1615	EETSW	Fedex		
				9/10/22 - 915	EETSAC

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

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Sacramento
Sample Receiving Notes

550-190229 Field Sheet

Job: ____________

Tracking # : 5290-4625-4802

SO / PO / FO / [✓ SAT] / 2-Day / Ground / UPS / CDO / Courier
GSO / OnTrac / Goldstreak / USPS / Other ____________

Use this form to record Sample Custody Seal, Cooler Custody Seal, Temperature & corrected Temperature & other observations.
File in the job folder with the COC.

Therm. ID: L-10 Corr. Factor: (+ / -) 0 °C

Ice ✓ Wet ✓ Gel ______ Other ______

Cooler Custody Seal: 1871226

Cooler ID: ____________

Temp Observed: 1.6 °C Corrected: 1.6 °C

From: Temp Blank ☒ Sample ☐

Opening/Processing The Shipment	**Yes**	**No**	**NA**
Cooler compromised/tampered with?	☐	☒	☐
Cooler Temperature is acceptable?	☒	☐	☐
Frozen samples show signs of thaw?	☐	☒	☐

Initials: JL Date: 9/10/22

Unpacking/Labeling The Samples	**Yes**	**No**	**NA**
COC is complete w/o discrepancies?	☒	☐	☐
Samples compromised/tampered with?	☐	☒	☐
Containers are not broken or leaking?	☒	☐	☐
Sample custody seal?	☐	☐	☒
Sample containers have legible labels?	☒	☐	☐
Sample date/times are provided?	☒	☐	☐
Appropriate containers are used?	☒	☐	☐
Sample bottles are completely filled?	☒	☐	☐
Sample preservatives verified?	☐	☐	☒
Is the Field Sampler's name on COC?	☐	☐	☒
Samples require splitting/compositing?	☐	☐	☒
Samples w/o discrepancies?	☒	☐	☐
Zero headspace?*	☐	☐	☒
Alkalinity has no headspace?	☐	☐	☒
Perchlorate has headspace? (Methods 314, 331, 6850)	☐	☐	☒
Multiphasic samples are not present?	☒	☐	☐

*Containers requiring zero headspace have no headspace, or bubble < 6 mm (1/4")

Initials: LB Date: 9.10.22

Notes: ____________

Trizma Lot #(s): ____________

Login Completion	**Yes**	**No**	**NA**
Receipt Temperature on COC?	☒	☐	☐
Samples received within hold time?	☒	☐	☐
NCM Filed?	☐	☐	☒
Log Release checked in TALS?	☐	☐	☒

Initials: LB Date: 9.10.22

WIB

Login Sample Receipt Checklist

Client: Pinyon Environmental, Inc.

Job Number: 550-190229-1

Login Number: 190229
List Number: 1
Creator: Gravlin, Andrea

List Source: Eurofins Phoenix

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.	True	
Sample custody seals, if present, are intact.	True	
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.	True	
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.	False	Check done at department level as required.

Login Sample Receipt Checklist

Client: Pinyon Environmental, Inc.

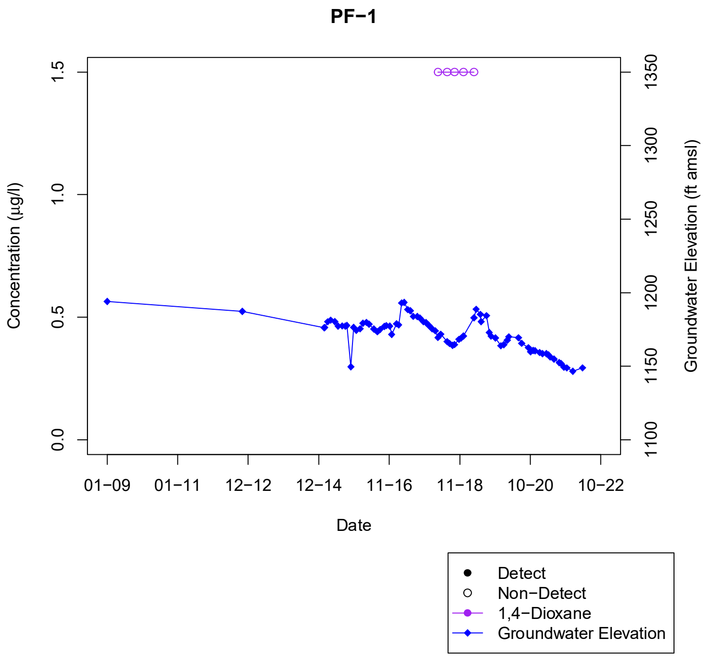
Job Number: 550-190229-1

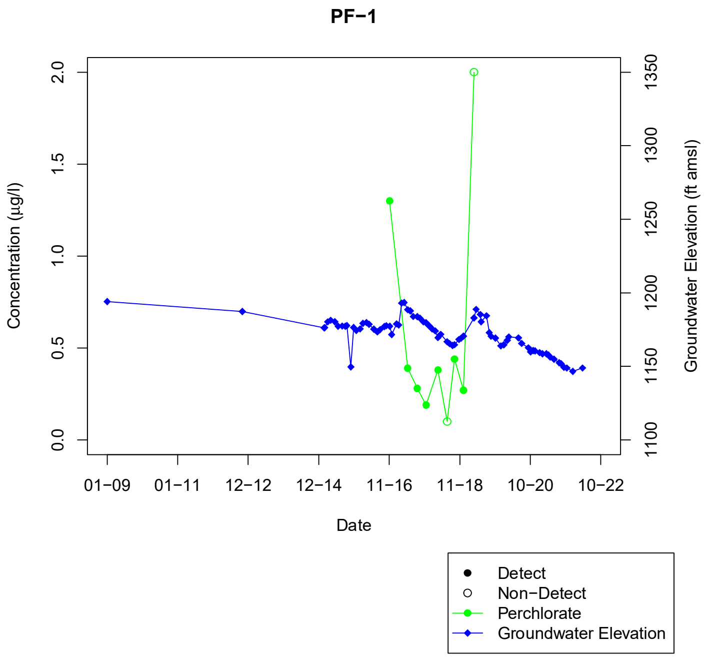
Login Number: 190229
List Number: 2
Creator: Simmons, Jason C

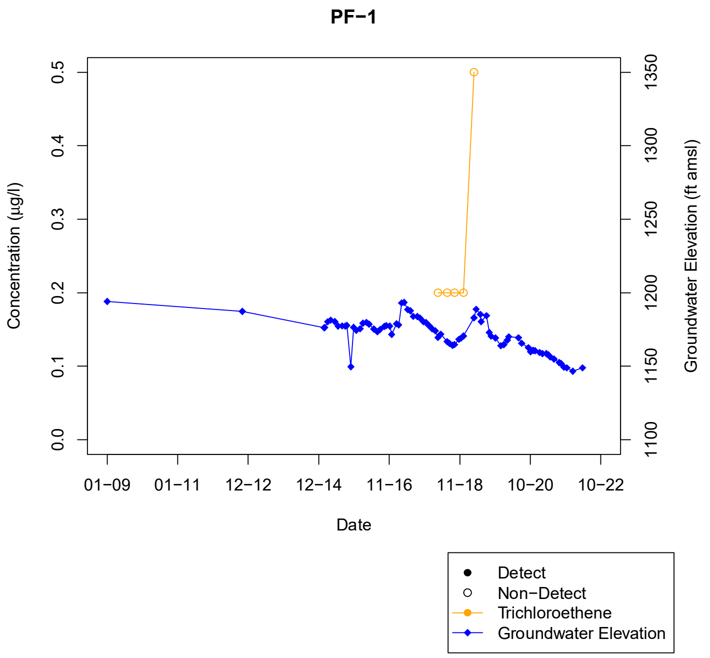
List Source: Eurofins Sacramento
List Creation: 09/10/22 11:37 AM

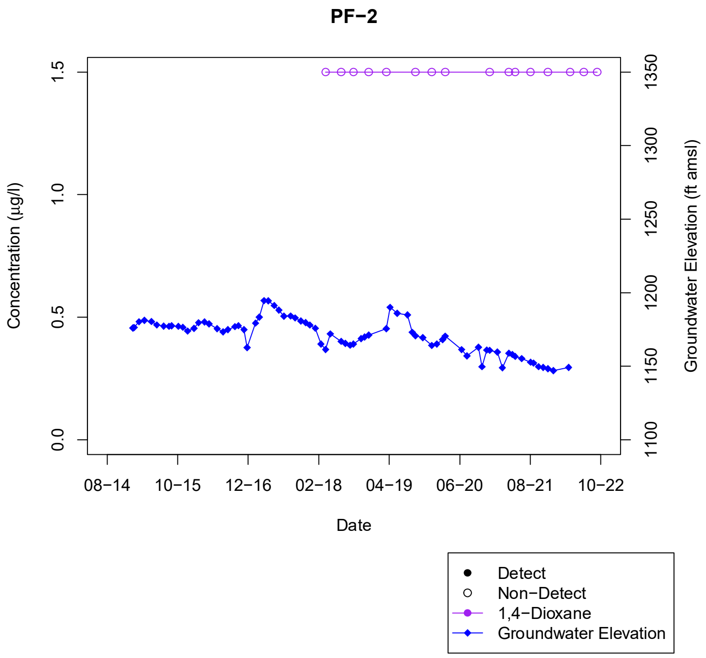
Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	1871226
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.6c
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?	False	Received project as a subcontract.
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 <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

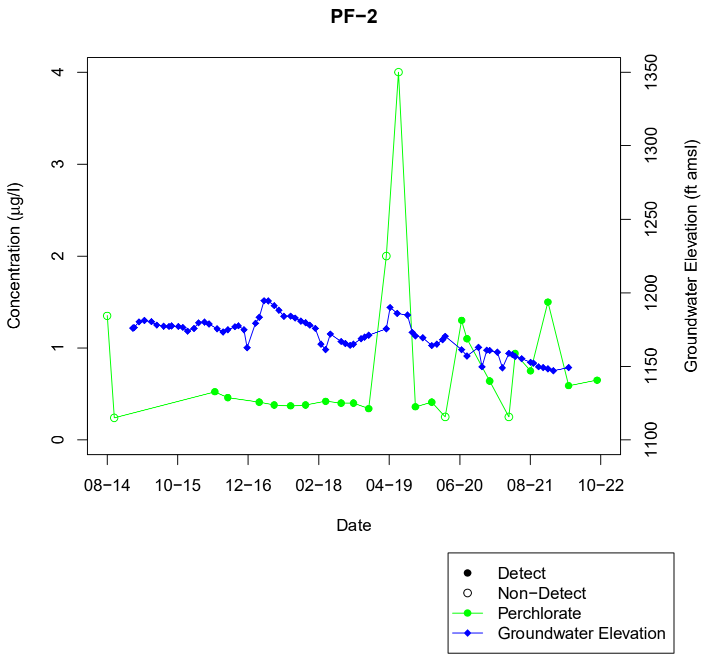
Attachment 4 – Concentration and Groundwater Elevation versus Time Plots

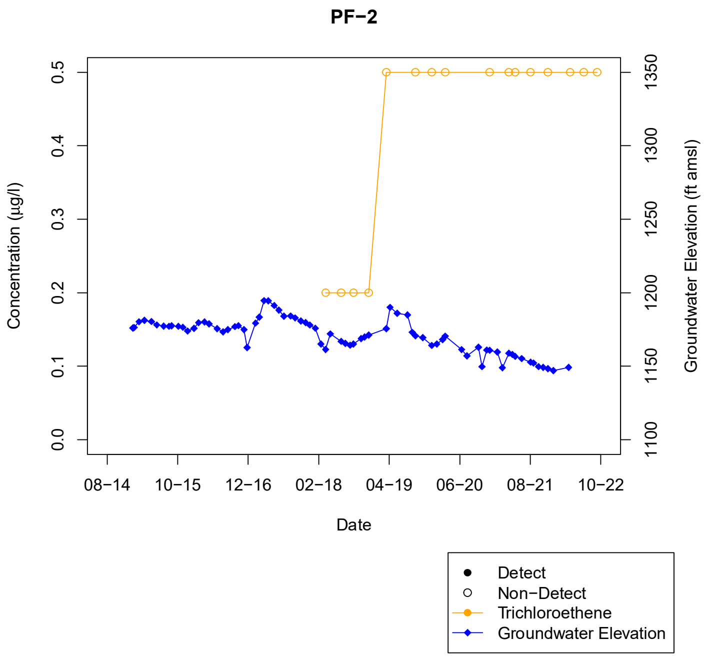

PF−1
Concentration (µg/l)
0.0
0.5
1.0
1.5
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
01−09
01−11
12−12
12−14
11−16
11−18
10−20
10−22
Date
● Detect
○ Non−Detect
1,4−Dioxane
Groundwater Elevation

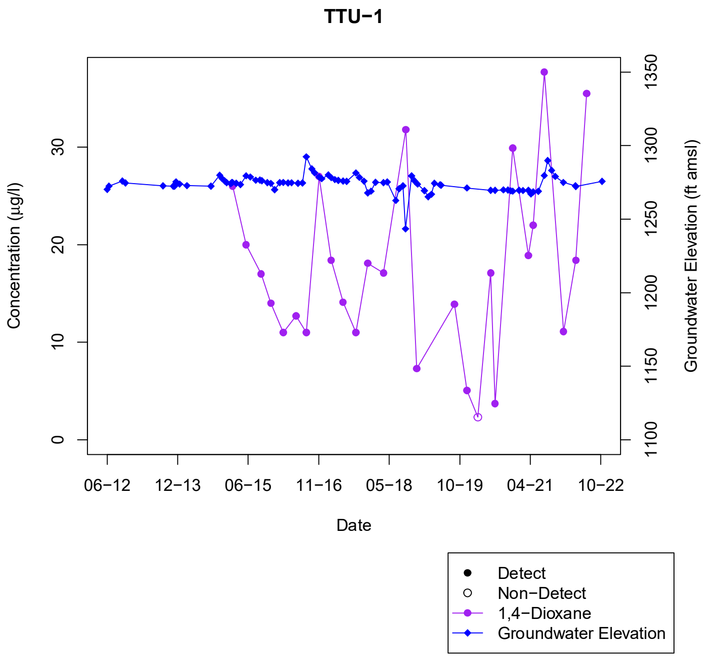

PF−1
Concentration (µg/l)
0.0
0.5
1.0
1.5
2.0
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
01−09
01−11
12−12
12−14
11−16
11−18
10−20
10−22
Date
● Detect
○ Non−Detect
Perchlorate
Groundwater Elevation

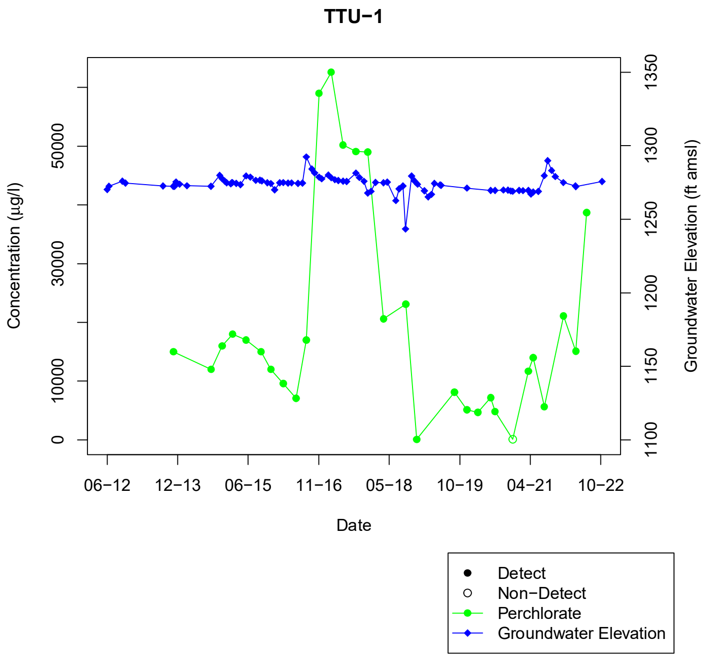

PF−1
Concentration (µg/l)
0.0
0.1
0.2
0.3
0.4
0.5
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
01−09
01−11
12−12
12−14
11−16
11−18
10−20
10−22
Date
● Detect
○ Non−Detect
Trichloroethene
Groundwater Elevation

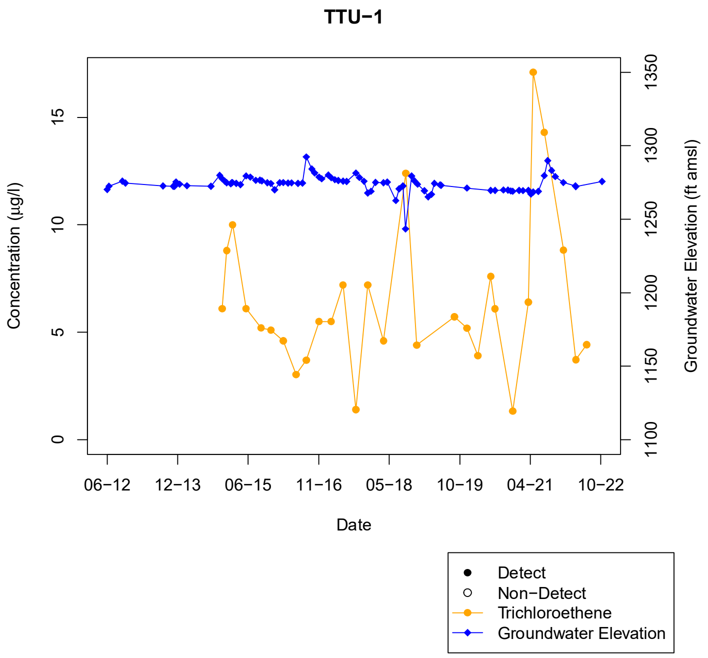

PF−2
Concentration (µg/l)
0.0
0.5
1.0
1.5
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
08−14
10−15
12−16
02−18
04−19
06−20
08−21
10−22
Date
Detect
Non−Detect
1,4−Dioxane
Groundwater Elevation

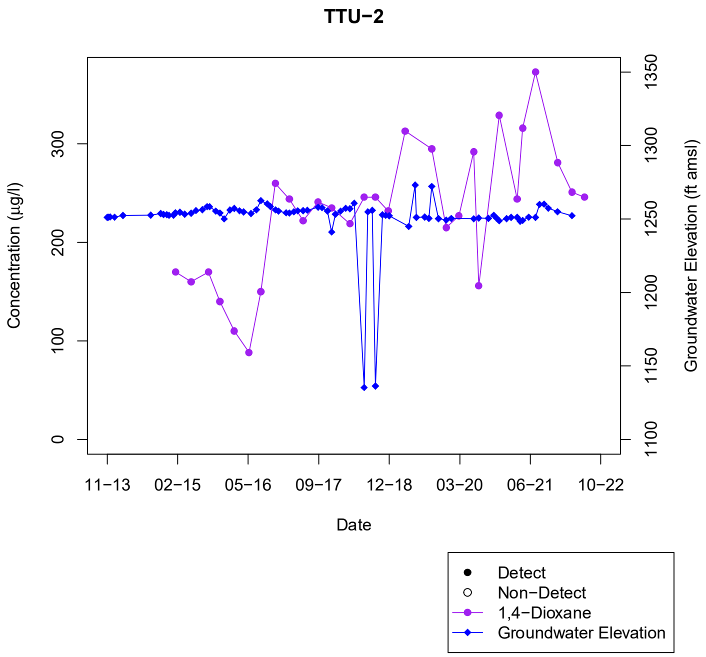

PF−2
Concentration (µg/l)
0
1
2
3
4
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
08−14
10−15
12−16
02−18
04−19
06−20
08−21
10−22
Date
Detect
Non−Detect
Perchlorate
Groundwater Elevation

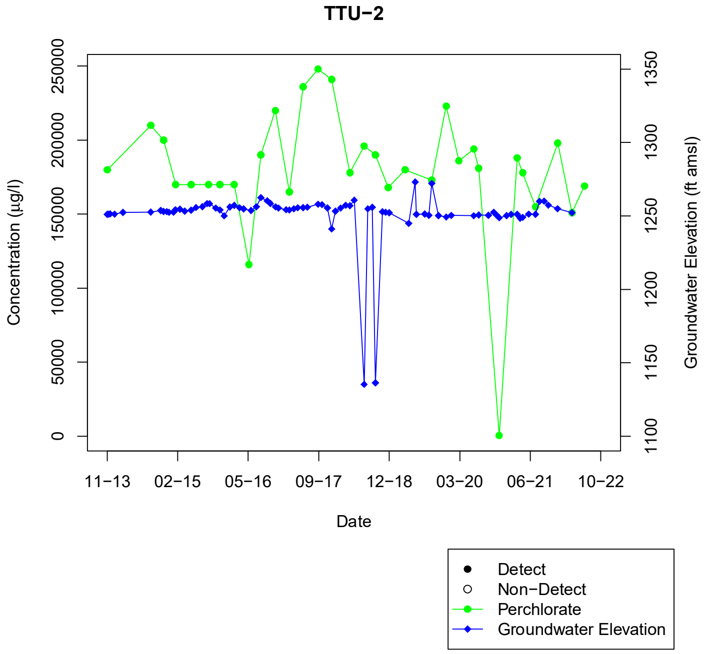

PF−2
Concentration (µg/l)
0.0
0.1
0.2
0.3
0.4
0.5
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
08−14
10−15
12−16
02−18
04−19
06−20
08−21
10−22
Date
Detect
Non−Detect
Trichloroethene
Groundwater Elevation

