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ZF Active Safety US Inc.

PROGRESS REPORT NO. 2

Former Kelsey-Hayes Company Site, Milford,
Michigan

Administrative Order for Response Activity, EGLE
Docket No. AO-RRD-22-001

June 15, 2022

**PROGRESS REPORT NO. 2
FORMER KELSEY-HAYES COMPANY
MILFORD, MICHIGAN
ADMINISTRATIVE ORDER FOR RESPONSE ACTIVITY EGLE
DOCKET NO. AO-RRD-22-001**

This progress report has been prepared and is being submitted pursuant to Section XII of the Administrative Order for Response Activity, Docket No. AO-RRD-22-001 (AO) issued by the Department of Environment, Great Lakes, and Energy (EGLE) to ZF Active Safety US Inc. (ZF or Respondent) on March 16, 2022 (effective date), with respect to the former Kelsey-Hayes site in Milford, Michigan (the "Site"). This progress report provides information regarding response activities and other matters related to the AO, that have occurred from May 11, 2022 through June 10, 2022.

Chronological Description of Activities Conducted during the Specified Reporting Period:

- Design and development of specifications for the Village of Milford (VOM) groundwater treatment system improvements in accordance with Section V of the AO continued throughout the reporting period. Design status update meetings with ZF, Arcadis, VOM, EGLE, and Wood (the "Design Group") occurred on May 13, 17, 20, 31, 2022, and June 3, 7, and 10, 2022. Meeting minutes from the Design Group meetings are included in Attachment 1
- In response to EGLE's May 4, 2022 letter which responded to ZF's Monitoring Well Rehabilitation and Vertical Aquifer Profiling Work Plan to EGLE on April 22, 2022 (the "Work Plan"), ZF submitted a letter on May 15, 2022 to EGLE addressing each of EGLE's comments concerning the Work Plan (the "May 15th Letter"). The May 15th Letter was included as Attachment 9 in Progress Report No. 1 which was also submitted on May 15, 2022.
- In accordance with the Work Plan, vertical aquifer profiling (VAP) was conducted May 16 through 25, 2022 at three locations (VAP No. 1, 2, and 3) near and west of Observation Well OW-16D2 to determine the presence and lateral and vertical distribution of volatile organic compound (VOC) concentrations in groundwater. The VAP borings were advanced to approximately 5 feet into the clay that was encountered at the bottom of the aquifer. Groundwater samples were collected at 10-foot intervals from the water table to 120 feet below ground surface (bgs). Groundwater samples were submitted to Fibertec Environmental Services of Holt, Michigan (Fibertec) for analysis of VOCs using United States Environmental Protection Agency (USEPA) Test Method 8260D. A summary of the laboratory analytical results and the laboratory analytical reports were submitted to EGLE and the VOM and are included in Attachment 2. Vinyl chloride was not detected in any groundwater samples collected from the three VAP borings. VAP No.1 was advanced next to OW-16D2 and was used to verify the zone of highest contamination for installation of a new well. As stated in EGLE's May 4, 2022 letter, the zone of highest contamination was defined as, "the zone of the highest detected concentration of vinyl chloride, or if no vinyl chloride is detected, as the zone with the highest total VOCs." Laboratory analytical results from VAP No. 1 indicated no detection of vinyl chloride. The zone with the highest total VOCs at VAP No. 1 was 85 to 90 feet bgs which consisted of 1,1

dichloroethane (2.2 ug/L), cis-1,2-dichloroethene (19 ug/L), trans-1,2-dichloroethene (1.3 ug/L), and toluene (4.7 ug/L). Therefore, Observation Well OW-16D2R1 was installed on May 26 and 27, 2022, and screened at the 85 to 90 feet bgs interval based on EGLE's statements in the May 4, 2022 letter and further electronic mail confirmation from Mr. Wojciechowski on May 26, 2022. See Attachment 3. In groundwater samples collected from VAP No. 2, only cis-1,2-dichloroethene (1.5 ug/L) was detected at a depth of 45-50 feet bgs. In groundwater samples collected from VAP No. 3, only toluene was detected (1.5 and 1.0 ug/L) at 15-20 feet bgs and 105-110 feet bgs, respectively.

- Observation Well OW-16D2 was sampled on May 18 and June 8, 2022. The water sample collected on May 18 was submitted to Eurofins Canton, Ohio (Eurofins) for analysis of VOCs using USEPA Test Method 8260D. The water sample collected on June 8 was submitted to Fibertec for expedited analysis of VOCs using USEPA Test Method 8260D. In addition, a groundwater sample was also collected from Observation Well OW-16D2R1 (the new well next to OW16D2) on June 8 and submitted to Fibertec for expedited analysis of VOCs using USEPA Test Method 8260D. Results of the May 18 and June 8, 2022 samples were submitted to EGLE and the VOM and are included in Attachment 4. Vinyl chloride was not detected in any of the May 18 or June 8, 2022 samples.
- Pursuant to Section V of the AO, ZF and Arcadis conducted the 80 percent (%) design meeting/call on May 20, 2022, with the Design Group. The 80% preliminary design plans and specifications for VOM's groundwater treatment system improvements were submitted to EGLE and the VOM on May 20, 2022. A copy of the 80% design meeting minutes is included in Attachment 1. A copy of the 80% preliminary design plans and specifications submitted to EGLE and the VOM is included in Attachment 5.
- In accordance with the Work Plan, water samples were collected from Observation Well OW-16D2 on June 6, 2022, for chemical and biological analysis. Samples were submitted to Water Systems Engineering Inc., Ottawa, Kansas (WSE). WSE indicated that the laboratory analysis of these samples will take approximately one month.
- On June 10, 2022, ZF submitted for review, draft 100% design plans and specifications, a draft design memo, and a draft Permit Application for Water Supply Systems pursuant to Act 399, to the Design Group for the VOM groundwater treatment system improvements. Copies of these documents are included in Attachment 6.

Results of Sampling and Tests and other Data

- A summary of the laboratory analytical results and the laboratory analytical reports for the samples collected at the VAP borings are included in Attachment 2. Vinyl chloride was not detected in any of the groundwater samples collected from the three VAP borings.
- Observation Well OW-16D2 was sampled on May 18 and June 8, 2022. The water sample collected on May 18, 2022 was submitted to Eurofins for analysis of VOCs using USEPA Test Method 8260D. The water sample collected on June 8, 2022 was submitted to Fibertec for expedited analysis of VOCs using USEPA Test Method 8260D. In addition, a groundwater sample was also collected from Observation Well OW-16D2R1 (the new well next to OW16D2) on June 8 and submitted to Fibertec for expedited analysis of VOCs using USEPA Test Method 8260D. Copies of the laboratory analytical reports for the May and June samples are included in Attachment 4. Vinyl chloride was not detected in any of the May 18 or June 8, 2022 samples.

Status of Access Issues

- There have been no issues with access during the reporting period.

Scheduled for the Next Reporting Period

- Conduct sampling at OW-16D2 and OW-16D2R1 in July 2022, with analysis conducted by Eurofins or Fibertec within 10 to 14 days.
- Submit the Permit Application for Water Supply Systems pursuant to Act 399 for construction of the treatment system improvements with supporting plans and specifications and design memo to the EGLE Drinking Water and Environmental Health Division, Warren District Office.
- Perform rehabilitation activities (camera survey) of OW-16D2 during the month of June or July 2022.
- Install an additional, deeper observation well (OW-16D2R2) near OW-16D2 screened at 95 to 100 feet bgs in July 2022. The additional observation well will be screened at the same depth as OW-16D2.

Other Relevant Information

No other relevant information was identified during this reporting period.

Attachments

1. Design Group Meeting Minutes
2. Summary Table and Laboratory Analytical Reports (Vertical Aquifer Profile Borings)
3. May 26, 2022, Electronic Mail Correspondence with EGLE
4. Laboratory Analytical Report (Observation Wells OW-16D2 and OW-16D2R1)
5. 80% Preliminary Design Plans and Specifications
6. Draft 100% Design Plans and Specifications, Design Memo, and Act 399 Permit Application

ATTACHMENT 1

Design Group Meeting Minutes

MEETING MINUTES
May 13, 2022
Design Group Meeting
Village of Milford Drinking Water System
Vinyl Chloride Treatment System
(Discussion Purposes Only)

- Participants (Design Group)
 - Mike Karll, VOM
 - Kevin Wojciechowski, EGLE (RRD)
 - Tiffany Yusko-Kotimko, EGLE (DW & EHD)
 - Bob Bleazard, ZF
 - John McInnis, Brad Hitts, and Grant Andrews, Arcadis,
 - Rob Dewyre and Jeshua Hansen, Wood (VOM consultant),
 - Ted Erickson, IMEG, (Wood consultant)
- Design Updates
 - Arcadis presented a draft set of design plans. It was also noted that the well pumps were being evaluated and discussed with Peerless.
 - There was a follow-up question regarding the air stripping units meeting NSF standards. Arcadis verified with DeLoach that the components of the air stripping units are NSF certified. Tiffany indicated that providing her the documentation sooner than later would help identify any questions or concerns early in the review process.
 - Arcadis indicated that stand-by generator electrical requirements were being evaluated pending review of the well pumps and final configuration of the proposed air stripping units.
 - Arcadis indicated that the forced draft blowers versus induced draft blowers were being evaluated and discussed with DeLoach on configuration/setup on the concrete tanks.
 - Ted Erickson indicated that a 3rd blower should be considered for the air stripper units and VFD's on the well pumps.
- Other Design Considerations
 - Tiffany Yusko-Kotimko indicated that review of potential corrosion issues resulting from the proposed air stripping units will be handled with some additional sampling pre- and post-installation of the new units. It was noted that the pre-installation sampling would probably occur in a couple of months. It was also noted that the proposed air to water ratio was 30:1 on the new air stripping units and the existing air to water ratio was similar at 30:1 to 50:1 on the existing aeration units.
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- Information Needs
 - No concerns with receiving access to existing site plans/as-builts, flow diagrams, etc. from the VOM.

MEETING MINUTES
May 17, 2022
Design Group Meeting
Village of Milford Drinking Water System
Vinyl Chloride Treatment System
(Discussion Purposes Only)

- Participants (Design Group)
 - Mike Karll, VOM
 - Kevin Wojciechowski, EGLE (RRD)
 - Tiffany Yusko-Kotimko and Nick Swiger, EGLE (DW & EHD)
 - Scott Detwiler, ZF
 - John McInnis, Brad Hitts, and Grant Andrews, Arcadis,
 - Rob Dewyre and Jeshua Hansen, Wood (VOM consultant),
 - Ted Erickson, IMEG, (Wood consultant)
- Design Updates
 - Arcadis presented a draft layout with proposed air stripper units and forced draft blowers (located on the concrete tank). There was a question about a third blower, but each air stripping tower and associated blower already adds redundancy, so a third blower is not needed.
 - Arcadis indicated that the evaluation of the well pumps by Peerless determined that new bowls and motors will be needed to meet the increased total dynamic head requirement. It was also noted that the pump upgrades could take 2 to 4 weeks (one pump at a time) and that scheduling the work during off-season and avoiding peak demands would be recommended.
 - Arcadis indicated that evaluation of the stand-by generator electrical requirements was in process. Mike Karll indicated that he was not aware of installation drawings of the existing generator, but it was his understanding that the generator runs the Iron Removal Plan, Well House/Pumps, and lights in the park restrooms.
 - It was also verified that the operating range (flow rates) of each proposed air stripping unit was 1,400 gpm design and 2,100 gpm peak and that the required removal efficiency for vinyl chloride was met at both these flow rates. There was a question on potential differences in the removal efficiency with the forced draft blowers versus the induced draft blowers.
- Information Needs
 - Mike verified that he would request actual electrical usage (loads) from the utility company to help with the generator evaluation. Tiffany said she would also check for any generator approval information in the EGLE permitting file.
- 80% Design Meeting
 - Verified that it was on May 20 at 11 AM and the 8:30 AM meeting would not be needed.

AGENDA
May 20, 2022
80% Design Meeting
Village of Milford Drinking Water System
Air Stripper Design
(Discussion Purposes Only)

Pursuant to Paragraph 5.2.b of EGLE Administrative Order AO-RRD-22-001

- Introduction - Welcomed the following participants to the meeting:
 - Mike Karll, VOM
 - Kevin Wojciechowski, EGLE (RRD)
 - Tiffany Yusko-Kotimko and Nick Swiger, EGLE (DW & EHD)
 - Scott Detwiler, ZF
 - John McInnis, Brad Hitts, and Grant Andrews, Keith Aschemeier, and Greg Foote, Arcadis
 - Rob Dewyre, Mark Sweatman, and Jeshua Hansen, Wood (VOM consultant)
 - Ted Erickson, IMEG, (Wood consultant)
- Response to Question from May 17 Design Group Call
 - Arcadis indicated that vinyl chloride removal efficiency is the same for both forced draft and induced draft blowers per manufacturer.
- Presentation of 80% Preliminary Design Plans and Specifications.
 - Arcadis presented the design plans and specifications to the design group. Initial comments included providing more information on the pipe supports, the work sequence, and the potential use of VFDs on the well pumps.
- Information Needs
 - Electrical usage (loads) from DTE. The back-up generator evaluation was discussed. Initial information from DTE indicated that the maximum usage was 125KW over the last year. The existing generator is sized to handle 250KW. It was decided that Mike (VOM) would request additional electrical usage (loads) from DTE over the last 4 years.
- Expectations for Preliminary Plans/Specifications for 80% Design Review.
 - Arcadis indicated that the 80% Design Plans and Specifications would be submitted by the close of today.

- Tiffany and the VOM (Wood) indicated that they would provide comments by next week and it was decided that the next call with the Design Group would be May 31, 2022.
- Act 399 Construction Application (June 19, 2022)
 - Village of Milford will need to sign off on design prior to submittal of permit application. Proposed submittal date to Village of Milford- June 10, 2022. EGLE (Tiffany and Kevin) indicated that it was acceptable to submit the 100% Design Plans and Specifications via email and follow-up with the paper copy. Tiffany indicated that her review of the Act 399 Application was a priority and the review would be expedited.
- Questions/Comments
 - Included within the above notes.

MEETING MINUTES
May 31, 2022
Design Group Meeting
Village of Milford Drinking Water System
Vinyl Chloride Treatment System
(Discussion Purposes Only)

- Participants (Design Group)
 - Mike Karll, VOM
 - Kevin Wojciechowski, EGLE (RRD)
 - Tiffany Yusko-Kotimko and Nick Swiger, EGLE (DW & EHD)
 - Scott Detwiler, ZF
 - John McInnis, Brad Hitts, and Grant Andrews, Arcadis
 - Jeshua Hansen, Wood (VOM consultant)
 - Ted Erickson, IMEG, (Wood consultant)
- Design Updates
 - Arcadis acknowledged receipt of comments on the 80% Design Submission and are working on updating the design plans and specifications.
 - Arcadis indicated that evaluation of the stand-by generator electrical requirements was in process and will update with the information from DTE.
 - Tiffany indicated that the basis of design information can be a separate document and does not need to be presented within the design plans and specifications.
- Information Needs
 - Mike provided information from DTE on actual electrical usage (loads) from the last 4 years.

MEETING MINUTES
June 3, 2022
Design Group Meeting
Village of Milford Drinking Water System
Vinyl Chloride Treatment System
(Discussion Purposes Only)

- Participants (Design Group)
 - Mike Karll, VOM
 - Kevin Wojciechowski, EGLE (RRD)
 - Tiffany Yusko-Kotimko and Nick Swiger, EGLE (DW & EHD)
 - Scott Detwiler, ZF
 - John McInnis, Brad Hitts, and Grant Andrews, Arcadis
 - Rob Dewyre and Jeshua Hansen, Wood (VOM consultant)
 - Ted Erickson, IMEG, (Wood consultant)
- Design Updates
 - Arcadis continues to work on updating the design plans and specifications.
 - Arcadis indicated that the existing stand-by generator can handle the increased loads from the proposed new well pumps and air stripper blowers using existing peak load information from DTE and requirements for the system to handle average treatment plant load requirements.
 - There was a question on increased loads during start-up of well pumps. Arcadis will double check if any concerns with these loads on the generator capacity.
- Information Needs
 - Arcadis requesting information as needed from equipment vendors.

MEETING MINUTES
June 7, 2022
Design Group Meeting
Village of Milford Drinking Water System
Vinyl Chloride Treatment System
(Discussion Purposes Only)

- Participants (Design Group)
 - Mike Karll, VOM
 - Kevin Wojciechowski, EGLE (RRD)
 - Tiffany Yusko-Kotimko and Nick Swiger, EGLE (DW & EHD)
 - Scott Detwiler, ZF
 - John McInnis, Brad Hitts, and Grant Andrews, Arcadis
 - Rob Dewyre and Jeshua Hansen, Wood (VOM consultant)
 - Ted Erickson, IMEG, (Wood consultant)
- Design Updates
 - Arcadis continues to work on updating the basis of design and the design plans and specifications.
 - Arcadis indicated that the existing stand-by generator can handle the increased loads during start-up of well pumps. Will include a summary in the basis of design.
 - Arcadis reviewed the Act 399 permit application with the group to verify information.
 - There was a question on the sequence of operation and management of pressures/potentially higher flows during change over to larger well pumps when the existing aerators (lower TDH) will still be in operation. Evaluation of this is still in process and Arcadis will provide more information on this within the next couple of days.
- Information Needs
 - Arcadis requesting information as needed from equipment vendors.

MEETING MINUTES
June 10, 2022
Design Group Meeting
Village of Milford Drinking Water System
Vinyl Chloride Treatment System
(Discussion Purposes Only)

- Participants (Design Group)
 - Mike Karll, VOM
 - Kevin Wojciechowski, EGLE (RRD)
 - Tiffany Yusko-Kotimko and Nick Swiger, EGLE (DW & EHD)
 - Scott Detwiler, ZF
 - John McInnis and Brad Hitts, Arcadis
 - Rob Dewyre and Jeshua Hansen, Wood (VOM consultant)
 - Ted Erickson, IMEG, (Wood consultant)
- Design Updates
 - Arcadis continues to work on updating the basis of design and the design plans and specifications. Arcadis will submit an updated draft set of the documents today.
 - Discussed changeover logistics with the well pumps and potential concerns with increased pressure on the infrastructure. Arcadis will evaluate the use of permanent or temporary VFDs to alleviate changeover concerns. The VFDs will also likely have the added benefit of minimizing multiple mobilizations by contractors during installation.
 - Arcadis to follow-up with UIS SCADA to verify programming requirements for proposed equipment after initial contact by the VOM.
 - Discussed inspecting/cleaning wells during the well pump changeover process. Arcadis will add this to the specifications. Arcadis indicated that the current plan was to use Peerless Midwest to perform the well work since they are familiar with the VOM wells and have been the most responsive.
 - EGLE verified that the Act 399 permit application requires a “wet” signature for the hard copy submittal. The plan is to submit the plans and specifications with the Act 399 permit application by June 19. The hard copy of the documents will be submitted during the week of June 20.
 - The AO indicates that construction shall begin within 60 days of approval of the Act 399 permit. Because of the lead time on equipment which will be several months, ZF requested that EGLE provide clarification on what constitutes start of construction. ZF suggests it be submittal of purchase orders.
- Information Needs
 - Arcadis requesting information as needed from equipment vendors.

ATTACHMENT 2

**Summary Table and Laboratory Analytical Reports (Vertical Aquifer
Profile Borings)**

Table 1
Detected Analytes in Groundwater - Vertical Aquifer Profiling Borings
Village of Milford Central Park
Milford, Michigan



VAP Boring ID:	RDW Criteria	GSI Criteria	VAP-01-01_15_20	VAP-01-02_35_40	VAP-01-03_45_50	VAP-01-04_55_60	VAP-01-05_65_70	VAP-01-06_75_80	VAP-01-07_85_90	VAP-01-08_95_100	VAP-01-09_105_110	VAP-01-10_115_120	VAP-01-11_125_130
Date Completed:			5/16/2022	5/17/2002	5/17/2022	5/17/2022	5/18/2022	5/18/2022	5/18/2022	5/19/2022	5/19/2022	5/19/2022	5/20/2022
Sampling Depth (Ft bgs):			15-20	35-40	45-50	55-60	65-70	75-80	85-90	95-100	105-110	115-120	125-130
1,1-Dichloroethane	880	740	<1.0	<1.0	<1.0	<1.0	<1.0	1.9	2.2	2.3	2.5	<1.0	<1.0
cis-1,2-Dichloroethene	70 (A)	620	<1.0	<1.0	1.2	2.1	9.5	21	19	20	18	14	13
trans-1,2-Dichloroethene	100 (A)	1,500 (X)	<1.0	<1.0	<1.0	<1.0	<1.0	1.2	1.3	1.4	1.6	1.7	2.7
Tetrachloroethene	5.0 (A)	60 (X)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	790 (E)	270	<1.0	15	8.5	15	<1.0	1.5	4.7	<1.0	1.5	1.4	<1.0
Trichloroethene	5.0 (A)	200 (X)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl chloride	2.0 (A)	13 (X)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
TOTAL CVOCs							9.5	24.1	22.5	23.7	22.1	15.7	15.7
TOTAL VOCs							9.5	25.6	27.2	23.7	23.6	17.1	15.7

Table 1
Detected Analytes in Groundwater - Vertical Aquifer Profiling Borings
Village of Milford Central Park
Milford, Michigan



VAP Boring ID:	RDW Criteria	GSI Criteria	VAP-02-01_15_20	VAP-02-02_25_30	VAP-02-03_35_40	VAP-02-04_45_50	VAP-02-05_55_60	VAP-02-06_65_70	VAP-02-07_75_80	VAP-02-08_85_90	VAP-02-09_95_100	VAP-02-10_105_110	VAP-02-11_115-120
Date Completed:			5/23/2022	5/23/2022	5/23/2022	5/24/2022	5/24/2022	5/24/2022	5/24/2022	5/24/2022	5/25/2022	5/25/2022	5/25/2022
Sampling Depth (Ft bgs):			15-20	25-30	35-40	45-50	55-60	65-70	75-80	85-90	95-100	105-110	115-120
1,1-Dichloroethane	880	740	<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 (A)	620	<1.0	<1.0	<1.0	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-Dichloroethene	100 (A)	1,500 (X)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene	5.0 (A)	60 (X)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	790 (E)	270	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Trichloroethene	5.0 (A)	200 (X)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl chloride	2.0 (A)	13 (X)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
TOTAL CVOCs						1.5							
TOTAL VOCs						1.5							

Table 1
Detected Analytes in Groundwater - Vertical Aquifer Profiling Borings
Village of Milford Central Park
Milford, Michigan



VAP Boring ID:	RDW Criteria	GSI Criteria	VAP-03-01_15_20	VAP-03-02_25_30	VAP-03-03_35_40	VAP-03-04_45_50	VAP-03-05_55_60	VAP-03-06_65_70	VAP-03-07_75_80	VAP-03-08_85_90	VAP-03-09_95_100	VAP-03-10_105_110
Date Completed:			5/23/2022	5/23/2022	5/24/2022	5/24/2022	5/24/2022	5/24/2022	5/24/2022	5/25/2022	5/25/2022	5/25/2022
Sampling Depth (Ft bgs):			15-20	25-30	35-40	45-50	55-60	65-70	75-80	85-90	95-100	105-110
1,1-Dichloroethane	880	740	<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 (A)	620	<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 (A)	1,500 (X)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Tetrachloroethene	5.0 (A)	60 (X)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Toluene	790 (E)	270	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.0
Trichloroethene	5.0 (A)	200 (X)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl chloride	2.0 (A)	13 (X)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0

TOTAL CVOCs												
TOTAL VOCs			1.5									1.0

Notes:
All concentrations are in micrograms per liter (µg/L).
(A) Criterion is the State of Michigan Drinking Water Standard established pursuant to Section 5 of the Safe Drinking Water Act No. 399 of the Public Acts of 1976.
(X) The Groundwater Surface Water Interface (GSI) criterion shown is not protective for surface water that is used as a drinking water source.
(E) Criterion is the aesthetic drinking water value, as required by Section 20120a(5) of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA).

Acronyms and Abbreviations:
EGLE Michigan Department of Environment, Great Lakes and Energy
ft bgs feet below ground surface
GSI Groundwater/Surface Water Interface
ID Insufficient data to develop criterion
RDW Residential Drinking Water
VAP vertical aquifer profile



Thursday, May 19, 2022

Fibertec Project Number: A08538
Project Identification: TRW Milford (30046730) /30046730
Submittal Date: 05/17/2022

Mr. Christian Seidel
Arcadis U.S., Inc. - Novi
28550 Cabot Drive
Suite 500
Novi, MI 48377

Dear Mr. Seidel,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note TO-15 samples will be disposed of 7 calendar days after the reporting date. All other samples will be disposed of 30 days after the reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,

A handwritten signature in black ink that reads "Sue Ricketts". The signature is fluid and cursive.

By Sue Ricketts at 12:13 PM, May 19, 2022

For Daryl P. Strandbergh
Laboratory Director

Enclosures

1914 Holloway Drive
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8660 S. Mackinaw Trail

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Analytical Laboratory Report
Laboratory Project Number: A08538
Laboratory Sample Number: A08538-001

Order: A08538
Date: 05/19/22

Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-01-01_15_20	Chain of Custody:	168193
Client Project Name:	TRW Milford (30046730)	Sample No:	1	Collect Date:	05/16/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	16:50

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08538-001 **Matrix: Ground Water**
Description: VAP-01-01_15_20

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Acetone	U	V+	µg/L	50	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
3. Benzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
4. Bromobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
5. Bromochloromethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
6. Bromodichloromethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
7. Bromoform	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
8. Bromomethane	U	ICV+	µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
9. 2-Butanone	U		µg/L	25	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
10. n-Butylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
13. Carbon Disulfide	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
15. Chlorobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
16. Chloroethane	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
17. Chloroform	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
18. Chloromethane	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
21. Dibromochloromethane	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
22. Dibromomethane	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
35. Ethylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
37. 2-Hexanone	U		µg/L	50	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-01-01_15_20	Chain of Custody:	168193
Client Project Name:	TRW Milford (30046730)	Sample No:	1	Collect Date:	05/16/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	16:50

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08538-001 **Matrix: Ground Water**
Description: VAP-01-01_15_20

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
38. Isopropylbenzene	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
40. Methylene Chloride	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
42. MTBE	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
43. Naphthalene	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
44. n-Propylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
45. Styrene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
48. Tetrachloroethene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
49. Toluene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
53. Trichloroethene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
59. Vinyl Chloride	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
60. m&p-Xylene	U		µg/L	2.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
61. o-Xylene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC
‡ 62. Xylenes	U		µg/L	3.0	1.0	05/18/22	VI22E18A	05/18/22 14:47	VI22E18A	SNC

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F: (231) 775-8584

Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-01-02_35_40	Chain of Custody:	168193
Client Project Name:	TRW Milford (30046730)	Sample No:	2	Collect Date:	05/17/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	11:40

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08538-002 **Matrix: Ground Water**
Description: VAP-01-02_35_40

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Acetone	U	V+	µg/L	50	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
3. Benzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
4. Bromobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
5. Bromochloromethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
6. Bromodichloromethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
7. Bromoform	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
8. Bromomethane	U	ICV+	µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
9. 2-Butanone	U		µg/L	25	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
10. n-Butylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
13. Carbon Disulfide	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
15. Chlorobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
16. Chloroethane	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
17. Chloroform	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
18. Chloromethane	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
21. Dibromochloromethane	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
22. Dibromomethane	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
35. Ethylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
37. 2-Hexanone	U		µg/L	50	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-01-02_35_40	Chain of Custody:	168193
Client Project Name:	TRW Milford (30046730)	Sample No:	2	Collect Date:	05/17/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	11:40

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08538-002 **Matrix: Ground Water**
Description: VAP-01-02_35_40

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
38. Isopropylbenzene	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
40. Methylene Chloride	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
42. MTBE	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
43. Naphthalene	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
44. n-Propylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
45. Styrene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
48. Tetrachloroethene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
49. Toluene	15		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
53. Trichloroethene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
59. Vinyl Chloride	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
60. m&p-Xylene	U		µg/L	2.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
61. o-Xylene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC
‡ 62. Xylenes	U		µg/L	3.0	1.0	05/18/22	VI22E18A	05/18/22 15:13	VI22E18A	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-01-03_45_50	Chain of Custody:	168193
Client Project Name:	TRW Milford (30046730)	Sample No:	3	Collect Date:	05/17/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	13:45

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08538-003 **Matrix: Ground Water**
Description: VAP-01-03_45_50

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Acetone	U	V+	µg/L	50	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
3. Benzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
4. Bromobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
5. Bromochloromethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
6. Bromodichloromethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
7. Bromoform	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
8. Bromomethane	U	ICV+	µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
9. 2-Butanone	U		µg/L	25	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
10. n-Butylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
13. Carbon Disulfide	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
15. Chlorobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
16. Chloroethane	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
17. Chloroform	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
18. Chloromethane	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
21. Dibromochloromethane	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
22. Dibromomethane	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
30. cis-1,2-Dichloroethene	1.2		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
35. Ethylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
37. 2-Hexanone	U		µg/L	50	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-01-03_45_50	Chain of Custody:	168193
Client Project Name:	TRW Milford (30046730)	Sample No:	3	Collect Date:	05/17/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	13:45

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08538-003 **Matrix: Ground Water**
Description: VAP-01-03_45_50

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
38. Isopropylbenzene	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
40. Methylene Chloride	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
42. MTBE	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
43. Naphthalene	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
44. n-Propylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
45. Styrene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
48. Tetrachloroethene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
49. Toluene	8.5		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
53. Trichloroethene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
59. Vinyl Chloride	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
60. m&p-Xylene	U		µg/L	2.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
61. o-Xylene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC
‡ 62. Xylenes	U		µg/L	3.0	1.0	05/18/22	VI22E18A	05/18/22 15:39	VI22E18A	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	Equipment Pump	Chain of Custody:	168193
Client Project Name:	TRW Milford (30046730)	Sample No:	4	Collect Date:	05/17/22
Client Project No:	30046730	Sample Matrix:	Blank: Equipment	Collect Time:	14:05

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08538-004
Description: Equipment Pump
Matrix: Blank: Equipment

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Acetone	U	V+	µg/L	50	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
3. Benzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
4. Bromobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
5. Bromochloromethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
6. Bromodichloromethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
7. Bromoform	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
8. Bromomethane	U	ICV+	µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
9. 2-Butanone	U		µg/L	25	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
10. n-Butylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
13. Carbon Disulfide	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
15. Chlorobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
16. Chloroethane	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
17. Chloroform	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
18. Chloromethane	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
21. Dibromochloromethane	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
22. Dibromomethane	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
35. Ethylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
37. 2-Hexanone	U		µg/L	50	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	Equipment Pump	Chain of Custody:	168193
Client Project Name:	TRW Milford (30046730)	Sample No:	4	Collect Date:	05/17/22
Client Project No:	30046730	Sample Matrix:	Blank: Equipment	Collect Time:	14:05

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08538-004 **Matrix: Blank: Equipment**
Description: Equipment Pump

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
38. Isopropylbenzene	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
40. Methylene Chloride	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
42. MTBE	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
43. Naphthalene	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
44. n-Propylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
45. Styrene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
48. Tetrachloroethene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
49. Toluene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
53. Trichloroethene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
59. Vinyl Chloride	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
60. m&p-Xylene	U		µg/L	2.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
61. o-Xylene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC
‡ 62. Xylenes	U		µg/L	3.0	1.0	05/18/22	VI22E18A	05/18/22 13:55	VI22E18A	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	Equipment Screen	Chain of Custody:	168193
Client Project Name:	TRW Milford (30046730)	Sample No:	5	Collect Date:	05/17/22
Client Project No:	30046730	Sample Matrix:	Blank: Equipment	Collect Time:	14:10

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08538-005 **Matrix: Blank: Equipment**
Description: Equipment Screen

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	V+	µg/L	50	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
3. Benzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
4. Bromobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
5. Bromochloromethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
6. Bromodichloromethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
7. Bromoform	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
8. Bromomethane	U	ICV+	µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
9. 2-Butanone	U		µg/L	25	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
10. n-Butylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
13. Carbon Disulfide	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
15. Chlorobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
16. Chloroethane	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
17. Chloroform	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
18. Chloromethane	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
21. Dibromochloromethane	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
22. Dibromomethane	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
35. Ethylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
37. 2-Hexanone	U		µg/L	50	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	Equipment Screen	Chain of Custody:	168193
Client Project Name:	TRW Milford (30046730)	Sample No:	5	Collect Date:	05/17/22
Client Project No:	30046730	Sample Matrix:	Blank: Equipment	Collect Time:	14:10

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08538-005 **Matrix: Blank: Equipment**
Description: Equipment Screen

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
38. Isopropylbenzene	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
40. Methylene Chloride	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
42. MTBE	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
43. Naphthalene	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
44. n-Propylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
45. Styrene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
48. Tetrachloroethene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
49. Toluene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
53. Trichloroethene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
59. Vinyl Chloride	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
60. m&p-Xylene	U		µg/L	2.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
61. o-Xylene	U		µg/L	1.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC
‡ 62. Xylenes	U		µg/L	3.0	1.0	05/18/22	VI22E18A	05/18/22 14:21	VI22E18A	SNC

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Definitions/ Qualifiers:

- A:** Spike recovery or precision unusable due to dilution.
B: The analyte was detected in the associated method blank.
E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
J: The concentration is an estimated value.
M: Modified Method
U: The analyte was not detected at or above the reporting limit.
X: Matrix Interference has resulted in a raised reporting limit or distorted result.
W: Results reported on a wet-weight basis.
***:** Value reported is outside QC limits

Exception Summary:

- ICV+** : Recovery in the associated initial calibration verification sample exceeds the upper control limit. Results may be biased high.
V+ : Recovery in the associated continuing calibration verification sample (CCV) exceeds the upper control limit. Results may be biased high.

Analysis Locations:

All analyses performed in Holt.



Accreditation Number(s):

T104704518-19-8 (TX)

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VI22E18A: Method Blank (MB)

EPA 8260D

Run Time: VI22E18A.MB 05/18/2022 12:10 [VI22E18A]

Analyte	MB Result	MB Qualifier	MB RDL
	µg/L		µg/L
Acetone	U		50
Acrylonitrile	U		2.0
Benzene	U		1.0
Bromobenzene	U		1.0
Bromochloromethane	U		1.0
Bromodichloromethane	U		1.0
Bromoform	U		1.0
Bromomethane	U		5.0
2-Butanone	U		25
n-Butylbenzene	U		1.0
sec-Butylbenzene	U		1.0
tert-Butylbenzene	U		1.0
Carbon Disulfide	U		5.0
Carbon Tetrachloride	U		1.0
Chlorobenzene	U		1.0
Chloroethane	U		5.0
Chloroform	U		1.0
Chloromethane	U		5.0
2-Chlorotoluene	U		5.0
1,2-Dibromo-3-chloropropane (SIM)	U		1.0
Dibromochloromethane	U		5.0
Dibromomethane	U		5.0
1,2-Dichlorobenzene	U		1.0
1,3-Dichlorobenzene	U		1.0
1,4-Dichlorobenzene	U		1.0
Dichlorodifluoromethane	U		5.0
1,1-Dichloroethane	U		1.0
1,2-Dichloroethane	U		1.0
1,1-Dichloroethene	U		1.0
cis-1,2-Dichloroethene	U		1.0
trans-1,2-Dichloroethene	U		1.0
1,2-Dichloropropane	U		1.0
cis-1,3-Dichloropropene	U		0.50

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VI22E18A: Method Blank (MB)

EPA 8260D

Run Time: VI22E18A.MB 05/18/2022 12:10 [VI22E18A]

Analyte	MB Result	MB Qualifier	MB RDL
	µg/L		µg/L
trans-1,3-Dichloropropene	U		0.50
Ethylbenzene	U		1.0
Ethylene Dibromide	U		1.0
2-Hexanone	U		50
Isopropylbenzene	U		5.0
4-Methyl-2-pentanone	U		50
Methylene Chloride	U		5.0
2-Methylnaphthalene	U		5.0
MTBE	U		5.0
Naphthalene	U		5.0
n-Propylbenzene	U		1.0
Styrene	U		1.0
1,1,1,2-Tetrachloroethane	U		1.0
1,1,2,2-Tetrachloroethane	U		1.0
Tetrachloroethene	U		1.0
Toluene	U		1.0
1,2,4-Trichlorobenzene	U		5.0
1,1,1-Trichloroethane	U		1.0
1,1,2-Trichloroethane	U		1.0
Trichloroethene	U		1.0
Trichlorofluoromethane	U		1.0
1,2,3-Trichloropropane	U		1.0
1,2,3-Trimethylbenzene	U		1.0
1,2,4-Trimethylbenzene	U		1.0
1,3,5-Trimethylbenzene	U		1.0
Vinyl Chloride	U		1.0
m&p-Xylene	U		2.0
o-Xylene	U		1.0
4-Bromofluorobenzene(S)	94		80-120
Dibromofluoromethane(S)	95		80-120
1,2-Dichloroethane-d4(S)	92		80-120
Toluene-d8(S)	97		80-120

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VI22E18A: Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD)

EPA 8260D

Run Time: VI22E18A.LCS: 05/18/2022 10:52 [VI22E18A] VI22E18A.LCSD: 05/18/2022 11:18 [VI22E18A]

Analyte	LCS Spike Amount µg/L	LCS Result µg/L	LCS Rec. %	Rec. Limits %	LCS Qualifier	LCSD Spike Amount µg/L	LCSD Result µg/L	LCSD Rec. %	LCSD Qualifier	RPD %	RPD Limits %	RPD Qualifier
Acetone	50.0	30.9	62	54-140		50.0	30.0	60		3	20	
Acrylonitrile	50.0	47.4	95	70-130		50.0	47.0	94		1	20	
Benzene	50.0	46.4	93	80-120		50.0	45.8	92		1	20	
Bromobenzene	50.0	45.4	91	75-125		50.0	45.6	91		0	20	
Bromochloromethane	50.0	43.6	87	70-130		50.0	42.4	85		2	20	
Bromodichloromethane	50.0	46.1	92	75-120		50.0	46.0	92		0	20	
Bromoform	50.0	51.6	103	70-130		50.0	51.0	102		1	20	
Bromomethane	50.0	60.1	120	68-135		50.0	58.3	117		3	20	
2-Butanone	50.0	41.7	83	70-148		50.0	40.9	82		1	20	
n-Butylbenzene	50.0	56.4	113	70-133		50.0	55.9	112		1	20	
sec-Butylbenzene	50.0	50.9	102	70-125		50.0	50.5	101		1	20	
tert-Butylbenzene	50.0	50.9	102	70-130		50.0	50.7	101		1	20	
Carbon Disulfide	50.0	45.9	92	70-130		50.0	43.6	87		6	20	
Carbon Tetrachloride	50.0	49.1	98	70-130		50.0	47.6	95		3	20	
Chlorobenzene	50.0	48.7	97	80-120		50.0	48.3	97		0	20	
Chloroethane	50.0	46.1	92	61-130		50.0	45.0	90		2	20	
Chloroform	50.0	43.6	87	80-120		50.0	42.7	85		2	20	
Chloromethane	50.0	48.7	97	67-125		50.0	48.4	97		0	20	
2-Chlorotoluene	50.0	47.6	95	75-125		50.0	47.3	95		0	20	
1,2-Dibromo-3-chloropropane (SIM)	50.0	47.9	96	70-130		50.0	48.4	97		1	20	
Dibromochloromethane	50.0	46.2	92	70-130		50.0	46.9	94		2	20	
Dibromomethane	50.0	50.7	101	75-125		50.0	51.2	102		1	20	
1,2-Dichlorobenzene	50.0	50.0	100	70-120		50.0	50.7	101		1	20	
1,3-Dichlorobenzene	50.0	51.5	103	75-125		50.0	51.5	103		0	20	
1,4-Dichlorobenzene	50.0	48.6	97	75-125		50.0	48.5	97		0	20	
Dichlorodifluoromethane	50.0	47.6	95	70-136		50.0	44.8	90		5	20	
1,1-Dichloroethane	50.0	44.2	88	70-130		50.0	42.5	85		3	20	
1,2-Dichloroethane	50.0	42.5	85	70-130		50.0	42.5	85		0	20	
1,1-Dichloroethene	50.0	42.9	86	78-120		50.0	41.0	82		5	20	
cis-1,2-Dichloroethene	50.0	42.7	85	70-125		50.0	41.4	83		2	20	
trans-1,2-Dichloroethene	50.0	46.1	92	70-130		50.0	44.2	88		4	20	
1,2-Dichloropropane	50.0	47.2	94	80-121		50.0	46.9	94		0	20	
cis-1,3-Dichloropropene	50.0	47.6	95	70-130		50.0	47.3	95		0	20	

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VI22E18A: Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD)

EPA 8260D

Run Time: VI22E18A.LCS: 05/18/2022 10:52 [VI22E18A] VI22E18A.LCSD: 05/18/2022 11:18 [VI22E18A]

Analyte	LCS Spike Amount µg/L	LCS Result µg/L	LCS Rec. %	Rec. Limits %	LCS Qualifier	LCSD Spike Amount µg/L	LCSD Result µg/L	LCSD Rec. %	LCSD Qualifier	RPD %	RPD Limits %	RPD Qualifier
trans-1,3-Dichloropropene	50.0	51.6	103	70-132		50.0	51.5	103		0	20	
Ethylbenzene	50.0	49.7	99	80-120		50.0	48.7	97		2	20	
Ethylene Dibromide	50.0	50.1	100	80-120		50.0	49.8	100		0	20	
2-Hexanone	50.0	43.8	88	70-130		50.0	43.3	87		1	20	
Isopropylbenzene	50.0	52.0	104	75-125		50.0	50.8	102		2	20	
4-Methyl-2-pentanone	50.0	50.8	102	70-130		50.0	51.5	103		1	20	
Methylene Chloride	50.0	43.3	87	70-130		50.0	42.2	84		4	20	
2-Methylnaphthalene	50.0	52.3	105	70-130		50.0	51.7	103		2	20	
MTBE	50.0	44.9	90	70-125		50.0	44.5	89		1	20	
Naphthalene	50.0	52.7	105	70-130		50.0	53.1	106		1	20	
n-Propylbenzene	50.0	50.3	101	70-130		50.0	49.9	100		1	20	
Styrene	50.0	46.7	93	70-130		50.0	46.4	93		0	20	
1,1,1,2-Tetrachloroethane	50.0	49.9	100	80-130		50.0	50.2	100		0	20	
1,1,2,2-Tetrachloroethane	50.0	54.0	108	70-130		50.0	54.0	108		0	20	
Tetrachloroethene	50.0	54.1	108	70-130		50.0	52.8	106		2	20	
Toluene	50.0	48.7	97	80-120		50.0	47.8	96		1	20	
1,2,4-Trichlorobenzene	50.0	56.3	113	70-130		50.0	56.3	113		0	20	
1,1,1-Trichloroethane	50.0	46.4	93	70-130		50.0	44.8	90		3	20	
1,1,2-Trichloroethane	50.0	47.5	95	75-125		50.0	47.3	95		0	20	
Trichloroethene	50.0	45.0	90	71-125		50.0	44.4	89		1	20	
Trichlorofluoromethane	50.0	49.8	100	70-133		50.0	48.0	96		4	20	
1,2,3-Trichloropropane	50.0	49.5	99	75-125		50.0	50.2	100		1	20	
1,2,3-Trimethylbenzene	50.0	47.9	96	70-130		50.0	48.5	97		1	20	
1,2,4-Trimethylbenzene	50.0	51.5	103	75-130		50.0	51.6	103		0	20	
1,3,5-Trimethylbenzene	50.0	50.9	102	75-130		50.0	50.8	102		0	20	
Vinyl Chloride	50.0	48.5	97	74-125		50.0	45.5	91		6	20	
m&p-Xylene	100	99.6	100	75-130		100	97.7	98		2	20	
o-Xylene	50.0	50.0	100	80-120		50.0	49.4	99		1	20	
4-Bromofluorobenzene(S)			99	80-120				97				
Dibromofluoromethane(S)			95	80-120				94				
1,2-Dichloroethane-d4(S)			88	80-120				88				
Toluene-d8(S)			97	80-120				97				

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Definitions/ Qualifiers:

U: The analyte was not detected at or above the Reporting Limit (RL).
*****: Value reported is outside QC limits

Exception Summary:

Exceptions have been properly noted on reported results or affected samples have been scheduled for reanalysis when appropriate.

Report Generated By:



By Sue Ricketts at 12:20 PM, May 19, 2022

Client Name: <u>TRW</u>				MATRIX (SEE RIGHT CORNER FOR CODE)	# OF CONTAINERS	VUC 8260	PARAMETERS										Matrix Code			Deliverables	
Contact Person: <u>Christian Seidel</u>							HOLD SAMPLE	S	Soil	GW	Ground Water				Level 2						
Project Name/ Number: <u>TRW Milford</u>								A	Air	SW	Surface Water				Level 3						
Email distribution list: <u>John.McInnis@krc-cadis.com</u>								O	Oil	WW	Waste Water				Level 4						
Quote# <u>849</u>								P	Wipe	X	Other: Specify				EDD						
Purchase Order#																					
Date	Time	Sample #	Client Sample Descriptor																		
5/16	16:50	1	VAP-01-01-15-26	GU	3	X													Remarks: <u>484r TAT C.S.</u>		
5/17	11:40	2	VAP-02-02-35-40	GU	3	X													<u>484r TAT</u>		
5/17	13:45	3	VAP-01-03-45-50	GU	3	X													<u>484r TAT</u>		
5/17	14:05	4	Equipment pump	X	3	X													<u>Lab water</u>		
5/17	14:10	5	Equipment screen	X	3	X													<u>Lab water</u>		
				Received By Lab																	
				MAY 17 2022																	
				Initials: <u>SS</u>																	
Comments:																					
Sampled/Relinquished By: <u>Christian Seidel</u>				Date/ Time: <u>5/16/2022 18:25</u>				Received By: <u>Aracelis Frigge</u>													
Relinquished By: <u>Aracelis Frigge</u>				Date/ Time: <u>5/17/2022 6:55</u>				Received By: <u>Christian Seidel</u>													
Relinquished By: <u>Christian Seidel</u>				Date/ Time: <u>5/17/2022 14:43</u>				Received By Laboratory: <u>Dale A. Shad 5/17/22 2:43</u>													
Turnaround Time ALL RESULTS WILL BE SENT BY THE END OF THE BUSINESS DAY _____ 1 bus. day _____ 2 bus. days _____ 3 bus. days _____ 4 bus. days _____ 5-7 bus. days (standard) Other (specify time/date requirement): _____																					
Fibertec project number: <u>A08538</u>												Received On Ice									
Temperature upon receipt at Lab: <u>4.2°C</u>																					
Please see back for terms and conditions																					

Dale A. Shad 5/17/22 16:30



Monday, May 23, 2022

Fibertec Project Number: A08565 Amended
Project Identification: TRW Milford (30046730) /30046730
Submittal Date: 05/18/2022

Mr. Christian Seidel
Arcadis U.S., Inc. - Novi
28550 Cabot Drive
Suite 500
Novi, MI 48377

Dear Mr. Seidel,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note TO-15 samples will be disposed of 7 calendar days after the reporting date. All other samples will be disposed of 30 days after the reporting date.

This report has been amended to correct the description on sample -002. This replaces the report issued on May 20th, 2022.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,

A handwritten signature in black ink that reads "Bailey Welch".

By Bailey Welch at 8:11 AM, May 23, 2022

For Daryl P. Strandbergh
Laboratory Director

Enclosures

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-01-04_55_60	Chain of Custody:	168192
Client Project Name:	TRW Milford (30046730)	Sample No:	1	Collect Date:	05/17/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	16:20

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Method: EPA 5030C/EPA 8260D

Aliquot ID: A08565-001

Matrix: Ground Water

Description: VAP-01-04_55_60

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	V+	µg/L	50	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
3. Benzene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
4. Bromobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
5. Bromochloromethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 11:26	VI22E20A	SNC
6. Bromodichloromethane	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
7. Bromoform	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
8. Bromomethane	U	ICV+	µg/L	5.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
9. 2-Butanone	U		µg/L	25	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
10. n-Butylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
13. Carbon Disulfide	U		µg/L	5.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
15. Chlorobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
16. Chloroethane	U		µg/L	5.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
17. Chloroform	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
18. Chloromethane	U		µg/L	5.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
21. Dibromochloromethane	U		µg/L	5.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
22. Dibromomethane	U		µg/L	5.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 11:26	VI22E20A	SNC
30. cis-1,2-Dichloroethene	2.1		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
35. Ethylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
37. 2-Hexanone	U	V+	µg/L	50	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-01-04_55_60	Chain of Custody:	168192
Client Project Name:	TRW Milford (30046730)	Sample No:	1	Collect Date:	05/17/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	16:20

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Method: EPA 5030C/EPA 8260D

Aliquot ID: A08565-001

Matrix: Ground Water

Description: VAP-01-04_55_60

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
38. Isopropylbenzene	U		µg/L	5.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
40. Methylene Chloride	U		µg/L	5.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
42. MTBE	U		µg/L	5.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
43. Naphthalene	U		µg/L	5.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
44. n-Propylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
45. Styrene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
48. Tetrachloroethene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
49. Toluene	15		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
53. Trichloroethene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
59. Vinyl Chloride	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
60. m&p-Xylene	U		µg/L	2.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
61. o-Xylene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC
‡ 62. Xylenes	U		µg/L	3.0	1.0	05/18/22	VI22E18B	05/19/22 01:16	VI22E18B	BRC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-01-05_65-70	Chain of Custody:	168192
Client Project Name:	TRW Milford (30046730)	Sample No:	2	Collect Date:	05/18/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	10:15

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Method: EPA 5030C/EPA 8260D

Aliquot ID: A08565-002

Matrix: Ground Water

Description: VAP-01-05_65-70

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	V+	µg/L	50	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
3. Benzene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
4. Bromobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
5. Bromochloromethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 11:52	VI22E20A	SNC
6. Bromodichloromethane	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
7. Bromoform	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
8. Bromomethane	U	ICV+	µg/L	5.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
9. 2-Butanone	U		µg/L	25	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
10. n-Butylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
13. Carbon Disulfide	U		µg/L	5.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
15. Chlorobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
16. Chloroethane	U		µg/L	5.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
17. Chloroform	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
18. Chloromethane	U		µg/L	5.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
21. Dibromochloromethane	U		µg/L	5.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
22. Dibromomethane	U		µg/L	5.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 11:52	VI22E20A	SNC
30. cis-1,2-Dichloroethene	9.5		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
35. Ethylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
37. 2-Hexanone	U	V+	µg/L	50	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-01-05_65-70	Chain of Custody:	168192
Client Project Name:	TRW Milford (30046730)	Sample No:	2	Collect Date:	05/18/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	10:15

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08565-002 **Matrix: Ground Water**
Description: VAP-01-05_65-70

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
38. Isopropylbenzene	U		µg/L	5.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
40. Methylene Chloride	U		µg/L	5.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
42. MTBE	U		µg/L	5.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
43. Naphthalene	U		µg/L	5.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
44. n-Propylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
45. Styrene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
48. Tetrachloroethene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
49. Toluene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
53. Trichloroethene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
59. Vinyl Chloride	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
60. m&p-Xylene	U		µg/L	2.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
61. o-Xylene	U		µg/L	1.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC
‡ 62. Xylenes	U		µg/L	3.0	1.0	05/18/22	VI22E18B	05/19/22 01:43	VI22E18B	BRC

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Definitions/ Qualifiers:

- A:** Spike recovery or precision unusable due to dilution.
B: The analyte was detected in the associated method blank.
E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
J: The concentration is an estimated value.
M: Modified Method
U: The analyte was not detected at or above the reporting limit.
X: Matrix Interference has resulted in a raised reporting limit or distorted result.
W: Results reported on a wet-weight basis.
***:** Value reported is outside QC limits

Exception Summary:

- ICV+** : Recovery in the associated initial calibration verification sample exceeds the upper control limit. Results may be biased high.
V+ : Recovery in the associated continuing calibration verification sample (CCV) exceeds the upper control limit. Results may be biased high.

Analysis Locations:

All analyses performed in Holt.



Accreditation Number(s):

T104704518-19-8 (TX)

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VI22E18B: Method Blank (MB)

EPA 8260D

Run Time: VI22E18B.MB 05/19/2022 00:50 [VI22E18B]

Analyte	MB Result µg/L	MB Qualifier	MB RDL µg/L
Acetone	U		50
Acrylonitrile	U		2.0
Benzene	U		1.0
Bromobenzene	U		1.0
Bromodichloromethane	U		1.0
Bromoform	U		1.0
Bromomethane	U		5.0
2-Butanone	U		25
n-Butylbenzene	U		1.0
sec-Butylbenzene	U		1.0
tert-Butylbenzene	U		1.0
Carbon Disulfide	U		5.0
Carbon Tetrachloride	U		1.0
Chlorobenzene	U		1.0
Chloroethane	U		5.0
Chloroform	U		1.0
Chloromethane	U		5.0
2-Chlorotoluene	U		5.0
1,2-Dibromo-3-chloropropane (SIM)	U		1.0
Dibromochloromethane	U		5.0
Dibromomethane	U		5.0
1,2-Dichlorobenzene	U		1.0
1,3-Dichlorobenzene	U		1.0
1,4-Dichlorobenzene	U		1.0
Dichlorodifluoromethane	U		5.0
1,1-Dichloroethane	U		1.0
1,2-Dichloroethane	U		1.0
cis-1,2-Dichloroethene	U		1.0
trans-1,2-Dichloroethene	U		1.0
1,2-Dichloropropane	U		1.0
cis-1,3-Dichloropropene	U		0.50
trans-1,3-Dichloropropene	U		0.50
Ethylbenzene	U		1.0

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VI22E18B: Method Blank (MB)

EPA 8260D

Run Time: VI22E18B.MB 05/19/2022 00:50 [VI22E18B]

Analyte	MB Result	MB Qualifier	MB RDL
µg/L			µg/L
Ethylene Dibromide	U		1.0
2-Hexanone	U		50
Isopropylbenzene	U		5.0
4-Methyl-2-pentanone	U		50
Methylene Chloride	U		5.0
2-Methylnaphthalene	U		5.0
MTBE	U		5.0
Naphthalene	U		5.0
n-Propylbenzene	U		1.0
Styrene	U		1.0
1,1,1,2-Tetrachloroethane	U		1.0
1,1,2,2-Tetrachloroethane	U		1.0
Tetrachloroethene	U		1.0
Toluene	U		1.0
1,2,4-Trichlorobenzene	U		5.0
1,1,1-Trichloroethane	U		1.0
1,1,2-Trichloroethane	U		1.0
Trichloroethene	U		1.0
Trichlorofluoromethane	U		1.0
1,2,3-Trichloropropane	U		1.0
1,2,3-Trimethylbenzene	U		1.0
1,2,4-Trimethylbenzene	U		1.0
1,3,5-Trimethylbenzene	U		1.0
Vinyl Chloride	U		1.0
m&p-Xylene	U		2.0
o-Xylene	U		1.0
4-Bromofluorobenzene(S)	95		80-120
Dibromofluoromethane(S)	94		80-120
1,2-Dichloroethane-d4(S)	94		80-120
Toluene-d8(S)	97		80-120

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VI22E18B: Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD)

EPA 8260D

Run Time: VI22E18B.LCS: 05/18/2022 23:31 [VI22E18B] VI22E18B.LCSD: 05/18/2022 23:57 [VI22E18B]

Analyte	LCS Spike Amount µg/L	LCS Result µg/L	LCS Rec. %	Rec. Limits %	LCS Qualifier	LCSD Spike Amount µg/L	LCSD Result µg/L	LCSD Rec. %	LCSD Qualifier	RPD %	RPD Limits %	RPD Qualifier
Acetone	50.0	29.0	58	54-140		50.0	28.6	57		2	20	
Acrylonitrile	50.0	43.1	86	70-130		50.0	43.7	87		1	20	
Benzene	50.0	44.8	90	80-120		50.0	43.6	87		3	20	
Bromobenzene	50.0	43.8	88	75-125		50.0	42.0	84		5	20	
Bromodichloromethane	50.0	45.7	91	75-120		50.0	45.1	90		1	20	
Bromoform	50.0	53.4	107	70-130		50.0	52.3	105		2	20	
Bromomethane	50.0	54.9	110	68-135		50.0	52.1	104		6	20	
2-Butanone	50.0	38.7	77	70-148		50.0	37.7	75		3	20	
n-Butylbenzene	50.0	53.3	107	70-133		50.0	51.0	102		5	20	
sec-Butylbenzene	50.0	49.3	99	70-125		50.0	46.9	94		5	20	
tert-Butylbenzene	50.0	50.4	101	70-130		50.0	48.2	96		5	20	
Carbon Disulfide	50.0	40.2	80	70-130		50.0	38.6	77		4	20	
Carbon Tetrachloride	50.0	50.7	101	70-130		50.0	48.7	97		4	20	
Chlorobenzene	50.0	48.0	96	80-120		50.0	47.2	94		2	20	
Chloroethane	50.0	40.7	81	61-130		50.0	40.2	80		1	20	
Chloroform	50.0	42.8	86	80-120		50.0	41.1	82		5	20	
Chloromethane	50.0	42.3	85	67-125		50.0	43.3	87		2	20	
2-Chlorotoluene	50.0	46.2	92	75-125		50.0	44.3	89		3	20	
1,2-Dibromo-3-chloropropane (SIM)	50.0	50.1	100	70-130		50.0	48.1	96		4	20	
Dibromochloromethane	50.0	47.8	96	70-130		50.0	47.1	94		2	20	
Dibromomethane	50.0	52.3	105	75-125		50.0	50.8	102		3	20	
1,2-Dichlorobenzene	50.0	50.0	100	70-120		50.0	48.2	96		4	20	
1,3-Dichlorobenzene	50.0	50.9	102	75-125		50.0	48.7	97		5	20	
1,4-Dichlorobenzene	50.0	48.1	96	75-125		50.0	45.8	92		4	20	
Dichlorodifluoromethane	50.0	45.1	90	70-136		50.0	43.0	86		5	20	
1,1-Dichloroethane	50.0	40.7	81	70-130		50.0	39.7	79		3	20	
1,2-Dichloroethane	50.0	42.8	86	70-130		50.0	42.3	85		1	20	
cis-1,2-Dichloroethene	50.0	39.3	79	70-125		50.0	38.6	77		3	20	
trans-1,2-Dichloroethene	50.0	42.3	85	70-130		50.0	41.1	82		4	20	
1,2-Dichloropropane	50.0	44.7	89	80-121		50.0	44.4	89		0	20	
cis-1,3-Dichloropropene	50.0	45.5	91	70-130		50.0	44.6	89		2	20	
trans-1,3-Dichloropropene	50.0	49.9	100	70-132		50.0	49.9	100		0	20	
Ethylbenzene	50.0	48.5	97	80-120		50.0	47.3	95		2	20	

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VI22E18B: Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD)

EPA 8260D

Run Time: VI22E18B.LCS: 05/18/2022 23:31 [VI22E18B] VI22E18B.LCSD: 05/18/2022 23:57 [VI22E18B]

Analyte	LCS Spike Amount µg/L	LCS Result µg/L	LCS Rec. %	Rec. Limits %	LCS Qualifier	LCSD Spike Amount µg/L	LCSD Result µg/L	LCSD Rec. %	LCSD Qualifier	RPD %	RPD Limits %	RPD Qualifier
Ethylene Dibromide	50.0	49.8	100	80-120		50.0	48.9	98		2	20	
2-Hexanone	50.0	41.6	83	70-130		50.0	41.7	83		0	20	
Isopropylbenzene	50.0	51.1	102	75-125		50.0	49.7	99		3	20	
4-Methyl-2-pentanone	50.0	50.5	101	70-130		50.0	49.2	98		3	20	
Methylene Chloride	50.0	38.8	78	70-130		50.0	38.1	76		3	20	
2-Methylnaphthalene	50.0	52.2	104	70-130		50.0	49.0	98		6	20	
MTBE	50.0	42.4	85	70-125		50.0	42.0	84		1	20	
Naphthalene	50.0	52.9	106	70-130		50.0	51.0	102		4	20	
n-Propylbenzene	50.0	48.3	97	70-130		50.0	46.7	93		4	20	
Styrene	50.0	45.2	90	70-130		50.0	44.8	90		0	20	
1,1,1,2-Tetrachloroethane	50.0	50.7	101	80-130		50.0	48.8	98		3	20	
1,1,2,2-Tetrachloroethane	50.0	52.5	105	70-130		50.0	51.3	103		2	20	
Tetrachloroethene	50.0	54.3	109	70-130		50.0	52.7	105		4	20	
Toluene	50.0	47.3	95	80-120		50.0	46.2	92		3	20	
1,2,4-Trichlorobenzene	50.0	56.0	112	70-130		50.0	53.3	107		5	20	
1,1,1-Trichloroethane	50.0	45.6	91	70-130		50.0	44.1	88		3	20	
1,1,2-Trichloroethane	50.0	47.5	95	75-125		50.0	46.6	93		2	20	
Trichloroethene	50.0	45.6	91	71-125		50.0	43.8	88		3	20	
Trichlorofluoromethane	50.0	48.4	97	70-133		50.0	47.0	94		3	20	
1,2,3-Trichloropropane	50.0	50.4	101	75-125		50.0	48.6	97		4	20	
1,2,3-Trimethylbenzene	50.0	46.7	93	70-130		50.0	45.3	91		2	20	
1,2,4-Trimethylbenzene	50.0	50.5	101	75-130		50.0	48.3	97		4	20	
1,3,5-Trimethylbenzene	50.0	49.6	99	75-130		50.0	47.3	95		4	20	
Vinyl Chloride	50.0	43.9	88	74-125		50.0	42.8	86		2	20	
m&p-Xylene	100	97.2	97	75-130		100	94.8	95		2	20	
o-Xylene	50.0	48.9	98	80-120		50.0	47.7	95		3	20	
4-Bromofluorobenzene(S)			97	80-120				98				
Dibromofluoromethane(S)			91	80-120				93				
1,2-Dichloroethane-d4(S)			90	80-120				89				
Toluene-d8(S)			97	80-120				97				

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VI22E20A: Method Blank (MB)

EPA 8260D

Run Time: VI22E20A.MB 05/20/2022 11:00 [VI22E20A]

Analyte	MB Result	MB Qualifier	MB RDL
Bromochloromethane	U		1.0
1,1-Dichloroethene	U		1.0
4-Bromofluorobenzene(S)	93		80-120
Dibromofluoromethane(S)	101		80-120
1,2-Dichloroethane-d4(S)	92		80-120
Toluene-d8(S)	98		80-120

VI22E20A: Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD)

EPA 8260D

Run Time: VI22E20A.LCS: 05/20/2022 09:42 [VI22E20A] VI22E20A.LCSD: 05/20/2022 10:08 [VI22E20A]

Analyte	LCS Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier	LCSD Spike Amount	LCSD Result	LCSD Rec.	LCSD Qualifier	RPD	RPD Limits	RPD Qualifier
	µg/L	µg/L	%	%		µg/L	µg/L	%		%	%	
Bromochloromethane	50.0	48.2	96	70-130		50.0	45.7	91		5	20	
1,1-Dichloroethene	50.0	44.4	89	78-120		50.0	42.6	85		5	20	
4-Bromofluorobenzene(S)			98	80-120				98				
Dibromofluoromethane(S)			97	80-120				96				
1,2-Dichloroethane-d4(S)			87	80-120				87				
Toluene-d8(S)			99	80-120				99				

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Definitions/ Qualifiers:

U: The analyte was not detected at or above the Reporting Limit (RL).
*: Value reported is outside QC limits

Exception Summary:

Exceptions have been properly noted on reported results or affected samples have been scheduled for reanalysis when appropriate.

Report Generated By:



By Bailey Welch at 3:29 PM, May 20, 2022

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Client Name: TRW				MATRIX (SEE RIGHT CORNER FOR CODE)	# OF CONTAINERS 0928 200	PARAMETERS												Matrix Code				Deliverables	
Contact Person: Christina Seidel						HOLD SAMPLE	S	Soil	GW	Ground Water	Level 2												
Project Name/ Number: TRW Melford							A	Air	SW	Surface Water	Level 3												
Email distribution list:							O	Oil	WW	Waste Water	Level 4												
Quote#																							
Purchase Order#																							
Date	Time	Sample #	Client Sample Descriptor	Remarks:																			
5/17	16:20	4	VAP-01-04-55-60	GL	3	✓	48 L _v TAT																
5/18	10:15	5	VAP-01-05-55-60	GL	3	✗	48 L _v TAT small bubbles in on VAP																
65-70 -jfm updated																							
				Received By Lab:																			
				MAY 18 2022																			
				Initials: FEA																			
				Received On Ice																			
Comments:																							
Sampled/Relinquished By: Christina Seidel				Date/Time: 5/17/22				Received By: Aracelis bridge															
Relinquished By: Aracelis bridge				Date/Time: 5/18/22				Received By: Ch Seidel															
Relinquished By: Ch Seidel				Date/Time: 5/18/22 13:10				Received By Laboratory: Dale St. Shuck 5/18/22 1:10															
Turnaround Time ALL RESULTS WILL BE SENT BY THE END OF THE BUSINESS DAY ____ 1 bus. day ____ 2 bus. days ____ 3 bus. days ____ 4 bus. days ____ 5-7 bus. days (standard) Other (specify time/date requirement): _____																							
Fibertec project number: A08565												Temperature upon receipt at Lab: 3.5°C											
Please see back for terms and conditions																							

Dale St. Shuck 5/18/22 15:00



Monday, May 23, 2022

Fibertec Project Number: A08596
Project Identification: TRW Milford (30046730) /30046730
Submittal Date: 05/19/2022

Mr. Christian Seidel
Arcadis U.S., Inc. - Novi
28550 Cabot Drive
Suite 500
Novi, MI 48377

Dear Mr. Seidel,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note TO-15 samples will be disposed of 7 calendar days after the reporting date. All other samples will be disposed of 30 days after the reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,

By Bailey Welch at 4:27 PM, May 23, 2022

For Daryl P. Strandbergh
Laboratory Director

Enclosures

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-01-06_75_80	Chain of Custody:	168191
Client Project Name:	TRW Milford (30046730)	Sample No:	1	Collect Date:	05/18/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	14:20

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: A08596-001

Matrix: Ground Water

Method: EPA 5030C/EPA 8260D

Description: VAP-01-06_75_80

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U		µg/L	50	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
3. Benzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
4. Bromobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
5. Bromochloromethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
6. Bromodichloromethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
7. Bromoform	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
8. Bromomethane	U	L+ ICV+	µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
9. 2-Butanone	U		µg/L	25	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
10. n-Butylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
13. Carbon Disulfide	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
15. Chlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
16. Chloroethane	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
17. Chloroform	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
18. Chloromethane	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
21. Dibromochloromethane	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
22. Dibromomethane	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
27. 1,1-Dichloroethane	1.9		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
30. cis-1,2-Dichloroethene	21		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
31. trans-1,2-Dichloroethene	1.2		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
35. Ethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-01-06_75_80	Chain of Custody:	168191
Client Project Name:	TRW Milford (30046730)	Sample No:	1	Collect Date:	05/18/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	14:20

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Method: EPA 5030C/EPA 8260D

Aliquot ID: A08596-001

Matrix: Ground Water

Description: VAP-01-06_75_80

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. 2-Hexanone	U		µg/L	50	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
38. Isopropylbenzene	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
40. Methylene Chloride	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
42. MTBE	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
43. Naphthalene	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
44. n-Propylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
45. Styrene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
48. Tetrachloroethene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
49. Toluene	1.5		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
53. Trichloroethene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
59. Vinyl Chloride	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
60. m&p-Xylene	U		µg/L	2.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
61. o-Xylene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC
‡ 62. Xylenes	U		µg/L	3.0	1.0	05/20/22	VI22E20A	05/20/22 17:07	VI22E20A	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-01-07_85_90	Chain of Custody:	168191
Client Project Name:	TRW Milford (30046730)	Sample No:	2	Collect Date:	05/18/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	17:45

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: A08596-002

Matrix: Ground Water

Method: EPA 5030C/EPA 8260D

Description: VAP-01-07_85_90

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U		µg/L	50	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
3. Benzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
4. Bromobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
5. Bromochloromethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
6. Bromodichloromethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
7. Bromoform	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
8. Bromomethane	U	L+ ICV+	µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
9. 2-Butanone	U		µg/L	25	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
10. n-Butylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
13. Carbon Disulfide	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
15. Chlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
16. Chloroethane	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
17. Chloroform	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
18. Chloromethane	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
21. Dibromochloromethane	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
22. Dibromomethane	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
27. 1,1-Dichloroethane	2.2		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
30. cis-1,2-Dichloroethene	19		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
31. trans-1,2-Dichloroethene	1.3		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
35. Ethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC

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Analytical Laboratory Report
Laboratory Project Number: A08596
Laboratory Sample Number: A08596-002

Order: A08596
Date: 05/23/22

Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-01-07_85_90	Chain of Custody:	168191
Client Project Name:	TRW Milford (30046730)	Sample No:	2	Collect Date:	05/18/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	17:45

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: A08596-002 Matrix: Ground Water

Method: EPA 5030C/EPA 8260D

Description: VAP-01-07_85_90

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. 2-Hexanone	U		µg/L	50	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
38. Isopropylbenzene	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
40. Methylene Chloride	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
42. MTBE	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
43. Naphthalene	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
44. n-Propylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
45. Styrene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
48. Tetrachloroethene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
49. Toluene	4.7		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
53. Trichloroethene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
59. Vinyl Chloride	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
60. m&p-Xylene	U		µg/L	2.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
61. o-Xylene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC
‡ 62. Xylenes	U		µg/L	3.0	1.0	05/20/22	VI22E20A	05/20/22 17:33	VI22E20A	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	Equipment Flow Valve	Chain of Custody:	168191
Client Project Name:	TRW Milford (30046730)	Sample No:	3	Collect Date:	05/19/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	09:55

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Method: EPA 5030C/EPA 8260D

Aliquot ID: A08596-003

Matrix: Ground Water

Description: Equipment Flow Valve

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U		µg/L	50	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
3. Benzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
4. Bromobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
5. Bromochloromethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
6. Bromodichloromethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
7. Bromoform	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
8. Bromomethane	U	L+ ICV+	µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
9. 2-Butanone	U		µg/L	25	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
10. n-Butylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
13. Carbon Disulfide	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
15. Chlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
16. Chloroethane	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
17. Chloroform	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
18. Chloromethane	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
21. Dibromochloromethane	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
22. Dibromomethane	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
35. Ethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	Equipment Flow Valve	Chain of Custody:	168191
Client Project Name:	TRW Milford (30046730)	Sample No:	3	Collect Date:	05/19/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	09:55

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Method: EPA 5030C/EPA 8260D

Aliquot ID: A08596-003

Matrix: Ground Water

Description: Equipment Flow Valve

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. 2-Hexanone	U		µg/L	50	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
38. Isopropylbenzene	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
40. Methylene Chloride	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
42. MTBE	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
43. Naphthalene	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
44. n-Propylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
45. Styrene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
48. Tetrachloroethene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
49. Toluene	2.3		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
53. Trichloroethene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
59. Vinyl Chloride	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
60. m&p-Xylene	U		µg/L	2.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
61. o-Xylene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC
‡ 62. Xylenes	U		µg/L	3.0	1.0	05/20/22	VI22E20A	05/20/22 17:59	VI22E20A	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-01-08_95_100	Chain of Custody:	168191
Client Project Name:	TRW Milford (30046730)	Sample No:	4	Collect Date:	05/19/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	11:25

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Method: EPA 5030C/EPA 8260D

Aliquot ID: A08596-004

Matrix: Ground Water

Description: VAP-01-08_95_100

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U		µg/L	50	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
3. Benzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
4. Bromobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
5. Bromochloromethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
6. Bromodichloromethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
7. Bromoform	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
8. Bromomethane	U	F+ * L+ ICV+	µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
9. 2-Butanone	U		µg/L	25	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
10. n-Butylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
13. Carbon Disulfide	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
15. Chlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
16. Chloroethane	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
17. Chloroform	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
18. Chloromethane	U	F+	µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
21. Dibromochloromethane	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
22. Dibromomethane	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
27. 1,1-Dichloroethane	2.3		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
30. cis-1,2-Dichloroethene	20		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
31. trans-1,2-Dichloroethene	1.4		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
35. Ethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-01-08_95_100	Chain of Custody:	168191
Client Project Name:	TRW Milford (30046730)	Sample No:	4	Collect Date:	05/19/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	11:25

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Method: EPA 5030C/EPA 8260D

Aliquot ID: A08596-004

Matrix: Ground Water

Description: VAP-01-08_95_100

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
36. Ethylene Dibromide	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
37. 2-Hexanone	U		µg/L	50	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
38. Isopropylbenzene	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
40. Methylene Chloride	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
‡ 41. 2-Methylnaphthalene	U	*	µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
42. MTBE	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
43. Naphthalene	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
44. n-Propylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
45. Styrene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
47. 1,1,2,2-Tetrachloroethane	U	F+	µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
48. Tetrachloroethene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
49. Toluene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
53. Trichloroethene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
59. Vinyl Chloride	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
60. m&p-Xylene	U		µg/L	2.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
61. o-Xylene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC
‡ 62. Xylenes	U		µg/L	3.0	1.0	05/20/22	VI22E20A	05/20/22 19:44	VI22E20A	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-01-08_95_100 MS	Chain of Custody:	168191
Client Project Name:	TRW Milford (30046730)	Sample No:	5	Collect Date:	05/19/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	11:25

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: A08596-005 Matrix: Ground Water

Method: EPA 5030C/EPA 8260D

Description: VAP-01-08_95_100 MS

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U		µg/L	50	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
‡ 2. Acrylonitrile	49		µg/L	2.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
3. Benzene	49		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
4. Bromobenzene	46		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
5. Bromochloromethane	48		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
6. Bromodichloromethane	47		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
7. Bromoform	48		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
8. Bromomethane	47	L+ ICV+	µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
9. 2-Butanone	42		µg/L	25	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
10. n-Butylbenzene	53		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
11. sec-Butylbenzene	50		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
12. tert-Butylbenzene	50		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
13. Carbon Disulfide	48		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
14. Carbon Tetrachloride	48		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
15. Chlorobenzene	49		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
16. Chloroethane	52		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
17. Chloroform	47		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
18. Chloromethane	55		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
19. 2-Chlorotoluene	47		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	45		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
21. Dibromochloromethane	46		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
22. Dibromomethane	48		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
23. 1,2-Dichlorobenzene	48		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
24. 1,3-Dichlorobenzene	49		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
25. 1,4-Dichlorobenzene	46		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
26. Dichlorodifluoromethane	51		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
27. 1,1-Dichloroethane	50		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
28. 1,2-Dichloroethane	43		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
29. 1,1-Dichloroethene	46		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
30. cis-1,2-Dichloroethene	65		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
31. trans-1,2-Dichloroethene	50		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
32. 1,2-Dichloropropane	51		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
33. cis-1,3-Dichloropropene	47		µg/L	0.50	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
34. trans-1,3-Dichloropropene	51		µg/L	0.50	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
35. Ethylbenzene	50		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
36. Ethylene Dibromide	50		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-01-08_95_100 MS	Chain of Custody:	168191
Client Project Name:	TRW Milford (30046730)	Sample No:	5	Collect Date:	05/19/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	11:25

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Method: EPA 5030C/EPA 8260D

Aliquot ID: A08596-005

Matrix: Ground Water

Description: VAP-01-08_95_100 MS

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. 2-Hexanone	U		µg/L	50	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
38. Isopropylbenzene	51		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
39. 4-Methyl-2-pentanone	53		µg/L	50	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
40. Methylene Chloride	47		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
‡ 41. 2-Methylnaphthalene	37		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
42. MTBE	46		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
43. Naphthalene	47		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
44. n-Propylbenzene	50		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
45. Styrene	46		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
46. 1,1,1,2-Tetrachloroethane	50		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
47. 1,1,2,2-Tetrachloroethane	56		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
48. Tetrachloroethene	51		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
49. Toluene	50		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
50. 1,2,4-Trichlorobenzene	47		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
51. 1,1,1-Trichloroethane	48		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
‡ 52. 1,1,2-Trichloroethane	48		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
53. Trichloroethene	45		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
54. Trichlorofluoromethane	51		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
55. 1,2,3-Trichloropropane	49		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
‡ 56. 1,2,3-Trimethylbenzene	48		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
57. 1,2,4-Trimethylbenzene	50		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
58. 1,3,5-Trimethylbenzene	50		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
59. Vinyl Chloride	55		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
60. m&p-Xylene	99		µg/L	2.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
61. o-Xylene	50		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC
‡ 62. Xylenes	150		µg/L	3.0	1.0	05/20/22	VI22E20A	05/20/22 20:10	VI22E20A	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-01-08_95_100 MSD	Chain of Custody:	168191
Client Project Name:	TRW Milford (30046730)	Sample No:	5	Collect Date:	05/19/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	11:25

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: A08596-006 Matrix: Ground Water

Method: EPA 5030C/EPA 8260D

Description: VAP-01-08_95_100 MSD

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U		µg/L	50	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
‡ 2. Acrylonitrile	57		µg/L	2.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
3. Benzene	57		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
4. Bromobenzene	54		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
5. Bromochloromethane	54		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
6. Bromodichloromethane	55		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
7. Bromoform	57		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
8. Bromomethane	74	L+ ICV+	µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
9. 2-Butanone	49		µg/L	25	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
10. n-Butylbenzene	57		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
11. sec-Butylbenzene	56		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
12. tert-Butylbenzene	58		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
13. Carbon Disulfide	53		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
14. Carbon Tetrachloride	56		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
15. Chlorobenzene	57		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
16. Chloroethane	60		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
17. Chloroform	54		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
18. Chloromethane	64		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
19. 2-Chlorotoluene	55		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	55		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
21. Dibromochloromethane	54		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
22. Dibromomethane	55		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
23. 1,2-Dichlorobenzene	56		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
24. 1,3-Dichlorobenzene	56		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
25. 1,4-Dichlorobenzene	52		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
26. Dichlorodifluoromethane	56		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
27. 1,1-Dichloroethane	58		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
28. 1,2-Dichloroethane	49		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
29. 1,1-Dichloroethene	53		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
30. cis-1,2-Dichloroethene	72		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
31. trans-1,2-Dichloroethene	57		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
32. 1,2-Dichloropropane	59		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
33. cis-1,3-Dichloropropene	55		µg/L	0.50	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
34. trans-1,3-Dichloropropene	58		µg/L	0.50	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
35. Ethylbenzene	58		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
36. Ethylene Dibromide	58		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-01-08_95_100 MSD	Chain of Custody:	168191
Client Project Name:	TRW Milford (30046730)	Sample No:	5	Collect Date:	05/19/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	11:25

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Method: EPA 5030C/EPA 8260D

Aliquot ID: A08596-006

Matrix: Ground Water

Description: VAP-01-08_95_100 MSD

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. 2-Hexanone	52		µg/L	50	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
38. Isopropylbenzene	58		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
39. 4-Methyl-2-pentanone	60		µg/L	50	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
40. Methylene Chloride	53		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
‡ 41. 2-Methylnaphthalene	49		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
42. MTBE	53		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
43. Naphthalene	57		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
44. n-Propylbenzene	57		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
45. Styrene	54		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
46. 1,1,1,2-Tetrachloroethane	58		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
47. 1,1,2,2-Tetrachloroethane	66		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
48. Tetrachloroethene	57		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
49. Toluene	58		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
50. 1,2,4-Trichlorobenzene	54		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
51. 1,1,1-Trichloroethane	56		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
‡ 52. 1,1,2-Trichloroethane	57		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
53. Trichloroethene	51		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
54. Trichlorofluoromethane	58		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
55. 1,2,3-Trichloropropane	59		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
‡ 56. 1,2,3-Trimethylbenzene	55		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
57. 1,2,4-Trimethylbenzene	58		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
58. 1,3,5-Trimethylbenzene	57		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
59. Vinyl Chloride	64		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
60. m&p-Xylene	110		µg/L	2.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
61. o-Xylene	58		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC
‡ 62. Xylenes	170		µg/L	3.0	1.0	05/20/22	VI22E20A	05/20/22 20:36	VI22E20A	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	Duplicate-1	Chain of Custody:	168191
Client Project Name:	TRW Milford (30046730)	Sample No:	6	Collect Date:	05/19/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	NA

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Method: EPA 5030C/EPA 8260D

Aliquot ID: A08596-007

Matrix: Ground Water

Description: Duplicate-1

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	V+	µg/L	50	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
3. Benzene	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
4. Bromobenzene	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
5. Bromochloromethane	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
6. Bromodichloromethane	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
7. Bromoform	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
8. Bromomethane	U	L+ ICV+	µg/L	5.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
9. 2-Butanone	U	V+	µg/L	25	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
10. n-Butylbenzene	U	V+	µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
13. Carbon Disulfide	U		µg/L	5.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
15. Chlorobenzene	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
16. Chloroethane	U		µg/L	5.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
17. Chloroform	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
18. Chloromethane	U		µg/L	5.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
21. Dibromochloromethane	U		µg/L	5.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
22. Dibromomethane	U		µg/L	5.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
27. 1,1-Dichloroethane	2.4		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
30. cis-1,2-Dichloroethene	20		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
31. trans-1,2-Dichloroethene	1.5		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
35. Ethylbenzene	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	Duplicate-1	Chain of Custody:	168191
Client Project Name:	TRW Milford (30046730)	Sample No:	6	Collect Date:	05/19/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	NA

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Method: EPA 5030C/EPA 8260D

Aliquot ID: A08596-007

Matrix: Ground Water

Description: Duplicate-1

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. 2-Hexanone	U	V+	µg/L	50	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
38. Isopropylbenzene	U		µg/L	5.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
40. Methylene Chloride	U		µg/L	5.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
42. MTBE	U		µg/L	5.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
43. Naphthalene	U		µg/L	5.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
44. n-Propylbenzene	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
45. Styrene	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
48. Tetrachloroethene	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
49. Toluene	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
53. Trichloroethene	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
59. Vinyl Chloride	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
60. m&p-Xylene	U		µg/L	2.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
61. o-Xylene	U		µg/L	1.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC
‡ 62. Xylenes	U		µg/L	3.0	1.0	05/23/22	VI22E23B	05/23/22 14:53	VI22E23A	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-01-09_105_110	Chain of Custody:	168191
Client Project Name:	TRW Milford (30046730)	Sample No:	7	Collect Date:	05/19/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	14:20

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Aliquot ID: **A08596-008** Matrix: **Ground Water**

Method: **EPA 5030C/EPA 8260D**

Description: **VAP-01-09_105_110**

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U		µg/L	50	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
3. Benzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
4. Bromobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
5. Bromochloromethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
6. Bromodichloromethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
7. Bromoform	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
8. Bromomethane	U	L+ ICV+	µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
9. 2-Butanone	U		µg/L	25	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
10. n-Butylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
13. Carbon Disulfide	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
15. Chlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
16. Chloroethane	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
17. Chloroform	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
18. Chloromethane	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
21. Dibromochloromethane	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
22. Dibromomethane	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
27. 1,1-Dichloroethane	2.5		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
30. cis-1,2-Dichloroethene	18		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
31. trans-1,2-Dichloroethene	1.6		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
35. Ethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-01-09_105_110	Chain of Custody:	168191
Client Project Name:	TRW Milford (30046730)	Sample No:	7	Collect Date:	05/19/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	14:20

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Method: EPA 5030C/EPA 8260D

Aliquot ID: A08596-008

Matrix: Ground Water

Description: VAP-01-09_105_110

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. 2-Hexanone	U		µg/L	50	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
38. Isopropylbenzene	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
40. Methylene Chloride	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
42. MTBE	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
43. Naphthalene	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
44. n-Propylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
45. Styrene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
48. Tetrachloroethene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
49. Toluene	1.5		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
53. Trichloroethene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
59. Vinyl Chloride	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
60. m&p-Xylene	U		µg/L	2.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
61. o-Xylene	U		µg/L	1.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC
‡ 62. Xylenes	U		µg/L	3.0	1.0	05/20/22	VI22E20A	05/20/22 18:25	VI22E20A	SNC

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Definitions/ Qualifiers:

- A:** Spike recovery or precision unusable due to dilution.
B: The analyte was detected in the associated method blank.
E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
J: The concentration is an estimated value.
M: Modified Method
U: The analyte was not detected at or above the reporting limit.
X: Matrix Interference has resulted in a raised reporting limit or distorted result.
W: Results reported on a wet-weight basis.
***:** Value reported is outside QC limits

Exception Summary:

- *** : Duplicate analysis not within control limits.
F+ : Recovery from the spiked aliquot exceeds the upper control limit (matrix spike or matrix spike duplicate).
ICV+ : Recovery in the associated initial calibration verification sample exceeds the upper control limit. Results may be biased high.
L+ : Recovery in the associated laboratory sample (LCS) exceeds the upper control limit. Results may be biased high.
V+ : Recovery in the associated continuing calibration verification sample (CCV) exceeds the upper control limit. Results may be biased high.

