



April 3, 2024

Mr. Claude Curley, P.E.
District Engineer
New York State Department of Health
317 Washington Street
Watertown, NY 13601

re: Well Construction and 72-hour Pumping Test Report
Tank Site Well
Town of LeRay, New York

Dear Mr. Curley:

Northeast Geoscience, Inc. (NGI) has prepared the following report on the installation and testing of the Tank Site Well for the Town of LeRay, New York. The Tank Site was identified during a 6-inch diameter test well drilling program conducted at several sites in 2022. The purpose of this report is to document the 8-inch diameter production well construction, and the results of a 72-hour constant rate pumping test on the new production well.

1.0 TANK SITE WELL DESCRIPTION

The location of the Tank Well Site is shown on Figure 1 - Locus Map, and a site plan showing the well location is presented on Figure 2. The site is located in the West Creek Sub-basin of the Indian River Watershed, but is within several hundred feet of the drainage divide with the Black River Basin. The site is located on Gracey Farm on a 2.06 acre parcel (Parcel 75.09-1-29.2) just southeast of the intersection of Country Route 283 and Five Corners Road. Most of the site is a surface of low relief at approximately elevation 570 feet. There is a valley just north of the well that flows to a culvert beneath Route 283, and is a tributary to West Creek and then the Indian River.

2.0 TANK SITE GEOLOGY

Figure 3 is a Bedrock Geologic Map of the site. The site is underlain by dark grey limestone of the Middle to Upper Ordovician Age Black River Group. There are some units of shale within the limestone and fossils are common. At the site, the rocks are nearly horizontally bedded where they outcrop along Route 283. In 2020, NGI conducted a limited fracture trace analysis, and the Tank Site is on an identified lineament. The lineaments are interpreted surface expressions of nearly vertical fractures in bedrock and provide aquifer recharge and well yield. The Tank Site was selected for drilling as it was on a parcel already owned by the Town for the elevated new water storage tank. Bedrock on site is at or near ground surface, and there are no overburden deposits.

3.0 6-INCH DIAMETER TEST WELL INSTALLATION

In September, 2022 Keller's Well Drilling installed a 6-inch diameter test well at the location shown on Figure 2. Bedrock was encountered at a depth of four feet. 20 feet of schedule 40 6-inch diameter steel well casing was installed with a carbide steel drive shoe driven into rock. The well was then advanced to a depth of 200 feet. Water bearing fractures were encountered at 30 ft, 100 ft, 120 ft, 130 ft and at 170 ft. The well was terminated in the Black River Limestone.

The well was initially rated at 75 gpm using air lift methods. A test pump was installed in the well, and the well was pumped at a flow rate of 100 gpm for 2-hours with limited water level drawdown in the pumping well. Water level data for this test indicated a yield of 100 gpm. The test well had water cascading into the well from the fracture at 30 feet. NGI recommended casing off this shallow fracture during construction of the production well to limit shallow water influence on the well. NGI also recommended abandoning the 6-inch test well by placing a grout plug at a depth of 40 feet, and tremie grouting the well to the surface as the casing was removed to seal off this shallow fracture. Keller's Well Drilling abandoned the 6-inch test well in this manner on November 2, 2023.

4.0 8-INCH PRODUCTION WELL

On November 6, 2023 Keller's Well Drilling advanced a 12-inch diameter pilot hole into bedrock for the production well. 8-inch diameter schedule 40 steel well casing fitted with a carbide steel drive shoe was installed in the 12-inch pilot hole. The casing was percussion driven into the bedrock at the bottom of the pilot hole, and the annular space between the 8-inch steel casing and 12-inch pilot hole was tremie grouted to ground surface. The grout contained 5% bentonite by weight, and was allowed to cure overnight.

8-inch diameter open hole was then advanced to a depth of 200 feet using air-rotary drilling methods. Rock encountered was described as hard grey to greenish-white limestone, which turned softer at 190-200 ft. Water bearing fractures were encountered at depths of 42 ft, 150-152 ft, and 190 ft. The well was initially rated at 100 gpm using air lift methods.

5.0 STEP-DRAWDOWN PUMPING TEST

Keller's Well Drilling installed a 25 h.p. submersible pump and motor in the well with the pump intake at a depth of 190 ft. A 1-inch diameter stilling well was installed in the well to 190 feet to facilitate data logger installation and accurate water level measurement. The discharge line was fitted with a gate valve to control flow, two sample taps to allow for representative water quality sampling and microscopic particulate analysis testing (MPA). The discharge line was run through 10 feet of 2-inch horizontal PVC pipe with a Blue-White Rotometer Type flow installed in a vertical position. Three-inch diameter lay-flat discharge line was then run approximately 380 feet to the west of the well to an existing drainage swale along Route 283 as shown on Figure 2. From there, discharged water flowed to the main branch of the tributary to West Creek that passes beneath Route 283 in a culvert.

On December 3, 2023 Keller's Well Drilling did a step-drawdown test at three progressively increasing flow rates. The static water level in the well prior to pumping was 49.93 feet below the stilling well or approximately 46 feet below ground. A log of the step-drawdown test is included in Appendix B and a graph of the data is presented on Figure 4.

The well was pumped at 150 gpm for 95 minutes and the maximum recorded depth to water was 82.19 feet. The flow rate was increased to 200 gpm until 153 minutes of pumping and then to 250 gpm until the test was terminated at 220 minutes or 3.6 hours. Based on the results of the step drawdown test NGI recommended a flow rate of 200 gpm for the 72-hour pumping test.

6.0 72-HOUR PUMPING TEST

After the pumping equipment was installed in the well, a Hobo U-20 data logger was installed in the stilling well in the Tank Site Well to record water levels at 5 minute intervals through the antecedent period, step-drawdown test, 72-hour test and recovery period. Figure 5 is a linear graph of water level elevation data recorded prior to the 72-hour pumping test. This data set includes the step-drawdown

test conducted on December 3, 2023. As can be seen from Figure 5 the water level in the Tank Site Well was not changing significantly prior to the test. The data set also shows no significant water level fluctuations associated with other withdrawals in the area.

Keller's Well Drilling initiated a constant rate pumping test on the Tank Site Well on December 4, 2023 at 9:00 AM. Figure 6 is a linear graph of water level data recorded during the test, and Figure 7 is a semi-log graph of the same data. The flow rate was initially 210 gpm but dropped to 190 gpm after 4 hours of pumping as the depth to water in the well increased to about 150 feet (106 feet of drawdown). The water level in the pumping well stabilized around a depth of 150 feet after 10 hours of pumping until shutdown of the test. At maximum drawdown approximately 40 feet of water remaining above the pump intake and was considered a normal and reliable operating condition for this well. The flow rate remained at 190 gpm for the duration of the test. No precipitation was received during the test except in the form of snow, and temperatures remained below freezing during the test. The pumping well recovered 100% 11.3 hours after shutdown of a 72-hour test.

NGI analyzed Figure 7 to evaluate the water level stability criteria and the results of the pumping test. The projected water level after pumping 190 gpm for 180 days is 110 feet of drawdown. This leaves 36 feet of water (or 24% of the total water column) remaining above the pump and meets the water level stability criteria.

7.0 WATER QUALITY

NGI collected water quality samples from the Tank Site Well for field parameters and general chemical parameters on December 4, December 6, and just before shutdown on December 7, 2023. Samples were also analyzed for field parameters at these times. Samples for Full Part 5 analyses were collected just prior to shutdown of the pumping test. Samples were collected in containers provided by the laboratory with appropriate preservatives and placed in a cooler on ice to be delivered to the laboratory under a chain of custody. A sample for microscopic particulate analysis (MPA) was collected from the well by filtering water at a flow rate of approximately 1.0 gpm for the last 24 hours of the pumping test. The filter was shipped to CH Diagnostics for MPA analyses. All other samples were delivered to Converse Laboratories in Watertown, NY for analysis. Laboratory certificates of analysis are included in Appendix C and summarized on Table 1.

As can be seen from Table 1, the water from the Tank Site Well is characterized by high hardness, alkalinity and total dissolved solids. This is not surprising in a limestone well, and these concentrations will likely go down over time as the well is pumped. The water also has elevated concentrations of sodium and chloride that exceed secondary standards. Slight hydrogen sulfide gas smell was noted during testing. Other than those issues, the water meets all applicable drinking water standards. There is low risk of surface water influence and iron concentrations were below detection limits. Manganese was detected at concentrations ranging from 0.0153 mg/l to 0.0187 mg/l which are below the secondary MCL of 0.05 mg/l.

The elevated sodium and chloride concentrations are interpreted by NGI to be a result of road salt applications on Route 283 and Five Corners Road.

8.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the information presented herein, NGI derives the following conclusions:

1. The Town of LeRay, NY Tank Site Well is located in the Indian River Watershed, near the divide with the Black River Watershed.

2. The Tank Site Well is an 8-inch diameter bedrock well with 40 feet of steel casing tremie grouted into the rock to form a sanitary seal, and was drilled to a depth of 200 feet.
3. The yield of the Tank Site Well is 190 gpm under normal conditions.
4. Water from the Tank Site Well has elevated hardness, alkalinity, sodium and chloride. The sodium and chloride are most likely a result of road salt applications on Route 283 and Five Corners Road.

NGI makes the following recommendations:

1. The Tank Site well should be fitted with a pitless adaptor, and a pump capable of producing 190 gpm should be set in the well at a depth of 190 feet.
2. The well should be equipped with a pressure transducer in a stilling well to monitor water levels and well performance following activation.

Based on information collected herein, NGI respectfully requests NYDOH approval of the Tank Site Well as a Public Water Supply for the Town of LeRay, NY. If you need any additional information regarding this matter please feel free to contact me.

Sincerely,
NORTHEAST GEOSCIENCE, INC.



Jay Billings, NYPG #001212
Hydrogeologist

cc: Mr. Leland Carpenter - Supervisor, Town of LeRay, NY
Mr. Tim Barber, The BCA Group

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Table 1
Laboratory Results for Tank Site Well
LeRay, New York

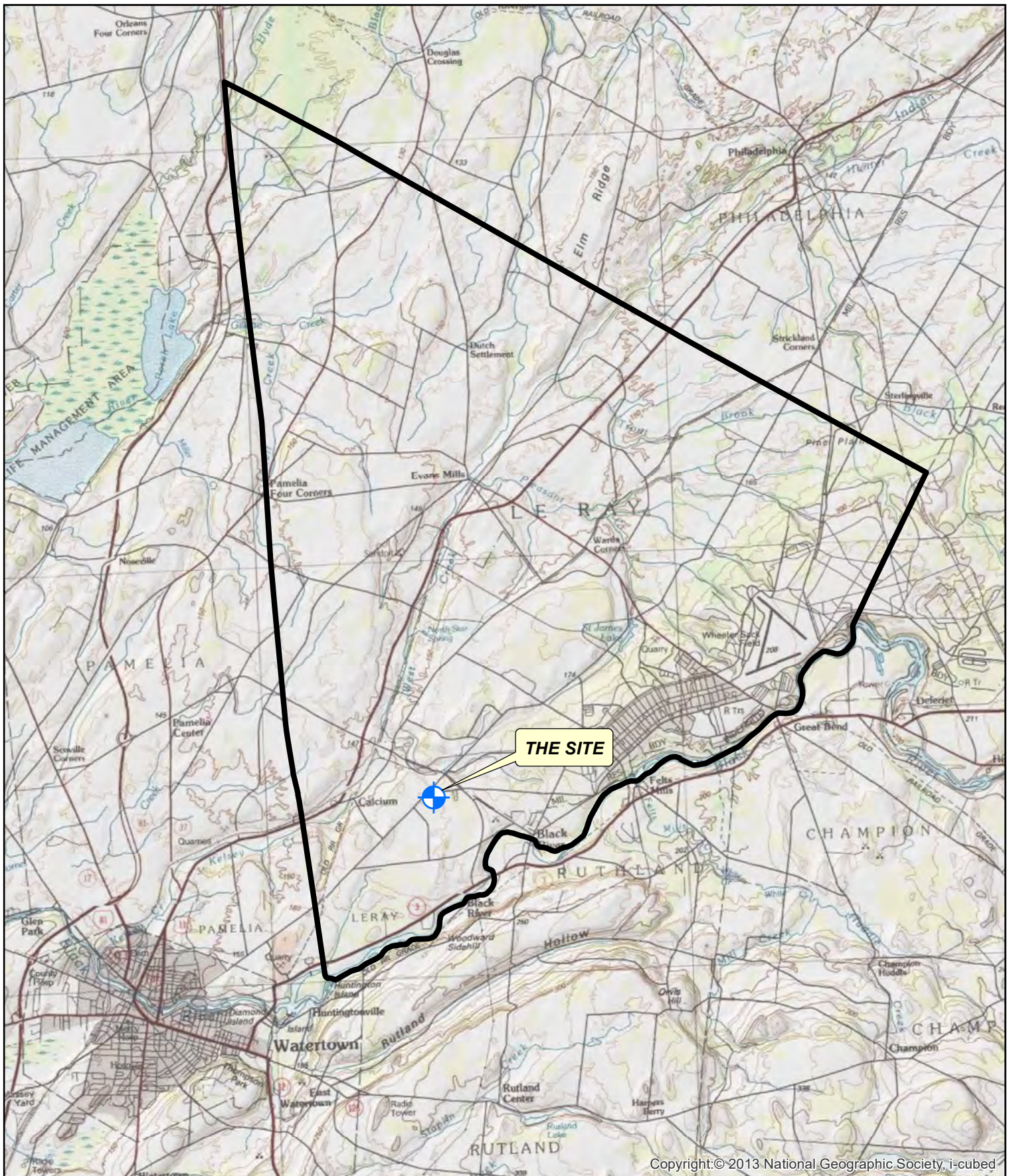
Parameter	Units	Startup			Standard
		12/4/23	12/6/23	End 12/7/23	
pH	S.U.	7.52	7.38	7.48	NCS
Temperature	Deg. C	9.6	9.7	9.9	NCS
Specific Conductance	us/cm	2,112	2,004	2,039	NCS
Odor	TON	<1	<1	<1	3
Total Dissolved Solids	mg/l	1,500	1,300	1,900	500
Apparent Color	Apparent C	<5	<5	<5	15
Turbidity	NTU	NS	NS	<2	NCS
Chloride	mg/l	472	392	389	250
Fluoride	mg/l	NS	NS	0.53	4
Sulfate	mg/l	334	298.0	272.0	250
Alkalinity (as CaCO3)	mg/l	205	203	205.00	NCS
Antimony	mg/l	NS	NS	<0.0040	0.006
Arsenic	mg/l	NS	NS	<0.0010	0.01
Barium	mg/l	NS	NS	0.0717	2
Beryllium	mg/l	NS	NS	<0.0010	0.004
Cadmium	mg/l	NS	NS	<0.0002	0.005
Calcium	mg/l	172	138	139	NCS
Chromium	mg/l	NS	NS	<0.0010	0.1
Iron	mg/l	<0.050	<0.050	<0.050	0.3
Lead	mg/l	NS	NS	<0.001	0.015
Magnesium	mg/l	38.0	35.1	35.3	NCS
Manganese	mg/l	0.0187	0.0153	0.0163	0.05
Mercury	mg/l	NS	NS	<0.0002	0.002
Nickel	mg/l	NS	NS	0.0088	0.1
Potassium	mg/l	7.02	6.14	6.57	NCS
Selenium	mg/l	NS	NS	<0.0050	0.05
Silver	mg/l	<0.0004	<0.0004	<0.0004	NCS
Sodium	mg/l	232	205	223	250
Thallium	mg/l	NS	NS	<0.0010	0.002
Zinc	mg/l	NS	NS	0.0552	NCS
Total Hardness	mg/l	586	485	493	180
Aluminum	mg/l	<0.010	<0.010	<0.010	0.05
Copper	mg/l	0.0024	0.0032	0.0012	1
Nitrate	mg/l	NS	NS	0.925	10
Nitrite	mg/l	NS	NS	<0.050	1
Cyanide	mg/l	NS	NS	<0.005	0.2
Volatile Organic Compounds	ug/l	NS	NS	ND	various
Total PFAS	ng/l	NS	NS	<2.02	10
Synthetic Organic Compounds	ug/l	NS	NS	ND	various
1,4-Dioxane	ug/l	NS	NS	<0.150	1
MPA Test	Risk Points	NS	NS	1	10
Perchlorate	ug/l	NS	NS	<0.3	2
Gross Alpha	pCi/l	NS	NS	0.805	15
Uranium	Pci/l	NS	NS	0.860	30
Radium 226	pCi/l	NS	NS	0.377	5
Radium 228	pCi/l	NS	NS	0.659	5

Notes:

- S.U. - Standard Units
- TON - Threshold Odor Number
- NTU - Nephelometric Turbidity Units
- mg/l - milligrams per liter
- NCS - No concentration set
- NS - Not Sampled
- Risk Points - EPA Consensus Method Risk Factor Points

FIGURES





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-  **MUNICIPAL BOUNDARY**
-  **WELL SITE**



**LOCUS MAP
TANK WELL SITE
PEARL STREET
TOWN OF LERAY
JEFFERSON COUNTY, NEW YORK**

NGI REF: LocusMap.mxd

Drafted By: JAF

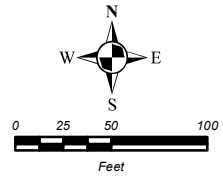
Date: 03/28/2024

Source: ArcGIS.com

FIGURE 1

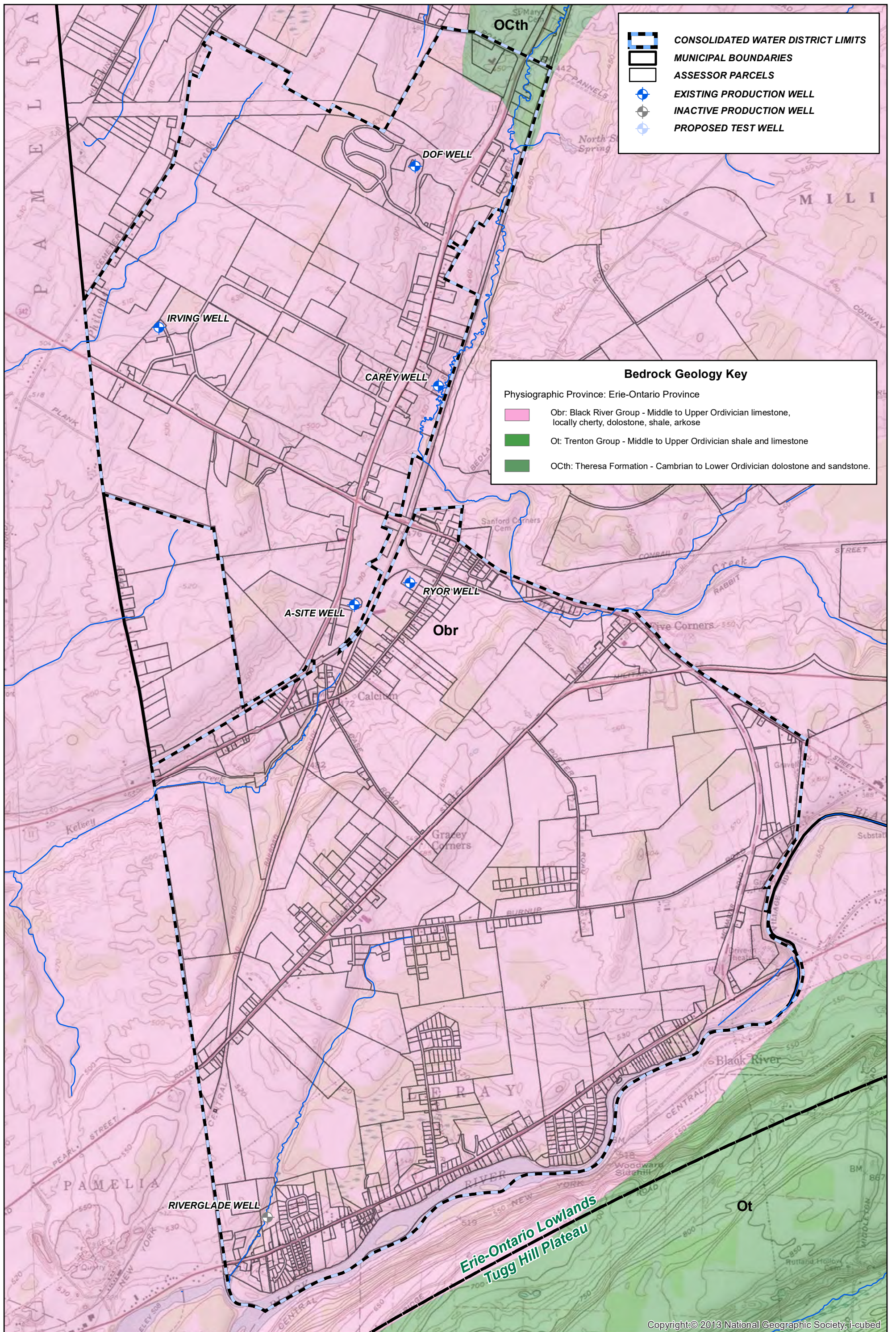


Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



SITE MAP TANK WELL SITE PEARL STREET - STATE ROUTE 283 TOWN OF LERAY JEFFERSON COUNTY, NEW YORK	
NGI REF: SiteMap.mxd	
Drafted By: JAF	Date: 03/29/2024
Source: MassGIS; ArcGIS.com	

FIGURE 2



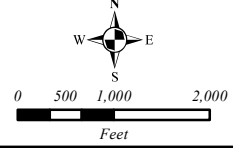
	CONSOLIDATED WATER DISTRICT LIMITS
	MUNICIPAL BOUNDARIES
	ASSESSOR PARCELS
	EXISTING PRODUCTION WELL
	INACTIVE PRODUCTION WELL
	PROPOSED TEST WELL

Bedrock Geology Key

Physiographic Province: Erie-Ontario Province

	Obr: Black River Group - Middle to Upper Ordovician limestone, locally cherty, dolostone, shale, arkose
	Ot: Trenton Group - Middle to Upper Ordovician shale and limestone
	OCth: Theresa Formation - Cambrian to Lower Ordovician dolostone and sandstone.