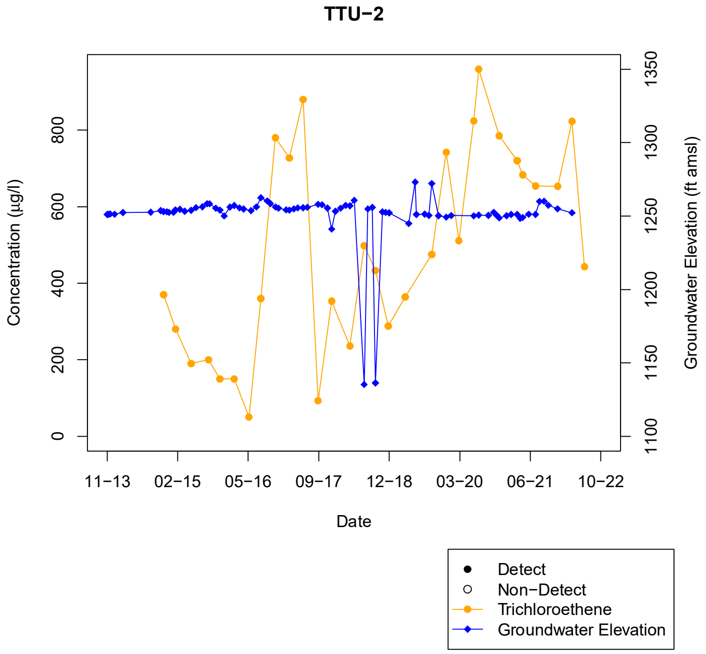

TTU−1
Concentration (µg/l)
0
10
20
30
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
Date
06−12
12−13
06−15
11−16
05−18
10−19
04−21
10−22
● Detect
○ Non−Detect
1,4−Dioxane
Groundwater Elevation

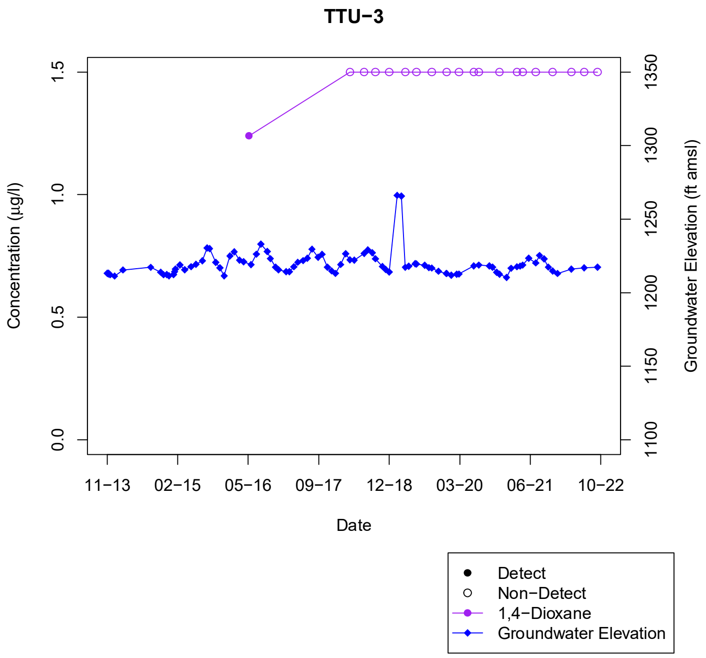

TTU−1
Concentration (µg/l)
0
10000
30000
50000
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
Date
06−12
12−13
06−15
11−16
05−18
10−19
04−21
10−22
● Detect
○ Non−Detect
Perchlorate
Groundwater Elevation

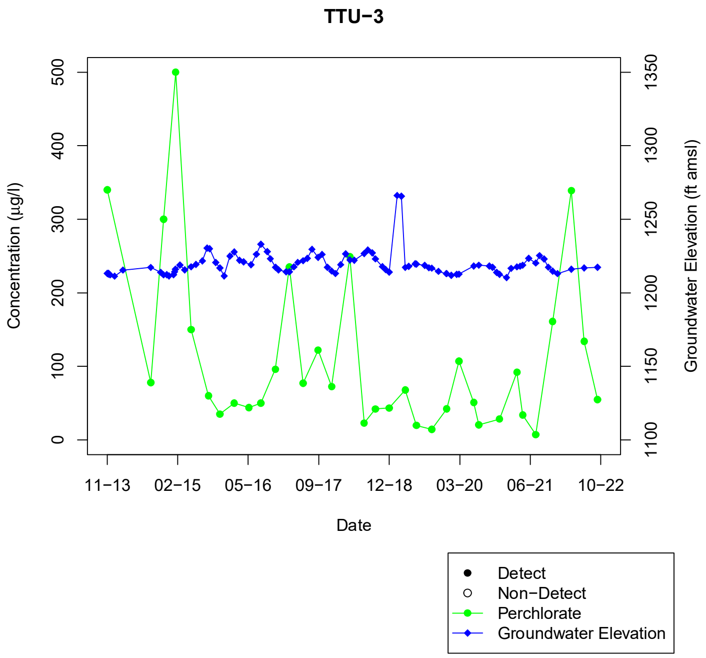

TTU−1
Concentration (µg/l)
0
5
10
15
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
Date
06−12
12−13
06−15
11−16
05−18
10−19
04−21
10−22
● Detect
○ Non−Detect
Trichloroethene
Groundwater Elevation

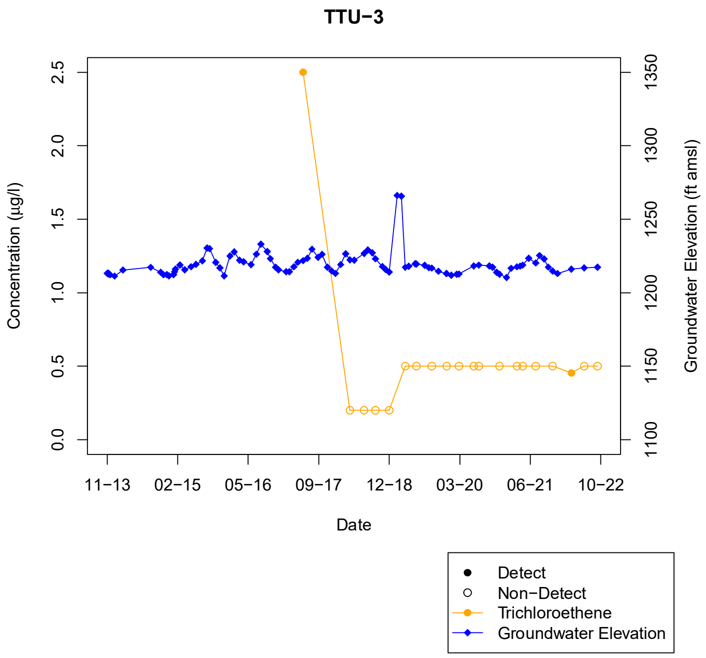

TTU−2
Concentration (µg/l)
0
100
200
300
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
11−13
02−15
05−16
09−17
12−18
03−20
06−21
10−22
Date
Detect
Non−Detect
1,4−Dioxane
Groundwater Elevation

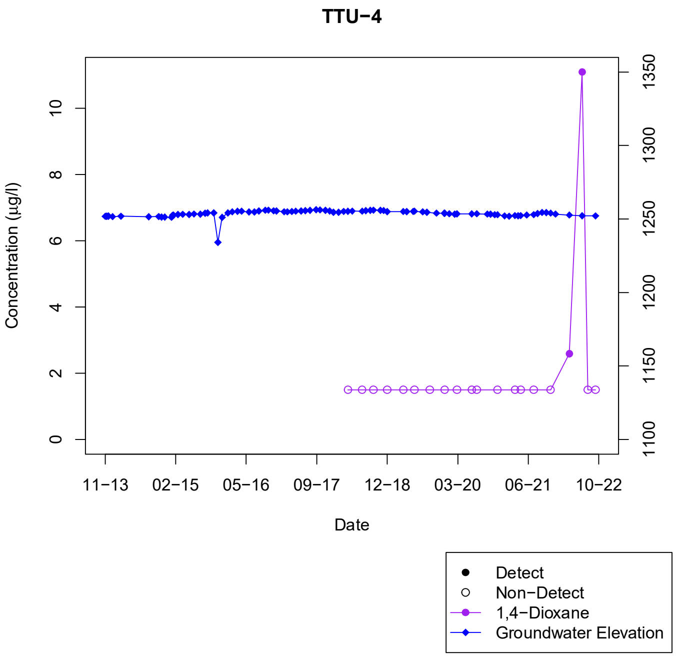

TTU−2
Concentration (µg/l)
0
50000
100000
150000
200000
250000
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
11−13
02−15
05−16
09−17
12−18
03−20
06−21
10−22
Date
Detect
Non−Detect
Perchlorate
Groundwater Elevation

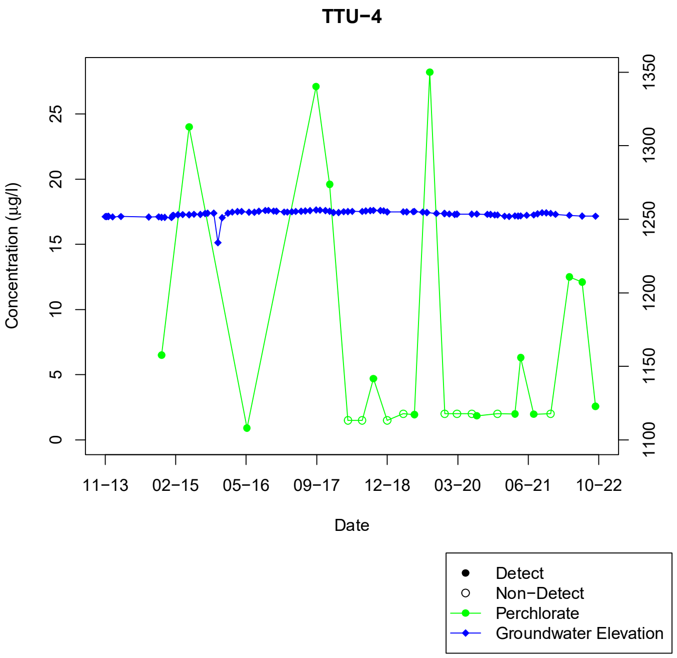

TTU−2
Concentration (µg/l)
0
200
400
600
800
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
11−13
02−15
05−16
09−17
12−18
03−20
06−21
10−22
Date
Detect
Non−Detect
Trichloroethene
Groundwater Elevation

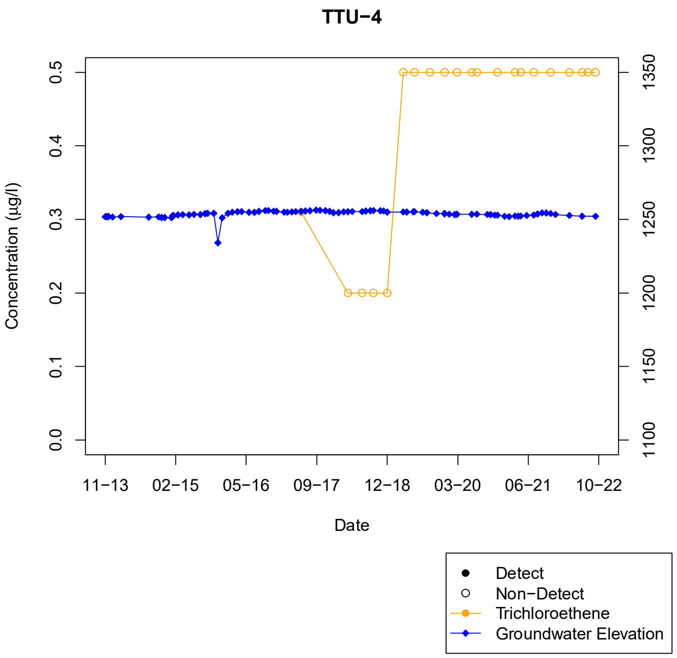

TTU−3
Concentration (µg/l)
0.0
0.5
1.0
1.5
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
11−13
02−15
05−16
09−17
12−18
03−20
06−21
10−22
Date
Detect
Non−Detect
1,4−Dioxane
Groundwater Elevation

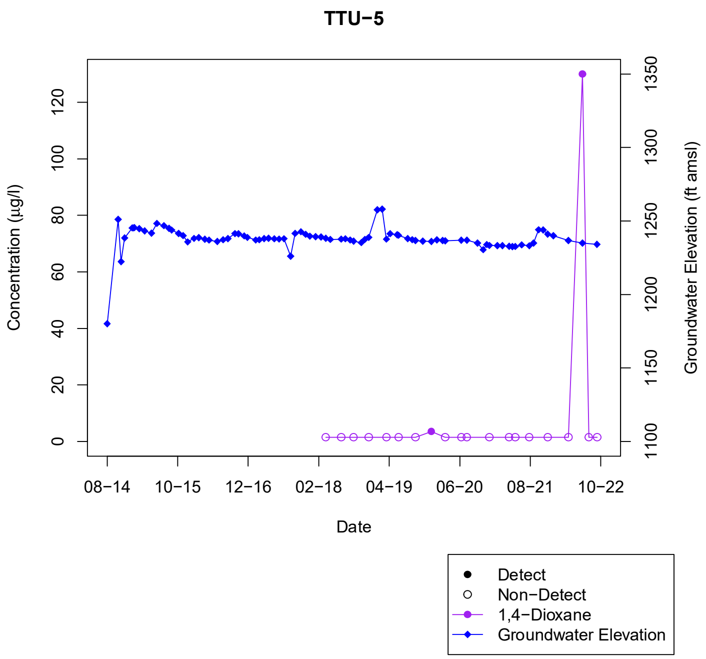

TTU−3
Concentration (µg/l)
0
100
200
300
400
500
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
11−13
02−15
05−16
09−17
12−18
03−20
06−21
10−22
Date
Detect
Non−Detect
Perchlorate
Groundwater Elevation

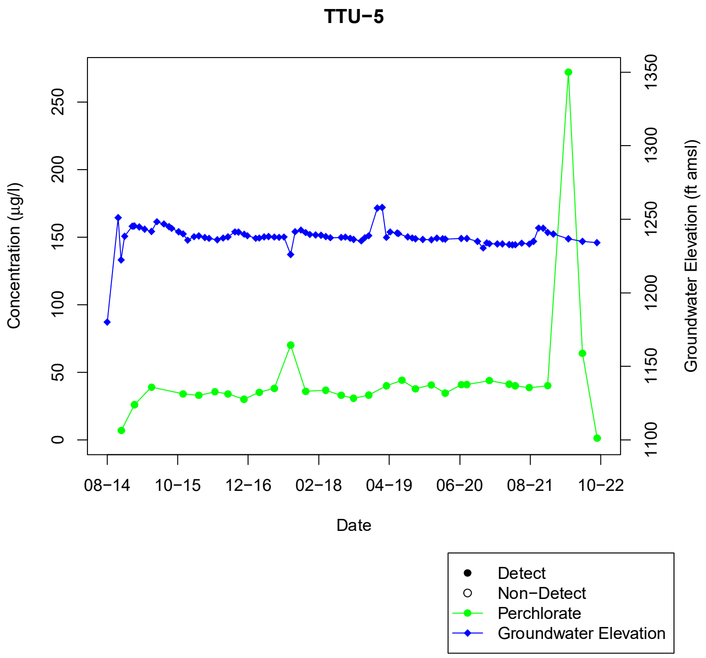

TTU−3
Concentration (µg/l)
0.0
0.5
1.0
1.5
2.0
2.5
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
11−13
02−15
05−16
09−17
12−18
03−20
06−21
10−22
Date
Detect
Non−Detect
Trichloroethene
Groundwater Elevation

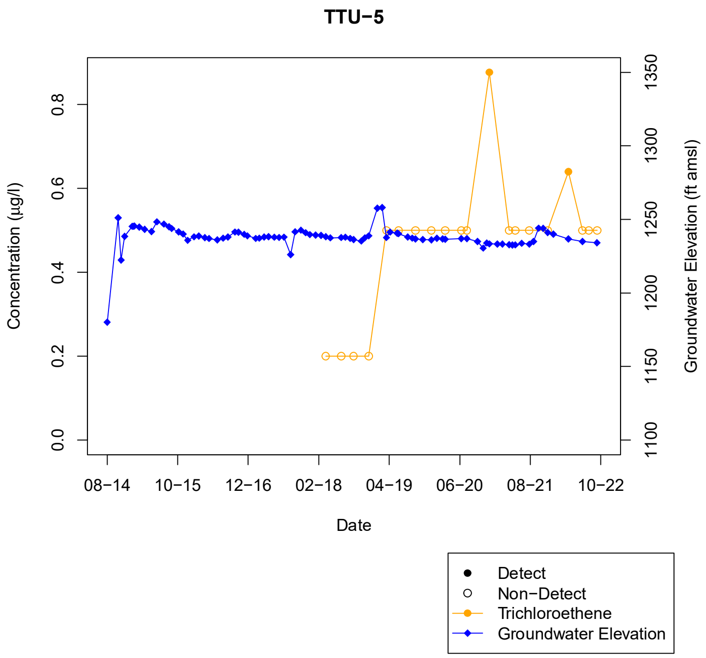

TTU−4
Concentration (µg/l)
0
2
4
6
8
10
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
11−13
02−15
05−16
09−17
12−18
03−20
06−21
10−22
Date
Detect
Non−Detect
1,4−Dioxane
Groundwater Elevation

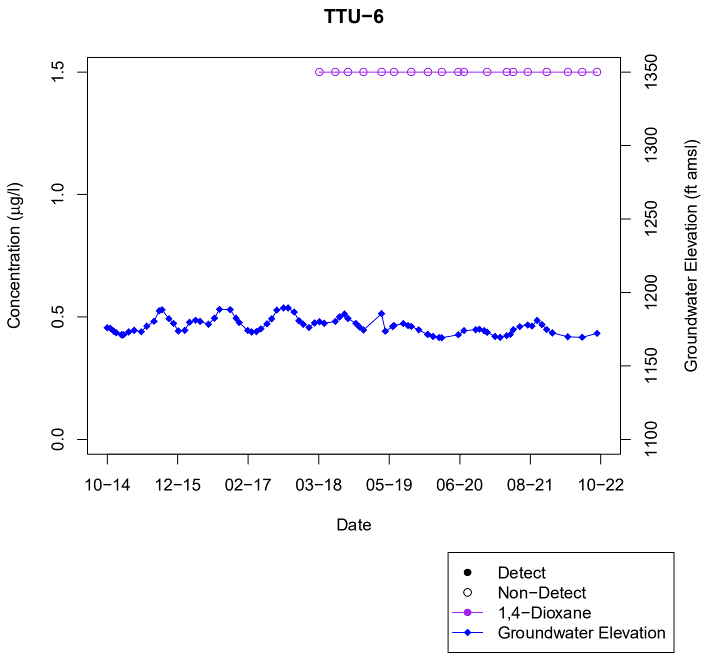

TTU−4
Concentration (µg/l)
0
5
10
15
20
25
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
11−13
02−15
05−16
09−17
12−18
03−20
06−21
10−22
Date
Detect
Non−Detect
Perchlorate
Groundwater Elevation

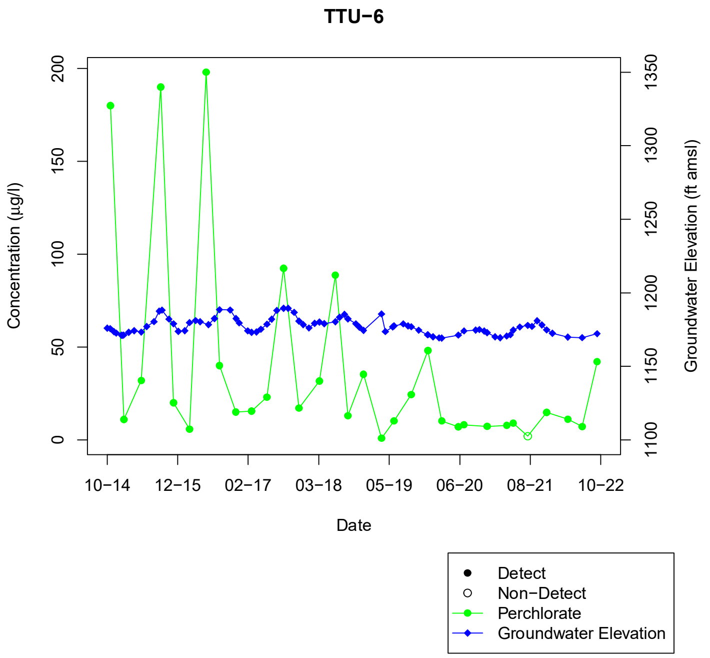

TTU−4
Concentration (µg/l)
0.0
0.1
0.2
0.3
0.4
0.5
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
11−13
02−15
05−16
09−17
12−18
03−20
06−21
10−22
Date
Detect
Non−Detect
Trichloroethene
Groundwater Elevation

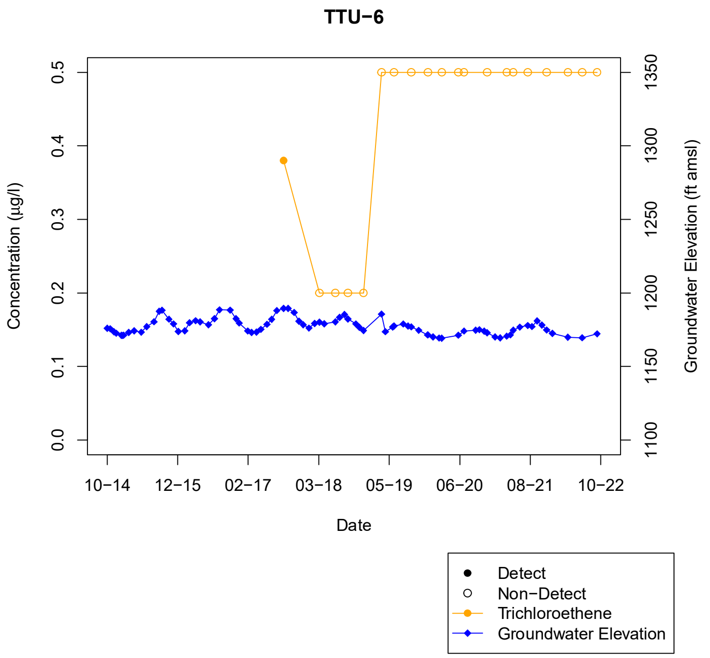

TTU−5
Concentration (µg/l)
0
20
40
60
80
100
120
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
08−14
10−15
12−16
02−18
04−19
06−20
08−21
10−22
Date
● Detect
○ Non−Detect
1,4−Dioxane
Groundwater Elevation