Analysis Locations:

All analyses performed in Holt.



Accreditation Number(s):

T104704518-19-8 (TX)

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VI22E20A: Method Blank (MB)

EPA 8260D

Run Time: VI22E20A.MB 05/20/2022 11:00 [VI22E20A]

Analyte	MB Result	MB Qualifier	MB RDL
	µg/L		µg/L
Acetone	U		50
Acrylonitrile	U		2.0
Benzene	U		1.0
Bromobenzene	U		1.0
Bromochloromethane	U		1.0
Bromodichloromethane	U		1.0
Bromoform	U		1.0
Bromomethane	U		5.0
2-Butanone	U		25
n-Butylbenzene	U		1.0
sec-Butylbenzene	U		1.0
tert-Butylbenzene	U		1.0
Carbon Disulfide	U		5.0
Carbon Tetrachloride	U		1.0
Chlorobenzene	U		1.0
Chloroethane	U		5.0
Chloroform	U		1.0
Chloromethane	U		5.0
2-Chlorotoluene	U		5.0
1,2-Dibromo-3-chloropropane (SIM)	U		1.0
Dibromochloromethane	U		5.0
Dibromomethane	U		5.0
1,2-Dichlorobenzene	U		1.0
1,3-Dichlorobenzene	U		1.0
1,4-Dichlorobenzene	U		1.0
Dichlorodifluoromethane	U		5.0
1,1-Dichloroethane	U		1.0
1,2-Dichloroethane	U		1.0
1,1-Dichloroethene	U		1.0
cis-1,2-Dichloroethene	U		1.0
trans-1,2-Dichloroethene	U		1.0
1,2-Dichloropropane	U		1.0
cis-1,3-Dichloropropene	U		0.50

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VI22E20A: Method Blank (MB)

EPA 8260D

Run Time: VI22E20A.MB 05/20/2022 11:00 [VI22E20A]

Analyte	MB Result	MB Qualifier	MB RDL
	µg/L		µg/L
trans-1,3-Dichloropropene	U		0.50
Ethylbenzene	U		1.0
Ethylene Dibromide	U		1.0
2-Hexanone	U		50
Isopropylbenzene	U		5.0
4-Methyl-2-pentanone	U		50
Methylene Chloride	U		5.0
2-Methylnaphthalene	U		5.0
MTBE	U		5.0
Naphthalene	U		5.0
n-Propylbenzene	U		1.0
Styrene	U		1.0
1,1,1,2-Tetrachloroethane	U		1.0
1,1,2,2-Tetrachloroethane	U		1.0
Tetrachloroethene	U		1.0
Toluene	U		1.0
1,2,4-Trichlorobenzene	U		5.0
1,1,1-Trichloroethane	U		1.0
1,1,2-Trichloroethane	U		1.0
Trichloroethene	U		1.0
Trichlorofluoromethane	U		1.0
1,2,3-Trichloropropane	U		1.0
1,2,3-Trimethylbenzene	U		1.0
1,2,4-Trimethylbenzene	U		1.0
1,3,5-Trimethylbenzene	U		1.0
Vinyl Chloride	U		1.0
m&p-Xylene	U		2.0
o-Xylene	U		1.0
4-Bromofluorobenzene(S)	93		80-120
Dibromofluoromethane(S)	101		80-120
1,2-Dichloroethane-d4(S)	92		80-120
Toluene-d8(S)	98		80-120

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VI22E20A: Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD)

EPA 8260D

Run Time: VI22E20A.LCS: 05/20/2022 09:42 [VI22E20A] VI22E20A.LCSD: 05/20/2022 10:08 [VI22E20A]

Analyte	LCS Spike Amount µg/L	LCS Result µg/L	LCS Rec. %	Rec. Limits %	LCS Qualifier	LCSD Spike Amount µg/L	LCSD Result µg/L	LCSD Rec. %	LCSD Qualifier	RPD %	RPD Limits %	RPD Qualifier
Acetone	50.0	32.2	64	54-140		50.0	33.2	66		3	20	
Acrylonitrile	50.0	51.8	104	70-130		50.0	50.6	101		3	20	
Benzene	50.0	49.1	98	80-120		50.0	47.2	94		4	20	
Bromobenzene	50.0	49.1	98	75-125		50.0	47.9	96		2	20	
Bromochloromethane	50.0	48.2	96	70-130		50.0	45.7	91		5	20	
Bromodichloromethane	50.0	47.2	94	75-120		50.0	45.6	91		3	20	
Bromoform	50.0	49.2	98	70-130		50.0	48.7	97		1	20	
Bromomethane	50.0	72.9	146	68-135	*	50.0	67.6	135		8	20	
2-Butanone	50.0	43.5	87	70-148		50.0	44.6	89		2	20	
n-Butylbenzene	50.0	61.8	124	70-133		50.0	59.8	120		3	20	
sec-Butylbenzene	50.0	54.7	109	70-125		50.0	52.8	106		3	20	
tert-Butylbenzene	50.0	53.2	106	70-130		50.0	51.8	104		2	20	
Carbon Disulfide	50.0	48.6	97	70-130		50.0	46.1	92		5	20	
Carbon Tetrachloride	50.0	46.7	93	70-130		50.0	44.6	89		4	20	
Chlorobenzene	50.0	50.6	101	80-120		50.0	48.8	98		3	20	
Chloroethane	50.0	51.3	103	61-130		50.0	48.3	97		6	20	
Chloroform	50.0	46.7	93	80-120		50.0	43.6	87		7	20	
Chloromethane	50.0	55.8	112	67-125		50.0	54.1	108		4	20	
2-Chlorotoluene	50.0	50.8	102	75-125		50.0	49.2	98		4	20	
1,2-Dibromo-3-chloropropane (SIM)	50.0	49.0	98	70-130		50.0	50.5	101		3	20	
Dibromochloromethane	50.0	46.7	93	70-130		50.0	45.3	91		2	20	
Dibromomethane	50.0	49.3	99	75-125		50.0	47.8	96		3	20	
1,2-Dichlorobenzene	50.0	52.2	104	70-120		50.0	51.2	102		2	20	
1,3-Dichlorobenzene	50.0	53.3	107	75-125		50.0	52.0	104		3	20	
1,4-Dichlorobenzene	50.0	50.5	101	75-125		50.0	49.1	98		3	20	
Dichlorodifluoromethane	50.0	50.0	100	70-136		50.0	47.7	95		5	20	
1,1-Dichloroethane	50.0	47.3	95	70-130		50.0	45.5	91		4	20	
1,2-Dichloroethane	50.0	42.4	85	70-130		50.0	41.5	83		2	20	
1,1-Dichloroethene	50.0	44.4	89	78-120		50.0	42.6	85		5	20	
cis-1,2-Dichloroethene	50.0	45.6	91	70-125		50.0	43.9	88		3	20	
trans-1,2-Dichloroethene	50.0	49.0	98	70-130		50.0	47.0	94		4	20	
1,2-Dichloropropane	50.0	51.7	103	80-121		50.0	49.6	99		4	20	
cis-1,3-Dichloropropene	50.0	49.9	100	70-130		50.0	48.4	97		3	20	

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VI22E20A: Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD)

EPA 8260D

Run Time: VI22E20A.LCS: 05/20/2022 09:42 [VI22E20A] VI22E20A.LCSD: 05/20/2022 10:08 [VI22E20A]

Analyte	LCS Spike Amount µg/L	LCS Result µg/L	LCS Rec. %	Rec. Limits %	LCS Qualifier	LCSD Spike Amount µg/L	LCSD Result µg/L	LCSD Rec. %	LCSD Qualifier	RPD %	RPD Limits %	RPD Qualifier
trans-1,3-Dichloropropene	50.0	53.9	108	70-132		50.0	51.4	103		5	20	
Ethylbenzene	50.0	51.5	103	80-120		50.0	49.8	100		3	20	
Ethylene Dibromide	50.0	51.3	103	80-120		50.0	50.4	101		2	20	
2-Hexanone	50.0	44.7	89	70-130		50.0	45.8	92		3	20	
Isopropylbenzene	50.0	52.5	105	75-125		50.0	51.0	102		3	20	
4-Methyl-2-pentanone	50.0	53.6	107	70-130		50.0	53.9	108		1	20	
Methylene Chloride	50.0	47.2	94	70-130		50.0	45.1	90		4	20	
2-Methylnaphthalene	50.0	51.0	102	70-130		50.0	53.0	106		4	20	
MTBE	50.0	47.0	94	70-125		50.0	45.9	92		2	20	
Naphthalene	50.0	54.0	108	70-130		50.0	55.5	111		3	20	
n-Propylbenzene	50.0	54.7	109	70-130		50.0	52.9	106		3	20	
Styrene	50.0	48.6	97	70-130		50.0	46.2	92		5	20	
1,1,1,2-Tetrachloroethane	50.0	49.9	100	80-130		50.0	48.5	97		3	20	
1,1,2,2-Tetrachloroethane	50.0	58.9	118	70-130		50.0	59.5	119		1	20	
Tetrachloroethene	50.0	52.7	105	70-130		50.0	51.0	102		3	20	
Toluene	50.0	50.7	101	80-120		50.0	48.6	97		4	20	
1,2,4-Trichlorobenzene	50.0	55.6	111	70-130		50.0	55.8	112		1	20	
1,1,1-Trichloroethane	50.0	45.9	92	70-130		50.0	44.7	89		3	20	
1,1,2-Trichloroethane	50.0	49.5	99	75-125		50.0	48.9	98		1	20	
Trichloroethene	50.0	45.3	91	71-125		50.0	43.7	87		4	20	
Trichlorofluoromethane	50.0	48.8	98	70-133		50.0	46.1	92		6	20	
1,2,3-Trichloropropane	50.0	51.2	102	75-125		50.0	52.2	104		2	20	
1,2,3-Trimethylbenzene	50.0	50.8	102	70-130		50.0	49.5	99		3	20	
1,2,4-Trimethylbenzene	50.0	54.7	109	75-130		50.0	53.0	106		3	20	
1,3,5-Trimethylbenzene	50.0	53.6	107	75-130		50.0	52.1	104		3	20	
Vinyl Chloride	50.0	55.0	110	74-125		50.0	52.7	105		5	20	
m&p-Xylene	100	102	102	75-130		100	98.8	99		3	20	
o-Xylene	50.0	51.3	103	80-120		50.0	49.6	99		4	20	
4-Bromofluorobenzene(S)			98	80-120				98				
Dibromofluoromethane(S)			97	80-120				96				
1,2-Dichloroethane-d4(S)			87	80-120				87				
Toluene-d8(S)			99	80-120				99				

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VI22E23A: Method Blank (MB)

EPA 8260D

Run Time: VI22E23A.MB 05/23/2022 14:27 [VI22E23A]

Analyte	MB Result	MB Qualifier	MB RDL
	µg/L		µg/L
Acetone	U		50
Acrylonitrile	U		2.0
Benzene	U		1.0
Bromobenzene	U		1.0
Bromochloromethane	U		1.0
Bromodichloromethane	U		1.0
Bromoform	U		1.0
Bromomethane	U		5.0
2-Butanone	U		25
n-Butylbenzene	U		1.0
sec-Butylbenzene	U		1.0
tert-Butylbenzene	U		1.0
Carbon Disulfide	U		5.0
Carbon Tetrachloride	U		1.0
Chlorobenzene	U		1.0
Chloroethane	U		5.0
Chloroform	U		1.0
Chloromethane	U		5.0
2-Chlorotoluene	U		5.0
1,2-Dibromo-3-chloropropane (SIM)	U		1.0
Dibromochloromethane	U		5.0
Dibromomethane	U		5.0
1,2-Dichlorobenzene	U		1.0
1,3-Dichlorobenzene	U		1.0
1,4-Dichlorobenzene	U		1.0
Dichlorodifluoromethane	U		5.0
1,1-Dichloroethane	U		1.0
1,2-Dichloroethane	U		1.0
1,1-Dichloroethene	U		1.0
cis-1,2-Dichloroethene	U		1.0
trans-1,2-Dichloroethene	U		1.0
1,2-Dichloropropane	U		1.0
cis-1,3-Dichloropropene	U		0.50

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VI22E23A: Method Blank (MB)

EPA 8260D

Run Time: VI22E23A.MB 05/23/2022 14:27 [VI22E23A]

Analyte	MB Result	MB Qualifier	MB RDL
	µg/L		µg/L
trans-1,3-Dichloropropene	U		0.50
Ethylbenzene	U		1.0
Ethylene Dibromide	U		1.0
2-Hexanone	U		50
Isopropylbenzene	U		5.0
4-Methyl-2-pentanone	U		50
Methylene Chloride	U		5.0
2-Methylnaphthalene	U		5.0
MTBE	U		5.0
Naphthalene	U		5.0
n-Propylbenzene	U		1.0
Styrene	U		1.0
1,1,1,2-Tetrachloroethane	U		1.0
1,1,2,2-Tetrachloroethane	U		1.0
Tetrachloroethene	U		1.0
Toluene	U		1.0
1,2,4-Trichlorobenzene	U		5.0
1,1,1-Trichloroethane	U		1.0
1,1,2-Trichloroethane	U		1.0
Trichloroethene	U		1.0
Trichlorofluoromethane	U		1.0
1,2,3-Trichloropropane	U		1.0
1,2,3-Trimethylbenzene	U		1.0
1,2,4-Trimethylbenzene	U		1.0
1,3,5-Trimethylbenzene	U		1.0
Vinyl Chloride	U		1.0
m&p-Xylene	U		2.0
o-Xylene	U		1.0
4-Bromofluorobenzene(S)	94		80-120
Dibromofluoromethane(S)	101		80-120
1,2-Dichloroethane-d4(S)	90		80-120
Toluene-d8(S)	98		80-120

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VI22E23A: Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD)

EPA 8260D

Run Time: VI22E23A.LCS: 05/23/2022 13:09 [VI22E23A] VI22E23A.LCSD: 05/23/2022 13:35 [VI22E23A]

Analyte	LCS Spike Amount µg/L	LCS Result µg/L	LCS Rec. %	Rec. Limits %	LCS Qualifier	LCSD Spike Amount µg/L	LCSD Result µg/L	LCSD Rec. %	LCSD Qualifier	RPD %	RPD Limits %	RPD Qualifier
Acetone	50.0	34.5	69	54-140		50.0	33.7	67		3	20	
Acrylonitrile	50.0	53.2	106	70-130		50.0	52.9	106		0	20	
Benzene	50.0	48.9	98	80-120		50.0	47.3	95		3	20	
Bromobenzene	50.0	49.9	100	75-125		50.0	48.0	96		4	20	
Bromochloromethane	50.0	48.7	97	70-130		50.0	47.9	96		1	20	
Bromodichloromethane	50.0	47.0	94	75-120		50.0	45.5	91		3	20	
Bromoform	50.0	50.4	101	70-130		50.0	48.1	96		5	20	
Bromomethane	50.0	71.6	143	68-135	*	50.0	67.8	136	*	5	20	
2-Butanone	50.0	46.3	93	70-148		50.0	45.8	92		1	20	
n-Butylbenzene	50.0	62.1	124	70-133		50.0	57.9	116		7	20	
sec-Butylbenzene	50.0	54.8	110	70-125		50.0	51.2	102		8	20	
tert-Butylbenzene	50.0	53.7	107	70-130		50.0	50.1	100		7	20	
Carbon Disulfide	50.0	48.6	97	70-130		50.0	46.7	93		4	20	
Carbon Tetrachloride	50.0	46.0	92	70-130		50.0	43.7	87		6	20	
Chlorobenzene	50.0	50.7	101	80-120		50.0	48.8	98		3	20	
Chloroethane	50.0	50.1	100	61-130		50.0	48.2	96		4	20	
Chloroform	50.0	46.1	92	80-120		50.0	44.9	90		2	20	
Chloromethane	50.0	56.6	113	67-125		50.0	55.0	110		3	20	
2-Chlorotoluene	50.0	51.5	103	75-125		50.0	48.2	96		7	20	
1,2-Dibromo-3-chloropropane (SIM)	50.0	51.6	103	70-130		50.0	48.8	98		5	20	
Dibromochloromethane	50.0	47.2	94	70-130		50.0	45.7	91		3	20	
Dibromomethane	50.0	49.4	99	75-125		50.0	48.1	96		3	20	
1,2-Dichlorobenzene	50.0	52.6	105	70-120		50.0	49.9	100		5	20	
1,3-Dichlorobenzene	50.0	53.9	108	75-125		50.0	50.8	102		6	20	
1,4-Dichlorobenzene	50.0	50.3	101	75-125		50.0	48.1	96		5	20	
Dichlorodifluoromethane	50.0	48.4	97	70-136		50.0	46.5	93		4	20	
1,1-Dichloroethane	50.0	47.6	95	70-130		50.0	46.3	93		2	20	
1,2-Dichloroethane	50.0	42.4	85	70-130		50.0	41.3	83		2	20	
1,1-Dichloroethene	50.0	44.1	88	78-120		50.0	42.9	86		2	20	
cis-1,2-Dichloroethene	50.0	45.8	92	70-125		50.0	44.9	90		2	20	
trans-1,2-Dichloroethene	50.0	49.1	98	70-130		50.0	47.8	96		2	20	
1,2-Dichloropropane	50.0	51.4	103	80-121		50.0	50.2	100		3	20	
cis-1,3-Dichloropropene	50.0	50.7	101	70-130		50.0	48.9	98		3	20	

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VI22E23A: Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD)

EPA 8260D

Run Time: VI22E23A.LCS: 05/23/2022 13:09 [VI22E23A] VI22E23A.LCSD: 05/23/2022 13:35 [VI22E23A]

Analyte	LCS Spike Amount µg/L	LCS Result µg/L	LCS Rec. %	Rec. Limits %	LCS Qualifier	LCSD Spike Amount µg/L	LCSD Result µg/L	LCSD Rec. %	LCSD Qualifier	RPD %	RPD Limits %	RPD Qualifier
trans-1,3-Dichloropropene	50.0	53.9	108	70-132		50.0	52.3	105		3	20	
Ethylbenzene	50.0	51.3	103	80-120		50.0	49.4	99		4	20	
Ethylene Dibromide	50.0	52.8	106	80-120		50.0	51.4	103		3	20	
2-Hexanone	50.0	46.5	93	70-130		50.0	44.8	90		3	20	
Isopropylbenzene	50.0	52.3	105	75-125		50.0	50.3	101		4	20	
4-Methyl-2-pentanone	50.0	55.4	111	70-130		50.0	53.4	107		4	20	
Methylene Chloride	50.0	47.3	95	70-130		50.0	46.1	92		3	20	
2-Methylnaphthalene	50.0	55.4	111	70-130		50.0	52.7	105		6	20	
MTBE	50.0	47.7	95	70-125		50.0	47.0	94		1	20	
Naphthalene	50.0	56.8	114	70-130		50.0	53.8	108		5	20	
n-Propylbenzene	50.0	55.0	110	70-130		50.0	51.6	103		7	20	
Styrene	50.0	48.2	96	70-130		50.0	46.6	93		3	20	
1,1,1,2-Tetrachloroethane	50.0	49.5	99	80-130		50.0	48.1	96		3	20	
1,1,2,2-Tetrachloroethane	50.0	61.6	123	70-130		50.0	59.4	119		3	20	
Tetrachloroethene	50.0	52.6	105	70-130		50.0	50.0	100		5	20	
Toluene	50.0	50.5	101	80-120		50.0	48.8	98		3	20	
1,2,4-Trichlorobenzene	50.0	57.7	115	70-130		50.0	54.5	109		5	20	
1,1,1-Trichloroethane	50.0	46.4	93	70-130		50.0	44.7	89		4	20	
1,1,2-Trichloroethane	50.0	50.7	101	75-125		50.0	49.4	99		2	20	
Trichloroethene	50.0	45.4	91	71-125		50.0	43.5	87		4	20	
Trichlorofluoromethane	50.0	47.7	95	70-133		50.0	45.9	92		3	20	
1,2,3-Trichloropropane	50.0	54.2	108	75-125		50.0	51.3	103		5	20	
1,2,3-Trimethylbenzene	50.0	51.6	103	70-130		50.0	48.6	97		6	20	
1,2,4-Trimethylbenzene	50.0	54.9	110	75-130		50.0	51.4	103		7	20	
1,3,5-Trimethylbenzene	50.0	54.1	108	75-130		50.0	50.6	101		7	20	
Vinyl Chloride	50.0	55.4	111	74-125		50.0	53.4	107		4	20	
m&p-Xylene	100	102	102	75-130		100	97.8	98		4	20	
o-Xylene	50.0	51.0	102	80-120		50.0	49.2	98		4	20	
4-Bromofluorobenzene(S)			98	80-120				99				
Dibromofluoromethane(S)			96	80-120				99				
1,2-Dichloroethane-d4(S)			84	80-120				86				
Toluene-d8(S)			99	80-120				100				

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Definitions/ Qualifiers:

- U: The analyte was not detected at or above the Reporting Limit (RL).
*: Value reported is outside QC limits

Exception Summary:

Exceptions have been properly noted on reported results or affected samples have been scheduled for reanalysis when appropriate.

Report Generated By:



By Bailey Welch at 5:06 PM, May 23, 2022

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A08596-004: Original Sample (OS)/Matrix Spike (MS)/Matrix Spike Duplicate (MSD)

EPA 8260D

Run Time: A08596-004 (OS): 05/20/22 19:44 [V122E20A] A08596-005 (MS): 05/20/22 20:10 [V122E20A] A08596-006 (MSD): 05/20/22 20:36 [V122E20A]

Analyte	Original Result µg/L	MS Spike Amount µg/L	MS Result µg/L	MS Rec. %	Rec. Limits %	MS Qualifier	MSD Spike Amount µg/L	MSD Result µg/L	MSD Rec. %	MSD Qualifier	RPD %	RPD Limits %	RPD Qualifier
Acetone	U	50.0	33.3	67	54 - 140		50.0	39.4	79		17	20	
Acrylonitrile	U	50.0	49.2	98	70 - 130		50.0	57.1	114		15	20	
Benzene	U	50.0	49.3	99	80 - 120		50.0	57.2	114		15	20	
Bromobenzene	U	50.0	46.2	92	75 - 125		50.0	53.9	108		15	20	
Bromochloromethane	U	50.0	47.9	96	70 - 130		50.0	54.2	108		12	20	
Bromodichloromethane	U	50.0	47.3	95	75 - 120		50.0	54.5	109		14	20	
Bromoform	U	50.0	48.4	97	70 - 130		50.0	56.7	113		16	20	
Bromomethane	U	50.0	47.4	95	68 - 135		50.0	73.6	147	*	43	20	*
2-Butanone	U	50.0	42.3	85	70 - 148		50.0	48.6	97		14	20	
n-Butylbenzene	U	50.0	52.8	106	70 - 133		50.0	57.3	115		8	20	
sec-Butylbenzene	U	50.0	49.8	100	70 - 125		50.0	56.2	112		12	20	
tert-Butylbenzene	U	50.0	50.2	100	70 - 130		50.0	58.2	116		15	20	
Carbon Disulfide	U	50.0	48.0	96	70 - 130		50.0	53.1	106		10	20	
Carbon Tetrachloride	U	50.0	47.6	95	70 - 130		50.0	55.5	111		15	20	
Chlorobenzene	U	50.0	49.3	99	80 - 120		50.0	56.9	114		14	20	
Chloroethane	U	50.0	52.3	105	61 - 130		50.0	60.4	121		14	20	
Chloroform	U	50.0	46.5	93	80 - 120		50.0	53.7	107		14	20	
Chloromethane	U	50.0	55.5	111	67 - 125		50.0	64.3	129	*	15	20	
2-Chlorotoluene	U	50.0	47.3	95	75 - 125		50.0	55.1	110		15	20	
1,2-Dibromo-3-chloropropane (SIM)	U	50.0	45.4	91	70 - 130		50.0	54.8	110		19	20	
Dibromochloromethane	U	50.0	46.2	92	70 - 130		50.0	53.8	108		15	20	
Dibromomethane	U	50.0	47.7	95	75 - 125		50.0	55.4	111		15	20	
1,2-Dichlorobenzene	U	50.0	48.0	96	70 - 120		50.0	55.8	112		15	20	
1,3-Dichlorobenzene	U	50.0	48.7	97	75 - 125		50.0	55.9	112		14	20	
1,4-Dichlorobenzene	U	50.0	46.0	92	75 - 125		50.0	52.4	105		13	20	
Dichlorodifluoromethane	U	50.0	51.4	103	70 - 136		50.0	56.2	112		9	20	
1,1-Dichloroethane	2.27	50.0	50.1	96	70 - 130		50.0	58.0	111		15	20	
1,2-Dichloroethane	U	50.0	43.1	86	70 - 130		50.0	49.2	98		13	20	
1,1-Dichloroethene	U	50.0	45.5	91	78 - 120		50.0	52.7	105		15	20	
cis-1,2-Dichloroethene	19.7	50.0	64.8	90	70 - 125		50.0	72.3	105		15	20	
trans-1,2-Dichloroethene	1.43	50.0	50.0	97	70 - 130		50.0	56.8	111		13	20	
1,2-Dichloropropane	U	50.0	50.9	102	80 - 121		50.0	59.2	118		15	20	
cis-1,3-Dichloropropene	U	50.0	47.5	95	70 - 130		50.0	54.9	110		14	20	

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A08596-004: Original Sample (OS)/Matrix Spike (MS)/Matrix Spike Duplicate (MSD)

EPA 8260D

Run Time: A08596-004 (OS): 05/20/22 19:44 [V122E20A] A08596-005 (MS): 05/20/22 20:10 [V122E20A] A08596-006 (MSD): 05/20/22 20:36 [V122E20A]

Analyte	Original Result µg/L	MS Spike Amount µg/L	MS Result µg/L	MS Rec. %	Rec. Limits %	MS Qualifier	MSD Spike Amount µg/L	MSD Result µg/L	MSD Rec. %	MSD Qualifier	RPD %	RPD Limits %	RPD Qualifier
trans-1,3-Dichloropropene	U	50.0	50.7	101	70 - 132		50.0	58.2	116		14	20	
Ethylbenzene	U	50.0	50.1	100	80 - 120		50.0	57.7	115		14	20	
Ethylene Dibromide	U	50.0	50.0	100	80 - 120		50.0	58.1	116		15	20	
2-Hexanone	U	50.0	44.2	88	70 - 130		50.0	52.0	104		16	20	
Isopropylbenzene	U	50.0	50.9	102	75 - 125		50.0	58.3	117		14	20	
4-Methyl-2-pentanone	U	50.0	52.9	106	70 - 130		50.0	60.0	120		13	20	
Methylene Chloride	U	50.0	46.8	94	70 - 130		50.0	53.5	107		13	20	
2-Methylnaphthalene	U	50.0	36.6	73	70 - 130		50.0	49.1	98		29	20	*
MTBE	U	50.0	46.0	92	70 - 125		50.0	53.5	107		15	20	
Naphthalene	U	50.0	47.2	94	70 - 130		50.0	56.9	114		19	20	
n-Propylbenzene	U	50.0	50.2	100	70 - 130		50.0	57.3	115		13	20	
Styrene	U	50.0	46.2	92	70 - 130		50.0	53.6	107		15	20	
1,1,1,2-Tetrachloroethane	U	50.0	49.9	100	80 - 130		50.0	58.0	116		15	20	
1,1,2,2-Tetrachloroethane	U	50.0	55.5	111	70 - 130		50.0	65.8	132	*	17	20	
Tetrachloroethene	U	50.0	51.0	102	70 - 130		50.0	57.0	114		11	20	
Toluene	U	50.0	50.4	101	80 - 120		50.0	58.1	116		14	20	
1,2,4-Trichlorobenzene	U	50.0	46.5	93	70 - 130		50.0	53.5	107		14	20	
1,1,1-Trichloroethane	U	50.0	48.2	96	70 - 130		50.0	56.4	113		16	20	
1,1,2-Trichloroethane	U	50.0	48.3	97	75 - 125		50.0	56.6	113		16	20	
Trichloroethene	U	50.0	44.8	90	71 - 125		50.0	51.3	103		14	20	
Trichlorofluoromethane	U	50.0	50.9	102	70 - 133		50.0	58.1	116		13	20	
1,2,3-Trichloropropane	U	50.0	48.9	98	75 - 125		50.0	59.1	118		19	20	
1,2,3-Trimethylbenzene	U	50.0	47.7	95	70 - 130		50.0	55.1	110		14	20	
1,2,4-Trimethylbenzene	U	50.0	50.3	101	75 - 130		50.0	57.7	115		14	20	
1,3,5-Trimethylbenzene	U	50.0	50.0	100	75 - 130		50.0	57.2	114		13	20	
Vinyl Chloride	U	50.0	54.9	110	74 - 125		50.0	63.7	127	*	15	20	
m&p-Xylene	U	100	98.9	99	75 - 130		100	114	114		14	20	
o-Xylene	U	50.0	50.0	100	80 - 120		50.0	57.6	115		14	20	

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F: (231) 775-8584

Definitions/ Qualifiers:

U: The analyte was not detected at or above the Reporting Limit (RL).
*****: Value reported is outside QC limits

Exception Summary:

Exceptions have been properly noted on reported results or affected samples have been scheduled for reanalysis when appropriate.

Report Generated By:



By Anthony Donnelly at 6:04 PM, May 23, 2022

Client Name: <u>TRW Millford</u>				MATRIX (SEE RIGHT CORNER FOR CODE) # OF CONTAINERS VOL 8260												HOLD SAMPLE												Matrix Code				Deliverables ☐ Level 2 ☐ Level 3 ☐ Level 4 ☐ EDD					
Contact Person: <u>Christina Seidel</u>																												S Soil						GW Ground Water			
Project Name/ Number: <u>TRW Millford 30096730</u>																												A Air						SW Surface Water			
Email distribution list: <u>John.Melhus@arcadis.com</u>																												O Oil						WW Waste Water			
Quote# <u>849</u>				P Wipe				X Other: Specify				Remarks:																									
Purchase Order#																																					
Date	Time	Sample #	Client Sample Descriptor																																		
5/18	14 ²⁰	1	VAP-01-06-75-80	GU	3	X											48 hr TAT																				
5/18	17 ⁴⁵	2	VAP-01-07-85-90	GU	3	X											48 hr TAT																				
5/19	9 ⁵⁵	3	Equipment Flow Valve	DI	3	X											48 hr TAT																				
5/19	11 ²⁵	4	VAP-01-08-85-100	GU	3	X											48 hr TAT																				
5/19	11 ²⁵	5	MS/MSD-1	GU	3	X											—																				
5/19	—	6	Duplicate -1	GU	3	X											48 hr TAT																				
5/19	14 ²⁰	7	VAP-01-09-105-110	GU	3	X											48 hr TAT																				
Received By Lab																																					
MAY 19 2022																																					
Initials: <u>JS</u>																																					
Sampled/Relinquished By: <u>Ch Seidel</u>				Date/Time: <u>5/18 18:25</u>				Received By: <u>Arcadis Fridge</u>																													
Relinquished By: <u>Arcadis fridge</u>				Date/Time: <u>5/19 7:00</u>				Received By: <u>Ch Seidel</u>																													
Relinquished By: <u>Ch Seidel</u>				Date/Time: <u>5/19 14:25</u>				Received By Laboratory: <u>Wade S. Shade 5/19/22 2:25</u>																													
Turnaround Time ALL RESULTS WILL BE SENT BY THE END OF THE BUSINESS DAY																																					
<u>1</u> bus. day <u>2</u> bus. days <u>3</u> bus. days <u>4</u> bus. days <u>5-7</u> bus. days (standard) Other (specify time/date requirement): _____ Fibertec project number: <u>A08596</u> Temperature upon receipt at Lab: <u>5°C</u>																																					
Please see back for terms and conditions																																					

Wade S. Shade 5/19/22

JS 1630

Received
On Ice



Tuesday, May 24, 2022

Fibertec Project Number: A08623
Project Identification: TRW Milford (30046730) /30046730
Submittal Date: 05/20/2022

Mr. Christian Seidel
Arcadis U.S., Inc. - Novi
28550 Cabot Drive
Suite 500
Novi, MI 48377

Dear Mr. Seidel,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note TO-15 samples will be disposed of 7 calendar days after the reporting date. All other samples will be disposed of 30 days after the reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,

A handwritten signature in dark ink, appearing to read "Sue Ricketts", with a stylized, cursive script.

By Sue Ricketts at 10:14 AM, May 24, 2022

For Daryl P. Strandbergh
Laboratory Director

Enclosures

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F: (231) 775-8584

Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-01-10_115_120	Chain of Custody:	168190
Client Project Name:	TRW Milford (30046730)	Sample No:	1	Collect Date:	05/19/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	17:30

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08623-001 **Matrix: Ground Water**
Description: VAP-01-10_115_120

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	V+	µg/L	50	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
3. Benzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
4. Bromobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
5. Bromochloromethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
6. Bromodichloromethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
7. Bromoform	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
8. Bromomethane	U	V+ L+ ICV+	µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
9. 2-Butanone	U	V+	µg/L	25	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
10. n-Butylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
13. Carbon Disulfide	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
15. Chlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
16. Chloroethane	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
17. Chloroform	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
18. Chloromethane	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
21. Dibromochloromethane	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
22. Dibromomethane	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
30. cis-1,2-Dichloroethene	14		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
31. trans-1,2-Dichloroethene	1.7		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
35. Ethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-01-10_115_120	Chain of Custody:	168190
Client Project Name:	TRW Milford (30046730)	Sample No:	1	Collect Date:	05/19/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	17:30

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08623-001 **Matrix: Ground Water**
Description: VAP-01-10_115_120

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. 2-Hexanone	U		µg/L	50	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
38. Isopropylbenzene	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
40. Methylene Chloride	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
42. MTBE	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
43. Naphthalene	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
44. n-Propylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
45. Styrene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
48. Tetrachloroethene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
49. Toluene	1.4		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
53. Trichloroethene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
59. Vinyl Chloride	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
60. m&p-Xylene	U		µg/L	2.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
61. o-Xylene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC
‡ 62. Xylenes	U		µg/L	3.0	1.0	05/20/22	VI22E20B	05/21/22 05:21	VI22E20B	SNC

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F: (231) 775-8584

Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-01-11_125_130	Chain of Custody:	168190
Client Project Name:	TRW Milford (30046730)	Sample No:	2	Collect Date:	05/20/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	10:45

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08623-002 **Matrix: Ground Water**
Description: VAP-01-11_125_130

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	V+	µg/L	50	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
3. Benzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
4. Bromobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
5. Bromochloromethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
6. Bromodichloromethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
7. Bromoform	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
8. Bromomethane	U	V+ L+ ICV+	µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
9. 2-Butanone	U	V+	µg/L	25	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
10. n-Butylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
13. Carbon Disulfide	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
15. Chlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
16. Chloroethane	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
17. Chloroform	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
18. Chloromethane	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
21. Dibromochloromethane	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
22. Dibromomethane	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
30. cis-1,2-Dichloroethene	13		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
31. trans-1,2-Dichloroethene	2.7		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
35. Ethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC

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F: (231) 775-8584

Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-01-11_125_130	Chain of Custody:	168190
Client Project Name:	TRW Milford (30046730)	Sample No:	2	Collect Date:	05/20/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	10:45

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08623-002 **Matrix: Ground Water**
Description: VAP-01-11_125_130

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. 2-Hexanone	U		µg/L	50	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
38. Isopropylbenzene	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
40. Methylene Chloride	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
42. MTBE	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
43. Naphthalene	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
44. n-Propylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
45. Styrene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
48. Tetrachloroethene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
49. Toluene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
53. Trichloroethene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
59. Vinyl Chloride	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
60. m&p-Xylene	U		µg/L	2.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
61. o-Xylene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC
‡ 62. Xylenes	U		µg/L	3.0	1.0	05/20/22	VI22E20B	05/21/22 05:47	VI22E20B	SNC

Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-01-12_95_100-2	Chain of Custody:	168190
Client Project Name:	TRW Milford (30046730)	Sample No:	3	Collect Date:	05/20/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	13:20

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08623-003 **Matrix: Ground Water**
Description: VAP-01-12_95_100-2

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	V+	µg/L	50	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
3. Benzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
4. Bromobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
5. Bromochloromethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
6. Bromodichloromethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
7. Bromoform	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
8. Bromomethane	U	V+ L+ ICV+	µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
9. 2-Butanone	U	V+	µg/L	25	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
10. n-Butylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
13. Carbon Disulfide	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
15. Chlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
16. Chloroethane	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
17. Chloroform	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
18. Chloromethane	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
21. Dibromochloromethane	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
22. Dibromomethane	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
27. 1,1-Dichloroethane	2.3		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
30. cis-1,2-Dichloroethene	19		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
31. trans-1,2-Dichloroethene	1.5		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
35. Ethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-01-12_95_100-2	Chain of Custody:	168190
Client Project Name:	TRW Milford (30046730)	Sample No:	3	Collect Date:	05/20/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	13:20

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08623-003 **Matrix: Ground Water**
Description: VAP-01-12_95_100-2

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. 2-Hexanone	U		µg/L	50	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
38. Isopropylbenzene	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
40. Methylene Chloride	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
42. MTBE	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
43. Naphthalene	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
44. n-Propylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
45. Styrene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
48. Tetrachloroethene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
49. Toluene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
53. Trichloroethene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
59. Vinyl Chloride	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
60. m&p-Xylene	U		µg/L	2.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
61. o-Xylene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC
‡ 62. Xylenes	U		µg/L	3.0	1.0	05/20/22	VI22E20B	05/21/22 06:13	VI22E20B	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	Duplicate 2	Chain of Custody:	168190
Client Project Name:	TRW Milford (30046730)	Sample No:	4	Collect Date:	05/20/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	NA

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08623-004
Description: Duplicate 2
Matrix: Ground Water

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	V+	µg/L	50	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
3. Benzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
4. Bromobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
5. Bromochloromethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
6. Bromodichloromethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
7. Bromoform	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
8. Bromomethane	U	V+ L+ ICV+	µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
9. 2-Butanone	U	V+	µg/L	25	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
10. n-Butylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
13. Carbon Disulfide	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
15. Chlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
16. Chloroethane	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
17. Chloroform	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
18. Chloromethane	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
21. Dibromochloromethane	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
22. Dibromomethane	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
27. 1,1-Dichloroethane	2.4		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
30. cis-1,2-Dichloroethene	19		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
31. trans-1,2-Dichloroethene	1.5		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
35. Ethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC

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F: (231) 775-8584

Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	Duplicate 2	Chain of Custody:	168190
Client Project Name:	TRW Milford (30046730)	Sample No:	4	Collect Date:	05/20/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	NA

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08623-004
Description: Duplicate 2
Matrix: Ground Water

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. 2-Hexanone	U		µg/L	50	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
38. Isopropylbenzene	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
40. Methylene Chloride	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
42. MTBE	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
43. Naphthalene	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
44. n-Propylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
45. Styrene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
48. Tetrachloroethene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
49. Toluene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
53. Trichloroethene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
59. Vinyl Chloride	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
60. m&p-Xylene	U		µg/L	2.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
61. o-Xylene	U		µg/L	1.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC
‡ 62. Xylenes	U		µg/L	3.0	1.0	05/20/22	VI22E20B	05/21/22 06:40	VI22E20B	SNC

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Definitions/ Qualifiers:

- A:** Spike recovery or precision unusable due to dilution.
B: The analyte was detected in the associated method blank.
E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
J: The concentration is an estimated value.
M: Modified Method
U: The analyte was not detected at or above the reporting limit.
X: Matrix Interference has resulted in a raised reporting limit or distorted result.
W: Results reported on a wet-weight basis.
***:** Value reported is outside QC limits

Exception Summary:

- ICV+** : Recovery in the associated initial calibration verification sample exceeds the upper control limit. Results may be biased high.
L+ : Recovery in the associated laboratory sample (LCS) exceeds the upper control limit. Results may be biased high.
V+ : Recovery in the associated continuing calibration verification sample (CCV) exceeds the upper control limit. Results may be biased high.

Analysis Locations:

All analyses performed in Holt.



Accreditation Number(s):

T104704518-19-8 (TX)

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VI22E20B: Method Blank (MB)

EPA 8260D

Run Time: VI22E20B.MB 05/20/2022 23:39 [VI22E20B]

Analyte	MB Result	MB Qualifier	MB RDL
	µg/L		µg/L
Acetone	U		50
Acrylonitrile	U		2.0
Benzene	U		1.0
Bromobenzene	U		1.0
Bromochloromethane	U		1.0
Bromodichloromethane	U		1.0
Bromoform	U		1.0
Bromomethane	U		5.0
2-Butanone	U		25
n-Butylbenzene	U		1.0
sec-Butylbenzene	U		1.0
tert-Butylbenzene	U		1.0
Carbon Disulfide	U		5.0
Carbon Tetrachloride	U		1.0
Chlorobenzene	U		1.0
Chloroethane	U		5.0
Chloroform	U		1.0
Chloromethane	U		5.0
2-Chlorotoluene	U		5.0
1,2-Dibromo-3-chloropropane (SIM)	U		1.0
Dibromochloromethane	U		5.0
Dibromomethane	U		5.0
1,2-Dichlorobenzene	U		1.0
1,3-Dichlorobenzene	U		1.0
1,4-Dichlorobenzene	U		1.0
Dichlorodifluoromethane	U		5.0
1,1-Dichloroethane	U		1.0
1,2-Dichloroethane	U		1.0
1,1-Dichloroethene	U		1.0
cis-1,2-Dichloroethene	U		1.0
trans-1,2-Dichloroethene	U		1.0
1,2-Dichloropropane	U		1.0
cis-1,3-Dichloropropene	U		0.50

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VI22E20B: Method Blank (MB)

EPA 8260D

Run Time: VI22E20B.MB 05/20/2022 23:39 [VI22E20B]

Analyte	MB Result	MB Qualifier	MB RDL
	µg/L		µg/L
trans-1,3-Dichloropropene	U		0.50
Ethylbenzene	U		1.0
Ethylene Dibromide	U		1.0
2-Hexanone	U		50
Isopropylbenzene	U		5.0
4-Methyl-2-pentanone	U		50
Methylene Chloride	U		5.0
2-Methylnaphthalene	U		5.0
MTBE	U		5.0
Naphthalene	U		5.0
n-Propylbenzene	U		1.0
Styrene	U		1.0
1,1,1,2-Tetrachloroethane	U		1.0
1,1,2,2-Tetrachloroethane	U		1.0
Tetrachloroethene	U		1.0
Toluene	U		1.0
1,2,4-Trichlorobenzene	U		5.0
1,1,1-Trichloroethane	U		1.0
1,1,2-Trichloroethane	U		1.0
Trichloroethene	U		1.0
Trichlorofluoromethane	U		1.0
1,2,3-Trichloropropane	U		1.0
1,2,3-Trimethylbenzene	U		1.0
1,2,4-Trimethylbenzene	U		1.0
1,3,5-Trimethylbenzene	U		1.0
Vinyl Chloride	U		1.0
m&p-Xylene	U		2.0
o-Xylene	U		1.0
4-Bromofluorobenzene(S)	94		80-120
Dibromofluoromethane(S)	101		80-120
1,2-Dichloroethane-d4(S)	92		80-120
Toluene-d8(S)	98		80-120

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VI22E20B: Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD)

EPA 8260D

Run Time: VI22E20B.LCS: 05/20/2022 22:21 [VI22E20B] VI22E20B.LCSD: 05/20/2022 22:47 [VI22E20B]

Analyte	LCS Spike Amount µg/L	LCS Result µg/L	LCS Rec. %	Rec. Limits %	LCS Qualifier	LCSD Spike Amount µg/L	LCSD Result µg/L	LCSD Rec. %	LCSD Qualifier	RPD %	RPD Limits %	RPD Qualifier
Acetone	50.0	35.4	71	54-140		50.0	31.7	63		12	20	
Acrylonitrile	50.0	51.4	103	70-130		50.0	46.8	94		9	20	
Benzene	50.0	47.5	95	80-120		50.0	45.0	90		5	20	
Bromobenzene	50.0	49.0	98	75-125		50.0	45.4	91		7	20	
Bromochloromethane	50.0	47.9	96	70-130		50.0	46.0	92		4	20	
Bromodichloromethane	50.0	45.8	92	75-120		50.0	43.4	87		6	20	
Bromoform	50.0	48.1	96	70-130		50.0	45.7	91		5	20	
Bromomethane	50.0	70.1	140	68-135	*	50.0	62.3	125		11	20	
2-Butanone	50.0	44.3	89	70-148		50.0	40.6	81		9	20	
n-Butylbenzene	50.0	56.4	113	70-133		50.0	52.9	106		6	20	
sec-Butylbenzene	50.0	52.0	104	70-125		50.0	48.2	96		8	20	
tert-Butylbenzene	50.0	51.4	103	70-130		50.0	47.5	95		8	20	
Carbon Disulfide	50.0	44.7	89	70-130		50.0	41.7	83		7	20	
Carbon Tetrachloride	50.0	44.5	89	70-130		50.0	41.3	83		7	20	
Chlorobenzene	50.0	48.7	97	80-120		50.0	46.3	93		4	20	
Chloroethane	50.0	49.7	99	61-130		50.0	46.0	92		7	20	
Chloroform	50.0	45.4	91	80-120		50.0	42.6	85		7	20	
Chloromethane	50.0	55.0	110	67-125		50.0	51.4	103		7	20	
2-Chlorotoluene	50.0	49.7	99	75-125		50.0	45.8	92		7	20	
1,2-Dibromo-3-chloropropane (SIM)	50.0	49.3	99	70-130		50.0	44.5	89		11	20	
Dibromochloromethane	50.0	46.0	92	70-130		50.0	43.3	87		6	20	
Dibromomethane	50.0	47.8	96	75-125		50.0	45.0	90		6	20	
1,2-Dichlorobenzene	50.0	50.8	102	70-120		50.0	47.4	95		7	20	
1,3-Dichlorobenzene	50.0	51.3	103	75-125		50.0	47.8	96		7	20	
1,4-Dichlorobenzene	50.0	48.8	98	75-125		50.0	45.5	91		7	20	
Dichlorodifluoromethane	50.0	45.9	92	70-136		50.0	43.2	86		7	20	
1,1-Dichloroethane	50.0	47.1	94	70-130		50.0	44.2	88		7	20	
1,2-Dichloroethane	50.0	41.2	82	70-130		50.0	39.5	79		4	20	
1,1-Dichloroethene	50.0	43.1	86	78-120		50.0	39.6	79		8	20	
cis-1,2-Dichloroethene	50.0	44.7	89	70-125		50.0	42.2	84		6	20	
trans-1,2-Dichloroethene	50.0	46.6	93	70-130		50.0	44.4	89		4	20	
1,2-Dichloropropane	50.0	50.0	100	80-121		50.0	47.5	95		5	20	
cis-1,3-Dichloropropene	50.0	47.7	95	70-130		50.0	45.3	91		4	20	

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VI22E20B: Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD)

EPA 8260D

Run Time: VI22E20B.LCS: 05/20/2022 22:21 [VI22E20B] VI22E20B.LCSD: 05/20/2022 22:47 [VI22E20B]

Analyte	LCS Spike Amount µg/L	LCS Result µg/L	LCS Rec. %	Rec. Limits %	LCS Qualifier	LCSD Spike Amount µg/L	LCSD Result µg/L	LCSD Rec. %	LCSD Qualifier	RPD %	RPD Limits %	RPD Qualifier
trans-1,3-Dichloropropene	50.0	51.0	102	70-132		50.0	48.3	97		5	20	
Ethylbenzene	50.0	49.7	99	80-120		50.0	47.0	94		5	20	
Ethylene Dibromide	50.0	50.7	101	80-120		50.0	47.6	95		6	20	
2-Hexanone	50.0	44.7	89	70-130		50.0	41.7	83		7	20	
Isopropylbenzene	50.0	50.1	100	75-125		50.0	47.5	95		5	20	
4-Methyl-2-pentanone	50.0	53.2	106	70-130		50.0	49.1	98		8	20	
Methylene Chloride	50.0	46.4	93	70-130		50.0	43.8	88		6	20	
2-Methylnaphthalene	50.0	49.7	99	70-130		50.0	44.7	89		11	20	
MTBE	50.0	46.4	93	70-125		50.0	43.8	88		6	20	
Naphthalene	50.0	53.2	106	70-130		50.0	48.9	98		8	20	
n-Propylbenzene	50.0	52.2	104	70-130		50.0	48.7	97		7	20	
Styrene	50.0	46.7	93	70-130		50.0	44.0	88		6	20	
1,1,1,2-Tetrachloroethane	50.0	49.2	98	80-130		50.0	46.3	93		5	20	
1,1,2,2-Tetrachloroethane	50.0	59.5	119	70-130		50.0	54.6	109		9	20	
Tetrachloroethene	50.0	49.2	98	70-130		50.0	46.2	92		6	20	
Toluene	50.0	48.6	97	80-120		50.0	46.1	92		5	20	
1,2,4-Trichlorobenzene	50.0	53.0	106	70-130		50.0	48.9	98		8	20	
1,1,1-Trichloroethane	50.0	45.6	91	70-130		50.0	42.7	85		7	20	
1,1,2-Trichloroethane	50.0	49.1	98	75-125		50.0	46.3	93		5	20	
Trichloroethene	50.0	43.2	86	71-125		50.0	40.6	81		6	20	
Trichlorofluoromethane	50.0	46.8	94	70-133		50.0	43.2	86		9	20	
1,2,3-Trichloropropane	50.0	50.9	102	75-125		50.0	46.5	93		9	20	
1,2,3-Trimethylbenzene	50.0	49.7	99	70-130		50.0	45.8	92		7	20	
1,2,4-Trimethylbenzene	50.0	52.4	105	75-130		50.0	48.8	98		7	20	
1,3,5-Trimethylbenzene	50.0	51.4	103	75-130		50.0	48.0	96		7	20	
Vinyl Chloride	50.0	52.4	105	74-125		50.0	49.3	99		6	20	
m&p-Xylene	100	98.3	98	75-130		100	93.0	93		5	20	
o-Xylene	50.0	49.3	99	80-120		50.0	46.9	94		5	20	
4-Bromofluorobenzene(S)			97	80-120				98				
Dibromofluoromethane(S)			97	80-120				96				
1,2-Dichloroethane-d4(S)			88	80-120				87				
Toluene-d8(S)			99	80-120				99				

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Definitions/ Qualifiers:

U: The analyte was not detected at or above the Reporting Limit (RL).
*****: Value reported is outside QC limits

Exception Summary:

Exceptions have been properly noted on reported results or affected samples have been scheduled for reanalysis when appropriate.

Report Generated By:



By Sue Ricketts at 10:17 AM, May 24, 2022

Client Name: <u>TRW Millford</u>				MATRIX (SEE RIGHT CORNER FOR CODE)	# OF CONTAINERS	PARAMETERS												Matrix Code		HOLD SAMPLE	Deliverables	
Contact Person: <u>Christian Seidel</u>																		S Soil	GW Ground Water			Level 2
Project Name/ Number: <u>TRW Millford</u>																		A Air	SW Surface Water			Level 3
Email distribution list: <u>John. Malnisi@arcadis.com</u>																		O Oil	WW Waste Water			Level 4
Quote# <u>849</u>																		P Wipe	X Other: Specify			EDD
Purchase Order#																						
Date	Time	Sample #	Client Sample Descriptor														Remarks:					
5/19	17:30	1	VAP-01-10-115-120	GW	3	X											484u TAT					
5/20	10:45	2	VAP-01-11-125-130	GW	3	X											484u TAT					
5/20	12:20	3	VAP-01-12-35-100-2	GW	3	X											484u TAT					
5/20		4	Duplicate 3	GW	3	X											484u TAT Received By Lab					
MAY 20 2022																						
Initials: <u>EA</u>																						
Received On Ice																						
Comments:																						
Sampled/Relinquished By: <u>Ch Seidel</u>				Date/Time: <u>5/19 18:00</u>				Received By: <u>Arcadis bridge</u>														
Relinquished By: <u>Arcadis bridge</u>				Date/Time: <u>5/20 7:05</u>				Received By: <u>Ch Seidel</u>														
Relinquished By: <u>Ch Seidel</u>				Date/Time: <u>5/20 13:33</u>				Received By Laboratory: <u>Dale & Shah 5/20/22 1:33</u>														
<u>Turnaround Time</u> ALL RESULTS WILL BE SENT BY THE END OF THE BUSINESS DAY																						
____ 1 bus. day ____ 2 bus. days ____ 3 bus. days ____ 4 bus. days ____ 5-7 bus. days (standard) Other (specify time/date requirement): _____																						
												Fibertec project number: <u>A0863</u> Temperature upon receipt at Lab: <u>4.9°C</u>										
Please see back for terms and conditions																						
<u>Dale & Shah 5/20/22 15:24</u>																						



Thursday, June 02, 2022

Fibertec Project Number: A08693
Project Identification: TRW Milford (30046730) /30046730
Submittal Date: 05/24/2022

Mr. Christian Seidel
Arcadis U.S., Inc. - Novi
28550 Cabot Drive
Suite 500
Novi, MI 48377

Dear Mr. Seidel,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note TO-15 samples will be disposed of 7 calendar days after the reporting date. All other samples will be disposed of 30 days after the reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,

A handwritten signature in black ink that reads "Sue Ricketts". The signature is fluid and cursive.

By Sue Ricketts at 11:02 AM, Jun 02, 2022

For Daryl P. Strandbergh
Laboratory Director

Enclosures

1914 Holloway Drive
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8660 S. Mackinaw Trail

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Brighton, MI 48116
Cadillac, MI 49601

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T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-02-01_15_20	Chain of Custody:	171066
Client Project Name:	TRW Milford (30046730)	Sample No:	1	Collect Date:	05/23/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	12:35

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08693-001 **Matrix: Ground Water**
Description: VAP-02-01_15_20

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Acetone	U	V+	µg/L	50	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
3. Benzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
4. Bromobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
5. Bromochloromethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
6. Bromodichloromethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
7. Bromoform	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
8. Bromomethane	U	V+ L+ ICV+	µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
9. 2-Butanone	U	V+	µg/L	25	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
10. n-Butylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
13. Carbon Disulfide	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
15. Chlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
16. Chloroethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
17. Chloroform	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
18. Chloromethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
21. Dibromochloromethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
22. Dibromomethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
35. Ethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-02-01_15_20	Chain of Custody:	171066
Client Project Name:	TRW Milford (30046730)	Sample No:	1	Collect Date:	05/23/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	12:35

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08693-001 **Matrix: Ground Water**
Description: VAP-02-01_15_20

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. 2-Hexanone	U		µg/L	50	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
38. Isopropylbenzene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
40. Methylene Chloride	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
42. MTBE	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
43. Naphthalene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
44. n-Propylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
45. Styrene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
48. Tetrachloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
49. Toluene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
53. Trichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
59. Vinyl Chloride	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
60. m&p-Xylene	U		µg/L	2.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
61. o-Xylene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC
‡ 62. Xylenes	U		µg/L	3.0	1.0	05/31/22	VI22E31B	06/01/22 01:31	VI22E31B	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-03-01_15_20	Chain of Custody:	171066
Client Project Name:	TRW Milford (30046730)	Sample No:	2	Collect Date:	05/23/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	12:40

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08693-002 **Matrix: Ground Water**
Description: VAP-03-01_15_20

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		Init.
						P. Date	P. Batch	A. Date	A. Batch	
1. Acetone	U	HV V+	µg/L	50	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
‡ 2. Acrylonitrile	U	HV	µg/L	2.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
3. Benzene	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
4. Bromobenzene	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
5. Bromochloromethane	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
6. Bromodichloromethane	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
7. Bromoform	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
8. Bromomethane	U	HV V+ L+ ICV+	µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
9. 2-Butanone	U	HV V+	µg/L	25	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
10. n-Butylbenzene	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
11. sec-Butylbenzene	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
12. tert-Butylbenzene	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
13. Carbon Disulfide	U	HV	µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
14. Carbon Tetrachloride	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
15. Chlorobenzene	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
16. Chloroethane	U	HV	µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
17. Chloroform	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
18. Chloromethane	U	HV	µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
19. 2-Chlorotoluene	U	HV	µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
21. Dibromochloromethane	U	HV	µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
22. Dibromomethane	U	HV	µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
23. 1,2-Dichlorobenzene	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
24. 1,3-Dichlorobenzene	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
25. 1,4-Dichlorobenzene	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
26. Dichlorodifluoromethane	U	HV	µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
27. 1,1-Dichloroethane	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
28. 1,2-Dichloroethane	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
29. 1,1-Dichloroethene	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
30. cis-1,2-Dichloroethene	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
31. trans-1,2-Dichloroethene	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
32. 1,2-Dichloropropane	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
33. cis-1,3-Dichloropropene	U	HV	µg/L	0.50	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-03-01_15_20	Chain of Custody:	171066
Client Project Name:	TRW Milford (30046730)	Sample No:	2	Collect Date:	05/23/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	12:40

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08693-002 **Matrix: Ground Water**
Description: VAP-03-01_15_20

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
34. trans-1,3-Dichloropropene	U	HV	µg/L	0.50	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
35. Ethylbenzene	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
36. Ethylene Dibromide	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
37. 2-Hexanone	U	HV	µg/L	50	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
38. Isopropylbenzene	U	HV	µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
39. 4-Methyl-2-pentanone	U	HV	µg/L	50	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
40. Methylene Chloride	U	HV	µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
‡ 41. 2-Methylnaphthalene	U	HV	µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
42. MTBE	U	HV	µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
43. Naphthalene	U	HV	µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
44. n-Propylbenzene	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
45. Styrene	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
46. 1,1,1,2-Tetrachloroethane	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
47. 1,1,2,2-Tetrachloroethane	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
48. Tetrachloroethene	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
49. Toluene	1.5	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
50. 1,2,4-Trichlorobenzene	U	HV	µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
51. 1,1,1-Trichloroethane	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
‡ 52. 1,1,2-Trichloroethane	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
53. Trichloroethene	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
54. Trichlorofluoromethane	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
55. 1,2,3-Trichloropropane	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
‡ 56. 1,2,3-Trimethylbenzene	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
57. 1,2,4-Trimethylbenzene	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
58. 1,3,5-Trimethylbenzene	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
59. Vinyl Chloride	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
60. m&p-Xylene	U	HV	µg/L	2.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
61. o-Xylene	U	HV	µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC
‡ 62. Xylenes	U	HV	µg/L	3.0	1.0	05/31/22	VI22E31B	06/01/22 01:57	VI22E31B	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-02-02_25_30	Chain of Custody:	171066
Client Project Name:	TRW Milford (30046730)	Sample No:	3	Collect Date:	05/23/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	14:37

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08693-003 **Matrix: Ground Water**
Description: VAP-02-02_25_30

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	V+	µg/L	50	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
3. Benzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
4. Bromobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
5. Bromochloromethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
6. Bromodichloromethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
7. Bromoform	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
8. Bromomethane	U	V+ L+ ICV+	µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
9. 2-Butanone	U	V+	µg/L	25	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
10. n-Butylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
13. Carbon Disulfide	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
15. Chlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
16. Chloroethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
17. Chloroform	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
18. Chloromethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
21. Dibromochloromethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
22. Dibromomethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
35. Ethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-02-02_25_30	Chain of Custody:	171066
Client Project Name:	TRW Milford (30046730)	Sample No:	3	Collect Date:	05/23/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	14:37

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08693-003 **Matrix: Ground Water**
Description: VAP-02-02_25_30

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. 2-Hexanone	U		µg/L	50	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
38. Isopropylbenzene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
40. Methylene Chloride	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
42. MTBE	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
43. Naphthalene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
44. n-Propylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
45. Styrene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
48. Tetrachloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
49. Toluene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
53. Trichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
59. Vinyl Chloride	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
60. m&p-Xylene	U		µg/L	2.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
61. o-Xylene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC
‡ 62. Xylenes	U		µg/L	3.0	1.0	05/31/22	VI22E31B	06/01/22 02:23	VI22E31B	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-03-02_25_30	Chain of Custody:	171066
Client Project Name:	TRW Milford (30046730)	Sample No:	4	Collect Date:	05/23/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	15:20

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08693-004 **Matrix: Ground Water**
Description: VAP-03-02_25_30

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	V+	µg/L	50	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
3. Benzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
4. Bromobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
5. Bromochloromethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
6. Bromodichloromethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
7. Bromoform	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
8. Bromomethane	U	V+ L+ ICV+	µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
9. 2-Butanone	U	V+	µg/L	25	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
10. n-Butylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
13. Carbon Disulfide	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
15. Chlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
16. Chloroethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
17. Chloroform	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
18. Chloromethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
21. Dibromochloromethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
22. Dibromomethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
35. Ethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-03-02_25_30	Chain of Custody:	171066
Client Project Name:	TRW Milford (30046730)	Sample No:	4	Collect Date:	05/23/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	15:20

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08693-004 **Matrix: Ground Water**
Description: VAP-03-02_25_30

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. 2-Hexanone	U		µg/L	50	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
38. Isopropylbenzene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
40. Methylene Chloride	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
42. MTBE	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
43. Naphthalene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
44. n-Propylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
45. Styrene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
48. Tetrachloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
49. Toluene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
53. Trichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
59. Vinyl Chloride	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
60. m&p-Xylene	U		µg/L	2.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
61. o-Xylene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC
‡ 62. Xylenes	U		µg/L	3.0	1.0	05/31/22	VI22E31B	06/01/22 02:49	VI22E31B	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-02-03_35_40	Chain of Custody:	171066
Client Project Name:	TRW Milford (30046730)	Sample No:	5	Collect Date:	05/23/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	16:35

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08693-005 **Matrix: Ground Water**
Description: VAP-02-03_35_40

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	V+	µg/L	50	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
3. Benzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
4. Bromobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
5. Bromochloromethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
6. Bromodichloromethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
7. Bromoform	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
8. Bromomethane	U	V+ L+ ICV+	µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
9. 2-Butanone	U	V+	µg/L	25	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
10. n-Butylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
13. Carbon Disulfide	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
15. Chlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
16. Chloroethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
17. Chloroform	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
18. Chloromethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
21. Dibromochloromethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
22. Dibromomethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
35. Ethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC

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Analytical Laboratory Report
Laboratory Project Number: A08693
Laboratory Sample Number: A08693-005

Order: A08693
Date: 06/02/22

Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-02-03_35_40	Chain of Custody:	171066
Client Project Name:	TRW Milford (30046730)	Sample No:	5	Collect Date:	05/23/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	16:35

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08693-005 Matrix: Ground Water
Description: VAP-02-03_35_40

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. 2-Hexanone	U		µg/L	50	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
38. Isopropylbenzene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
40. Methylene Chloride	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
42. MTBE	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
43. Naphthalene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
44. n-Propylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
45. Styrene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
48. Tetrachloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
49. Toluene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
53. Trichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
59. Vinyl Chloride	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
60. m&p-Xylene	U		µg/L	2.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
61. o-Xylene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC
‡ 62. Xylenes	U		µg/L	3.0	1.0	05/31/22	VI22E31B	06/01/22 03:15	VI22E31B	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-03-03_35_40	Chain of Custody:	171066
Client Project Name:	TRW Milford (30046730)	Sample No:	7	Collect Date:	05/24/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	09:15

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08693-007 **Matrix: Ground Water**
Description: VAP-03-03_35_40

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	V+	µg/L	50	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
3. Benzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
4. Bromobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
5. Bromochloromethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
6. Bromodichloromethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
7. Bromoform	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
8. Bromomethane	U	V+ L+ ICV+	µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
9. 2-Butanone	U	V+	µg/L	25	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
10. n-Butylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
13. Carbon Disulfide	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
15. Chlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
16. Chloroethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
17. Chloroform	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
18. Chloromethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
21. Dibromochloromethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
22. Dibromomethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
35. Ethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-03-03_35_40	Chain of Custody:	171066
Client Project Name:	TRW Milford (30046730)	Sample No:	7	Collect Date:	05/24/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	09:15

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08693-007 **Matrix: Ground Water**
Description: VAP-03-03_35_40

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. 2-Hexanone	U		µg/L	50	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
38. Isopropylbenzene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
40. Methylene Chloride	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
42. MTBE	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
43. Naphthalene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
44. n-Propylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
45. Styrene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
48. Tetrachloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
49. Toluene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
53. Trichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
59. Vinyl Chloride	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
60. m&p-Xylene	U		µg/L	2.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
61. o-Xylene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC
‡ 62. Xylenes	U		µg/L	3.0	1.0	05/31/22	VI22E31B	06/01/22 03:41	VI22E31B	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-02-04_45_50	Chain of Custody:	171066
Client Project Name:	TRW Milford (30046730)	Sample No:	8	Collect Date:	05/24/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	09:20

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08693-008 **Matrix: Ground Water**
Description: VAP-02-04_45_50

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	V+	µg/L	50	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
3. Benzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
4. Bromobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
5. Bromochloromethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
6. Bromodichloromethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
7. Bromoform	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
8. Bromomethane	U	V+ L+ ICV+	µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
9. 2-Butanone	U	V+	µg/L	25	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
10. n-Butylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
13. Carbon Disulfide	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
15. Chlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
16. Chloroethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
17. Chloroform	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
18. Chloromethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
21. Dibromochloromethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
22. Dibromomethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
30. cis-1,2-Dichloroethene	1.5		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
35. Ethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-02-04_45_50	Chain of Custody:	171066
Client Project Name:	TRW Milford (30046730)	Sample No:	8	Collect Date:	05/24/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	09:20

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08693-008 **Matrix: Ground Water**
Description: VAP-02-04_45_50

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. 2-Hexanone	U		µg/L	50	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
38. Isopropylbenzene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
40. Methylene Chloride	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
42. MTBE	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
43. Naphthalene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
44. n-Propylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
45. Styrene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
48. Tetrachloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
49. Toluene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
53. Trichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
59. Vinyl Chloride	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
60. m&p-Xylene	U		µg/L	2.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
61. o-Xylene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC
‡ 62. Xylenes	U		µg/L	3.0	1.0	05/31/22	VI22E31B	06/01/22 04:07	VI22E31B	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-02-05_55_60	Chain of Custody:	171066
Client Project Name:	TRW Milford (30046730)	Sample No:	9	Collect Date:	05/24/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	11:05

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08693-009 **Matrix: Ground Water**
Description: VAP-02-05_55_60

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	V+	µg/L	50	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
3. Benzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
4. Bromobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
5. Bromochloromethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
6. Bromodichloromethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
7. Bromoform	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
8. Bromomethane	U	V+ L+ ICV+	µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
9. 2-Butanone	U	V+	µg/L	25	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
10. n-Butylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
13. Carbon Disulfide	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
15. Chlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
16. Chloroethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
17. Chloroform	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
18. Chloromethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
21. Dibromochloromethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
22. Dibromomethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
35. Ethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC

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F: (810) 220-3311
F: (231) 775-8584

Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-02-05_55_60	Chain of Custody:	171066
Client Project Name:	TRW Milford (30046730)	Sample No:	9	Collect Date:	05/24/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	11:05

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08693-009 **Matrix: Ground Water**
Description: VAP-02-05_55_60

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. 2-Hexanone	U		µg/L	50	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
38. Isopropylbenzene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
40. Methylene Chloride	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
42. MTBE	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
43. Naphthalene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
44. n-Propylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
45. Styrene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
48. Tetrachloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
49. Toluene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
53. Trichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
59. Vinyl Chloride	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
60. m&p-Xylene	U		µg/L	2.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
61. o-Xylene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC
‡ 62. Xylenes	U		µg/L	3.0	1.0	05/31/22	VI22E31B	06/01/22 04:33	VI22E31B	SNC

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F: (231) 775-8584

Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-03-04_45_50	Chain of Custody:	171066
Client Project Name:	TRW Milford (30046730)	Sample No:	10	Collect Date:	05/24/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	10:45

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08693-010 **Matrix: Ground Water**
Description: VAP-03-04_45_50

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	V+	µg/L	50	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
3. Benzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
4. Bromobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
5. Bromochloromethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
6. Bromodichloromethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
7. Bromoform	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
8. Bromomethane	U	V+ L+ ICV+	µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
9. 2-Butanone	U	V+	µg/L	25	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
10. n-Butylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
13. Carbon Disulfide	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
15. Chlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
16. Chloroethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
17. Chloroform	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
18. Chloromethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
21. Dibromochloromethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
22. Dibromomethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
35. Ethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC

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F: (810) 220-3311
F: (231) 775-8584

Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-03-04_45_50	Chain of Custody:	171066
Client Project Name:	TRW Milford (30046730)	Sample No:	10	Collect Date:	05/24/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	10:45

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08693-010 **Matrix: Ground Water**
Description: VAP-03-04_45_50

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. 2-Hexanone	U		µg/L	50	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
38. Isopropylbenzene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
40. Methylene Chloride	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
42. MTBE	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
43. Naphthalene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
44. n-Propylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
45. Styrene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
48. Tetrachloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
49. Toluene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
53. Trichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
59. Vinyl Chloride	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
60. m&p-Xylene	U		µg/L	2.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
61. o-Xylene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC
‡ 62. Xylenes	U		µg/L	3.0	1.0	05/31/22	VI22E31B	06/01/22 05:00	VI22E31B	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-03-05_55_60	Chain of Custody:	171064
Client Project Name:	TRW Milford (30046730)	Sample No:	11	Collect Date:	05/24/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	12:05

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08693-011 **Matrix: Ground Water**
Description: VAP-03-05_55_60

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	V+	µg/L	50	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
3. Benzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
4. Bromobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
5. Bromochloromethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
6. Bromodichloromethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
7. Bromoform	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
8. Bromomethane	U	V+ L+ ICV+	µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
9. 2-Butanone	U	V+	µg/L	25	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
10. n-Butylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
13. Carbon Disulfide	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
15. Chlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
16. Chloroethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
17. Chloroform	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
18. Chloromethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
21. Dibromochloromethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
22. Dibromomethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
35. Ethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-03-05_55_60	Chain of Custody:	171064
Client Project Name:	TRW Milford (30046730)	Sample No:	11	Collect Date:	05/24/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	12:05

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08693-011 **Matrix: Ground Water**
Description: VAP-03-05_55_60

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. 2-Hexanone	U		µg/L	50	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
38. Isopropylbenzene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
40. Methylene Chloride	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
42. MTBE	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
43. Naphthalene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
44. n-Propylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
45. Styrene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
48. Tetrachloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
49. Toluene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
53. Trichloroethene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
59. Vinyl Chloride	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
60. m&p-Xylene	U		µg/L	2.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
61. o-Xylene	U		µg/L	1.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC
‡ 62. Xylenes	U		µg/L	3.0	1.0	05/31/22	VI22E31B	06/01/22 05:26	VI22E31B	SNC

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F: (231) 775-8584

Definitions/ Qualifiers:

- A:** Spike recovery or precision unusable due to dilution.
B: The analyte was detected in the associated method blank.
E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
J: The concentration is an estimated value.
M: Modified Method
U: The analyte was not detected at or above the reporting limit.
X: Matrix Interference has resulted in a raised reporting limit or distorted result.
W: Results reported on a wet-weight basis.
***:** Value reported is outside QC limits

Exception Summary:

- HV** : Per method requirements, the hold time is reduced from 14 days to 7 days when the sample pH is >2. The hold time was exceeded.
ICV+ : Recovery in the associated initial calibration verification sample exceeds the upper control limit. Results may be biased high.
L+ : Recovery in the associated laboratory sample (LCS) exceeds the upper control limit. Results may be biased high.
V+ : Recovery in the associated continuing calibration verification sample (CCV) exceeds the upper control limit. Results may be biased high.

Analysis Locations:

All analyses performed in Holt.



