ERM

One Beacon Street
5th Floor
Boston, Massachusetts
02108

Telephone: +1 617 646 7800
Fax: +1 617 267 6447

www.erm.com

15 November 2021

Massachusetts Department of Environmental Protection
Northeast Regional Office
Bureau of Waste Site Cleanup
205B Lowell Street
Wilmington, MA 01887

Reference: 0583683

Re: Remedy Operation Status Submittal
May 2021 through October 2021
Former Raytheon Facility
Wayland, Massachusetts
Release Tracking Nos. 3-13302 and 3-22408
Tier IB Permit Nos. 133939 and W045278

Dear Sir or Madam,

On behalf of Raytheon Company (Raytheon), Environmental Resources Management (ERM) has prepared this Remedy Operation Status (ROS) Submittal for the Former Raytheon Facility located at 430 Boston Post Road in Wayland, Massachusetts (herein referred to as the "Site") (**Figure 1)**. This report discusses groundwater remediation and monitoring activities conducted at the Site during the reporting period from 1 May 2021 to 31 October 2021, and is intended to satisfy the requirements of the Massachusetts Contingency Plan (MCP) at 310 CMR 40.0893.

The Massachusetts Department of Environmental Protection (MassDEP) ROS transmittal form (BWSC 108) and Remedial Monitoring Reports (RMRs) were filed electronically via eDEP. Copies of the BWSC forms are included in **Appendix A**.

Background

This submittal incorporates the ongoing bioremediation activities in the Northern Area of the Site (**Figure 2**) with the ongoing Southern Area in-situ chemical oxidation (ISCO) monitoring program. Northern Area response actions were formerly tracked under Release Tracking Number (RTN) 3-22408. These RTNs were linked under 3-13302 in a letter submitted to the MassDEP on 9 June 2009.

RTN 3-13302

A Phase IV Completion Report was submitted for RTN 3-13302 on 24 November 2004 to MassDEP for portions of the approximately 83-acre property (**Figure 2**). The Phase IV Completion Report documented wetland remediation activities conducted from October 2003 through October 2004, and groundwater remediation activities conducted from May through July 2004. Since completion of Phase IV activities and the Site entering into ROS, ROS reports are submitted to MassDEP on a semiannual basis.

RTN 3-22408

A Phase IV Completion Report was submitted for RTN 3-22408 on 23 December 2008 for the chlorinated volatile organic compound (CVOC) impacts to Northern Area soil and groundwater. Beginning with the 9 June 2009 report, activities formerly conducted under this RTN have been summarized jointly with those under RTN 3-13302 in the ROS submittals described above.

Northern Area Bioremediation Activities

Northern Area bioremediation response actions were conducted by Innovative Engineering Solutions, Inc. (IESI) of Braintree, Massachusetts during this reporting period. IESI temporarily deactivated the Enhanced Anaerobic Dechlorination (EAD) system on 20 December 2016 in order to evaluate the progress of the remedial program in this area. The EAD system has remained offline since December 2016; however, IESI conducted a small-scale batch injection at RIW-11S in November 2018. No injection activities were conducted during this reporting period. **Appendix B** includes a memorandum prepared by IESI to document the monitoring activities completed during this reporting period.

Northern Area Groundwater Monitoring

Semiannual groundwater sampling in the Northern Area was conducted by IESI in September 2021 during this reporting period. Groundwater sampling results for the Northern Area are summarized in **Appendix B**.

Southern Area Groundwater Monitoring

The groundwater monitoring plan in the Southern Area was originally modified in May 2019 following an evaluation of historical CVOC results, as described in the ROS report submitted to MassDEP on 21 May 2019. As outlined in the May 2019 ROS Report, specific criteria were used to determine sampling frequency for select monitoring wells. Based on the criteria, the Southern Area monitoring program was further modified in May 2021 and includes monitoring wells that are sampled on a biennial, annual, and semiannual basis, as shown on **Figure 3** and as summarized below:

- Biennial Locations: 18 monitoring locations are part of the biennial monitoring network including MW-217D, MW-1001M, MW-1002M, MW-1003, MW-1004, MW-1006, MW-1008, MW-1010D, MW-1016D, MW-1017D, MW-1019B, MW-1022, MW-1023, MW-1030, MW-1038, MW-1039, MW-1040, and SEN-1D. All samples collected from the biennial monitoring list are analyzed for CVOCs only, with the exception of MW-1039, which is also analyzed for 1,4-dioxane.

- Annual Locations: 7 monitoring locations are sampled annually for 1,4-dioxane including MW-1020, MW-1025M, MW-1026D, MW-1033, MW-1034, MW-1036, and MW-1039.

- Semiannual Locations: 8 monitoring locations are part of the semiannual monitoring network including MW-217M, MW-1005, MW-1010M, MW-1014, MW-1015D, MW-1028, MW-1032, and MW-1034. All samples collected from the semiannual monitoring list are analyzed for CVOCs only, with the exception of MW-1034, which is also analyzed for 1,4-dioxane.

A combined semiannual and biennial groundwater monitoring event was conducted by ERM within the Southern Area between 14 September and 15 September 2021, in accordance with the May 2021 ROS Report. Groundwater monitoring activities conducted during this event included

comprehensive groundwater gauging and the collection of groundwater samples via passive diffusion bags (PDBs).

Groundwater Gauging

Groundwater gauging data collected within the Southern Area in March 2021 are presented in **Table 1**. Gauging data indicate that groundwater generally flows from the southeast to the northwest, and then west toward the Sudbury River, consistent with historical observations. Interpretations of the generalized upper and lower potentiometric surfaces are presented on **Figure 4A** and **Figure 4B**, respectively.

Groundwater Sampling

Following gauging activities, groundwater samples were collected from the above mentioned list of wells within the Southern Area for the analysis of CVOCs using the U.S. Environmental Protection Agency (USEPA) Method 8260. PDBs were used to collect groundwater samples, which are constructed of a semi-permeable membrane that allows groundwater to pass through and into the PDB, thereby allowing collection of a sample from the aquifer at equilibrium conditions. PDBs were installed across the saturated mid-point of each screen and were allowed to equilibrate with the surrounding groundwater for at least 14 days before being sampled. Samples collected for CVOC analysis were submitted to Eurofins Test America of Amherst, New York. A summary of the laboratory analytical data for the Southern Area monitoring wells is provided in **Table 2** and groundwater laboratory analytical reports are provided in **Appendix C**.

During the September 2021 monitoring event, trichloroethene (TCE) was detected above the MCP GW-1 criteria in samples collected from the following monitoring wells in the Southern Area: MW-1010D, MW-1010M, MW-1014, MW-1028, MW-1032, MW-1034, MW-1038, MW-1039, and MW-217M (**Figure 5**). Although TCE exceedances were observed, concentrations in the Southern Area are generally decreasing and are expected to continue doing so over time. There were no other exceedances of the MCP GW-1 criteria in groundwater during this sampling event.

Due to complications from silting in during redevelopment activities (as discussed in below), MW-1003 was not sampled during this event. Total depth at the time of sampling was gauged at 28.23 feet below top of casing (ft btoc), while the constructed total depth is 37 ft btoc, with a five foot screen. This well will be redeveloped prior to the next sampling event. For reference, MW-1003 has had no exceedances above GW-1 standards in the last five sampling events.

For reference, previously detected concentrations of CVOCs in MW-1038, MW-1039, and several other wells along the southern property boundary were determined to be originating from an off-site source(s). A Downgradient Property Status (DPS) Opinion was prepared to address the CVOCs originating from upgradient releases. The DPS Opinion was submitted to MassDEP on 7 March 2017 under RTN-3-33752.

Miscellaneous Activities

Based on the spring 2021 gauging results, a subset of wells were documented to have minor sediment build-up at the bottom of the well. Well redevelopment activities were attempted in August 2021 at the following wells: MW-1002M, MW-1003, MW-1016D, and MW-1025M. This included purging water from the well with a buffalo pump at a high rate in order to clear the screen of

deposited sediments. Depth to bottom was gauged immediately following redevelopment activities to confirm wells were restored to original depth. During post-redevelopment gauging, silt was observed re-entering the screens in some locations, including silting in a deployed PBD at MW-1003. Further activities are planned to retrieve this PDB and clear the well screens of silt.

Well development activities generated approximately 45 gallons of well development water, which was containerized and shipped off-Site as nonhazardous, non-Department of Transportation-regulated purge water on a Non-Hazardous Waste Manifest.

Sentinel Well Monitoring

In 2009, Raytheon installed five sentinel wells on the Town of Wayland Cow Common Conservation Area as part of a voluntary Supplemental Environmental Project (SEP). In addition to the installation of the five wells, the SEP included an agreement to conduct semiannual monitoring of CVOC concentrations in the sentinel wells through December 2011; however, Raytheon continued to voluntarily sample these locations on an annual basis. The locations of the sentinel wells are shown on **Figure 6**. Historical groundwater gauging data for the sentinel wells are summarized in **Table 3** and historical groundwater analytical data is summarized in **Table 4**. Based on an evaluation of historical CVOC results, the monitoring frequency of sentinel wells was reduced, as described in the May 2019 ROS report. Sampling of SEN-1M, SEN-2M, SEN-2D, and SEN-3 has been discontinued and SEN-1D is now monitored on a biennial basis. SEN-1D was sampled on 2 April 2021. Concentrations at this location were consistent with historical detections. The next sampling round for SEN-1D is expected to be completed in the spring of 2023.

Proposed Modifications to Groundwater Monitoring in the Southern Area

Concentrations of CVOCs in the Southern Area have been extensively evaluated since completion of Phase IV activities in 2004. Since the installation of the current monitoring well network in 2012, CVOC concentrations have continued to decrease below GW-1 criteria in the majority of monitoring wells. Sampling frequencies for monitoring wells are reviewed periodically and adjusted, as appropriate. The Southern Area groundwater monitoring plan was last updated in the May 2021 ROS Report.

For reference, the full groundwater monitoring plan, is outlined below:

Current Groundwater Monitoring Plan

CVOC Sampling Frequency	Monitoring Wells
Semiannual	MW-217M, MW-1005, MW-1010M, MW-1014, MW-1015D, MW-1028, MW-1032, MW-1034
Biennial	MW-217D, MW-1001M, MW-1002M, MW-1003, MW-1004, MW-1006, MW-1008, MW-1010D, MW-1016D, MW-1017D, MW-1019B, MW-1022, MW-1023, MW-1030, MW-1038, MW-1039, MW-1040, SEN-1D

CVOC Sampling Frequency	Monitoring Wells
Discontinue	MW-217S, MW-1001B, MW-1002B, MW-1009, MW-1011, MW-1013, MW-1018, MW-1020, MW-1024D, MW-1025D, MW-1025M, MW-1026D, MW-1027, MW-1031, MW-1033, MW-1035, MW-1036, MW-1037, SEN-1M, SEN-2M, SEN-2D, SEN-3

If you have any questions or comments in regards to this submittal, please contact the undersigned at (617) 646-7800.

Sincerely,

John C. Drobinski, P.G., LSP
Partner

Dena Tomassi
Interim Project Manager

cc: Jonathan Hone, Raytheon
Linda Hansen, Town of Wayland Conservation Commission
Tim Skehan, Russell's Garden Center
David Costello, National Development
Dave Falatko, IESI
Public Repositories

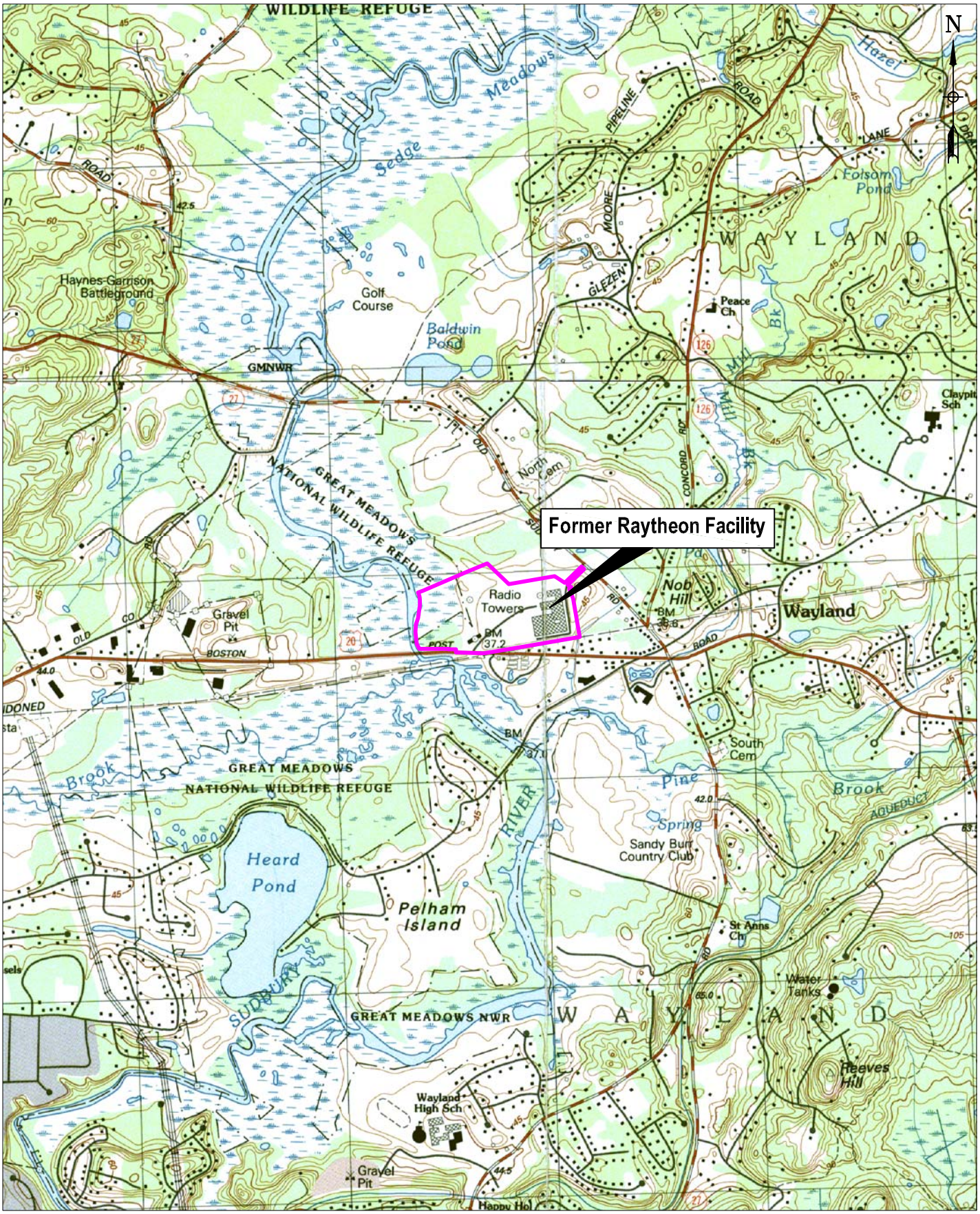
Attachments:

Figures:

Tables:

Appendices:

FIGURES



Legend

Former Raytheon Facility Property Boundary

Figure 1 - Site Locus Map
Former Raytheon Facility

Scale = 1:25,000

ERM

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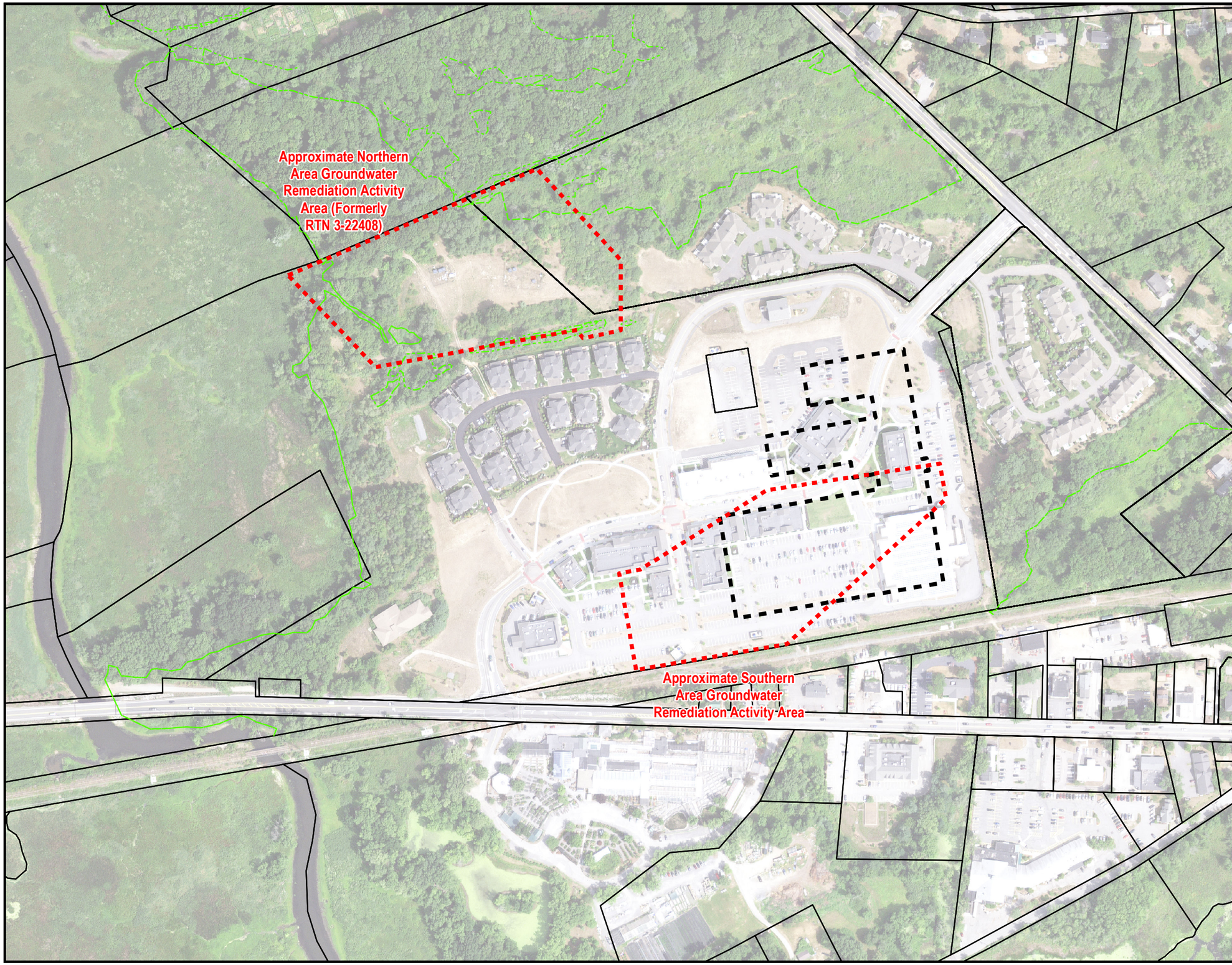

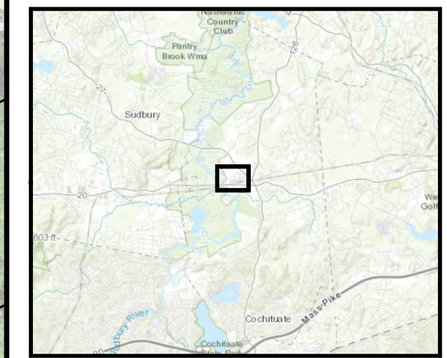

Legend

- Approximate Remediation Activity Area
- Approximate Former Building Footprint
- Delineated Wetland Boundary
- Parcel Outlines

N

0 50 100 200 300 400 500 Feet

Figure 2: Remediation Site Plan
Former Raytheon Facility
Wayland, MA

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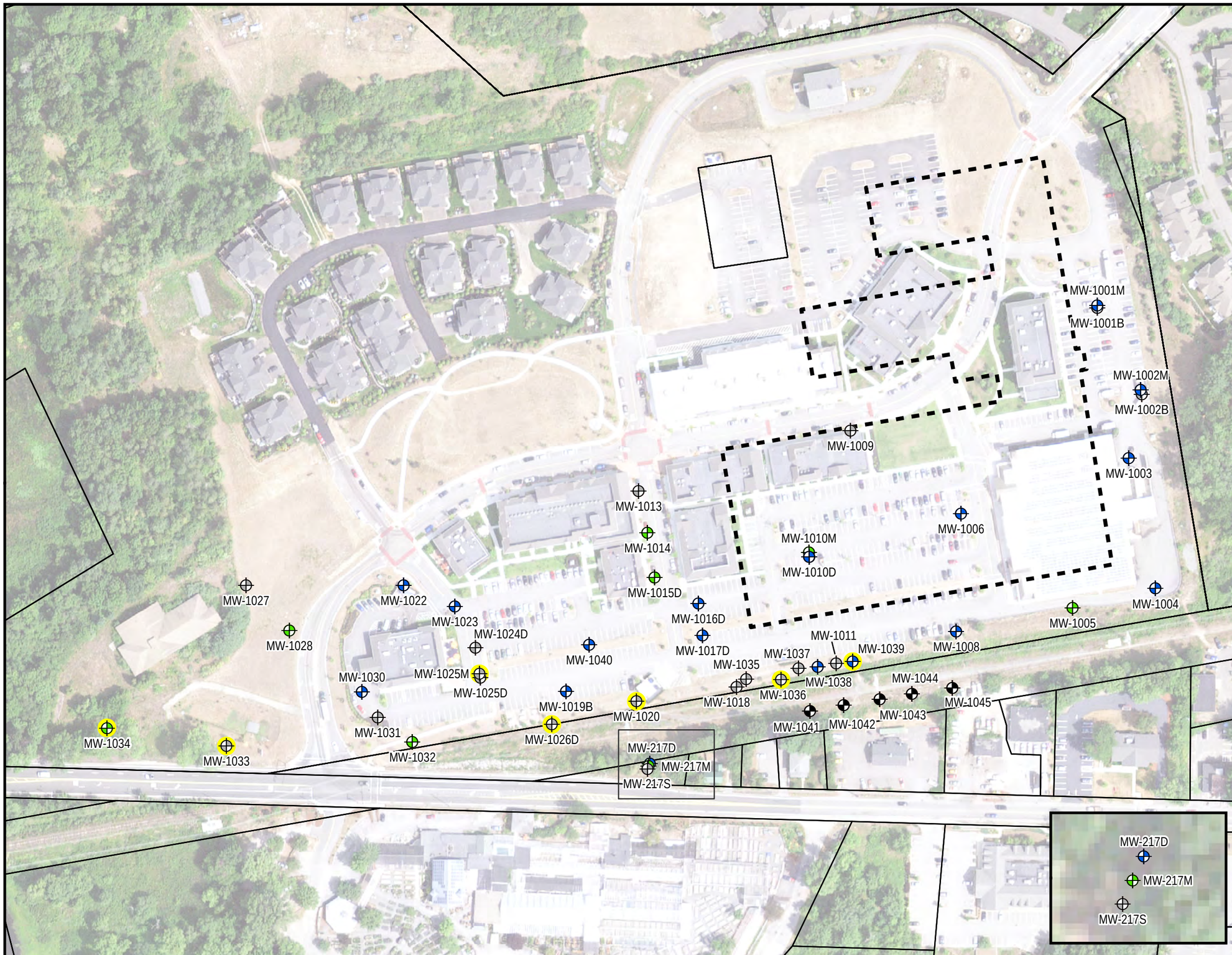

Legend

- Approximate Former Building Footprint
- Parcel Outlines
- Monitoring Well Locations

VOC Sampling Frequency

- Semiannual
- Annual
- Biennial
- Discontinued
- Not sampled as part of ROS

1,4-Dioxane Sampling Frequency

- Annual

NOTES:
- VOC: Volatile Organic Compound
- ROS: Remedy Operation Status

N

0 25 50 100 150 200 250
Feet

Figure 3: Monitoring Well Locations - Southern Area
Former Raytheon Facility
Wayland, MA

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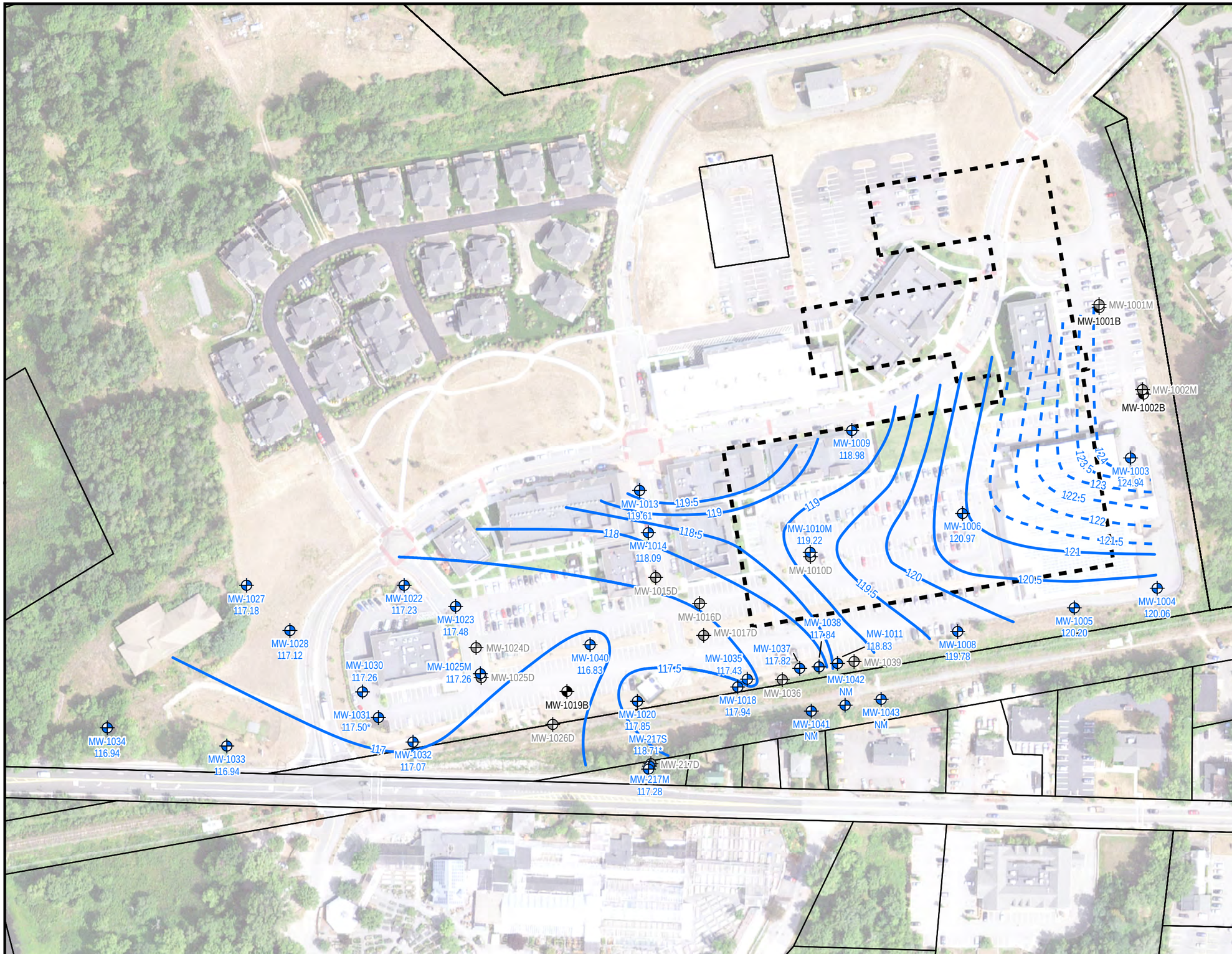

Legend

- Parcel Boundary
- Approximate Former Building Footprint

September 2021 Groundwater Elevation (ft ASL)

- Monitoring Well Screened in Upper Hydrogeologic Unit
- Monitoring Well Screened in Lower Hydrogeologic Unit
- Monitoring Well Screened in Bedrock
- NM Not Measured
- Upper Potentiometric Surface Contour

NOTES:
- Groundwater Elevation measured on September 14 and 15, 2021. Labeled as feet above sea level (ASL).
- Contours dashed where inferred
* = Elevation data not used for contouring

N

0 25 50 100 150 200 250 Feet

Figure 4A: September 2021 Generalized Upper Potentiometric Surface Southern Area
Former Raytheon Facility
Wayland, MA

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Legend

- Parcel Boundary
- Approximate Former Building Footprint

September 2021 Groundwater Elevation (ft ASL)

- Monitoring Well Screened in Lower Hydrogeologic Unit
- Monitoring Well Screened in Upper Hydrogeologic Unit
- Monitoring Well Screened in Bedrock
- NM Not Measured
- Lower Potentiometric Surface Contour (Dashed where inferred)

NOTES:
- Groundwater Elevation measured on September 14 and 15, 2021. Labeled as feet above sea level (ASL).

N

0 25 50 100 150 200 250 Feet

Figure 4B: September 2021 Generalized Lower Potentiometric Surface Southern Area
Former Raytheon Facility
Wayland, MA

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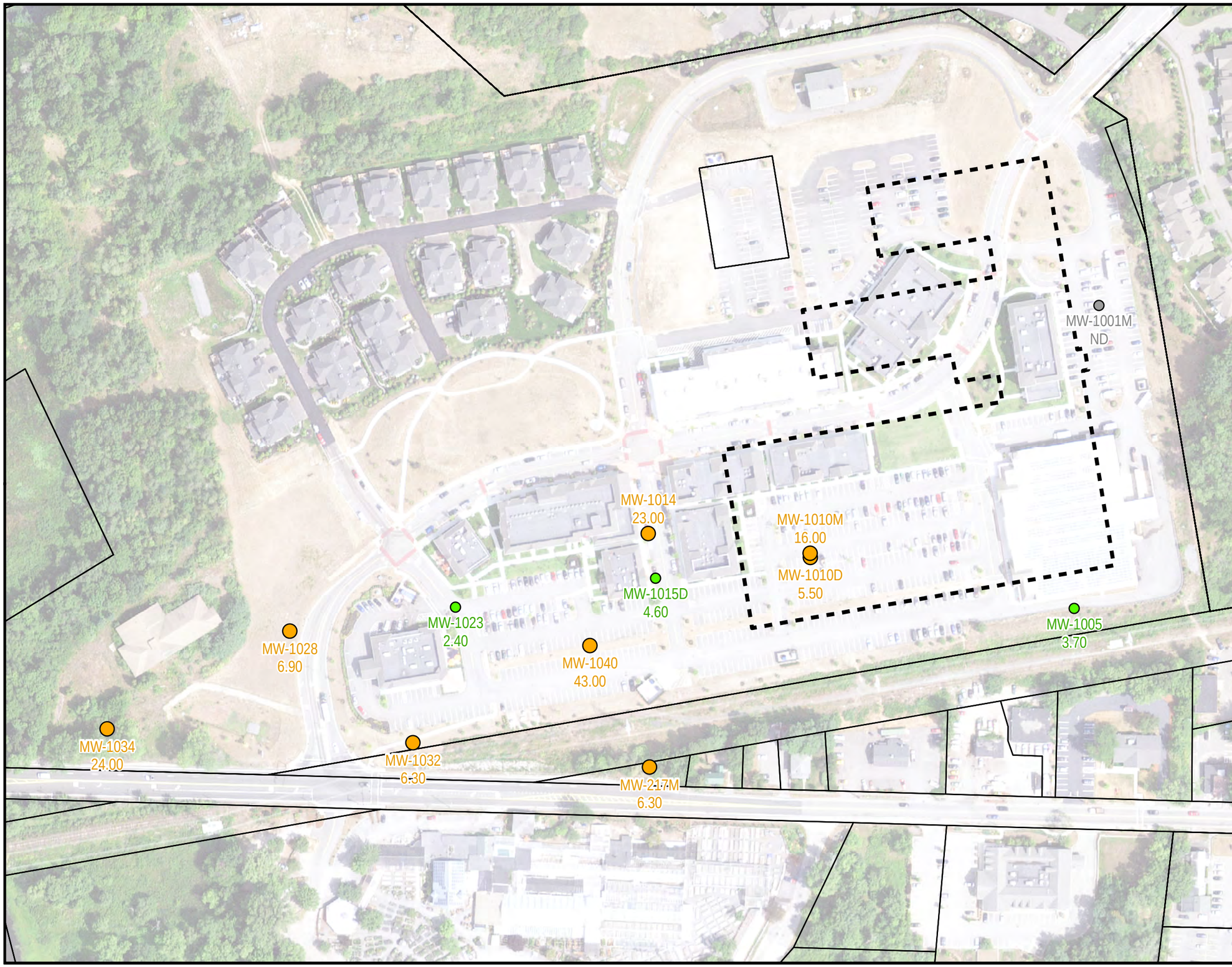

Legend

- Approximate Former Building Footprint
- Parcel Outlines

September 2021 TCE Concentrations in Groundwater (ug/L)

- Non-detect
- Below GW 1 Criteria (<5 ug/L)
- Exceeds GW 1 Criteria (≥5 ug/L)

MW-1008 - Well ID
3.9 - TCE Concentration (µg/L)

NOTES:
- Locations sampled on 14 September 2021
- ug/L = micrograms per liter

N

0 25 50 100 150 200 250 Feet

Figure 5: September 2021 TCE Concentrations in Groundwater - Southern Area
Former Raytheon Facility
Wayland, MA

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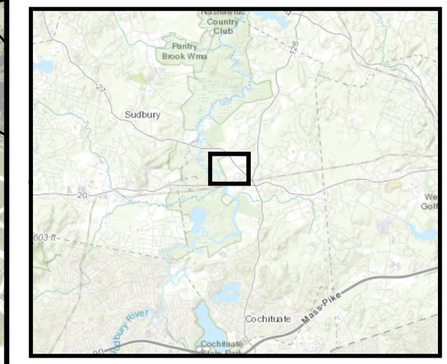

Legend

- Sentinel Well Location
- Approximate Former Building Footprint
- Parcel Boundary

N

0 50100 200 300 400 500 Feet

Figure 6: Sentinel Well Locations
Former Raytheon Facility
Wayland, MA

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TABLES

Table 1
Summary of Groundwater Gauging Data - Southern Area
Former Raytheon Facility
Wayland, Massachusetts

Well	Measurement Date	Historical Reference Elevation (feet above sea level)	Depth to Water (feet below top of casing)	Groundwater Elevation (feet above sea level)
MW-1001B	15-Sep-21	135.11	0.40	134.71
	01-Apr-21	135.11	0.55	134.56
	09-Sep-20	135.11	2.06	133.05
	31-Mar-20	135.11	0.10	135.01
MW-1001M	15-Sep-21	135.06	13.93	121.13
	01-Apr-21	135.06	14.95	120.11
	09-Sep-20	135.06	16.19	118.87
	31-Mar-20	135.06	14.24	120.82
MW-1002B	15-Sep-21	135.44	15.07	120.37
	01-Apr-21	135.44	15.68	119.76
	09-Sep-20	135.44	17.36	118.08
	02-Apr-20	135.44	15.26	120.18
MW-1002M	15-Sep-21	135.57	14.00	121.57
	01-Apr-21	135.57	14.47	121.10
	09-Sep-20	135.57	16.12	119.45
MW-1003	15-Sep-21	132.53	7.59	124.94
	01-Apr-21	132.53	13.03	119.50
	09-Sep-20	132.53	13.78	118.75
	31-Mar-20	132.53	11.57	120.96
MW-1004	14-Sep-21	134.61	14.55	120.06
	01-Apr-21	134.61	16.03	118.58
	09-Sep-20	134.61	16.71	117.90
	31-Mar-20	134.61	14.56	120.05
MW-1005	15-Sep-21	134.28	14.08	120.20
	01-Apr-21	134.28	15.06	119.22
	09-Sep-20	134.28	16.44	117.84
	31-Mar-20	134.28	14.18	120.10
MW-1006	14-Sep-21	135.21	14.24	120.97
	01-Apr-21	135.21	15.78	119.43
	09-Sep-20	135.21	16.21	119.00
	31-Mar-20	135.21	14.72	120.49
MW-1008	15-Sep-21	134.84	15.06	119.78
	01-Apr-21	134.84	15.74	119.10
	10-Sep-20	134.84	17.39	117.45
	01-Apr-20	134.84	14.98	119.86
MW-1009	15-Sep-21	134.66	15.68	118.98
	02-Apr-21	134.66	16.49	118.17
	10-Sep-20	134.66	18.36	116.30
	31-Mar-20	134.66	15.89	118.77
MW-1010D	15-Sep-21	133.40	14.83	118.57
	01-Apr-21	133.40	16.53	116.87
	09-Sep-20	133.40	17.85	115.55
	31-Mar-20	133.40	15.27	118.13
MW-1010M	15-Sep-21	133.43	14.21	119.22
	01-Apr-21	133.43	15.96	117.47
	09-Sep-20	133.43	16.71	116.72
	31-Mar-20	133.43	14.84	118.59
MW-1011	15-Sep-21	133.18	14.35	118.83
	02-Apr-21	133.18	14.96	118.22
	09-Sep-20	133.18	16.23	116.95
	31-Mar-20	133.18	14.77	118.41
MW-1013	15-Sep-21	133.26	13.65	119.61
	02-Apr-21	133.26	14.61	118.65
	09-Sep-20	133.26	15.38	117.88
	31-Mar-20	133.26	14.19	119.07
MW-1014	15-Sep-21	133.37	15.28	118.09
	02-Apr-21	133.37	16.31	117.06
	09-Sep-20	133.37	18.48	114.89
	31-Mar-20	133.37	15.82	117.55
MW-1015D	15-Sep-21	133.61	15.48	118.13
	02-Apr-21	133.61	16.58	117.03
	09-Sep-20	133.61	18.63	114.98
	31-Mar-20	133.61	15.97	117.64
MW-1016D	14-Sep-21	133.40	15.16	118.24
	02-Apr-21	133.40	16.38	117.02
	09-Sep-20	133.40	18.46	114.94
	31-Mar-20	133.40	15.77	117.63
MW-1017D	14-Sep-21	133.15	15.04	118.11
	02-Apr-21	133.15	16.03	117.12
	09-Sep-20	133.15	18.15	115.00
	31-Mar-20	133.15	15.52	117.63

Table 1
Summary of Groundwater Gauging Data - Southern Area
Former Raytheon Facility
Wayland, Massachusetts

Well	Measurement Date	Historical Reference Elevation (feet above sea level)	Depth to Water (feet below top of casing)	Groundwater Elevation (feet above sea level)
MW-1018	15-Sep-21	133.55	15.61	117.94
	02-Apr-21	133.55	16.38	117.17
	09-Sep-20	133.55	18.82	114.73
	31-Mar-20	133.55	16.32	117.23
MW-1019B	15-Sep-21	131.51	13.40	118.11
	02-Apr-21	131.51	14.69	116.82
	10-Sep-20	131.51	16.61	114.90
	31-Mar-20	131.51	14.38	117.13
MW-1020	15-Sep-21	132.92	15.07	117.85
	02-Apr-21	132.92	16.49	116.43
	10-Sep-20	132.92	18.97	113.95
	01-Apr-20	132.92	16.19	116.73
MW-1022	15-Sep-21	132.22	14.99	117.23
	01-Apr-21	132.22	16.32	115.90
	10-Sep-20	132.22	18.82	113.40
	31-Mar-20	132.22	15.77	116.45
MW-1023	15-Sep-21	131.76	14.28	117.48
	10-Sep-20	131.76	18.38	113.38
	31-Mar-20	131.76	15.35	116.41
MW-1024D	15-Sep-21	130.66	12.86	117.80
	01-Apr-21	130.66	14.05	116.61
	10-Sep-20	130.66	16.19	114.47
	31-Mar-20	130.66	13.56	117.10
MW-1025D	15-Sep-21	130.92	13.26	117.66
	01-Apr-21	130.92	14.13	116.79
	10-Sep-20	130.92	16.46	114.46
	31-Mar-20	130.92	13.66	117.26
MW-1025M	15-Sep-21	130.75	13.49	117.26
	01-Apr-21	130.75	14.81	115.94
	10-Sep-20	130.75	17.31	113.44
	01-Apr-20	130.75	14.37	116.38
MW-1026D	15-Sep-21	131.55	13.88	117.67
	01-Apr-21	131.55	14.84	116.71
	10-Sep-20	131.55	17.02	114.53
	31-Mar-20	131.55	14.30	117.25
MW-1027	14-Sep-21	126.87	9.69	117.18
	01-Apr-21	126.87	11.25	115.62
	09-Sep-20	126.87	13.66	113.21
	31-Mar-20	126.87	10.56	116.31
MW-1028	15-Sep-21	127.99	10.87	117.12
	01-Apr-21	127.99	12.44	115.55
	09-Sep-20	127.99	14.83	113.16
	31-Mar-20	127.99	11.78	116.21
MW-1030	14-Sep-21	131.51	14.25	117.26
	01-Apr-21	131.51	15.79	115.72
	09-Sep-20	131.51	18.23	113.28
	31-Mar-20	131.51	15.17	116.34
MW-1031	14-Sep-21	130.56	13.06	117.50
	01-Apr-21	130.56	15.02	115.54
	09-Sep-20	130.56	17.29	113.27
	31-Mar-20	130.56	14.36	116.20
MW-1032	15-Sep-21	130.08	13.01	117.07
	01-Apr-21	130.08	14.54	115.54
	09-Sep-20	130.08	16.90	113.18
	31-Mar-20	130.08	13.94	116.14
MW-1033	14-Sep-21	119.99	3.05	116.94
	01-Apr-21	119.99	4.46	115.53
	10-Sep-20	119.99	7.05	112.94
	01-Apr-20	119.99	3.86	116.13
MW-1034	15-Sep-21	123.20	6.26	116.94
	01-Apr-21	123.20	7.82	115.38
	09-Sep-20	123.20	10.23	112.97
	31-Mar-20	123.20	7.02	116.18
MW-1035	15-Sep-21	132.35	14.92	117.43
	01-Apr-21	132.35	15.94	116.41
	09-Sep-20	132.35	18.43	113.92
	31-Mar-20	132.35	15.78	116.57
MW-1036	15-Sep-21	132.70	14.98	117.72
	01-Apr-21	132.70	15.79	116.91
	09-Sep-20	132.70	18.12	114.58
	01-Apr-20	132.70	15.51	117.19

Table 1
Summary of Groundwater Gauging Data - Southern Area
Former Raytheon Facility
Wayland, Massachusetts

Well	Measurement Date	Historical Reference Elevation (feet above sea level)	Depth to Water (feet below top of casing)	Groundwater Elevation (feet above sea level)
MW-1037	15-Sep-21	132.70	14.88	117.82
	01-Apr-21	132.70	15.71	116.99
	09-Sep-20	132.70	18.17	114.53
	31-Mar-20	132.70	15.65	117.05
MW-1038	15-Sep-21	132.03	14.19	117.84
	01-Apr-21	132.03	14.86	117.17
	09-Sep-20	132.03	17.38	114.65
	31-Mar-20	132.03	14.81	117.22
MW-1039	15-Sep-21	131.14	13.14	118.00
	01-Apr-21	131.14	14.54	116.60
	09-Sep-20	131.14	16.02	115.12
	01-Apr-20	131.14	13.43	117.71
MW-1040	15-Sep-21	130.97	14.14	116.83
	01-Apr-21	130.97	15.56	115.41
	10-Sep-20	130.97	18.02	112.95
	02-Apr-20	130.97	15.23	115.74
MW-217D	14-Sep-21	129.87	12.06	117.81
	02-Apr-21	129.87	13.17	116.70
	09-Sep-20	129.87	15.30	114.57
	31-Mar-20	129.87	13.63	116.24
MW-217M	15-Sep-21	130.21	12.93	117.28
	02-Apr-21	130.21	13.50	116.71
	09-Sep-20	130.21	16.14	114.07
	31-Mar-20	130.21	13.29	116.92
MW-217S	14-Sep-21	130.44	11.73	118.71
	02-Apr-21	130.44	12.79	117.65
	09-Sep-20	130.44	15.53	114.91
	31-Mar-20	130.44	12.67	117.77

Table 2
Summary of Groundwater Analytical Data - Southern Area
Former Raytheon Facility
Wayland, Massachusetts

	Location ID	MW-1001B	MW-1001M	MW-1001M	MW-1001M	MW-1001M	MW-1001M	MW-1001M	MW-1002B
	Sample Date	9/5/2018	9/5/2018	8/21/2019	3/31/2020	9/9/2020	3/31/2021	9/14/2021	9/5/2018
	Sample Type	N	N	N	N	N	N	N	N
Analyte	**MA-GW-1-2020**								
1,4-Dioxane, Method EPA522, µg/L									
1,4-Dioxane	**0.3**								
VOC, Method 8260, µg/L									
1,1,1-Trichloroethane	200	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethane	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethene	7	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,2-Dichlorobenzene	600	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
2-Butanone	4000	*< 10 **	*< 10 **	*< 10 **	*< 10 **	*< 10 **	*< 10 *+*	*< 10 *+*	*< 10 **
Acetone	6300	*< 50*	*< 50*	*< 50*	170	*< 50*	*< 50*	*< 50 *1*	*< 50*
Chloroform	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
cis-1,2-Dichloroethene	70	*< 1.0*	17	16	*< 1.0*	17	2.1	*< 1.0*	*< 1.0*
Ethyl ether		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Methyl tert-butyl ether	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
tert-Amyl Methyl Ether		*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0 *1*	*< 5.0*
Tetrachloroethene	5	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Toluene	1000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
trans-1,2-Dichloroethene	100	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Trichloroethene	**5**	*< 1.0*	4.7	3.7	*< 1.0*	3.7	*< 1.0*	*< 1.0*	*< 1.0*
Trichlorofluoromethane (Freon 11)		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = not analyzed
FD = Field Duplicate Sample
N = Normal Environmental Sample
ug/L = micrograms per liter
MA-GW-1-2020 = Massachusetts Contingency Plan, 310 CMR 40, Method 1 Groundwater Standards, Category GW-1, 2020.
* = LCS or LCSD is outside acceptance limits.
+ = High biased.
*1 = LCS/LCSD RPD exceeds control limits.
F1 = Indicates MS and/or MSD Recovery is outside acceptance limits.