NOTES:
 1. Consolidated water district limits do not include a portion of the district located approximately one mile east of the contiguous portions of the district.



CONSOLIDATED WATER DISTRICT MAP
 DESKTOP WATER SEARCH
 TOWN OF LE RAY, NEW YORK

REF: 200102 - LeRayNY WaterSearch SiteMap.mxd
 Drafted By: JAF Date: 02/05/2020
 Source: NYGIS, ArcGIS.com, USGS

Figure 4 - Linear Graph of Step Test Water Level Data
Tank Site 8-inch Well - LeRay, NY

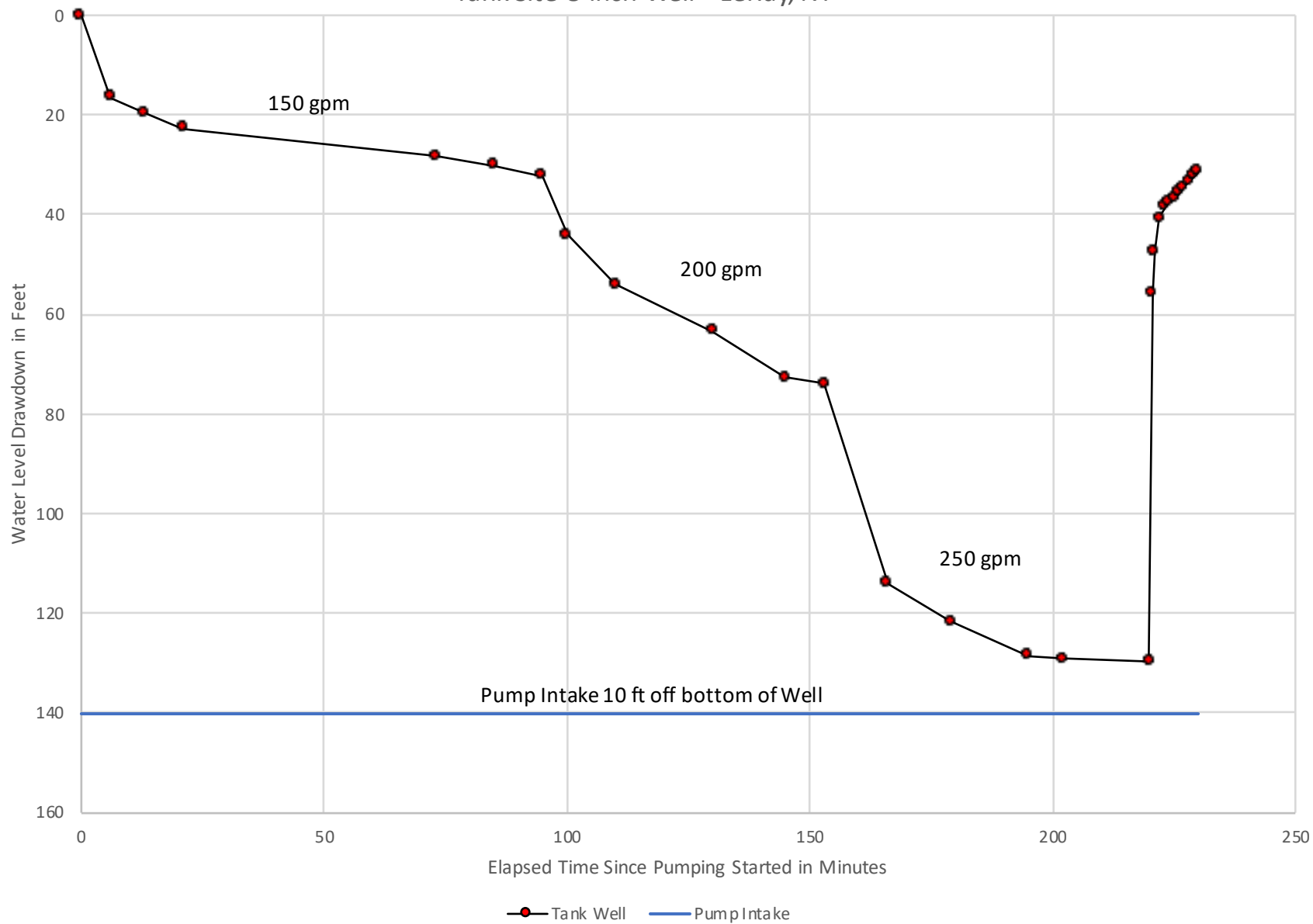


Figure 5 - Linear Graph of Water Level Elevation Data in the Tank Site Tank Well
Prior to the Start of the 72-hour Pumping Test

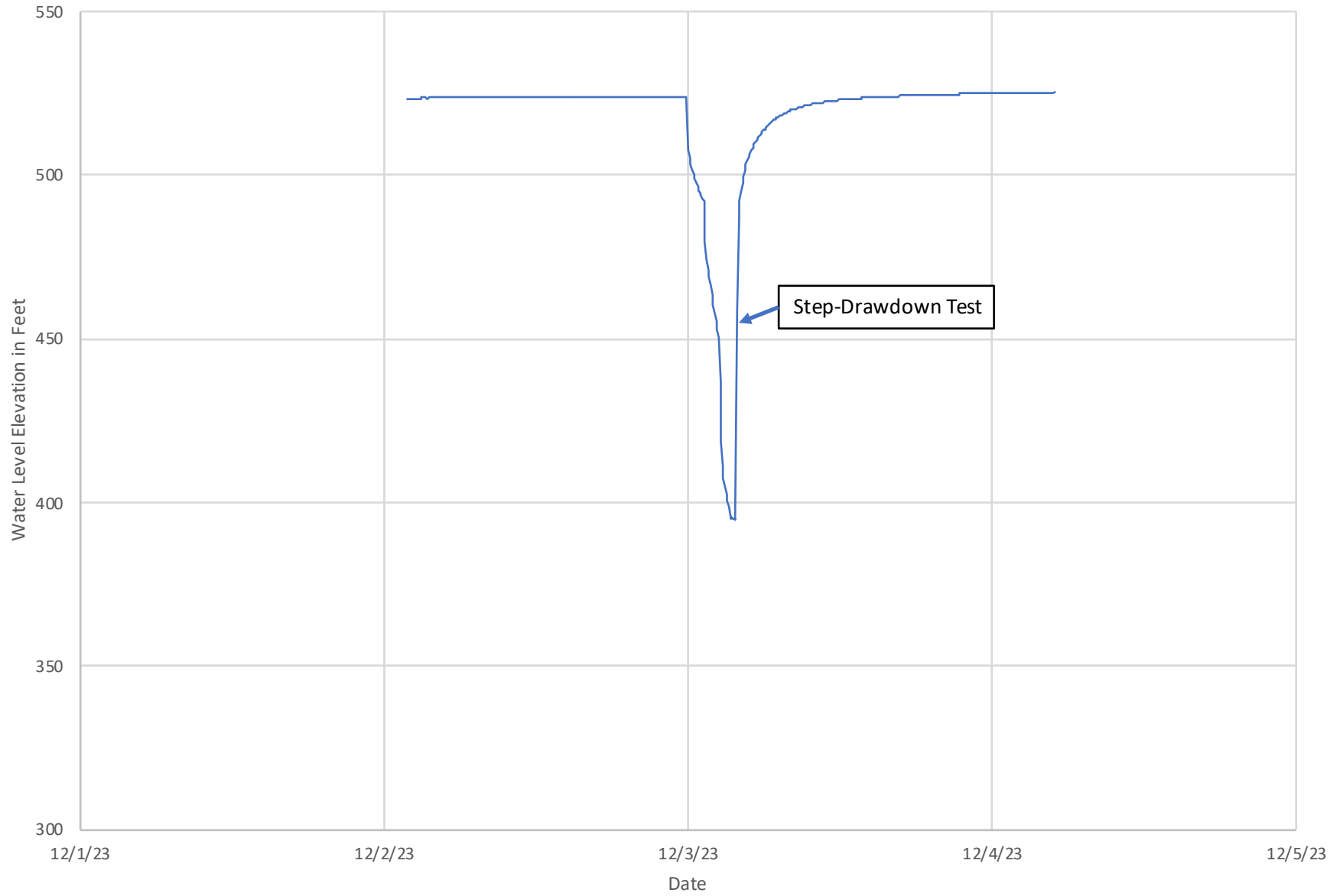


Figure 6 - Linear Graph of Water Level Data From 72 Hour Test on 8-inch Well
Tank Well Site - LeRay, NY

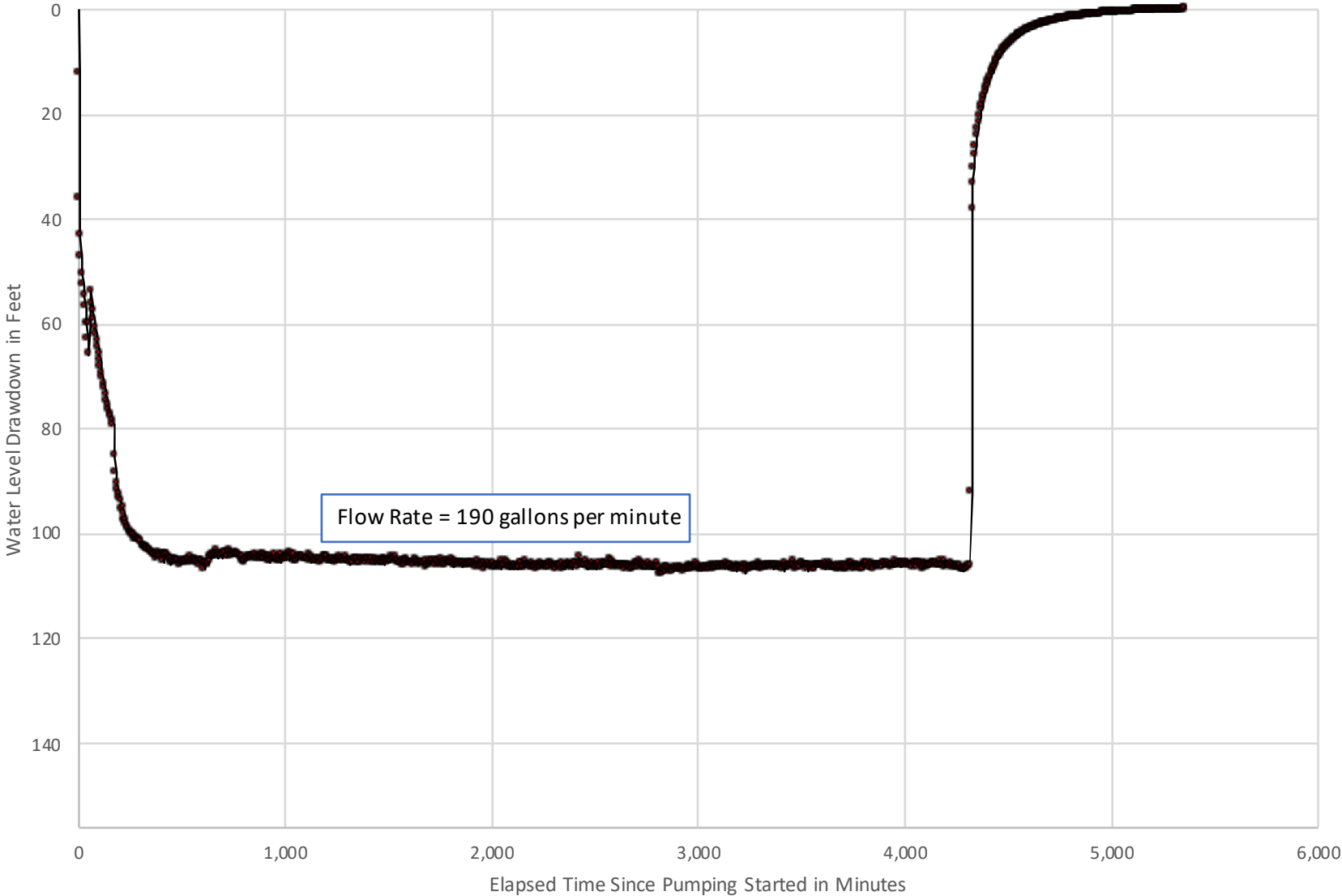
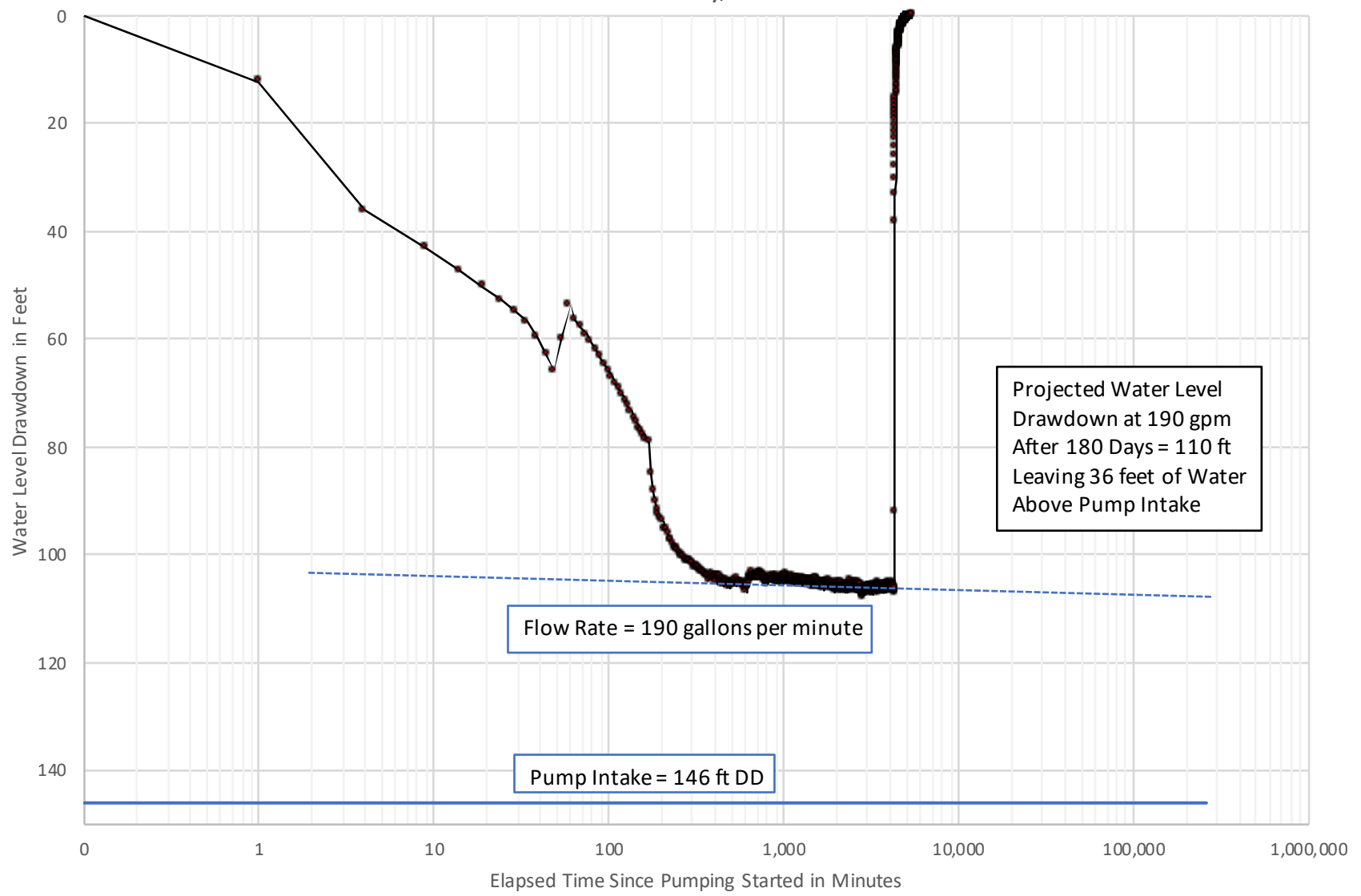


Figure 7 - Semi-log Graph of Water Level Data From 72 Hour Test on Tank Site Well
Town of LeRay, NY



APPENDIX A





(1) COUNTY JEFFERSON

(3) DEC Well Number

(2) TOWN LERAY

WATER WELL COMPLETION REPORT

J-

(4) OWNER <u>TOWN OF LERAY</u>		(45) WELL LOG	
(5) ADDRESS <u>MAIN ST EQUUS MILLS N.Y.</u>		Depth to Bedrock <u>9</u> (ft. below land surface)	
(6) LOCATION OF WELL (See Instructions On Reverse) (Check here <input type="checkbox"/> if address is same as above) <u>CORR 283</u>		Ground Elevation _____ (ft. above sea level)	
(7) LATITUDE/LONGITUDE AND METHOD USED <input checked="" type="checkbox"/> GPS <input type="checkbox"/> Map <u>44.02126 75.82352</u>		Top of Casing <u>2</u> (ft. above (+) or below (-) land surface)	
(9) DEPTH OF WELL BELOW LAND SURFACE (feet) <u>200</u>	(10) DEPTH TO GROUNDWATER BELOW LAND SURFACE (feet) <u>39</u>	DATE MEASURED <u>11/20/22</u>	
CASINGS			
(11) DIAMETER <u>8</u> in. <u>8</u> in. _____ in. _____ in.	(45) WELL LOG REMAINING GRout 206GPM DRIVE 50' 267M 100+ GPM BROKEN BLACK LIMESTONE LAYER FRACTURE LAYER 100+ GPM		
(12) LENGTH <u>21</u> ft. <u>21</u> ft. _____ ft. _____ ft.			
(13) GROUT TYPE / SEALING <u>DRIVE SHOE GROUT</u>	(14) GROUT / SEALING INTERVAL (feet) FROM <u>40</u> TO <u>9</u>		
SCREENS			
(15) MAKE & MATERIAL	(16) OPENINGS		
(17) DIAMETER _____ in. _____ in. _____ in. _____ in.	30' 40' 40'		
(18) LENGTH _____ ft. _____ ft. _____ ft. _____ ft.			
(19) DEPTH TO TOP OF SCREEN, FROM TOP OF CASING (Feet)			
YIELD TEST			
(20) DATE <u>12/4/23 - 12/7/23</u>		(21) DURATION OF TEST <u>72 HRS</u>	
(22) LIFT METHOD <input checked="" type="checkbox"/> Pump <input type="checkbox"/> Air Lift <input type="checkbox"/> Bailer		(23) STABILIZED DISCHARGE (GPM) <u>190</u>	
(24) STATIC LEVEL PRIOR TO TEST (feet/inches below top of casing) <u>39</u>		(25) MAXIMUM DRAWDOWN (Stabilized) (feet/inches below top of casing) <u>175</u>	
(26) RECOVERY (Time in hours/minutes) <u>24 hrs</u>		(27) Was the water produced during the test discharged away from immediate area? Yes <input checked="" type="checkbox"/> No _____	
PUMP INSTALLATION			
(28) PUMP INSTALLED? YES _____ NO <input checked="" type="checkbox"/>		(29) DATE	(30) PUMP INSTALLER
(31) TYPE		(32) MAKE	(33) MODEL
(34) MAXIMUM CAPACITY (GPM)		(35) PUMP INSTALLATION LEVEL FROM TOP OF CASING (Feet)	
DRILLER INFORMATION			
(36) METHOD OF DRILLING <input checked="" type="checkbox"/> Rotary <input type="checkbox"/> Cable Tool <input type="checkbox"/> Other		(37) USE OF WATER (See instructions for choices) <u>Village supply</u>	
(38) DATE DRILLING WORK STARTED <u>11/16/23</u>		(39) DATE DRILLING WORK COMPLETED <u>11/20/23</u>	
(40) DATE REPORT FILED <u>1/25/24</u>	(41) REGISTERED COMPANY <u>KELLER WELL DRILLING</u>	(42) DEC REGISTRATION NO. <u>NYRD 10039</u>	
(43) CERTIFIED DRILLER (Print name) <u>RICK KELLER</u>		(44) CERTIFIED DRILLER SIGNATURE <u>Ry Keller</u>	
* By signing this document I hereby affirm that: (1) I am certified to supervise water well drilling activities as defined by Environmental Conservation Law 15-1502; (2) this water well was constructed in accordance with water well standards promulgated by the New York State Department of Health; (3) under the penalty of perjury the information provided in this Well Completion Report is true, accurate and complete, and I understand that any false statement made herein is punishable as a Class A Misdemeanor under Penal Law §210.45.		150' 152' 190' 200'	
		BOTTOM OF HOLE	
		OWNER	

LOCATION SKETCH - Indicate north

Shot of 20 GPM at 30 Foot
 150 FT FRACTURE produced pm sized chips
 190 FT FRACTURE produced chips the size 1/2 to 2 inch flat layered chips