Accreditation Number(s):

T104704518-19-8 (TX)

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VI22E31B: Method Blank (MB)

EPA 8260D

Run Time: VI22E31B.MB 05/31/2022 23:19 [VI22E31B]

Analyte	MB Result µg/L	MB Qualifier	MB RDL µg/L
Acetone	U		50
Acrylonitrile	U		2.0
Benzene	U		1.0
Bromobenzene	U		1.0
Bromochloromethane	U		1.0
Bromodichloromethane	U		1.0
Bromoform	U		1.0
Bromomethane	U		5.0
2-Butanone	U		25
n-Butylbenzene	U		1.0
sec-Butylbenzene	U		1.0
tert-Butylbenzene	U		1.0
Carbon Disulfide	U		5.0
Carbon Tetrachloride	U		1.0
Chlorobenzene	U		1.0
Chloroethane	U		5.0
Chloroform	U		1.0
Chloromethane	U		5.0
2-Chlorotoluene	U		5.0
1,2-Dibromo-3-chloropropane (SIM)	U		1.0
Dibromochloromethane	U		5.0
Dibromomethane	U		5.0
1,2-Dichlorobenzene	U		1.0
1,3-Dichlorobenzene	U		1.0
1,4-Dichlorobenzene	U		1.0
Dichlorodifluoromethane	U		5.0
1,1-Dichloroethane	U		1.0
1,2-Dichloroethane	U		1.0
1,1-Dichloroethene	U		1.0
cis-1,2-Dichloroethene	U		1.0
trans-1,2-Dichloroethene	U		1.0
1,2-Dichloropropane	U		1.0
cis-1,3-Dichloropropene	U		0.50

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VI22E31B: Method Blank (MB)

EPA 8260D

Run Time: VI22E31B.MB 05/31/2022 23:19 [VI22E31B]

Analyte	MB Result µg/L	MB Qualifier	MB RDL µg/L
trans-1,3-Dichloropropene	U		0.50
Ethylbenzene	U		1.0
Ethylene Dibromide	U		1.0
2-Hexanone	U		50
Isopropylbenzene	U		5.0
4-Methyl-2-pentanone	U		50
Methylene Chloride	U		5.0
2-Methylnaphthalene	U		5.0
MTBE	U		5.0
Naphthalene	U		5.0
n-Propylbenzene	U		1.0
Styrene	U		1.0
1,1,1,2-Tetrachloroethane	U		1.0
1,1,2,2-Tetrachloroethane	U		1.0
Tetrachloroethene	U		1.0
Toluene	U		1.0
1,2,4-Trichlorobenzene	U		5.0
1,1,1-Trichloroethane	U		1.0
1,1,2-Trichloroethane	U		1.0
Trichloroethene	U		1.0
Trichlorofluoromethane	U		1.0
1,2,3-Trichloropropane	U		1.0
1,2,3-Trimethylbenzene	U		1.0
1,2,4-Trimethylbenzene	U		1.0
1,3,5-Trimethylbenzene	U		1.0
Vinyl Chloride	U		1.0
m&p-Xylene	U		2.0
o-Xylene	U		1.0
4-Bromofluorobenzene(S)	95		80-120
Dibromofluoromethane(S)	112		80-120
1,2-Dichloroethane-d4(S)	92		80-120
Toluene-d8(S)	99		80-120

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VI22E31B: Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD)

EPA 8260D

Run Time: VI22E31B.LCS: 05/31/2022 22:01 [VI22E31B] VI22E31B.LCSD: 05/31/2022 22:27 [VI22E31B]

Analyte	LCS Spike Amount µg/L	LCS Result µg/L	LCS Rec. %	Rec. Limits %	LCS Qualifier	LCSD Spike Amount µg/L	LCSD Result µg/L	LCSD Rec. %	LCSD Qualifier	RPD %	RPD Limits %	RPD Qualifier
Acetone	50.0	42.0	84	54-140		50.0	41.6	83		1	20	
Acrylonitrile	50.0	54.7	109	70-130		50.0	55.4	111		2	20	
Benzene	50.0	47.6	95	80-120		50.0	49.4	99		4	20	
Bromobenzene	50.0	46.7	93	75-125		50.0	48.0	96		3	20	
Bromochloromethane	50.0	49.2	98	70-130		50.0	50.6	101		3	20	
Bromodichloromethane	50.0	45.5	91	75-120		50.0	47.0	94		3	20	
Bromoform	50.0	47.5	95	70-130		50.0	48.0	96		1	20	
Bromomethane	50.0	69.3	139	68-135	*	50.0	71.1	142	*	2	20	
2-Butanone	50.0	47.7	95	70-148		50.0	47.2	94		1	20	
n-Butylbenzene	50.0	56.3	113	70-133		50.0	58.2	116		3	20	
sec-Butylbenzene	50.0	51.3	103	70-125		50.0	53.2	106		3	20	
tert-Butylbenzene	50.0	50.4	101	70-130		50.0	51.8	104		3	20	
Carbon Disulfide	50.0	48.3	97	70-130		50.0	50.3	101		4	20	
Carbon Tetrachloride	50.0	44.6	89	70-130		50.0	46.6	93		4	20	
Chlorobenzene	50.0	47.7	95	80-120		50.0	49.5	99		4	20	
Chloroethane	50.0	51.0	102	61-130		50.0	53.0	106		4	20	
Chloroform	50.0	47.8	96	80-120		50.0	50.4	101		5	20	
Chloromethane	50.0	52.1	104	67-125		50.0	54.6	109		5	20	
2-Chlorotoluene	50.0	48.2	96	75-125		50.0	49.5	99		3	20	
1,2-Dibromo-3-chloropropane (SIM)	50.0	46.3	93	70-130		50.0	46.0	92		1	20	
Dibromochloromethane	50.0	44.6	89	70-130		50.0	46.0	92		3	20	
Dibromomethane	50.0	47.6	95	75-125		50.0	48.1	96		1	20	
1,2-Dichlorobenzene	50.0	48.7	97	70-120		50.0	50.2	100		3	20	
1,3-Dichlorobenzene	50.0	50.0	100	75-125		50.0	51.2	102		2	20	
1,4-Dichlorobenzene	50.0	46.3	93	75-125		50.0	48.7	97		4	20	
Dichlorodifluoromethane	50.0	45.1	90	70-136		50.0	47.1	94		4	20	
1,1-Dichloroethane	50.0	48.9	98	70-130		50.0	50.8	102		4	20	
1,2-Dichloroethane	50.0	41.4	83	70-130		50.0	41.8	84		1	20	
1,1-Dichloroethene	50.0	45.3	91	78-120		50.0	47.0	94		3	20	
cis-1,2-Dichloroethene	50.0	46.9	94	70-125		50.0	49.1	98		4	20	
trans-1,2-Dichloroethene	50.0	49.9	100	70-130		50.0	52.5	105		5	20	
1,2-Dichloropropane	50.0	49.5	99	80-121		50.0	51.5	103		4	20	
cis-1,3-Dichloropropene	50.0	46.7	93	70-130		50.0	48.5	97		4	20	

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VI22E31B: Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD)

EPA 8260D

Run Time: VI22E31B.LCS: 05/31/2022 22:01 [VI22E31B] VI22E31B.LCSD: 05/31/2022 22:27 [VI22E31B]

Analyte	LCS Spike Amount µg/L	LCS Result µg/L	LCS Rec. %	Rec. Limits %	LCS Qualifier	LCSD Spike Amount µg/L	LCSD Result µg/L	LCSD Rec. %	LCSD Qualifier	RPD %	RPD Limits %	RPD Qualifier
trans-1,3-Dichloropropene	50.0	50.6	101	70-132		50.0	51.9	104		3	20	
Ethylbenzene	50.0	48.4	97	80-120		50.0	50.4	101		4	20	
Ethylene Dibromide	50.0	49.2	98	80-120		50.0	50.4	101		3	20	
2-Hexanone	50.0	43.7	87	70-130		50.0	44.2	88		1	20	
Isopropylbenzene	50.0	49.7	99	75-125		50.0	51.7	103		4	20	
4-Methyl-2-pentanone	50.0	53.7	107	70-130		50.0	54.4	109		2	20	
Methylene Chloride	50.0	48.3	97	70-130		50.0	50.2	100		3	20	
2-Methylnaphthalene	50.0	48.0	96	70-130		50.0	47.6	95		1	20	
MTBE	50.0	49.8	100	70-125		50.0	50.5	101		1	20	
Naphthalene	50.0	50.8	102	70-130		50.0	51.2	102		0	20	
n-Propylbenzene	50.0	51.3	103	70-130		50.0	52.8	106		3	20	
Styrene	50.0	45.5	91	70-130		50.0	47.2	94		3	20	
1,1,1,2-Tetrachloroethane	50.0	47.7	95	80-130		50.0	48.5	97		2	20	
1,1,2,2-Tetrachloroethane	50.0	58.0	116	70-130		50.0	58.1	116		0	20	
Tetrachloroethene	50.0	49.1	98	70-130		50.0	50.7	101		3	20	
Toluene	50.0	48.7	97	80-120		50.0	50.7	101		4	20	
1,2,4-Trichlorobenzene	50.0	49.5	99	70-130		50.0	51.4	103		4	20	
1,1,1-Trichloroethane	50.0	48.6	97	70-130		50.0	50.5	101		4	20	
1,1,2-Trichloroethane	50.0	48.0	96	75-125		50.0	49.2	98		2	20	
Trichloroethene	50.0	43.3	87	71-125		50.0	45.1	90		3	20	
Trichlorofluoromethane	50.0	49.4	99	70-133		50.0	51.5	103		4	20	
1,2,3-Trichloropropane	50.0	50.8	102	75-125		50.0	51.3	103		1	20	
1,2,3-Trimethylbenzene	50.0	47.7	95	70-130		50.0	49.2	98		3	20	
1,2,4-Trimethylbenzene	50.0	51.3	103	75-130		50.0	52.7	105		2	20	
1,3,5-Trimethylbenzene	50.0	50.3	101	75-130		50.0	52.6	105		4	20	
Vinyl Chloride	50.0	52.9	106	74-125		50.0	55.5	111		5	20	
m&p-Xylene	100	96.8	97	75-130		100	100	100		3	20	
o-Xylene	50.0	48.5	97	80-120		50.0	50.3	101		4	20	
4-Bromofluorobenzene(S)			98	80-120				97				
Dibromofluoromethane(S)			106	80-120				106				
1,2-Dichloroethane-d4(S)			86	80-120				86				
Toluene-d8(S)			100	80-120				100				

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Definitions/ Qualifiers:

U: The analyte was not detected at or above the Reporting Limit (RL).
*****: Value reported is outside QC limits

Exception Summary:

Exceptions have been properly noted on reported results or affected samples have been scheduled for reanalysis when appropriate.

Report Generated By:



By Sue Ricketts at 11:07 AM, Jun 02, 2022

Please see back for terms and conditions



Analytical Laboratory

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Industrial Hygiene Services, Inc.

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Geoprobe

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Brighton, MI 48116

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Fax: 810 220 3311

Chain of Custody #

171064

PAGE ____ of ____

[illegible]



Friday, June 3, 2022

Fibertec Project Number: A08733
Project Identification: TRW Milford (30046730) /30046730
Submittal Date: 05/25/2022

Mr. Christian Seidel
Arcadis U.S., Inc. - Novi
28550 Cabot Drive
Suite 500
Novi, MI 48377

Dear Mr. Seidel,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note TO-15 samples will be disposed of 7 calendar days after the reporting date. All other samples will be disposed of 30 days after the reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,

By Katherine Jones at 3:34 PM, Jun 03, 2022

For Daryl P. Strandbergh
Laboratory Director

Enclosures

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-03-07_75_80	Chain of Custody:	168189
Client Project Name:	TRW Milford (30046730)	Sample No:	1	Collect Date:	05/24/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	15:50

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08733-001 **Matrix: Ground Water**
Description: VAP-03-07_75_80

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	V+	µg/L	50	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
3. Benzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
4. Bromobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
5. Bromochloromethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
6. Bromodichloromethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
7. Bromoform	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
8. Bromomethane	U	V+ L+ ICV+	µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
9. 2-Butanone	U	V+	µg/L	25	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
10. n-Butylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
13. Carbon Disulfide	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
15. Chlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
16. Chloroethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
17. Chloroform	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
18. Chloromethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
21. Dibromochloromethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
22. Dibromomethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
35. Ethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-03-07_75_80	Chain of Custody:	168189
Client Project Name:	TRW Milford (30046730)	Sample No:	1	Collect Date:	05/24/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	15:50

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08733-001 **Matrix: Ground Water**
Description: VAP-03-07_75_80

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. 2-Hexanone	U		µg/L	50	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
38. Isopropylbenzene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
40. Methylene Chloride	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
42. MTBE	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
43. Naphthalene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
44. n-Propylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
45. Styrene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
48. Tetrachloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
49. Toluene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
53. Trichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
59. Vinyl Chloride	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
60. m&p-Xylene	U		µg/L	2.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
61. o-Xylene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC
‡ 62. Xylenes	U		µg/L	3.0	1.0	06/01/22	VI22F01B	06/02/22 04:41	VI22F01B	BRC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-03-06_65_70	Chain of Custody:	168189
Client Project Name:	TRW Milford (30046730)	Sample No:	2	Collect Date:	05/24/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	14:00

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08733-002 **Matrix: Ground Water**
Description: VAP-03-06_65_70

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	V+	µg/L	50	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
3. Benzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
4. Bromobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
5. Bromochloromethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
6. Bromodichloromethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
7. Bromoform	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
8. Bromomethane	U	V+ L+ ICV+	µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
9. 2-Butanone	U	V+	µg/L	25	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
10. n-Butylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
13. Carbon Disulfide	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
15. Chlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
16. Chloroethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
17. Chloroform	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
18. Chloromethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
21. Dibromochloromethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
22. Dibromomethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
35. Ethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-03-06_65_70	Chain of Custody:	168189
Client Project Name:	TRW Milford (30046730)	Sample No:	2	Collect Date:	05/24/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	14:00

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08733-002 **Matrix: Ground Water**
Description: VAP-03-06_65_70

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. 2-Hexanone	U		µg/L	50	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
38. Isopropylbenzene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
40. Methylene Chloride	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
42. MTBE	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
43. Naphthalene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
44. n-Propylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
45. Styrene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
48. Tetrachloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
49. Toluene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
53. Trichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
59. Vinyl Chloride	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
60. m&p-Xylene	U		µg/L	2.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
61. o-Xylene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC
‡ 62. Xylenes	U		µg/L	3.0	1.0	06/01/22	VI22F01B	06/02/22 05:07	VI22F01B	BRC

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Analytical Laboratory Report
Laboratory Project Number: A08733
Laboratory Sample Number: A08733-003

Order: A08733
Date: 06/03/22

Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-02-06_65_70	Chain of Custody:	168189
Client Project Name:	TRW Milford (30046730)	Sample No:	3	Collect Date:	05/24/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	14:12

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08733-003 Matrix: Ground Water
Description: VAP-02-06_65_70

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	V+	µg/L	50	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
3. Benzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
4. Bromobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
5. Bromochloromethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
6. Bromodichloromethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
7. Bromoform	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
8. Bromomethane	U	V+ L+ ICV+	µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
9. 2-Butanone	U	V+	µg/L	25	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
10. n-Butylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
13. Carbon Disulfide	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
15. Chlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
16. Chloroethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
17. Chloroform	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
18. Chloromethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
21. Dibromochloromethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
22. Dibromomethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
35. Ethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-02-06_65_70	Chain of Custody:	168189
Client Project Name:	TRW Milford (30046730)	Sample No:	3	Collect Date:	05/24/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	14:12

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08733-003 **Matrix: Ground Water**
Description: VAP-02-06_65_70

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. 2-Hexanone	U		µg/L	50	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
38. Isopropylbenzene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
40. Methylene Chloride	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
42. MTBE	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
43. Naphthalene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
44. n-Propylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
45. Styrene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
48. Tetrachloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
49. Toluene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
53. Trichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
59. Vinyl Chloride	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
60. m&p-Xylene	U		µg/L	2.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
61. o-Xylene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC
‡ 62. Xylenes	U		µg/L	3.0	1.0	06/01/22	VI22F01B	06/02/22 05:33	VI22F01B	BRC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	Equipment Valve	Chain of Custody:	168189
Client Project Name:	TRW Milford (30046730)	Sample No:	4	Collect Date:	05/24/22
Client Project No:	30046730	Sample Matrix:	Blank: Equipment	Collect Time:	15:30

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08733-004 **Matrix: Blank: Equipment**
Description: Equipment Valve

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	V+	µg/L	50	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
3. Benzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
4. Bromobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
5. Bromochloromethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
6. Bromodichloromethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
7. Bromoform	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
8. Bromomethane	U	V+ L+ ICV+	µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
9. 2-Butanone	U	V+	µg/L	25	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
10. n-Butylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
13. Carbon Disulfide	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
15. Chlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
16. Chloroethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
17. Chloroform	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
18. Chloromethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
21. Dibromochloromethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
22. Dibromomethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
35. Ethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	Equipment Valve	Chain of Custody:	168189
Client Project Name:	TRW Milford (30046730)	Sample No:	4	Collect Date:	05/24/22
Client Project No:	30046730	Sample Matrix:	Blank: Equipment	Collect Time:	15:30

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08733-004 **Matrix: Blank: Equipment**
Description: Equipment Valve

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. 2-Hexanone	U		µg/L	50	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
38. Isopropylbenzene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
40. Methylene Chloride	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
42. MTBE	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
43. Naphthalene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
44. n-Propylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
45. Styrene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
48. Tetrachloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
49. Toluene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
53. Trichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
59. Vinyl Chloride	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
60. m&p-Xylene	U		µg/L	2.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
61. o-Xylene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC
‡ 62. Xylenes	U		µg/L	3.0	1.0	06/01/22	VI22F01B	06/02/22 00:46	VI22F01B	BRC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-02-07_75_80	Chain of Custody:	168189
Client Project Name:	TRW Milford (30046730)	Sample No:	5	Collect Date:	05/24/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	16:20

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08733-005 **Matrix: Ground Water**
Description: VAP-02-07_75_80

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	V+	µg/L	50	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
3. Benzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
4. Bromobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
5. Bromochloromethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
6. Bromodichloromethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
7. Bromoform	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
8. Bromomethane	U	V+ L+ ICV+	µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
9. 2-Butanone	U	V+	µg/L	25	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
10. n-Butylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
13. Carbon Disulfide	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
15. Chlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
16. Chloroethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
17. Chloroform	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
18. Chloromethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
21. Dibromochloromethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
22. Dibromomethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
35. Ethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-02-07_75_80	Chain of Custody:	168189
Client Project Name:	TRW Milford (30046730)	Sample No:	5	Collect Date:	05/24/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	16:20

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08733-005 **Matrix: Ground Water**
Description: VAP-02-07_75_80

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. 2-Hexanone	U		µg/L	50	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
38. Isopropylbenzene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
40. Methylene Chloride	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
42. MTBE	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
43. Naphthalene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
44. n-Propylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
45. Styrene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
48. Tetrachloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
49. Toluene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
53. Trichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
59. Vinyl Chloride	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
60. m&p-Xylene	U		µg/L	2.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
61. o-Xylene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC
‡ 62. Xylenes	U		µg/L	3.0	1.0	06/01/22	VI22F01B	06/02/22 05:59	VI22F01B	BRC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-02-08_85_90	Chain of Custody:	168189
Client Project Name:	TRW Milford (30046730)	Sample No:	6	Collect Date:	05/24/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	09:20

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08733-006 **Matrix: Ground Water**
Description: VAP-02-08_85_90

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	V+	µg/L	50	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
3. Benzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
4. Bromobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
5. Bromochloromethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
6. Bromodichloromethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
7. Bromoform	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
8. Bromomethane	U	V+ L+ ICV+	µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
9. 2-Butanone	U	V+	µg/L	25	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
10. n-Butylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
13. Carbon Disulfide	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
15. Chlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
16. Chloroethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
17. Chloroform	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
18. Chloromethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
21. Dibromochloromethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
22. Dibromomethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
35. Ethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-02-08_85_90	Chain of Custody:	168189
Client Project Name:	TRW Milford (30046730)	Sample No:	6	Collect Date:	05/24/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	09:20

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08733-006 **Matrix: Ground Water**
Description: VAP-02-08_85_90

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. 2-Hexanone	U		µg/L	50	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
38. Isopropylbenzene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
40. Methylene Chloride	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
42. MTBE	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
43. Naphthalene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
44. n-Propylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
45. Styrene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
48. Tetrachloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
49. Toluene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
53. Trichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
59. Vinyl Chloride	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
60. m&p-Xylene	U		µg/L	2.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
61. o-Xylene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC
‡ 62. Xylenes	U		µg/L	3.0	1.0	06/01/22	VI22F01B	06/02/22 06:26	VI22F01B	BRC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-02-09_95_100	Chain of Custody:	168189
Client Project Name:	TRW Milford (30046730)	Sample No:	7	Collect Date:	05/25/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	11:15

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08733-007 **Matrix: Ground Water**
Description: VAP-02-09_95_100

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	V+	µg/L	50	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
3. Benzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
4. Bromobenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
5. Bromochloromethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
6. Bromodichloromethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
7. Bromoform	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
8. Bromomethane	U	ICV+	µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
9. 2-Butanone	U		µg/L	25	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
10. n-Butylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
13. Carbon Disulfide	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
15. Chlorobenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
16. Chloroethane	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
17. Chloroform	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
18. Chloromethane	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
21. Dibromochloromethane	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
22. Dibromomethane	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
35. Ethylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
37. 2-Hexanone	U		µg/L	50	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-02-09_95_100	Chain of Custody:	168189
Client Project Name:	TRW Milford (30046730)	Sample No:	7	Collect Date:	05/25/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	11:15

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08733-007 **Matrix: Ground Water**
Description: VAP-02-09_95_100

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
38. Isopropylbenzene	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
40. Methylene Chloride	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
42. MTBE	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
43. Naphthalene	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
44. n-Propylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
45. Styrene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
48. Tetrachloroethene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
49. Toluene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
53. Trichloroethene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
59. Vinyl Chloride	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
60. m&p-Xylene	U		µg/L	2.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
61. o-Xylene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC
‡ 62. Xylenes	U		µg/L	3.0	1.0	06/02/22	VI22F02A	06/02/22 15:54	VI22F02A	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-03-08_85_90	Chain of Custody:	168189
Client Project Name:	TRW Milford (30046730)	Sample No:	8	Collect Date:	05/25/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	09:45

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08733-008 **Matrix: Ground Water**
Description: VAP-03-08_85_90

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	V+	µg/L	50	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
3. Benzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
4. Bromobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
5. Bromochloromethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
6. Bromodichloromethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
7. Bromoform	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
8. Bromomethane	U	V+ L+ ICV+	µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
9. 2-Butanone	U	V+	µg/L	25	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
10. n-Butylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
13. Carbon Disulfide	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
15. Chlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
16. Chloroethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
17. Chloroform	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
18. Chloromethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
21. Dibromochloromethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
22. Dibromomethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
35. Ethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-03-08_85_90	Chain of Custody:	168189
Client Project Name:	TRW Milford (30046730)	Sample No:	8	Collect Date:	05/25/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	09:45

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08733-008 **Matrix: Ground Water**
Description: VAP-03-08_85_90

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. 2-Hexanone	U		µg/L	50	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
38. Isopropylbenzene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
40. Methylene Chloride	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
42. MTBE	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
43. Naphthalene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
44. n-Propylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
45. Styrene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
48. Tetrachloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
49. Toluene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
53. Trichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
59. Vinyl Chloride	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
60. m&p-Xylene	U		µg/L	2.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
61. o-Xylene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC
‡ 62. Xylenes	U		µg/L	3.0	1.0	06/01/22	VI22F01B	06/02/22 07:17	VI22F01B	BRC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-03-09_95_100	Chain of Custody:	168189
Client Project Name:	TRW Milford (30046730)	Sample No:	9	Collect Date:	05/25/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	11:35

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS

Method: EPA 5030C/EPA 8260D

Aliquot ID: A08733-009

Matrix: Ground Water

Description: VAP-03-09_95_100

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	V+	µg/L	50	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
3. Benzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
4. Bromobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
5. Bromochloromethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
6. Bromodichloromethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
7. Bromoform	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
8. Bromomethane	U	V+ L+ ICV+	µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
9. 2-Butanone	U	V+	µg/L	25	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
10. n-Butylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
13. Carbon Disulfide	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
15. Chlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
16. Chloroethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
17. Chloroform	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
18. Chloromethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
21. Dibromochloromethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
22. Dibromomethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
35. Ethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-03-09_95_100	Chain of Custody:	168189
Client Project Name:	TRW Milford (30046730)	Sample No:	9	Collect Date:	05/25/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	11:35

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08733-009 **Matrix: Ground Water**
Description: VAP-03-09_95_100

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. 2-Hexanone	U		µg/L	50	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
38. Isopropylbenzene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
40. Methylene Chloride	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
42. MTBE	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
43. Naphthalene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
44. n-Propylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
45. Styrene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
48. Tetrachloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
49. Toluene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
53. Trichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
59. Vinyl Chloride	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
60. m&p-Xylene	U		µg/L	2.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
61. o-Xylene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC
‡ 62. Xylenes	U		µg/L	3.0	1.0	06/01/22	VI22F01B	06/02/22 07:43	VI22F01B	BRC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	Duplicate 3	Chain of Custody:	168189
Client Project Name:	TRW Milford (30046730)	Sample No:	10	Collect Date:	05/25/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	NA

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08733-010
Description: Duplicate 3
Matrix: Ground Water

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	V+	µg/L	50	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
3. Benzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
4. Bromobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
5. Bromochloromethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
6. Bromodichloromethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
7. Bromoform	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
8. Bromomethane	U	V+ L+ ICV+	µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
9. 2-Butanone	U	V+	µg/L	25	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
10. n-Butylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
13. Carbon Disulfide	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
15. Chlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
16. Chloroethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
17. Chloroform	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
18. Chloromethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
21. Dibromochloromethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
22. Dibromomethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
35. Ethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	Duplicate 3	Chain of Custody:	168189
Client Project Name:	TRW Milford (30046730)	Sample No:	10	Collect Date:	05/25/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	NA

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08733-010
Description: Duplicate 3
Matrix: Ground Water

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. 2-Hexanone	U		µg/L	50	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
38. Isopropylbenzene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
40. Methylene Chloride	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
42. MTBE	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
43. Naphthalene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
44. n-Propylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
45. Styrene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
48. Tetrachloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
49. Toluene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
53. Trichloroethene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
59. Vinyl Chloride	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
60. m&p-Xylene	U		µg/L	2.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
61. o-Xylene	U		µg/L	1.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC
‡ 62. Xylenes	U		µg/L	3.0	1.0	06/01/22	VI22F01B	06/02/22 08:10	VI22F01B	BRC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-03-10_105_110	Chain of Custody:	171065
Client Project Name:	TRW Milford (30046730)	Sample No:	11	Collect Date:	05/25/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	13:35

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08733-011 **Matrix: Ground Water**
Description: VAP-03-10_105_110

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	V+	µg/L	50	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
3. Benzene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
4. Bromobenzene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
5. Bromochloromethane	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
6. Bromodichloromethane	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
7. Bromoform	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
8. Bromomethane	U	V+ L+ ICV+	µg/L	5.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
9. 2-Butanone	U	V+	µg/L	25	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
10. n-Butylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
13. Carbon Disulfide	U		µg/L	5.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
15. Chlorobenzene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
16. Chloroethane	U		µg/L	5.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
17. Chloroform	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
18. Chloromethane	U		µg/L	5.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
21. Dibromochloromethane	U		µg/L	5.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
22. Dibromomethane	U		µg/L	5.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
35. Ethylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-03-10_105_110	Chain of Custody:	171065
Client Project Name:	TRW Milford (30046730)	Sample No:	11	Collect Date:	05/25/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	13:35

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08733-011 **Matrix: Ground Water**
Description: VAP-03-10_105_110

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. 2-Hexanone	U		µg/L	50	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
38. Isopropylbenzene	U		µg/L	5.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
40. Methylene Chloride	U		µg/L	5.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
42. MTBE	U		µg/L	5.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
43. Naphthalene	U		µg/L	5.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
44. n-Propylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
45. Styrene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
48. Tetrachloroethene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
49. Toluene	1.0		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
53. Trichloroethene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
59. Vinyl Chloride	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
60. m&p-Xylene	U		µg/L	2.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
61. o-Xylene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC
‡ 62. Xylenes	U		µg/L	3.0	1.0	06/02/22	VI22F01B	06/02/22 08:36	VI22F01B	BRC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-02-10_105_110	Chain of Custody:	171065
Client Project Name:	TRW Milford (30046730)	Sample No:	12	Collect Date:	05/25/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	13:50

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08733-012 **Matrix: Ground Water**
Description: VAP-02-10_105_110

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	V+	µg/L	50	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
3. Benzene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
4. Bromobenzene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
5. Bromochloromethane	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
6. Bromodichloromethane	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
7. Bromoform	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
8. Bromomethane	U	V+ L+ ICV+	µg/L	5.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
9. 2-Butanone	U	V+	µg/L	25	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
10. n-Butylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
13. Carbon Disulfide	U		µg/L	5.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
15. Chlorobenzene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
16. Chloroethane	U		µg/L	5.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
17. Chloroform	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
18. Chloromethane	U		µg/L	5.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
21. Dibromochloromethane	U		µg/L	5.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
22. Dibromomethane	U		µg/L	5.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
35. Ethylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-02-10_105_110	Chain of Custody:	171065
Client Project Name:	TRW Milford (30046730)	Sample No:	12	Collect Date:	05/25/22
Client Project No:	30046730	Sample Matrix:	Ground Water	Collect Time:	13:50

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08733-012 **Matrix: Ground Water**
Description: VAP-02-10_105_110

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
37. 2-Hexanone	U		µg/L	50	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
38. Isopropylbenzene	U		µg/L	5.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
40. Methylene Chloride	U		µg/L	5.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
42. MTBE	U		µg/L	5.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
43. Naphthalene	U		µg/L	5.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
44. n-Propylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
45. Styrene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
48. Tetrachloroethene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
49. Toluene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
53. Trichloroethene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
59. Vinyl Chloride	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
60. m&p-Xylene	U		µg/L	2.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
61. o-Xylene	U		µg/L	1.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC
‡ 62. Xylenes	U		µg/L	3.0	1.0	06/02/22	VI22F01B	06/02/22 09:02	VI22F01B	BRC

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Definitions/ Qualifiers:

- A:** Spike recovery or precision unusable due to dilution.
B: The analyte was detected in the associated method blank.
E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
J: The concentration is an estimated value.
M: Modified Method
U: The analyte was not detected at or above the reporting limit.
X: Matrix Interference has resulted in a raised reporting limit or distorted result.
W: Results reported on a wet-weight basis.
***:** Value reported is outside QC limits

Exception Summary:

- ICV+** : Recovery in the associated initial calibration verification sample exceeds the upper control limit. Results may be biased high.
L+ : Recovery in the associated laboratory sample (LCS) exceeds the upper control limit. Results may be biased high.
V+ : Recovery in the associated continuing calibration verification sample (CCV) exceeds the upper control limit. Results may be biased high.

Analysis Locations:

All analyses performed in Holt.



Accreditation Number(s):

T104704518-19-8 (TX)

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VI22F01B: Method Blank (MB)

EPA 8260D

Run Time: VI22F01B.MB 06/01/2022 23:53 [VI22F01B]

Analyte	MB Result	MB Qualifier	MB RDL
µg/L			µg/L
Acetone	U		50
Acrylonitrile	U		2.0
Benzene	U		1.0
Bromobenzene	U		1.0
Bromochloromethane	U		1.0
Bromodichloromethane	U		1.0
Bromoform	U		1.0
Bromomethane	U		5.0
2-Butanone	U		25
n-Butylbenzene	U		1.0
sec-Butylbenzene	U		1.0
tert-Butylbenzene	U		1.0
Carbon Disulfide	U		5.0
Carbon Tetrachloride	U		1.0
Chlorobenzene	U		1.0
Chloroethane	U		5.0
Chloroform	U		1.0
Chloromethane	U		5.0
2-Chlorotoluene	U		5.0
1,2-Dibromo-3-chloropropane (SIM)	U		1.0
Dibromochloromethane	U		5.0
Dibromomethane	U		5.0
1,2-Dichlorobenzene	U		1.0
1,3-Dichlorobenzene	U		1.0
1,4-Dichlorobenzene	U		1.0
Dichlorodifluoromethane	U		5.0
1,1-Dichloroethane	U		1.0
1,2-Dichloroethane	U		1.0
1,1-Dichloroethene	U		1.0
cis-1,2-Dichloroethene	U		1.0
trans-1,2-Dichloroethene	U		1.0
1,2-Dichloropropane	U		1.0
cis-1,3-Dichloropropene	U		0.50

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VI22F01B: Method Blank (MB)

EPA 8260D

Run Time: VI22F01B.MB 06/01/2022 23:53 [VI22F01B]

Analyte	MB Result	MB Qualifier	MB RDL
	µg/L		µg/L
trans-1,3-Dichloropropene	U		0.50
Ethylbenzene	U		1.0
Ethylene Dibromide	U		1.0
2-Hexanone	U		50
Isopropylbenzene	U		5.0
4-Methyl-2-pentanone	U		50
Methylene Chloride	U		5.0
2-Methylnaphthalene	U		5.0
MTBE	U		5.0
Naphthalene	U		5.0
n-Propylbenzene	U		1.0
Styrene	U		1.0
1,1,1,2-Tetrachloroethane	U		1.0
1,1,2,2-Tetrachloroethane	U		1.0
Tetrachloroethene	U		1.0
Toluene	U		1.0
1,2,4-Trichlorobenzene	U		5.0
1,1,1-Trichloroethane	U		1.0
1,1,2-Trichloroethane	U		1.0
Trichloroethene	U		1.0
Trichlorofluoromethane	U		1.0
1,2,3-Trichloropropane	U		1.0
1,2,3-Trimethylbenzene	U		1.0
1,2,4-Trimethylbenzene	U		1.0
1,3,5-Trimethylbenzene	U		1.0
Vinyl Chloride	U		1.0
m&p-Xylene	U		2.0
o-Xylene	U		1.0
4-Bromofluorobenzene(S)	92		80-120
Dibromofluoromethane(S)	102		80-120
1,2-Dichloroethane-d4(S)	90		80-120
Toluene-d8(S)	98		80-120

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VI22F01B: Method Blank (MB)

EPA 8260D

Run Time: VI22F01B.MB 06/02/2022 00:20 [VI22F01B]

Analyte	MB Result µg/L	MB Qualifier	MB RDL µg/L
4-Bromofluorobenzene(S)	93		80-120
Dibromofluoromethane(S)	103		80-120
1,2-Dichloroethane-d4(S)	91		80-120
Toluene-d8(S)	97		80-120

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VI22F01B: Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD)

EPA 8260D

Run Time: VI22F01B.LCS: 06/01/2022 21:43 [VI22F01B] VI22F01B.LCSD: 06/01/2022 22:09 [VI22F01B]

	LCS Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier	LCSD Spike Amount	LCSD Result	LCSD Rec.	LCSD Qualifier	RPD	RPD Limits	RPD Qualifier
Analyte	µg/L	µg/L	%	%		µg/L	µg/L	%		%	%	
Acetone	50.0	36.2	72	54-140		50.0	35.2	70		3	20	
Acrylonitrile	50.0	47.8	96	70-130		50.0	47.0	94		2	20	
Benzene	50.0	45.5	91	80-120		50.0	47.8	96		5	20	
Bromobenzene	50.0	44.3	89	75-125		50.0	46.9	94		5	20	
Bromochloromethane	50.0	43.1	86	70-130		50.0	45.1	90		5	20	
Bromodichloromethane	50.0	43.7	87	75-120		50.0	45.2	90		3	20	
Bromoform	50.0	47.5	95	70-130		50.0	47.5	95		0	20	
Bromomethane	50.0	67.1	134	68-135		50.0	71.3	143	*	6	20	
2-Butanone	50.0	40.6	81	70-148		50.0	39.7	79		3	20	
n-Butylbenzene	50.0	52.7	105	70-133		50.0	56.9	114		8	20	
sec-Butylbenzene	50.0	48.5	97	70-125		50.0	52.0	104		7	20	
tert-Butylbenzene	50.0	47.7	95	70-130		50.0	51.7	103		8	20	
Carbon Disulfide	50.0	43.7	87	70-130		50.0	45.9	92		6	20	
Carbon Tetrachloride	50.0	42.5	85	70-130		50.0	45.3	91		7	20	
Chlorobenzene	50.0	46.6	93	80-120		50.0	48.4	97		4	20	
Chloroethane	50.0	47.2	94	61-130		50.0	50.1	100		6	20	
Chloroform	50.0	43.1	86	80-120		50.0	44.7	89		3	20	
Chloromethane	50.0	49.7	99	67-125		50.0	51.8	104		5	20	
2-Chlorotoluene	50.0	45.6	91	75-125		50.0	48.8	98		7	20	
1,2-Dibromo-3-chloropropane (SIM)	50.0	44.0	88	70-130		50.0	44.9	90		2	20	
Dibromochloromethane	50.0	43.8	88	70-130		50.0	45.4	91		3	20	
Dibromomethane	50.0	46.8	94	75-125		50.0	47.3	95		1	20	
1,2-Dichlorobenzene	50.0	47.5	95	70-120		50.0	49.6	99		4	20	
1,3-Dichlorobenzene	50.0	48.6	97	75-125		50.0	51.3	103		6	20	
1,4-Dichlorobenzene	50.0	45.9	92	75-125		50.0	47.9	96		4	20	
Dichlorodifluoromethane	50.0	41.9	84	70-136		50.0	44.4	89		6	20	
1,1-Dichloroethane	50.0	43.3	87	70-130		50.0	45.6	91		4	20	
1,2-Dichloroethane	50.0	39.6	79	70-130		50.0	40.0	80		1	20	
1,1-Dichloroethene	50.0	39.5	79	78-120		50.0	42.2	84		6	20	
cis-1,2-Dichloroethene	50.0	41.8	84	70-125		50.0	43.8	88		5	20	
trans-1,2-Dichloroethene	50.0	44.2	88	70-130		50.0	46.0	92		4	20	
1,2-Dichloropropane	50.0	46.4	93	80-121		50.0	48.0	96		3	20	
cis-1,3-Dichloropropene	50.0	44.1	88	70-130		50.0	45.5	91		3	20	

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VI22F01B: Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD)

EPA 8260D

Run Time: VI22F01B.LCS: 06/01/2022 21:43 [VI22F01B] VI22F01B.LCSD: 06/01/2022 22:09 [VI22F01B]

	LCS Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier	LCSD Spike Amount	LCSD Result	LCSD Rec.	LCSD Qualifier	RPD	RPD Limits	RPD Qualifier
Analyte	µg/L	µg/L	%	%		µg/L	µg/L	%		%	%	
trans-1,3-Dichloropropene	50.0	47.7	95	70-132		50.0	48.7	97		2	20	
Ethylbenzene	50.0	47.1	94	80-120		50.0	49.5	99		5	20	
Ethylene Dibromide	50.0	48.4	97	80-120		50.0	49.1	98		1	20	
2-Hexanone	50.0	40.0	80	70-130		50.0	39.9	80		0	20	
Isopropylbenzene	50.0	48.1	96	75-125		50.0	50.8	102		6	20	
4-Methyl-2-pentanone	50.0	48.9	98	70-130		50.0	49.4	99		1	20	
Methylene Chloride	50.0	42.9	86	70-130		50.0	44.2	88		2	20	
2-Methylnaphthalene	50.0	43.4	87	70-130		50.0	45.9	92		6	20	
MTBE	50.0	44.3	89	70-125		50.0	44.9	90		1	20	
Naphthalene	50.0	48.1	96	70-130		50.0	49.6	99		3	20	
n-Propylbenzene	50.0	48.0	96	70-130		50.0	52.0	104		8	20	
Styrene	50.0	44.5	89	70-130		50.0	46.5	93		4	20	
1,1,1,2-Tetrachloroethane	50.0	46.8	94	80-130		50.0	48.6	97		3	20	
1,1,2,2-Tetrachloroethane	50.0	54.0	108	70-130		50.0	56.0	112		4	20	
Tetrachloroethene	50.0	47.5	95	70-130		50.0	50.5	101		6	20	
Toluene	50.0	46.9	94	80-120		50.0	49.0	98		4	20	
1,2,4-Trichlorobenzene	50.0	48.7	97	70-130		50.0	51.0	102		5	20	
1,1,1-Trichloroethane	50.0	43.5	87	70-130		50.0	45.6	91		4	20	
1,1,2-Trichloroethane	50.0	46.8	94	75-125		50.0	47.5	95		1	20	
Trichloroethene	50.0	41.6	83	71-125		50.0	44.1	88		6	20	
Trichlorofluoromethane	50.0	44.1	88	70-133		50.0	47.1	94		7	20	
1,2,3-Trichloropropane	50.0	49.2	98	75-125		50.0	49.7	99		1	20	
1,2,3-Trimethylbenzene	50.0	46.1	92	70-130		50.0	49.1	98		6	20	
1,2,4-Trimethylbenzene	50.0	48.7	97	75-130		50.0	52.0	104		7	20	
1,3,5-Trimethylbenzene	50.0	48.1	96	75-130		50.0	51.5	103		7	20	
Vinyl Chloride	50.0	48.2	96	74-125		50.0	51.8	104		8	20	
m&p-Xylene	100	94.4	94	75-130		100	98.9	99		5	20	
o-Xylene	50.0	47.0	94	80-120		50.0	49.2	98		4	20	
4-Bromofluorobenzene(S)			98	80-120				99				
Dibromofluoromethane(S)			98	80-120				97				
1,2-Dichloroethane-d4(S)			85	80-120				85				
Toluene-d8(S)			98	80-120				98				

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Quality Control Report
Laboratory Project Number: A08733

Order ID: A08733
Page: 6 of 11
Date: 06/03/22

VI22F01B: Laboratory Control Sample (LCS) EPA 8260D

Run Time: VI22F01B.LCS: 06/01/2022 23:01 [VI22F01B]

Analyte	LCS Spike Amount µg/L	LCS Result µg/L	LCS Rec. %	Rec. Limits %	LCS Qualifier
4-Bromofluorobenzene(S)			95	80-120	
Dibromofluoromethane(S)			101	80-120	
1,2-Dichloroethane-d4(S)			90	80-120	
Toluene-d8(S)			97	80-120	

VI22F02A: Method Blank (MB)

EPA 8260D

Run Time: VI22F02A.MB 06/02/2022 12:51 [VI22F02A]

Analyte	MB Result	MB Qualifier	MB RDL
	µg/L		µg/L
Acetone	U		50
Acrylonitrile	U		2.0
Benzene	U		1.0
Bromobenzene	U		1.0
Bromochloromethane	U		1.0
Bromodichloromethane	U		1.0
Bromoform	U		1.0
Bromomethane	U		5.0
2-Butanone	U		25
n-Butylbenzene	U		1.0
sec-Butylbenzene	U		1.0
tert-Butylbenzene	U		1.0
Carbon Disulfide	U		5.0
Carbon Tetrachloride	U		1.0
Chlorobenzene	U		1.0
Chloroethane	U		5.0
Chloroform	U		1.0
Chloromethane	U		5.0
2-Chlorotoluene	U		5.0
1,2-Dibromo-3-chloropropane (SIM)	U		1.0
Dibromochloromethane	U		5.0
Dibromomethane	U		5.0
1,2-Dichlorobenzene	U		1.0
1,3-Dichlorobenzene	U		1.0
1,4-Dichlorobenzene	U		1.0
Dichlorodifluoromethane	U		5.0
1,1-Dichloroethane	U		1.0
1,2-Dichloroethane	U		1.0
1,1-Dichloroethene	U		1.0
cis-1,2-Dichloroethene	U		1.0
trans-1,2-Dichloroethene	U		1.0
1,2-Dichloropropane	U		1.0
cis-1,3-Dichloropropene	U		0.50

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VI22F02A: Method Blank (MB)

EPA 8260D

Run Time: VI22F02A.MB 06/02/2022 12:51 [VI22F02A]

Analyte	MB Result	MB Qualifier	MB RDL
	µg/L		µg/L
trans-1,3-Dichloropropene	U		0.50
Ethylbenzene	U		1.0
Ethylene Dibromide	U		1.0
2-Hexanone	U		50
Isopropylbenzene	U		5.0
4-Methyl-2-pentanone	U		50
Methylene Chloride	U		5.0
2-Methylnaphthalene	U		5.0
MTBE	U		5.0
Naphthalene	U		5.0
n-Propylbenzene	U		1.0
Styrene	U		1.0
1,1,1,2-Tetrachloroethane	U		1.0
1,1,2,2-Tetrachloroethane	U		1.0
Tetrachloroethene	U		1.0
Toluene	U		1.0
1,2,4-Trichlorobenzene	U		5.0
1,1,1-Trichloroethane	U		1.0
1,1,2-Trichloroethane	U		1.0
Trichloroethene	U		1.0
Trichlorofluoromethane	U		1.0
1,2,3-Trichloropropane	U		1.0
1,2,3-Trimethylbenzene	U		1.0
1,2,4-Trimethylbenzene	U		1.0
1,3,5-Trimethylbenzene	U		1.0
Vinyl Chloride	U		1.0
m&p-Xylene	U		2.0
o-Xylene	U		1.0
4-Bromofluorobenzene(S)	91		80-120
Dibromofluoromethane(S)	98		80-120
1,2-Dichloroethane-d4(S)	88		80-120
Toluene-d8(S)	97		80-120

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F: (231) 775-8584

VI22F02A: Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD)

EPA 8260D

Run Time: VI22F02A.LCS: 06/02/2022 11:33 [VI22F02A] VI22F02A.LCSD: 06/02/2022 11:59 [VI22F02A]

	LCS Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier	LCSD Spike Amount	LCSD Result	LCSD Rec.	LCSD Qualifier	RPD	RPD Limits	RPD Qualifier
Analyte	µg/L	µg/L	%	%		µg/L	µg/L	%		%	%	
Acetone	50.0	32.8	66	54-140		50.0	32.0	64		3	20	
Acrylonitrile	50.0	46.1	92	70-130		50.0	45.3	91		1	20	
Benzene	50.0	46.9	94	80-120		50.0	45.2	90		4	20	
Bromobenzene	50.0	45.9	92	75-125		50.0	44.7	89		3	20	
Bromochloromethane	50.0	43.4	87	70-130		50.0	41.8	84		4	20	
Bromodichloromethane	50.0	44.5	89	75-120		50.0	43.7	87		2	20	
Bromoform	50.0	48.8	98	70-130		50.0	47.8	96		2	20	
Bromomethane	50.0	64.2	128	68-135		50.0	62.5	125		2	20	
2-Butanone	50.0	38.5	77	70-148		50.0	37.5	75		3	20	
n-Butylbenzene	50.0	58.4	117	70-133		50.0	55.8	112		4	20	
sec-Butylbenzene	50.0	52.5	105	70-125		50.0	50.2	100		5	20	
tert-Butylbenzene	50.0	51.3	103	70-130		50.0	48.7	97		6	20	
Carbon Disulfide	50.0	45.3	91	70-130		50.0	43.1	86		6	20	
Carbon Tetrachloride	50.0	45.3	91	70-130		50.0	44.5	89		2	20	
Chlorobenzene	50.0	49.4	99	80-120		50.0	47.6	95		4	20	
Chloroethane	50.0	46.8	94	61-130		50.0	45.2	90		4	20	
Chloroform	50.0	43.2	86	80-120		50.0	41.5	83		4	20	
Chloromethane	50.0	47.2	94	67-125		50.0	46.2	92		2	20	
2-Chlorotoluene	50.0	48.6	97	75-125		50.0	46.5	93		4	20	
1,2-Dibromo-3-chloropropane (SIM)	50.0	45.6	91	70-130		50.0	44.4	89		2	20	
Dibromochloromethane	50.0	45.5	91	70-130		50.0	44.9	90		1	20	
Dibromomethane	50.0	47.2	94	75-125		50.0	47.0	94		0	20	
1,2-Dichlorobenzene	50.0	49.8	100	70-120		50.0	48.5	97		3	20	
1,3-Dichlorobenzene	50.0	51.6	103	75-125		50.0	50.1	100		3	20	
1,4-Dichlorobenzene	50.0	48.9	98	75-125		50.0	47.1	94		4	20	
Dichlorodifluoromethane	50.0	45.5	91	70-136		50.0	43.5	87		4	20	
1,1-Dichloroethane	50.0	43.6	87	70-130		50.0	41.7	83		5	20	
1,2-Dichloroethane	50.0	40.1	80	70-130		50.0	39.5	79		1	20	
1,1-Dichloroethene	50.0	40.6	81	78-120		50.0	39.2	78		4	20	
cis-1,2-Dichloroethene	50.0	41.8	84	70-125		50.0	40.2	80		5	20	
trans-1,2-Dichloroethene	50.0	45.2	90	70-130		50.0	43.1	86		5	20	
1,2-Dichloropropane	50.0	46.8	94	80-121		50.0	45.8	92		2	20	
cis-1,3-Dichloropropene	50.0	45.9	92	70-130		50.0	45.4	91		1	20	

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VI22F02A: Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD)

EPA 8260D

Run Time: VI22F02A.LCS: 06/02/2022 11:33 [VI22F02A] VI22F02A.LCSD: 06/02/2022 11:59 [VI22F02A]

	LCS Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier	LCSD Spike Amount	LCSD Result	LCSD Rec.	LCSD Qualifier	RPD	RPD Limits	RPD Qualifier
Analyte	µg/L	µg/L	%	%		µg/L	µg/L	%		%	%	
trans-1,3-Dichloropropene	50.0	49.6	99	70-132		50.0	48.8	98		1	20	
Ethylbenzene	50.0	50.2	100	80-120		50.0	47.8	96		4	20	
Ethylene Dibromide	50.0	49.5	99	80-120		50.0	49.3	99		0	20	
2-Hexanone	50.0	39.2	78	70-130		50.0	38.6	77		1	20	
Isopropylbenzene	50.0	51.5	103	75-125		50.0	49.5	99		4	20	
4-Methyl-2-pentanone	50.0	47.9	96	70-130		50.0	46.6	93		3	20	
Methylene Chloride	50.0	42.2	84	70-130		50.0	40.6	81		4	20	
2-Methylnaphthalene	50.0	45.2	90	70-130		50.0	45.0	90		0	20	
MTBE	50.0	42.9	86	70-125		50.0	42.3	85		1	20	
Naphthalene	50.0	49.6	99	70-130		50.0	49.0	98		1	20	
n-Propylbenzene	50.0	51.9	104	70-130		50.0	49.4	99		5	20	
Styrene	50.0	47.1	94	70-130		50.0	45.3	91		3	20	
1,1,1,2-Tetrachloroethane	50.0	49.0	98	80-130		50.0	47.5	95		3	20	
1,1,2,2-Tetrachloroethane	50.0	55.8	112	70-130		50.0	54.2	108		4	20	
Tetrachloroethene	50.0	53.5	107	70-130		50.0	50.4	101		6	20	
Toluene	50.0	48.7	97	80-120		50.0	46.9	94		3	20	
1,2,4-Trichlorobenzene	50.0	51.7	103	70-130		50.0	51.1	102		1	20	
1,1,1-Trichloroethane	50.0	44.7	89	70-130		50.0	42.8	86		3	20	
1,1,2-Trichloroethane	50.0	48.3	97	75-125		50.0	46.8	94		3	20	
Trichloroethene	50.0	44.5	89	71-125		50.0	42.7	85		5	20	
Trichlorofluoromethane	50.0	46.3	93	70-133		50.0	44.3	89		4	20	
1,2,3-Trichloropropane	50.0	49.2	98	75-125		50.0	47.5	95		3	20	
1,2,3-Trimethylbenzene	50.0	48.8	98	70-130		50.0	47.0	94		4	20	
1,2,4-Trimethylbenzene	50.0	52.2	104	75-130		50.0	50.2	100		4	20	
1,3,5-Trimethylbenzene	50.0	51.7	103	75-130		50.0	49.5	99		4	20	
Vinyl Chloride	50.0	50.0	100	74-125		50.0	47.5	95		5	20	
m&p-Xylene	100	101	101	75-130		100	96.1	96		5	20	
o-Xylene	50.0	49.1	98	80-120		50.0	47.8	96		2	20	
4-Bromofluorobenzene(S)			95	80-120				97				
Dibromofluoromethane(S)			94	80-120				94				
1,2-Dichloroethane-d4(S)			84	80-120				84				
Toluene-d8(S)			96	80-120				98				

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Definitions/ Qualifiers:

- U: The analyte was not detected at or above the Reporting Limit (RL).
*: Value reported is outside QC limits

Exception Summary:

Exceptions have been properly noted on reported results or affected samples have been scheduled for reanalysis when appropriate.

Report Generated By:



By Katherine Jones at 3:47 PM, Jun 03, 2022

Client Name: TRW Milford				MATRIX (SEE RIGHT CORNER FOR CODE)	# OF CONTAINERS VOC 260	PARAMETERS												Matrix Code			Deliverables	
Contact Person: John Melanis, Christian Seidel						HOLD SAMPLE	S Soil	GW	Ground Water	Level 2												
Project Name/ Number: 300 46730 TRW Milford							A Air	SW	Surface Water	Level 3												
Email distribution list: John. Melanis. @arcadis-com							O Oil	WW	Waste Water	Level 4												
Quote# 849							P Wipe	X	Other: Specify	EDD												
Purchase Order#				Remarks:																		
Date	Time	Sample #	Client Sample Descriptor																			
5/24	15:50	1	VAP-03-07-75-80	GW	3	X																
5/24	14:00	2	VAP-03-06-65-70	GW	3	X																
5/24	14:12	3	VAP-02-06-65-70	GW	3	X																
5/24	15:30	4	Equipment Valve	X	3	X																
5/24	16:20	5	VAP-02-07-75-80	GW	3	X																
5/25	9:20	6	VAP-02-08-85-90	GW	3	X																
5/25	11:15	7	VAP-02-09-85-100	GW	3	X																
5/25	9:45	8	VAP-03-08-85-90	GW	3	X																
5/25	11:35	9	VAP-03-05-85-100	GW	3	X																
5/25		10	Duplicate 3	GW	3	X																
Comments:																						
Sampled/Relinquished By: Chris Seidel				Date/Time: 5/24 18:50				Received By: Arcadis bridge														
Relinquished By: Arcadis bridge				Date/Time: 5/25 7:05				Received By: Chris Seidel														
Relinquished By: Chris Seidel				Date/Time: 5/25 19:45				Received By Laboratory: Lab of Arcadis 5/25/22 2:45														
Turnaround Time ALL RESULTS WILL BE SENT BY THE END OF THE BUSINESS DAY ____ 1 bus. day ____ 2 bus. days ____ 3 bus. days ____ 4 bus. days ____ 5-7 bus. days (standard) Other (specify time/date requirement): _____																						
Fibertec project number: A08733 Temperature upon receipt at Lab: 4.3C																						
Please see back for terms and conditions Date of Arcadis 5/25/22 16:00																						



Analytical Laboratory

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Industrial Hygiene Services, Inc.

1914 Holloway Drive

Holt. MI 48842

Phone: 517 699 0345

Fax: 517 699 0382

email: asbestos@fibertecihs.com

Geoprobe

11766 E. Grand River Rd.

Brighton, MI 48116

Phone: 810 220 3300

Fax: 810 220 3311

Chain of Custody #

171065

PAGE ____ of ____

Client Name: <u>TRW Milford</u>		PARAMETERS												Matrix Code			Deliverables		
Contact Person: <u>John McInnis, Christian Seidl</u>														S	Soil	GW	Ground Water		Level 2
Project Name/ Number: <u>20046730</u> <u>TRW Milford</u>														A	Air	SW	Surface Water		Level 3
Email distribution list: <u>christian.seidl@areadis.com</u> <u>John.McInnis@areadis.com</u>														O	Oil	WW	Waste Water		Level 4
Quote# <u>849</u>														P	Wipe	X	Other: Specify		EDD
Purchase Order#		HOLD SAMPLE												Remarks:					
Date	Time	Sample #	Client Sample Descriptor	MATRIX (SEE RIGHT CORNER FOR CODE)	# OF CONTAINERS														
5/22	1335	11	VAP-03-10-105-110	CH3	1														
5/25	1350	12	VAP-02-10-105-110	GW3	1														
Comments:																			
Sampled/Relinquished By: <u>Ch Seidl</u> Date/Time: <u>5/25 14:45</u> Received By: <u>Deborah Shad</u> 5/25/22 2:45																			
Relinquished By: <u>Deborah Shad</u> Date/Time: <u>5/25/22 16:00</u> Received By: <u>Erin</u>																			
Relinquished By: <u>Deborah Shad</u> Date/Time: <u>5/25/22 16:00</u> Received By Laboratory:																			
Turnaround Time ALL RESULTS WILL BE SENT BY THE END OF THE BUSINESS DAY												LAB USE ONLY							
_____ 1 bus. day _____ 2 bus. days _____ 3 bus. days _____ 4 bus. days												Fibertec project number: <u>A08733</u>							
_____ 5-7 bus. days (standard) Other (specify time/date requirement): _____												Temperature upon receipt at Lab: <u>4.3 °C</u>							
Please see back for terms and conditions																			



Friday, June 3, 2022

Fibertec Project Number: A08739
Project Identification: KH Milford /
Submittal Date: 05/26/2022

Mr. Christian Seidel
Arcadis U.S., Inc. - Novi
28550 Cabot Drive
Suite 500
Novi, MI 48377

Dear Mr. Seidel,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note TO-15 samples will be disposed of 7 calendar days after the reporting date. All other samples will be disposed of 30 days after the reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,

By Katherine Jones at 4:04 PM, Jun 03, 2022

For Daryl P. Strandbergh
Laboratory Director

Enclosures

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-02-11_115-120	Chain of Custody:	202784
Client Project Name:	KH Milford	Sample No:		Collect Date:	05/25/22
Client Project No:	NA	Sample Matrix:	Ground Water	Collect Time:	17:15

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08739-001 **Matrix: Ground Water**
Description: VAP-02-11_115-120

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	V+	µg/L	50	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
3. Benzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
4. Bromobenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
5. Bromochloromethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
6. Bromodichloromethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
7. Bromoform	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
8. Bromomethane	U	ICV+	µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
9. 2-Butanone	U		µg/L	25	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
10. n-Butylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
13. Carbon Disulfide	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
15. Chlorobenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
16. Chloroethane	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
17. Chloroform	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
18. Chloromethane	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
21. Dibromochloromethane	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
22. Dibromomethane	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
35. Ethylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
37. 2-Hexanone	U		µg/L	50	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	VAP-02-11_115-120	Chain of Custody:	202784
Client Project Name:	KH Milford	Sample No:		Collect Date:	05/25/22
Client Project No:	NA	Sample Matrix:	Ground Water	Collect Time:	17:15

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08739-001 **Matrix: Ground Water**
Description: VAP-02-11_115-120

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
38. Isopropylbenzene	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
40. Methylene Chloride	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
42. MTBE	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
43. Naphthalene	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
44. n-Propylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
45. Styrene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
48. Tetrachloroethene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
49. Toluene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
53. Trichloroethene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
59. Vinyl Chloride	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
60. m&p-Xylene	U		µg/L	2.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
61. o-Xylene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC
‡ 62. Xylenes	U		µg/L	3.0	1.0	06/02/22	VI22F02A	06/02/22 21:35	VI22F02A	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	Equipment_Pump	Chain of Custody:	202784
Client Project Name:	KH Milford	Sample No:		Collect Date:	05/25/22
Client Project No:	NA	Sample Matrix:	Blank: Equipment	Collect Time:	15:50

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08739-002 **Matrix: Blank: Equipment**
Description: Equipment_Pump

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	V+	µg/L	50	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
3. Benzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
4. Bromobenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
5. Bromochloromethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
6. Bromodichloromethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
7. Bromoform	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
8. Bromomethane	U	ICV+	µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
9. 2-Butanone	U		µg/L	25	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
10. n-Butylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
13. Carbon Disulfide	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
15. Chlorobenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
16. Chloroethane	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
17. Chloroform	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
18. Chloromethane	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
21. Dibromochloromethane	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
22. Dibromomethane	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
35. Ethylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
37. 2-Hexanone	U		µg/L	50	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	Equipment_Pump	Chain of Custody:	202784
Client Project Name:	KH Milford	Sample No:		Collect Date:	05/25/22
Client Project No:	NA	Sample Matrix:	Blank: Equipment	Collect Time:	15:50

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08739-002 **Matrix: Blank: Equipment**
Description: Equipment_Pump

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
38. Isopropylbenzene	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
40. Methylene Chloride	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
42. MTBE	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
43. Naphthalene	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
44. n-Propylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
45. Styrene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
48. Tetrachloroethene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
49. Toluene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
53. Trichloroethene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
59. Vinyl Chloride	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
60. m&p-Xylene	U		µg/L	2.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
61. o-Xylene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC
‡ 62. Xylenes	U		µg/L	3.0	1.0	06/02/22	VI22F02A	06/02/22 15:01	VI22F02A	SNC

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Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	Equipment_Screen	Chain of Custody:	202784
Client Project Name:	KH Milford	Sample No:		Collect Date:	05/25/22
Client Project No:	NA	Sample Matrix:	Blank: Equipment	Collect Time:	16:00

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08739-003 **Matrix: Blank: Equipment**
Description: Equipment_Screen

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	V+	µg/L	50	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
3. Benzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
4. Bromobenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
5. Bromochloromethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
6. Bromodichloromethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
7. Bromoform	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
8. Bromomethane	U	ICV+	µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
9. 2-Butanone	U		µg/L	25	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
10. n-Butylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
13. Carbon Disulfide	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
15. Chlorobenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
16. Chloroethane	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
17. Chloroform	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
18. Chloromethane	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
21. Dibromochloromethane	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
22. Dibromomethane	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
27. 1,1-Dichloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
30. cis-1,2-Dichloroethene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
31. trans-1,2-Dichloroethene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
35. Ethylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
37. 2-Hexanone	U		µg/L	50	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC

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T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	Equipment_Screen	Chain of Custody:	202784
Client Project Name:	KH Milford	Sample No:		Collect Date:	05/25/22
Client Project No:	NA	Sample Matrix:	Blank: Equipment	Collect Time:	16:00

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08739-003 **Matrix: Blank: Equipment**
Description: Equipment_Screen

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
38. Isopropylbenzene	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
40. Methylene Chloride	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
‡ 41. 2-Methylnaphthalene	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
42. MTBE	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
43. Naphthalene	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
44. n-Propylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
45. Styrene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
48. Tetrachloroethene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
49. Toluene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
53. Trichloroethene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
59. Vinyl Chloride	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
60. m&p-Xylene	U		µg/L	2.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
61. o-Xylene	U		µg/L	1.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC
‡ 62. Xylenes	U		µg/L	3.0	1.0	06/02/22	VI22F02A	06/02/22 15:27	VI22F02A	SNC

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F: (231) 775-8584

Definitions/ Qualifiers:

- A:** Spike recovery or precision unusable due to dilution.
B: The analyte was detected in the associated method blank.
E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
J: The concentration is an estimated value.
M: Modified Method
U: The analyte was not detected at or above the reporting limit.
X: Matrix Interference has resulted in a raised reporting limit or distorted result.
W: Results reported on a wet-weight basis.
***:** Value reported is outside QC limits

Exception Summary:

- ICV+** : Recovery in the associated initial calibration verification sample exceeds the upper control limit. Results may be biased high.
V+ : Recovery in the associated continuing calibration verification sample (CCV) exceeds the upper control limit. Results may be biased high.

Analysis Locations:

All analyses performed in Holt.



Accreditation Number(s):

T104704518-19-8 (TX)

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VI22F02A: Method Blank (MB)

EPA 8260D

Run Time: VI22F02A.MB 06/02/2022 12:51 [VI22F02A]

Analyte	MB Result	MB Qualifier	MB RDL
	µg/L		µg/L
Acetone	U		50
Acrylonitrile	U		2.0
Benzene	U		1.0
Bromobenzene	U		1.0
Bromochloromethane	U		1.0
Bromodichloromethane	U		1.0
Bromoform	U		1.0
Bromomethane	U		5.0
2-Butanone	U		25
n-Butylbenzene	U		1.0
sec-Butylbenzene	U		1.0
tert-Butylbenzene	U		1.0
Carbon Disulfide	U		5.0
Carbon Tetrachloride	U		1.0
Chlorobenzene	U		1.0
Chloroethane	U		5.0
Chloroform	U		1.0
Chloromethane	U		5.0
2-Chlorotoluene	U		5.0
1,2-Dibromo-3-chloropropane (SIM)	U		1.0
Dibromochloromethane	U		5.0
Dibromomethane	U		5.0
1,2-Dichlorobenzene	U		1.0
1,3-Dichlorobenzene	U		1.0
1,4-Dichlorobenzene	U		1.0
Dichlorodifluoromethane	U		5.0
1,1-Dichloroethane	U		1.0
1,2-Dichloroethane	U		1.0
1,1-Dichloroethene	U		1.0
cis-1,2-Dichloroethene	U		1.0
trans-1,2-Dichloroethene	U		1.0
1,2-Dichloropropane	U		1.0
cis-1,3-Dichloropropene	U		0.50

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VI22F02A: Method Blank (MB)

EPA 8260D

Run Time: VI22F02A.MB 06/02/2022 12:51 [VI22F02A]

Analyte	MB Result	MB Qualifier	MB RDL
	µg/L		µg/L
trans-1,3-Dichloropropene	U		0.50
Ethylbenzene	U		1.0
Ethylene Dibromide	U		1.0
2-Hexanone	U		50
Isopropylbenzene	U		5.0
4-Methyl-2-pentanone	U		50
Methylene Chloride	U		5.0
2-Methylnaphthalene	U		5.0
MTBE	U		5.0
Naphthalene	U		5.0
n-Propylbenzene	U		1.0
Styrene	U		1.0
1,1,1,2-Tetrachloroethane	U		1.0
1,1,2,2-Tetrachloroethane	U		1.0
Tetrachloroethene	U		1.0
Toluene	U		1.0
1,2,4-Trichlorobenzene	U		5.0
1,1,1-Trichloroethane	U		1.0
1,1,2-Trichloroethane	U		1.0
Trichloroethene	U		1.0
Trichlorofluoromethane	U		1.0
1,2,3-Trichloropropane	U		1.0
1,2,3-Trimethylbenzene	U		1.0
1,2,4-Trimethylbenzene	U		1.0
1,3,5-Trimethylbenzene	U		1.0
Vinyl Chloride	U		1.0
m&p-Xylene	U		2.0
o-Xylene	U		1.0
4-Bromofluorobenzene(S)	91		80-120
Dibromofluoromethane(S)	98		80-120
1,2-Dichloroethane-d4(S)	88		80-120
Toluene-d8(S)	97		80-120

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VI22F02A: Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD)

EPA 8260D

Run Time: VI22F02A.LCS: 06/02/2022 11:33 [VI22F02A] VI22F02A.LCSD: 06/02/2022 11:59 [VI22F02A]

	LCS Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier	LCSD Spike Amount	LCSD Result	LCSD Rec.	LCSD Qualifier	RPD	RPD Limits	RPD Qualifier
Analyte	µg/L	µg/L	%	%		µg/L	µg/L	%		%	%	
Acetone	50.0	32.8	66	54-140		50.0	32.0	64		3	20	
Acrylonitrile	50.0	46.1	92	70-130		50.0	45.3	91		1	20	
Benzene	50.0	46.9	94	80-120		50.0	45.2	90		4	20	
Bromobenzene	50.0	45.9	92	75-125		50.0	44.7	89		3	20	
Bromochloromethane	50.0	43.4	87	70-130		50.0	41.8	84		4	20	
Bromodichloromethane	50.0	44.5	89	75-120		50.0	43.7	87		2	20	
Bromoform	50.0	48.8	98	70-130		50.0	47.8	96		2	20	
Bromomethane	50.0	64.2	128	68-135		50.0	62.5	125		2	20	
2-Butanone	50.0	38.5	77	70-148		50.0	37.5	75		3	20	
n-Butylbenzene	50.0	58.4	117	70-133		50.0	55.8	112		4	20	
sec-Butylbenzene	50.0	52.5	105	70-125		50.0	50.2	100		5	20	
tert-Butylbenzene	50.0	51.3	103	70-130		50.0	48.7	97		6	20	
Carbon Disulfide	50.0	45.3	91	70-130		50.0	43.1	86		6	20	
Carbon Tetrachloride	50.0	45.3	91	70-130		50.0	44.5	89		2	20	
Chlorobenzene	50.0	49.4	99	80-120		50.0	47.6	95		4	20	
Chloroethane	50.0	46.8	94	61-130		50.0	45.2	90		4	20	
Chloroform	50.0	43.2	86	80-120		50.0	41.5	83		4	20	
Chloromethane	50.0	47.2	94	67-125		50.0	46.2	92		2	20	
2-Chlorotoluene	50.0	48.6	97	75-125		50.0	46.5	93		4	20	
1,2-Dibromo-3-chloropropane (SIM)	50.0	45.6	91	70-130		50.0	44.4	89		2	20	
Dibromochloromethane	50.0	45.5	91	70-130		50.0	44.9	90		1	20	
Dibromomethane	50.0	47.2	94	75-125		50.0	47.0	94		0	20	
1,2-Dichlorobenzene	50.0	49.8	100	70-120		50.0	48.5	97		3	20	
1,3-Dichlorobenzene	50.0	51.6	103	75-125		50.0	50.1	100		3	20	
1,4-Dichlorobenzene	50.0	48.9	98	75-125		50.0	47.1	94		4	20	
Dichlorodifluoromethane	50.0	45.5	91	70-136		50.0	43.5	87		4	20	
1,1-Dichloroethane	50.0	43.6	87	70-130		50.0	41.7	83		5	20	
1,2-Dichloroethane	50.0	40.1	80	70-130		50.0	39.5	79		1	20	
1,1-Dichloroethene	50.0	40.6	81	78-120		50.0	39.2	78		4	20	
cis-1,2-Dichloroethene	50.0	41.8	84	70-125		50.0	40.2	80		5	20	
trans-1,2-Dichloroethene	50.0	45.2	90	70-130		50.0	43.1	86		5	20	
1,2-Dichloropropane	50.0	46.8	94	80-121		50.0	45.8	92		2	20	
cis-1,3-Dichloropropene	50.0	45.9	92	70-130		50.0	45.4	91		1	20	

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VI22F02A: Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD)

EPA 8260D

Run Time: VI22F02A.LCS: 06/02/2022 11:33 [VI22F02A] VI22F02A.LCSD: 06/02/2022 11:59 [VI22F02A]

	LCS Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier	LCSD Spike Amount	LCSD Result	LCSD Rec.	LCSD Qualifier	RPD	RPD Limits	RPD Qualifier
Analyte	µg/L	µg/L	%	%		µg/L	µg/L	%		%	%	
trans-1,3-Dichloropropene	50.0	49.6	99	70-132		50.0	48.8	98		1	20	
Ethylbenzene	50.0	50.2	100	80-120		50.0	47.8	96		4	20	
Ethylene Dibromide	50.0	49.5	99	80-120		50.0	49.3	99		0	20	
2-Hexanone	50.0	39.2	78	70-130		50.0	38.6	77		1	20	
Isopropylbenzene	50.0	51.5	103	75-125		50.0	49.5	99		4	20	
4-Methyl-2-pentanone	50.0	47.9	96	70-130		50.0	46.6	93		3	20	
Methylene Chloride	50.0	42.2	84	70-130		50.0	40.6	81		4	20	
2-Methylnaphthalene	50.0	45.2	90	70-130		50.0	45.0	90		0	20	
MTBE	50.0	42.9	86	70-125		50.0	42.3	85		1	20	
Naphthalene	50.0	49.6	99	70-130		50.0	49.0	98		1	20	
n-Propylbenzene	50.0	51.9	104	70-130		50.0	49.4	99		5	20	
Styrene	50.0	47.1	94	70-130		50.0	45.3	91		3	20	
1,1,1,2-Tetrachloroethane	50.0	49.0	98	80-130		50.0	47.5	95		3	20	
1,1,2,2-Tetrachloroethane	50.0	55.8	112	70-130		50.0	54.2	108		4	20	
Tetrachloroethene	50.0	53.5	107	70-130		50.0	50.4	101		6	20	
Toluene	50.0	48.7	97	80-120		50.0	46.9	94		3	20	
1,2,4-Trichlorobenzene	50.0	51.7	103	70-130		50.0	51.1	102		1	20	
1,1,1-Trichloroethane	50.0	44.7	89	70-130		50.0	42.8	86		3	20	
1,1,2-Trichloroethane	50.0	48.3	97	75-125		50.0	46.8	94		3	20	
Trichloroethene	50.0	44.5	89	71-125		50.0	42.7	85		5	20	
Trichlorofluoromethane	50.0	46.3	93	70-133		50.0	44.3	89		4	20	
1,2,3-Trichloropropane	50.0	49.2	98	75-125		50.0	47.5	95		3	20	
1,2,3-Trimethylbenzene	50.0	48.8	98	70-130		50.0	47.0	94		4	20	
1,2,4-Trimethylbenzene	50.0	52.2	104	75-130		50.0	50.2	100		4	20	
1,3,5-Trimethylbenzene	50.0	51.7	103	75-130		50.0	49.5	99		4	20	
Vinyl Chloride	50.0	50.0	100	74-125		50.0	47.5	95		5	20	
m&p-Xylene	100	101	101	75-130		100	96.1	96		5	20	
o-Xylene	50.0	49.1	98	80-120		50.0	47.8	96		2	20	
4-Bromofluorobenzene(S)			95	80-120				97				
Dibromofluoromethane(S)			94	80-120				94				
1,2-Dichloroethane-d4(S)			84	80-120				84				
Toluene-d8(S)			96	80-120				98				

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Definitions/ Qualifiers:

- U: The analyte was not detected at or above the Reporting Limit (RL).
*: Value reported is outside QC limits

Exception Summary:

Exceptions have been properly noted on reported results or affected samples have been scheduled for reanalysis when appropriate.

Report Generated By:



By Katherine Jones at 4:13 PM, Jun 03, 2022



Analytical Laboratory
1914 Holloway Drive 8660 S. Mackinaw Trail
Holt, MI 48842 Cadillac, MI 49601
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Fax: 517 699 0388 Fax: 231 775 8584
email: lab@fibertec.us

Geoprobe
11766 E. Grand River Rd.
Brighton, MI 48116
Phone: 810 220 3300
Fax: 810 220 3311

Chain of Custody #
202784
PAGE 1 of 1

Client Name: <u>Artadis</u>				MATRIX (SEE RIGHT CORNER FOR CODE)	# OF CONTAINERS <u>3</u>	VOCs <u>8260</u>	PARAMETERS												Matrix Code		Deliverables ☒ Level 2 ☐ Level 3 ☐ Level 4 ☐ EDD
Contact Person: <u>Christian Seidel</u>							HOLD SAMPLE	S Soil	GW Ground Water												
Project Name/ Number: <u>KH Milford</u>								A Air	SW Surface Water												
Email distribution list: <u>christian.seidel@artadis.com</u> <u>john.mcininnis@artadis.com</u>								O Oil	WW Waste Water												
Quote# <u>849</u>								P Wipe	X Other: Specify												
Purchase Order# <u>30047630</u>				Remarks:																	
Date	Time	Sample #	Client Sample Descriptor	GN	W	X															
<u>5/25/22</u>	<u>1715</u>		<u>VAP-02-11-115-120</u>	<u>W</u>	<u>W</u>	<u>W</u>															
	<u>1550</u>		<u>Equipment - pump</u>	<u>W</u>	<u>W</u>	<u>W</u>															
	<u>1600</u>		<u>Equipment - screen</u>	<u>W</u>	<u>W</u>	<u>W</u>															
Received By Lab MAY 26 2022 Initials: <u>EA</u> Received On Ice																					
Comments:																					
Sampled/Relinquished By: <u>Madison Alexander</u>				Date/Time: <u>5/26/22 1335</u>				Received By: <u>Dan Stash</u>													
Relinquished By: <u>Dan Stash</u>				Date/Time: <u>5/26/22 1530</u>				Received By: <u>[Signature]</u>													
Relinquished By:				Date/Time:				Received By Laboratory:													
Turnaround Time ALL RESULTS WILL BE SENT BY THE END OF THE BUSINESS DAY																		LAB USE ONLY			
☐ 1 bus. day ☐ 2 bus. days ☐ 3 bus. days ☐ 4 bus. days																		Fibertec project number: <u>A08739</u>			
☒ 5-7 bus. days (standard) Other (specify time/date requirement): _____																		Temperature upon receipt at Lab: <u>4.3°C</u>			
Please see back for terms and conditions																					

ATTACHMENT 3

May 26, 2022, Electronic Mail Correspondence with EGLE

McInnis, John

From: Wojciechowski, Kevin (EGLE) <WojciechowskiK@michigan.gov>
Sent: Thursday, May 26, 2022 5:46 PM
To: McInnis, John
Cc: Detwiler Scott MSA HEEN; Owens, Paul (EGLE); Wilson, Cheryl (EGLE); Yusko-Kotimko, Tiffany (EGLE)
Subject: RE: VAP Monitoring well screen location

Thanks for the update.

Kevin Wojciechowski

Senior Environmental Quality Analyst
Michigan Department of Environment, Great Lakes, and Energy
Remediation Redevelopment Division
Warren District Office
Cell: 586-623-2948

wojciechowskik@michigan.gov

Pollution Emergency Alerting System: 1-800-292-4706

From: McInnis, John <John.McInnis@arcadis.com>
Sent: Thursday, May 26, 2022 3:58 PM
To: Wojciechowski, Kevin (EGLE) <WojciechowskiK@michigan.gov>
Cc: Detwiler Scott MSA HEEN <scott.detwiler@zf.com>; Owens, Paul (EGLE) <OWENSP@michigan.gov>; Wilson, Cheryl (EGLE) <WILSONC3@michigan.gov>; Yusko-Kotimko, Tiffany (EGLE) <YuskoKotimkoT@michigan.gov>
Subject: RE: VAP Monitoring well screen location

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov

Hi Kevin,

As a follow-up to your email and our calls, this serves as confirmation that we are proceeding with the installation of a new monitoring well at the VAP #1 location today and tomorrow with a screened interval of 85 to 90 feet below ground level.

It's our intent to also install another deeper well near VAP #1 and OW16D2 with a screened interval of 95 to 100 feet below ground level consistent with the OW-16D2 screen interval, to serve as a nested pair with the new 85 to 90 foot well once the driller's schedule can be confirmed and additional materials procured.

Please let me know if you have any questions or concerns.

Thanks, John

From: Wojciechowski, Kevin (EGLE) <WojciechowskiK@michigan.gov>
Sent: Thursday, May 26, 2022 10:54 AM
To: McInnis, John <John.McInnis@arcadis.com>
Cc: Detwiler Scott MSA HEEN <scott.detwiler@zf.com>; Owens, Paul (EGLE) <owensp@michigan.gov>; Wilson, Cheryl

(EGLE) <WILSONC3@michigan.gov>; Yusko-Kotimko, Tiffany (EGLE) <YuskoKotimkoT@michigan.gov>

Subject: Re: VAP Monitoring well screen location

Yes that was considered and it wasn't ruled out. Looking back at EGLEs communications with ZF, total VOCs was agree upon to set the screen. This is outside of the Order, but EGLE believes this is an important monitoring point and the VAP demonstrated VOCs especially CVOCs equally spread out in a large portion of the aquifer. The only thing that was agreed to in correspondences is set at highest total VOCs.

From: McInnis, John <John.McInnis@arcadis.com>

Sent: Thursday, May 26, 2022 10:00:38 AM

To: Wojciechowski, Kevin (EGLE) <WojciechowskiK@michigan.gov>

Cc: Detwiler Scott MSA HEEN <scott.detwiler@zf.com>; Owens, Paul (EGLE) <OWENSP@michigan.gov>; Wilson, Cheryl (EGLE) <WILSONC3@michigan.gov>; Yusko-Kotimko, Tiffany (EGLE) <YuskoKotimkoT@michigan.gov>

Subject: RE: VAP Monitoring well screen location

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov

Hi Kevin,

Thanks for the feedback. Was there a consideration to use a 10-foot screen to cover a greater area of the impacted zone?

Also, just to confirm, you are only concerned about the total chlorinated VOCs for evaluation of the screen placement correct?

John

John McInnis PE

Principal Engineer/Project Manager

Arcadis of Michigan, LLC

28550 Cabot Drive Suite 500 | Novi, MI | 48377 | USA

T +1 248 994 2285

M +1 248 982 9674

www.arcadis.com



Professional Registration / PE-MI, 6201037207

From: Wojciechowski, Kevin (EGLE) <WojciechowskiK@michigan.gov>

Sent: Thursday, May 26, 2022 9:48 AM

To: McInnis, John <John.McInnis@arcadis.com>

Cc: Detwiler Scott MSA HEEN <scott.detwiler@zf.com>; Owens, Paul (EGLE) <owensp@michigan.gov>; Wilson, Cheryl (EGLE) <WILSONC3@michigan.gov>; Yusko-Kotimko, Tiffany (EGLE) <YuskoKotimkoT@michigan.gov>

Subject: VAP Monitoring well screen location

John,

After discussions with my supervisor's and geologist. The screen of the monitoring well should be placed from 85-90 ft where the highest total VOCs were located. Based on the review of the VAP data and the location of the monitoring well being a sentinel well before the village intake wells, levels of VOCs are consistent from 75-110 ft. Nested well screens should be considered for this location, to better monitoring near the Village intake wells.

Thanks,

Kevin Wojciechowski

Senior Environmental Quality Analyst

Michigan Department of Environment, Great Lakes, and Energy

Remediation Redevelopment Division

Warren District Office

Cell: 586-623-2948

wojciechowskik@michigan.gov

Pollution Emergency Alerting System: 1-800-292-4706

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ATTACHMENT 4

Laboratory Analytical Report (Observation Wells OW-16D2 and OW-16D2R1)

ANALYTICAL REPORT

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Tel: (330)497-9396

Laboratory Job ID: 240-167051-1

Client Project/Site: Milford

For:

ZF Active Safety and Electronics LLC
Tech 2
12025 Tech Center Drive
Livonia, Michigan 48150

Attn: Scott Detwiler



Authorized for release by:

6/7/2022 2:23:44 PM

Michael DelMonico, Project Manager I
(330)497-9396

Michael.DelMonico@et.eurofinsus.com

LINKS

Review your project
results through



Have a Question?



Visit us at:

www.eurofinsus.com/Env

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

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

Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Method Summary	5
Sample Summary	6
Detection Summary	7
Client Sample Results	9
Surrogate Summary	57
QC Sample Results	58
QC Association Summary	73
Lab Chronicle	74
Certification Summary	78
Chain of Custody	79



Definitions/Glossary

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

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

Case Narrative

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Job ID: 240-167051-1

Laboratory: Eurofins Canton

Narrative

Job Narrative 240-167051-1

Comments

No additional comments.

Receipt

The samples were received on 5/21/2022 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 2.1° C.

GC/MS VOA

Method 8260D: The continuing calibration verification (CCV) analyzed in batch 240-528486 was outside the method criteria for bromomethane. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte is considered estimated.