All analyses performed by TestAmerica - Buffalo, NY

Table 2
Summary of Groundwater Analytical Data - Southern Area
Former Raytheon Facility
Wayland, Massachusetts

	Location ID	MW-1002M	MW-1002M	MW-1002M	MW-1002M	MW-1003	MW-1003	MW-1003	MW-1003
	Sample Date	9/5/2018	8/21/2019	9/9/2020	3/31/2021	9/5/2018	4/3/2019	8/21/2019	3/31/2020
	Sample Type	N	N	N	N	N	N	N	N
Analyte	**MA-GW-1-2020**								
1,4-Dioxane, Method EPA522, µg/L									
1,4-Dioxane	**0.3**								
VOC, Method 8260, µg/L									
1,1,1-Trichloroethane	200	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethane	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethene	7	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,2-Dichlorobenzene	600	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
2-Butanone	4000	*< 10 **	*< 10 **	*< 10 **	*< 10 *+*	*< 10 **	*< 10 **	*< 10 **	*< 10 **
Acetone	6300	*< 50*	*< 50*	110	*< 50*	*< 50*	64 *	*< 50*	150
Chloroform	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
cis-1,2-Dichloroethene	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	3.0	1.1	3.0	*< 1.0*
Ethyl ether		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Methyl tert-butyl ether	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
tert-Amyl Methyl Ether		*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*
Tetrachloroethene	5	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Toluene	1000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
trans-1,2-Dichloroethene	100	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Trichloroethene	**5**	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	**6.1**	2.1	4.5	*< 1.0*
Trichlorofluoromethane (Freon 11)		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = not analyzed
FD = Field Duplicate Sample
N = Normal Environmental Sample
ug/L = micrograms per liter
MA-GW-1-2020 = Massachusetts Contingency Plan, 310 CMR 40, Method 1 Groundwater Standards, Category GW-1, 2020.
* = LCS or LCSD is outside acceptance limits.
+ = High biased.
*1 = LCS/LCSD RPD exceeds control limits.
F1 = Indicates MS and/or MSD Recovery is outside acceptance limits.

All analyses performed by TestAmerica - Buffalo, NY

Table 2
Summary of Groundwater Analytical Data - Southern Area
Former Raytheon Facility
Wayland, Massachusetts

	Location ID	MW-1003	MW-1003	MW-1004	MW-1004	MW-1004	MW-1004
	Sample Date	9/9/2020	3/31/2021	9/5/2018	4/3/2019	3/31/2020	4/28/2021
	Sample Type	N	N	N	N	N	N
Analyte	**MA-GW-1-2020**						
1,4-Dioxane, Method EPA522, µg/L							
1,4-Dioxane	**0.3**						
VOC, Method 8260, µg/L							
1,1,1-Trichloroethane	200	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethane	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethene	7	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,2-Dichlorobenzene	600	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
2-Butanone	4000	*< 10 **	*< 10 *+*	*< 10 **	*< 10 **	*< 10 **	17 *+
Acetone	6300	*< 50*	*< 50*	*< 50*	*< 50 **	140	*< 50*
Chloroform	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
cis-1,2-Dichloroethene	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Ethyl ether		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Methyl tert-butyl ether	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
tert-Amyl Methyl Ether		*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*
Tetrachloroethene	5	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Toluene	1000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
trans-1,2-Dichloroethene	100	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Trichloroethene	**5**	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Trichlorofluoromethane (Freon 11)		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = not analyzed
FD = Field Duplicate Sample
N = Normal Environmental Sample
ug/L = micrograms per liter
MA-GW-1-2020 = Massachusetts Contingency Plan, 310 CMR 40, Method 1 Groundwater Standards, Category GW-1, 2020.
* = LCS or LCSD is outside acceptance limits.
+ = High biased.
*1 = LCS/LCSD RPD exceeds control limits.
F1 = Indicates MS and/or MSD Recovery is outside acceptance limits.

All analyses performed by TestAmerica - Buffalo, NY

Table 2
Summary of Groundwater Analytical Data - Southern Area
Former Raytheon Facility
Wayland, Massachusetts

	Location ID	MW-1005	MW-1005	MW-1005	MW-1005	MW-1005	MW-1005	MW-1005	MW-1005	MW-1005
	Sample Date	9/5/2018	9/5/2018	4/3/2019	4/3/2019	8/21/2019	3/31/2020	9/9/2020	3/31/2021	9/14/2021
	Sample Type	FD	N	FD	N	N	N	N	N	N
Analyte	**MA-GW-1-2020**									
1,4-Dioxane, Method EPA522, µg/L										
1,4-Dioxane	**0.3**									
VOC, Method 8260, µg/L										
1,1,1-Trichloroethane	200	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethane	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethene	7	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,2-Dichlorobenzene	600	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
2-Butanone	4000	*< 10 **	*< 10 **	*< 10 **	*< 10 **	*< 10 **	*< 10 **	*< 10 **	*< 10 *+F1*	*< 10 *+*
Acetone	6300	*< 50*	*< 50*	*< 50*	*< 50 **	*< 50*	140	*< 50*	*< 50*	73 *1
Chloroform	70	1.1	1.1	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
cis-1,2-Dichloroethene	70	4.5	5.5	8.4	8.2	13	9.4	13	3.8	11
Ethyl ether		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Methyl tert-butyl ether	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
tert-Amyl Methyl Ether		*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0 *1*
Tetrachloroethene	5	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Toluene	1000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
trans-1,2-Dichloroethene	100	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Trichloroethene	**5**	**7.0**	**7.2**	**5.2**	**5.3**	**5.2**	**5.5**	4.7	3.4	3.7
Trichlorofluoromethane (Freon 11)		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = not analyzed
FD = Field Duplicate Sample
N = Normal Environmental Sample
ug/L = micrograms per liter
MA-GW-1-2020 = Massachusetts Contingency Plan, 310 CMR 40, Method 1 Groundwater Standards, Category GW-1, 2020.
* = LCS or LCSD is outside acceptance limits.
+ = High biased.
*1 = LCS/LCSD RPD exceeds control limits.
F1 = Indicates MS and/or MSD Recovery is outside acceptance limits.

All analyses performed by TestAmerica - Buffalo, NY

Table 2
Summary of Groundwater Analytical Data - Southern Area
Former Raytheon Facility
Wayland, Massachusetts

	Location ID	MW-1006	MW-1006	MW-1006	MW-1008	MW-1008	MW-1008	MW-1008	MW-1009
	Sample Date	9/5/2018	4/3/2019	3/31/2021	9/5/2018	4/4/2019	4/1/2020	3/31/2021	9/5/2018
	Sample Type	N	N	N	N	N	N	N	N
Analyte	**MA-GW-1-2020**								
1,4-Dioxane, Method EPA522, µg/L									
1,4-Dioxane	**0.3**								
VOC, Method 8260, µg/L									
1,1,1-Trichloroethane	200	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethane	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethene	7	1.0	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,2-Dichlorobenzene	600	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
2-Butanone	4000	*< 10 **	*< 10 **	*< 10 *+*	*< 10 **	*< 50*	*< 10 **	*< 10 *+*	*< 10 **
Acetone	6300	*< 50*	*< 50 **	*< 50*	*< 50*	*< 25*	*< 50*	*< 50*	*< 50*
Chloroform	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
cis-1,2-Dichloroethene	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Ethyl ether		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 5.0*	*< 1.0*	*< 1.0*	*< 1.0*
Methyl tert-butyl ether	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
tert-Amyl Methyl Ether		*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 1.0*	*< 5.0*	*< 5.0*	*< 5.0*
Tetrachloroethene	5	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Toluene	1000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
trans-1,2-Dichloroethene	100	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Trichloroethene	**5**	4.4	4.0	3.5	3.2	2.4	3.8	3.3	*< 1.0*
Trichlorofluoromethane (Freon 11)		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	15

Notes:
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Empty cells = not analyzed
FD = Field Duplicate Sample
N = Normal Environmental Sample
ug/L = micrograms per liter
MA-GW-1-2020 = Massachusetts Contingency Plan, 310 CMR 40, Method 1 Groundwater Standards, Category GW-1, 2020.
* = LCS or LCSD is outside acceptance limits.
+ = High biased.
*1 = LCS/LCSD RPD exceeds control limits.
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All analyses performed by TestAmerica - Buffalo, NY

Table 2
Summary of Groundwater Analytical Data - Southern Area
Former Raytheon Facility
Wayland, Massachusetts

	Location ID	MW-1009	MW-217D	MW-217D	MW-217D	MW-217M	MW-217M	MW-217M	MW-217M
	Sample Date	4/4/2019	9/5/2018	9/5/2019	4/28/2021	9/5/2018	4/3/2019	8/21/2019	3/31/2020
	Sample Type	N	N	N	N	N	N	N	N
Analyte	**MA-GW-1-2020**								
1,4-Dioxane, Method EPA522, µg/L									
1,4-Dioxane	**0.3**								
VOC, Method 8260, µg/L									
1,1,1-Trichloroethane	200	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethane	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	2.8	2.7	1.2	2.4
1,1-Dichloroethene	7	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,2-Dichlorobenzene	600	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	1.0	1.1	*< 1.0*	1.5
2-Butanone	4000	*< 50*	*< 10 **	*< 10 **	17 *+	*< 10 **	*< 10 **	*< 10 **	*< 10 **
Acetone	6300	*< 25*	*< 50*	*< 50*	*< 50*	*< 50*	*< 50 **	*< 50*	110
Chloroform	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
cis-1,2-Dichloroethene	70	*< 1.0*	*< 1.0*	2.2	1.7	1.2	1.0	*< 1.0*	1.2
Ethyl ether		*< 5.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Methyl tert-butyl ether	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	51	56	48	57
tert-Amyl Methyl Ether		*< 1.0*	*< 5.0*	*< 5.0*	*< 5.0*	21	22	22	20
Tetrachloroethene	5	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Toluene	1000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
trans-1,2-Dichloroethene	100	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Trichloroethene	**5**	*< 1.0*	2.0	3.8	2.1	**6.4**	**6.9**	3.9	**7.6**
Trichlorofluoromethane (Freon 11)		11	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = not analyzed
FD = Field Duplicate Sample
N = Normal Environmental Sample
ug/L = micrograms per liter
MA-GW-1-2020 = Massachusetts Contingency Plan, 310 CMR 40, Method 1 Groundwater Standards, Category GW-1, 2020.
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All analyses performed by TestAmerica - Buffalo, NY

Table 2
Summary of Groundwater Analytical Data - Southern Area
Former Raytheon Facility
Wayland, Massachusetts

	Location ID	MW-217M	MW-217M	MW-217M	MW-217M	MW-217S	MW-217S	MW-1010D	MW-1010D
	Sample Date	9/9/2020	4/1/2021	9/14/2021	9/14/2021	9/5/2018	4/3/2019	9/5/2018	4/3/2019
	Sample Type	N	N	FD	N	N	N	N	N
Analyte	**MA-GW-1-2020**								
1,4-Dioxane, Method EPA522, µg/L									
1,4-Dioxane	**0.3**								
VOC, Method 8260, µg/L									
1,1,1-Trichloroethane	200	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethane	70	1.3	1.9	2.2	2.2	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethene	7	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,2-Dichlorobenzene	600	*< 1.0*	1.3	1.3	1.2	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
2-Butanone	4000	*< 10 **	10 *+	*< 10 *+*	*< 10 *+*	*< 10 **	*< 10 **	*< 10 **	*< 10 **
Acetone	6300	*< 50*	*< 50*	*< 50 *1*	*< 50 *1*	*< 50*	*< 50 **	*< 50*	*< 50 **
Chloroform	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
cis-1,2-Dichloroethene	70	*< 1.0*	1.0	1.3	1.4	*< 1.0*	*< 1.0*	8.5	*< 1.0*
Ethyl ether		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Methyl tert-butyl ether	70	43	42	35	36	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
tert-Amyl Methyl Ether		19	17	15 *1	15 *1	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*
Tetrachloroethene	5	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Toluene	1000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
trans-1,2-Dichloroethene	100	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Trichloroethene	**5**	4.7	**5.9**	**6.3**	**6.3**	*< 1.0*	*< 1.0*	**20**	4.1
Trichlorofluoromethane (Freon 11)		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = not analyzed
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N = Normal Environmental Sample
ug/L = micrograms per liter
MA-GW-1-2020 = Massachusetts Contingency Plan, 310 CMR 40, Method 1 Groundwater Standards, Category GW-1, 2020.
* = LCS or LCSD is outside acceptance limits.
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*1 = LCS/LCSD RPD exceeds control limits.
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All analyses performed by TestAmerica - Buffalo, NY

Table 2
Summary of Groundwater Analytical Data - Southern Area
Former Raytheon Facility
Wayland, Massachusetts

	Location ID	MW-1010D	MW-1010D	MW-1010D	MW-1010D	MW-1010D	MW-1010M	MW-1010M	MW-1010M
	Sample Date	8/21/2019	3/31/2020	9/9/2020	3/31/2021	9/14/2021	9/5/2018	4/3/2019	8/21/2019
	Sample Type	N	N	N	N	N	N	N	FD
Analyte	**MA-GW-1-2020**								
1,4-Dioxane, Method EPA522, µg/L									
1,4-Dioxane	**0.3**								
VOC, Method 8260, µg/L									
1,1,1-Trichloroethane	200	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethane	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethene	7	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,2-Dichlorobenzene	600	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
2-Butanone	4000	*< 10 **	*< 10 **	*< 10 **	*< 10 *+*	*< 10 *+*	*< 10 **	*< 10 **	*< 10 **
Acetone	6300	*< 50*	91	*< 50*	*< 50*	*< 50 *1*	*< 50*	*< 50 **	*< 50*
Chloroform	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
cis-1,2-Dichloroethene	70	*< 1.0*	*< 1.0*	*< 1.0*	1.8	2.4	*< 1.0*	*< 1.0*	*< 1.0*
Ethyl ether		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Methyl tert-butyl ether	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
tert-Amyl Methyl Ether		*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0 *1*	*< 5.0*	*< 5.0*	*< 5.0*
Tetrachloroethene	5	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Toluene	1000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
trans-1,2-Dichloroethene	100	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Trichloroethene	**5**	*< 1.0*	*< 1.0*	*< 1.0*	3.7	**5.5**	**13**	**11**	**10**
Trichlorofluoromethane (Freon 11)		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = not analyzed
FD = Field Duplicate Sample
N = Normal Environmental Sample
ug/L = micrograms per liter
MA-GW-1-2020 = Massachusetts Contingency Plan, 310 CMR 40, Method 1 Groundwater Standards, Category GW-1, 2020.
* = LCS or LCSD is outside acceptance limits.
+ = High biased.
*1 = LCS/LCSD RPD exceeds control limits.
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All analyses performed by TestAmerica - Buffalo, NY

Table 2
Summary of Groundwater Analytical Data - Southern Area
Former Raytheon Facility
Wayland, Massachusetts

	Location ID	MW-1010M	MW-1010M	MW-1010M	MW-1010M	MW-1010M	MW-1010M	MW-1010M	MW-1010M
	Sample Date	8/21/2019	3/31/2020	3/31/2020	9/9/2020	9/9/2020	3/31/2021	3/31/2021	9/14/2021
	Sample Type	N	FD	N	FD	N	FD	N	FD
Analyte	**MA-GW-1-2020**								
1,4-Dioxane, Method EPA522, µg/L									
1,4-Dioxane	**0.3**								
VOC, Method 8260, µg/L									
1,1,1-Trichloroethane	200	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethane	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethene	7	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,2-Dichlorobenzene	600	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
2-Butanone	4000	*< 10 **	*< 10 **	*< 10 **	*< 10 **	*< 10 **	*< 10 *+*	*< 10 *+*	*< 10 *+*
Acetone	6300	*< 50*	130	170	*< 50*	*< 50*	*< 50*	*< 50*	79 *1
Chloroform	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
cis-1,2-Dichloroethene	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Ethyl ether		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Methyl tert-butyl ether	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
tert-Amyl Methyl Ether		*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0 *1*
Tetrachloroethene	5	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Toluene	1000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
trans-1,2-Dichloroethene	100	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Trichloroethene	**5**	**11**	**5.7**	**6.4**	**13**	**14**	**12**	**12**	**15**
Trichlorofluoromethane (Freon 11)		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*

Notes:
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N = Normal Environmental Sample
ug/L = micrograms per liter
MA-GW-1-2020 = Massachusetts Contingency Plan, 310 CMR 40, Method 1 Groundwater Standards, Category GW-1, 2020.
* = LCS or LCSD is outside acceptance limits.
+ = High biased.
*1 = LCS/LCSD RPD exceeds control limits.
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All analyses performed by TestAmerica - Buffalo, NY

Table 2
Summary of Groundwater Analytical Data - Southern Area
Former Raytheon Facility
Wayland, Massachusetts

Analyte	Location ID Sample Date Sample Type MA-GW-1-2020	MW-1010M 9/14/2021 N	MW-1011 9/5/2018 N	MW-1011 4/3/2019 N	MW-1013 9/5/2018 N	MW-1013 4/4/2019 N	MW-1013 3/31/2020 N	MW-1013 3/31/2021 N	MW-1014 9/5/2018 N
1,4-Dioxane, Method EPA522, µg/L									
1,4-Dioxane	**0.3**								
VOC, Method 8260, µg/L									
1,1,1-Trichloroethane	200	*< 1.0*	*< 1.0*	38	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethane	70	*< 1.0*	*< 1.0*	1.2	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethene	7	*< 1.0*	*< 1.0*	1.8	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,2-Dichlorobenzene	600	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
2-Butanone	4000	*< 10 *+*	*< 10 **	*< 10 **	*< 10 **	*< 50*	*< 10 **	*< 10 *+*	*< 10 **
Acetone	6300	77 *1	*< 50*	*< 50 **	*< 50*	*< 25*	*< 50*	*< 50*	*< 50*
Chloroform	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
cis-1,2-Dichloroethene	70	*< 1.0*	7.2	3.0	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	11
Ethyl ether		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 5.0*	*< 1.0*	*< 1.0*	*< 1.0*
Methyl tert-butyl ether	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
tert-Amyl Methyl Ether		*< 5.0 *1*	*< 5.0*	*< 5.0*	*< 5.0*	*< 1.0*	*< 5.0*	*< 5.0*	*< 5.0*
Tetrachloroethene	5	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Toluene	1000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
trans-1,2-Dichloroethene	100	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Trichloroethene	**5**	**16**	**16**	**140**	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	**48**
Trichlorofluoromethane (Freon 11)		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*

Notes:
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ug/L = micrograms per liter
MA-GW-1-2020 = Massachusetts Contingency Plan, 310 CMR 40, Method 1 Groundwater Standards, Category GW-1, 2020.
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All analyses performed by TestAmerica - Buffalo, NY

Table 2
Summary of Groundwater Analytical Data - Southern Area
Former Raytheon Facility
Wayland, Massachusetts

	Location ID	MW-1014	MW-1014	MW-1014	MW-1014	MW-1014	MW-1014	MW-1015D	MW-1015D
	Sample Date	4/4/2019	8/21/2019	3/31/2020	9/9/2020	4/1/2021	9/14/2021	9/5/2018	4/3/2019
	Sample Type	N	N	N	N	N	N	N	N
Analyte	**MA-GW-1-2020**								
1,4-Dioxane, Method EPA522, µg/L									
1,4-Dioxane	**0.3**								
VOC, Method 8260, µg/L									
1,1,1-Trichloroethane	200	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethane	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethene	7	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,2-Dichlorobenzene	600	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
2-Butanone	4000	*< 50*	*< 10 **	*< 10 **	*< 10 **	*< 10 *+*	*< 10 *+*	*< 10 **	*< 10 **
Acetone	6300	42	*< 50*	150	*< 50*	*< 50*	51 *1	*< 50*	*< 50 **
Chloroform	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
cis-1,2-Dichloroethene	70	7.9	6.9	4.4	7.1	1.4	3.0	*< 1.0*	*< 1.0*
Ethyl ether		*< 5.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Methyl tert-butyl ether	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
tert-Amyl Methyl Ether		*< 1.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0 *1*	*< 5.0*	*< 5.0*
Tetrachloroethene	5	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	1.5	1.5
Toluene	1000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
trans-1,2-Dichloroethene	100	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Trichloroethene	**5**	**34**	**45**	**17**	**39**	**7.5**	**23**	**9.9**	**8.4**
Trichlorofluoromethane (Freon 11)		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*

Notes:
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Empty cells = not analyzed
FD = Field Duplicate Sample
N = Normal Environmental Sample
ug/L = micrograms per liter
MA-GW-1-2020 = Massachusetts Contingency Plan, 310 CMR 40, Method 1 Groundwater Standards, Category GW-1, 2020.
* = LCS or LCSD is outside acceptance limits.
+ = High biased.
*1 = LCS/LCSD RPD exceeds control limits.
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All analyses performed by TestAmerica - Buffalo, NY

Table 2
Summary of Groundwater Analytical Data - Southern Area
Former Raytheon Facility
Wayland, Massachusetts

	Location ID	MW-1015D	MW-1015D	MW-1015D	MW-1015D	MW-1015D	MW-1016D	MW-1016D	MW-1016D
	Sample Date	8/21/2019	3/31/2020	9/9/2020	3/31/2021	9/14/2021	9/5/2018	9/5/2018	4/3/2019
	Sample Type	N	N	N	N	N	FD	N	FD
Analyte	**MA-GW-1-2020**								
1,4-Dioxane, Method EPA522, µg/L									
1,4-Dioxane	**0.3**								
VOC, Method 8260, µg/L									
1,1,1-Trichloroethane	200	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethane	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethene	7	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,2-Dichlorobenzene	600	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
2-Butanone	4000	*< 10 **	*< 10 **	*< 10 **	*< 10 *+*	*< 10 *+*	*< 10 **	*< 10 **	*< 10 **
Acetone	6300	*< 50*	250	*< 50*	*< 50*	*< 50 *1*	*< 50*	*< 50*	*< 50*
Chloroform	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
cis-1,2-Dichloroethene	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	1.3
Ethyl ether		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Methyl tert-butyl ether	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
tert-Amyl Methyl Ether		*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0 *1*	*< 5.0*	*< 5.0*	*< 5.0*
Tetrachloroethene	5	1.3	1.7	1.1	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Toluene	1000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
trans-1,2-Dichloroethene	100	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Trichloroethene	**5**	**8.2**	**8.1**	**6.3**	4.3	4.6	4.3	4.4	**15**
Trichlorofluoromethane (Freon 11)		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = not analyzed
FD = Field Duplicate Sample
N = Normal Environmental Sample
ug/L = micrograms per liter
MA-GW-1-2020 = Massachusetts Contingency Plan, 310 CMR 40, Method 1 Groundwater Standards, Category GW-1, 2020.
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+ = High biased.
*1 = LCS/LCSD RPD exceeds control limits.
F1 = Indicates MS and/or MSD Recovery is outside acceptance limits.

All analyses performed by TestAmerica - Buffalo, NY

Table 2
Summary of Groundwater Analytical Data - Southern Area
Former Raytheon Facility
Wayland, Massachusetts

	Location ID	MW-1016D	MW-1016D	MW-1017D	MW-1017D	MW-1017D	MW-1018	MW-1018	MW-1019B
	Sample Date	4/3/2019	3/31/2021	9/5/2018	4/3/2019	4/1/2021	9/5/2018	4/3/2019	9/5/2018
	Sample Type	N	N	N	N	N	N	N	N
Analyte	**MA-GW-1-2020**								
1,4-Dioxane, Method EPA522, µg/L									
1,4-Dioxane	**0.3**								
VOC, Method 8260, µg/L									
1,1,1-Trichloroethane	200	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	2.8	*< 1.0*	*< 1.0*
1,1-Dichloroethane	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethene	7	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,2-Dichlorobenzene	600	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
2-Butanone	4000	*< 10 **	*< 10 *+*	*< 10 **	*< 10 **	*< 10 *+*	*< 10 **	*< 10 **	*< 10 **
Acetone	6300	*< 50 **	*< 50*	*< 50*	*< 50 **	*< 50*	*< 50*	*< 50 **	*< 50*
Chloroform	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
cis-1,2-Dichloroethene	70	1.5	*< 1.0*	65	24	5.0	*< 1.0*	*< 1.0*	*< 1.0*
Ethyl ether		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Methyl tert-butyl ether	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	1.0	*< 1.0*	*< 1.0*
tert-Amyl Methyl Ether		*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*
Tetrachloroethene	5	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Toluene	1000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
trans-1,2-Dichloroethene	100	*< 1.0*	*< 1.0*	1.5	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Trichloroethene	**5**	**16**	*< 1.0*	**16**	**13**	3.0	**10**	*< 1.0*	*< 1.0*
Trichlorofluoromethane (Freon 11)		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*

Notes:
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Empty cells = not analyzed
FD = Field Duplicate Sample
N = Normal Environmental Sample
ug/L = micrograms per liter
MA-GW-1-2020 = Massachusetts Contingency Plan, 310 CMR 40, Method 1 Groundwater Standards, Category GW-1, 2020.
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+ = High biased.
*1 = LCS/LCSD RPD exceeds control limits.
F1 = Indicates MS and/or MSD Recovery is outside acceptance limits.

All analyses performed by TestAmerica - Buffalo, NY

Table 2
Summary of Groundwater Analytical Data - Southern Area
Former Raytheon Facility
Wayland, Massachusetts

Analyte	Location ID / Sample Date / Sample Type / MA-GW-1-2020	MW-1019B 4/3/2019 N	MW-1019B 3/31/2021 N	MW-1020 9/5/2018 N	MW-1020 4/4/2019 N	MW-1020 4/1/2020 N	MW-1020 4/1/2021 N	MW-1022 9/5/2018 N	MW-1022 4/4/2019 N
1,4-Dioxane, Method EPA522, µg/L									
1,4-Dioxane	**0.3**				**0.50**	**0.36**	**0.45**		
VOC, Method 8260, µg/L									
1,1,1-Trichloroethane	200	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*
1,1-Dichloroethane	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*
1,1-Dichloroethene	7	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*
1,2-Dichlorobenzene	600	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*
2-Butanone	4000	*< 10 **	*< 10 *+*	*< 10 **	*< 50*			*< 10 **	*< 50*
Acetone	6300	*< 50 **	*< 50*	*< 50*	*< 25*			*< 50*	*< 25*
Chloroform	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*
cis-1,2-Dichloroethene	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*
Ethyl ether		*< 1.0*	*< 1.0*	*< 1.0*	*< 5.0*			*< 1.0*	*< 5.0*
Methyl tert-butyl ether	70	*< 1.0*	*< 1.0*	15	16			*< 1.0*	*< 1.0*
tert-Amyl Methyl Ether		*< 5.0*	*< 5.0*	7.4	7.9			*< 5.0*	*< 1.0*
Tetrachloroethene	5	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*
Toluene	1000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*
trans-1,2-Dichloroethene	100	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*
Trichloroethene	**5**	*< 1.0*	*< 1.0*	**9.3**	**7.0**			2.7	2.4
Trichlorofluoromethane (Freon 11)		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = not analyzed
FD = Field Duplicate Sample
N = Normal Environmental Sample
ug/L = micrograms per liter
MA-GW-1-2020 = Massachusetts Contingency Plan, 310 CMR 40, Method 1 Groundwater Standards, Category GW-1, 2020.
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+ = High biased.
*1 = LCS/LCSD RPD exceeds control limits.
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All analyses performed by TestAmerica - Buffalo, NY

Table 2
Summary of Groundwater Analytical Data - Southern Area
Former Raytheon Facility
Wayland, Massachusetts

	Location ID	MW-1022	MW-1023	MW-1023	MW-1023	MW-1024D	MW-1024D	MW-1025D	MW-1025D
	Sample Date	4/1/2021	9/5/2018	9/5/2019	9/14/2021	9/5/2018	4/3/2019	9/5/2018	4/3/2019
	Sample Type	N	N	N	N	N	N	N	N
Analyte	**MA-GW-1-2020**								
1,4-Dioxane, Method EPA522, µg/L									
1,4-Dioxane	**0.3**								
VOC, Method 8260, µg/L									
1,1,1-Trichloroethane	200	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethane	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethene	7	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,2-Dichlorobenzene	600	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
2-Butanone	4000	*< 10 *+*	*< 10 **	*< 10 **	*< 10 *+*	*< 10 **	*< 10 **	*< 10 **	*< 10 **
Acetone	6300	*< 50*	*< 50*	90	*< 50 *1*	*< 50*	*< 50 **	*< 50*	*< 50 **
Chloroform	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
cis-1,2-Dichloroethene	70	*< 1.0*	*< 1.0*	*< 1.0*	6.0	*< 1.0*	2.4	*< 1.0*	1.4
Ethyl ether		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Methyl tert-butyl ether	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
tert-Amyl Methyl Ether		*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0 *1*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*
Tetrachloroethene	5	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Toluene	1000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	2.2	*< 1.0*
trans-1,2-Dichloroethene	100	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Trichloroethene	**5**	1.9	*< 1.0*	*< 1.0*	2.4	*< 1.0*	**5.8**	*< 1.0*	*< 1.0*
Trichlorofluoromethane (Freon 11)		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = not analyzed
FD = Field Duplicate Sample
N = Normal Environmental Sample
ug/L = micrograms per liter
MA-GW-1-2020 = Massachusetts Contingency Plan, 310 CMR 40, Method 1 Groundwater Standards, Category GW-1, 2020.
* = LCS or LCSD is outside acceptance limits.
+ = High biased.
*1 = LCS/LCSD RPD exceeds control limits.
F1 = Indicates MS and/or MSD Recovery is outside acceptance limits.

All analyses performed by TestAmerica - Buffalo, NY

Table 2
Summary of Groundwater Analytical Data - Southern Area
Former Raytheon Facility
Wayland, Massachusetts

	Location ID	MW-1025M	MW-1025M	MW-1025M	MW-1025M	MW-1025M	MW-1025M	MW-1026D	MW-1026D
	Sample Date	9/5/2018	9/5/2018	4/4/2019	4/4/2019	4/1/2020	4/2/2021	9/5/2018	4/4/2019
	Sample Type	FD	N	FD	N	N	N	N	N
Analyte	**MA-GW-1-2020**								
1,4-Dioxane, Method EPA522, µg/L									
1,4-Dioxane	**0.3**				**0.93**	*< 0.20*	**0.74**		**0.58**
VOC, Method 8260, µg/L									
1,1,1-Trichloroethane	200	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*
1,1-Dichloroethane	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*
1,1-Dichloroethene	7	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*
1,2-Dichlorobenzene	600	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*
2-Butanone	4000	*< 10 **	*< 10 **	*< 50*	*< 50*			*< 10 **	*< 50*
Acetone	6300	55	*< 50*	*< 25*	*< 25*			*< 50*	*< 25*
Chloroform	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*
cis-1,2-Dichloroethene	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*			17	26
Ethyl ether		*< 1.0*	*< 1.0*	*< 5.0*	*< 5.0*			*< 1.0*	*< 5.0*
Methyl tert-butyl ether	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*
tert-Amyl Methyl Ether		*< 5.0*	*< 5.0*	*< 1.0*	*< 1.0*			*< 5.0*	*< 1.0*
Tetrachloroethene	5	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*
Toluene	1000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*
trans-1,2-Dichloroethene	100	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*
Trichloroethene	**5**	**8.5**	**7.8**	*< 1.0*	*< 1.0*			**68**	**26**
Trichlorofluoromethane (Freon 11)		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = not analyzed
FD = Field Duplicate Sample
N = Normal Environmental Sample
ug/L = micrograms per liter
MA-GW-1-2020 = Massachusetts Contingency Plan, 310 CMR 40, Method 1 Groundwater Standards, Category GW-1, 2020.
* = LCS or LCSD is outside acceptance limits.
+ = High biased.
*1 = LCS/LCSD RPD exceeds control limits.
F1 = Indicates MS and/or MSD Recovery is outside acceptance limits.

All analyses performed by TestAmerica - Buffalo, NY

Table 2
Summary of Groundwater Analytical Data - Southern Area
Former Raytheon Facility
Wayland, Massachusetts

	Location ID	MW-1026D	MW-1026D	MW-1027	MW-1027	MW-1028	MW-1028	MW-1028	MW-1028
	Sample Date	3/31/2020	4/2/2021	9/5/2018	4/3/2019	9/5/2018	4/3/2019	8/21/2019	3/31/2020
	Sample Type	N	N	N	N	N	N	N	N
Analyte	**MA-GW-1-2020**								
1,4-Dioxane, Method EPA522, µg/L									
1,4-Dioxane	**0.3**	**0.65**	**0.53**						
VOC, Method 8260, µg/L									
1,1,1-Trichloroethane	200			*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethane	70			*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethene	7			*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,2-Dichlorobenzene	600			*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
2-Butanone	4000			*< 10 **	*< 10 **	*< 10 **	*< 10 **	*< 10 **	*< 10 **
Acetone	6300			*< 50*	*< 50 **	*< 50*	*< 50 **	56	130
Chloroform	70			*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
cis-1,2-Dichloroethene	70			*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	1.1
Ethyl ether				*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Methyl tert-butyl ether	70			*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
tert-Amyl Methyl Ether				*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*
Tetrachloroethene	5			*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Toluene	1000			*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
trans-1,2-Dichloroethene	100			*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Trichloroethene	**5**			*< 1.0*	*< 1.0*	**5.2**	3.9	4.8	**5.9**
Trichlorofluoromethane (Freon 11)				*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = not analyzed
FD = Field Duplicate Sample
N = Normal Environmental Sample
ug/L = micrograms per liter
MA-GW-1-2020 = Massachusetts Contingency Plan, 310 CMR 40, Method 1 Groundwater Standards, Category GW-1, 2020.
* = LCS or LCSD is outside acceptance limits.
+ = High biased.
*1 = LCS/LCSD RPD exceeds control limits.
F1 = Indicates MS and/or MSD Recovery is outside acceptance limits.

All analyses performed by TestAmerica - Buffalo, NY

Table 2
Summary of Groundwater Analytical Data - Southern Area
Former Raytheon Facility
Wayland, Massachusetts

	Location ID	MW-1028	MW-1028	MW-1028	MW-1030	MW-1030	MW-1030	MW-1031	MW-1031
	Sample Date	9/9/2020	3/31/2021	9/14/2021	9/5/2018	4/3/2019	3/31/2021	9/5/2018	4/3/2019
	Sample Type	N	N	N	N	N	N	N	N
Analyte	**MA-GW-1-2020**								
1,4-Dioxane, Method EPA522, µg/L									
1,4-Dioxane	**0.3**								
VOC, Method 8260, µg/L									
1,1,1-Trichloroethane	200	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethane	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethene	7	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,2-Dichlorobenzene	600	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
2-Butanone	4000	*< 10 *F1*	*< 10 *+*	*< 10 *+*	*< 10 **	*< 10 **	*< 10 *+*	*< 10 **	*< 10 **
Acetone	6300	*< 50*	*< 50*	*< 50 *1*	*< 50*	*< 50 **	*< 50*	*< 50*	*< 50 **
Chloroform	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
cis-1,2-Dichloroethene	70	1.1	*< 1.0*	1.0	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Ethyl ether		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Methyl tert-butyl ether	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
tert-Amyl Methyl Ether		*< 5.0*	*< 5.0*	*< 5.0 *1*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*
Tetrachloroethene	5	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Toluene	1000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
trans-1,2-Dichloroethene	100	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Trichloroethene	**5**	**8.1**	**5.8**	**6.9**	2.9	2.7	4.1	*< 1.0*	*< 1.0*
Trichlorofluoromethane (Freon 11)		*< 1.0 F1*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = not analyzed
FD = Field Duplicate Sample
N = Normal Environmental Sample
ug/L = micrograms per liter
MA-GW-1-2020 = Massachusetts Contingency Plan, 310 CMR 40, Method 1 Groundwater Standards, Category GW-1, 2020.
* = LCS or LCSD is outside acceptance limits.
+ = High biased.
*1 = LCS/LCSD RPD exceeds control limits.
F1 = Indicates MS and/or MSD Recovery is outside acceptance limits.

All analyses performed by TestAmerica - Buffalo, NY

Table 2
Summary of Groundwater Analytical Data - Southern Area
Former Raytheon Facility
Wayland, Massachusetts

	Location ID	MW-1032	MW-1032	MW-1032	MW-1032	MW-1032	MW-1032	MW-1032	MW-1032
	Sample Date	9/5/2018	4/3/2019	8/22/2019	3/31/2020	9/9/2020	9/9/2020	3/31/2021	9/14/2021
	Sample Type	N	N	N	N	FD	N	N	N
Analyte	**MA-GW-1-2020**								
1,4-Dioxane, Method EPA522, µg/L									
1,4-Dioxane	**0.3**								
VOC, Method 8260, µg/L									
1,1,1-Trichloroethane	200	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethane	70	1.8	1.1	*< 1.0*	1.0	*< 1.0*	1.1	*< 1.0*	*< 1.0*
1,1-Dichloroethene	7	2.4	1.3	1.1	1.4	1.2	1.2	*< 1.0*	*< 1.0*
1,2-Dichlorobenzene	600	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
2-Butanone	4000	*< 10 **	*< 10 **	*< 10 **	*< 10 **	*< 10 **	*< 10 **	*< 10 *+*	*< 10 *+*
Acetone	6300	*< 50*	*< 50 **	*< 50*	*< 50*	*< 50*	*< 50*	*< 50*	*< 50 *1*
Chloroform	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
cis-1,2-Dichloroethene	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Ethyl ether		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Methyl tert-butyl ether	70	46	59	35	53	29	29	31	25
tert-Amyl Methyl Ether		15	16	11	13	9.2	9.4	9.4	7.5 *1
Tetrachloroethene	5	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Toluene	1000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
trans-1,2-Dichloroethene	100	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Trichloroethene	**5**	**7.2**	**6.9**	**6.0**	**7.8**	**6.5**	**6.5**	**5.8**	**6.3**
Trichlorofluoromethane (Freon 11)		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = not analyzed
FD = Field Duplicate Sample
N = Normal Environmental Sample
ug/L = micrograms per liter
MA-GW-1-2020 = Massachusetts Contingency Plan, 310 CMR 40, Method 1 Groundwater Standards, Category GW-1, 2020.
* = LCS or LCSD is outside acceptance limits.
+ = High biased.
*1 = LCS/LCSD RPD exceeds control limits.
F1 = Indicates MS and/or MSD Recovery is outside acceptance limits.

All analyses performed by TestAmerica - Buffalo, NY

Table 2
Summary of Groundwater Analytical Data - Southern Area
Former Raytheon Facility
Wayland, Massachusetts

	Location ID	MW-1033	MW-1033	MW-1033	MW-1033	MW-1034	MW-1034	MW-1034	MW-1034
	Sample Date	9/5/2018	4/5/2019	4/1/2020	4/2/2021	9/5/2018	9/5/2018	4/5/2019	4/5/2019
	Sample Type	N	N	N	N	FD	N	FD	N
Analyte	**MA-GW-1-2020**								
1,4-Dioxane, Method EPA522, µg/L									
1,4-Dioxane	**0.3**		**3.7**	**1.7**	**4.6**				**0.43**
VOC, Method 8260, µg/L									
1,1,1-Trichloroethane	200	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethane	70	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethene	7	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,2-Dichlorobenzene	600	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
2-Butanone	4000	*< 10 **	*< 50*			*< 10 **	*< 10 **	*< 50*	*< 50*
Acetone	6300	*< 50*	*< 25*			*< 50*	*< 50*	*< 25*	*< 25*
Chloroform	70	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
cis-1,2-Dichloroethene	70	*< 1.0*	*< 1.0*			14	14	11	12
Ethyl ether		*< 1.0*	*< 5.0*			*< 1.0*	*< 1.0*	*< 5.0*	*< 5.0*
Methyl tert-butyl ether	70	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
tert-Amyl Methyl Ether		*< 5.0*	*< 1.0*			*< 5.0*	*< 5.0*	*< 1.0*	*< 1.0*
Tetrachloroethene	5	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Toluene	1000	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
trans-1,2-Dichloroethene	100	*< 1.0*	*< 1.0*			1.9	1.7	1.4	1.4
Trichloroethene	**5**	*< 1.0*	*< 1.0*			**39**	**37**	**31**	**31**
Trichlorofluoromethane (Freon 11)		*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = not analyzed
FD = Field Duplicate Sample
N = Normal Environmental Sample
ug/L = micrograms per liter
MA-GW-1-2020 = Massachusetts Contingency Plan, 310 CMR 40, Method 1 Groundwater Standards, Category GW-1, 2020.
* = LCS or LCSD is outside acceptance limits.
+ = High biased.
*1 = LCS/LCSD RPD exceeds control limits.
F1 = Indicates MS and/or MSD Recovery is outside acceptance limits.

All analyses performed by TestAmerica - Buffalo, NY

Table 2
Summary of Groundwater Analytical Data - Southern Area
Former Raytheon Facility
Wayland, Massachusetts

	Location ID	MW-1034	MW-1034	MW-1034	MW-1034	MW-1034	MW-1034	MW-1034	MW-1034
	Sample Date	8/21/2019	8/21/2019	3/31/2020	3/31/2020	4/1/2020	4/1/2020	9/9/2020	4/1/2021
	Sample Type	FD	N	FD	N	FD	N	N	FD
Analyte	**MA-GW-1-2020**								
1,4-Dioxane, Method EPA522, µg/L									
1,4-Dioxane	**0.3**					**0.34**	0.28		**0.53**
VOC, Method 8260, µg/L									
1,1,1-Trichloroethane	200	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*
1,1-Dichloroethane	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*
1,1-Dichloroethene	7	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*
1,2-Dichlorobenzene	600	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*
2-Butanone	4000	*< 10 **	*< 10 **	*< 10 **	*< 10 **			*< 10 **	*< 10 *+*
Acetone	6300	*< 50*	*< 50*	51	56			*< 50*	*< 50*
Chloroform	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*
cis-1,2-Dichloroethene	70	12	12	11	12			13	20
Ethyl ether		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*
Methyl tert-butyl ether	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*
tert-Amyl Methyl Ether		*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*			*< 5.0*	*< 5.0*
Tetrachloroethene	5	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*
Toluene	1000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*
trans-1,2-Dichloroethene	100	1.4	1.3	1.2	1.3			1.3	1.6
Trichloroethene	**5**	**31**	**32**	**29**	**29**			**31**	**17**
Trichlorofluoromethane (Freon 11)		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*			*< 1.0*	*< 1.0*

Notes:
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Empty cells = not analyzed
FD = Field Duplicate Sample
N = Normal Environmental Sample
ug/L = micrograms per liter
MA-GW-1-2020 = Massachusetts Contingency Plan, 310 CMR 40, Method 1 Groundwater Standards, Category GW-1, 2020.
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*1 = LCS/LCSD RPD exceeds control limits.
F1 = Indicates MS and/or MSD Recovery is outside acceptance limits.