APPENDIX B



Tank Site Step-Drawdown Test Log
Town of LeRay, NY

Date	Time	ET (min)	DTW (ft)	DD (ft)	Q (gpm)	Comments
12/3/23	9:00	0	49.93	0.00	0	Static water level, 40 Deg. F and raining
	9:36	6	66.33	16.40	150	
	9:43	13	69.61	19.68	150	
	9:51	21	72.70	22.77	150	
	10:13	73	78.15	28.22	150	
	10:25	85	80.14	30.21	150	
	10:35	95	82.19	32.26	150	
	10:40	100	93.90	43.97	200	
	10:50	110	103.92	53.99	200	
	11:10	130	113.22	63.29	200	
	11:25	145	122.53	72.60	200	
	11:33	153	123.87	73.94	200	
	11:46	166	163.91	113.98	250	
	11:59	179	171.51	121.58	250	
	12:15	195	178.41	128.48	250	
	12:22	202	179.10	129.17	250	
	12:40	220	179.58	129.65	250	Shutdown
	12:40:30	220.5	105.70	55.77	0	
	12:41	221	97.30	47.37	0	
	12:42	222	90.70	40.77	0	
	12:43	223	88.48	38.55	0	
	12:44	224	87.32	37.39	0	
	12:45	225	86.70	36.77	0	
	12:46	226	85.42	35.49	0	
	12:47	227	84.41	34.48	0	
	12:48	228	83.50	33.57	0	
	12:49	229	82.10	32.17	0	
	12:50	230	81.40	31.47	0	

Notes: Water levels recorded from top of stilling well 4.79 feet above ground surface

**Pumping Test Log for 8-inch Production Well at Tank Site
Town of LeRay, NY**

Date	Time	ET (min)	DTW (ft)	DD (ft)	Q (gpm)	Comments
12/4/23	9:00	0	48.10	0.00	0	Static, measurements to top stilling well
	9:01	1	62.38	14.28	210	
	9:02	2	69.32	21.22		
	9:03	3	75.21	27.11		
	9:04	4	78.85	30.75	210	
	9:05	5	82.10	34.00		
	9:06	6	84.30	36.20		
	9:07	7	86.02	37.92		
	9:08	8	87.82	39.72		
	9:09	9	89.04	40.94		
	9:10	10	90.32	42.22		
	9:15	15	94.35	46.25		
	9:20	20	97.78	49.68		
	9:30	30	102.29	54.19		
	9:40	40	106.95	58.85		
	9:50	50	112.62	64.52		
	10:00	60	101.09	52.99	240	
	10:10	70	105.71	57.61	210	
	10:20	80	108.82	60.72		
	10:30	90	111.15	63.05		
	10:40	100	113.55	65.45		
	11:00	120	118.55	70.45	210	
	11:10	130	120.19	72.09	210	
	11:20	140	121.99	73.89		
	11:30	150	123.65	75.55		
	11:50	170	128.99	80.89		
	12:00	180	134.45	86.35		
	12:10	190	136.75	88.65	200	
	12:50	230	143.41	95.31	200	
	13:00	240	145.10	97.00		Sample collected, T=10.1, pH=7.87, Cond.=1,961
	13:30	270	145.27	97.17	190	
	14:00	300	147.03	98.93	190	
	14:30	330	148.35	100.25	190	
	15:00	360	148.81	100.71		
	15:30	390	148.10	100.00		
	16:00	420	149.00	100.90	190	
	18:00	540	148.64	100.54	190	light snow
	20:00	660	149.10	101.00	190	
12/5/23	0:00	900	150.10	102.00	190	
	4:00	1020	150.27	102.17	190	
	6:00	1140	150.41	102.31	190	light snow
	8:00	1380	150.75	102.65	190	
	10:00	1500	151.62	103.52	190	
	12:00	1620	151.81	103.71	190	
	14:00	1740	149.70	101.60	190	
	16:00	1860	150.50	102.40	190	
	18:00	1980	152.13	104.03	190	
	20:00	2100	152.10	104.00	190	
	22:00	2220	152.02	103.92	190	
12/16/23	0:00	2340	152.66	104.56	190	
	6:00	2700	152.41	104.31	190	24 Deg F, light snow
	8:00	2820	154.02	105.92	190	Set up MPA Filter
	10:00	2940	151.61	103.51	190	
	12:00	3060	152.73	104.63	190	Mike Tracey DOH visited site
	14:00	3180	153.22	105.12	190	
	16:00	3300	151.03	102.93	190	
	18:00	3420	152.82	104.72	190	19 Deg. F, partly cloudy
	20:00	3540	151.34	103.24	190	
12/17/23	0:00	3780	152.23	104.13	190	
	6:00	4140	152.71	104.61	meter froze	24 Deg. F, overcast
	8:00	4260	152.80	104.70	190	Full Part 5 Samples collected
	9:00	4320	152.75	104.65	190	
	9:01	4321	107.20	59.10	0	
	9:02	4322	100.55	52.45	0	
	9:03	4323	95.35	47.25	0	
	9:04	4324	89.90	41.80	0	
	9:05	4325	86.10	38.00	0	
	9:06	4326	84.40	36.30	0	
	9:07	4327	83.20	35.10	0	
	9:08	4328	82.55	34.45	0	
	9:09	4329	81.80	33.70	0	
	9:10	4330	81.13	33.03	0	
	9:15	4335	78.35	30.25	0	
	9:20	4340	75.25	27.15	0	
	9:30	4350	72.40	24.30	0	

APPENDIX C



Project Name: NORTHEAST GEOSCIENCE
Project Number: AL23-1421

Lab Number: L2371534
Report Date: 12/12/23

SAMPLE RESULTS

Lab ID: L2371534-01
 Client ID: 8-INCH TANK WELL
 Sample Location: Not Specified

Date Collected: 12/04/23 13:00
 Date Received: 12/05/23
 Field Prep: Not Specified

Sample Depth:
 Matrix: Dw

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	ND		mg/l	0.0100	--	1	12/06/23 21:00	12/07/23 20:28	EPA 3005A	3,200.8	WKP
Calcium, Total	172.		mg/l	0.100	--	1	12/06/23 21:00	12/07/23 08:43	EPA 3005A	19,200.7	JMF
Copper, Total	0.0024		mg/l	0.0010	--	1	12/06/23 21:00	12/07/23 20:28	EPA 3005A	3,200.8	WKP
Iron, Total	ND		mg/l	0.0500	--	1	12/06/23 21:00	12/07/23 08:43	EPA 3005A	19,200.7	JMF
Magnesium, Total	38.0		mg/l	0.100	--	1	12/06/23 21:00	12/07/23 08:43	EPA 3005A	19,200.7	JMF
Manganese, Total	0.0187		mg/l	0.0010	--	1	12/06/23 21:00	12/07/23 20:28	EPA 3005A	3,200.8	WKP
Potassium, Total	7.02		mg/l	2.50	--	1	12/06/23 21:00	12/07/23 08:43	EPA 3005A	19,200.7	JMF
Silver, Total	ND		mg/l	0.0004	--	1	12/06/23 21:00	12/07/23 20:28	EPA 3005A	3,200.8	WKP
Sodium, Total	232.		mg/l	2.00	--	1	12/06/23 21:00	12/07/23 08:43	EPA 3005A	19,200.7	JMF
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	586.		mg/l	0.660	NA	1	12/06/23 21:00	12/07/23 08:43	EPA 3005A	19,200.7	JMF



Project Name: NORTHEAST GEOSCIENCE
Project Number: AL23-1421

Lab Number: L2371534
Report Date: 12/12/23

SAMPLE RESULTS

Lab ID: L2371534-01
Client ID: 8-INCH TANK WELL
Sample Location: Not Specified

Date Collected: 12/04/23 13:00
Date Received: 12/05/23
Field Prep: Not Specified

Sample Depth:
Matrix: Dw

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Odor @ 60 C	NO ODOR		TON	1	--	1	-	12/06/23 12:45	121,2150B	JBB
Color, Apparent	ND		A.P.C.U.	5.0	--	1	-	12/06/23 12:40	121,2120B	JBB
Alkalinity, Total	205.		mg CaCO3/L	2.00	NA	1	-	12/09/23 09:20	121,2320B	MRM
Alkalinity, Bicarbonate	205.		mg CaCO3/L	2.00	NA	1	-	12/09/23 09:20	121,2320B	MRM
Anions by Ion Chromatography - Westborough Lab										
Chloride	472.		mg/l	5.00	--	10	-	12/09/23 12:55	44,300.0	CVN
Sulfate	334.		mg/l	10.0	--	10	-	12/09/23 12:55	44,300.0	CVN





ANALYTICAL REPORT

Lab Number:	L2371534
Client:	Converse Laboratories, Inc. 800 Starbuck Ave Suite B101 Watertown, NY 13601
ATTN:	Dave Converse
Phone:	(315) 788-8388
Project Name:	NORTHEAST GEOSCIENCE
Project Number:	AL23-1421
Report Date:	12/12/23

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OH (CL108), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Serial_No:12122314:06

Project Name: NORTHEAST GEOSCIENCE
Project Number: AL23-1421

Lab Number: L2371534
Report Date: 12/12/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2371534-01	8-INCH TANK WELL	DW	Not Specified	12/04/23 13:00	12/05/23



Project Name: NORTHEAST GEOSCIENCE
Project Number: AL23-1421

Lab Number: L2371534
Report Date: 12/12/23

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: NORTHEAST GEOSCIENCE
Project Number: AL23-1421

Lab Number: L2371534
Report Date: 12/12/23

Case Narrative (continued)

Report Submission

Please note that this report format does not contain typical QC parameters that were performed with these samples. As such, any QC outliers or non-conformances can only be reviewed by accessing your Alpha Customer Center account at www.alphalab.com and building a Data Usability table (format 11) in our Data Merger tool.

Total Metals

The WG1860483-3 MS recoveries for calcium (70%) and sodium (70%), performed on L2371534-01, do not apply because the sample concentrations are greater than four times the spike amounts added.

Odor @ 60 C

L2371534-01: The sample was analyzed with the method required holding time exceeded.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Caitlin Walukevich

Title: Technical Director/Representative

Date: 12/12/23

METALS



INORGANICS & MISCELLANEOUS



Project Name: NORTHEAST GEOSCIENCE
Project Number: AL23-1421

Serial_No:12122314:06
Lab Number: L2371534
Report Date: 12/12/23

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent
C	Absent
D	Absent
E	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2371534-01A	Plastic 950ml HNO3 preserved	B	<2	<2	4.3	Y	Absent		AL-2008T(180),MN-2008T(180),CA-UI(180),K-UI(180),MG-UI(180),CU-2008T(180),FE-UI(180),HARDU(180),AG-2008T(180),NA-UI(180)
L2371534-01B	Plastic 1000ml unpreserved/No Headspace	B	NA		4.3	Y	Absent		ALK-T-2320(14),ALK-HCO3-2320(14)
L2371534-01C	Plastic 950ml unpreserved	B	7	7	4.3	Y	Absent		SO4-300(28),CL-300(28)
L2371534-01D	Amber 950ml unpreserved	B	7	7	4.3	Y	Absent		COLOR-A-2120(2),ODOR-2150(1)

*Values in parentheses indicate holding time in days



Project Name: NORTHEAST GEOSCIENCE
Project Number: AL23-1421

Lab Number: L2371534
Report Date: 12/12/23

GLOSSARY

Acronyms

- DL** - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
- EDL** - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
- EMPC** - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
- EPA** - Environmental Protection Agency.
- LCS** - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
- LCSD** - Laboratory Control Sample Duplicate: Refer to LCS.
- LFB** - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
- LOD** - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
- LOQ** - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
- MDL** - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
- MS** - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
- MSD** - Matrix Spike Sample Duplicate: Refer to MS.
- NA** - Not Applicable.
- NC** - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
- NDPA/DPA** - N-Nitrosodiphenylamine/Diphenylamine.
- NI** - Not Ignitable.
- NP** - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
- NR** - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
- RL** - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
- RPD** - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
- SRM** - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
- STLP** - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
- TEF** - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
- TEQ** - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
- TIC** - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report - No QC



Project Name: NORTHEAST GEOSCIENCE

Lab Number: L2371534

Project Number: AL23-1421

Report Date: 12/12/23

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: DU Report - No QC



Project Name: NORTHEAST GEOSCIENCE
Project Number: AL23-1421

Lab Number: L2371534
Report Date: 12/12/23

Data Qualifiers

- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: DU Report - No QC



Project Name: NORTHEAST GEOSCIENCE
Project Number: AL23-1421

Lab Number: L2371534
Report Date: 12/12/23

REFERENCES

- 3 Methods for the Determination of Metals in Environmental Samples, Supplement I. EPA/600/R-94/111. May 1994.
- 19 Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.
- 44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625.1: alpha-Terpineol

EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270E: NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.

Mansfield Facility

SM 2540D: TSS.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:**

Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,**

SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables).

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.**

EPA 522, EPA 537.1.

Non-Potable Water


EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

 ALPHA <small>LABORATORY</small>	NEW YORK CHAIN OF CUSTODY	Service Centers Mahwah, NJ 07430: 35 Whitney Rd, Suite 5 Albany, NY 12205: 14 Walker Way Tonawanda, NY 14150: 275 Cooper Ave, Suite 105	Page 1 of 1	Date Rec'd In Lab <u>12/6/23</u>	ALPHA Job # <u>12371834</u>										
		Westborough, MA 01581 8 Walkup Dr. TEL: 508-898-9220 FAX: 508-898-9193	Mansfield, MA 02048 320 Forbes Blvd TEL: 508-822-9300 FAX: 508-822-3788	Project Information Project Name: <u>NORTHEAST GEOSCIENCE</u> Project Location: _____ Project # <u>AL23-1421</u> (Use Project name as Project #) <input type="checkbox"/>		Deliverables <input type="checkbox"/> ASP-A <input type="checkbox"/> ASP-B <input type="checkbox"/> EQUIS (1 File) <input type="checkbox"/> EQUIS (4 File) <input type="checkbox"/> Other									
Client Information Client: <u>Converse Laboratories Inc</u> Address: <u>800 Starbuck Ave Ste B101</u> Watertown, NY 13601 Phone: <u>315-788-8388</u> Fax: <u>315-788-9258</u> Email: <u>customerservice2@conver</u>		Project Manager: <u>Brenda Pirinelli</u> ALPHAQuote #: _____ Turn-Around Time Standard <input checked="" type="checkbox"/> Due Date: _____ Rush (only if pre approved) <input type="checkbox"/> # of Days: _____		Billing Information <input checked="" type="checkbox"/> Same as Client Info PO # _____											
These samples have been previously analyzed by Alpha <input type="checkbox"/> Other project specific requirements/comments: <u>*Ca,Mg,Na,Fe,Ag,Al,Cu,Mn,K</u> Please specify Metals or TAL.		Regulatory Requirement <input type="checkbox"/> NY TOGS <input type="checkbox"/> NY Part 375 <input type="checkbox"/> AWQ Standards <input type="checkbox"/> NY CP-51 <input type="checkbox"/> NY Restricted Use <input type="checkbox"/> Other <input type="checkbox"/> NY Unrestricted Use <input type="checkbox"/> NYC Sewer Discharge		Disposal Site Information Please identify below location of applicable disposal facilities. Disposal Facility: <input type="checkbox"/> NJ <input type="checkbox"/> NY <input type="checkbox"/> Other: _____											
ANALYSIS		Sample Filtration <input type="checkbox"/> Done <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please Specify below)		Sample Specific Comments											
ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler's Initials	COLOR/ODOR	HARDNESS	METALS*	ALKALINITY	BICARBONATE ALK	CHLORIDE/SULFATE	OTHER			
		Date	Time												
<u>11524-D1</u>	<u>8-INCH TANK WELL</u>	<u>12/4/2023</u>	<u>1300P</u>	<u>DW</u>	<u>JB</u>	<u>1</u>	<u>X</u>	<u>1</u>	<u>1</u>	<u>X</u>	<u>X</u>				
Preservative Code: 1 = None 3 = HCl 2 = HNO ₃ 2 = H ₂ SO ₄ 1 = NaOH 1 = NaOH 3 = NaHSO ₄ 1 = Na ₂ S ₂ O ₈ JE = Zn Ac/NaOH 1 = Other		Container Code P = Plastic A = Amber Glass V = Vial G = Glass B = Bacteria Cup C = Cube O = Other E = Encore D = BOD Bottle		Westboro: Certification No: MA835 Mansfield: Certification No: MA015		Container Type A P P Preservative A C A		Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS.							
Relinquished By: _____ Date/Time: <u>12/5/2023 1600</u>		Received By: <u>AAZ</u> Date/Time: <u>12/6/23 1730</u>		Relinquished By: <u>[Signature]</u> Date/Time: <u>12/6/23 1915</u>		Received By: <u>[Signature]</u> Date/Time: <u>12/6/23 1915</u>		Relinquished By: <u>[Signature]</u> Date/Time: <u>12/6/23 1915</u>		Received By: <u>[Signature]</u> Date/Time: <u>12/6/23 0240</u>		Relinquished By: _____ Date/Time: _____		Received By: _____ Date/Time: _____	

Project Name: NORTHEAST GEOSCIENCE
Project Number: AL23-1438

Lab Number: L2372476
Report Date: 12/14/23

SAMPLE RESULTS

Lab ID: L2372476-01
 Client ID: 8 INCH TANK SITE T. LERAY
 Sample Location: Not Specified

Date Collected: 12/06/23 14:00
 Date Received: 12/07/23
 Field Prep: Not Specified

Sample Depth:
 Matrix: Dw

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	ND		mg/l	0.0100	--	1	12/10/23 04:00	12/11/23 07:47	EPA 3005A	3,200.8	EJF
Calcium, Total	136.		mg/l	0.100	--	1	12/10/23 04:00	12/11/23 10:41	EPA 3005A	19,200.7	DHL
Copper, Total	0.0032		mg/l	0.0010	--	1	12/10/23 04:00	12/11/23 07:47	EPA 3005A	3,200.8	EJF
Iron, Total	ND		mg/l	0.0500	--	1	12/10/23 04:00	12/11/23 10:41	EPA 3005A	19,200.7	DHL
Magnesium, Total	35.1		mg/l	0.100	--	1	12/10/23 04:00	12/11/23 10:41	EPA 3005A	19,200.7	DHL
Manganese, Total	0.0153		mg/l	0.0010	--	1	12/10/23 04:00	12/11/23 07:47	EPA 3005A	3,200.8	EJF
Potassium, Total	6.14		mg/l	2.50	--	1	12/10/23 04:00	12/11/23 10:41	EPA 3005A	19,200.7	DHL
Silver, Total	ND		mg/l	0.0004	--	1	12/10/23 04:00	12/11/23 07:47	EPA 3005A	3,200.8	EJF
Sodium, Total	205.		mg/l	2.00	--	1	12/10/23 04:00	12/11/23 10:41	EPA 3005A	19,200.7	DHL
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	485.		mg/l	0.660	NA	1	12/10/23 04:00	12/11/23 10:41	EPA 3005A	19,200.7	DHL



Project Name: NORTHEAST GEOSCIENCE

Lab Number: L2372476

Project Number: AL23-1438

Report Date: 12/14/23

SAMPLE RESULTS

Lab ID: L2372476-01
 Client ID: 8 INCH TANK SITE T. LERAY
 Sample Location: Not Specified

Date Collected: 12/06/23 14:00
 Date Received: 12/07/23
 Field Prep: Not Specified

Sample Depth:
 Matrix: Dw

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Odor @ 60 C	NO ODOR		TON	1	--	1	-	12/08/23 11:43	121,2150B	JBB
Color, Apparent	ND		A.P.C.U.	5.0	--	1	-	12/08/23 09:10	121,2120B	JBB
Alkalinity, Total	203.		mg CaCO3/L	2.00	NA	1	-	12/14/23 11:27	121,2320B	MRW
Alkalinity, Bicarbonate	203.		mg CaCO3/L	2.00	NA	1	-	12/14/23 11:27	121,2320B	MRW
Anions by Ion Chromatography - Westborough Lab										
Chloride	392.		mg/l	5.00	--	10	-	12/12/23 03:09	44,300.0	CVN
Sulfate	298.		mg/l	10.0	--	10	-	12/12/23 03:09	44,300.0	CVN





ANALYTICAL REPORT

Lab Number:	L2372476
Client:	Converse Laboratories, Inc. 800 Starbuck Ave Suite B101 Watertown, NY 13601
ATTN:	Dave Converse
Phone:	(315) 788-8388
Project Name:	NORTHEAST GEOSCIENCE
Project Number:	AL23-1438
Report Date:	12/14/23

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OH (CL108), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: NORTHEAST GEOSCIENCE
Project Number: AL23-1438

Lab Number: L2372476
Report Date: 12/14/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2372476-01	8 INCH TANK SITE T. LERAY	DW	Not Specified	12/06/23 14:00	12/07/23



Project Name: NORTHEAST GEOSCIENCE
Project Number: AL23-1438

Lab Number: L2372476
Report Date: 12/14/23

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: NORTHEAST GEOSCIENCE
Project Number: AL23-1438

Lab Number: L2372476
Report Date: 12/14/23

Case Narrative (continued)

Report Submission

Please note that this report format does not contain typical QC parameters that were performed with these samples. As such, any QC outliers or non-conformances can only be reviewed by accessing your Alpha Customer Center account at www.alphalab.com and building a Data Usability table (format 11) in our Data Merger tool.

Sample Receipt

L2372476-01: Headspace was noted in the sample container submitted for Total Alkalinity - SM 2320 and Bicarbonate Alkalinity - SM 2320.

Odor @ 60 C

L2372476-01: The sample was analyzed with the method required holding time exceeded.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Michelle M. Morris

Title: Technical Director/Representative

Date: 12/14/23

METALS



INORGANICS & MISCELLANEOUS

Serial_No:12142315:58

Lab Number: L2372476

Report Date: 12/14/23

Project Name: NORTHEAST GEOSCIENCE

Project Number: AL23-1438

Sample Receipt and Container Information

YES

Were project specific reporting limits specified?

