Remedial Action Work Plan

Phase II: Surface Soil and Groundwater Remedial Action

Former Bernzomatic Facility
Medina, NY
BCP Site No. C837018

August 2023

Prepared for:
Newell Operating Company
3 Glenlake Parkway
Atlanta, GA 30328

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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July 24, 2023

Kristin Jones
Newell Rubbermaid, Inc.
3 Glenlake Park
Atlanta, Georgia, 30328

Re: Revised Action Work Plan Phase II: Surface Soil and Groundwater Remedial Action
Former Bernzomatic Facility, C837018
Village of Medina, New York, Orleans County

Dear Ms. Jones,

The New York State Department of Environmental Conservation (NYSDEC) and New York State Department of Health (NYSDOH), collectively referred to as the Departments, have completed their review of the revised Remedial Action Work Plan Phase II: Surface Soil and Groundwater Remedial Action (RAWP) and the appended Pre-Design Investigation Report Phase II: Subsurface Soil and Groundwater (PDI Phase II) dated July 2023 (electronically received July 6, 2023) prepared by the URS Corporation, an AECOM company.

In accordance with Title 6 of the New York Codes, Rules and Regulations (NYCRR) part 375-1.6, the Departments **approve as modified** below:

1. Section 5.2.10 – Survey – Completed excavations will be surveyed by a URS New York State-licensed land surveyor. The horizontal coordinate system will be New York State Plane – West (NAD83) with vertical information which will use North America Vertical Datum (NAVD88). Following the survey, the following deliverables will be disseminated to the Department of Environmental Conservation:
   - A PDF file of the survey map(s) and
   - ii. CAD File(s) (.DWG) OR ArcGIS Pro Shape File(s) (.SHP) of the survey map(s).

When the Department issues a response of **approved as modified** for a given workplan, Title 6 of NYCRR part 375-1.6, requires you to choose one of the following responses and notify the Departments in writing within **15 days of the date of this letter**:

- Elect in writing your acceptance of the Department's approval "as modified",
- Invoke a Dispute Resolution in accordance with part 375-1.5(b)(2) or,
- Terminate the Brownfield Cleanup Agreement in accordance with part 375-3.5.

If accepting the Department's revisions, submit a final electronic document which is stamped/signed by professional engineer in the State of New York and includes this letter along with your written acceptance letter as cover pages. Please also include a brief field schedule for the pre-implementation Design Verification Testing study.

Within 10 days from notifying the Department of acceptance, a physical copy of the final document should be placed in the document repository. Pease contact me at Joshuah.Klier@dec.ny.gov or at (585) 226-5357 to discuss any questions or concerns regarding these comments.

NEW YORK STATE | Department of Environmental Conservation

Sincerely,

Joshuah J. Klier

Joshuah J. Klier, G.I.T.
Assistant Geologist

ec: Kyle Brent, B360 Holdings LLC
James Kaczor, URS, an AECOM Company
Thomas Walsh, Barclay Damon, LLP
Jeffrey Stravino, Hodgson Russ, LLP
David Pratt, NYSDEC
Adam Morgan, NYSDEC
Lisa Schwartz, NYSDEC
Angela Martin, NYSDOH
Justin Deming, NYSDOH

Kaczor, Jim

From:	Kaczor, Jim
Sent:	Monday, August 7, 2023 2:24 PM
To:	Klier, Joshuah J (DEC)
Cc:	Jones, Kristin; kbrent@b360holdings.com; Walsh, Thomas F.; Pratt, David (DEC); Morgan, Adam T (DEC); Schwartz, Lisa (DEC); Martin, Angela L (HEALTH); Deming, Justin H (HEALTH); Stravino, Jeffrey; Zebrowski, Adam
Subject:	RE: Former Bernzomatic Facility - C837018 - Remedial Action Work Plan/PDI Phase II Report - Revised Submittal - accepted as modified
Attachments:	Letter.BCP.C837018.2023-07-24.revisedRAWP_and_PDI_Comm.pdf

Good afternoon Josh,

On behalf of Newell Operating Company, as requested in the attached correspondence, the purpose of this message is to inform you in writing that Newell accepts the Departments approval of the Remedial Action Work Plan (RAWP) as modified.

The final modified version of the RAWP will be signed/stamped and submitted to the Departments along with a copy of this correspondence and the attached letter as cover pages. The submittal will also include a brief field schedule for the pre-implementation Design Verification Testing study.

Within 10 days of this correspondence, a physical copy of the final modified version of the RAWP will also be placed at the document repository in Medina, NY.

We appreciate your time in support of this site. Please feel free to contact me if you have any questions.

Have a safe day.

Best regards,
Jim

James Kaczor, PG (NY, IN)

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From: Klier, Joshuah J (DEC) <Joshuah.Klier@dec.ny.gov>
Sent: Monday, July 24, 2023 3:49 PM
To: Kaczor, Jim <James.Kaczor@aecom.com>
Cc: Jones, Kristin <Kristin.Jones@newellco.com>; kbrent@b360holdings.com; Walsh, Thomas F. <TWalsh@barclaydamon.com>; Pratt, David (DEC) <david.pratt@dec.ny.gov>; Morgan, Adam T (DEC) <Adam.Morgan@dec.ny.gov>; Schwartz, Lisa (DEC) <lisa.schwartz@dec.ny.gov>; Martin, Angela L (HEALTH) <Angela.Martin@health.ny.gov>; Deming, Justin H (HEALTH) <justin.deming@health.ny.gov>; Stravino, Jeffrey <JStravin@hodgsonruss.com>; Zebrowski, Adam <AZebrowski@LaBellaPC.com>
Subject: RE: Former Berzomatic Facility - C837018 - Remedial Action Work Plan/PDI Phase II Report - Revised Submittal
Importance: High

Attention all,

This email copies you on official correspondence from the New York State Department of Environmental Conservation in consultation with the New York State Department of Health. To reduce paper waste, a hard copy will not be sent by postal mail.

If you have any questions or concerns, please contact me by email or at 585-226-5357.

Cheers,
Josh.
--

Joshuah J. Klier, G.I.T., M.S. (Josh) *(he/him/his)*
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Remedial Action Work Plan
Phase II: Surface Soil and Groundwater Remedial Action

Former Bernzomatic Facility
Medina, NY
BCP Site No. C837018

CERTIFICATION

I, Carsten H. Floess , PE, certify that I am currently a NYS registered professional engineer as defined in 6 NYCRR Part 375 and that this Predesign Investigation Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

Name. August 10, 2023 Date

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Attachment 4 DER-10 Appendix 1A, New York State Department of Health Generic Community Air Monitoring Plan & DER-10 Appendix 1B Fugitive Dust and Particulate Monitoring

1. Introduction

The Former Bernzomatic Facility Site (Site) is a New York State Department of Environmental Conservation (NYSDEC) Brownfield Cleanup Program (BCP) Site (No. C837018) and is located at 1 Bernzomatic Drive, Village of Medina, Orleans County, New York (**Figure 1-1**).

This Remedial Action Work Plan (RAWP) – Phase II - Surface Soil and Groundwater, prepared by URS Corporation (URS), an AECOM company, on behalf of Newell Operating Company (Newell), presents a detailed description of the remedial activities to be implemented at the Site pursuant to Items #2 (targeted excavation areas), #3 (in the targeted excavation areas) and #5 of the Description of Selected Remedy set forth in the NYSDEC's Decision Documented dated February 2021.

Newell entered the BCP as a Participant as defined in ECL 27-1405(1)(a). On October 16, 2018, B360 Holdings LLC purchased the overall property of which the BCP Site is a portion. In April 2019, B360 Holdings submitted an Application to Amend Brownfield Cleanup Agreement (BCA) and Amendment form to be added to the Brownfield Cleanup Agreement as a Volunteer. Following NYSDEC comment, the form was amended, and B360 Holdings LLC requested to be added to the BCA as a Participant. NYSDEC approved the amendment and added B360 Holdings LLC to the BCA as a Participant on August 6, 2019. Newell remains a Participant on the BCA, as well. The planned remediation at the Site included demolition of the eastern machining building, excavation of surface soils at several previously defined locations across the Site and in-situ enhanced bioremediation of groundwater impacts in the area of the eastern machining building.

The Pre-Design Investigation (PDI) Phase I: Eastern Machining Building Demolition & Surface Cover (PDI Phase 1) is being conducted by LaBella Associates, D.P.C. (LaBella) on behalf of B360 Holdings LLC. The PDI Phase I pertained to demolition of the eastern machining building (including floor slabs) (completed), excavations for infrastructure upgrades and replacements, and installation of a 1-foot cover over the footprint of the excavations. The PDI Phase I was initiated in September 2021 and substantially completed in December 2021, with surface soil placement and grading completed in May 2022.

This RAWP presents proposed activities to complete removal of surface soils in the upper foot which exceed the Commercial Use Soil Cleanup Objectives (CUSCOs) and implement an enhanced bioremediation treatment zone for volatile organic compounds (VOCs) in overburden groundwater in the area of the former eastern machining building.

The proposed remedial action will be developed in accordance with the NYSDEC's Division of Environmental Remediation-10 (Technical Guidance for Site Investigation and Remediation) issued May 3, 2010 (DER-10).

2. Site Description and History

2.1 Site Description

The Site is located in the Village of Medina, Orleans County, New York. The property is comprised of two adjoining lots located in the Towns of Shelby and Ridgeway with the street address of 1 Bernzomatic Drive. The BCP parcel included two connected buildings – a western manufacturing building and an older now-demolished eastern machining building (**Figure 2-1 and Figure 2-2**). Truck and trailer parking areas are located to the north of the manufacturing building and employee and visitor parking is located to its south.

The western manufacturing building previously consisted of assembly, packaging, warehouse/storage, and office areas. Roof drains from the western manufacturing building discharge into a cistern system located beneath the manufacturing building. Overflow from the cistern discharges to a manmade stormwater pond located southwest of the manufacturing building.

The former eastern machining building was used for machining, parts washing, and materials storage. The eastern machining building was demolished in fall 2021 as part of the PDI Phase I. The building floor slab and footers were removed in fall 2021, and placement of clean fill to surrounding grade (approximately 1-foot thick) over the former building footprint was completed May 2022.

A former engineering laboratory approximately 4,000 square feet in size, and a former storage building approximately 8,000 square feet in size, are located on the east side of Bernzomatic Drive but are not part of the BCP parcel.

The adjacent properties are characterized as a mixture of industrial, commercial, and residential uses. The Site is bordered by vacant, wooded land, and a mix of residential, commercial, and industrial properties along Bates Road, by the New York Central Railroad and a vacant commercial property to the north; by vacant wooded land, a condominium development (senior citizen housing) and residential properties to the south; and by the Cook Building (a warehouse formerly leased by Bernzomatic), a “rag production factory” (manufacturer of industrial wipe cloths, fabrics and leather materials), and residential properties along East Avenue to the west.