Method 8260D: The continuing calibration verification (CCV) analyzed in batch 240-528483 was outside the method criteria for the following analytes: Bromoform and Methylcyclohexane. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analytes is considered estimated: OW-10D_051722 (240-167051-2), OW-08D_051722 (240-167051-3), OW-05D2_051722 (240-167051-4), OW-30_051722 (240-167051-5), OW-23D_051722 (240-167051-6), OW-28_051722 (240-167051-7), OW-18D_051822 (240-167051-8), OW-09-ML-D_051822 (240-167051-9), OW-09-ML-C_051822 (240-167051-10), OW-18-ML-A_051822 (240-167051-11), OW-18-ML-B_051822 (240-167051-12), OW-18-ML-C_051922 (240-167051-13) and (CCVIS 240-528483/4).

Method 8260D: The continuing calibration verification (CCV) analyzed in batch 240-528938 was outside the method criteria for some analytes. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analytes is considered estimated.

Method 8260D: The continuing calibration verification (CCV) analyzed in batch 240-528862 was outside the method criteria for multiple analytes. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analytes is considered estimated: EQUIPMENT BLANK_051922 (240-167051-22), FIELD BLANK_051922 (240-167051-23), TRIP BLANK_051922 (240-167051-24) and (CCVIS 240-528862/3).

Method 8260D: The continuing calibration verification (CCV) analyzed in batch 240-529073 was outside the method criteria for the following analytes: Bromomethane and Bromoform. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analytes is considered estimated: OW-22_052022 (240-167051-18), OW-07D_052022 (240-167051-19), DUP-01_052022 (240-167051-20), DUP-02_052022 (240-167051-21) and (CCVIS 240-529073/4).

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

VOA Prep

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

Method Summary

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	TAL CAN
5030C	Purge and Trap	SW846	TAL CAN

Protocol References:

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

Laboratory References:

TAL CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Sample Summary

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-167051-1	OW-16D2_051822	Water	05/18/22 09:18	05/21/22 08:00
240-167051-2	OW-10D_051722	Water	05/17/22 09:42	05/21/22 08:00
240-167051-3	OW-08D_051722	Water	05/17/22 11:45	05/21/22 08:00
240-167051-4	OW-05D2_051722	Water	05/17/22 13:15	05/21/22 08:00
240-167051-5	OW-30_051722	Water	05/17/22 14:35	05/21/22 08:00
240-167051-6	OW-23D_051722	Water	05/17/22 15:56	05/21/22 08:00
240-167051-7	OW-28_051722	Water	05/17/22 17:05	05/21/22 08:00
240-167051-8	OW-18D_051822	Water	05/18/22 11:10	05/21/22 08:00
240-167051-9	OW-09-ML-D_051822	Water	05/18/22 12:10	05/21/22 08:00
240-167051-10	OW-09-ML-C_051822	Water	05/18/22 13:13	05/21/22 08:00
240-167051-11	OW-18-ML-A_051822	Water	05/18/22 14:55	05/21/22 08:00
240-167051-12	OW-18-ML-B_051822	Water	05/18/22 15:33	05/21/22 08:00
240-167051-13	OW-18-ML-C_051922	Water	05/19/22 09:46	05/21/22 08:00
240-167051-14	OW-18-ML-D_051922	Water	05/19/22 10:55	05/21/22 08:00
240-167051-15	OW-18-ML-E_051922	Water	05/19/22 12:46	05/21/22 08:00
240-167051-16	OW-18-ML-F_051922	Water	05/19/22 13:52	05/21/22 08:00
240-167051-17	OW-02D2_051922	Water	05/19/22 16:03	05/21/22 08:00
240-167051-18	OW-22_052022	Water	05/20/22 08:47	05/21/22 08:00
240-167051-19	OW-07D_052022	Water	05/20/22 10:25	05/21/22 08:00
240-167051-20	DUP-01_052022	Water	05/20/22 00:00	05/21/22 08:00
240-167051-21	DUP-02_052022	Water	05/20/22 00:00	05/21/22 08:00
240-167051-22	EQUIPMENT BLANK_051922	Water	05/19/22 10:00	05/21/22 08:00
240-167051-23	FIELD BLANK_051922	Water	05/19/22 09:20	05/21/22 08:00
240-167051-24	TRIP BLANK_051922	Water	05/19/22 00:00	05/21/22 08:00

Detection Summary

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-16D2_051822

Lab Sample ID: 240-167051-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	3.4		1.0	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	16		1.0	ug/L	1		8260D	Total/NA

Client Sample ID: OW-10D_051722

Lab Sample ID: 240-167051-2

No Detections.

Client Sample ID: OW-08D_051722

Lab Sample ID: 240-167051-3

No Detections.

Client Sample ID: OW-05D2_051722

Lab Sample ID: 240-167051-4

No Detections.

Client Sample ID: OW-30_051722

Lab Sample ID: 240-167051-5

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	3.2		1.0	ug/L	1		8260D	Total/NA

Client Sample ID: OW-23D_051722

Lab Sample ID: 240-167051-6

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	2.7		1.0	ug/L	1		8260D	Total/NA

Client Sample ID: OW-28_051722

Lab Sample ID: 240-167051-7

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	3.5		1.0	ug/L	1		8260D	Total/NA

Client Sample ID: OW-18D_051822

Lab Sample ID: 240-167051-8

No Detections.

Client Sample ID: OW-09-ML-D_051822

Lab Sample ID: 240-167051-9

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	8.1		1.0	ug/L	1		8260D	Total/NA

Client Sample ID: OW-09-ML-C_051822

Lab Sample ID: 240-167051-10

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	3.8		1.0	ug/L	1		8260D	Total/NA
Trichloroethene	1.5		1.0	ug/L	1		8260D	Total/NA

Client Sample ID: OW-18-ML-A_051822

Lab Sample ID: 240-167051-11

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	1.3		1.0	ug/L	1		8260D	Total/NA

Client Sample ID: OW-18-ML-B_051822

Lab Sample ID: 240-167051-12

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	4.1		1.0	ug/L	1		8260D	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Detection Summary

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-18-ML-C_051922

Lab Sample ID: 240-167051-13

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	2.6		1.0	ug/L	1		8260D	Total/NA

Client Sample ID: OW-18-ML-D_051922

Lab Sample ID: 240-167051-14

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	1.2		1.0	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	7.0		1.0	ug/L	1		8260D	Total/NA

Client Sample ID: OW-18-ML-E_051922

Lab Sample ID: 240-167051-15

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	1.4		1.0	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	7.5		1.0	ug/L	1		8260D	Total/NA

Client Sample ID: OW-18-ML-F_051922

Lab Sample ID: 240-167051-16

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	14		1.0	ug/L	1		8260D	Total/NA
trans-1,2-Dichloroethene	1.4		1.0	ug/L	1		8260D	Total/NA

Client Sample ID: OW-02D2_051922

Lab Sample ID: 240-167051-17

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	5.9		2.5	ug/L	2.5		8260D	Total/NA
Trichloroethene	62		2.5	ug/L	2.5		8260D	Total/NA

Client Sample ID: OW-22_052022

Lab Sample ID: 240-167051-18

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	5.3		2.5	ug/L	2.5		8260D	Total/NA
cis-1,2-Dichloroethene	32		2.5	ug/L	2.5		8260D	Total/NA
Tetrachloroethene	3.2		2.5	ug/L	2.5		8260D	Total/NA
Trichloroethene	54		2.5	ug/L	2.5		8260D	Total/NA

Client Sample ID: OW-07D_052022

Lab Sample ID: 240-167051-19

No Detections.

Client Sample ID: DUP-01_052022

Lab Sample ID: 240-167051-20

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	4.1		1.0	ug/L	1		8260D	Total/NA

Client Sample ID: DUP-02_052022

Lab Sample ID: 240-167051-21

No Detections.

Client Sample ID: EQUIPMENT BLANK_051922

Lab Sample ID: 240-167051-22

No Detections.

Client Sample ID: FIELD BLANK_051922

Lab Sample ID: 240-167051-23

No Detections.

Client Sample ID: TRIP BLANK_051922

Lab Sample ID: 240-167051-24

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-16D2_051822

Lab Sample ID: 240-167051-1

Date Collected: 05/18/22 09:18

Matrix: Water

Date Received: 05/21/22 08:00

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	ug/L			05/31/22 19:52	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	ug/L			05/31/22 19:52	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	ug/L			05/31/22 19:52	1
1,1,2-Trichloroethane	1.0	U	1.0	ug/L			05/31/22 19:52	1
1,1-Dichloroethane	3.4		1.0	ug/L			05/31/22 19:52	1
1,1-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 19:52	1
1,2,4-Trichlorobenzene	1.0	U	1.0	ug/L			05/31/22 19:52	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	ug/L			05/31/22 19:52	1
Ethylene Dibromide	1.0	U	1.0	ug/L			05/31/22 19:52	1
1,2-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 19:52	1
1,2-Dichloroethane	1.0	U	1.0	ug/L			05/31/22 19:52	1
1,2-Dichloropropane	1.0	U	1.0	ug/L			05/31/22 19:52	1
1,3-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 19:52	1
1,4-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 19:52	1
2-Butanone (MEK)	10	U	10	ug/L			05/31/22 19:52	1
2-Hexanone	10	U	10	ug/L			05/31/22 19:52	1
4-Methyl-2-pentanone (MIBK)	10	U	10	ug/L			05/31/22 19:52	1
Acetone	10	U	10	ug/L			05/31/22 19:52	1
Benzene	1.0	U	1.0	ug/L			05/31/22 19:52	1
Dichlorobromomethane	1.0	U	1.0	ug/L			05/31/22 19:52	1
Bromoform	1.0	U	1.0	ug/L			05/31/22 19:52	1
Bromomethane	1.0	U	1.0	ug/L			05/31/22 19:52	1
Carbon disulfide	1.0	U	1.0	ug/L			05/31/22 19:52	1
Carbon tetrachloride	1.0	U	1.0	ug/L			05/31/22 19:52	1
Chlorobenzene	1.0	U	1.0	ug/L			05/31/22 19:52	1
Chloroethane	1.0	U	1.0	ug/L			05/31/22 19:52	1
Chloroform	1.0	U	1.0	ug/L			05/31/22 19:52	1
Chloromethane	1.0	U	1.0	ug/L			05/31/22 19:52	1
cis-1,2-Dichloroethene	16		1.0	ug/L			05/31/22 19:52	1
cis-1,3-Dichloropropene	1.0	U	1.0	ug/L			05/31/22 19:52	1
Cyclohexane	1.0	U	1.0	ug/L			05/31/22 19:52	1
Chlorodibromomethane	1.0	U	1.0	ug/L			05/31/22 19:52	1
Dichlorodifluoromethane	1.0	U	1.0	ug/L			05/31/22 19:52	1
Ethylbenzene	1.0	U	1.0	ug/L			05/31/22 19:52	1
Isopropylbenzene	1.0	U	1.0	ug/L			05/31/22 19:52	1
Methyl acetate	10	U	10	ug/L			05/31/22 19:52	1
Methyl tert-butyl ether	1.0	U	1.0	ug/L			05/31/22 19:52	1
Methylcyclohexane	1.0	U	1.0	ug/L			05/31/22 19:52	1
Methylene Chloride	5.0	U	5.0	ug/L			05/31/22 19:52	1
Styrene	1.0	U	1.0	ug/L			05/31/22 19:52	1
Tetrachloroethene	1.0	U	1.0	ug/L			05/31/22 19:52	1
Toluene	1.0	U	1.0	ug/L			05/31/22 19:52	1
trans-1,2-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 19:52	1
trans-1,3-Dichloropropene	1.0	U	1.0	ug/L			05/31/22 19:52	1
Trichloroethene	1.0	U	1.0	ug/L			05/31/22 19:52	1
Trichlorofluoromethane	1.0	U	1.0	ug/L			05/31/22 19:52	1
Vinyl chloride	1.0	U	1.0	ug/L			05/31/22 19:52	1
Xylenes, Total	2.0	U	2.0	ug/L			05/31/22 19:52	1

Eurofins Canton

Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-16D2_051822

Lab Sample ID: 240-167051-1

Date Collected: 05/18/22 09:18

Matrix: Water

Date Received: 05/21/22 08:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	102		78 - 122		05/31/22 19:52	1
<i>Dibromofluoromethane (Surr)</i>	97		73 - 120		05/31/22 19:52	1
<i>4-Bromofluorobenzene (Surr)</i>	98		56 - 136		05/31/22 19:52	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	109		62 - 137		05/31/22 19:52	1

Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-10D_051722

Lab Sample ID: 240-167051-2

Date Collected: 05/17/22 09:42

Matrix: Water

Date Received: 05/21/22 08:00

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	ug/L			05/31/22 14:14	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	ug/L			05/31/22 14:14	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	ug/L			05/31/22 14:14	1
1,1,2-Trichloroethane	1.0	U	1.0	ug/L			05/31/22 14:14	1
1,1-Dichloroethane	1.0	U	1.0	ug/L			05/31/22 14:14	1
1,1-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 14:14	1
1,2,4-Trichlorobenzene	1.0	U	1.0	ug/L			05/31/22 14:14	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	ug/L			05/31/22 14:14	1
Ethylene Dibromide	1.0	U	1.0	ug/L			05/31/22 14:14	1
1,2-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 14:14	1
1,2-Dichloroethane	1.0	U	1.0	ug/L			05/31/22 14:14	1
1,2-Dichloropropane	1.0	U	1.0	ug/L			05/31/22 14:14	1
1,3-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 14:14	1
1,4-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 14:14	1
2-Butanone (MEK)	10	U	10	ug/L			05/31/22 14:14	1
2-Hexanone	10	U	10	ug/L			05/31/22 14:14	1
4-Methyl-2-pentanone (MIBK)	10	U	10	ug/L			05/31/22 14:14	1
Acetone	10	U	10	ug/L			05/31/22 14:14	1
Benzene	1.0	U	1.0	ug/L			05/31/22 14:14	1
Dichlorobromomethane	1.0	U	1.0	ug/L			05/31/22 14:14	1
Bromoform	1.0	U	1.0	ug/L			05/31/22 14:14	1
Bromomethane	1.0	U	1.0	ug/L			05/31/22 14:14	1
Carbon disulfide	1.0	U	1.0	ug/L			05/31/22 14:14	1
Carbon tetrachloride	1.0	U	1.0	ug/L			05/31/22 14:14	1
Chlorobenzene	1.0	U	1.0	ug/L			05/31/22 14:14	1
Chloroethane	1.0	U	1.0	ug/L			05/31/22 14:14	1
Chloroform	1.0	U	1.0	ug/L			05/31/22 14:14	1
Chloromethane	1.0	U	1.0	ug/L			05/31/22 14:14	1
cis-1,2-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 14:14	1
cis-1,3-Dichloropropene	1.0	U	1.0	ug/L			05/31/22 14:14	1
Cyclohexane	1.0	U	1.0	ug/L			05/31/22 14:14	1
Chlorodibromomethane	1.0	U	1.0	ug/L			05/31/22 14:14	1
Dichlorodifluoromethane	1.0	U	1.0	ug/L			05/31/22 14:14	1
Ethylbenzene	1.0	U	1.0	ug/L			05/31/22 14:14	1
Isopropylbenzene	1.0	U	1.0	ug/L			05/31/22 14:14	1
Methyl acetate	10	U	10	ug/L			05/31/22 14:14	1
Methyl tert-butyl ether	1.0	U	1.0	ug/L			05/31/22 14:14	1
Methylcyclohexane	1.0	U	1.0	ug/L			05/31/22 14:14	1
Methylene Chloride	5.0	U	5.0	ug/L			05/31/22 14:14	1
Styrene	1.0	U	1.0	ug/L			05/31/22 14:14	1
Tetrachloroethene	1.0	U	1.0	ug/L			05/31/22 14:14	1
Toluene	1.0	U	1.0	ug/L			05/31/22 14:14	1
trans-1,2-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 14:14	1
trans-1,3-Dichloropropene	1.0	U	1.0	ug/L			05/31/22 14:14	1
Trichloroethene	1.0	U	1.0	ug/L			05/31/22 14:14	1
Trichlorofluoromethane	1.0	U	1.0	ug/L			05/31/22 14:14	1
Vinyl chloride	1.0	U	1.0	ug/L			05/31/22 14:14	1
Xylenes, Total	2.0	U	2.0	ug/L			05/31/22 14:14	1

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Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-10D_051722

Lab Sample ID: 240-167051-2

Date Collected: 05/17/22 09:42

Matrix: Water

Date Received: 05/21/22 08:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	86		78 - 122		05/31/22 14:14	1
Dibromofluoromethane (Surr)	96		73 - 120		05/31/22 14:14	1
4-Bromofluorobenzene (Surr)	89		56 - 136		05/31/22 14:14	1
1,2-Dichloroethane-d4 (Surr)	93		62 - 137		05/31/22 14:14	1

Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-08D_051722

Lab Sample ID: 240-167051-3

Date Collected: 05/17/22 11:45

Matrix: Water

Date Received: 05/21/22 08:00

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	ug/L			05/31/22 15:28	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	ug/L			05/31/22 15:28	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	ug/L			05/31/22 15:28	1
1,1,2-Trichloroethane	1.0	U	1.0	ug/L			05/31/22 15:28	1
1,1-Dichloroethane	1.0	U	1.0	ug/L			05/31/22 15:28	1
1,1-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 15:28	1
1,2,4-Trichlorobenzene	1.0	U	1.0	ug/L			05/31/22 15:28	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	ug/L			05/31/22 15:28	1
Ethylene Dibromide	1.0	U	1.0	ug/L			05/31/22 15:28	1
1,2-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 15:28	1
1,2-Dichloroethane	1.0	U	1.0	ug/L			05/31/22 15:28	1
1,2-Dichloropropane	1.0	U	1.0	ug/L			05/31/22 15:28	1
1,3-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 15:28	1
1,4-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 15:28	1
2-Butanone (MEK)	10	U	10	ug/L			05/31/22 15:28	1
2-Hexanone	10	U	10	ug/L			05/31/22 15:28	1
4-Methyl-2-pentanone (MIBK)	10	U	10	ug/L			05/31/22 15:28	1
Acetone	10	U	10	ug/L			05/31/22 15:28	1
Benzene	1.0	U	1.0	ug/L			05/31/22 15:28	1
Dichlorobromomethane	1.0	U	1.0	ug/L			05/31/22 15:28	1
Bromoform	1.0	U	1.0	ug/L			05/31/22 15:28	1
Bromomethane	1.0	U	1.0	ug/L			05/31/22 15:28	1
Carbon disulfide	1.0	U	1.0	ug/L			05/31/22 15:28	1
Carbon tetrachloride	1.0	U	1.0	ug/L			05/31/22 15:28	1
Chlorobenzene	1.0	U	1.0	ug/L			05/31/22 15:28	1
Chloroethane	1.0	U	1.0	ug/L			05/31/22 15:28	1
Chloroform	1.0	U	1.0	ug/L			05/31/22 15:28	1
Chloromethane	1.0	U	1.0	ug/L			05/31/22 15:28	1
cis-1,2-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 15:28	1
cis-1,3-Dichloropropene	1.0	U	1.0	ug/L			05/31/22 15:28	1
Cyclohexane	1.0	U	1.0	ug/L			05/31/22 15:28	1
Chlorodibromomethane	1.0	U	1.0	ug/L			05/31/22 15:28	1
Dichlorodifluoromethane	1.0	U	1.0	ug/L			05/31/22 15:28	1
Ethylbenzene	1.0	U	1.0	ug/L			05/31/22 15:28	1
Isopropylbenzene	1.0	U	1.0	ug/L			05/31/22 15:28	1
Methyl acetate	10	U	10	ug/L			05/31/22 15:28	1
Methyl tert-butyl ether	1.0	U	1.0	ug/L			05/31/22 15:28	1
Methylcyclohexane	1.0	U	1.0	ug/L			05/31/22 15:28	1
Methylene Chloride	5.0	U	5.0	ug/L			05/31/22 15:28	1
Styrene	1.0	U	1.0	ug/L			05/31/22 15:28	1
Tetrachloroethene	1.0	U	1.0	ug/L			05/31/22 15:28	1
Toluene	1.0	U	1.0	ug/L			05/31/22 15:28	1
trans-1,2-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 15:28	1
trans-1,3-Dichloropropene	1.0	U	1.0	ug/L			05/31/22 15:28	1
Trichloroethene	1.0	U	1.0	ug/L			05/31/22 15:28	1
Trichlorofluoromethane	1.0	U	1.0	ug/L			05/31/22 15:28	1
Vinyl chloride	1.0	U	1.0	ug/L			05/31/22 15:28	1
Xylenes, Total	2.0	U	2.0	ug/L			05/31/22 15:28	1

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Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-08D_051722

Lab Sample ID: 240-167051-3

Date Collected: 05/17/22 11:45

Matrix: Water

Date Received: 05/21/22 08:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	84		78 - 122		05/31/22 15:28	1
Dibromofluoromethane (Surr)	93		73 - 120		05/31/22 15:28	1
4-Bromofluorobenzene (Surr)	87		56 - 136		05/31/22 15:28	1
1,2-Dichloroethane-d4 (Surr)	93		62 - 137		05/31/22 15:28	1

Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-05D2_051722

Lab Sample ID: 240-167051-4

Date Collected: 05/17/22 13:15

Matrix: Water

Date Received: 05/21/22 08:00

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	ug/L			05/31/22 15:52	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	ug/L			05/31/22 15:52	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	ug/L			05/31/22 15:52	1
1,1,2-Trichloroethane	1.0	U	1.0	ug/L			05/31/22 15:52	1
1,1-Dichloroethane	1.0	U	1.0	ug/L			05/31/22 15:52	1
1,1-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 15:52	1
1,2,4-Trichlorobenzene	1.0	U	1.0	ug/L			05/31/22 15:52	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	ug/L			05/31/22 15:52	1
Ethylene Dibromide	1.0	U	1.0	ug/L			05/31/22 15:52	1
1,2-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 15:52	1
1,2-Dichloroethane	1.0	U	1.0	ug/L			05/31/22 15:52	1
1,2-Dichloropropane	1.0	U	1.0	ug/L			05/31/22 15:52	1
1,3-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 15:52	1
1,4-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 15:52	1
2-Butanone (MEK)	10	U	10	ug/L			05/31/22 15:52	1
2-Hexanone	10	U	10	ug/L			05/31/22 15:52	1
4-Methyl-2-pentanone (MIBK)	10	U	10	ug/L			05/31/22 15:52	1
Acetone	10	U	10	ug/L			05/31/22 15:52	1
Benzene	1.0	U	1.0	ug/L			05/31/22 15:52	1
Dichlorobromomethane	1.0	U	1.0	ug/L			05/31/22 15:52	1
Bromoform	1.0	U	1.0	ug/L			05/31/22 15:52	1
Bromomethane	1.0	U	1.0	ug/L			05/31/22 15:52	1
Carbon disulfide	1.0	U	1.0	ug/L			05/31/22 15:52	1
Carbon tetrachloride	1.0	U	1.0	ug/L			05/31/22 15:52	1
Chlorobenzene	1.0	U	1.0	ug/L			05/31/22 15:52	1
Chloroethane	1.0	U	1.0	ug/L			05/31/22 15:52	1
Chloroform	1.0	U	1.0	ug/L			05/31/22 15:52	1
Chloromethane	1.0	U	1.0	ug/L			05/31/22 15:52	1
cis-1,2-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 15:52	1
cis-1,3-Dichloropropene	1.0	U	1.0	ug/L			05/31/22 15:52	1
Cyclohexane	1.0	U	1.0	ug/L			05/31/22 15:52	1
Chlorodibromomethane	1.0	U	1.0	ug/L			05/31/22 15:52	1
Dichlorodifluoromethane	1.0	U	1.0	ug/L			05/31/22 15:52	1
Ethylbenzene	1.0	U	1.0	ug/L			05/31/22 15:52	1
Isopropylbenzene	1.0	U	1.0	ug/L			05/31/22 15:52	1
Methyl acetate	10	U	10	ug/L			05/31/22 15:52	1
Methyl tert-butyl ether	1.0	U	1.0	ug/L			05/31/22 15:52	1
Methylcyclohexane	1.0	U	1.0	ug/L			05/31/22 15:52	1
Methylene Chloride	5.0	U	5.0	ug/L			05/31/22 15:52	1
Styrene	1.0	U	1.0	ug/L			05/31/22 15:52	1
Tetrachloroethene	1.0	U	1.0	ug/L			05/31/22 15:52	1
Toluene	1.0	U	1.0	ug/L			05/31/22 15:52	1
trans-1,2-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 15:52	1
trans-1,3-Dichloropropene	1.0	U	1.0	ug/L			05/31/22 15:52	1
Trichloroethene	1.0	U	1.0	ug/L			05/31/22 15:52	1
Trichlorofluoromethane	1.0	U	1.0	ug/L			05/31/22 15:52	1
Vinyl chloride	1.0	U	1.0	ug/L			05/31/22 15:52	1
Xylenes, Total	2.0	U	2.0	ug/L			05/31/22 15:52	1

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Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-05D2_051722

Lab Sample ID: 240-167051-4

Date Collected: 05/17/22 13:15

Matrix: Water

Date Received: 05/21/22 08:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	87		78 - 122		05/31/22 15:52	1
<i>Dibromofluoromethane (Surr)</i>	97		73 - 120		05/31/22 15:52	1
<i>4-Bromofluorobenzene (Surr)</i>	90		56 - 136		05/31/22 15:52	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	94		62 - 137		05/31/22 15:52	1

Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-30_051722

Lab Sample ID: 240-167051-5

Date Collected: 05/17/22 14:35

Matrix: Water

Date Received: 05/21/22 08:00

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	ug/L			05/31/22 16:17	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	ug/L			05/31/22 16:17	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	ug/L			05/31/22 16:17	1
1,1,2-Trichloroethane	1.0	U	1.0	ug/L			05/31/22 16:17	1
1,1-Dichloroethane	1.0	U	1.0	ug/L			05/31/22 16:17	1
1,1-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 16:17	1
1,2,4-Trichlorobenzene	1.0	U	1.0	ug/L			05/31/22 16:17	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	ug/L			05/31/22 16:17	1
Ethylene Dibromide	1.0	U	1.0	ug/L			05/31/22 16:17	1
1,2-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 16:17	1
1,2-Dichloroethane	1.0	U	1.0	ug/L			05/31/22 16:17	1
1,2-Dichloropropane	1.0	U	1.0	ug/L			05/31/22 16:17	1
1,3-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 16:17	1
1,4-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 16:17	1
2-Butanone (MEK)	10	U	10	ug/L			05/31/22 16:17	1
2-Hexanone	10	U	10	ug/L			05/31/22 16:17	1
4-Methyl-2-pentanone (MIBK)	10	U	10	ug/L			05/31/22 16:17	1
Acetone	10	U	10	ug/L			05/31/22 16:17	1
Benzene	1.0	U	1.0	ug/L			05/31/22 16:17	1
Dichlorobromomethane	1.0	U	1.0	ug/L			05/31/22 16:17	1
Bromoform	1.0	U	1.0	ug/L			05/31/22 16:17	1
Bromomethane	1.0	U	1.0	ug/L			05/31/22 16:17	1
Carbon disulfide	1.0	U	1.0	ug/L			05/31/22 16:17	1
Carbon tetrachloride	1.0	U	1.0	ug/L			05/31/22 16:17	1
Chlorobenzene	1.0	U	1.0	ug/L			05/31/22 16:17	1
Chloroethane	1.0	U	1.0	ug/L			05/31/22 16:17	1
Chloroform	1.0	U	1.0	ug/L			05/31/22 16:17	1
Chloromethane	1.0	U	1.0	ug/L			05/31/22 16:17	1
cis-1,2-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 16:17	1
cis-1,3-Dichloropropene	1.0	U	1.0	ug/L			05/31/22 16:17	1
Cyclohexane	1.0	U	1.0	ug/L			05/31/22 16:17	1
Chlorodibromomethane	1.0	U	1.0	ug/L			05/31/22 16:17	1
Dichlorodifluoromethane	1.0	U	1.0	ug/L			05/31/22 16:17	1
Ethylbenzene	1.0	U	1.0	ug/L			05/31/22 16:17	1
Isopropylbenzene	1.0	U	1.0	ug/L			05/31/22 16:17	1
Methyl acetate	10	U	10	ug/L			05/31/22 16:17	1
Methyl tert-butyl ether	1.0	U	1.0	ug/L			05/31/22 16:17	1
Methylcyclohexane	1.0	U	1.0	ug/L			05/31/22 16:17	1
Methylene Chloride	5.0	U	5.0	ug/L			05/31/22 16:17	1
Styrene	1.0	U	1.0	ug/L			05/31/22 16:17	1
Tetrachloroethene	1.0	U	1.0	ug/L			05/31/22 16:17	1
Toluene	1.0	U	1.0	ug/L			05/31/22 16:17	1
trans-1,2-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 16:17	1
trans-1,3-Dichloropropene	1.0	U	1.0	ug/L			05/31/22 16:17	1
Trichloroethene	3.2		1.0	ug/L			05/31/22 16:17	1
Trichlorofluoromethane	1.0	U	1.0	ug/L			05/31/22 16:17	1
Vinyl chloride	1.0	U	1.0	ug/L			05/31/22 16:17	1
Xylenes, Total	2.0	U	2.0	ug/L			05/31/22 16:17	1

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Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-30_051722

Lab Sample ID: 240-167051-5

Date Collected: 05/17/22 14:35

Matrix: Water

Date Received: 05/21/22 08:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	85		78 - 122		05/31/22 16:17	1
<i>Dibromofluoromethane (Surr)</i>	96		73 - 120		05/31/22 16:17	1
<i>4-Bromofluorobenzene (Surr)</i>	90		56 - 136		05/31/22 16:17	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	93		62 - 137		05/31/22 16:17	1

Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-23D_051722

Lab Sample ID: 240-167051-6

Date Collected: 05/17/22 15:56

Matrix: Water

Date Received: 05/21/22 08:00

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	ug/L			05/31/22 16:42	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	ug/L			05/31/22 16:42	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	ug/L			05/31/22 16:42	1
1,1,2-Trichloroethane	1.0	U	1.0	ug/L			05/31/22 16:42	1
1,1-Dichloroethane	1.0	U	1.0	ug/L			05/31/22 16:42	1
1,1-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 16:42	1
1,2,4-Trichlorobenzene	1.0	U	1.0	ug/L			05/31/22 16:42	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	ug/L			05/31/22 16:42	1
Ethylene Dibromide	1.0	U	1.0	ug/L			05/31/22 16:42	1
1,2-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 16:42	1
1,2-Dichloroethane	1.0	U	1.0	ug/L			05/31/22 16:42	1
1,2-Dichloropropane	1.0	U	1.0	ug/L			05/31/22 16:42	1
1,3-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 16:42	1
1,4-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 16:42	1
2-Butanone (MEK)	10	U	10	ug/L			05/31/22 16:42	1
2-Hexanone	10	U	10	ug/L			05/31/22 16:42	1
4-Methyl-2-pentanone (MIBK)	10	U	10	ug/L			05/31/22 16:42	1
Acetone	10	U	10	ug/L			05/31/22 16:42	1
Benzene	1.0	U	1.0	ug/L			05/31/22 16:42	1
Dichlorobromomethane	1.0	U	1.0	ug/L			05/31/22 16:42	1
Bromoform	1.0	U	1.0	ug/L			05/31/22 16:42	1
Bromomethane	1.0	U	1.0	ug/L			05/31/22 16:42	1
Carbon disulfide	1.0	U	1.0	ug/L			05/31/22 16:42	1
Carbon tetrachloride	1.0	U	1.0	ug/L			05/31/22 16:42	1
Chlorobenzene	1.0	U	1.0	ug/L			05/31/22 16:42	1
Chloroethane	1.0	U	1.0	ug/L			05/31/22 16:42	1
Chloroform	1.0	U	1.0	ug/L			05/31/22 16:42	1
Chloromethane	1.0	U	1.0	ug/L			05/31/22 16:42	1
cis-1,2-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 16:42	1
cis-1,3-Dichloropropene	1.0	U	1.0	ug/L			05/31/22 16:42	1
Cyclohexane	1.0	U	1.0	ug/L			05/31/22 16:42	1
Chlorodibromomethane	1.0	U	1.0	ug/L			05/31/22 16:42	1
Dichlorodifluoromethane	1.0	U	1.0	ug/L			05/31/22 16:42	1
Ethylbenzene	1.0	U	1.0	ug/L			05/31/22 16:42	1
Isopropylbenzene	1.0	U	1.0	ug/L			05/31/22 16:42	1
Methyl acetate	10	U	10	ug/L			05/31/22 16:42	1
Methyl tert-butyl ether	1.0	U	1.0	ug/L			05/31/22 16:42	1
Methylcyclohexane	1.0	U	1.0	ug/L			05/31/22 16:42	1
Methylene Chloride	5.0	U	5.0	ug/L			05/31/22 16:42	1
Styrene	1.0	U	1.0	ug/L			05/31/22 16:42	1
Tetrachloroethene	1.0	U	1.0	ug/L			05/31/22 16:42	1
Toluene	1.0	U	1.0	ug/L			05/31/22 16:42	1
trans-1,2-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 16:42	1
trans-1,3-Dichloropropene	1.0	U	1.0	ug/L			05/31/22 16:42	1
Trichloroethene	2.7		1.0	ug/L			05/31/22 16:42	1
Trichlorofluoromethane	1.0	U	1.0	ug/L			05/31/22 16:42	1
Vinyl chloride	1.0	U	1.0	ug/L			05/31/22 16:42	1
Xylenes, Total	2.0	U	2.0	ug/L			05/31/22 16:42	1

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Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-23D_051722

Lab Sample ID: 240-167051-6

Date Collected: 05/17/22 15:56

Matrix: Water

Date Received: 05/21/22 08:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	84		78 - 122		05/31/22 16:42	1
Dibromofluoromethane (Surr)	95		73 - 120		05/31/22 16:42	1
4-Bromofluorobenzene (Surr)	88		56 - 136		05/31/22 16:42	1
1,2-Dichloroethane-d4 (Surr)	94		62 - 137		05/31/22 16:42	1

Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-28_051722

Lab Sample ID: 240-167051-7

Date Collected: 05/17/22 17:05

Matrix: Water

Date Received: 05/21/22 08:00

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	ug/L			05/31/22 17:06	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	ug/L			05/31/22 17:06	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	ug/L			05/31/22 17:06	1
1,1,2-Trichloroethane	1.0	U	1.0	ug/L			05/31/22 17:06	1
1,1-Dichloroethane	1.0	U	1.0	ug/L			05/31/22 17:06	1
1,1-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 17:06	1
1,2,4-Trichlorobenzene	1.0	U	1.0	ug/L			05/31/22 17:06	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	ug/L			05/31/22 17:06	1
Ethylene Dibromide	1.0	U	1.0	ug/L			05/31/22 17:06	1
1,2-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 17:06	1
1,2-Dichloroethane	1.0	U	1.0	ug/L			05/31/22 17:06	1
1,2-Dichloropropane	1.0	U	1.0	ug/L			05/31/22 17:06	1
1,3-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 17:06	1
1,4-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 17:06	1
2-Butanone (MEK)	10	U	10	ug/L			05/31/22 17:06	1
2-Hexanone	10	U	10	ug/L			05/31/22 17:06	1
4-Methyl-2-pentanone (MIBK)	10	U	10	ug/L			05/31/22 17:06	1
Acetone	10	U	10	ug/L			05/31/22 17:06	1
Benzene	1.0	U	1.0	ug/L			05/31/22 17:06	1
Dichlorobromomethane	1.0	U	1.0	ug/L			05/31/22 17:06	1
Bromoform	1.0	U	1.0	ug/L			05/31/22 17:06	1
Bromomethane	1.0	U	1.0	ug/L			05/31/22 17:06	1
Carbon disulfide	1.0	U	1.0	ug/L			05/31/22 17:06	1
Carbon tetrachloride	1.0	U	1.0	ug/L			05/31/22 17:06	1
Chlorobenzene	1.0	U	1.0	ug/L			05/31/22 17:06	1
Chloroethane	1.0	U	1.0	ug/L			05/31/22 17:06	1
Chloroform	1.0	U	1.0	ug/L			05/31/22 17:06	1
Chloromethane	1.0	U	1.0	ug/L			05/31/22 17:06	1
cis-1,2-Dichloroethene	3.5		1.0	ug/L			05/31/22 17:06	1
cis-1,3-Dichloropropene	1.0	U	1.0	ug/L			05/31/22 17:06	1
Cyclohexane	1.0	U	1.0	ug/L			05/31/22 17:06	1
Chlorodibromomethane	1.0	U	1.0	ug/L			05/31/22 17:06	1
Dichlorodifluoromethane	1.0	U	1.0	ug/L			05/31/22 17:06	1
Ethylbenzene	1.0	U	1.0	ug/L			05/31/22 17:06	1
Isopropylbenzene	1.0	U	1.0	ug/L			05/31/22 17:06	1
Methyl acetate	10	U	10	ug/L			05/31/22 17:06	1
Methyl tert-butyl ether	1.0	U	1.0	ug/L			05/31/22 17:06	1
Methylcyclohexane	1.0	U	1.0	ug/L			05/31/22 17:06	1
Methylene Chloride	5.0	U	5.0	ug/L			05/31/22 17:06	1
Styrene	1.0	U	1.0	ug/L			05/31/22 17:06	1
Tetrachloroethene	1.0	U	1.0	ug/L			05/31/22 17:06	1
Toluene	1.0	U	1.0	ug/L			05/31/22 17:06	1
trans-1,2-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 17:06	1
trans-1,3-Dichloropropene	1.0	U	1.0	ug/L			05/31/22 17:06	1
Trichloroethene	1.0	U	1.0	ug/L			05/31/22 17:06	1
Trichlorofluoromethane	1.0	U	1.0	ug/L			05/31/22 17:06	1
Vinyl chloride	1.0	U	1.0	ug/L			05/31/22 17:06	1
Xylenes, Total	2.0	U	2.0	ug/L			05/31/22 17:06	1

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Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-28_051722

Lab Sample ID: 240-167051-7

Date Collected: 05/17/22 17:05

Matrix: Water

Date Received: 05/21/22 08:00

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Toluene-d8 (Surr)</i>	86		78 - 122		05/31/22 17:06	1
<i>Dibromofluoromethane (Surr)</i>	95		73 - 120		05/31/22 17:06	1
<i>4-Bromofluorobenzene (Surr)</i>	88		56 - 136		05/31/22 17:06	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	94		62 - 137		05/31/22 17:06	1

Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-18D_051822

Lab Sample ID: 240-167051-8

Date Collected: 05/18/22 11:10

Matrix: Water

Date Received: 05/21/22 08:00

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	ug/L			05/31/22 17:31	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	ug/L			05/31/22 17:31	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	ug/L			05/31/22 17:31	1
1,1,2-Trichloroethane	1.0	U	1.0	ug/L			05/31/22 17:31	1
1,1-Dichloroethane	1.0	U	1.0	ug/L			05/31/22 17:31	1
1,1-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 17:31	1
1,2,4-Trichlorobenzene	1.0	U	1.0	ug/L			05/31/22 17:31	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	ug/L			05/31/22 17:31	1
Ethylene Dibromide	1.0	U	1.0	ug/L			05/31/22 17:31	1
1,2-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 17:31	1
1,2-Dichloroethane	1.0	U	1.0	ug/L			05/31/22 17:31	1
1,2-Dichloropropane	1.0	U	1.0	ug/L			05/31/22 17:31	1
1,3-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 17:31	1
1,4-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 17:31	1
2-Butanone (MEK)	10	U	10	ug/L			05/31/22 17:31	1
2-Hexanone	10	U	10	ug/L			05/31/22 17:31	1
4-Methyl-2-pentanone (MIBK)	10	U	10	ug/L			05/31/22 17:31	1
Acetone	10	U	10	ug/L			05/31/22 17:31	1
Benzene	1.0	U	1.0	ug/L			05/31/22 17:31	1
Dichlorobromomethane	1.0	U	1.0	ug/L			05/31/22 17:31	1
Bromoform	1.0	U	1.0	ug/L			05/31/22 17:31	1
Bromomethane	1.0	U	1.0	ug/L			05/31/22 17:31	1
Carbon disulfide	1.0	U	1.0	ug/L			05/31/22 17:31	1
Carbon tetrachloride	1.0	U	1.0	ug/L			05/31/22 17:31	1
Chlorobenzene	1.0	U	1.0	ug/L			05/31/22 17:31	1
Chloroethane	1.0	U	1.0	ug/L			05/31/22 17:31	1
Chloroform	1.0	U	1.0	ug/L			05/31/22 17:31	1
Chloromethane	1.0	U	1.0	ug/L			05/31/22 17:31	1
cis-1,2-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 17:31	1
cis-1,3-Dichloropropene	1.0	U	1.0	ug/L			05/31/22 17:31	1
Cyclohexane	1.0	U	1.0	ug/L			05/31/22 17:31	1
Chlorodibromomethane	1.0	U	1.0	ug/L			05/31/22 17:31	1
Dichlorodifluoromethane	1.0	U	1.0	ug/L			05/31/22 17:31	1
Ethylbenzene	1.0	U	1.0	ug/L			05/31/22 17:31	1
Isopropylbenzene	1.0	U	1.0	ug/L			05/31/22 17:31	1
Methyl acetate	10	U	10	ug/L			05/31/22 17:31	1
Methyl tert-butyl ether	1.0	U	1.0	ug/L			05/31/22 17:31	1
Methylcyclohexane	1.0	U	1.0	ug/L			05/31/22 17:31	1
Methylene Chloride	5.0	U	5.0	ug/L			05/31/22 17:31	1
Styrene	1.0	U	1.0	ug/L			05/31/22 17:31	1
Tetrachloroethene	1.0	U	1.0	ug/L			05/31/22 17:31	1
Toluene	1.0	U	1.0	ug/L			05/31/22 17:31	1
trans-1,2-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 17:31	1
trans-1,3-Dichloropropene	1.0	U	1.0	ug/L			05/31/22 17:31	1
Trichloroethene	1.0	U	1.0	ug/L			05/31/22 17:31	1
Trichlorofluoromethane	1.0	U	1.0	ug/L			05/31/22 17:31	1
Vinyl chloride	1.0	U	1.0	ug/L			05/31/22 17:31	1
Xylenes, Total	2.0	U	2.0	ug/L			05/31/22 17:31	1

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Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-18D_051822

Lab Sample ID: 240-167051-8

Date Collected: 05/18/22 11:10

Matrix: Water

Date Received: 05/21/22 08:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	86		78 - 122		05/31/22 17:31	1
<i>Dibromofluoromethane (Surr)</i>	96		73 - 120		05/31/22 17:31	1
<i>4-Bromofluorobenzene (Surr)</i>	89		56 - 136		05/31/22 17:31	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	93		62 - 137		05/31/22 17:31	1

Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-09-ML-D_051822

Lab Sample ID: 240-167051-9

Date Collected: 05/18/22 12:10

Matrix: Water

Date Received: 05/21/22 08:00

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	ug/L			05/31/22 17:55	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	ug/L			05/31/22 17:55	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	ug/L			05/31/22 17:55	1
1,1,2-Trichloroethane	1.0	U	1.0	ug/L			05/31/22 17:55	1
1,1-Dichloroethane	1.0	U	1.0	ug/L			05/31/22 17:55	1
1,1-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 17:55	1
1,2,4-Trichlorobenzene	1.0	U	1.0	ug/L			05/31/22 17:55	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	ug/L			05/31/22 17:55	1
Ethylene Dibromide	1.0	U	1.0	ug/L			05/31/22 17:55	1
1,2-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 17:55	1
1,2-Dichloroethane	1.0	U	1.0	ug/L			05/31/22 17:55	1
1,2-Dichloropropane	1.0	U	1.0	ug/L			05/31/22 17:55	1
1,3-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 17:55	1
1,4-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 17:55	1
2-Butanone (MEK)	10	U	10	ug/L			05/31/22 17:55	1
2-Hexanone	10	U	10	ug/L			05/31/22 17:55	1
4-Methyl-2-pentanone (MIBK)	10	U	10	ug/L			05/31/22 17:55	1
Acetone	10	U	10	ug/L			05/31/22 17:55	1
Benzene	1.0	U	1.0	ug/L			05/31/22 17:55	1
Dichlorobromomethane	1.0	U	1.0	ug/L			05/31/22 17:55	1
Bromoform	1.0	U	1.0	ug/L			05/31/22 17:55	1
Bromomethane	1.0	U	1.0	ug/L			05/31/22 17:55	1
Carbon disulfide	1.0	U	1.0	ug/L			05/31/22 17:55	1
Carbon tetrachloride	1.0	U	1.0	ug/L			05/31/22 17:55	1
Chlorobenzene	1.0	U	1.0	ug/L			05/31/22 17:55	1
Chloroethane	1.0	U	1.0	ug/L			05/31/22 17:55	1
Chloroform	1.0	U	1.0	ug/L			05/31/22 17:55	1
Chloromethane	1.0	U	1.0	ug/L			05/31/22 17:55	1
cis-1,2-Dichloroethene	8.1		1.0	ug/L			05/31/22 17:55	1
cis-1,3-Dichloropropene	1.0	U	1.0	ug/L			05/31/22 17:55	1
Cyclohexane	1.0	U	1.0	ug/L			05/31/22 17:55	1
Chlorodibromomethane	1.0	U	1.0	ug/L			05/31/22 17:55	1
Dichlorodifluoromethane	1.0	U	1.0	ug/L			05/31/22 17:55	1
Ethylbenzene	1.0	U	1.0	ug/L			05/31/22 17:55	1
Isopropylbenzene	1.0	U	1.0	ug/L			05/31/22 17:55	1
Methyl acetate	10	U	10	ug/L			05/31/22 17:55	1
Methyl tert-butyl ether	1.0	U	1.0	ug/L			05/31/22 17:55	1
Methylcyclohexane	1.0	U	1.0	ug/L			05/31/22 17:55	1
Methylene Chloride	5.0	U	5.0	ug/L			05/31/22 17:55	1
Styrene	1.0	U	1.0	ug/L			05/31/22 17:55	1
Tetrachloroethene	1.0	U	1.0	ug/L			05/31/22 17:55	1
Toluene	1.0	U	1.0	ug/L			05/31/22 17:55	1
trans-1,2-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 17:55	1
trans-1,3-Dichloropropene	1.0	U	1.0	ug/L			05/31/22 17:55	1
Trichloroethene	1.0	U	1.0	ug/L			05/31/22 17:55	1
Trichlorofluoromethane	1.0	U	1.0	ug/L			05/31/22 17:55	1
Vinyl chloride	1.0	U	1.0	ug/L			05/31/22 17:55	1
Xylenes, Total	2.0	U	2.0	ug/L			05/31/22 17:55	1

Eurofins Canton

Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-09-ML-D_051822

Lab Sample ID: 240-167051-9

Date Collected: 05/18/22 12:10

Matrix: Water

Date Received: 05/21/22 08:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	84		78 - 122		05/31/22 17:55	1
<i>Dibromofluoromethane (Surr)</i>	91		73 - 120		05/31/22 17:55	1
<i>4-Bromofluorobenzene (Surr)</i>	85		56 - 136		05/31/22 17:55	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	89		62 - 137		05/31/22 17:55	1

Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-09-ML-C_051822

Lab Sample ID: 240-167051-10

Date Collected: 05/18/22 13:13

Matrix: Water

Date Received: 05/21/22 08:00

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	ug/L			05/31/22 18:20	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	ug/L			05/31/22 18:20	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	ug/L			05/31/22 18:20	1
1,1,2-Trichloroethane	1.0	U	1.0	ug/L			05/31/22 18:20	1
1,1-Dichloroethane	1.0	U	1.0	ug/L			05/31/22 18:20	1
1,1-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 18:20	1
1,2,4-Trichlorobenzene	1.0	U	1.0	ug/L			05/31/22 18:20	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	ug/L			05/31/22 18:20	1
Ethylene Dibromide	1.0	U	1.0	ug/L			05/31/22 18:20	1
1,2-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 18:20	1
1,2-Dichloroethane	1.0	U	1.0	ug/L			05/31/22 18:20	1
1,2-Dichloropropane	1.0	U	1.0	ug/L			05/31/22 18:20	1
1,3-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 18:20	1
1,4-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 18:20	1
2-Butanone (MEK)	10	U	10	ug/L			05/31/22 18:20	1
2-Hexanone	10	U	10	ug/L			05/31/22 18:20	1
4-Methyl-2-pentanone (MIBK)	10	U	10	ug/L			05/31/22 18:20	1
Acetone	10	U	10	ug/L			05/31/22 18:20	1
Benzene	1.0	U	1.0	ug/L			05/31/22 18:20	1
Dichlorobromomethane	1.0	U	1.0	ug/L			05/31/22 18:20	1
Bromoform	1.0	U	1.0	ug/L			05/31/22 18:20	1
Bromomethane	1.0	U	1.0	ug/L			05/31/22 18:20	1
Carbon disulfide	1.0	U	1.0	ug/L			05/31/22 18:20	1
Carbon tetrachloride	1.0	U	1.0	ug/L			05/31/22 18:20	1
Chlorobenzene	1.0	U	1.0	ug/L			05/31/22 18:20	1
Chloroethane	1.0	U	1.0	ug/L			05/31/22 18:20	1
Chloroform	1.0	U	1.0	ug/L			05/31/22 18:20	1
Chloromethane	1.0	U	1.0	ug/L			05/31/22 18:20	1
cis-1,2-Dichloroethene	3.8		1.0	ug/L			05/31/22 18:20	1
cis-1,3-Dichloropropene	1.0	U	1.0	ug/L			05/31/22 18:20	1
Cyclohexane	1.0	U	1.0	ug/L			05/31/22 18:20	1
Chlorodibromomethane	1.0	U	1.0	ug/L			05/31/22 18:20	1
Dichlorodifluoromethane	1.0	U	1.0	ug/L			05/31/22 18:20	1
Ethylbenzene	1.0	U	1.0	ug/L			05/31/22 18:20	1
Isopropylbenzene	1.0	U	1.0	ug/L			05/31/22 18:20	1
Methyl acetate	10	U	10	ug/L			05/31/22 18:20	1
Methyl tert-butyl ether	1.0	U	1.0	ug/L			05/31/22 18:20	1
Methylcyclohexane	1.0	U	1.0	ug/L			05/31/22 18:20	1
Methylene Chloride	5.0	U	5.0	ug/L			05/31/22 18:20	1
Styrene	1.0	U	1.0	ug/L			05/31/22 18:20	1
Tetrachloroethene	1.0	U	1.0	ug/L			05/31/22 18:20	1
Toluene	1.0	U	1.0	ug/L			05/31/22 18:20	1
trans-1,2-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 18:20	1
trans-1,3-Dichloropropene	1.0	U	1.0	ug/L			05/31/22 18:20	1
Trichloroethene	1.5		1.0	ug/L			05/31/22 18:20	1
Trichlorofluoromethane	1.0	U	1.0	ug/L			05/31/22 18:20	1
Vinyl chloride	1.0	U	1.0	ug/L			05/31/22 18:20	1
Xylenes, Total	2.0	U	2.0	ug/L			05/31/22 18:20	1

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Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-09-ML-C_051822

Lab Sample ID: 240-167051-10

Date Collected: 05/18/22 13:13

Matrix: Water

Date Received: 05/21/22 08:00

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Toluene-d8 (Surr)</i>	87		78 - 122		05/31/22 18:20	1
<i>Dibromofluoromethane (Surr)</i>	96		73 - 120		05/31/22 18:20	1
<i>4-Bromofluorobenzene (Surr)</i>	89		56 - 136		05/31/22 18:20	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	95		62 - 137		05/31/22 18:20	1

Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-18-ML-A_051822

Lab Sample ID: 240-167051-11

Date Collected: 05/18/22 14:55

Matrix: Water

Date Received: 05/21/22 08:00

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	ug/L			05/31/22 18:45	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	ug/L			05/31/22 18:45	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	ug/L			05/31/22 18:45	1
1,1,2-Trichloroethane	1.0	U	1.0	ug/L			05/31/22 18:45	1
1,1-Dichloroethane	1.0	U	1.0	ug/L			05/31/22 18:45	1
1,1-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 18:45	1
1,2,4-Trichlorobenzene	1.0	U	1.0	ug/L			05/31/22 18:45	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	ug/L			05/31/22 18:45	1
Ethylene Dibromide	1.0	U	1.0	ug/L			05/31/22 18:45	1
1,2-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 18:45	1
1,2-Dichloroethane	1.0	U	1.0	ug/L			05/31/22 18:45	1
1,2-Dichloropropane	1.0	U	1.0	ug/L			05/31/22 18:45	1
1,3-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 18:45	1
1,4-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 18:45	1
2-Butanone (MEK)	10	U	10	ug/L			05/31/22 18:45	1
2-Hexanone	10	U	10	ug/L			05/31/22 18:45	1
4-Methyl-2-pentanone (MIBK)	10	U	10	ug/L			05/31/22 18:45	1
Acetone	10	U	10	ug/L			05/31/22 18:45	1
Benzene	1.0	U	1.0	ug/L			05/31/22 18:45	1
Dichlorobromomethane	1.0	U	1.0	ug/L			05/31/22 18:45	1
Bromoform	1.0	U	1.0	ug/L			05/31/22 18:45	1
Bromomethane	1.0	U	1.0	ug/L			05/31/22 18:45	1
Carbon disulfide	1.0	U	1.0	ug/L			05/31/22 18:45	1
Carbon tetrachloride	1.0	U	1.0	ug/L			05/31/22 18:45	1
Chlorobenzene	1.0	U	1.0	ug/L			05/31/22 18:45	1
Chloroethane	1.0	U	1.0	ug/L			05/31/22 18:45	1
Chloroform	1.0	U	1.0	ug/L			05/31/22 18:45	1
Chloromethane	1.0	U	1.0	ug/L			05/31/22 18:45	1
cis-1,2-Dichloroethene	1.3		1.0	ug/L			05/31/22 18:45	1
cis-1,3-Dichloropropene	1.0	U	1.0	ug/L			05/31/22 18:45	1
Cyclohexane	1.0	U	1.0	ug/L			05/31/22 18:45	1
Chlorodibromomethane	1.0	U	1.0	ug/L			05/31/22 18:45	1
Dichlorodifluoromethane	1.0	U	1.0	ug/L			05/31/22 18:45	1
Ethylbenzene	1.0	U	1.0	ug/L			05/31/22 18:45	1
Isopropylbenzene	1.0	U	1.0	ug/L			05/31/22 18:45	1
Methyl acetate	10	U	10	ug/L			05/31/22 18:45	1
Methyl tert-butyl ether	1.0	U	1.0	ug/L			05/31/22 18:45	1
Methylcyclohexane	1.0	U	1.0	ug/L			05/31/22 18:45	1
Methylene Chloride	5.0	U	5.0	ug/L			05/31/22 18:45	1
Styrene	1.0	U	1.0	ug/L			05/31/22 18:45	1
Tetrachloroethene	1.0	U	1.0	ug/L			05/31/22 18:45	1
Toluene	1.0	U	1.0	ug/L			05/31/22 18:45	1
trans-1,2-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 18:45	1
trans-1,3-Dichloropropene	1.0	U	1.0	ug/L			05/31/22 18:45	1
Trichloroethene	1.0	U	1.0	ug/L			05/31/22 18:45	1
Trichlorofluoromethane	1.0	U	1.0	ug/L			05/31/22 18:45	1
Vinyl chloride	1.0	U	1.0	ug/L			05/31/22 18:45	1
Xylenes, Total	2.0	U	2.0	ug/L			05/31/22 18:45	1

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Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-18-ML-A_051822

Lab Sample ID: 240-167051-11

Date Collected: 05/18/22 14:55

Matrix: Water

Date Received: 05/21/22 08:00

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Toluene-d8 (Surr)</i>	87		78 - 122		05/31/22 18:45	1
<i>Dibromofluoromethane (Surr)</i>	99		73 - 120		05/31/22 18:45	1
<i>4-Bromofluorobenzene (Surr)</i>	89		56 - 136		05/31/22 18:45	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	95		62 - 137		05/31/22 18:45	1

Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-18-ML-B_051822

Lab Sample ID: 240-167051-12

Date Collected: 05/18/22 15:33

Matrix: Water

Date Received: 05/21/22 08:00

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	ug/L			05/31/22 19:09	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	ug/L			05/31/22 19:09	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	ug/L			05/31/22 19:09	1
1,1,2-Trichloroethane	1.0	U	1.0	ug/L			05/31/22 19:09	1
1,1-Dichloroethane	1.0	U	1.0	ug/L			05/31/22 19:09	1
1,1-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 19:09	1
1,2,4-Trichlorobenzene	1.0	U	1.0	ug/L			05/31/22 19:09	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	ug/L			05/31/22 19:09	1
Ethylene Dibromide	1.0	U	1.0	ug/L			05/31/22 19:09	1
1,2-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 19:09	1
1,2-Dichloroethane	1.0	U	1.0	ug/L			05/31/22 19:09	1
1,2-Dichloropropane	1.0	U	1.0	ug/L			05/31/22 19:09	1
1,3-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 19:09	1
1,4-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 19:09	1
2-Butanone (MEK)	10	U	10	ug/L			05/31/22 19:09	1
2-Hexanone	10	U	10	ug/L			05/31/22 19:09	1
4-Methyl-2-pentanone (MIBK)	10	U	10	ug/L			05/31/22 19:09	1
Acetone	10	U	10	ug/L			05/31/22 19:09	1
Benzene	1.0	U	1.0	ug/L			05/31/22 19:09	1
Dichlorobromomethane	1.0	U	1.0	ug/L			05/31/22 19:09	1
Bromoform	1.0	U	1.0	ug/L			05/31/22 19:09	1
Bromomethane	1.0	U	1.0	ug/L			05/31/22 19:09	1
Carbon disulfide	1.0	U	1.0	ug/L			05/31/22 19:09	1
Carbon tetrachloride	1.0	U	1.0	ug/L			05/31/22 19:09	1
Chlorobenzene	1.0	U	1.0	ug/L			05/31/22 19:09	1
Chloroethane	1.0	U	1.0	ug/L			05/31/22 19:09	1
Chloroform	1.0	U	1.0	ug/L			05/31/22 19:09	1
Chloromethane	1.0	U	1.0	ug/L			05/31/22 19:09	1
cis-1,2-Dichloroethene	4.1		1.0	ug/L			05/31/22 19:09	1
cis-1,3-Dichloropropene	1.0	U	1.0	ug/L			05/31/22 19:09	1
Cyclohexane	1.0	U	1.0	ug/L			05/31/22 19:09	1
Chlorodibromomethane	1.0	U	1.0	ug/L			05/31/22 19:09	1
Dichlorodifluoromethane	1.0	U	1.0	ug/L			05/31/22 19:09	1
Ethylbenzene	1.0	U	1.0	ug/L			05/31/22 19:09	1
Isopropylbenzene	1.0	U	1.0	ug/L			05/31/22 19:09	1
Methyl acetate	10	U	10	ug/L			05/31/22 19:09	1
Methyl tert-butyl ether	1.0	U	1.0	ug/L			05/31/22 19:09	1
Methylcyclohexane	1.0	U	1.0	ug/L			05/31/22 19:09	1
Methylene Chloride	5.0	U	5.0	ug/L			05/31/22 19:09	1
Styrene	1.0	U	1.0	ug/L			05/31/22 19:09	1
Tetrachloroethene	1.0	U	1.0	ug/L			05/31/22 19:09	1
Toluene	1.0	U	1.0	ug/L			05/31/22 19:09	1
trans-1,2-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 19:09	1
trans-1,3-Dichloropropene	1.0	U	1.0	ug/L			05/31/22 19:09	1
Trichloroethene	1.0	U	1.0	ug/L			05/31/22 19:09	1
Trichlorofluoromethane	1.0	U	1.0	ug/L			05/31/22 19:09	1
Vinyl chloride	1.0	U	1.0	ug/L			05/31/22 19:09	1
Xylenes, Total	2.0	U	2.0	ug/L			05/31/22 19:09	1

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Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-18-ML-B_051822

Lab Sample ID: 240-167051-12

Date Collected: 05/18/22 15:33

Matrix: Water

Date Received: 05/21/22 08:00

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Toluene-d8 (Surr)</i>	83		78 - 122		05/31/22 19:09	1
<i>Dibromofluoromethane (Surr)</i>	95		73 - 120		05/31/22 19:09	1
<i>4-Bromofluorobenzene (Surr)</i>	86		56 - 136		05/31/22 19:09	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	91		62 - 137		05/31/22 19:09	1

Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-18-ML-C_051922

Lab Sample ID: 240-167051-13

Date Collected: 05/19/22 09:46

Matrix: Water

Date Received: 05/21/22 08:00

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	ug/L			05/31/22 19:34	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	ug/L			05/31/22 19:34	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	ug/L			05/31/22 19:34	1
1,1,2-Trichloroethane	1.0	U	1.0	ug/L			05/31/22 19:34	1
1,1-Dichloroethane	1.0	U	1.0	ug/L			05/31/22 19:34	1
1,1-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 19:34	1
1,2,4-Trichlorobenzene	1.0	U	1.0	ug/L			05/31/22 19:34	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	ug/L			05/31/22 19:34	1
Ethylene Dibromide	1.0	U	1.0	ug/L			05/31/22 19:34	1
1,2-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 19:34	1
1,2-Dichloroethane	1.0	U	1.0	ug/L			05/31/22 19:34	1
1,2-Dichloropropane	1.0	U	1.0	ug/L			05/31/22 19:34	1
1,3-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 19:34	1
1,4-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 19:34	1
2-Butanone (MEK)	10	U	10	ug/L			05/31/22 19:34	1
2-Hexanone	10	U	10	ug/L			05/31/22 19:34	1
4-Methyl-2-pentanone (MIBK)	10	U	10	ug/L			05/31/22 19:34	1
Acetone	10	U	10	ug/L			05/31/22 19:34	1
Benzene	1.0	U	1.0	ug/L			05/31/22 19:34	1
Dichlorobromomethane	1.0	U	1.0	ug/L			05/31/22 19:34	1
Bromoform	1.0	U	1.0	ug/L			05/31/22 19:34	1
Bromomethane	1.0	U	1.0	ug/L			05/31/22 19:34	1
Carbon disulfide	1.0	U	1.0	ug/L			05/31/22 19:34	1
Carbon tetrachloride	1.0	U	1.0	ug/L			05/31/22 19:34	1
Chlorobenzene	1.0	U	1.0	ug/L			05/31/22 19:34	1
Chloroethane	1.0	U	1.0	ug/L			05/31/22 19:34	1
Chloroform	1.0	U	1.0	ug/L			05/31/22 19:34	1
Chloromethane	1.0	U	1.0	ug/L			05/31/22 19:34	1
cis-1,2-Dichloroethene	2.6		1.0	ug/L			05/31/22 19:34	1
cis-1,3-Dichloropropene	1.0	U	1.0	ug/L			05/31/22 19:34	1
Cyclohexane	1.0	U	1.0	ug/L			05/31/22 19:34	1
Chlorodibromomethane	1.0	U	1.0	ug/L			05/31/22 19:34	1
Dichlorodifluoromethane	1.0	U	1.0	ug/L			05/31/22 19:34	1
Ethylbenzene	1.0	U	1.0	ug/L			05/31/22 19:34	1
Isopropylbenzene	1.0	U	1.0	ug/L			05/31/22 19:34	1
Methyl acetate	10	U	10	ug/L			05/31/22 19:34	1
Methyl tert-butyl ether	1.0	U	1.0	ug/L			05/31/22 19:34	1
Methylcyclohexane	1.0	U	1.0	ug/L			05/31/22 19:34	1
Methylene Chloride	5.0	U	5.0	ug/L			05/31/22 19:34	1
Styrene	1.0	U	1.0	ug/L			05/31/22 19:34	1
Tetrachloroethene	1.0	U	1.0	ug/L			05/31/22 19:34	1
Toluene	1.0	U	1.0	ug/L			05/31/22 19:34	1
trans-1,2-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 19:34	1
trans-1,3-Dichloropropene	1.0	U	1.0	ug/L			05/31/22 19:34	1
Trichloroethene	1.0	U	1.0	ug/L			05/31/22 19:34	1
Trichlorofluoromethane	1.0	U	1.0	ug/L			05/31/22 19:34	1
Vinyl chloride	1.0	U	1.0	ug/L			05/31/22 19:34	1
Xylenes, Total	2.0	U	2.0	ug/L			05/31/22 19:34	1

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Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-18-ML-C_051922

Lab Sample ID: 240-167051-13

Date Collected: 05/19/22 09:46

Matrix: Water

Date Received: 05/21/22 08:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	87		78 - 122		05/31/22 19:34	1
Dibromofluoromethane (Surr)	97		73 - 120		05/31/22 19:34	1
4-Bromofluorobenzene (Surr)	89		56 - 136		05/31/22 19:34	1
1,2-Dichloroethane-d4 (Surr)	96		62 - 137		05/31/22 19:34	1

Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-18-ML-D_051922

Lab Sample ID: 240-167051-14

Date Collected: 05/19/22 10:55

Matrix: Water

Date Received: 05/21/22 08:00

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	ug/L			05/31/22 20:14	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	ug/L			05/31/22 20:14	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	ug/L			05/31/22 20:14	1
1,1,2-Trichloroethane	1.0	U	1.0	ug/L			05/31/22 20:14	1
1,1-Dichloroethane	1.2		1.0	ug/L			05/31/22 20:14	1
1,1-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 20:14	1
1,2,4-Trichlorobenzene	1.0	U	1.0	ug/L			05/31/22 20:14	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	ug/L			05/31/22 20:14	1
Ethylene Dibromide	1.0	U	1.0	ug/L			05/31/22 20:14	1
1,2-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 20:14	1
1,2-Dichloroethane	1.0	U	1.0	ug/L			05/31/22 20:14	1
1,2-Dichloropropane	1.0	U	1.0	ug/L			05/31/22 20:14	1
1,3-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 20:14	1
1,4-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 20:14	1
2-Butanone (MEK)	10	U	10	ug/L			05/31/22 20:14	1
2-Hexanone	10	U	10	ug/L			05/31/22 20:14	1
4-Methyl-2-pentanone (MIBK)	10	U	10	ug/L			05/31/22 20:14	1
Acetone	10	U	10	ug/L			05/31/22 20:14	1
Benzene	1.0	U	1.0	ug/L			05/31/22 20:14	1
Dichlorobromomethane	1.0	U	1.0	ug/L			05/31/22 20:14	1
Bromoform	1.0	U	1.0	ug/L			05/31/22 20:14	1
Bromomethane	1.0	U	1.0	ug/L			05/31/22 20:14	1
Carbon disulfide	1.0	U	1.0	ug/L			05/31/22 20:14	1
Carbon tetrachloride	1.0	U	1.0	ug/L			05/31/22 20:14	1
Chlorobenzene	1.0	U	1.0	ug/L			05/31/22 20:14	1
Chloroethane	1.0	U	1.0	ug/L			05/31/22 20:14	1
Chloroform	1.0	U	1.0	ug/L			05/31/22 20:14	1
Chloromethane	1.0	U	1.0	ug/L			05/31/22 20:14	1
cis-1,2-Dichloroethene	7.0		1.0	ug/L			05/31/22 20:14	1
cis-1,3-Dichloropropene	1.0	U	1.0	ug/L			05/31/22 20:14	1
Cyclohexane	1.0	U	1.0	ug/L			05/31/22 20:14	1
Chlorodibromomethane	1.0	U	1.0	ug/L			05/31/22 20:14	1
Dichlorodifluoromethane	1.0	U	1.0	ug/L			05/31/22 20:14	1
Ethylbenzene	1.0	U	1.0	ug/L			05/31/22 20:14	1
Isopropylbenzene	1.0	U	1.0	ug/L			05/31/22 20:14	1
Methyl acetate	10	U	10	ug/L			05/31/22 20:14	1
Methyl tert-butyl ether	1.0	U	1.0	ug/L			05/31/22 20:14	1
Methylcyclohexane	1.0	U	1.0	ug/L			05/31/22 20:14	1
Methylene Chloride	5.0	U	5.0	ug/L			05/31/22 20:14	1
Styrene	1.0	U	1.0	ug/L			05/31/22 20:14	1
Tetrachloroethene	1.0	U	1.0	ug/L			05/31/22 20:14	1
Toluene	1.0	U	1.0	ug/L			05/31/22 20:14	1
trans-1,2-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 20:14	1
trans-1,3-Dichloropropene	1.0	U	1.0	ug/L			05/31/22 20:14	1
Trichloroethene	1.0	U	1.0	ug/L			05/31/22 20:14	1
Trichlorofluoromethane	1.0	U	1.0	ug/L			05/31/22 20:14	1
Vinyl chloride	1.0	U	1.0	ug/L			05/31/22 20:14	1
Xylenes, Total	2.0	U	2.0	ug/L			05/31/22 20:14	1

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Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-18-ML-D_051922

Lab Sample ID: 240-167051-14

Date Collected: 05/19/22 10:55

Matrix: Water

Date Received: 05/21/22 08:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	103		78 - 122		05/31/22 20:14	1
<i>Dibromofluoromethane (Surr)</i>	98		73 - 120		05/31/22 20:14	1
<i>4-Bromofluorobenzene (Surr)</i>	97		56 - 136		05/31/22 20:14	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	106		62 - 137		05/31/22 20:14	1

Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-18-ML-E_051922

Lab Sample ID: 240-167051-15

Date Collected: 05/19/22 12:46

Matrix: Water

Date Received: 05/21/22 08:00

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	ug/L			06/02/22 16:23	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	ug/L			06/02/22 16:23	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	ug/L			06/02/22 16:23	1
1,1,2-Trichloroethane	1.0	U	1.0	ug/L			06/02/22 16:23	1
1,1-Dichloroethane	1.4		1.0	ug/L			06/02/22 16:23	1
1,1-Dichloroethene	1.0	U	1.0	ug/L			06/02/22 16:23	1
1,2,4-Trichlorobenzene	1.0	U	1.0	ug/L			06/02/22 16:23	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	ug/L			06/02/22 16:23	1
Ethylene Dibromide	1.0	U	1.0	ug/L			06/02/22 16:23	1
1,2-Dichlorobenzene	1.0	U	1.0	ug/L			06/02/22 16:23	1
1,2-Dichloroethane	1.0	U	1.0	ug/L			06/02/22 16:23	1
1,2-Dichloropropane	1.0	U	1.0	ug/L			06/02/22 16:23	1
1,3-Dichlorobenzene	1.0	U	1.0	ug/L			06/02/22 16:23	1
1,4-Dichlorobenzene	1.0	U	1.0	ug/L			06/02/22 16:23	1
2-Butanone (MEK)	10	U	10	ug/L			06/02/22 16:23	1
2-Hexanone	10	U	10	ug/L			06/02/22 16:23	1
4-Methyl-2-pentanone (MIBK)	10	U	10	ug/L			06/02/22 16:23	1
Acetone	10	U	10	ug/L			06/02/22 16:23	1
Benzene	1.0	U	1.0	ug/L			06/02/22 16:23	1
Dichlorobromomethane	1.0	U	1.0	ug/L			06/02/22 16:23	1
Bromoform	1.0	U	1.0	ug/L			06/02/22 16:23	1
Bromomethane	1.0	U	1.0	ug/L			06/02/22 16:23	1
Carbon disulfide	1.0	U	1.0	ug/L			06/02/22 16:23	1
Carbon tetrachloride	1.0	U	1.0	ug/L			06/02/22 16:23	1
Chlorobenzene	1.0	U	1.0	ug/L			06/02/22 16:23	1
Chloroethane	1.0	U	1.0	ug/L			06/02/22 16:23	1
Chloroform	1.0	U	1.0	ug/L			06/02/22 16:23	1
Chloromethane	1.0	U	1.0	ug/L			06/02/22 16:23	1
cis-1,2-Dichloroethene	7.5		1.0	ug/L			06/02/22 16:23	1
cis-1,3-Dichloropropene	1.0	U	1.0	ug/L			06/02/22 16:23	1
Cyclohexane	1.0	U	1.0	ug/L			06/02/22 16:23	1
Chlorodibromomethane	1.0	U	1.0	ug/L			06/02/22 16:23	1
Dichlorodifluoromethane	1.0	U	1.0	ug/L			06/02/22 16:23	1
Ethylbenzene	1.0	U	1.0	ug/L			06/02/22 16:23	1
Isopropylbenzene	1.0	U	1.0	ug/L			06/02/22 16:23	1
Methyl acetate	10	U	10	ug/L			06/02/22 16:23	1
Methyl tert-butyl ether	1.0	U	1.0	ug/L			06/02/22 16:23	1
Methylcyclohexane	1.0	U	1.0	ug/L			06/02/22 16:23	1
Methylene Chloride	5.0	U	5.0	ug/L			06/02/22 16:23	1
Styrene	1.0	U	1.0	ug/L			06/02/22 16:23	1
Tetrachloroethene	1.0	U	1.0	ug/L			06/02/22 16:23	1
Toluene	1.0	U	1.0	ug/L			06/02/22 16:23	1
trans-1,2-Dichloroethene	1.0	U	1.0	ug/L			06/02/22 16:23	1
trans-1,3-Dichloropropene	1.0	U	1.0	ug/L			06/02/22 16:23	1
Trichloroethene	1.0	U	1.0	ug/L			06/02/22 16:23	1
Trichlorofluoromethane	1.0	U	1.0	ug/L			06/02/22 16:23	1
Vinyl chloride	1.0	U	1.0	ug/L			06/02/22 16:23	1
Xylenes, Total	2.0	U	2.0	ug/L			06/02/22 16:23	1

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Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-18-ML-E_051922

Lab Sample ID: 240-167051-15

Date Collected: 05/19/22 12:46

Matrix: Water

Date Received: 05/21/22 08:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	110		78 - 122		06/02/22 16:23	1
<i>Dibromofluoromethane (Surr)</i>	110		73 - 120		06/02/22 16:23	1
<i>4-Bromofluorobenzene (Surr)</i>	98		56 - 136		06/02/22 16:23	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	100		62 - 137		06/02/22 16:23	1

Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-18-ML-F_051922

Lab Sample ID: 240-167051-16

Date Collected: 05/19/22 13:52

Matrix: Water

Date Received: 05/21/22 08:00

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	ug/L			06/02/22 16:47	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	ug/L			06/02/22 16:47	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	ug/L			06/02/22 16:47	1
1,1,2-Trichloroethane	1.0	U	1.0	ug/L			06/02/22 16:47	1
1,1-Dichloroethane	1.0	U	1.0	ug/L			06/02/22 16:47	1
1,1-Dichloroethene	1.0	U	1.0	ug/L			06/02/22 16:47	1
1,2,4-Trichlorobenzene	1.0	U	1.0	ug/L			06/02/22 16:47	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	ug/L			06/02/22 16:47	1
Ethylene Dibromide	1.0	U	1.0	ug/L			06/02/22 16:47	1
1,2-Dichlorobenzene	1.0	U	1.0	ug/L			06/02/22 16:47	1
1,2-Dichloroethane	1.0	U	1.0	ug/L			06/02/22 16:47	1
1,2-Dichloropropane	1.0	U	1.0	ug/L			06/02/22 16:47	1
1,3-Dichlorobenzene	1.0	U	1.0	ug/L			06/02/22 16:47	1
1,4-Dichlorobenzene	1.0	U	1.0	ug/L			06/02/22 16:47	1
2-Butanone (MEK)	10	U	10	ug/L			06/02/22 16:47	1
2-Hexanone	10	U	10	ug/L			06/02/22 16:47	1
4-Methyl-2-pentanone (MIBK)	10	U	10	ug/L			06/02/22 16:47	1
Acetone	10	U	10	ug/L			06/02/22 16:47	1
Benzene	1.0	U	1.0	ug/L			06/02/22 16:47	1
Dichlorobromomethane	1.0	U	1.0	ug/L			06/02/22 16:47	1
Bromoform	1.0	U	1.0	ug/L			06/02/22 16:47	1
Bromomethane	1.0	U	1.0	ug/L			06/02/22 16:47	1
Carbon disulfide	1.0	U	1.0	ug/L			06/02/22 16:47	1
Carbon tetrachloride	1.0	U	1.0	ug/L			06/02/22 16:47	1
Chlorobenzene	1.0	U	1.0	ug/L			06/02/22 16:47	1
Chloroethane	1.0	U	1.0	ug/L			06/02/22 16:47	1
Chloroform	1.0	U	1.0	ug/L			06/02/22 16:47	1
Chloromethane	1.0	U	1.0	ug/L			06/02/22 16:47	1
cis-1,2-Dichloroethene	14		1.0	ug/L			06/02/22 16:47	1
cis-1,3-Dichloropropene	1.0	U	1.0	ug/L			06/02/22 16:47	1
Cyclohexane	1.0	U	1.0	ug/L			06/02/22 16:47	1
Chlorodibromomethane	1.0	U	1.0	ug/L			06/02/22 16:47	1
Dichlorodifluoromethane	1.0	U	1.0	ug/L			06/02/22 16:47	1
Ethylbenzene	1.0	U	1.0	ug/L			06/02/22 16:47	1
Isopropylbenzene	1.0	U	1.0	ug/L			06/02/22 16:47	1
Methyl acetate	10	U	10	ug/L			06/02/22 16:47	1
Methyl tert-butyl ether	1.0	U	1.0	ug/L			06/02/22 16:47	1
Methylcyclohexane	1.0	U	1.0	ug/L			06/02/22 16:47	1
Methylene Chloride	5.0	U	5.0	ug/L			06/02/22 16:47	1
Styrene	1.0	U	1.0	ug/L			06/02/22 16:47	1
Tetrachloroethene	1.0	U	1.0	ug/L			06/02/22 16:47	1
Toluene	1.0	U	1.0	ug/L			06/02/22 16:47	1
trans-1,2-Dichloroethene	1.4		1.0	ug/L			06/02/22 16:47	1
trans-1,3-Dichloropropene	1.0	U	1.0	ug/L			06/02/22 16:47	1
Trichloroethene	1.0	U	1.0	ug/L			06/02/22 16:47	1
Trichlorofluoromethane	1.0	U	1.0	ug/L			06/02/22 16:47	1
Vinyl chloride	1.0	U	1.0	ug/L			06/02/22 16:47	1
Xylenes, Total	2.0	U	2.0	ug/L			06/02/22 16:47	1

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Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-18-ML-F_051922

Lab Sample ID: 240-167051-16

Date Collected: 05/19/22 13:52

Matrix: Water

Date Received: 05/21/22 08:00

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Toluene-d8 (Surr)</i>	107		78 - 122		06/02/22 16:47	1
<i>Dibromofluoromethane (Surr)</i>	108		73 - 120		06/02/22 16:47	1
<i>4-Bromofluorobenzene (Surr)</i>	97		56 - 136		06/02/22 16:47	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	101		62 - 137		06/02/22 16:47	1

Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-02D2_051922

Lab Sample ID: 240-167051-17

Date Collected: 05/19/22 16:03

Matrix: Water

Date Received: 05/21/22 08:00

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
1,1,2,2-Tetrachloroethane	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
1,1,2-Trichloroethane	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
1,1-Dichloroethane	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
1,1-Dichloroethene	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
1,2,4-Trichlorobenzene	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	ug/L			06/02/22 17:10	2.5
Ethylene Dibromide	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
1,2-Dichlorobenzene	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
1,2-Dichloroethane	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
1,2-Dichloropropane	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
1,3-Dichlorobenzene	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
1,4-Dichlorobenzene	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
2-Butanone (MEK)	25	U	25	ug/L			06/02/22 17:10	2.5
2-Hexanone	25	U	25	ug/L			06/02/22 17:10	2.5
4-Methyl-2-pentanone (MIBK)	25	U	25	ug/L			06/02/22 17:10	2.5
Acetone	25	U	25	ug/L			06/02/22 17:10	2.5
Benzene	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
Dichlorobromomethane	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
Bromoform	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
Bromomethane	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
Carbon disulfide	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
Carbon tetrachloride	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
Chlorobenzene	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
Chloroethane	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
Chloroform	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
Chloromethane	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
cis-1,2-Dichloroethene	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
cis-1,3-Dichloropropene	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
Cyclohexane	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
Chlorodibromomethane	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
Dichlorodifluoromethane	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
Ethylbenzene	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
Isopropylbenzene	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
Methyl acetate	25	U	25	ug/L			06/02/22 17:10	2.5
Methyl tert-butyl ether	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
Methylcyclohexane	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
Methylene Chloride	13	U	13	ug/L			06/02/22 17:10	2.5
Styrene	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
Tetrachloroethene	5.9		2.5	ug/L			06/02/22 17:10	2.5
Toluene	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
trans-1,2-Dichloroethene	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
trans-1,3-Dichloropropene	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
Trichloroethene	62		2.5	ug/L			06/02/22 17:10	2.5
Trichlorofluoromethane	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
Vinyl chloride	2.5	U	2.5	ug/L			06/02/22 17:10	2.5
Xylenes, Total	5.0	U	5.0	ug/L			06/02/22 17:10	2.5