Cooler Information

Custody Seal

A Absent
C Absent

Container Information

Container ID Container Type

L2372476-01A Plastic 250ml HNO3 preserved
L2372476-01B Plastic 1000ml unpreserved/No Headspace
L2372476-01C Plastic 950ml unpreserved
L2372476-01D Plastic 950ml unpreserved
L2372476-01E Amber 500ml unpreserved
L2372476-01F Plastic 2 liter container

Cooler pH Initial pH Final pH Temp deg C Pres Seal

C <2 <2 4.0 Y Absent
C NA 7 7 4.0 Y Absent
C 7 7 4.0 Y Absent
C 7 7 4.0 Y Absent
A 7 7 3.6 Y Absent
C 7 7 4.0 Y Absent

Frozen Date/Time

Analysis(*)

AL-2008T(180),CA-UJ(180),MN-2008T(180),K-UI(180),HARDU(180),MG-UI(180),CU-2008T(180),FE-UI(180),AG-2008T(180),NA-UI(180)
ALK-T-2320(14),ALK-HCO3-2320(14)
SO4-300(28),CL-300(28)
SO4-300(28),CL-300(28)
COLOR-A-2120(2),ODOR-2150(1)
SO4-300(28),CL-300(28)



Project Name: NORTHEAST GEOSCIENCE
Project Number: AL23-1438

Lab Number: L2372476
Report Date: 12/14/23

GLOSSARY

Acronyms

- DL** - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
- EDL** - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
- EMPC** - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
- EPA** - Environmental Protection Agency.
- LCS** - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
- LCSD** - Laboratory Control Sample Duplicate: Refer to LCS.
- LFB** - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
- LOD** - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
- LOQ** - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
- MDL** - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
- MS** - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
- MSD** - Matrix Spike Sample Duplicate: Refer to MS.
- NA** - Not Applicable.
- NC** - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
- NDPA/DPA** - N-Nitrosodiphenylamine/Diphenylamine.
- NI** - Not Ignitable.
- NP** - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
- NR** - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
- RL** - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
- RPD** - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
- SRM** - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
- STLP** - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
- TEF** - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
- TEQ** - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
- TIC** - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report - No QC



Project Name: NORTHEAST GEOSCIENCE
Project Number: AL23-1438

Lab Number: L2372476
Report Date: 12/14/23

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: DU Report - No QC



Project Name: NORTHEAST GEOSCIENCE
Project Number: AL23-1438

Lab Number: L2372476
Report Date: 12/14/23

Data Qualifiers

- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: DU Report - No QC



Project Name: NORTHEAST GEOSCIENCE**Lab Number:** L2372476**Project Number:** AL23-1438**Report Date:** 12/14/23

REFERENCES

- 3 Methods for the Determination of Metals in Environmental Samples, Supplement I. EPA/600/R-94/111. May 1994.
- 19 Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.
- 44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625.1: alpha-Terpineol

EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270E: NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility

SM 2540D: TSS.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

EPA 524.2: THMs and VOCs; **EPA 504.1:** EDB, DBCP.

Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables).

Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.**

EPA 522, EPA 537.1.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Fulfilled 11/16/23 - KMR
 Restock
 Fulfilled 12/14/23 - KMR

Proposed Laboratory Tests for 72-hour Test on Tank Site 8-inch Bedrock Production Well
 LeRay, New York

Parameter	Units	Startup			End	Standard	#
		11/27/23	11/29/23	11/30/23			
pH	S.U.	X	X	X	NCS	3	
Temperature	Deg. C	Field	Field	Field	NCS	0	
Specific Conductance	us/cm	X	X	X	NCS	3	
Odor	TON	X	X	X	3	3	
Total Dissolved Solids	mg/l	X	X	X	500	3	
Apparent Color	Apparent C	X	X	X	15	3	
Turbidity	NTU	X	X	X	NCS	3	
Chloride	mg/l	X	X	X	250	3	
Fluoride	mg/l	NS	NS	X	4	1	
Sulfate	mg/l	X	X	X	250	3	
Alkalinity (as CaCO3)	mg/l	X	X	X	NCS	3	
Antimony	mg/l	NS	NS	X	0.006	1	
Arsenic	mg/l	NS	NS	X	0.01	1	
Barium	mg/l	NS	NS	X	2	1	
Beryllium	mg/l	NS	NS	X	0.004	1	
Cadmium	mg/l	NS	NS	X	0.005	1	
Calcium	mg/l	X	X	X	NCS	3	
Chromium	mg/l	NS	NS	X	0.1	1	
Iron	mg/l	X	X	X	0.3	3	
Lead	mg/l	NS	NS	X	0.015	1	
Magnesium	mg/l	X	X	X	NCS	3	
Manganese	mg/l	X	X	X	0.05	3	
Mercury	mg/l	NS	NS	X	0.002	1	
Nickel	mg/l	NS	NS	X	0.1	1	
Potassium	mg/l	NS	NS	X	NCS	1	
Selenium	mg/l	NS	NS	X	0.05	1	
Silver	mg/l	NS	NS	X	NCS	1	
Sodium	mg/l	NS	NS	X	250	1	
Thallium	mg/l	NS	NS	X	0.002	1	
Zinc	mg/l	X	X	X	NCS	3	
Total Hardness	mg/l	X	X	X	NCS	3	
Aluminum	mg/l	X	X	X	0.05	3	
Copper	mg/l	X	X	X	1	3	
Nitrate	mg/l	NS	NS	X	10	1	
Nitrite	mg/l	NS	NS	X	1	1	
Cyanide	mg/l	NS	NS	X	0.2	1	
Total Coliform Bacteria	col/100 ml	NS	NS	X	0	1	
Volatile Organic Compounds	ug/l	NS	NS	X	various	1	
Total PFAS	ng/l	NS	NS	X	10	1	
Synthetic Organic Compounds	ug/l	NS	NS	X	various	1	
1,4-Dioxane	ug/l	NS	NS	X	1	1	
MRA Test	Risk Points	NS	NS	X	10	1	
Gross Alpha	pCi/l	NS	NS	X	15	1	
Uranium	pCi/l	NS	NS	X	30	1	
Radium 226	pCi/l	NS	NS	X	5	1	
Radium 228	pCi/l	NS	NS	X	5	1	
Perchlorate	ug/l	NS	NS	X	0.8	1	

by Otag
 ↓

- Notes:
- S.U. - Standard Units
 - TON - Threshold Odor Number
 - NTU - Nephelometric Turbidity Units
 - mg/l - milligrams per liter
 - NCS - No concentration set
 - NS - Not Sampled
 - Risk Points - EPA Consensus Method Risk Factor Points

Project Name: NORTHEAST GEOSCIENCE
Project Number: AL23-1439

Lab Number: L2372477
Report Date: 12/22/23

SAMPLE RESULTS

Lab ID: L2372477-01
Client ID: 8 INCH TANK SITE T. LERAY
Sample Location: Not Specified

Date Collected: 12/07/23 08:00
Date Received: 12/07/23
Field Prep: Not Specified

Sample Depth:
Matrix: Dw

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	ND		mg/l	0.0100	--	1	12/20/23 03:00	12/21/23 11:37	EPA 3005A	3,200.8	NTB
Antimony, Total	ND		mg/l	0.0040	--	1	12/20/23 03:00	12/21/23 11:37	EPA 3005A	3,200.8	NTB
Arsenic, Total	ND		mg/l	0.0010	--	1	12/20/23 03:00	12/21/23 11:37	EPA 3005A	3,200.8	NTB
Barium, Total	0.0717		mg/l	0.0010	--	1	12/20/23 03:00	12/21/23 11:37	EPA 3005A	3,200.8	NTB
Beryllium, Total	ND		mg/l	0.0010	--	1	12/20/23 03:00	12/21/23 11:37	EPA 3005A	3,200.8	NTB
Cadmium, Total	ND		mg/l	0.0002	--	1	12/20/23 03:00	12/21/23 11:37	EPA 3005A	3,200.8	NTB
Calcium, Total	139.		mg/l	0.100	--	1	12/20/23 03:00	12/20/23 14:02	EPA 3005A	19,200.7	AMW
Chromium, Total	ND		mg/l	0.0010	--	1	12/20/23 03:00	12/21/23 11:37	EPA 3005A	3,200.8	NTB
Copper, Total	0.0012		mg/l	0.0010	--	1	12/20/23 03:00	12/21/23 11:37	EPA 3005A	3,200.8	NTB
Iron, Total	ND		mg/l	0.0500	--	1	12/20/23 03:00	12/20/23 14:02	EPA 3005A	19,200.7	AMW
Lead, Total	ND		mg/l	0.0010	--	1	12/20/23 03:00	12/21/23 11:37	EPA 3005A	3,200.8	NTB
Magnesium, Total	35.5		mg/l	0.100	--	1	12/20/23 03:00	12/20/23 14:02	EPA 3005A	19,200.7	AMW
Manganese, Total	0.0163		mg/l	0.0010	--	1	12/20/23 03:00	12/21/23 11:37	EPA 3005A	3,200.8	NTB
Mercury, Total	ND		mg/l	0.0002	--	1	12/20/23 04:00	12/21/23 12:51	EPA 245.1	3,245.1	GMG
Nickel, Total	0.0088		mg/l	0.0020	--	1	12/20/23 03:00	12/21/23 11:37	EPA 3005A	3,200.8	NTB
Potassium, Total	6.57		mg/l	2.50	--	1	12/20/23 03:00	12/20/23 14:02	EPA 3005A	19,200.7	AMW
Selenium, Total	ND		mg/l	0.0050	--	1	12/20/23 03:00	12/21/23 11:37	EPA 3005A	3,200.8	NTB
Silver, Total	ND		mg/l	0.0004	--	1	12/20/23 03:00	12/21/23 11:37	EPA 3005A	3,200.8	NTB
Sodium, Total	223.		mg/l	2.00	--	1	12/20/23 03:00	12/20/23 14:02	EPA 3005A	19,200.7	AMW
Thallium, Total	ND		mg/l	0.0010	--	1	12/20/23 03:00	12/21/23 11:37	EPA 3005A	3,200.8	NTB
Zinc, Total	0.0552		mg/l	0.0050	--	1	12/20/23 03:00	12/21/23 11:37	EPA 3005A	3,200.8	NTB
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	493.		mg/l	0.660	NA	1	12/20/23 03:00	12/20/23 14:02	EPA 3005A	19,200.7	AMW



Project Name: NORTHEAST GEOSCIENCE
 Project Number: AL23-1439

Lab Number: L2372477
 Report Date: 12/22/23

SAMPLE RESULTS

Lab ID: L2372477-01
 Client ID: 8 INCH TANK SITE T. LERAY
 Sample Location: Not Specified

Date Collected: 12/07/23 08:00
 Date Received: 12/07/23
 Field Prep: Not Specified

Sample Depth:
 Matrix: Dw

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Odor @ 60 C	NO ODOR		TON	1	--	1	-	12/08/23 07:40	121,2150B	JBB
Color, Apparent	ND		A.P.C.U.	5.0	--	1	-	12/08/23 09:10	121,2120B	JBB
Alkalinity, Total	205.		mg CaCO3/L	2.00	NA	1	-	12/20/23 08:57	121,2320B	MKT
Cyanide, Total	ND		mg/l	0.005	--	1	12/19/23 19:20	12/20/23 14:38	121,4500CN-CE	JER
Fluoride	0.53		mg/l	0.20	--	1	-	12/14/23 12:30	121,4500F-C	DTH
Nitrogen, Nitrite	ND		mg/l	0.050	--	1	-	12/08/23 10:25	44,353.2	KAF
Nitrogen, Nitrate	0.925		mg/l	0.100	--	1	-	12/08/23 10:25	121,4500NO3-F	KAF
Anions by Ion Chromatography - Westborough Lab										
Chloride	389.		mg/l	5.00	--	10	-	12/20/23 17:38	44,300.0	CVN
Sulfate	272.		mg/l	10.0	--	10	-	12/20/23 17:38	44,300.0	CVN





ANALYTICAL REPORT

Lab Number:	L2372477
Client:	Converse Laboratories, Inc. 800 Starbuck Ave Suite B101 Watertown, NY 13601
ATTN:	Dave Converse
Phone:	(315) 788-8388
Project Name:	NORTHEAST GEOSCIENCE
Project Number:	AL23-1439
Report Date:	12/22/23

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OH (CL108), OR (MA-1316), PA (68-03671), RI (LAC00065), TX (T104704478), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: NORTHEAST GEOSCIENCE
Project Number: AL23-1439

Lab Number: L2372477
Report Date: 12/22/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2372477-01	8 INCH TANK SITE T. LERAY	DW	Not Specified	12/07/23 08:00	12/07/23



Project Name: NORTHEAST GEOSCIENCE
Project Number: AL23-1439

Lab Number: L2372477
Report Date: 12/22/23

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: NORTHEAST GEOSCIENCE
Project Number: AL23-1439

Lab Number: L2372477
Report Date: 12/22/23

Case Narrative (continued)

Report Submission

Please note that this report format does not contain typical QC parameters that were performed with these samples. As such, any QC outliers or non-conformances can only be reviewed by accessing your Alpha Customer Center account at www.alphalab.com and building a Data Usability table (format 11) in our Data Merger tool.

Sample Receipt

L2372477-01: Sample containers for VOCs and 522 analyses were received for the "8 INCH TANK SITE T. LERAY" sample, but were not listed on the chain of custody. At the client's request, the analyses were performed. The results will be issued under separate cover.

Total Metals

The WG1865984-3 MS recoveries for calcium (190%) and sodium (240%), performed on L2372477-01, do not apply because the sample concentrations are greater than four times the spike amounts added.

The WG1865984-3 MS recovery, performed on L2372477-01, is outside the acceptance criteria for magnesium (70%). A post digestion spike was performed and yielded an unacceptable recovery for magnesium (60%). The serial dilution recovery was acceptable; therefore, the matrix test passed for the sample matrix.

Anions by Ion Chromatography

The WG1866528-3 MS recovery, performed on L2372477-01, is outside the acceptance criteria for chloride (77%); however, the associated LCS recovery is within criteria. No further action was taken.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Melissa Sturgis

Title: Technical Director/Representative

Date: 12/22/23

METALS



INORGANICS & MISCELLANEOUS



Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent
C	Absent
D	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2372477-01A	Vial HCl preserved	C	NA	NA	4.0	Y	Absent		HOLD-8280(14)
L2372477-01B	Vial HCl preserved	C	NA	NA	4.0	Y	Absent		HOLD-8280(14)
L2372477-01C	Vial HCl preserved	C	NA	NA	4.0	Y	Absent		HOLD-8280(14)
L2372477-01D	Plastic 250ml unpreserved/No Headspace	C	NA	NA	4.0	Y	Absent		ALK-T-2320(14)
L2372477-01E	Plastic 250ml unpreserved	C	7	7	4.0	Y	Absent		SO4-300(28),F-4500(28),CL-300(28),NO2-353(2),NO3-4500(2)
L2372477-01F	Plastic 250ml HNO3 preserved	C	<2	<2	4.0	Y	Absent		CD-2008T(180),AL-2008T(180),MN-2008T(180),CA-UI(180),NI-2008T(180),BE-2008T(180),K-UI(180),ZN-2008T(180),HARDUI(180),FE-UI(180),MG-UI(180),CU-2008T(180),SE-2008T(180),AG-2008T(180),AS-2008T(180),HG-LJ(28),NA-UI(180),BA-2008T(180),SB-2008T(180),CR-2008T(180),PB-2008T(180)
L2372477-01G	Plastic 250ml NaOH preserved	C	>12	>12	4.0	Y	Absent		TCN-4500(14)
L2372477-01H	Amber 500ml NaSulfite/NaHSO4 preserved	C	<4	<4	4.0	Y	Absent		HOLD-522(28)
L2372477-01I	Amber 500ml NaSulfite/NaHSO4 preserved	C	<4	<4	4.0	Y	Absent		HOLD-522(28)
L2372477-01J	Plastic 950ml unpreserved	C	7	7	4.0	Y	Absent		SO4-300(28),F-4500(28),CL-300(28),NO2-353(2),NO3-4500(2)
L2372477-01K	Plastic 950ml unpreserved	C	7	7	4.0	Y	Absent		SO4-300(28),F-4500(28),CL-300(28),NO2-353(2),NO3-4500(2)
L2372477-01L	Plastic 950ml unpreserved	C	7	7	4.0	Y	Absent		SO4-300(28),F-4500(28),CL-300(28),NO2-353(2),NO3-4500(2)
L2372477-01M	Plastic 950ml unpreserved	C	7	7	4.0	Y	Absent		SO4-300(28),F-4500(28),CL-300(28),NO2-353(2),NO3-4500(2)
L2372477-01N	Amber 950ml unpreserved	C	7	7	4.0	Y	Absent		COLOR-A-2120(2),ODOR-2150(1)

*Values in parentheses indicate holding time in days



Project Name: NORTHEAST GEOSCIENCE
Project Number: AL23-1439

Lab Number: L2372477
Report Date: 12/22/23

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report - No QC



Project Name: NORTHEAST GEOSCIENCE
Project Number: AL23-1439

Lab Number: L2372477
Report Date: 12/22/23

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: DU Report - No QC



Project Name: NORTHEAST GEOSCIENCE
Project Number: AL23-1439

Lab Number: L2372477
Report Date: 12/22/23

Data Qualifiers

- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Project Name: NORTHEAST GEOSCIENCE
Project Number: AL23-1439

Lab Number: L2372477
Report Date: 12/22/23

REFERENCES

- 3 Methods for the Determination of Metals in Environmental Samples, Supplement I. EPA/600/R-94/111. May 1994.
- 19 Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.
- 44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Alpha Analytical, Inc.
 Facility: **Company-wide**
 Department: **Quality Assurance**
 Title: **Certificate/Approval Program Summary**

ID No.: **17873**
 Revision **20**
 Published Date: **6/16/2023 4:52:28 PM**
 Page **1 of 1**

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624.1: m/p-xylene, o-xylene, Naphthalene
 EPA 625.1: alpha-Terpineol
 EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
 EPA 8270E: NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.
 SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.

Mansfield Facility

SM 2640D: TSS.
 EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
 Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; EPA 353.2: Nitrate-N, Nitrite-N; SM4500NO3-F: Nitrate-N, Nitrite-N; SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B
 EPA 524.2: THMs and VOCs; EPA 504.1: EDB, DBCP.
 Microbiology: SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, EPA 350.1: Ammonia-N, LCHAT 10-107-06-1-B: Ammonia-N, EPA 351.1, SM4500NO3-F, EPA 353.2: Nitrate-N, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.
 EPA 624.1: Volatile Halocarbons & Aromatics,
 EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
 EPA 625.1: SVOC (Acid/Base/Neutral Extractables).
 Microbiology: SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.

Mansfield Facility:


Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. EPA 200.8: Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. EPA 245.1 Hg.
 EPA 522, EPA 537.1.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
 EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
 EPA 245.1 Hg.
 SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

	NEW YORK CHAIN OF CUSTODY Westborough, MA 01581 8 Watup Dr. TEL: 508-856-0220 FAX: 508-856-0193	Service Center Mahwah, NJ 07430: 35 Whitney Rd, Suite 5 Albany, NY 12205: 14 Wilkey Way Tonawanda, NY 14156: 275 Cooper Ave, Suite 100	Page 1 of 2	Date Rec'd In Lab <u>12/18/23</u>	ALPHA Job # <u>12372477</u>
Westborough, MA 01581 320 Forbes Blvd TEL: 508-856-0220 FAX: 508-856-0193		Project Information Project Name: <u>NORTHEAST GEOSCIENCE</u> Project Location: <u>AL23-1439</u> Project # <u>AL23-1439</u> Project Manager: <u>Brenda Pinelli</u> ALPHA Quote #: _____ Turn-Around Time _____ Standard <input checked="" type="checkbox"/> Due Date: _____ Rush (only if pre-approved) <input type="checkbox"/> # of Days: _____		Billing Information <input checked="" type="checkbox"/> Same as Client Info PO # _____	
Client Information Client: <u>Converse Laboratories Inc</u> Address: <u>800 Starbuck Ave Ste B101</u> Westtown, NY 13601 Phone: <u>315-768-9388</u> Fax: <u>315-768-9258</u> Email: <u>customerservice2@conver</u>		Regulatory Requirement <input type="checkbox"/> NY TOGS <input type="checkbox"/> NY Part 375 <input type="checkbox"/> AWO Standards <input type="checkbox"/> NY CP-81 <input type="checkbox"/> NY Restricted Use <input type="checkbox"/> Other _____ <input type="checkbox"/> NY Unrestricted Use <input type="checkbox"/> NYC Sewer Discharge		Disposal Site Information Please identify below location of applicable disposal facilities. Disposal Facility: _____ <input type="checkbox"/> NJ <input type="checkbox"/> NY <input type="checkbox"/> Other: _____	
These samples have been previously analyzed by Alpha <input type="checkbox"/> Other project specific requirements/comments: <u>PLEASE REPORT NITRATE AND NITRITE SEPERATELY</u> <u>PLEASE REPORT METALS OR TAL</u> METALS: Sb,As,Ba,Be,Cd,Ca,Cr,Fa,Pb,Mg,Mn,Hg,Ni,K,Se,Ag,Na,Tl,Zn,Al,Cu, ALPHA Lab ID (Lab Use Only) _____					
Sample ID <u>AL23-1439-D18</u>		Collection Date <u>12/17/2023</u>		Collection Time <u>0800A</u>	
Sample Matrix <u>DW</u>		Sampler's Initials <u>CLIENT</u>		ANALYSIS COLORADOR 1 1 1 1 1 1 X 1 X 1 ALKALINITY 1 1 1 1 1 1 X 1 X 1 CYANIDE 1 1 1 1 1 1 X 1 X 1 CHLORIDE/FLUORIDE 1 1 1 1 1 1 X 1 X 1 METALS 1 1 1 1 1 1 X 1 X 1 HARDNESS 1 1 1 1 1 1 X 1 X 1 NITRATE/NITRITE 1 1 1 1 1 1 X 1 X 1	
Container Code P = Plastic A = Amber Glass V = Vial G = Glass B = Bacteria Cup C = Cube O = Other E = Encore D = BOD Bottle		Westboro: Certification No: <u>MA935</u> Mansfield: Certification No: <u>MA015</u>		Container Type Preservative _____ Date/Time <u>12/17/2023 1600</u>	
Preservative Code A = None B = HCl C = HNO ₃ D = H ₂ SO ₄ E = NaOH F = MeOH G = NaHSO ₄ H = Na ₂ S ₂ O ₈ K/E = Zn Ac/NH ₄ OH O = Other		Relinquished By: <u>K. Boinney</u> <u>12/17/23 1832</u>		Received By: <u>APB</u> <u>12/18/23 0615P</u>	
Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. BY EXECUTING THIS COC, THE CLIENT HAS READ AND AGREES TO BE BOUND BY ALPHA'S TERMS & CONDITIONS.					