2.2 Site History

Available records indicate that industrial use of the property began around 1915. Early activities included canneries and food processing. Ancillary buildings included a pipe shed, machine shop, and oil house. Available records indicate that parts cleaning operations were once performed using solvent degreasing agents.

Past operations involved the machining, assembly, packing, and shipping of hand-held torches by Bernzomatic, a division of Newell. In 2011, Newell sold the business to Worthington Industries who continued manufacturing torches at the Site until July 2014. The property was sold to B360 Holdings LLC in September 2018.

The western manufacturing building is currently occupied by B360 Holdings LLC and a tenant. B360 operations include dry goods storage in the northwest corner of the western manufacturing building; and tenant operations include material assembly, packaging, and shipping in the main area of the western manufacturing building.

2.3 Previous Investigations

Previous investigations at the Site consisted of a Phase I Environmental Site Assessment (ESA) performed by AECOM (AECOM 2010) and two phases of Phase II ESA and a Remedial Investigation (RI) performed by URS (URS 2018). The Phase II ESA and RI investigations collectively included geophysical surveys; completion of soil borings; installation of 21 monitoring wells; and collection and analysis of

surface and subsurface soil, groundwater, surface water and co-located sediment, sub-slab soil vapor and co-located indoor air, and outdoor air samples (**Figure 2-3**).

During the previous Phase II ESA and RI investigations, samples were submitted to New York State Department of Health (NYSDOH) Environmental Laboratory Accreditation Program (ELAP)-certified laboratories. The analytical results were validated by a URS chemist in accordance with NYSDEC DER-10 and United States Environmental Protection Agency (USEPA) Region II data validation procedures. In the Alternatives Analysis Report (AAR), semi-volatile organic compounds (SVOCs) in surface soil, and chlorinated VOCs and metals in subsurface soil and groundwater were identified as contaminants of concern. No contaminants of concern were identified in surface water or sediments.

Surface soils with SVOCs (polycyclic aromatic hydrocarbons [PAHs]) impacts were identified in relatively small areas at various locations across the Site with a total estimated volume of 21 cubic yards of soil to be removed.

The extent of chlorinated VOC impacts to subsurface soil is confined to the assumed source area in the former eastern machining building, specifically the former parts washing area. This area measures about 50 feet by 50 feet for a total of approximately 2,500 square feet. Full delineation of this area was not previously completed due to the presence of the eastern machining building.

The extent of chlorinated VOC impacts in groundwater as defined by the 5 micrograms per liter (µg/L) contour line is an area of approximately 162,000 square feet (**Figure 2-4**).

2.4 NYSDEC Decision Document

In 2020, URS prepared an Alternatives Analysis Report (AAR). Under the BCP, at a minimum the goal of the remedial program is to select a remedy for the Site that is protective of public health and the environment for the Site's reasonably anticipated use. The current and reasonably anticipated use of the Site is industrial. The primary purpose of the AAR was to identify and evaluate the most appropriate remedial alternatives to eliminate or mitigate, through the proper application of scientific and engineering principles, all significant threats to public health and to the environment presented by contaminants disposed at the Site.

The AAR identified several remedial alternatives and evaluated the effectiveness of each alternative with respect to the remedy selection evaluation criteria as presented in Title 6 New York State Codes, Rules and Regulations (NYCRR), Part 375 and DER-10. Remedies in the BCP are selected from up to four of the following cleanup tracks:

- Track 1 - no restrictions on the use of the property.
- Track 2 - restricted use with generic soil cleanup objectives (SCOs) based on the intended use of the property-residential, restricted residential (single family houses not allowed), commercial, or industrial.
- Track 3 - restricted use with modified SCOs based on the same uses described in track 2 above.
- Track 4 - restricted use with site-specific SCOs, where the shallow exposed soils must meet the generic SCOs used for track 2 above.

In February 2021, the NYSDEC issued the Decision Document for the Site (see **Attachment 1**). The selected Track 4 remedy is referred to as the Enhanced Bioremediation with Targeted PAHs and Source Area Excavation and Institutional Controls (IC) remedy includes the following elements:

1. Remedial Design (RD) to provide details for construction, operation, optimization, maintenance, and monitoring of the remedial program.
2. Excavation including:
    - demolition of the eastern machining building,

- investigating the extent of contamination in areas not previously accessible (i.e., the PDI),
- preparing a Remedial Action Work Plan (RAWP) based on the PDI to address the removal and/or treatment of any source areas to the extent feasible, and
- excavating and off-site disposal of soils in the upper 1-foot which exceed NYCRR Part 375 CUSCOs.

3. Backfill to replace excavated soils as necessary to establish the designed grades at the Site.
4. A cover system to allow for commercial or industrial use of the Site where the upper 1-foot of soil will exceed applicable SCOs.
5. Enhanced bioremediation to treat chlorinated VOCs in groundwater in the area of the former eastern machining building.
6. Implement engineering and institutional controls to achieve a Track 4 commercial cleanup, at a minimum, and include a Site cover.
7. Prepare and implement a Site Management Plan.

2.5 Pre-Design Investigations

2.5.1 PDI Phase I

The PDI Phase I for the Eastern Machining Building Demolition & Surface Cover is being conducted by LaBella Associates, D.P.C. (LaBella) on behalf of B360 Holdings LLC (B360). The PDI Phase I pertained to demolition of the eastern machining building (including floor slabs) (completed), excavations for infrastructure upgrades and replacements, and installation of a 1-foot cover over the footprint of the excavations. The PDI Phase I was initiated in September 2021 and substantially completed in December 2021, with surface soil placement and grading completed in May 2022. The PDI Phase I Construction Completion Report, prepared by LaBella on behalf of B360, was submitted to NYSDEC /NYSDOH on March 14, 2023. NYSDEC/NYSDOH provided comments on the draft report on May 22, 2023. The revised draft PDI Phase I Completion Report will be submitted by LaBella on behalf of B360 under separate cover.

2.5.2 PDI Phase II

The PDI Phase II for soil and groundwater is being conducted by URS on behalf of Newell. The PDI Phase II Work Plan was approved by the NYSDEC on March 18, 2022. The PDI Phase II subsurface soil and groundwater PDI was performed in late April and May 2022 upon demolition of the eastern machining building completed as PDI Phase I. The purpose of the PDI Phase II Work Plan was to gather additional information to complete the remedial design for soil and groundwater.

Attachment 2 to this RAWP presents the PDI Phase II Report: Subsurface Soil and Groundwater summarizing the activities completed as part of the PDI Phase II. PDI Phase II soil and groundwater data are summarized in the following subsections.

Subsurface Soil

Figure 2-5 presents subsurface soil data obtained during the PDI Phase II (locations PDI-01 through PDI-12) and the RI (all other locations). The concentrations of the detected compounds were compared against the criteria in NYCRR Part 375, Subpart 375-6, Table 375-6.8(a) *Unrestricted Use SCOs* and Table 375-6.8(b) *Protection of Groundwater Use SCOs and Commercial Use SCOs*.

Three metals were detected above Unrestricted Use SCOs as described below:

- Aluminum in 3 of 12 samples: in PDI-06, PDI-07, and PDI-12.
- Calcium in 9 of 12 samples: in PDI-01, PDI-02, PDI-04, PDI-05, PDI-06, PDI-07, PDI-09, PD I-10, and PDI-11.

- Iron: in all 12 samples: PDI-01 thru PDI-12.

Although there were detections of other metals at each PDI Phase II location, there were no exceedances of metals for Protection of Groundwater or CUSCOs. As can be seen on **Figure 2-5**, these results are consistent with the results of the RI (i.e., aluminum, calcium, and iron were detected in the same range of concentrations in subsurface soils in the PDI Phase II as were detected in the RI).

Eight VOCs were detected below criteria in at least one PDI location, including: 1,1,1-trichloroethane, cis - 1,2-dichloroethene (cis-1,2-DCE), trans - 1,2-dichloroethene (trans-1,2-DCE), acetone, methyl acetate, methyl ethyl ketone (2-Butanone), methylcyclohexane, and tetrachloroethene (PCE). No VOC concentrations exceeded Unrestricted Use, Protection of Groundwater, or CUSCOs.

Groundwater

Figure 2-6 and **Figure 2-7** present the groundwater analytical data from the PDI Phase II and RI. During the PDI Phase II, groundwater grab samples were collected from twelve PDI temporary monitoring wells/soil borings (PDI-01 through PDI-12), and eight groundwater samples were collected using low-flow sample collection procedures from one new monitoring well (MW-22), two replacement monitoring wells (MW-05R and MW-19R) and five existing monitoring wells (MW-07, MW-14, MW-16, MW-17, and MW-21). The concentrations of the detected compounds were compared against the criteria in *NYSDEC TOGS (1,1,1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, April 2000*.

Five metals were detected above groundwater standards and guidance values as described below:

- Barium in 2 of 8 samples: MW-16 and MW-21.
- Iron in 6 of 8 samples: MW-07, MW-14, MW-16, MW-17, MW-19R, and MW-22.
- Magnesium in 3 of 8 samples: MW-16, MW-17, and MW-21.
- Manganese in 8 of 8 samples: MW-05R, MW-07, MW-14, MW-16, MW-17, MW-19R, MW-21, and MW-22.
- Sodium in 7 of 8 samples: MW-05R, MW-14, MW-16, MW-17, MW-19R, MW-21, and MW-22.

Although there were detections of other metals at each PDI Phase II location, there were no other exceedances of metals for the listed groundwater standards and guidance values.

Nine VOCs were detected above the groundwater standards and guidance values, including: 1,1-dichloroethane, 1,1-dichloroethene, cis -1,2- dichloroethene (cis-1,2-DCE), trans - 1,2- dichloroethene, acetone, chloroethane, tetrachloroethene, trichloroethene (TCE), and vinyl chloride.

Monitoring well locations where criteria exceeded VOC groundwater standards included: MW-05R, MW-07, MW-21 (and duplicate), and MW-22. Each of these locations is downgradient of the suspected source area in the former eastern machining building (i.e., former parts washing area) and within the footprint of anticipated groundwater impacts as shown on **Figure 2-4**. A summary of exceedance detections from low-flow monitoring well samples includes:

- MW-05R – maximum concentration cis-1,2-DCE at 210 µg/L; four other compounds detected at 22 µg/L or less.
- MW-07 - maximum concentration TCE at 6.1 µg/L; no other compounds detected above criteria.
- MW-21 - maximum concentration cis-1,2-DCE at 65 µg/L; two other compounds detected at 13 µg/L each.
- MW-22 - maximum concentration cis-1,2-DCE at 130 µg/L; no other compounds detected above criteria.