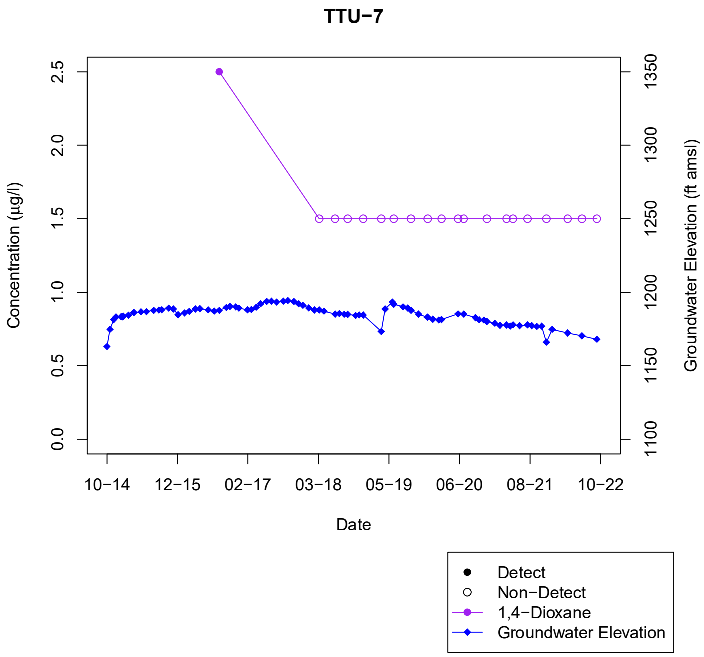

TTU−5
Concentration (µg/l)
0
50
100
150
200
250
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
08−14
10−15
12−16
02−18
04−19
06−20
08−21
10−22
Date
● Detect
○ Non−Detect
Perchlorate
Groundwater Elevation

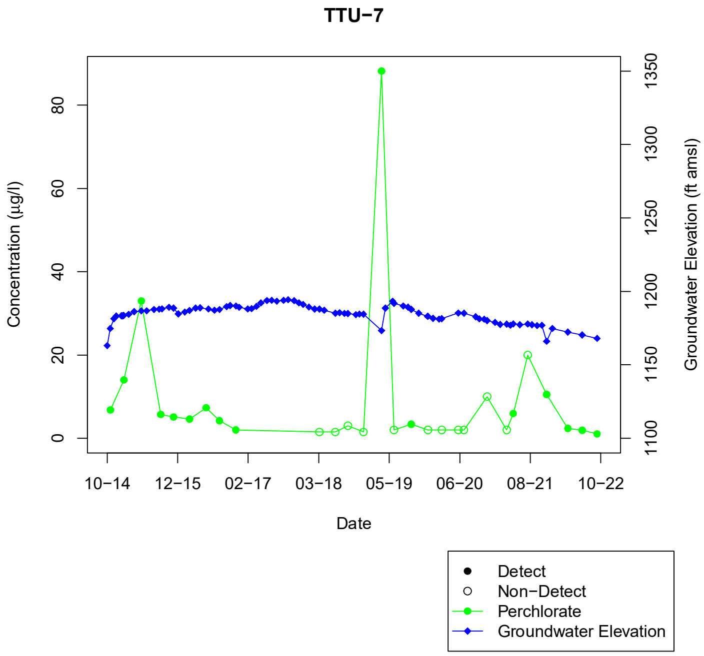

TTU−5
Concentration (µg/l)
0.0
0.2
0.4
0.6
0.8
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
08−14
10−15
12−16
02−18
04−19
06−20
08−21
10−22
Date
● Detect
○ Non−Detect
Trichloroethene
Groundwater Elevation

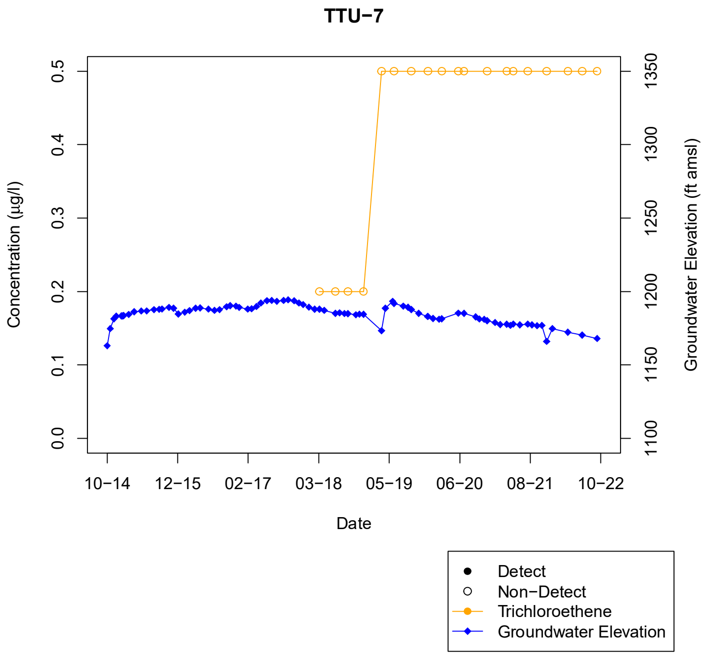

TTU−6
Concentration (µg/l)
0.0
0.5
1.0
1.5
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
10−14
12−15
02−17
03−18
05−19
06−20
08−21
10−22
Date
Detect
Non−Detect
1,4−Dioxane
Groundwater Elevation

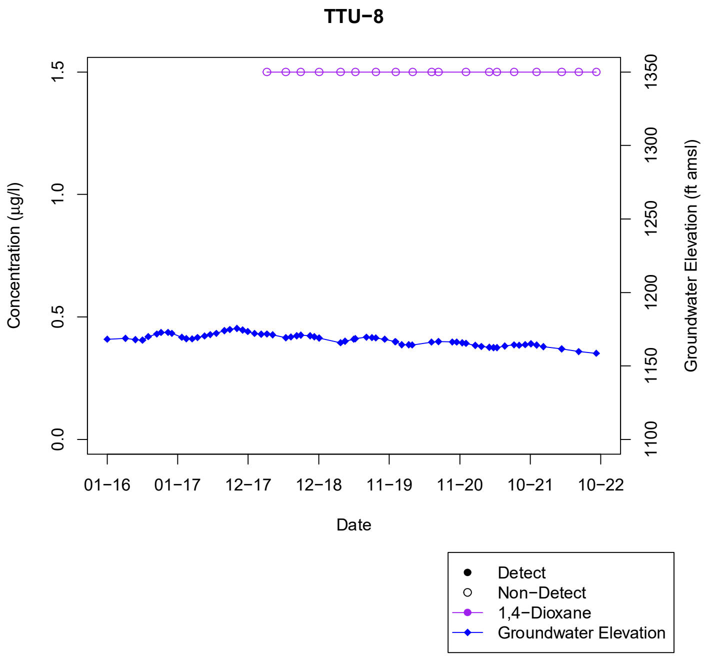

TTU−6
Concentration (µg/l)
0
50
100
150
200
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
10−14
12−15
02−17
03−18
05−19
06−20
08−21
10−22
Date
Detect
Non−Detect
Perchlorate
Groundwater Elevation

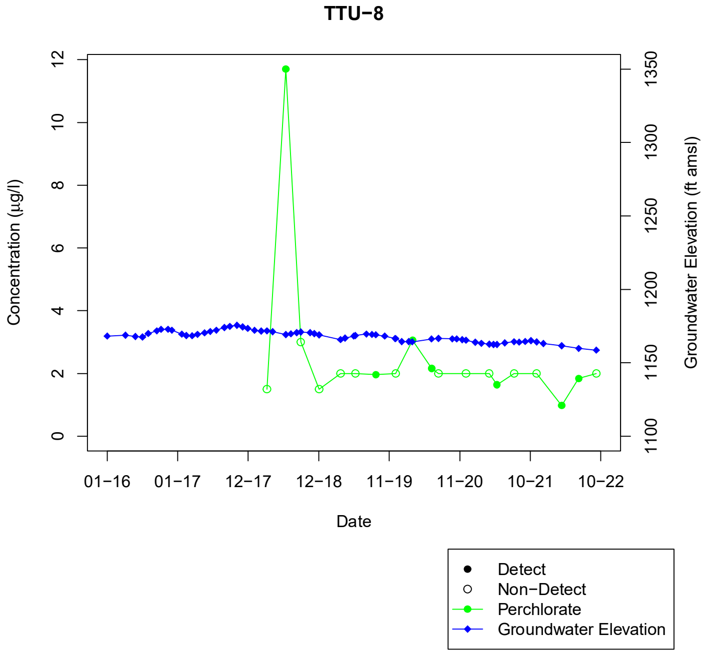

TTU−6
Concentration (µg/l)
0.0
0.1
0.2
0.3
0.4
0.5
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
10−14
12−15
02−17
03−18
05−19
06−20
08−21
10−22
Date
Detect
Non−Detect
Trichloroethene
Groundwater Elevation

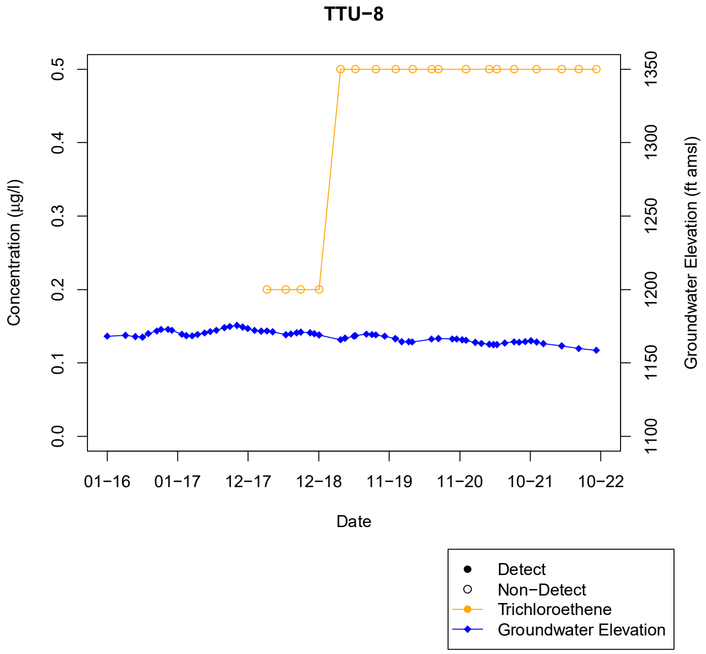

TTU−7

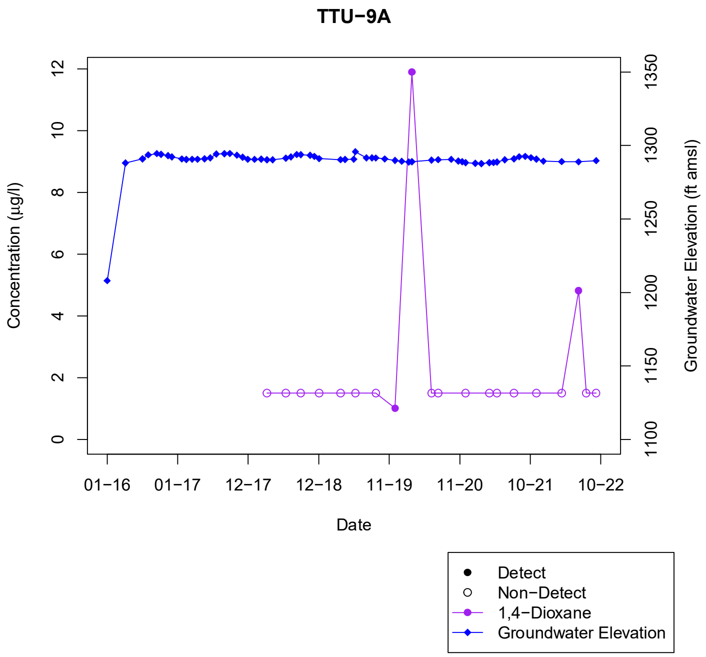

TTU−7

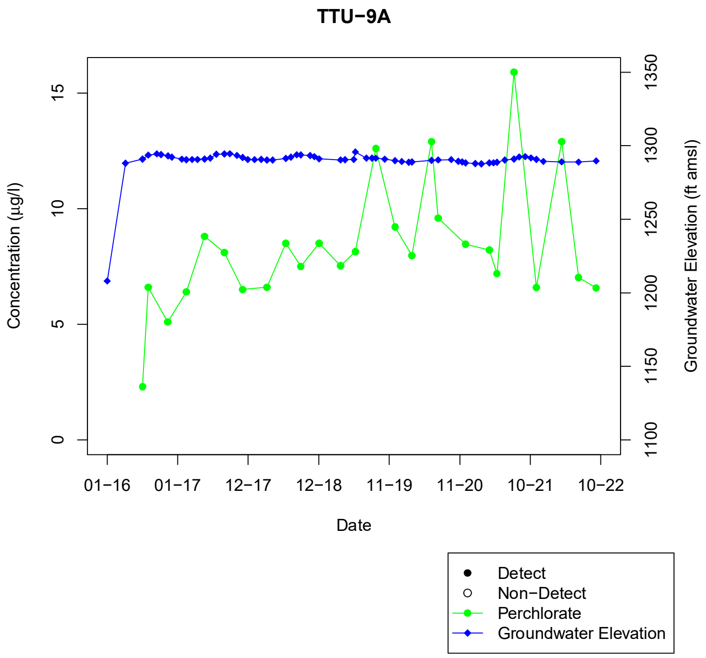

TTU−7

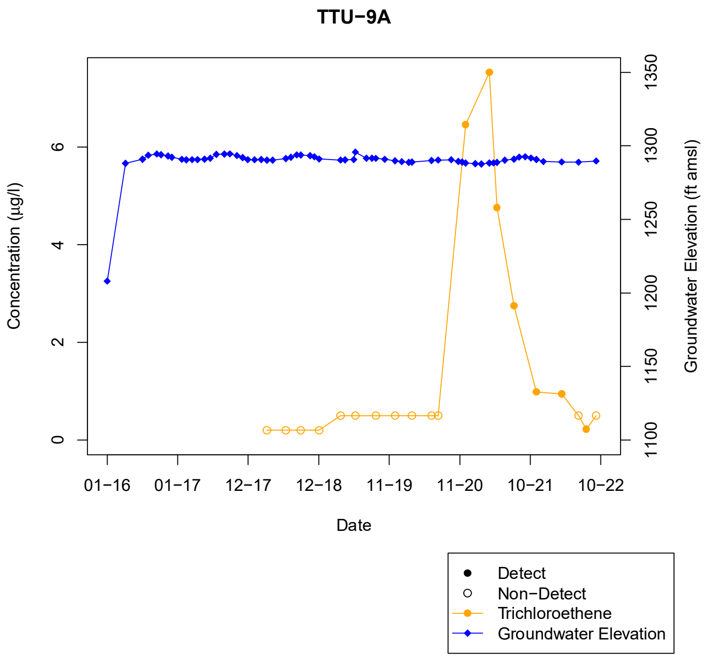

TTU−8
Concentration (µg/l)
0.0
0.5
1.0
1.5
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
01−16
01−17
12−17
12−18
11−19
11−20
10−21
10−22
Date
Detect
Non−Detect
1,4−Dioxane
Groundwater Elevation

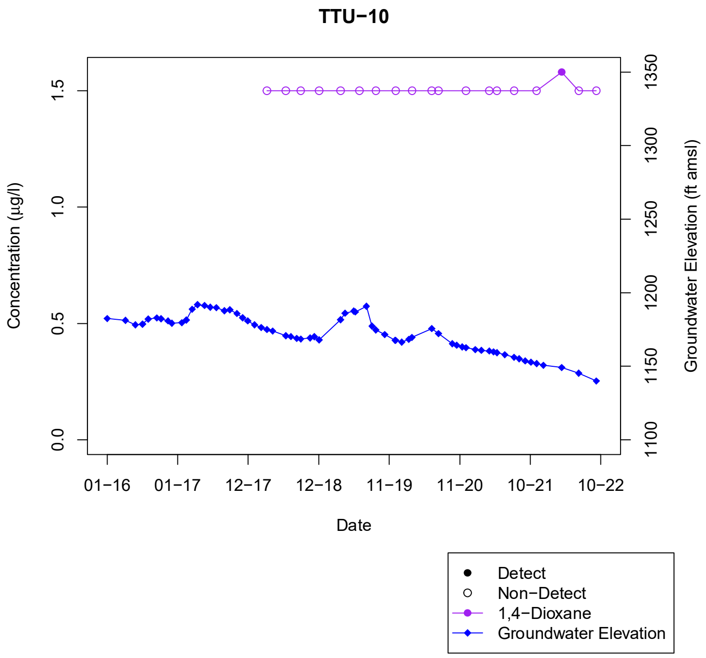

TTU−8
Concentration (µg/l)
0
2
4
6
8
10
12
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
01−16
01−17
12−17
12−18
11−19
11−20
10−21
10−22
Date
Detect
Non−Detect
Perchlorate
Groundwater Elevation

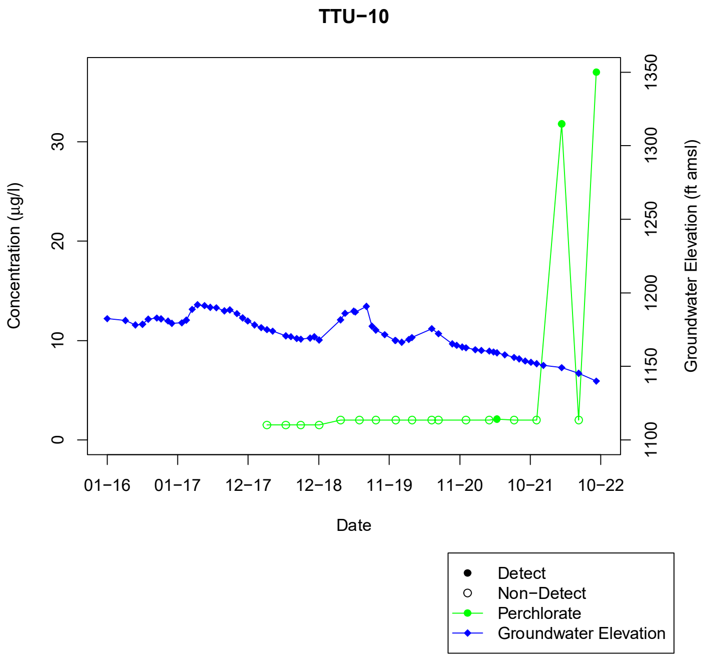

TTU−8
Concentration (µg/l)
0.0
0.1
0.2
0.3
0.4
0.5
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
01−16
01−17
12−17
12−18
11−19
11−20
10−21
10−22
Date
Detect
Non−Detect
Trichloroethene
Groundwater Elevation

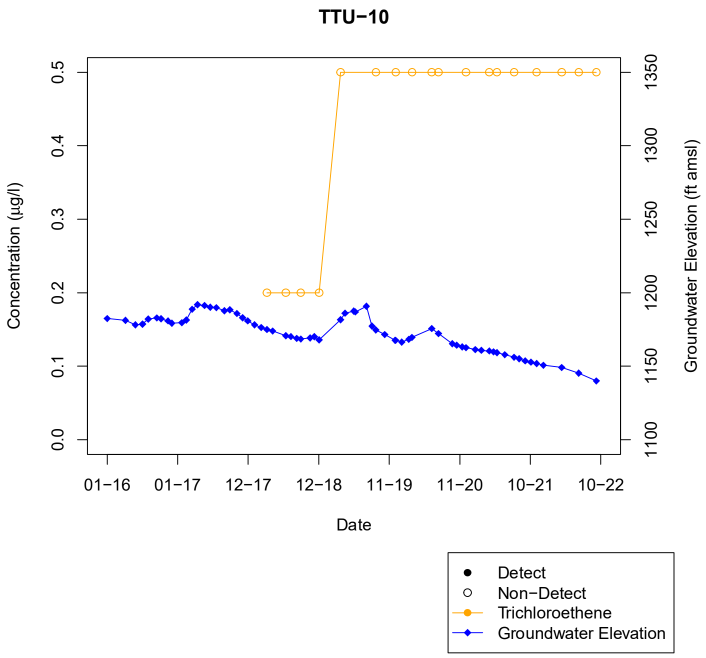

TTU−9A
Concentration (µg/l)
0
2
4
6
8
10
12
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
01−16
01−17
12−17
12−18
11−19
11−20
10−21
10−22
Date
● Detect
○ Non−Detect
1,4−Dioxane
Groundwater Elevation

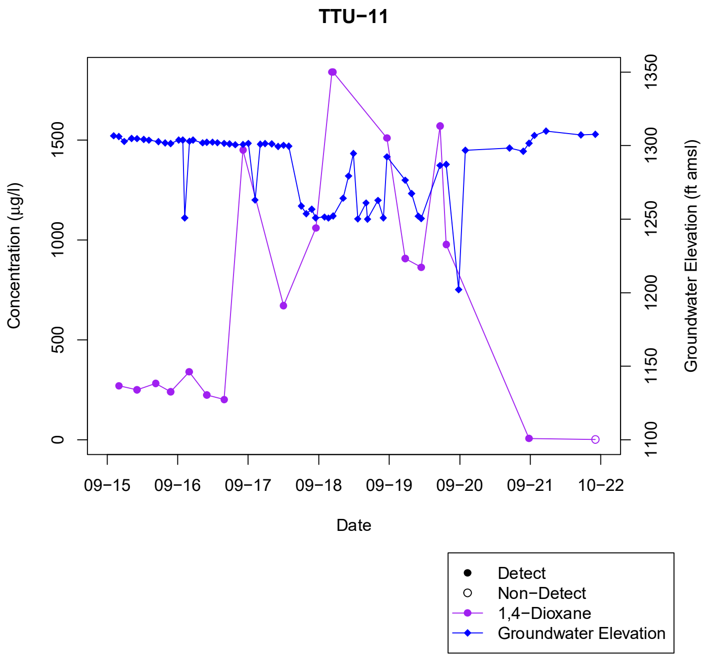

TTU−9A
Concentration (µg/l)
0
5
10
15
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
01−16
01−17
12−17
12−18
11−19
11−20
10−21
10−22
Date
● Detect
○ Non−Detect
Perchlorate
Groundwater Elevation