All analyses performed by TestAmerica - Buffalo, NY

Table 2
Summary of Groundwater Analytical Data - Southern Area
Former Raytheon Facility
Wayland, Massachusetts

	Location ID	MW-1034	MW-1034	MW-1035	MW-1035	MW-1036	MW-1036	MW-1036	MW-1036
	Sample Date	4/1/2021	9/14/2021	9/5/2018	4/3/2019	9/5/2018	9/5/2018	4/4/2019	4/4/2019
	Sample Type	N	N	N	N	FD	N	FD	N
Analyte	**MA-GW-1-2020**								
1,4-Dioxane, Method EPA522, µg/L									
1,4-Dioxane	**0.3**	**0.50**						*< 0.20*	*< 0.20*
VOC, Method 8260, µg/L									
1,1,1-Trichloroethane	200	*< 1.0*	*< 1.0*	6.0	6.9	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethane	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethene	7	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,2-Dichlorobenzene	600	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
2-Butanone	4000	*< 10 *+*	*< 10 *+*	*< 10 **	*< 10 **	*< 10 **	*< 10 **	*< 50*	*< 50*
Acetone	6300	*< 50*	*< 50 *1*	*< 50*	*< 50 **	*< 50*	*< 50*	*< 25*	*< 25*
Chloroform	70	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
cis-1,2-Dichloroethene	70	20	17	*< 1.0*	*< 1.0*	8.8	10	*< 1.0*	*< 1.0*
Ethyl ether		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 5.0*	*< 5.0*
Methyl tert-butyl ether	70	*< 1.0*	*< 1.0*	2.7	2.1	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
tert-Amyl Methyl Ether		*< 5.0*	*< 5.0 *1*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 1.0*	*< 1.0*
Tetrachloroethene	5	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Toluene	1000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
trans-1,2-Dichloroethene	100	1.4	1.2	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Trichloroethene	**5**	**16**	**24**	**33**	**28**	**20**	**20**	*< 1.0*	*< 1.0*
Trichlorofluoromethane (Freon 11)		*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = not analyzed
FD = Field Duplicate Sample
N = Normal Environmental Sample
ug/L = micrograms per liter
MA-GW-1-2020 = Massachusetts Contingency Plan, 310 CMR 40, Method 1 Groundwater Standards, Category GW-1, 2020.
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*1 = LCS/LCSD RPD exceeds control limits.
F1 = Indicates MS and/or MSD Recovery is outside acceptance limits.

All analyses performed by TestAmerica - Buffalo, NY

Table 2
Summary of Groundwater Analytical Data - Southern Area
Former Raytheon Facility
Wayland, Massachusetts

	Location ID	MW-1036	MW-1036	MW-1037	MW-1037	MW-1038	MW-1038	MW-1038	MW-1039
	Sample Date	4/1/2020	4/1/2021	9/5/2018	4/3/2019	9/5/2018	4/3/2019	3/31/2021	9/5/2018
	Sample Type	N	N	N	N	N	N	N	N
Analyte	**MA-GW-1-2020**								
1,4-Dioxane, Method EPA522, µg/L									
1,4-Dioxane	**0.3**	0.23	**0.34**						
VOC, Method 8260, µg/L									
1,1,1-Trichloroethane	200			34	18	40	15	80	*< 1.0*
1,1-Dichloroethane	70			*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	1.8	*< 1.0*
1,1-Dichloroethene	7			1.6	*< 1.0*	1.7	*< 1.0*	5.3	*< 1.0*
1,2-Dichlorobenzene	600			*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
2-Butanone	4000			*< 10 **	*< 10 **	*< 10 **	*< 10 **	*< 10 *+*	*< 10 **
Acetone	6300			*< 50*	*< 50*	*< 50*	*< 50*	68	*< 50*
Chloroform	70			*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
cis-1,2-Dichloroethene	70			*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	1.5	35
Ethyl ether				*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Methyl tert-butyl ether	70			*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
tert-Amyl Methyl Ether				*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*
Tetrachloroethene	5			*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Toluene	1000			*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
trans-1,2-Dichloroethene	100			*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	2.4
Trichloroethene	**5**			**120**	**59**	**150**	**47**	**260**	**53**
Trichlorofluoromethane (Freon 11)				*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit. The laboratory reporting detection limit is shown.
Empty cells = not analyzed
FD = Field Duplicate Sample
N = Normal Environmental Sample
ug/L = micrograms per liter
MA-GW-1-2020 = Massachusetts Contingency Plan, 310 CMR 40, Method 1 Groundwater Standards, Category GW-1, 2020.
* = LCS or LCSD is outside acceptance limits.
+ = High biased.
*1 = LCS/LCSD RPD exceeds control limits.
F1 = Indicates MS and/or MSD Recovery is outside acceptance limits.

All analyses performed by TestAmerica - Buffalo, NY

Table 2
Summary of Groundwater Analytical Data - Southern Area
Former Raytheon Facility
Wayland, Massachusetts

Analyte	Location ID Sample Date Sample Type MA-GW-1-2020	MW-1039 4/5/2019 N	MW-1039 4/1/2020 N	MW-1039 4/1/2021 N	MW-1040 9/5/2019 N	MW-1040 9/14/2021 N
1,4-Dioxane, Method EPA522, µg/L						
1,4-Dioxane	**0.3**	**0.34**	0.26	**0.41**		
VOC, Method 8260, µg/L						
1,1,1-Trichloroethane	200	*< 1.0*		*< 1.0*	7.9	2.6
1,1-Dichloroethane	70	*< 1.0*		*< 1.0*	1.9	1.9
1,1-Dichloroethene	7	*< 1.0*		*< 1.0*	3.0	1.6
1,2-Dichlorobenzene	600	*< 1.0*		*< 1.0*	*< 1.0*	*< 1.0*
2-Butanone	4000	*< 50*		*< 10 *+F1*	*< 10 **	*< 10 *+*
Acetone	6300	*< 25*		*< 50*	*< 50*	52 *1
Chloroform	70	*< 1.0*		*< 1.0*	*< 1.0*	*< 1.0*
cis-1,2-Dichloroethene	70	29		32	1.6	1.7
Ethyl ether		*< 5.0*		*< 1.0*	*< 1.0*	*< 1.0*
Methyl tert-butyl ether	70	*< 1.0*		*< 1.0*	1.5	2.1
tert-Amyl Methyl Ether		*< 1.0*		*< 5.0*	*< 5.0*	*< 5.0 *1*
Tetrachloroethene	5	*< 1.0*		*< 1.0*	*< 1.0*	*< 1.0*
Toluene	1000	*< 1.0*		*< 1.0*	*< 1.0*	*< 1.0*
trans-1,2-Dichloroethene	100	2.0		2.0	*< 1.0*	*< 1.0*
Trichloroethene	**5**	**51**		**39**	**86**	**43**
Trichlorofluoromethane (Freon 11)		*< 1.0*		*< 1.0*	*< 1.0*	*< 1.0*

Notes:
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Empty cells = not analyzed
FD = Field Duplicate Sample
N = Normal Environmental Sample
ug/L = micrograms per liter
MA-GW-1-2020 = Massachusetts Contingency Plan, 310 CMR 40, Method 1 Groundwater Standards, Category GW-1, 2020.
* = LCS or LCSD is outside acceptance limits.
+ = High biased.
*1 = LCS/LCSD RPD exceeds control limits.
F1 = Indicates MS and/or MSD Recovery is outside acceptance limits.

All analyses performed by TestAmerica - Buffalo, NY

Table 3
Summary of Groundwater Gauging Data - Cow Common Conservation Area
Former Raytheon Facility
Wayland, Massachusetts

Well	Measurement Date	Depth to Water (feet below top of casing)
SEN-1D	15-Mar-16	16.09
	05-Apr-17	15.56
	28-Mar-18	14.32
	05-Apr-19	11.17
	02-Apr-21	13.63
SEN-1M	15-Mar-16	16.27
	05-Apr-17	15.76
	28-Mar-18	14.37
	05-Apr-19	11.10
SEN-2D	15-Mar-16	9.69
	05-Apr-17	8.82
	28-Mar-18	8.92
	05-Apr-19	7.86
SEN-2M	15-Mar-16	9.76
	05-Apr-17	8.89
	28-Mar-18	9.02
	05-Apr-19	7.96
SEN-3	15-Mar-16	18.95
	05-Apr-17	19.02
	28-Mar-18	17.68
	05-Apr-19	14.55

Table 4
Summary of Groundwater Analytical Data - Cow Common Conservation Area
Former Raytheon Facility
Wayland, Massachusetts

		Location ID	SEN-1D	SEN-1D	SEN-1D	SEN-1D	SEN-1D	SEN-1D	SEN-1M	SEN-1M	SEN-1M	SEN-1M	SEN-2D	SEN-2D	SEN-2D
		Sample Date	3/15/2016	4/5/2017	4/13/2018	4/5/2019	4/2/2021	4/2/2021	3/15/2016	4/5/2017	4/13/2018	4/5/2019	3/15/2016	4/5/2017	4/13/2018
		Sample Type	N	N	N	N	FD	N	N	N	N	N	N	N	N
Analyte	**MA-GW-1-2020**	**MA-GW-3-2014**													
SW8260C, ug/L															
1,1,1-Trichloroethane	**200**	20000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethane	70	20000	1.2	2.7	2.1	2.2	1.7	1.9	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethene	**7**	30000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,2-Dichlorobenzene	600	2000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
2-Butanone	4000	50000	*< 10*	*< 10*	*< 10 **	*< 50*	*< 10 *+*	*< 10 *+*	*< 10*	*< 10*	*< 10 **	*< 50*	*< 10*	*< 10*	*< 10 **
Acetone	6300	50000	120	52	*< 50*	*< 25*	*< 50*	*< 50*	*< 50*	61	*< 50*	*< 25*	*< 50*	93	*< 50*
Chloroform	70	20000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
cis-1,2-Dichloroethene	**70**	50000	2.8	6.5	7.8	7.5	7.8	8.3	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Ethyl ether	NS	NS	*< 1.0*	3.2	2.3	7.8	6.9	6.8	*< 1.0*	*< 1.0*	*< 1.0*	*< 5.0*	*< 1.0*	*< 1.0*	*< 1.0*
Methyl tert-butyl ether	**70**	50000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
tert-Amyl Methyl Ether	NS	NS	*< 5.0*	*< 5.0*	*< 5.0*	*< 1.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 1.0*	*< 5.0*	*< 5.0*	*< 5.0*
Tetrachloroethene	5	30000	*< 1.0 **	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0 **	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0 **	*< 1.0*	*< 1.0*
Toluene	1000	40000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
trans-1,2-Dichloroethene	100	50000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Trichloroethene	**5**	5000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Trichlorofluoromethane (Freon 11)	NS	NS	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit.
The laboratory reporting detection limit is shown.
Empty cells = not analyzed
FD = Field Duplicate Sample
N = Normal Environmental Sample
*+ = LCS and/or LCSD is outside acceptance limits, high biased.
Units are in ug/L = micrograms per liter
NS = No standard

Table 4
Summary of Groundwater Analytical Data - Cow C
Former Raytheon Facility
Wayland, Massachusetts

		Location ID	SEN-2D	SEN-2M	SEN-2M	SEN-2M	SEN-2M	SEN-3	SEN-3	SEN-3	SEN-3
		Sample Date	4/5/2019	3/15/2016	4/5/2017	4/13/2018	4/5/2019	3/15/2016	4/5/2017	4/13/2018	4/5/2019
		Sample Type	N	N	N	N	N	N	N	N	N
Analyte	**MA-GW-1-2020**	**MA-GW-3-2014**									
SW8260C, ug/L											
1,1,1-Trichloroethane	**200**	20000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethane	70	20000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,1-Dichloroethene	**7**	30000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
1,2-Dichlorobenzene	600	2000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
2-Butanone	4000	50000	*< 50*	*< 10*	*< 10*	*< 10 **	*< 50*	16	*< 10*	*< 10 **	*< 50*
Acetone	6300	50000	*< 25*	*< 50*	89	*< 50*	*< 25*	75	*< 50*	*< 50*	*< 25*
Chloroform	70	20000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
cis-1,2-Dichloroethene	**70**	50000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Ethyl ether	NS	NS	*< 5.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 5.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 5.0*
Methyl tert-butyl ether	**70**	50000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
tert-Amyl Methyl Ether	NS	NS	*< 1.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 1.0*	*< 5.0*	*< 5.0*	*< 5.0*	*< 1.0*
Tetrachloroethene	5	30000	*< 1.0*	*< 1.0 **	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0 **	*< 1.0*	*< 1.0*	*< 1.0*
Toluene	1000	40000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
trans-1,2-Dichloroethene	100	50000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Trichloroethene	**5**	5000	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
Trichlorofluoromethane (Freon 11)	NS	NS	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*

Notes:
< = Compound not detected at concentrations above the laboratory reporting detection limit.
The laboratory reporting detection limit is shown.
Empty cells = not analyzed
FD = Field Duplicate Sample
N = Normal Environmental Sample
*+ = LCS and/or LCSD is outside acceptance limits, high biased.
Units are in ug/L = micrograms per liter
NS = No standard

APPENDIX A BWSC TRANSMITTAL FORMS—SUBMITTED CONCURRENTLY VIA EDEP

Massachusetts Department of Environmental Protection

eDEP Transaction Copy

Here is the file you requested for your records.

To retain a copy of this file you must save and/or print.

Username:	**JOHND**
Transaction ID:	**1311570**
Document:	**BWSC108 Comp. Res. Action Transmittal Form & Phase I**
Size of File:	**536.61K**
Status of Transaction:	**Submitted**
Date and Time Created:	**11/16/2021:9:09:09 AM**

Note: This file only includes forms that were part of your transaction as of the date and time indicated above. If you need a more current copy of your transaction, return to eDEP and select to “Download a Copy” from the Current Submittals page.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC 108

Release Tracking Number
3 - 13302

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM & PHASE I COMPLETION STATEMENT

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

A. SITE LOCATION:

1. Site Name: RAYTHEON COMPANY

2. Street Address: 430 BOSTON POST RD

3. City/Town: WAYLAND 4. ZIP Code: 017780000

☑ 5. Check here if the disposal site that is the source of the release is Tier Classified. Check the current Tier Classification Category:

☑ a. Tier I ☐ b. Tier ID ☐ c. Tier II

B. THIS FORM IS BEING USED TO: (check all that apply)

☐ 1. Submit a **Phase I Completion Statement,** pursuant to 310 CMR 40.0484.

☐ 2. Submit a **Revised Phase I Completion Statement,** pursuant to 310 CMR 40.0484.

☐ 3. Submit a **Phase II Scope of Work,** pursuant to 310 CMR 40.0834.

☐ 4. Submit an **interim Phase II Report.** This report does not satisfy the response action deadline requirements in 310 CMR 40.0500.

☐ 5. Submit a **final Phase II Report and Completion Statement,** pursuant to 310 CMR 40.0836.

☐ 6. Submit a **Revised Phase II Report and Completion Statement,** pursuant to 310 CMR 40.0836.

☐ 7. Submit a **Phase III Remedial Action Plan and Completion Statement,** pursuant to 310 CMR 40.0862.

☐ 8. Submit a **Revised Phase III Remedial Action Plan and Completion Statement,** pursuant to 310 CMR 40.0862.

☐ 9. Submit a **Phase IV Remedy Implementation Plan,** pursuant to 310 CMR 40.0874.

☐ 10. Submit a **Modified Phase IV Remedy Implementation Plan,** pursuant to 310 CMR 40.0874.

☐ 11. Submit an **As-Built Construction Report,** pursuant to 310 CMR 40.0875.

☐ 12. Submit a **Phase IV Status Report,** pursuant to 310 CMR 40.0877.

☐ 13. Submit a **Phase IV Completion Statement,** pursuant to 310 CMR 40.0878 and 40.0879.

Specify the outcome of Phase IV activities: (check one)

☐ a. Phase V Operation, Maintenance or Monitoring of the Comprehensive Remedial Action is necessary to achieve a Permanent or Temporary Solution.

☐ b. The requirements of a Permanent Solution have been met. A completed Permanent Solution Statement and Report (BWSC104) will be submitted to DEP.

☐ c. The requirements of a Temporary Solution have been met. A completed Temporary Solution Statement and Report (BWSC104) will be submitted to DEP.

B. THIS FORM IS BEING USED TO (cont.): (check all that apply)

☐ 14. Submit a **Revised Phase IV Completion Statement,** pursuant to 310 CMR 40.0878 and 40.0879.

☐ 15. Submit a **Phase V Status Report,** pursuant to 310 CMR 40.0892.

☑ 16. Submit a **Remedial Monitoring Report.** (This report can only be submitted through eDEP.)

a. Type of Report: (check one) ☐ i. Initial Report ☑ ii. Interim Report ☐ iii. Final Report

b. Frequency of Submittal: (check all that apply)

☐ i. A Remedial Monitoring Report(s) submitted monthly to address an Imminent Hazard.

☐ ii. A Remedial Monitoring Report(s) submitted monthly to address a Condition of Substantial Release Migration.

☑ iii. A Remedial Monitoring Report(s) submitted every six months, concurrent with a Status Report.

☐ iv. A Remedial Monitoring Report(s) submitted annually, concurrent with a Status Report.

c. Status of Site: (check one) ☐ i. Phase IV ☐ ii. Phase V ☑ iii. Remedy Operation Status ☐ iv. Temporary Solution

d. Number of Remedial Systems and/or Monitoring Programs: 2

A separate BWSC108A, CRA Remedial Monitoring Report, must be filled out for each Remedial System and/or Monitoring Program addressed by this transmittal form.

☐ 17. Submit a **Remedy Operation Status,** pursuant to 310 CMR 40.0893.

☑ 18. Submit a **Status Report to maintain a Remedy Operation Status,** pursuant to 310 CMR 40.0893(2).

☐ 19. Submit a **Transfer and/or a Modification of Persons Maintaining a Remedy Operation Status (ROS),** pursuant to 310 CMR 40.0893(5) (check one, or both, if applicable).

☐ a. Submit a Transfer of Persons Maintaining an ROS (the transferee should be the person listed in Section D, "Person Undertaking Response Actions").

☐ b. Submit a Modification of Persons Maintaining an ROS (the primary representative should be the person listed in Section D, "Person Undertaking Response Actions").

c. Number of Persons Maintaining an ROS not including the primary representative: _____

☐ 20. Submit a **Termination of a Remedy Operation Status,** pursuant to 310 CMR 40.0893(6).(check one)

☐ a. Submit a notice indicating ROS performance standards have not been met. A plan and timetable pursuant to 310 CMR 40.0893(6)(b) for resuming the ROS are attached.

☐ b. Submit a notice of Termination of ROS.

☐ 21. Submit a **Phase V Completion Statement,** pursuant to 310 CMR 40.0894.

Specify the outcome of Phase V activities: (check one)

☐ a. The requirements of a Permanent Solution have been met. A completed Permanent Solution Statement and Report (BWSC104) will be submitted to DEP.

☐ b. The requirements for a Temporary Solution have been met. A completed Temporary Solution Statement and Report (BWSC104) will be submitted to DEP.

☐ 22. Submit a **Revised Phase V Completion Statement,** pursuant to 310 CMR 40.0894.

☐ 23. Submit a **Temporary Solution Status Report,** pursuant to 310 CMR 40.0898.

☐ 24. Submit a **Plan for the Application of Remedial Additives** near a sensitive receptor, pursuant to 310 CMR 40.0046(3).

a. Status of Site: (check one)

☐ i. Phase IV ☐ ii. Phase V ☐ iii. Remedy Operation Status ☐ iv. Temporary Solution

C. LSP SIGNATURE AND STAMP:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief,

> *if Section B indicates that a* ***Phase I, Phase II, Phase III, Phase IV or Phase V Completion Statement*** *and/or a* ***Termination of a Remedy Operation Status*** *is being submitted*, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> *if Section B indicates that a* ***Phase II Scope of Work*** *or a* ***Phase IV Remedy Implementation Plan*** *is being submitted,* the response action(s) that is (are) the subject of this submittal (i) has (have) been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> *if Section B indicates that an* ***As-Built Construction Report,*** *a* ***Remedy Operation Status,*** *a* ***Phase IV, Phase V or Temporary Solution Status Report,*** *a* ***Status Report to Maintain a Remedy Operation Status,*** *a* ***Transfer or Modification of Persons Maintaining a Remedy Operation Status*** *and/or a* ***Remedial Monitoring Report*** *is being submitted,* the response action(s) that is (are) the subject of this submittal (i) is (are) being implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal.

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

1. LSP#: 2196

2. First Name: JOHN C 3. Last Name: DROBINSKI

4. Telephone: 6176467800 5. Ext.: 6. Email: john.drobinski@erm.com

7. Signature: JOHN C DROBINSKI

8. Date: 11/15/2021 (mm/dd/yyyy) 9. LSP Stamp:

D. PERSON UNDERTAKING RESPONSE ACTIONS:

1. Check all that apply: ☐ a. change in contact name ☐ b. change of address ☐ c. change in the person undertaking response actions

2. Name of Organization: WAYLAND TOWN CENTER, LLC

3. Contact First Name: 4. Last Name:

5. Street: 10 MEMORIAL BLVD SUITE #901 6. Title:

7. City/Town: PROVIDENCE 8. State: RI 9. ZIP Code: 029030000

10. Telephone: 11. Ext: 12. Email:

E. RELATIONSHIP TO SITE OF PERSON UNDERTAKING RESPONSE ACTIONS: ☐ Check here to change relationship

☑ 1. RP or PRP ☑ a. Owner ☐ b. Operator ☐ c. Generator ☐ d. Transporter

☐ e. Other RP or PRP Specify:

☐ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

☐ 4. Any Other Person Undertaking Response Actions Specify Relationship:

F. REQUIRED ATTACHMENT AND SUBMITTALS:

☐ 1. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.

☐ 2. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the submittal of any Phase Reports to DEP.

☐ 3. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the availability of a Phase III Remedial Action Plan.

☐ 4. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the availability of a Phase IV Remedy Implementation Plan.

☐ 5. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of any field work involving the implementation of a Phase IV Remedial Action.

☐ 6. If submitting a Transfer of a Remedy Operation Status (as per 310 CMR 40.0893(5)), check here to certify that a statement detailing the compliance history for the person making this submittal (transferee) is attached.

☐ 7. If submitting a Modification of a Remedy Operation Status (as per 310 CMR 40.0893(5)), check here to certify that a statement detailing the compliance history for each new person making this submittal is attached.

☐ 8. Check here if any non-updatable information provided on this form is incorrect, e.g. Release Address/Location Aid. Send corrections to: BWSC.eDEP@state.ma.us.

☑ 9. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.

G. CERTIFICATION OF PERSON UNDERTAKING RESPONSE ACTIONS:

1. I, JONATHAN HONE, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

>*if Section B indicates that this is a* **Modification of a Remedy Operation Status (ROS),** I attest under the pains and penalties of perjury that I am fully authorized to act on behalf of all persons performing response actions under the ROS as stated in 310 CMR 40.0893(5)(d) to receive oral and written correspondence from MassDEP with respect to performance of response actions under the ROS, and to receive a statement of fee amount as per 4.03(3).

I understand that any material received by the Primary Representative from MassDEP shall be deemed received by all the persons performing response actions under the ROS, and I am aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate or incomplete information.

2. By: JONATHAN HONE
Signature

3. Title: _____

4. For: WAYLAND TOWN CENTER, LLC
(Name of person or entity recorded in Section D)

5. Date: 11/15/2021
(mm/dd/yyyy)

☐ 6. Check here if the address of the person providing certification is different from address recorded in Section D.

7. Street: _____

8. City/Town: _____ 9. State: _____ 10. ZIP Code: _____

11. Telephone: _____ 12. Ext.: _____ 13. Email: _____

YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO $10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.

Date Stamp (DEP USE ONLY:)

Received by DEP on 11/15/2021 6:30:35 PM

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
CRA REMEDIAL MONITORING REPORT
Pursuant to 310 CMR 40.0800 (SUBPART H)
Remedial System or Monitoring Program: 1 of: 2

BWSC108 -A

Release Tracking Number
3 - 13302

A. DESCRIPTION OF ACTIVE OPERATION AND MAINTENANCE ACTIVITY:

1. Type of Active Operation and Maintenance Activity: (check all that apply)
   - ☑ a. Active Remedial System: (check all that apply)
     - ☐ i. NAPL Recovery ☐ ii. Soil Vapor Extraction/Bioventing ☐ iii. Vapor-phase Carbon Adsorption
     - ☑ iv. Groundwater Recovery ☐ v. Dual/Multi-phase Extraction ☐ vi. Aqueous-phase Carbon Adsorption
     - ☐ vii. Air Stripping ☐ viii. Sparging/Biosparging ☐ ix. Cat/Thermal Oxidation
     - ☐ x. Other Describe:
   - ☐ b. Active Exposure Pathway Elimination Measure
     Active Exposure Pathway Mitigation System to address (check one): ☐ i. Indoor Air ☐ ii. Drinking Water
   - ☑ c. Application of Remedial Additives: (check all that apply)
     - ☐ i. To the Subsurface ☑ ii. To Groundwater (Injection) ☐ iii. To the Surface
   - ☐ d. Active Remedial Monitoring Program Without the Application of Remedial Additives: (check all that apply; Sections C, D and E are not required; attach supporting information, data, maps and/or sketches needed by checking Section G5)
     - ☐ i. Reactive Wall ☐ ii. Natural Attenuation ☐ iii. Other Describe:
2. Mode of Operation: (check one)
   - ☑ a. Continuous ☐ b. Intermittent ☐ c. Pulsed ☐ d. One-time Event Only ☐ e. Other:
3. System Effluent/Discharge: (check all that apply)
   - ☐ a. Sanitary Sewer/POTW
   - ☑ b. Groundwater Re-infiltration/Re-injection: (check one) ☐ i. Downgradient ☑ ii. Upgradient
   - ☐ c. Vapor-phase Discharge to Ambient Air: (check one) ☐ i. Off-gas Controls ☐ ii. No Off-gas Controls
   - ☐ d. Drinking Water Supply
   - ☐ e. Surface Water (including Storm Drains)
   - ☐ f. Other Describe:

B. MONITORING FREQUENCY:

1. Reporting period that is the subject of this submittal: From: 5/1/2021 (mm/dd/yyyy) To: 10/31/2021 (mm/dd/yyyy)
2. Number of monitoring events during the reporting period: (check one)
   - ☐ a. System Startup: (if applicable)
     - ☐ i. Days 1, 3, 6, and then weekly thereafter, for the first month.
     - ☐ ii. Other Describe:
   - ☑ b. Post-system Startup (after first month) or Monitoring Program:
     - ☐ i. Monthly
     - ☑ ii. Quarterly
     - ☐ iii. Annually
     - ☐ iv. Other Describe:
   - ☐ 3. Check here to certify that the number of required monitoring events were conducted during the reporting period.

C. EFFLUENT/DISCHARGE REGULATION: (check one to indicate how the effluent/discharge limits were established)

- ☐ 1. NPDES: (check one) ☐ a. Remediation General Permit ☐ b. Individual Permit ☐ c. Emergency Exclusion Effective Date of Permit: (mm/dd/yyyy)
- ☑ 2. MCP Performance Standard MCP Citations(s): 310 CMR 40.0045(4)
- ☐ 3. DEP Approval Letter Date of Letter: (mm/dd/yyyy)
- ☐ 4. Other Describe:

D. WASTEWATER TREATMENT PLANT OPERATOR: (check one)

☐ 1. Required due to Remedial Wastewater Treatment Plant in place for more than 30 days.

a. Name: _____ b. Grade: _____

c. License No: _____ d. License Exp. Date: _____ (mm/dd/yyyy)

☐ 2. Not Required

☑ 3. Not Applicable

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (check all that apply)

☐ 1. The Active Remedial System was functional one or more days during the Reporting Period.

a. Days System was Fully Functional: _____ b. GW Recovered (gals): _____

c. NAPL Recovered (gals): _____ d. GW Discharged (gals): _____

e. Avg. Soil Gas Recovery Rate (scfm): _____ f. Avg. Sparging Rate (scfm): _____

☑ 2. Remedial Additives: (check all that apply)

☑ a. No Remedial Additives applied during the Reporting Period.

☐ b. Enhanced Bioremediation Additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Nitrogen/Phosphorus:

Name of Additive	Date	Quantity	Units

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

☐ iii. Microorganisms:

Name of Additive	Date	Quantity	Units

☐ iv. Other:

Name of Additive	Date	Quantity	Units

☐ c. Chemical oxidation/reduction additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Permanganates:

Name of Additive	Date	Quantity	Units

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

☐ iii. Persulfates:

Name of Additive	Date	Quantity	Units

☐ iv. Other:

Name of Additive	Date	Quantity	Units

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (cont.)

☐ d. Other additives applied: (total quantity applied at the site for the current reporting period)

Name of Additive	Date	Quantity	Units	Name of Additive	Date	Quantity	Units

☐ e. Check here if any additional Remedial Additives were applied. Attach list of additional additives and include Name of Additive, Date Applied, Quantity Applied and Units (in gals. or lbs.)

F. SHUTDOWNS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM: (check all that apply)

☐ 1. The Active Remedial System had unscheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Unscheduled Shutdowns: _____ b. Total Number of Days of Unscheduled Shutdowns: _____

c. Reason(s) for Unscheduled Shutdowns: _____

☑ 2. The Active Remedial System had scheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Scheduled Shutdowns: 1 b. Total Number of Days of Scheduled Shutdowns: 183

c. Reason(s) for Scheduled Shutdowns: REMEDIATION EXPECTED TO CONTINUE NATURALLY WITHOUT ASSISTANCE OF SYSTEM

☐ 3. The Active Remedial System or Active Remedial Monitoring Program was permanently shutdown/discontinued during the Reporting Period.

a. Date of Final System or Monitoring Program Shutdown: _____ (mm/dd/yyyy)

☐ b. No Further Effluent Discharges.

☐ c. No Further Application of Remedial Additives planned; sufficient monitoring completed to demonstrate compliance with 310 CMR 40.0046.

☐ d. No Further Submittals Planned.

☐ e. Other: Describe: _____

G. SUMMARY STATEMENTS: (check all that apply for the current reporting period)

☑ 1. All Active Remedial System checks and effluent analyses required by the approved plan and/or permit were performed when applicable.

☑ 2. There were no significant problems or prolonged (>25% of reporting period) unscheduled shutdowns of the Active Remedial System.

☑ 3. The Active Remedial System or Active Remedial Monitoring Program operated in conformance with the MCP, and all applicable approval conditions and/or permits.

4. Indicate any Operational Problems or Notes:

☐ 5. Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup
CRA REMEDIAL MONITORING REPORT
Pursuant to 310 CMR 40.0800 (SUBPART H)
Remedial System or Monitoring Program: 2 of: 2

BWSC108 -A

Release Tracking Number
3 - 13302

A. DESCRIPTION OF ACTIVE OPERATION AND MAINTENANCE ACTIVITY:

1. Type of Active Operation and Maintenance Activity: (check all that apply)
   - ☐ a. Active Remedial System: (check all that apply)
     - ☐ i. NAPL Recovery ☐ ii. Soil Vapor Extraction/Bioventing ☐ iii. Vapor-phase Carbon Adsorption
     - ☐ iv. Groundwater Recovery ☐ v. Dual/Multi-phase Extraction ☐ vi. Aqueous-phase Carbon Adsorption
     - ☐ vii. Air Stripping ☐ viii. Sparging/Biosparging ☐ ix. Cat/Thermal Oxidation
     - ☐ x. Other Describe:
   - ☐ b. Active Exposure Pathway Elimination Measure
     Active Exposure Pathway Mitigation System to address (check one): ☐ i. Indoor Air ☐ ii. Drinking Water
   - ☑ c. Application of Remedial Additives: (check all that apply)
     - ☐ i. To the Subsurface ☑ ii. To Groundwater (Injection) ☐ iii. To the Surface
   - ☐ d. Active Remedial Monitoring Program Without the Application of Remedial Additives: (check all that apply; Sections C, D and E are not required; attach supporting information, data, maps and/or sketches needed by checking Section G5)
     - ☐ i. Reactive Wall ☐ ii. Natural Attenuation ☐ iii. Other Describe:
2. Mode of Operation: (check one)
   - ☐ a. Continuous ☑ b. Intermittent ☐ c. Pulsed ☐ d. One-time Event Only ☐ e. Other:
3. System Effluent/Discharge: (check all that apply)
   - ☐ a. Sanitary Sewer/POTW
   - ☐ b. Groundwater Re-infiltration/Re-injection: (check one) ☐ i. Downgradient ☐ ii. Upgradient
   - ☐ c. Vapor-phase Discharge to Ambient Air: (check one) ☐ i. Off-gas Controls ☐ ii. No Off-gas Controls
   - ☐ d. Drinking Water Supply
   - ☐ e. Surface Water (including Storm Drains)
   - ☑ f. Other Describe: NO EFFLUENT

B. MONITORING FREQUENCY:

1. Reporting period that is the subject of this submittal: From: 5/1/2021 (mm/dd/yyyy) To: 10/31/2021 (mm/dd/yyyy)
2. Number of monitoring events during the reporting period: (check one)
   - ☐ a. System Startup: (if applicable)
     - ☐ i. Days 1, 3, 6, and then weekly thereafter, for the first month.
     - ☐ ii. Other Describe:
   - ☑ b. Post-system Startup (after first month) or Monitoring Program:
     - ☐ i. Monthly
     - ☐ ii. Quarterly
     - ☐ iii. Annually
     - ☑ iv. Other Describe: SEMI-ANNUALLY
3. ☐ Check here to certify that the number of required monitoring events were conducted during the reporting period.

C. EFFLUENT/DISCHARGE REGULATION: (check one to indicate how the effluent/discharge limits were established)

- ☐ 1. NPDES: (check one) ☐ a. Remediation General Permit ☐ b. Individual Permit ☐ c. Emergency Exclusion
  Effective Date of Permit: (mm/dd/yyyy)
- ☐ 2. MCP Performance Standard MCP Citations(s):
- ☐ 3. DEP Approval Letter Date of Letter: (mm/dd/yyyy)
- ☑ 4. Other Describe: NO EFFLUENT

D. WASTEWATER TREATMENT PLANT OPERATOR: (check one)

☐ 1. Required due to Remedial Wastewater Treatment Plant in place for more than 30 days.

a. Name: _____ b. Grade: _____

c. License No: _____ d. License Exp. Date: _____ (mm/dd/yyyy)

☐ 2. Not Required

☑ 3. Not Applicable

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (check all that apply)

☐ 1. The Active Remedial System was functional one or more days during the Reporting Period.

a. Days System was Fully Functional: _____ b. GW Recovered (gals): _____

c. NAPL Recovered (gals): _____ d. GW Discharged (gals): _____

e. Avg. Soil Gas Recovery Rate (scfm): _____ f. Avg. Sparging Rate (scfm): _____

☑ 2. Remedial Additives: (check all that apply)

☑ a. No Remedial Additives applied during the Reporting Period.

☐ b. Enhanced Bioremediation Additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Nitrogen/Phosphorus:

Name of Additive	Date	Quantity	Units

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

☐ iii. Microorganisms:

Name of Additive	Date	Quantity	Units

☐ iv. Other:

Name of Additive	Date	Quantity	Units

☐ c. Chemical oxidation/reduction additives applied: (total quantity applied at the site for the current reporting period)

☐ i. Permanganates:

Name of Additive	Date	Quantity	Units

☐ ii. Peroxides:

Name of Additive	Date	Quantity	Units

☐ iii. Persulfates:

Name of Additive	Date	Quantity	Units

☐ iv. Other:

Name of Additive	Date	Quantity	Units

E. STATUS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM DURING REPORTING PERIOD: (cont.)

☐ d. Other additives applied: (total quantity applied at the site for the current reporting period)

Name of Additive	Date	Quantity	Units	Name of Additive	Date	Quantity	Units

☐ e. Check here if any additional Remedial Additives were applied. Attach list of additional additives and include Name of Additive, Date Applied, Quantity Applied and Units (in gals. or lbs.)

F. SHUTDOWNS OF ACTIVE REMEDIAL SYSTEM OR ACTIVE REMEDIAL MONITORING PROGRAM: (check all that apply)

☐ 1. The Active Remedial System had unscheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Unscheduled Shutdowns: _____ b. Total Number of Days of Unscheduled Shutdowns: _____

c. Reason(s) for Unscheduled Shutdowns: _____

☑ 2. The Active Remedial System had scheduled shutdowns on one or more occasions during the Reporting Period.

a. Number of Scheduled Shutdowns: 1 b. Total Number of Days of Scheduled Shutdowns: 183

c. Reason(s) for Scheduled Shutdowns: REMEDIATION EXPECTED TO CONTINUE NATURALLY WITHOUT ASSISTANCE OF SYSTEM

☐ 3. The Active Remedial System or Active Remedial Monitoring Program was permanently shutdown/discontinued during the Reporting Period.

a. Date of Final System or Monitoring Program Shutdown: _____ (mm/dd/yyyy)

☐ b. No Further Effluent Discharges.

☐ c. No Further Application of Remedial Additives planned; sufficient monitoring completed to demonstrate compliance with 310 CMR 40.0046.

☐ d. No Further Submittals Planned.

☐ e. Other: Describe: _____

G. SUMMARY STATEMENTS: (check all that apply for the current reporting period)

☑ 1. All Active Remedial System checks and effluent analyses required by the approved plan and/or permit were performed when applicable.

☑ 2. There were no significant problems or prolonged (>25% of reporting period) unscheduled shutdowns of the Active Remedial System.

☑ 3. The Active Remedial System or Active Remedial Monitoring Program operated in conformance with the MCP, and all applicable approval conditions and/or permits.

4. Indicate any Operational Problems or Notes:

☐ 5. Check here if additional/supporting Information, data, maps, and/or sketches are attached to the form.

APPENDIX B IESI MEMORANDUM

Innovative Engineering Solutions, Inc.
37 Pearl Street, #1, Braintree, Massachusetts 02184 (508) 623-1224 • fax (508) 668-5175

MEMORANDUM

To: Jonathan Hone; Raytheon Company
From: David Falatko, P.E., IESI
Subject: Work Summary for ROS Report
Raytheon Facility
Wayland, Massachusetts
Date: October 4, 2021

At the request of Raytheon Company (Raytheon), Innovative Engineering Solutions Inc. (IESI) has prepared this memorandum outlining the bioremediation activities (at the Northern Area) between May 1, 2021 and November 1, 2021 at the Former Raytheon Facility located in Wayland, Massachusetts. The memorandum provides sufficient detail to be incorporated into a Remedy Operation Status (ROS) report.

The following activities have been performed during this time period:

1. Collection of groundwater elevation data (May 2021); and,
2. Sampling and analysis to evaluate remediation progress (May and September 2021).

Since remedial system start up in 2011, approximately 12.8 million gallons have been recirculated by numerous extraction and injection wells across the site as shown on Figures 1 thru 3. The active groundwater recirculation system was deactivated on December 20, 2016 since the bulk of the chlorinated volatile organic compounds (CVOCs) had been remediated across the entire site. We expect continued groundwater improvement over the next several years since residual total organic carbon (TOC) will act as an electron donor as will TOC that may be generated from endogenous microbial decay. At this point (57 months after system shut down), the analytical data indicates that there is no noticeable VOC concentration rebound and the recirculation system is expected to remain off for an indefinite period.

1. Collection of Groundwater Elevation Data

Groundwater elevation data was collected from selected wells in the Northern Area on May 3, 2021. The data is compiled and presented in Table 1. Figures 1 thru 3 presents interpreted groundwater elevation contour maps for this measurement event along with recent site groundwater analytical data. Consistent with past groundwater elevation measurements, groundwater flow is to the west.

2. Sampling and Analysis to Evaluate the Progress of the Recirculation System

Groundwater samples were collected to evaluate the progress of the remedial program. Groundwater sampling was conducted during this reporting period in May and September of 2021. The May 2021 analytical data is summarized in Table 3 and the September 2021 data is summarized in Table 4; data from the January sampling event is also included for reference in Table 2. All laboratory analytical data reports can be found in Attachment A. All sampling was conducted using low flow sampling methods using a peristaltic pump. Groundwater sampling logs can be found in Attachment B. Groundwater dissolved gas sample analysis was conducted by Alpha Analytical of Westborough, MA, and dissolved CVOCs and other constituents were analyzed by Eurofins – TestAmerica of Amherst, New York.

Selected analytical data for selected wells are graphed in Attachment C. Each page in Attachment C is for a single well and is made up of four separate graphs to allow a simultaneous evaluation of biogeochemical and VOC data.

In general, the data indicate excellent CVOC reduction, electron donor distribution, sulfate reduction, methane generation and dechlorination of parent compounds to breakdown products (leading to ethene/ethane). The data often indicate initial electron donor induced desorption (of CVOCs), followed by dechlorination of the chlorinated VOCs (CVOCs). Near complete dechlorination has essentially been achieved across most/all of the northern area plume. Near complete dechlorination is evident in all treatment zone wells. Figures 1 thru 3 show the site plan of wells and has groundwater VOC data called out for selected wells. Locations with CVOCs remaining typically have mostly degradation by-products such as 1,2-cis dichloroethane and vinyl chloride, with relatively low concentrations of trichloroethene.

As of 2021, the following wells have had had non-detectable concentrations of the targeted CVOCs for at least the last year: MW-261S, MW-551, MW-552, MW-560, MW-561, MW-562, MW-563, MW-267M, and REW-series wells 1, 6, 7, 8, 9, 10, 11, and 12. The sampling frequency of these wells has therefore been reduced, and overall site monitoring events will occur twice a year going forward instead of quarterly. The new sampling plan for the Northern Area is shown on Table 5. The sampling plan may change as new data becomes available and may be adjusted accordingly.

In addition to the previous wells that have non-detectable concentrations, several other wells have had significant reductions in concentrations of the targeted CVOCs but still have low to trace concentrations remaining, including MW-264M, MW-266Mb, and the MW-268 cluster (shallow, medium, and deep intervals). Groundwater quality at MW-268S has not improved as quickly as at other locations, with total CVOCs of 88 ug/L during this recent, September 2021 sampling event. However, here is still significant TOC present at this location (135 mg/l TOC) and continued biological treatment and dechlorination is expected with time.

In general, the site data show good degradation of the targeted CVOCs, illustrated by the following:

1) TCE has been reduced to below the GW-1 standard of 5 ug/l at all monitoring locations, as shown on Figure 1.
2) Cis-1,2-DCE has been reduced to below the GW-1 standard of 70 ug/l at all but one monitoring location (88 ug/l of cis-1,2-DCE is present at MW-268S), as shown on Figure 2.
3) Vinyl chloride has been reduced to below the GW-1 standard of 2 ug/l at all but two monitoring locations (12 ug/l of VC is present at MW-264M, and 88 ug/l of VC is present at MW-268S), as shown on Figure 3.

Concentrations of 1,4-dioxane have been reduced across the site, but still exceed the low GW-1 standard of 0.3 ug/l at approximately 50% of the monitoring locations, as shown on Figure 4. Of the locations where 1,4-dioxane is still present above the GW-1 standard, concentrations are typically stable or decreasing. One location, however, MW-268S, has 1,4-dioxane concentration of 29 ug/l, and appears to be increasing in concentration currently. 1,4-dioxane was not a targeted compound in the EAD remedial approach but can be co-metabolically degraded after the EAD process. It appears that 1,4-dioxane concentrations across the site have decreased after EAD treatment, and that reduction may be attributed to this co-metabolic process. Location MW-268S appears to be one of the last areas to be treated with EAD, and this may be why 1,4-dioxane concentrations are still elevated there, but these concentrations are expected to decrease in accordance with overall site trends for 1,4-dioxane.

Analytical results for sample trip blank and sample duplicates conform to acceptable and applicable guidelines/standards and are tabulated in the tables alongside the respective sampled wells. Correlation between the sample duplicates is considered acceptable. The laboratory blanks were free of detectable VOCs.

Acetone and/or Methyl ethyl ketone (MEK), fermentation products of many electron donors, are present at a few locations within the treatment area in concentrations up to 610 µg/L (MEK at well MW-267S in September 2021). These compounds have been detected more commonly and at more locations in the past when electron donor injections were still occurring, and the groundwater recirculation system was active. The generation of acetone and MEK is a transient phenomenon and the compounds are not expected to mobilize beyond the treatment area. Bother acetone and MEK are electron donors and are expected to degrade over time (Fowler et. al., 2011). Acetone and MEK are readily degraded and should not reach more downgradient locations in significant concentrations.

References

Fowler, T., Thompson, B., Mueller, J., 2011; Acetone and 2-Butanone Creation Associated with Biological and Chemical Remediation of Environmental Contamination; Remediation Journal Winter 2011, p-9-27.