Groundwater grab locations where criteria exceeded VOC groundwater standards included: PDI-03, PDI-04, PDI-08, PDI-09, PDI-10, PDI-11, PDI-12. Grab sample VOC exceedances were predominantly located north of the new asphalt driveway, except for PDI-12, located just south of the western end of the new asphalt driveway. Other locations had detections for other select VOCs but were not in exceedance of the

groundwater criteria. A summary of VOC exceedance detections in direct-push boring grab sample locations includes:

- PDI-03 – maximum concentration cis-1,2-DCE at 300 µg/L; no other compounds detected above criteria.
- PDI-04 – maximum concentration cis-1,2-DCE at 1,400 µg/L; two other compounds detected at 430 µg/L and 250 µg/L respectively, and four other compounds detected at 73 µg/L or less.
- PDI-08 – maximum concentration cis-1,2-DCE at 18 µg/L; no other compounds detected above criteria.
- PDI-09 – maximum concentration cis-1,2-DCE at 87 µg/L; four other compounds detected at 11 µg/L or less.
- PDI-10 – maximum concentration cis-1,2-DCE at 140 µg/L; three other compounds detected at 23 µg/L or less.
- PDI-11 – maximum concentration cis-1,2-DCE at 300 µg/L; three compounds detected between 52 µg/L and 73 µg/L, and two compounds detected below 10 µg/L.
- PDI-12 – maximum concentration cis-1,2-DCE at 1,400 µg/L; one other compound detected at 160 µg/L, and four other compounds detected at 45 µg/L or less.

Groundwater grab samples were collected from the pilot borings for two new wells (PDI-11 at MW-05R and PDI-3 at MW-22). In each case, compounds detected were similar, but concentrations were greater in the groundwater grab sample as compared to the low-flow sample, which would be expected given the differences in the sample collection techniques.

The individual constituents detected in the PDI Phase II groundwater VOC and metals data are consistent with the results of the RI. The range of VOC concentrations detected in the PDI Phase II groundwater samples focused within the footprint of the former eastern machining building were generally greater than observed in the RI areas outside the footprint of the former eastern machining building. The RI concluded VOC levels in groundwater suggest the likely source was in the former eastern machining building. PDI Phase II VOC groundwater data support this conclusion. MNA and field parameters collected from four select groundwater monitoring wells indicate a reductive pathway is possible. Therefore, it is appropriate to proceed with the remedy described in the Decision Document without further investigation or refinement.

2.6 Current Site Conditions

The former Eastern Machining Building has been demolished and the area backfilled to match surrounding grade. The backfilled area has been seeded to establish a grass-covered lawn area.

The Site is underlain by approximately 5 to 12.5 feet of unconsolidated materials overlying bedrock. The unconsolidated materials are comprised of as much as 4 feet of fine to medium sand and gravel with some concrete and wood. The fill is underlain by natural deposits of sand and silt with some gravel. The underlying bedrock consists of approximately 10 feet of the Irondequoit Limestone underlain by Medina Group sandstone.

Depth to overburden groundwater ranges from 0.5 to 6.7 feet below ground surface with an average depth of approximately 2.7 feet below ground surface. Using water level measurements from May 2, 2022, PDI Phase II Report **Figure 2** presents the groundwater elevation contour map - overall groundwater flow is to the north-northwest.

During the remedial investigation, the results of slug tests from four wells indicate hydraulic conductivities in the unconsolidated materials range from approximately 7.58×10^{-4} centimeters per second (cm/sec) to 4.99×10^{-3} cm/sec.

3. Remedial Action Objectives

Remedial Action Objectives (RAO) for the Site are presented in Section 6.5 of the February 2021 Decision Document (see **Attachment 1**). For convenience, the list is repeated here.

The following RAOs have been established for Site media:

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

RAOs for Environmental Protection

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.
- Prevent the discharge of contaminants to surface water.
- Remove the source of ground or surface water contamination.

Soil

RAOs for Public Health Protection

- Prevent ingestion of or direct contact with contaminated soil.
- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.

RAOs for Environmental Protection

- Prevent impacts to biota from ingestion/direct contact with soil causing toxicity or impacts from bioaccumulation through the terrestrial food chain.

Sediment

RAOs for Public Health Protection

- Prevent ingestion of or direct contact with contaminated sediments.
- Prevent surface water contamination which may result in fish advisories.

RAOs for Environmental Protection

- Prevent releases of contaminants from sediments that would result in surface water levels in excess of ambient water quality criteria.
- Prevent impacts to biota from ingestion/direct contact with sediments causing toxicity or impacts from bioaccumulation through the marine or aquatic food chain.

Soil Vapor

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

The objective of this RAWP is to address soil and groundwater as summarized in Section 2.4, above, and described more fully in Section 7 of the February 2021 Decision Document (**see Attachment 1**).

4. Standards, Criteria, and Guidance

Appropriate standards, criteria, and guidance (SCG) will be used during implementation of the RAWP. Based on the nature of the remedial action, it is expected that the following SGCs will be applied to evaluate import of soil to the Site, re-use of soil at the Site, and export of soil from the Site as is detailed below. These SCGs were developed using NYSDEC DER-10, the Excavation Work Plan prepared for the Site by URS dated October 2019, the Final AAR Report prepared for the Site by URS dated August 2020, and the Decision Document issued by the NYSDEC for the Site dated February 2021.

- NYSDEC Remedial Program Soil Cleanup Objectives
    - 6 NYCRR Part 375 Subpart 375-6
- Soil Import SCG
    - Soil imported to the Site will meet Part 375 Unrestricted Use SCOs and applicable NYSDEC guidance for Polyfluoroalkyl Substances (PFAS).
- Soil Re-Use SCG
    - Soil which exceeds Part 375 CUSCOs may not be reused on-site.
    - Soil which exceeds Part 375 Unrestricted Use SCOs, but does not exceed Part 375 CUSCOs, may be re-used on-site if placed below an impervious surface, or placed beneath a minimum of 12 inches of clean cover material.
    - Soil which does not exceed Part 375 Unrestricted Use SCOs can be re-used on-site without restriction.
    - If soil is to be reused at the Site or exported from the Site, such will be completed in accordance with 6 NYCRR Part 360.
- Soil Export SCG
    - Soil excavated from the Site for off-site disposal will be considered contaminated unless testing demonstrates the soil does not exhibit contaminants exceeding Part 375 Unrestricted Use SCOs for the site-related contaminants of concern and applicable NYSDEC guidance for PFAS.
- Groundwater Quality Standards and Guidance Values
    - 6 NYCRR Part 700-706, including 6 NYCRR Part 703.5
    - NYSDEC Division of Water, TOGS 1.1.1
- In-situ Treatment of Groundwater
    - Underground Injection Control Program, 40 CFR Part 144

5. Remedial Action Work Plan

5.1 Design Description

The following sections describe the elements of the design basis that apply to the remedial design. **Figure 5-1** shows the layout of the surface soil excavation areas and **Figure 5-2** shows the layout of the in-situ groundwater treatability area.

5.2 Surface Soil Remedial Activity

5.2.1 Site Preparation

The Site will be prepared for the required remedial action and restoration work. The Site preparation activities include mobilization, installation of erosion and sedimentation controls (as needed), installation of temporary site facilities, utility location and protection, and implementation of traffic controls associated with soil transport vehicles.

5.2.2 Surface Soil Excavation

As specified in the Decision Document, soils with contaminants of concern (in this case, PAHs) in the upper foot which exceed the CUSCOs as defined by 6 NYCRR Part 375-6.8 will be excavated and transported off-site for disposal. Only PAHs were identified as a contaminant of concern in surface soil.

Prior to the start of intrusive activities, the excavation subcontractor will contact the New York DIG SAFE CALL CENTER at Dig Safely New York for public utility mark outs. URS will review available Site drawings and contact Site personnel to identify subsurface utilities and structures to the extent feasible.

Figure 5-1 presents the areas identified for surface soil remediation. Each excavation area will initially be completed as a 10’ x 15’ x 1 deep excavation. It is estimated that 21 CY of contaminated soil will be excavated and transported offsite for disposal in accord with all applicable law. Compliance samples will be collected as described in Section 5.2.3.

A demarcation layer, such as commercially available orange snow fence, orange cargo netting, or other non-biodegradable, visible material that does not impact the percolation of groundwater will be utilized prior to backfilling excavation areas. The demarcation layer will be placed over the full footprint of the excavation and sidewalls.

Backfill will be completed as described in Section 5.2.4. Excavation areas will be restored to grade and seeded to match surrounding grassy areas.

5.2.3 Compliance Samples

Confirmation samples will be collected to demonstrate the remedy has removed soils with contaminants of concern exceeding CUSCOs from the top 12 inches. As the excavations addressing surface soil contamination are between 20 and 300 feet in perimeter, and have a surface area less than 900 square feet, confirmation samples will be collected in accordance with DER-10, Section 5.4(b)5.ii. Therefore, one sample will be collected from the bottom of the excavation and one sample will be collected at the midpoint of each sidewall. If a sidewall is comprised of a pavement section (i.e., immediately adjacent to asphalt parking lot or driveway), a sidewall sample will not be collected for that sidewall.

Confirmation sample results will be compared to the CUSCOs to confirm that soils with PAHs exceeding CUSCOs have been successfully remediated. Preliminary confirmation sample data will be provided to NYSDEC / NYSDOH prior to backfilling. If a sidewall sample location fails to meet criteria, an additional 4 foot wide by 1-foot-deep cut of surface soil will be removed from the sampled sidewall and sampling will be repeated. If the initial bottom sample fails to meet criteria, an additional minimum 0.5-foot depth will be excavated and sampling repeated. If a sample fails to meet criteria after two attempts at any sample

location, the NYSDEC project manager will be consulted prior to proceeding with any additional excavations.

The soil confirmation samples will be collected and managed in accordance with the soil sampling procedures outlined in the Remedial Investigation Work Plan. The soil samples will be submitted to a NYSDOH ELAP-certified laboratory for analysis of PAHs by EPA SW 846 Method 8270D. A sample list summary including quantities and analytical methods is presented in **Table 5-1**. Analytical specifications, sample bottle, volume, preservation and holding times are presented in **Table 5-2**.