CONVERSE LABORATORIES, INI
 800 Starbuck Ave., Suite B101, Watertown, NY 13601
 (315) 788-8388 www.converselabs.com

Chain of Custody

AL23-1439
 Page 1 of 1

Client Name: NorthEast Geoscience		Client Project ID / PO#: _____							
Client Address: 97 Walnut Street		Matrix Codes: DW= Drinking Water GW=Ground Water WW=Wastewater SL=Sludge SW=Surface Water SO=Soil							
Clinton, MA 01510		Preservative Codes: 1= Na ₂ S ₂ O ₅ 2= HCl 3= H ₂ SO ₄ 4= HNO ₃ 5= NaOH 6= Asorbic Acid 7= NH ₄ CL 8= Unpres. 9= _____							
Phone #: 978-771-7369	Cell # _____	List Preservative Code Below							
E-Mail address: jbillings@ngeo.net		1	2	3	4	5	6	7	8
Contact/Report to: Jay Billings		Chlorine Residual							
Sampler: _____		Matrix - see codes above							
		G = Grab C = Composite							
		Subcontracted <input checked="" type="checkbox"/> N <input type="checkbox"/> A							
		Date Needed: _____ a.m. / p.m.							
		NOTES TO LABORATORY							
		Normal TAT <input checked="" type="checkbox"/> Rush TAT <input type="checkbox"/>							
		DW RESULTS WILL BE FORWARDED TO NYS DOH.							
		Sample Information: <input type="checkbox"/> Finished <input checked="" type="checkbox"/> Raw <input type="checkbox"/> Chlorinated <input type="checkbox"/> UV <input type="checkbox"/> OTHER: _____							
		ANALYSIS / TEST REQUESTED							
		SAMPLE ID # (lab use only)							
		See Attached Parameters							
		5407							
		AUTHORIZED RECIPIENTS & CONTACT INFO.							
		ICED? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO							
		Rec'd Temp: _____							
		SAMPLE(S) AS RECEIVED CONFORM TO NELAP STANDARDS <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO							
		IF NO, SEE ATTACHED SHEET.							
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11/29 11/30/23 - KMR
 25022
 PWAL/EC 12/6/23 - KMR

Proposed Laboratory Tests for 72-hour Test on Tank Site 8-inch Bedrock Production Well
 LeRay, New York

Parameter	Units	Startup			Standard	#
		11/27/23	11/29/23	End 11/30/23		
pH	S.U.	X	X	X	NCS	3
Temperature	Deg. C	Field	Field	Field	NCS	0
Specific Conductance	us/cm	X	X	X	NCS	3
Odor	TON	X	X	X	3	3
Total Dissolved Solids	mg/l	X	X	X	500	3
Apparent Color	Apparent C	X	X	X	15	3
Turbidity	NTU	X	X	X	NCS	3
Chloride	mg/l	X	X	X	250	3
Fluoride	mg/l	NS	NS	X	4	1
Sulfate	mg/l	X	X	X	250	3
Alkalinity (as CaCO3)	mg/l	X	X	X	NCS	3
Antimony	mg/l	NS	NS	X	0.006	1
Arsenic	mg/l	NS	NS	X	0.01	1
Barium	mg/l	NS	NS	X	2	1
Beryllium	mg/l	NS	NS	X	0.004	1
Cadmium	mg/l	NS	NS	X	0.005	1
Calcium	mg/l	X	X	X	NCS	3
Chromium	mg/l	NS	NS	X	0.1	1
Iron	mg/l	X	X	X	0.3	3
Lead	mg/l	NS	NS	X	0.015	1
Magnesium	mg/l	X	X	X	NCS	3
Manganese	mg/l	X	X	X	0.05	3
Mercury	mg/l	NS	NS	X	0.002	1
Nickel	mg/l	NS	NS	X	0.1	1
Potassium	mg/l	NS	NS	X	NCS	1
Selenium	mg/l	NS	NS	X	0.05	1
Silver	mg/l	NS	NS	X	NCS	1
Sodium	mg/l	NS	NS	X	250	1
Titanium	mg/l	NS	NS	X	0.002	1
Zinc	mg/l	X	X	X	NCS	3
Total Hardness	mg/l	X	X	X	NCS	3
Aluminum	mg/l	X	X	X	0.05	3
Copper	mg/l	X	X	X	1	3
Nitrate	mg/l	NS	NS	X	10	1
Nitrite	mg/l	NS	NS	X	1	1
Cyanide	mg/l	NS	NS	X	0.2	1
Total Coliform Bacteria	col/100 ml	NS	NS	X	0	1
Volatile Organic Compounds	ug/l	NS	NS	X	various	1
Total PFAS	ng/l	NS	NS	X	10	1
Synthetic Organic Compounds	ug/l	NS	NS	X	various	1
1,4-Dioxane	ug/l	NS	NS	X	1	1
MRA Test	Risk Points	NS	NS	X	10	1
Gross Alpha	pCi/l	NS	NS	X	15	1
Uranium	pCi/l	NS	NS	X	30	1
Radium 226	pCi/l	NS	NS	X	5	1
Radium 228	pCi/l	NS	NS	X	5	1
Perchlorate	ug/l	NS	NS	X	0.8	1

by orlag
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Notes:
 S.U. - Standard Units
 TON - Threshold Odor Number
 NTU - Nephelometric Turbidity Units
 mg/l - milligrams per liter
 NCS - No concentration set
 NS - Not Sampled
 Risk Points - EPA Consensus Method Risk Factor Points



ANALYTICAL REPORT

Lab Number:	L2372479
Client:	Converse Laboratories, Inc. 800 Starbuck Ave Suite B101 Watertown, NY 13601
ATTN:	Dave Converse
Phone:	(315) 788-8388
Project Name:	Not Specified
Project Number:	AL23-1439
Report Date:	01/12/24

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0826), IL (200077), IN (C-MA-03), KY (KY98045), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), OH (CL108), OR (MA-1316), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #525-23-122-91930).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: Not Specified
Project Number: AL23-1439

Lab Number: L2372479
Report Date: 01/12/24

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2372479-01	TANK WELL	DW	Not Specified	12/07/23 08:00	12/07/23



Project Name: Not Specified
Project Number: AL23-1439

Lab Number: L2372479
Report Date: 01/12/24

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: Not Specified
Project Number: AL23-1439

Lab Number: L2372479
Report Date: 01/12/24

Case Narrative (continued)

Report Submission

January 12, 2024: This final report includes the results of all requested analyses.

January 12, 2024: This is a preliminary report.

Please note that this report format does not contain typical QC parameters that were performed with these samples. As such, any QC outliers or non-conformances can only be reviewed by accessing your Alpha Customer Center account at www.alphalab.com and building a Data Usability table (format 11) in our Data Merger tool.

The analyses of Perchlorate, Radiologicals, and SOCs, were subcontracted. Copies of the laboratory reports are included as an addendum. Please note: This data is only available in PDF format and is not available on Data Merger.

Sample Receipt

L2372479-01: The sample was received in an inappropriate container for the PFAAs via EPA 537.1 analysis. An aliquot was taken from an unpreserved container and preserved appropriately.

L2372479-01: The sample was received above the appropriate pH for the Subcontract - Radium 228, Subcontract - Gross Alpha, Subcontract - Radium 226, and Subcontract - Uranium by EPA 200.8 analysis. The laboratory added additional HNO₃ to a pH <2.

L2372479-01: The sample was received in an inappropriate container for the Subcontract Perchlorate by 331 analysis. An aliquot was taken from an unpreserved container and preserved appropriately.

Perfluorinated Alkyl Acids by EPA 537.1

L2372479-01: The sample was received without preservation. During sample preparation, Trizma was added to meet the acceptable pH range for the method.

WG1866634-1R: The sample was re-analyzed due to QC failures in the original analysis. The results of the re-analysis are reported.

Project Name: Not Specified
Project Number: AL23-1439

Lab Number: L2372479
Report Date: 01/12/24

Case Narrative (continued)

The WG1866634-2 LCS recovery, associated with L2372479-01, is above the acceptance criteria for perfluorotetradecanoic acid (pfta) (131%); however, the associated samples are non-detect to the RL for this target analyte. The results of the original analysis are reported.

The WG1866634-2 LCS recoveries, associated with L2372479-01, were outside the acceptance criteria for perfluorotetradecanoic acid (pfta) (131%); however, these compounds are not reported in the associated sample.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Cristin Walker

Title: Technical Director/Representative

Date: 01/12/24

VOLATILES



Project Name: Not Specified

Lab Number: L2372479

Project Number: AL23-1439

Report Date: 01/12/24

SAMPLE RESULTS

Lab ID: L2372479-01

Date Collected: 12/07/23 08:00

Client ID: TANK WELL

Date Received: 12/07/23

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Matrix: Dw

Analytical Method: 16,524.2

Analytical Date: 12/14/23 10:37

Analyst: GMT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Dichlorodifluoromethane	ND		ug/l	0.50	--	1
Chloromethane	ND		ug/l	0.50	--	1
Vinyl chloride	ND		ug/l	0.50	--	1
Bromomethane	ND		ug/l	0.50	--	1
Chloroethane	ND		ug/l	0.50	--	1
Trichlorofluoromethane	ND		ug/l	0.50	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
Methylene chloride	ND		ug/l	0.50	--	1
Methyl tert butyl ether	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	0.50	--	1
1,1-Dichloroethane	ND		ug/l	0.50	--	1
2,2-Dichloropropane	ND		ug/l	0.50	--	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	--	1
Chloroform	ND		ug/l	0.50	--	1
Bromochloromethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	0.50	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Trichloroethene	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	0.50	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
Dibromomethane	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	0.50	--	1



Project Name: Not Specified

Lab Number: L2372479

Project Number: AL23-1439

Report Date: 01/12/24

SAMPLE RESULTS

Lab ID: L2372479-01

Date Collected: 12/07/23 08:00

Client ID: TANK WELL

Date Received: 12/07/23

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,3-Dichloropropane	ND		ug/l	0.50	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
Dibromochloromethane	ND		ug/l	0.50	--	1
1,2-Dibromoethane	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	0.50	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Ethylbenzene	ND		ug/l	0.50	--	1
p/m-Xylene	ND		ug/l	0.50	--	1
o-Xylene	ND		ug/l	0.50	--	1
Styrene	ND		ug/l	0.50	--	1
Isopropylbenzene	ND		ug/l	0.50	--	1
Bromoform	ND		ug/l	0.50	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Xylenes, Total ¹	ND		ug/l	0.50	--	1
1,2,3-Trichloropropane	ND		ug/l	0.50	--	1
n-Propylbenzene	ND		ug/l	0.50	--	1
Bromobenzene	ND		ug/l	0.50	--	1
1,3,5-Trimethylbenzene	ND		ug/l	0.50	--	1
o-Chlorotoluene	ND		ug/l	0.50	--	1
p-Chlorotoluene	ND		ug/l	0.50	--	1
tert-Butylbenzene	ND		ug/l	0.50	--	1
1,2,4-Trimethylbenzene	ND		ug/l	0.50	--	1
sec-Butylbenzene	ND		ug/l	0.50	--	1
p-Isopropyltoluene	ND		ug/l	0.50	--	1
1,3-Dichlorobenzene	ND		ug/l	0.50	--	1
1,4-Dichlorobenzene	ND		ug/l	0.50	--	1
n-Butylbenzene	ND		ug/l	0.50	--	1
1,2-Dichlorobenzene	ND		ug/l	0.50	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	0.50	--	1
1,2,4-Trichlorobenzene	ND		ug/l	0.50	--	1
Hexachlorobutadiene	ND		ug/l	0.50	--	1
Naphthalene	ND		ug/l	0.50	--	1
1,2,3-Trichlorobenzene	ND		ug/l	0.50	--	1



Project Name: Not Specified
Project Number: AL23-1439

Lab Number: L2372479
Report Date: 01/12/24

SAMPLE RESULTS

Lab ID: L2372479-01
 Client ID: TANK WELL
 Sample Location: Not Specified

Date Collected: 12/07/23 08:00
 Date Received: 12/07/23
 Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichlorobenzene-d4	104		80-120
4-Bromofluorobenzene	89		80-120



SEMIVOLATILES



Project Name: Not Specified
Project Number: AL23-1439

Lab Number: L2372479
Report Date: 01/12/24

SAMPLE RESULTS

Lab ID: L2372479-01
 Client ID: TANK WELL
 Sample Location: Not Specified

Date Collected: 12/07/23 08:00
 Date Received: 12/07/23
 Field Prep: Not Specified

Sample Depth:
 Matrix: Dw
 Analytical Method: 120,522
 Analytical Date: 01/04/24 15:41
 Analyst: AMV

Extraction Method: EPA 522
 Extraction Date: 01/03/24 15:59

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
1,4 Dioxane by EPA 522 - Mansfield Lab						
1,4-Dioxane	ND		ug/l	0.150	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	94		70-130



Project Name: Not Specified

Lab Number: L2372479

Project Number: AL23-1439

Report Date: 01/12/24

SAMPLE RESULTS

Lab ID: L2372479-01

Date Collected: 12/07/23 08:00

Client ID: TANK WELL

Date Received: 12/07/23

Sample Location: Not Specified

Field Prep: Not Specified

Sample Depth:

Matrix: Dw

Extraction Method: EPA 537.1

Analytical Method: 133,537.1

Extraction Date: 12/21/23 02:02

Analytical Date: 12/22/23 18:39

Analyst: CAP

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by EPA 537.1 - Mansfield Lab						
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.02	--	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.02	--	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA)	ND		ng/l	2.02	--	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.02	--	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.02	--	1
4,8-Dioxo-3h-Perfluorononanoic Acid (ADONA)	ND		ng/l	2.02	--	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.02	--	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.02	--	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.02	--	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.02	--	1
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid (9Cl-PF3ONS)	ND		ng/l	2.02	--	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.02	--	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.02	--	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.02	--	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.02	--	1
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid (11Cl-PF3OUdS)	ND		ng/l	2.02	--	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.02	--	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.02	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Perfluoro-n-[1,2-13C2]hexanoic Acid (13C-PFHxA)	112		70-130
Tetrafluoro-2-heptafluoropropoxy-[13C3]-propanoic acid (13C3-HFPO-DA)	100		70-130
Perfluoro-n-[1,2-13C2]decanoic Acid (13C-PFDA)	114		70-130
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	102		70-130



Serial_No:01122417:32
 Lab Number: L2372479
 Report Date: 01/12/24

Project Name: Not Specified
 Project Number: AL23-1439

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information
 Cooler Custody Seal
 C Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2372479-01A	Vial Na2S2O3 preserved	C	NA	NA	4.0	Y	Absent		SUB-504.1(14)
L2372479-01B	Vial Na2S2O3 preserved	C	NA	NA	4.0	Y	Absent		SUB-504.1(14)
L2372479-01C	Vial Na2S2O3 preserved	C	NA	NA	4.0	Y	Absent		SUB-531.1(28)
L2372479-01D	Vial Na2S2O3 preserved	C	NA	NA	4.0	Y	Absent		SUB-531.1(28)
L2372479-01E	Vial Na2S2O3 preserved	C	NA	NA	4.0	Y	Absent		SUB-505(7)
L2372479-01F	Vial Na2S2O3 preserved	C	NA	NA	4.0	Y	Absent		SUB-505(7)
L2372479-01G	Amber 250ml Na2S2O3 preserved	C	NA	NA	4.0	Y	Absent		SUB-515.3(14)
L2372479-01H	Amber 1000ml Ascorbic Acid	C	NA	NA	4.0	Y	Absent		SUB-525.3(14)
L2372479-01I	Amber 1000ml Ascorbic Acid	C	NA	NA	4.0	Y	Absent		SUB-525.3(14)
L2372479-01J	Vial HCl preserved	C	NA	NA	4.0	Y	Absent		524.2(14)
L2372479-01K	Vial HCl preserved	C	NA	NA	4.0	Y	Absent		524.2(14)
L2372479-01L	Vial HCl preserved	C	NA	NA	4.0	Y	Absent		524.2(14)
L2372479-01M	Plastic 250ml unpreserved split	C	NA	NA	4.0	Y	Absent		A2-537.1(14)
L2372479-01N	Plastic 250ml unpreserved split	C	NA	NA	4.0	Y	Absent		SUB-PERC-331(28)
L2372479-01O	Amber 500ml NaSulfite/NaHSO4 preserved	C	<4	<4	4.0	Y	Absent		A2-14DIOXANE-522(28)
L2372479-01P	Amber 500ml NaSulfite/NaHSO4 preserved	C	<4	<4	4.0	Y	Absent		A2-14DIOXANE-522(28)
L2372479-01Q	Plastic 950ml HNO3 preserved	C	7	<2	4.0	N	Absent		SUB-RA228(180),SUB-URANIUM(180),SUB-ALPHA(180),SUB-RA226(180)
L2372479-01R	Plastic 950ml HNO3 preserved	C	7	<2	4.0	N	Absent		SUB-RA228(180),SUB-URANIUM(180),SUB-ALPHA(180),SUB-RA226(180)
L2372479-01S	Plastic 950ml HNO3 preserved	C	7	<2	4.0	N	Absent		SUB-RA228(180),SUB-URANIUM(180),SUB-ALPHA(180),SUB-RA226(180)

*Values in parentheses indicate holding time in days



Project Name: Not Specified
Project Number: AL23-1439

Serial_No:01122417:32
Lab Number: L2372479
Report Date: 01/12/24

PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
PERFLUOROALKYL CARBOXYLIC ACIDS (PFCAs)		
Perfluorooctadecanoic Acid	PFODA	16517-11-6
Perfluorohexadecanoic Acid	PFHxDA	67905-19-5
Perfluorotetradecanoic Acid	PFTA/PFTeDA	376-06-7
Perfluorotridecanoic Acid	PFTTrDA	72629-94-8
Perfluorododecanoic Acid	PFDoA	307-55-1
Perfluoroundecanoic Acid	PFUnA	2058-94-8
Perfluorodecanoic Acid	PFDA	335-76-2
Perfluorononanoic Acid	PFNA	375-95-1
Perfluorooctanoic Acid	PFOA	335-67-1
Perfluoroheptanoic Acid	PFHpA	375-85-9
Perfluorohexanoic Acid	PFHxA	307-24-4
Perfluoropentanoic Acid	PFPeA	2706-90-3
Perfluorobutanoic Acid	PFBA	375-22-4
PERFLUOROALKYL SULFONIC ACIDS (PFSAs)		
Perfluorododecanesulfonic Acid	PFDoDS/PFDoS	79780-39-5
Perfluorodecanesulfonic Acid	PFDS	335-77-3
Perfluorononanesulfonic Acid	PFNS	68259-12-1
Perfluorooctanesulfonic Acid	PFOS	1763-23-1
Perfluoroheptanesulfonic Acid	PFHpS	375-92-8
Perfluorohexanesulfonic Acid	PFHxS	355-46-4
Perfluoropentanesulfonic Acid	PFPeS	2706-91-4
Perfluorobutanesulfonic Acid	PFBS	375-73-5
Perfluoropropanesulfonic Acid	PFPrS	423-41-6
FLUOROTELOMERS		
1H,1H,2H,2H-Perfluorododecanesulfonic Acid	10:2FTS	120226-60-0
1H,1H,2H,2H-Perfluorodecanesulfonic Acid	8:2FTS	39108-34-4
1H,1H,2H,2H-Perfluorooctanesulfonic Acid	6:2FTS	27619-97-2
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	4:2FTS	757124-72-4
PERFLUOROALKANE SULFONAMIDES (FASAs)		
Perfluorooctanesulfonamide	FOSA/PFOSA	754-91-6
N-Ethyl Perfluorooctane Sulfonamide	NEtFOSA	4151-50-2
N-Methyl Perfluorooctane Sulfonamide	NMeFOSA	31506-32-8
PERFLUOROALKANE SULFONYL SUBSTANCES		
N-Ethyl Perfluorooctanesulfonamido Ethanol	NEtFOSE	1691-99-2
N-Methyl Perfluorooctanesulfonamido Ethanol	NMeFOSE	24448-09-7
N-Ethyl Perfluorooctanesulfonamidoacetic Acid	NEtFOSAA	2991-50-6
N-Methyl Perfluorooctanesulfonamidoacetic Acid	NMeFOSAA	2355-31-9
PER- and POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS		
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid	HFPO-DA	13252-13-6
4,8-Dioxa-3h-Perfluorononanoic Acid	ADONA	919005-14-4
CHLORO-PERFLUOROALKYL SULFONIC ACIDS		
11-Chloroeicosafuoro-3-Oxaundecane-1-Sulfonic Acid	11Cl-PF3OUdS	763051-92-9
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid	9Cl-PF3ONS	756426-58-1
PERFLUOROETHER SULFONIC ACIDS (PFESAs)		
Perfluoro(2-Ethoxyethane)Sulfonic Acid	PFEESA	113507-82-7
PERFLUOROETHER/POLYETHER CARBOXYLIC ACIDS (PFPCAs)		
Perfluoro-3-Methoxypropanoic Acid	PFMPA	377-73-1
Perfluoro-4-Methoxybutanoic Acid	PFMBA	863090-89-5
Nonafuoro-3,6-Dioxaheptanoic Acid	NFDHA	151772-58-6