Tables

Figures

Attachments

Table 1 - Groundwater Gauging Summary, May 3, 2021

Former Raytheon Facility, Northern Area, Wayland MA

Well Designation	Screen Length (feet)	Total Well Depth (feet)	Measuring Point Elevation	Depth to Water (feet)	Depth to Bottom (feet)	Groundwater Elevation (feet)
MW-261S	5	22	131.28	11.02	24.4	120.26
MW-263S	5	25	127.96	7.82	22.2	120.14
MW-263M	5	50	127.77	9.5	52.68	118.27
MW-264S	10	20	126.32	5.47	22	120.85
MW-264M	10	44	126.28	7.74	47.3	118.54
MW-264D	5	77	126.63	9.64	79.8	116.99
MW-265S	10	18	130.06	7.97	21	122.09
MW-265M	5	45	129.89	10.97	48.4	118.92
MW-265D	5	89	130.07	13.01	91.45	117.06
MW-266S	10	17	126.79	7.23	20.02	119.56
MW-266Ma	5	52	127.72	10.13	55.1	117.59
MW-266Mb	10	68	126.88	10.25	70.1	116.63
MW-266D	5	105	127.70	10.75	107.93	116.95
MW-266B	5	138	128.14	10.98	137.7	117.16
MW-267S	5	77	125.30	8.98	76.4	116.32
MW-267M	10	95	125.40	8.9	98.2	116.50
MW-267D	5	121	125.88	8.8	122.95	117.08
MW-267B	5	153	124.02	7.61	113.36	116.41
MW-268S	5	74	123.66	7.41	77	116.25
MW-268M	10	94	123.41	7.49	93.8	115.92
MW-268D	5	127	124.86	8.41	130.15	116.45
MW-268B	5	153	122.34	6.55	156.8	115.79
MW-269S	10	20	125.54	6.91	21.81	118.63
MW-269Ma	5	32	124.96	7.64	33.68	117.32
MW-269Mb	10	84	125.42	9.44	83.82	115.98
MW-269D	5	144	125.34	10.28	146.8	115.06
MW-551	5	26	129.30	8.99	26.3	120.31
MW-552	5	24	130.09	10	27.1	120.09
MW-553	5	20	130.33	9.96	21.5	120.37
DEP-19S	5	15	120.79	2.36	12.66	118.43
DEP-19M	5	40	120.62	2.38	39.8	118.24
DEP-19D	5	50	120.78	2.36	49.55	118.42
DEP-21	5	50	119.18	2	49.61	117.18
MW-560	10	67	127.23	9.63	65.2	117.60
MW-561	10	53.65	127.90	9.7	53.65	118.20
MW-562	10	45	128.13	8.38	41.6	119.75
MW-563	30	70	125.70	6.73	65.2	118.97
REW-1	30	45	126.23	3.67	14.36	122.56
REW-4	30	45	125.85	7.79	47.36	118.06
REW-5	30	45	125.80	7.42	39.53	118.38

DTW- depth to water

Wells not listed were not measured in this gauging round.

Table 2 - Summary of Analytical Data, January, 2021

Former Raytheon Facility, Wayland MA

Sample ID	Units	MCP Method 1 GW-1	MW-266Mb	MW-268D	MW-268S	MW-268S DUP 1	MW-268M	REW-6	REW-11	REW-12	REW-7	Trip Blank
Methane	ug/L	NS	16700	5240	25900	na	31400	22800	27200	22800	23500	ND
Ethene	ug/L	NS	5.06	ND	8.04	na	1.79	ND	1.26	ND	ND	ND
Ethane	ug/L	NS	8.41	1.37	8.09	na	12.9	2.7	13.6	5.78	6.57	ND
Vinyl Chloride	ug/L	2	10	ND	25	29	1.3	ND	ND	ND	ND	ND
Chloroethane	ug/L	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DCE	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DCA	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-cDCE	ug/L	70	1.6	7.3	310	320	1.2	ND	ND	ND	ND	ND
t-1,2 DCE	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-TCA	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TCE	ug/L	5	ND	3.1	10	10	ND	ND	ND	ND	ND	ND
PCE	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ug/L	6,300	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
THF	ug/L	NS	15	ND	ND	ND	ND	37	ND	ND	60	ND
m,p xylene	ug/L	10,000	5.6	ND	ND	ND	ND	ND	ND	4.2	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1,000	ND	7.7	29	31	ND	ND	ND	ND	ND	ND
Ethyl benzene	ug/L	700	4.1	ND	ND	ND	ND	ND	ND	1.3	ND	ND
2-Butan. (MEK)	ug/L	4,000	ND	ND	ND	ND	ND	ND	1000	ND	ND	ND
o-xylene	ug/L	10,000	4.6	ND	ND	ND	ND	ND	ND	1.3	ND	ND
1,2 Dichlorbenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4 Dichlorobenzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ug/L	140	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Cl.	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4 Dioxane	ug/L	0.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloride	mg/L	NS	37	49	22	na	42.0	40	60.0	46.0	21.0	na
Nitrate	mg/L	NS	0.260	ND	0.160	na	0.160	0.180	0.080	0.250	ND	na
Sulfate	mg/L	NS	ND	32.0	ND	na	ND	620.0	12.0	ND	ND	na
Alkalinity	mg/L	NS	420	77	140	na	280	39	1600	240	140	na
Manganese	mg/L	NS	ND	ND	ND	na	ND	ND	ND	ND	ND	na
NH3-N	mg/L	NS	0.290	ND	ND	na	ND	5.5	ND	2.80	1.60	na
PO4	mg/L	NS	ND	0.100	0.047	na	0.021	0.089	0.17	0.09	0.097	na
Sulfide	mg/L	NS	ND	ND	ND	na	ND	ND	ND	ND	ND	na
Total Iron	mg/L	NS	43	0	28.0	na	27	58	250	46	4.8	na
COD	mg/L	NS	ND	ND	ND	na	ND	ND	ND	ND	ND	na
TOC	mg/L	NS	2.63	20.0	387	na	2	2.3	2167	1.63	1.05	na
lab pH	pH units	NS	6.7	8.0	6.2	na	6.8	6.5	6.2	6.6	7.3	na
field pH	pH units	NS	6.7	8.5	6.7	na	7.0	7.0	6.4	6.7	7.4	na

1,1 DCE- 1,1 dichloroethene; 1,1 DCA-1,1 Dichloroethane; 1,2cDCE- 1,2 cis dichloroethene;
1,1,1 TCA- 1,1,1 trichoroethane, TCE- trichoroethene; PCE- tetrachloroethene
na- not analyzed
1,4 dioxane by Method 8260 with detection limits varying from 50 ug/l to 1,000 ug/l
all other VOCs by Method 8260B
THF-tetrahydrofuran 1,2,4 TMB- 1,2,4 trimethylbenzene
ND- not detected- see lab report for detection limits
DUP 1 = duplicate #1

VOC detections

ketone breakdown products

Table 3- Summary of Analytical Data, May 2021 (Part I)
Former Raytheon Facility, Wayland MA

Sample ID	units	MCP Method 1 GW-1	DEP-21	MW-261S	MW-261S DUP 2	MW-264M	MW-265S	MW-265M	MW-265D	MW-266Ma	MW-266Mb	MW-267S	MW-267M	MW-268S	MW-268M	MW-268M DUP 1	MW-268D
Methane	ug/L	NS	NA	NA	NA	18600	NA	NA	NA	NA	19,200	18,100	30,000	25,200	25,100	NA	5,830
Ethene	ug/L	NS	NA	NA	NA	1.44	NA	NA	NA	NA	5.67	3.59	ND	6.43	2.68	NA	0.75
Ethane	ug/L	NS	NA	NA	NA	1.44	NA	NA	NA	NA	6.94	ND	42.5	8.63	12.3	NA	1.39
Vinyl Chloride	ug/L	2	1.9	ND	ND	19	ND	ND	ND	ND	4.9	ND	ND	16	13	13	ND
Chloroethane	ug/L	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DCE	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DCA	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-c DCE	ug/L	70	2.3	ND	ND	25	ND	ND	ND	ND	1.2	ND	ND	130	4	3.9	10
1,2-t-DCE	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-TCA	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TCE	ug/L	5	ND	ND	ND	4.3	ND	ND	ND	ND	ND	ND	ND	5	ND	ND	3.4
PCE	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ug/L	6,300	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
THF	ug/L	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
m,p xylene	ug/L	10,000	ND	ND	ND	ND	ND	ND	ND	ND	7.9	ND	ND	ND	ND	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	60	ND	23	ND	ND	5.9
Ethyl Benzene	ug/L	700	ND	ND	ND	ND	ND	ND	ND	ND	4.3	ND	ND	ND	ND	ND	ND
2-Butananone (MEK)	ug/L	4,000	ND	ND	ND	ND	ND	ND	ND	ND	ND	650	ND	ND	ND	ND	ND
o-xylene	ug/L	10,000	ND	ND	ND	ND	ND	ND	ND	ND	4.2	ND	ND	ND	ND	ND	ND
Carbon Disulfide	ug/L	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2 Dichlorbenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4 Dichlorobenzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ug/L	140	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4 Dioxane	ug/L	0.3	ND	0.27	0.32	3.3	ND	2.7	ND	0.86	3.3	ND	4	24	6.3	6.6	ND
Chloride	mg/L	NS	NA	NA	NA	64	NA	NA	NA	NA	36	41	39	21	41	ND	48
Nitrate	mg/L	NS	NA	NA	NA	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND
Sulfate	mg/L	NS	NA	NA	NA	32	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	31
Alkalinity	mg/L	NS	NA	NA	NA	250	NA	NA	NA	NA	450	1100	130	120	370	ND	76
Manganese	mg/L		NA	NA	NA	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND
NH3-N	mg/L	NS	NA	NA	NA	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND
PO4	mg/L	NS	NA	NA	NA	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND
Sulfide	mg/L	NS	NA	NA	NA	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	ND
Total Iron	mg/L	NS	NA	NA	NA	13	NA	NA	NA	NA	38	890	62	24	4	ND	ND
COD	mg/L	NS	NA	NA	NA	ND	NA	NA	NA	NA	ND	ND	ND	ND	ND	ND	0.063
TOC	mg/L	NS	NA	NA	NA	2.53	NA	NA	NA	NA	3.8	2800	2.13	250	1.6	ND	ND
lab pH	pH units	NS	NA	NA	NA	6.4	NA	NA	NA	NA	6.3	5.3	6.5	6.0	7.0	ND	7.6
field pH	pH units	NS	8.4	7.1	7.1	7.0	6.7	7.1	6.7	6.5	6.8	5.4	6.6	5.9	6.8	6.8	8.1

1,1 DCE- 1,1 dichloroethene; 1,1 DCA-1,1 Dichloroethane; 1,2cDCE- 1,2 cis dichloroethene;
1,1,1 TCA- 1,1,1 trichoroethane, TCE- trichoroethene; PCE- tetrachloroethene; THF-tetrahydrofuran;
na/NA- not analyzed ; ND- not detected- see lab reports for detection limits
MCP Method 1 GW-1: MCP Method 1 Standards for GW-1 Category Groundwater, NS: no standard
All analysis by Test America except dissolved gases by Alpha Analytical.
DUP 1 = duplicate #1

1,4 dioxane by Method 522; all other VOCs by 8260C

VOC detections

ketone breakdown products

Table 3- Summary of Analytical Data, May 2021 (Part II)
Former Raytheon Facility, Wayland MA

Sample ID	units	MCP Method 1 GW-1	MW-269Ma	MW-551	MW-552	MW-553	MW-560	MW-561	MW-562	MW-563	REW-6	REW-6 DUP 3	REW-7	REW-11	REW-12	MW269M	Trip Blank
Methane	ug/L	NS	22	NA	NA	16,300	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethene	ug/L	NS	ND	NA	NA	0.86	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethane	ug/L	NS	ND	NA	NA	1.37	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Vinyl Chloride	ug/L	2	ND	ND	ND	2.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Chloroethane	ug/L	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DCE	ug/L	7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DCA	ug/L	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-c DCE	ug/L	70	2.8	ND	ND	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2-t-DCE	ug/L	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-TCA	ug/L	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TCE	ug/L	5	4.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
PCE	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ug/L	6,300	ND	ND	ND	ND	ND	110	ND	ND	ND	ND	ND	ND	ND	ND	ND
THF	ug/L	NS	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	10	ND	ND	ND	ND
m,p xylene	ug/L	10,000	ND	ND	ND	2.5	ND	5.5	3.1	ND	ND	2	ND	ND	6.5	ND	ND
Benzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	1,000	ND	ND	ND	ND	ND	2	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethyl Benzene	ug/L	700	ND	ND	ND	1.9	ND	4.3	ND	ND	ND	ND	ND	ND	2	ND	ND
2-Butananone (MEK)	ug/L	4,000	ND	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	610	ND	ND	ND
o-xylene	ug/L	10,000	ND	ND	ND	ND	ND	3.7	ND	ND	ND	ND	ND	ND	1.8	ND	ND
Carbon Disulfide	ug/L	NS	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2 Dichlorbenzene	ug/L	600	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4 Dichlorobenzene	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ug/L	140	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ug/L	2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4 Dioxane	ug/L	0.3	0.64	0.30	0.49	0.81	ND	4.6	0.23	0.34	3.1	3.2	ND	1.9	3.4	0.86	ND
Chloride	mg/L	NS	22	NA	NA	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Nitrate	mg/L	NS	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfate	mg/L	NS	29	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Alkalinity	mg/L	NS	110	NA	NA	740	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Manganese	mg/L		ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NH3-N	mg/L	NS	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PO4	mg/L	NS	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sulfide	mg/L	NS	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total Iron	mg/L	NS	18	NA	NA	36	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
COD	mg/L	NS	ND	NA	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOC	mg/L	NS	ND	NA	NA	2.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
lab pH	pH units	NS	7.0	NA	NA	7.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
field pH	pH units	NS	7.0	6.9	7.1	7.2	7.4	6.5	6.9	6.9	6.8	NA	7.0	7.0	6.5	7.0	NA

1,1 DCE- 1,1 dichloroethene; 1,1 DCA-1,1 Dichloroethane; 1,2cDCE- 1,2 cis dichloroethene;
1,1,1 TCA- 1,1,1 trichoroethane, TCE- trichoroethene; PCE- tetrachloroethene; THF-tetrahydrofuran;
na/NA- not analyzed ; ND- not detected- see lab reports for detection limits
MCP Method 1 GW-1: MCP Method 1 Standards for GW-1 Category Groundwater, NS: no standard
All analysis by Test America except dissolved gases by Alpha Analytical.
DUP 1 = duplicate #1

VOC detections

ketone breakdown products

Table 4- Summary of Analytical Data, September 2021
Former Raytheon Facility, Wayland MA

Sample ID	units	MW-264M	MW-266Mb	MW-266Mb DUP 1	MW-267S	MW-267M	MW-268S	MW-268M	MW-268D	MW-269Ma	MW-553	Trip Blank
Methane	ug/L	21300	19,900	na	17,000	28,400	31,000	28,900	7,250	ND	18,400	ND
Ethene	ug/L	3.67	1.62	na	4.49	ND	6.91	2.44	1.61	ND	1.00	ND
Ethane	ug/L	1.3	7.23	na	ND	39.4	11.60	10.8	1.73	ND	1.39	ND
Vinyl Chloride	ug/L	12	1.9	1.9	ND	ND	ND	5.1	ND	ND	ND	ND
Chloroethane	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DCE	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1-DCA	ug/L	ND	ND	ND	ND	1.1	ND	ND	ND	ND	ND	ND
1,2-c DCE	ug/L	21	1.5	1.5	49	ND	88	1.3	14	3.8	ND	ND
1,2-t-DCE	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,1,1-TCA	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TCE	ug/L	2.2	ND	ND	ND	ND	ND	ND	3.6	4.3	ND	ND
PCE	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Acetone	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
THF	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
m,p xylene	ug/L	ND	17	18	ND	ND	ND	ND	ND	ND	ND	ND
Benzene	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Toluene	ug/L	ND	ND	ND	76	ND	14	ND	4.5	ND	ND	ND
Ethyl Benzene	ug/L	ND	6.3	6.6	ND	ND	ND	ND	ND	ND	ND	ND
2-Butananone (MEK)	ug/L	ND	ND	ND	610	ND	ND	ND	ND	ND	ND	ND
o-xylene	ug/L	ND	4.4	4.4	ND	ND	ND	ND	ND	ND	ND	ND
Carbon Disulfide	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2 Dichlorbenzene	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4 Dichlorobenzene	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Naphthalene	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Methylene Chloride	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dibromochlorometha	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4 Dioxane	ug/L	2.6	3.7	3.6	ND	4.3	29	6.5	0.22	0.66	0.8	ND
Chloride	mg/L	39	33	na	40	40	20	41	47	21	11	ND
Nitrate	mg/L	ND	ND	na	ND	ND	ND	ND	ND	ND	ND	ND
Sulfate	mg/L	19	ND	na	ND	ND	ND	ND	26	22	ND	ND
Alkalinity	mg/L	210	490	na	910	170	88	330	75	110	780	na
Manganese	mg/L	ND	ND	na	ND	ND	ND	ND	ND	ND	ND	na
NH3-N	mg/L	0.11	0.26	na	0.08	0.35	0.33	0.1	ND	ND	ND	na
PO4	mg/L	ND	ND	na	ND	ND	ND	ND	ND	ND	ND	na
Sulfide	mg/L	ND	ND	na	ND	ND	ND	ND	ND	ND	ND	na
Total Iron	mg/L	22	51	na	890	78	21	18	0.053	9.1	28	na
COD	mg/L	ND	ND	na	ND	ND	ND	ND	ND	ND	ND	na
TOC	mg/L	1.5	2.4	na	3500	1.85	135	2.3	ND	ND	1.95	na
lab pH	pH units	6.7	6.4	na	5.5	6.5	5.8	6.9	8.2	7.2	7.0	na
field pH	pH units	6.7	6.4	6.4	5.6	6.7	5.7	6.9	8.2	7.3	7.1	na

1,1 DCE- 1,1 dichloroethene; 1,1 DCA-1,1 Dichloroethane; 1,2cDCE- 1,2 cis dichloroethene;
1,1,1 TCA- 1,1,1 trichoroethane, TCE- trichoroethene; PCE- tetrachloroethene; THF-tetrahydrofuran;
na/NA- not analyzed ; ND- not detected- see lab reports for detection limits
MCP Method 1 GW-1: MCP Method 1 Standards for GW-1 Category Groundwater, NS: no standard
All analysis by Test America except dissolved gases by Alpha Analytical.
DUP 1 = duplicate #1

VOC detections

ketone breakdown products

Table 5: 2021 - 2022 Sampling Plan for Northern Area

Former Raytheon Facility

Wayland, Massachusetts

Well ID	Biennial Sampling - Spring / Summer (complete every two years, 2021, then 2023)				Annual Sampling - 2022 (complete in spring)				Semi-annual Sampling (complete in fall)			
	Well ID	CVOCs[1]	Dioxane by 522[2]	Bio Suite [3]	Well ID	CVOCs[1]	Dioxane by 522[2]	Bio Suite [3]	Well ID	CVOCs[1]	Dioxane by 522[2]	Bio Suite [3]
DEP-21	DEP-21	X	X		DEP-21	X	X		DEP-21			
MW-261S	MW-261S	X	X		MW-261S	X	X		MW-261S			
MW-264M	MW-264M	X	X	X	MW-264M	X	X	X	MW-264M	X	X	X
MW-265S	MW-265S	X	X		MW-265S				MW-265S			
MW-265M	MW-265M	X	X		MW-265M	X	X		MW-265M			
MW-265D	MW-265D	X	X		MW-265D				MW-265D			
MW-266Ma	MW-266Ma	X	X		MW-266Ma	X	X		MW-266Ma			
MW-266Mb	MW-266Mb	X	X	X	MW-266Mb	X	X	X	MW-266Mb	X	X	X
MW-267S	MW-267S	X	X	X	MW-267S	X	X	X	MW-267S	X	X	X
MW-267M	MW-267M	X	X	X	MW-267M	X	X	X	MW-267M	X	X	X
MW-268S	MW-268S	X	X	X	MW-268S	X	X	X	MW-268S	X	X	X
MW-268M	MW-268M	X	X	X	MW-268M	X	X	X	MW-268M	X	X	X
MW-268D	MW-268D	X	X	X	MW-268D	X	X	X	MW-268D	X	X	X
MW-269Ma	MW-269Ma	X	X		MW-269Ma	X	X		MW-269Ma	X	X	
MW-551	MW-551	X	X		MW-551	X	X		MW-551			
MW-552	MW-552	X	X		MW-552	X	X		MW-552			
MW-553	MW-553	X	X	X	MW-553	X	X	X	MW-553	X	X	X
MW-560	MW-560	X	X		MW-560				MW-560			
MW-561	MW-561	X	X		MW-561				MW-561			
MW-562	MW-562	X	X		MW-562				MW-562			
MW-563	MW-563	X	X		MW-563	X	X		MW-563			
REW-1	REW-1				REW-1				REW-1			
REW-4	REW-4				REW-4				REW-4			
REW-5	REW-5				REW-5				REW-5			
REW-6	REW-6	X	X		REW-6	X	X		REW-6			
REW-7	REW-7	X	X		REW-7	X	X		REW-7			
REW-8	REW-8				REW-8				REW-8			
REW-9	REW-9				REW-9				REW-9			
REW-10	REW-10				REW-10				REW-10			
REW-11	REW-11	X	X		REW-11	X	X		REW-11			
REW-12	REW-12	X	X		REW-12	X	X		REW-12			
	TOTALS:	25	25	8	**TOTALS:**	20	20	8	**TOTALS:**	9	9	8

NOTES:

1) 8260 for CVOC

2) 522 for 1,4 dioxane

3) Bio suite: anions, gases, TOC, alkalinity, total iron, pH

4) Targeted EAD VOCs include chlorinated ethenes such PCE, TCE and associated degradation by-products. This does not include 1,4-dioxane, THF, BTEX compounds, ketones from the EAD process, or other 8260 reported VOCs.

5) General criteria used to determine frequency reductions are as follows (adjust as new data is available):

- Semiannual Stable or slightly increasing CVOC and/or 1,4-Dioxane concentrations, GW-1 exceedances observed
- Annual Low to non-detect CVOC and 1,4-Dioxane concentrations, continue to monitor bio suite
- Biennial Non-detect CVOC and 1,4-Dioxane concentrations for at least the last 3 years

NOTES:
1) ALL LOCATIONS HAVE TCE BELOW GW-1 STANDARDS.
2) SOME EAD TREATED AREAS HAVE DEGRADATION PRODUCTS cis-1,2-DCE AND VC.
3) TOTAL VOC CONCENTRATIONS ARE STILL DECREASING.

N

DEP-21

DEP-19D
DEP-19S
DEP-19M

DEP-21	
SI: 45'-50'	
TCE	ND
cisDCE	2.0
VC	1.9
TCVOCs	ND
1,4-D	ND

APPROXIMATE PROPERTY LINE

116

117

118

119

120

MW-267M	
SI: 85'-95'	
TCVOCs	ND
1,4-D	4.3

MW-267S	
SI: 72'-77'	
TCVOCs	ND
1,4-D	ND

MW-267M
116.5
MW-267S
MW-267B
MW-267D
RIW-16

REW-16	
SI: 70'-100'	

REW-6	
SI: 50'-80'	
TCVOCs	ND
TOC	NA
1,4-D	3.1

REW-6

REW-11	
SI: 70'-100'	
TCVOCs	–
TOC	–
1,4-D	2

MW-268D	
SI: 122'-127'	
TCE	3.6
cisDCE	14
VC	ND
TCVOCs	17.6
TOC	ND
1,4-D	0.22

REW-11/RIW-11
RIW-11
MW-268B
MW-268D
MW-268S
MW-268M
115.92

MW-268S	
SI: 69'-74'	
TCE	ND
cisDCE	88
VC	ND
TCVOCs	88
TOC	135
1,4-D	29

MW-268M	
SI: 84'-94'	
TCE	ND
cisDCE	1.3
VC	5.1
TCVOCs	6.4
TOC	2.3
1,4-D	6.5

RIW-11	
SI: 70'-100'	

REW-7	
SI: 50'-80'	
TCVOCs	ND
TOC	1.05
1,4-D	ND

REW-7

REW-8	
SI: 50'-80'	
TCVOCs	ND
1,4-D	ND

REW-8

RIW-12

RIW-13

RIW-13	
SI: 70'-100'	

RIW-14

REW-9	
SI: 50'-80'	
TCVOCs	ND
1,4-D	ND

REW-9

REW-10	
SI: 50'-80'	
TCVOCs	ND
1,4-D	ND

REW-10

MW-269Ma	
SI: 27'-32'	
TCE	4.3
cisDCE	3.8
VC	ND
TCVOCs	8.1
TOC	NA
1,4-D	0.66

115.98
MW-269MA
MW-269S
MW-269MB
MW-269D
RIW-15

MW-266Mb	
SI: 58'-68'	
TCE	ND
cisDCE	1.5
VC	1.9
TCVOCs	3.4
TOC	2.4
1,4-D	3.7

MW-266Ma	
SI: 47'-52'	
TCVOCs	ND
1,4-D	0.86

MW-266Ma
MW-266S
MW-266D
116.63
MW-266Mb
REW-12
MW-266B

REW-12	
SI: 50'-80'	
TCVOCs	ND
TOC	1.6
1,4-D	3.4

MW-563	
SI: 40'-70'	
TCVOCs	ND
1,4-D	ND

MW-563

MW-560	
SI: 57'-67'	
TCVOCs	ND
1,4-D	ND

MW-560
117.6

IW-4
IW-5
IW-6
IW-7
IW-8
IW-9

RIW-8
RIW-9
RIW-10

MW-561	
SI: 43.7'-53.7	
TCE	ND
1,4-D	5

MW-561
118.2

RIW-9	
SI: 35'-65'	

IW-13
IW-14
IW-15
IW-16

MW-264M	
SI: 34'-44'	
TCE	2.2
cisDCE	21
VC	12
TCVOCs	35.2
TOC	1.5
1,4-D	2.6

MW-264M
MW-264D
MW-264S
118.54

REW-5

REW-5	
SI: 15'-45'	
TCVOCs	ND
1,4-D	ND

118.92
MW-265D
MW-265M
MW-265S

MW-265M	
SI: 40'-45'	
TCE	ND
cisDCE	ND
VC	ND
TCVOCs	ND
1,4-D	2.7

IW-1
IW-2
IW-3

REW-4	
SI: 15'-45'	
TCVOCs	ND
1,4-D	ND

REW-4
118.06

REW-1	
SI: 15'-45'	
TCVOCs	ND
1,4-D	ND

REW-1
REW-3
IW-17
IW-18 (approx.)
IW-12

MW-562	
SI: 15'-45'	
TCVOCs	ND
1,4-D	0.23

REW-2
MW-562
IW-10
IW-11
RIW-1
RIW-1	
SI: 15'-45'	

RIW-3
RIW-2
RIW-1

MW-553	
SI: 15'-20'	
TCE	ND
cisDCE	ND
VC	ND
TCVOCs	ND
1,4-D	0.8

MW-553
120.09
MW-552
MW-261S
MW-551

MW-552	
SI: 19'-24'	
TCVOCs	ND
1,4-D	0.49

MW-551	
SI: 21'-26'	
TCVOCs	ND
1,4-D	0.3

MW-261S	
SI: 17'-22'	
TCVOCs	ND
1,4-D	0.27

RIW-5

MW-263S
MW-263M

APPROXIMATE TREE LINE

WETLANDS 100' SETBACK

MW-TP-3

MID-DEPTH GROUNDWATER ELEVATION CONTOURS FROM MAY, 2021

HAYBALE LINE

RIW-7

0 50' 100'
SCALE IN FEET

RIW-6

RIW-6	
SI: 15'-30'	

INFILTRATION GALLERY

APPROX. PROPERTY

BASE MAP SOURCES: 1] "FIGURE 5A NORTHERN AREA CVOC CONCENTRATIONS – FEBRUARY 2010"; PREPARED BY ERM; 2] "WELL AND TRENCH LOCATIONS, DECEMBER 5, 2011" PLAN PREPARED BY PRECISION SURVEYING, RHODE ISLAND; 3] "WELL LOCATION PLAN" PREPARED BY PRECISION SURVEYING, RHODE ISLAND, DATED DECEMBER 3, 2012.

LEGEND

- MONITORING WELL / CLUSTER
- 2" INJECTION WELL
- 4" INJECTION WELL
- EXTRACTION WELL
- 116.09 GROUNDWATER ELEVATION AT WELL ON 5/3/2021
- 116 GROUNDWATER ELEVATION CONTOUR
- TCE below GW-1 or ND
- TCE above GW-1, decreasing
- TCE above GW-1, trend flat or unknown
- TCE above GW-1, increasing

GW-1 standard for Trichloroethene: 5.0 ug/l

MAY 2021 DATA SUMMARY

WELL IDENTIFICATION	
SI: SCREENED INTERVAL (FEET BELOW GRADE)	
TCE	TRICHLOROETHENE (ug/l)
cisDCE	1,2, CIS-DICHLOROETHENE (ug/l)
VC	VINYL CHLORIDE (ug/l)
TCVOCs	TOTAL CHLORINATED VOCS (ug/l)
TOC	TOTAL ORGANIC CARBON (mg/l)
1,4-D	1 4-DIOXANE (ug/l)

SEPTEMBER 2021 DATA SUMMARY

WELL IDENTIFICATION	
SI: SCREENED INTERVAL (FEET BELOW GRADE)	
TCE	TRICHLOROETHENE (ug/l)
cisDCE	1,2, CIS-DICHLOROETHENE (ug/l)
VC	VINYL CHLORIDE (ug/l)
TCVOCs	TOTAL CHLORINATED VOCS (ug/l)
TOC	TOTAL ORGANIC CARBON (mg/l)
1,4-DIOXANE	1,4-DIOXANE (ug/l)

Innovative Engineering Solutions, Inc.
37 PEARL STREET
BRAINTREE, MASSACHUSETTS 02184
(508) 668-0033

TITLE
SITE PLAN WITH RECENT GROUNDWATER DATA AND TCE FLAGS

SITE
430 BOSTON POST ROAD
FORMER RAYTHEON FACILITY
WAYLAND, MASSACHUSETTS

CLIENT
RAYTHEON CORPORATION

DRAWN	CHECKED	FILENAME	DATE	FIGURE
IK	DF	WAYLAND 2021	OCT 2021	1

NOTES:
1) ALL LOCATIONS EXCEPT MW-268S HAVE cis-1,2-DCE BELOW GW-1 STANDARDS.
2) cis-1,2-DCE CONCENTRATIONS ARE STILL DECREASING.

N

DEP-21
DEP-19D
DEP-19S
DEP-19M

DEP-21	
SI: 45'-50'	
TCE	ND
cisDCE	2.0
VC	1.9
TCVOCs	ND
1,4-D	ND

APPROXIMATE PROPERTY LINE

116
117
118
119
120

MW-267M	
SI: 85'-95'	
TCVOCs	ND
1,4-D	4.3

MW-267S	
SI: 72'-77'	
TCVOCs	ND
1,4-D	ND

MW-267M
MW-267S
MW-267B
MW-267D
116.5
RIW-16
REW-6
REW-16 SI: 70'-100'

REW-6	
SI: 50'-80'	
TCVOCs	ND
TOC	NA
1,4-D	3.1

REW-11	
SI: 70'-100'	
TCVOCs	–
TOC	–
1,4-D	2

MW-268D	
SI: 122'-127'	
TCE	3.6
cisDCE	14
VC	ND
TCVOCs	17.6
TOC	ND
1,4-D	0.22

REW-11/RIW-11
RIW-11
MW-268B
MW-268D
MW-268S
MW-268M
115.92

MW-268S	
SI: 69'-74'	
TCE	ND
cisDCE	88
VC	ND
TCVOCs	88
TOC	135
1,4-D	29

MW-268M	
SI: 84'-94'	
TCE	ND
cisDCE	1.3
VC	5.1
TCVOCs	6.4
TOC	2.3
1,4-D	6.5

RIW-11 SI: 70'-100'

REW-7	
SI: 50'-80'	
TCVOCs	ND
TOC	1.05
1,4-D	ND

REW-7
REW-8
RIW-12
REW-8 SI: 50'-80'

MW-266Mb	
SI: 58'-68'	
TCE	ND
cisDCE	1.5
VC	1.9
TCVOCs	3.4
TOC	2.4
1,4-D	3.7

MW-266Ma	
SI: 47'-52'	
TCVOCs	ND
1,4-D	0.86

MW-266Ma
MW-266S
MW-266D
MW-266Mb
116.63
REW-12
MW-266B

REW-12	
SI: 50'-80'	
TCVOCs	ND
TOC	1.6
1,4-D	3.4

MW-563	
SI: 40'-70'	
TCVOCs	ND
1,4-D	ND

MW-563
IW-6
IW-7
RIW-13
RIW-13 SI: 70'-100'
REW-9 SI: 50'-80'
REW-9
RIW-14
REW-10 SI: 50'-80'
REW-10

MW-560	
SI: 57'-67'	
TCVOCs	ND
1,4-D	ND

MW-560
117.6
IW-8
IW-9

IW-4
RIW-8
IW-5
RIW-9
RIW-9 SI: 35'-65'
RIW-10

MW-561	
SI: 43.7'-53.7'	
TCVOCs	ND
1,4-D	5

MW-561
118.2

IW-13
IW-14
IW-15
IW-16
IW-17
IW-3

REW-5
118.92
MW-265D
MW-265M
MW-265S

REW-5	
SI: 15'-45'	
TCVOCs	ND
1,4-D	ND

MW-265M	
SI: 40'-45'	
TCE	ND
cisDCE	ND
VC	ND
TCVOCs	ND
1,4-D	2.7

REW-4	
SI: 15'-45'	
TCVOCs	ND
1,4-D	ND

REW-4
118.06

REW-1	
SI: 15'-45'	
TCVOCs	ND
1,4-D	ND

REW-1
REW-3
IW-18 (approx.)
IW-12

IW-1
IW-2

MW-264M	
SI: 34'-44'	
TCE	2.2
cisDCE	21
VC	12
TCVOCs	35.2
TOC	1.5
1,4-D	2.6

MW-264M
MW-264D
MW-264S
118.54

APPROXIMATE TREE LINE

WETLANDS 100' SETBACK

MW-263S
MW-263M

MW-TP-3

MID-DEPTH GROUNDWATER ELEVATION CONTOURS FROM MAY, 2021

REW-2

MW-562	
SI: 15'-45'	
TCVOCs	ND
1,4-D	0.23

MW-562
IW-10
IW-11
RIW-1 SI: 15'-45'
RIW-2
RIW-3
RIW-1

MW-553	
SI: 15'-20'	
TCE	ND
cisDCE	ND
VC	ND
TCVOCs	ND
1,4-D	0.8

MW-553
120.09
MW-552
MW-261S
MW-551

MW-552	
SI: 19'-24'	
TCVOCs	ND
1,4-D	0.49

MW-551	
SI: 21'-26'	
TCVOCs	ND
1,4-D	0.3

MW-261S	
SI: 17'-22'	
TCVOCs	ND
1,4-D	0.27

RIW-5
RIW-6
RIW-6 SI: 15'-30'
RIW-7
INFILTRATION GALLERY
APPROX. PROPERTY

0 50' 100'
SCALE IN FEET

MW-269Ma	
SI: 27'-32'	
TCE	4.3
cisDCE	3.8
VC	ND
TCVOCs	8.1
TOC	NA
1,4-D	0.66

115.98
MW-269MA
MW-269S
MW-269MB
MW-269D
RIW-15

BASE MAP SOURCES: 1] "FIGURE 5A NORTHERN AREA CVOC CONCENTRATIONS – FEBRUARY 2010"; PREPARED BY ERM; 2] "WELL AND TRENCH LOCATIONS, DECEMBER 5, 2011" PLAN PREPARED BY PRECISION SURVEYING, RHODE ISLAND; 3] "WELL LOCATION PLAN" PREPARED BY PRECISION SURVEYING, RHODE ISLAND, DATED DECEMBER 3, 2012.

LEGEND

- MONITORING WELL / CLUSTER
- 2" INJECTION WELL
- 4" INJECTION WELL
- EXTRACTION WELL
- 116.09 GROUNDWATER ELEVATION AT WELL ON 5/3/2021
- 116 GROUNDWATER ELEVATION CONTOUR
- cis-1,2 DCE below GW-1 or ND
- cis-1,2 DCE above GW-1, decreasing
- cis-1,2 DCE above GW-1, trend flat or unknown
- cis-1,2 DCE above GW-1, increasing

GW-1 standard for cis-1,2 DCE: 70 ug/l

MAY 2021 DATA SUMMARY

WELL IDENTIFICATION	
SI: SCREENED INTERVAL (FEET BELOW GRADE)	
TCE	TRICHLOROETHENE (ug/l)
cisDCE	1,2, CIS-DICHLOROETHENE (ug/l)
VC	VINYL CHLORIDE (ug/l)
TCVOCs	TOTAL CHLORINATED VOCS (ug/l)
TOC	TOTAL ORGANIC CARBON (mg/l)
1,4-D	1 4-DIOXANE (ug/l)

SEPTEMBER 2021 DATA SUMMARY

WELL IDENTIFICATION	
SI: SCREENED INTERVAL (FEET BELOW GRADE)	
TCE	TRICHLOROETHENE (ug/l)
cisDCE	1,2, CIS-DICHLOROETHENE (ug/l)
VC	VINYL CHLORIDE (ug/l)
TCVOCs	TOTAL CHLORINATED VOCS (ug/l)
TOC	TOTAL ORGANIC CARBON (mg/l)
1,4-DIOXANE	1,4-DIOXANE (ug/l)

iesi
Innovative Engineering Solutions, Inc.
37 PEARL STREET
BRAINTREE, MASSACHUSETTS 02184
(508) 668-0033

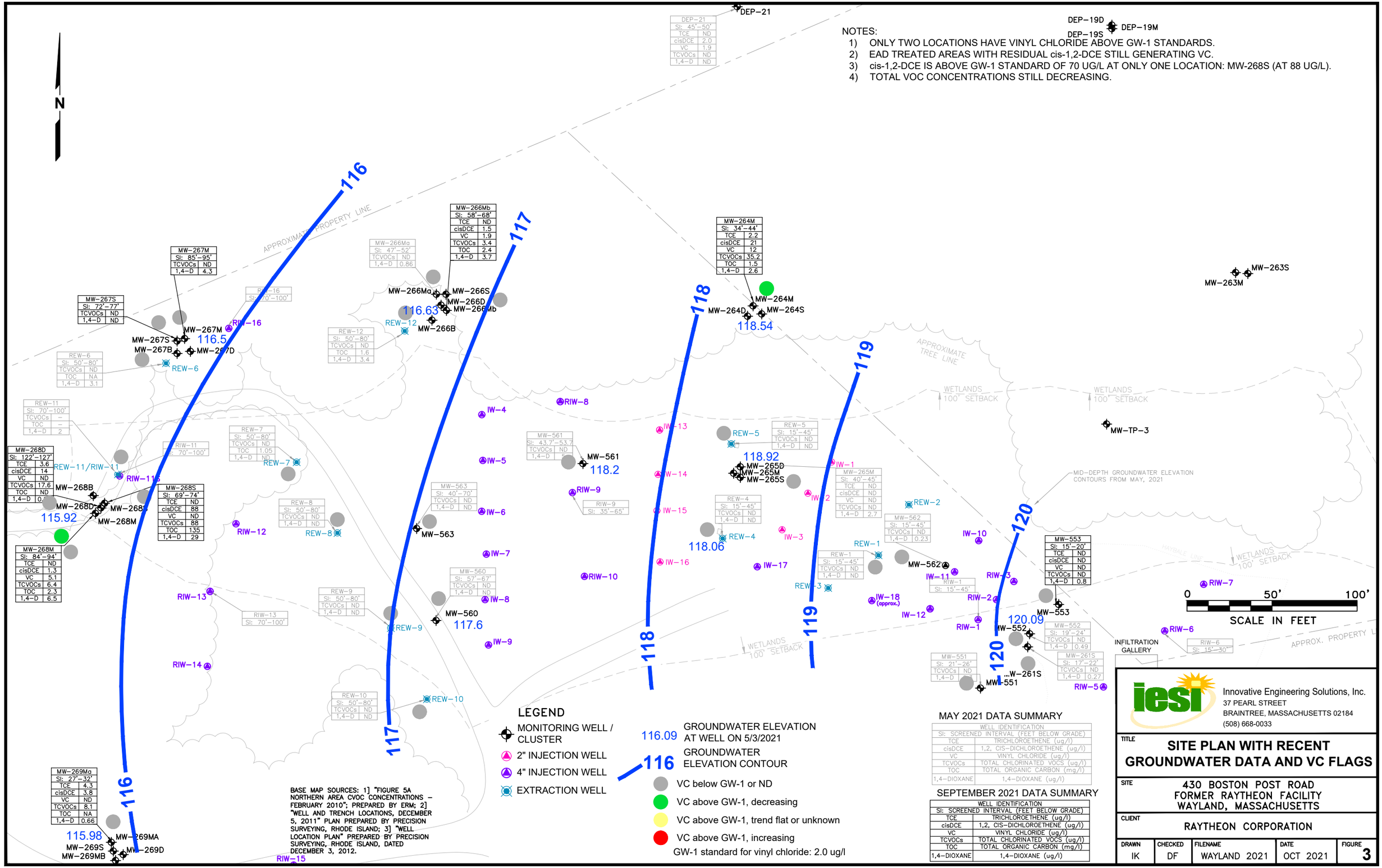
TITLE: **SITE PLAN WITH RECENT GROUNDWATER DATA AND cis-1,2-DCE FLAGS**

SITE: 430 BOSTON POST ROAD
FORMER RAYTHEON FACILITY
WAYLAND, MASSACHUSETTS

CLIENT: RAYTHEON CORPORATION

DRAWN	CHECKED	FILENAME	DATE	FIGURE
IK	DF	WAYLAND 2021	OCT 2021	2

NOTES:
1) ONLY TWO LOCATIONS HAVE VINYL CHLORIDE ABOVE GW-1 STANDARDS.
2) EAD TREATED AREAS WITH RESIDUAL cis-1,2-DCE STILL GENERATING VC.
3) cis-1,2-DCE IS ABOVE GW-1 STANDARD OF 70 UG/L AT ONLY ONE LOCATION: MW-268S (AT 88 UG/L).
4) TOTAL VOC CONCENTRATIONS STILL DECREASING.



MW-267M	
SI: 85'-95'	
TCVOCs	ND
1,4-D	4.3

MW-267S	
SI: 72'-77'	
TCVOCs	ND
1,4-D	ND

REW-6	
SI: 50'-80'	
TCVOCs	ND
TOC	NA
1,4-D	3.1

REW-11	
SI: 70'-100'	
TCVOCs	–
TOC	–
1,4-D	2

MW-268D	
SI: 122'-127'	
TCE	3.6
cisDCE	14
VC	ND
TCVOCs	17.6
TOC	ND
1,4-D	0.[illegible]

MW-268S	
SI: 69'-74'	
TCE	ND
cisDCE	88
VC	ND
TCVOCs	88
TOC	135
1,4-D	29

MW-268M	
SI: 84'-94'	
TCE	ND
cisDCE	1.3
VC	5.1
TCVOCs	6.4
TOC	2.3
1,4-D	6.5

MW-269Ma	
SI: 27'-32'	
TCE	4.3
cisDCE	3.8
VC	ND
TCVOCs	8.1
TOC	NA
1,4-D	0.66

RIW-11	
SI: 70'-100'	

REW-7	
SI: 50'-80'	
TCVOCs	ND
TOC	1.05
1,4-D	ND

REW-8	
SI: 50'-80'	
TCVOCs	ND
1,4-D	ND

RIW-13	
SI: 70'-100'	

REW-9	
SI: 50'-80'	
TCVOCs	ND
1,4-D	ND

REW-10	
SI: 50'-80'	
TCVOCs	ND
1,4-D	ND

MW-266Ma	
SI: 47'-52'	
TCVOCs	ND
1,4-D	0.86

MW-266Mb	
SI: 58'-68'	
TCE	ND
cisDCE	1.5
VC	1.9
TCVOCs	3.4
TOC	2.4
1,4-D	3.7

REW-12	
SI: 50'-80'	
TCVOCs	ND
TOC	1.6
1,4-D	3.4

MW-563	
SI: 40'-70'	
TCVOCs	ND
1,4-D	ND

MW-560	
SI: 57'-67'	
TCVOCs	ND
1,4-D	ND

MW-561	
SI: 43.7'-53.7'	
TCVOCs	ND
1,4-D	ND

RIW-9	
SI: 35'-65'	

REW-5	
SI: 15'-45'	
TCVOCs	ND
1,4-D	ND

REW-4	
SI: 15'-45'	
TCVOCs	ND
1,4-D	ND

MW-265M	
SI: 40'-45'	
TCE	ND
cisDCE	ND
VC	ND
TCVOCs	ND
1,4-D	2.7

MW-562	
SI: 15'-45'	
TCVOCs	ND
1,4-D	0.23

REW-1	
SI: 15'-45'	
TCVOCs	ND
1,4-D	ND

RIW-1	
SI: 15'-45'	

MW-264M	
SI: 34'-44'	
TCE	2.2
cisDCE	21
VC	12
TCVOCs	35.2
TOC	1.5
1,4-D	2.6

MW-553	
SI: 15'-20'	
TCE	ND
cisDCE	ND
VC	ND
TCVOCs	ND
1,4-D	0.8

MW-552	
SI: 19'-24'	
TCVOCs	ND
1,4-D	0.49

MW-261S	
SI: 17'-22'	
TCVOCs	ND
1,4-D	0.27

MW-551	
SI: 21'-26'	
TCVOCs	ND
1,4-D	

RIW-6	
SI: 15'-30'	

DEP-21	
SI: 45'-50'	
TCE	ND
cisDCE	2.0
VC	1.9
TCVOCs	ND
1,4-D	ND

LEGEND

- MONITORING WELL / CLUSTER
- 2" INJECTION WELL
- 4" INJECTION WELL
- EXTRACTION WELL
- 116.09 GROUNDWATER ELEVATION AT WELL ON 5/3/2021
- 116 GROUNDWATER ELEVATION CONTOUR
- VC below GW-1 or ND
- VC above GW-1, decreasing
- VC above GW-1, trend flat or unknown
- VC above GW-1, increasing

GW-1 standard for vinyl chloride: 2.0 ug/l

BASE MAP SOURCES: 1] "FIGURE 5A NORTHERN AREA CVOC CONCENTRATIONS – FEBRUARY 2010"; PREPARED BY ERM; 2] "WELL AND TRENCH LOCATIONS, DECEMBER 5, 2011" PLAN PREPARED BY PRECISION SURVEYING, RHODE ISLAND; 3] "WELL LOCATION PLAN" PREPARED BY PRECISION SURVEYING, RHODE ISLAND, DATED DECEMBER 3, 2012.