Quality assurance/quality control (QA/QC) samples consisting of a matrix spike/matrix spike duplicate (MS/MSD), and field duplicate will be collected at a frequency of one per 20 samples. The estimated number of samples is as follows:

Parameters	Method	Samples	MS/MSD	Field Duplicate	Rinse Blank	Trip Blank	Total
Soil Samples							
SVOCs (PAHs)	8270D	18	1/1	1	1		22

The analytical results will be validated by a URS chemist following NYSDEC and EPA data validation procedures. The analytical laboratory will supply Category B data deliverables within 15 days of sample receipt. A Data Usability Summary Report (DUSR) will be prepared as detailed in DER-10, Appendix 2B.

5.2.4 Imported Soil and Granular Fill

It is anticipated that materials imported to the Site will be limited to topsoil and granular (crushed stone) backfill. Prior to import of soil and granular fill to the Site, a request to Import/Reuse Fill or Soil will be prepared and submitted to the NYSDEC project manager for review and approval. It is the intent to utilize the same borrow sources as were approved for use in the PDI Phase I for the Site. The request to Import/Reuse Fill or Soil will be accompanied by appropriate documentation detailing the source, sieve analysis, and laboratory results, etc. Laboratory analysis for soil will be completed in accordance with DER-10, Table 5.4(e)10 and include analysis for 1,4-dioxane and poly- and perfluoroalkyl substances (PFAS). Any coarse grained backfill will meet the requirements of DER-10, Section 5.4(e)(5)(i). If the grain size distribution of the granular backfill is shown to contain less than 10 percent by weight of particles that pass the #80 sieve, no laboratory chemical testing may be required.

Trucks entering the Site with imported soils will be securely covered with tight fitting covers. Imported soils will be stockpiled separately from excavated materials and covered to prevent dust releases.

5.2.5 Soil Stockpiles

Although it is not anticipated to be necessary given the limited excavation and backfill areas, if soils are stockpiled temporarily, stockpiles will be continuously encircled with a berm and/or silt fence. Stockpiles will not be staged directly on the ground surface (i.e., stockpiles must be on poly or in lined containers). Hay bales or a silt sock will be used as needed near catch basins, surface waters, and other discharge points. Stockpiles will be kept covered at all times when not in use with anchored tarps. Stockpiles will be routinely inspected and damaged tarp covers will be promptly replaced. Stockpiles will be inspected at a minimum once each week and after every storm event. Results of inspections will be recorded in a logbook and maintained at the Site and available for inspection by the NYSDEC.

5.2.6 Material Disposal Offsite

Excavated impacted soil will be transported to a permitted off-site landfill for disposal as a solid waste if waste characterization sampling and analysis confirms this expectation. It is anticipated that excavated soil will be transported to Niagara Falls Landfill located in Niagara Falls, New York, for disposal. Soil transported for landfill disposal will be characterized per the landfill requirements prior to export from the Site.

Transport of materials will be performed by licensed haulers in accordance with applicable local, state, and federal laws and regulations. Haulers will be appropriately licensed, including under 6 NYCRR Part 364,

and trucks properly placarded. If soil loads contain wet material capable of producing free liquid, truck liners will be used. Trucks exiting the site with exported materials will be securely covered with tight fitting covers to prevent contaminated dust releases.

As it is anticipated no more than three truckloads of soil will be generated for disposal, a formal transportation plan is not anticipated. However, transporters loaded with Site materials will exit the vicinity of the Site using only the existing driveways and will follow the most appropriate routes taking into account: (a) limiting transport through residential areas and past sensitive sites; (b) use of city mapped truck routes; (c) prohibiting off-site queuing of trucks entering the Site; (d) limiting total distance to major highways; (e) promoting safety in access to highways; and (f) overall safety in transport.

Based on the limited excavation areas and shallow depth of disturbance it is not anticipated that construction water will be generated. However, if investigative derived fluids are generated or dewatering is necessary due to rainwater collection (where a sump will be dug in the excavation and pumps of proper sizing and capacity will be used to transfer runoff), such investigative derived fluids and/or runoff will be placed in a holding tank or 55-gallon drums. Collected water would be characterized and transported to an appropriate off-site disposal facility in accordance with applicable local, state, and federal regulations.

5.2.7 Decontamination

During and upon completion of remediation activities, decontamination of equipment will be performed to prevent contaminated material from being spread off site during waste hauling activities, and to prevent the spreading of impacted material to un-impacted areas of the site. Trucks used for transport of excavated material will be decontaminated using dry decontamination methods (i.e., removal of loose material with a broom or brush) to limit the volume of decontamination water which will require treatment and disposal. These methods, along with parking of trucks on plastic sheeting during loading, will effectively prevent the spread of contaminated materials onto roadways during transport to disposal facilities. If impacted waste materials are inadvertently spread such materials must be cleaned immediately.

Decontamination of the earth-moving and drilling equipment will occur at the completion of their respective phase of work and prior to the handling of clean backfill or de-mobilization off site. The method of equipment decontamination will consist of pressure washing to remove any impacted soil. Decontamination water generated during cleaning of tools and equipment will be collected in on-site collection area (e.g., temporary decontamination pad) and disposed of at an approved water handling facility. Water generated from decontaminating personnel will be minimal due to the availability of disposable personal protective equipment (PPE) such as Tyvek coveralls, booties, and nitrile gloves. The volume of decontamination water generated from personnel decontamination is assumed to be minimal compared to equipment decontamination water.

5.2.8 Investigation-derived Waste Management

Investigation-derived waste (IDW) generated during remedial activities (e.g., decontamination water, soil cuttings from groundwater remedy activity, purge water) will be placed in properly labeled 55-gallon drums. Drums of soil and groundwater will be labeled as “pending analysis – Potentially Hazardous Waste – pending analysis - Investigation-derived residual – soil/water from drill cuttings” and temporarily stored on-site pending characterization. One composite sample from the drummed soil cuttings and one composite sample from the drummed purge water will be collected for characterization for off-site disposal. The composite samples will be analyzed for parameters required by the selected waste disposal facility. Solid IDW will be disposed at an appropriately permitted landfill and liquid IDW will be disposed at an appropriately permitted liquid waste disposal facility.

5.2.9 Air Monitoring

Community air monitoring for VOCs and particulates (i.e., dust) will be performed in the area during intrusive activities. The community air monitoring is intended is to provide a protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigation work activities.

Real time monitoring will be performed at one upwind and one downwind station for VOCs and particulates in accordance with the guidance in DER-10 Appendix 1A, New York State Department of Health (NYSDOH) Generic Community Air Monitoring Plan and DER-10 Appendix 1B Fugitive Dust and Particulate Monitoring. These documents are provided in **Attachment 4**.

VOC monitoring will be performed using a RAE Systems MiniRAE™ or equivalent located downwind of the work zone. If the concentration of total VOCs exceeds 5 parts per million (ppm) above background, then work activities will be temporarily halted. If the total VOC level then decreases below 5 ppm over background, work activities will resume. If the total VOC levels persist at levels in excess of 5 ppm, work activities will be halted, the source of the vapors identified, and corrective actions taken to abate the emissions until the concentrations drop below the action levels. PIDs will be calibrated daily.

Particulate monitoring will be performed using a real-time DusTrak meter or equivalent, which is capable of measuring particulate matter less than 10 microns in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate alert and action levels. The alert level is 100 micrograms per cubic meter [mcg/m^3]) and the action level is150 mcg/m^3. If the particulate level is 100 (mcg/m^3) greater than background for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. If the PM-10 particulate levels exceed 150 mcg/m^3 above the background level work must be stopped and a re-evaluation of activities initiated. Work may continue if controls implemented are successful in reducing the PM-10 particulate levels below 150 mcg/m^3. Each particulate monitor's calibration will be checked daily with a filtered air sample.

The on-site Qualified Environmental Professional will monitor the operation of the CAMP equipment to verify CAMP stations are recording data appropriately. Weekly CAMP monitoring reports will be submitted to NYSDEC / NYSDOH during the duration of all ground-breaking work (i.e., soil excavations and subsurface drilling and injections).

5.2.10 Survey

Completed excavations will be surveyed by a URS New York State-licensed land surveyor. The horizontal coordinate system will be New York State Plane – West (NAD83) with vertical information which will use North America Vertical Datum (NAVD88). Following the survey, the following deliverables will be disseminated to the Department of Environmental Conservation:

- A PDF file of the survey map(s), and
- CAD file(s) (.dwg) or ArcGIS Pro shapefile(s) (.shp) of the survey map(s).

5.3 Groundwater Remedial Activity

As described in the Section 7 of the Decision Document, in-situ enhanced biodegradation will be employed to treat chlorinated VOCs in groundwater in the area of the eastern machining building. Data obtained during the Phase II PDI were consistent with prior data and supported the selected remedy. The biological breakdown of contaminants through anaerobic reductive dechlorination will be enhanced by the placement of bacteria and nutrients into the subsurface to promote microbe growth. The final remedial design of the in-situ enhanced biodegradation remedy, including the permeable reactive barrier, as described in this section will be refined based on data obtained from a pre-implementation study. The purpose of the pre-implementation study is to confirm / augment design assumptions.

5.3.1 In-situ Remedy

URS is proposing to implement the in-situ remedy with support from Regenesis, a recognized leader in technology-based solutions for the in-situ treatment of groundwater and soil contamination. Following completion of PDI Phase II data reduction, URS provided remedial investigation and PDI Phase II soil and groundwater data to Regenesis. **Figure 5-2** presents the proposed remedial approach including injection materials, volumes, and locations. The Technical Approach section of **Attachment 3** provides detailed information on the injection materials.

As described in **Attachment 3**, a brief pre-implementation study (Design Verification Testing or "DVT") is proposed to confirm design assumptions. The purpose of the pre-implementation DVT study is to verify that the subsurface conditions at the selected application locations matches those conditions used in the design. Performing the DVT step provides critical data input to the design team allowing the adjustment as necessary of the elements in the design. These design adjustments could, for example, optimize substrate placement and will result in an overall improvement in remedial performance and a reduction in overall project cost.

REGENESIS is recommending installing a FluxTracer at target wells MW-5R and MW-7. FluxTracer is a device that is deployed into the saturated screened interval of a monitoring well that can accurately determine groundwater speed and chlorinated solvent mass flux, both are instrumental in the successful design of PlumeStop barriers. A FluxTracer unit consists of a series of 2-foot pre-strung canisters installed into a 2-inch monitoring well for approximately two weeks. Each canister contains activated carbon and biodegradable tracers. As groundwater naturally moves through the FluxTracer, contaminants are sorbed to the activated carbon, and the tracers are depleted from activated carbon. The amount of sorbed VOCs is used to determine mass flux, while the depletion of the tracers can estimate groundwater speed. Initial construction and lab analysis is completed by REGENESIS; deployment and retrieval will be performed by URS field personnel. Refer to **Attachment 3** for a FluxTracer Specification Sheet, FluxTracer Installation and Retrieval Guide, and Flux Tracer Site Evaluation Form.