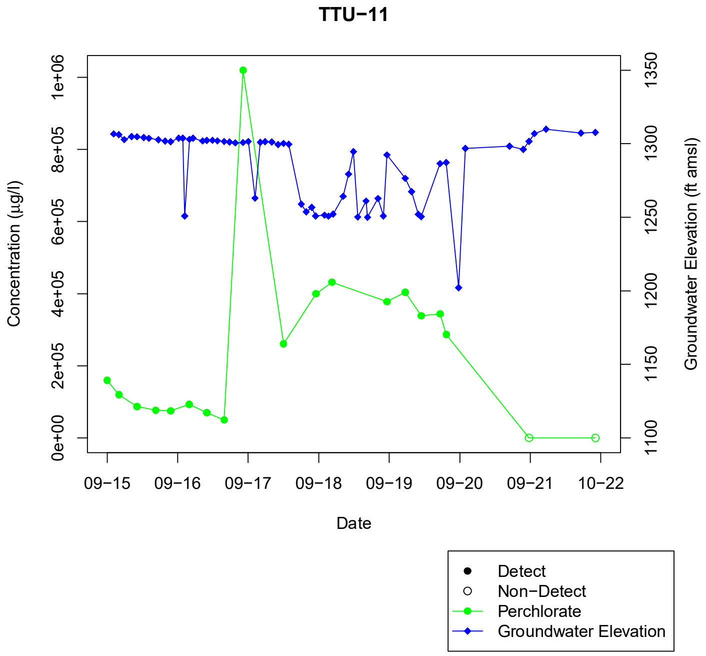

TTU−9A
Concentration (µg/l)
0
2
4
6
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
01−16
01−17
12−17
12−18
11−19
11−20
10−21
10−22
Date
● Detect
○ Non−Detect
Trichloroethene
Groundwater Elevation

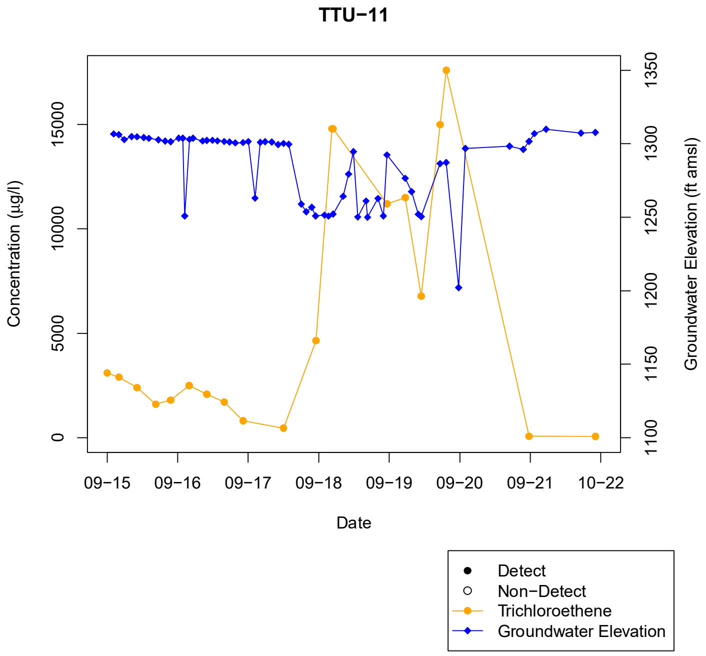

TTU−10
Concentration (µg/l)
0.0
0.5
1.0
1.5
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
01−16
01−17
12−17
12−18
11−19
11−20
10−21
10−22
Date
Detect
Non−Detect
1,4−Dioxane
Groundwater Elevation

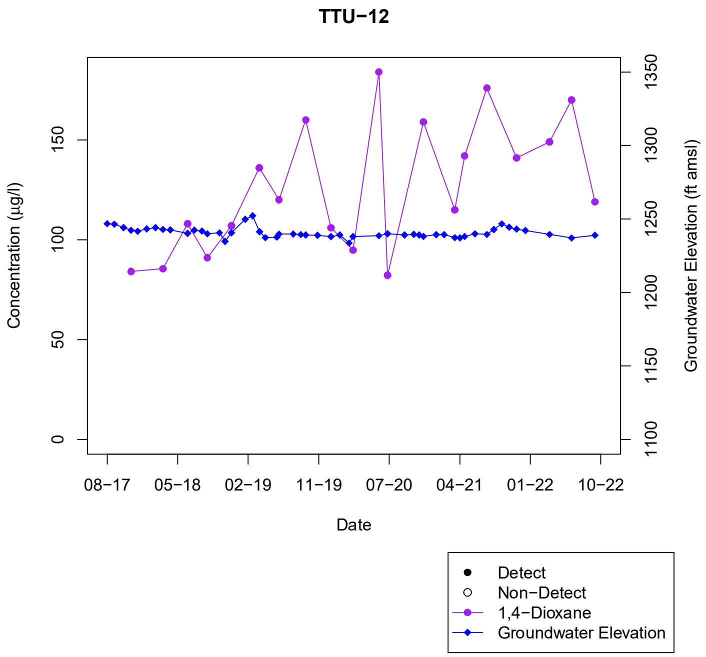

TTU−10
Concentration (µg/l)
0
10
20
30
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
01−16
01−17
12−17
12−18
11−19
11−20
10−21
10−22
Date
Detect
Non−Detect
Perchlorate
Groundwater Elevation

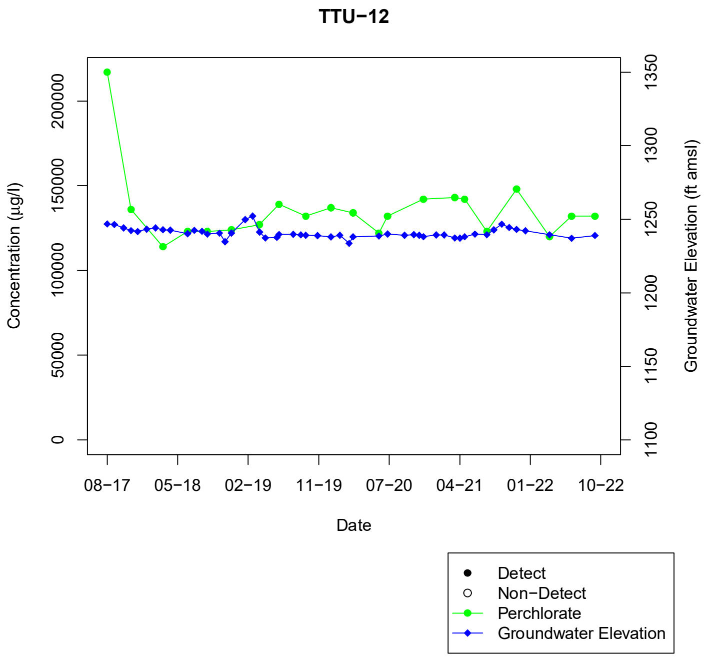

TTU−10
Concentration (µg/l)
0.0
0.1
0.2
0.3
0.4
0.5
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
01−16
01−17
12−17
12−18
11−19
11−20
10−21
10−22
Date
Detect
Non−Detect
Trichloroethene
Groundwater Elevation

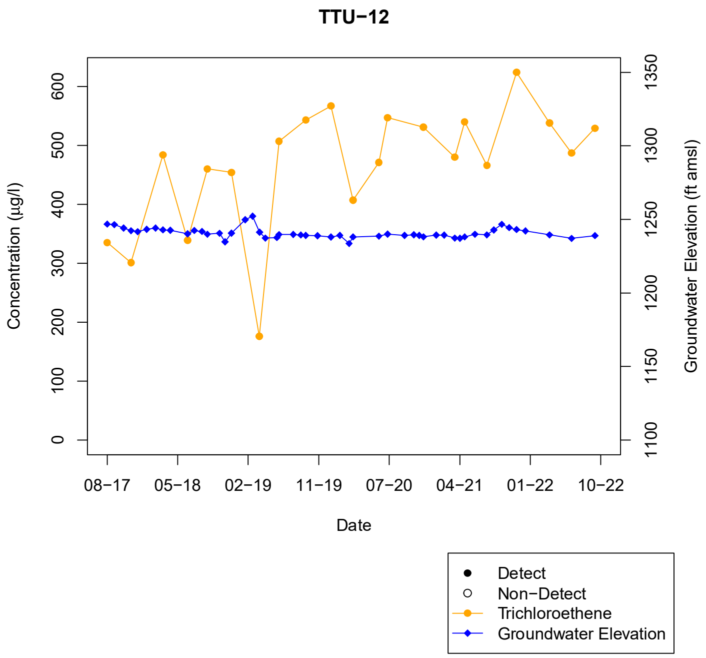

TTU−11
Concentration (µg/l)
0
500
1000
1500
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
09−15
09−16
09−17
09−18
09−19
09−20
09−21
10−22
Date
Detect
Non−Detect
1,4−Dioxane
Groundwater Elevation

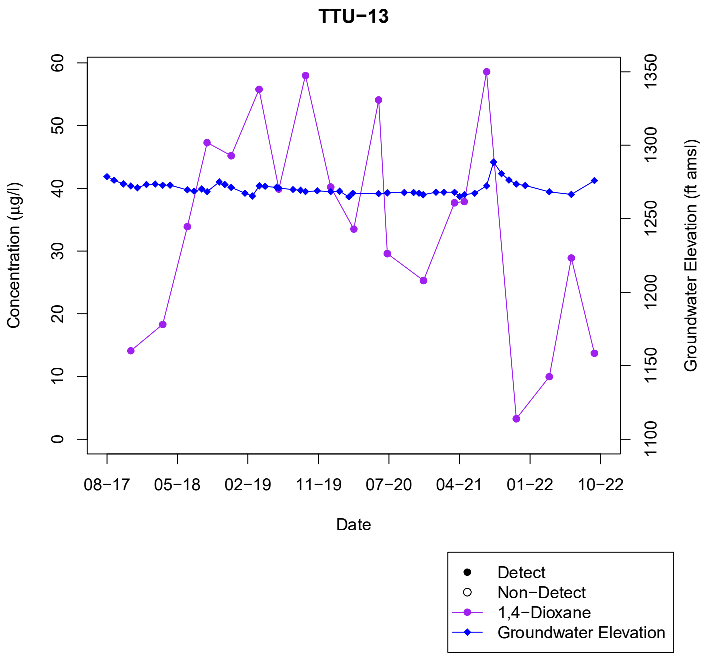

TTU−11
Concentration (µg/l)
0e+00
2e+05
4e+05
6e+05
8e+05
1e+06
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
09−15
09−16
09−17
09−18
09−19
09−20
09−21
10−22
Date
Detect
Non−Detect
Perchlorate
Groundwater Elevation

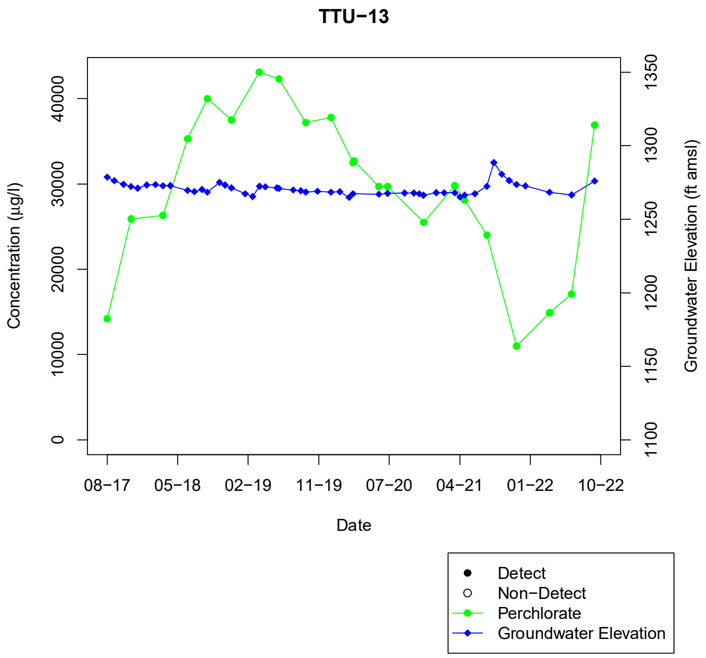

TTU−11
Concentration (µg/l)
0
5000
10000
15000
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
09−15
09−16
09−17
09−18
09−19
09−20
09−21
10−22
Date
Detect
Non−Detect
Trichloroethene
Groundwater Elevation

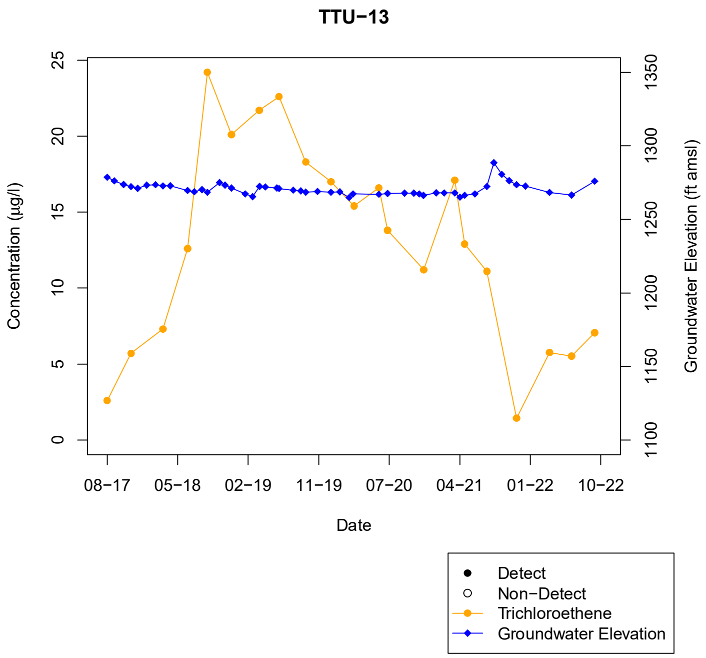

TTU−12
Concentration (µg/l)
0
50
100
150
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
08−17
05−18
02−19
11−19
07−20
04−21
01−22
10−22
Date
● Detect
○ Non−Detect
1,4−Dioxane
Groundwater Elevation

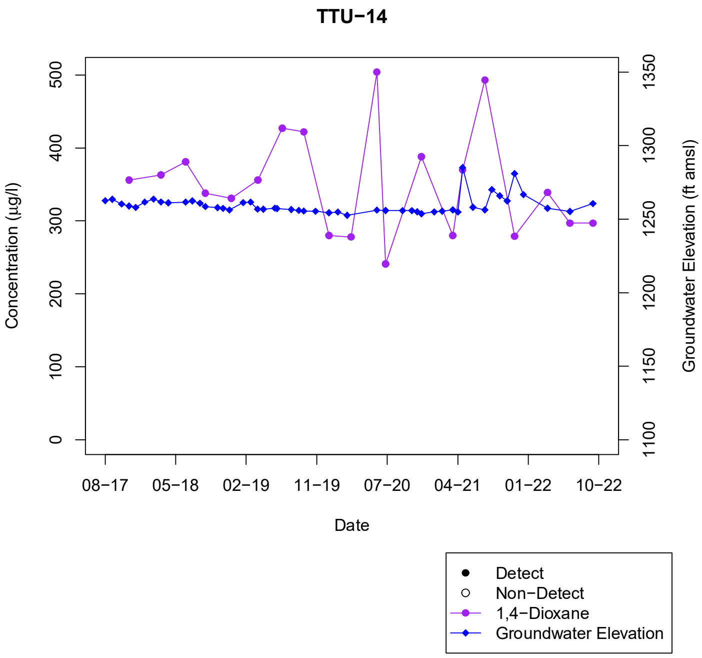

TTU−12
Concentration (µg/l)
0
50000
100000
150000
200000
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
08−17
05−18
02−19
11−19
07−20
04−21
01−22
10−22
Date
● Detect
○ Non−Detect
Perchlorate
Groundwater Elevation

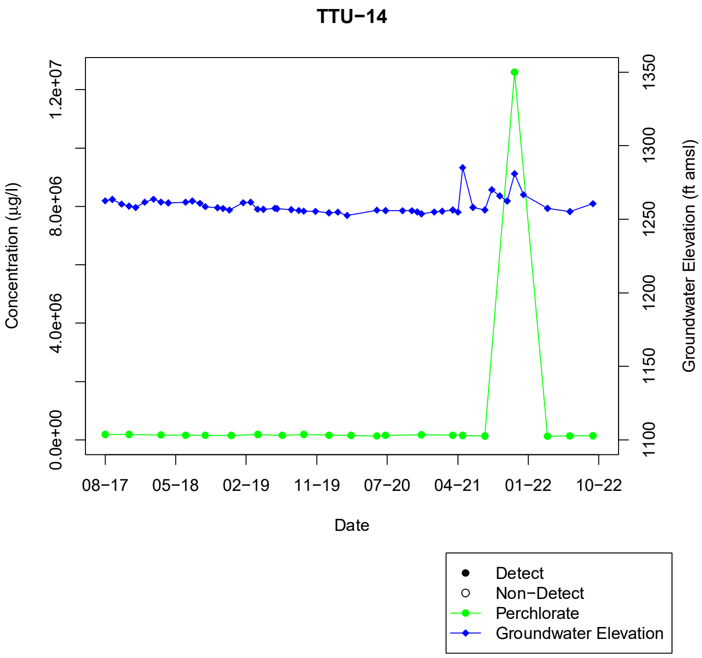

TTU−12
Concentration (µg/l)
0
100
200
300
400
500
600
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
08−17
05−18
02−19
11−19
07−20
04−21
01−22
10−22
Date
● Detect
○ Non−Detect
Trichloroethene
Groundwater Elevation

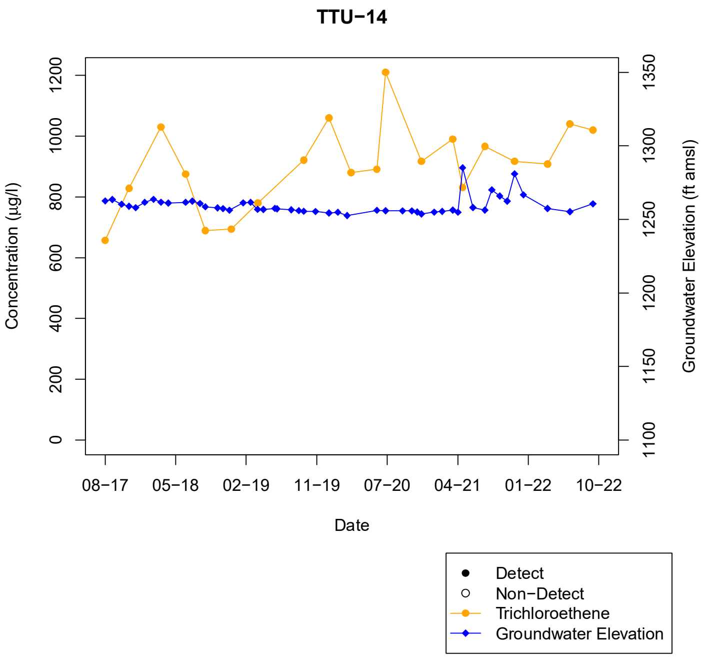

TTU−13
Concentration (µg/l)
0
10
20
30
40
50
60
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
08−17
05−18
02−19
11−19
07−20
04−21
01−22
10−22
Date
● Detect
○ Non−Detect
1,4−Dioxane
Groundwater Elevation

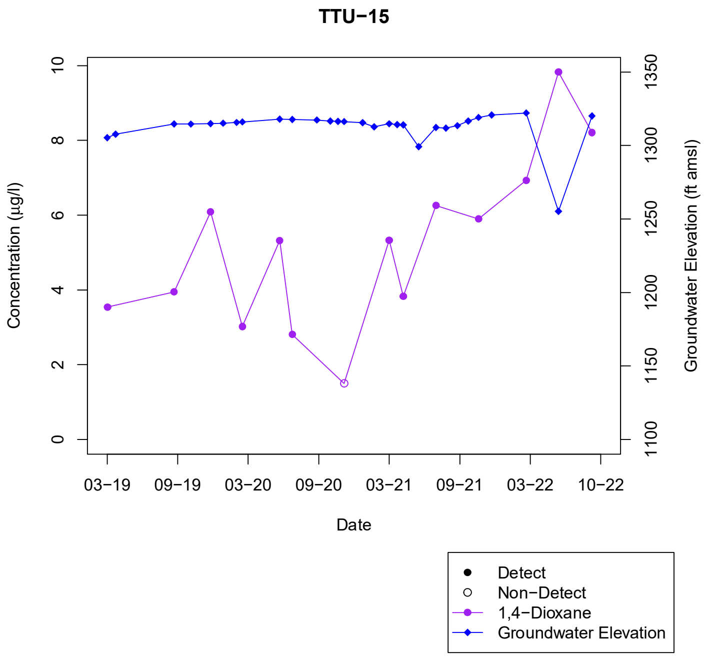

TTU−13
Concentration (µg/l)
0
10000
20000
30000
40000
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
08−17
05−18
02−19
11−19
07−20
04−21
01−22
10−22
Date
● Detect
○ Non−Detect
Perchlorate
Groundwater Elevation