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Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-02D2_051922

Lab Sample ID: 240-167051-17

Date Collected: 05/19/22 16:03

Matrix: Water

Date Received: 05/21/22 08:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	108		78 - 122		06/02/22 17:10	2.5
<i>Dibromofluoromethane (Surr)</i>	108		73 - 120		06/02/22 17:10	2.5
<i>4-Bromofluorobenzene (Surr)</i>	98		56 - 136		06/02/22 17:10	2.5
<i>1,2-Dichloroethane-d4 (Surr)</i>	99		62 - 137		06/02/22 17:10	2.5

Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-22_052022

Lab Sample ID: 240-167051-18

Date Collected: 05/20/22 08:47

Matrix: Water

Date Received: 05/21/22 08:00

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	5.3		2.5	ug/L			06/03/22 17:59	2.5
1,1,2,2-Tetrachloroethane	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
1,1,2-Trichloro-1,2,2-trifluoroethane	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
1,1,2-Trichloroethane	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
1,1-Dichloroethane	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
1,1-Dichloroethene	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
1,2,4-Trichlorobenzene	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
1,2-Dibromo-3-Chloropropane	5.0	U	5.0	ug/L			06/03/22 17:59	2.5
Ethylene Dibromide	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
1,2-Dichlorobenzene	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
1,2-Dichloroethane	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
1,2-Dichloropropane	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
1,3-Dichlorobenzene	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
1,4-Dichlorobenzene	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
2-Butanone (MEK)	25	U	25	ug/L			06/03/22 17:59	2.5
2-Hexanone	25	U	25	ug/L			06/03/22 17:59	2.5
4-Methyl-2-pentanone (MIBK)	25	U	25	ug/L			06/03/22 17:59	2.5
Acetone	25	U	25	ug/L			06/03/22 17:59	2.5
Benzene	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
Dichlorobromomethane	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
Bromoform	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
Bromomethane	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
Carbon disulfide	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
Carbon tetrachloride	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
Chlorobenzene	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
Chloroethane	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
Chloroform	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
Chloromethane	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
cis-1,2-Dichloroethene	32		2.5	ug/L			06/03/22 17:59	2.5
cis-1,3-Dichloropropene	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
Cyclohexane	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
Chlorodibromomethane	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
Dichlorodifluoromethane	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
Ethylbenzene	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
Isopropylbenzene	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
Methyl acetate	25	U	25	ug/L			06/03/22 17:59	2.5
Methyl tert-butyl ether	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
Methylcyclohexane	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
Methylene Chloride	13	U	13	ug/L			06/03/22 17:59	2.5
Styrene	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
Tetrachloroethene	3.2		2.5	ug/L			06/03/22 17:59	2.5
Toluene	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
trans-1,2-Dichloroethene	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
trans-1,3-Dichloropropene	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
Trichloroethene	54		2.5	ug/L			06/03/22 17:59	2.5
Trichlorofluoromethane	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
Vinyl chloride	2.5	U	2.5	ug/L			06/03/22 17:59	2.5
Xylenes, Total	5.0	U	5.0	ug/L			06/03/22 17:59	2.5

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Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-22_052022

Lab Sample ID: 240-167051-18

Date Collected: 05/20/22 08:47

Matrix: Water

Date Received: 05/21/22 08:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	90		78 - 122		06/03/22 17:59	2.5
<i>Dibromofluoromethane (Surr)</i>	102		73 - 120		06/03/22 17:59	2.5
<i>4-Bromofluorobenzene (Surr)</i>	93		56 - 136		06/03/22 17:59	2.5
<i>1,2-Dichloroethane-d4 (Surr)</i>	98		62 - 137		06/03/22 17:59	2.5

Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-07D_052022

Lab Sample ID: 240-167051-19

Date Collected: 05/20/22 10:25

Matrix: Water

Date Received: 05/21/22 08:00

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	ug/L			06/03/22 18:23	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	ug/L			06/03/22 18:23	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	ug/L			06/03/22 18:23	1
1,1,2-Trichloroethane	1.0	U	1.0	ug/L			06/03/22 18:23	1
1,1-Dichloroethane	1.0	U	1.0	ug/L			06/03/22 18:23	1
1,1-Dichloroethene	1.0	U	1.0	ug/L			06/03/22 18:23	1
1,2,4-Trichlorobenzene	1.0	U	1.0	ug/L			06/03/22 18:23	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	ug/L			06/03/22 18:23	1
Ethylene Dibromide	1.0	U	1.0	ug/L			06/03/22 18:23	1
1,2-Dichlorobenzene	1.0	U	1.0	ug/L			06/03/22 18:23	1
1,2-Dichloroethane	1.0	U	1.0	ug/L			06/03/22 18:23	1
1,2-Dichloropropane	1.0	U	1.0	ug/L			06/03/22 18:23	1
1,3-Dichlorobenzene	1.0	U	1.0	ug/L			06/03/22 18:23	1
1,4-Dichlorobenzene	1.0	U	1.0	ug/L			06/03/22 18:23	1
2-Butanone (MEK)	10	U	10	ug/L			06/03/22 18:23	1
2-Hexanone	10	U	10	ug/L			06/03/22 18:23	1
4-Methyl-2-pentanone (MIBK)	10	U	10	ug/L			06/03/22 18:23	1
Acetone	10	U	10	ug/L			06/03/22 18:23	1
Benzene	1.0	U	1.0	ug/L			06/03/22 18:23	1
Dichlorobromomethane	1.0	U	1.0	ug/L			06/03/22 18:23	1
Bromoform	1.0	U	1.0	ug/L			06/03/22 18:23	1
Bromomethane	1.0	U	1.0	ug/L			06/03/22 18:23	1
Carbon disulfide	1.0	U	1.0	ug/L			06/03/22 18:23	1
Carbon tetrachloride	1.0	U	1.0	ug/L			06/03/22 18:23	1
Chlorobenzene	1.0	U	1.0	ug/L			06/03/22 18:23	1
Chloroethane	1.0	U	1.0	ug/L			06/03/22 18:23	1
Chloroform	1.0	U	1.0	ug/L			06/03/22 18:23	1
Chloromethane	1.0	U	1.0	ug/L			06/03/22 18:23	1
cis-1,2-Dichloroethene	1.0	U	1.0	ug/L			06/03/22 18:23	1
cis-1,3-Dichloropropene	1.0	U	1.0	ug/L			06/03/22 18:23	1
Cyclohexane	1.0	U	1.0	ug/L			06/03/22 18:23	1
Chlorodibromomethane	1.0	U	1.0	ug/L			06/03/22 18:23	1
Dichlorodifluoromethane	1.0	U	1.0	ug/L			06/03/22 18:23	1
Ethylbenzene	1.0	U	1.0	ug/L			06/03/22 18:23	1
Isopropylbenzene	1.0	U	1.0	ug/L			06/03/22 18:23	1
Methyl acetate	10	U	10	ug/L			06/03/22 18:23	1
Methyl tert-butyl ether	1.0	U	1.0	ug/L			06/03/22 18:23	1
Methylcyclohexane	1.0	U	1.0	ug/L			06/03/22 18:23	1
Methylene Chloride	5.0	U	5.0	ug/L			06/03/22 18:23	1
Styrene	1.0	U	1.0	ug/L			06/03/22 18:23	1
Tetrachloroethene	1.0	U	1.0	ug/L			06/03/22 18:23	1
Toluene	1.0	U	1.0	ug/L			06/03/22 18:23	1
trans-1,2-Dichloroethene	1.0	U	1.0	ug/L			06/03/22 18:23	1
trans-1,3-Dichloropropene	1.0	U	1.0	ug/L			06/03/22 18:23	1
Trichloroethene	1.0	U	1.0	ug/L			06/03/22 18:23	1
Trichlorofluoromethane	1.0	U	1.0	ug/L			06/03/22 18:23	1
Vinyl chloride	1.0	U	1.0	ug/L			06/03/22 18:23	1
Xylenes, Total	2.0	U	2.0	ug/L			06/03/22 18:23	1

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Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-07D_052022

Lab Sample ID: 240-167051-19

Date Collected: 05/20/22 10:25

Matrix: Water

Date Received: 05/21/22 08:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	90		78 - 122		06/03/22 18:23	1
<i>Dibromofluoromethane (Surr)</i>	105		73 - 120		06/03/22 18:23	1
<i>4-Bromofluorobenzene (Surr)</i>	93		56 - 136		06/03/22 18:23	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	102		62 - 137		06/03/22 18:23	1

Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: DUP-01_052022

Lab Sample ID: 240-167051-20

Date Collected: 05/20/22 00:00

Matrix: Water

Date Received: 05/21/22 08:00

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	ug/L			06/03/22 18:48	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	ug/L			06/03/22 18:48	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	ug/L			06/03/22 18:48	1
1,1,2-Trichloroethane	1.0	U	1.0	ug/L			06/03/22 18:48	1
1,1-Dichloroethane	1.0	U	1.0	ug/L			06/03/22 18:48	1
1,1-Dichloroethene	1.0	U	1.0	ug/L			06/03/22 18:48	1
1,2,4-Trichlorobenzene	1.0	U	1.0	ug/L			06/03/22 18:48	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	ug/L			06/03/22 18:48	1
Ethylene Dibromide	1.0	U	1.0	ug/L			06/03/22 18:48	1
1,2-Dichlorobenzene	1.0	U	1.0	ug/L			06/03/22 18:48	1
1,2-Dichloroethane	1.0	U	1.0	ug/L			06/03/22 18:48	1
1,2-Dichloropropane	1.0	U	1.0	ug/L			06/03/22 18:48	1
1,3-Dichlorobenzene	1.0	U	1.0	ug/L			06/03/22 18:48	1
1,4-Dichlorobenzene	1.0	U	1.0	ug/L			06/03/22 18:48	1
2-Butanone (MEK)	10	U	10	ug/L			06/03/22 18:48	1
2-Hexanone	10	U	10	ug/L			06/03/22 18:48	1
4-Methyl-2-pentanone (MIBK)	10	U	10	ug/L			06/03/22 18:48	1
Acetone	10	U	10	ug/L			06/03/22 18:48	1
Benzene	1.0	U	1.0	ug/L			06/03/22 18:48	1
Dichlorobromomethane	1.0	U	1.0	ug/L			06/03/22 18:48	1
Bromoform	1.0	U	1.0	ug/L			06/03/22 18:48	1
Bromomethane	1.0	U	1.0	ug/L			06/03/22 18:48	1
Carbon disulfide	1.0	U	1.0	ug/L			06/03/22 18:48	1
Carbon tetrachloride	1.0	U	1.0	ug/L			06/03/22 18:48	1
Chlorobenzene	1.0	U	1.0	ug/L			06/03/22 18:48	1
Chloroethane	1.0	U	1.0	ug/L			06/03/22 18:48	1
Chloroform	1.0	U	1.0	ug/L			06/03/22 18:48	1
Chloromethane	1.0	U	1.0	ug/L			06/03/22 18:48	1
cis-1,2-Dichloroethene	4.1		1.0	ug/L			06/03/22 18:48	1
cis-1,3-Dichloropropene	1.0	U	1.0	ug/L			06/03/22 18:48	1
Cyclohexane	1.0	U	1.0	ug/L			06/03/22 18:48	1
Chlorodibromomethane	1.0	U	1.0	ug/L			06/03/22 18:48	1
Dichlorodifluoromethane	1.0	U	1.0	ug/L			06/03/22 18:48	1
Ethylbenzene	1.0	U	1.0	ug/L			06/03/22 18:48	1
Isopropylbenzene	1.0	U	1.0	ug/L			06/03/22 18:48	1
Methyl acetate	10	U	10	ug/L			06/03/22 18:48	1
Methyl tert-butyl ether	1.0	U	1.0	ug/L			06/03/22 18:48	1
Methylcyclohexane	1.0	U	1.0	ug/L			06/03/22 18:48	1
Methylene Chloride	5.0	U	5.0	ug/L			06/03/22 18:48	1
Styrene	1.0	U	1.0	ug/L			06/03/22 18:48	1
Tetrachloroethene	1.0	U	1.0	ug/L			06/03/22 18:48	1
Toluene	1.0	U	1.0	ug/L			06/03/22 18:48	1
trans-1,2-Dichloroethene	1.0	U	1.0	ug/L			06/03/22 18:48	1
trans-1,3-Dichloropropene	1.0	U	1.0	ug/L			06/03/22 18:48	1
Trichloroethene	1.0	U	1.0	ug/L			06/03/22 18:48	1
Trichlorofluoromethane	1.0	U	1.0	ug/L			06/03/22 18:48	1
Vinyl chloride	1.0	U	1.0	ug/L			06/03/22 18:48	1
Xylenes, Total	2.0	U	2.0	ug/L			06/03/22 18:48	1

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Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: DUP-01_052022

Lab Sample ID: 240-167051-20

Date Collected: 05/20/22 00:00

Matrix: Water

Date Received: 05/21/22 08:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	91		78 - 122		06/03/22 18:48	1
Dibromofluoromethane (Surr)	105		73 - 120		06/03/22 18:48	1
4-Bromofluorobenzene (Surr)	94		56 - 136		06/03/22 18:48	1
1,2-Dichloroethane-d4 (Surr)	100		62 - 137		06/03/22 18:48	1

Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: DUP-02_052022

Lab Sample ID: 240-167051-21

Date Collected: 05/20/22 00:00

Matrix: Water

Date Received: 05/21/22 08:00

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	ug/L			06/03/22 19:12	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	ug/L			06/03/22 19:12	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	ug/L			06/03/22 19:12	1
1,1,2-Trichloroethane	1.0	U	1.0	ug/L			06/03/22 19:12	1
1,1-Dichloroethane	1.0	U	1.0	ug/L			06/03/22 19:12	1
1,1-Dichloroethene	1.0	U	1.0	ug/L			06/03/22 19:12	1
1,2,4-Trichlorobenzene	1.0	U	1.0	ug/L			06/03/22 19:12	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	ug/L			06/03/22 19:12	1
Ethylene Dibromide	1.0	U	1.0	ug/L			06/03/22 19:12	1
1,2-Dichlorobenzene	1.0	U	1.0	ug/L			06/03/22 19:12	1
1,2-Dichloroethane	1.0	U	1.0	ug/L			06/03/22 19:12	1
1,2-Dichloropropane	1.0	U	1.0	ug/L			06/03/22 19:12	1
1,3-Dichlorobenzene	1.0	U	1.0	ug/L			06/03/22 19:12	1
1,4-Dichlorobenzene	1.0	U	1.0	ug/L			06/03/22 19:12	1
2-Butanone (MEK)	10	U	10	ug/L			06/03/22 19:12	1
2-Hexanone	10	U	10	ug/L			06/03/22 19:12	1
4-Methyl-2-pentanone (MIBK)	10	U	10	ug/L			06/03/22 19:12	1
Acetone	10	U	10	ug/L			06/03/22 19:12	1
Benzene	1.0	U	1.0	ug/L			06/03/22 19:12	1
Dichlorobromomethane	1.0	U	1.0	ug/L			06/03/22 19:12	1
Bromoform	1.0	U	1.0	ug/L			06/03/22 19:12	1
Bromomethane	1.0	U	1.0	ug/L			06/03/22 19:12	1
Carbon disulfide	1.0	U	1.0	ug/L			06/03/22 19:12	1
Carbon tetrachloride	1.0	U	1.0	ug/L			06/03/22 19:12	1
Chlorobenzene	1.0	U	1.0	ug/L			06/03/22 19:12	1
Chloroethane	1.0	U	1.0	ug/L			06/03/22 19:12	1
Chloroform	1.0	U	1.0	ug/L			06/03/22 19:12	1
Chloromethane	1.0	U	1.0	ug/L			06/03/22 19:12	1
cis-1,2-Dichloroethene	1.0	U	1.0	ug/L			06/03/22 19:12	1
cis-1,3-Dichloropropene	1.0	U	1.0	ug/L			06/03/22 19:12	1
Cyclohexane	1.0	U	1.0	ug/L			06/03/22 19:12	1
Chlorodibromomethane	1.0	U	1.0	ug/L			06/03/22 19:12	1
Dichlorodifluoromethane	1.0	U	1.0	ug/L			06/03/22 19:12	1
Ethylbenzene	1.0	U	1.0	ug/L			06/03/22 19:12	1
Isopropylbenzene	1.0	U	1.0	ug/L			06/03/22 19:12	1
Methyl acetate	10	U	10	ug/L			06/03/22 19:12	1
Methyl tert-butyl ether	1.0	U	1.0	ug/L			06/03/22 19:12	1
Methylcyclohexane	1.0	U	1.0	ug/L			06/03/22 19:12	1
Methylene Chloride	5.0	U	5.0	ug/L			06/03/22 19:12	1
Styrene	1.0	U	1.0	ug/L			06/03/22 19:12	1
Tetrachloroethene	1.0	U	1.0	ug/L			06/03/22 19:12	1
Toluene	1.0	U	1.0	ug/L			06/03/22 19:12	1
trans-1,2-Dichloroethene	1.0	U	1.0	ug/L			06/03/22 19:12	1
trans-1,3-Dichloropropene	1.0	U	1.0	ug/L			06/03/22 19:12	1
Trichloroethene	1.0	U	1.0	ug/L			06/03/22 19:12	1
Trichlorofluoromethane	1.0	U	1.0	ug/L			06/03/22 19:12	1
Vinyl chloride	1.0	U	1.0	ug/L			06/03/22 19:12	1
Xylenes, Total	2.0	U	2.0	ug/L			06/03/22 19:12	1

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Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: DUP-02_052022

Lab Sample ID: 240-167051-21

Date Collected: 05/20/22 00:00

Matrix: Water

Date Received: 05/21/22 08:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	91		78 - 122		06/03/22 19:12	1
<i>Dibromofluoromethane (Surr)</i>	105		73 - 120		06/03/22 19:12	1
<i>4-Bromofluorobenzene (Surr)</i>	94		56 - 136		06/03/22 19:12	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	101		62 - 137		06/03/22 19:12	1

Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: EQUIPMENT BLANK_051922

Lab Sample ID: 240-167051-22

Date Collected: 05/19/22 10:00

Matrix: Water

Date Received: 05/21/22 08:00

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	ug/L			06/02/22 19:45	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	ug/L			06/02/22 19:45	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	ug/L			06/02/22 19:45	1
1,1,2-Trichloroethane	1.0	U	1.0	ug/L			06/02/22 19:45	1
1,1-Dichloroethane	1.0	U	1.0	ug/L			06/02/22 19:45	1
1,1-Dichloroethene	1.0	U	1.0	ug/L			06/02/22 19:45	1
1,2,4-Trichlorobenzene	1.0	U	1.0	ug/L			06/02/22 19:45	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	ug/L			06/02/22 19:45	1
Ethylene Dibromide	1.0	U	1.0	ug/L			06/02/22 19:45	1
1,2-Dichlorobenzene	1.0	U	1.0	ug/L			06/02/22 19:45	1
1,2-Dichloroethane	1.0	U	1.0	ug/L			06/02/22 19:45	1
1,2-Dichloropropane	1.0	U	1.0	ug/L			06/02/22 19:45	1
1,3-Dichlorobenzene	1.0	U	1.0	ug/L			06/02/22 19:45	1
1,4-Dichlorobenzene	1.0	U	1.0	ug/L			06/02/22 19:45	1
2-Butanone (MEK)	10	U	10	ug/L			06/02/22 19:45	1
2-Hexanone	10	U	10	ug/L			06/02/22 19:45	1
4-Methyl-2-pentanone (MIBK)	10	U	10	ug/L			06/02/22 19:45	1
Acetone	10	U	10	ug/L			06/02/22 19:45	1
Benzene	1.0	U	1.0	ug/L			06/02/22 19:45	1
Dichlorobromomethane	1.0	U	1.0	ug/L			06/02/22 19:45	1
Bromoform	1.0	U	1.0	ug/L			06/02/22 19:45	1
Bromomethane	1.0	U	1.0	ug/L			06/02/22 19:45	1
Carbon disulfide	1.0	U	1.0	ug/L			06/02/22 19:45	1
Carbon tetrachloride	1.0	U	1.0	ug/L			06/02/22 19:45	1
Chlorobenzene	1.0	U	1.0	ug/L			06/02/22 19:45	1
Chloroethane	1.0	U	1.0	ug/L			06/02/22 19:45	1
Chloroform	1.0	U	1.0	ug/L			06/02/22 19:45	1
Chloromethane	1.0	U	1.0	ug/L			06/02/22 19:45	1
cis-1,2-Dichloroethene	1.0	U	1.0	ug/L			06/02/22 19:45	1
cis-1,3-Dichloropropene	1.0	U	1.0	ug/L			06/02/22 19:45	1
Cyclohexane	1.0	U	1.0	ug/L			06/02/22 19:45	1
Chlorodibromomethane	1.0	U	1.0	ug/L			06/02/22 19:45	1
Dichlorodifluoromethane	1.0	U	1.0	ug/L			06/02/22 19:45	1
Ethylbenzene	1.0	U	1.0	ug/L			06/02/22 19:45	1
Isopropylbenzene	1.0	U	1.0	ug/L			06/02/22 19:45	1
Methyl acetate	10	U	10	ug/L			06/02/22 19:45	1
Methyl tert-butyl ether	1.0	U	1.0	ug/L			06/02/22 19:45	1
Methylcyclohexane	1.0	U	1.0	ug/L			06/02/22 19:45	1
Methylene Chloride	5.0	U	5.0	ug/L			06/02/22 19:45	1
Styrene	1.0	U	1.0	ug/L			06/02/22 19:45	1
Tetrachloroethene	1.0	U	1.0	ug/L			06/02/22 19:45	1
Toluene	1.0	U	1.0	ug/L			06/02/22 19:45	1
trans-1,2-Dichloroethene	1.0	U	1.0	ug/L			06/02/22 19:45	1
trans-1,3-Dichloropropene	1.0	U	1.0	ug/L			06/02/22 19:45	1
Trichloroethene	1.0	U	1.0	ug/L			06/02/22 19:45	1
Trichlorofluoromethane	1.0	U	1.0	ug/L			06/02/22 19:45	1
Vinyl chloride	1.0	U	1.0	ug/L			06/02/22 19:45	1
Xylenes, Total	2.0	U	2.0	ug/L			06/02/22 19:45	1

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Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: EQUIPMENT BLANK_051922

Lab Sample ID: 240-167051-22

Date Collected: 05/19/22 10:00

Matrix: Water

Date Received: 05/21/22 08:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	94		78 - 122		06/02/22 19:45	1
<i>Dibromofluoromethane (Surr)</i>	114		73 - 120		06/02/22 19:45	1
<i>4-Bromofluorobenzene (Surr)</i>	96		56 - 136		06/02/22 19:45	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	103		62 - 137		06/02/22 19:45	1

Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: FIELD BLANK_051922

Lab Sample ID: 240-167051-23

Date Collected: 05/19/22 09:20

Matrix: Water

Date Received: 05/21/22 08:00

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	ug/L			06/02/22 20:10	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	ug/L			06/02/22 20:10	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	ug/L			06/02/22 20:10	1
1,1,2-Trichloroethane	1.0	U	1.0	ug/L			06/02/22 20:10	1
1,1-Dichloroethane	1.0	U	1.0	ug/L			06/02/22 20:10	1
1,1-Dichloroethene	1.0	U	1.0	ug/L			06/02/22 20:10	1
1,2,4-Trichlorobenzene	1.0	U	1.0	ug/L			06/02/22 20:10	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	ug/L			06/02/22 20:10	1
Ethylene Dibromide	1.0	U	1.0	ug/L			06/02/22 20:10	1
1,2-Dichlorobenzene	1.0	U	1.0	ug/L			06/02/22 20:10	1
1,2-Dichloroethane	1.0	U	1.0	ug/L			06/02/22 20:10	1
1,2-Dichloropropane	1.0	U	1.0	ug/L			06/02/22 20:10	1
1,3-Dichlorobenzene	1.0	U	1.0	ug/L			06/02/22 20:10	1
1,4-Dichlorobenzene	1.0	U	1.0	ug/L			06/02/22 20:10	1
2-Butanone (MEK)	10	U	10	ug/L			06/02/22 20:10	1
2-Hexanone	10	U	10	ug/L			06/02/22 20:10	1
4-Methyl-2-pentanone (MIBK)	10	U	10	ug/L			06/02/22 20:10	1
Acetone	10	U	10	ug/L			06/02/22 20:10	1
Benzene	1.0	U	1.0	ug/L			06/02/22 20:10	1
Dichlorobromomethane	1.0	U	1.0	ug/L			06/02/22 20:10	1
Bromoform	1.0	U	1.0	ug/L			06/02/22 20:10	1
Bromomethane	1.0	U	1.0	ug/L			06/02/22 20:10	1
Carbon disulfide	1.0	U	1.0	ug/L			06/02/22 20:10	1
Carbon tetrachloride	1.0	U	1.0	ug/L			06/02/22 20:10	1
Chlorobenzene	1.0	U	1.0	ug/L			06/02/22 20:10	1
Chloroethane	1.0	U	1.0	ug/L			06/02/22 20:10	1
Chloroform	1.0	U	1.0	ug/L			06/02/22 20:10	1
Chloromethane	1.0	U	1.0	ug/L			06/02/22 20:10	1
cis-1,2-Dichloroethene	1.0	U	1.0	ug/L			06/02/22 20:10	1
cis-1,3-Dichloropropene	1.0	U	1.0	ug/L			06/02/22 20:10	1
Cyclohexane	1.0	U	1.0	ug/L			06/02/22 20:10	1
Chlorodibromomethane	1.0	U	1.0	ug/L			06/02/22 20:10	1
Dichlorodifluoromethane	1.0	U	1.0	ug/L			06/02/22 20:10	1
Ethylbenzene	1.0	U	1.0	ug/L			06/02/22 20:10	1
Isopropylbenzene	1.0	U	1.0	ug/L			06/02/22 20:10	1
Methyl acetate	10	U	10	ug/L			06/02/22 20:10	1
Methyl tert-butyl ether	1.0	U	1.0	ug/L			06/02/22 20:10	1
Methylcyclohexane	1.0	U	1.0	ug/L			06/02/22 20:10	1
Methylene Chloride	5.0	U	5.0	ug/L			06/02/22 20:10	1
Styrene	1.0	U	1.0	ug/L			06/02/22 20:10	1
Tetrachloroethene	1.0	U	1.0	ug/L			06/02/22 20:10	1
Toluene	1.0	U	1.0	ug/L			06/02/22 20:10	1
trans-1,2-Dichloroethene	1.0	U	1.0	ug/L			06/02/22 20:10	1
trans-1,3-Dichloropropene	1.0	U	1.0	ug/L			06/02/22 20:10	1
Trichloroethene	1.0	U	1.0	ug/L			06/02/22 20:10	1
Trichlorofluoromethane	1.0	U	1.0	ug/L			06/02/22 20:10	1
Vinyl chloride	1.0	U	1.0	ug/L			06/02/22 20:10	1
Xylenes, Total	2.0	U	2.0	ug/L			06/02/22 20:10	1

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Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: FIELD BLANK_051922

Lab Sample ID: 240-167051-23

Date Collected: 05/19/22 09:20

Matrix: Water

Date Received: 05/21/22 08:00

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Toluene-d8 (Surr)</i>	93		78 - 122		06/02/22 20:10	1
<i>Dibromofluoromethane (Surr)</i>	113		73 - 120		06/02/22 20:10	1
<i>4-Bromofluorobenzene (Surr)</i>	97		56 - 136		06/02/22 20:10	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	104		62 - 137		06/02/22 20:10	1

Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: TRIP BLANK_051922

Lab Sample ID: 240-167051-24

Date Collected: 05/19/22 00:00

Matrix: Water

Date Received: 05/21/22 08:00

Method: 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	ug/L			06/02/22 20:35	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	ug/L			06/02/22 20:35	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	ug/L			06/02/22 20:35	1
1,1,2-Trichloroethane	1.0	U	1.0	ug/L			06/02/22 20:35	1
1,1-Dichloroethane	1.0	U	1.0	ug/L			06/02/22 20:35	1
1,1-Dichloroethene	1.0	U	1.0	ug/L			06/02/22 20:35	1
1,2,4-Trichlorobenzene	1.0	U	1.0	ug/L			06/02/22 20:35	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	ug/L			06/02/22 20:35	1
Ethylene Dibromide	1.0	U	1.0	ug/L			06/02/22 20:35	1
1,2-Dichlorobenzene	1.0	U	1.0	ug/L			06/02/22 20:35	1
1,2-Dichloroethane	1.0	U	1.0	ug/L			06/02/22 20:35	1
1,2-Dichloropropane	1.0	U	1.0	ug/L			06/02/22 20:35	1
1,3-Dichlorobenzene	1.0	U	1.0	ug/L			06/02/22 20:35	1
1,4-Dichlorobenzene	1.0	U	1.0	ug/L			06/02/22 20:35	1
2-Butanone (MEK)	10	U	10	ug/L			06/02/22 20:35	1
2-Hexanone	10	U	10	ug/L			06/02/22 20:35	1
4-Methyl-2-pentanone (MIBK)	10	U	10	ug/L			06/02/22 20:35	1
Acetone	10	U	10	ug/L			06/02/22 20:35	1
Benzene	1.0	U	1.0	ug/L			06/02/22 20:35	1
Dichlorobromomethane	1.0	U	1.0	ug/L			06/02/22 20:35	1
Bromoform	1.0	U	1.0	ug/L			06/02/22 20:35	1
Bromomethane	1.0	U	1.0	ug/L			06/02/22 20:35	1
Carbon disulfide	1.0	U	1.0	ug/L			06/02/22 20:35	1
Carbon tetrachloride	1.0	U	1.0	ug/L			06/02/22 20:35	1
Chlorobenzene	1.0	U	1.0	ug/L			06/02/22 20:35	1
Chloroethane	1.0	U	1.0	ug/L			06/02/22 20:35	1
Chloroform	1.0	U	1.0	ug/L			06/02/22 20:35	1
Chloromethane	1.0	U	1.0	ug/L			06/02/22 20:35	1
cis-1,2-Dichloroethene	1.0	U	1.0	ug/L			06/02/22 20:35	1
cis-1,3-Dichloropropene	1.0	U	1.0	ug/L			06/02/22 20:35	1
Cyclohexane	1.0	U	1.0	ug/L			06/02/22 20:35	1
Chlorodibromomethane	1.0	U	1.0	ug/L			06/02/22 20:35	1
Dichlorodifluoromethane	1.0	U	1.0	ug/L			06/02/22 20:35	1
Ethylbenzene	1.0	U	1.0	ug/L			06/02/22 20:35	1
Isopropylbenzene	1.0	U	1.0	ug/L			06/02/22 20:35	1
Methyl acetate	10	U	10	ug/L			06/02/22 20:35	1
Methyl tert-butyl ether	1.0	U	1.0	ug/L			06/02/22 20:35	1
Methylcyclohexane	1.0	U	1.0	ug/L			06/02/22 20:35	1
Methylene Chloride	5.0	U	5.0	ug/L			06/02/22 20:35	1
Styrene	1.0	U	1.0	ug/L			06/02/22 20:35	1
Tetrachloroethene	1.0	U	1.0	ug/L			06/02/22 20:35	1
Toluene	1.0	U	1.0	ug/L			06/02/22 20:35	1
trans-1,2-Dichloroethene	1.0	U	1.0	ug/L			06/02/22 20:35	1
trans-1,3-Dichloropropene	1.0	U	1.0	ug/L			06/02/22 20:35	1
Trichloroethene	1.0	U	1.0	ug/L			06/02/22 20:35	1
Trichlorofluoromethane	1.0	U	1.0	ug/L			06/02/22 20:35	1
Vinyl chloride	1.0	U	1.0	ug/L			06/02/22 20:35	1
Xylenes, Total	2.0	U	2.0	ug/L			06/02/22 20:35	1

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Client Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: TRIP BLANK_051922

Lab Sample ID: 240-167051-24

Date Collected: 05/19/22 00:00

Matrix: Water

Date Received: 05/21/22 08:00

<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>Toluene-d8 (Surr)</i>	96		78 - 122		06/02/22 20:35	1
<i>Dibromofluoromethane (Surr)</i>	112		73 - 120		06/02/22 20:35	1
<i>4-Bromofluorobenzene (Surr)</i>	99		56 - 136		06/02/22 20:35	1
<i>1,2-Dichloroethane-d4 (Surr)</i>	102		62 - 137		06/02/22 20:35	1

Surrogate Summary

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TOL (78-122)	DBFM (73-120)	BFB (56-136)	DCA (62-137)
240-167051-1	OW-16D2_051822	102	97	98	109
240-167051-2	OW-10D_051722	86	96	89	93
240-167051-2 MS	OW-10D_051722	86	95	90	91
240-167051-2 MSD	OW-10D_051722	88	94	92	91
240-167051-3	OW-08D_051722	84	93	87	93
240-167051-4	OW-05D2_051722	87	97	90	94
240-167051-5	OW-30_051722	85	96	90	93
240-167051-6	OW-23D_051722	84	95	88	94
240-167051-7	OW-28_051722	86	95	88	94
240-167051-8	OW-18D_051822	86	96	89	93
240-167051-9	OW-09-ML-D_051822	84	91	85	89
240-167051-10	OW-09-ML-C_051822	87	96	89	95
240-167051-11	OW-18-ML-A_051822	87	99	89	95
240-167051-12	OW-18-ML-B_051822	83	95	86	91
240-167051-13	OW-18-ML-C_051922	87	97	89	96
240-167051-14	OW-18-ML-D_051922	103	98	97	106
240-167051-15	OW-18-ML-E_051922	110	110	98	100
240-167051-16	OW-18-ML-F_051922	107	108	97	101
240-167051-17	OW-02D2_051922	108	108	98	99
240-167051-18	OW-22_052022	90	102	93	98
240-167051-19	OW-07D_052022	90	105	93	102
240-167051-20	DUP-01_052022	91	105	94	100
240-167051-21	DUP-02_052022	91	105	94	101
240-167051-22	EQUIPMENT BLANK_051922	94	114	96	103
240-167051-23	FIELD BLANK_051922	93	113	97	104
240-167051-24	TRIP BLANK_051922	96	112	99	102
LCS 240-528483/5	Lab Control Sample	90	98	93	93
LCS 240-528486/5	Lab Control Sample	107	94	110	97
LCS 240-528862/5	Lab Control Sample	99	94	105	88
LCS 240-528938/5	Lab Control Sample	110	102	103	94
LCS 240-529073/5	Lab Control Sample	93	102	96	96
MB 240-528483/8	Method Blank	88	98	88	92
MB 240-528486/8	Method Blank	102	93	99	101
MB 240-528862/8	Method Blank	97	114	99	104
MB 240-528938/7	Method Blank	104	105	95	96
MB 240-529073/8	Method Blank	89	102	92	98

Surrogate Legend

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DCA = 1,2-Dichloroethane-d4 (Surr)

QC Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 240-528483/8

Matrix: Water

Analysis Batch: 528483

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	ug/L			05/31/22 11:47	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	ug/L			05/31/22 11:47	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	ug/L			05/31/22 11:47	1
1,1,2-Trichloroethane	1.0	U	1.0	ug/L			05/31/22 11:47	1
1,1-Dichloroethane	1.0	U	1.0	ug/L			05/31/22 11:47	1
1,1-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 11:47	1
1,2,4-Trichlorobenzene	1.0	U	1.0	ug/L			05/31/22 11:47	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	ug/L			05/31/22 11:47	1
Ethylene Dibromide	1.0	U	1.0	ug/L			05/31/22 11:47	1
1,2-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 11:47	1
1,2-Dichloroethane	1.0	U	1.0	ug/L			05/31/22 11:47	1
1,2-Dichloropropane	1.0	U	1.0	ug/L			05/31/22 11:47	1
1,3-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 11:47	1
1,4-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 11:47	1
2-Butanone (MEK)	10	U	10	ug/L			05/31/22 11:47	1
2-Hexanone	10	U	10	ug/L			05/31/22 11:47	1
4-Methyl-2-pentanone (MIBK)	10	U	10	ug/L			05/31/22 11:47	1
Acetone	10	U	10	ug/L			05/31/22 11:47	1
Benzene	1.0	U	1.0	ug/L			05/31/22 11:47	1
Dichlorobromomethane	1.0	U	1.0	ug/L			05/31/22 11:47	1
Bromoform	1.0	U	1.0	ug/L			05/31/22 11:47	1
Bromomethane	1.0	U	1.0	ug/L			05/31/22 11:47	1
Carbon disulfide	1.0	U	1.0	ug/L			05/31/22 11:47	1
Carbon tetrachloride	1.0	U	1.0	ug/L			05/31/22 11:47	1
Chlorobenzene	1.0	U	1.0	ug/L			05/31/22 11:47	1
Chloroethane	1.0	U	1.0	ug/L			05/31/22 11:47	1
Chloroform	1.0	U	1.0	ug/L			05/31/22 11:47	1
Chloromethane	1.0	U	1.0	ug/L			05/31/22 11:47	1
cis-1,2-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 11:47	1
cis-1,3-Dichloropropene	1.0	U	1.0	ug/L			05/31/22 11:47	1
Cyclohexane	1.0	U	1.0	ug/L			05/31/22 11:47	1
Chlorodibromomethane	1.0	U	1.0	ug/L			05/31/22 11:47	1
Dichlorodifluoromethane	1.0	U	1.0	ug/L			05/31/22 11:47	1
Ethylbenzene	1.0	U	1.0	ug/L			05/31/22 11:47	1
Isopropylbenzene	1.0	U	1.0	ug/L			05/31/22 11:47	1
Methyl acetate	10	U	10	ug/L			05/31/22 11:47	1
Methyl tert-butyl ether	1.0	U	1.0	ug/L			05/31/22 11:47	1
Methylcyclohexane	1.0	U	1.0	ug/L			05/31/22 11:47	1
Methylene Chloride	5.0	U	5.0	ug/L			05/31/22 11:47	1
Styrene	1.0	U	1.0	ug/L			05/31/22 11:47	1
Tetrachloroethene	1.0	U	1.0	ug/L			05/31/22 11:47	1
Toluene	1.0	U	1.0	ug/L			05/31/22 11:47	1
trans-1,2-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 11:47	1
trans-1,3-Dichloropropene	1.0	U	1.0	ug/L			05/31/22 11:47	1
Trichloroethene	1.0	U	1.0	ug/L			05/31/22 11:47	1
Trichlorofluoromethane	1.0	U	1.0	ug/L			05/31/22 11:47	1
Vinyl chloride	1.0	U	1.0	ug/L			05/31/22 11:47	1
Xylenes, Total	2.0	U	2.0	ug/L			05/31/22 11:47	1

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QC Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

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

Lab Sample ID: MB 240-528483/8

Matrix: Water

Analysis Batch: 528483

Client Sample ID: Method Blank

Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	88		78 - 122		05/31/22 11:47	1
Dibromofluoromethane (Surr)	98		73 - 120		05/31/22 11:47	1
4-Bromofluorobenzene (Surr)	88		56 - 136		05/31/22 11:47	1
1,2-Dichloroethane-d4 (Surr)	92		62 - 137		05/31/22 11:47	1

Lab Sample ID: LCS 240-528483/5

Matrix: Water

Analysis Batch: 528483

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-Trichloroethane	20.0	18.7		ug/L		94	64 - 131
1,1,1,2-Tetrachloroethane	20.0	18.0		ug/L		90	58 - 157
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	20.1		ug/L		101	51 - 146
1,1,2-Trichloroethane	20.0	17.4		ug/L		87	70 - 138
1,1-Dichloroethane	20.0	18.5		ug/L		92	72 - 127
1,1-Dichloroethene	20.0	19.6		ug/L		98	63 - 134
1,2,4-Trichlorobenzene	20.0	14.1		ug/L		70	44 - 147
1,2-Dibromo-3-Chloropropane	20.0	14.9		ug/L		75	53 - 135
Ethylene Dibromide	20.0	17.1		ug/L		85	71 - 134
1,2-Dichlorobenzene	20.0	16.6		ug/L		83	78 - 120
1,2-Dichloroethane	20.0	19.3		ug/L		97	66 - 128
1,2-Dichloropropane	20.0	18.8		ug/L		94	75 - 133
1,3-Dichlorobenzene	20.0	16.4		ug/L		82	80 - 120
1,4-Dichlorobenzene	20.0	16.5		ug/L		82	80 - 120
2-Butanone (MEK)	40.0	35.2		ug/L		88	54 - 156
2-Hexanone	40.0	33.0		ug/L		83	43 - 167
4-Methyl-2-pentanone (MIBK)	40.0	35.2		ug/L		88	46 - 158
Acetone	40.0	36.2		ug/L		90	50 - 149
Benzene	20.0	19.1		ug/L		95	77 - 123
Dichlorobromomethane	20.0	18.4		ug/L		92	69 - 126
Bromoform	20.0	14.0		ug/L		70	57 - 129
Bromomethane	20.0	18.8		ug/L		94	36 - 142
Carbon disulfide	20.0	19.3		ug/L		97	43 - 140
Carbon tetrachloride	20.0	18.1		ug/L		91	55 - 137
Chlorobenzene	20.0	17.1		ug/L		85	80 - 121
Chloroethane	20.0	20.4		ug/L		102	38 - 152
Chloroform	20.0	19.1		ug/L		95	74 - 122
Chloromethane	20.0	19.2		ug/L		96	47 - 143
cis-1,2-Dichloroethene	20.0	19.2		ug/L		96	77 - 123
cis-1,3-Dichloropropene	20.0	18.0		ug/L		90	64 - 130
Cyclohexane	20.0	17.2		ug/L		86	58 - 146
Chlorodibromomethane	20.0	15.5		ug/L		77	70 - 124
Dichlorodifluoromethane	20.0	24.1		ug/L		121	34 - 153
Ethylbenzene	20.0	16.8		ug/L		84	80 - 121
Isopropylbenzene	20.0	15.2		ug/L		76	74 - 128
Methyl acetate	40.0	34.7		ug/L		87	42 - 169
Methyl tert-butyl ether	20.0	18.4		ug/L		92	65 - 126
Methylcyclohexane	20.0	15.4		ug/L		77	62 - 136

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QC Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

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

Lab Sample ID: LCS 240-528483/5

Matrix: Water

Analysis Batch: 528483

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methylene Chloride	20.0	18.5		ug/L		93	71 - 125
Styrene	20.0	16.5		ug/L		82	80 - 135
Tetrachloroethene	20.0	17.3		ug/L		86	76 - 123
Toluene	20.0	16.8		ug/L		84	80 - 123
trans-1,2-Dichloroethene	20.0	18.3		ug/L		92	75 - 124
trans-1,3-Dichloropropene	20.0	16.5		ug/L		82	57 - 129
Trichloroethene	20.0	19.2		ug/L		96	70 - 122
Trichlorofluoromethane	20.0	21.0		ug/L		105	30 - 170
Vinyl chloride	20.0	20.5		ug/L		102	60 - 144
Xylenes, Total	40.0	32.9		ug/L		82	80 - 121
m-Xylene & p-Xylene	20.0	16.4		ug/L		82	80 - 120
o-Xylene	20.0	16.5		ug/L		83	80 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	90		78 - 122
Dibromofluoromethane (Surr)	98		73 - 120
4-Bromofluorobenzene (Surr)	93		56 - 136
1,2-Dichloroethane-d4 (Surr)	93		62 - 137

Lab Sample ID: 240-167051-2 MS

Matrix: Water

Analysis Batch: 528483

Client Sample ID: OW-10D_051722

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,1-Trichloroethane	1.0	U	20.0	17.9		ug/L		89	60 - 130
1,1,2,2-Tetrachloroethane	1.0	U	20.0	17.2		ug/L		86	54 - 145
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	20.0	19.0		ug/L		95	41 - 147
1,1,2-Trichloroethane	1.0	U	20.0	16.5		ug/L		82	69 - 131
1,1-Dichloroethane	1.0	U	20.0	17.7		ug/L		88	68 - 125
1,1-Dichloroethene	1.0	U	20.0	18.5		ug/L		92	56 - 135
1,2,4-Trichlorobenzene	1.0	U	20.0	13.1		ug/L		65	29 - 156
1,2-Dibromo-3-Chloropropane	2.0	U	20.0	13.7		ug/L		69	41 - 129
Ethylene Dibromide	1.0	U	20.0	16.0		ug/L		80	69 - 125
1,2-Dichlorobenzene	1.0	U	20.0	15.7		ug/L		78	73 - 120
1,2-Dichloroethane	1.0	U	20.0	18.3		ug/L		92	63 - 126
1,2-Dichloropropane	1.0	U	20.0	17.6		ug/L		88	69 - 130
1,3-Dichlorobenzene	1.0	U	20.0	15.2		ug/L		76	73 - 120
1,4-Dichlorobenzene	1.0	U	20.0	15.5		ug/L		77	74 - 120
2-Butanone (MEK)	10	U	40.0	34.6		ug/L		86	40 - 151
2-Hexanone	10	U	40.0	31.5		ug/L		79	35 - 156
4-Methyl-2-pentanone (MIBK)	10	U	40.0	34.0		ug/L		85	31 - 153
Acetone	10	U	40.0	33.8		ug/L		85	33 - 149
Benzene	1.0	U	20.0	18.0		ug/L		90	64 - 128
Dichlorobromomethane	1.0	U	20.0	17.3		ug/L		87	62 - 125
Bromoform	1.0	U	20.0	12.5		ug/L		63	47 - 125
Bromomethane	1.0	U	20.0	15.2		ug/L		76	28 - 150
Carbon disulfide	1.0	U	20.0	17.8		ug/L		89	38 - 140
Carbon tetrachloride	1.0	U	20.0	16.9		ug/L		84	51 - 133

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QC Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

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

Lab Sample ID: 240-167051-2 MS

Matrix: Water

Analysis Batch: 528483

Client Sample ID: OW-10D_051722

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chlorobenzene	1.0	U	20.0	16.2		ug/L		81	74 - 121
Chloroethane	1.0	U	20.0	19.6		ug/L		98	10 - 199
Chloroform	1.0	U	20.0	17.7		ug/L		89	70 - 122
Chloromethane	1.0	U	20.0	17.6		ug/L		88	32 - 149
cis-1,2-Dichloroethene	1.0	U	20.0	17.8		ug/L		89	66 - 128
cis-1,3-Dichloropropene	1.0	U	20.0	16.5		ug/L		83	47 - 125
Cyclohexane	1.0	U	20.0	16.2		ug/L		81	42 - 147
Chlorodibromomethane	1.0	U	20.0	14.1		ug/L		71	65 - 120
Dichlorodifluoromethane	1.0	U	20.0	22.5		ug/L		113	38 - 139
Ethylbenzene	1.0	U	20.0	15.9		ug/L		79	67 - 127
Isopropylbenzene	1.0	U	20.0	14.3		ug/L		72	64 - 129
Methyl acetate	10	U	40.0	33.2		ug/L		83	37 - 155
Methyl tert-butyl ether	1.0	U	20.0	17.7		ug/L		88	47 - 134
Methylcyclohexane	1.0	U	20.0	14.2		ug/L		71	39 - 144
Methylene Chloride	5.0	U	20.0	17.4		ug/L		87	62 - 129
Styrene	1.0	U	20.0	15.5		ug/L		78	70 - 139
Tetrachloroethene	1.0	U	20.0	15.5		ug/L		78	62 - 131
Toluene	1.0	U	20.0	15.9		ug/L		79	58 - 135
trans-1,2-Dichloroethene	1.0	U	20.0	17.3		ug/L		86	56 - 136
trans-1,3-Dichloropropene	1.0	U	20.0	15.6		ug/L		78	47 - 120
Trichloroethene	1.0	U	20.0	17.6		ug/L		88	61 - 124
Trichlorofluoromethane	1.0	U	20.0	19.9		ug/L		99	24 - 177
Vinyl chloride	1.0	U	20.0	18.9		ug/L		94	43 - 157
Xylenes, Total	2.0	U	40.0	30.7		ug/L		77	71 - 123
m-Xylene & p-Xylene	2.0	U	20.0	15.3		ug/L		76	71 - 123
o-Xylene	1.0	U	20.0	15.4		ug/L		77	70 - 125

Surrogate	MS %Recovery	MS Qualifier	Limits
Toluene-d8 (Surr)	86		78 - 122
Dibromofluoromethane (Surr)	95		73 - 120
4-Bromofluorobenzene (Surr)	90		56 - 136
1,2-Dichloroethane-d4 (Surr)	91		62 - 137

Lab Sample ID: 240-167051-2 MSD

Matrix: Water

Analysis Batch: 528483

Client Sample ID: OW-10D_051722

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane	1.0	U	20.0	18.5		ug/L		92	60 - 130	3	17
1,1,2,2-Tetrachloroethane	1.0	U	20.0	18.7		ug/L		94	54 - 145	8	15
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	20.0	19.5		ug/L		97	41 - 147	2	35
1,1,2-Trichloroethane	1.0	U	20.0	17.6		ug/L		88	69 - 131	6	14
1,1-Dichloroethane	1.0	U	20.0	18.2		ug/L		91	68 - 125	3	13
1,1-Dichloroethene	1.0	U	20.0	19.0		ug/L		95	56 - 135	3	26
1,2,4-Trichlorobenzene	1.0	U	20.0	14.2		ug/L		71	29 - 156	8	19
1,2-Dibromo-3-Chloropropane	2.0	U	20.0	14.7		ug/L		73	41 - 129	7	22
Ethylene Dibromide	1.0	U	20.0	17.0		ug/L		85	69 - 125	6	14
1,2-Dichlorobenzene	1.0	U	20.0	17.0		ug/L		85	73 - 120	8	14

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QC Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

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

Lab Sample ID: 240-167051-2 MSD

Matrix: Water

Analysis Batch: 528483

Client Sample ID: OW-10D_051722

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2-Dichloroethane	1.0	U	20.0	19.1		ug/L		95	63 - 126	4	12
1,2-Dichloropropane	1.0	U	20.0	18.3		ug/L		92	69 - 130	4	13
1,3-Dichlorobenzene	1.0	U	20.0	16.5		ug/L		83	73 - 120	8	14
1,4-Dichlorobenzene	1.0	U	20.0	16.6		ug/L		83	74 - 120	7	15
2-Butanone (MEK)	10	U	40.0	35.6		ug/L		89	40 - 151	3	20
2-Hexanone	10	U	40.0	33.2		ug/L		83	35 - 156	5	17
4-Methyl-2-pentanone (MIBK)	10	U	40.0	35.5		ug/L		89	31 - 153	4	15
Acetone	10	U	40.0	35.2		ug/L		88	33 - 149	4	34
Benzene	1.0	U	20.0	18.6		ug/L		93	64 - 128	4	14
Dichlorobromomethane	1.0	U	20.0	17.7		ug/L		88	62 - 125	2	13
Bromoform	1.0	U	20.0	13.6		ug/L		68	47 - 125	8	15
Bromomethane	1.0	U	20.0	17.3		ug/L		86	28 - 150	13	26
Carbon disulfide	1.0	U	20.0	18.6		ug/L		93	38 - 140	5	23
Carbon tetrachloride	1.0	U	20.0	17.6		ug/L		88	51 - 133	4	24
Chlorobenzene	1.0	U	20.0	16.8		ug/L		84	74 - 121	4	14
Chloroethane	1.0	U	20.0	19.8		ug/L		99	10 - 199	1	30
Chloroform	1.0	U	20.0	18.5		ug/L		93	70 - 122	4	14
Chloromethane	1.0	U	20.0	19.0		ug/L		95	32 - 149	8	27
cis-1,2-Dichloroethene	1.0	U	20.0	18.7		ug/L		93	66 - 128	5	14
cis-1,3-Dichloropropene	1.0	U	20.0	17.4		ug/L		87	47 - 125	5	13
Cyclohexane	1.0	U	20.0	16.7		ug/L		84	42 - 147	3	35
Chlorodibromomethane	1.0	U	20.0	15.2		ug/L		76	65 - 120	7	13
Dichlorodifluoromethane	1.0	U	20.0	23.1		ug/L		116	38 - 139	3	35
Ethylbenzene	1.0	U	20.0	16.6		ug/L		83	67 - 127	4	15
Isopropylbenzene	1.0	U	20.0	14.8		ug/L		74	64 - 129	3	18
Methyl acetate	10	U	40.0	34.2		ug/L		86	37 - 155	3	18
Methyl tert-butyl ether	1.0	U	20.0	18.4		ug/L		92	47 - 134	4	16
Methylcyclohexane	1.0	U	20.0	14.8		ug/L		74	39 - 144	4	35
Methylene Chloride	5.0	U	20.0	17.8		ug/L		89	62 - 129	2	17
Styrene	1.0	U	20.0	16.2		ug/L		81	70 - 139	4	18
Tetrachloroethene	1.0	U	20.0	16.5		ug/L		83	62 - 131	6	20
Toluene	1.0	U	20.0	16.6		ug/L		83	58 - 135	4	14
trans-1,2-Dichloroethene	1.0	U	20.0	18.0		ug/L		90	56 - 136	4	15
trans-1,3-Dichloropropene	1.0	U	20.0	16.6		ug/L		83	47 - 120	6	14
Trichloroethene	1.0	U	20.0	18.6		ug/L		93	61 - 124	6	15
Trichlorofluoromethane	1.0	U	20.0	20.7		ug/L		104	24 - 177	4	34
Vinyl chloride	1.0	U	20.0	19.9		ug/L		100	43 - 157	5	24
Xylenes, Total	2.0	U	40.0	32.2		ug/L		81	71 - 123	5	15
m-Xylene & p-Xylene	2.0	U	20.0	16.0		ug/L		80	71 - 123	5	16
o-Xylene	1.0	U	20.0	16.2		ug/L		81	70 - 125	5	15

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Toluene-d8 (Surr)	88		78 - 122
Dibromofluoromethane (Surr)	94		73 - 120
4-Bromofluorobenzene (Surr)	92		56 - 136
1,2-Dichloroethane-d4 (Surr)	91		62 - 137

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QC Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

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

Lab Sample ID: MB 240-528486/8

Matrix: Water

Analysis Batch: 528486

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	ug/L			05/31/22 11:40	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	ug/L			05/31/22 11:40	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	ug/L			05/31/22 11:40	1
1,1,2-Trichloroethane	1.0	U	1.0	ug/L			05/31/22 11:40	1
1,1-Dichloroethane	1.0	U	1.0	ug/L			05/31/22 11:40	1
1,1-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 11:40	1
1,2,4-Trichlorobenzene	1.0	U	1.0	ug/L			05/31/22 11:40	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	ug/L			05/31/22 11:40	1
Ethylene Dibromide	1.0	U	1.0	ug/L			05/31/22 11:40	1
1,2-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 11:40	1
1,2-Dichloroethane	1.0	U	1.0	ug/L			05/31/22 11:40	1
1,2-Dichloropropane	1.0	U	1.0	ug/L			05/31/22 11:40	1
1,3-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 11:40	1
1,4-Dichlorobenzene	1.0	U	1.0	ug/L			05/31/22 11:40	1
2-Butanone (MEK)	10	U	10	ug/L			05/31/22 11:40	1
2-Hexanone	10	U	10	ug/L			05/31/22 11:40	1
4-Methyl-2-pentanone (MIBK)	10	U	10	ug/L			05/31/22 11:40	1
Acetone	10	U	10	ug/L			05/31/22 11:40	1
Benzene	1.0	U	1.0	ug/L			05/31/22 11:40	1
Dichlorobromomethane	1.0	U	1.0	ug/L			05/31/22 11:40	1
Bromoform	1.0	U	1.0	ug/L			05/31/22 11:40	1
Bromomethane	1.0	U	1.0	ug/L			05/31/22 11:40	1
Carbon disulfide	1.0	U	1.0	ug/L			05/31/22 11:40	1
Carbon tetrachloride	1.0	U	1.0	ug/L			05/31/22 11:40	1
Chlorobenzene	1.0	U	1.0	ug/L			05/31/22 11:40	1
Chloroethane	1.0	U	1.0	ug/L			05/31/22 11:40	1
Chloroform	1.0	U	1.0	ug/L			05/31/22 11:40	1
Chloromethane	1.0	U	1.0	ug/L			05/31/22 11:40	1
cis-1,2-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 11:40	1
cis-1,3-Dichloropropene	1.0	U	1.0	ug/L			05/31/22 11:40	1
Cyclohexane	1.0	U	1.0	ug/L			05/31/22 11:40	1
Chlorodibromomethane	1.0	U	1.0	ug/L			05/31/22 11:40	1
Dichlorodifluoromethane	1.0	U	1.0	ug/L			05/31/22 11:40	1
Ethylbenzene	1.0	U	1.0	ug/L			05/31/22 11:40	1
Isopropylbenzene	1.0	U	1.0	ug/L			05/31/22 11:40	1
Methyl acetate	10	U	10	ug/L			05/31/22 11:40	1
Methyl tert-butyl ether	1.0	U	1.0	ug/L			05/31/22 11:40	1
Methylcyclohexane	1.0	U	1.0	ug/L			05/31/22 11:40	1
Methylene Chloride	5.0	U	5.0	ug/L			05/31/22 11:40	1
Styrene	1.0	U	1.0	ug/L			05/31/22 11:40	1
Tetrachloroethene	1.0	U	1.0	ug/L			05/31/22 11:40	1
Toluene	1.0	U	1.0	ug/L			05/31/22 11:40	1
trans-1,2-Dichloroethene	1.0	U	1.0	ug/L			05/31/22 11:40	1
trans-1,3-Dichloropropene	1.0	U	1.0	ug/L			05/31/22 11:40	1
Trichloroethene	1.0	U	1.0	ug/L			05/31/22 11:40	1
Trichlorofluoromethane	1.0	U	1.0	ug/L			05/31/22 11:40	1
Vinyl chloride	1.0	U	1.0	ug/L			05/31/22 11:40	1
Xylenes, Total	2.0	U	2.0	ug/L			05/31/22 11:40	1

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QC Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

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

Lab Sample ID: MB 240-528486/8

Matrix: Water

Analysis Batch: 528486

Client Sample ID: Method Blank

Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		78 - 122		05/31/22 11:40	1
Dibromofluoromethane (Surr)	93		73 - 120		05/31/22 11:40	1
4-Bromofluorobenzene (Surr)	99		56 - 136		05/31/22 11:40	1
1,2-Dichloroethane-d4 (Surr)	101		62 - 137		05/31/22 11:40	1

Lab Sample ID: LCS 240-528486/5

Matrix: Water

Analysis Batch: 528486

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-Trichloroethane	20.0	20.9		ug/L		105	64 - 131
1,1,1,2-Tetrachloroethane	20.0	21.6		ug/L		108	58 - 157
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	20.3		ug/L		102	51 - 146
1,1,2-Trichloroethane	20.0	21.7		ug/L		109	70 - 138
1,1-Dichloroethane	20.0	20.0		ug/L		100	72 - 127
1,1-Dichloroethene	20.0	20.9		ug/L		105	63 - 134
1,2,4-Trichlorobenzene	20.0	20.9		ug/L		105	44 - 147
1,2-Dibromo-3-Chloropropane	20.0	21.8		ug/L		109	53 - 135
Ethylene Dibromide	20.0	21.6		ug/L		108	71 - 134
1,2-Dichlorobenzene	20.0	21.2		ug/L		106	78 - 120
1,2-Dichloroethane	20.0	19.2		ug/L		96	66 - 128
1,2-Dichloropropane	20.0	19.9		ug/L		100	75 - 133
1,3-Dichlorobenzene	20.0	20.9		ug/L		104	80 - 120
1,4-Dichlorobenzene	20.0	20.6		ug/L		103	80 - 120
2-Butanone (MEK)	40.0	39.7		ug/L		99	54 - 156
2-Hexanone	40.0	47.5		ug/L		119	43 - 167
4-Methyl-2-pentanone (MIBK)	40.0	42.0		ug/L		105	46 - 158
Acetone	40.0	39.7		ug/L		99	50 - 149
Benzene	20.0	20.0		ug/L		100	77 - 123
Dichlorobromomethane	20.0	20.3		ug/L		102	69 - 126
Bromoform	20.0	22.7		ug/L		113	57 - 129
Bromomethane	20.0	15.6		ug/L		78	36 - 142
Carbon disulfide	20.0	21.2		ug/L		106	43 - 140
Carbon tetrachloride	20.0	21.3		ug/L		107	55 - 137
Chlorobenzene	20.0	20.7		ug/L		104	80 - 121
Chloroethane	20.0	16.1		ug/L		81	38 - 152
Chloroform	20.0	19.7		ug/L		98	74 - 122
Chloromethane	20.0	19.0		ug/L		95	47 - 143
cis-1,2-Dichloroethene	20.0	19.8		ug/L		99	77 - 123
cis-1,3-Dichloropropene	20.0	21.5		ug/L		107	64 - 130
Cyclohexane	20.0	20.5		ug/L		103	58 - 146
Chlorodibromomethane	20.0	22.4		ug/L		112	70 - 124
Dichlorodifluoromethane	20.0	25.4		ug/L		127	34 - 153
Ethylbenzene	20.0	21.7		ug/L		109	80 - 121
Isopropylbenzene	20.0	22.5		ug/L		113	74 - 128
Methyl acetate	40.0	40.2		ug/L		100	42 - 169
Methyl tert-butyl ether	20.0	20.6		ug/L		103	65 - 126
Methylcyclohexane	20.0	21.1		ug/L		106	62 - 136

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QC Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

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

Lab Sample ID: LCS 240-528486/5

Matrix: Water

Analysis Batch: 528486

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methylene Chloride	20.0	19.4		ug/L		97	71 - 125
Styrene	20.0	22.3		ug/L		112	80 - 135
Tetrachloroethene	20.0	21.3		ug/L		106	76 - 123
Toluene	20.0	21.2		ug/L		106	80 - 123
trans-1,2-Dichloroethene	20.0	20.4		ug/L		102	75 - 124
trans-1,3-Dichloropropene	20.0	23.0		ug/L		115	57 - 129
Trichloroethene	20.0	19.5		ug/L		98	70 - 122
Trichlorofluoromethane	20.0	18.0		ug/L		90	30 - 170
Vinyl chloride	20.0	19.4		ug/L		97	60 - 144
Xylenes, Total	40.0	44.7		ug/L		112	80 - 121
m-Xylene & p-Xylene	20.0	22.3		ug/L		112	80 - 120
o-Xylene	20.0	22.4		ug/L		112	80 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	107		78 - 122
Dibromofluoromethane (Surr)	94		73 - 120
4-Bromofluorobenzene (Surr)	110		56 - 136
1,2-Dichloroethane-d4 (Surr)	97		62 - 137

Lab Sample ID: MB 240-528862/8

Matrix: Water

Analysis Batch: 528862

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	ug/L			06/02/22 11:28	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	ug/L			06/02/22 11:28	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	ug/L			06/02/22 11:28	1
1,1,2-Trichloroethane	1.0	U	1.0	ug/L			06/02/22 11:28	1
1,1-Dichloroethane	1.0	U	1.0	ug/L			06/02/22 11:28	1
1,1-Dichloroethene	1.0	U	1.0	ug/L			06/02/22 11:28	1
1,2,4-Trichlorobenzene	1.0	U	1.0	ug/L			06/02/22 11:28	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	ug/L			06/02/22 11:28	1
Ethylene Dibromide	1.0	U	1.0	ug/L			06/02/22 11:28	1
1,2-Dichlorobenzene	1.0	U	1.0	ug/L			06/02/22 11:28	1
1,2-Dichloroethane	1.0	U	1.0	ug/L			06/02/22 11:28	1
1,2-Dichloropropane	1.0	U	1.0	ug/L			06/02/22 11:28	1
1,3-Dichlorobenzene	1.0	U	1.0	ug/L			06/02/22 11:28	1
1,4-Dichlorobenzene	1.0	U	1.0	ug/L			06/02/22 11:28	1
2-Butanone (MEK)	10	U	10	ug/L			06/02/22 11:28	1
2-Hexanone	10	U	10	ug/L			06/02/22 11:28	1
4-Methyl-2-pentanone (MIBK)	10	U	10	ug/L			06/02/22 11:28	1
Acetone	10	U	10	ug/L			06/02/22 11:28	1
Benzene	1.0	U	1.0	ug/L			06/02/22 11:28	1
Dichlorobromomethane	1.0	U	1.0	ug/L			06/02/22 11:28	1
Bromoform	1.0	U	1.0	ug/L			06/02/22 11:28	1
Bromomethane	1.0	U	1.0	ug/L			06/02/22 11:28	1
Carbon disulfide	1.0	U	1.0	ug/L			06/02/22 11:28	1
Carbon tetrachloride	1.0	U	1.0	ug/L			06/02/22 11:28	1

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QC Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

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

Lab Sample ID: MB 240-528862/8

Matrix: Water

Analysis Batch: 528862

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	1.0	U	1.0	ug/L			06/02/22 11:28	1
Chloroethane	1.0	U	1.0	ug/L			06/02/22 11:28	1
Chloroform	1.0	U	1.0	ug/L			06/02/22 11:28	1
Chloromethane	1.0	U	1.0	ug/L			06/02/22 11:28	1
cis-1,2-Dichloroethene	1.0	U	1.0	ug/L			06/02/22 11:28	1
cis-1,3-Dichloropropene	1.0	U	1.0	ug/L			06/02/22 11:28	1
Cyclohexane	1.0	U	1.0	ug/L			06/02/22 11:28	1
Chlorodibromomethane	1.0	U	1.0	ug/L			06/02/22 11:28	1
Dichlorodifluoromethane	1.0	U	1.0	ug/L			06/02/22 11:28	1
Ethylbenzene	1.0	U	1.0	ug/L			06/02/22 11:28	1
Isopropylbenzene	1.0	U	1.0	ug/L			06/02/22 11:28	1
Methyl acetate	10	U	10	ug/L			06/02/22 11:28	1
Methyl tert-butyl ether	1.0	U	1.0	ug/L			06/02/22 11:28	1
Methylcyclohexane	1.0	U	1.0	ug/L			06/02/22 11:28	1
Methylene Chloride	5.0	U	5.0	ug/L			06/02/22 11:28	1
Styrene	1.0	U	1.0	ug/L			06/02/22 11:28	1
Tetrachloroethene	1.0	U	1.0	ug/L			06/02/22 11:28	1
Toluene	1.0	U	1.0	ug/L			06/02/22 11:28	1
trans-1,2-Dichloroethene	1.0	U	1.0	ug/L			06/02/22 11:28	1
trans-1,3-Dichloropropene	1.0	U	1.0	ug/L			06/02/22 11:28	1
Trichloroethene	1.0	U	1.0	ug/L			06/02/22 11:28	1
Trichlorofluoromethane	1.0	U	1.0	ug/L			06/02/22 11:28	1
Vinyl chloride	1.0	U	1.0	ug/L			06/02/22 11:28	1
Xylenes, Total	2.0	U	2.0	ug/L			06/02/22 11:28	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	97		78 - 122		06/02/22 11:28	1
Dibromofluoromethane (Surr)	114		73 - 120		06/02/22 11:28	1
4-Bromofluorobenzene (Surr)	99		56 - 136		06/02/22 11:28	1
1,2-Dichloroethane-d4 (Surr)	104		62 - 137		06/02/22 11:28	1

Lab Sample ID: LCS 240-528862/5

Matrix: Water

Analysis Batch: 528862

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-Trichloroethane	20.0	19.4		ug/L		97	64 - 131
1,1,2,2-Tetrachloroethane	20.0	19.9		ug/L		99	58 - 157
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	23.6		ug/L		118	51 - 146
1,1,2-Trichloroethane	20.0	20.6		ug/L		103	70 - 138
1,1-Dichloroethane	20.0	20.4		ug/L		102	72 - 127
1,1-Dichloroethene	20.0	22.6		ug/L		113	63 - 134
1,2,4-Trichlorobenzene	20.0	20.0		ug/L		100	44 - 147
1,2-Dibromo-3-Chloropropane	20.0	18.6		ug/L		93	53 - 135
Ethylene Dibromide	20.0	19.6		ug/L		98	71 - 134
1,2-Dichlorobenzene	20.0	21.2		ug/L		106	78 - 120
1,2-Dichloroethane	20.0	18.0		ug/L		90	66 - 128
1,2-Dichloropropane	20.0	21.0		ug/L		105	75 - 133

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QC Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

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

Lab Sample ID: LCS 240-528862/5

Matrix: Water

Analysis Batch: 528862

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,3-Dichlorobenzene	20.0	20.9		ug/L		104	80 - 120
1,4-Dichlorobenzene	20.0	20.6		ug/L		103	80 - 120
2-Butanone (MEK)	40.0	33.6		ug/L		84	54 - 156
2-Hexanone	40.0	37.2		ug/L		93	43 - 167
4-Methyl-2-pentanone (MIBK)	40.0	36.6		ug/L		91	46 - 158
Acetone	40.0	38.2		ug/L		96	50 - 149
Benzene	20.0	21.5		ug/L		107	77 - 123
Dichlorobromomethane	20.0	19.2		ug/L		96	69 - 126
Bromoform	20.0	18.8		ug/L		94	57 - 129
Bromomethane	20.0	14.3		ug/L		72	36 - 142
Carbon disulfide	20.0	22.6		ug/L		113	43 - 140
Carbon tetrachloride	20.0	19.5		ug/L		98	55 - 137
Chlorobenzene	20.0	20.7		ug/L		104	80 - 121
Chloroethane	20.0	19.3		ug/L		96	38 - 152
Chloroform	20.0	19.1		ug/L		96	74 - 122
Chloromethane	20.0	14.4		ug/L		72	47 - 143
cis-1,2-Dichloroethene	20.0	20.6		ug/L		103	77 - 123
cis-1,3-Dichloropropene	20.0	19.9		ug/L		99	64 - 130
Cyclohexane	20.0	23.7		ug/L		118	58 - 146
Chlorodibromomethane	20.0	19.8		ug/L		99	70 - 124
Dichlorodifluoromethane	20.0	22.8		ug/L		114	34 - 153
Ethylbenzene	20.0	21.4		ug/L		107	80 - 121
Isopropylbenzene	20.0	21.9		ug/L		109	74 - 128
Methyl acetate	40.0	33.8		ug/L		85	42 - 169
Methyl tert-butyl ether	20.0	18.7		ug/L		94	65 - 126
Methylcyclohexane	20.0	22.1		ug/L		110	62 - 136
Methylene Chloride	20.0	19.8		ug/L		99	71 - 125
Styrene	20.0	22.6		ug/L		113	80 - 135
Tetrachloroethene	20.0	21.9		ug/L		109	76 - 123
Toluene	20.0	21.5		ug/L		108	80 - 123
trans-1,2-Dichloroethene	20.0	20.7		ug/L		104	75 - 124
trans-1,3-Dichloropropene	20.0	20.1		ug/L		101	57 - 129
Trichloroethene	20.0	21.0		ug/L		105	70 - 122
Trichlorofluoromethane	20.0	19.4		ug/L		97	30 - 170
Vinyl chloride	20.0	14.9		ug/L		75	60 - 144
Xylenes, Total	40.0	43.8		ug/L		110	80 - 121
m-Xylene & p-Xylene	20.0	22.5		ug/L		113	80 - 120
o-Xylene	20.0	21.3		ug/L		107	80 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	99		78 - 122
Dibromofluoromethane (Surr)	94		73 - 120
4-Bromofluorobenzene (Surr)	105		56 - 136
1,2-Dichloroethane-d4 (Surr)	88		62 - 137

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QC Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

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

Lab Sample ID: MB 240-528938/7

Matrix: Water

Analysis Batch: 528938

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	ug/L			06/02/22 13:37	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	ug/L			06/02/22 13:37	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	ug/L			06/02/22 13:37	1
1,1,2-Trichloroethane	1.0	U	1.0	ug/L			06/02/22 13:37	1
1,1-Dichloroethane	1.0	U	1.0	ug/L			06/02/22 13:37	1
1,1-Dichloroethene	1.0	U	1.0	ug/L			06/02/22 13:37	1
1,2,4-Trichlorobenzene	1.0	U	1.0	ug/L			06/02/22 13:37	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	ug/L			06/02/22 13:37	1
Ethylene Dibromide	1.0	U	1.0	ug/L			06/02/22 13:37	1
1,2-Dichlorobenzene	1.0	U	1.0	ug/L			06/02/22 13:37	1
1,2-Dichloroethane	1.0	U	1.0	ug/L			06/02/22 13:37	1
1,2-Dichloropropane	1.0	U	1.0	ug/L			06/02/22 13:37	1
1,3-Dichlorobenzene	1.0	U	1.0	ug/L			06/02/22 13:37	1
1,4-Dichlorobenzene	1.0	U	1.0	ug/L			06/02/22 13:37	1
2-Butanone (MEK)	10	U	10	ug/L			06/02/22 13:37	1
2-Hexanone	10	U	10	ug/L			06/02/22 13:37	1
4-Methyl-2-pentanone (MIBK)	10	U	10	ug/L			06/02/22 13:37	1
Acetone	10	U	10	ug/L			06/02/22 13:37	1
Benzene	1.0	U	1.0	ug/L			06/02/22 13:37	1
Dichlorobromomethane	1.0	U	1.0	ug/L			06/02/22 13:37	1
Bromoform	1.0	U	1.0	ug/L			06/02/22 13:37	1
Bromomethane	1.0	U	1.0	ug/L			06/02/22 13:37	1
Carbon disulfide	1.0	U	1.0	ug/L			06/02/22 13:37	1
Carbon tetrachloride	1.0	U	1.0	ug/L			06/02/22 13:37	1
Chlorobenzene	1.0	U	1.0	ug/L			06/02/22 13:37	1
Chloroethane	1.0	U	1.0	ug/L			06/02/22 13:37	1
Chloroform	1.0	U	1.0	ug/L			06/02/22 13:37	1
Chloromethane	1.0	U	1.0	ug/L			06/02/22 13:37	1
cis-1,2-Dichloroethene	1.0	U	1.0	ug/L			06/02/22 13:37	1
cis-1,3-Dichloropropene	1.0	U	1.0	ug/L			06/02/22 13:37	1
Cyclohexane	1.0	U	1.0	ug/L			06/02/22 13:37	1
Chlorodibromomethane	1.0	U	1.0	ug/L			06/02/22 13:37	1
Dichlorodifluoromethane	1.0	U	1.0	ug/L			06/02/22 13:37	1
Ethylbenzene	1.0	U	1.0	ug/L			06/02/22 13:37	1
Isopropylbenzene	1.0	U	1.0	ug/L			06/02/22 13:37	1
Methyl acetate	10	U	10	ug/L			06/02/22 13:37	1
Methyl tert-butyl ether	1.0	U	1.0	ug/L			06/02/22 13:37	1
Methylcyclohexane	1.0	U	1.0	ug/L			06/02/22 13:37	1
Methylene Chloride	5.0	U	5.0	ug/L			06/02/22 13:37	1
Styrene	1.0	U	1.0	ug/L			06/02/22 13:37	1
Tetrachloroethene	1.0	U	1.0	ug/L			06/02/22 13:37	1
Toluene	1.0	U	1.0	ug/L			06/02/22 13:37	1
trans-1,2-Dichloroethene	1.0	U	1.0	ug/L			06/02/22 13:37	1
trans-1,3-Dichloropropene	1.0	U	1.0	ug/L			06/02/22 13:37	1
Trichloroethene	1.0	U	1.0	ug/L			06/02/22 13:37	1
Trichlorofluoromethane	1.0	U	1.0	ug/L			06/02/22 13:37	1
Vinyl chloride	1.0	U	1.0	ug/L			06/02/22 13:37	1
Xylenes, Total	2.0	U	2.0	ug/L			06/02/22 13:37	1

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QC Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

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

Lab Sample ID: MB 240-528938/7

Matrix: Water

Analysis Batch: 528938

Client Sample ID: Method Blank

Prep Type: Total/NA

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	104		78 - 122		06/02/22 13:37	1
Dibromofluoromethane (Surr)	105		73 - 120		06/02/22 13:37	1
4-Bromofluorobenzene (Surr)	95		56 - 136		06/02/22 13:37	1
1,2-Dichloroethane-d4 (Surr)	96		62 - 137		06/02/22 13:37	1

Lab Sample ID: LCS 240-528938/5

Matrix: Water

Analysis Batch: 528938

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-Trichloroethane	25.0	24.3		ug/L		97	64 - 131
1,1,1,2-Tetrachloroethane	25.0	28.1		ug/L		112	58 - 157
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	25.8		ug/L		103	51 - 146
1,1,2-Trichloroethane	25.0	27.2		ug/L		109	70 - 138
1,1-Dichloroethane	25.0	24.7		ug/L		99	72 - 127
1,1-Dichloroethene	25.0	25.6		ug/L		102	63 - 134
1,2,4-Trichlorobenzene	25.0	27.0		ug/L		108	44 - 147
1,2-Dibromo-3-Chloropropane	25.0	28.9		ug/L		116	53 - 135
Ethylene Dibromide	25.0	26.9		ug/L		107	71 - 134
1,2-Dichlorobenzene	25.0	26.3		ug/L		105	78 - 120
1,2-Dichloroethane	25.0	22.5		ug/L		90	66 - 128
1,2-Dichloropropane	25.0	26.5		ug/L		106	75 - 133
1,3-Dichlorobenzene	25.0	26.2		ug/L		105	80 - 120
1,4-Dichlorobenzene	25.0	26.7		ug/L		107	80 - 120
2-Butanone (MEK)	50.0	56.5		ug/L		113	54 - 156
2-Hexanone	50.0	56.9		ug/L		114	43 - 167
4-Methyl-2-pentanone (MIBK)	50.0	53.5		ug/L		107	46 - 158
Acetone	50.0	51.3		ug/L		103	50 - 149
Benzene	25.0	26.0		ug/L		104	77 - 123
Dichlorobromomethane	25.0	24.9		ug/L		100	69 - 126
Bromoform	25.0	30.7		ug/L		123	57 - 129
Bromomethane	25.0	20.8		ug/L		83	36 - 142
Carbon disulfide	25.0	25.7		ug/L		103	43 - 140
Carbon tetrachloride	25.0	26.5		ug/L		106	55 - 137
Chlorobenzene	25.0	26.6		ug/L		106	80 - 121
Chloroethane	25.0	28.8		ug/L		115	38 - 152
Chloroform	25.0	23.6		ug/L		95	74 - 122
Chloromethane	25.0	26.3		ug/L		105	47 - 143
cis-1,2-Dichloroethene	25.0	24.9		ug/L		100	77 - 123
cis-1,3-Dichloropropene	25.0	26.7		ug/L		107	64 - 130
Cyclohexane	25.0	26.6		ug/L		107	58 - 146
Chlorodibromomethane	25.0	27.9		ug/L		112	70 - 124
Dichlorodifluoromethane	25.0	30.8		ug/L		123	34 - 153
Ethylbenzene	25.0	26.7		ug/L		107	80 - 121
Isopropylbenzene	25.0	26.1		ug/L		104	74 - 128
Methyl acetate	50.0	53.4		ug/L		107	42 - 169
Methyl tert-butyl ether	25.0	25.1		ug/L		100	65 - 126
Methylcyclohexane	25.0	27.9		ug/L		112	62 - 136

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QC Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

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

Lab Sample ID: LCS 240-528938/5

Matrix: Water

Analysis Batch: 528938

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Methylene Chloride	25.0	24.8		ug/L		99	71 - 125
Styrene	25.0	25.7		ug/L		103	80 - 135
Tetrachloroethene	25.0	27.8		ug/L		111	76 - 123
Toluene	25.0	26.2		ug/L		105	80 - 123
trans-1,2-Dichloroethene	25.0	24.7		ug/L		99	75 - 124
trans-1,3-Dichloropropene	25.0	28.2		ug/L		113	57 - 129
Trichloroethene	25.0	26.0		ug/L		104	70 - 122
Trichlorofluoromethane	25.0	23.4		ug/L		94	30 - 170
Vinyl chloride	25.0	25.3		ug/L		101	60 - 144
Xylenes, Total	50.0	50.6		ug/L		101	80 - 121
m-Xylene & p-Xylene	25.0	25.4		ug/L		102	80 - 120
o-Xylene	25.0	25.2		ug/L		101	80 - 123