MAY 2021 DATA SUMMARY

WELL IDENTIFICATION	
SI: SCREENED INTERVAL (FEET BELOW GRADE)	
TCE	TRICHLOROETHENE (ug/l)
cisDCE	1,2, CIS-DICHLOROETHENE (ug/l)
VC	VINYL CHLORIDE (ug/l)
TCVOCs	TOTAL CHLORINATED VOCS (ug/l)
TOC	TOTAL ORGANIC CARBON (mg/l)
1,4-DIOXANE	1,4-DIOXANE (ug/l)

SEPTEMBER 2021 DATA SUMMARY

WELL IDENTIFICATION	
SI: SCREENED INTERVAL (FEET BELOW GRADE)	
TCE	TRICHLOROETHENE (ug/l)
cisDCE	1,2, CIS-DICHLOROETHENE (ug/l)
VC	VINYL CHLORIDE (ug/l)
TCVOCs	TOTAL CHLORINATED VOCS (ug/l)
TOC	TOTAL ORGANIC CARBON (mg/l)
1,4-DIOXANE	1,4-DIOXANE (ug/l)

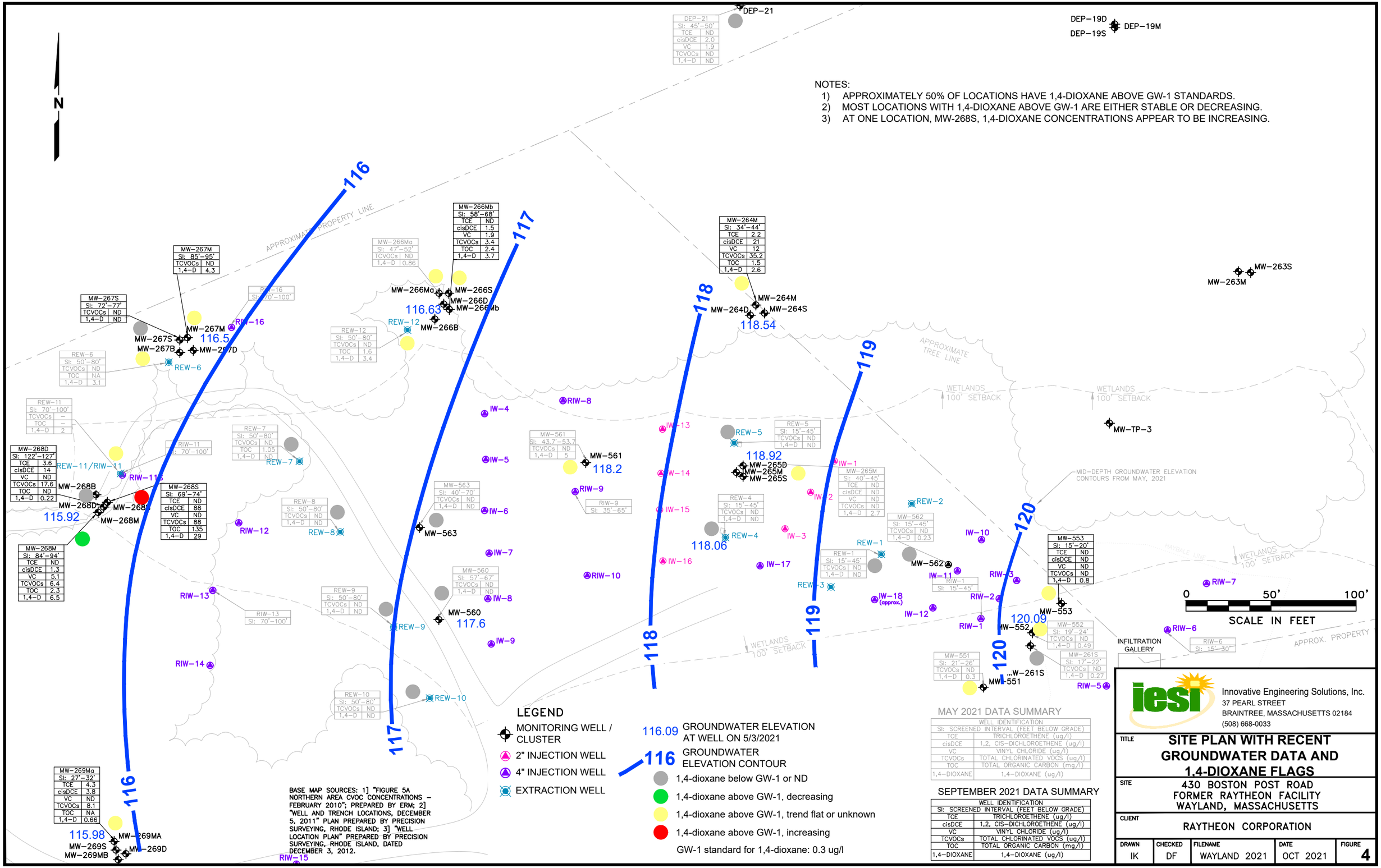
Innovative Engineering Solutions, Inc.
37 PEARL STREET
BRAINTREE, MASSACHUSETTS 02184
(508) 668-0033

TITLE: **SITE PLAN WITH RECENT GROUNDWATER DATA AND VC FLAGS**

SITE: 430 BOSTON POST ROAD
FORMER RAYTHEON FACILITY
WAYLAND, MASSACHUSETTS

CLIENT: RAYTHEON CORPORATION

DRAWN	CHECKED	FILENAME	DATE	FIGURE
IK	DF	WAYLAND 2021	OCT 2021	3


N
NOTES:
1) APPROXIMATELY 50% OF LOCATIONS HAVE 1,4-DIOXANE ABOVE GW-1 STANDARDS.
2) MOST LOCATIONS WITH 1,4-DIOXANE ABOVE GW-1 ARE EITHER STABLE OR DECREASING.
3) AT ONE LOCATION, MW-268S, 1,4-DIOXANE CONCENTRATIONS APPEAR TO BE INCREASING.
DEP-21
DEP-19D
DEP-19S
DEP-19M
MW-263S
MW-263M
MW-TP-3
APPROXIMATE PROPERTY LINE
APPROXIMATE TREE LINE
WETLANDS 100' SETBACK
MID-DEPTH GROUNDWATER ELEVATION CONTOURS FROM MAY, 2021
INFILTRATION GALLERY
APPROX. PROPERTY
0 50' 100'
SCALE IN FEET
116
117
118
119
120
116.5
116.63
118.54
118.92
118.2
118.06
117.6
120.09
115.92
115.98
MW-267M
MW-267S
MW-267B
MW-267D
MW-266Mb
MW-266Ma
MW-266S
MW-266D
MW-266B
MW-264M
MW-264D
MW-264S
MW-561
MW-563
MW-560
MW-268B
MW-268D
MW-268S
MW-268M
MW-269Ma
MW-269S
MW-269MB
MW-269D
MW-265D
MW-265M
MW-265S
MW-562
MW-553
MW-552
MW-551
MW-261S
REW-6
REW-7
REW-8
REW-9
REW-10
REW-11/RIW-11
REW-12
REW-5
REW-4
REW-1
REW-2
REW-3
RIW-16
RIW-11
RIW-12
RIW-13
RIW-14
RIW-15
RIW-8
RIW-9
RIW-10
RIW-1
RIW-2
RIW-3
RIW-5
RIW-6
RIW-7
IW-4
IW-5
IW-6
IW-7
IW-8
IW-9
IW-10
IW-11
IW-12
IW-13
IW-14
IW-15
IW-16
IW-17
IW-18 (approx.)
IW-1
IW-2
IW-3
LEGEND
MONITORING WELL / CLUSTER
2" INJECTION WELL
4" INJECTION WELL
EXTRACTION WELL
116.09 GROUNDWATER ELEVATION AT WELL ON 5/3/2021
116 GROUNDWATER ELEVATION CONTOUR
1,4-dioxane below GW-1 or ND
1,4-dioxane above GW-1, decreasing
1,4-dioxane above GW-1, trend flat or unknown
1,4-dioxane above GW-1, increasing
GW-1 standard for 1,4-dioxane: 0.3 ug/l
BASE MAP SOURCES: 1] "FIGURE 5A NORTHERN AREA CVOC CONCENTRATIONS – FEBRUARY 2010"; PREPARED BY ERM; 2] "WELL AND TRENCH LOCATIONS, DECEMBER 5, 2011" PLAN PREPARED BY PRECISION SURVEYING, RHODE ISLAND; 3] "WELL LOCATION PLAN" PREPARED BY PRECISION SURVEYING, RHODE ISLAND, DATED DECEMBER 3, 2012.
MAY 2021 DATA SUMMARY
WELL IDENTIFICATION
SI: SCREENED INTERVAL (FEET BELOW GRADE)
TCE TRICHLOROETHENE (ug/l)
cisDCE 1,2, CIS-DICHLOROETHENE (ug/l)
VC VINYL CHLORIDE (ug/l)
TCVOCs TOTAL CHLORINATED VOCS (ug/l)
TOC TOTAL ORGANIC CARBON (mg/l)
1,4-DIOXANE 1,4-DIOXANE (ug/l)
SEPTEMBER 2021 DATA SUMMARY
WELL IDENTIFICATION
SI: SCREENED INTERVAL (FEET BELOW GRADE)
TCE TRICHLOROETHENE (ug/l)
cisDCE 1,2, CIS-DICHLOROETHENE (ug/l)
VC VINYL CHLORIDE (ug/l)
TCVOCs TOTAL CHLORINATED VOCS (ug/l)
TOC TOTAL ORGANIC CARBON (mg/l)
1,4-DIOXANE 1,4-DIOXANE (ug/l)
iesi
Innovative Engineering Solutions, Inc.
37 PEARL STREET
BRAINTREE, MASSACHUSETTS 02184
(508) 668-0033
TITLE
SITE PLAN WITH RECENT GROUNDWATER DATA AND 1,4-DIOXANE FLAGS
SITE
430 BOSTON POST ROAD
FORMER RAYTHEON FACILITY
WAYLAND, MASSACHUSETTS
CLIENT
RAYTHEON CORPORATION
DRAWN IK
CHECKED DF
FILENAME WAYLAND 2021
DATE OCT 2021
FIGURE 4

APPENDIX C LABORATORY ANALYTICAL REPORTS

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

Laboratory Job ID: 480-189559-1
Client Project/Site: IDS Wayland

For:
ERM-Northeast
15 Park Row West
Suite 104
Providence, Rhode Island 02903

Attn: Katie Wolf

Authorized for release by:
9/22/2021 10:29:20 AM
Wyatt Watson, Project Management Assistant I
Wyatt.Watson@Eurofinset.com

Designee for

Becky Mason, Project Manager II
(413)572-4000
Becky.Mason@Eurofinset.com

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

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

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

Table of Contents

Definitions/Glossary

Client: ERM-Northeast
Project/Site: IDS Wayland

Job ID: 480-189559-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.

Glossary

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

Job ID: 480-189559-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative
480-189559-1

Receipt
The samples were received on 9/15/2021 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.8º C.

GC/MS VOA
Method 8260C: With the exception of diluted samples, per question G on the MassDEP Analytical Protocol Certification Form, TestAmerica's routine reporting limits do not achieve the CAM reporting limits specified in this CAM protocol for 1,2-dibromo-3-chloropropane, Carbon Disulfide, Isopropyl Ether, Naphthalene, tert-Amyl Methyl Ether and Tetrahydrofuran.

Method 8260C: The laboratory control sample (LCS) and / or the laboratory control sample duplicate (LCSD) for batch 480-596441 recovered outside control limits but were greater than 10% for the following analytes: 2,2-Dichloropropane . MCP protocol allows for 10% of the target compounds to be outside of the limits provided the recoveries are over 10%. The associated samples are: MW-1001M-20210914-01 (480-189559-1), MW-1005-20210914-01 (480-189559-2), MW-1010D-20210914-01 (480-189559-3), MW-1010M-20210914-01 (480-189559-4), MW-1014-20210914-01 (480-189559-5), MW-1015D-20210914-01 (480-189559-6), MW1028-20210914-01 (480-189559-7), MW-1032-20210914-01 (480-189559-8), MW-1034-20210914-01 (480-189559-9), MW-1040-20210914-01 (480-189559-10), MW-1023M-20210914-01 (480-189559-11), DUP-001-20210914-01 (480-189559-12), DUP-002-20210914-01 (480-189559-13), PDB-001-20210914-01 (480-189559-14) and TB-001-20210914-01 (480-189559-15).

Method 8260C: The laboratory control sample (LCS) and / or the laboratory control sample duplicate (LCSD) for batch 480-596441 exceeded control limits for the following analyte: 2-Butanone. Unlike the calibration standards, this is due to the coelution with Ethyl Acetate, n-butyl Acetate, 2-Chloro-1,3-butadiene, Methacrylonitrile, Methylcyclohexane in the spiking solution. This does not indicate a performance issue with the spike recovery, but rather the laboratory's ability to measure the two analytes together in a combined spiking solution. Through the use of spectral analysis, the two compounds can be distinguished from one another if present in a client sample. The following samples were affected : MW-1001M-20210914-01 (480-189559-1), MW-1005-20210914-01 (480-189559-2), MW-1010D-20210914-01 (480-189559-3), MW-1010M-20210914-01 (480-189559-4), MW-1014-20210914-01 (480-189559-5), MW-1015D-20210914-01 (480-189559-6), MW1028-20210914-01 (480-189559-7), MW-1032-20210914-01 (480-189559-8), MW-1034-20210914-01 (480-189559-9), MW-1040-20210914-01 (480-189559-10), MW-1023M-20210914-01 (480-189559-11), DUP-001-20210914-01 (480-189559-12), DUP-002-20210914-01 (480-189559-13), PDB-001-20210914-01 (480-189559-14) and TB-001-20210914-01 (480-189559-15).

Method 8260C: The continuing calibration verification (CCV) for Carbon disulfide and Tert-amyl methyl ether associated with batch 480-596441 recovered outside the MCP control limit criteria. MCP protocol allows for 20% of the target compounds to be outside the 20% difference but not over 40% difference. Difficult analytes are allowed to be outside the 20% difference but not over 60% difference. The following samples were affected : MW-1001M-20210914-01 (480-189559-1), MW-1005-20210914-01 (480-189559-2), MW-1010D-20210914-01 (480-189559-3), MW-1010M-20210914-01 (480-189559-4), MW-1014-20210914-01 (480-189559-5), MW-1015D-20210914-01 (480-189559-6), MW1028-20210914-01 (480-189559-7), MW-1032-20210914-01 (480-189559-8), MW-1034-20210914-01 (480-189559-9), MW-1040-20210914-01 (480-189559-10), MW-1023M-20210914-01 (480-189559-11), DUP-001-20210914-01 (480-189559-12), DUP-002-20210914-01 (480-189559-13), PDB-001-20210914-01 (480-189559-14) and TB-001-20210914-01 (480-189559-15).

Method 8260C: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 480-596441 recovered outside control limits for the following analytes: 1,4-Dioxane, 2,2-Dichloropropane, Acetone, Bromomethane and Tert-amyl methyl ether.

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

MassDEP Analytical Protocol Certification Form

Laboratory Name: **TestAmerica Buffalo** Project #: **480-189559-1**

Project Location: **IDS Wayland** RTN:

This form provides certifications for the following data set: list Laboratory Sample ID Number(s):

480-189559 (1-15)

Matrices: ■ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocols (check all that apply below):

8260 VOC CAM II A ■	7470/7471 Hg CAM III B ☐	Mass DEP VPH CAM IV A ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	Mass DEP APH CAM IX A ☐
8270 SVOC CAM II B ☐	7010 Metals CAM III C ☐	Mass DEP EPH CAM IV B ☐	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☐	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9014 Total Cyanide/PAC CAM VI A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding time.	■ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	■ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	■ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	■ Yes ☐ No
E	a. VPH, EPH and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	■ Yes ☐ No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ■ No[1]

Data User Note: ***Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WCS-07-350***

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	☐ Yes ■ No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s) ?	■ Yes ☐ No[1]

[1] All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, is accurate and complete.

Signature: Wyatt Watson Position: Project Manager Assistant

Printed Name: Wyatt Watson Date: 9/22/21 10:19

Detection Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

Job ID: 480-189559-1

Client Sample ID: MW-1001M-20210914-01 — Lab Sample ID: 480-189559-1

No Detections.

Client Sample ID: MW-1005-20210914-01 — Lab Sample ID: 480-189559-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	73	*1	50		ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	11		1.0		ug/L	1		8260C	Total/NA
Trichloroethene	3.7		1.0		ug/L	1		8260C	Total/NA

Client Sample ID: MW-1010D-20210914-01 — Lab Sample ID: 480-189559-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	2.4		1.0		ug/L	1		8260C	Total/NA
Trichloroethene	5.5		1.0		ug/L	1		8260C	Total/NA

Client Sample ID: MW-1010M-20210914-01 — Lab Sample ID: 480-189559-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	77	*1	50		ug/L	1		8260C	Total/NA
Trichloroethene	16		1.0		ug/L	1		8260C	Total/NA

Client Sample ID: MW-1014-20210914-01 — Lab Sample ID: 480-189559-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	51	*1	50		ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	3.0		1.0		ug/L	1		8260C	Total/NA
Trichloroethene	23		1.0		ug/L	1		8260C	Total/NA

Client Sample ID: MW-1015D-20210914-01 — Lab Sample ID: 480-189559-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	4.6		1.0		ug/L	1		8260C	Total/NA

Client Sample ID: MW1028-20210914-01 — Lab Sample ID: 480-189559-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.0		1.0		ug/L	1		8260C	Total/NA
Trichloroethene	6.9		1.0		ug/L	1		8260C	Total/NA

Client Sample ID: MW-1032-20210914-01 — Lab Sample ID: 480-189559-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methyl tert-butyl ether	25		1.0		ug/L	1		8260C	Total/NA
Tert-amyl methyl ether	7.5	*1	5.0		ug/L	1		8260C	Total/NA
Trichloroethene	6.3		1.0		ug/L	1		8260C	Total/NA

Client Sample ID: MW-1034-20210914-01 — Lab Sample ID: 480-189559-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	17		1.0		ug/L	1		8260C	Total/NA
trans-1,2-Dichloroethene	1.2		1.0		ug/L	1		8260C	Total/NA
Trichloroethene	24		1.0		ug/L	1		8260C	Total/NA

Client Sample ID: MW-1040-20210914-01 — Lab Sample ID: 480-189559-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	2.6		1.0		ug/L	1		8260C	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

Job ID: 480-189559-1

Client Sample ID: MW-1040-20210914-01 (Continued) — Lab Sample ID: 480-189559-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	1.9		1.0		ug/L	1		8260C	Total/NA
1,1-Dichloroethene	1.6		1.0		ug/L	1		8260C	Total/NA
Acetone	52	*1	50		ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	1.7		1.0		ug/L	1		8260C	Total/NA
Methyl tert-butyl ether	2.1		1.0		ug/L	1		8260C	Total/NA
Trichloroethene	43		1.0		ug/L	1		8260C	Total/NA

Client Sample ID: MW-1023M-20210914-01 — Lab Sample ID: 480-189559-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	6.0		1.0		ug/L	1		8260C	Total/NA
Trichloroethene	2.4		1.0		ug/L	1		8260C	Total/NA

Client Sample ID: DUP-001-20210914-01 — Lab Sample ID: 480-189559-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	79	*1	50		ug/L	1		8260C	Total/NA
Trichloroethene	15		1.0		ug/L	1		8260C	Total/NA

Client Sample ID: DUP-002-20210914-01 — Lab Sample ID: 480-189559-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	2.2		1.0		ug/L	1		8260C	Total/NA
1,2-Dichlorobenzene	1.3		1.0		ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	1.3		1.0		ug/L	1		8260C	Total/NA
Methyl tert-butyl ether	35		1.0		ug/L	1		8260C	Total/NA
Tert-amyl methyl ether	15	*1	5.0		ug/L	1		8260C	Total/NA
Trichloroethene	6.3		1.0		ug/L	1		8260C	Total/NA

Client Sample ID: PDB-001-20210914-01 — Lab Sample ID: 480-189559-14

No Detections.

Client Sample ID: TB-001-20210914-01 — Lab Sample ID: 480-189559-15

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: ERM-Northeast
Project/Site: IDS Wayland

Job ID: 480-189559-1

Client Sample ID: MW-1001M-20210914-01

Lab Sample ID: 480-189559-1

Date Collected: 09/14/21 09:55
Matrix: Water
Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			09/16/21 03:04	1
1,1,1-Trichloroethane	ND		1.0		ug/L			09/16/21 03:04	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			09/16/21 03:04	1
1,1,2-Trichloroethane	ND		1.0		ug/L			09/16/21 03:04	1
1,1-Dichloroethane	ND		1.0		ug/L			09/16/21 03:04	1
1,1-Dichloroethene	ND		1.0		ug/L			09/16/21 03:04	1
1,1-Dichloropropene	ND		1.0		ug/L			09/16/21 03:04	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			09/16/21 03:04	1
1,2,3-Trichloropropane	ND		1.0		ug/L			09/16/21 03:04	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			09/16/21 03:04	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			09/16/21 03:04	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			09/16/21 03:04	1
1,2-Dichlorobenzene	ND		1.0		ug/L			09/16/21 03:04	1
1,2-Dichloroethane	ND		1.0		ug/L			09/16/21 03:04	1
1,2-Dichloropropane	ND		1.0		ug/L			09/16/21 03:04	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			09/16/21 03:04	1
1,3-Dichlorobenzene	ND		1.0		ug/L			09/16/21 03:04	1
1,3-Dichloropropane	ND		1.0		ug/L			09/16/21 03:04	1
1,4-Dichlorobenzene	ND		1.0		ug/L			09/16/21 03:04	1
1,4-Dioxane	ND	*1	50		ug/L			09/16/21 03:04	1
2,2-Dichloropropane	ND	*+ *1	1.0		ug/L			09/16/21 03:04	1
2-Butanone (MEK)	ND	*+	10		ug/L			09/16/21 03:04	1
2-Chlorotoluene	ND		1.0		ug/L			09/16/21 03:04	1
2-Hexanone	ND		10		ug/L			09/16/21 03:04	1
4-Chlorotoluene	ND		1.0		ug/L			09/16/21 03:04	1
4-Isopropyltoluene	ND		1.0		ug/L			09/16/21 03:04	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			09/16/21 03:04	1
Acetone	ND	*1	50		ug/L			09/16/21 03:04	1
Benzene	ND		1.0		ug/L			09/16/21 03:04	1
Bromobenzene	ND		1.0		ug/L			09/16/21 03:04	1
Bromoform	ND		1.0		ug/L			09/16/21 03:04	1
Bromomethane	ND	*1	2.0		ug/L			09/16/21 03:04	1
Carbon disulfide	ND		10		ug/L			09/16/21 03:04	1
Carbon tetrachloride	ND		1.0		ug/L			09/16/21 03:04	1
Chlorobenzene	ND		1.0		ug/L			09/16/21 03:04	1
Chlorobromomethane	ND		1.0		ug/L			09/16/21 03:04	1
Chlorodibromomethane	ND		0.50		ug/L			09/16/21 03:04	1
Chloroethane	ND		2.0		ug/L			09/16/21 03:04	1
Chloroform	ND		1.0		ug/L			09/16/21 03:04	1
Chloromethane	ND		2.0		ug/L			09/16/21 03:04	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			09/16/21 03:04	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 03:04	1
Dichlorobromomethane	ND		0.50		ug/L			09/16/21 03:04	1
Dichlorodifluoromethane	ND		1.0		ug/L			09/16/21 03:04	1
Ethyl ether	ND		1.0		ug/L			09/16/21 03:04	1
Ethylbenzene	ND		1.0		ug/L			09/16/21 03:04	1
Ethylene Dibromide	ND		1.0		ug/L			09/16/21 03:04	1
Hexachlorobutadiene	ND		0.40		ug/L			09/16/21 03:04	1
Isopropyl ether	ND		10		ug/L			09/16/21 03:04	1

Client Sample ID: MW-1001M-20210914-01

Lab Sample ID: 480-189559-1

Date Collected: 09/14/21 09:55
Matrix: Water
Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			09/16/21 03:04	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/16/21 03:04	1
Methylene Chloride	ND		1.0		ug/L			09/16/21 03:04	1
m-Xylene & p-Xylene	ND		2.0		ug/L			09/16/21 03:04	1
Naphthalene	ND		5.0		ug/L			09/16/21 03:04	1
n-Butylbenzene	ND		1.0		ug/L			09/16/21 03:04	1
N-Propylbenzene	ND		1.0		ug/L			09/16/21 03:04	1
o-Xylene	ND		1.0		ug/L			09/16/21 03:04	1
sec-Butylbenzene	ND		1.0		ug/L			09/16/21 03:04	1
Styrene	ND		1.0		ug/L			09/16/21 03:04	1
Tert-amyl methyl ether	ND	*1	5.0		ug/L			09/16/21 03:04	1
Tert-butyl ethyl ether	ND		5.0		ug/L			09/16/21 03:04	1
tert-Butylbenzene	ND		1.0		ug/L			09/16/21 03:04	1
Tetrachloroethene	ND		1.0		ug/L			09/16/21 03:04	1
Tetrahydrofuran	ND		10		ug/L			09/16/21 03:04	1
Toluene	ND		1.0		ug/L			09/16/21 03:04	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			09/16/21 03:04	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 03:04	1
Trichloroethene	ND		1.0		ug/L			09/16/21 03:04	1
Trichlorofluoromethane	ND		1.0		ug/L			09/16/21 03:04	1
Vinyl chloride	ND		1.0		ug/L			09/16/21 03:04	1
Dibromomethane	ND		1.0		ug/L			09/16/21 03:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*70 - 130*		*09/16/21 03:04*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*		*09/16/21 03:04*	*1*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*		*09/16/21 03:04*	*1*

Client Sample ID: MW-1005-20210914-01

Lab Sample ID: 480-189559-2

Date Collected: 09/14/21 10:55
Matrix: Water
Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			09/16/21 03:27	1
1,1,1-Trichloroethane	ND		1.0		ug/L			09/16/21 03:27	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			09/16/21 03:27	1
1,1,2-Trichloroethane	ND		1.0		ug/L			09/16/21 03:27	1
1,1-Dichloroethane	ND		1.0		ug/L			09/16/21 03:27	1
1,1-Dichloroethene	ND		1.0		ug/L			09/16/21 03:27	1
1,1-Dichloropropene	ND		1.0		ug/L			09/16/21 03:27	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			09/16/21 03:27	1
1,2,3-Trichloropropane	ND		1.0		ug/L			09/16/21 03:27	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			09/16/21 03:27	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			09/16/21 03:27	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			09/16/21 03:27	1
1,2-Dichlorobenzene	ND		1.0		ug/L			09/16/21 03:27	1
1,2-Dichloroethane	ND		1.0		ug/L			09/16/21 03:27	1
1,2-Dichloropropane	ND		1.0		ug/L			09/16/21 03:27	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			09/16/21 03:27	1

Client Sample Results

Client: ERM-Northeast
Project/Site: IDS Wayland

Job ID: 480-189559-1

Client Sample ID: MW-1005-20210914-01

Lab Sample ID: 480-189559-2

Date Collected: 09/14/21 10:55
Matrix: Water
Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0		ug/L			09/16/21 03:27	1
1,3-Dichloropropane	ND		1.0		ug/L			09/16/21 03:27	1
1,4-Dichlorobenzene	ND		1.0		ug/L			09/16/21 03:27	1
1,4-Dioxane	ND	*1	50		ug/L			09/16/21 03:27	1
2,2-Dichloropropane	ND	*+ *1	1.0		ug/L			09/16/21 03:27	1
2-Butanone (MEK)	ND	*+	10		ug/L			09/16/21 03:27	1
2-Chlorotoluene	ND		1.0		ug/L			09/16/21 03:27	1
2-Hexanone	ND		10		ug/L			09/16/21 03:27	1
4-Chlorotoluene	ND		1.0		ug/L			09/16/21 03:27	1
4-Isopropyltoluene	ND		1.0		ug/L			09/16/21 03:27	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			09/16/21 03:27	1
Acetone	**73**	***1**	50		ug/L			09/16/21 03:27	1
Benzene	ND		1.0		ug/L			09/16/21 03:27	1
Bromobenzene	ND		1.0		ug/L			09/16/21 03:27	1
Bromoform	ND		1.0		ug/L			09/16/21 03:27	1
Bromomethane	ND	*1	2.0		ug/L			09/16/21 03:27	1
Carbon disulfide	ND		10		ug/L			09/16/21 03:27	1
Carbon tetrachloride	ND		1.0		ug/L			09/16/21 03:27	1
Chlorobenzene	ND		1.0		ug/L			09/16/21 03:27	1
Chlorobromomethane	ND		1.0		ug/L			09/16/21 03:27	1
Chlorodibromomethane	ND		0.50		ug/L			09/16/21 03:27	1
Chloroethane	ND		2.0		ug/L			09/16/21 03:27	1
Chloroform	ND		1.0		ug/L			09/16/21 03:27	1
Chloromethane	ND		2.0		ug/L			09/16/21 03:27	1
cis-1,2-Dichloroethene	**11**		1.0		ug/L			09/16/21 03:27	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 03:27	1
Dichlorobromomethane	ND		0.50		ug/L			09/16/21 03:27	1
Dichlorodifluoromethane	ND		1.0		ug/L			09/16/21 03:27	1
Ethyl ether	ND		1.0		ug/L			09/16/21 03:27	1
Ethylbenzene	ND		1.0		ug/L			09/16/21 03:27	1
Ethylene Dibromide	ND		1.0		ug/L			09/16/21 03:27	1
Hexachlorobutadiene	ND		0.40		ug/L			09/16/21 03:27	1
Isopropyl ether	ND		10		ug/L			09/16/21 03:27	1
Isopropylbenzene	ND		1.0		ug/L			09/16/21 03:27	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/16/21 03:27	1
Methylene Chloride	ND		1.0		ug/L			09/16/21 03:27	1
m-Xylene & p-Xylene	ND		2.0		ug/L			09/16/21 03:27	1
Naphthalene	ND		5.0		ug/L			09/16/21 03:27	1
n-Butylbenzene	ND		1.0		ug/L			09/16/21 03:27	1
N-Propylbenzene	ND		1.0		ug/L			09/16/21 03:27	1
o-Xylene	ND		1.0		ug/L			09/16/21 03:27	1
sec-Butylbenzene	ND		1.0		ug/L			09/16/21 03:27	1
Styrene	ND		1.0		ug/L			09/16/21 03:27	1
Tert-amyl methyl ether	ND	*1	5.0		ug/L			09/16/21 03:27	1
Tert-butyl ethyl ether	ND		5.0		ug/L			09/16/21 03:27	1
tert-Butylbenzene	ND		1.0		ug/L			09/16/21 03:27	1
Tetrachloroethene	ND		1.0		ug/L			09/16/21 03:27	1
Tetrahydrofuran	ND		10		ug/L			09/16/21 03:27	1
Toluene	ND		1.0		ug/L			09/16/21 03:27	1

Client Sample ID: MW-1005-20210914-01

Lab Sample ID: 480-189559-2

Date Collected: 09/14/21 10:55
Matrix: Water
Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		1.0		ug/L			09/16/21 03:27	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 03:27	1
Trichloroethene	**3.7**		1.0		ug/L			09/16/21 03:27	1
Trichlorofluoromethane	ND		1.0		ug/L			09/16/21 03:27	1
Vinyl chloride	ND		1.0		ug/L			09/16/21 03:27	1
Dibromomethane	ND		1.0		ug/L			09/16/21 03:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*70 - 130*		*09/16/21 03:27*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*09/16/21 03:27*	*1*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*		*09/16/21 03:27*	*1*

Client Sample ID: MW-1010D-20210914-01

Lab Sample ID: 480-189559-3

Date Collected: 09/14/21 12:20
Matrix: Water
Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			09/16/21 03:50	1
1,1,1-Trichloroethane	ND		1.0		ug/L			09/16/21 03:50	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			09/16/21 03:50	1
1,1,2-Trichloroethane	ND		1.0		ug/L			09/16/21 03:50	1
1,1-Dichloroethane	ND		1.0		ug/L			09/16/21 03:50	1
1,1-Dichloroethene	ND		1.0		ug/L			09/16/21 03:50	1
1,1-Dichloropropene	ND		1.0		ug/L			09/16/21 03:50	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			09/16/21 03:50	1
1,2,3-Trichloropropane	ND		1.0		ug/L			09/16/21 03:50	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			09/16/21 03:50	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			09/16/21 03:50	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			09/16/21 03:50	1
1,2-Dichlorobenzene	ND		1.0		ug/L			09/16/21 03:50	1
1,2-Dichloroethane	ND		1.0		ug/L			09/16/21 03:50	1
1,2-Dichloropropane	ND		1.0		ug/L			09/16/21 03:50	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			09/16/21 03:50	1
1,3-Dichlorobenzene	ND		1.0		ug/L			09/16/21 03:50	1
1,3-Dichloropropane	ND		1.0		ug/L			09/16/21 03:50	1
1,4-Dichlorobenzene	ND		1.0		ug/L			09/16/21 03:50	1
1,4-Dioxane	ND	*1	50		ug/L			09/16/21 03:50	1
2,2-Dichloropropane	ND	*+ *1	1.0		ug/L			09/16/21 03:50	1
2-Butanone (MEK)	ND	*+	10		ug/L			09/16/21 03:50	1
2-Chlorotoluene	ND		1.0		ug/L			09/16/21 03:50	1
2-Hexanone	ND		10		ug/L			09/16/21 03:50	1
4-Chlorotoluene	ND		1.0		ug/L			09/16/21 03:50	1
4-Isopropyltoluene	ND		1.0		ug/L			09/16/21 03:50	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			09/16/21 03:50	1
Acetone	ND	*1	50		ug/L			09/16/21 03:50	1
Benzene	ND		1.0		ug/L			09/16/21 03:50	1
Bromobenzene	ND		1.0		ug/L			09/16/21 03:50	1
Bromoform	ND		1.0		ug/L			09/16/21 03:50	1
Bromomethane	ND	*1	2.0		ug/L			09/16/21 03:50	1

Client Sample ID: MW-1010D-20210914-01

Lab Sample ID: 480-189559-3

Date Collected: 09/14/21 12:20

Matrix: Water

Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		10		ug/L			09/16/21 03:50	1
Carbon tetrachloride	ND		1.0		ug/L			09/16/21 03:50	1
Chlorobenzene	ND		1.0		ug/L			09/16/21 03:50	1
Chlorobromomethane	ND		1.0		ug/L			09/16/21 03:50	1
Chlorodibromomethane	ND		0.50		ug/L			09/16/21 03:50	1
Chloroethane	ND		2.0		ug/L			09/16/21 03:50	1
Chloroform	ND		1.0		ug/L			09/16/21 03:50	1
Chloromethane	ND		2.0		ug/L			09/16/21 03:50	1
cis-1,2-Dichloroethene	**2.4**		1.0		ug/L			09/16/21 03:50	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 03:50	1
Dichlorobromomethane	ND		0.50		ug/L			09/16/21 03:50	1
Dichlorodifluoromethane	ND		1.0		ug/L			09/16/21 03:50	1
Ethyl ether	ND		1.0		ug/L			09/16/21 03:50	1
Ethylbenzene	ND		1.0		ug/L			09/16/21 03:50	1
Ethylene Dibromide	ND		1.0		ug/L			09/16/21 03:50	1
Hexachlorobutadiene	ND		0.40		ug/L			09/16/21 03:50	1
Isopropyl ether	ND		10		ug/L			09/16/21 03:50	1
Isopropylbenzene	ND		1.0		ug/L			09/16/21 03:50	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/16/21 03:50	1
Methylene Chloride	ND		1.0		ug/L			09/16/21 03:50	1
m-Xylene & p-Xylene	ND		2.0		ug/L			09/16/21 03:50	1
Naphthalene	ND		5.0		ug/L			09/16/21 03:50	1
n-Butylbenzene	ND		1.0		ug/L			09/16/21 03:50	1
N-Propylbenzene	ND		1.0		ug/L			09/16/21 03:50	1
o-Xylene	ND		1.0		ug/L			09/16/21 03:50	1
sec-Butylbenzene	ND		1.0		ug/L			09/16/21 03:50	1
Styrene	ND		1.0		ug/L			09/16/21 03:50	1
Tert-amyl methyl ether	ND	*1	5.0		ug/L			09/16/21 03:50	1
Tert-butyl ethyl ether	ND		5.0		ug/L			09/16/21 03:50	1
tert-Butylbenzene	ND		1.0		ug/L			09/16/21 03:50	1
Tetrachloroethene	ND		1.0		ug/L			09/16/21 03:50	1
Tetrahydrofuran	ND		10		ug/L			09/16/21 03:50	1
Toluene	ND		1.0		ug/L			09/16/21 03:50	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			09/16/21 03:50	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 03:50	1
Trichloroethene	**5.5**		1.0		ug/L			09/16/21 03:50	1
Trichlorofluoromethane	ND		1.0		ug/L			09/16/21 03:50	1
Vinyl chloride	ND		1.0		ug/L			09/16/21 03:50	1
Dibromomethane	ND		1.0		ug/L			09/16/21 03:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*70 - 130*		*09/16/21 03:50*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*		*09/16/21 03:50*	*1*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*		*09/16/21 03:50*	*1*

Client Sample Results

Client: ERM-Northeast
Project/Site: IDS Wayland

Job ID: 480-189559-1

Client Sample ID: MW-1010M-20210914-01

Lab Sample ID: 480-189559-4

Date Collected: 09/14/21 11:30
Matrix: Water
Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			09/16/21 04:13	1
1,1,1-Trichloroethane	ND		1.0		ug/L			09/16/21 04:13	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			09/16/21 04:13	1
1,1,2-Trichloroethane	ND		1.0		ug/L			09/16/21 04:13	1
1,1-Dichloroethane	ND		1.0		ug/L			09/16/21 04:13	1
1,1-Dichloroethene	ND		1.0		ug/L			09/16/21 04:13	1
1,1-Dichloropropene	ND		1.0		ug/L			09/16/21 04:13	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			09/16/21 04:13	1
1,2,3-Trichloropropane	ND		1.0		ug/L			09/16/21 04:13	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			09/16/21 04:13	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			09/16/21 04:13	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			09/16/21 04:13	1
1,2-Dichlorobenzene	ND		1.0		ug/L			09/16/21 04:13	1
1,2-Dichloroethane	ND		1.0		ug/L			09/16/21 04:13	1
1,2-Dichloropropane	ND		1.0		ug/L			09/16/21 04:13	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			09/16/21 04:13	1
1,3-Dichlorobenzene	ND		1.0		ug/L			09/16/21 04:13	1
1,3-Dichloropropane	ND		1.0		ug/L			09/16/21 04:13	1
1,4-Dichlorobenzene	ND		1.0		ug/L			09/16/21 04:13	1
1,4-Dioxane	ND	*1	50		ug/L			09/16/21 04:13	1
2,2-Dichloropropane	ND	*+ *1	1.0		ug/L			09/16/21 04:13	1
2-Butanone (MEK)	ND	*+	10		ug/L			09/16/21 04:13	1
2-Chlorotoluene	ND		1.0		ug/L			09/16/21 04:13	1
2-Hexanone	ND		10		ug/L			09/16/21 04:13	1
4-Chlorotoluene	ND		1.0		ug/L			09/16/21 04:13	1
4-Isopropyltoluene	ND		1.0		ug/L			09/16/21 04:13	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			09/16/21 04:13	1
Acetone	**77**	***1**	50		ug/L			09/16/21 04:13	1
Benzene	ND		1.0		ug/L			09/16/21 04:13	1
Bromobenzene	ND		1.0		ug/L			09/16/21 04:13	1
Bromoform	ND		1.0		ug/L			09/16/21 04:13	1
Bromomethane	ND	*1	2.0		ug/L			09/16/21 04:13	1
Carbon disulfide	ND		10		ug/L			09/16/21 04:13	1
Carbon tetrachloride	ND		1.0		ug/L			09/16/21 04:13	1
Chlorobenzene	ND		1.0		ug/L			09/16/21 04:13	1
Chlorobromomethane	ND		1.0		ug/L			09/16/21 04:13	1
Chlorodibromomethane	ND		0.50		ug/L			09/16/21 04:13	1
Chloroethane	ND		2.0		ug/L			09/16/21 04:13	1
Chloroform	ND		1.0		ug/L			09/16/21 04:13	1
Chloromethane	ND		2.0		ug/L			09/16/21 04:13	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			09/16/21 04:13	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 04:13	1
Dichlorobromomethane	ND		0.50		ug/L			09/16/21 04:13	1
Dichlorodifluoromethane	ND		1.0		ug/L			09/16/21 04:13	1
Ethyl ether	ND		1.0		ug/L			09/16/21 04:13	1
Ethylbenzene	ND		1.0		ug/L			09/16/21 04:13	1
Ethylene Dibromide	ND		1.0		ug/L			09/16/21 04:13	1
Hexachlorobutadiene	ND		0.40		ug/L			09/16/21 04:13	1
Isopropyl ether	ND		10		ug/L			09/16/21 04:13	1

Client Sample ID: MW-1010M-20210914-01

Lab Sample ID: 480-189559-4

Date Collected: 09/14/21 11:30
Matrix: Water
Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			09/16/21 04:13	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/16/21 04:13	1
Methylene Chloride	ND		1.0		ug/L			09/16/21 04:13	1
m-Xylene & p-Xylene	ND		2.0		ug/L			09/16/21 04:13	1
Naphthalene	ND		5.0		ug/L			09/16/21 04:13	1
n-Butylbenzene	ND		1.0		ug/L			09/16/21 04:13	1
N-Propylbenzene	ND		1.0		ug/L			09/16/21 04:13	1
o-Xylene	ND		1.0		ug/L			09/16/21 04:13	1
sec-Butylbenzene	ND		1.0		ug/L			09/16/21 04:13	1
Styrene	ND		1.0		ug/L			09/16/21 04:13	1
Tert-amyl methyl ether	ND	*1	5.0		ug/L			09/16/21 04:13	1
Tert-butyl ethyl ether	ND		5.0		ug/L			09/16/21 04:13	1
tert-Butylbenzene	ND		1.0		ug/L			09/16/21 04:13	1
Tetrachloroethene	ND		1.0		ug/L			09/16/21 04:13	1
Tetrahydrofuran	ND		10		ug/L			09/16/21 04:13	1
Toluene	ND		1.0		ug/L			09/16/21 04:13	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			09/16/21 04:13	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 04:13	1
Trichloroethene	**16**		1.0		ug/L			09/16/21 04:13	1
Trichlorofluoromethane	ND		1.0		ug/L			09/16/21 04:13	1
Vinyl chloride	ND		1.0		ug/L			09/16/21 04:13	1
Dibromomethane	ND		1.0		ug/L			09/16/21 04:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*107*		*70 - 130*		*09/16/21 04:13*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*		*09/16/21 04:13*	*1*
4-Bromofluorobenzene (Surr)	*111*		*70 - 130*		*09/16/21 04:13*	*1*

Client Sample ID: MW-1014-20210914-01

Lab Sample ID: 480-189559-5

Date Collected: 09/14/21 09:00
Matrix: Water
Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			09/16/21 04:36	1
1,1,1-Trichloroethane	ND		1.0		ug/L			09/16/21 04:36	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			09/16/21 04:36	1
1,1,2-Trichloroethane	ND		1.0		ug/L			09/16/21 04:36	1
1,1-Dichloroethane	ND		1.0		ug/L			09/16/21 04:36	1
1,1-Dichloroethene	ND		1.0		ug/L			09/16/21 04:36	1
1,1-Dichloropropene	ND		1.0		ug/L			09/16/21 04:36	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			09/16/21 04:36	1
1,2,3-Trichloropropane	ND		1.0		ug/L			09/16/21 04:36	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			09/16/21 04:36	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			09/16/21 04:36	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			09/16/21 04:36	1
1,2-Dichlorobenzene	ND		1.0		ug/L			09/16/21 04:36	1
1,2-Dichloroethane	ND		1.0		ug/L			09/16/21 04:36	1
1,2-Dichloropropane	ND		1.0		ug/L			09/16/21 04:36	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			09/16/21 04:36	1