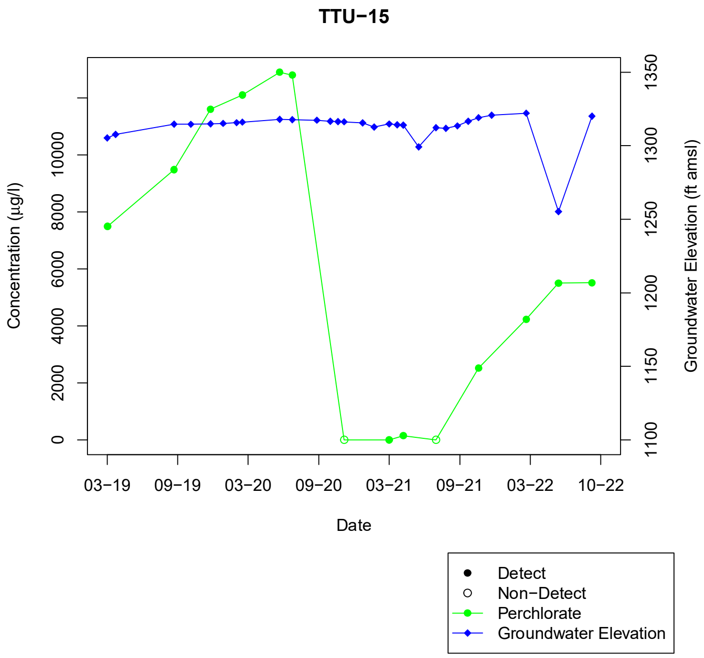

TTU−13
Concentration (µg/l)
0
5
10
15
20
25
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
08−17
05−18
02−19
11−19
07−20
04−21
01−22
10−22
Date
● Detect
○ Non−Detect
Trichloroethene
Groundwater Elevation

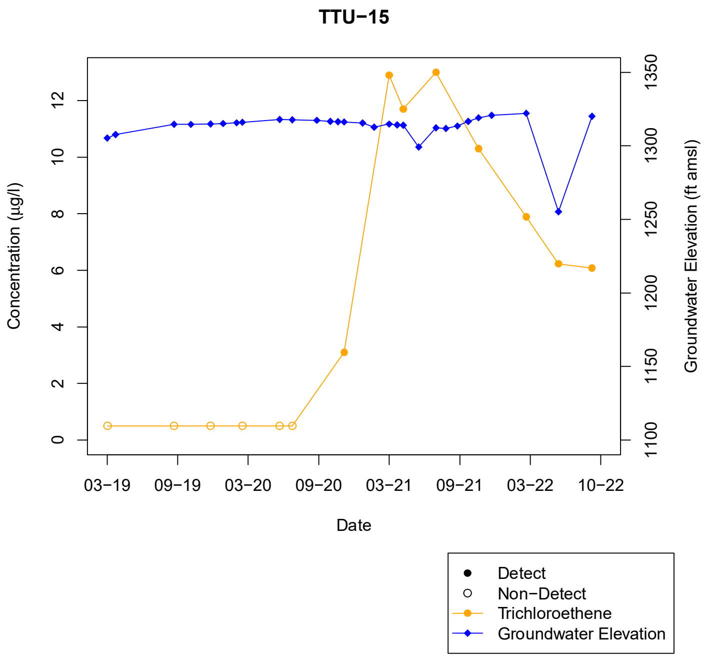

TTU−14
Concentration (µg/l)
0
100
200
300
400
500
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
08−17
05−18
02−19
11−19
07−20
04−21
01−22
10−22
Date
● Detect
○ Non−Detect
1,4−Dioxane
Groundwater Elevation

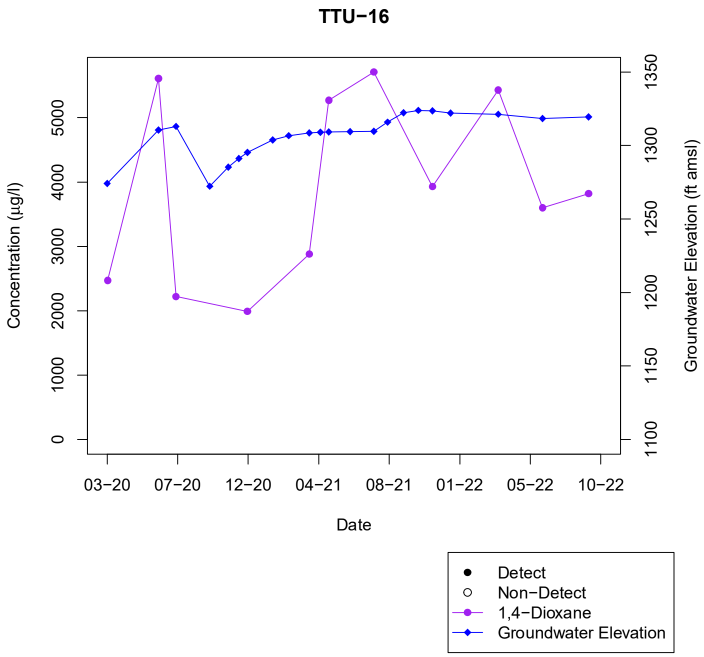

TTU−14
Concentration (µg/l)
0.0e+00
4.0e+06
8.0e+06
1.2e+07
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
08−17
05−18
02−19
11−19
07−20
04−21
01−22
10−22
Date
● Detect
○ Non−Detect
Perchlorate
Groundwater Elevation

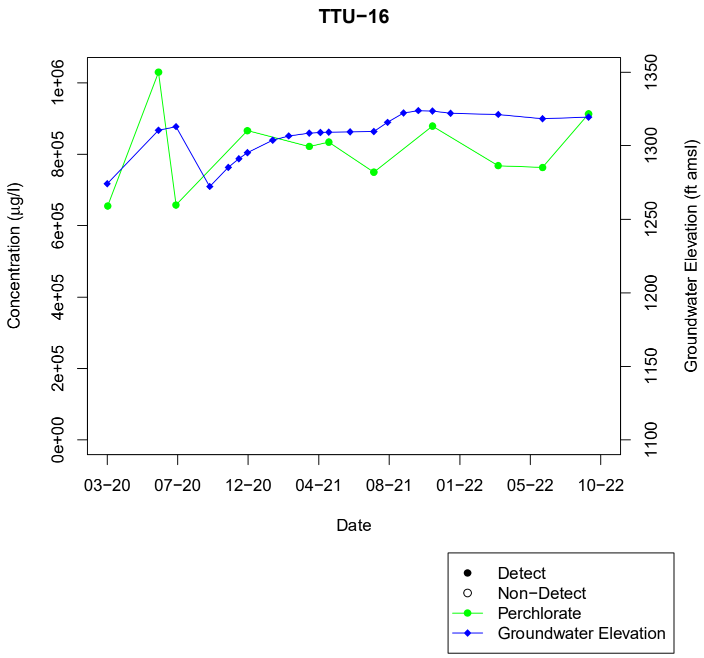

TTU−14
Concentration (µg/l)
0
200
400
600
800
1000
1200
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
08−17
05−18
02−19
11−19
07−20
04−21
01−22
10−22
Date
● Detect
○ Non−Detect
Trichloroethene
Groundwater Elevation

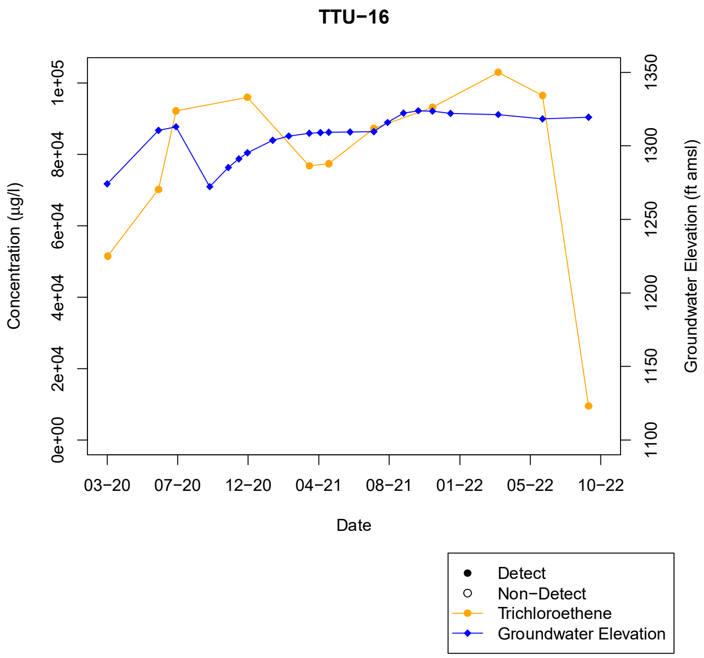

TTU−15
Concentration (µg/l)
0
2
4
6
8
10
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
03−19
09−19
03−20
09−20
03−21
09−21
03−22
10−22
Date
● Detect
○ Non−Detect
1,4−Dioxane
Groundwater Elevation

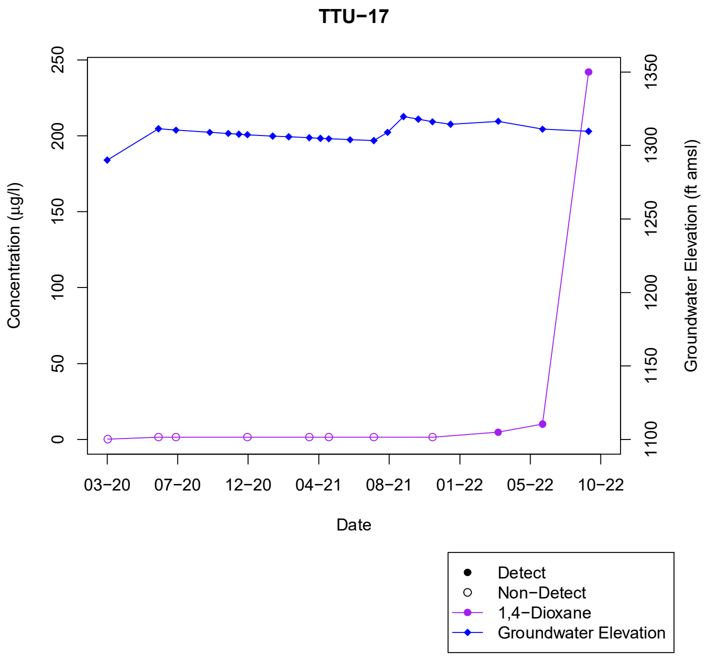

TTU−15
Concentration (µg/l)
0
2000
4000
6000
8000
10000
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
03−19
09−19
03−20
09−20
03−21
09−21
03−22
10−22
Date
● Detect
○ Non−Detect
Perchlorate
Groundwater Elevation

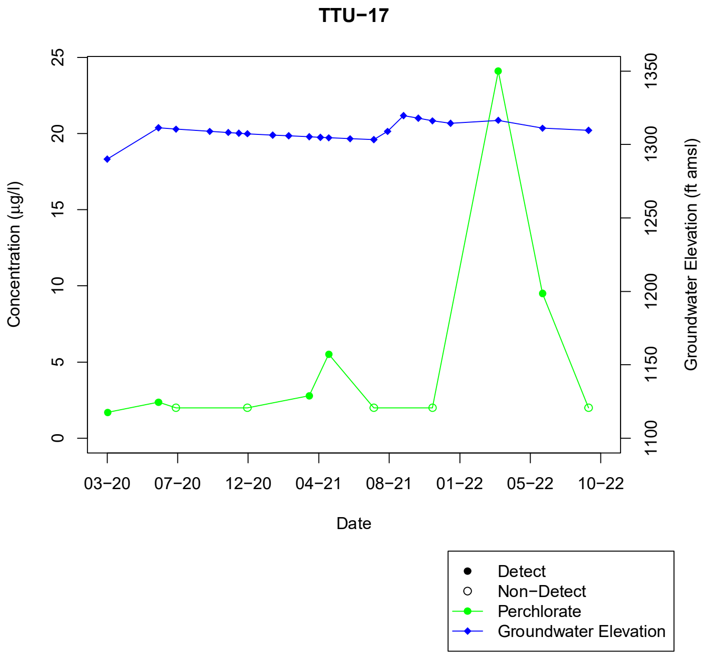

TTU−15
Concentration (µg/l)
0
2
4
6
8
10
12
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
03−19
09−19
03−20
09−20
03−21
09−21
03−22
10−22
Date
● Detect
○ Non−Detect
Trichloroethene
Groundwater Elevation

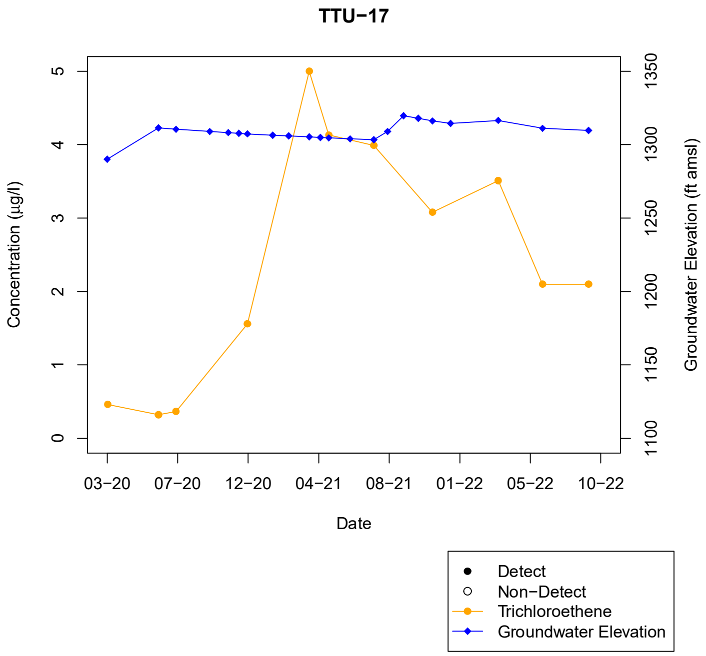

TTU−16
Concentration (µg/l)
0
1000
2000
3000
4000
5000
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
03−20
07−20
12−20
04−21
08−21
01−22
05−22
10−22
Date
Detect
Non−Detect
1,4−Dioxane
Groundwater Elevation

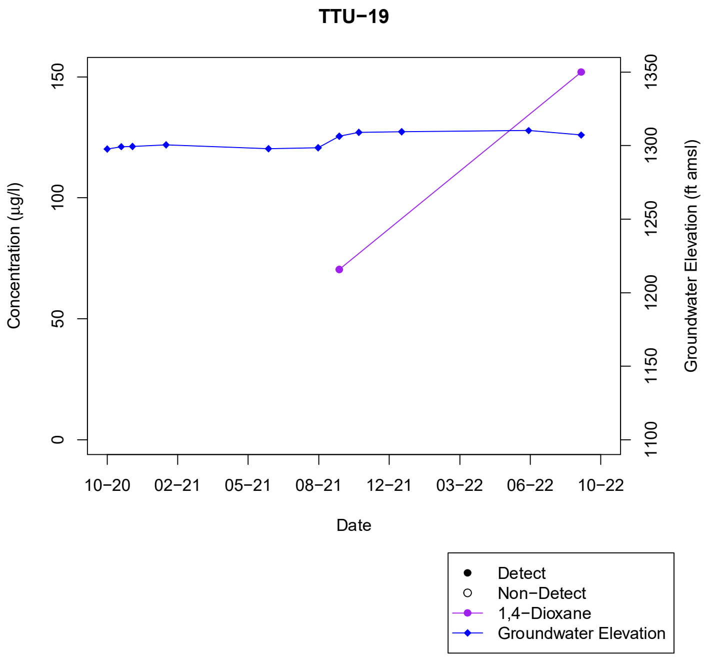

TTU−16
Concentration (µg/l)
0e+00
2e+05
4e+05
6e+05
8e+05
1e+06
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
03−20
07−20
12−20
04−21
08−21
01−22
05−22
10−22
Date
Detect
Non−Detect
Perchlorate
Groundwater Elevation

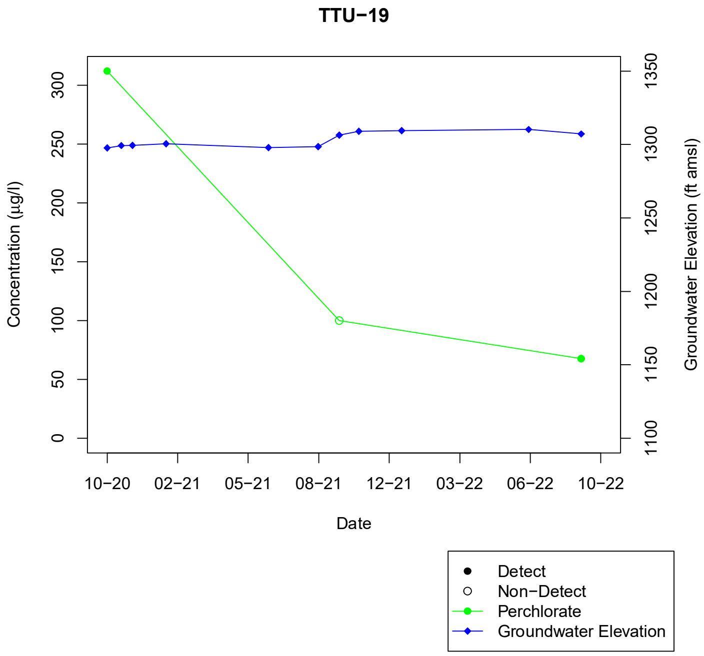

TTU−16
Concentration (µg/l)
0e+00
2e+04
4e+04
6e+04
8e+04
1e+05
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
03−20
07−20
12−20
04−21
08−21
01−22
05−22
10−22
Date
Detect
Non−Detect
Trichloroethene
Groundwater Elevation

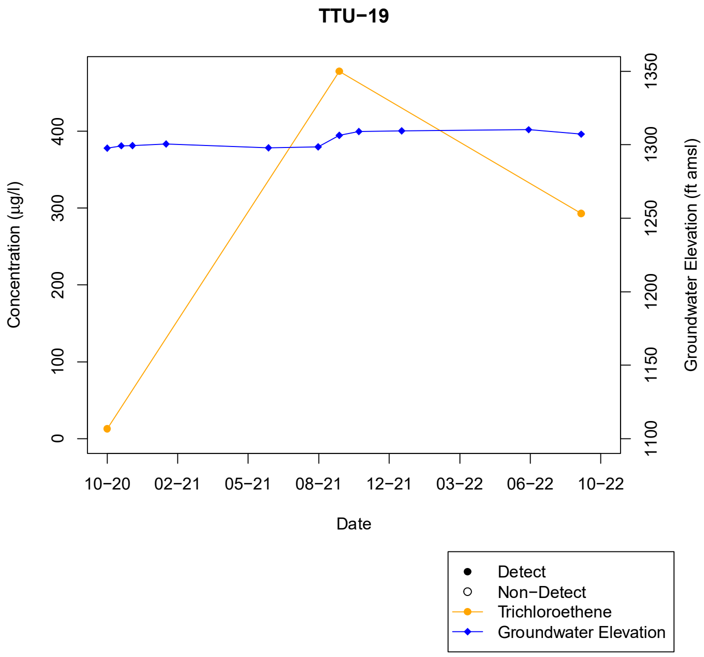

TTU−17
Concentration (µg/l)
0
50
100
150
200
250
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
03−20
07−20
12−20
04−21
08−21
01−22
05−22
10−22
Date
Detect
Non−Detect
1,4−Dioxane
Groundwater Elevation

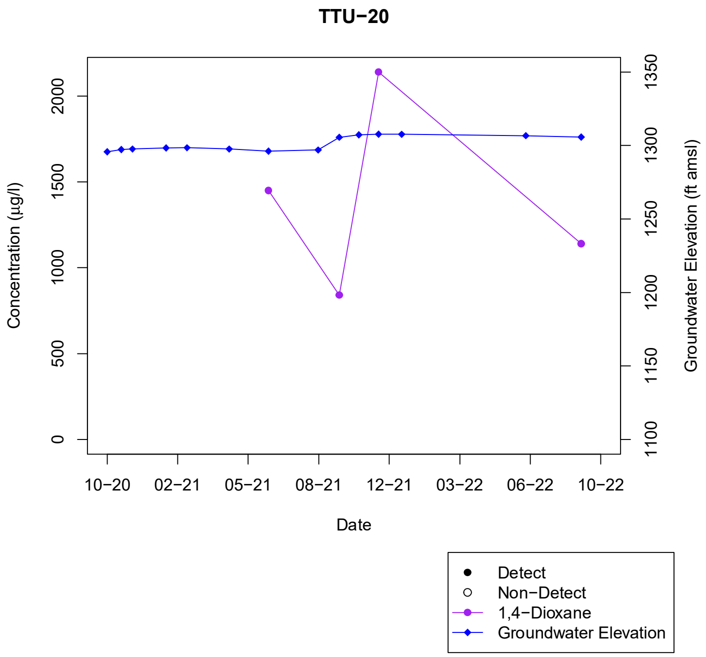

TTU−17
Concentration (µg/l)
0
5
10
15
20
25
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
03−20
07−20
12−20
04−21
08−21
01−22
05−22
10−22
Date
Detect
Non−Detect
Perchlorate
Groundwater Elevation


TTU−17
Concentration (µg/l)
0
1
2
3
4
5
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
03−20
07−20
12−20
04−21
08−21
01−22
05−22
10−22
Date
Detect
Non−Detect
Trichloroethene
Groundwater Elevation