Surrogate	%Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	110		78 - 122
Dibromofluoromethane (Surr)	102		73 - 120
4-Bromofluorobenzene (Surr)	103		56 - 136
1,2-Dichloroethane-d4 (Surr)	94		62 - 137

Lab Sample ID: MB 240-529073/8

Matrix: Water

Analysis Batch: 529073

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0	U	1.0	ug/L			06/03/22 12:15	1
1,1,2,2-Tetrachloroethane	1.0	U	1.0	ug/L			06/03/22 12:15	1
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	1.0	ug/L			06/03/22 12:15	1
1,1,2-Trichloroethane	1.0	U	1.0	ug/L			06/03/22 12:15	1
1,1-Dichloroethane	1.0	U	1.0	ug/L			06/03/22 12:15	1
1,1-Dichloroethene	1.0	U	1.0	ug/L			06/03/22 12:15	1
1,2,4-Trichlorobenzene	1.0	U	1.0	ug/L			06/03/22 12:15	1
1,2-Dibromo-3-Chloropropane	2.0	U	2.0	ug/L			06/03/22 12:15	1
Ethylene Dibromide	1.0	U	1.0	ug/L			06/03/22 12:15	1
1,2-Dichlorobenzene	1.0	U	1.0	ug/L			06/03/22 12:15	1
1,2-Dichloroethane	1.0	U	1.0	ug/L			06/03/22 12:15	1
1,2-Dichloropropane	1.0	U	1.0	ug/L			06/03/22 12:15	1
1,3-Dichlorobenzene	1.0	U	1.0	ug/L			06/03/22 12:15	1
1,4-Dichlorobenzene	1.0	U	1.0	ug/L			06/03/22 12:15	1
2-Butanone (MEK)	10	U	10	ug/L			06/03/22 12:15	1
2-Hexanone	10	U	10	ug/L			06/03/22 12:15	1
4-Methyl-2-pentanone (MIBK)	10	U	10	ug/L			06/03/22 12:15	1
Acetone	10	U	10	ug/L			06/03/22 12:15	1
Benzene	1.0	U	1.0	ug/L			06/03/22 12:15	1
Dichlorobromomethane	1.0	U	1.0	ug/L			06/03/22 12:15	1
Bromoform	1.0	U	1.0	ug/L			06/03/22 12:15	1
Bromomethane	1.0	U	1.0	ug/L			06/03/22 12:15	1
Carbon disulfide	1.0	U	1.0	ug/L			06/03/22 12:15	1
Carbon tetrachloride	1.0	U	1.0	ug/L			06/03/22 12:15	1

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QC Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

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

Lab Sample ID: MB 240-529073/8

Matrix: Water

Analysis Batch: 529073

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	1.0	U	1.0	ug/L			06/03/22 12:15	1
Chloroethane	1.0	U	1.0	ug/L			06/03/22 12:15	1
Chloroform	1.0	U	1.0	ug/L			06/03/22 12:15	1
Chloromethane	1.0	U	1.0	ug/L			06/03/22 12:15	1
cis-1,2-Dichloroethene	1.0	U	1.0	ug/L			06/03/22 12:15	1
cis-1,3-Dichloropropene	1.0	U	1.0	ug/L			06/03/22 12:15	1
Cyclohexane	1.0	U	1.0	ug/L			06/03/22 12:15	1
Chlorodibromomethane	1.0	U	1.0	ug/L			06/03/22 12:15	1
Dichlorodifluoromethane	1.0	U	1.0	ug/L			06/03/22 12:15	1
Ethylbenzene	1.0	U	1.0	ug/L			06/03/22 12:15	1
Isopropylbenzene	1.0	U	1.0	ug/L			06/03/22 12:15	1
Methyl acetate	10	U	10	ug/L			06/03/22 12:15	1
Methyl tert-butyl ether	1.0	U	1.0	ug/L			06/03/22 12:15	1
Methylcyclohexane	1.0	U	1.0	ug/L			06/03/22 12:15	1
Methylene Chloride	5.0	U	5.0	ug/L			06/03/22 12:15	1
Styrene	1.0	U	1.0	ug/L			06/03/22 12:15	1
Tetrachloroethene	1.0	U	1.0	ug/L			06/03/22 12:15	1
Toluene	1.0	U	1.0	ug/L			06/03/22 12:15	1
trans-1,2-Dichloroethene	1.0	U	1.0	ug/L			06/03/22 12:15	1
trans-1,3-Dichloropropene	1.0	U	1.0	ug/L			06/03/22 12:15	1
Trichloroethene	1.0	U	1.0	ug/L			06/03/22 12:15	1
Trichlorofluoromethane	1.0	U	1.0	ug/L			06/03/22 12:15	1
Vinyl chloride	1.0	U	1.0	ug/L			06/03/22 12:15	1
Xylenes, Total	2.0	U	2.0	ug/L			06/03/22 12:15	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	89		78 - 122		06/03/22 12:15	1
Dibromofluoromethane (Surr)	102		73 - 120		06/03/22 12:15	1
4-Bromofluorobenzene (Surr)	92		56 - 136		06/03/22 12:15	1
1,2-Dichloroethane-d4 (Surr)	98		62 - 137		06/03/22 12:15	1

Lab Sample ID: LCS 240-529073/5

Matrix: Water

Analysis Batch: 529073

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-Trichloroethane	20.0	20.0		ug/L		100	64 - 131
1,1,2,2-Tetrachloroethane	20.0	19.3		ug/L		96	58 - 157
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	20.9		ug/L		104	51 - 146
1,1,2-Trichloroethane	20.0	18.5		ug/L		92	70 - 138
1,1-Dichloroethane	20.0	19.9		ug/L		99	72 - 127
1,1-Dichloroethene	20.0	20.7		ug/L		103	63 - 134
1,2,4-Trichlorobenzene	20.0	15.0		ug/L		75	44 - 147
1,2-Dibromo-3-Chloropropane	20.0	15.6		ug/L		78	53 - 135
Ethylene Dibromide	20.0	17.9		ug/L		90	71 - 134
1,2-Dichlorobenzene	20.0	17.5		ug/L		88	78 - 120
1,2-Dichloroethane	20.0	20.6		ug/L		103	66 - 128
1,2-Dichloropropane	20.0	19.9		ug/L		100	75 - 133

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QC Sample Results

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

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

Lab Sample ID: LCS 240-529073/5

Matrix: Water

Analysis Batch: 529073

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,3-Dichlorobenzene	20.0	17.4		ug/L		87	80 - 120
1,4-Dichlorobenzene	20.0	17.7		ug/L		88	80 - 120
2-Butanone (MEK)	40.0	38.3		ug/L		96	54 - 156
2-Hexanone	40.0	35.9		ug/L		90	43 - 167
4-Methyl-2-pentanone (MIBK)	40.0	37.8		ug/L		95	46 - 158
Acetone	40.0	39.8		ug/L		99	50 - 149
Benzene	20.0	20.5		ug/L		102	77 - 123
Dichlorobromomethane	20.0	19.8		ug/L		99	69 - 126
Bromoform	20.0	14.5		ug/L		72	57 - 129
Bromomethane	20.0	16.3		ug/L		82	36 - 142
Carbon disulfide	20.0	20.4		ug/L		102	43 - 140
Carbon tetrachloride	20.0	19.0		ug/L		95	55 - 137
Chlorobenzene	20.0	18.2		ug/L		91	80 - 121
Chloroethane	20.0	22.0		ug/L		110	38 - 152
Chloroform	20.0	20.6		ug/L		103	74 - 122
Chloromethane	20.0	20.1		ug/L		100	47 - 143
cis-1,2-Dichloroethene	20.0	20.5		ug/L		103	77 - 123
cis-1,3-Dichloropropene	20.0	19.0		ug/L		95	64 - 130
Cyclohexane	20.0	18.2		ug/L		91	58 - 146
Chlorodibromomethane	20.0	16.3		ug/L		82	70 - 124
Dichlorodifluoromethane	20.0	23.1		ug/L		115	34 - 153
Ethylbenzene	20.0	17.8		ug/L		89	80 - 121
Isopropylbenzene	20.0	16.0		ug/L		80	74 - 128
Methyl acetate	40.0	38.2		ug/L		96	42 - 169
Methyl tert-butyl ether	20.0	19.7		ug/L		98	65 - 126
Methylcyclohexane	20.0	16.3		ug/L		81	62 - 136
Methylene Chloride	20.0	19.6		ug/L		98	71 - 125
Styrene	20.0	17.6		ug/L		88	80 - 135
Tetrachloroethene	20.0	17.7		ug/L		88	76 - 123
Toluene	20.0	17.8		ug/L		89	80 - 123
trans-1,2-Dichloroethene	20.0	19.7		ug/L		98	75 - 124
trans-1,3-Dichloropropene	20.0	17.6		ug/L		88	57 - 129
Trichloroethene	20.0	20.2		ug/L		101	70 - 122
Trichlorofluoromethane	20.0	22.3		ug/L		112	30 - 170
Vinyl chloride	20.0	21.2		ug/L		106	60 - 144
Xylenes, Total	40.0	34.5		ug/L		86	80 - 121
m-Xylene & p-Xylene	20.0	17.1		ug/L		86	80 - 120
o-Xylene	20.0	17.4		ug/L		87	80 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	93		78 - 122
Dibromofluoromethane (Surr)	102		73 - 120
4-Bromofluorobenzene (Surr)	96		56 - 136
1,2-Dichloroethane-d4 (Surr)	96		62 - 137

Eurofins Canton

QC Association Summary

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

GC/MS VOA

Analysis Batch: 528483

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-167051-2	OW-10D_051722	Total/NA	Water	8260D	
240-167051-3	OW-08D_051722	Total/NA	Water	8260D	
240-167051-4	OW-05D2_051722	Total/NA	Water	8260D	
240-167051-5	OW-30_051722	Total/NA	Water	8260D	
240-167051-6	OW-23D_051722	Total/NA	Water	8260D	
240-167051-7	OW-28_051722	Total/NA	Water	8260D	
240-167051-8	OW-18D_051822	Total/NA	Water	8260D	
240-167051-9	OW-09-ML-D_051822	Total/NA	Water	8260D	
240-167051-10	OW-09-ML-C_051822	Total/NA	Water	8260D	
240-167051-11	OW-18-ML-A_051822	Total/NA	Water	8260D	
240-167051-12	OW-18-ML-B_051822	Total/NA	Water	8260D	
240-167051-13	OW-18-ML-C_051922	Total/NA	Water	8260D	
MB 240-528483/8	Method Blank	Total/NA	Water	8260D	
LCS 240-528483/5	Lab Control Sample	Total/NA	Water	8260D	
240-167051-2 MS	OW-10D_051722	Total/NA	Water	8260D	
240-167051-2 MSD	OW-10D_051722	Total/NA	Water	8260D	

Analysis Batch: 528486

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-167051-1	OW-16D2_051822	Total/NA	Water	8260D	
240-167051-14	OW-18-ML-D_051922	Total/NA	Water	8260D	
MB 240-528486/8	Method Blank	Total/NA	Water	8260D	
LCS 240-528486/5	Lab Control Sample	Total/NA	Water	8260D	

Analysis Batch: 528862

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-167051-22	EQUIPMENT BLANK_051922	Total/NA	Water	8260D	
240-167051-23	FIELD BLANK_051922	Total/NA	Water	8260D	
240-167051-24	TRIP BLANK_051922	Total/NA	Water	8260D	
MB 240-528862/8	Method Blank	Total/NA	Water	8260D	
LCS 240-528862/5	Lab Control Sample	Total/NA	Water	8260D	

Analysis Batch: 528938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-167051-15	OW-18-ML-E_051922	Total/NA	Water	8260D	
240-167051-16	OW-18-ML-F_051922	Total/NA	Water	8260D	
240-167051-17	OW-02D2_051922	Total/NA	Water	8260D	
MB 240-528938/7	Method Blank	Total/NA	Water	8260D	
LCS 240-528938/5	Lab Control Sample	Total/NA	Water	8260D	

Analysis Batch: 529073

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-167051-18	OW-22_052022	Total/NA	Water	8260D	
240-167051-19	OW-07D_052022	Total/NA	Water	8260D	
240-167051-20	DUP-01_052022	Total/NA	Water	8260D	
240-167051-21	DUP-02_052022	Total/NA	Water	8260D	
MB 240-529073/8	Method Blank	Total/NA	Water	8260D	
LCS 240-529073/5	Lab Control Sample	Total/NA	Water	8260D	

Lab Chronicle

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-16D2_051822

Lab Sample ID: 240-167051-1

Date Collected: 05/18/22 09:18

Matrix: Water

Date Received: 05/21/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	528486	05/31/22 19:52	TJL1	TAL CAN

Client Sample ID: OW-10D_051722

Lab Sample ID: 240-167051-2

Date Collected: 05/17/22 09:42

Matrix: Water

Date Received: 05/21/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	528483	05/31/22 14:14	HMB	TAL CAN

Client Sample ID: OW-08D_051722

Lab Sample ID: 240-167051-3

Date Collected: 05/17/22 11:45

Matrix: Water

Date Received: 05/21/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	528483	05/31/22 15:28	HMB	TAL CAN

Client Sample ID: OW-05D2_051722

Lab Sample ID: 240-167051-4

Date Collected: 05/17/22 13:15

Matrix: Water

Date Received: 05/21/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	528483	05/31/22 15:52	HMB	TAL CAN

Client Sample ID: OW-30_051722

Lab Sample ID: 240-167051-5

Date Collected: 05/17/22 14:35

Matrix: Water

Date Received: 05/21/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	528483	05/31/22 16:17	HMB	TAL CAN

Client Sample ID: OW-23D_051722

Lab Sample ID: 240-167051-6

Date Collected: 05/17/22 15:56

Matrix: Water

Date Received: 05/21/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	528483	05/31/22 16:42	HMB	TAL CAN

Client Sample ID: OW-28_051722

Lab Sample ID: 240-167051-7

Date Collected: 05/17/22 17:05

Matrix: Water

Date Received: 05/21/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	528483	05/31/22 17:06	HMB	TAL CAN

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Lab Chronicle

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-18D_051822

Lab Sample ID: 240-167051-8

Date Collected: 05/18/22 11:10

Matrix: Water

Date Received: 05/21/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	528483	05/31/22 17:31	HMB	TAL CAN

Client Sample ID: OW-09-ML-D_051822

Lab Sample ID: 240-167051-9

Date Collected: 05/18/22 12:10

Matrix: Water

Date Received: 05/21/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	528483	05/31/22 17:55	HMB	TAL CAN

Client Sample ID: OW-09-ML-C_051822

Lab Sample ID: 240-167051-10

Date Collected: 05/18/22 13:13

Matrix: Water

Date Received: 05/21/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	528483	05/31/22 18:20	HMB	TAL CAN

Client Sample ID: OW-18-ML-A_051822

Lab Sample ID: 240-167051-11

Date Collected: 05/18/22 14:55

Matrix: Water

Date Received: 05/21/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	528483	05/31/22 18:45	HMB	TAL CAN

Client Sample ID: OW-18-ML-B_051822

Lab Sample ID: 240-167051-12

Date Collected: 05/18/22 15:33

Matrix: Water

Date Received: 05/21/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	528483	05/31/22 19:09	HMB	TAL CAN

Client Sample ID: OW-18-ML-C_051922

Lab Sample ID: 240-167051-13

Date Collected: 05/19/22 09:46

Matrix: Water

Date Received: 05/21/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	528483	05/31/22 19:34	HMB	TAL CAN

Client Sample ID: OW-18-ML-D_051922

Lab Sample ID: 240-167051-14

Date Collected: 05/19/22 10:55

Matrix: Water

Date Received: 05/21/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	528486	05/31/22 20:14	TJL1	TAL CAN

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Lab Chronicle

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: OW-18-ML-E_051922

Lab Sample ID: 240-167051-15

Date Collected: 05/19/22 12:46

Matrix: Water

Date Received: 05/21/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	528938	06/02/22 16:23	TJL1	TAL CAN

Client Sample ID: OW-18-ML-F_051922

Lab Sample ID: 240-167051-16

Date Collected: 05/19/22 13:52

Matrix: Water

Date Received: 05/21/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	528938	06/02/22 16:47	TJL1	TAL CAN

Client Sample ID: OW-02D2_051922

Lab Sample ID: 240-167051-17

Date Collected: 05/19/22 16:03

Matrix: Water

Date Received: 05/21/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		2.5	528938	06/02/22 17:10	TJL1	TAL CAN

Client Sample ID: OW-22_052022

Lab Sample ID: 240-167051-18

Date Collected: 05/20/22 08:47

Matrix: Water

Date Received: 05/21/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		2.5	529073	06/03/22 17:59	HMB	TAL CAN

Client Sample ID: OW-07D_052022

Lab Sample ID: 240-167051-19

Date Collected: 05/20/22 10:25

Matrix: Water

Date Received: 05/21/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	529073	06/03/22 18:23	HMB	TAL CAN

Client Sample ID: DUP-01_052022

Lab Sample ID: 240-167051-20

Date Collected: 05/20/22 00:00

Matrix: Water

Date Received: 05/21/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	529073	06/03/22 18:48	HMB	TAL CAN

Client Sample ID: DUP-02_052022

Lab Sample ID: 240-167051-21

Date Collected: 05/20/22 00:00

Matrix: Water

Date Received: 05/21/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	529073	06/03/22 19:12	HMB	TAL CAN

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Lab Chronicle

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Client Sample ID: EQUIPMENT BLANK_051922

Lab Sample ID: 240-167051-22

Date Collected: 05/19/22 10:00

Matrix: Water

Date Received: 05/21/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	528862	06/02/22 19:45	HMB	TAL CAN

Client Sample ID: FIELD BLANK_051922

Lab Sample ID: 240-167051-23

Date Collected: 05/19/22 09:20

Matrix: Water

Date Received: 05/21/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	528862	06/02/22 20:10	HMB	TAL CAN

Client Sample ID: TRIP BLANK_051922

Lab Sample ID: 240-167051-24

Date Collected: 05/19/22 00:00

Matrix: Water

Date Received: 05/21/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260D		1	528862	06/02/22 20:35	HMB	TAL CAN

Laboratory References:

TAL CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: ZF Active Safety and Electronics LLC
Project/Site: Milford

Job ID: 240-167051-1

Laboratory: Eurofins Canton

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

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-27-23
Connecticut	State	PH-0590	12-31-23
Florida	NELAP	E87225	06-30-22
Georgia	State	4062	02-23-22 *
Illinois	NELAP	200004	07-31-22
Iowa	State	421	06-01-23
Kentucky (UST)	State	112225	02-27-23
Kentucky (WW)	State	KY98016	12-31-22
Minnesota	NELAP	039-999-348	12-31-22
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-22
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-23-23
Ohio VAP	State	CL0024	02-27-23
Oregon	NELAP	4062	02-27-23
Pennsylvania	NELAP	68-00340	08-31-22
Texas	NELAP	T104704517-22-16	08-31-22
Virginia	NELAP	11570	09-14-22
Washington	State	C971	01-12-23
West Virginia DEP	State	210	12-31-22

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

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190

2.1/2.1

STL North Canton				Chain Of Custody / Analysis Request										LAB USE ONLY	
4101 Sheffield Drive NW North Canton, OH 44720 Attn: Michael DeMonico				Privileged & Confidential		Yes		Site Name: Milford		Site Location: Milford, Michigan		Laboratory ID No. (Lot No.)			
Project Type: Groundwater Sampling - IZ				TRW PO No. 30046730.000IZ											
TRW PNI: (name, company, address, e-mail)				Database Manager: (name, company, address, E-mail)											
Bob Bleazard				Marina Samp and Sharon Clouse											
11202 East Germann Road				28550 Cabot Drive, Suite 500											
Mesa, AZ 85212				Novi, MI 48377											
bob.bleazard@trw.com				Marina.Samp@arcadis.com											
				simon.samp@arcadis-usa.com											
Analysis Level				Level 1 (Routine Report)		Sampler		S. Hannula							
LAT				10 Business Days (Standard - Level 1)		Deliverable		EDD/PDF (e-mail)							
Sample Identification and Information															
Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID	Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	No. of Cont.	Grab or Composite	Field Filtered	Preservatives Code (see below)	Lab Sample Numbers		
1 OW-16D2	--	--	OW-16D2 051822	5-18-22	0918	GW	WATER	REG	3	G	X				
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															



240-167051 Chain of Custody

Special Instructions:

Relinquished by:	Company:	Received by:	Company:	Condition:	Custody Seals Intact:
Stacey Hannula	Arcadis	Jan Hale	EEA		
Date/Time:	5/20/22 1200	Date/Time:	5/20/22 1301	Cooler Temp.	
Relinquished by:	Company:	Received by:	Company:	Condition:	Custody Seals Intact:
Jan Hale	EEA	Stacey Hannula	EEA		
Date/Time:	5/20/22 1203	Date/Time:	5/24/22 0800	Cooler Temp.	
Relinquished by:	Company:	Received by:	Company:	Condition:	Custody Seals Intact:
Date/Time:		Date/Time:		Cooler Temp.	
Relinquished by:	Company:	Received by:	Company:	Condition:	Custody Seals Intact:
Date/Time:		Date/Time:		Cooler Temp.	

Preservatives Code: 0 = None; 1 = HCL; 2 = HNO3; 3 = H2SO4; 4 = NaOH; 5 = Zn. Acetate; 6 = MeOH; 7 = NaHSO4; 8 = Other (specify):

pg 1/1

21 / 2.1

STL North Canton			Chain Of Custody / Analysis Request										LAB USE ONLY	
4101 Shaffel Drive NW North Canton, OH 44720 Attn: Michael DelMonico			Privileged & Confidential		Yes		Site Name:		Milford		Laboratory ID No. (Lot No.)			
Project Type: Groundwater Sampling - IZ			TRW PO No.		30126485.000IZ		Site Location:		Milford, Michigan					
TRW PM: (name, company, address, e-mail)			Database Manager: (name, company, address, e-mail)				Preservatives Code (see below)							
Bob Bleazard			Marina Saup and Sharon Clouse											
11202 East Germann Road			2850 Cabot Drive, Suite 508											
Mesa, AZ 85212			Novi, MI 48377											
bob.bleazard@trw.com			Stacey Hannula@arcadis.com											
			stacyh@arcadis-us.com											
Analysis Level			Level 1 (Routine Report)		Sampler		S. Hannula							
TAT			10 Business Days (Standard - Level 1)		Deliverable		EDD/PDF (e-mail)							
Sample Identification and Information														
Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID	Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	No. of Cont.	Grab or Composite	Field Filtered	Lab Sample Numbers		
1 OW-10D (MS/USD)	--	--	OW-10D 051722	5-17-22	0942	GW	WATER	REG	9	G	X	MS/USD		
2 OW-08D	--	--	OW-08D 051722	5-17-22	1145	GW	WATER	REG	3	G	X			
3 OW-05D2	--	--	OW-05D2 051722	5-17-22	1315	GW	WATER	REG	3	G	X			
4 OW-30	--	--	OW-30 051722	5-17-22	1435	GW	WATER	REG	3	G	X			
5 OW-23D	--	--	OW-23D 051722	5-17-22	1556	GW	WATER	REG	3	G	X			
6 OW-28	--	--	OW-28 051722	5-17-22	1705	GW	WATER	REG	3	G	X			
7 OW-18D	--	--	OW-18D 051822	5-18-22	1110	GW	WATER	REG	3	G	X			
8 OW-09-ML-D	--	--	OW-09-ML-D 051822	5-18-22	1210	GW	WATER	REG	3	G	X			
9 OW-09-ML-C	--	--	OW-09-ML-C 051822	5-18-22	1313	GW	WATER	REG	3	G	X			
10 OW-18-ML-A	--	--	OW-18-ML-A 051822	5-18-22	1455	GW	WATER	REG	3	G	X			
11 OW-18-ML-B	--	--	OW-18-ML-B 051822	5-18-22	1533	GW	WATER	REG	3	G	X			
Special Instructions:														
Relinquished by:		Company:		Received by:		Company:		Condition:		Custody Seals Intact:				
Stacey Hannula		Arcadis		Jen Hal		EFTH								
Date/Time:		Date/Time:		Date/Time:		Date/Time:		Cooler Temp.:						
5/20/22 1200		5/20/22 1200		5/20/22 1200		5/20/22 1200								
Relinquished by:		Company:		Received by:		Company:		Condition:		Custody Seals Intact:				
Jen Hal		EFTH		Jen Hal		EFTH								
Date/Time:		Date/Time:		Date/Time:		Date/Time:		Cooler Temp.:						
5/20/22 1200		5/20/22 1200		5/20/22 1200		5/20/22 1200								
Relinquished by:		Company:		Received by:		Company:		Condition:		Custody Seals Intact:				
Date/Time:		Date/Time:		Date/Time:		Date/Time:		Cooler Temp.:						
Relinquished by:		Company:		Received by:		Company:		Condition:		Custody Seals Intact:				
Date/Time:		Date/Time:		Date/Time:		Date/Time:		Cooler Temp.:						

Preservatives Code: 0 = None; 1 = HCL; 2 = HNO3; 3 = H2SO4; 4 = NaOH; 5 = Zn Acetate; 6 = MeOH; 7 = NaHSO4; 8 = Other (specify):

pg 1/3

2.1 / 2.1

STL North Canton			Chain Of Custody / Analysis Request										LAB USE ONLY			
4101 Shuffel Drive NW North Canton, OH 44720 Attn: Michael DelMonico			Privileged & Confidential Yes Site Name: Milford										Laboratory ID No. (Lot No.)			
Project Type: Groundwater Sampling - IZ			TRW PO No. 30049533.000IZ Site Location: Milford, Michigan													
TRW PM: (name, company, address, e-mail)			Database Manager: (name, company, address, e-mail)													
Bob Bleazard			Marina Samp and Sharon Clouse													
11202 East Germann Road			28550 Cabot Drive, Suite 500													
Mesa, AZ 85212			Novi, MI 48377													
bob.bleazard@trw.com			Marina.Samp@arcadis.com													
			sharon.clouse@arcadis.com													
Analysis Level			Sampler													
Level 1 (Routine Report)			S. Hannula													
TAT			Deliverable													
10 Business Days (Standard - Level 1)			EDD/PDF (e-mail)													
Sample Identification and Information																
Location ID	Start Depth (ft)	End Depth (ft)	Field Sample ID	Sample Date	Sample Time	Sample Type	Sample Matrix	Sample Purpose	No. of Cont.	Grab or Composite	Field Filtered	VOL	Q200	D	Lab Sample Numbers	
1 OW-18-ML-C	--	--	OW-18-ML-C 051922	5/19/22	0946	GW	WATER	REG	3	G	X					
2 OW-18-ML-D	--	--	OW-18-ML-D 051922	5/19/22	1055	GW	WATER	REG	3	G	X					
3 OW-18-ML-E	--	--	OW-18-ML-E 051922	5/19/22	1246	GW	WATER	REG	3	G	X					
4 OW-18-ML-F	--	--	OW-18-ML-F 051922	5/19/22	1352	GW	WATER	REG	3	G	X					
5 OW-02D2	--	--	OW-02D2 051922	5/19/22	1603	GW	WATER	REG	3	G	X					
6 OW-22	--	--	OW-22 052022	5/20/22	1847	GW	WATER	REG	3	G	X					
7 OW-07D	--	--	OW-07D 052022	5/20/22	1025	GW	WATER	REG	3	G	X					
8 DUP-01	--	--	DUP-01	--	--	GW	WATER	REG	3	G	X					
9 DUP-02	--	--	DUP-02	--	--	GW	WATER	REG	3	G	X					
10 EQUIPMENT BLANK	--	--	EQUIPMENT BLANK 051922	5/19/22	1000	QC	WATER	REG	3	G	N	X				
11 FIELD BLANK	--	--	FIELD BLANK 051922	5/19/22	0920	QC	WATER	REG	3	G	N	X				
Special Instructions:																
Relinquished by: Stacy Hannula			Company: Arcadis			Received by: Jennifer			Company: EETA			Condition:			Custody Seals Intact	
Date/Time: 5/20/22			Date/Time: 5/20/22			Date/Time: 5/20/22 1201			Date/Time: 5/20/22 0800			Cooler Temp.				
Relinquished by: Jennifer			Company: EETA			Received by: Jennifer			Company: EETA			Condition:			Custody Seals Intact	
Date/Time: 5/20/22 1203			Date/Time: 5/20/22 1203			Date/Time: 5/20/22 1203			Date/Time: 5/20/22 0800			Cooler Temp.				
Relinquished by:			Company:			Received by:			Company:			Condition:			Custody Seals Intact	
Date/Time:			Date/Time:			Date/Time:			Date/Time:			Cooler Temp.				
Relinquished by:			Company:			Received by:			Company:			Condition:			Custody Seals Intact	
Date/Time:			Date/Time:			Date/Time:			Date/Time:			Cooler Temp.				
Preservatives Code: 0 = None; 1 = HCL; 2 = HNO3; 3 = H2SO4; 4 = NaOH; 5 = Zn. Acetate; 6 = MeOH; 7 = NaHSO4; 8 = Other (specify):																

pg 2/3

pg 3/3

Eurofins - Canton Sample Receipt Form/Narrative Login # : 167051
Barberton Facility

Client TRW Site Name Milford Cooler unpacked by: me
Cooler Received on 5-21-22 Opened on 5-23-22
FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off Eurofins Courier Other
Receipt After-hours: Drop-off Date/Time **Storage Location**

Eurofins Cooler # TA Foam Box Client Cooler Box Other
Packing material used: Bubble Wrap Foam Plastic Bag None Other
COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
IR GUN# IR-13 (CF 0.0 °C) Observed Cooler Temp. 2.1 °C Corrected Cooler Temp. 2.1 °C
IR GUN #IR-15 (CF -0.7 °C) Observed Cooler Temp. °C Corrected Cooler Temp. °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
-Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No NA
-Were tamper/custody seals intact and uncompromised? Yes No NA

3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? Yes No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?
10. Were correct bottle(s) used for the test(s) indicated? Yes No
11. Sufficient quantity received to perform indicated analyses? Yes No
12. Are these work share samples and all listed on the COC? Yes No
If yes, Questions 13-17 have been checked at the originating laboratory.

13. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC157842
14. Were VOAs on the COC? Yes No
15. Were air bubbles >6 mm in any VOA vials?  Larger than this. Yes No NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # 01042016 Yes No
17. Was a LL Hg or Me Hg trip blank present? Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other
Concerning _____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page Samples processed by:

19. SAMPLE CONDITION
Sample(s) _____ were received after the recommended holding time had expired.
Sample(s) _____ were received in a broken container.
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION
Sample(s) _____ were further preserved in the laboratory.
Time preserved: _____ Preservative(s) added/Lot number(s): _____
VOA Sample Preservation - Date/Time VOAs Frozen: _____



Tuesday, June 14, 2022

Fibertec Project Number: A08975 Partial
Project Identification: ZF Active Safety US Inc. (Milford) /
Submittal Date: 06/08/2022

Ms. Stacey Hannula
Arcadis U.S., Inc. - Novi
28550 Cabot Drive
Suite 500
Novi, MI 48377

Dear Ms. Hannula,

Thank you for selecting Fibertec Environmental Services as your analytical laboratory. The samples you submitted have been analyzed in accordance with NELAC standards and the results compiled in the attached report. Any exceptions to NELAC compliance are noted in the report. These results apply only to those samples submitted. Please note TO-15 samples will be disposed of 7 calendar days after the reporting date. All other samples will be disposed of 30 days after the reporting date.

If you have any questions regarding these results or if we may be of further assistance to you, please contact me at (517) 699-0345.

Sincerely,

A handwritten signature in dark ink, appearing to read "Sue Ricketts".

By Sue Ricketts at 4:40 PM, Jun 14, 2022

For Daryl P. Strandbergh
Laboratory Director

Enclosures

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Analytical Laboratory Report
Laboratory Project Number: A08975
Laboratory Sample Number: A08975-001

Order: A08975
Date: 06/14/22

Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	OW-16D2_060822	Chain of Custody:	203194
Client Project Name:	ZF Active Safety US Inc. (Milford)	Sample No:		Collect Date:	06/08/22
Client Project No:	NA	Sample Matrix:	Ground Water	Collect Time:	09:35

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08975-001 **Matrix: Ground Water**
Description: OW-16D2_060822

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	L-	µg/L	50	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
3. Benzene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
4. Bromobenzene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
5. Bromochloromethane	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
6. Bromodichloromethane	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
7. Bromoform	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
8. Bromomethane	U		µg/L	5.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
9. 2-Butanone	U		µg/L	25	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
10. n-Butylbenzene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
13. Carbon Disulfide	U		µg/L	5.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
15. Chlorobenzene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
16. Chloroethane	U		µg/L	5.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
17. Chloroform	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
18. Chloromethane	U		µg/L	5.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
21. Dibromochloromethane	U		µg/L	5.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
22. Dibromomethane	U		µg/L	5.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
27. 1,1-Dichloroethane	3.6		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
30. cis-1,2-Dichloroethene	19		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
31. trans-1,2-Dichloroethene	1.4		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
35. Ethylbenzene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
37. 2-Hexanone	U		µg/L	50	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC

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F: (231) 775-8584

Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	OW-16D2_060822	Chain of Custody:	203194
Client Project Name:	ZF Active Safety US Inc. (Milford)	Sample No:		Collect Date:	06/08/22
Client Project No:	NA	Sample Matrix:	Ground Water	Collect Time:	09:35

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08975-001 **Matrix: Ground Water**
Description: OW-16D2_060822

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
38. Isopropylbenzene	U		µg/L	5.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
40. Methylene Chloride	U		µg/L	5.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
‡ 41. 2-Methylnaphthalene	U	V-	µg/L	5.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
42. MTBE	U		µg/L	5.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
43. Naphthalene	U		µg/L	5.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
44. n-Propylbenzene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
45. Styrene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
48. Tetrachloroethene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
49. Toluene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
53. Trichloroethene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
59. Vinyl Chloride	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
60. m&p-Xylene	U		µg/L	2.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
61. o-Xylene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC
‡ 62. Xylenes	U		µg/L	3.0	1.0	06/13/22	VI22F13B	06/14/22 01:41	VI22F13B	BRC

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Analytical Laboratory Report
Laboratory Project Number: A08975
Laboratory Sample Number: A08975-002

Order: A08975
Date: 06/14/22

Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	OW-16D2R1_060822	Chain of Custody:	203194
Client Project Name:	ZF Active Safety US Inc. (Milford)	Sample No:		Collect Date:	06/08/22
Client Project No:	NA	Sample Matrix:	Ground Water	Collect Time:	11:00

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08975-002 **Matrix: Ground Water**
Description: OW-16D2R1_060822

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
1. Acetone	U	L-	µg/L	50	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
‡ 2. Acrylonitrile	U		µg/L	2.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
3. Benzene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
4. Bromobenzene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
5. Bromochloromethane	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
6. Bromodichloromethane	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
7. Bromoform	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
8. Bromomethane	U		µg/L	5.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
9. 2-Butanone	U		µg/L	25	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
10. n-Butylbenzene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
11. sec-Butylbenzene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
12. tert-Butylbenzene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
13. Carbon Disulfide	U		µg/L	5.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
14. Carbon Tetrachloride	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
15. Chlorobenzene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
16. Chloroethane	U		µg/L	5.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
17. Chloroform	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
18. Chloromethane	U		µg/L	5.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
19. 2-Chlorotoluene	U		µg/L	5.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
‡ 20. 1,2-Dibromo-3-chloropropane (SIM)	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
21. Dibromochloromethane	U		µg/L	5.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
22. Dibromomethane	U		µg/L	5.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
23. 1,2-Dichlorobenzene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
24. 1,3-Dichlorobenzene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
25. 1,4-Dichlorobenzene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
26. Dichlorodifluoromethane	U		µg/L	5.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
27. 1,1-Dichloroethane	2.5		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
28. 1,2-Dichloroethane	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
29. 1,1-Dichloroethene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
30. cis-1,2-Dichloroethene	21		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
31. trans-1,2-Dichloroethene	1.1		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
32. 1,2-Dichloropropane	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
33. cis-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
34. trans-1,3-Dichloropropene	U		µg/L	0.50	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
35. Ethylbenzene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
36. Ethylene Dibromide	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
37. 2-Hexanone	U		µg/L	50	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC

1914 Holloway Drive
11766 E. Grand River
8660 S. Mackinaw Trail

Holt, MI 48842
Brighton, MI 48116
Cadillac, MI 49601

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T: (810) 220-3300
T: (231) 775-8368

F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Client Identification:	Arcadis U.S., Inc. - Novi	Sample Description:	OW-16D2R1_060822	Chain of Custody:	203194
Client Project Name:	ZF Active Safety US Inc. (Milford)	Sample No:		Collect Date:	06/08/22
Client Project No:	NA	Sample Matrix:	Ground Water	Collect Time:	11:00

Sample Comments:

Definitions: Q: Qualifier (see definitions at end of report) NA: Not Applicable ‡: Parameter not included in NELAC Scope of Analysis.

Volatile Organic Compounds (VOCs) by GC/MS
Method: EPA 5030C/EPA 8260D

Aliquot ID: A08975-002 **Matrix: Ground Water**
Description: OW-16D2R1_060822

Parameter(s)	Result	Q	Units	Reporting Limit	Dilution	Preparation		Analysis		
						P. Date	P. Batch	A. Date	A. Batch	Init.
38. Isopropylbenzene	U		µg/L	5.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
39. 4-Methyl-2-pentanone	U		µg/L	50	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
40. Methylene Chloride	U		µg/L	5.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
‡ 41. 2-Methylnaphthalene	U	V-	µg/L	5.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
42. MTBE	U		µg/L	5.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
43. Naphthalene	U		µg/L	5.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
44. n-Propylbenzene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
45. Styrene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
46. 1,1,1,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
47. 1,1,2,2-Tetrachloroethane	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
48. Tetrachloroethene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
49. Toluene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
50. 1,2,4-Trichlorobenzene	U		µg/L	5.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
51. 1,1,1-Trichloroethane	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
‡ 52. 1,1,2-Trichloroethane	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
53. Trichloroethene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
54. Trichlorofluoromethane	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
55. 1,2,3-Trichloropropane	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
‡ 56. 1,2,3-Trimethylbenzene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
57. 1,2,4-Trimethylbenzene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
58. 1,3,5-Trimethylbenzene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
59. Vinyl Chloride	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
60. m&p-Xylene	U		µg/L	2.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
61. o-Xylene	U		µg/L	1.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC
‡ 62. Xylenes	U		µg/L	3.0	1.0	06/13/22	VI22F13B	06/14/22 02:07	VI22F13B	BRC

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F: (231) 775-8584

Definitions/ Qualifiers:

- A:** Spike recovery or precision unusable due to dilution.
B: The analyte was detected in the associated method blank.
E: The analyte was detected at a concentration greater than the calibration range, therefore the result is estimated.
J: The concentration is an estimated value.
M: Modified Method
U: The analyte was not detected at or above the reporting limit.
X: Matrix Interference has resulted in a raised reporting limit or distorted result.
W: Results reported on a wet-weight basis.
***:** Value reported is outside QC limits

Exception Summary:

- L-** : Recovery in the associated laboratory sample (LCS) exceeds the lower control limit. Results may be biased low.
V- : Recovery in the associated continuing calibration verification sample (CCV) exceeds the lower control limit. Results may be biased low.

Analysis Locations:

All analyses performed in Holt.



Accreditation Number(s):

T104704518-19-8 (TX)

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11766 E. Grand River
8660 S. Mackinaw Trail

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F: (517) 699-0388
F: (810) 220-3311
F: (231) 775-8584

Client Name: Arcadis				MATRIX (SEE RIGHT CORNER FOR CODE) # OF CONTAINERS VOC - 8260P HOLD SAMPLE												Matrix Code				Deliverables	
Contact Person: Stacey Hannula																S Soil		GW Ground Water		☒ Level 2	
Project Name/ Number: 2003 30136112 TRW Milford																A Air		SW Surface Water		☐ Level 3	
Email distribution list: stacey.hannula@arcadis.com john.mcininis@arcadis.com																O Oil		WW Waste Water		☐ Level 4	
Quote#				P Wipe		X Other: Specify		☐ EDD													
Purchase Order# 30136112				Remarks: 48hr TAT 48hr TAT standard TAT standard TAT standard TAT																	
Date	Time	Sample #	Client Sample Descriptor																		
6.8	0935		OW-1602 - 060822																		
	1100		OW-1602R1 - 060822																		
	1110		FIELD BLANK																		
	1112		EQUIPMENT BLANK																		
	-	-	TRIP BLANK																		
Comments:																					
Sampled/Relinquished By: Stacey Hannula Arcadis				Date/ Time: 6.8.22 1200				Received By:													
Relinquished By:				Date/ Time:				Received By:													
Relinquished By:				Date/ Time: 6/8/22 16:30				Received By:													
Turnaround Time ALL RESULTS WILL BE SENT BY THE END OF THE BUSINESS DAY																					
1 bus. day <u>2</u> 2 bus. days 3 bus. days 4 bus. days <u>3</u> 5-7 bus. days (standard) Other (specify time/date requirement):								LAB USE ONLY Fibertec project number: A08975 Temperature upon receipt at Lab: 3.40C													
Please see back for terms and conditions																					

Received
On Ice

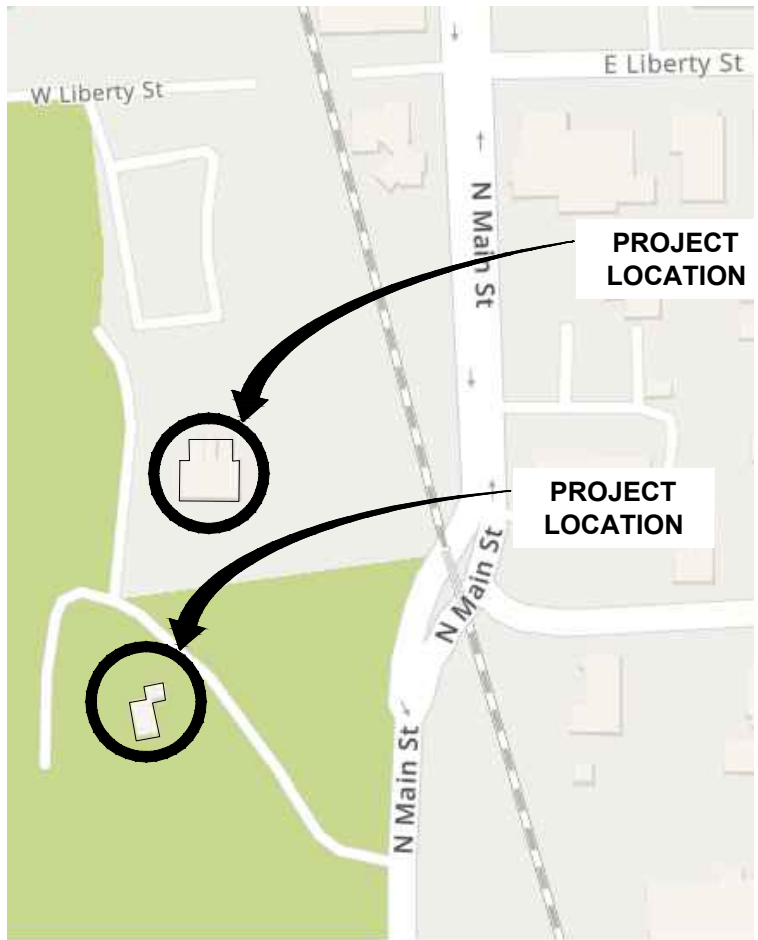
ATTACHMENT 5

80% Preliminary Design Plans and Specifications

VILLAGE OF MILFORD, MI GROUNDWATER TREATMENT SYSTEM IMPROVEMENTS

ADMINISTRATIVE ORDER FOR RESPONSE ACTIVITY EGLE DOCKET NO. AO-RRD-22-001

MAY 2022



LOCATION MAP
NOT TO SCALE

ADDRESS:
159 N MAIN ST.
MILFORD, MI 48381

INDEX OF DRAWINGS:

GENERAL

G-001 COVER SHEET
G-002 SITE PLAN
G-003 FLOW DIAGRAMS
G-004 SPECIFICATIONS

DEMOLITION

D-001 DEMOLITION PLANS
D-002 DEMOLITION SECTIONS AND DETAILS

MECHANICAL

M-001 PROPOSED PLANS
M-002 PROPOSED SECTIONS AND DETAILS

ELECTRICAL

E-001 GENERAL NOTES AND LEGEND
E-002 SINGLE LINE DIAGRAM
E-003 PROPOSED ELECTRICAL EQUIPMENT



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ZF ACTIVE SAFETY US INC.



VILLAGE OF MILFORD, MI
GROUND WATER TREATMENT
SYSTEM IMPROVEMENTS

CLIENT PROJ. NO.: 30126485

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PROJECT STATUS:

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DESIGNED BY: X. XXXX
DRAWN BY: C. ELLING
CHECKED BY: X. XXXX

SHEET TITLE

GENERAL

COVER SHEET

SCALE:
AS SHOWN

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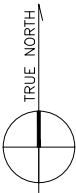
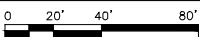
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SITE PLAN

SCALE: 1" = 40'



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SHEET TITLE

GENERAL

SITE PLAN

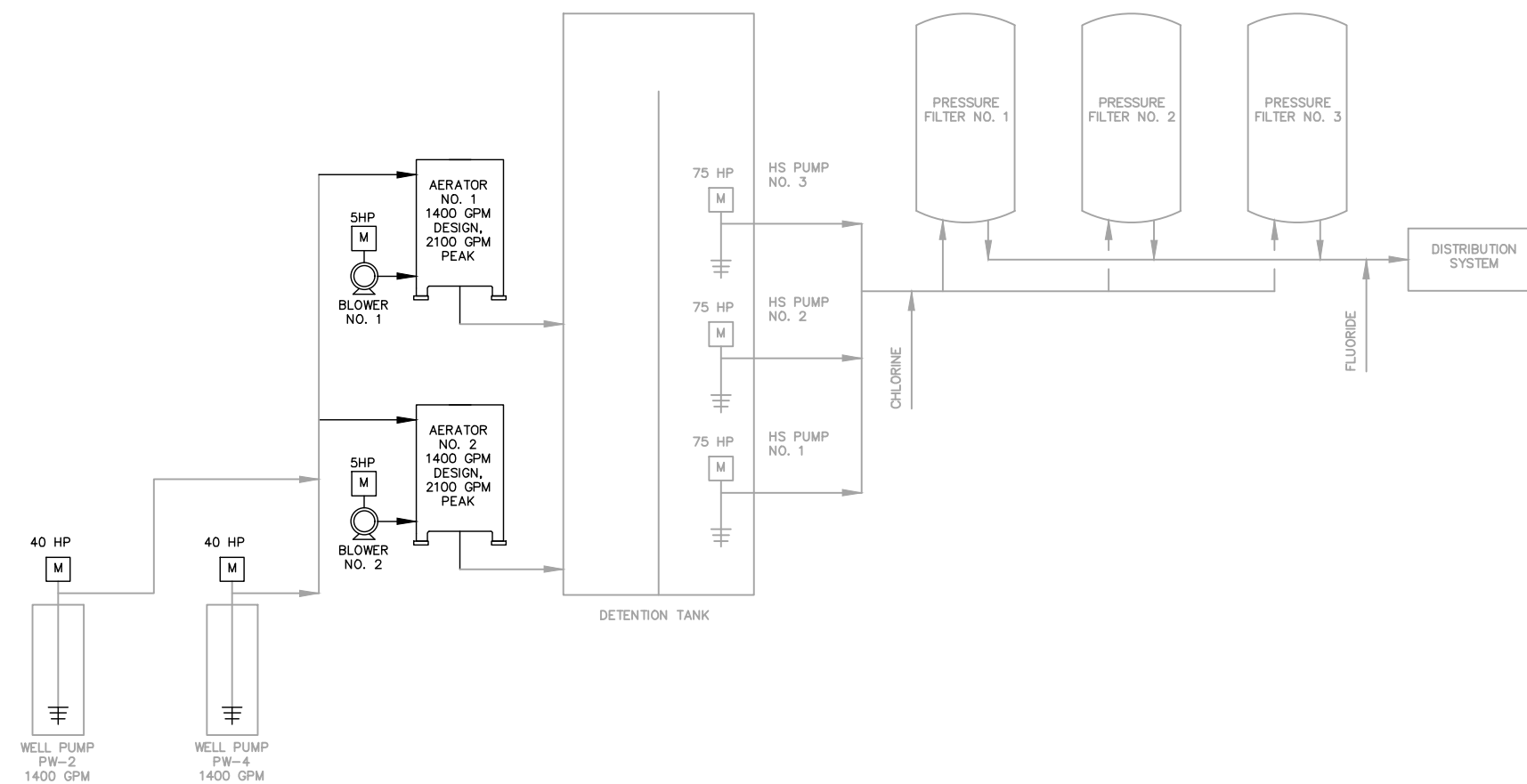
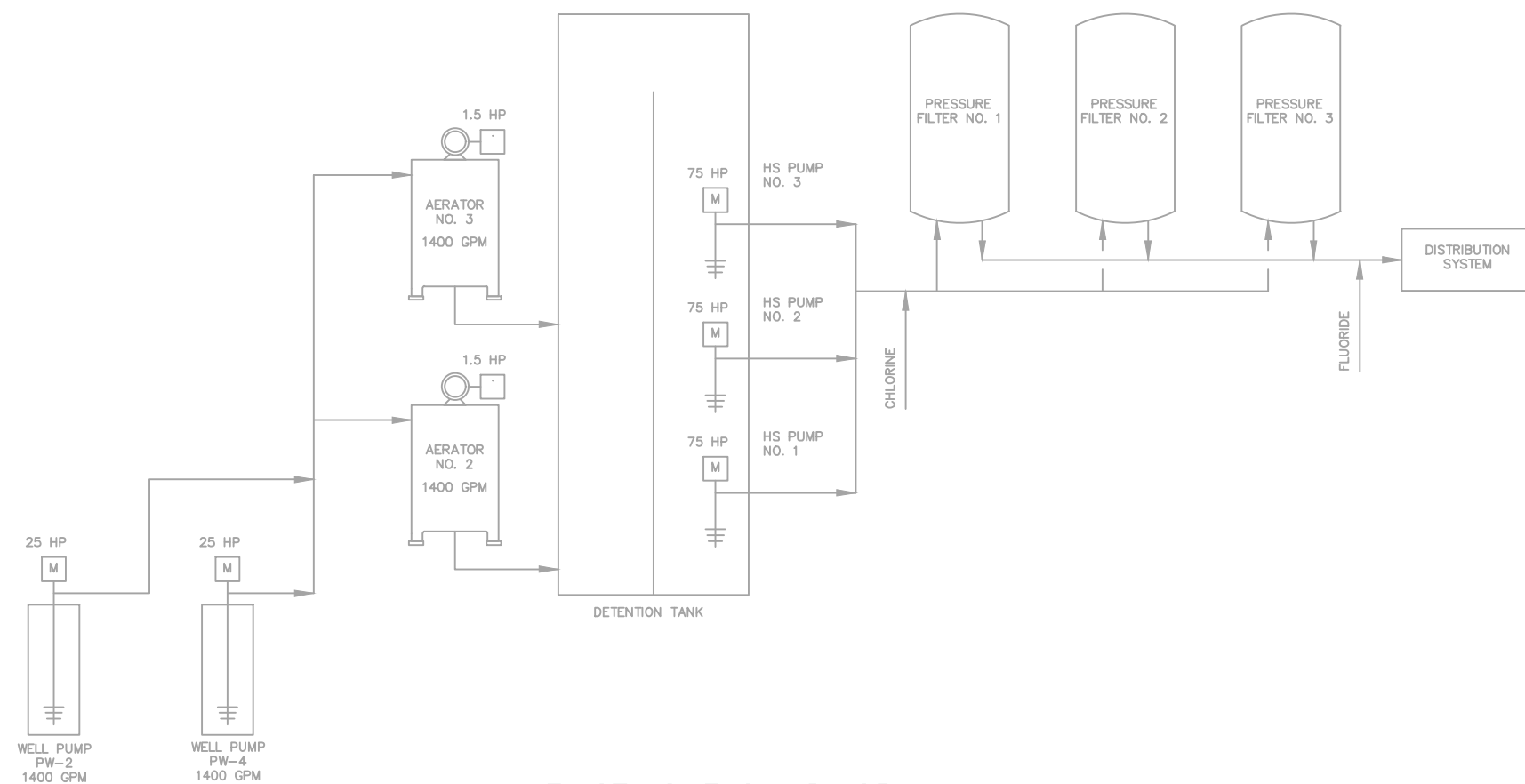
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SHEET TITLE

GENERAL

FLOW DIAGRAMS

SCALE:

AS SHOWN

0 1
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UNREDUCED DRAWING

DRAWING NO.:

G-003

SHEET NO.: 3 OF 11

WORK SEQUENCE REQUIREMENTS:

1. THE IRON REMOVAL PLANT IS A 24/7 OPERATING FACILITY AND SHALL REMAIN IN SERVICE AT ALL TIMES.
2. ONLY ONE WELL PUMP MAY BE TAKEN OUT OF SERVICE AT A TIME. WELL PUMPS SHALL NOT BE TAKEN OUT OF SERVICE PRIOR TO OCTOBER 1, 2022.
3. WORK ASSOCIATED WITH THE WELL PUMPS SHALL BE COMPLETED PRIOR TO TAKING AN AERATOR OUT OF SERVICE.
4. ONLY ONE AERATOR MAY BE TAKEN OUT OF SERVICE AT A TIME.
5. WORK SHALL BE COMPLETED PRIOR TO MARCH 15, 2023.

CONTRACTOR'S USE OF SITE

1. CONTRACT CONSTRUCTION ACTIVITIES SHALL BE LIMITED TO 7AM – 5PM, MONDAY THROUGH FRIDAY BUT NO SOONER THAN SUNRISE AND NO LATER THAN SUNSET UNLESS OTHERWISE AUTHORIZED BY OWNER.
2. WEEKEND AND HOLIDAY WORK IS NOT PERMITTED UNLESS OTHERWISE AUTHORIZED BY OWNER. 48 HOURS IS REQUIRED WHEN REQUESTING WEEKEND OR HOLIDAY WORK.

DEMOLITION

1. SALVAGE AND OWNERSHIP: UNLESS DIRECTED OTHERWISE BY OWNER, EXISTING EQUIPMENT AND MATERIALS REMOVED AND NOT SHOWN OR SPECIFIED TO BE REUSED IN THE WORK WILL BECOME CONTRACTOR'S PROPERTY.

PROCESS PIPING

1. RAW WATER
- A. DUCTILE IRON PIPE, JOINTS, AND FITTINGS:
- I. MANUFACTURER: PROVIDE PRODUCTS OF ONE OF THE FOLLOWING:
1. MCWANE CAST IRON PIPE COMPANY
 2. CLOW WATER SYSTEMS COMPANY
 3. GRIFFIN PIPE PRODUCTS CO.
 4. AMERICAN CAST IRON PIPE CO.
 5. U.S. PIPE AND FOUNDRY CO.
 6. OR APPROVED EQUAL.
- II. FLANGED PIPE: FABRICATE IN ACCORDANCE WITH ANSI/AWWA C115.
1. PRESSURE RATING: PRESSURE CLASS 350.
- III. PIPE JOINTS:
1. FLANGED JOINTS: CONFORM TO ANSI/AWWA C110 AND ANSI/AWWA C111.
 - A. GASKETS: GASKETS SHALL BE AT LEAST 1/8-INCH THICK, RING OR FULL-FACE AS REQUIRED FOR THE PIPE, OF SYNTHETIC RUBBER COMPOUND CONTAINING NOT LESS THAN 50 PERCENT BY VOLUME NITRILE OR NEOPRENE, AND SHALL BE FREE FROM FACTICE, RECLAIMED RUBBER, AND OTHER DELETERIOUS SUBSTANCES. GASKETS SHALL BE NSF-61 CERTIFIED AND DESIGNED FOR USE WITH DUCTILE IRON PIPE AND FITTINGS.
 - B. BOLTS: COMPLY WITH ANSI B18.2.1.
 - I. EXPOSED: ASTM A307, GRADE B.
 - C. NUTS: COMPLY WITH ANSI B18.2.2.
 - I. EXPOSED: ASTM A563, GRADE A, HEAVY HEX.
- IV. FITTINGS: COMPLY WITH ANSI/AWWA C110 AND ANSI/AWWA C111.
1. MATERIAL: DUCTILE IRON.
 2. PRESSURE RATING, GASKETS, BOLTS, AND NUTS SHALL BE AS SPECIFIED FOR FLANGED JOINTS. PRESSURE RATING OF FITTINGS SHALL MEET, BUT NOT EXCEED, SPECIFIED PRESSURE RATING OR SPECIAL THICKNESS CLASS OF THE CONNECTED PIPE.
- V. LINING:
1. PIPE AND FITTINGS SHALL BE LINED WITH NSF-61 CERTIFIED BITUMINOUS SEAL COATED CEMENT MORTAR LINING IN ACCORDANCE WITH ANSI/AWWA C104.
- VI. COATING:
1. FACTORY APPLIED PRIME COAT.

PROCESS SPECIALTIES

1. SLEEVE-TYPE, FLEXIBLE COUPLINGS:
 - A. PRODUCTS AND MANUFACTURERS: PROVIDE ONE OF THE FOLLOWING:
 - I. BAKER COUPLING COMPANY, INC., SERIES 200.
 - II. DRESSER INDUSTRIES, STYLE 3B.
 - III. SMITH-BLAIR, INC., 411.
 - IV. OR APPROVED EQUAL.
 - B. TYPE: AWWA C219, BOLTED, GASKETED SLEEVE-TYPE.
 - C. COMPONENTS:
 - I. CENTER SLEEVE.
 - II. END RINGS.
 - III. RUBBER COMPOUND, WEDGE-SHAPED GASKETS SUITABLE FOR CONFIGURATION AND SERVICE INTENDED.
 - IV. FLANGED COUPLING ADAPTER WHERE REQUIRED; COMPLY WITH AWWA C115.
 - V. FASTENERS: TRACKHEAD STEEL BOLTS AND NUTS FOR ABOVEGROUND SERVICE; STAINLESS STEEL BOLTS AND NUTS FOR BURIED SERVICE.
 - VI. COUPLING MATERIAL: DUCTILE IRON, OR STEEL AS RECOMMENDED BY MANUFACTURER BASED ON PIPE MATERIAL.
 - D. EXTERIOR FINISH: EXPOSED SERVICE: FACTORY-APPLIED PRIMER.
 - E. INTERIOR FINISH: FACTORY-APPLIED EPOXY COATING; NSF-CERTIFIED.

AIR STRIPPING TOWERS

1. UNDER DEVELOPMENT

WELL PUMP MODIFICATIONS

- ### 1. UNDER DEVELOPMENT



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MILFORD, MI
ZF ACTIVE SAFETY US INC.



VILLAGE OF MILFORD, MI GROUND WATER TREATMENT SYSTEM IMPROVEMENTS

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DATE: MAY 2022

DESIGNED BY: X. XXXX

DRAWN BY: C. ELLING

CHECKED BY: X. XXXX

SHEET TITLE

GENERAL

SPECIFICATIONS

SCALE: 0 1
AS SHOWN BAR IS ONE INCH UNREDUCED DRAWING

DRAWING NO.:

SHEET NO.: 4 OF 11

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DATE: MAY 2022

DESIGNED BY: X. XXXX

DRAWN BY: K. ARTZ

CHECKED BY: X. XXXX

SHEET TITLE

DEMOLITION

PLANS

SCALE:  BAR IS ONE INCH ON UNREDUCED DRAWING

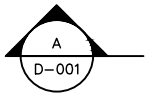
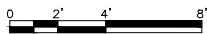
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D-001

SHEET NO.: 5 OF 11

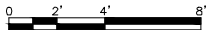


SCALE: $1/4" = 1'-0"$



IRON REMOVAL PLANT DEMOLITION PLAN

SCALE: $1/4" = 1'-0"$



A compass rose with a circle divided into four quadrants by a vertical and a horizontal line. The vertical line is labeled "TRUE NORTH" with an arrow pointing upwards.



TO BE REMOVED



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VILLAGE OF MILFORD, MI
GROUND WATER TREATMENT
SYSTEM IMPROVEMENTS

CLIENT PROJ. NO.: 30126485

REVISIONS

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DATE: MAY 2022

DESIGNED BY: X. XXXX

DRAWN BY: K. ARTZ

CHECKED BY: X. XXXX

SHEET TITLE

DEMOLITION

SECTIONS

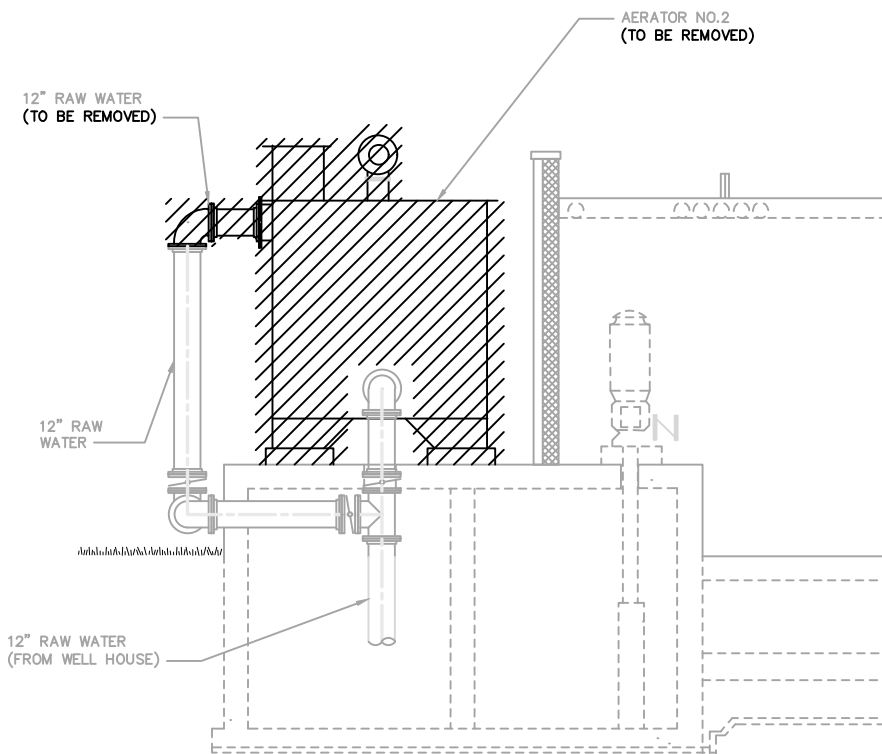
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BAR IS ONE INCH ON
UNREDUCED DRAWING

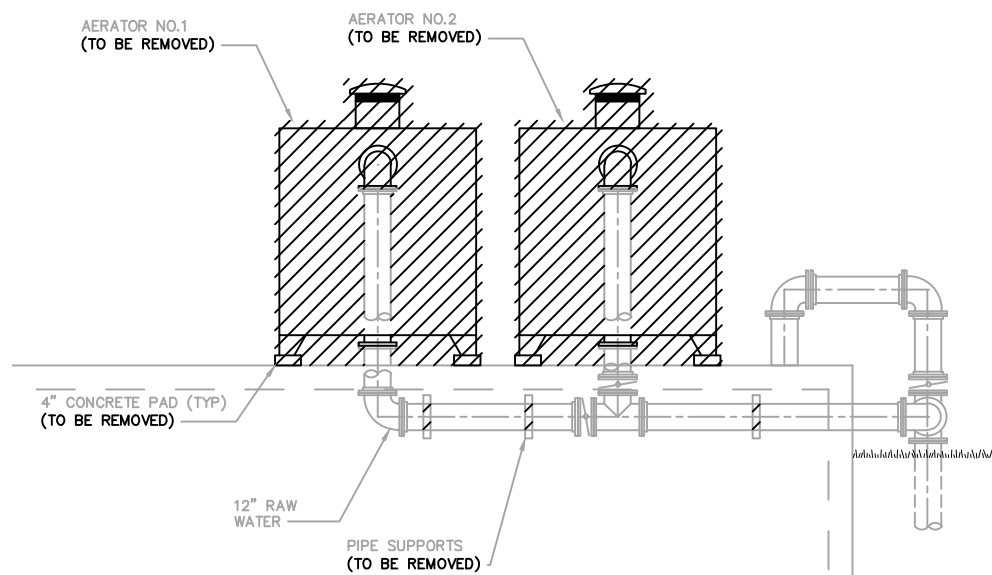
DRAWING NO.:

D-002

SHEET NO.: 6 OF 11




IRON REMOVAL PLANT DEMOLITION SECTION
 SCALE: 1/4" = 1'-0"
 






User: JARCH Spec: AUS-NC5000 File: C:\Users\JARCH\ARCADIS\30126485 - ZF 2022 KELSEY-HAYES MILFORD OMM - 01 VILLAGE OF MILFORD TREATMENT SYS DESIGN\DRAWINGS\CAD\ELECTRICAL\E-001.DWG Scale: 1:1 Saved Date: 5/19/2022 Time: 11:59 Plot Date: Arch, Jordan, 5/20/2022, 13:25 : Layout: 09

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EQUIPMENT SHALL BE LISTED BY A NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL). - PROVIDE AND MAINTAIN A CLEAR WORKING SPACE ABOUT ELECTRICAL EQUIPMENT (SWITCHBOARDS, PANELBOARDS, ETC.) IN ACCORDANCE WITH NEC ARTICLES 110.26 AND 110.34. - BOND RACEWAYS AND THE FRAMES AND ENCLOSURES OF MOTORS, BREAKERS, SWITCHES, AND OTHER ELECTRICAL EQUIPMENT TO THE BUILDING GROUNDING SYSTEM. INSTALL AN INSULATED EQUIPMENT GROUND CONDUCTOR IN EACH RACEWAY OR CONDUIT. SIZE EQUIPMENT GROUND CONDUCTOR IN ACCORDANCE WITH NEC TABLE 250.122. - PROVIDE CIRCUIT BREAKERS WITH UL LISTED INTERRUPTING RATING (RMS SYMMETRICAL AMPERES) GREATER THAN THE AVAILABLE FAULT CURRENT OF THE SYSTEM. DO NOT USE SERIES RATED BREAKERS. - PROVIDE PADLOCKING PROVISIONS FOR EACH NEW CIRCUIT BREAKER. - IDENTIFY NEW BRANCH CIRCUITS AT THE PANEL AND AT THE LOAD OUTLET, RECEPTACLE, AND SWITCH. IDENTIFY THE PURPOSE OF INDIVIDUAL CIRCUIT BREAKERS, SAFETY SWITCHES, AND MOTOR STARTERS BY MEANS OF NAMEPLATES AS INDICATED. - ROUTE CONDUITS TO SUIT EQUIPMENT AND BUILDING STRUCTURE. LIMIT THE USE OF ELECTRICAL METALLIC TUBING (EMT) TO INTERIOR AREAS WHERE IT WILL NOT BE SUBJECT TO PHYSICAL DAMAGE OR CORROSION. USE RIGID GALVANIZED STEEL CONDUIT (RGS) FOR WORK EMBEDDED IN CONCRETE OR EXPOSED TO PHYSICAL DAMAGE. USE MINIMUM 3/4 INCH CONDUIT. - SEAL AROUND CONDUIT PENETRATIONS THROUGH INTERIOR WALLS AND FLOORS SEPARATING AREAS TO RESTORE ORIGINAL FIRE RATING. USE A UL CLASSIFIED FIRE SEALANT. SEAL PENETRATIONS THROUGH ROOF AND EXTERIOR WALLS TO MAKE WATERPROOF. REQUEST INSPECTION OF FIRE SEALS BY ELECTRICAL INSPECTOR FROM AUTHORITY HAVING JURISDICTION BEFORE AND AFTER PLACEMENT OF FIRE SEAL MATERIALS. - USE 12 AWG OR LARGER CONDUCTORS FOR POWER WIRING. USE 14 AWG OR LARGER STRANDED CONDUCTORS FOR CONTROL WIRING UNLESS OTHERWISE SPECIFIED OR SHOWN ON THE DRAWINGS. - USE ONLY COPPER CONDUCTORS UNLESS NOTED OTHERWISE. CONDUCTORS 10 AWG AND SMALLER SHALL BE SOLID, AND 8 AWG AND LARGER SHALL BE STRANDED. PROVIDE TYPE THHN/THWN WIRE INSULATIONS. TYPE XHHW INSULATION MAY BE USED FOR 1 AWG AND LARGER. - USE THE FOLLOWING CONDUCTOR COLOR CODES FOR 480Y/277V: PHASE A: BROWN PHASE B: ORANGE PHASE C: YELLOW NEUTRAL: GRAY GROUND: GREEN - USE THE FOLLOWING CONDUCTOR COLOR CODES FOR 208Y/120V: PHASE A: BLACK PHASE B: RED PHASE C: BLUE NEUTRAL: WHITE GROUND: GREEN - ARRANGE CONNECTIONS FOR SINGLE PHASE CIRCUITS TO ACHIEVE THREE PHASE LOAD BALANCE WITHIN 20% OF THE AVERAGE PHASE LOAD CURRENT. - DO NOT USE A COMMON NEUTRAL FOR MULTIPLE CIRCUITS. - TEST CONDUCTORS FOR CONTINUITY AND FREEDOM FROM SHORTS AND UNINTENTIONAL GROUNDS. ELECTRICAL EQUIPMENT SPECIFIED IN THIS DOCUMENT SHALL BE ACCEPTANCE TESTED AND INSPECTED IN ACCORDANCE WITH NETA ATS. - PROVIDE NECESSARY SUPPORTING STRUT CHANNEL AND ALL MISCELLANEOUS HARDWARE FOR MOUNTING ELECTRICAL EQUIPMENT. MAINTAIN NEC WORKING CLEARANCES. COORDINATE EXACT LOCATION IN FIELD. DO NOT MOUNT ON EQUIPMENT ACCESS PANELS OR IN EQUIPMENT MANUFACTURER'S RECOMMENDED MAINTENANCE CLEARANCES. - VERIFY AND COORDINATE ELECTRICAL ROUGH-IN REQUIREMENTS FOR EQUIPMENT FURNISHED BY OWNER OR OTHER CONTRACTORS OR SYSTEM MANUFACTURERS PRIOR TO PULLING CONDUCTORS AND MAKING FINAL CONNECTIONS. LACK OF COORDINATION SHALL NOT JUSTIFY CHANGE ORDERS. - PROVIDE TEMPORARY POWER AND LIGHTING AS REQUIRED TO COMPLETE PROJECT IN ACCORDANCE WITH APPLICABLE CODES AND STANDARDS. - SUBMIT FOR APPROVAL SHOP DRAWINGS FOR EQUIPMENT AND MATERIALS USED ON PROJECT. 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LEGAL ENTITY:
ARCADIS U.S., INC.

CONSULTANTS

SEALS

MILFORD, MI
ZF ACTIVE
SAFETY US INC.

VILLAGE OF MILFORD, MI
GROUNDWATER TREATMENT
SYSTEM IMPROVEMENTS

ARCADIS PROJ. NO. 30126485

NO.	DATE	ISSUED FOR	BY

COPYRIGHT: ARCADIS U.S., INC.
2020

DATE: MAY 2022

PROJECT NO.: 30126485

FILE NAME: E-001

DESIGNED BY: J. ARCH

DRAWN BY: J. ARCH

CHECKED BY: D. OBERLE

SHEET TITLE

ELECTRICAL

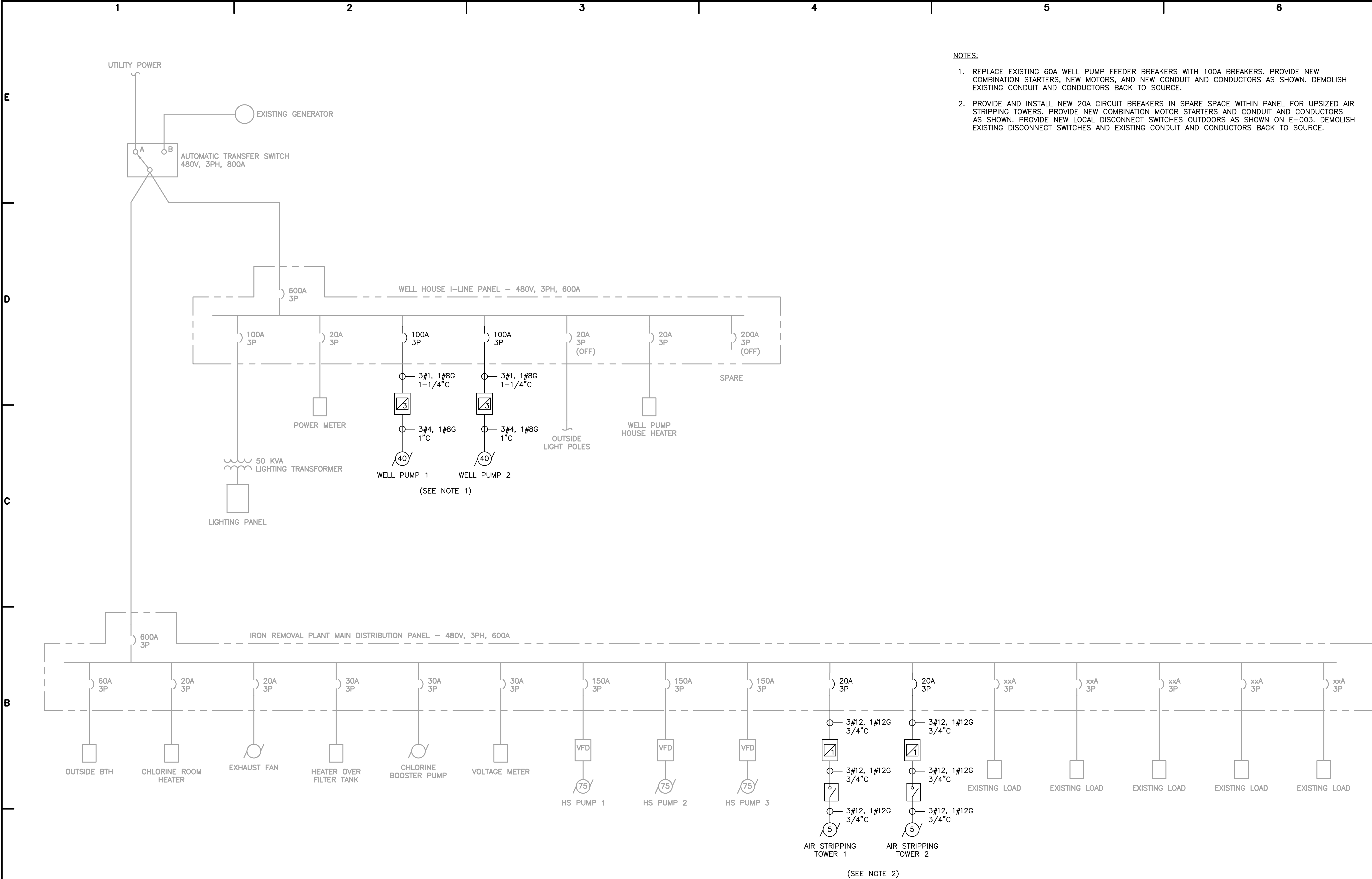
GENERAL NOTES AND
LEGEND

SCALE: AS SHOWN

E-001

SHEET 09 OF 11

User: JARCH-Spec-AUS-NSM000 File: c:\users\jarch\arcadis\30126485 - 01 VILLAGE OF MILFORD TREATMENT SYS DESIGN\DRAWINGS\CAD\ELECTRICAL\E-002.DWG Scale: 1:1 Saved Date: 5/20/2022 Time: 08:32 Plot Date: 5/20/2022 13:26 : Layout: 10



- NOTES:
1. REPLACE EXISTING 60A WELL PUMP FEEDER BREAKERS WITH 100A BREAKERS. PROVIDE NEW COMBINATION STARTERS, NEW MOTORS, AND NEW CONDUIT AND CONDUCTORS AS SHOWN. DEMOLISH EXISTING CONDUIT AND CONDUCTORS BACK TO SOURCE.
 2. PROVIDE AND INSTALL NEW 20A CIRCUIT BREAKERS IN SPARE SPACE WITHIN PANEL FOR UPSIZED AIR STRIPPING TOWERS. PROVIDE NEW COMBINATION MOTOR STARTERS AND CONDUIT AND CONDUCTORS AS SHOWN. PROVIDE NEW LOCAL DISCONNECT SWITCHES OUTDOORS AS SHOWN ON E-003. DEMOLISH EXISTING DISCONNECT SWITCHES AND EXISTING CONDUIT AND CONDUCTORS BACK TO SOURCE.



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SAFETY US INC.