Client Sample ID: MW-1014-20210914-01

Lab Sample ID: 480-189559-5

Date Collected: 09/14/21 09:00

Matrix: Water

Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0		ug/L			09/16/21 04:36	1
1,3-Dichloropropane	ND		1.0		ug/L			09/16/21 04:36	1
1,4-Dichlorobenzene	ND		1.0		ug/L			09/16/21 04:36	1
1,4-Dioxane	ND	*1	50		ug/L			09/16/21 04:36	1
2,2-Dichloropropane	ND	*+ *1	1.0		ug/L			09/16/21 04:36	1
2-Butanone (MEK)	ND	*+	10		ug/L			09/16/21 04:36	1
2-Chlorotoluene	ND		1.0		ug/L			09/16/21 04:36	1
2-Hexanone	ND		10		ug/L			09/16/21 04:36	1
4-Chlorotoluene	ND		1.0		ug/L			09/16/21 04:36	1
4-Isopropyltoluene	ND		1.0		ug/L			09/16/21 04:36	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			09/16/21 04:36	1
Acetone	**51**	***1**	50		ug/L			09/16/21 04:36	1
Benzene	ND		1.0		ug/L			09/16/21 04:36	1
Bromobenzene	ND		1.0		ug/L			09/16/21 04:36	1
Bromoform	ND		1.0		ug/L			09/16/21 04:36	1
Bromomethane	ND	*1	2.0		ug/L			09/16/21 04:36	1
Carbon disulfide	ND		10		ug/L			09/16/21 04:36	1
Carbon tetrachloride	ND		1.0		ug/L			09/16/21 04:36	1
Chlorobenzene	ND		1.0		ug/L			09/16/21 04:36	1
Chlorobromomethane	ND		1.0		ug/L			09/16/21 04:36	1
Chlorodibromomethane	ND		0.50		ug/L			09/16/21 04:36	1
Chloroethane	ND		2.0		ug/L			09/16/21 04:36	1
Chloroform	ND		1.0		ug/L			09/16/21 04:36	1
Chloromethane	ND		2.0		ug/L			09/16/21 04:36	1
cis-1,2-Dichloroethene	**3.0**		1.0		ug/L			09/16/21 04:36	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 04:36	1
Dichlorobromomethane	ND		0.50		ug/L			09/16/21 04:36	1
Dichlorodifluoromethane	ND		1.0		ug/L			09/16/21 04:36	1
Ethyl ether	ND		1.0		ug/L			09/16/21 04:36	1
Ethylbenzene	ND		1.0		ug/L			09/16/21 04:36	1
Ethylene Dibromide	ND		1.0		ug/L			09/16/21 04:36	1
Hexachlorobutadiene	ND		0.40		ug/L			09/16/21 04:36	1
Isopropyl ether	ND		10		ug/L			09/16/21 04:36	1
Isopropylbenzene	ND		1.0		ug/L			09/16/21 04:36	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/16/21 04:36	1
Methylene Chloride	ND		1.0		ug/L			09/16/21 04:36	1
m-Xylene & p-Xylene	ND		2.0		ug/L			09/16/21 04:36	1
Naphthalene	ND		5.0		ug/L			09/16/21 04:36	1
n-Butylbenzene	ND		1.0		ug/L			09/16/21 04:36	1
N-Propylbenzene	ND		1.0		ug/L			09/16/21 04:36	1
o-Xylene	ND		1.0		ug/L			09/16/21 04:36	1
sec-Butylbenzene	ND		1.0		ug/L			09/16/21 04:36	1
Styrene	ND		1.0		ug/L			09/16/21 04:36	1
Tert-amyl methyl ether	ND	*1	5.0		ug/L			09/16/21 04:36	1
Tert-butyl ethyl ether	ND		5.0		ug/L			09/16/21 04:36	1
tert-Butylbenzene	ND		1.0		ug/L			09/16/21 04:36	1
Tetrachloroethene	ND		1.0		ug/L			09/16/21 04:36	1
Tetrahydrofuran	ND		10		ug/L			09/16/21 04:36	1
Toluene	ND		1.0		ug/L			09/16/21 04:36	1

Client Sample ID: MW-1014-20210914-01

Lab Sample ID: 480-189559-5

Date Collected: 09/14/21 09:00

Matrix: Water

Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		1.0		ug/L			09/16/21 04:36	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 04:36	1
Trichloroethene	**23**		1.0		ug/L			09/16/21 04:36	1
Trichlorofluoromethane	ND		1.0		ug/L			09/16/21 04:36	1
Vinyl chloride	ND		1.0		ug/L			09/16/21 04:36	1
Dibromomethane	ND		1.0		ug/L			09/16/21 04:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*70 - 130*		*09/16/21 04:36*	*1*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*		*09/16/21 04:36*	*1*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*		*09/16/21 04:36*	*1*

Client Sample ID: MW-1015D-20210914-01

Lab Sample ID: 480-189559-6

Date Collected: 09/14/21 08:58

Matrix: Water

Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			09/16/21 04:59	1
1,1,1-Trichloroethane	ND		1.0		ug/L			09/16/21 04:59	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			09/16/21 04:59	1
1,1,2-Trichloroethane	ND		1.0		ug/L			09/16/21 04:59	1
1,1-Dichloroethane	ND		1.0		ug/L			09/16/21 04:59	1
1,1-Dichloroethene	ND		1.0		ug/L			09/16/21 04:59	1
1,1-Dichloropropene	ND		1.0		ug/L			09/16/21 04:59	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			09/16/21 04:59	1
1,2,3-Trichloropropane	ND		1.0		ug/L			09/16/21 04:59	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			09/16/21 04:59	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			09/16/21 04:59	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			09/16/21 04:59	1
1,2-Dichlorobenzene	ND		1.0		ug/L			09/16/21 04:59	1
1,2-Dichloroethane	ND		1.0		ug/L			09/16/21 04:59	1
1,2-Dichloropropane	ND		1.0		ug/L			09/16/21 04:59	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			09/16/21 04:59	1
1,3-Dichlorobenzene	ND		1.0		ug/L			09/16/21 04:59	1
1,3-Dichloropropane	ND		1.0		ug/L			09/16/21 04:59	1
1,4-Dichlorobenzene	ND		1.0		ug/L			09/16/21 04:59	1
1,4-Dioxane	ND	*1	50		ug/L			09/16/21 04:59	1
2,2-Dichloropropane	ND	*+ *1	1.0		ug/L			09/16/21 04:59	1
2-Butanone (MEK)	ND	*+	10		ug/L			09/16/21 04:59	1
2-Chlorotoluene	ND		1.0		ug/L			09/16/21 04:59	1
2-Hexanone	ND		10		ug/L			09/16/21 04:59	1
4-Chlorotoluene	ND		1.0		ug/L			09/16/21 04:59	1
4-Isopropyltoluene	ND		1.0		ug/L			09/16/21 04:59	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			09/16/21 04:59	1
Acetone	ND	*1	50		ug/L			09/16/21 04:59	1
Benzene	ND		1.0		ug/L			09/16/21 04:59	1
Bromobenzene	ND		1.0		ug/L			09/16/21 04:59	1
Bromoform	ND		1.0		ug/L			09/16/21 04:59	1
Bromomethane	ND	*1	2.0		ug/L			09/16/21 04:59	1

Client Sample ID: MW-1015D-20210914-01

Lab Sample ID: 480-189559-6

Date Collected: 09/14/21 08:58

Matrix: Water

Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		10		ug/L			09/16/21 04:59	1
Carbon tetrachloride	ND		1.0		ug/L			09/16/21 04:59	1
Chlorobenzene	ND		1.0		ug/L			09/16/21 04:59	1
Chlorobromomethane	ND		1.0		ug/L			09/16/21 04:59	1
Chlorodibromomethane	ND		0.50		ug/L			09/16/21 04:59	1
Chloroethane	ND		2.0		ug/L			09/16/21 04:59	1
Chloroform	ND		1.0		ug/L			09/16/21 04:59	1
Chloromethane	ND		2.0		ug/L			09/16/21 04:59	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			09/16/21 04:59	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 04:59	1
Dichlorobromomethane	ND		0.50		ug/L			09/16/21 04:59	1
Dichlorodifluoromethane	ND		1.0		ug/L			09/16/21 04:59	1
Ethyl ether	ND		1.0		ug/L			09/16/21 04:59	1
Ethylbenzene	ND		1.0		ug/L			09/16/21 04:59	1
Ethylene Dibromide	ND		1.0		ug/L			09/16/21 04:59	1
Hexachlorobutadiene	ND		0.40		ug/L			09/16/21 04:59	1
Isopropyl ether	ND		10		ug/L			09/16/21 04:59	1
Isopropylbenzene	ND		1.0		ug/L			09/16/21 04:59	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/16/21 04:59	1
Methylene Chloride	ND		1.0		ug/L			09/16/21 04:59	1
m-Xylene & p-Xylene	ND		2.0		ug/L			09/16/21 04:59	1
Naphthalene	ND		5.0		ug/L			09/16/21 04:59	1
n-Butylbenzene	ND		1.0		ug/L			09/16/21 04:59	1
N-Propylbenzene	ND		1.0		ug/L			09/16/21 04:59	1
o-Xylene	ND		1.0		ug/L			09/16/21 04:59	1
sec-Butylbenzene	ND		1.0		ug/L			09/16/21 04:59	1
Styrene	ND		1.0		ug/L			09/16/21 04:59	1
Tert-amyl methyl ether	ND	*1	5.0		ug/L			09/16/21 04:59	1
Tert-butyl ethyl ether	ND		5.0		ug/L			09/16/21 04:59	1
tert-Butylbenzene	ND		1.0		ug/L			09/16/21 04:59	1
Tetrachloroethene	ND		1.0		ug/L			09/16/21 04:59	1
Tetrahydrofuran	ND		10		ug/L			09/16/21 04:59	1
Toluene	ND		1.0		ug/L			09/16/21 04:59	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			09/16/21 04:59	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 04:59	1
Trichloroethene	**4.6**		1.0		ug/L			09/16/21 04:59	1
Trichlorofluoromethane	ND		1.0		ug/L			09/16/21 04:59	1
Vinyl chloride	ND		1.0		ug/L			09/16/21 04:59	1
Dibromomethane	ND		1.0		ug/L			09/16/21 04:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*70 - 130*		*09/16/21 04:59*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*		*09/16/21 04:59*	*1*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*		*09/16/21 04:59*	*1*

Client Sample Results

Client: ERM-Northeast
Project/Site: IDS Wayland

Job ID: 480-189559-1

Client Sample ID: MW1028-20210914-01

Lab Sample ID: 480-189559-7

Date Collected: 09/14/21 12:10
Matrix: Water
Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			09/16/21 05:22	1
1,1,1-Trichloroethane	ND		1.0		ug/L			09/16/21 05:22	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			09/16/21 05:22	1
1,1,2-Trichloroethane	ND		1.0		ug/L			09/16/21 05:22	1
1,1-Dichloroethane	ND		1.0		ug/L			09/16/21 05:22	1
1,1-Dichloroethene	ND		1.0		ug/L			09/16/21 05:22	1
1,1-Dichloropropene	ND		1.0		ug/L			09/16/21 05:22	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			09/16/21 05:22	1
1,2,3-Trichloropropane	ND		1.0		ug/L			09/16/21 05:22	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			09/16/21 05:22	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			09/16/21 05:22	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			09/16/21 05:22	1
1,2-Dichlorobenzene	ND		1.0		ug/L			09/16/21 05:22	1
1,2-Dichloroethane	ND		1.0		ug/L			09/16/21 05:22	1
1,2-Dichloropropane	ND		1.0		ug/L			09/16/21 05:22	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			09/16/21 05:22	1
1,3-Dichlorobenzene	ND		1.0		ug/L			09/16/21 05:22	1
1,3-Dichloropropane	ND		1.0		ug/L			09/16/21 05:22	1
1,4-Dichlorobenzene	ND		1.0		ug/L			09/16/21 05:22	1
1,4-Dioxane	ND	*1	50		ug/L			09/16/21 05:22	1
2,2-Dichloropropane	ND	*+ *1	1.0		ug/L			09/16/21 05:22	1
2-Butanone (MEK)	ND	*+	10		ug/L			09/16/21 05:22	1
2-Chlorotoluene	ND		1.0		ug/L			09/16/21 05:22	1
2-Hexanone	ND		10		ug/L			09/16/21 05:22	1
4-Chlorotoluene	ND		1.0		ug/L			09/16/21 05:22	1
4-Isopropyltoluene	ND		1.0		ug/L			09/16/21 05:22	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			09/16/21 05:22	1
Acetone	ND	*1	50		ug/L			09/16/21 05:22	1
Benzene	ND		1.0		ug/L			09/16/21 05:22	1
Bromobenzene	ND		1.0		ug/L			09/16/21 05:22	1
Bromoform	ND		1.0		ug/L			09/16/21 05:22	1
Bromomethane	ND	*1	2.0		ug/L			09/16/21 05:22	1
Carbon disulfide	ND		10		ug/L			09/16/21 05:22	1
Carbon tetrachloride	ND		1.0		ug/L			09/16/21 05:22	1
Chlorobenzene	ND		1.0		ug/L			09/16/21 05:22	1
Chlorobromomethane	ND		1.0		ug/L			09/16/21 05:22	1
Chlorodibromomethane	ND		0.50		ug/L			09/16/21 05:22	1
Chloroethane	ND		2.0		ug/L			09/16/21 05:22	1
Chloroform	ND		1.0		ug/L			09/16/21 05:22	1
Chloromethane	ND		2.0		ug/L			09/16/21 05:22	1
cis-1,2-Dichloroethene	**1.0**		1.0		ug/L			09/16/21 05:22	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 05:22	1
Dichlorobromomethane	ND		0.50		ug/L			09/16/21 05:22	1
Dichlorodifluoromethane	ND		1.0		ug/L			09/16/21 05:22	1
Ethyl ether	ND		1.0		ug/L			09/16/21 05:22	1
Ethylbenzene	ND		1.0		ug/L			09/16/21 05:22	1
Ethylene Dibromide	ND		1.0		ug/L			09/16/21 05:22	1
Hexachlorobutadiene	ND		0.40		ug/L			09/16/21 05:22	1
Isopropyl ether	ND		10		ug/L			09/16/21 05:22	1

Client Sample ID: MW1028-20210914-01

Lab Sample ID: 480-189559-7

Date Collected: 09/14/21 12:10
Matrix: Water
Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			09/16/21 05:22	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/16/21 05:22	1
Methylene Chloride	ND		1.0		ug/L			09/16/21 05:22	1
m-Xylene & p-Xylene	ND		2.0		ug/L			09/16/21 05:22	1
Naphthalene	ND		5.0		ug/L			09/16/21 05:22	1
n-Butylbenzene	ND		1.0		ug/L			09/16/21 05:22	1
N-Propylbenzene	ND		1.0		ug/L			09/16/21 05:22	1
o-Xylene	ND		1.0		ug/L			09/16/21 05:22	1
sec-Butylbenzene	ND		1.0		ug/L			09/16/21 05:22	1
Styrene	ND		1.0		ug/L			09/16/21 05:22	1
Tert-amyl methyl ether	ND	*1	5.0		ug/L			09/16/21 05:22	1
Tert-butyl ethyl ether	ND		5.0		ug/L			09/16/21 05:22	1
tert-Butylbenzene	ND		1.0		ug/L			09/16/21 05:22	1
Tetrachloroethene	ND		1.0		ug/L			09/16/21 05:22	1
Tetrahydrofuran	ND		10		ug/L			09/16/21 05:22	1
Toluene	ND		1.0		ug/L			09/16/21 05:22	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			09/16/21 05:22	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 05:22	1
Trichloroethene	**6.9**		1.0		ug/L			09/16/21 05:22	1
Trichlorofluoromethane	ND		1.0		ug/L			09/16/21 05:22	1
Vinyl chloride	ND		1.0		ug/L			09/16/21 05:22	1
Dibromomethane	ND		1.0		ug/L			09/16/21 05:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*70 - 130*		*09/16/21 05:22*	*1*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*		*09/16/21 05:22*	*1*
4-Bromofluorobenzene (Surr)	*101*		*70 - 130*		*09/16/21 05:22*	*1*

Client Sample ID: MW-1032-20210914-01

Lab Sample ID: 480-189559-8

Date Collected: 09/14/21 11:35
Matrix: Water
Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			09/16/21 05:45	1
1,1,1-Trichloroethane	ND		1.0		ug/L			09/16/21 05:45	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			09/16/21 05:45	1
1,1,2-Trichloroethane	ND		1.0		ug/L			09/16/21 05:45	1
1,1-Dichloroethane	ND		1.0		ug/L			09/16/21 05:45	1
1,1-Dichloroethene	ND		1.0		ug/L			09/16/21 05:45	1
1,1-Dichloropropene	ND		1.0		ug/L			09/16/21 05:45	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			09/16/21 05:45	1
1,2,3-Trichloropropane	ND		1.0		ug/L			09/16/21 05:45	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			09/16/21 05:45	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			09/16/21 05:45	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			09/16/21 05:45	1
1,2-Dichlorobenzene	ND		1.0		ug/L			09/16/21 05:45	1
1,2-Dichloroethane	ND		1.0		ug/L			09/16/21 05:45	1
1,2-Dichloropropane	ND		1.0		ug/L			09/16/21 05:45	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			09/16/21 05:45	1

Client Sample Results

Client: ERM-Northeast
Project/Site: IDS Wayland

Job ID: 480-189559-1

Client Sample ID: MW-1032-20210914-01

Lab Sample ID: 480-189559-8

Date Collected: 09/14/21 11:35
Matrix: Water
Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0		ug/L			09/16/21 05:45	1
1,3-Dichloropropane	ND		1.0		ug/L			09/16/21 05:45	1
1,4-Dichlorobenzene	ND		1.0		ug/L			09/16/21 05:45	1
1,4-Dioxane	ND	*1	50		ug/L			09/16/21 05:45	1
2,2-Dichloropropane	ND	*+ *1	1.0		ug/L			09/16/21 05:45	1
2-Butanone (MEK)	ND	*+	10		ug/L			09/16/21 05:45	1
2-Chlorotoluene	ND		1.0		ug/L			09/16/21 05:45	1
2-Hexanone	ND		10		ug/L			09/16/21 05:45	1
4-Chlorotoluene	ND		1.0		ug/L			09/16/21 05:45	1
4-Isopropyltoluene	ND		1.0		ug/L			09/16/21 05:45	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			09/16/21 05:45	1
Acetone	ND	*1	50		ug/L			09/16/21 05:45	1
Benzene	ND		1.0		ug/L			09/16/21 05:45	1
Bromobenzene	ND		1.0		ug/L			09/16/21 05:45	1
Bromoform	ND		1.0		ug/L			09/16/21 05:45	1
Bromomethane	ND	*1	2.0		ug/L			09/16/21 05:45	1
Carbon disulfide	ND		10		ug/L			09/16/21 05:45	1
Carbon tetrachloride	ND		1.0		ug/L			09/16/21 05:45	1
Chlorobenzene	ND		1.0		ug/L			09/16/21 05:45	1
Chlorobromomethane	ND		1.0		ug/L			09/16/21 05:45	1
Chlorodibromomethane	ND		0.50		ug/L			09/16/21 05:45	1
Chloroethane	ND		2.0		ug/L			09/16/21 05:45	1
Chloroform	ND		1.0		ug/L			09/16/21 05:45	1
Chloromethane	ND		2.0		ug/L			09/16/21 05:45	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			09/16/21 05:45	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 05:45	1
Dichlorobromomethane	ND		0.50		ug/L			09/16/21 05:45	1
Dichlorodifluoromethane	ND		1.0		ug/L			09/16/21 05:45	1
Ethyl ether	ND		1.0		ug/L			09/16/21 05:45	1
Ethylbenzene	ND		1.0		ug/L			09/16/21 05:45	1
Ethylene Dibromide	ND		1.0		ug/L			09/16/21 05:45	1
Hexachlorobutadiene	ND		0.40		ug/L			09/16/21 05:45	1
Isopropyl ether	ND		10		ug/L			09/16/21 05:45	1
Isopropylbenzene	ND		1.0		ug/L			09/16/21 05:45	1
Methyl tert-butyl ether	**25**		1.0		ug/L			09/16/21 05:45	1
Methylene Chloride	ND		1.0		ug/L			09/16/21 05:45	1
m-Xylene & p-Xylene	ND		2.0		ug/L			09/16/21 05:45	1
Naphthalene	ND		5.0		ug/L			09/16/21 05:45	1
n-Butylbenzene	ND		1.0		ug/L			09/16/21 05:45	1
N-Propylbenzene	ND		1.0		ug/L			09/16/21 05:45	1
o-Xylene	ND		1.0		ug/L			09/16/21 05:45	1
sec-Butylbenzene	ND		1.0		ug/L			09/16/21 05:45	1
Styrene	ND		1.0		ug/L			09/16/21 05:45	1
Tert-amyl methyl ether	**7.5**	***1**	5.0		ug/L			09/16/21 05:45	1
Tert-butyl ethyl ether	ND		5.0		ug/L			09/16/21 05:45	1
tert-Butylbenzene	ND		1.0		ug/L			09/16/21 05:45	1
Tetrachloroethene	ND		1.0		ug/L			09/16/21 05:45	1
Tetrahydrofuran	ND		10		ug/L			09/16/21 05:45	1
Toluene	ND		1.0		ug/L			09/16/21 05:45	1

Client Sample ID: MW-1032-20210914-01

Lab Sample ID: 480-189559-8

Date Collected: 09/14/21 11:35

Matrix: Water

Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		1.0		ug/L			09/16/21 05:45	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 05:45	1
Trichloroethene	**6.3**		1.0		ug/L			09/16/21 05:45	1
Trichlorofluoromethane	ND		1.0		ug/L			09/16/21 05:45	1
Vinyl chloride	ND		1.0		ug/L			09/16/21 05:45	1
Dibromomethane	ND		1.0		ug/L			09/16/21 05:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*70 - 130*		*09/16/21 05:45*	*1*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 130*		*09/16/21 05:45*	*1*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*		*09/16/21 05:45*	*1*

Client Sample ID: MW-1034-20210914-01

Lab Sample ID: 480-189559-9

Date Collected: 09/14/21 12:45

Matrix: Water

Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			09/16/21 06:08	1
1,1,1-Trichloroethane	ND		1.0		ug/L			09/16/21 06:08	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			09/16/21 06:08	1
1,1,2-Trichloroethane	ND		1.0		ug/L			09/16/21 06:08	1
1,1-Dichloroethane	ND		1.0		ug/L			09/16/21 06:08	1
1,1-Dichloroethene	ND		1.0		ug/L			09/16/21 06:08	1
1,1-Dichloropropene	ND		1.0		ug/L			09/16/21 06:08	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			09/16/21 06:08	1
1,2,3-Trichloropropane	ND		1.0		ug/L			09/16/21 06:08	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			09/16/21 06:08	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			09/16/21 06:08	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			09/16/21 06:08	1
1,2-Dichlorobenzene	ND		1.0		ug/L			09/16/21 06:08	1
1,2-Dichloroethane	ND		1.0		ug/L			09/16/21 06:08	1
1,2-Dichloropropane	ND		1.0		ug/L			09/16/21 06:08	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			09/16/21 06:08	1
1,3-Dichlorobenzene	ND		1.0		ug/L			09/16/21 06:08	1
1,3-Dichloropropane	ND		1.0		ug/L			09/16/21 06:08	1
1,4-Dichlorobenzene	ND		1.0		ug/L			09/16/21 06:08	1
1,4-Dioxane	ND	*1	50		ug/L			09/16/21 06:08	1
2,2-Dichloropropane	ND	*+ *1	1.0		ug/L			09/16/21 06:08	1
2-Butanone (MEK)	ND	*+	10		ug/L			09/16/21 06:08	1
2-Chlorotoluene	ND		1.0		ug/L			09/16/21 06:08	1
2-Hexanone	ND		10		ug/L			09/16/21 06:08	1
4-Chlorotoluene	ND		1.0		ug/L			09/16/21 06:08	1
4-Isopropyltoluene	ND		1.0		ug/L			09/16/21 06:08	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			09/16/21 06:08	1
Acetone	ND	*1	50		ug/L			09/16/21 06:08	1
Benzene	ND		1.0		ug/L			09/16/21 06:08	1
Bromobenzene	ND		1.0		ug/L			09/16/21 06:08	1
Bromoform	ND		1.0		ug/L			09/16/21 06:08	1
Bromomethane	ND	*1	2.0		ug/L			09/16/21 06:08	1

Client Sample ID: MW-1034-20210914-01

Lab Sample ID: 480-189559-9

Date Collected: 09/14/21 12:45

Matrix: Water

Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		10		ug/L			09/16/21 06:08	1
Carbon tetrachloride	ND		1.0		ug/L			09/16/21 06:08	1
Chlorobenzene	ND		1.0		ug/L			09/16/21 06:08	1
Chlorobromomethane	ND		1.0		ug/L			09/16/21 06:08	1
Chlorodibromomethane	ND		0.50		ug/L			09/16/21 06:08	1
Chloroethane	ND		2.0		ug/L			09/16/21 06:08	1
Chloroform	ND		1.0		ug/L			09/16/21 06:08	1
Chloromethane	ND		2.0		ug/L			09/16/21 06:08	1
cis-1,2-Dichloroethene	**17**		1.0		ug/L			09/16/21 06:08	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 06:08	1
Dichlorobromomethane	ND		0.50		ug/L			09/16/21 06:08	1
Dichlorodifluoromethane	ND		1.0		ug/L			09/16/21 06:08	1
Ethyl ether	ND		1.0		ug/L			09/16/21 06:08	1
Ethylbenzene	ND		1.0		ug/L			09/16/21 06:08	1
Ethylene Dibromide	ND		1.0		ug/L			09/16/21 06:08	1
Hexachlorobutadiene	ND		0.40		ug/L			09/16/21 06:08	1
Isopropyl ether	ND		10		ug/L			09/16/21 06:08	1
Isopropylbenzene	ND		1.0		ug/L			09/16/21 06:08	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/16/21 06:08	1
Methylene Chloride	ND		1.0		ug/L			09/16/21 06:08	1
m-Xylene & p-Xylene	ND		2.0		ug/L			09/16/21 06:08	1
Naphthalene	ND		5.0		ug/L			09/16/21 06:08	1
n-Butylbenzene	ND		1.0		ug/L			09/16/21 06:08	1
N-Propylbenzene	ND		1.0		ug/L			09/16/21 06:08	1
o-Xylene	ND		1.0		ug/L			09/16/21 06:08	1
sec-Butylbenzene	ND		1.0		ug/L			09/16/21 06:08	1
Styrene	ND		1.0		ug/L			09/16/21 06:08	1
Tert-amyl methyl ether	ND	*1	5.0		ug/L			09/16/21 06:08	1
Tert-butyl ethyl ether	ND		5.0		ug/L			09/16/21 06:08	1
tert-Butylbenzene	ND		1.0		ug/L			09/16/21 06:08	1
Tetrachloroethene	ND		1.0		ug/L			09/16/21 06:08	1
Tetrahydrofuran	ND		10		ug/L			09/16/21 06:08	1
Toluene	ND		1.0		ug/L			09/16/21 06:08	1
trans-1,2-Dichloroethene	**1.2**		1.0		ug/L			09/16/21 06:08	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 06:08	1
Trichloroethene	**24**		1.0		ug/L			09/16/21 06:08	1
Trichlorofluoromethane	ND		1.0		ug/L			09/16/21 06:08	1
Vinyl chloride	ND		1.0		ug/L			09/16/21 06:08	1
Dibromomethane	ND		1.0		ug/L			09/16/21 06:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*70 - 130*		*09/16/21 06:08*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*09/16/21 06:08*	*1*
4-Bromofluorobenzene (Surr)	*110*		*70 - 130*		*09/16/21 06:08*	*1*

Client Sample Results

Client: ERM-Northeast
Project/Site: IDS Wayland

Job ID: 480-189559-1

Client Sample ID: MW-1040-20210914-01

Lab Sample ID: 480-189559-10

Date Collected: 09/14/21 12:55
Matrix: Water
Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			09/16/21 06:30	1
1,1,1-Trichloroethane	**2.6**		1.0		ug/L			09/16/21 06:30	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			09/16/21 06:30	1
1,1,2-Trichloroethane	ND		1.0		ug/L			09/16/21 06:30	1
1,1-Dichloroethane	**1.9**		1.0		ug/L			09/16/21 06:30	1
1,1-Dichloroethene	**1.6**		1.0		ug/L			09/16/21 06:30	1
1,1-Dichloropropene	ND		1.0		ug/L			09/16/21 06:30	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			09/16/21 06:30	1
1,2,3-Trichloropropane	ND		1.0		ug/L			09/16/21 06:30	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			09/16/21 06:30	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			09/16/21 06:30	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			09/16/21 06:30	1
1,2-Dichlorobenzene	ND		1.0		ug/L			09/16/21 06:30	1
1,2-Dichloroethane	ND		1.0		ug/L			09/16/21 06:30	1
1,2-Dichloropropane	ND		1.0		ug/L			09/16/21 06:30	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			09/16/21 06:30	1
1,3-Dichlorobenzene	ND		1.0		ug/L			09/16/21 06:30	1
1,3-Dichloropropane	ND		1.0		ug/L			09/16/21 06:30	1
1,4-Dichlorobenzene	ND		1.0		ug/L			09/16/21 06:30	1
1,4-Dioxane	ND	*1	50		ug/L			09/16/21 06:30	1
2,2-Dichloropropane	ND	*+ *1	1.0		ug/L			09/16/21 06:30	1
2-Butanone (MEK)	ND	*+	10		ug/L			09/16/21 06:30	1
2-Chlorotoluene	ND		1.0		ug/L			09/16/21 06:30	1
2-Hexanone	ND		10		ug/L			09/16/21 06:30	1
4-Chlorotoluene	ND		1.0		ug/L			09/16/21 06:30	1
4-Isopropyltoluene	ND		1.0		ug/L			09/16/21 06:30	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			09/16/21 06:30	1
Acetone	**52**	***1**	50		ug/L			09/16/21 06:30	1
Benzene	ND		1.0		ug/L			09/16/21 06:30	1
Bromobenzene	ND		1.0		ug/L			09/16/21 06:30	1
Bromoform	ND		1.0		ug/L			09/16/21 06:30	1
Bromomethane	ND	*1	2.0		ug/L			09/16/21 06:30	1
Carbon disulfide	ND		10		ug/L			09/16/21 06:30	1
Carbon tetrachloride	ND		1.0		ug/L			09/16/21 06:30	1
Chlorobenzene	ND		1.0		ug/L			09/16/21 06:30	1
Chlorobromomethane	ND		1.0		ug/L			09/16/21 06:30	1
Chlorodibromomethane	ND		0.50		ug/L			09/16/21 06:30	1
Chloroethane	ND		2.0		ug/L			09/16/21 06:30	1
Chloroform	ND		1.0		ug/L			09/16/21 06:30	1
Chloromethane	ND		2.0		ug/L			09/16/21 06:30	1
cis-1,2-Dichloroethene	**1.7**		1.0		ug/L			09/16/21 06:30	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 06:30	1
Dichlorobromomethane	ND		0.50		ug/L			09/16/21 06:30	1
Dichlorodifluoromethane	ND		1.0		ug/L			09/16/21 06:30	1
Ethyl ether	ND		1.0		ug/L			09/16/21 06:30	1
Ethylbenzene	ND		1.0		ug/L			09/16/21 06:30	1
Ethylene Dibromide	ND		1.0		ug/L			09/16/21 06:30	1
Hexachlorobutadiene	ND		0.40		ug/L			09/16/21 06:30	1
Isopropyl ether	ND		10		ug/L			09/16/21 06:30	1

Client Sample ID: MW-1040-20210914-01

Lab Sample ID: 480-189559-10

Date Collected: 09/14/21 12:55
Matrix: Water
Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			09/16/21 06:30	1
Methyl tert-butyl ether	**2.1**		1.0		ug/L			09/16/21 06:30	1
Methylene Chloride	ND		1.0		ug/L			09/16/21 06:30	1
m-Xylene & p-Xylene	ND		2.0		ug/L			09/16/21 06:30	1
Naphthalene	ND		5.0		ug/L			09/16/21 06:30	1
n-Butylbenzene	ND		1.0		ug/L			09/16/21 06:30	1
N-Propylbenzene	ND		1.0		ug/L			09/16/21 06:30	1
o-Xylene	ND		1.0		ug/L			09/16/21 06:30	1
sec-Butylbenzene	ND		1.0		ug/L			09/16/21 06:30	1
Styrene	ND		1.0		ug/L			09/16/21 06:30	1
Tert-amyl methyl ether	ND	*1	5.0		ug/L			09/16/21 06:30	1
Tert-butyl ethyl ether	ND		5.0		ug/L			09/16/21 06:30	1
tert-Butylbenzene	ND		1.0		ug/L			09/16/21 06:30	1
Tetrachloroethene	ND		1.0		ug/L			09/16/21 06:30	1
Tetrahydrofuran	ND		10		ug/L			09/16/21 06:30	1
Toluene	ND		1.0		ug/L			09/16/21 06:30	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			09/16/21 06:30	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 06:30	1
Trichloroethene	**43**		1.0		ug/L			09/16/21 06:30	1
Trichlorofluoromethane	ND		1.0		ug/L			09/16/21 06:30	1
Vinyl chloride	ND		1.0		ug/L			09/16/21 06:30	1
Dibromomethane	ND		1.0		ug/L			09/16/21 06:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*70 - 130*		*09/16/21 06:30*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*		*09/16/21 06:30*	*1*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*		*09/16/21 06:30*	*1*

Client Sample ID: MW-1023M-20210914-01

Lab Sample ID: 480-189559-11

Date Collected: 09/14/21 11:00
Matrix: Water
Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			09/16/21 06:53	1
1,1,1-Trichloroethane	ND		1.0		ug/L			09/16/21 06:53	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			09/16/21 06:53	1
1,1,2-Trichloroethane	ND		1.0		ug/L			09/16/21 06:53	1
1,1-Dichloroethane	ND		1.0		ug/L			09/16/21 06:53	1
1,1-Dichloroethene	ND		1.0		ug/L			09/16/21 06:53	1
1,1-Dichloropropene	ND		1.0		ug/L			09/16/21 06:53	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			09/16/21 06:53	1
1,2,3-Trichloropropane	ND		1.0		ug/L			09/16/21 06:53	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			09/16/21 06:53	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			09/16/21 06:53	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			09/16/21 06:53	1
1,2-Dichlorobenzene	ND		1.0		ug/L			09/16/21 06:53	1
1,2-Dichloroethane	ND		1.0		ug/L			09/16/21 06:53	1
1,2-Dichloropropane	ND		1.0		ug/L			09/16/21 06:53	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			09/16/21 06:53	1

Client Sample ID: MW-1023M-20210914-01

Lab Sample ID: 480-189559-11

Date Collected: 09/14/21 11:00

Matrix: Water

Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0		ug/L			09/16/21 06:53	1
1,3-Dichloropropane	ND		1.0		ug/L			09/16/21 06:53	1
1,4-Dichlorobenzene	ND		1.0		ug/L			09/16/21 06:53	1
1,4-Dioxane	ND	*1	50		ug/L			09/16/21 06:53	1
2,2-Dichloropropane	ND	*+ *1	1.0		ug/L			09/16/21 06:53	1
2-Butanone (MEK)	ND	*+	10		ug/L			09/16/21 06:53	1
2-Chlorotoluene	ND		1.0		ug/L			09/16/21 06:53	1
2-Hexanone	ND		10		ug/L			09/16/21 06:53	1
4-Chlorotoluene	ND		1.0		ug/L			09/16/21 06:53	1
4-Isopropyltoluene	ND		1.0		ug/L			09/16/21 06:53	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			09/16/21 06:53	1
Acetone	ND	*1	50		ug/L			09/16/21 06:53	1
Benzene	ND		1.0		ug/L			09/16/21 06:53	1
Bromobenzene	ND		1.0		ug/L			09/16/21 06:53	1
Bromoform	ND		1.0		ug/L			09/16/21 06:53	1
Bromomethane	ND	*1	2.0		ug/L			09/16/21 06:53	1
Carbon disulfide	ND		10		ug/L			09/16/21 06:53	1
Carbon tetrachloride	ND		1.0		ug/L			09/16/21 06:53	1
Chlorobenzene	ND		1.0		ug/L			09/16/21 06:53	1
Chlorobromomethane	ND		1.0		ug/L			09/16/21 06:53	1
Chlorodibromomethane	ND		0.50		ug/L			09/16/21 06:53	1
Chloroethane	ND		2.0		ug/L			09/16/21 06:53	1
Chloroform	ND		1.0		ug/L			09/16/21 06:53	1
Chloromethane	ND		2.0		ug/L			09/16/21 06:53	1
cis-1,2-Dichloroethene	**6.0**		1.0		ug/L			09/16/21 06:53	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 06:53	1
Dichlorobromomethane	ND		0.50		ug/L			09/16/21 06:53	1
Dichlorodifluoromethane	ND		1.0		ug/L			09/16/21 06:53	1
Ethyl ether	ND		1.0		ug/L			09/16/21 06:53	1
Ethylbenzene	ND		1.0		ug/L			09/16/21 06:53	1
Ethylene Dibromide	ND		1.0		ug/L			09/16/21 06:53	1
Hexachlorobutadiene	ND		0.40		ug/L			09/16/21 06:53	1
Isopropyl ether	ND		10		ug/L			09/16/21 06:53	1
Isopropylbenzene	ND		1.0		ug/L			09/16/21 06:53	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/16/21 06:53	1
Methylene Chloride	ND		1.0		ug/L			09/16/21 06:53	1
m-Xylene & p-Xylene	ND		2.0		ug/L			09/16/21 06:53	1
Naphthalene	ND		5.0		ug/L			09/16/21 06:53	1
n-Butylbenzene	ND		1.0		ug/L			09/16/21 06:53	1
N-Propylbenzene	ND		1.0		ug/L			09/16/21 06:53	1
o-Xylene	ND		1.0		ug/L			09/16/21 06:53	1
sec-Butylbenzene	ND		1.0		ug/L			09/16/21 06:53	1
Styrene	ND		1.0		ug/L			09/16/21 06:53	1
Tert-amyl methyl ether	ND	*1	5.0		ug/L			09/16/21 06:53	1
Tert-butyl ethyl ether	ND		5.0		ug/L			09/16/21 06:53	1
tert-Butylbenzene	ND		1.0		ug/L			09/16/21 06:53	1
Tetrachloroethene	ND		1.0		ug/L			09/16/21 06:53	1
Tetrahydrofuran	ND		10		ug/L			09/16/21 06:53	1
Toluene	ND		1.0		ug/L			09/16/21 06:53	1

Client Sample ID: MW-1023M-20210914-01

Lab Sample ID: 480-189559-11

Date Collected: 09/14/21 11:00
Matrix: Water
Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		1.0		ug/L			09/16/21 06:53	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 06:53	1
Trichloroethene	**2.4**		1.0		ug/L			09/16/21 06:53	1
Trichlorofluoromethane	ND		1.0		ug/L			09/16/21 06:53	1
Vinyl chloride	ND		1.0		ug/L			09/16/21 06:53	1
Dibromomethane	ND		1.0		ug/L			09/16/21 06:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*70 - 130*		*09/16/21 06:53*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*		*09/16/21 06:53*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*09/16/21 06:53*	*1*

Client Sample ID: DUP-001-20210914-01

Lab Sample ID: 480-189559-12

Date Collected: 09/14/21 00:01
Matrix: Water
Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			09/16/21 07:15	1
1,1,1-Trichloroethane	ND		1.0		ug/L			09/16/21 07:15	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			09/16/21 07:15	1
1,1,2-Trichloroethane	ND		1.0		ug/L			09/16/21 07:15	1
1,1-Dichloroethane	ND		1.0		ug/L			09/16/21 07:15	1
1,1-Dichloroethene	ND		1.0		ug/L			09/16/21 07:15	1
1,1-Dichloropropene	ND		1.0		ug/L			09/16/21 07:15	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			09/16/21 07:15	1
1,2,3-Trichloropropane	ND		1.0		ug/L			09/16/21 07:15	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			09/16/21 07:15	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			09/16/21 07:15	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			09/16/21 07:15	1
1,2-Dichlorobenzene	ND		1.0		ug/L			09/16/21 07:15	1
1,2-Dichloroethane	ND		1.0		ug/L			09/16/21 07:15	1
1,2-Dichloropropane	ND		1.0		ug/L			09/16/21 07:15	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			09/16/21 07:15	1
1,3-Dichlorobenzene	ND		1.0		ug/L			09/16/21 07:15	1
1,3-Dichloropropane	ND		1.0		ug/L			09/16/21 07:15	1
1,4-Dichlorobenzene	ND		1.0		ug/L			09/16/21 07:15	1
1,4-Dioxane	ND	*1	50		ug/L			09/16/21 07:15	1
2,2-Dichloropropane	ND	*+ *1	1.0		ug/L			09/16/21 07:15	1
2-Butanone (MEK)	ND	*+	10		ug/L			09/16/21 07:15	1
2-Chlorotoluene	ND		1.0		ug/L			09/16/21 07:15	1
2-Hexanone	ND		10		ug/L			09/16/21 07:15	1
4-Chlorotoluene	ND		1.0		ug/L			09/16/21 07:15	1
4-Isopropyltoluene	ND		1.0		ug/L			09/16/21 07:15	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			09/16/21 07:15	1
Acetone	**79**	***1**	50		ug/L			09/16/21 07:15	1
Benzene	ND		1.0		ug/L			09/16/21 07:15	1
Bromobenzene	ND		1.0		ug/L			09/16/21 07:15	1
Bromoform	ND		1.0		ug/L			09/16/21 07:15	1
Bromomethane	ND	*1	2.0		ug/L			09/16/21 07:15	1

Client Sample ID: DUP-001-20210914-01

Lab Sample ID: 480-189559-12

Date Collected: 09/14/21 00:01

Matrix: Water

Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		10		ug/L			09/16/21 07:15	1
Carbon tetrachloride	ND		1.0		ug/L			09/16/21 07:15	1
Chlorobenzene	ND		1.0		ug/L			09/16/21 07:15	1
Chlorobromomethane	ND		1.0		ug/L			09/16/21 07:15	1
Chlorodibromomethane	ND		0.50		ug/L			09/16/21 07:15	1
Chloroethane	ND		2.0		ug/L			09/16/21 07:15	1
Chloroform	ND		1.0		ug/L			09/16/21 07:15	1
Chloromethane	ND		2.0		ug/L			09/16/21 07:15	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			09/16/21 07:15	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 07:15	1
Dichlorobromomethane	ND		0.50		ug/L			09/16/21 07:15	1
Dichlorodifluoromethane	ND		1.0		ug/L			09/16/21 07:15	1
Ethyl ether	ND		1.0		ug/L			09/16/21 07:15	1
Ethylbenzene	ND		1.0		ug/L			09/16/21 07:15	1
Ethylene Dibromide	ND		1.0		ug/L			09/16/21 07:15	1
Hexachlorobutadiene	ND		0.40		ug/L			09/16/21 07:15	1
Isopropyl ether	ND		10		ug/L			09/16/21 07:15	1
Isopropylbenzene	ND		1.0		ug/L			09/16/21 07:15	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/16/21 07:15	1
Methylene Chloride	ND		1.0		ug/L			09/16/21 07:15	1
m-Xylene & p-Xylene	ND		2.0		ug/L			09/16/21 07:15	1
Naphthalene	ND		5.0		ug/L			09/16/21 07:15	1
n-Butylbenzene	ND		1.0		ug/L			09/16/21 07:15	1
N-Propylbenzene	ND		1.0		ug/L			09/16/21 07:15	1
o-Xylene	ND		1.0		ug/L			09/16/21 07:15	1
sec-Butylbenzene	ND		1.0		ug/L			09/16/21 07:15	1
Styrene	ND		1.0		ug/L			09/16/21 07:15	1
Tert-amyl methyl ether	ND	*1	5.0		ug/L			09/16/21 07:15	1
Tert-butyl ethyl ether	ND		5.0		ug/L			09/16/21 07:15	1
tert-Butylbenzene	ND		1.0		ug/L			09/16/21 07:15	1
Tetrachloroethene	ND		1.0		ug/L			09/16/21 07:15	1
Tetrahydrofuran	ND		10		ug/L			09/16/21 07:15	1
Toluene	ND		1.0		ug/L			09/16/21 07:15	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			09/16/21 07:15	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 07:15	1
Trichloroethene	**15**		1.0		ug/L			09/16/21 07:15	1
Trichlorofluoromethane	ND		1.0		ug/L			09/16/21 07:15	1
Vinyl chloride	ND		1.0		ug/L			09/16/21 07:15	1
Dibromomethane	ND		1.0		ug/L			09/16/21 07:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*70 - 130*		*09/16/21 07:15*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*		*09/16/21 07:15*	*1*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*		*09/16/21 07:15*	*1*