Project Name: Not Specified
Project Number: AL23-1439

Serial_No:01122417:32
Lab Number: L2372479
Report Date: 01/12/24

PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
FLUOROTELOMER CARBOXYLIC ACIDS (FTCAs)		
3-Perfluoroheptyl Propanoic Acid	7:3FTCA	812-70-4
2H,2H,3H,3H-Perfluorooctanoic Acid	5:3FTCA	914637-49-3
3-Perfluoropropyl Propanoic Acid	3:3FTCA	356-02-5

Project Name: Not Specified
Project Number: AL23-1439

Lab Number: L2372479
Report Date: 01/12/24

GLOSSARY

Acronyms

- DL** - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
- EDL** - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
- EMPC** - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
- EPA** - Environmental Protection Agency.
- LCS** - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
- LCSD** - Laboratory Control Sample Duplicate: Refer to LCS.
- LFB** - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
- LOD** - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
- LOQ** - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
- MDL** - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
- MS** - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
- MSD** - Matrix Spike Sample Duplicate: Refer to MS.
- NA** - Not Applicable.
- NC** - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
- NDPA/DPA** - N-Nitrosodiphenylamine/Diphenylamine.
- NI** - Not Ignitable.
- NP** - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
- NR** - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
- RL** - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
- RPD** - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
- SRM** - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
- STLP** - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
- TEF** - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
- TEQ** - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
- TIC** - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: DU Report - No QC



Project Name: Not Specified
Project Number: AL23-1439

Lab Number: L2372479
Report Date: 01/12/24

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: DU Report - No QC



Project Name: Not Specified
Project Number: AL23-1439

Lab Number: L2372479
Report Date: 01/12/24

Data Qualifiers

- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: DU Report - No QC



Project Name: Not Specified
Project Number: AL23-1439

Lab Number: L2372479
Report Date: 01/12/24

REFERENCES

- 16 Methods for the Determination of Organic Compounds in Drinking Water - Supplement II. EPA/600/R-92/129, August 1992.
- 120 Determination of 1,4-Dioxane in Drinking Water by Solid Phase Extraction (SPE) and Gas Chromatography/Mass Spectrometry (GC/MS) with Selected Ion Monitoring (SIM). EPA Method 522, EPA/600/R-08/101. Version 1.0, September 2008.
- 133 Determination of Selected Per- and Polyfluorinated Alkyl Substances in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS). EPA Method 537.1, EPA/600/R-18/352. Version 1.0, November 2018.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility

EPA 624.1: m/p-xylene, o-xylene, Naphthalene

EPA 625.1: alpha-Terpineol

EPA 8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270E: NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility

SM 2540D: TSS.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; EPA 353.2: Nitrate-N, Nitrite-N; SM4500NO3-F: Nitrate-N, Nitrite-N; SM4500F-C, SM4500CN-CE,

EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

EPA 524.2: THMs and VOCs; EPA 504.1: EDB, DBCP.

Microbiology: SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.

Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, EPA 350.1:

Ammonia-N, LACHAT 10-107-06-1-B: Ammonia-N, EPA 351.1, SM4500NO3-F, EPA 353.2: Nitrate-N, SM4500P-E, SM4500P-B, E, SM4500SO4-E,

SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables).

Microbiology: SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.

Mansfield Facility:

Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. EPA 200.8: Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. EPA 245.1 Hg.

EPA 522, EPA 537.1.

Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

L2312479

<p>NEW YORK CHAIN OF CUSTODY</p> <p>Worcester, MA 01581 8 Wallop Dr. TEL: 508-858-8220 FAX: 508-858-8183</p>		<p>Service Centers</p> <p>Milwaukie, NJ 07430-31 Whitney Rd, Suite F Milwaukie, NJ 07430-31 Towamenc, NY 14150-275 Cooper Ave, Suite 405</p>		<p>Page 1 of 2</p>																																																																							
<p>Client Information</p> <p>Client: Converse Laboratories Inc Address: 800 Starbuck Ave Ste B101 Watertown, NY 13601 Phone: 315-798-8388 Fax: 315-798-9258 Email: customerservice2@converse.com</p>		<p>Project Information</p> <p>Project Name: NORTHEAST GEOSCIENCE Project Location: AL23-1439 Project Manager: Brenda Pinnell ALPHAQuote #: Turn-Around Time: Standard <input checked="" type="checkbox"/> Due Date: Rush (only if pre-approved) <input type="checkbox"/> # of Days: Other project specific requirements/comments: PLEASE REPORT NITRATE AND NITRITE SEPERATELY SOC SUITE 526, 515, 531, 505, 504</p>		<p>Billing Information</p> <p><input checked="" type="checkbox"/> Same as Client info PO #</p>																																																																							
<p>Deliveryables</p> <p><input type="checkbox"/> ASP-A <input type="checkbox"/> EQUIS (1 File) <input type="checkbox"/> Other</p>		<p>Regulatory Requirement</p> <p><input type="checkbox"/> NY TOGS <input type="checkbox"/> AWC Standards <input type="checkbox"/> NY Restricted Use <input type="checkbox"/> NY Unrestricted Use <input type="checkbox"/> NYC Sewer Discharge</p>		<p>Disposal Site Information</p> <p>Please identify below location of applicable disposal facilities. Disposal Facility: <input type="checkbox"/> NJ <input type="checkbox"/> NY <input type="checkbox"/> Other:</p>																																																																							
<p>ANALYSIS</p> <p>524.2</p> <table border="1"> <thead> <tr> <th>ANALYSIS</th> <th>1</th> <th>1</th> <th>1</th> <th>1</th> <th>1</th> <th>1</th> <th>1</th> <th>1</th> </tr> </thead> <tbody> <tr> <td>T. PFAS BY 537</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> </tr> <tr> <td>SOC SUITE *</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> </tr> <tr> <td>1,4-DIOXANE</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>GROSS ALPHA</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>RAD 226/228</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>URANIUM</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>PERCHLORATE</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		ANALYSIS	1	1	1	1	1	1	1	1	T. PFAS BY 537	1	1	1	1	1	1	1	1	SOC SUITE *	1	1	1	1	1	1	1	1	1,4-DIOXANE									GROSS ALPHA									RAD 226/228									URANIUM									PERCHLORATE									<p>Sample Filtration</p> <p><input type="checkbox"/> Done <input type="checkbox"/> Lab to do Preservation <input type="checkbox"/> Lab to do (Please Specify below)</p> <p>Sample Specific Comments</p>	
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<p>Preservative Code: A = None B = HCl C = HNO₃ D = H₂SO₄ E = NaOH F = MeOH G = NaHSO₄ H = Na₂S₂O₈ K/E = Zn Ac/NaOH O = Other</p>		<p>Container Code: P = Plastic A = Amber Glass V = Vial G = Glass B = Bacteria Cup C = Cube O = Other E = Encore D = BOD Bottle</p>		<p>Westboro; Certification No: MA935 Mansfield; Certification No: MA015</p>																																																																							
<p>724174-01 B INCH TANK SITE T. LERAY</p>		<p>Collection Date: 12/7/2023 Time: 0800A Sample Matrix: DW Sampler's Initials: CLIENT</p>		<p>Container Type: Preservative</p>																																																																							
<p>Relinquished By: K. BONNEY Date/Time: 12/7/2023 1600</p>		<p>Received By:</p>		<p>Date/Time:</p>																																																																							
<p>Form No: 01-29 (rev. 30-Sept-2013)</p>																																																																											



December 29, 2023

Melissa Gulli
Alpha Analytical
8 Walkup Drive
Westborough, MA 01581

RE: Project: L2372479
Pace Project No.: 30647362

Dear Melissa Gulli:

Enclosed are the analytical results for sample(s) received by the laboratory on December 13, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Skyler C. Richmond
skyler.richmond@pacelabs.com
(724)850-5600
Project Manager

Enclosures

cc: Customer Service, Alpha Analytical



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.



CERTIFICATIONS

Project: L2372479
Pace Project No.: 30647362

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991

Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: L2372479
Pace Project No.: 30647362

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30647362001	TANK WELL	Drinking Water	12/07/23 08:00	12/13/23 09:45

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: L2372479
Pace Project No.: 30647362

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30647362001	TANK WELL	SM 7110C-1996	REH1	1	PASI-PA
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		ASTM D5174-97	SLC	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: L2372479
 Pace Project No.: 30647362

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: TANK WELL Lab ID: 30647362001 Collected: 12/07/23 08:00 Received: 12/13/23 09:45 Matrix: Drinking Water						
PWS: Site ID: Sample Type:						
Gross Alpha	SM 7110C-1996	0.805 ± 1.08 (2.34) C:NA T:NA	pCi/L	12/27/23 08:33	12587-46-1	
Radium-226	EPA 903.1	0.377 ± 0.570 (0.941) C:NA T:85%	pCi/L	12/29/23 12:53	13982-63-3	
Radium-228	EPA 904.0	0.659 ± 0.370 (0.699) C:80% T:79%	pCi/L	12/27/23 16:11	15262-20-1	
Total Uranium	ASTM D5174-97	0.860 ± 0.014 (0.323) C:NA T:NA	ug/L	12/29/23 11:56	7440-61-1	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: L2372479
 Pace Project No.: 30647362

QC Batch: 637855	Analysis Method: SM 7110C-1996
QC Batch Method: SM 7110C-1996	Analysis Description: 7110C Gross Alpha, DW
	Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30647362001

METHOD BLANK: 3111194 Matrix: Drinking Water

Associated Lab Samples: 30647362001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Gross Alpha	0.578 ± 1.08 (2.48) C:NA T:NA	pCi/L	12/27/23 08:32	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: L2372479
 Pace Project No.: 30647362

QC Batch: 636753	Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1	Analysis Description: 903.1 Radium-226, DW
	Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30647362001

METHOD BLANK: 3105735 Matrix: Drinking Water

Associated Lab Samples: 30647362001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.192 ± 0.266 (0.446) C:NA T:89%	pCi/L	12/29/23 12:27	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: L2372479
 Pace Project No.: 30647362

QC Batch: 636754	Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0	Analysis Description: 904.0 Radium 228, DW
	Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30647362001

METHOD BLANK: 3105736 Matrix: Drinking Water

Associated Lab Samples: 30647362001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.636 ± 0.365 (0.702) C:81% T:83%	pCi/L	12/27/23 16:08	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: L2372479
 Pace Project No.: 30647362

QC Batch: 638403	Analysis Method: ASTM D5174-97
QC Batch Method: ASTM D5174-97	Analysis Description: D5174.97 Total Uranium KPA, DW
	Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30647362001

METHOD BLANK: 3113643 Matrix: Drinking Water

Associated Lab Samples: 30647362001

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Total Uranium	0.022 ± 0.001 (0.323) C:NA T:NA	ug/L	12/29/23 10:15	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALIFIERS

Project: L2372479
Pace Project No.: 30647362

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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WO#: 30647362



30647362

30647362

Subcontract Chain of Custody

Pace Analytical
1638 Roseytown Rd, Suite 2
Greensburg, PA 15601

Alpha Job Number
L2372479

Client Information

Client: Alpha Analytical Labs
Address: Eight Walkup Drive
Westborough, MA 01581-1019

Phone: 716.427.5225
Email: bpirinelli@alphalab.com

Project Information

Project Location: NY
Project Manager: Brenda Pirinelli

Turnaround & Deliverables Information

Due Date:
Deliverables:

Regulatory Requirements/Report Limits

State/Federal Program:
Regulatory Criteria:

Project Specific Requirements and/or Report Requirements

Reference following Alpha Job Number on final report/deliverables: L2372479 Report to include Method Blank, LCS/LCSD:

Additional Comments: Send all results/reports to subreports@alphalab.com This is a Converse job.

Serial_No:01122417:32

Lab ID	Client ID	Collection Date/Time	Sample Matrix	Analysis	Batch QC
	TANK WELL	12-07-23 08:00	DW	Gross Alpha; Radium 226; Radium 228; Uranium by EPA 200.8	001
Relinquished By:				Received By:	Date/Time: 12/13/23 945
Form No: AL_subcoc					

Received by Pace Greensburg
Therm ID Corr Factor +/
Receipt Temp
Corrected Temp
Correct Preservation Y/N

DC#_Title: ENV-FRM-GBUR-0088 v06_Sample Condition Upon Receipt-
Pittsburgh

Effective Date: 09/20/2023



WO# : 30647362
 PM: SCR Due Date: 01/05/24
 CLIENT: ALPHA ANALYT

Client Name: Alpha

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking Number: 1ZE306540194147535

Initial / Date

Examined By: PS 12/15/23

Custody Seal on Cooler/Box Present: Yes No

Seals Intact: Yes No

Labeled By: PS 12/15/23

Thermometer Used: _____ Type of Ice: Wet Blue Nona

Temped By: _____

Cooler Temperature: Observed Temp _____ °C Correction Factor: _____ °C Final Temp: _____ °C

Temp should be above freezing to 6°C

Comments:	Yes	No	NA	pH paper Lot#	D.P.D. Residual Chlorine Lot #
				1000134	
Chain of Custody Present	/			1.	
Chain of Custody Filled Out: -Were client corrections present on COC	/			2.	
Chain of Custody Relinquished	/			3.	
Sampler Name & Signature on COC:	/			4.	
Sample Labels match COC: -Includes date/time/ID Matrix: <u>DW</u>	/			5.	
Samples Arrived within Hold Time:	/			6.	
Short Hold Time Analysis (<72hr remaining):		/		7.	
Rush Turn Around Time Requested:		/		8.	
Sufficient Volume:	/			9.	
Correct Containers Used: -Pace Containers Used	/			10.	
Containers Intact:	/			11.	
Orthophosphate field filtered:			/	12.	
Hex Cr Aqueous samples field filtered:			/	13.	
Organic Samples checked for dechlorination			/	14.	
Filtered volume received for dissolved tests:			/	15.	
All containers checked for preservation: exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix	/			16.	
All containers meet method preservation requirements:	/			Initial when completed <u>PS</u>	Date/Time of Preservation
8260C/D: Headspace in VOA Vials (>6mm)			/	17.	Lot# of added Preservative
624.1: Headspace in VOA Vials (0mm)			/	18.	
Trip Blank Present:			/	Trip blank custody seal present? YES or NO	
Rad Samples Screened <.05 mrem/hr.	/			Initial when completed <u>PS</u>	Date: <u>12/13/23</u> Survey Meter SN: <u>25014380</u>
Comments:					

Note: For NC compliance samples with discrepancies, a copy of this form must be sent to the DEHNR Certification office. PM Review is documented electronically in LIMS through the SRF Review schedule in the Workorder Edit Screen.



December 22, 2023

Reports
Alpha Analytical
8 Walkup Drive
Westborough, MA 01581

RE: Project: L2372479
Pace Project No.: 70280773

Dear Reports:

Enclosed are the analytical results for sample(s) received by the laboratory on December 13, 2023. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Melville

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Matthew T. Nemeth
matthew.nemeth@pacelabs.com
516-370-6042
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: L2372479
Pace Project No.: 70280773

Pace Analytical Services Long Island

575 Broad Hollow Rd, Melville, NY 11747
Connecticut Certification #: PH-0435
Delaware Certification # NY 10478
Maryland Certification #: 208
Massachusetts Certification #: M-NY026
New Hampshire Certification #: 2987

New Jersey Certification #: NY158
New York Certification #: 10478 Primary Accrediting Body
Pennsylvania Certification #: 68-00350
Rhode Island Certification #: LAO00340
Virginia Certification # 460302

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: L2372479
Pace Project No.: 70280773

Sample: TANK WELL **Lab ID: 70280773001** Collected: 12/07/23 08:00 Received: 12/13/23 10:05 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
------------	---------	-------	--------------	----	----------	----------	---------	------

505 GCS Pesticides/PCBs

Analytical Method: EPA 505 Preparation Method: EPA 505
Pace Analytical Services - Melville

Alachlor	<0.20	ug/L	0.20	1	12/14/23 16:30	12/14/23 23:51	15972-60-8	
Aldrin	<0.025	ug/L	0.025	1	12/14/23 16:30	12/14/23 23:51	309-00-2	
gamma-BHC (Lindane)	<0.020	ug/L	0.020	1	12/14/23 16:30	12/14/23 23:51	58-89-9	
Chlordane (Technical)	<0.20	ug/L	0.20	1	12/14/23 16:30	12/14/23 23:51	57-74-9	
Dieldrin	<0.050	ug/L	0.050	1	12/14/23 16:30	12/14/23 23:51	60-57-1	
Endrin	<0.010	ug/L	0.010	1	12/14/23 16:30	12/14/23 23:51	72-20-8	
Heptachlor	<0.025	ug/L	0.025	1	12/14/23 16:30	12/14/23 23:51	76-44-8	
Heptachlor epoxide	<0.020	ug/L	0.020	1	12/14/23 16:30	12/14/23 23:51	1024-57-3	
Hexachlorobenzene	<0.10	ug/L	0.10	1	12/14/23 16:30	12/14/23 23:51	118-74-1	
Hexachlorocyclopentadiene	<0.10	ug/L	0.10	1	12/14/23 16:30	12/14/23 23:51	77-47-4	
Methoxychlor	<0.10	ug/L	0.10	1	12/14/23 16:30	12/14/23 23:51	72-43-5	
PCB Screen	<0.40	ug/L	0.40	1	12/14/23 16:30	12/14/23 23:51		
Toxaphene	<1.0	ug/L	1.0	1	12/14/23 16:30	12/14/23 23:51	8001-35-2	
Surrogates								
Tetrachloro-m-xylene (S)	119	%	56-149	1	12/14/23 16:30	12/14/23 23:51	877-09-8	
Decachlorobiphenyl (S)	101	%	60-151	1	12/14/23 16:30	12/14/23 23:51	2051-24-3	

515.3 Chlorinated Herbicides

Analytical Method: EPA 515.3 Preparation Method: EPA 515.3
Pace Analytical Services - Melville

2,4-D	<0.10	ug/L	0.10	1	12/17/23 09:11	12/18/23 23:16	94-75-7	
Dalapon	<0.70	ug/L	0.70	1	12/17/23 09:11	12/18/23 23:16	75-99-0	
Dicamba	<1.0	ug/L	1.0	1	12/17/23 09:11	12/18/23 23:16	1918-00-9	
Dinoseb	<0.20	ug/L	0.20	1	12/17/23 09:11	12/18/23 23:16	88-85-7	
Pentachlorophenol	<0.040	ug/L	0.040	1	12/17/23 09:11	12/18/23 23:16	87-86-5	
Picloram	<0.10	ug/L	0.10	1	12/17/23 09:11	12/18/23 23:16	1918-02-1	
2,4,5-TP (Silvex)	<0.13	ug/L	0.13	1	12/17/23 09:11	12/18/23 23:16	93-72-1	
Surrogates								
2,4-DCAA (S)	75	%	70-130	1	12/17/23 09:11	12/18/23 23:16	19719-28-9	

531.2 HPLC Carbamates

Analytical Method: EPA 531.2
Pace Analytical Services - Melville

Aldicarb	<0.50	ug/L	0.50	1		12/19/23 06:21	116-06-3	
Aldicarb sulfone	<0.80	ug/L	0.80	1		12/19/23 06:21	1646-88-4	
Aldicarb sulfoxide	<0.50	ug/L	0.50	1		12/19/23 06:21	1646-87-3	
Carbofuran	<0.90	ug/L	0.90	1		12/19/23 06:21	1563-66-2	
3-Hydroxycarbofuran	<1.0	ug/L	1.0	1		12/19/23 06:21	16655-82-6	
Methomyl	<1.0	ug/L	1.0	1		12/19/23 06:21	16752-77-5	
Oxamyl	<1.0	ug/L	1.0	1		12/19/23 06:21	23135-22-0	
Carbaryl	<1.0	ug/L	1.0	1		12/19/23 06:21	63-25-2	
Surrogates								
BDMC (S)	96	%	70-130	1		12/19/23 06:21		

525.3 Base Neutral Extractable

Analytical Method: EPA 525.3 Preparation Method: EPA 525.3
Pace Analytical Services - Melville

Atrazine	<0.10	ug/L	0.10	1	12/14/23 11:11	12/16/23 06:02	1912-24-9	
Benzo(a)pyrene	<0.020	ug/L	0.020	1	12/14/23 11:11	12/16/23 06:02	50-32-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: L2372479
 Pace Project No.: 70280773