VILLAGE OF MILFORD, MI
GROUNDWATER TREATMENT
SYSTEM IMPROVEMENTS

ARCADIS PROJ. NO. 30126485

NO.	DATE	ISSUED FOR	BY

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DATE: MAY 2022
PROJECT NO.: 30126485
FILE NAME: E-002
DESIGNED BY: J. ARCH
DRAWN BY: J. ARCH
CHECKED BY: D. OBERLE

SHEET TITLE

ELECTRICAL

SINGLE LINE DIAGRAM

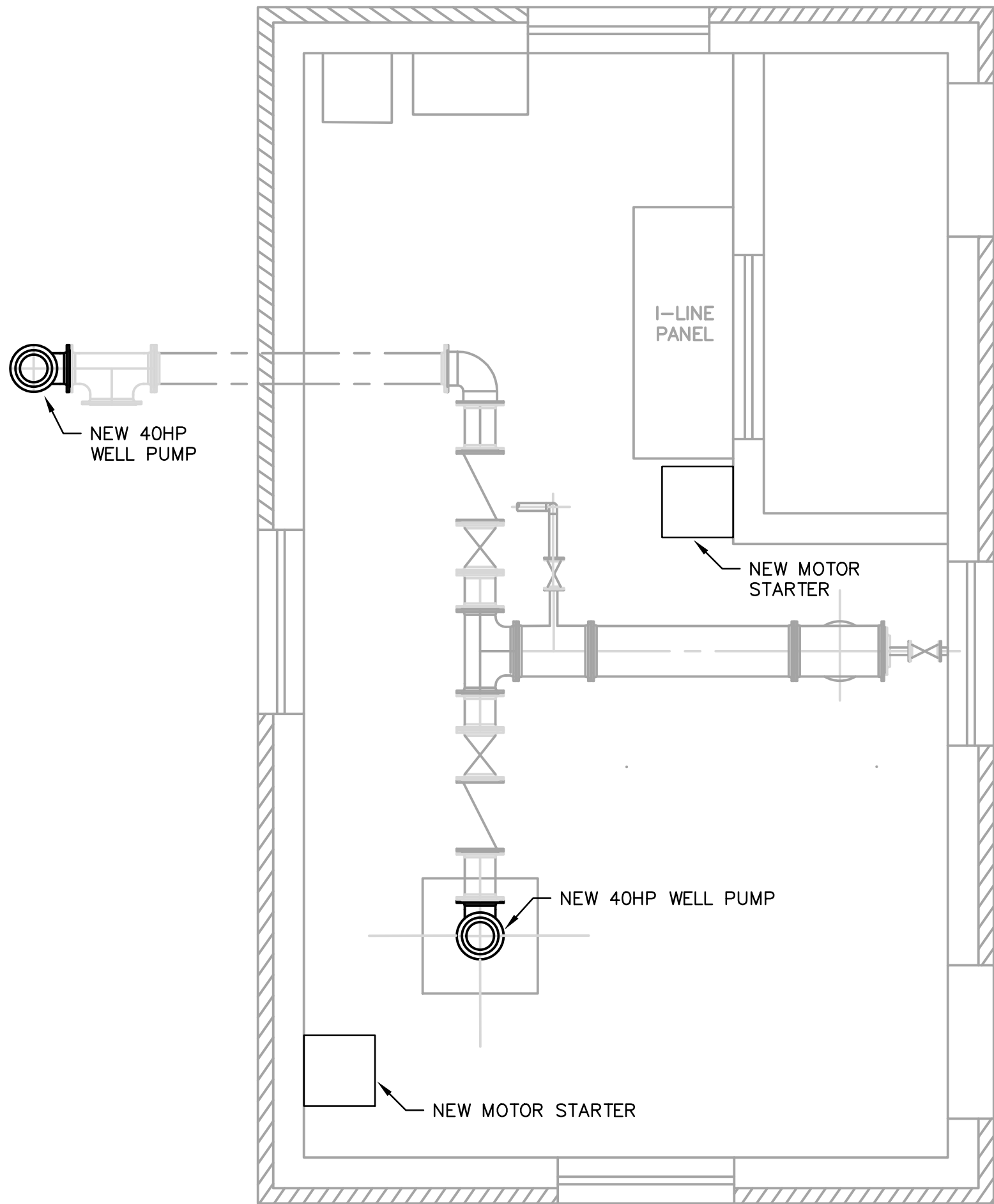
SCALE: AS SHOWN

E-002

SHEET 10 OF 11

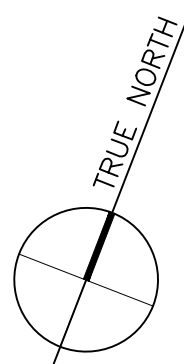
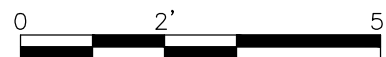
User: JARCH Spec: AUS-NC5000 File: C:\Users\JARCH\ARCADIS\30126485 - ZF 2022 KELSEY-HAYES MILFORD OMM - 01 VILLAGE OF MILFORD TREATMENT SYS DESIGN\DRAWINGS\CAD\ELECTRICAL\E-003.DWG Scale: 1:1 Saved Date: 5/20/2022 Time: 08:49 Plot Date: Arch Jordan 5/20/2022 13:27 ; Layout: 11

E
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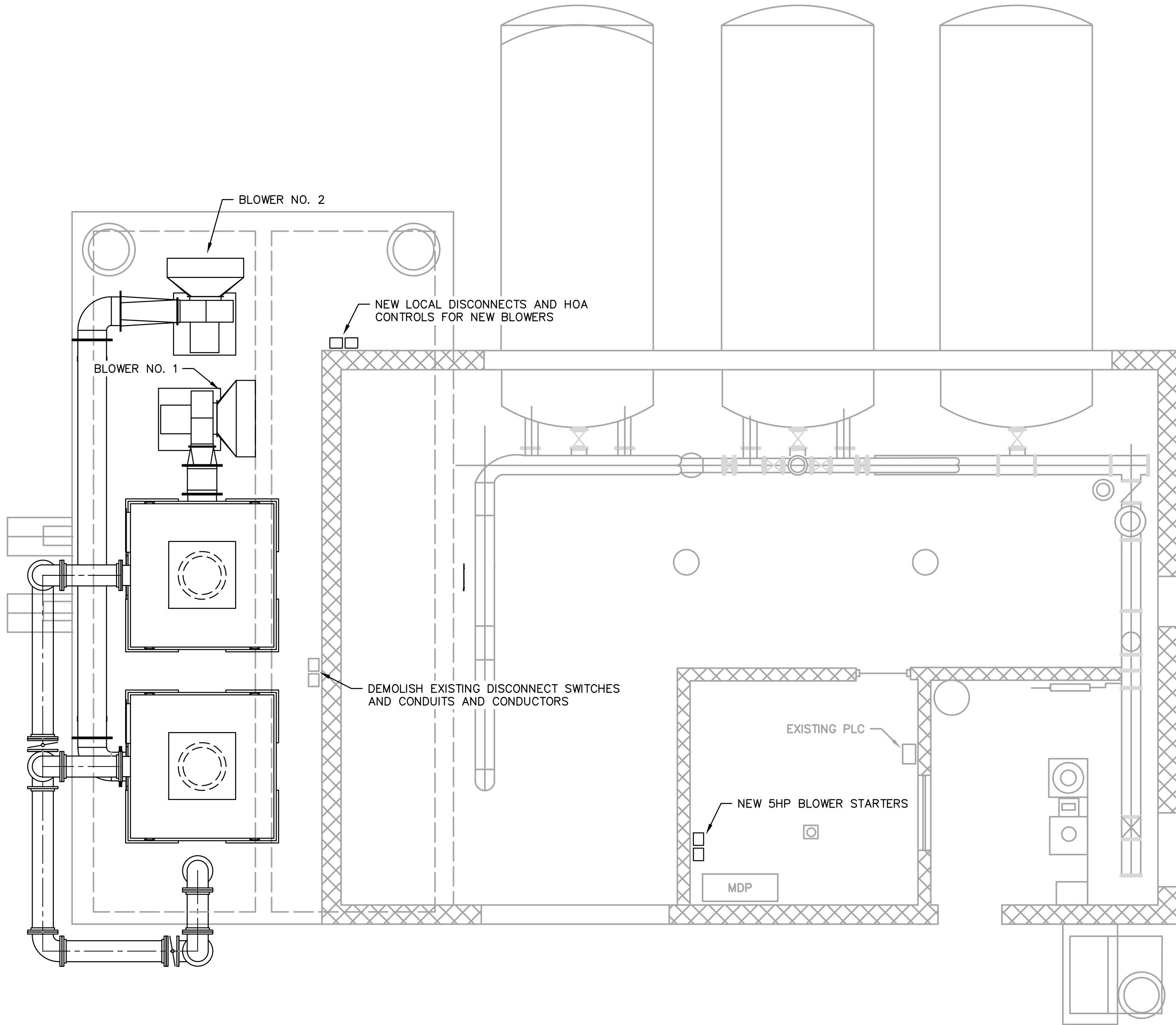
WELL HOUSE ELECTRICAL PLAN

SCALE: 3/8" = 1'-0"



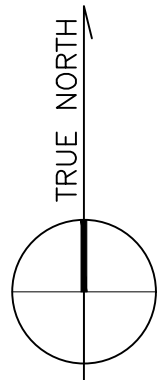
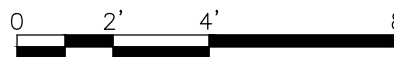
WELL HOUSE NOTES:

- SEE SINGLE LINE DIAGRAM ON SHEET E-002 FOR CONDUIT AND CONDUCTOR INFORMATION.
- NEW 40HP WELL PUMPS ARE TO REPLACE EXISTING 25HP PUMPS. DEMOLISH EXISTING PUMP MOTORS AND CONDUIT AND CONDUCTORS BACK TO SOURCE.
- NEW 40HP MOTOR STARTERS ARE TO REPLACE EXISTING WELL PUMP MOTOR STARTERS. LOCATE NEW STARTER ENCLOSURES WHERE EXISTING STARTERS ARE LOCATED. ENSURE ADEQUATE WORKING CLEARANCES ARE MAINTAINED PER NEC.
- REUSE CONTROLS CONDUIT AND CONDUCTORS FROM EACH MOTOR STARTER BACK TO EXISTING PLANT PLC.



IRON REMOVAL PLANT ELECTRICAL PLAN

SCALE: 1/4" = 1'-0"



TREATMENT BUILDING NOTES:

- SEE SINGLE LINE DIAGRAM ON SHEET E-002 FOR CONDUIT AND CONDUCTOR INFORMATION.
- NEW 5HP AERATOR BLOWERS ARE TO REPLACE EXISTING BLOWERS. DEMOLISH EXISTING BLOWERS AND CONDUIT AND CONDUCTORS BACK TO SOURCE.
- NEW 5HP MOTOR STARTERS ARE TO REPLACE EXISTING BLOWER MOTOR STARTERS. LOCATE NEW STARTER ENCLOSURES WHERE EXISTING STARTERS ARE LOCATED. ENSURE ADEQUATE WORKING CLEARANCES ARE MAINTAINED PER NEC.
- REUSE CONTROLS CONDUIT AND CONDUCTORS FROM EACH MOTOR STARTER BACK TO EXISTING PLANT PLC. PROVIDE NEW 4#14 CONDUCTORS FOR ADDITIONAL BLOWER RUNNING AND FAULT SIGNALS.



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VILLAGE OF MILFORD, MI
GROUNDWATER TREATMENT
SYSTEM IMPROVEMENTS

ARCADIS PROJ. NO. 30126485

NO.	DATE	ISSUED FOR	BY

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2020

DATE: MAY 2022

PROJECT NO.: 30126485

FILE NAME: E-003

DESIGNED BY: J. ARCH

DRAWN BY: J. ARCH

CHECKED BY: D. OBERLE

SHEET TITLE

ELECTRICAL

PROPOSED ELECTRICAL
EQUIPMENT LAYOUT

SCALE:

AS SHOWN

E-003

SHEET 11 OF 11

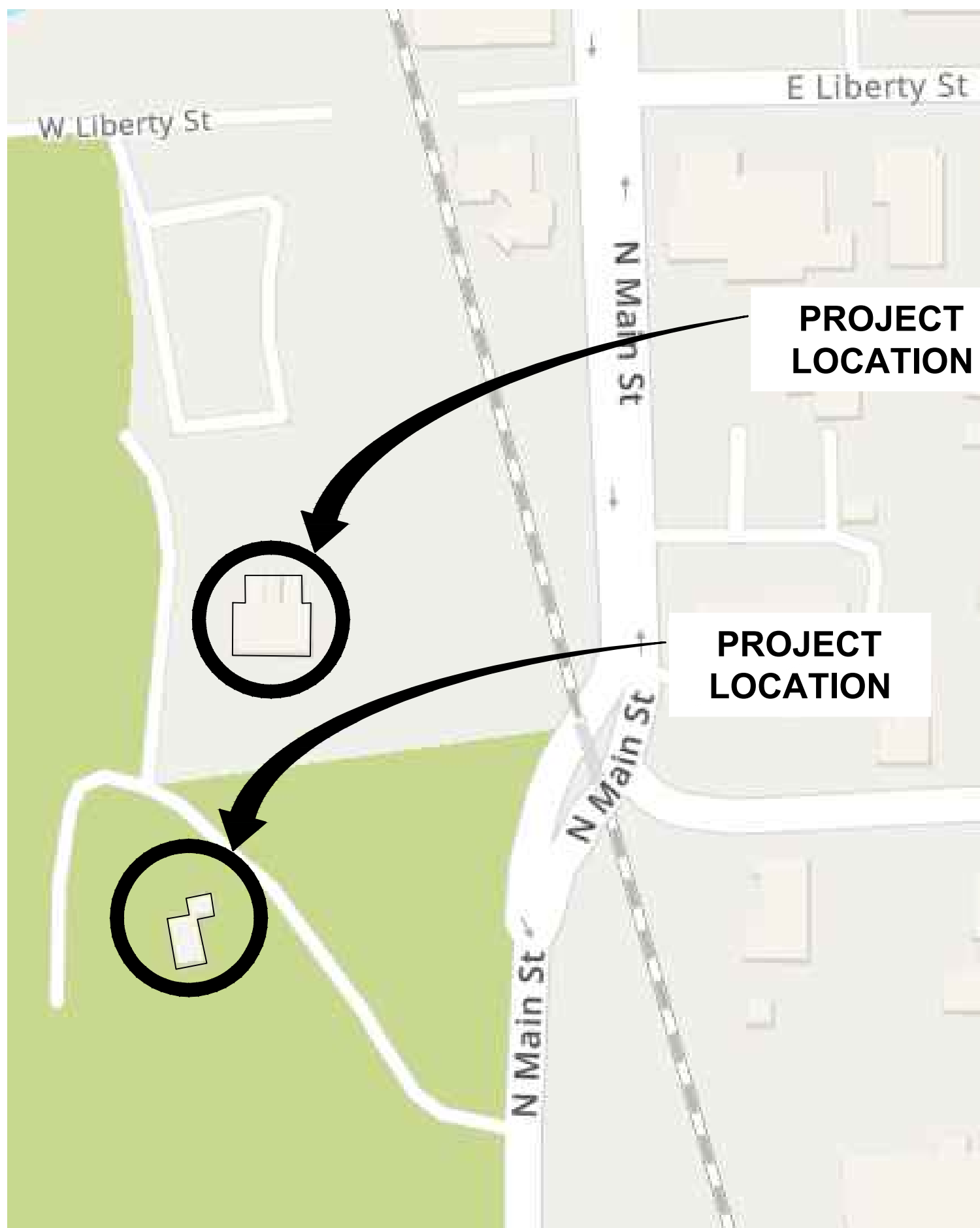
ATTACHMENT 6

Draft 100% Design Plans and Specifications, Design Memo, and Act 399 Permit Application

VILLAGE OF MILFORD, MI GROUNDWATER TREATMENT SYSTEM IMPROVEMENTS

ADMINISTRATIVE ORDER FOR RESPONSE ACTIVITY EGLE DOCKET NO. AO-RRD-22-001

**JUNE 2022
DRAFT 100% DESIGN**



LOCATION MAP
NOT TO SCALE

ADDRESS:
159 N MAIN ST.
MILFORD, MI 48381

INDEX OF DRAWINGS:

GENERAL

- G-001 COVER SHEET
- G-002 SITE PLAN
- G-003 FLOW DIAGRAMS
- G-004 SPECIFICATIONS
- G-005 SPECIFICATIONS (CONTINUED)

DEMOLITION

- D-001 DEMOLITION PLANS
- D-002 DEMOLITION SECTIONS AND DETAILS

MECHANICAL

- M-001 PROPOSED PLANS
- M-002 PROPOSED SECTIONS AND DETAILS

ELECTRICAL

- E-001 GENERAL NOTES AND LEGEND
- E-002 SINGLE LINE DIAGRAM
- E-003 PROPOSED ELECTRICAL EQUIPMENT



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ZF ACTIVE SAFETY US INC.



VILLAGE OF MILFORD, MI
GROUND WATER TREATMENT
SYSTEM IMPROVEMENTS

CLIENT PROJ. NO.: 30126485

REVISIONS			

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PROJECT STATUS:

PROJECT NO.: 30126485
DATE: JUNE 2022
DESIGNED BY: B. HITS
DRAWN BY: K. ARTZ
CHECKED BY: X. XXXX

SHEET TITLE

GENERAL

COVER SHEET

SCALE:
AS SHOWN

DRAWING NO.:
G-001

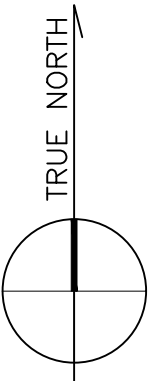
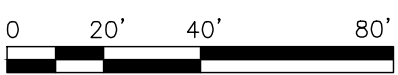
SHEET NO.: 1 OF 12

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SITE PLAN

SCALE: 1" = 40'



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SYSTEM IMPROVEMENTS

CLIENT PROJ. NO.: 30126485

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PROJECT STATUS:

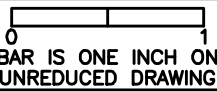
PROJECT NO.:	30126485
DATE:	JUNE 2022
DESIGNED BY:	B. HITS
DRAWN BY:	K. ARTZ
CHECKED BY:	X. XXXX

SHEET TITLE

GENERAL

SITE PLAN

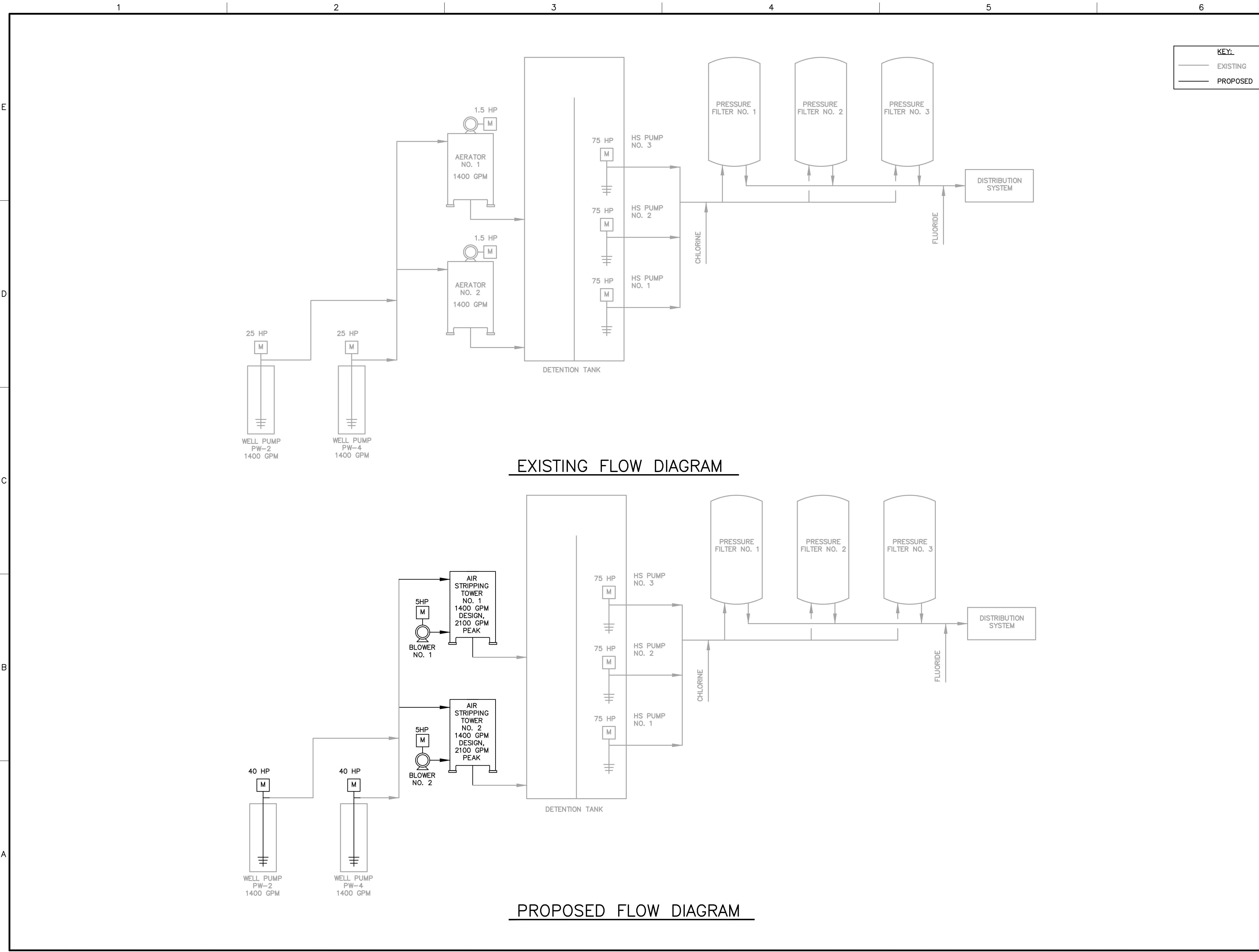
SCALE:
AS SHOWN



DRAWING NO.:

G-002

SHEET NO.: 2 OF 12



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ZF ACTIVE SAFETY US INC.



VILLAGE OF MILFORD, MI
GROUND WATER TREATMENT
SYSTEM IMPROVEMENTS

CLIENT PROJ. NO.: 30126485

REVISIONS			

NO.	DATE	ISSUED FOR	BY

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PROJECT STATUS:

PROJECT NO.: 30126485

DATE: JUNE 2022

DESIGNED BY: B. HITS

DRAWN BY: K. ARTZ

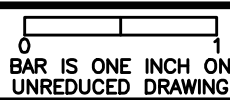
CHECKED BY: X. XXXX

SHEET TITLE

GENERAL

FLOW DIAGRAMS

SCALE:
AS SHOWN



DRAWING NO.:

G-003

SHEET NO.: 3 OF 12

E

D

C

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A

DESIGN REQUIREMENTS

A. DESIGN CRITERIA, EACH AIR STRIPPING TOWER;

1. MINIMUM FLOW RATE: 700 GPM

2. DESIGN FLOW RATE: 1,400 GPM

3. PEAK FLOW RATE: 2,100 GPM

4. TOWER DIMENSIONS: 7'-6" SQUARE.

5. PACKING TYPE AND BED DEPTH: 3.5" TRIPAK AND 14'-0".

6. MINIMUM AIR TO WATER RATIO: 20:1.

7. MAXIMUM LIQUID LOADING RATE: 37.3 GPM/SQ.FT.

8. INFLUENT AND EFFLUENT CONNECTION DIA/TYPE: 12"/FLANGED.

B. INFLUENT WATER CHARACTERISTICS AND EFFLUENT PERFORMANCE REQUIREMENTS:

INFLUENT WATER PARAMETERINFLUENT DESIGN VALUEEFFLUENT PERFORMANCE REQUIREMENTTOTAL IRON1.5 MG/LOXIDIZED FOR REMOVAL VIA DOWSTREAM FILTRATIONVINYL CHLORIDE50 UG/LLESS THAN 2 UG/HARDNESS (AS CaCO3)280 MG/L-CHLORIDE200 MG/LFLUORIDE0.1 MG/LSULFATE50 MG/L-TOTAL CALCIUM110 MG/L-TOTAL SODIUM90 MG/L-TOTAL BARIUM0.2 MG/LTEMPERATURE50F-PH?<C. EFFLUENT PERFORMANCE REQUIREMENTS SHALL BE MET AT MINIMUM, DESIGN, AND PEAK FLOW RATES SPECIFIED HEREIN.

D. IT IS THE RESPONSIBILITY OF THE TOWER MANUFACTURER TO SELECT AND SIZE ALL COMPONENTS OF THE COLUMN TO MEET THE EFFLUENT PERFORMANCE CRITERIA. THE COMPONENT SIZES SHALL MEET OR EXCEED THOSE SPECIED HEREIN.

SPARE PARTS

A. PACKING MEDIA IN QUANTITY TO ALLOW FOR FULL REPLACEMENT OF ONE AIR STRIPPING TOWER MEDIA.

B. ONE COMPLETE SET OF GASKETS FOR TOWER HATCHES.

C. ONE COMPLETE SET OF GASKETS AND SEALS FOR EACH BLOWER.

D. ONE COMPLETE SET OF BEARINGS FOR EACH BLOWER

E. ONE BLOWER MOTOR.

F. FOUR BLOWER INLET AIR FILTERS.

AIR STRIPPING TOWER DESCRIPTION

A. SHELL: THE TOWER SHALL BE A FREE-STANDING UNIT DESIGNED ACCORDING TO STATE OF MICHIGAN BUILDING CODE INCLUDING WIND AND SEISMIC REQUIREMENTS. THE TOWER COLUMN SHALL BE CONSTRUCTED ENTIERLY OF TYPE 3003 OR 5052 ALUMINUM WITH A MINIMUM WALL THICKNESS OF ¼ INCH AND EXTERIOR ALUMINIUM REINFORCING.

B. BOTTOM SECTION: THE BOTTOM SECTION OF THE AERATION TOWER SHALL INCLUDE AN AIR INLET CONNECTION(S), AN ACCESS PORT, WATER OUTLET, DRAIN FITTING, SIGHT GLASS CONNECTIONS, AND ALL OTHER CONNECTIONS OR COMPONENTS REQUIRED FOR PROPER OPERATION OR BY THE MANUFACTURER'S DESIGN. THE UNIT SHALL BE DESIGNED FOR GRAVITY FLOW OF WATER FROM THE BOTTOM SECTION OF THE UNIT.

C. WATER OUTLET: PROVIDE WITH A WATER SEAL AND VORTEX BREAKER TO PRECLUDE AIR FROM EXITING WITH THE WATER.

D. DRAIN: A MINIMUM OF ONE 2-INCH ALUMINUM DRAIN CONNECTION SHALL BE PROVIDED AT THE BASE OF THE VESSEL TO ALLOW COMPLETE DRAINAGE OF THE TOWER.

E. PACKING SUPPORT: THE PACKING SHALL BE SUPPORTD BY A FABRICATED SUPPORT PLATE OR GRATING. THE TOWER STRUCTURE SHALL INCLUDE AN INTERNAL STRUCTURAL SUPPORT RING CONTINUOUSLY WELDED TO THE TOWER SHELL TO SUPPORT THE WEIGHT OF THE PACKING. IF THE REQUIRED BED DEPTH EXCEEDS THE PACKING MANUFACTURER'S RECOMMENDED MAXIMUM VERTICAL DEPTH OF PACKING, AN INTERMEDIATE PACKING SUPPORT PLATE SHALL BE INSTALLED.

F. PACKING: HIGH PERFORMANCE, FREE FLOWING, RANDOM SPEHERICAL TYPE PACKING, 3.5 INCH DIAMETER, 38 SQFT/CUFT GEOMETRIC SURFACE AREA, 95% VOID SPACE, NSF61 CERTIFIED, RASCHIG USA JAEGER TRI-PACK, OR APPROVED EQUAL.

G. DISTRIBUTION SYSTEM: THE DISTRIBUTOR SHALL BE A PAN TYPE WITH NOZZLES SIZED, NUMBEREED, AND LOCATED TO EVENLY DISTRIBUTE FLOW. NOZZLES SHALL BE OF NON-CLOG DESIGN. THE PAN SHALL CONTAIN AIR RELIEF PORTS TO ALLOW FOR AIR PASSAGE.

H. MIST ELIMINATOR: HIGH EFFICIENCY, LOW PRESSURE DROP DESIGN, PRECLUDING THE ENTRANCE OF SUNLIGHT INTO THE TOP OF THE TOWER. THE MIST ELIMINATOR SHALL BE POLYPROPYLENE, MUNTERS T-271 OR APPROVED EQUAL.

I. LIFTING LUGS: ALUMINUM LIFTING LUGS SHALL BE PROVIDED AS REQUIRED FOR HANDLING AND INSTALLATION OF AN EMPTY TOWER. THE ALUMINUM LUGS SHALL BE ALUMINUM 3003 MATERIAL AND WILL BE WELDED TO THE VESSEL WALL.

J. ACCESS PORTS: THE TOWER SHALL BE PROVIDED WITH TWO 24 INCH SQUARE ACCESS HATCHES TO ALLOW INSPECTIONS AND MEDIA REMOVAL. SECURE WITH EPDM GASKETS AND 316 SS HARDWARE. ALL ACCESS PORT COVERS SHALL BE GAS-TIGHT UNDER A POSITIVE INTERNAL OPERATING PRESSURE OF 10 INCHES W.C.. INCLUDE PROVISIONS TO PREVENT MEDIA FROM FALLING OUT OF UNIT WHEN LOWER COVER REMOVED.

K. ALL PIPING CONNECTIONS TO THE AERATOR TOWER SHALL BE FLANGED AND SHALL CONFORM TO ANSI B16.5, CLASS 150.

L. AIR OUTLET: AN AIR OUTLET SHALL BE PROVIDED AT THE TOP OF THE AERATION TOWER ABOVE THE DISTRIBUTION SYSTEM. OUTLET OPENINGS SHALL HAVE 24 MESH TYPE 316 STAINLESS STEEL SCREEN.

M. ACCESS LADDER: PROVIDE AN OSHA COMPLIANT LADDER FOR ACCESS AND INSPECTION OF TOWER SUPPORT FROM THE TOWER SHELL.

N. HARDWARE: ALL BOLTS, NUTS, WASHERS, AND OTHER MISCELLANEOUS HARDWARE USED TO ASSEMBLED TOWER SHALL BE TYPE 304 STAINLESS STEEL OR BETTER.

BLOWER ASSEMBLY

A. GENERAL:

1. TOWER MANUFACTURER SHALL FURNISH ONE AIR SUPPLY BLOWER AND ALL SPECIFIED APPURTENANCES AND ACCESSORIES FOR EACH AIR STRIPPING TOWER PROVIDED.

2. TYPE: CENTRIFUGAL BELT DRIVEN, SINGLE WIDTH, SINGLE INLET.

3. CONSTRUCT AND TEST IN ACCORDANCE WITH AMCA STANDARDS.

4. THE SOUND LEVELS GENERATED BY THE BLOWER DURING NORMAL OPERATION SHALL NOT EXCEED 85 DBA - WEIGHTED, SLOW RESPONSE, UNDER FREE FIELD CONDITION, AT A HORIZONTAL DISTANCE OF 10 FEET FROM THE SURFACE OF SOUND GENERATION.

5. THE BLOWER SHALL BE DYNAMICALLY BALANCED AT THE FACTORY PRIOR TO SHIPPING.

B. PERFORMANCE:

1. AIR FLOW: 5615 SCFM AT 2 INCHES STATIC PRESSURE.

2. MOTOR: 5 HP, 1725 RPM, 460 VOLT, THREE-PHASE, 60 HZ, TEFC, 1.15 SF.

C. BLOWER CONSTRUCTION:

1. THE BLOWER AND WHEEL SHALL BE CONSTRUCTED OF HEAVY GAUGE CARBON STEEL AND BE CONTINUOUSLY WELDED.

2. BEARINGS SHALL BE VISIBLE AND ACCESSIBLE FOR INSPECTION AND MAINTENANCE. BEARING LIFE SHALL HAVE A MINIMUM OF 20,000 HOURS AT A L10 RATING.

3. PROVIDE BLOWER WITH LIFTING LUGS FOR HANDLING.

4. PROVIDE BLOWER WITH WEATHER GUARDS, DRAIN CONNECTION, DRIVE GUARDS, ADJUSTABLE MOTOR BASEPLATE, AND INLET/OUTLET FLANGES.

D. BLOWER FACTORY TESTING:

1. SUBMIT CERTIFIED PERFORMANCE CURVES FOR THE BLOWER AT RATED RPM SHOWING TYPICAL FT/SEC VS. STATIC PRESSURE AND HORSEPOWER FROM "SHUTOFF" TO "FREE DELIVERY". BLOWER SHALL BE STATICALLY AND DYNAMICALLY FACTORY BALANCED AND GIVEN A RUNNING TEST WITH MOTOR AND DRIVE INSTALLED. BLOWER PERFORMANCE SHALL BE BASED ON TESTS MADE IN ACCORDANCE WITH AMCA STANDARD 210-74.

E. BLOWER MOTOR:

1. PROVIDE WITH 120 VOLT, 60 HZ, SINGLE-PHASE SPACE HEATERS WIRED TO THE MOTOR TERMINAL BOX.

F. AIR DUCT

1. ALL REQUIRED DUCTWORK TO CONNECT THE BLOWER DISCHARGE TO THE AIR STRIPPING TOWER AND BLOWER INLET TO FILTER SHALL BE PROVIDED BY THE TOWER MANUFACTURER.

2. DUCTWORK SHALL BE OF FRP CONSTRUCTION.

3. PROVIDE FLEXIBLE CONNECTION ASSEMBLIES ON BLOWER INLET AND DISCHARGE TO ISOLATE VIBRATION AND FACILITATE INSTALLATION AND MAINTENANCE.

4. DUCTING PIPE SUPPORTS SHALL BE PROVIDED BY INSTALLING CONTACTOR.

G. ACCESSORIES

1. INTAKE LOUVER TO PREVENT THE ENTRY OF MOISTURE INTO FILTERS

2. BLOWER INLET FILTER HOUSING WITH FILTER FRAME AND RAIN GUARD.

3. HIGH-CAPACITY INLET AIR FILTERS, 4" DEPTH.

4. COUNTER-BALANCED BACKDRAFT DAMPER TO PREVENT REVERSE AIRFLOW.

5. AIR PRESSURE GAUGE MOUNTED IN DISCHARGE DUCT.

6. STAINLESS STEEL VANE TYPE AIR FLOW SWITCH PRESSURE SWITCH, DWYER MODEL 530 OR APPROVED EQUAL, INSTALLED IN DISCHARGE DUCT.

7. ACCESS PORT TO ALLOW FOR AIR FLOW MEASUREMENT USING ANEMOMETER.

ANCHOR BOLTS

A. PROVIDE TYPE 316 STAINLESS STEEL ANCHORS. ANCHORS SHALL BE OF AMPLE SIZE AND STRENGTH FOR THE PURPOSE INTENDED AND SHALL BE SIZED BY THE MANUFACTURER.

B. SUBMIT THE DESIGN OF THE AIR STRIPPING TOWER BASE ANCHORS TO THE STRUCTURE. THESE CALCULATIONS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MICHIGAN

MANUFACTURER'S START-UP SERVICES

A. PROVIDE FOR A MINIMUM OF TWO 8 HOUR DAYS FOR STARTING UP EQUIPMENT AND TRAINING OPERATING PERSONNEL IN THE OPERATION OF THE EQUIPMENT.

WELL PUMPS

PERFORMANCE REQUIREMENTS

A. WELL PUMP NO. 2 AND WELL PUMP NO. 4:

1. DESIGN POINT: 1,400 GPM AT 71 FT TDH

2. EFFICIENCY AT DESIGN FLOW: 76% MINIMUM.

3. 2ND DESIGN POINT: 1,700 GPM AT 50 FT TDH (FLOW AT SECOND DESIGN POINT SHALL BE WITHIN 10 PERCENT OF SPECIFIED VALUE).

4. SHUTOFF HEAD MINIMUM: 115 FT OR GREATER.

5. COLUMN LENGTH FROM BASE OF DISCHARGE HEAD TO TOP OF BOWL ASSEMBLY: 60 FT.

6. COLUMN DIAMETER: 8".

7. DISCHARGE DIAMETER: 8".

8. LIQUID PUMPED: WELL WATER.

9. TEMPERATURE: 50F.

10. HP: 40

11. RPM: 1800 RPM NOMINAL

12. ELECTRICAL: 460V, 3 PHASE. 60 HZ.

13. SUITABLE FOR OPERATION WITHOUT VACUUM RELIEF ON PUMP DISCHARGE.

14. DESIGN FOR EITHER INTERMITTENT OR CONTINUOUS 24 HOURS PER DAY OPERATION.

15. MOTOR SUPPLIED SHALL BE CAPABLE OF OPERATING THE PUMP AND IMPELLER AT ANY POINT ON THE CURVE WITHOUT EXCEEDING NAMEPLATE HORSEPOWER.

MANUFACTURERS

A. NATIONAL PUMP COMPANY, MODEL H12MC, OR APPROVED EQUAL.

PUMPS

A. ALL SURFACES, INCLUDING COATINGS WHICH WILL BE IN CONTACT WITH THE WELL WATER SHALL BE NSF61 CERTIFIED.

B. TYPE: PUMPS SHALL BE VERTICAL LINESHAFT TYPE, WATER LUBRICATED, SUITABLE FOR DEEP WELL PUMPING OF CLEAN WATER.

C. PUMP HEAD: HIGH GRADE CAST IRON CONFORMING TO ASTM A48, CLASS 30, DESIGNED TO SUPPORT THE ENTIRE COLUMN AND BOWL ASSEMBLY, CAST IRON BASE PLATE, SEAL FLUSH CONNECTION, DRAIN PLUG, AND DISCHARGE FLANGE DRILLED PER ANSI B16.1 CLASS 125. PROVIDE 1/2 INCH TAPPED CONNECTION AT FLANGE FOR PRESSURE GAGE AND 1 INCH TAP IN BASE FOR SOUNDER TUBES.

D. PUMP BOWL ASSEMBLY: CLOSE-GRAINED CAST IRON WITH 30,000 PSI MINIMUM TENSILE STRENGTH, NSF 61 SMOOTH VITREOUS ENAMEL OR NSF61 FUSION-BONDED EPOXY COATING ON BOWL INTERIOR, IMPELLER SEAL RING, LATERAL BOWL WEARING RINGS OR REPLACEABLE BRONZE WEARING RINGS, BELL MOUTH SUCTION BOWL WITH ANTI-VORTEX GUIDE VANES.

E. IMPELLERS: BRONZE, FULLY ENCLOSED, OR SEMI-ENCLOSED ACCURATELY MACHINED AND FINISHED, DYNAMICALLY BALANCED, KEYED TO SHAFT OR SECURED WITH LOCK NUT, SECURELY FASTENED TO THE IMPELLER SHAFT WITH A TAPERED BUSHING, ADJUSTABLE VERTICALLY BY MEANS OF A SHAFT NUT AT THE TOP OF THE MOTOR OR AN ADJUSTING TYPE RIGID COUPLING LOCATED BETWEEN THE PUMP AND MOTOR.

F. IMPELLER SHAFT: STAINLESS STEEL OF NOT LESS THAN 12 PERCENT CHROME, WATER-LUBRICATED, FLUTED RUBBER AND BRONZE BEARINGS.

G. COLUMN ASSEMBLY: STEEL PIPE SECTIONS A MAXIMUM OF 5 FEET IN LENGTH, INTERCHANGEABLE SECTIONS, THREADED SLEEVE TYPE COUPLINGS CONNECTED WITH STAINLESS STEEL BOLTS AND WASHERS, BUTTED JOINTS TO ENSURE PERFECT ALIGNMENT AFTER ASSEMBLY, FLANGED BEARING HOUSING RETAINERS WITH WATER-LUBRICATED, CUTLESS RUBBER BEARING DESIGNED FOR VERTICAL TURBINE PUMP SERVICE.

H. LINE SHAFT: TURNED, GROUND AND POLISHED STAINLESS STEEL A MAXIMUM OF 5 FEET IN LENGTH, INTERCHANGEABLE SECTIONS WITH STAINLESS STEEL COUPLINGS MACHINED FROM SOLID BAR STOCK. COUPLED ABOVE THE STUFFING BOX TO FACILITATE EASY REMOVAL AND REPLACEMENT OF THE DRIVER. PROVIDE SHAFTING OF AMPLE SIZE TO OPERATE THE PUMP WITHOUT DISTORTION OR VIBRATION.

I. SEALS: PACKING GLAND WITH MINIMUM FOUR RINGS NSF61 PTFE PACKING AND BRONZE LANTERN RINGS.

MOTORS

A. MOTOR: 1.15 SF, WPI ENCLOSURE, NORMALLY CLOSED WINDING OVERHEAT CONTACT IMBEDDED IN MOTOR WINDINGS, AND 120 VAC MOTOR HEATER. MOTORS SHALL BE PROVIDED WITH A NON-REVERSE RATCHET (OR SELF RELEASE COUPLING).

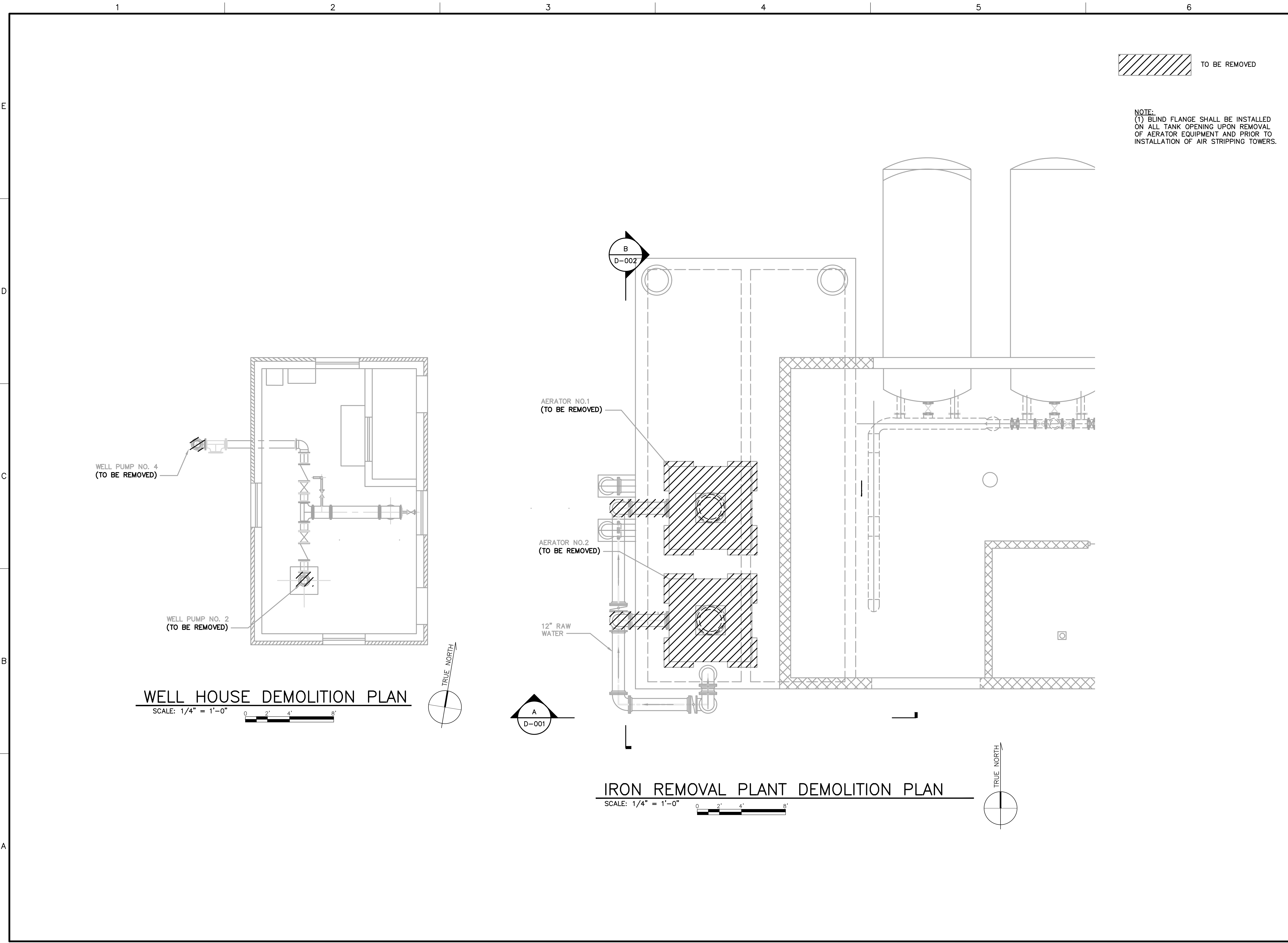
FINISHES

A. PROVIDE PUMPS(INTERIOR AND EXTERIOR) AND MOTORS WITH A COMPLETE FACTORY FINISH USING THE MANUFACTURER'S STANDARD INDUSTRIAL GRADE COATINGS.

B. THE INTERIOR SURFACES OF THE PUMP, SUCTION BELL AND DISCHARGE COLUMN PIPES, AND THE INTERIOR SURFACES OF THE PUMP HEAD AND SUCTION BARREL SHALL BE NSF61 FACTORY FINISHED.

C. OTHERWISE PROTECT FROM

User: KARTZ Spec: AUS-NCSMOD File: C:\USERS\KARTZ\ONEDRIVE - ARCADIS\01 VILLAGE OF MILFORD TREATMENT SYS DESIGN\DRAWINGS\CAD\2 DEMO\D-001.DWG Scale: 1:1 Saved Date: 6/10/2022 Time: 10:38 Plot Date: Artz, Kyle; 6/10/2022; 14:10 ; Layout: D-001





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MILFORD, MI
ZF ACTIVE SAFETY US INC.



VILLAGE OF MILFORD, MI
GROUND WATER TREATMENT
SYSTEM IMPROVEMENTS

CLIENT PROJ. NO.: 30126485

REVISIONS			
NO.	DATE	ISSUED FOR	BY

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2020

PROJECT STATUS:

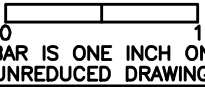
PROJECT NO.: 30126485
DATE: JUNE 2022
DESIGNED BY: B. HITS
DRAWN BY: K. ARTZ
CHECKED BY: X. XXXX

SHEET TITLE

DEMOLITION

PLANS

SCALE:
AS SHOWN



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UNREDUCED DRAWING

DRAWING NO.:
D-001

SHEET NO.: 6 OF 12



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VILLAGE OF MILFORD, MI GROUND WATER TREATMENT SYSTEM IMPROVEMENTS

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DESIGNED BY: B. HITSDRAWN BY: K. ARTZ

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SHEET TITLE

DEMOLITION

SECTIONS AND DETAILS

SCALE:

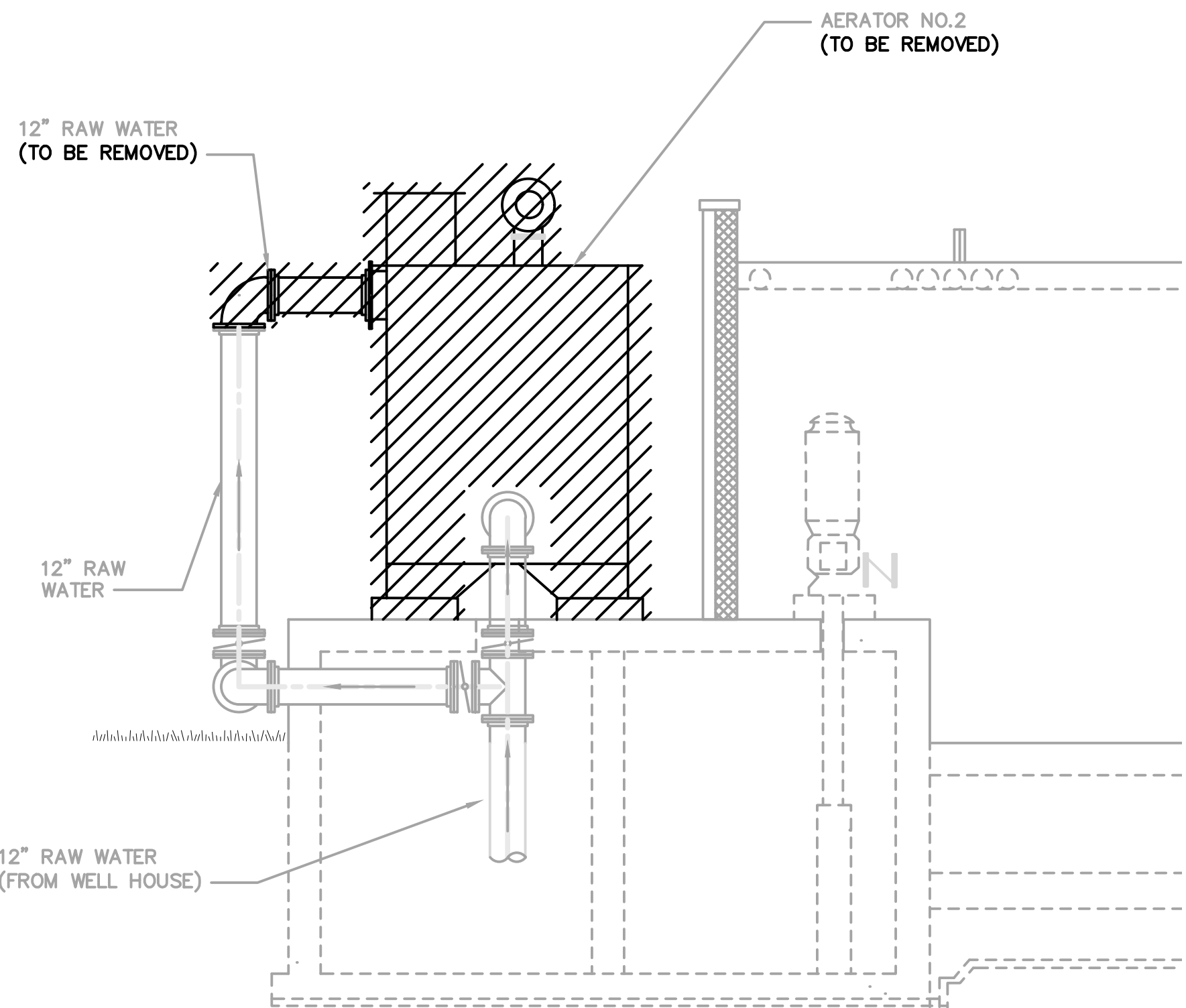
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D-002

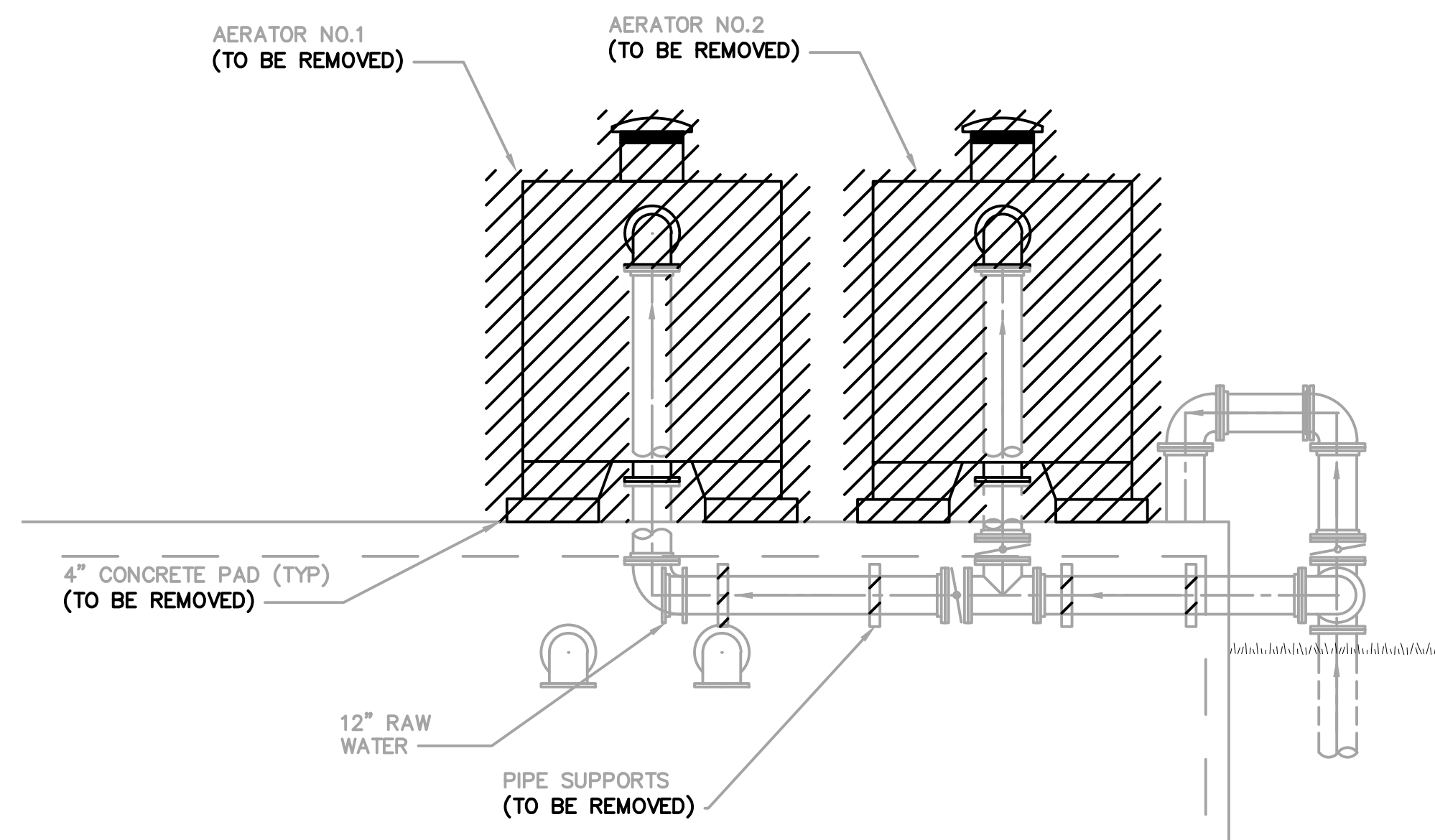
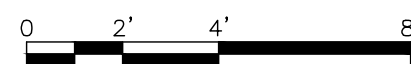
SHEET NO.: 7 OF 12



 IRON REMOVAL PLANT DEMOLITION SECTION

M-001

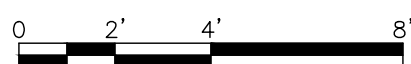
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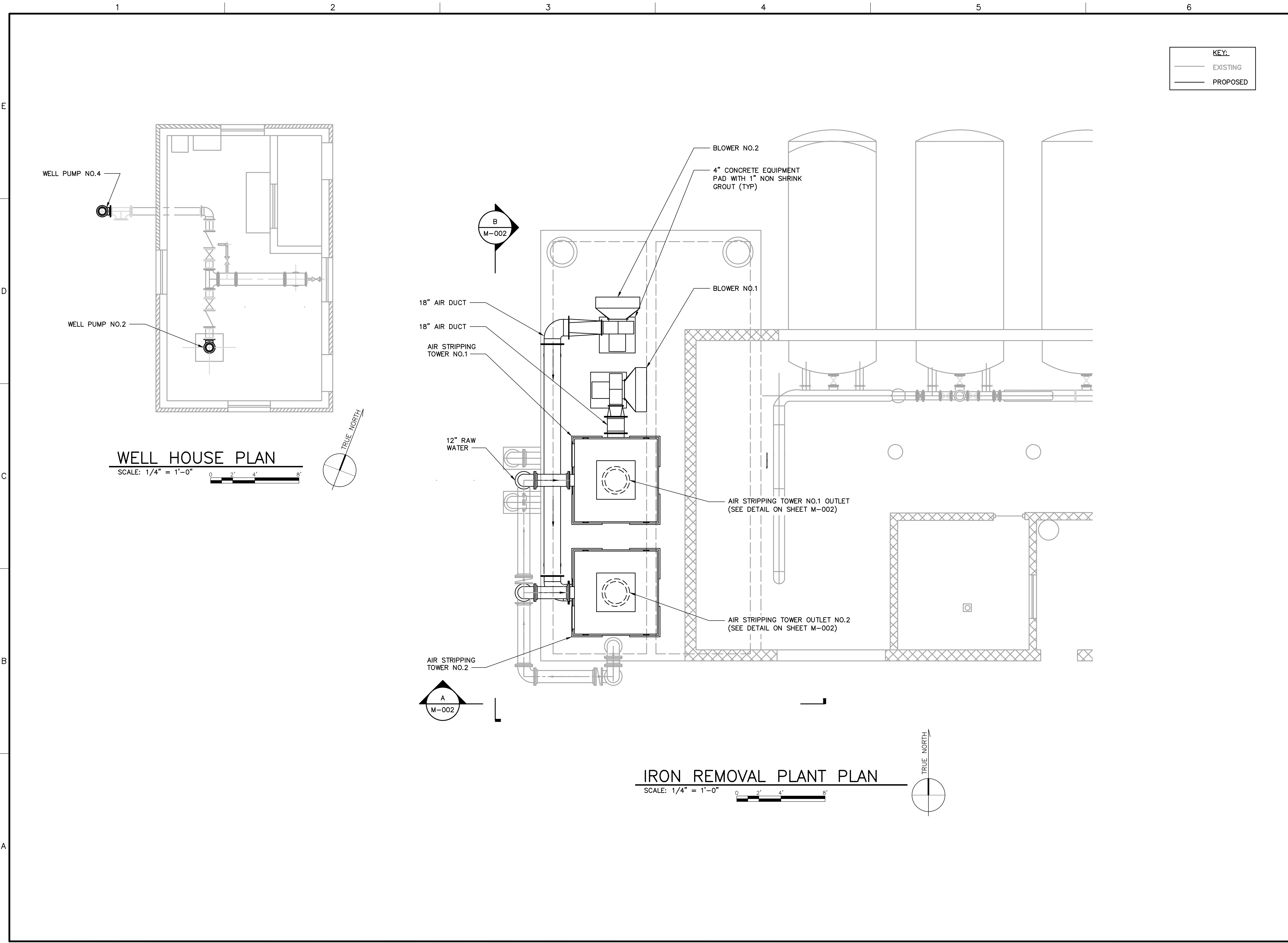


IRON REMOVAL PLANT DEMOLITION SECTION

M-001

SCALE: 1/4" = 1'-0"





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VILLAGE OF MILFORD, MI
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SHEET TITLE

PROCESS

PLANS

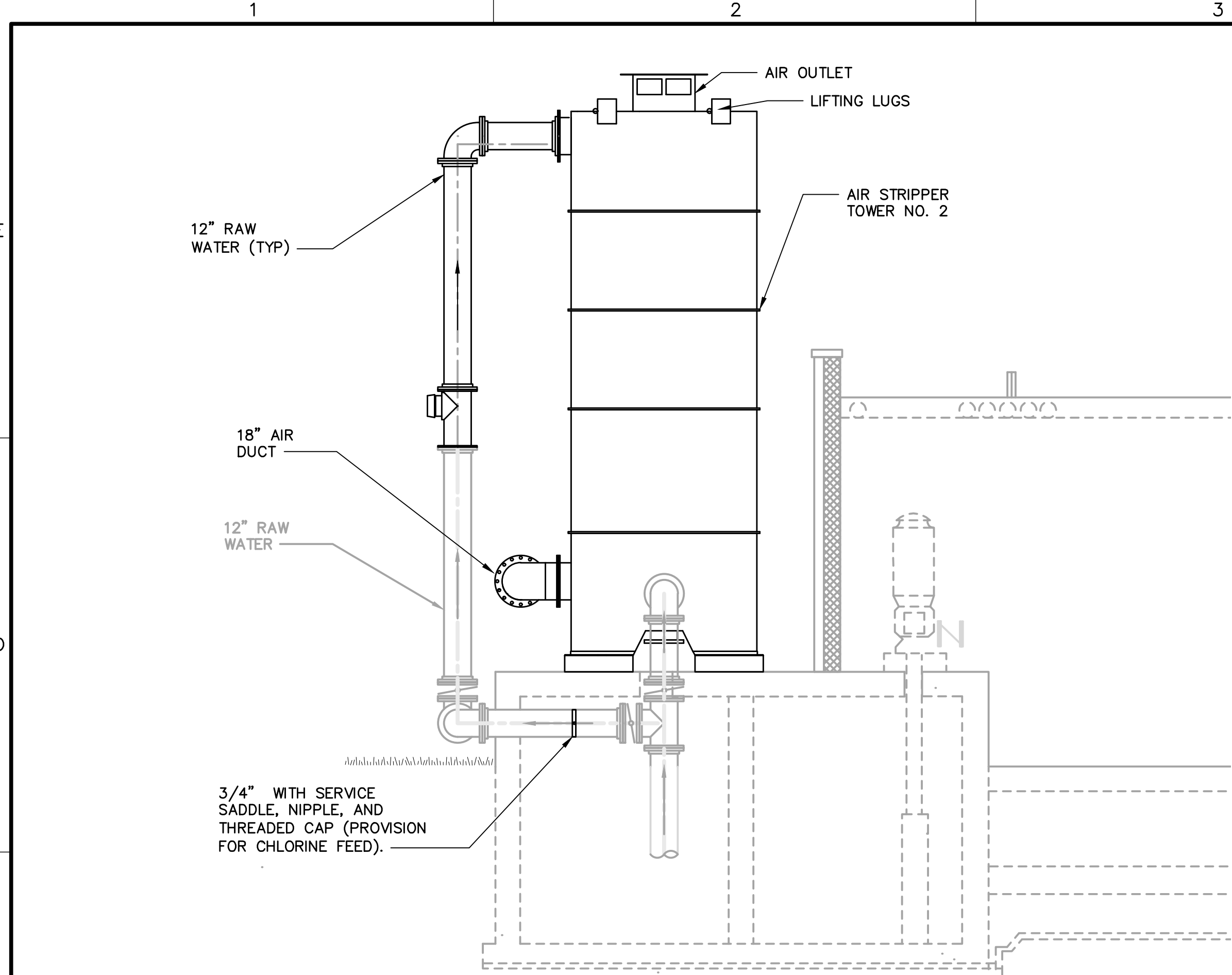
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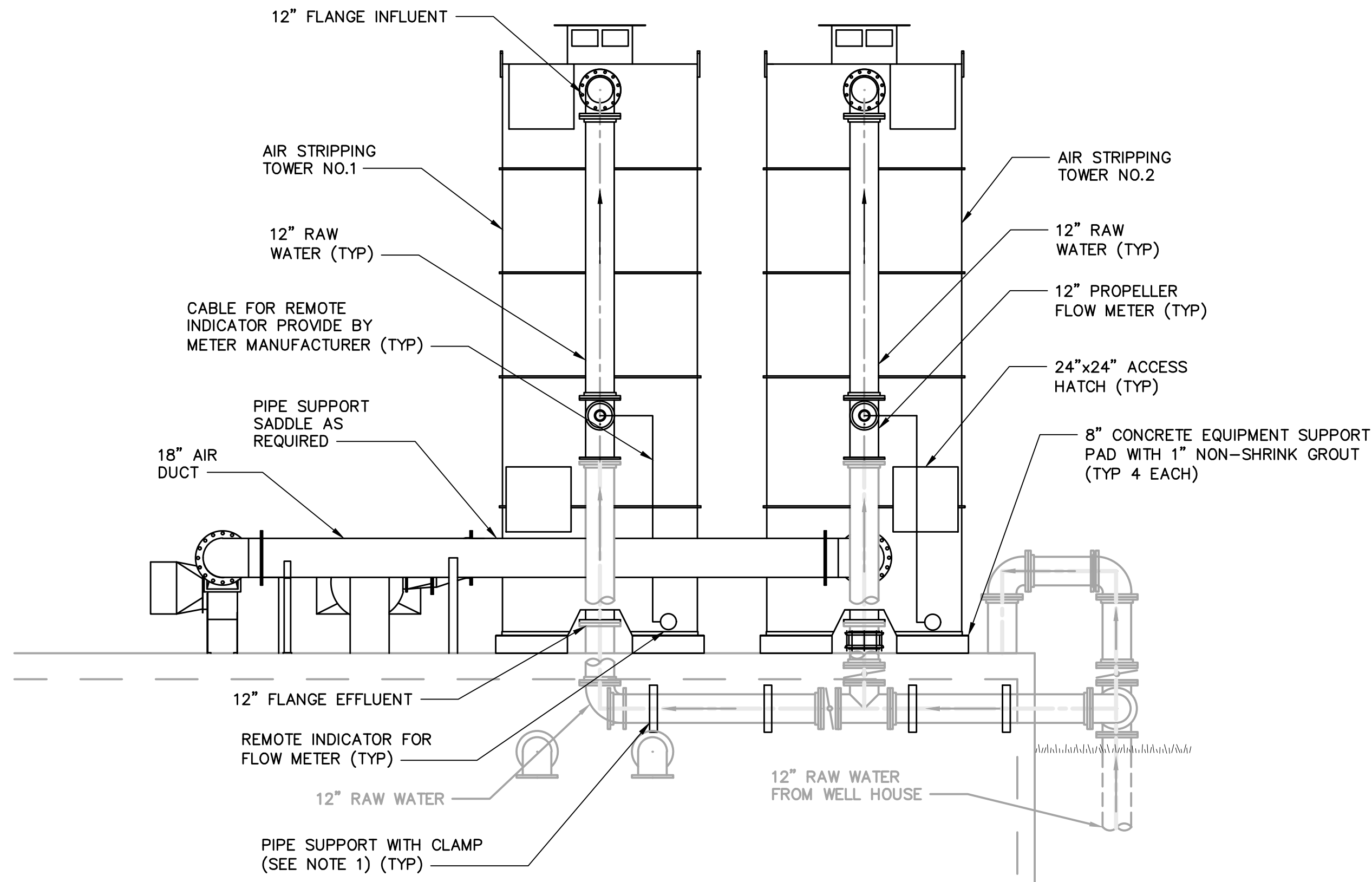
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M-001

SHEET NO.: 8 OF 12



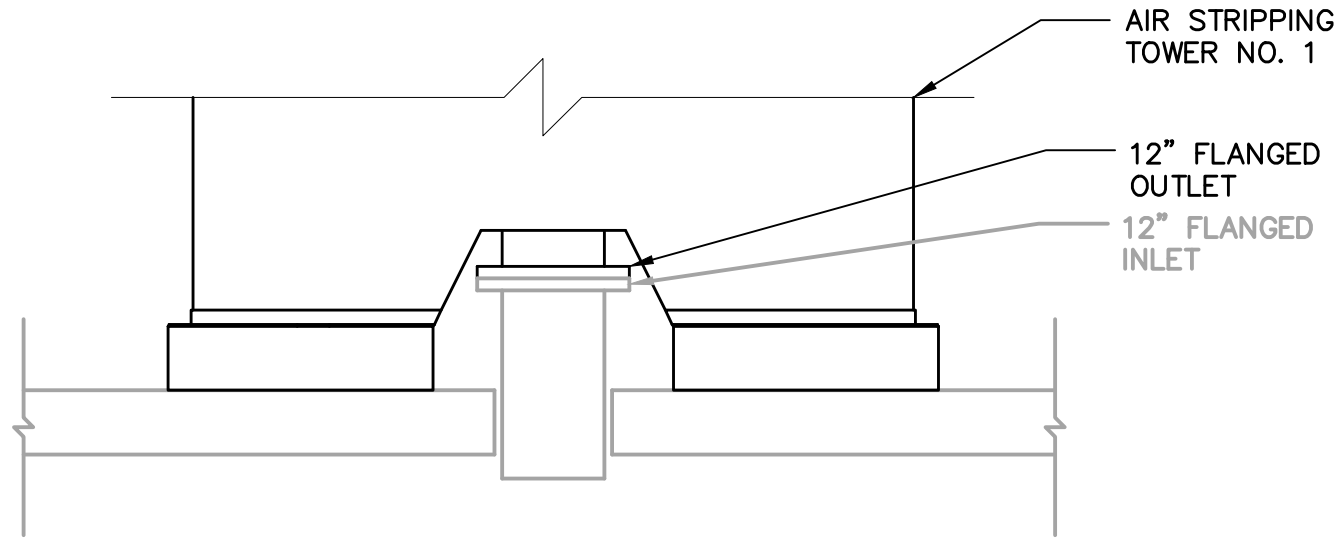
A SECTION
M-001 SCALE: 1/4" = 1'-0" 0 2' 4' 8'



B SECTION
M-001 SCALE: 1/4" = 1'-0" 0 2' 4' 8'

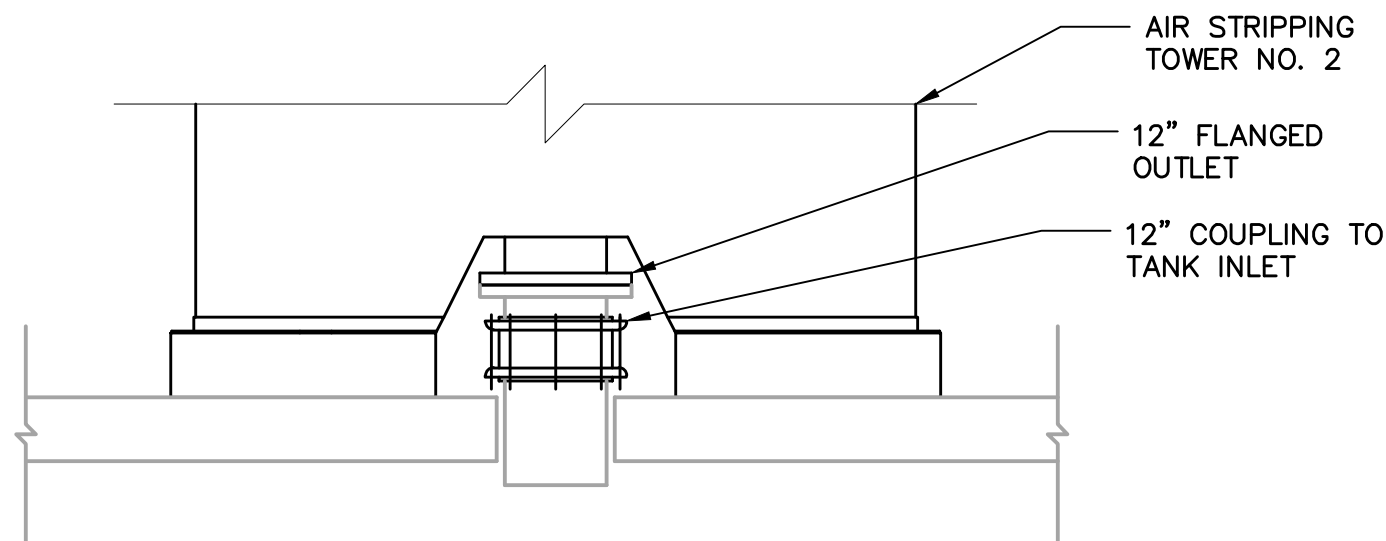
KEY:
EXISTING
PROPOSED

- NOTES:
1. WALL SUPPORT BRACKET TO BE FIGURE 199, BRACKET NUMBER 0 BY ANVIL INTERNATIONAL. ATTACH BRACKET WITH 3/4" DIA ADHESIVE ANCHORS WITH 7" EMBEDMENT (MIN). WALL BRACKET TO BE RATED FOR A MINIMUM 3,000 POUND LOAD.
 2. NEW PIPE SUPPORTS SHALL BE INSTALLED PRIOR TO REMOVAL OF EXISTING PIPE SUPPORTS.



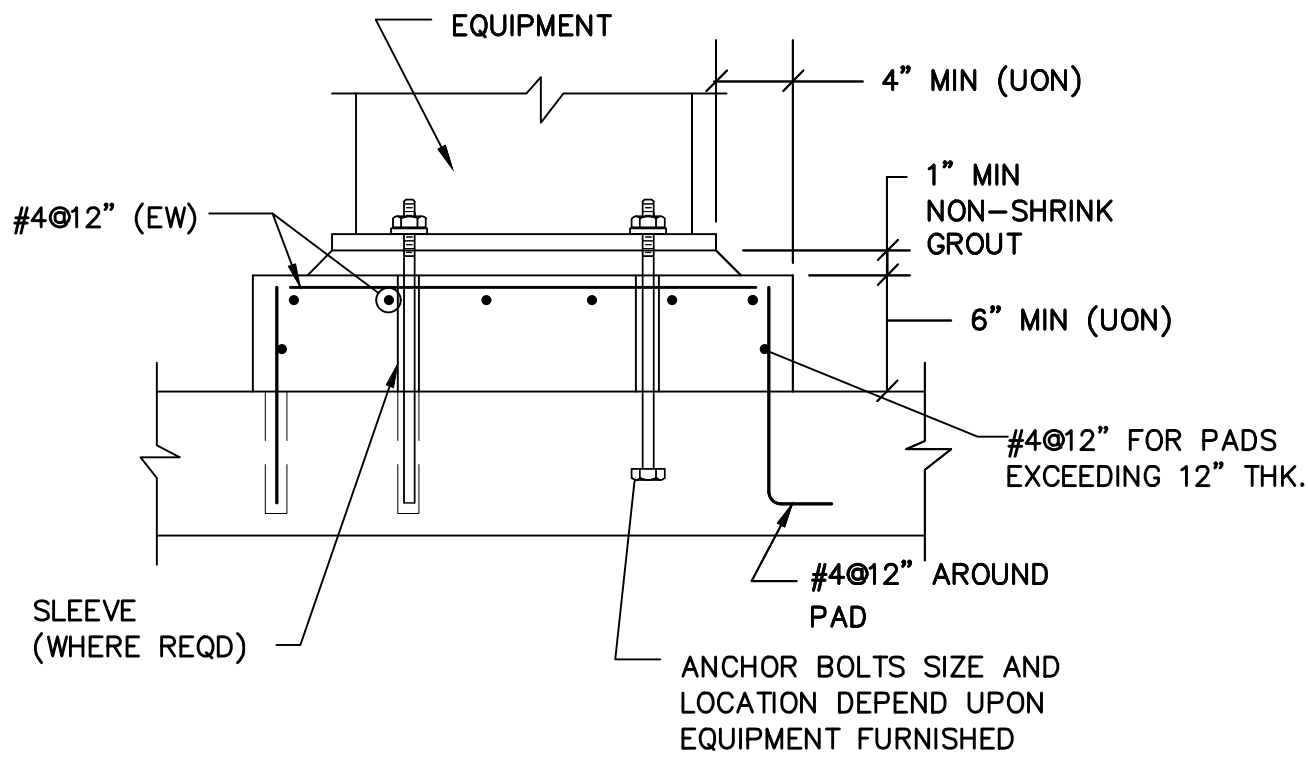
AIR STRIPPING TOWER NO.1 OUTLET DETAIL

SCALE: 1/2" = 1'-0" 0 1' 2' 4'



AIR STRIPPING TOWER NO.2 OUTLET DETAIL

SCALE: 1/2" = 1'-0" 0 1' 2' 4'



EQUIPMENT SUPPORT PAD DETAIL

SCALE: 1/2" = 1'-0" 0 1' 2' 4'



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CHECKED BY:	X. XXXX

SHEET TITLE

PROCESS

SECTIONS
AND DETAILS

SCALE:
AS SHOWN

DRAWING NO.:

M-002

SHEET NO.: 9 OF 12

GENERAL NOTES

SYMBOL	DESCRIPTION
	EMERGENCY LIGHTING UNIT
	CEILING MOUNTED EXIT SIGN — ARROW AS INDICATED
	TWO FACED EXIT SIGN
	WALL MOUNTED EXIT SIGN
	SWITCHBOARD, POWER PANELBOARD
	LIGHTING PANELBOARD
	TRANSFORMER
	NON-FUSIBLE SAFETY SWITCH (NUMBER INDICATES SWITCH SIZE)
	FUSED SAFETY SWITCH (NUMBERS INDICATE FUSE/SWITCH SIZES)
	COMBINATION MAGNETIC STARTER AND CIRCUIT BREAKER 20— INDICATES NEMA STARTER SIZE 20— INDICATES CIRCUIT BREAKER TRIP
	MAGNETIC STARTER
	ADJUSTABLE SPEED DRIVE
	MOTOR (NUMBER INDICATES HP)
	BELL
	HORN "H" OR SIREN "S"
	BUZZER
	PUSHBUTTON
	MANUAL PULL STATION
	FIRE ALARM HORN (V=VISUAL SIGNAL)
	PHOTOELECTRIC SMOKE DETECTOR
	IONIZATION SMOKE DETECTOR
	THERMAL DETECTOR
	DUCT SMOKE DETECTOR (PHOTOELECTRIC)
	MAGNETIC DOOR HOLDER
	PRESSURE SWITCH
	FLOW SWITCH
	VALVE SUPERVISORY SWITCH
	FIRE ALARM CONTROL PANEL
	FIRE ALARM RACEWAY
	CEILING SPEAKER
	WALL SPEAKER
	ANALOG DATA OUTLET
	DIGITAL DATA OUTLET
	INTERCOM OUTLET
	TELECOMMUNICATIONS RACEWAY
	PROTECTED TRANSMISSION SYSTEM (PTS) DATA TERMINAL CONNECTION
	TELEVISION OUTLET
	CARD READER
	ELECTRIC DOOR STRIKE
	DOOR CONTACTS
	REMOTE ACCESS PANEL
	HAND GEOMETRY UNIT
	MOTION DETECTOR
	CLOSED CIRCUIT TV CAMERA

SYMBOL	DESCRIPTION
	MEDIUM VOLTAGE DISCONNECT SWITCH
	MEDIUM VOLTAGE DRAWOUT CIRCUIT BREAKER
	TRANSFORMER (DELTA-WYE CONN.)
	SHIELDED TRANSFORMER
	DRAWOUT CIRCUIT BREAKER
	CIRCUIT BREAKER (TRIP/FRAME) WITH GROUND FAULT INTERRUPTER
	MOTOR CIRCUIT PROTECTOR
	MOTOR CONTROL CENTER STARTER UNIT
	FUSE
	GROUND
	GENERATOR
	CURRENT TRANSFORMER (NUMBERS INDICATE RATIO AND QUANTITY)
	POTENTIAL TRANSFORMER (NUMBER INDICATES QUANTITY)
	AMMETER SWITCH
	VOLTMETER SWITCH
	VOLTMETER
	AMMETER
	KILOWATT METER
	TRANSFER SWITCH
	KEY INTERLOCK #1
	BATTERY
	NORMALLY CLOSED CONTACT
	NORMALLY OPEN CONTACT
	PROTECTIVE RELAY, SOLENOID COIL
	THERMAL OVERLOAD
	CONNECTION
	CROSS, NO CONNECTION
	SURGE ARRESTOR
	TRANSIENT VOLTAGE SURGE SUPPRESSOR
	CAPACITOR
	CONTROL RELAY #1
	BUS PLUG CIRCUIT BREAKER
	THERMOSTAT
	KEYED NOTE DESIGNATION
	ELECTRICAL EQUIPMENT DESIGNATION
	MECHANICAL EQUIPMENT DESIGNATION
WP	WEATHERPROOF
AFF	ABOVE FINISH FLOOR

1. PERFORM INSTALLATION IN ACCORDANCE TO THE CURRENT EDITION OF THE NATIONAL ELECTRICAL CODE (NEC), THE OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA), AND APPLICABLE ENERGY CODES. EQUIPMENT SHALL BE LISTED BY A NATIONALLY RECOGNIZED TESTING LABORATORY (NRTL).
2. PROVIDE AND MAINTAIN A CLEAR WORKING SPACE ABOUT ELECTRICAL EQUIPMENT (SWITCHBOARDS, PANELBOARDS, ETC.) IN ACCORDANCE WITH NEC ARTICLES 110.26 AND 110.34.
3. BOND RACEWAYS AND THE FRAMES AND ENCLOSURES OF MOTORS, BREAKERS, SWITCHES, AND OTHER ELECTRICAL EQUIPMENT TO THE BUILDING GROUNDING SYSTEM. INSTALL AN INSULATED EQUIPMENT GROUND CONDUCTOR IN EACH RACEWAY OR CONDUIT. SIZE EQUIPMENT GROUND CONDUCTOR IN ACCORDANCE WITH NEC TABLE 250.122.
4. PROVIDE CIRCUIT BREAKERS WITH UL LISTED INTERRUPTING RATING (RMS SYMMETRICAL AMPERES) GREATER THAN THE AVAILABLE FAULT CURRENT OF THE SYSTEM. DO NOT USE SERIES RATED BREAKERS.
5. PROVIDE PADLOCKING PROVISIONS FOR EACH NEW CIRCUIT BREAKER.
6. IDENTIFY NEW BRANCH CIRCUITS AT THE PANEL AND AT THE LOAD OUTLET, RECEPTACLE, AND SWITCH. IDENTIFY THE PURPOSE OF INDIVIDUAL CIRCUIT BREAKERS, SAFETY SWITCHES, AND MOTOR STARTERS BY MEANS OF NAMEPLATES AS INDICATED.
7. ROUTE CONDUITS TO SUIT EQUIPMENT AND BUILDING STRUCTURE. LIMIT THE USE OF ELECTRICAL METALLIC TUBING (EMT) TO INTERIOR AREAS WHERE IT WILL NOT BE SUBJECT TO PHYSICAL DAMAGE OR CORROSION. USE RIGID GALVANIZED STEEL CONDUIT (RGS) FOR WORK EMBEDDED IN CONCRETE OR EXPOSED TO PHYSICAL DAMAGE. USE MINIMUM 3/4 INCH CONDUIT.
8. SEAL AROUND CONDUIT PENETRATIONS THROUGH INTERIOR WALLS AND FLOORS SEPARATING AREAS TO RESTORE ORIGINAL FIRE RATING. USE A UL CLASSIFIED FIRE SEALANT. SEAL PENETRATIONS THROUGH ROOF AND EXTERIOR WALLS TO MAKE WATERPROOF. REQUEST INSPECTION OF FIRE SEALS BY ELECTRICAL INSPECTOR FROM AUTHORITY HAVING JURISDICTION BEFORE AND AFTER PLACEMENT OF FIRE SEAL MATERIALS.
9. USE 12 AWG OR LARGER CONDUCTORS FOR POWER WIRING. USE 14 AWG OR LARGER STRANDED CONDUCTORS FOR CONTROL WIRING UNLESS OTHERWISE SPECIFIED OR SHOWN ON THE DRAWINGS.
10. USE ONLY COPPER CONDUCTORS UNLESS NOTED OTHERWISE. CONDUCTORS 10 AWG AND SMALLER SHALL BE SOLID, AND 8 AWG AND LARGER SHALL BE STRANDED. PROVIDE TYPE THHN/THWN WIRE INSULATIONS. TYPE XHHW INSULATION MAY BE USED FOR 1 AWG AND LARGER.
11. USE THE FOLLOWING CONDUCTOR COLOR CODES FOR 480Y/277V:
PHASE A: BROWN
PHASE B: ORANGE
PHASE C: YELLOW
NEUTRAL: GRAY
GROUND: GREEN
12. USE THE FOLLOWING CONDUCTOR COLOR CODES FOR 208Y/120V:
PHASE A: BLACK
PHASE B: RED
PHASE C: BLUE
NEUTRAL: WHITE
GROUND: GREEN
13. ARRANGE CONNECTIONS FOR SINGLE PHASE CIRCUITS TO ACHIEVE THREE PHASE LOAD BALANCE WITHIN 20% OF THE AVERAGE PHASE LOAD CURRENT.
14. DO NOT USE A COMMON NEUTRAL FOR MULTIPLE CIRCUITS.
15. TEST CONDUCTORS FOR CONTINUITY AND FREEDOM FROM SHORTS AND UNINTENTIONAL GROUNDS. ELECTRICAL EQUIPMENT SPECIFIED IN THIS DOCUMENT SHALL BE ACCEPTANCE TESTED AND INSPECTED IN ACCORDANCE WITH NETA ATS.
16. PROVIDE NECESSARY SUPPORTING STRUT CHANNEL AND ALL MISCELLANEOUS HARDWARE FOR MOUNTING ELECTRICAL EQUIPMENT. MAINTAIN NEC WORKING CLEARANCES. COORDINATE EXACT LOCATION IN FIELD. DO NOT MOUNT ON EQUIPMENT ACCESS PANELS OR IN EQUIPMENT MANUFACTURER'S RECOMMENDED MAINTENANCE CLEARANCES.
17. VERIFY AND COORDINATE ELECTRICAL ROUGH-IN REQUIREMENTS FOR EQUIPMENT FURNISHED BY OWNER OR OTHER CONTRACTORS OR SYSTEM MANUFACTURERS PRIOR TO PULLING CONDUCTORS AND MAKING FINAL CONNECTIONS. LACK OF COORDINATION SHALL NOT JUSTIFY CHANGE ORDERS.
18. PROVIDE TEMPORARY POWER AND LIGHTING AS REQUIRED TO COMPLETE PROJECT IN ACCORDANCE WITH APPLICABLE CODES AND STANDARDS.
19. SUBMIT FOR APPROVAL SHOP DRAWINGS FOR EQUIPMENT AND MATERIALS USED ON PROJECT. OBTAIN APPROVAL BY ENGINEER PRIOR TO PURCHASE OF EQUIPMENT AND MATERIALS.
20. REPAIR AREAS DAMAGED DURING CONSTRUCTION TO MATCH ADJACENT AREAS WITH RESPECT TO BOTH COLOR AND FINISH.
21. KEEP JOB SITE IN AN ORDERLY CONDITION AND REMOVE ALL WASTE AT PROJECT COMPLETION. LEAVE THE JOB SITE IN A CONDITION ACCEPTABLE TO THE OWNER.
22. IF A CONFLICT ARISES BETWEEN THE FIELD CONDITIONS AND THESE GENERAL ELECTRICAL REQUIREMENTS, CONTACT THE OWNER FOR DIRECTIONS.