Client Sample Results

Client: ERM-Northeast
Project/Site: IDS Wayland

Job ID: 480-189559-1

Client Sample ID: DUP-002-20210914-01

Lab Sample ID: 480-189559-13

Date Collected: 09/14/21 00:02
Matrix: Water
Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			09/16/21 07:38	1
1,1,1-Trichloroethane	ND		1.0		ug/L			09/16/21 07:38	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			09/16/21 07:38	1
1,1,2-Trichloroethane	ND		1.0		ug/L			09/16/21 07:38	1
1,1-Dichloroethane	**2.2**		1.0		ug/L			09/16/21 07:38	1
1,1-Dichloroethene	ND		1.0		ug/L			09/16/21 07:38	1
1,1-Dichloropropene	ND		1.0		ug/L			09/16/21 07:38	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			09/16/21 07:38	1
1,2,3-Trichloropropane	ND		1.0		ug/L			09/16/21 07:38	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			09/16/21 07:38	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			09/16/21 07:38	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			09/16/21 07:38	1
1,2-Dichlorobenzene	**1.3**		1.0		ug/L			09/16/21 07:38	1
1,2-Dichloroethane	ND		1.0		ug/L			09/16/21 07:38	1
1,2-Dichloropropane	ND		1.0		ug/L			09/16/21 07:38	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			09/16/21 07:38	1
1,3-Dichlorobenzene	ND		1.0		ug/L			09/16/21 07:38	1
1,3-Dichloropropane	ND		1.0		ug/L			09/16/21 07:38	1
1,4-Dichlorobenzene	ND		1.0		ug/L			09/16/21 07:38	1
1,4-Dioxane	ND	*1	50		ug/L			09/16/21 07:38	1
2,2-Dichloropropane	ND	*+ *1	1.0		ug/L			09/16/21 07:38	1
2-Butanone (MEK)	ND	*+	10		ug/L			09/16/21 07:38	1
2-Chlorotoluene	ND		1.0		ug/L			09/16/21 07:38	1
2-Hexanone	ND		10		ug/L			09/16/21 07:38	1
4-Chlorotoluene	ND		1.0		ug/L			09/16/21 07:38	1
4-Isopropyltoluene	ND		1.0		ug/L			09/16/21 07:38	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			09/16/21 07:38	1
Acetone	ND	*1	50		ug/L			09/16/21 07:38	1
Benzene	ND		1.0		ug/L			09/16/21 07:38	1
Bromobenzene	ND		1.0		ug/L			09/16/21 07:38	1
Bromoform	ND		1.0		ug/L			09/16/21 07:38	1
Bromomethane	ND	*1	2.0		ug/L			09/16/21 07:38	1
Carbon disulfide	ND		10		ug/L			09/16/21 07:38	1
Carbon tetrachloride	ND		1.0		ug/L			09/16/21 07:38	1
Chlorobenzene	ND		1.0		ug/L			09/16/21 07:38	1
Chlorobromomethane	ND		1.0		ug/L			09/16/21 07:38	1
Chlorodibromomethane	ND		0.50		ug/L			09/16/21 07:38	1
Chloroethane	ND		2.0		ug/L			09/16/21 07:38	1
Chloroform	ND		1.0		ug/L			09/16/21 07:38	1
Chloromethane	ND		2.0		ug/L			09/16/21 07:38	1
cis-1,2-Dichloroethene	**1.3**		1.0		ug/L			09/16/21 07:38	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 07:38	1
Dichlorobromomethane	ND		0.50		ug/L			09/16/21 07:38	1
Dichlorodifluoromethane	ND		1.0		ug/L			09/16/21 07:38	1
Ethyl ether	ND		1.0		ug/L			09/16/21 07:38	1
Ethylbenzene	ND		1.0		ug/L			09/16/21 07:38	1
Ethylene Dibromide	ND		1.0		ug/L			09/16/21 07:38	1
Hexachlorobutadiene	ND		0.40		ug/L			09/16/21 07:38	1
Isopropyl ether	ND		10		ug/L			09/16/21 07:38	1

Client Sample ID: DUP-002-20210914-01

Lab Sample ID: 480-189559-13

Date Collected: 09/14/21 00:02
Matrix: Water
Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			09/16/21 07:38	1
Methyl tert-butyl ether	**35**		1.0		ug/L			09/16/21 07:38	1
Methylene Chloride	ND		1.0		ug/L			09/16/21 07:38	1
m-Xylene & p-Xylene	ND		2.0		ug/L			09/16/21 07:38	1
Naphthalene	ND		5.0		ug/L			09/16/21 07:38	1
n-Butylbenzene	ND		1.0		ug/L			09/16/21 07:38	1
N-Propylbenzene	ND		1.0		ug/L			09/16/21 07:38	1
o-Xylene	ND		1.0		ug/L			09/16/21 07:38	1
sec-Butylbenzene	ND		1.0		ug/L			09/16/21 07:38	1
Styrene	ND		1.0		ug/L			09/16/21 07:38	1
Tert-amyl methyl ether	**15**	***1**	5.0		ug/L			09/16/21 07:38	1
Tert-butyl ethyl ether	ND		5.0		ug/L			09/16/21 07:38	1
tert-Butylbenzene	ND		1.0		ug/L			09/16/21 07:38	1
Tetrachloroethene	ND		1.0		ug/L			09/16/21 07:38	1
Tetrahydrofuran	ND		10		ug/L			09/16/21 07:38	1
Toluene	ND		1.0		ug/L			09/16/21 07:38	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			09/16/21 07:38	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 07:38	1
Trichloroethene	**6.3**		1.0		ug/L			09/16/21 07:38	1
Trichlorofluoromethane	ND		1.0		ug/L			09/16/21 07:38	1
Vinyl chloride	ND		1.0		ug/L			09/16/21 07:38	1
Dibromomethane	ND		1.0		ug/L			09/16/21 07:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*70 - 130*		*09/16/21 07:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*		*09/16/21 07:38*	*1*
4-Bromofluorobenzene (Surr)	*108*		*70 - 130*		*09/16/21 07:38*	*1*

Client Sample ID: PDB-001-20210914-01

Lab Sample ID: 480-189559-14

Date Collected: 09/14/21 13:30
Matrix: Water
Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			09/16/21 08:01	1
1,1,1-Trichloroethane	ND		1.0		ug/L			09/16/21 08:01	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			09/16/21 08:01	1
1,1,2-Trichloroethane	ND		1.0		ug/L			09/16/21 08:01	1
1,1-Dichloroethane	ND		1.0		ug/L			09/16/21 08:01	1
1,1-Dichloroethene	ND		1.0		ug/L			09/16/21 08:01	1
1,1-Dichloropropene	ND		1.0		ug/L			09/16/21 08:01	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			09/16/21 08:01	1
1,2,3-Trichloropropane	ND		1.0		ug/L			09/16/21 08:01	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			09/16/21 08:01	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			09/16/21 08:01	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			09/16/21 08:01	1
1,2-Dichlorobenzene	ND		1.0		ug/L			09/16/21 08:01	1
1,2-Dichloroethane	ND		1.0		ug/L			09/16/21 08:01	1
1,2-Dichloropropane	ND		1.0		ug/L			09/16/21 08:01	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			09/16/21 08:01	1

Client Sample ID: PDB-001-20210914-01

Lab Sample ID: 480-189559-14

Date Collected: 09/14/21 13:30

Matrix: Water

Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0		ug/L			09/16/21 08:01	1
1,3-Dichloropropane	ND		1.0		ug/L			09/16/21 08:01	1
1,4-Dichlorobenzene	ND		1.0		ug/L			09/16/21 08:01	1
1,4-Dioxane	ND	*1	50		ug/L			09/16/21 08:01	1
2,2-Dichloropropane	ND	*+ *1	1.0		ug/L			09/16/21 08:01	1
2-Butanone (MEK)	ND	*+	10		ug/L			09/16/21 08:01	1
2-Chlorotoluene	ND		1.0		ug/L			09/16/21 08:01	1
2-Hexanone	ND		10		ug/L			09/16/21 08:01	1
4-Chlorotoluene	ND		1.0		ug/L			09/16/21 08:01	1
4-Isopropyltoluene	ND		1.0		ug/L			09/16/21 08:01	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			09/16/21 08:01	1
Acetone	ND	*1	50		ug/L			09/16/21 08:01	1
Benzene	ND		1.0		ug/L			09/16/21 08:01	1
Bromobenzene	ND		1.0		ug/L			09/16/21 08:01	1
Bromoform	ND		1.0		ug/L			09/16/21 08:01	1
Bromomethane	ND	*1	2.0		ug/L			09/16/21 08:01	1
Carbon disulfide	ND		10		ug/L			09/16/21 08:01	1
Carbon tetrachloride	ND		1.0		ug/L			09/16/21 08:01	1
Chlorobenzene	ND		1.0		ug/L			09/16/21 08:01	1
Chlorobromomethane	ND		1.0		ug/L			09/16/21 08:01	1
Chlorodibromomethane	ND		0.50		ug/L			09/16/21 08:01	1
Chloroethane	ND		2.0		ug/L			09/16/21 08:01	1
Chloroform	ND		1.0		ug/L			09/16/21 08:01	1
Chloromethane	ND		2.0		ug/L			09/16/21 08:01	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			09/16/21 08:01	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 08:01	1
Dichlorobromomethane	ND		0.50		ug/L			09/16/21 08:01	1
Dichlorodifluoromethane	ND		1.0		ug/L			09/16/21 08:01	1
Ethyl ether	ND		1.0		ug/L			09/16/21 08:01	1
Ethylbenzene	ND		1.0		ug/L			09/16/21 08:01	1
Ethylene Dibromide	ND		1.0		ug/L			09/16/21 08:01	1
Hexachlorobutadiene	ND		0.40		ug/L			09/16/21 08:01	1
Isopropyl ether	ND		10		ug/L			09/16/21 08:01	1
Isopropylbenzene	ND		1.0		ug/L			09/16/21 08:01	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/16/21 08:01	1
Methylene Chloride	ND		1.0		ug/L			09/16/21 08:01	1
m-Xylene & p-Xylene	ND		2.0		ug/L			09/16/21 08:01	1
Naphthalene	ND		5.0		ug/L			09/16/21 08:01	1
n-Butylbenzene	ND		1.0		ug/L			09/16/21 08:01	1
N-Propylbenzene	ND		1.0		ug/L			09/16/21 08:01	1
o-Xylene	ND		1.0		ug/L			09/16/21 08:01	1
sec-Butylbenzene	ND		1.0		ug/L			09/16/21 08:01	1
Styrene	ND		1.0		ug/L			09/16/21 08:01	1
Tert-amyl methyl ether	ND	*1	5.0		ug/L			09/16/21 08:01	1
Tert-butyl ethyl ether	ND		5.0		ug/L			09/16/21 08:01	1
tert-Butylbenzene	ND		1.0		ug/L			09/16/21 08:01	1
Tetrachloroethene	ND		1.0		ug/L			09/16/21 08:01	1
Tetrahydrofuran	ND		10		ug/L			09/16/21 08:01	1
Toluene	ND		1.0		ug/L			09/16/21 08:01	1

Client Sample ID: PDB-001-20210914-01

Lab Sample ID: 480-189559-14

Date Collected: 09/14/21 13:30
Matrix: Water
Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		1.0		ug/L			09/16/21 08:01	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 08:01	1
Trichloroethene	ND		1.0		ug/L			09/16/21 08:01	1
Trichlorofluoromethane	ND		1.0		ug/L			09/16/21 08:01	1
Vinyl chloride	ND		1.0		ug/L			09/16/21 08:01	1
Dibromomethane	ND		1.0		ug/L			09/16/21 08:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*109*		*70 - 130*		*09/16/21 08:01*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*		*09/16/21 08:01*	*1*
4-Bromofluorobenzene (Surr)	*113*		*70 - 130*		*09/16/21 08:01*	*1*

Client Sample ID: TB-001-20210914-01

Lab Sample ID: 480-189559-15

Date Collected: 09/14/21 00:00
Matrix: Water
Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			09/16/21 08:23	1
1,1,1-Trichloroethane	ND		1.0		ug/L			09/16/21 08:23	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			09/16/21 08:23	1
1,1,2-Trichloroethane	ND		1.0		ug/L			09/16/21 08:23	1
1,1-Dichloroethane	ND		1.0		ug/L			09/16/21 08:23	1
1,1-Dichloroethene	ND		1.0		ug/L			09/16/21 08:23	1
1,1-Dichloropropene	ND		1.0		ug/L			09/16/21 08:23	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			09/16/21 08:23	1
1,2,3-Trichloropropane	ND		1.0		ug/L			09/16/21 08:23	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			09/16/21 08:23	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			09/16/21 08:23	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			09/16/21 08:23	1
1,2-Dichlorobenzene	ND		1.0		ug/L			09/16/21 08:23	1
1,2-Dichloroethane	ND		1.0		ug/L			09/16/21 08:23	1
1,2-Dichloropropane	ND		1.0		ug/L			09/16/21 08:23	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			09/16/21 08:23	1
1,3-Dichlorobenzene	ND		1.0		ug/L			09/16/21 08:23	1
1,3-Dichloropropane	ND		1.0		ug/L			09/16/21 08:23	1
1,4-Dichlorobenzene	ND		1.0		ug/L			09/16/21 08:23	1
1,4-Dioxane	ND	*1	50		ug/L			09/16/21 08:23	1
2,2-Dichloropropane	ND	*+ *1	1.0		ug/L			09/16/21 08:23	1
2-Butanone (MEK)	ND	*+	10		ug/L			09/16/21 08:23	1
2-Chlorotoluene	ND		1.0		ug/L			09/16/21 08:23	1
2-Hexanone	ND		10		ug/L			09/16/21 08:23	1
4-Chlorotoluene	ND		1.0		ug/L			09/16/21 08:23	1
4-Isopropyltoluene	ND		1.0		ug/L			09/16/21 08:23	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			09/16/21 08:23	1
Acetone	ND	*1	50		ug/L			09/16/21 08:23	1
Benzene	ND		1.0		ug/L			09/16/21 08:23	1
Bromobenzene	ND		1.0		ug/L			09/16/21 08:23	1
Bromoform	ND		1.0		ug/L			09/16/21 08:23	1
Bromomethane	ND	*1	2.0		ug/L			09/16/21 08:23	1

Client Sample ID: TB-001-20210914-01

Lab Sample ID: 480-189559-15

Date Collected: 09/14/21 00:00

Matrix: Water

Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		10		ug/L			09/16/21 08:23	1
Carbon tetrachloride	ND		1.0		ug/L			09/16/21 08:23	1
Chlorobenzene	ND		1.0		ug/L			09/16/21 08:23	1
Chlorobromomethane	ND		1.0		ug/L			09/16/21 08:23	1
Chlorodibromomethane	ND		0.50		ug/L			09/16/21 08:23	1
Chloroethane	ND		2.0		ug/L			09/16/21 08:23	1
Chloroform	ND		1.0		ug/L			09/16/21 08:23	1
Chloromethane	ND		2.0		ug/L			09/16/21 08:23	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			09/16/21 08:23	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 08:23	1
Dichlorobromomethane	ND		0.50		ug/L			09/16/21 08:23	1
Dichlorodifluoromethane	ND		1.0		ug/L			09/16/21 08:23	1
Ethyl ether	ND		1.0		ug/L			09/16/21 08:23	1
Ethylbenzene	ND		1.0		ug/L			09/16/21 08:23	1
Ethylene Dibromide	ND		1.0		ug/L			09/16/21 08:23	1
Hexachlorobutadiene	ND		0.40		ug/L			09/16/21 08:23	1
Isopropyl ether	ND		10		ug/L			09/16/21 08:23	1
Isopropylbenzene	ND		1.0		ug/L			09/16/21 08:23	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/16/21 08:23	1
Methylene Chloride	ND		1.0		ug/L			09/16/21 08:23	1
m-Xylene & p-Xylene	ND		2.0		ug/L			09/16/21 08:23	1
Naphthalene	ND		5.0		ug/L			09/16/21 08:23	1
n-Butylbenzene	ND		1.0		ug/L			09/16/21 08:23	1
N-Propylbenzene	ND		1.0		ug/L			09/16/21 08:23	1
o-Xylene	ND		1.0		ug/L			09/16/21 08:23	1
sec-Butylbenzene	ND		1.0		ug/L			09/16/21 08:23	1
Styrene	ND		1.0		ug/L			09/16/21 08:23	1
Tert-amyl methyl ether	ND	*1	5.0		ug/L			09/16/21 08:23	1
Tert-butyl ethyl ether	ND		5.0		ug/L			09/16/21 08:23	1
tert-Butylbenzene	ND		1.0		ug/L			09/16/21 08:23	1
Tetrachloroethene	ND		1.0		ug/L			09/16/21 08:23	1
Tetrahydrofuran	ND		10		ug/L			09/16/21 08:23	1
Toluene	ND		1.0		ug/L			09/16/21 08:23	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			09/16/21 08:23	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 08:23	1
Trichloroethene	ND		1.0		ug/L			09/16/21 08:23	1
Trichlorofluoromethane	ND		1.0		ug/L			09/16/21 08:23	1
Vinyl chloride	ND		1.0		ug/L			09/16/21 08:23	1
Dibromomethane	ND		1.0		ug/L			09/16/21 08:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*95*		*70 - 130*		*09/16/21 08:23*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*		*09/16/21 08:23*	*1*
4-Bromofluorobenzene (Surr)	*107*		*70 - 130*		*09/16/21 08:23*	*1*

Surrogate Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

Job ID: 480-189559-1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		TOL	DCA	BFB
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
480-189559-1	MW-1001M-20210914-01	100	102	108
480-189559-2	MW-1005-20210914-01	102	101	107
480-189559-3	MW-1010D-20210914-01	100	103	111
480-189559-4	MW-1010M-20210914-01	107	103	111
480-189559-5	MW-1014-20210914-01	100	97	99
480-189559-6	MW-1015D-20210914-01	101	102	107
480-189559-7	MW1028-20210914-01	98	102	101
480-189559-8	MW-1032-20210914-01	102	108	105
480-189559-9	MW-1034-20210914-01	99	100	110
480-189559-10	MW-1040-20210914-01	102	104	107
480-189559-11	MW-1023M-20210914-01	100	103	103
480-189559-12	DUP-001-20210914-01	102	103	112
480-189559-13	DUP-002-20210914-01	104	99	108
480-189559-14	PDB-001-20210914-01	109	103	113
480-189559-15	TB-001-20210914-01	95	101	107
LCS 480-596441/6	Lab Control Sample	104	102	112
LCSD 480-596441/7	Lab Control Sample Dup	103	100	100
MB 480-596441/9	Method Blank	102	105	103

Surrogate Legend

TOL = Toluene-d8 (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)

Method: 8260C - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-596441/9
Matrix: Water
Analysis Batch: 596441

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			09/16/21 01:09	1
1,1,1-Trichloroethane	ND		1.0		ug/L			09/16/21 01:09	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			09/16/21 01:09	1
1,1,2-Trichloroethane	ND		1.0		ug/L			09/16/21 01:09	1
1,1-Dichloroethane	ND		1.0		ug/L			09/16/21 01:09	1
1,1-Dichloroethene	ND		1.0		ug/L			09/16/21 01:09	1
1,1-Dichloropropene	ND		1.0		ug/L			09/16/21 01:09	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			09/16/21 01:09	1
1,2,3-Trichloropropane	ND		1.0		ug/L			09/16/21 01:09	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			09/16/21 01:09	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			09/16/21 01:09	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			09/16/21 01:09	1
1,2-Dichlorobenzene	ND		1.0		ug/L			09/16/21 01:09	1
1,2-Dichloroethane	ND		1.0		ug/L			09/16/21 01:09	1
1,2-Dichloropropane	ND		1.0		ug/L			09/16/21 01:09	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			09/16/21 01:09	1
1,3-Dichlorobenzene	ND		1.0		ug/L			09/16/21 01:09	1
1,3-Dichloropropane	ND		1.0		ug/L			09/16/21 01:09	1
1,4-Dichlorobenzene	ND		1.0		ug/L			09/16/21 01:09	1
1,4-Dioxane	ND		50		ug/L			09/16/21 01:09	1
2,2-Dichloropropane	ND		1.0		ug/L			09/16/21 01:09	1
2-Butanone (MEK)	ND		10		ug/L			09/16/21 01:09	1
2-Chlorotoluene	ND		1.0		ug/L			09/16/21 01:09	1
2-Hexanone	ND		10		ug/L			09/16/21 01:09	1
4-Chlorotoluene	ND		1.0		ug/L			09/16/21 01:09	1
4-Isopropyltoluene	ND		1.0		ug/L			09/16/21 01:09	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			09/16/21 01:09	1
Acetone	ND		50		ug/L			09/16/21 01:09	1
Benzene	ND		1.0		ug/L			09/16/21 01:09	1
Bromobenzene	ND		1.0		ug/L			09/16/21 01:09	1
Bromoform	ND		1.0		ug/L			09/16/21 01:09	1
Bromomethane	ND		2.0		ug/L			09/16/21 01:09	1
Carbon disulfide	ND		10		ug/L			09/16/21 01:09	1
Carbon tetrachloride	ND		1.0		ug/L			09/16/21 01:09	1
Chlorobenzene	ND		1.0		ug/L			09/16/21 01:09	1
Chlorobromomethane	ND		1.0		ug/L			09/16/21 01:09	1
Chlorodibromomethane	ND		0.50		ug/L			09/16/21 01:09	1
Chloroethane	ND		2.0		ug/L			09/16/21 01:09	1
Chloroform	ND		1.0		ug/L			09/16/21 01:09	1
Chloromethane	ND		2.0		ug/L			09/16/21 01:09	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			09/16/21 01:09	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 01:09	1
Dichlorobromomethane	ND		0.50		ug/L			09/16/21 01:09	1
Dichlorodifluoromethane	ND		1.0		ug/L			09/16/21 01:09	1
Ethyl ether	ND		1.0		ug/L			09/16/21 01:09	1
Ethylbenzene	ND		1.0		ug/L			09/16/21 01:09	1
Ethylene Dibromide	ND		1.0		ug/L			09/16/21 01:09	1
Hexachlorobutadiene	ND		0.40		ug/L			09/16/21 01:09	1

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 480-596441/9
Matrix: Water
Analysis Batch: 596441

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropyl ether	ND		10		ug/L			09/16/21 01:09	1
Isopropylbenzene	ND		1.0		ug/L			09/16/21 01:09	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/16/21 01:09	1
Methylene Chloride	ND		1.0		ug/L			09/16/21 01:09	1
m-Xylene & p-Xylene	ND		2.0		ug/L			09/16/21 01:09	1
Naphthalene	ND		5.0		ug/L			09/16/21 01:09	1
n-Butylbenzene	ND		1.0		ug/L			09/16/21 01:09	1
N-Propylbenzene	ND		1.0		ug/L			09/16/21 01:09	1
o-Xylene	ND		1.0		ug/L			09/16/21 01:09	1
sec-Butylbenzene	ND		1.0		ug/L			09/16/21 01:09	1
Styrene	ND		1.0		ug/L			09/16/21 01:09	1
Tert-amyl methyl ether	ND		5.0		ug/L			09/16/21 01:09	1
Tert-butyl ethyl ether	ND		5.0		ug/L			09/16/21 01:09	1
tert-Butylbenzene	ND		1.0		ug/L			09/16/21 01:09	1
Tetrachloroethene	ND		1.0		ug/L			09/16/21 01:09	1
Tetrahydrofuran	ND		10		ug/L			09/16/21 01:09	1
Toluene	ND		1.0		ug/L			09/16/21 01:09	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			09/16/21 01:09	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 01:09	1
Trichloroethene	ND		1.0		ug/L			09/16/21 01:09	1
Trichlorofluoromethane	ND		1.0		ug/L			09/16/21 01:09	1
Vinyl chloride	ND		1.0		ug/L			09/16/21 01:09	1
Dibromomethane	ND		1.0		ug/L			09/16/21 01:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*70 - 130*		*09/16/21 01:09*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 130*		*09/16/21 01:09*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*09/16/21 01:09*	*1*

Lab Sample ID: LCS 480-596441/6
Matrix: Water
Analysis Batch: 596441

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	25.0	32.5		ug/L		130	70 - 130
1,1,1-Trichloroethane	25.0	24.1		ug/L		96	70 - 130
1,1,2,2-Tetrachloroethane	25.0	24.2		ug/L		97	70 - 130
1,1,2-Trichloroethane	25.0	23.2		ug/L		93	70 - 130
1,1-Dichloroethane	25.0	26.4		ug/L		106	70 - 130
1,1-Dichloroethene	25.0	25.0		ug/L		100	70 - 130
1,1-Dichloropropene	25.0	23.7		ug/L		95	70 - 130
1,2,3-Trichlorobenzene	25.0	23.1		ug/L		92	70 - 130
1,2,3-Trichloropropane	25.0	21.9		ug/L		88	70 - 130
1,2,4-Trichlorobenzene	25.0	23.3		ug/L		93	70 - 130
1,2,4-Trimethylbenzene	25.0	25.0		ug/L		100	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	28.2		ug/L		113	70 - 130
1,2-Dichlorobenzene	25.0	24.2		ug/L		97	70 - 130
1,2-Dichloroethane	25.0	23.3		ug/L		93	70 - 130

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-596441/6
Matrix: Water
Analysis Batch: 596441

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	25.0	23.9		ug/L		95	70 - 130
1,3,5-Trimethylbenzene	25.0	25.4		ug/L		101	70 - 130
1,3-Dichlorobenzene	25.0	24.8		ug/L		99	70 - 130
1,3-Dichloropropane	25.0	23.5		ug/L		94	70 - 130
1,4-Dichlorobenzene	25.0	23.9		ug/L		95	70 - 130
1,4-Dioxane	500	622		ug/L		124	70 - 130
2,2-Dichloropropane	25.0	34.4	*+	ug/L		138	70 - 130
2-Butanone (MEK)	125	191	*+	ug/L		153	70 - 130
2-Chlorotoluene	25.0	25.9		ug/L		103	70 - 130
2-Hexanone	125	126		ug/L		101	70 - 130
4-Chlorotoluene	25.0	24.9		ug/L		100	70 - 130
4-Isopropyltoluene	25.0	22.7		ug/L		91	70 - 130
4-Methyl-2-pentanone (MIBK)	125	132		ug/L		106	70 - 130
Acetone	125	125		ug/L		100	70 - 130
Benzene	25.0	24.1		ug/L		97	70 - 130
Bromobenzene	25.0	24.1		ug/L		96	70 - 130
Bromoform	25.0	32.1		ug/L		129	70 - 130
Bromomethane	25.0	24.7		ug/L		99	70 - 130
Carbon disulfide	25.0	22.4		ug/L		90	70 - 130
Carbon tetrachloride	25.0	26.7		ug/L		107	70 - 130
Chlorobenzene	25.0	23.9		ug/L		95	70 - 130
Chlorobromomethane	25.0	26.5		ug/L		106	70 - 130
Chlorodibromomethane	25.0	27.4		ug/L		109	70 - 130
Chloroethane	25.0	25.7		ug/L		103	70 - 130
Chloroform	25.0	23.4		ug/L		94	70 - 130
Chloromethane	25.0	22.9		ug/L		92	70 - 130
cis-1,2-Dichloroethene	25.0	25.6		ug/L		102	70 - 130
cis-1,3-Dichloropropene	25.0	23.1		ug/L		92	70 - 130
Dichlorobromomethane	25.0	24.9		ug/L		100	70 - 130
Dichlorodifluoromethane	25.0	25.4		ug/L		102	70 - 130
Ethyl ether	25.0	25.2		ug/L		101	70 - 130
Ethylbenzene	25.0	25.3		ug/L		101	70 - 130
Ethylene Dibromide	25.0	25.7		ug/L		103	70 - 130
Hexachlorobutadiene	25.0	24.1		ug/L		96	70 - 130
Isopropyl ether	25.0	23.9		ug/L		96	70 - 130
Isopropylbenzene	25.0	25.3		ug/L		101	70 - 130
Methyl tert-butyl ether	25.0	28.7		ug/L		115	70 - 130
Methylene Chloride	25.0	23.4		ug/L		93	70 - 130
m-Xylene & p-Xylene	25.0	25.5		ug/L		102	70 - 130
Naphthalene	25.0	24.1		ug/L		96	70 - 130
n-Butylbenzene	25.0	24.8		ug/L		99	70 - 130
N-Propylbenzene	25.0	24.2		ug/L		97	70 - 130
o-Xylene	25.0	27.0		ug/L		108	70 - 130
sec-Butylbenzene	25.0	22.4		ug/L		89	70 - 130
Styrene	25.0	25.1		ug/L		100	70 - 130
Tert-amyl methyl ether	25.0	29.6		ug/L		118	70 - 130
Tert-butyl ethyl ether	25.0	27.3		ug/L		109	70 - 130
tert-Butylbenzene	25.0	23.3		ug/L		93	70 - 130
Tetrachloroethene	25.0	26.7		ug/L		107	70 - 130

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-596441/6
Matrix: Water
Analysis Batch: 596441

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Tetrahydrofuran	50.0	54.4		ug/L		109	70 - 130
Toluene	25.0	24.8		ug/L		99	70 - 130
trans-1,2-Dichloroethene	25.0	27.4		ug/L		109	70 - 130
trans-1,3-Dichloropropene	25.0	27.9		ug/L		111	70 - 130
Trichloroethene	25.0	23.4		ug/L		93	70 - 130
Trichlorofluoromethane	25.0	26.8		ug/L		107	70 - 130
Vinyl chloride	25.0	25.5		ug/L		102	70 - 130
Dibromomethane	25.0	24.3		ug/L		97	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*104*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*

Lab Sample ID: LCSD 480-596441/7
Matrix: Water
Analysis Batch: 596441

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	25.0	29.3		ug/L		117	70 - 130	10	20
1,1,1-Trichloroethane	25.0	20.6		ug/L		82	70 - 130	16	20
1,1,2,2-Tetrachloroethane	25.0	25.1		ug/L		101	70 - 130	4	20
1,1,2-Trichloroethane	25.0	25.6		ug/L		102	70 - 130	10	20
1,1-Dichloroethane	25.0	23.5		ug/L		94	70 - 130	12	20
1,1-Dichloroethene	25.0	21.4		ug/L		86	70 - 130	15	20
1,1-Dichloropropene	25.0	23.3		ug/L		93	70 - 130	1	20
1,2,3-Trichlorobenzene	25.0	22.3		ug/L		89	70 - 130	4	20
1,2,3-Trichloropropane	25.0	23.0		ug/L		92	70 - 130	5	20
1,2,4-Trichlorobenzene	25.0	21.6		ug/L		87	70 - 130	8	20
1,2,4-Trimethylbenzene	25.0	24.2		ug/L		97	70 - 130	3	20
1,2-Dibromo-3-Chloropropane	25.0	29.3		ug/L		117	70 - 130	4	20
1,2-Dichlorobenzene	25.0	24.0		ug/L		96	70 - 130	1	20
1,2-Dichloroethane	25.0	23.2		ug/L		93	70 - 130	0	20
1,2-Dichloropropane	25.0	23.3		ug/L		93	70 - 130	2	20
1,3,5-Trimethylbenzene	25.0	24.7		ug/L		99	70 - 130	3	20
1,3-Dichlorobenzene	25.0	24.6		ug/L		99	70 - 130	1	20
1,3-Dichloropropane	25.0	25.4		ug/L		102	70 - 130	8	20
1,4-Dichlorobenzene	25.0	24.4		ug/L		97	70 - 130	2	20
1,4-Dioxane	500	490	*1	ug/L		98	70 - 130	24	20
2,2-Dichloropropane	25.0	25.1	*1	ug/L		101	70 - 130	31	20
2-Butanone (MEK)	125	190	*+	ug/L		152	70 - 130	1	20
2-Chlorotoluene	25.0	26.7		ug/L		107	70 - 130	3	20
2-Hexanone	125	127		ug/L		102	70 - 130	1	20
4-Chlorotoluene	25.0	26.4		ug/L		106	70 - 130	6	20
4-Isopropyltoluene	25.0	21.6		ug/L		86	70 - 130	5	20
4-Methyl-2-pentanone (MIBK)	125	119		ug/L		95	70 - 130	10	20
Acetone	125	88.8	*1	ug/L		71	70 - 130	34	20
Benzene	25.0	22.9		ug/L		92	70 - 130	5	20

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 480-596441/7
Matrix: Water
Analysis Batch: 596441

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromobenzene	25.0	26.9		ug/L		107	70 - 130	11	20
Bromoform	25.0	31.9		ug/L		128	70 - 130	1	20
Bromomethane	25.0	19.9	*1	ug/L		80	70 - 130	22	20
Carbon disulfide	25.0	19.1		ug/L		76	70 - 130	16	20
Carbon tetrachloride	25.0	23.1		ug/L		92	70 - 130	14	20
Chlorobenzene	25.0	24.3		ug/L		97	70 - 130	2	20
Chlorobromomethane	25.0	24.0		ug/L		96	70 - 130	10	20
Chlorodibromomethane	25.0	28.8		ug/L		115	70 - 130	5	20
Chloroethane	25.0	22.5		ug/L		90	70 - 130	13	20
Chloroform	25.0	21.5		ug/L		86	70 - 130	8	20
Chloromethane	25.0	20.6		ug/L		82	70 - 130	11	20
cis-1,2-Dichloroethene	25.0	22.9		ug/L		92	70 - 130	11	20
cis-1,3-Dichloropropene	25.0	24.3		ug/L		97	70 - 130	5	20
Dichlorobromomethane	25.0	24.7		ug/L		99	70 - 130	1	20
Dichlorodifluoromethane	25.0	21.6		ug/L		86	70 - 130	16	20
Ethyl ether	25.0	22.5		ug/L		90	70 - 130	11	20
Ethylbenzene	25.0	23.7		ug/L		95	70 - 130	7	20
Ethylene Dibromide	25.0	28.0		ug/L		112	70 - 130	8	20
Hexachlorobutadiene	25.0	23.9		ug/L		96	70 - 130	1	20
Isopropyl ether	25.0	21.4		ug/L		86	70 - 130	11	20
Isopropylbenzene	25.0	25.5		ug/L		102	70 - 130	1	20
Methyl tert-butyl ether	25.0	24.2		ug/L		97	70 - 130	17	20
Methylene Chloride	25.0	20.1		ug/L		81	70 - 130	15	20
m-Xylene & p-Xylene	25.0	24.2		ug/L		97	70 - 130	5	20
Naphthalene	25.0	23.3		ug/L		93	70 - 130	3	20
n-Butylbenzene	25.0	23.1		ug/L		93	70 - 130	7	20
N-Propylbenzene	25.0	24.4		ug/L		97	70 - 130	1	20
o-Xylene	25.0	24.5		ug/L		98	70 - 130	10	20
sec-Butylbenzene	25.0	21.6		ug/L		86	70 - 130	3	20
Styrene	25.0	24.1		ug/L		97	70 - 130	4	20
Tert-amyl methyl ether	25.0	23.0	*1	ug/L		92	70 - 130	25	20
Tert-butyl ethyl ether	25.0	23.1		ug/L		92	70 - 130	17	20
tert-Butylbenzene	25.0	23.2		ug/L		93	70 - 130	0	20
Tetrachloroethene	25.0	26.4		ug/L		106	70 - 130	1	20
Tetrahydrofuran	50.0	47.9		ug/L		96	70 - 130	13	20
Toluene	25.0	24.2		ug/L		97	70 - 130	3	20
trans-1,2-Dichloroethene	25.0	22.9		ug/L		92	70 - 130	18	20
trans-1,3-Dichloropropene	25.0	30.8		ug/L		123	70 - 130	10	20
Trichloroethene	25.0	23.5		ug/L		94	70 - 130	1	20
Trichlorofluoromethane	25.0	23.7		ug/L		95	70 - 130	12	20
Vinyl chloride	25.0	22.1		ug/L		89	70 - 130	14	20
Dibromomethane	25.0	23.7		ug/L		95	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*103*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*

QC Association Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

Job ID: 480-189559-1

GC/MS VOA

Analysis Batch: 596441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-189559-1	MW-1001M-20210914-01	Total/NA	Water	8260C	
480-189559-2	MW-1005-20210914-01	Total/NA	Water	8260C	
480-189559-3	MW-1010D-20210914-01	Total/NA	Water	8260C	
480-189559-4	MW-1010M-20210914-01	Total/NA	Water	8260C	
480-189559-5	MW-1014-20210914-01	Total/NA	Water	8260C	
480-189559-6	MW-1015D-20210914-01	Total/NA	Water	8260C	
480-189559-7	MW1028-20210914-01	Total/NA	Water	8260C	
480-189559-8	MW-1032-20210914-01	Total/NA	Water	8260C	
480-189559-9	MW-1034-20210914-01	Total/NA	Water	8260C	
480-189559-10	MW-1040-20210914-01	Total/NA	Water	8260C	
480-189559-11	MW-1023M-20210914-01	Total/NA	Water	8260C	
480-189559-12	DUP-001-20210914-01	Total/NA	Water	8260C	
480-189559-13	DUP-002-20210914-01	Total/NA	Water	8260C	
480-189559-14	PDB-001-20210914-01	Total/NA	Water	8260C	
480-189559-15	TB-001-20210914-01	Total/NA	Water	8260C	
MB 480-596441/9	Method Blank	Total/NA	Water	8260C	
LCS 480-596441/6	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-596441/7	Lab Control Sample Dup	Total/NA	Water	8260C	

Lab Chronicle

Client: ERM-Northeast
Project/Site: IDS Wayland

Job ID: 480-189559-1

Client Sample ID: MW-1001M-20210914-01 — Lab Sample ID: 480-189559-1

Date Collected: 09/14/21 09:55 — **Matrix: Water**
Date Received: 09/15/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	596441	09/16/21 03:04	AXK	TAL BUF

Client Sample ID: MW-1005-20210914-01 — Lab Sample ID: 480-189559-2

Date Collected: 09/14/21 10:55 — **Matrix: Water**
Date Received: 09/15/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	596441	09/16/21 03:27	AXK	TAL BUF

Client Sample ID: MW-1010D-20210914-01 — Lab Sample ID: 480-189559-3

Date Collected: 09/14/21 12:20 — **Matrix: Water**
Date Received: 09/15/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	596441	09/16/21 03:50	AXK	TAL BUF

Client Sample ID: MW-1010M-20210914-01 — Lab Sample ID: 480-189559-4

Date Collected: 09/14/21 11:30 — **Matrix: Water**
Date Received: 09/15/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	596441	09/16/21 04:13	AXK	TAL BUF

Client Sample ID: MW-1014-20210914-01 — Lab Sample ID: 480-189559-5

Date Collected: 09/14/21 09:00 — **Matrix: Water**
Date Received: 09/15/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	596441	09/16/21 04:36	AXK	TAL BUF

Client Sample ID: MW-1015D-20210914-01 — Lab Sample ID: 480-189559-6

Date Collected: 09/14/21 08:58 — **Matrix: Water**
Date Received: 09/15/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	596441	09/16/21 04:59	AXK	TAL BUF

Client Sample ID: MW1028-20210914-01 — Lab Sample ID: 480-189559-7

Date Collected: 09/14/21 12:10 — **Matrix: Water**
Date Received: 09/15/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	596441	09/16/21 05:22	AXK	TAL BUF

Lab Chronicle

Client: ERM-Northeast
Project/Site: IDS Wayland

Job ID: 480-189559-1

Client Sample ID: MW-1032-20210914-01 — Lab Sample ID: 480-189559-8

Date Collected: 09/14/21 11:35 — **Matrix: Water**
Date Received: 09/15/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	596441	09/16/21 05:45	AXK	TAL BUF

Client Sample ID: MW-1034-20210914-01 — Lab Sample ID: 480-189559-9

Date Collected: 09/14/21 12:45 — **Matrix: Water**
Date Received: 09/15/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	596441	09/16/21 06:08	AXK	TAL BUF

Client Sample ID: MW-1040-20210914-01 — Lab Sample ID: 480-189559-10

Date Collected: 09/14/21 12:55 — **Matrix: Water**
Date Received: 09/15/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	596441	09/16/21 06:30	AXK	TAL BUF

Client Sample ID: MW-1023M-20210914-01 — Lab Sample ID: 480-189559-11

Date Collected: 09/14/21 11:00 — **Matrix: Water**
Date Received: 09/15/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	596441	09/16/21 06:53	AXK	TAL BUF

Client Sample ID: DUP-001-20210914-01 — Lab Sample ID: 480-189559-12

Date Collected: 09/14/21 00:01 — **Matrix: Water**
Date Received: 09/15/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	596441	09/16/21 07:15	AXK	TAL BUF

Client Sample ID: DUP-002-20210914-01 — Lab Sample ID: 480-189559-13

Date Collected: 09/14/21 00:02 — **Matrix: Water**
Date Received: 09/15/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	596441	09/16/21 07:38	AXK	TAL BUF

Client Sample ID: PDB-001-20210914-01 — Lab Sample ID: 480-189559-14

Date Collected: 09/14/21 13:30 — **Matrix: Water**
Date Received: 09/15/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	596441	09/16/21 08:01	AXK	TAL BUF

Lab Chronicle

Client: ERM-Northeast
Project/Site: IDS Wayland

Job ID: 480-189559-1

Client Sample ID: TB-001-20210914-01

Date Collected: 09/14/21 00:00
Date Received: 09/15/21 08:00

Lab Sample ID: 480-189559-15

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	596441	09/16/21 08:23	AXK	TAL BUF

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Accreditation/Certification Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

Job ID: 480-189559-1

Laboratory: Eurofins TestAmerica, Buffalo

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-0686	07-07-21 *
Connecticut	State	PH-0568	09-30-22
Florida	NELAP	E87672	06-30-22
Georgia	State	10026 (NY)	03-31-22
Georgia	State Program	N/A	03-31-09 *
Georgia (DW)	State	956	03-31-22
Illinois	NELAP	200003	10-01-21
Iowa	State	374	03-01-23
Iowa	State Program	374	03-01-09 *
Kansas	NELAP	E-10187	02-02-22
Kentucky (DW)	State	90029	12-31-21
Kentucky (UST)	State	30	04-01-22
Kentucky (WW)	State	KY90029	01-01-22
Louisiana	NELAP	02031	06-30-22
Maine	State	NY00044	12-05-22
Maryland	State	294	04-02-22
Massachusetts	State	M-NY044	06-30-22
Michigan	State	9937	04-01-22
Michigan	State Program	9937	04-01-09 *
Minnesota	NELAP	1524384	01-01-22
New Hampshire	NELAP	2973	09-11-19 *
New Hampshire	NELAP	2337	11-19-21
New Jersey	NELAP	NY455	06-30-22
New York	NELAP	10026	04-01-22
Oregon	NELAP	NY200003	06-12-22
Pennsylvania	NELAP	68-00281	07-31-22
Rhode Island	State	LAO00328	12-31-21
Tennessee	State	02970	03-31-22
Texas	NELAP	T104704412-18-10	07-31-22
USDA	US Federal Programs	P330-18-00039	03-25-24
Virginia	NELAP	460185	09-14-22
Washington	State	C784	02-10-22
Wisconsin	State	998310390	08-31-22

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

Method Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

Job ID: 480-189559-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds (GC/MS)	MA DEP	TAL BUF
5030C	Purge and Trap	SW846	TAL BUF

Protocol References:

MA DEP = Massachusetts Department Of Environmental Protection

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

Job ID: 480-189559-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-189559-1	MW-1001M-20210914-01	Water	09/14/21 09:55	09/15/21 08:00
480-189559-2	MW-1005-20210914-01	Water	09/14/21 10:55	09/15/21 08:00
480-189559-3	MW-1010D-20210914-01	Water	09/14/21 12:20	09/15/21 08:00
480-189559-4	MW-1010M-20210914-01	Water	09/14/21 11:30	09/15/21 08:00
480-189559-5	MW-1014-20210914-01	Water	09/14/21 09:00	09/15/21 08:00
480-189559-6	MW-1015D-20210914-01	Water	09/14/21 08:58	09/15/21 08:00
480-189559-7	MW1028-20210914-01	Water	09/14/21 12:10	09/15/21 08:00
480-189559-8	MW-1032-20210914-01	Water	09/14/21 11:35	09/15/21 08:00
480-189559-9	MW-1034-20210914-01	Water	09/14/21 12:45	09/15/21 08:00
480-189559-10	MW-1040-20210914-01	Water	09/14/21 12:55	09/15/21 08:00
480-189559-11	MW-1023M-20210914-01	Water	09/14/21 11:00	09/15/21 08:00
480-189559-12	DUP-001-20210914-01	Water	09/14/21 00:01	09/15/21 08:00
480-189559-13	DUP-002-20210914-01	Water	09/14/21 00:02	09/15/21 08:00
480-189559-14	PDB-001-20210914-01	Water	09/14/21 13:30	09/15/21 08:00
480-189559-15	TB-001-20210914-01	Water	09/14/21 00:00	09/15/21 08:00

Login Sample Receipt Checklist

Client: ERM-Northeast

Job Number: 480-189559-1

Login Number: 189559
List Number: 1
Creator: Sabuda, Brendan D

List Source: Eurofins TestAmerica, Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8 #1 Ice
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	True	

10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Phone (716) 691-7991

Chain of Custody Record

eurofins | Environment Testing America

Boston #215

Client Information				
Client Contact: Julia Redden	Sampler: LUKE JENKINS	Lab PM: Mason, Becky C	Carrier Tracking No(s):	COC No:
Company: ERM-Northeast	Phone: 667-202-4046	E-Mail: Becky.Mason@Eurofinset.com	State of Origin: MA	Page: 1 of 2
Address: One Beacon Steet 5th Floor	PWSID:			Job #:
City: Boston	Due Date Requested:			
State, Zip: MA, 02108	TAT Requested (days): Standard			
Phone: 617-646-7849(Tel)	Compliance Project: Δ Yes Δ No			
Email: Julia.Redden@erm.com	PO #: 0583683.01			
Project Name: IDS Wayland	WO #:			
Site: Wayland, MA	Project #: 48007117			
	SSOW#:			

Analysis Requested

480-189559 Chain of Custody

Preservation Codes:
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Z - other (specify)
K - EDTA
L - EDA
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260MCP - 8260	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A		
MW-1001M- 20210914-01	09-14-21	0955	G	Water	N	N	X	3	
~~MW-1003-~~			~~G~~	~~Water~~	~~N~~	~~N~~	~~X~~		
MW-1005- 20210914-01	09-14-21	1055	G	Water	N	N	X	3	
MW-1010D- 20210914-01		1220	G	Water	N	N	X	3	
MW-1010M- 20210914-01		1130	G	Water	N	N	X	3	
MW-1014- 20210914-01		0900	G	Water	N	N	X	3	
MW-1015D- 20210914-01		0858	G	Water	N	N	X	3	
MW-1028- 20210914-01		1210	G	Water	N	N	X	3	
MW-1032- 20210914-01		1135	G	Water	N	N	X	3	
MW-1034- 20210914-01		1245	G	Water	N	N	X	3	
MW-1040- 20210914-01		1255	G	Water	N	N	X	3	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[signature]	09-14-21 1536	ERM	[signature]	9/14/21 1536	ETA
[signature]	9/14/21 1600	ETA			
			[signature]	9/15/21 0800	ETA

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 2.8 #1 ICE

10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Phone (716) 691-7991

Chain of Custody Record

eurofins | Environment Testing America

Boston #215

Client Information	Sampler: LUKE JENKINS	Lab PM: Mason, Becky C	Carrier Tracking No(s):	COC No:
Client Contact: Julia Redden	Phone: 662-202-4046	E-Mail: Becky.Mason@Eurofinset.com	State of Origin: MA	Page: 2 of 2
Company: ERM-Northeast	PWSID:			Job #:
Address: One Beacon Steet 5th Floor	Due Date Requested:			
City: Boston	TAT Requested (days): Standard			
State, Zip: MA, 02108	Compliance Project: Δ Yes Δ No			
Phone: 617-646-7849(Tel)	PO #: 0583683.01			
Email: Julia.Redden@erm.com	WO #:			
Project Name: IDS Wayland	Project #: 48007117			
Site: Wayland, MA	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA
M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260MCP - 8260		Total Number of containers	Special Instructions/Note:
			Preservation Code:				A			
MW-1023M-20210914-01	09-14-21	1100	G	Water	N	N	X		3	
DUP-001-20210914-01	↓	0001	G	Water	N	N	X		3	
DUP-002-20210914-01		0002	G	Water	N	N	X		3	
PDB-001-20210914-01		1330	G	Water	N	N	X		3	
TB-001-20210914-01	—	N/A	TB	Water	N	N	X		2	Lab provided.