Sample: TANK WELL	Lab ID: 70280773001	Collected: 12/07/23 08:00	Received: 12/13/23 10:05	Matrix: Drinking Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
525.3 Base Neutral Extractable								
Analytical Method: EPA 525.3 Preparation Method: EPA 525.3								
Pace Analytical Services - Melville								
Butachlor	<0.20	ug/L	0.20	1	12/14/23 11:11	12/16/23 06:02	23184-66-9	
bis(2-Ethylhexyl)adipate	<0.60	ug/L	0.60	1	12/14/23 11:11	12/16/23 06:02	103-23-1	
bis(2-Ethylhexyl)phthalate	<0.60	ug/L	0.60	1	12/14/23 11:11	12/16/23 06:02	117-81-7	
Metolachlor	<0.10	ug/L	0.10	1	12/14/23 11:11	12/16/23 06:02	51218-45-2	
Metribuzin	<0.50	ug/L	0.50	1	12/14/23 11:11	12/16/23 06:02	21087-64-9	
Propachlor	<0.10	ug/L	0.10	1	12/14/23 11:11	12/16/23 06:02	1918-16-7	
Simazine	<0.070	ug/L	0.070	1	12/14/23 11:11	12/16/23 06:02	122-34-9	
Surrogates								
1,3-Dimethyl-2-nitrobenzene(S)	82	%	70-130	1	12/14/23 11:11	12/16/23 06:02	81209	
Benzo(a)pyrene-d12 (S)	70	%	70-130	1	12/14/23 11:11	12/16/23 06:02		
Triphenylphosphate (S)	100	%	70-130	1	12/14/23 11:11	12/16/23 06:02	115-86-6	
524.3 MSV SIM								
Analytical Method: EPA 524.3								
Pace Analytical Services - Melville								
1,2,3-Trichloropropane	<0.010	ug/L	0.010	1		12/18/23 22:11	96-18-4	
1,2-Dibromoethane (EDB)	<0.010	ug/L	0.010	1		12/18/23 22:11	106-93-4	
1,2-Dibromo-3-chloropropane	<0.010	ug/L	0.010	1		12/18/23 22:11	96-12-8	
Surrogates								
1,2-Dichlorobenzene-d4 (S)	103	%	70-130	1		12/18/23 22:11	2199-69-1	
tert Butyl Methyl-d3 Ether (S)	103	%	70-130	1		12/18/23 22:11	29366-08-3	
4-Bromofluorobenzene (S)	92	%	70-130	1		12/18/23 22:11	460-00-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: L2372479
 Pace Project No.: 70280773

QC Batch: 331041 Analysis Method: EPA 531.2
 QC Batch Method: EPA 531.2 Analysis Description: 531.2 HPLC Carbamate
 Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70280773001

METHOD BLANK: 1695817 Matrix: Water

Associated Lab Samples: 70280773001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
3-Hydroxycarbofuran	ug/L	<1.0	1.0	12/18/23 19:10	
Aldicarb	ug/L	<0.50	0.50	12/18/23 19:10	
Aldicarb sulfone	ug/L	<0.80	0.80	12/18/23 19:10	
Aldicarb sulfoxide	ug/L	<0.50	0.50	12/18/23 19:10	
Carbaryl	ug/L	<1.0	1.0	12/18/23 19:10	
Carbofuran	ug/L	<0.90	0.90	12/18/23 19:10	
Methomyl	ug/L	<1.0	1.0	12/18/23 19:10	
Oxamyl	ug/L	<1.0	1.0	12/18/23 19:10	
BDMC (S)	%	97	70-130	12/18/23 19:10	

LABORATORY CONTROL SAMPLE: 1695818

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
3-Hydroxycarbofuran	ug/L	2	2.3	113	70-130	
Aldicarb	ug/L	2	2.2	112	70-130	
Aldicarb sulfone	ug/L	2	2.4	121	70-130	
Aldicarb sulfoxide	ug/L	2	2.3	114	70-130	
Carbaryl	ug/L	2	2.4	119	70-130	
Carbofuran	ug/L	2	2.0	99	70-130	
Methomyl	ug/L	2	2.2	108	70-130	
Oxamyl	ug/L	2	2.3	114	70-130	
BDMC (S)	%			100	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1695819 1695820

Parameter	Units	MS 70280492001		MSD 1695820		MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result					
3-Hydroxycarbofuran	ug/L	<1.0	2	2	2.3	2.2	115	110	70-130	4
Aldicarb	ug/L	<0.50	2	2	2.3	2.2	114	109	70-130	5
Aldicarb sulfone	ug/L	<0.80	2	2	2.4	2.3	121	117	70-130	4
Aldicarb sulfoxide	ug/L	<0.50	2	2	2.3	2.2	115	111	70-130	4
Carbaryl	ug/L	<1.0	2	2	2.4	2.3	122	116	70-130	5
Carbofuran	ug/L	<0.90	2	2	2.2	2.1	112	106	70-130	6
Methomyl	ug/L	<1.0	2	2	2.3	2.2	113	108	70-130	4
Oxamyl	ug/L	<1.0	2	2	2.3	2.2	116	112	70-130	4
BDMC (S)	%						104	95	70-130	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: L2372479
 Pace Project No.: 70280773

QC Batch: 331178 Analysis Method: EPA 524.3
 QC Batch Method: EPA 524.3 Analysis Description: 524.3 MSV
 Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70280773001

METHOD BLANK: 1696942 Matrix: Water

Associated Lab Samples: 70280773001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,3-Trichloropropane	ug/L	<0.010	0.010	12/18/23 14:26	
1,2-Dibromo-3-chloropropane	ug/L	<0.010	0.010	12/18/23 14:26	
1,2-Dibromoethane (EDB)	ug/L	<0.010	0.010	12/18/23 14:26	
1,2-Dichlorobenzene-d4 (S)	%	103	70-130	12/18/23 14:26	
4-Bromofluorobenzene (S)	%	91	70-130	12/18/23 14:26	
tert Butyl Methyl-d3 Ether (S)	%	98	70-130	12/18/23 14:26	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1697180 1697181

Parameter	Units	70280568001		MS		MSD		MS		MSD		% Rec Limits	RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result	% Rec	% Rec					
1,2,3-Trichloropropane	ug/L	<0.010	0.05	0.05	0.062	0.064	125	128	70-130	3				
1,2-Dibromo-3-chloropropane	ug/L	<0.010	0.05	0.05	0.051	0.053	101	105	70-130	4				
1,2-Dibromoethane (EDB)	ug/L	<0.010	0.05	0.05	0.048	0.048	95	95	70-130	0				
1,2-Dichlorobenzene-d4 (S)	%						104	103	70-130					
4-Bromofluorobenzene (S)	%						89	88	70-130					
tert Butyl Methyl-d3 Ether (S)	%						102	102	70-130					

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: L2372479
 Pace Project No.: 70280773

QC Batch: 330791 Analysis Method: EPA 505
 QC Batch Method: EPA 505 Analysis Description: 505 GCS Pesticides
 Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70280773001

METHOD BLANK: 1694484 Matrix: Water

Associated Lab Samples: 70280773001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alachlor	ug/L	<0.20	0.20	12/14/23 17:51	
Aldrin	ug/L	<0.025	0.025	12/14/23 17:51	
Chlordane (Technical)	ug/L	<0.20	0.20	12/14/23 17:51	
Dieldrin	ug/L	<0.050	0.050	12/14/23 17:51	
Endrin	ug/L	<0.010	0.010	12/14/23 17:51	
gamma-BHC (Lindane)	ug/L	<0.020	0.020	12/14/23 17:51	
Heptachlor	ug/L	<0.025	0.025	12/14/23 17:51	
Heptachlor epoxide	ug/L	<0.020	0.020	12/14/23 17:51	
Hexachlorobenzene	ug/L	<0.10	0.10	12/14/23 17:51	
Hexachlorocyclopentadiene	ug/L	<0.10	0.10	12/14/23 17:51	
Methoxychlor	ug/L	<0.10	0.10	12/14/23 17:51	
PCB Screen	ug/L	<0.40	0.40	12/14/23 17:51	
Toxaphene	ug/L	<1.0	1.0	12/14/23 17:51	
Decachlorobiphenyl (S)	%	112	60-151	12/14/23 17:51	
Tetrachloro-m-xylene (S)	%	115	56-149	12/14/23 17:51	

LABORATORY CONTROL SAMPLE: 1694485

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alachlor	ug/L	0.29	0.23	81	70-130	
Aldrin	ug/L	0.029	0.026	89	70-130	
Dieldrin	ug/L	0.029	<0.050	81	70-130	
Endrin	ug/L	0.029	0.025	89	70-130	
gamma-BHC (Lindane)	ug/L	0.029	0.024	84	70-130	
Heptachlor	ug/L	0.029	<0.025	86	70-130	
Heptachlor epoxide	ug/L	0.029	0.027	96	70-130	
Hexachlorobenzene	ug/L	0.029	<0.10	96	70-130	
Hexachlorocyclopentadiene	ug/L	0.029	<0.10	94	70-130	
Methoxychlor	ug/L	0.14	0.13	90	70-130	
Decachlorobiphenyl (S)	%			111	60-151	
Tetrachloro-m-xylene (S)	%			108	56-149	

LABORATORY CONTROL SAMPLE: 1694486

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alachlor	ug/L	0.057	<0.20	79	70-130	
Aldrin	ug/L	0.0057	<0.025	94	70-130	

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QUALITY CONTROL DATA

Project: L2372479
 Pace Project No.: 70280773

LABORATORY CONTROL SAMPLE: 1694486

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Dieldrin	ug/L	0.0057	<0.050	81	70-130	
Endrin	ug/L	0.0057	<0.010	83	70-130	
gamma-BHC (Lindane)	ug/L	0.0057	<0.020	82	70-130	
Heptachlor	ug/L	0.0057	<0.025	90	70-130	
Heptachlor epoxide	ug/L	0.0057	<0.020	103	70-130	
Hexachlorobenzene	ug/L	0.0057	<0.10	99	70-130	
Hexachlorocyclopentadiene	ug/L	0.0057	<0.10	130	70-130	
Methoxychlor	ug/L	0.029	<0.10	73	70-130	
Decachlorobiphenyl (S)	%			117	60-151	
Tetrachloro-m-xylene (S)	%			109	56-149	

LABORATORY CONTROL SAMPLE: 1694487

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Toxaphene	ug/L	5.7	6.1	107	70-130	
Decachlorobiphenyl (S)	%			124	60-151	
Tetrachloro-m-xylene (S)	%			114	56-149	

MATRIX SPIKE SAMPLE: 1694494

Parameter	Units	70280671001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Alachlor	ug/L	<0.20	0.57	0.46	80	65-135	
Aldrin	ug/L	<0.025	0.057	0.057	99	65-135	
Dieldrin	ug/L	<0.050	0.057	<0.050	83	65-135	
Endrin	ug/L	<0.010	0.057	0.051	89	65-135	
gamma-BHC (Lindane)	ug/L	<0.020	0.057	0.048	85	65-135	
Heptachlor	ug/L	<0.025	0.057	0.060	105	65-135	
Heptachlor epoxide	ug/L	<0.020	0.057	0.052	92	65-135	
Hexachlorobenzene	ug/L	<0.10	0.057	<0.10	120	65-135	
Hexachlorocyclopentadiene	ug/L	<0.10	0.057	<0.10	135	65-135	
Methoxychlor	ug/L	<0.10	0.29	0.32	111	65-135	
Decachlorobiphenyl (S)	%				123	60-151	
Tetrachloro-m-xylene (S)	%				110	56-149	

MATRIX SPIKE SAMPLE: 1696650

Parameter	Units	70280773001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Alachlor	ug/L	<0.20	0.57	0.39	68	65-135	
Aldrin	ug/L	<0.025	0.057	0.047	82	65-135	
Chlordane (Technical)	ug/L	<0.20		0.58			
Dieldrin	ug/L	<0.050	0.057	<0.050	69	65-135	
Endrin	ug/L	<0.010	0.057	0.043	75	65-135	

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QUALITY CONTROL DATA

Project: L2372479
 Pace Project No.: 70280773

MATRIX SPIKE SAMPLE: 1696650		70280773001	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
gamma-BHC (Lindane)	ug/L	<0.020	0.057	0.043	75	65-135	
Heptachlor	ug/L	<0.025	0.057	0.047	83	65-135	
Heptachlor epoxide	ug/L	<0.020	0.057	0.043	75	65-135	
Hexachlorobenzene	ug/L	<0.10	0.057	<0.10	96	65-135	
Hexachlorocyclopentadiene	ug/L	<0.10	0.057	<0.10	119	65-135	
Methoxychlor	ug/L	<0.10	0.29	0.25	88	65-135	
PCB Screen	ug/L	<0.40		<0.40			
Toxaphene	ug/L	<1.0		<1.0			
Decachlorobiphenyl (S)	%				90	60-151	
Tetrachloro-m-xylene (S)	%				104	56-149	

SAMPLE DUPLICATE: 1694495

Parameter	Units	70280671002	Dup	RPD	Qualifiers
		Result	Result		
Alachlor	ug/L	<0.20	<0.20		
Aldrin	ug/L	<0.025	<0.025		
Chlordane (Technical)	ug/L	<0.20	<0.20		
Dieldrin	ug/L	<0.050	<0.050		
Endrin	ug/L	<0.010	<0.010		
gamma-BHC (Lindane)	ug/L	<0.020	<0.020		
Heptachlor	ug/L	<0.025	<0.025		
Heptachlor epoxide	ug/L	<0.020	<0.020		
Hexachlorobenzene	ug/L	<0.10	<0.10		
Hexachlorocyclopentadiene	ug/L	<0.10	<0.10		
Methoxychlor	ug/L	<0.10	<0.10		
PCB Screen	ug/L	<0.40	<0.40		
Toxaphene	ug/L	<1.0	<1.0		
Decachlorobiphenyl (S)	%	113	105		
Tetrachloro-m-xylene (S)	%	115	121		

SAMPLE DUPLICATE: 1695824

Parameter	Units	70280748001	Dup	RPD	Qualifiers
		Result	Result		
Alachlor	ug/L	<0.20	<0.20		
Aldrin	ug/L	<0.025	<0.025		
Chlordane (Technical)	ug/L	<0.20	<0.20		
Dieldrin	ug/L	<0.050	<0.050		
Endrin	ug/L	<0.010	<0.010		
gamma-BHC (Lindane)	ug/L	<0.020	<0.020		
Heptachlor	ug/L	<0.025	<0.025		
Heptachlor epoxide	ug/L	<0.020	0.021		
Hexachlorobenzene	ug/L	<0.10	<0.10		
Hexachlorocyclopentadiene	ug/L	<0.10	<0.10		
Methoxychlor	ug/L	<0.10	<0.10		

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QUALITY CONTROL DATA

Project: L2372479
Pace Project No.: 70280773

SAMPLE DUPLICATE: 1695824

Parameter	Units	70280748001 Result	Dup Result	RPD	Qualifiers
PCB Screen	ug/L	<0.40	<0.40		
Toxaphene	ug/L	<1.0	<1.0		
Decachlorobiphenyl (S)	%	104	103		
Tetrachloro-m-xylene (S)	%	105	111		

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QUALITY CONTROL DATA

Project: L2372479
 Pace Project No.: 70280773

QC Batch: 331080 Analysis Method: EPA 515.3
 QC Batch Method: EPA 515.3 Analysis Description: 5153 GCS Herbicides
 Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70280773001

METHOD BLANK: 1696456 Matrix: Water

Associated Lab Samples: 70280773001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
2,4,5-TP (Silvex)	ug/L	<0.13	0.13	12/18/23 12:41	
2,4-D	ug/L	<0.10	0.10	12/18/23 12:41	
Dalapon	ug/L	<0.70	0.70	12/18/23 12:41	
Dicamba	ug/L	<1.0	1.0	12/18/23 12:41	
Dinoseb	ug/L	<0.20	0.20	12/18/23 12:41	
Pentachlorophenol	ug/L	<0.040	0.040	12/18/23 12:41	
Picloram	ug/L	<0.10	0.10	12/18/23 12:41	
2,4-DCAA (S)	%	87	70-130	12/18/23 12:41	

LABORATORY CONTROL SAMPLE: 1696457

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4,5-TP (Silvex)	ug/L	0.2	0.17	84	70-130	
2,4-D	ug/L	0.2	0.18	91	70-130	
Dalapon	ug/L	2.2	2.1	94	70-130	
Dicamba	ug/L	0.2	<1.0	89	70-130	
Dinoseb	ug/L	0.2	<0.20	94	70-130	
Pentachlorophenol	ug/L	0.2	0.17	87	70-130	
Picloram	ug/L	0.2	0.24	118	70-130	
2,4-DCAA (S)	%			81	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1696474 1696475

Parameter	70280671001		MS	MSD	MS		MSD		% Rec Limits	RPD	Qual
	Units	Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec			
2,4,5-TP (Silvex)	ug/L	<0.13	0.2	0.2	0.15	0.15	73	76	70-130	5	
2,4-D	ug/L	<0.10	0.2	0.2	0.21	0.25	106	123	70-130	15	
Dalapon	ug/L	<0.70	2.2	2.2	2.2	2.2	101	99	70-130	2	
Dicamba	ug/L	<1.0	0.2	0.2	<1.0	<1.0	88	87	70-130		
Dinoseb	ug/L	<0.20	0.2	0.2	<0.20	<0.20	93	93	70-130		
Pentachlorophenol	ug/L	<0.040	0.2	0.2	0.17	0.17	87	87	70-130	0	
Picloram	ug/L	<0.10	0.2	0.2	0.24	0.26	122	129	70-130	5	
2,4-DCAA (S)	%						75	75	70-130		

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QUALITY CONTROL DATA

Project: L2372479
 Pace Project No.: 70280773

Parameter	70280930001		MS		MSD		MS		MSD		% Rec	Limits	RPD	Qual
	Units	Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec						
2,4,5-TP (Silvex)	ug/L	<0.13	0.2	0.2	<0.13	0.14	53	72	70-130					M1
2,4-D	ug/L	<0.10	0.2	0.2	0.19	0.21	93	104	70-130	12				
Dalapon	ug/L	<0.70	2.2	2.2	1.6	2.0	73	92	70-130	23	R1			
Dicamba	ug/L	<1.0	0.2	0.2	<1.0	<1.0	68	93	70-130					M1
Dinoseb	ug/L	<0.20	0.2	0.2	<0.20	<0.20	69	93	70-130					M1
Pentachlorophenol	ug/L	<0.040	0.2	0.2	0.11	0.17	56	86	70-130	41	M1,R1			
Picloram	ug/L	<0.10	0.2	0.2	0.16	0.29	82	146	70-130	57	M1,R1			
2,4-DCAA (S)	%						56	78	70-130					S0

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QUALITY CONTROL DATA

Project: L2372479
 Pace Project No.: 70280773

QC Batch: 330768 Analysis Method: EPA 525.3
 QC Batch Method: EPA 525.3 Analysis Description: 525.3 Base Neutral Extractables
 Laboratory: Pace Analytical Services - Melville

Associated Lab Samples: 70280773001

METHOD BLANK: 1694437 Matrix: Water

Associated Lab Samples: 70280773001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Atrazine	ug/L	ND	0.10	12/15/23 17:21	
Benzo(a)pyrene	ug/L	ND	0.020	12/15/23 17:21	
bis(2-Ethylhexyl)adipate	ug/L	ND	0.60	12/15/23 17:21	
bis(2-Ethylhexyl)phthalate	ug/L	ND	0.60	12/15/23 17:21	
Butachlor	ug/L	ND	0.20	12/15/23 17:21	
Metolachlor	ug/L	ND	0.10	12/15/23 17:21	
Metribuzin	ug/L	ND	0.50	12/15/23 17:21	
Propachlor	ug/L	ND	0.10	12/15/23 17:21	
Simazine	ug/L	ND	0.070	12/15/23 17:21	
1,3-Dimethyl-2-nitrobenzene(S)	%	91	70-130	12/15/23 17:21	
Benzo(a)pyrene-d12 (S)	%	72	70-130	12/15/23 17:21	
Triphenylphosphate (S)	%	98	70-130	12/15/23 17:21	

LABORATORY CONTROL SAMPLE: 1694438

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzo(a)pyrene	ug/L	0.02	<0.020	81	70-130	
Simazine	ug/L	0.02	<0.070	88	70-130	
1,3-Dimethyl-2-nitrobenzene(S)	%			88	70-130	
Benzo(a)pyrene-d12 (S)	%			70	70-130	
Triphenylphosphate (S)	%			100	70-130	

LABORATORY CONTROL SAMPLE: 1694439

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Atrazine	ug/L	0.1	<0.10	84	70-130	
Butachlor	ug/L	0.1	<0.20	86	70-130	
Metolachlor	ug/L	0.1	<0.10	91	70-130	
Metribuzin	ug/L	0.1	<0.50	74	70-130	
Propachlor	ug/L	0.1	<0.10	87	70-130	
1,3-Dimethyl-2-nitrobenzene(S)	%			89	70-130	
Benzo(a)pyrene-d12 (S)	%			72	70-130	
Triphenylphosphate (S)	%			96	70-130	

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QUALITY CONTROL DATA

Project: L2372479
 Pace Project No.: 70280773

LABORATORY CONTROL SAMPLE: 1694440

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
bis(2-Ethylhexyl)adipate	ug/L	0.5	<0.60	83	70-130	
bis(2-Ethylhexyl)phthalate	ug/L	0.5	<0.60	75	70-130	
1,3-Dimethyl-2-nitrobenzene(S)	%			89	70-130	
Benzo(a)pyrene-d12 (S)	%			75	70-130	
Triphenylphosphate (S)	%			97	70-130	