This brief study will be implemented within two weeks of RAWP approval. After data are evaluated, a brief letter report with final recommendations and/or revised figures will be prepared and submitted to NYSDEC / NYSDOH for approval prior to proceeding with in-situ remedial action.

5.3.2 Mobilization

Upon approval of the RAWP, a United States Environmental Protection Agency (USEPA) Region 2 Underground Injection Control (UIC) Permit is not required for Class V Remediation Wells; however, notification for inventory is required. The notification form will be completed and submitted to EPA Region 2 prior to implementing the pilot study; see https://www.epa.gov/uic/underground-injection-control-epa-region-2-nj-ny-pr-and-vi for submittal information. A copy of the completed form will be provided to NYSDEC prior to mobilizing to the Site.

Prior to the start of intrusive activities, the drilling subcontractor will contact the New York DIG SAFE CALL CENTER at Dig Safely New York for public utility mark outs. URS will also review available Site drawings and contact Site personnel to identify subsurface utilities and structures.

It is URS's understanding that utilities were disconnected from the former eastern machining building prior to demolition. During the building demolition phase, three utilities were either protected or rerouted for continued use (low voltage electric; fire protection water loop; and natural gas). Any borings completed in the vicinity of these utilities will be hand cleared to a 5-foot depth.

5.3.3 Injection Borings

Injection borings will be completed using a direct-push drill rig. The injection borings will be installed at locations in accordance with the proposed design in **Attachment 3**. After the injection is completed, the injection boring will be filled with bentonite chips and hydrated to minimize the potential for short-circuiting of injection fluids from adjacent injection points.

Injection borings will be established in the injection areas shown on **Figure 5-2** at 10 feet on-center and will be initially advanced to refusal (i.e., top of bedrock, approximately 10 to 12 feet below ground surface [bgs] depending on location). Injections are planned to begin at refusal (approximately 10 to 12 feet bgs depending on location) and continue upward to approximately three feet bgs (i.e., through the saturated interval).

The following data, associated with delivery hydraulics, will be collected during the injection process.

- GPS location of each injection boring
- Composition of injected solution;

- Injection location;
- Injection interval;
- Injection solution flow rate;
- Injection pressure;
- Temperature, pH, and specific conductance of the injection solution; and,
- Cumulative volume of injection solution delivered to the injection point.

The generation of soil cuttings is expected to be minimal and will be managed as described in Section 5.2.8.

5.3.4 Post-Injection Performance Monitoring

Post-injection groundwater monitoring will be performed to provide data related to the performance of the injected amendment with respect to remedial action objectives. Should data indicate the need, additional injections may be warranted to keep contaminant concentrations down; such evaluation and recommendations related to the data will be presented in the periodic reporting program described in Section 8.1 and Section 8.3. The performance monitoring program will include laboratory analysis and field measurement of selected parameters during performance monitoring events.

To enhance the downgradient monitoring program, one new monitoring well (MW-23) will be installed downgradient of the PlumeStop barrier in the vicinity of RI borings GSP-19/SB-05A (see **Figure 5-2** and **Figure 2-3**, respectively), and existing monitoring well MW-9 will be added to the post-injection monitoring program. These two additional points will provide intermediary information between the wells closest to the barrier (MW-5R and MW-7) and downgradient boundary wells (MW-16 and MW-17). New well MW-23 will be installed and developed in accordance with the methods described in the approved Phase II PDI Work Plan (March 2022).

Groundwater samples will be collected from the treatment area well (MW-22), eight other pre-existing wells (MW-5R, MW-7, MW-9, MW-14, MW-16, MW-17, MW-19R, MW-21) and new well MW-23. Performance groundwater monitoring will be conducted on a quarterly basis for one year from injection. The quarterly groundwater samples will be submitted to the NYSDOH ELAP-certified laboratory for analysis of VOCs, total and dissolved iron, total and dissolved manganese, sulfate, sulfide, nitrate, total organic carbon, alkalinity, chloride, and methane, ethane, ethene and carbon dioxide. All analyses will be performed following EPA methods, where applicable. A sample list summary including quantities and analytical methods is presented in **Table 5-1**. Analytical specifications, sample bottle, volume, preservation and holding times are presented in **Table 5-2**.

The groundwater samples will be collected using the low-flow sampling procedure. Water quality measurements of dissolved oxygen (DO), oxidation-reduction potential (ORP), pH, temperature, and conductivity will be periodically recorded (e.g., every gallon) using a flow-through meter.

Quality assurance/quality control (QA/QC) samples consisting of a matrix spike/matrix spike duplicate (MS/MSD), and field duplicate will be collected at a frequency of one per 20 samples per round. In addition, one trip blank per cooler containing aqueous samples scheduled for VOC analysis.

The analytical results will be validated by a URS chemist following NYSDEC and EPA data validation procedures. The analytical laboratory will supply Category B data deliverables within 15 days of sample receipt. A DUSR will be prepared as detailed in DER-10, Appendix 2B.

The groundwater results will be compared to the standards and guidance values presented in NYSDECs TOGS 1.1.1, dated June 1998.

Quarterly post-injection performance monitoring data will be communicated to NYSDEC within 30 days of receipt of laboratory data packages.

5.4 Final Engineering Report

At the completion of the remedial action, a Final Engineering Report (FER) will be prepared in accordance with DER-10, Section 5.8(a)2.(iii), including a set of “as-built” drawings, in accordance with Section 5.2(b). The FER will summarize the Phase II RAWP activities described herein and include the Phase I PDI Construction Completion Report as an appendix. The Phase II RAWP FER will be submitted 60 days after completion of remedial excavation and installation of the injections. As noted in Section 5.3.4, post-injection monitoring reports will be submitted separately as part of the MNA (monitoring) section of the Site Management Plan that will be appended to the FER along with a copy of the Environmental Easement for the Site.

6. Quality Assurance Project Plan

This section describes the QA requirements for the RAWP as specified in DER-10.

6.1 Project Organization

This RAWP will be performed by URS on behalf of Newell. URS will arrange for the excavation, drilling, surveying, and analytical services and provide on-site field personnel to perform any soil characterization, soil sampling, and groundwater sampling. Key contacts for this project are as follows:

Newell Operating Company Director Environmental Affairs:
Kristin Holloway Jones
Newell Operating Company
3 Glenlake Parkway
Atlanta, Georgia 30328
Telephone: (770) 418-7822

B360 Holdings LLC Owner:
Kyle Brent
B360 Holdings LLC
9952 Mountain Road
Middleport, New York 14105
Telephone: (585) 205-8319

URS Project Manager:
James Kaczor, P.G.
AECOM
50 Lakefront Blvd., Suite 111
Buffalo, New York 14202
Telephone: (716) 856-5636

URS Field Team Manager:
To be determined.

URS Quality Assurance Officer:
To be determined.

Laboratory Representative (Eurofins TestAmerica):
To be determined.

6.2 Sampling and Testing Procedures

This section details the sampling and testing procedures which will be followed during this RAWP. The chosen laboratory for the project, Eurofins TestAmerica, is certified, and maintains certification, under the NYSDOH ELAP.

Sampling equipment will be properly decontaminated before being reused or disposed of accordingly. Samples will be collected in pre-cleaned sample containers provided by the laboratory performing analysis with any necessary preservations added to the sample containers at the laboratory prior to sample collection. Coolers with ice will be used to store samples at 4 degrees Centigrade (°C) until delivered to and analyzed by the laboratory.

6.2.1 Chemical Analysis

Samples collected as described in this RAWP will be analyzed for the parameters specified in **Table 5-1**. Field duplicate and MS/MSD are required at a frequency of 1 per 20 samples per round. One rinse blank will be collected during each sampling event and analyzed for the parameters specified in **Table 5-2**. A trip blank will be submitted to the lab with each shipment of aqueous VOC samples. Holding times for the

samples are given in **Table 5-2**. Chain-of-custody procedures will be followed to document that contamination of samples has not occurred during container preparation, shipment, and sampling.

6.3 Sample Tracking and Custody

This section presents sample custody procedures for both the field and laboratory. Implementation of proper custody procedures for samples generated in the field is the responsibility of URS field personnel. Both laboratory and field personnel involved in the chain-of-custody and transfer of samples will be trained on the purpose of the chain-of-custody and specific procedures prior to implementation.

Evidence of sample traceability and integrity is developed by implementation of, and adherence to, the chain-of-custody procedures. These procedures document the sample traceability from the selection and preparation of the sample containers by the laboratory, to sample collection, to sample shipment, to laboratory receipt and analysis. A sample is considered to be in a person's custody if the sample is:

- In a person's possession
- Maintained in view after possession is accepted and documented
- Locked and tagged with custody seals so that no one can tamper with it after having been in physical custody
- In a secured area which is restricted to authorized personnel

6.3.1 Field Sample Custody

A chain-of-custody record accompanies the sample containers from selection and preparation at the laboratory, during shipment to the field for sample containment and preservation, and during return to the laboratory. Triplicate copies of the chain-of-custody must be completed for each sample set collected.

The chain-of-custody lists the field personnel responsible for taking samples, the project name and number, the name of the analytical laboratory to which the samples are sent, and the method of sample shipment. The chain-of-custody also lists a unique description of every sample bottle in the set. If samples are split and sent to different laboratories, a copy of the chain-of-custody record will be sent with each sample.

The “Remarks” space on the chain-of-custody is used to indicate if the sample is an MS/MD/MSD, or any other sample information for the laboratory. Since they are not specific to any one sample point, trip and equipment blanks are indicated on separate rows. Once all bottles are properly accounted for on the form, a sampler will write his or her signature and the date and time on the first “Relinquished By” space. The sampler will also write the method of shipment, the shipping cooler identification number, and the shipper air bill number on the top of the chain-of-custody. Errors will be crossed out with a single line in ink and initialed and dated by the author.

One copy of the chain-of-custody is retained by sampling personnel and the other two copies are put into a sealable plastic bag and taped inside the lid of the shipping cooler. The cooler is wrapped tightly with clear packing tape. It is then relinquished by field personnel to personnel responsible for shipment, typically an overnight carrier. The packing tape must be broken to open the container. Breakage of the tape before receipt at the laboratory may indicate tampering. If tampering is apparent, the laboratory will contact the URS Project Manager, and the sample(s) will not be analyzed.

6.3.2 Laboratory Sample Custody

The URS Project Manager or Field Team Manager will notify the laboratory of upcoming field sampling activities and the subsequent shipment of samples to the laboratory. This notification will include information concerning the number and type of samples to be shipped as well as the anticipated date of arrival.