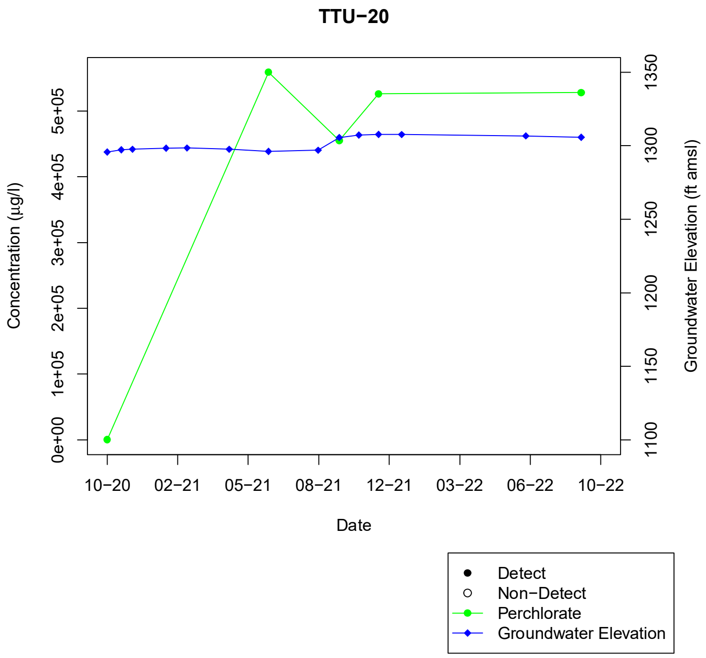

TTU−19
Concentration (µg/l)
0
50
100
150
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
10−20
02−21
05−21
08−21
12−21
03−22
06−22
10−22
Date
Detect
Non−Detect
1,4−Dioxane
Groundwater Elevation


TTU−19
Concentration (µg/l)
0
50
100
150
200
250
300
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
10−20
02−21
05−21
08−21
12−21
03−22
06−22
10−22
Date
Detect
Non−Detect
Perchlorate
Groundwater Elevation

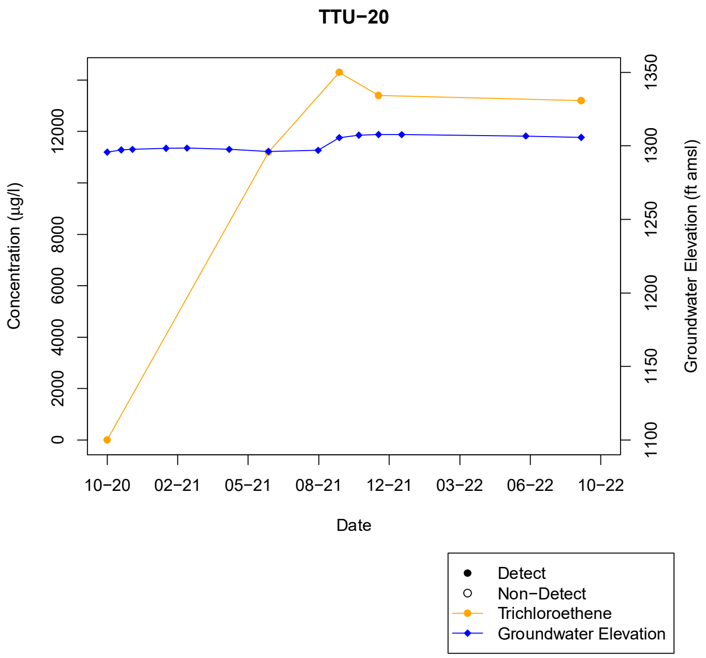

TTU−19
Concentration (µg/l)
0
100
200
300
400
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
10−20
02−21
05−21
08−21
12−21
03−22
06−22
10−22
Date
Detect
Non−Detect
Trichloroethene
Groundwater Elevation



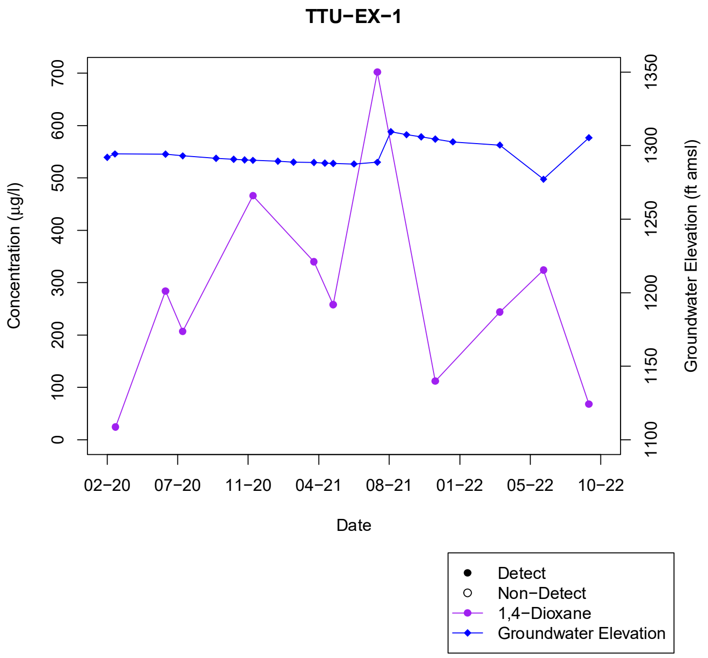
TTU−20
Concentration (µg/l)
0
500
1000
1500
2000
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
10−20
02−21
05−21
08−21
12−21
03−22
06−22
10−22
Date
Detect
Non−Detect
1,4−Dioxane
Groundwater Elevation

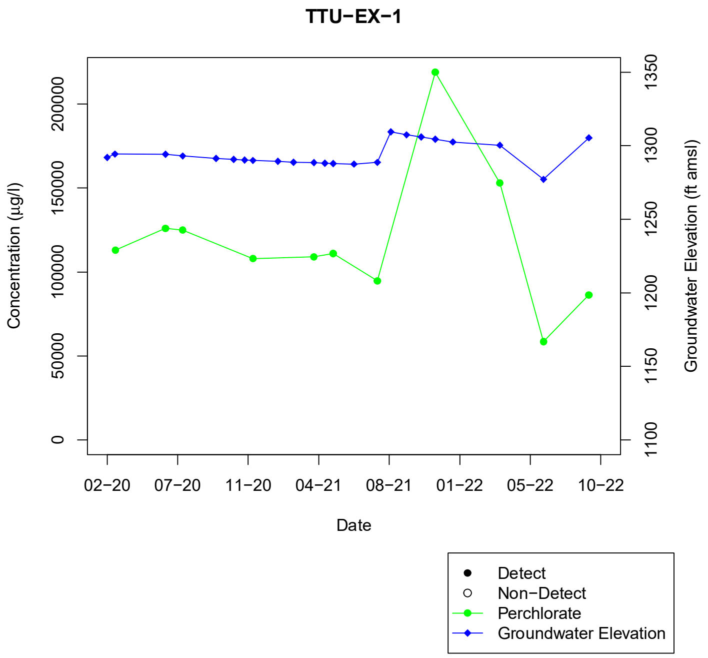


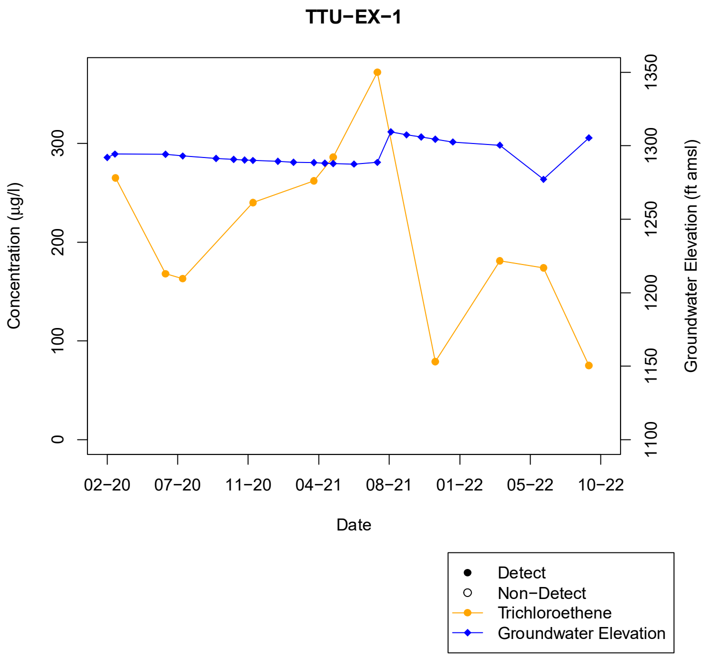
TTU−20
Concentration (µg/l)
0e+00
1e+05
2e+05
3e+05
4e+05
5e+05
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
10−20
02−21
05−21
08−21
12−21
03−22
06−22
10−22
Date
Detect
Non−Detect
Perchlorate
Groundwater Elevation

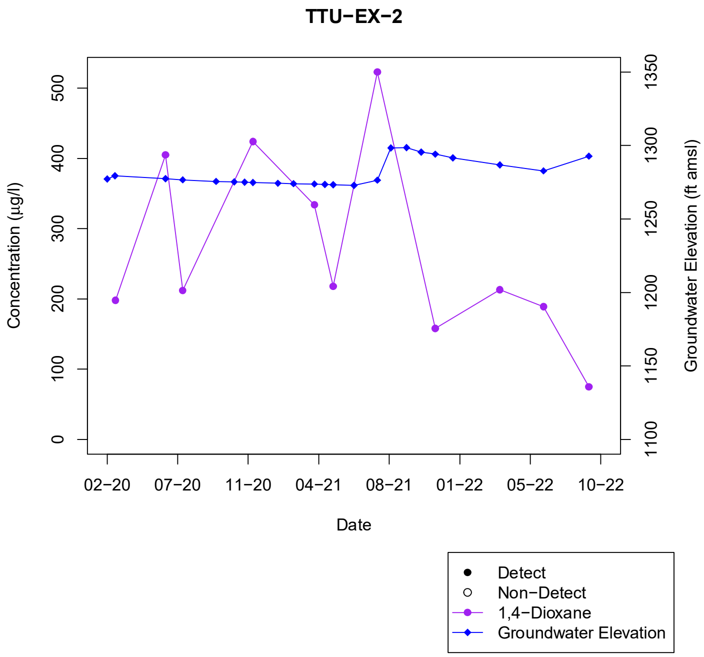


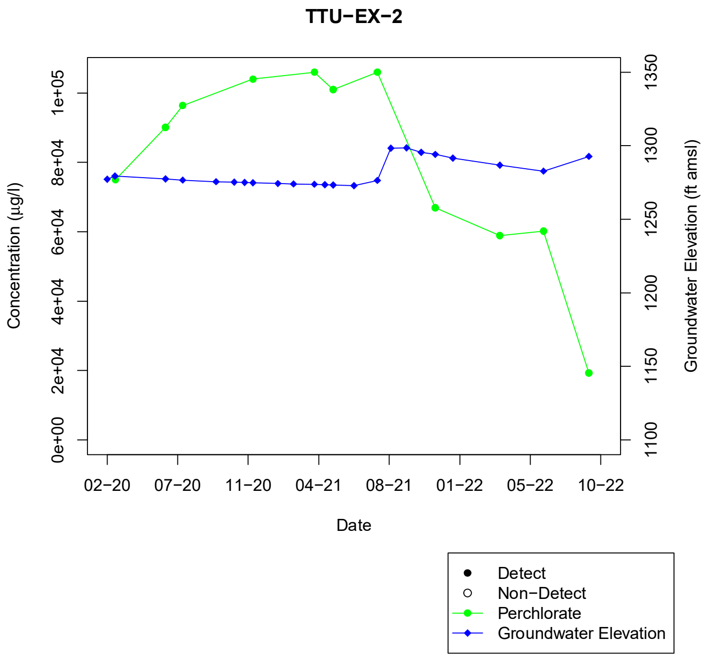
TTU−20
Concentration (µg/l)
0
2000
4000
6000
8000
12000
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
10−20
02−21
05−21
08−21
12−21
03−22
06−22
10−22
Date
Detect
Non−Detect
Trichloroethene
Groundwater Elevation

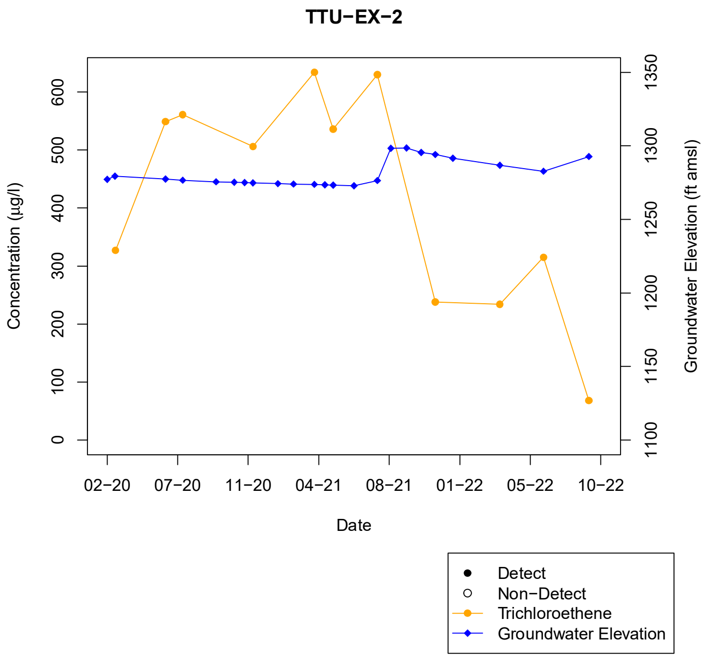

TTU−EX−1
Concentration (µg/l)
0
100
200
300
400
500
600
700
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
02−20
07−20
11−20
04−21
08−21
01−22
05−22
10−22
Date
Detect
Non−Detect
1,4−Dioxane
Groundwater Elevation

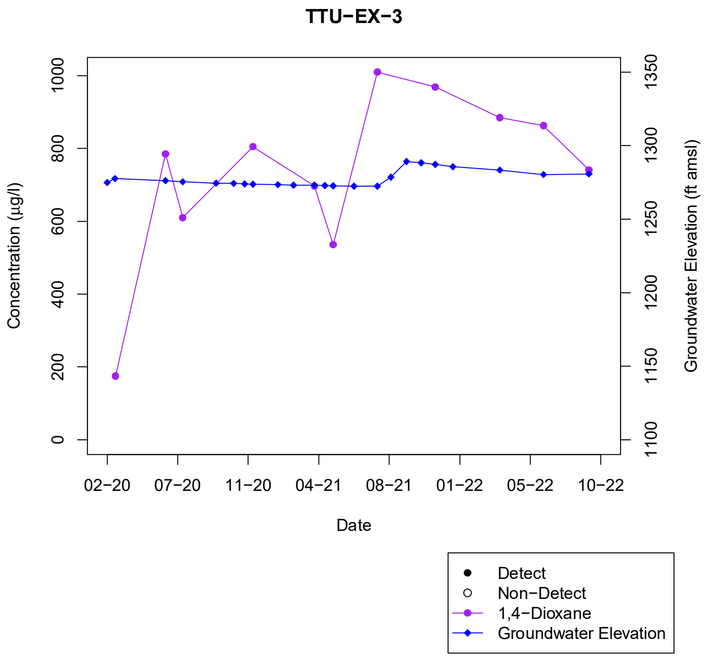

TTU−EX−1
Concentration (µg/l)
0
50000
100000
150000
200000
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
02−20
07−20
11−20
04−21
08−21
01−22
05−22
10−22
Date
Detect
Non−Detect
Perchlorate
Groundwater Elevation

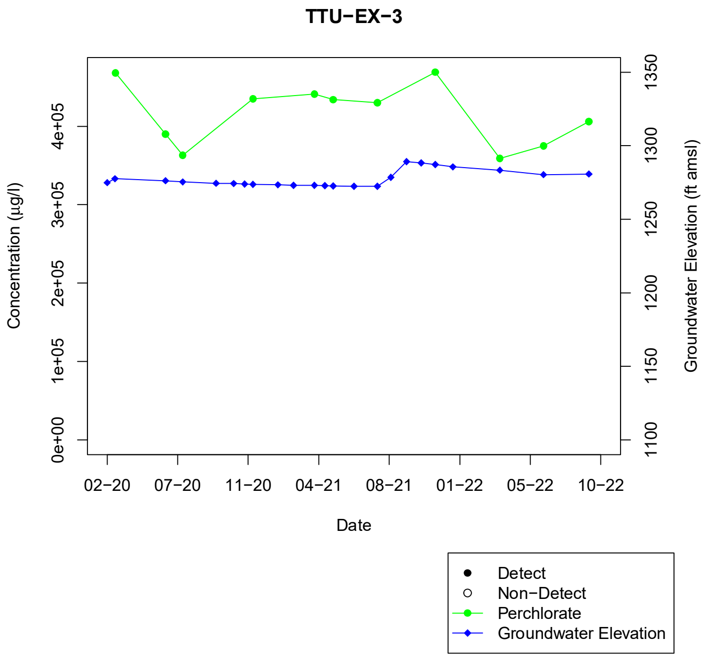

TTU−EX−1
Concentration (µg/l)
0
100
200
300
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
02−20
07−20
11−20
04−21
08−21
01−22
05−22
10−22
Date
Detect
Non−Detect
Trichloroethene
Groundwater Elevation

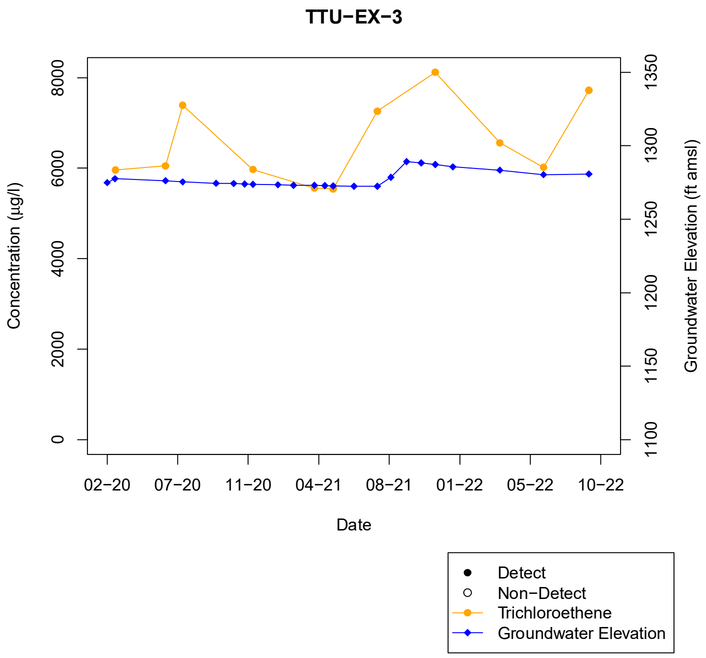

TTU−EX−2
Concentration (µg/l)
0
100
200
300
400
500
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
02−20
07−20
11−20
04−21
08−21
01−22
05−22
10−22
Date
● Detect
○ Non−Detect
1,4−Dioxane
Groundwater Elevation

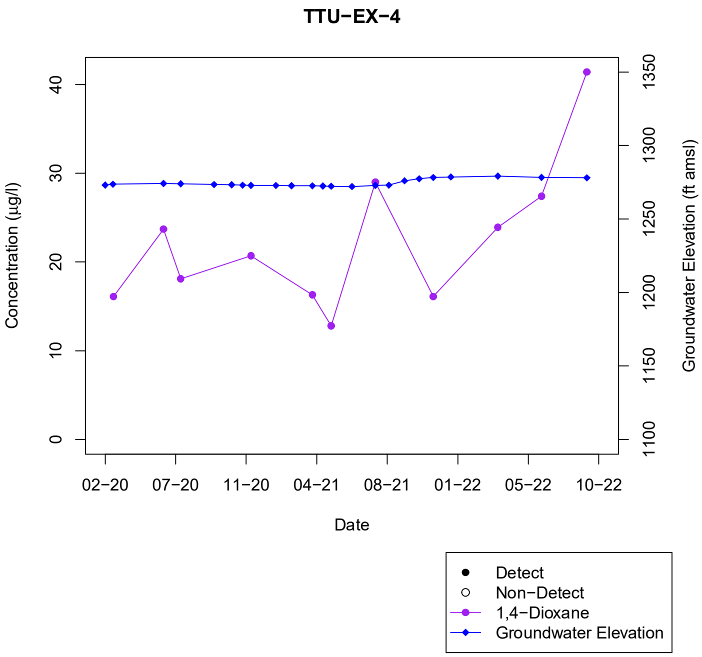

TTU−EX−2
Concentration (µg/l)
0e+00
2e+04
4e+04
6e+04
8e+04
1e+05
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
02−20
07−20
11−20
04−21
08−21
01−22
05−22
10−22
Date
● Detect
○ Non−Detect
Perchlorate
Groundwater Elevation

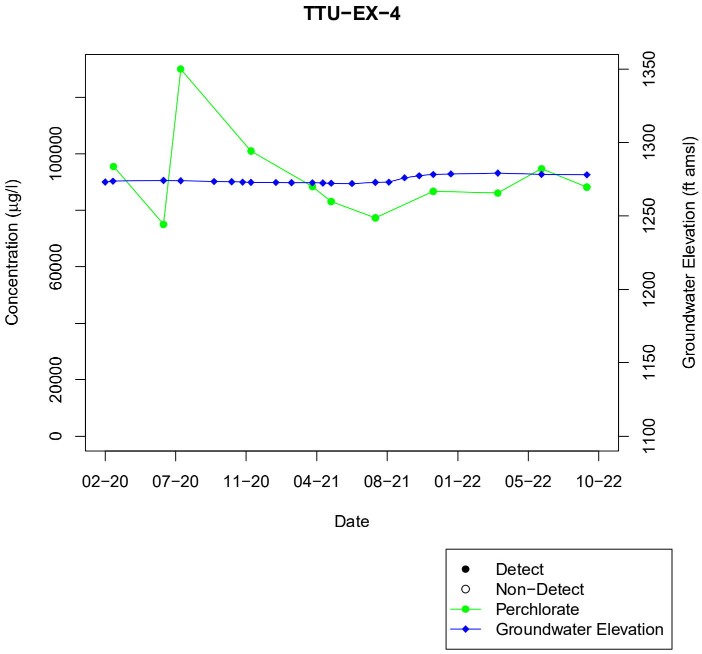

TTU−EX−2
Concentration (µg/l)
0
100
200
300
400
500
600
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
02−20
07−20
11−20
04−21
08−21
01−22
05−22
10−22
Date
● Detect
○ Non−Detect
Trichloroethene
Groundwater Elevation