MATRIX SPIKE SAMPLE: 1694441

Parameter	Units	70280492001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Atrazine	ug/L	<0.10	0.1	<0.10	82	70-130	
Benzo(a)pyrene	ug/L	<0.020	0.1	0.075	75	70-130	
bis(2-Ethylhexyl)adipate	ug/L	<0.60	0.1	<0.60	78	70-130	
bis(2-Ethylhexyl)phthalate	ug/L	<0.60	0.1	<0.60	87	70-130	
Butachlor	ug/L	<0.20	0.1	<0.20	89	70-130	
Metolachlor	ug/L	<0.10	0.1	<0.10	93	70-130	
Metribuzin	ug/L	<0.50	0.1	<0.50	78	70-130	
Propachlor	ug/L	<0.10	0.1	<0.10	91	70-130	
Simazine	ug/L	<0.070	0.1	0.078	78	70-130	
1,3-Dimethyl-2-nitrobenzene(S)	%				88	70-130	
Benzo(a)pyrene-d12 (S)	%				71	70-130	
Triphenylphosphate (S)	%				98	70-130	

SAMPLE DUPLICATE: 1696786

Parameter	Units	70280773001 Result	Dup Result	RPD	Qualifiers
Atrazine	ug/L	<0.10	<0.10		
Benzo(a)pyrene	ug/L	<0.020	<0.020		
bis(2-Ethylhexyl)adipate	ug/L	<0.60	<0.60		
bis(2-Ethylhexyl)phthalate	ug/L	<0.60	<0.60		
Butachlor	ug/L	<0.20	<0.20		
Metolachlor	ug/L	<0.10	<0.10		
Metribuzin	ug/L	<0.50	<0.50		
Propachlor	ug/L	<0.10	<0.10		
Simazine	ug/L	<0.070	<0.070		
1,3-Dimethyl-2-nitrobenzene(S)	%	82	90		
Benzo(a)pyrene-d12 (S)	%	70	70		
Triphenylphosphate (S)	%	100	98		

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QUALIFIERS

Project: L2372479
Pace Project No.: 70280773

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1 RPD value was outside control limits.
S0 Surrogate recovery outside laboratory control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: L2372479
Pace Project No.: 70280773

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70280773001	TANK WELL	EPA 505	330791	EPA 505	330879
70280773001	TANK WELL	EPA 515.3	331080	EPA 515.3	331091
70280773001	TANK WELL	EPA 531.2	331041		
70280773001	TANK WELL	EPA 525.3	330768	EPA 525.3	330991
70280773001	TANK WELL	EPA 524.3	331178		

REPORT OF LABORATORY ANALYSIS

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WO#: 70280773



70280773

Subcontract Chain of Custody

Pace Analytical (Melville)
575 Broad Hollow Road
Melville, NY 11747

Alpha Job Number
L2372479

Client Information

Client: Alpha Analytical Labs
Address: Eight Walkup Drive
Westborough, MA 01581-1019

Phone: 716.427.5225
Email: bpirinelli@alphalab.com

Project Information

Project Location: NY
Project Manager: Brenda Pirinelli

Turnaround & Deliverables Information

Due Date:
Deliverables:

Regulatory Requirements/Report Limits

State/Federal Program:
Regulatory Criteria:

Project Specific Requirements and/or Report Requirements

Reference following Alpha Job Number on final report/deliverables: L2372479 Report to include Method Blank, LCS/LCSD:

Additional Comments: Send all results/reports to subreports@alphalab.com This is a Converse job.

Lab ID	Client ID	Collection Date/Time	Sample Matrix	Analysis	Batch QC
	TANK WELL	12-07-23 08:00	DW	EPA 504.1; PCB/PEST - EPA 505; Chlor. Acids - EPA 515.3; Pesticides - EPA 525.3; Carbamates - EPA 531.1	
Relinquished By:				Date/Time:	Received By:
<i>[Signature]</i>				12/19/23	<i>[Signature]</i> 12/12/23 17:30
<i>[Signature]</i>				12/12/23 22:00 AM	<i>[Signature]</i> 12/12/23 22:05
<i>[Signature]</i>				12/12/23	<i>[Signature]</i> 12/12/23 8:15

Form No: AL_subcoc

DC# Title: ENV-FRM-MELV-0024 v04_SCUR
 Effective Date: 10/13/2023

WO#: 70280773

Client Name: ALPHA
 Courier: Fed Ex UPS USPS Client Commercial Pacd Other
 Tracking #: _____

Project # **PM: MN2** Due Date: **12/22/23**
CLIENT: ALPHA

Custody Seal on Cooler/Box Present: Yes No Seals intact: Yes No Temperature Blank Present: Yes No
 Packing Material: Bubble Wrap Bubble Bags Ziplo None Other Type of Ice: Wet Blue None
 Thermometer Used: TH211 Correction Factor: -0.4 Samples on ice, cooling process has begun
 Cooler Temperature (°C): 1.6 Cooler Temperature Corrected (°C): 2.0 Date/Time 5035A kits placed in freezer _____
 Temp should be above freezing to 6.0°C

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? Yes No

Did samples originate from a foreign source including Hawaii and Puerto Rico? Yes No

If Yes to either question, fill out a Regulated Soil Checklist (ENV-FRM-MELV-0076) and include with SCUR/COC paperwork.

Date and Initials of person examining contents: MPL 12/13/23

	COMMENTS:
Chain of Custody Present: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1.
Chain of Custody Filled Out: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2.
Chain of Custody Relinquished: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.
Sampler Name & Signature on COC: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	4.
Samples Arrived within Hold Time: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
Short Hold Time Analysis (<72hr): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6.
Rush Turn Around Time Requested <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume: (Triple volume provided for MS/MSD) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8.
Correct Containers Used: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Containers Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11. Note: if sediment is visible in the dissolved container.
Sample Labels match COC: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	12. <u>524.3 vials received instead of 504.5 listed on COC.</u>
-Includes date/time/ID/Analysis Matrix: SL <input checked="" type="checkbox"/> OIL OTHER	

Date and Initials of person checking preservation: MPL 12/13/23

All containers needing preservation have been pH paper Lot # <u>211021A</u> <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13. <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> HCl
All containers needing preservation are found to be in compliance with method recommendation? (HNO ₃ , H ₂ SO ₄ , HCl, NaOH > 9 Sulfide, <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A NAOH > 12 Cyanide)	Sample #
Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water). Per Method, VOA pH is checked after analysis	Initial when completed: Lot # of added preservative: Date/Time preservative added:
Samples checked for dechlorination: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
KI starch test strips Lot # <u>166040A</u>	Positive for Res. Chlorine? <u>Y</u> <input checked="" type="checkbox"/> N
Residual chlorine strips Lot # <u>166040A</u>	15. Positive for Sulfide? <u>Y</u> N
SM 4500 CN samples checked for sul <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Lead Acetate Strips Lot # <u>166040A</u>	17.
Headspace in VOA Vials (>6mm): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Trip Blank Present: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Trip Blank Custody Seals Present <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

DATE AND INITIALS OF PERSON COMPLETING SECOND REVIEW: MPL 12/13

Client Notification/ Resolution: _____ Field Data Required? Y / N
 Person Contacted: _____ Date/Time: _____
 Comments/ Resolution: _____

* PM (Project Manager) review is documented electronically in LIMS.



ANALYTICAL REPORT

January 12, 2024

Revised Report

¹ Pb

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Pace Analytical (Alpha) - Westborough,MA

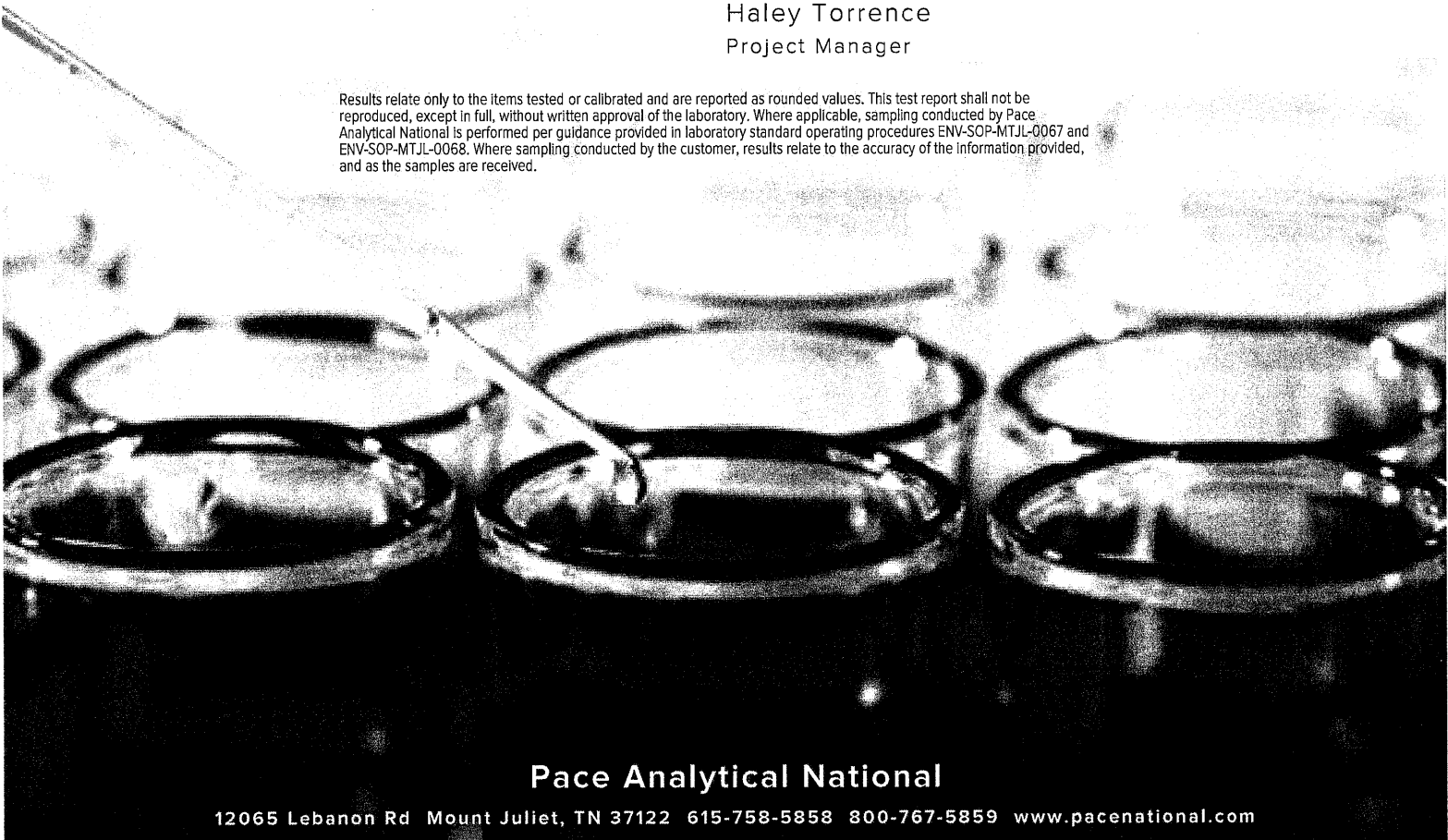
Sample Delivery Group: L1687616
 Samples Received: 12/13/2023
 Project Number: L2372479
 Description:

Report To: Susan O'Neil
 8 Walkup Drive
 Westborough, MA 01581

Entire Report Reviewed By:

Haley Torrence
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



Pace Analytical National

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

TABLE OF CONTENTS

Serial_No:01122417:32

Cp: Cover Page	1	¹ Cp
Tc: Table of Contents	2	
Ss: Sample Summary	3	² Tc
Cn: Case Narrative	4	
Sr: Sample Results	5	³ Ss
TANK WELL L1687616-01	5	
Qc: Quality Control Summary	6	⁴ Cn
Wet Chemistry by Method 314.0 Mod	6	
Gl: Glossary of Terms	8	⁵ Sr
Al: Accreditations & Locations	9	⁶ Qc
Sc: Sample Chain of Custody	10	⁷ Gl
		⁸ Al
		⁹ Sc

SAMPLE SUMMARY

TANK WELL L1687616-01 DW

Collected by
 Collected date/time 12/07/23 08:00
 Received date/time 12/13/23 10:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 314.0 Mod	WG2190836	1	01/07/24 14:38	01/07/24 14:38	JEA	Mt. Juliet, TN

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ 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.



Haley Torrence
Project Manager

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

Report Revision History

Level II Report - Version 1: 01/09/24 16:04

Project Narrative

TANK WELL

SAMPLE RESULTS - 01

Serial_No:01122417:32

Collected date/time: 12/07/23 08:00

L1687616

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	<u>J6</u>	0.300	4.00	1	01/07/2024 14:38	<u>WG2190836</u>

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

QUALITY CONTROL SUMMARY

L1687616-01

WG2190836

Wet Chemistry by Method 314.0 Mod

Method Blank (MB)

(MB) R4021309-1	01/07/24 01:22	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	ug/l	ug/l		ug/l	ug/l
Perchlorate	U		0.300	4.00	

Method Blank (MB)

(MB) R4021309-2	01/07/24 01:51	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	ug/l	ug/l		ug/l	ug/l
Perchlorate	U		0.300	4.00	

L1687016-18 Original Sample (OS) • Duplicate (DUP)

(OS) L1687016-18 01/07/24 10:22 • (DUP) R4021309-4 01/07/24 16:18

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

L1687591-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1687591-01 01/07/24 11:19 • (DUP) R4021309-7 01/07/24 17:45

Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
ug/l	ug/l	%	%	%	%
Perchlorate	19.5	20.2	1	3.56	15

Laboratory Control Sample (LCS)

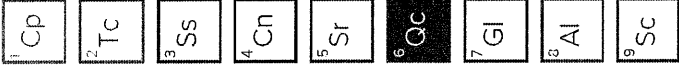
(LCS) R4021309-3 01/07/24 03:16

Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
ug/l	ug/l	%	%	
Perchlorate	10.0	9.32	93.2	90.0-110

L1687016-18 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1687016-18 01/07/24 10:22 • (MS) R4021309-5 01/07/24 16:48 • (MSD) R4021309-6 01/07/24 17:17

Spike Amount	Original Result	MS Result	MSD Result	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
ug/l	ug/l	ug/l	ug/l	%	%	%	%	%	%	%
Perchlorate	10.0	U	10.4	10.3	103	80.0-120	104	0.386	15	



QUALITY CONTROL SUMMARY

L1687616-01

WG2190836

Wet Chemistry by Method 314.0 Mod

L1687591-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1687591-01 01/07/24 11:19 • (MS) R4021309-8 01/07/24 18:14 • (MSD) R4021309-9 01/07/24 19:39

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Perchlorate	10.0	19.5	31.5	30.3	120	108	1	80.0-120		3.93		15

L1687616-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1687616-01 01/07/24 14:38 • (MS) R4021309-10 01/08/24 21:48 • (MSD) R4021309-11 01/08/24 22:17

Analyte	Spike Amount ug/l	Original Result ug/l	MS Result ug/l	MSD Result ug/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Perchlorate	10.0	U	7.90	8.02	79.0	80.2	1	80.0-120	J6	1.52		15

Sample Narrative:

MS: within RPD of passing MSD

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

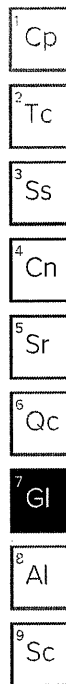
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
----	---



ACCREDITATIONS & LOCATIONS

Serial_No:01122417:32

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey--NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio--VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA -- ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA -- ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA--Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable
 * Not all certifications held by the laboratory are applicable to the results reported in the attached report.
 * Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

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



Subcontract Chain of Custody

Pace Analytical National
12065 Lebanon Road
Mt. Juliet, TN 37122

M027

Alpha Job Number
L2372479

C1687616

Client Information		Project Information		Regulatory Requirements/Report Limits	
Client: Alpha Analytical Labs Address: Eight Walkup Drive Westborough, MA 01581-1019 Phone: 716.427.5225 Email: bpirinelli@alphalab.com		Project Location: NY Project Manager: Brenda Pirinelli Turnaround & Deliverables Information Due Date: Deliverables:		State/Federal Program: Regulatory Criteria:	
Project Specific Requirements and/or Report Requirements					
Reference following Alpha Job Number on final report/deliverables: L2372479		Report to include Method Blank, LCS/LCSD:			
Additional Comments: Send all results/reports to subreports@alphalab.com This is a Converse job.					
Lab ID	Client ID	Collection Date/Time	Sample Matrix	Analysis	Batch QC
	TANK WELL	12-07-23 08:00	DW	Subcontract Perchlorate by 331	
Sample Receipt Checklist: <input type="checkbox"/> If Applicable CSC Seal Present/Intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N CSC Signed/Accurate: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Bottles arrive intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Correct bottles used: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Sufficient volume sent: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N RA Screen <0.5 mR/hr: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N					
Relinquished By:		Date/Time: 12/18/23	Received By:		Date/Time: 12/19/23 1030
Form No: AL_subcoc					

MSA8
5.3 +0.5.3

ANALYSIS FOR WATERBORNE PARTICULATES

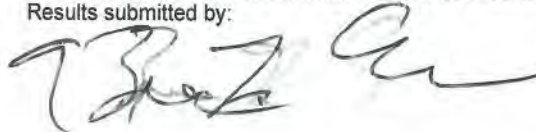
CH Diagnostic and Consulting Service, Inc.
512 5th Street, Berthoud, CO 80513
P: (970) 532-2078 F: (970) 532-3358

Invoice 20230412

Customer 20142070
Northeast Geoscience, Inc.
97 Walnut Street
Clinton, MA 01510
PWSID# 4240006

Laboratory Information

Federal Express; 12/8/2023; 1000 Hrs; 5.4°C; Wound
Results submitted by:



Sample Identification: LeRay, New York, 8-Inch Well Tank Site

Sample Information: SOURCE: Drilled Well; 200' deep; 1000' from surface water; Unchlorinated; pH 7.23 → pH 7.15;
8.6°C → 8.7°C; 0 NTU → 0 NTU

Sample Date & Time: 12/6/2023 08:00 AM → 12/7/2023 08:00 AM

Sampler: Jay Billings

Amount: 3936.4 L (1040 gal)

Filter Color: Off white

Filter Type: Polypropylene wound cartridge

Date/Time Eluted: 12/9/2023 12:00 AM

Centrifugate: 0.0127 mL/100 L

RESULTS OF MICROSCOPIC PARTICULATE ANALYSIS

Amount of sample assayed: 240 L

Amorphous Debris	clay (1-2 µm), silt (2-50 µm), sand (50-2000 µm)
Algae	ND
Diatoms	ND
Plant debris	ND
Rotifers	3/100 Gal
Nematodes	6/100 Gal
Pollen (pine)	3/100 Gal
Ameba	ND
Ciliates	ND
Colorless Flagellates	ND
Crustaceans	ND
Other Arthropods	ND
Other	ND

Giardia and *Coccidia* are none detected (ND) by MPA unless reported under "Other".

This sample was analyzed for particulates following the Environmental Protection Agency Consensus Method for Determining Groundwaters Under the Direct Influence of Surface Water Using Microscopic Particulate Analysis (MPA). 1992. USEPA, Port Orchard, WA, EPA 910/9-92-029. All limitations stated in the methods apply. If HV capsule or foam filter was received, method was modified by filtering sample through a Pall Envirochek™ HV capsule or IDEXX Filta-Max™ filter at the sample site. If *Giardia* and *Cryptosporidium* Analysis was also performed, particulate extraction was modified.

COMMENTS: Score: 1-Low Risk per EPA Consensus Method referenced above.

Ground Water Risk Factor Table

From: E.P.A. Consensus Method for Determining Groundwaters Under the Direct Influence of Surface Water Using Microscopic Particulate Analysis (MPA)

Table 1. Numerical range of each primary bio-indicator (Particulate) counted per 100 gallons water.

Indicators of surface water ¹	EH ³	H	M	R	NS
Giardia ²	>30	16-30	6-15	1-5	<1
Coccidia ²	>30	16-30	6-15	1-5	<1
Diatoms ⁴	>150	41-149	11-40	1-10	<1
Other Algae ⁴	>300	96-299	21-95	1-20	<1
Insects/Larvae	>100	31-99	16-30	1-15	<1
Rotifers	>150	61-149	21-60	1-20	<1
Plant Debris ⁴	>200	71-200	26-70	1-25	<1

1. According to EPA "Guidance Manual for Compliance with the Filtration and Disinfection Requirements for Public Water Systems Using Surface Water Sources", March, 1991 ed.
2. If Giardia cysts or coccidian are found in any sample, irrespective of volume, score as above.
3. Key= EH – extremely heavy M – moderate NS – not significant
 H – heavy R – rare
4. Chlorophyll containing

Table 2. Relative surface water risk factors associated with scoring of primary bio-indicators (particulate) present during MPA of subsurface water sources.

Indicators of surface water ¹	Relative Risk Factor ³				
	EH ²	H	M	R	NS
Giardia	40	30	25	20	0
Coccidia	35	30	25	20	0
Diatoms	16	13	11	6	0
Other Algae	14	12	9	4	0
Insects/Larvae	9	7	5	3	0
Rotifers	4	3	2	1	0
Plant Debris	3	2	1	0	0

1. According to EPA "Guidance Manual for Compliance with the Filtration and Disinfection Requirements for Public Water Systems Using Surface Water Sources", March, 1991 ed.
2. Refer to Table 1 for range of indicators counted per 100 gallons.
 Key= EH – extremely heavy M – moderate NS – not significant
 H – heavy R – rare
3. Risk of surface water contamination
 ≥20 – high risk
 10-19 – moderate risk
 ≤9 – low risk