The following laboratory sample custody procedures will be used:

- The laboratory will designate a sample custodian who will be responsible for maintaining custody of the samples and for maintaining all associated records documenting that custody.
- Upon receipt of the samples, the custodian will check cooler temperature, and check the original chain-of-custody documents and compare them with the labeled contents of each sample container for correctness and traceability. The sample custodian will sign the chain-of-custody record and record the date and time received.
- Care will be exercised to annotate any labeling or description errors. In the event of discrepant documentation, the laboratory will immediately contact the URS Project Manager or Field Team Manager as part of the corrective action process. A qualitative assessment of each sample container will be performed to note any anomalies, such as broken or leaking bottles. This assessment will be recorded as part of the incoming chain-of-custody procedure.
- The samples will be stored in a secured area and, if required, stored at a temperature of 4°± 2°C.
- A laboratory tracking record will accompany the sample or sample fraction through final analysis and final storage for control.

A copy of the tracking record will accompany the laboratory report and will become a permanent part of the project records.

6.4 Reporting

Data will be provided in electronic format, including the following specific requirements:

- All data generated will be submitted in an electronic data deliverable (EDD) that complies with the DEC's Electronic Data Warehouse standards (EDWS) or as otherwise directed by DER.
- Preliminary or final reports will be submitted to the DER in an electronic format that complies with DEC's Electronic Document Standards (EDS) or as otherwise directed.
- A DUSR will be prepared in accordance with NYSDEC procedures.

6.5 Data Quality Usability Objectives

Data Quality Objectives (DQOs) are qualitative and quantitative statements to ensure that data of known and appropriate quality are obtained during sampling and analysis activities. Data developed during the RAWP and PDI will be used to fulfill the overall objectives of the program.

The QA/QC objectives for all measurement data include precision, accuracy, representativeness, completeness, and comparability. These objectives are defined in following subsections. They are formulated to meet the requirements of the USEPA SW-846, the analytical methods and their Contract Required Quantitation Limits (CRQLs), and Contract Required Detection Limits (CRDLs).

6.5.1 Precision

Precision is an expression of the reproducibility of measurements of the same parameter under a given set of conditions. Specifically, it is a quantitative measurement of the variability of a group of measurements compared to their average value. Precision is usually stated in terms of standard deviation, but other estimates such as the coefficient of variation (relative standard deviation), range (maximum value minus minimum value), relative range, and relative percent difference (RPD) are common.

For this project, field sampling precision will be determined by analyzing coded duplicate samples (labeled so that the laboratory does not recognize them as duplicates) for the same parameters, and then, during data validation, calculating the RPD for field duplicate sample results.

The data quality objectives for analytical precision, calculated as the RPD between duplicate analyses, will be statistically calculated laboratory control limits based on historical data. Should there be insufficient

data to calculate limits; the validation default RPD limits will be used: 20% for aqueous samples and 35% for soils.

6.5.2 Accuracy

Accuracy is a measure of the degree of agreement of a measured value with the true or expected value of the quantity of concern, or the difference between a measured value and the true or accepted reference value. The accuracy of an analytical procedure is best determined by the analysis of a sample containing a known quantity of material and is expressed as the percent of the known quantity which is recovered or measured (percent recovery).

Sampling accuracy may be determined through the assessment of the analytical results of field blanks and trip blanks for each sample set. Analytical accuracy is typically assessed by examining the percent recoveries of surrogate compounds that are added to each sample (organic analyses only), and the percent recoveries of matrix spike compounds added to selected samples and laboratory blanks. Additionally, initial and continuing calibrations must be established and be within method control limits. Instrument and method analytical accuracy can then be determined for any sample set.

The data quality objectives for analytical precision, calculated as the percent recovery, will be statistically calculated laboratory control limits based on historical data. Should there be insufficient data to calculate limits, the validation default percent recovery limits will be used: 70-130% for organic analyses, and 75-125% (matrix spike recovery) and 80-120% (laboratory control spike (LCS) recovery) for inorganic analyses.

6.5.3 Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represent a characteristic of a population, parameter variations at a sampling point, or an environmental condition. Representativeness is a qualitative parameter which is most concerned with the proper design of the sampling program. Samples must be representative of the environmental media being sampled. Selection of sample locations and sampling procedures will incorporate consideration of obtaining the most representative sample possible.

Field and laboratory procedures will be performed in such a manner as to ensure, to the degree that is technically possible, that the data derived represents the in-place quality of the material sampled. Every effort will be made to ensure that chemical compounds will not be introduced into the sample via sample containers, handling, and analysis. Decontamination of sampling devices and digging equipment will be performed between samples. Analysis of field blanks, trip blanks, and method blanks will also be performed to monitor for potential sample contamination from field and laboratory procedures.

The assessment of representativeness also must consider the degree of heterogeneity in the material from which the samples are collected. Sampling heterogeneity will be evaluated during data validation through the analysis of coded field duplicate samples. The analytical laboratory will also follow acceptable procedures to assure the samples are adequately homogenized prior to taking aliquots for analysis, so the reported results are representative of the sample received.

Chain-of-custody procedures will be followed to document that contamination of samples has not occurred during container preparation, shipment, and sampling.

6.5.4 Completeness

Completeness is defined as the percentage of measurements made which are judged to be valid. The QC objective for completeness is generation of valid data for at least 90% of the analyses requested

6.5.5 Comparability

Comparability expresses the degree of confidence with which one data set can be compared to another. The comparability of all data collected for this project will be ensured by:

- Using identified standard methods for both sampling and analysis phases of this project.

- Requiring traceability of all analytical standards and/or source materials to the USEPA or National Institute of Standards and Technology (NIST).
- Requiring that all calibrations be verified with an independently traceable standard from a source other than that used for calibration.
- Using standard reporting units and reporting formats including the reporting of QC data.
- Performing a complete data validation on all of the analytical results, including the use of data qualifiers in all cases where appropriate.
- Requiring that all validation qualifiers be considered any time an analytical result is used for any purpose.

These steps will ensure all future users of either the data or the conclusions drawn from them will be able to judge the comparability of these data and conclusions.

6.5.6 Sensitivity

Soil and water will be analyzed according to the methods listed in **Table 5-2** (and subsequent updates).

7. Health and Safety Protocols

There are physical hazards which may be present at the Site associated with existing conditions and with investigation activities. Potential physical hazards include the following:

- Traffic – Requires care when entering and leaving the Site.
- Overhead and underground utilities - Overhead power lines near Site boundary. Potential underground utilities during drilling.
- Mechanical equipment including drill rigs and excavations.
- Slips, trips, and falls – General site hazards. Debris inside and outside of buildings.
- Exposure to hazardous wildlife and plants.

Based upon investigations conducted to date the primary contaminants of concern include PAHs in surface soils, and metals and VOCs in subsurface soils and groundwater.

All staff will be bound by the provisions of the RI Work Plan Health and Safety Plan (HASP) (URS, 2016) and are required to participate in a preliminary project safety meeting to familiarize them with the anticipated hazards and respective onsite controls. The discussion will cover the entire HASP subject matter, putting emphasis on critical elements of the plan, such as the emergency response procedures, personal protective equipment, site control strategies, and monitoring requirements. In addition, daily tailgate safety meetings will be held to discuss: the anticipated scope of work, required controls, identify new hazards and controls, incident reporting, review the results of inspections, any lessons learned or concerns from the previous day.

8. Post-Remedial Action Plans

In addition to the remedial action activities described herein, the Decision Document also requires implementation of post-remedy groundwater monitoring (i.e., natural attenuation monitoring) and institutional and engineering controls once remedial construction is complete as part of the SMP for the Site.

8.1 Monitored Natural Attenuation (MNA)

Groundwater contamination remaining after active remediation will be addressed through an MNA groundwater monitoring section of the SMP. The elements of the groundwater monitoring program for MNA indicators may include the following elements (to be modified as needed in the final Site Management Plan [SMP]):

- Groundwater will be periodically monitored as determined by NYSDEC and Newell for site related contamination and for MNA indicators (as determined in development of the SMP) to provide an understanding of the biological breakdown of Site contaminants. The recommended monitoring frequency will be outlined in the SMP.
- Monitoring wells will be selected by Newell with the concurrence of NYSDEC such that the limits of groundwater contamination are contained within the monitoring well network.

MNA sampling results will be summarized as required by post-remedy monitoring plans in letter reports and submitted to the NYSDEC for concurrence.

8.2 Institutional and Engineering Controls

Institutional controls will be implemented in the form of an environmental easement for the controlled property that:

- Requires the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls.
- Will allow the use and development of the controlled property for commercial or industrial use.
- Restricts the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County DOH.
- Requires compliance with the Department approved SMP.

Elements of the remedial action which require ongoing operation, maintenance, or monitoring are considered engineering controls.

8.3 Site Management Plan

An SMP is required as part of the FER submission, which includes the following elements:

- An Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the Site and details steps and media-specific requirements necessary to ensure institutional and/or engineering controls remain in place and effective.
    - An Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination.
    - A provision for further investigation and remediation should any of the existing structures be demolished, or if the subsurface is otherwise made accessible. The nature and extent of contamination in areas where access was previously limited or unavailable will be investigated pursuant to a plan approved by the Department. Based on the investigation results and the Department determination of the need for a remedy, a

RAWP will be developed for the final remedy for the site, including removal and/or treatment of any source areas to the extent feasible. Citizen Participation Plan (CPP) activities will continue through this process. Any necessary remediation will be completed prior to, or in association with, redevelopment.

- Descriptions of the provisions of the environmental easement including land use and groundwater use restrictions.
- A provision for evaluation of the potential for soil vapor intrusion for any new buildings developed onsite, including provision for implementing actions recommended to address exposures related to soil vapor intrusion.
- Provisions for the management and inspection of the identified engineering controls.
- Maintaining site access controls and Department notification.
- Periodic reviews and certification of the institutional and/or engineering controls.

- A Monitoring Plan to assess the performance and effectiveness of the remedy, including the MNA injections. The plan includes, but may not be limited to:
  - Monitoring of groundwater to assess the performance and effectiveness of the remedy.
  - A schedule of monitoring and frequency of submittals to the Department.
  - Monitoring and /or control for vapor intrusion for any buildings developed on the site as required.

A copy of the SMP will be provided to the appropriate property owners.

9. Schedule

The anticipated schedule for remedial activities is included in Figure 9-1.

Pre-planning and coordination for the remedial activities will begin upon NYSDEC approval of this RAWP.

A Final Engineering Report will be prepared approximately 60 days following completion of the surface soil excavations and in-situ groundwater remedy injections described herein. As noted in **Section 5.3.4**, quarterly post-injection performance monitoring reports will be provided to NYSDEC as separate, interim communications until incorporated into the SMP's groundwater monitoring program.