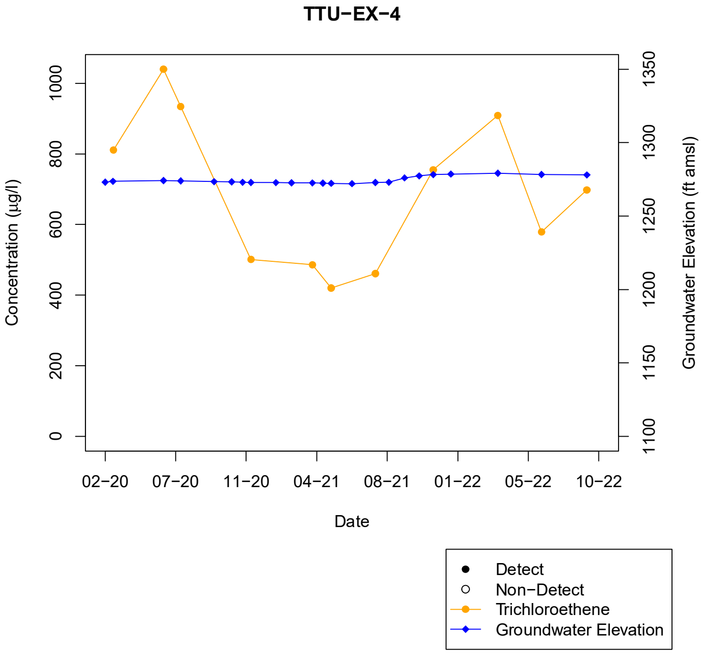

TTU−EX−3
Concentration (µg/l)
0
200
400
600
800
1000
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
02−20
07−20
11−20
04−21
08−21
01−22
05−22
10−22
Date
● Detect
○ Non−Detect
1,4−Dioxane
Groundwater Elevation

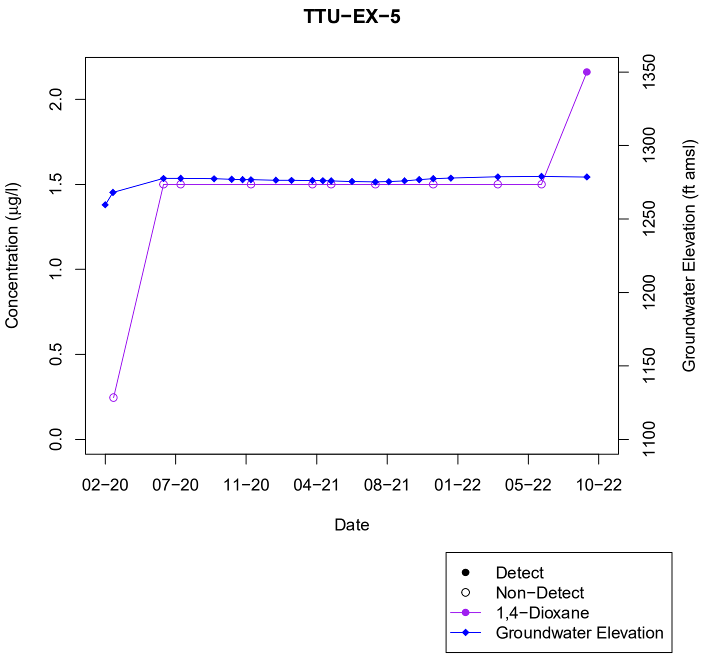

TTU−EX−3
Concentration (µg/l)
0e+00
1e+05
2e+05
3e+05
4e+05
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
02−20
07−20
11−20
04−21
08−21
01−22
05−22
10−22
Date
● Detect
○ Non−Detect
Perchlorate
Groundwater Elevation

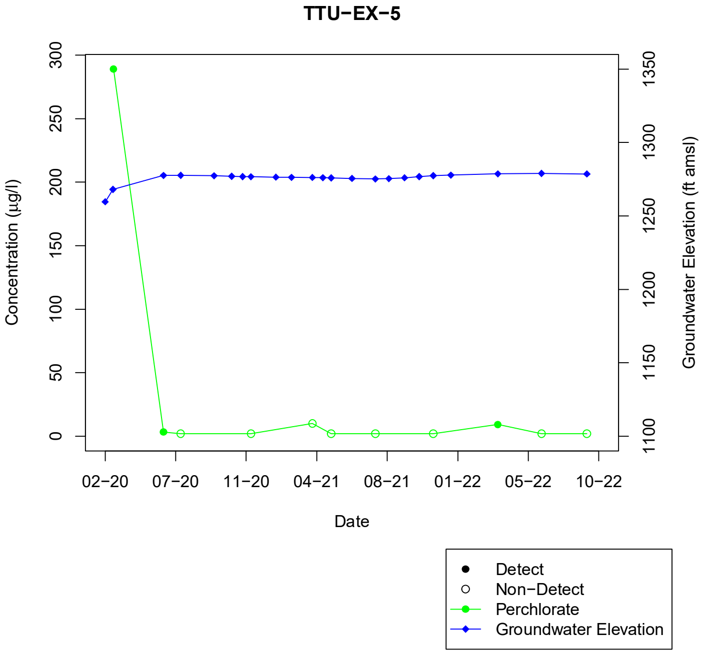

TTU−EX−3
Concentration (µg/l)
0
2000
4000
6000
8000
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
02−20
07−20
11−20
04−21
08−21
01−22
05−22
10−22
Date
● Detect
○ Non−Detect
Trichloroethene
Groundwater Elevation

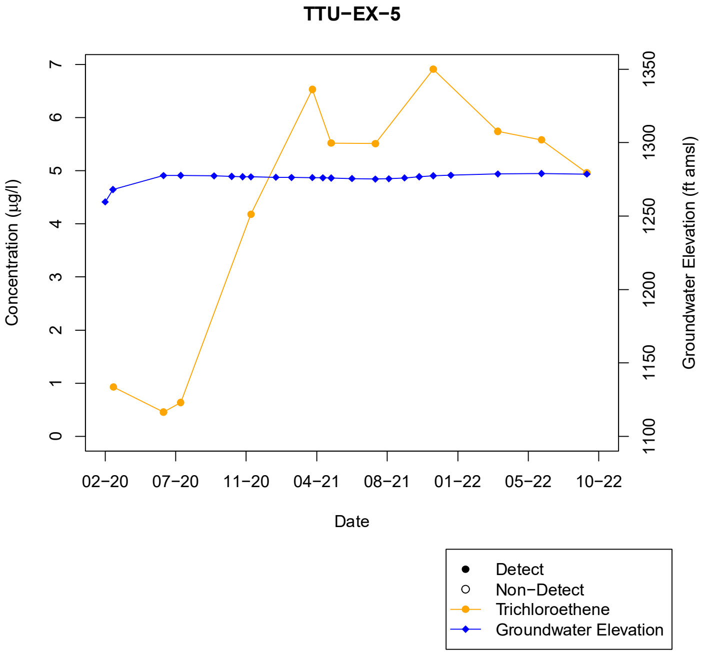

TTU−EX−4
Concentration (µg/l)
0
10
20
30
40
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
02−20
07−20
11−20
04−21
08−21
01−22
05−22
10−22
Date
Detect
Non−Detect
1,4−Dioxane
Groundwater Elevation


TTU−EX−4
Concentration (µg/l)
0
20000
60000
100000
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
02−20
07−20
11−20
04−21
08−21
01−22
05−22
10−22
Date
Detect
Non−Detect
Perchlorate
Groundwater Elevation


TTU−EX−4
Concentration (µg/l)
0
200
400
600
800
1000
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
02−20
07−20
11−20
04−21
08−21
01−22
05−22
10−22
Date
Detect
Non−Detect
Trichloroethene
Groundwater Elevation


TTU−EX−5
Concentration (µg/l)
0.0
0.5
1.0
1.5
2.0
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
02−20
07−20
11−20
04−21
08−21
01−22
05−22
10−22
Date
Detect
Non−Detect
1,4−Dioxane
Groundwater Elevation


TTU−EX−5
Concentration (µg/l)
0
50
100
150
200
250
300
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
02−20
07−20
11−20
04−21
08−21
01−22
05−22
10−22
Date
Detect
Non−Detect
Perchlorate
Groundwater Elevation


TTU−EX−5
Concentration (µg/l)
0
1
2
3
4
5
6
7
Groundwater Elevation (ft amsl)
1100
1150
1200
1250
1300
1350
02−20
07−20
11−20
04−21
08−21
01−22
05−22
10−22
Date
Detect
Non−Detect
Trichloroethene
Groundwater Elevation

Attachment 5 – Data Validation Memo

Memorandum

Date:	November 18, 2022
To:	Angel Soto, Nammo Defense Systems Inc.
From:	Mary G. Weiss
Subject:	Nammo Defense Systems (NDS) Inc. – Former Thermal Treatment Unit (TTU) Third Quarter 2022 Groundwater Sampling Tier 1A Data Validation – Level II Data Deliverables, Pace Analytical Sample Delivery Groups (SDGs) L1533315, L1534502, L1545901, 550-190229-1

Introduction

Pinyon Environmental, Inc. (Pinyon), completed groundwater sampling activities for the Nammo Denfense Systems (NDS) Inc. Former Thermal Treatment Unit (TTU) Site in September and October of 2022. Subsequently, Pinyon performed a Tier 1A data validation of the groundwater samples collected during the sampling event as part of the NDS TTU third 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)
- Volatile Organic Compounds (VOCs) by EPA Method 8260B
- 1,4-Dioxane by EPA Method 8260B using selective ion monitoring (SIM) mode

Quarter 3 2022 – September and October 2022

A total of 26 primary samples, 4 duplicate samples, 3 trip blank samples, and 4 Matrix Spike (MS) and Matrix Spike Duplicate (MSD) samples were collected between September 3 and October 11, 2022 (Table 1). The samples were relinquished to a representative at the laboratory on September 6, September 9, and October 11.

Samples arrived at the laboratory for analysis on September 7, September 9, September 10, and October 13. Upon arrival at the laboratory for analysis, the temperatures of the coolers were recorded. Sample temperatures ranged between 1.1°C and 4.5°C. The laboratory noted that one trip blank per batch was received and preserved with hydrochloric acid (HCl).

The collection times for the trip blanks were not recorded on the COC. The laboratory assigned the following dates and times to the trip blanks samples:

- TRIP BLANK 2 (L1533315-05) – 9/3/22 00:00
- TRIP BLANK (L1534502-23) – 9/8/22 00:00
- TRIP BLANK (L1545901-04) – 10/11/22 00:00

The laboratory made note of "No extra volume received to perform Matrix Spike samples" for analysis of VOCs by 8260B or 1,4-dioxane by 8260B-SIM for the following samples:

- L1533315-01 (TTU-11-73-20220903)
- L1533315-02 (TTU-19-73-20220903)
- L1533315-04 (DUP-01)
- L1534502-01 (TTU-EXT-1-69-20220908)
- L1534502-02 (TTU-EXT-2-74-20220908)
- L1534502-04 (TTU-EXT-4-77-20220908)
- L1534502-20 (TTU-16-80-20220908)

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 of VOCs by 8260B for L1533315-01 (TTU-11-73-20220903) and L1533315-02 (TTU-19-73-20220903). Based on conversations with the laboratory, the above items are 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 sample 550-190229-1 (PF-2) for perchlorate by EPA Method 6850. The sample was placed under Pace COC and submitted to Eurofins Scientific (Eurofins), Phoenix, Arizona. The sample was relinquished to a representative of the laboratory on September 9 and arrived at the laboratory for analysis on September 10, 2022. Upon arrival at the laboratory for analysis, the temperature of the cooler was recorded and noted as 1.6°C.

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 1). 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 18 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 seven method blanks (batches WG1928871, WG1924008, WG1929502, WG1931315, WG1930280, WG1944313, and 616859). 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 L1533315-02 (TTU-19), L1534502-19 (TTU-15), L1534502-10 (TTU-6), L1534502-22 (PF-2), and L1545901-01 (TTU-2. Eight sample set specific MSs were reported using samples L1533315-01 (TTU-11), L1534502-07 (TTU-3), L1534502-08 (TTU-4), L1534502-09 (TTU-5), L1534502-11 (TTU-7), L1534502-12 (TTU-8), L1534502-13 (DUP-03), andL1534502-14 (TTU-9A).

The percent recovery (%R) and relative percent difference (RPD) results for the MS samples and MS/MSD sample 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 seven 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

Three laboratory duplicates were analyzed. The laboratory duplicates were analyzed using original sample from Lab IDs L1534502-02 (TTU- EXT-2), L1534502-15 (TTU-10), and L1545901-02 (TTU-1) for perchlorate. The RPD results were within the limits stated in the laboratory report or results were appropriately qualified.

Field Duplicate

A total of four 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:

- L1533315-04 (DUP-01) = L1533315-03 (TTU-20)
- L1534502-06 (DUP-02) = L1534502-05 (TTU-EXT-5)
- L1534502-13 (DUP-03) = L1534502-12 (TTU-8)
- L1545901-03 (DUP-1) = L1545901-02 (TTU-1)

For the samples and duplicates in the above list, perchlorate was not detected in the duplicate pair for laboratory sample L1534502-05 (TTU-EXT-5). Perchlorate was not detected in the original sample, but was detected in the duplicate for laboratory sample L1534502-12 (TTU-8). The RPD was not calculated for those results.

The RPD was calculated in accordance with the method discussed in the NDS Facility QAPP. RPD for each pair was up to 2%. The RPD results were within acceptable precision limits as RPDs were less than or equal to 30% and were appropriately qualified. The results for perchlorate for L1534502-13 (DUP-03) were qualified as “J” (the identification of the analyte is acceptable; the reported value is an estimate). This qualifier 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 4 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 eight method blanks (batches WG1924204, WG1925636, WG1925641, WG1926858, WG1926870, WG1927005, WG1928174, and WG1943510).

VOCs 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). Four sample MS/MSD sets were reported using samples L1533315-02 (TTU-19), L1534502-10 (TTU-6), L1534502-19 (TTU-15), and L1545901-01 (TTU-2).

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 eight 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 four 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:

- L1533315-04 (DUP-01) = L1533315-03 (TTU-20)
- L1534502-06 (DUP-02) = L1534502-05 (TTU-EXT-5)
- L1534502-13 (DUP-03) = L1534502-12 (TTU-8)
- L1545901-03 (DUP-1) = L1545901-02 (TTU-1)

For the duplicate pairs in the above list, the following analytes were detected in duplicate L1533315-04 (DUP-01) and not detected in the original sample L1533315-03 (TTU-20):

- 1,1,2-Trichloroethane
- 1,2-Dichloroethane
- 1,2-Dichlorobenzene
- 1,3-Dichlorobenzene
- 1,4-Dichlorobenzene
- Diisopropyl ether

- Tetrachloroethene
- Vinyl chloride
- Toluene

The following analytes were detected in original sample L1533315-03 (TTU-20) and not detected in duplicate L1533315-04 (DUP-01):

- 4-Ethyltoulene
- Naphthalene
- 1,2,3-Trimethylbenzene
- 1,2,4-Trimethylbenzene
- 1,3,5-Trimethylbenzene

VOCs were neither detected in the original sample L1534502-12 (TTU-8) nor the duplicate L1534502-13 (DUP-03). The RPD was not calculated for those results where the analyte was not detected in the original sample or the duplicate sample.

For the remaining samples and analytes, The RPD was calculated in accordance with the method discussed in the NDS Facility QAPP. RPD for each pair was up to 27%, excluding results for total xylene for the sample and duplicate from TTU-20. 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). Two duplicate pairs had results reported as estimated concentrations (laboratory qualifier “J”). The results for trichloroethene, 1,1,2-trichloroethane, trans-1,2-dichloroethene, and 1,1-dichloroethene for L1533315-03 (TTU-20) and L1533315-04 (DUP-01) were qualified as “J4” (the associated batch QC was outside the established quality control range for accuracy). This does not impact the validity of the results. The laboratory results were appropriately qualified.

Trip Blank

Three trip blanks were collected during the sampling event. Trip blanks are a requirement of the NDS Facility QAPP. Toluene was detected in the trip blank (L1545901-04) 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 L1534502-03 (TTU-EXT-3), L1534502-04 (TTU-EXT-4), L1534502-16 (TTU-12), L1534502-20 (TTU-16), and L1545901-01 (TTU-2) due to the dilutions analyzed. 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 17 days (Table 2). Samples L1533315-02 (TTU-19), L1533315-03 (TTU-20), and L1533315-04 (DUP-01) 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 need 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 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 considered usable and valid.

Method Blank

One method blank was analyzed for each batch of analysis completed. This resulted in seven method blanks (batches WG1926249, WG1926871, WG1928694, WG1928820, WG1930191, WG1930402, and WG1942212). 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). Four sample MS/MSD sets were reported using samples L1533315-02 (TTU-19), L1534502-10 (TTU-6), L1534502-19 (TTU-15), and L1545901-01 (TTU-2).

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 seven 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 four 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:

- L1533315-04 (DUP-01) = L1533315-03 (TTU-20)
- L1534502-06 (DUP-02) = L1534502-05 (TTU-EXT-5)

- L1534502-13 (DUP-03) = L1534502-12 (TTU-8)

- L1545901-03 (DUP-1) = L1545901-02 (TTU-1)

1,4-dioxane was neither detected in original sample L1534502-12 (TTU-8) nor duplicate sample L1534502-13 (DUP-03). 1,4-dioxane was detected in original sample L1534502-05 (TTU-EXT-5), but not in duplicate sample L1534502-06 (DUP-02). The RPD was not calculated for these results.

The RPD was calculated in accordance with the method discussed in the NDS Facility QAPP. RPD for each pair was up to 9%. Qualifiers were applied to the field duplicates and corresponding sample results as appropriate.

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 1

Sample Summary

Nammo Defense Systems

Former Thermal Treatment Unit

Third Quarter 2022 Groundwater Sampling

Laboratory Sample ID	Client Sample ID	Sample Location	Sample Depth (feet)	Sample Type	Matrix	Date Collected	Requested Analysis			
							VOCs 8260B	1,4-Dioxane 8260B SIM	Perchlorate 314.0 Mod	Perchlorate 6850
L1533315-01	TTU-11-73-20220903	TTU-11	73	Normal	Water	9/3/2022	X	X	X	-
R3838899-3	TTU-11-73-20220903	TTU-11	NA	MS	Water	NA	-	-	X	-
L1533315-02	TTU-19-73-20220903	TTU-19	73	Normal	Water	9/3/2022	X	X	X	-
R3837604-8	TTU-19-73-20220903	TTU-19	NA	MS	Water	NA	X	-	-	-
R3837604-9	TTU-19-73-20220903	TTU-19	NA	MS_D	Water	NA	X	-	-	-
R3837798-5	TTU-19-73-20220903	TTU-19	NA	LAB_D	Water	NA			X	-
R3837798-10	TTU-19-73-20220903	TTU-19	NA	MS	Water	NA	-	-	X	-
R3837798-11	TTU-19-73-20220903	TTU-19	NA	MS_D	Water	NA	-	-	X	-
R3839351-4	TTU-19-73-20220903	TTU-19	NA	MS	Water	NA	-	X	-	-
R3839351-5	TTU-19-73-20220903	TTU-19	NA	MS_D	Water	NA	-	X	-	-
L1533315-03	TTU-20-73-20220903	TTU-20	73	Normal	Water	9/3/2022	X	X	X	-
L1533315-04	DUP-01	DUP-01	NR	Normal	Water	9/3/2022	X	X	X	-
L1533315-05	TRIP BLANK 2	TRIP BLANK 2	NR	Normal	Water	9/3/2022	X	-	-	-
L1534502-01	TTU-EXT-1-69-20220908	TTU-EX-1	69	Normal	Water	9/8/2022	X	X	X	-
L1534502-02	TTU-EXT-2-74-20220908	TTU-EX-2	74	Normal	Water	9/8/2022	X	X	X	-
R3840607-3	TTU-EXT-2-74-20220908	TTU-EX-2	NA	LAB_D	Water	NA	-	-	X	-
L1534502-03	TTU-EXT-3-76-20220908	TTU-EX-3	76	Normal	Water	9/8/2022	X	X	X	-
L1534502-04	TTU-EXT-4-77-20220908	TTU-EX-4	77	Normal	Water	9/8/2022	X	X	X	-
L1534502-05	TTU-EXT-5-80-20220908	TTU-EX-5	80	Normal	Water	9/8/2022	X	X	X	-
L1534502-06	DUP-02	DUP-02	NR	Normal	Water	9/8/2022	X	X	X	-
L1534502-07	TTU-3-108-20220909	TTU-3	108	Normal	Water	9/9/2022	X	X	X	-
R3840609-3	TTU-3-108-20220909	TTU-3	NA	MS	Water	NA	-	-	X	-
L1534502-08	TTU-4-57-20220909	TTU-4	57	Normal	Water	9/9/2022	X	X	X	-
R3840609-4	TTU-4-57-20220909	TTU-4	NA	MS	Water	NA	-	-	X	-
L1534502-09	TTU-5-110-20220908	TTU-5	110	Normal	Water	9/8/2022	X	X	X	-
R3840609-5	TTU-5-110-20220908	TTU-5	NA	MS	Water	NA	-	-	X	-
L1534502-10	TTU-6-143-20220909	TTU-6	143	Normal	Water	9/9/2022	X	X	X	-
R3837498-4	TTU-6-143-20220909	TTU-6	NA	MS	Water	NA	X	-	-	-
R3837498-5	TTU-6-143-20220909	TTU-6	NA	MS_D	Water	NA	X	-	-	-
R3839848-4	TTU-6-143-20220909	TTU-6	NA	MS	Water	NA	-	X	-	-
R3839848-5	TTU-6-143-20220909	TTU-6	NA	MS_D	Water	NA	-	X	-	-
R3840607-4	TTU-6-143-20220909	TTU-6	NA	MS	Water	NA	-	-	X	-
R3840607-5	TTU-6-143-20220909	TTU-6	NA	MS_D	Water	NA	-	-	X	-
L1534502-11	TTU-7-345-20220909	TTU-7	345	Normal	Water	9/9/2022	X	X	X	-
R3840609-6	TTU-7-345-20220909	TTU-7	NA	MS	Water	NA	-	-	X	-
L1534502-12	TTU-8-164-20220909	TTU-8	164	Normal	Water	9/9/2022	X	X	X	-
R3840609-7	TTU-8-164-20220909	TTU-8	NA	MS	Water	NA	-	-	X	-
L1534502-13	DUP-03	DUP-03	NR	Normal	Water	9/9/2022	X	X	X	-
R3840609-8	DUP-03	DUP-03	NA	MS	Water	NA	-	-	X	-
L1534502-14	TTU-9A-61-20220908	TTU-9A	61	Normal	Water	9/8/2022	X	X	X	-
R3840609-9	TTU-9A-61-20220908	TTU-9A	NA	MS	Water	NA	-	-	X	-
L1534502-15	TTU-10-165-20220909	TTU-10	165	Normal	Water	9/9/2022	X	X	X	-
R3840607-6	TTU-10-165-20220909	TTU-10	NA	LAB_D	Water	NA	-	-	X	-
L1534502-16	TTU-12-82-20220909	TTU-12	82	Normal	Water	9/9/2022	X	X	X	-
L1534502-17	TTU-13-51-20220908	TTU-13	51	Normal	Water	9/8/2022	X	X	X	-
L1534502-18	TTU-14-64-20220909	TTU-14	64	Normal	Water	9/9/2022	X	X	X	-
L1534502-19	TTU-15-75-20220908	TTU-15	75	Normal	Water	9/8/2022	X	X	X	-
R3838411-4	TTU-15-75-20220908	TTU-15	NA	MS	Water	NA	X	-	-	-
R3838411-5	TTU-15-75-20220908	TTU-15	NA	MS_D	Water	NA	X	-	-	-
R3840607-7	TTU-15-75-20220908	TTU-15	NA	MS	Water	NA	-	-	X	-
R3840607-8	TTU-15-75-20220908	TTU-15	NA	MS_D	Water	NA	-	-	X	-
R3840618-4	TTU-15-75-20220908	TTU-15	NA	MS	Water	NA	-	X	-	-
R3840618-5	TTU-15-75-20220908	TTU-15	NA	MS_D	Water	NA	-	X	-	-
L1534502-20	TTU-16-80-20220908	TTU-16	80	Normal	Water	9/8/2022	X	X	X	-
L1534502-21	TTU-17-80-20220908	TTU-17	80	Normal	Water	9/8/2022	X	X	X	-
L1534502-22	PF-2-400-20220909	PF-2	400	Normal	Water	9/9/2022	X	X	-	-
L1534502-23	TRIP BLANK	TRIP BLANK	NR	Normal	Water	9/8/2022	X	-	-	-
550-190229-1	PF-2-400-20220909	PF-2	400	Normal	Water	9/9/2022	-	-	-	X
550-190229-1 MS	PF-2-400-20220909	PF-2	NA	MS	Water	NA	-	-	-	X
550-190229-1 MSD	PF-2-400-20220909	PF-2	NA	MS_D	Water	NA	-	-	-	X