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time: 09-14-21 1536	Company	Received by:	Date/Time: 9/14/21 1536	Company ETA
Relinquished by:	Date/Time: 9/14/21 1600	Company ETA	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 9/15/21 0800	Company TA

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins TestAmerica, Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Tel: (716)691-2600

Laboratory Job ID: 480-189563-1
Client Project/Site: IDS Wayland

For:
ERM-Northeast
15 Park Row West
Suite 104
Providence, Rhode Island 02903

Attn: Katie Wolf

Authorized for release by:
9/22/2021 11:05:22 AM
Wyatt Watson, Project Management Assistant I
Wyatt.Watson@Eurofinset.com

Designee for

Becky Mason, Project Manager II
(413)572-4000
Becky.Mason@Eurofinset.com

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

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

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

Table of Contents

Definitions/Glossary

Client: ERM-Northeast
Project/Site: IDS Wayland

Job ID: 480-189563-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.

Glossary

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

Job ID: 480-189563-1

Laboratory: Eurofins TestAmerica, Buffalo

Narrative

Job Narrative
480-189563-1

Receipt
The samples were received on 9/15/2021 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.8º C.

GC/MS VOA
Method 8260C: With the exception of diluted samples, per question G on the MassDEP Analytical Protocol Certification Form, TestAmerica's routine reporting limits do not achieve the CAM reporting limits specified in this CAM protocol for 1,2-dibromo-3-chloropropane, Carbon Disulfide, Isopropyl Ether, Naphthalene, tert-Amyl Methyl Ether and Tetrahydrofuran.

Method 8260C: The laboratory control sample (LCS) and / or the laboratory control sample duplicate (LCSD) for batch 480-596441 recovered outside control limits but were greater than 10% for the following analytes: 2,2-Dichloropropane . MCP protocol allows for 10% of the target compounds to be outside of the limits provided the recoveries are over 10%. The associated samples are: MW-217M-20210914-01 (480-189563-1) and TB-001-20210914-01 (480-189563-2).

Method 8260C: The laboratory control sample (LCS) and / or the laboratory control sample duplicate (LCSD) for batch 480-596441 exceeded control limits for the following analyte: 2-Butanone. Unlike the calibration standards, this is due to the coelution with Ethyl Acetate, n-butyl Acetate, 2-Chloro-1,3-butadiene, Methacrylonitrile, Methylcyclohexane in the spiking solution. This does not indicate a performance issue with the spike recovery, but rather the laboratory's ability to measure the two analytes together in a combined spiking solution. Through the use of spectral analysis, the two compounds can be distinguished from one another if present in a client sample. The following samples were affected : MW-217M-20210914-01 (480-189563-1) and TB-001-20210914-01 (480-189563-2).

Method 8260C: The continuing calibration verification (CCV) for Carbon disulfide and Tert-amyl methyl ether associated with batch 480-596441 recovered outside the MCP control limit criteria. MCP protocol allows for 20% of the target compounds to be outside the 20% difference but not over 40% difference. Difficult analytes are allowed to be outside the 20% difference but not over 60% difference. The following samples were affected : MW-217M-20210914-01 (480-189563-1) and TB-001-20210914-01 (480-189563-2).

Method 8260C: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 480-596441 recovered outside control limits for the following analytes: 1,4-Dioxane, 2,2-Dichloropropane, Acetone, Bromomethane and Tert-amyl methyl ether.

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

MassDEP Analytical Protocol Certification Form

Laboratory Name: **TestAmerica Buffalo** Project #: **480-189563-1**

Project Location: **IDS Wayland** RTN:

This form provides certifications for the following data set: list Laboratory Sample ID Number(s):

480-189563 (1,2)

Matrices: ■ Groundwater/Surface Water ☐ Soil/Sediment ☐ Drinking Water ☐ Air ☐ Other:

CAM Protocols (check all that apply below):

8260 VOC CAM II A ■	7470/7471 Hg CAM III B ☐	Mass DEP VPH CAM IV A ☐	8081 Pesticides CAM V B ☐	7196 Hex Cr CAM VI B ☐	Mass DEP APH CAM IX A ☐
8270 SVOC CAM II B ☐	7010 Metals CAM III C ☐	Mass DEP EPH CAM IV B ☐	8151 Herbicides CAM V C ☐	8330 Explosives CAM VIII A ☐	TO-15 VOC CAM IX B ☐
6010 Metals CAM III A ☐	6020 Metals CAM III D ☐	8082 PCB CAM V A ☐	9014 Total Cyanide/PAC CAM VI A ☐	6860 Perchlorate CAM VIII B ☐	

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding time.	■ Yes ☐ No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	■ Yes ☐ No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	■ Yes ☐ No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	■ Yes ☐ No
E	a. VPH, EPH and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ☐ Yes ☐ No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	■ Yes ☐ No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ■ No[1]

Data User Note: ***Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WCS-07-350***

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	☐ Yes ■ No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s) ?	■ Yes ☐ No[1]

[1] All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, is accurate and complete.

Signature: Wyatt Watson Position: Project Manager Assistant

Printed Name: Wyatt Watson Date: 9/22/21 10:47

Detection Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

Job ID: 480-189563-1

Client Sample ID: MW-217M-20210914-01 — Lab Sample ID: 480-189563-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	2.2		1.0		ug/L	1		8260C	Total/NA
1,2-Dichlorobenzene	1.2		1.0		ug/L	1		8260C	Total/NA
cis-1,2-Dichloroethene	1.4		1.0		ug/L	1		8260C	Total/NA
Methyl tert-butyl ether	36		1.0		ug/L	1		8260C	Total/NA
Tert-amyl methyl ether	15	*1	5.0		ug/L	1		8260C	Total/NA
Trichloroethene	6.3		1.0		ug/L	1		8260C	Total/NA

Client Sample ID: TB-001-20210914-01 — Lab Sample ID: 480-189563-2

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: ERM-Northeast
Project/Site: IDS Wayland

Job ID: 480-189563-1

Client Sample ID: MW-217M-20210914-01

Lab Sample ID: 480-189563-1

Date Collected: 09/14/21 09:52
Matrix: Water
Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			09/16/21 08:46	1
1,1,1-Trichloroethane	ND		1.0		ug/L			09/16/21 08:46	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			09/16/21 08:46	1
1,1,2-Trichloroethane	ND		1.0		ug/L			09/16/21 08:46	1
1,1-Dichloroethane	**2.2**		1.0		ug/L			09/16/21 08:46	1
1,1-Dichloroethene	ND		1.0		ug/L			09/16/21 08:46	1
1,1-Dichloropropene	ND		1.0		ug/L			09/16/21 08:46	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			09/16/21 08:46	1
1,2,3-Trichloropropane	ND		1.0		ug/L			09/16/21 08:46	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			09/16/21 08:46	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			09/16/21 08:46	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			09/16/21 08:46	1
1,2-Dichlorobenzene	**1.2**		1.0		ug/L			09/16/21 08:46	1
1,2-Dichloroethane	ND		1.0		ug/L			09/16/21 08:46	1
1,2-Dichloropropane	ND		1.0		ug/L			09/16/21 08:46	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			09/16/21 08:46	1
1,3-Dichlorobenzene	ND		1.0		ug/L			09/16/21 08:46	1
1,3-Dichloropropane	ND		1.0		ug/L			09/16/21 08:46	1
1,4-Dichlorobenzene	ND		1.0		ug/L			09/16/21 08:46	1
1,4-Dioxane	ND	*1	50		ug/L			09/16/21 08:46	1
2,2-Dichloropropane	ND	*+ *1	1.0		ug/L			09/16/21 08:46	1
2-Butanone (MEK)	ND	*+	10		ug/L			09/16/21 08:46	1
2-Chlorotoluene	ND		1.0		ug/L			09/16/21 08:46	1
2-Hexanone	ND		10		ug/L			09/16/21 08:46	1
4-Chlorotoluene	ND		1.0		ug/L			09/16/21 08:46	1
4-Isopropyltoluene	ND		1.0		ug/L			09/16/21 08:46	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			09/16/21 08:46	1
Acetone	ND	*1	50		ug/L			09/16/21 08:46	1
Benzene	ND		1.0		ug/L			09/16/21 08:46	1
Bromobenzene	ND		1.0		ug/L			09/16/21 08:46	1
Bromoform	ND		1.0		ug/L			09/16/21 08:46	1
Bromomethane	ND	*1	2.0		ug/L			09/16/21 08:46	1
Carbon disulfide	ND		10		ug/L			09/16/21 08:46	1
Carbon tetrachloride	ND		1.0		ug/L			09/16/21 08:46	1
Chlorobenzene	ND		1.0		ug/L			09/16/21 08:46	1
Chlorobromomethane	ND		1.0		ug/L			09/16/21 08:46	1
Chlorodibromomethane	ND		0.50		ug/L			09/16/21 08:46	1
Chloroethane	ND		2.0		ug/L			09/16/21 08:46	1
Chloroform	ND		1.0		ug/L			09/16/21 08:46	1
Chloromethane	ND		2.0		ug/L			09/16/21 08:46	1
cis-1,2-Dichloroethene	**1.4**		1.0		ug/L			09/16/21 08:46	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 08:46	1
Dichlorobromomethane	ND		0.50		ug/L			09/16/21 08:46	1
Dichlorodifluoromethane	ND		1.0		ug/L			09/16/21 08:46	1
Ethyl ether	ND		1.0		ug/L			09/16/21 08:46	1
Ethylbenzene	ND		1.0		ug/L			09/16/21 08:46	1
Ethylene Dibromide	ND		1.0		ug/L			09/16/21 08:46	1
Hexachlorobutadiene	ND		0.40		ug/L			09/16/21 08:46	1
Isopropyl ether	ND		10		ug/L			09/16/21 08:46	1

Client Sample ID: MW-217M-20210914-01

Lab Sample ID: 480-189563-1

Date Collected: 09/14/21 09:52
Matrix: Water
Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropylbenzene	ND		1.0		ug/L			09/16/21 08:46	1
Methyl tert-butyl ether	**36**		1.0		ug/L			09/16/21 08:46	1
Methylene Chloride	ND		1.0		ug/L			09/16/21 08:46	1
m-Xylene & p-Xylene	ND		2.0		ug/L			09/16/21 08:46	1
Naphthalene	ND		5.0		ug/L			09/16/21 08:46	1
n-Butylbenzene	ND		1.0		ug/L			09/16/21 08:46	1
N-Propylbenzene	ND		1.0		ug/L			09/16/21 08:46	1
o-Xylene	ND		1.0		ug/L			09/16/21 08:46	1
sec-Butylbenzene	ND		1.0		ug/L			09/16/21 08:46	1
Styrene	ND		1.0		ug/L			09/16/21 08:46	1
Tert-amyl methyl ether	**15**	***1**	5.0		ug/L			09/16/21 08:46	1
Tert-butyl ethyl ether	ND		5.0		ug/L			09/16/21 08:46	1
tert-Butylbenzene	ND		1.0		ug/L			09/16/21 08:46	1
Tetrachloroethene	ND		1.0		ug/L			09/16/21 08:46	1
Tetrahydrofuran	ND		10		ug/L			09/16/21 08:46	1
Toluene	ND		1.0		ug/L			09/16/21 08:46	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			09/16/21 08:46	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 08:46	1
Trichloroethene	**6.3**		1.0		ug/L			09/16/21 08:46	1
Trichlorofluoromethane	ND		1.0		ug/L			09/16/21 08:46	1
Vinyl chloride	ND		1.0		ug/L			09/16/21 08:46	1
Dibromomethane	ND		1.0		ug/L			09/16/21 08:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*70 - 130*		*09/16/21 08:46*	*1*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 130*		*09/16/21 08:46*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*09/16/21 08:46*	*1*

Client Sample ID: TB-001-20210914-01

Lab Sample ID: 480-189563-2

Date Collected: 09/14/21 00:01
Matrix: Water
Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			09/16/21 09:09	1
1,1,1-Trichloroethane	ND		1.0		ug/L			09/16/21 09:09	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			09/16/21 09:09	1
1,1,2-Trichloroethane	ND		1.0		ug/L			09/16/21 09:09	1
1,1-Dichloroethane	ND		1.0		ug/L			09/16/21 09:09	1
1,1-Dichloroethene	ND		1.0		ug/L			09/16/21 09:09	1
1,1-Dichloropropene	ND		1.0		ug/L			09/16/21 09:09	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			09/16/21 09:09	1
1,2,3-Trichloropropane	ND		1.0		ug/L			09/16/21 09:09	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			09/16/21 09:09	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			09/16/21 09:09	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			09/16/21 09:09	1
1,2-Dichlorobenzene	ND		1.0		ug/L			09/16/21 09:09	1
1,2-Dichloroethane	ND		1.0		ug/L			09/16/21 09:09	1
1,2-Dichloropropane	ND		1.0		ug/L			09/16/21 09:09	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			09/16/21 09:09	1

Client Sample ID: TB-001-20210914-01

Lab Sample ID: 480-189563-2

Date Collected: 09/14/21 00:01

Matrix: Water

Date Received: 09/15/21 08:00

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0		ug/L			09/16/21 09:09	1
1,3-Dichloropropane	ND		1.0		ug/L			09/16/21 09:09	1
1,4-Dichlorobenzene	ND		1.0		ug/L			09/16/21 09:09	1
1,4-Dioxane	ND	*1	50		ug/L			09/16/21 09:09	1
2,2-Dichloropropane	ND	*+ *1	1.0		ug/L			09/16/21 09:09	1
2-Butanone (MEK)	ND	*+	10		ug/L			09/16/21 09:09	1
2-Chlorotoluene	ND		1.0		ug/L			09/16/21 09:09	1
2-Hexanone	ND		10		ug/L			09/16/21 09:09	1
4-Chlorotoluene	ND		1.0		ug/L			09/16/21 09:09	1
4-Isopropyltoluene	ND		1.0		ug/L			09/16/21 09:09	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			09/16/21 09:09	1
Acetone	ND	*1	50		ug/L			09/16/21 09:09	1
Benzene	ND		1.0		ug/L			09/16/21 09:09	1
Bromobenzene	ND		1.0		ug/L			09/16/21 09:09	1
Bromoform	ND		1.0		ug/L			09/16/21 09:09	1
Bromomethane	ND	*1	2.0		ug/L			09/16/21 09:09	1
Carbon disulfide	ND		10		ug/L			09/16/21 09:09	1
Carbon tetrachloride	ND		1.0		ug/L			09/16/21 09:09	1
Chlorobenzene	ND		1.0		ug/L			09/16/21 09:09	1
Chlorobromomethane	ND		1.0		ug/L			09/16/21 09:09	1
Chlorodibromomethane	ND		0.50		ug/L			09/16/21 09:09	1
Chloroethane	ND		2.0		ug/L			09/16/21 09:09	1
Chloroform	ND		1.0		ug/L			09/16/21 09:09	1
Chloromethane	ND		2.0		ug/L			09/16/21 09:09	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			09/16/21 09:09	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 09:09	1
Dichlorobromomethane	ND		0.50		ug/L			09/16/21 09:09	1
Dichlorodifluoromethane	ND		1.0		ug/L			09/16/21 09:09	1
Ethyl ether	ND		1.0		ug/L			09/16/21 09:09	1
Ethylbenzene	ND		1.0		ug/L			09/16/21 09:09	1
Ethylene Dibromide	ND		1.0		ug/L			09/16/21 09:09	1
Hexachlorobutadiene	ND		0.40		ug/L			09/16/21 09:09	1
Isopropyl ether	ND		10		ug/L			09/16/21 09:09	1
Isopropylbenzene	ND		1.0		ug/L			09/16/21 09:09	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/16/21 09:09	1
Methylene Chloride	ND		1.0		ug/L			09/16/21 09:09	1
m-Xylene & p-Xylene	ND		2.0		ug/L			09/16/21 09:09	1
Naphthalene	ND		5.0		ug/L			09/16/21 09:09	1
n-Butylbenzene	ND		1.0		ug/L			09/16/21 09:09	1
N-Propylbenzene	ND		1.0		ug/L			09/16/21 09:09	1
o-Xylene	ND		1.0		ug/L			09/16/21 09:09	1
sec-Butylbenzene	ND		1.0		ug/L			09/16/21 09:09	1
Styrene	ND		1.0		ug/L			09/16/21 09:09	1
Tert-amyl methyl ether	ND	*1	5.0		ug/L			09/16/21 09:09	1
Tert-butyl ethyl ether	ND		5.0		ug/L			09/16/21 09:09	1
tert-Butylbenzene	ND		1.0		ug/L			09/16/21 09:09	1
Tetrachloroethene	ND		1.0		ug/L			09/16/21 09:09	1
Tetrahydrofuran	ND		10		ug/L			09/16/21 09:09	1
Toluene	ND		1.0		ug/L			09/16/21 09:09	1

Client Sample Results

Client: ERM-Northeast
Project/Site: IDS Wayland

Job ID: 480-189563-1

Client Sample ID: TB-001-20210914-01

Lab Sample ID: 480-189563-2

Date Collected: 09/14/21 00:01
Date Received: 09/15/21 08:00

Matrix: Water

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		1.0		ug/L			09/16/21 09:09	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 09:09	1
Trichloroethene	ND		1.0		ug/L			09/16/21 09:09	1
Trichlorofluoromethane	ND		1.0		ug/L			09/16/21 09:09	1
Vinyl chloride	ND		1.0		ug/L			09/16/21 09:09	1
Dibromomethane	ND		1.0		ug/L			09/16/21 09:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*70 - 130*		*09/16/21 09:09*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 130*		*09/16/21 09:09*	*1*
4-Bromofluorobenzene (Surr)	*104*		*70 - 130*		*09/16/21 09:09*	*1*

Surrogate Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

Job ID: 480-189563-1

Method: 8260C - Volatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		TOL	DCA	BFB
Lab Sample ID	**Client Sample ID**	**(70-130)**	**(70-130)**	**(70-130)**
480-189563-1	MW-217M-20210914-01	96	109	103
480-189563-2	TB-001-20210914-01	98	106	104
LCS 480-596441/6	Lab Control Sample	104	102	112
LCSD 480-596441/7	Lab Control Sample Dup	103	100	100
MB 480-596441/9	Method Blank	102	105	103

Surrogate Legend

TOL = Toluene-d8 (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)

Method: 8260C - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-596441/9
Matrix: Water
Analysis Batch: 596441

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			09/16/21 01:09	1
1,1,1-Trichloroethane	ND		1.0		ug/L			09/16/21 01:09	1
1,1,2,2-Tetrachloroethane	ND		0.50		ug/L			09/16/21 01:09	1
1,1,2-Trichloroethane	ND		1.0		ug/L			09/16/21 01:09	1
1,1-Dichloroethane	ND		1.0		ug/L			09/16/21 01:09	1
1,1-Dichloroethene	ND		1.0		ug/L			09/16/21 01:09	1
1,1-Dichloropropene	ND		1.0		ug/L			09/16/21 01:09	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			09/16/21 01:09	1
1,2,3-Trichloropropane	ND		1.0		ug/L			09/16/21 01:09	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			09/16/21 01:09	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			09/16/21 01:09	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			09/16/21 01:09	1
1,2-Dichlorobenzene	ND		1.0		ug/L			09/16/21 01:09	1
1,2-Dichloroethane	ND		1.0		ug/L			09/16/21 01:09	1
1,2-Dichloropropane	ND		1.0		ug/L			09/16/21 01:09	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			09/16/21 01:09	1
1,3-Dichlorobenzene	ND		1.0		ug/L			09/16/21 01:09	1
1,3-Dichloropropane	ND		1.0		ug/L			09/16/21 01:09	1
1,4-Dichlorobenzene	ND		1.0		ug/L			09/16/21 01:09	1
1,4-Dioxane	ND		50		ug/L			09/16/21 01:09	1
2,2-Dichloropropane	ND		1.0		ug/L			09/16/21 01:09	1
2-Butanone (MEK)	ND		10		ug/L			09/16/21 01:09	1
2-Chlorotoluene	ND		1.0		ug/L			09/16/21 01:09	1
2-Hexanone	ND		10		ug/L			09/16/21 01:09	1
4-Chlorotoluene	ND		1.0		ug/L			09/16/21 01:09	1
4-Isopropyltoluene	ND		1.0		ug/L			09/16/21 01:09	1
4-Methyl-2-pentanone (MIBK)	ND		10		ug/L			09/16/21 01:09	1
Acetone	ND		50		ug/L			09/16/21 01:09	1
Benzene	ND		1.0		ug/L			09/16/21 01:09	1
Bromobenzene	ND		1.0		ug/L			09/16/21 01:09	1
Bromoform	ND		1.0		ug/L			09/16/21 01:09	1
Bromomethane	ND		2.0		ug/L			09/16/21 01:09	1
Carbon disulfide	ND		10		ug/L			09/16/21 01:09	1
Carbon tetrachloride	ND		1.0		ug/L			09/16/21 01:09	1
Chlorobenzene	ND		1.0		ug/L			09/16/21 01:09	1
Chlorobromomethane	ND		1.0		ug/L			09/16/21 01:09	1
Chlorodibromomethane	ND		0.50		ug/L			09/16/21 01:09	1
Chloroethane	ND		2.0		ug/L			09/16/21 01:09	1
Chloroform	ND		1.0		ug/L			09/16/21 01:09	1
Chloromethane	ND		2.0		ug/L			09/16/21 01:09	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			09/16/21 01:09	1
cis-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 01:09	1
Dichlorobromomethane	ND		0.50		ug/L			09/16/21 01:09	1
Dichlorodifluoromethane	ND		1.0		ug/L			09/16/21 01:09	1
Ethyl ether	ND		1.0		ug/L			09/16/21 01:09	1
Ethylbenzene	ND		1.0		ug/L			09/16/21 01:09	1
Ethylene Dibromide	ND		1.0		ug/L			09/16/21 01:09	1
Hexachlorobutadiene	ND		0.40		ug/L			09/16/21 01:09	1

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 480-596441/9
Matrix: Water
Analysis Batch: 596441

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropyl ether	ND		10		ug/L			09/16/21 01:09	1
Isopropylbenzene	ND		1.0		ug/L			09/16/21 01:09	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/16/21 01:09	1
Methylene Chloride	ND		1.0		ug/L			09/16/21 01:09	1
m-Xylene & p-Xylene	ND		2.0		ug/L			09/16/21 01:09	1
Naphthalene	ND		5.0		ug/L			09/16/21 01:09	1
n-Butylbenzene	ND		1.0		ug/L			09/16/21 01:09	1
N-Propylbenzene	ND		1.0		ug/L			09/16/21 01:09	1
o-Xylene	ND		1.0		ug/L			09/16/21 01:09	1
sec-Butylbenzene	ND		1.0		ug/L			09/16/21 01:09	1
Styrene	ND		1.0		ug/L			09/16/21 01:09	1
Tert-amyl methyl ether	ND		5.0		ug/L			09/16/21 01:09	1
Tert-butyl ethyl ether	ND		5.0		ug/L			09/16/21 01:09	1
tert-Butylbenzene	ND		1.0		ug/L			09/16/21 01:09	1
Tetrachloroethene	ND		1.0		ug/L			09/16/21 01:09	1
Tetrahydrofuran	ND		10		ug/L			09/16/21 01:09	1
Toluene	ND		1.0		ug/L			09/16/21 01:09	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			09/16/21 01:09	1
trans-1,3-Dichloropropene	ND		0.40		ug/L			09/16/21 01:09	1
Trichloroethene	ND		1.0		ug/L			09/16/21 01:09	1
Trichlorofluoromethane	ND		1.0		ug/L			09/16/21 01:09	1
Vinyl chloride	ND		1.0		ug/L			09/16/21 01:09	1
Dibromomethane	ND		1.0		ug/L			09/16/21 01:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*70 - 130*		*09/16/21 01:09*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 130*		*09/16/21 01:09*	*1*
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*		*09/16/21 01:09*	*1*

Lab Sample ID: LCS 480-596441/6
Matrix: Water
Analysis Batch: 596441

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	25.0	32.5		ug/L		130	70 - 130
1,1,1-Trichloroethane	25.0	24.1		ug/L		96	70 - 130
1,1,2,2-Tetrachloroethane	25.0	24.2		ug/L		97	70 - 130
1,1,2-Trichloroethane	25.0	23.2		ug/L		93	70 - 130
1,1-Dichloroethane	25.0	26.4		ug/L		106	70 - 130
1,1-Dichloroethene	25.0	25.0		ug/L		100	70 - 130
1,1-Dichloropropene	25.0	23.7		ug/L		95	70 - 130
1,2,3-Trichlorobenzene	25.0	23.1		ug/L		92	70 - 130
1,2,3-Trichloropropane	25.0	21.9		ug/L		88	70 - 130
1,2,4-Trichlorobenzene	25.0	23.3		ug/L		93	70 - 130
1,2,4-Trimethylbenzene	25.0	25.0		ug/L		100	70 - 130
1,2-Dibromo-3-Chloropropane	25.0	28.2		ug/L		113	70 - 130
1,2-Dichlorobenzene	25.0	24.2		ug/L		97	70 - 130
1,2-Dichloroethane	25.0	23.3		ug/L		93	70 - 130

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-596441/6
Matrix: Water
Analysis Batch: 596441

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloropropane	25.0	23.9		ug/L		95	70 - 130
1,3,5-Trimethylbenzene	25.0	25.4		ug/L		101	70 - 130
1,3-Dichlorobenzene	25.0	24.8		ug/L		99	70 - 130
1,3-Dichloropropane	25.0	23.5		ug/L		94	70 - 130
1,4-Dichlorobenzene	25.0	23.9		ug/L		95	70 - 130
1,4-Dioxane	500	622		ug/L		124	70 - 130
2,2-Dichloropropane	25.0	34.4	*+	ug/L		138	70 - 130
2-Butanone (MEK)	125	191	*+	ug/L		153	70 - 130
2-Chlorotoluene	25.0	25.9		ug/L		103	70 - 130
2-Hexanone	125	126		ug/L		101	70 - 130
4-Chlorotoluene	25.0	24.9		ug/L		100	70 - 130
4-Isopropyltoluene	25.0	22.7		ug/L		91	70 - 130
4-Methyl-2-pentanone (MIBK)	125	132		ug/L		106	70 - 130
Acetone	125	125		ug/L		100	70 - 130
Benzene	25.0	24.1		ug/L		97	70 - 130
Bromobenzene	25.0	24.1		ug/L		96	70 - 130
Bromoform	25.0	32.1		ug/L		129	70 - 130
Bromomethane	25.0	24.7		ug/L		99	70 - 130
Carbon disulfide	25.0	22.4		ug/L		90	70 - 130
Carbon tetrachloride	25.0	26.7		ug/L		107	70 - 130
Chlorobenzene	25.0	23.9		ug/L		95	70 - 130
Chlorobromomethane	25.0	26.5		ug/L		106	70 - 130
Chlorodibromomethane	25.0	27.4		ug/L		109	70 - 130
Chloroethane	25.0	25.7		ug/L		103	70 - 130
Chloroform	25.0	23.4		ug/L		94	70 - 130
Chloromethane	25.0	22.9		ug/L		92	70 - 130
cis-1,2-Dichloroethene	25.0	25.6		ug/L		102	70 - 130
cis-1,3-Dichloropropene	25.0	23.1		ug/L		92	70 - 130
Dichlorobromomethane	25.0	24.9		ug/L		100	70 - 130
Dichlorodifluoromethane	25.0	25.4		ug/L		102	70 - 130
Ethyl ether	25.0	25.2		ug/L		101	70 - 130
Ethylbenzene	25.0	25.3		ug/L		101	70 - 130
Ethylene Dibromide	25.0	25.7		ug/L		103	70 - 130
Hexachlorobutadiene	25.0	24.1		ug/L		96	70 - 130
Isopropyl ether	25.0	23.9		ug/L		96	70 - 130
Isopropylbenzene	25.0	25.3		ug/L		101	70 - 130
Methyl tert-butyl ether	25.0	28.7		ug/L		115	70 - 130
Methylene Chloride	25.0	23.4		ug/L		93	70 - 130
m-Xylene & p-Xylene	25.0	25.5		ug/L		102	70 - 130
Naphthalene	25.0	24.1		ug/L		96	70 - 130
n-Butylbenzene	25.0	24.8		ug/L		99	70 - 130
N-Propylbenzene	25.0	24.2		ug/L		97	70 - 130
o-Xylene	25.0	27.0		ug/L		108	70 - 130
sec-Butylbenzene	25.0	22.4		ug/L		89	70 - 130
Styrene	25.0	25.1		ug/L		100	70 - 130
Tert-amyl methyl ether	25.0	29.6		ug/L		118	70 - 130
Tert-butyl ethyl ether	25.0	27.3		ug/L		109	70 - 130
tert-Butylbenzene	25.0	23.3		ug/L		93	70 - 130
Tetrachloroethene	25.0	26.7		ug/L		107	70 - 130

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-596441/6
Matrix: Water
Analysis Batch: 596441

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Tetrahydrofuran	50.0	54.4		ug/L		109	70 - 130
Toluene	25.0	24.8		ug/L		99	70 - 130
trans-1,2-Dichloroethene	25.0	27.4		ug/L		109	70 - 130
trans-1,3-Dichloropropene	25.0	27.9		ug/L		111	70 - 130
Trichloroethene	25.0	23.4		ug/L		93	70 - 130
Trichlorofluoromethane	25.0	26.8		ug/L		107	70 - 130
Vinyl chloride	25.0	25.5		ug/L		102	70 - 130
Dibromomethane	25.0	24.3		ug/L		97	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*104*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*
4-Bromofluorobenzene (Surr)	*112*		*70 - 130*

Lab Sample ID: LCSD 480-596441/7
Matrix: Water
Analysis Batch: 596441

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	25.0	29.3		ug/L		117	70 - 130	10	20
1,1,1-Trichloroethane	25.0	20.6		ug/L		82	70 - 130	16	20
1,1,2,2-Tetrachloroethane	25.0	25.1		ug/L		101	70 - 130	4	20
1,1,2-Trichloroethane	25.0	25.6		ug/L		102	70 - 130	10	20
1,1-Dichloroethane	25.0	23.5		ug/L		94	70 - 130	12	20
1,1-Dichloroethene	25.0	21.4		ug/L		86	70 - 130	15	20
1,1-Dichloropropene	25.0	23.3		ug/L		93	70 - 130	1	20
1,2,3-Trichlorobenzene	25.0	22.3		ug/L		89	70 - 130	4	20
1,2,3-Trichloropropane	25.0	23.0		ug/L		92	70 - 130	5	20
1,2,4-Trichlorobenzene	25.0	21.6		ug/L		87	70 - 130	8	20
1,2,4-Trimethylbenzene	25.0	24.2		ug/L		97	70 - 130	3	20
1,2-Dibromo-3-Chloropropane	25.0	29.3		ug/L		117	70 - 130	4	20
1,2-Dichlorobenzene	25.0	24.0		ug/L		96	70 - 130	1	20
1,2-Dichloroethane	25.0	23.2		ug/L		93	70 - 130	0	20
1,2-Dichloropropane	25.0	23.3		ug/L		93	70 - 130	2	20
1,3,5-Trimethylbenzene	25.0	24.7		ug/L		99	70 - 130	3	20
1,3-Dichlorobenzene	25.0	24.6		ug/L		99	70 - 130	1	20
1,3-Dichloropropane	25.0	25.4		ug/L		102	70 - 130	8	20
1,4-Dichlorobenzene	25.0	24.4		ug/L		97	70 - 130	2	20
1,4-Dioxane	500	490	*1	ug/L		98	70 - 130	24	20
2,2-Dichloropropane	25.0	25.1	*1	ug/L		101	70 - 130	31	20
2-Butanone (MEK)	125	190	*+	ug/L		152	70 - 130	1	20
2-Chlorotoluene	25.0	26.7		ug/L		107	70 - 130	3	20
2-Hexanone	125	127		ug/L		102	70 - 130	1	20
4-Chlorotoluene	25.0	26.4		ug/L		106	70 - 130	6	20
4-Isopropyltoluene	25.0	21.6		ug/L		86	70 - 130	5	20
4-Methyl-2-pentanone (MIBK)	125	119		ug/L		95	70 - 130	10	20
Acetone	125	88.8	*1	ug/L		71	70 - 130	34	20
Benzene	25.0	22.9		ug/L		92	70 - 130	5	20

Method: 8260C - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 480-596441/7
Matrix: Water
Analysis Batch: 596441

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromobenzene			25.0	26.9		ug/L		107	70 - 130	11	20
Bromoform			25.0	31.9		ug/L		128	70 - 130	1	20
Bromomethane			25.0	19.9	*1	ug/L		80	70 - 130	22	20
Carbon disulfide			25.0	19.1		ug/L		76	70 - 130	16	20
Carbon tetrachloride			25.0	23.1		ug/L		92	70 - 130	14	20
Chlorobenzene			25.0	24.3		ug/L		97	70 - 130	2	20
Chlorobromomethane			25.0	24.0		ug/L		96	70 - 130	10	20
Chlorodibromomethane			25.0	28.8		ug/L		115	70 - 130	5	20
Chloroethane			25.0	22.5		ug/L		90	70 - 130	13	20
Chloroform			25.0	21.5		ug/L		86	70 - 130	8	20
Chloromethane			25.0	20.6		ug/L		82	70 - 130	11	20
cis-1,2-Dichloroethene			25.0	22.9		ug/L		92	70 - 130	11	20
cis-1,3-Dichloropropene			25.0	24.3		ug/L		97	70 - 130	5	20
Dichlorobromomethane			25.0	24.7		ug/L		99	70 - 130	1	20
Dichlorodifluoromethane			25.0	21.6		ug/L		86	70 - 130	16	20
Ethyl ether			25.0	22.5		ug/L		90	70 - 130	11	20
Ethylbenzene			25.0	23.7		ug/L		95	70 - 130	7	20
Ethylene Dibromide			25.0	28.0		ug/L		112	70 - 130	8	20
Hexachlorobutadiene			25.0	23.9		ug/L		96	70 - 130	1	20
Isopropyl ether			25.0	21.4		ug/L		86	70 - 130	11	20
Isopropylbenzene			25.0	25.5		ug/L		102	70 - 130	1	20
Methyl tert-butyl ether			25.0	24.2		ug/L		97	70 - 130	17	20
Methylene Chloride			25.0	20.1		ug/L		81	70 - 130	15	20
m-Xylene & p-Xylene			25.0	24.2		ug/L		97	70 - 130	5	20
Naphthalene			25.0	23.3		ug/L		93	70 - 130	3	20
n-Butylbenzene			25.0	23.1		ug/L		93	70 - 130	7	20
N-Propylbenzene			25.0	24.4		ug/L		97	70 - 130	1	20
o-Xylene			25.0	24.5		ug/L		98	70 - 130	10	20
sec-Butylbenzene			25.0	21.6		ug/L		86	70 - 130	3	20
Styrene			25.0	24.1		ug/L		97	70 - 130	4	20
Tert-amyl methyl ether			25.0	23.0	*1	ug/L		92	70 - 130	25	20
Tert-butyl ethyl ether			25.0	23.1		ug/L		92	70 - 130	17	20
tert-Butylbenzene			25.0	23.2		ug/L		93	70 - 130	0	20
Tetrachloroethene			25.0	26.4		ug/L		106	70 - 130	1	20
Tetrahydrofuran			50.0	47.9		ug/L		96	70 - 130	13	20
Toluene			25.0	24.2		ug/L		97	70 - 130	3	20
trans-1,2-Dichloroethene			25.0	22.9		ug/L		92	70 - 130	18	20
trans-1,3-Dichloropropene			25.0	30.8		ug/L		123	70 - 130	10	20
Trichloroethene			25.0	23.5		ug/L		94	70 - 130	1	20
Trichlorofluoromethane			25.0	23.7		ug/L		95	70 - 130	12	20
Vinyl chloride			25.0	22.1		ug/L		89	70 - 130	14	20
Dibromomethane			25.0	23.7		ug/L		95	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*103*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*

QC Association Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

Job ID: 480-189563-1

GC/MS VOA

Analysis Batch: 596441

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-189563-1	MW-217M-20210914-01	Total/NA	Water	8260C	
480-189563-2	TB-001-20210914-01	Total/NA	Water	8260C	
MB 480-596441/9	Method Blank	Total/NA	Water	8260C	
LCS 480-596441/6	Lab Control Sample	Total/NA	Water	8260C	
LCSD 480-596441/7	Lab Control Sample Dup	Total/NA	Water	8260C	

Lab Chronicle

Client: ERM-Northeast
Project/Site: IDS Wayland

Job ID: 480-189563-1

Client Sample ID: MW-217M-20210914-01

Lab Sample ID: 480-189563-1

Date Collected: 09/14/21 09:52
Matrix: Water
Date Received: 09/15/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	596441	09/16/21 08:46	AXK	TAL BUF

Client Sample ID: TB-001-20210914-01

Lab Sample ID: 480-189563-2

Date Collected: 09/14/21 00:01
Matrix: Water
Date Received: 09/15/21 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	596441	09/16/21 09:09	AXK	TAL BUF

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Accreditation/Certification Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

Job ID: 480-189563-1

Laboratory: Eurofins TestAmerica, Buffalo

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

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	88-0686	07-07-21 *
Connecticut	State	PH-0568	09-30-22
Florida	NELAP	E87672	06-30-22
Georgia	State	10026 (NY)	03-31-22
Georgia	State Program	N/A	03-31-09 *
Georgia (DW)	State	956	03-31-22
Illinois	NELAP	200003	10-01-21
Iowa	State	374	03-01-23
Iowa	State Program	374	03-01-09 *
Kansas	NELAP	E-10187	02-02-22
Kentucky (DW)	State	90029	12-31-21
Kentucky (UST)	State	30	04-01-22
Kentucky (WW)	State	KY90029	01-01-22
Louisiana	NELAP	02031	06-30-22
Maine	State	NY00044	12-05-22
Maryland	State	294	04-02-22
Massachusetts	State	M-NY044	06-30-22
Michigan	State	9937	04-01-22
Michigan	State Program	9937	04-01-09 *
Minnesota	NELAP	1524384	01-01-22
New Hampshire	NELAP	2973	09-11-19 *
New Hampshire	NELAP	2337	11-19-21
New Jersey	NELAP	NY455	06-30-22
New York	NELAP	10026	04-01-22
Oregon	NELAP	NY200003	06-12-22
Pennsylvania	NELAP	68-00281	07-31-22
Rhode Island	State	LAO00328	12-31-21
Tennessee	State	02970	03-31-22
Texas	NELAP	T104704412-18-10	07-31-22
USDA	US Federal Programs	P330-18-00039	03-25-24
Virginia	NELAP	460185	09-14-22
Washington	State	C784	02-10-22
Wisconsin	State	998310390	08-31-22

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

Method Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

Job ID: 480-189563-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds (GC/MS)	MA DEP	TAL BUF
5030C	Purge and Trap	SW846	TAL BUF

Protocol References:

MA DEP = Massachusetts Department Of Environmental Protection

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Sample Summary

Client: ERM-Northeast
Project/Site: IDS Wayland

Job ID: 480-189563-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
480-189563-1	MW-217M-20210914-01	Water	09/14/21 09:52	09/15/21 08:00
480-189563-2	TB-001-20210914-01	Water	09/14/21 00:01	09/15/21 08:00

Login Sample Receipt Checklist

Client: ERM-Northeast

Job Number: 480-189563-1

Login Number: 189563
List Number: 1
Creator: Sabuda, Brendan D

List Source: Eurofins TestAmerica, Buffalo

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.8 #1 ICE
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	True	

Amherst, NY 14228-2298
Phone (716) 691-2600 Phone (716) 691-7991

Chain of Custody Record

eurofins | Environment Testing America

Boston #215

Client Information				
Client Contact: Julia Redden	Sampler: LUKE JENKINS	Lab PM: Mason, Becky C	Carrier Tracking No(s):	COC No:
Company: ERM-Northeast	Phone: 662-202-4046	E-Mail: Becky.Mason@Eurofinset.com	State of Origin: MA	Page: 1 of 1
Address: One Beacon Steet 5th Floor	PWSID:			Job #:
City: Boston	Due Date Requested:			
State, Zip: MA, 02108	TAT Requested (days): Standard			
Phone: 617-646-7849(Tel)	Compliance Project: Δ Yes Δ No			
Email: Julia.Redden@erm.com	PO #: 0583683.01			
Project Name: IDS Wayland	WO #:			
Site: Wayland, MA	Project #: 48007117			
	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260MCP - 8260	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A		
MW-217M-20210914-01	09-14-21	0952	G	Water	N	N	X	3	
~~TB 002 20210914 01~~									
TB-001-20210914-01	09-14-21	0001	G	W	N	N	X	3	SAME AS OTHER COC

480-189563 Chain of Custody

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	09-14-21 1536			9/14/21 1536	ETA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	9/14/21 1600	ETA			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
				9/15/21 0800	TA

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 2.8 #1 ICK