10. References

LaBella 2021. Predesign Investigation Work Plan, Phase I: Eastern Machining Building Demolition & Surface Cover. NYSDEC BCP No. C837018. July.

New York State Department of Environmental Conservation (NYSDEC) 1998. Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, Division of Water Technical and Operational Guidance Series 1.1.1 (TOGS 1.1.1). October; and addenda dated January 1999, April 2000, and June 2004.

NYSDEC 2006. Title 6 New York State Codes, Rules and Regulations, Subpart 375-6, Remedial Program Soil Cleanup Objectives. December.

NYSDEC 2010. CP-51 Soil Cleanup Guidance. October.

NYSDEC 2010. DER-10/Technical Guidance for Site Investigation and Remediation. May.

NYSDEC 2021. Decision Document, Former Bernzomatic Facility, Brownfield Cleanup Program, Medina, Orleans County, Site No. C837018. February.

URS Corporation (URS) 2016. Remedial Investigation Work Plan for the Former Bernzomatic Facility. NYSDEC BCP Site No. C837018. November.

URS 2018. Remedial Investigation Report for the Former Bernzomatic Facility. NYSDEC BCP Site No. C837018. August.

URS 2020. Final Alternatives Analysis Report. NYSDEC BCP Site No. C837018. October.

Tables

Table 5-1

Sampling Matrix for Analytical Parameters
Remedial Action Work Plan
Former Bernzomatic Facility
Medina, Orleans County, New York

Location	Parameters									
	Groundwater									Surface Soil
	VOCs (8260C)	Total Fe, Total Mn[1] (6010C)	Dissolved Fe, Dissolved Mn[1] (6010C)	Alkalinity[1] (2320-B)	Chloride/ Nitrate/ Sulfate [1] (300.0)	Methane/ Ethane/ Ethene/ CO2 [1] (RSK-175)	Sulfide (376.1)	TOC (9060A)	Field Parameters [2]	SVOCs (PAHs only) (8270D)
MW-05R	1	1	1	1	1	1	1	1	1	
MW-07	1	1	1	1	1	1	1	1	1	
MW-09	1	1							1	
MW-14	1	1							1	
MW-16	1	1							1	
MW-17	1	1							1	
MW-19R	1	1	1	1	1	1	1	1	1	
MW-21	1	1	1	1	1	1	1	1	1	
MW-22	1	1	1	1	1	1	1	1	1	
MW-23	1	1							1	
Monitoring Subtotal	10	10	5	5	5	5	5	5	10	
Surface Soil Excavations Confirmation Sampling[3]										
EA1-Wside										1
EA1-Nside										1
EA1-Eside										1
EA1-Bot										1
EA2-Wside										1
EA2-Nside										1
EA2-Eside										1
EA2-Sside										1
EA2-Bot										1
EA3-Wside										1
EA3-Nside										1
EA3-Eside										1
EA3-Sside										1
EA3-Bot										1
EA4-Wside										1
EA4-Eside										1
EA4-Sside										1
EA4-Bot										1
Subtotal Surface Soil Confirmation Samples[3]										18
Waste Characterization[4]										
QA/QC										
Duplicate [5]	1	1	1	1	1	1	1	1		1
Matrix Spike [5]	1	1	1	1	1	1	1	1		1
Matrix Spike Duplicate [5]	1	1	1	1	1	1	1	1		1
Trip Blank	1									
Rinse Blank [6]	1	1	1	1	1	1	1	1		1
Total Per Sampling Event [7]	15	14	9	9	9	9	9	9	10	4

Notes:

(1) Total and Dissolved Fe and Mn and MNA parameters to be collected from wells within and immediately adjacent to in-situ treatment areas.
(2) Field collected parameters will include dissolved oxygen, electrical conductivity, oxidation-reduction potential, pH, temperature, and turbidity.
(3) One bottom sample and up to four sidewall samples from each of the four surface soil excavation areas.
(4) Waste characterization parameters to be determined based on selected dispsoal facility.
(5) Duplicates, Matrix Spike, and Matrix Spike Duplicate samples will be collected at a rate of 1 per 20 samples.
(6) Rinse Blanks will be collected at a rate of 1 per sampling event.
(7) Four quarterly post-injection performance monitoring events are planned for groundwater.

VOC - volatile organic compound
SVOC - semi-volatile organic compound
PAH - polycyclic aromatic hydrocarbon
QA/QC - quality assurance/quality control
MW - monitoring well
TOC - Total Organic Carbon

Table 5-2

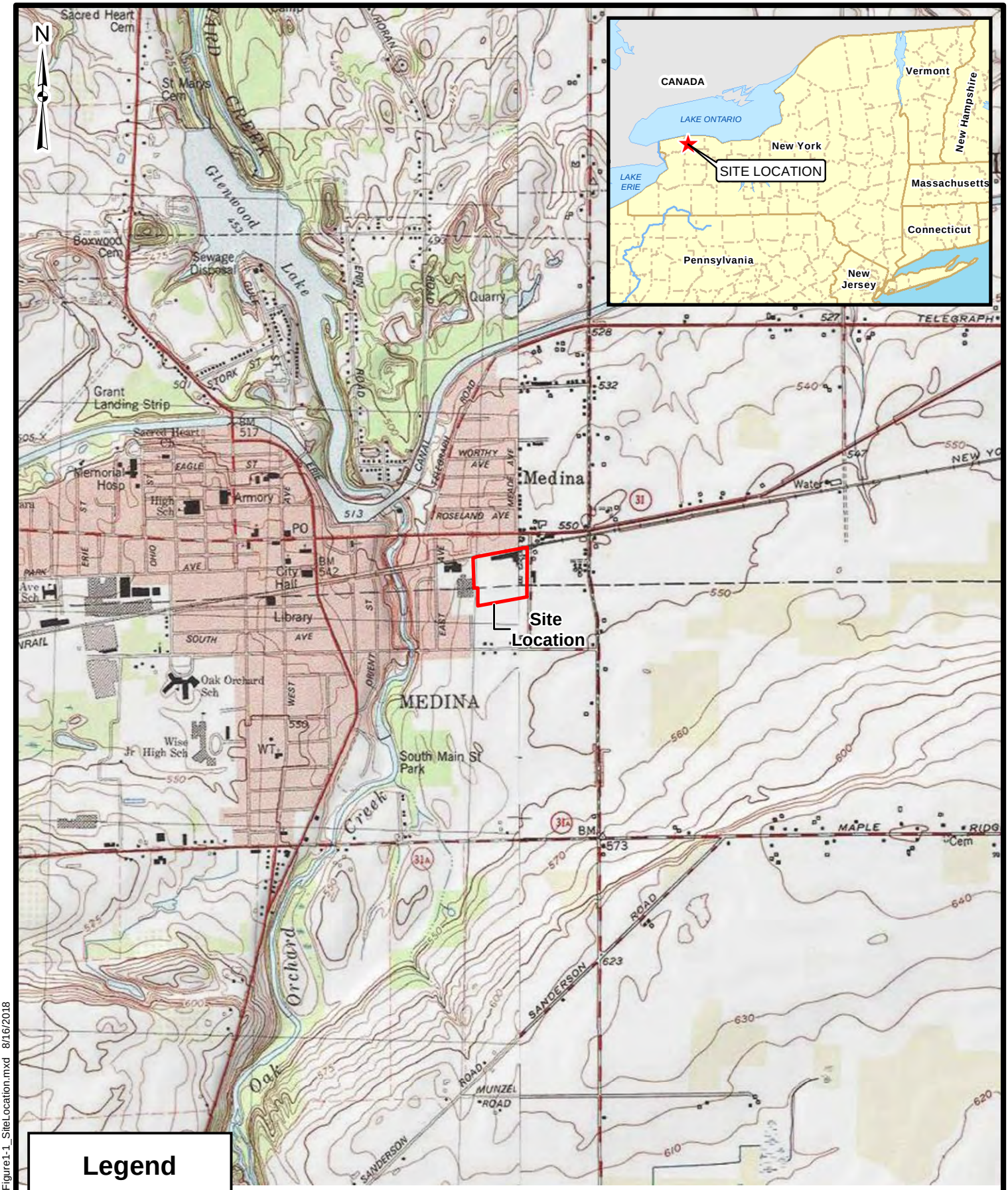
Analytical Specifications - Sample Bottle, Volume, Preservation, and Holding Time Summary
Remedial Action Work Plan
Former Bernzomatic Facility
Medina, Orleans County, New York

Matrix/Analysis	Sample Prep Method [1]	Analytical Method [1]	Sample Bottles [2]				Minimum Vol Rqd	Preservation [3]	Holding Time [4]		Comment
			Mat'l	Size	Qty	Source			Extraction	Analysis	
Aqueous Samples											
Volatile Organics	SW-846 5030C	SW-846 8260C	Glass	40 mL	3	Lab	40 mL	HCl to pH ≤ 2	NA	14 days	7 days if not preserved
Total Metals (Fe, Mn)	SW-846 3005A	SW-846 6010C	HDPE	250 mL	1	Lab	200 mL	HNO_3 to pH ≤ 2	NA	180 days	28 days for Mercury
Dissolved Metals (Fe, Mn)	SW-846 3005A	SW-846 6010C	HDPE	250 mL	1	Lab	200 mL	HNO_3 to pH ≤ 2	NA	180 days	
Alkalinity	SM 2320-B	SM 2320-B	HDPE	250 mL	1	Lab	100 mL	None	NA	14 days	
Chloride/Nitrate/Sulfate	EPA 300.0	EPA 300.0	HDPE	125 mL	1	Lab	50 mL	None	NA	28 days	48 Hr. Nitrate
Methane/Ethane/Ethene/CO2	RSK-175	RSK-175	Glass	40 mL	3	Lab	40 mL	HCl to pH ≤ 2	NA	14 days	
Sulfide	EPA 376.1	EPA 376.1	HDPE	60 ml	1	Lab	60 ml	ZnAcetate/NaOH pH>9	NA	7 days	
Total Organic Carbon	SW-846 9060A	SW-846 9060A	Glass	40 mL	2	Lab	40 mL	HCl to pH ≤ 2	NA	28 days	
Subsurface Soil Samples											
Semi-volatile Organics (PAHs only)	SW-846 3500	SW-846 8270D	Glass	8 oz	1	Lab	50 g	None	14	40	
Waste Characterization Non-Aqueous Samples (Potential as may be required by Disposal Facility)											
Waste Characterization Aqueous Samples (Potential as may be required by Disposal Facility)											