NO.	DATE	ISSUED FOR	BY

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2020

DATE:	<u>JUNE 2022</u>
PROJECT NO.:	<u>30126485</u>
FILE NAME:	<u>E-001</u>
DESIGNED BY:	<u>J. ARCH</u>
DRAWN BY:	<u>J. ARCH</u>
CHECKED BY:	<u>D. OBERLE</u>

SHEET TITLE

ELECTRICAL

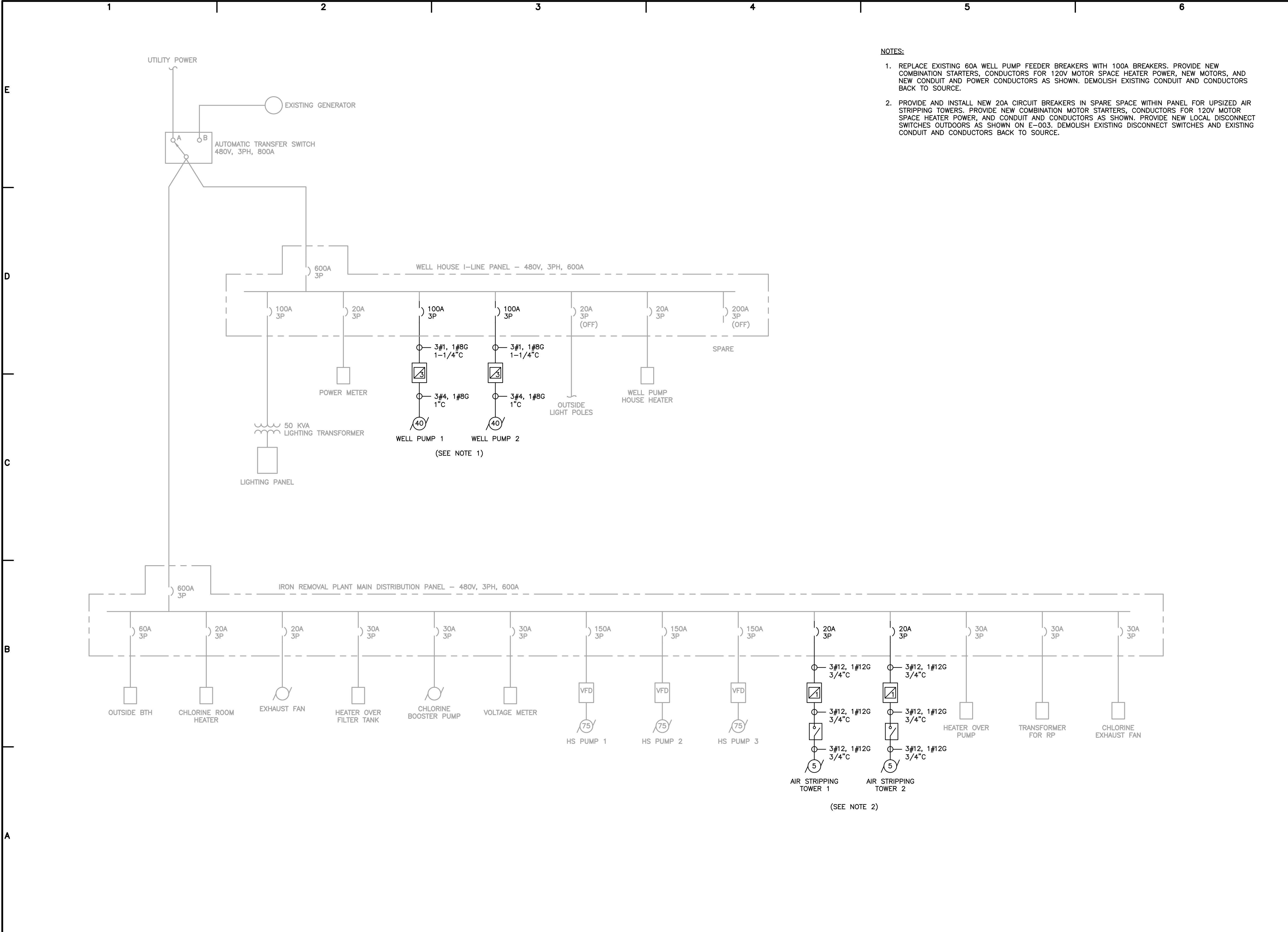
GENERAL NOTES AND LEGEND

SCALE:

E-001

SHEET 10 OF 12

User:KARTZ_Spec:AUS-HCSMOD_Files:\Users\KARTZ\ONEDRIVE - ARCADIS\01 VILLAGE OF MILFORD TREATMENT SYS DESIGN\DRAWINGS\CAD\4- ELECTRICAL\E-002.DWG Scale:1:1 SavedDate:6/10/2022 Time:14:21 Plot Date: Artz, Kyle, 6/10/2022, 14:22 Layout:10



LEGAL ENTITY:
ARCADIS U.S., INC.

CONSULTANTS

SEALS

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RELEASED FOR THE
PURPOSE OF INTERIM
REVIEW, NOT FOR
CONSTRUCTION

MILFORD, MI
ZF ACTIVE
SAFETY US INC.



VILLAGE OF MILFORD, MI
GROUNDWATER TREATMENT
SYSTEM IMPROVEMENTS

ARCADIS PROJ. NO. 30126485

NO.	DATE	ISSUED FOR	BY

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2020

DATE: JUNE 2022
PROJECT NO.: 30126485
FILE NAME: E-002
DESIGNED BY: J. ARCH
DRAWN BY: J. ARCH
CHECKED BY: D. OBERLE

SHEET TITLE

ELECTRICAL

SINGLE LINE DIAGRAM

SCALE: AS SHOWN

E-002

SHEET 11 OF 12

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ZF ACTIVE
SAFETY US INC.



VILLAGE OF MILFORD, MI GROUNDWATER TREATMENT SYSTEM IMPROVEMENTS

ARCADIS PROJ. NO. 30126485

[illegible]

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2020

DATE: JUNE 2022

PROJECT NO.: 30126485

FILE NAME: E-003

DESIGNED BY: J. ARCH

DRAWN BY: J. ARCH

CHECKED BY: D. OBERLE

SHEET TITLE

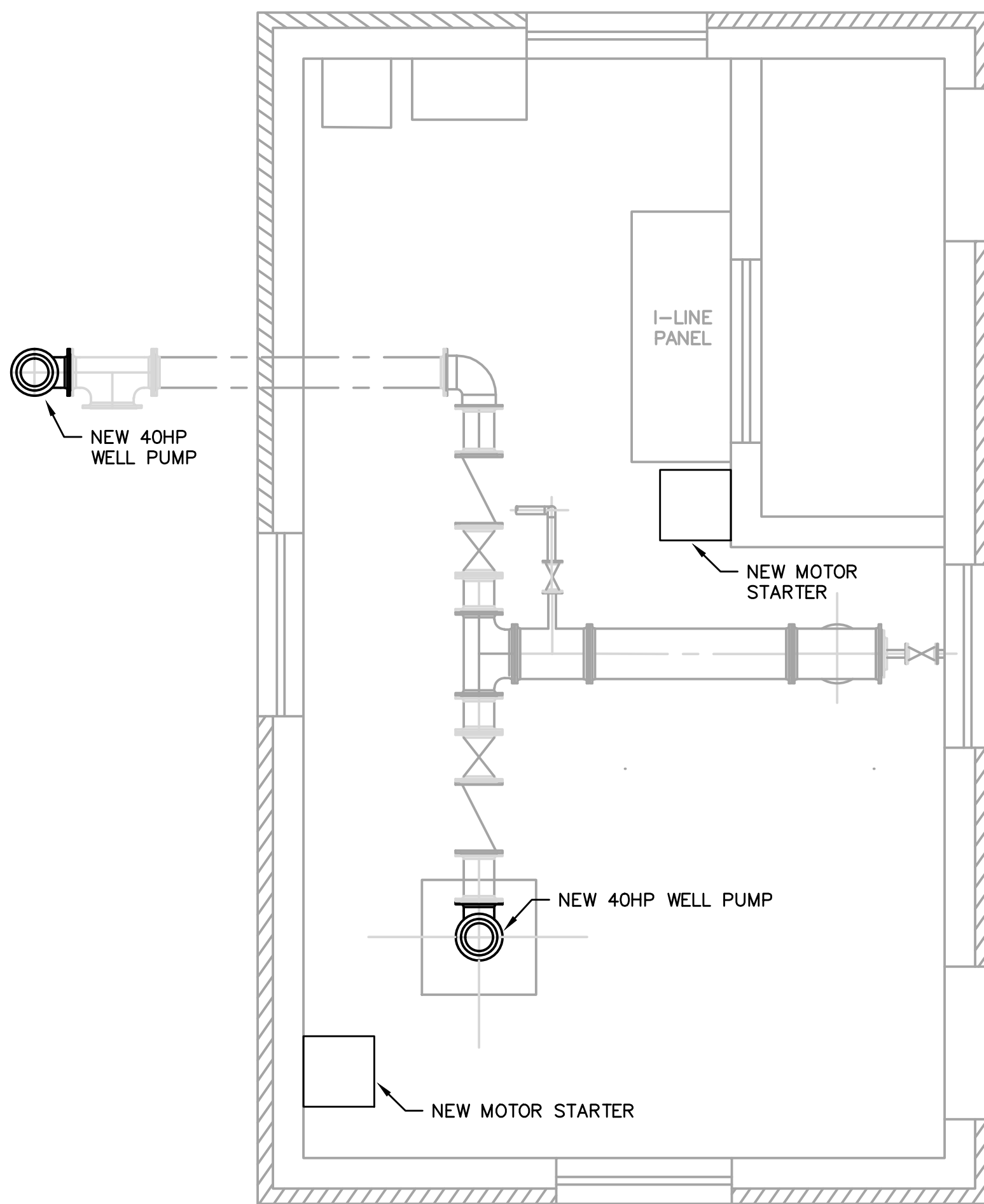
ELECTRICAL

PROPOSED ELECTRICAL EQUIPMENT LAYOUT

SCALE: AS SHOWN

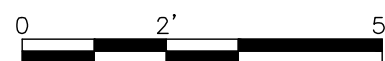
E-003

SHEET 12 OF 12



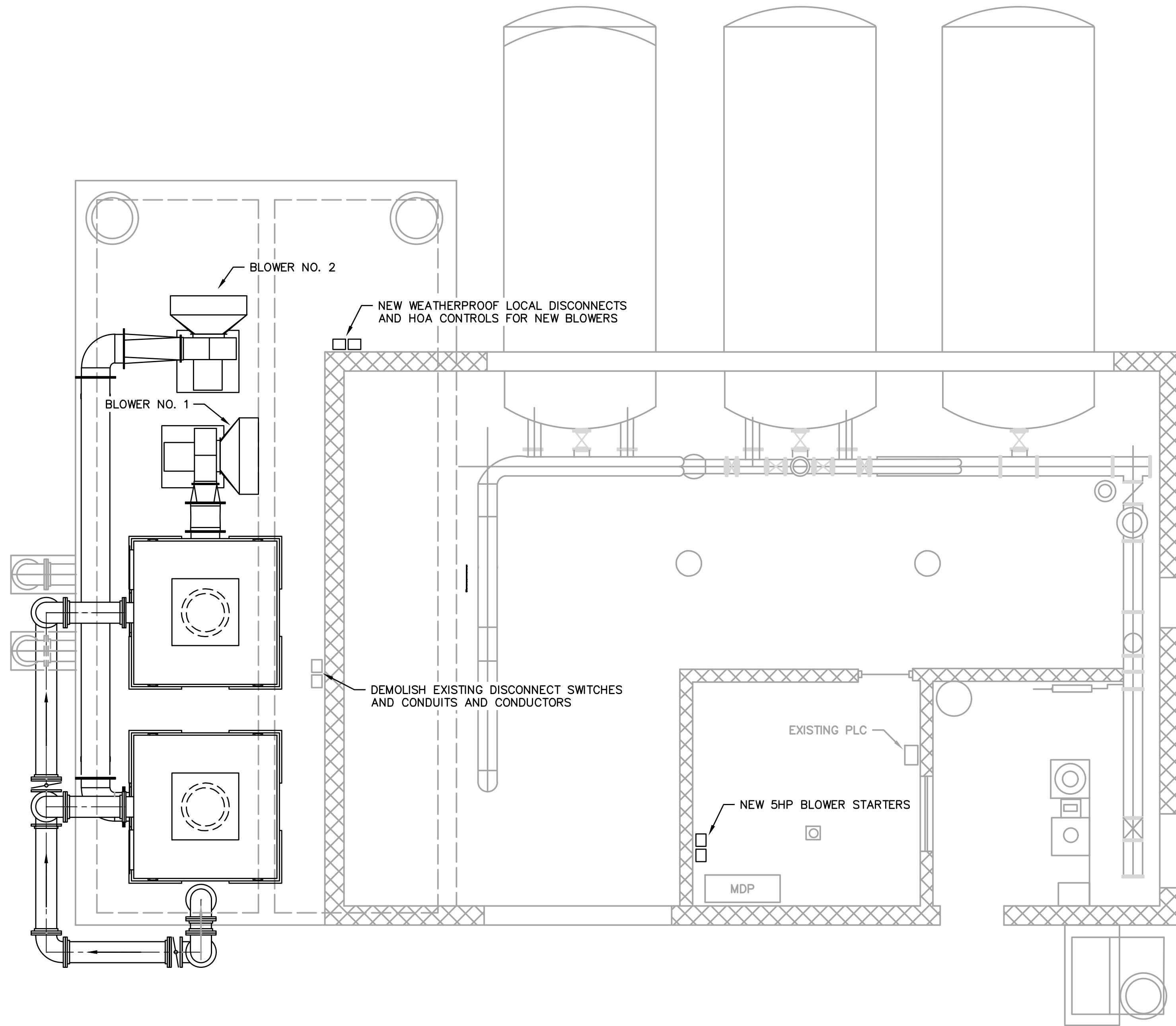
WELL HOUSE ELECTRICAL PLAN

SCALE: $3/8" = 1'-0"$



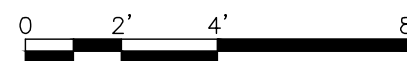
WELL HOUSE NOTES:

1. SEE SINGLE LINE DIAGRAM ON SHEET E-002 FOR CONDUIT AND CONDUCTOR INFORMATION.
2. NEW 40HP WELL PUMPS ARE TO REPLACE EXISTING 25HP PUMPS. DEMOLISH EXISTING PUMP MOTORS AND CONDUIT AND CONDUCTORS BACK TO SOURCE.
3. NEW 40HP MOTOR STARTERS ARE TO REPLACE EXISTING WELL PUMP MOTOR STARTERS. LOCATE NEW STARTER ENCLOSURES WHERE EXISTING STARTERS ARE LOCATED. ENSURE ADEQUATE WORKING CLEARANCES ARE MAINTAINED PER NEC.
4. REUSE CONTROLS CONDUIT AND CONDUCTORS FROM EACH MOTOR STARTER BACK TO EXISTING PLANT PLC.



IRON REMOVAL PLANT ELECTRICAL PLAN

SCALE: $1/4" = 1'-0"$



TREATMENT BUILDING NOTES:

1. SEE SINGLE LINE DIAGRAM ON SHEET E-002 FOR CONDUIT AND CONDUCTOR INFORMATION.
2. NEW 5HP AERATOR BLOWERS ARE TO REPLACE EXISTING BLOWERS. DEMOLISH EXISTING BLOWERS AND CONDUIT AND CONDUCTORS BACK TO SOURCE.
3. NEW 5HP MOTOR STARTERS ARE TO REPLACE EXISTING BLOWER MOTOR STARTERS. LOCATE NEW STARTER ENCLOSURES WHERE EXISTING STARTERS ARE LOCATED. ENSURE ADEQUATE WORKING CLEARANCES ARE MAINTAINED PER NEC.
4. REUSE CONTROLS CONDUIT AND CONDUCTORS FROM EACH MOTOR STARTER BACK TO EXISTING PLANT PLC. PROVIDE NEW 6#14 CONDUCTORS FOR ADDITIONAL BLOWER RUNNING AND FAULT SIGNALS AND SPARE.
5. PROVIDE 2#14 AND CONDUIT FROM PLANT PLC TO AIRFLOW SWITCH AT EACH BLOWER DISCHARGE.

Air Stripping Towers

This project will replace the induced draft aerators with packed tower air strippers. The air stripping towers will achieve two primary functions: oxidization of iron and stripping of vinyl chloride (if it becomes present in the future).

Influent water parameters and effluent performance requirements used to size the towers are as follows:

Influent Water Parameter	Influent Design Value	Effluent Performance Requirement
Total Iron	1.5 mg/l	Oxidized for removal in downstream filtration
Vinyl Chloride	50 ug/l	Less than 2 ug/l
Hardness (as CaCO ₃)	280 mg/l	-
Sulfate	50 mg/l	-
Total Calcium	110 mg/l	-
Total Sodium	90 mg/l	-
Temperature	50F	-
pH	?	-

Effluent performance requirements are required to be met at the following flow rates:

- Minimum Flow (700 GPM); both towers operating in parallel with each tower receiving 50% of the plant's rated capacity.
- Design Flow (1400 GPM); one tower out of service; one tower operating at the plant's rated capacity.
- Peak Flow (2100 GPM); one tower out of service; one tower operating at 150% of the plant's rated capacity.

The proposed towers will match the horizontal footprint of the existing aerators (7'-6" square). The height of the new equipment will be greater than the existing at approximately 22'-0" tall. Each tower will be packed with 3.5" diameter Tripack media at 14'-0" depth. Manufacturer calculated removal efficiencies along with a preliminary layout drawing are attached to the end of this memo.

Well Pumps

The installation of the air stripping towers will result in a higher pump discharge elevation, as the towers are taller than the existing aerators. This impacts the discharge head on the pumps since they pump to the top of the unit.

The existing pumps have a design point of 1,400 gpm at 59 ft tdh. 2021 testing data shows that the pumps have some wear. They are currently producing approximately 1,400 gpm at about 10-15ft below their curve head rating.

To maintain the same allowance for wear as existing, the design tdh will be increased by the discharge height increase, approximately 12 feet. This results in a design point of 1,400 gpm at 71 ft tdh which is beyond the capability of the existing pumps and motors. As such, new pumps capable of pumping to the higher elevation are proposed. The new pumps will have 40 HP motors. A preliminary cut sheet and curve is included at the end of this memo.

PRELIMINARY

Process Control Description

Well Pumps

1. Equipment
 - a. Well Pump No. 2
 - b. Well Pump No. 4
2. Overview
 - a. Pumps are vertical turbine type and operate in a lead-lag arrangement to deliver well water to the Air Stripping Towers.
3. Control
 - a. With the Hand-Off-Auto selector switch on the starter in Hand, the pump shall run.
 - b. With the Hand-Off-Auto selector switch in Auto, the pump shall be controlled from the PLC in either a manual or automatic mode, as selected at the HMI.
 - c. PLC Manual Mode: An Operator at the HMI shall start, stop the pump.
 - d. PLC Auto Mode:
 - i. Existing automatic controls shall be maintained. Existing controls include a lead lag configuration based on the iron removal plant clearwell level, and automatic alternation.
 - ii. Airflow must be present from in service Blowers (No. 1 and No.2) for a well pump to start.
4. Interlocks
 - a. Existing interlocks will be maintained. New Interlocks are as follows:

Interlock	Type	Purpose	Setpoint	Action
Loss of Airflow	Software	Pump Shutdown	Tripped	Pump Stop
Airflow Present	Software	Pump Permissive	Tripped	Pump Start

5. Monitoring
 - a. Existing monitoring will be maintained.
6. Alarms
 - a. Existing alarms will be maintained.
 - b. **Pump motor winding overheat.**

Air Stripping Towers

1. Equipment
 - a. Air Stripping Tower No. 1
 - b. Air Stripping Tower No. 2
 - c. Blower No. 1
 - d. Blower No. 2
 - e. Raw Water Flowmeter No. 1
 - f. Raw Water Flowmeter No. 2
 - g. Air Flow Switch No. 1
 - h. Air Flow Switch No. 2
2. Process Overview

- a. The Air Stripping Towers receive well water from Well Pumps No. 2 and 4. Water enters at the top of the tower and flows downward by gravity while air from its' Blower enters from the bottom and flows upward. The counter current airflow strips contaminants from the well water. The treated water is discharged into a detention tank below the Tower.
 - b. Blower No. 1 is dedicated to Air Stripping Tower No. 1 and Blower No. 2 to Air Stripping Tower No. 2. There is no crossover.
 - c. The Blower must be operating and producing airflow for the Tower it serves to be in service.
 - d. The Air Stripping Towers operate in parallel. Normally both towers are in operation but one can be taken out of service and the flow from one well pump routed to it.
3. Control
- a. Air Stripping Tower No.1 and 2
 - i. No automatic controls exist.
 - ii. A tower may be taken out of service by closing the manually actuated butterfly valve on its dedicated influent pipe.
 - iii. Flowmeters (Well Water Flowmeter No. 1 and 2) are provided on the influent to each tower. With both towers operating in parallel, the flow should be equally split based on the influent piping configuration. If not equally split, the manually actuated butterfly valve on the influent to each Tower can be adjusted to achieve an equal split. At least one of the two butterfly valves should always be 100% open. If an unbalance exists, the butterfly valve on the unit receiving a higher flow rate can be throttled slightly to achieve an approximate balance.
 - b. Blower No. 1 and 2
 - i. With the Hand-Off-Auto selector switch on the starter in Hand, the blower shall run.
 - ii. With the Hand-Off-Auto selector switch in Auto, the blower shall be controlled from the PLC in either a manual or automatic mode, as selected at the HMI.
 - iii. PLC Manual Mode: An Operator at the HMI shall start, stop the blower.
 - iv. PLC Auto Mode: The PLC shall automatically start the blower when either Well Pump No. 2 or Well Pump No. 4 is called to start.
4. Interlocks
- a. None identified.
5. Monitoring
- a. In Auto
 - b. Running
 - c. Airflow Present
6. Alarms
- a. Loss of Airflow
 - b. Blower motor winding overheat

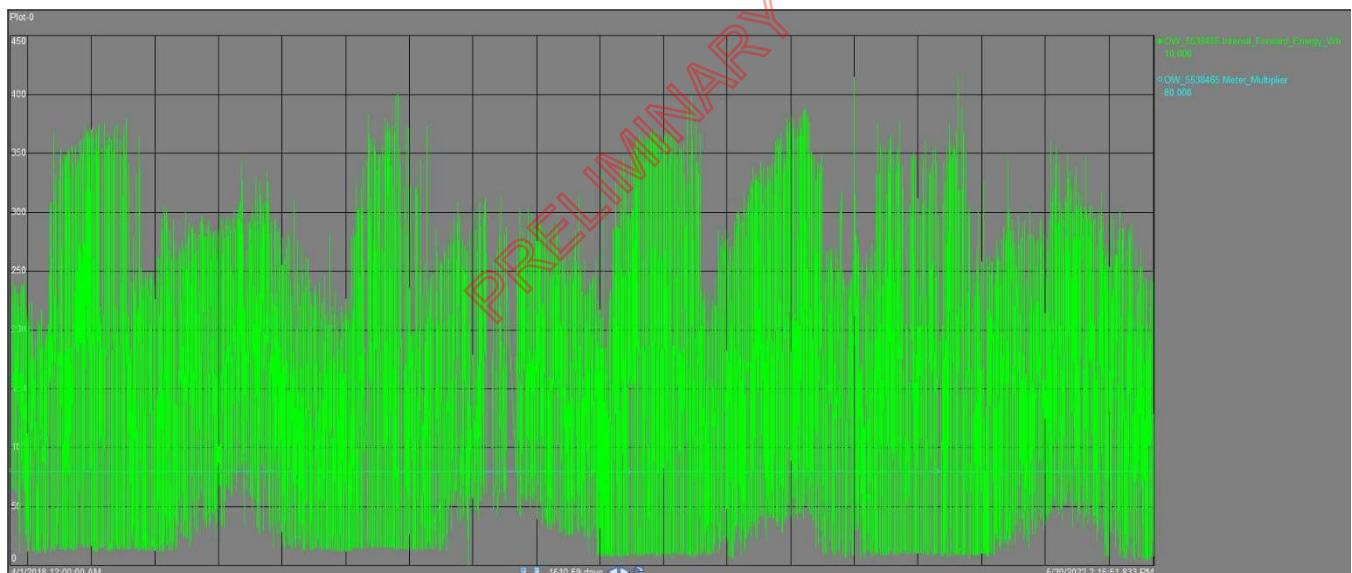
Standby Power

Generator Loading Analysis

The existing 250-kilowatt generator is wired via automatic transfer switch such that the plant can continue to operate during loss of utility power. The replacing of the well pumps and aerator blowers and the resulting effect on the generator's demand load was analysed.

The largest existing motor loads consist of the high service pumps (75HP), well pumps (25HP), and aerator blowers (3HP). The high service pumps are operated by VFDs and are to remain as-is. The well pumps are to be upsized to 40HP motors and will continue to operate on standard full-voltage combination starters. Similarly, the aerator blowers are to be upsized to 5HP motors and will also continue to operate on full-voltage combinations starters.

Utility data was provided that indicates a peak demand at the plant of 128 kilowatts, with readings taken from April 2018 to present. The usage data can be found in the following Figure.



DTE Usage Data for the site at 195 N. Main St., Milford, MI 48381

The total net added load resulting from upsizing the well pumps and aerator blowers is approximately 23 kVA. This steady-state amount and associated starting currents does not result in a significant load increase relative to the available generator capacity based on the actual demand readings.

A supplemental demand calculation was estimated based on a hypothetical “worst-case” scenario. One well pump, two aerator blowers, and two high service pumps were assumed to be operating simultaneously, all at full load. This conservatively simulates the plant running at or above its designed capacity. With the proposed upsized motors accounted for, these loads would total approximately 234 amps (480V, 3-phase). Assuming the full load amperage of the generator converts to approximately 300

amps, this would result in approximately 66 amps (480V, 3-phase) of available capacity for miscellaneous, smaller building loads (lights, heaters, etc.) to operate simultaneously.

Regulatory Requirements

The Ten State Recommended Standards for Water Works (2018) requires that “dedicated standby power shall be provided so that water may be treated and/or pumped to the distribution system during power outages to meet the average day demand.”

Conclusion

Based on the results of the generator loading analysis and the ability to provide backup power well above the required average daily demand, the existing generator is deemed to remain appropriately sized for the proposed plant upgrades.

PRELIMINARY

RE: Design information – Vinyl Chloride**June 10, 2022****PROJECT / REF: Milford, MI****PHYSICAL PROPERTIES OF CONTAMINANTS**

Contaminant – Vinyl chloride
Molecular weight – 62.5 g/mol
Boiling point – 9 degrees F
Molar volume – 0.0653L/mol
Henry's constant – 3.400
Temperature const. – 1904 degrees K

PHYSICAL PROPERTIES OF PACKING

Type – Raschig Tripack
Nominal size – 3.5"
Material – Polypropylene
Specific area – 38 sq. ft./ cu. ft.
Packing factor – 14

DESIGN PARAMETERS WITH REMOVAL EFFICIENCY

Influent flow rate – 700 GPM, 1400 GPM, 2100 GPM
Tower – 7'-6" sq.
Load rate – @ 700 GPM = 12.4 GPM/sq. ft.
 @ 1400 GPM = 24.9 GPM/sq. ft.
 @ 2100 GPM = 37.3 GPM/sq. ft.

Influent temp. – 50 degrees

Media – 3.5" Tripack

Media depth – 14'-0"

Air to Water ratio – @ 700 GPM = 60:1 (5615 cfm)
 @ 1400 GPM = 40:1 (5615 CFM)
 @ 2100 GPM = 20:1 (5615 CFM)

Atmospheric pressure – 1.0 atm

Air pressure gradient - <.06" H₂O/ft.

Contaminant – Vinyl chloride (VCM)

VCM influent concentration – 50 ug/L

Removal efficiency (VCM) @ 700 GPM – 99.4%

Effluent VCM concentration – 0.3 ug/L

Stripping factor – 124.6

(VCM) @ 1400 GPM – 98.7%

Effluent VCM concentration – 0.7 ug/L

Stripping factor – 62.3

(VCM) @ 2100 GPM – 97.9%

Effluent VCM concentration – 1.1 ug/L

Stripping factor – 41.5

Air pressure gradient for all scenarios is < .06" H₂O per ft

PRELIMINARY DRAWINGS

FOR:

MILFORD, MI

(2) STRIPPING TOWERS

ALUMINUM FORCED DRAFT STRIPPING TOWER

APRIL 17, 2021

INDEX OF DRAWINGS

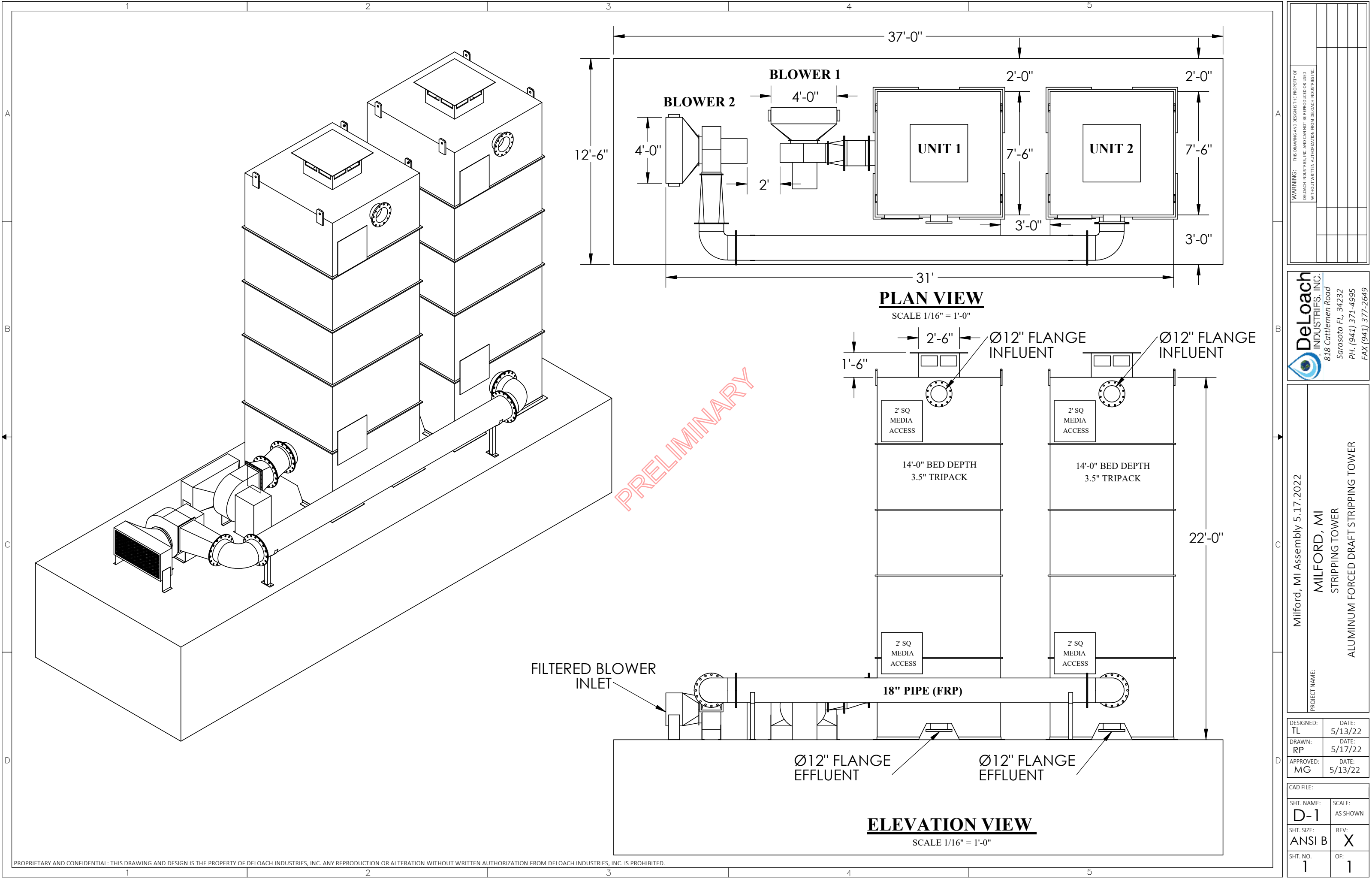
<u>SHEET</u>	<u>PAGE</u>	<u>TITLE</u>
C-1	1	COVER SHEET & INDEX OF DRAWINGS
D-1	2	PLAN & ELEVATION VIEWS

PREPARED BY

DELOACH INDUSTRIES, INC

818 Cattlemen Road, Sarasota Florida 34232

PH: (941) 371-4995 - FAX: (941) 377-2649



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DeLoach

INDUSTRIES, INC.

818 Cattlemen Road
Sarasota FL, 34232
PH. (941) 371-4995
FAX (941) 377-2649

Milford, MI Assembly 5.17.2022	PROJECT NAME:	
	MILFORD, MI	
	STRIPPING TOWER	
	ALUMINUM FORCED DRAFT STRIPPING TOWER	

DESIGNED: TL	DATE: 5/13/22
DRAWN: RP	DATE: 5/17/22
APPROVED: MG	DATE: 5/13/22

CAD FILE:	
SHT. NAME: D-1	SCALE: AS SHOWN
SHT. SIZE: ANSI B	REV: X
SHT. NO. 1	OF: 1

VERTICAL TURBINE PUMP



MOTOR

MFGR US HP 40 ENCLOSURE WP1 RPM 1800
 TYPE VHS PHASE 3 HERTZ 60 VOLTS 230/460
 S.F. 1.15 EFF. INV BD 16.50" BX 1.25"
 KWT 0.25" CPLG NRR THRUST 5700 FRAME 324TPH
 MODEL NO. HO40V2BLG CD 28.22"

DISCHARGE HEAD

MODEL HH30 W/16.5" BD
8" - ANSI CLASS 125-FF DISCHARGE FLANGE
X PACKING BOX SPLIT BRZ PACKING GLAND
N/A MECHANICAL SEAL N/A
N/A TENSION ASSEMBLY YES SOLE PLATE

COLUMN

8" X 0.322" WALL X THD N/A FLG'D
 LINESHAFT X OPEN (N/A) ENCLOSED
 SHAFT DIA 1.50" TPI 10 TPI TUBE DIA N/A

BOWL

2 STAGE H12MC BOWL ASSEMBLY
1400 US GPM FLOW 71 FT. HEAD
 STRAINER YES X NO TYPE NONE

MATERIALS

BOWLS CLCN COLUMN A53, GR B
 IMPELLERS 876 BZ (STD) COLUMN CPLG DI
 BWL SFT 416 SS SHAFT TUBE N/A
 COLLETS 1215 CS BRG RET 304 SS
 BOWL BRG BOWL DWG LINE SFT BRGS RUBBER
 BOLTING GR. 5 LINE SHAFT SS (416)
 TENSION BRG N/A SHAFT SLEEVES SS (304)
 MECH SEAL N/A SHAFT CPLG SS (304)
 SOLE PLATE A-36 PACKING GRAPHITE
 BOWL WR N/A STRAINER N/A
 IMP WR N/A HEAD CI
 HEAD SHAFT 416 SS HEAD SHAFT CPG SS (304)
 BOWL SURFACE FINISH STD PAINT; OD
 COLUMN SURFACE FINISH NO COATING
 HEAD SURFACE FINISH NO COATING

PROJECT NAME

Well #2 & Well #4

WEIGHT & THRUST ESTIMATES

BOWL 455 LBS COLUMN 131 LBS HEAD ? LBS
 SHAFT 372 LBS TUBE 0 LBS DRIVER 600 LBS
 HYD THRUST 1150 LBS DRIVER MAX THRUST 5700 LBS

SPECIAL NOTE: DO NOT ASSEMBLE AS A SCVT PUMP

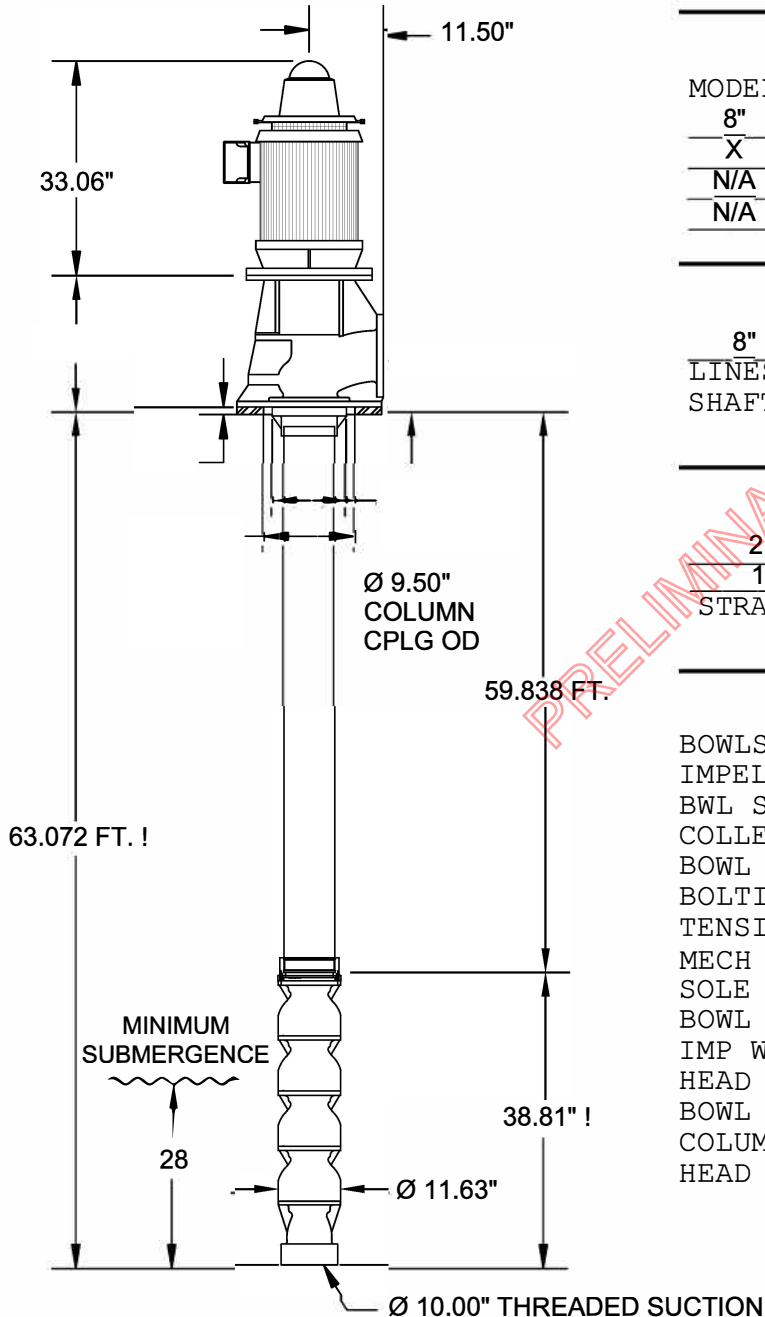
ALL DIMENSIONS IN INCHES UNLESS OTHERWISE SHOWN.

FOUR STAGE ASSEMBLY SHOWN.

NOT FOR CONSTRUCTION UNLESS CERTIFIED.

C-167320

BUILD - 2



! OPTIONAL SUCTION PIPE LENGTH OF 10 FT. NOT INCLUDED IN TPL OR BOWL LENGTH DIMENSIONS

MFG. BY NATIONAL PUMP COMPANY

Pump Data Sheet - National Pump Company

Company: Peerless-Midwest, Inc.

Milford, MI - Well #2 & Well #4

Name: Nathan Shail

Date: 5/27/2022



Pump:

Size: H12MC (2 stage)
 Type: VERT.TURB.ENCLOSED
 Synch Speed: 1800 rpm
 Curve: CVH12MC4P6CY
 Specific Speeds:
 Dimensions:
 Vertical Turbine:
 Speed: 1770 rpm
 Dia: 8.58 in
 Impeller: H12MC (1/8)
 Ns: 4200
 Nss: 9500
 Suction: ---
 Discharge: ---
 Bowl Size: 11.6 in
 Max Lateral: 1 in
 Thrust K Factor: 15.8 lbf/ft

Search Criteria:

Flow: 1400 US gpm Head: 71 ft

Fluid:

Water
 Density: 62.32 lb/ft³
 Viscosity: 0.9946 cP
 NPSHa: ---
 Temperature: 68 °F
 Vapor Pressure: 0.3391 psi a
 Atm Pressure: 14.7 psi a

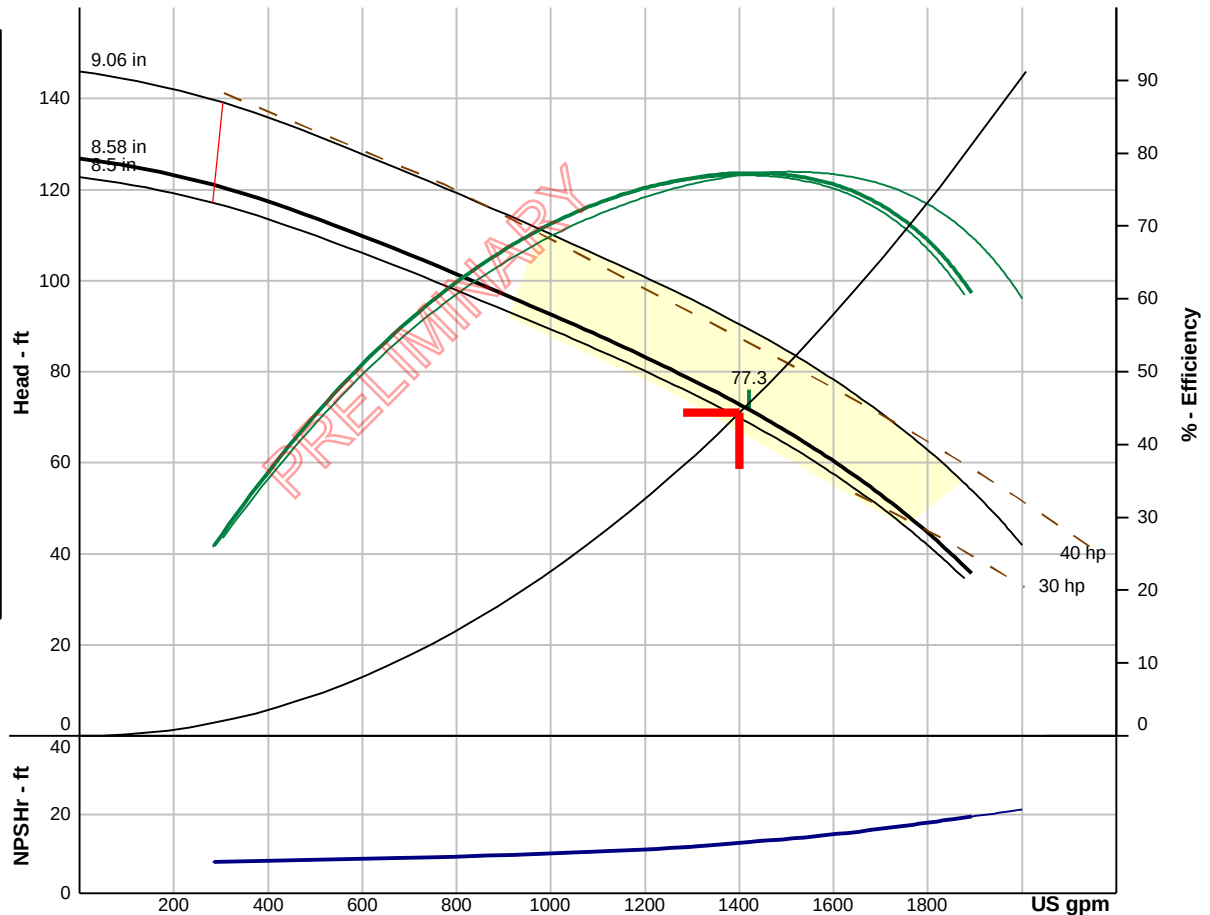
Motor:

Standard: NEMA
 Enclosure: WP-I
 Sizing Criteria: Max Power on Design Curve
 Size: 40 hp
 Speed: 1800 rpm
 Frame: 324

Pump Limits:

Temperature: 180 °F
 Pressure: 410 psi g
 Sphere Size: 0.9 in
 Power: 417 hp
 Eye Area: 33.5 in²

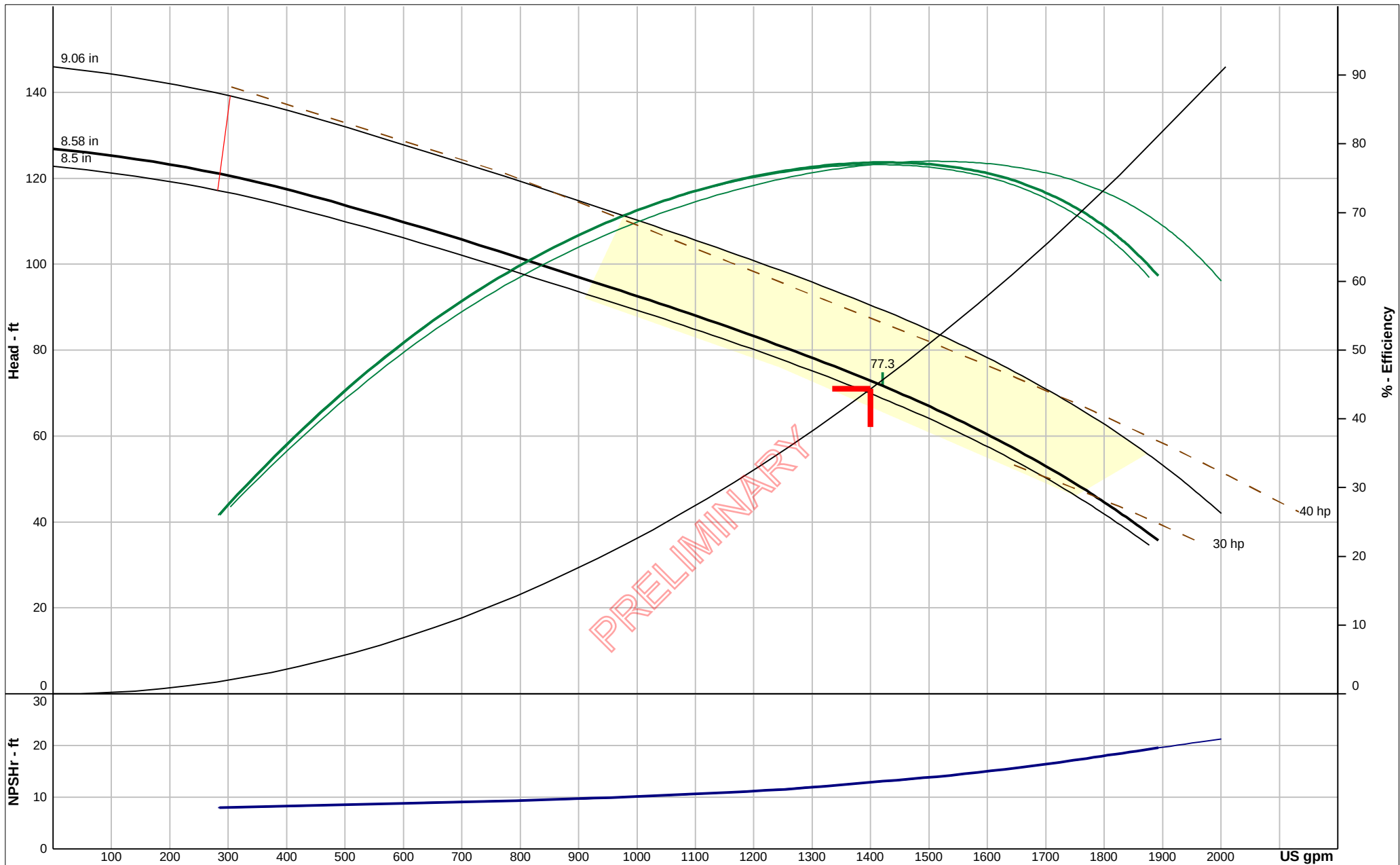
---- Duty Point ----	
Flow:	1400 US gpm
Head:	72.8 ft
Eff:	77%
Power:	33.3 hp
NPSHr:	12.9 ft
---- Design Curve ----	
Shutoff Head:	127 ft
Shutoff dP:	54.9 psi
Min Flow:	284 US gpm
BEP:	77.3% @ 1421 US gpm
NOL Power:	33.5 hp @ 1254 US gpm
-- Max Curve --	
Max Power:	41.5 hp @ 1335 US gpm



UNLESS OTHERWISE SPECIFIED: [1] LIMITS AND PERFORMANCE BASED ON STANDARD MATERIALS. [2] PERFORMANCE SHOWN MEETS HI 14.6-2011 GRADE 1B TOLERANCES AT THE RATED CONDITION WITHIN THE SELECTION WINDOW. [3] NPSHR AT 1ST STAGE IMPELLER CENTERLINE.

Performance Evaluation:

Flow US gpm	Speed rpm	Head ft	Efficiency %	Power hp	NPSHr ft
1680	1770	54.4	73	31.4	16.2
1400	1770	72.8	77	33.3	12.9
1120	1770	87.1	74	33.4	10.8
840	1770	99.6	63	32.9	9.6
560	1770	111	48	32.6	8.77



UNLESS OTHERWISE SPECIFIED: [1] LIMITS AND PERFORMANCE BASED ON STANDARD MATERIALS. [2] PERFORMANCE SHOWN MEETS HI 14.6-2011 GRADE 1B TOLERANCES AT THE RATED CONDITION WITHIN THE SELECTION WINDOW. [3] NPSHR AT 1ST STAGE IMPELLER CENTERLINE.

Company: Peerless-Midwest, Inc.
Name: Nathan Shail
5/27/2022

National Pump Company
Catalog: National Pump Company.60, Vers 6c210401
VERT.TURB.ENCLOSED - 1800 rpm
Design Point: 1400 US gpm, 71 ft

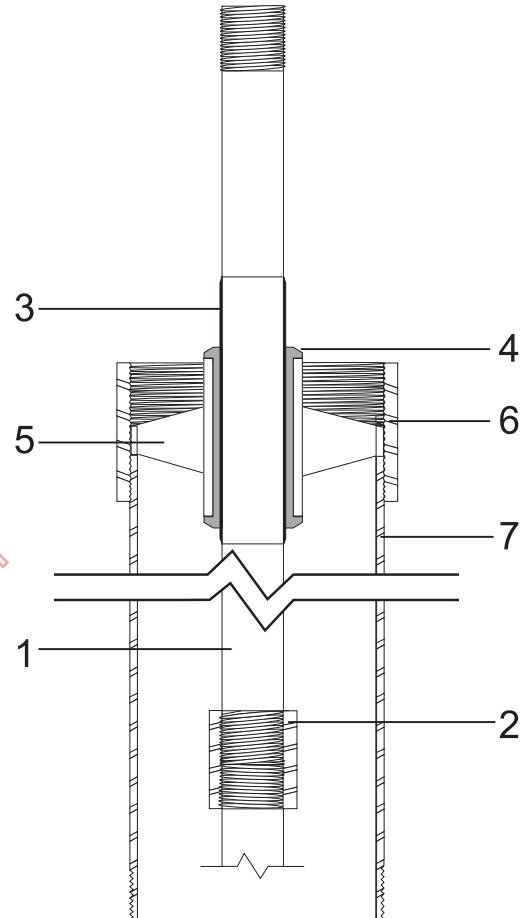
Size: H12MC (2 stage)
Speed: 1770 rpm
Dia: 8.58 in
Curve: CVH12MC4P6CY
Impeller: H12MC (1/8)



COLUMN ASSEMBLY PRODUCT LUBRICATED TYPE FOR LINESHAFT TURBINE PUMPS

COLUMN SIZE SCH. WALL THICKNESS	SHAFT SIZE	WEIGHT IN LBS.		MAX. AWWA RECMD. GPM	O.D. PIPE CPLG.
		5 FT.	10 FT.		
4" SCH. 40 0.237"	1"	71	139	150	5.20"
	1-3/16"	77	150	100	
	1-1/4"	79	154	100	
5" SCH. 40 0.258"	1"	95	182	325	6.30"
	1-3/16"	101	193	250	
	1-1/4"	103	197	250	
	1-1/2"	113	216	225	
6" SCH. 40 0.280"	1"	118	227	600	7.39"
	1-3/16"	124	238	500	
	1-1/4"	126	242	500	
	1-1/2"	136	261	400	
	1-11/16"	144	277	400	
8" SCH. 40 0.322"	1"	172	329	1350	9.63"
	1-3/16"	178	340	1300	
	1-1/4"	180	344	1300	
	1-1/2"	190	363	1150	
	1-11/16"	198	379	1150	
	1-15/16"	212	405	950	
10" 0.279"	1"	245	461	2800	11.75"
	1-3/16"	251	472	2600	
	1-1/4"	253	474	2600	
	1-1/2"	263	495	2450	
	1-11/16"	271	511	2450	
	1-15/16"	285	538	2000	
12" SCH. 30 0.330"	1"	304	565	4700	14.00"
	1-3/16"	310	577	4300	
	1-1/4"	312	581	4300	
	1-1/2"	322	602	4000	
	1-11/16"	330	616	4000	
	1-15/16"	344	642	3600	
	2-3/16"	359	671	3400	

THREADED COLUMN ASSEMBLY
PRODUCT LUBRICATED (PRL)



TYPICAL COLUMN ASSEMBLY CONSISTS OF:

1. 416 STAINLESS STEEL LINESHAFT
2. 304 STAINLESS STEEL SHAFT COUPLING
3. 304 SS SLEEVE
4. NEOPRENE LINESHAFT BEARING
5. 304 STAINLESS STEEL BEARING RETAINER
6. DUCTILE IRON PIPE COUPLINGS
7. A53 GRADE B STEEL PIPE

CONSULT THE FACTORY FOR
MATERIAL AVAILABILITY AND
PRICES OTHER THAN STANDARD.

EFFECTIVE:
20-JUL-11

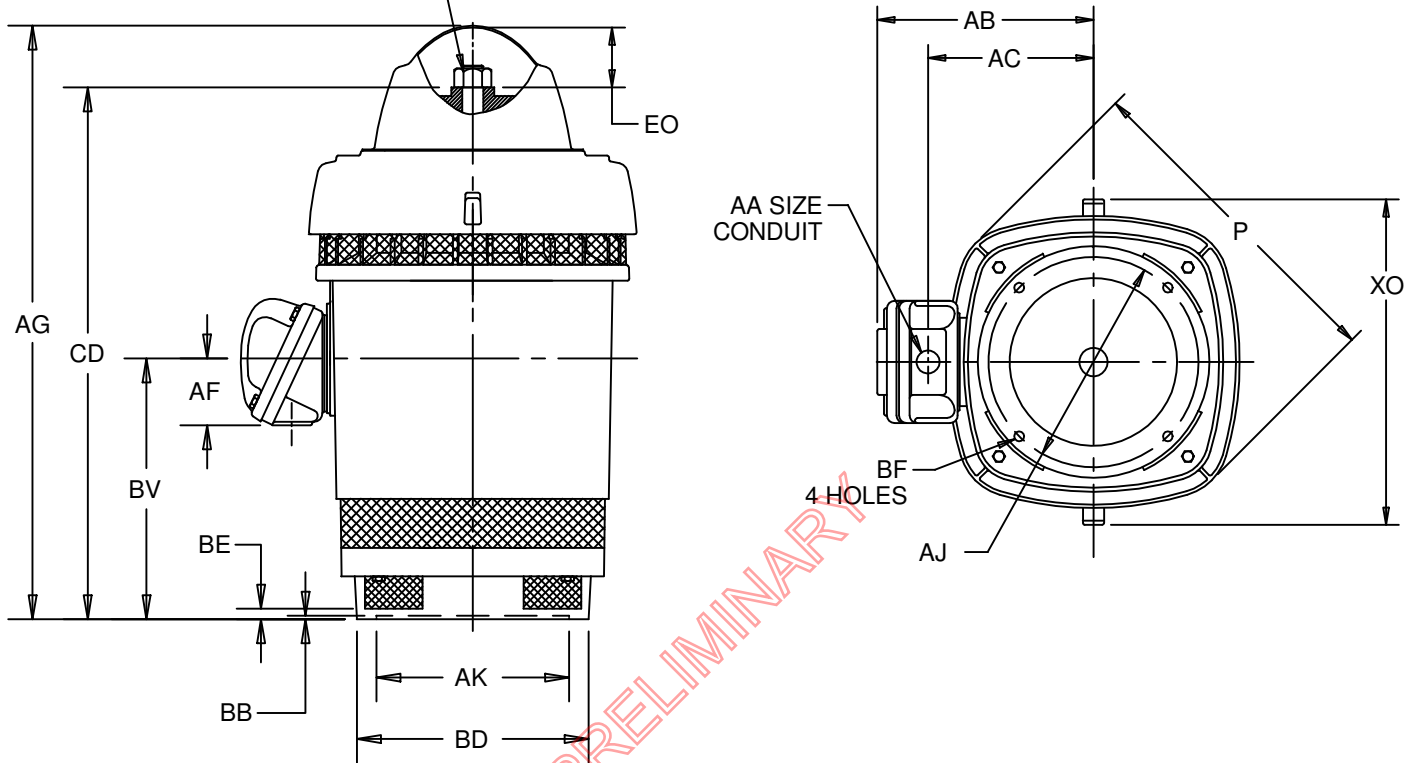
SUPERSEDES:
22-FEB-11

VERTICAL MOTORS
WEATHER PROTECTED TYPE 1
FRAME: 324, 326TP, TPH
BASIC TYPE: RU

PRINT:
09-2291

SHEET:
1 OF 1

PUMP SHAFT, ADJUSTING NUT AND
LOCKING SCREWS ARE NOT
FURNISHED WITH MOTOR



ALL DIMENSIONS ARE IN INCHES AND MILLIMETERS

UNITS	P ²	AG	BE	BV	CD	EO	XO
IN	19.06	33.06	.69	11.06	28.22	4.69	21.69
MM	484	840	18	281	717	119	551

FRAME	UNITS	AJ	AK	BB MIN	BD MAX	BF
324, 326TP	IN	14.750	13.500	.25	16.50	.69
	MM	374.65	342.90	6	419	18
324,326TPH	IN	9.125	8.250	.19	12.00	.44
	MM	231.78	209.55	5	305	11

CONDUIT BOX MATERIAL	UNITS	AA	AB	AC	AF
STEEL	IN	3.00	15.84	11.56	3.38
	MM		402	294	86
CAST IRON	IN	3 NPT	16.63	12.25	4.63
	MM		422	311	118

- 1: ALL ROUGH DIMENSIONS MAY VARY BY .25" DUE TO CASTING AND/OR FABRICATION VARIATIONS.
2: LARGEST MOTOR WIDTH.
3: CONDUIT OPENINGS MAY BE LOCATED IN STEPS OF 90 DEGREES REGARDLESS OF LOCATION.
STANDARD AS SHOWN WITH CONDUIT OPENING DOWN.
4: TOLERANCES SHOWN ARE IN INCHES ONLY.

TOLERANCES	8.250 AK	13.500 AK
FACE RUNOUT	.004 T.I.R.	.007 T.I.R.
PERMISSIBLE ECCENTRICITY OF MOUNTING RABBET	.004 T.I.R.	.007 T.I.R.
TOLERANCE ON AK DIMENSION	+.003	+.005

09-2291/C

Nidec Motor Corporation
St. Louis, Missouri

INFORMATION DISCLOSED ON THIS DOCUMENT
IS CONSIDERED PROPRIETARY AND SHALL NOT BE
REPRODUCED OR DISCLOSED WITHOUT WRITTEN
CONSENT OF NIDEC MOTOR CORPORATION



ISSUED BY
E. WENDT
APPROVED BY
K. POTTER

IHP_DP_NMCA (MAR-2011) SOLIDEDGE

NAMEPLATE DATA

CATALOG NUMBER		HO40V2BLG		NAMEPLATE PART #:		422707-005	
MODEL	DT97	FR	324TP	TYPE	RUSI	ENCL	WPI
SHAFT END BRG		6211-J - QTY 1		OPP END BRG		7220 BEP - QTY 1	
PH	3	MAX AMB	40 C	ID#			
INSUL CLASS	F	Asm. Pos			DUTY	CONT	
HP	40	RPM	1780	HP		RPM	
VOLTS	460	230		VOLTS			
FL AMPS	45.0	91.0		FL AMPS			
SF AMPS	52.0	104.0		SF AMPS			
SF	1.15	DESIGN	B	CODE	G		
NEMA NOM EFFICIENCY	94.5	NOM PF	87.8	KiloWatt	29.840		
GUARANTEED EFFICIENCY	93.6	MAX KVAR		HZ	60		

HAZARDOUS LOCATION DATA (IF APPLICABLE):

DIVISION		CLASS I		GROUP I	
TEMP CODE		CLASS II		GROUP II	

VFD DATA (IF APPLICABLE):

VOLTS	460	230		
AMPS	47.3	95.6		
TORQUE 1	117.9LB-FT		TORQUE 2	
VFD LOAD TYPE 1	VT/PWM		VFD LOAD TYPE 2	
VFD HERTZ RANGE 1	6-60		VFD HERTZ RANGE 2	
VFD SPEED RANGE 1	180-1800		VFD SPEED RANGE 2	
SERVICE FACTOR	1.00		FL SLIP	
NO. POLES			MAGNETIZING AMPS	
VECTOR MAX RPM			Encoder PPR	
Radians / Seconds			Encoder Volts	

TEAO DATA (IF APPLICABLE):

HP (AIR OVER)		HP (AIR OVER M/S)		RPM (AIR OVER)		RPM (AIR OVER M/S)	
FPM AIR VELOCITY		FPM AIR VELOCITY M/S		FPM AIR VELOCITY SEC			

ADDITIONAL NAMEPLATE DATA:

Decal / Plate	WD=159833	Customer PN	
Notes		Non Rev Ratchet	NRR
Max Temp Rise		OPP/Upper Oil Cap	3 QT/2.8 L
Thermal (WDG)	OVER TEMP PROT 2	SHAFT/Lower Oil Cap	GREASE
Altitude			
Regulatory Notes		Regulatory Compliance	
COS		Marine Duty	
Balance	0.08 IN/SEC	Arctic Duty	
3/4 Load Eff.	94.4	Inrush Limit	
Motor Weight (LBS)	635	Direction of Rotation	
Sound Level		Special Note 1	
Vertical Thrust (LBS)	5700	Special Note 2	
Thrust Percentage	100% HT	Special Note 3	
Bearing Life		Special Note 4	
Starting Method		Special Note 5	
Number of Starts		Special Note 6	
200/208V 60Hz Max Amps		SH Max. Temp.	
190V 50 hz Max Amps		SH Voltage	SH VOLTS=115V
380V 50 Hz Max Amps		SH Watts	SH WATTS= 96W
NEMA Inertia		Load Inertia	
Sumpheater Voltage		Sumpheater Wattage	
Special Accessory Note 1		Special Accessory Note 16	
Special Accessory Note 2		Special Accessory Note 17	
Special Accessory Note 3		Special Accessory Note 18	
Special Accessory Note 4		Special Accessory Note 19	
Special Accessory Note 5		Special Accessory Note 20	
Special Accessory Note 6		Special Accessory Note 21	
Special Accessory Note 7		Special Accessory Note 22	
Special Accessory Note 8		Special Accessory Note 23	
Special Accessory Note 9		Special Accessory Note 24	
Special Accessory Note 10		Special Accessory Note 25	
Special Accessory Note 11		Special Accessory Note 26	
Special Accessory Note 12		Special Accessory Note 27	
Special Accessory Note 13		Special Accessory Note 28	
Special Accessory Note 14		Special Accessory Note 29	
Special Accessory Note 15		Special Accessory Note 30	

NIDEC MOTOR CORPORATION
ST. LOUIS, MO



TYPICAL NAMEPLATE DATA
ACTUAL MOTOR NAMEPLATE LAYOUT MAY VARY
SOME FIELDS MAY BE OMITTED

Nidec trademarks followed by the ® symbol are registered with the U.S. Patent and Trademark Office.

MOTOR PERFORMANCE

MODEL NO.	CATALOG NO.	PHASE	TYPE	FRAME
DT97	HO40V2BLG	3	RUSI	324TP

ORDER NO.	22256	LINE NO.	

MPI:		141535	141537
HP:		40	40
POLES:		4	4
VOLTS:		460	230
HZ:		60	60
SERVICE FACTOR:		1.15	1.15
EFFICIENCY (%):			
	S.F.	94	94
	FULL	94.1	94.1
	3/4	94.4	94.4
	1/2	93.6	93.6
	1/4	90	90
POWER FACTOR (%):			
	S.F.	87.9	87.9
	FULL	87.8	87.8
	3/4	86.4	86.4
	1/2	81.3	81.3
	1/4	64.8	64.8
	NO LOAD	7.9	7.9
	LOCKED ROTOR	36.4	36.4
AMPS:			
	S.F.	52	104
	FULL	45	91
	3/4	34	69
	1/2	24.6	49
	1/4	16.1	32
	NO LOAD	11.8	23.5
	LOCKED ROTOR	286	572
NEMA CODE LETTER		G	G
NEMA DESIGN LETTER		B	B
FULL LOAD RPM		1780	1780
NEMA NOMINAL EFFICIENCY (%)		94.5	94.5
GUARANTEED EFFICIENCY (%)		93.6	93.6
MAX KVAR		8	8
AMBIENT (°C)		40	40
ALTITUDE (FASL)		3300	3300
SAFE STALL TIME-HOT (SEC)		30	30
SOUND PRESSURE (DBA @ 1M)		65	65
TORQUES:			
	BREAKDOWN(% F.L.)	251	251
	LOCKED ROTOR(% F.L.)	192	192
	FULL LOAD(LB-FT)	117.9	117.9

NEMA Nominal and Guaranteed Efficiencies are up to 3,300 feet above sea level and 25 ° C ambient

The Above Data Is Typical, Sinewave Power Unless Noted Otherwise

NIDEC MOTOR CORPORATION
ST. LOUIS, MO



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PERMIT APPLICATION FOR WATER SUPPLY SYSTEMS
(CONSTRUCTION - ALTERATION - ADDITION OR IMPROVEMENT) AS DESCRIBED HEREIN
Required under the Authority of 1976 PA 399, as amended (Act 399)

This application becomes an Act 399 Permit only when signed and issued by authorized Michigan Department of Environment, Great Lakes, and Energy (EGLE) staff. See instructions below for completion of this application.

1. Municipality or Organization, Address and WSSN that will own or control the water facilities to be constructed. This permit is to be issued to: Village of Milford 1100 Atlantic Milford, Michigan 48381 WSSN: 04390	Permit Stamp Area (EGLE use only)	
2. Owner's Contact Person (provide name for questions): Contact: Mike Karll Title: Director of Public Services Phone: 248-685-3055		
3. Project Name (Provide phase number if project is segmented): Groundwater Treatment System Improvements	4. Project Location (City, Village, Township): Village of Milford	5. County (location of project): Oakland

**ISSUED UNDER THE AUTHORITY OF THE DIRECTOR OF
THE MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY**

cc:

Issued by: _____

Reviewed by: _____

☐ **If this box is marked see attached special conditions.**

Instructions: Complete items 1 through 5 above and 6 through 21 on the following pages of this application. Print or type all information except for signatures. Mail completed application, plans and specifications, and any attachments to the EGLE District Office having jurisdiction in the area of the proposed construction.

Please Note:

- This **PERMIT** only authorizes the construction, alteration, addition or improvement of the water system described herein and is issued solely under the authority of 1976 PA 399, as amended.
- The issuance of this **PERMIT** does not authorize violation of any federal, state or local laws or regulations, nor does it obviate the necessity of obtaining such permits, including any other EGLE permits, or approvals from other units of government as may be required by law.
- This **PERMIT** expires two (2) years after the date of issuance in accordance with R 325.11306, 1976 PA 399, administrative rules, unless construction has been initiated prior to expiration.
- Noncompliance with the conditions of this permit and the requirements of the Act constitutes a violation of the Act.
- Applicant must give notice to public utilities in accordance with 1974 PA 53, (MISS DIG), being Section 460.701 to 460.718 of the Michigan Compiled Laws and comply with each of the requirements of that Act.
- All earth changing activities must be conducted in accordance with the requirements of the Soil Erosion and Sedimentation Control Act, Part 91, 1994 PA 451, as amended (Act 451).
- All construction activity impacting wetlands must be conducted in accordance with the Wetland Protection Act, Part 303, 1994 PA 451, as amended.
- Intentionally providing false information in this application constitutes fraud which is punishable by fine and/or imprisonment.
- Where applicable for water withdrawals, the issuance of this permit indicates compliance with the requirements of Part 327 of Act 451, Great Lakes Preservation Act.

Permit Application for Water Supply Systems (Continued)

- 6. Facilities Description** – In the space below provide a detailed description of the proposed project. Applications without adequate facilities descriptions **will be returned**. SEE EXAMPLES BELOW. Use additional sheets if needed.

The existing water treatment plant will be modified to include upgraded well pumps and motors at the existing water supply wells (PW-2 and PW-4) and two new air stripping towers to remove vinyl chloride. The two existing vertical turbine well pumps will be upgraded to 40 Hp motors (460 volt, three phase, 60 Hz) and 2 stage 12 inch bowls with a rating of 1,400 gpm at 71 feet TDH. Each air stripping tower will be rated at 1,400 gpm and capable of removing vinyl chloride concentrations at 50 ug/L to < 2 ug/L. Air stripping towers will be 7 feet-6 inches square with a media depth of 14 feet. Media will be 3.5 inch Raschig Tripack (polypropylene). Each air stripping tower will be equipped with a 5 Hp (460 volt, three phase, 60 Hz) forced draft blower with a rating of 5,615 SCFM at 2 inches static pressure. Air to water ratio shall be a minimum of 20 to 1.

EXAMPLES – EXAMPLES – EXAMPLES – EXAMPLES – EXAMPLES – EXAMPLES

Water Mains	500 feet of 8-inch water main in First Street from Main Street north to State Street. OR 250 feet of 12-inch water main in Clark Road from an existing 8-inch main in Third Avenue north to a hydrant.
Booster Stations	A booster station located at the southwest corner of Third Avenue and Main Street, and equipped with two, 15 Hp pumps each rated 150 gpm @ 200 feet TDH. Station includes backup power and all other equipment as required for proper operation.
Elevated Storage Tank	A 300,000 gallon elevated storage tank located in City Park. The proposed tank shall be spherical, all welded construction and supported on a single pedestal. The tank shall be 150 feet in height, 40 feet in diameter with a normal operating range of 130 – 145 feet. The interior coating system shall be ANSI/NSF Standard 61 approved or equivalent. The tank will be equipped with a cathodic protection system, and includes a tank level control system with telemetry.
Chemical Feed	A positive displacement chemical feed pump, rated at 24 gpd @ 110 psi to apply a chlorine solution for Well No. 1. Chlorine is 12.5% NaOCL, ANSI/NSF Standard 60 approved and will be applied at a rate of 1.0 mg/l of actual chlorine.
Water Supply Well	Well No. 3, a 200 foot deep well with 170 feet of 8-inch casing and 30 feet of 8-inch, 10 slot screen. The well will be equipped with a 20 Hp submersible pump and motor rated 200 gpm @ 225 feet TDH, set at 160 feet below land surface.
Treatment Facilities	A 5 million gpd water treatment plant located at the north end of Second Avenue. The facility will include 6 low service pumps, 2 rapid mix basins, 4 flocculation/sedimentation basins, 8 dual media filters, 3 million gallon water storage reservoir and 6 high service pumps. Also included are chemical feed pumps and related appurtenances for the addition of alum, fluoride, phosphate and chlorine.

Permit Application for Water Supply Systems (Continued)

General Project Information – Complete all boxes below.	
7. Design engineer's name, engineering firm, address, phone number, and email address: Brad Hitts Arcadis of Michigan, LLC 28550 Cabot Drive, Suite 500 Novi, Michigan 48377 419-213-1623 brad.hitts@arcadis.com	8. Indicate who will provide project construction inspection: ☐ Organization listed in Box 1. ☒ Engineering firm listed in Box 7. ☐ Other - name, address, and phone number listed below.
9. Is a basis of design attached? ☒ YES ☐ NO If no, briefly explain why a basis of design is not needed.	
10. Are sealed and signed engineering plans attached? ☐ YES ☐ NO If no, briefly explain why engineering plans are not needed.	
11. Are sealed and signed construction specifications attached? ☐ YES ☐ NO If specifications are not attached, they need to be on file at EGLE.	
12. Were Recommended Standards for Water Works, Suggested Practice for Water Works, AWWA guidelines, and the requirements of Act 399 and its administrative rules followed? ☒ YES ☐ NO If no, explain which deviations were made and why.	
13. Are all coatings, chemical additives and construction materials ANSI/NSF or other adequate 3rd party approved? ☒ YES ☐ NO If no, describe what coatings, additives or materials did not meet the applicable standard and why.	
14. Are all water system facilities being installed in the public right-of-way or a dedicated utility easement? (For projects not located in the public right-of-way, utility easements must be shown on the plans.) ☒ YES ☐ NO If no, explain how access will be obtained.	
15. Is the project construction activity within a wetland (as defined by Section 324.30301(d)) of Part 303, 1994 PA 451? ☐ YES ☒ NO If yes, a wetland permit must be obtained.	
16. Is the project construction activity within a 100-year floodplain (as defined by R 323.1311(e)) of Part 31, 1994 PA 451, administrative rules? ☐ YES ☒ NO The project does not require the disturbance of land. If yes, a flood plain permit must be obtained.	
17. Is the project construction activity within 500 feet of a lake, reservoir, or stream? ☐ YES ☒ NO The project does not require the disturbance of land. If yes, a Soil and Erosion Control Permit must be obtained <u>or</u> indicate if the owner listed in box 2 of this application is an Authorized Public Agency (Section 10 of Part 91, 1994 PA 451) ☐ Owner is APA.	

Permit Application for Water Supply Systems (Continued)

18. Will the proposed construction activity be part of a project involving the disturbance of five (5) or more acres of land?

☐ YES ☒ NO

If YES, is this activity regulated by the National Pollutant Discharge Elimination System (NPDES) storm water regulations?

☐ YES: NPDES Authorization to discharge storm water from construction activities must be obtained.

☐ NO: Describe why activity is not regulated.

Please call 517-241-8993 with questions regarding the applicability of the storm water regulations.

19. Is the project in or adjacent to a site of suspected or known soil or groundwater contamination?

☒ YES ☐ NO No contaminated soils and/or groundwater will be disturbed during proposed work.

If YES, attach a copy of a plan acceptable to EGLE for handling contaminated soils and/or groundwater disturbed during construction. Contact the local EGLE district office for listings of Michigan sites of environmental contamination.

20. IF YOU ARE A CUSTOMER/WHOLESALE/BULK PURCHASER, COMPLETE THE FOLLOWING

Not Applicable

1. Name and WSSN of source water supply system (seller): _____
2. Does the water service contract require water producer/seller to review and approve customer/wholesale/bulk purchaser water system construction plans?

☐ YES ☐ NO

If yes to #2, the producer/seller approval letter must be attached when submitted to EGLE.

21. **Owner's Certification** The owner of the proposed facilities or the owner's authorized representative shall complete the owner's certification. It is anticipated that the owner will either be a governmental agency (city, village, township, county, etc.) or a private owner (individual, company, association, etc.) of a Type I public water supply.

OWNER'S CERTIFICATION

I, _____ (name), acting as the _____ (title/position) for
(print) (print)

_____ (entity owning proposed facilities) certify that this project has
(print)

been reviewed and approved as detailed by the Plans and Specifications submitted under this application, and is in compliance with the requirements of 1976 PA 399, as amended, and its administrative rules.

Signature*

Date

Phone

*Original signature only, no photocopies will be accepted.

PROJECT BASIS OF DESIGN – FOR WATER MAIN PROJECTS

Not Applicable

PROJECT NAME: _____

For this PROJECT the following information must be provided per Act 399 unless waived by the Department. For projects other than water main installation, or if additional space is needed, attach separate sheet(s) with detailed Basis of Design calculations.

- A. A general map of the initial and ultimate service areas
☐ Included on engineering plans ☐ Attached separately
- B. Number of service connections served by this permit application _____
- C. Total number of service connections ultimately served by entire project _____
- D. Residential Equivalent Units (REUs) served by this permit application _____
- E. Total Residential Equivalent Units (REUs) ultimately served by entire project _____
- F. Water flow rates for proposed project based on REUs listed in "D" and "E" above
1. Initial design average day flow (mgd) _____
 2. Initial design maximum day flow (mgd) _____
 3. Total design average day flow (mgd) _____
 4. Total design maximum day flow (mgd) _____
 5. Required fire flows: ⁽¹⁾ _____ gpm for _____ hours
- G. Actual flows and pressures of existing system
 at the connection point(s) ⁽²⁾ _____ gpm at _____ psi
 _____ gpm at _____ psi
 _____ gpm at _____ psi
 _____ gpm at _____ psi
- H. Estimated minimum flows and pressures within
 the proposed water main system ⁽³⁾ _____ gpm at _____ psi

- (1) Every water system must decide what levels of firefighting flows they wish to provide. Fire flow should be appropriate for the area (residential, commercial, industrial) being served by the project. Typical fire flow rates can be obtained from the water supply, local fire dept., ISO or AWWA. The water system must then be designed to be able to provide the required fire flows while maintaining at least 20 psi in all portions of the distribution system.
- (2) Flows and pressures at the connection points must be given to determine if the existing water main(s) are able to deliver water to the new service area. These numbers can be obtained from a properly modeled and calibrated distribution system hydraulic analysis or hydrant flow tests performed in the field. If more than one connection is proposed, list as needed.
- (3) List what the estimated minimum flows can be expected in the proposed water mains based on estimated water demands, head losses, elevation changes and other factors that may affect flows, such as dead end mains.

Arcadis of Michigan, LLC

28550 Cabot Drive

Suite 500

Novi, Michigan 48377

Tel 248 994 2240

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