Table 1

Sample Summary

Nammo Defense Systems

Former Thermal Treatment Unit

Third Quarter 2022 Groundwater Sampling

Laboratory Sample ID	Client Sample ID	Sample Location	Sample Depth (feet)	Sample Type	Matrix	Date Collected	Requested Analysis			
							VOCs 8260B	1,4-Dioxane 8260B SIM	Perchlorate 314.0 Mod	Perchlorate 6850
L1545901-01	TTU-2-114-20221010	TTU-2	114	Normal	Water	10/10/2022	X	X	X	-
R3849991-4	TTU-2-114-20221010	TTU-2	NA	MS	Water	NA	-	X	-	-
R3849991-5	TTU-2-114-20221010	TTU-2	NA	MS_D	Water	NA	-	X	-	-
R3850102-3	TTU-2-114-20221010	TTU-2	NA	MS	Water	NA	-	-	X	-
R3850102-4	TTU-2-114-20221010	TTU-2	NA	MS_D	Water	NA	-	-	X	-
R3850916-4	TTU-2-114-20221010	TTU-2	NA	MS	Water	NA	X	-	-	-
R3850916-5	TTU-2-114-20221010	TTU-2	NA	MS_D	Water	NA	X	-	-	-
L1545901-02	TTU-1-50-20221011	TTU-1	50	Normal	Water	10/11/2022	X	X	X	-
R3850102-5	TTU-1-50-20221011	TTU-1	NA	LAB_D	Water	NA	-	-	X	-
L1545901-03	DUP-01	DUP-01	NR	Normal	Water	10/11/2022	X	X	X	-
L1545901-04	TRIP BLANK	TRIP BLANK	NR	Normal	Water	10/11/2022	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
Third 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							
L1533315-01	TTU-11-73-20220903	9/3/2022	9/10/2022	9/10/2022	WG1928871	7	
L1533315-02	TTU-19-73-20220903	9/3/2022	9/10/2022	9/10/2022	WG1924008	7	Sample required dilution.
L1533315-03	TTU-20-73-20220903	9/3/2022	9/10/2022	9/10/2022	WG1924008	7	Sample required dilution.
L1533315-04	DUP-01	9/3/2022	9/10/2022	9/10/2022	WG1924008	7	Sample required dilution.
L1534502-01	TTU-EXT-1-69-20220908	9/8/2022	9/22/2022	9/22/2022	WG1929502	14	Sample required dilution.
L1534502-02	TTU-EXT-2-74-20220908	9/8/2022	9/22/2022	9/22/2022	WG1929502	14	Sample required dilution.
L1534502-03	TTU-EXT-3-76-20220908	9/8/2022	9/22/2022	9/22/2022	WG1929502	14	Sample required dilution.
L1534502-04	TTU-EXT-4-77-20220908	9/8/2022	9/23/2022	9/23/2022	WG1929502	15	Sample required dilution.
L1534502-05	TTU-EXT-5-80-20220908	9/8/2022	9/22/2022	9/22/2022	WG1929502	14	
L1534502-06	DUP-02	9/8/2022	9/22/2022	9/22/2022	WG1929502	14	
L1534502-07	TTU-3-108-20220909	9/9/2022	9/22/2022	9/22/2022	WG1931315	13	
L1534502-08	TTU-4-57-20220909	9/9/2022	9/22/2022	9/22/2022	WG1931315	13	
L1534502-09	TTU-5-110-20220908	9/8/2022	9/22/2022	9/22/2022	WG1931315	14	
L1534502-10	TTU-6-143-20220909	9/9/2022	9/22/2022	9/22/2022	WG1929502	13	Sample required dilution.
L1534502-11	TTU-7-345-20220909	9/9/2022	9/22/2022	9/22/2022	WG1931315	13	
L1534502-12	TTU-8-164-20220909	9/9/2022	9/22/2022	9/22/2022	WG1931315	13	
L1534502-13	DUP-03	9/9/2022	9/22/2022	9/22/2022	WG1931315	13	
L1534502-14	TTU-9A-61-20220908	9/8/2022	9/22/2022	9/22/2022	WG1931315	14	
L1534502-15	TTU-10-165-20220909	9/9/2022	9/22/2022	9/22/2022	WG1929502	13	
L1534502-16	TTU-12-82-20220909	9/9/2022	9/22/2022	9/22/2022	WG1929502	13	Sample required dilution.
L1534502-17	TTU-13-51-20220908	9/8/2022	9/22/2022	9/22/2022	WG1929502	14	Sample required dilution.
L1534502-18	TTU-14-64-20220909	9/9/2022	9/22/2022	9/22/2022	WG1929502	13	Sample required dilution.
L1534502-19	TTU-15-75-20220908	9/8/2022	9/22/2022	9/22/2022	WG1929502	14	Sample required dilution.
L1534502-20	TTU-16-80-20220908	9/8/2022	9/22/2022	9/22/2022	WG1929502	14	Sample required dilution.
L1534502-21	TTU-17-80-20220908	9/8/2022	9/26/2022	9/26/2022	WG1930280	18	
L1545901-01	TTU-2-114-20221010	10/10/2022	10/18/2022	10/18/2022	WG1944313	8	Sample required dilution.
L1545901-02	TTU-1-50-20221011	10/11/2022	10/18/2022	10/18/2022	WG1944313	7	Sample required dilution.
L1545901-03	DUP-01	10/11/2022	10/18/2022	10/18/2022	WG1944313	7	Sample required dilution.
Perchlorate by 6850							
550-190229-1	PF-2-400-20220909	9/9/2022	9/13/2022	9/14/2022	616859	5	
Volatile Organic Compounds by 8260B							
L1533315-01	TTU-11-73-20220903	9/3/2022	9/11/2022	9/11/2022	WG1924204	8	Sample required dilution.
			9/16/2022	9/16/2022	WG1927005	13	Sample required dilution.
L1533315-02	TTU-19-73-20220903	9/3/2022	9/11/2022	9/11/2022	WG1924204	8	Sample required dilution.
			9/16/2022	9/16/2022	WG1927005	13	Sample required dilution.
L1533315-03	TTU-20-73-20220903	9/3/2022	9/16/2022	9/16/2022	WG1926870	13	Sample required dilution.
L1533315-04	DUP-01	9/3/2022	9/10/2022	9/10/2022	WG1924204	7	
			9/16/2022	9/16/2022	WG1927005	13	Sample required dilution.
L1533315-05	TRIP BLANK 2	9/3/2022	9/10/2022	9/10/2022	WG1924204	7	
L1534502-01	TTU-EXT-1-69-20220908	9/8/2022	9/15/2022	9/15/2022	WG1926858	7	
L1534502-02	TTU-EXT-2-74-20220908	9/8/2022	9/15/2022	9/15/2022	WG1926858	7	
L1534502-03	TTU-EXT-3-76-20220908	9/8/2022	9/13/2022	9/13/2022	WG1925636	5	Sample required dilution.
L1534502-04	TTU-EXT-4-77-20220908	9/8/2022	9/15/2022	9/15/2022	WG1926858	7	Sample required dilution.
L1534502-05	TTU-EXT-5-80-20220908	9/8/2022	9/13/2022	9/13/2022	WG1925636	5	
L1534502-06	DUP-02	9/8/2022	9/13/2022	9/13/2022	WG1925636	5	
L1534502-07	TTU-3-108-20220909	9/9/2022	9/13/2022	9/13/2022	WG1925636	4	
L1534502-08	TTU-4-57-20220909	9/9/2022	9/13/2022	9/13/2022	WG1925636	4	
L1534502-09	TTU-5-110-20220908	9/8/2022	9/13/2022	9/13/2022	WG1925636	5	
L1534502-10	TTU-6-143-20220909	9/9/2022	9/13/2022	9/13/2022	WG1925636	4	
L1534502-11	TTU-7-345-20220909	9/9/2022	9/13/2022	9/13/2022	WG1925636	4	
L1534502-12	TTU-8-164-20220909	9/9/2022	9/13/2022	9/13/2022	WG1925636	4	
L1534502-13	DUP-03	9/9/2022	9/13/2022	9/13/2022	WG1925636	4	
L1534502-14	TTU-9A-61-20220908	9/8/2022	9/14/2022	9/14/2022	WG1925641	6	
L1534502-15	TTU-10-165-20220909	9/9/2022	9/14/2022	9/14/2022	WG1925641	5	
L1534502-16	TTU-12-82-20220909	9/9/2022	9/14/2022	9/14/2022	WG1925641	5	Sample required dilution.
L1534502-17	TTU-13-51-20220908	9/8/2022	9/14/2022	9/14/2022	WG1925641	6	
L1534502-18	TTU-14-64-20220909	9/9/2022	9/14/2022	9/14/2022	WG1925641	6	
			9/18/2022	9/18/2022	WG1928174	9	Sample required dilution.
L1534502-19	TTU-15-75-20220908	9/8/2022	9/14/2022	9/14/2022	WG1925641	6	
			9/18/2022	9/18/2022	WG1928174	10	
L1534502-20	TTU-16-80-20220908	9/8/2022	9/14/2022	9/14/2022	WG1925641	6	Sample required dilution.
L1534502-21	TTU-17-80-20220908	9/8/2022	9/14/2022	9/14/2022	WG1925641	6	
			9/18/2022	9/18/2022	WG1928174	10	
L1534502-22	PF-2-400-20220909	9/9/2022	9/14/2022	9/14/2022	WG1925641	5	
L1534502-23	TRIP BLANK	9/8/2022	9/14/2022	9/14/2022	WG1925641	5	

Table 2

Analysis Summary

Nammo Defense Systems
Former Thermal Treatment Unit
Third 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							
L1545901-01	TTU-2-114-20221010	10/10/2022	10/16/2022	10/16/2022	WG1943510	6	Sample required dilution.
L1545901-02	TTU-1-50-20221011	10/11/2022	10/15/2022	10/15/2022	WG1943510	4	
L1545901-03	DUP-01	10/11/2022	10/16/2022	10/16/2022	WG1943510	5	
L1545901-04	TRIP BLANK	10/11/2022	10/15/2022	10/15/2022	WG1943510	4	
1,4-Dioxane by 8260B-SIM							
L1533315-01	TTU-11-73-20220903	9/3/2022	9/14/2022	9/14/2022	WG1926249	11	
L1533315-02	TTU-19-73-20220903	9/3/2022	9/20/2022	9/20/2022	WG1928820	17	Sample required dilution.
L1533315-03	TTU-20-73-20220903	9/3/2022	9/20/2022	9/20/2022	WG1928820	17	Sample required dilution.
L1533315-04	DUP-01	9/3/2022	9/20/2022	9/20/2022	WG1928820	17	Sample required dilution.
L1534502-01	TTU-EXT-1-69-20220908	9/8/2022	9/15/2022	9/15/2022	WG1926871	7	
L1534502-02	TTU-EXT-2-74-20220908	9/8/2022	9/15/2022	9/15/2022	WG1926871	7	
L1534502-03	TTU-EXT-3-76-20220908	9/8/2022	9/15/2022	9/15/2022	WG1926871	7	
L1534502-04	TTU-EXT-4-77-20220908	9/8/2022	9/15/2022	9/15/2022	WG1926871	7	
L1534502-05	TTU-EXT-5-80-20220908	9/8/2022	9/15/2022	9/15/2022	WG1926871	7	
L1534502-06	DUP-02	9/8/2022	9/15/2022	9/15/2022	WG1926871	7	
L1534502-07	TTU-3-108-20220909	9/9/2022	9/15/2022	9/15/2022	WG1926871	6	
L1534502-08	TTU-4-57-20220909	9/9/2022	9/15/2022	9/15/2022	WG1926871	6	
L1534502-09	TTU-5-110-20220908	9/8/2022	9/15/2022	9/15/2022	WG1926871	7	
L1534502-10	TTU-6-143-20220909	9/9/2022	9/15/2022	9/15/2022	WG1926871	6	
L1534502-11	TTU-7-345-20220909	9/9/2022	9/15/2022	9/15/2022	WG1926871	6	
L1534502-12	TTU-8-164-20220909	9/9/2022	9/15/2022	9/15/2022	WG1926871	6	
L1534502-13	DUP-03	9/9/2022	9/15/2022	9/15/2022	WG1926871	6	
L1534502-14	TTU-9A-61-20220908	9/8/2022	9/15/2022	9/15/2022	WG1926871	7	
L1534502-15	TTU-10-165-20220909	9/9/2022	9/16/2022	9/16/2022	WG1926871	7	
L1534502-16	TTU-12-82-20220909	9/9/2022	9/16/2022	9/16/2022	WG1926871	7	
L1534502-17	TTU-13-51-20220908	9/8/2022	9/16/2022	9/16/2022	WG1926871	8	
L1534502-18	TTU-14-64-20220909	9/9/2022	9/16/2022	9/16/2022	WG1926871	7	
L1534502-19	TTU-15-75-20220908	9/8/2022	9/22/2022	9/22/2022	WG1930402	14	
L1534502-20	TTU-16-80-20220908	9/8/2022	9/22/2022	9/22/2022	WG1930191	14	Sample required dilution.
L1534502-21	TTU-17-80-20220908	9/8/2022	9/16/2022	9/16/2022	WG1926871	8	
L1534502-22	PF-2-400-20220909	9/9/2022	9/19/2022	9/19/2022	WG1928694	10	
L1545901-01	TTU-2-114-20221010	10/10/2022	10/13/2022	10/13/2022	WG1942212	3	Sample required dilution.
L1545901-02	TTU-1-50-20221011	10/11/2022	10/13/2022	10/13/2022	WG1942212	2	
L1545901-03	DUP-01	10/11/2022	10/13/2022	10/13/2022	WG1942212	2	

Notes:

SIM = Selected Ion Monitoring

Mod = Modified

Table 3
Field Duplicates - Detections Only
Nammo Defense Systems
Former Thermal Treatment Unit
Third 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 Qualifer
Perchlorate	L1533315-03 (TTU-20)	528,000	-	L1533315-04 (DUP-01)	537,000	-	2%	-	-	-
1,1,2-Trichloroethane	L1533315-03 (TTU-20)	<15.8	-	L1533315-04 (DUP-01)	20.9	J4	NC	-	-	-
1,1-Dichloroethane	L1533315-03 (TTU-20)	27.6	J	L1533315-04 (DUP-01)	28.8	-	4%	-	-	-
1,1-Dichloroethene	L1533315-03 (TTU-20)	2,610	J4	L1533315-04 (DUP-01)	2,230	-	16%	-	-	-
1,2-Dichloroethane	L1533315-03 (TTU-20)	<8.19	-	L1533315-04 (DUP-01)	4.15	-	NC	-	-	-
1,2-Dichlorobenzene	L1533315-03 (TTU-20)	<10.7	-	L1533315-04 (DUP-01)	1.53	-	NC	-	-	-
1,3-Dichlorobenzene	L1533315-03 (TTU-20)	<11.0	-	L1533315-04 (DUP-01)	0.155	J	NC	-	-	-
1,4-Dichlorobenzene	L1533315-03 (TTU-20)	<12.0	-	L1533315-04 (DUP-01)	0.454	J	NC	-	-	-
Benzene	L1533315-03 (TTU-20)	77.9	J	L1533315-04 (DUP-01)	77.7	-	0.3%	-	-	-
Chloroform	L1533315-03 (TTU-20)	17.2	J	L1533315-04 (DUP-01)	19.8	-	14%	-	-	-
cis-1,2-Dichloroethene	L1533315-03 (TTU-20)	146	-	L1533315-04 (DUP-01)	141	-	3%	-	-	-
Diisopropyl ether	L1533315-03 (TTU-20)	<10.5	-	L1533315-04 (DUP-01)	0.267	J	NC	-	-	-
Methyl tert-butyl ether	L1533315-03 (TTU-20)	116	J	L1533315-04 (DUP-01)	112	-	4%	-	-	-
4-Ethyltoluene	L1533315-03 (TTU-20)	35	J	L1533315-04 (DUP-01)	<0.208	-	NC	-	-	-
Naphthalene	L1533315-03 (TTU-20)	122	J	L1533315-04 (DUP-01)	<1.00	-	NC	-	-	-
Tetrachloroethene	L1533315-03 (TTU-20)	<30.0	-	L1533315-04 (DUP-01)	27.9	-	NC	-	-	-
Toluene	L1533315-03 (TTU-20)	<27.8	-	L1533315-04 (DUP-01)	1.42	-	NC	-	-	-
trans-1,2-Dichloroethene	L1533315-03 (TTU-20)	18.9	J ; J4	L1533315-04 (DUP-01)	22.2	-	16%	-	-	-
Trichloroethene	L1533315-03 (TTU-20)	13,200	J4	L1533315-04 (DUP-01)	10,700	-	21%	-	-	-
1,2,3-Trimethylbenzene	L1533315-03 (TTU-20)	42	J	L1533315-04 (DUP-01)	<0.104	-	NC	-	-	-
1,2,4-Trimethylbenzene	L1533315-03 (TTU-20)	105	-	L1533315-04 (DUP-01)	<0.322	-	NC	-	-	-
1,3,5-Trimethylbenzene	L1533315-03 (TTU-20)	27.7	J	L1533315-04 (DUP-01)	<0.104	-	NC	-	-	-
Vinyl chloride	L1533315-03 (TTU-20)	<23.4	-	L1533315-04 (DUP-01)	1.87	-	NC	-	-	-
Xylene Total	L1533315-03 (TTU-20)	55.7	J	L1533315-04 (DUP-01)	2.65	J	182%	J	J	1
1,4-Dioxane	L1533315-03 (TTU-20)	1,140	Q	L1533315-04 (DUP-01)	1,250	Q	9%	-	-	-
cis-1,2-Dichloroethene	L1534502-05 (TTU-EXT-5)	0.16	J	L1534502-06 (DUP-02)	0.209	J	27%	-	-	-
Trichloroethene	L1534502-05 (TTU-EXT-5)	4.96	-	L1534502-06 (DUP-02)	5.06	-	2%	-	-	-
1,4-Dioxane	L1534502-05 (TTU-EXT-5)	2.16	J	L1534502-06 (DUP-02)	<0.597	-	NC	-	-	-
Perchlorate	L1534502-12 (TTU-8)	<0.300	-	L1534502-13 (DUP-03)	0.614	J	NC	-	-	-
Perchlorate	L1545901-02 (TTU-1)	11,300	-	L1545901-03 (DUP-01)	11,200	-	1%	-	-	-
1,1-Dichloroethene	L1545901-02 (TTU-1)	1.06	-	L1545901-03 (DUP-01)	1.26	-	17%	-	-	-
Trichloroethene	L1545901-02 (TTU-1)	5.13	-	L1545901-03 (DUP-01)	5.85	-	13%	-	-	-
1,4-Dioxane	L1545901-02 (TTU-1)	15.1	-	L1545901-03 (DUP-01)	14.5	-	4%	-	-	-

Notes:

RPD = Relative Percent Difference

NC = Not Calculated

µg/L = micrograms per liter

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.

Q - Sample was prepared and/or analyzed past holding time as defined in the method. Concentrations should be considered minimum values.

1 - Field duplicte RPD exceeded 30%.

< = Less than

% = Percent