Notes:
(1) More recent versions of SW-846, EPA, and SM methods may be used subject to URS approval.
(2) Bottles typical.
(3) All samples for chemical analysis will be held at 4 degrees C in addition to any chemical preservation required.
(4) Holding time calculated from day of collection, unless noted as being from time of extraction.
SW-846: Test Methods for Evaluating Solid Waste, Physical/Chemical Methods. USEPA SW-846. Complete through Update IV, March 2009.
EPA - Compendium of Methods for the Determination of Toxic Organics in Air, Second Edition (EPA/625/R-96/010b; 1999).
SM - Standard Methods for the Examination of Water and Wastewater. AWWA. 20th Edition, 1998.
RSK - R.S. Kerr USEPA Laboratory, Ada, OK

g - gram
oz - ounce
HDPE - high-density polyethylene
NA - not applicable
HCL - hydrochloric acid
HNO_3 - nitric acid
mL- milliliter
PAH - polycyclic aromatic hydrocarbon

Figures



Legend

Site Boundary

Source: © 2013 National Geographic Society, i-cubed;
1:24:000-scale USGS Topographic Maps, Medina & Knowlesville Quadrangle

2,000 0 2,000 Feet

URS

FORMER BERNZOMATIC FACILITY
VILLAGE OF MEDINA, NEW YORK
SITE LOCATION MAP

FIGURE 1-1

J:\Projects\25369237\GIS\Maps\Figure1-1_SiteLocation.mxd 8/16/2018

N

State St

Center St

Million Dollar Hwy

Fire Pumphouse Building

Main Facility

Village of Medina

Town of Ridgeway

Ringer Ave

Storage Building

Engineering Building

Town of Ridgeway

Town of Shelby

Bates Rd

Town of Ridgeway

Town of Shelby

Mahar St

East Ave

Waverly Ave

Bernz O Matic Dr

Village of Medina

Town of Shelby

Legend

- Site Boundary
- Parcel Boundary
- Municipal Boundary
- Buildings

Source: NYS Digital Ortho-Imagery Program, Orleans County, 2015

200 0 200 Feet

FORMER BERNZOMATIC FACILITY
VILLAGE OF MEDINA, NEW YORK
SITE VICINITY MAP

URS

FIGURE 2-1

J:\Projects\25369237\GIS\Maps\Figure2-1_SiteVicinity.mxd 7/14/2017

N

METAL SHAVINGS STAGING TRAILER
SEALED SUMP
STORAGE OF METAL WASTE
WC
STORAGE OF RAW MATERIALS
EXTERNAL STORAGE OF EQUIP. (TEMPORARY)
LOADING DOCK
TRENCH DRAIN
SUMP
Eastern MACHINING Building
VIRGIN OIL SUPPLY
USED OIL STORAGE TANKS AND BERM
LOADING DOCK
WAREHOUSE STORAGE
WAREHOUSE STORAGE
ASSEMBLY AREA
550-GAL. DIESEL AST
PACKING AREA
WAREHOUSE STORAGE
OFFICE AREA (2 FLOORS)
PRINTING AREA
CAFETERIA
PARTS WASHING AREA
ACTIVE FLOOR DRAIN
FLAMMABLE PRODUCTS STORAGE (CLOSETS)
SEALED TRENCH DRAIN
MAINT. DEPT.
ELECTRIC SWITCHBOARD

50 0 50 Feet

FORMER BERNZOMATIC FACILITY
VILLAGE OF MEDINA, NEW YORK
BUILDING FLOOR PLAN
(2014)

URS

FIGURE 2-2

J:\Projects\25369237\GIS\Maps\Figure2-2_Building Plan (2014).mxd 11/14/2018

Legend

- Air
- Soil Gas
- Soil Boring
- Monitoring Well
- Surface Soil
- DPT Temporary Well
- Surface Water/Sediment
- BCP Site Boundary

Source: NYS Digital Ortho-Imagery Program, Orleans County, 2015

100 0 100 Feet

FORMER BERNZOMATIC FACILITY
PREVIOUS INVESTIGATIONS LOCATION MAP

URS

FIGURE 2-3

J:\Projects\25369237\GIS\Maps\Figure 2-3 - All Sample Points.mxd 1/13/2022

N

MW-17, 542.37
MW-18, 542.26
MW-16, 539.86
MW-09, 542.71
MW-06, 542.98
MW-08, 540.30
MW-10, 542.35
MW-15, 540.42
MW-05, 543.18
MW-07, 543.01
MW-21, 541.01
MW-11, 543.27
MW-20, 541.10
MW-19, 543.65
MW-02, 542.91
MW-04, 542.61
MW-12, 544.09
MW-03, 543.39
MW-01, 543.83
MW-14, 544.32
MW-13, 543.83

540.0
540.5
541.0
541.5
542.0
542.5
543.0
543.5
544.0

Legend

- Monitoring Well
- Groundwater Flow Direction
- Groundwater Contour (FT AMSL) (March 23, 2017)
- Estimated Extent of Groundwater Exceeding Criteria (5 µg/l)
- PH I ESA REC
- Cistern
- Assumed Source Area

FT AMSL = Feet Above Mean Sea Level

Note: Monitoring well, MW-08, is a bedrock well; therefore, it was not used for generating groundwater contours.
Source: NYS Digital Ortho-Imagery Program, Orleans County, 2015

100 0 100 Feet

FORMER BERNZOMATIC FACILITY
VILLAGE OF MEDINA, NEW YORK
EXTENT OF VOC GROUNDWATER IMPACTS

URS

FIGURE 2-4

J:\Projects\25369237\GIS\Maps\Figure 2-4 - Extent of GW Impacts.mxd 1/14/2022

PDI-11 (3' - 4')	CRIT 1	CRIT 2	CRIT 3	04/22
Metals:				
Calcium	10000	--	--	31000
Iron	2000	--	--	11300

MW-17 (4.5' - 5')	CRIT 1	CRIT 2	CRIT 3	02/17
Metals:				
Calcium	10000	--	--	16500
Iron	2000	--	--	9310

PDI-05 (4' - 5')	CRIT 1	CRIT 2	CRIT 3	04/22
Metals:				
Calcium	10000	--	--	24300
Iron	2000	--	--	9200

SB-06 (2.8' - 3.8')	CRIT 1	CRIT 2	CRIT 3	03/17
Metals:				
Iron	2000	--	--	9910

MW-18 (4' - 5')	CRIT 1	CRIT 2	CRIT 3	03/17
Metals:				
Aluminum	10000	--	--	12200
Iron	2000	--	--	10700

SB-05A (4' - 5')	CRIT 1	CRIT 2	CRIT 3	03/17
Metals:				
Calcium	10000	--	--	21200
Iron	2000	--	--	8360

MW-16 (4' - 5')	CRIT 1	CRIT 2	CRIT 3	02/17
Metals:				
Iron	2000	--	--	11000

PDI-10 (3' - 4')	CRIT 1	CRIT 2	CRIT 3	04/22
Metals:				
Calcium	10000	--	--	32400
Iron	2000	--	--	10100

SS-04

MW-15 (2.5' - 3')	CRIT 1	CRIT 2	CRIT 3	02/17
Pesticides:				
4,4'-DDT	0.0033	136	47	0.025
Metals:				
Iron	2000	--	--	14100

MW-21 (2.8' - 3.8')	CRIT 1	CRIT 2	CRIT 3	03/17
Metals:				
Calcium	10000	--	--	30100
Iron	2000	--	--	9170

SB-07 (3' - 4')	CRIT 1	CRIT 2	CRIT 3	02/17
Metals:				
Aluminum	10000	--	--	11600
Iron	2000	--	--	10900

MW-20 (1.5' - 2')	CRIT 1	CRIT 2	CRIT 3	02/17
SVOCs:				
Di-n-butylphthalate	0.014	8.1	--	0.045
Metals:				
Aluminum	10000	--	--	13200
Iron	2000	--	--	14400

PDI-09 (2' - 3')	CRIT 1	CRIT 2	CRIT 3	04/22
Metals:				
Calcium	10000	--	--	22100
Iron	2000	--	--	9030

MW-19 (2' - 3')	CRIT 1	CRIT 2	CRIT 3	02/17
Metals:				
Iron	2000	--	--	9530

PDI-04 (3' - 4')	CRIT 1	CRIT 2	CRIT 3	04/22
Metals:				
Calcium	10000	--	--	16600
Iron	2000	--	--	11300

PDI-08 (4' - 5')	CRIT 1	CRIT 2	CRIT 3	04/22
Metals:				
Iron	2000	--	--	9440

SB-08 (3' - 4')	CRIT 1	CRIT 2	CRIT 3	02/17
Metals:				
Aluminum	10000	--	--	21500
Iron	2000	--	--	15700

PDI-03 (2' - 3')	CRIT 1	CRIT 2	CRIT 3	04/22
Metals:				
Iron	2000	--	--	7200

PDI-07 (2' - 3')	CRIT 1	CRIT 2	CRIT 3	04/22
Metals:				
Aluminum	10000	--	--	10600
Calcium	10000	--	--	18100
Iron	2000	--	--	9340

PDI-12 (4' - 5')	CRIT 1	CRIT 2	CRIT 3	04/22
Metals:				
Aluminum	10000	--	--	14300
Iron	2000	--	--	18700

MW-14 (1' - 2')	CRIT 1	CRIT 2	CRIT 3	02/17
Pesticides:				
4,4'-DDT	0.0033	136	47	0.0079
Metals:				
Calcium	10000	--	--	12100
Iron	2000	--	--	14000
Lead	63	450	1000	92.9

SB-09 (1' - 2')	CRIT 1	CRIT 2	CRIT 3	02/17
Metals:				
Calcium	10000	--	--	17200
Iron	2000	--	--	9560

MW-13 (2' - 3')	CRIT 1	CRIT 2	CRIT 3	02/15
VOCs:				
Acetone	0.05	0.05	500	0.063

PDI-06 (3' - 4')	CRIT 1	CRIT 2	CRIT 3	04/22
Metals:				
Aluminum	10000	--	--	11900
Calcium	10000	--	--	22400
Iron	2000	--	--	16800

PDI-02 (2' - 3')	CRIT 1	CRIT 2	CRIT 3	04/22
Metals:				
Calcium	10000	--	--	14900
Iron	2000	--	--	11500

PDI-01 (4' - 5')	CRIT 1	CRIT 2	CRIT 3	04/22
Metals:				
Calcium	10000	--	--	33100
Iron	2000	--	--	16900

MW-09
SB-04
MW-06
SB-03
MW-10
MW-05
MW-08
MW-07
SB-02
SB-01
MW-11
MW-04
MW-02
MW-12
MW-01
MW-03
SS-05
SS-01
SS-02
SS-06
SS-03
SS-07

Legend

- At Least One Compound Exceeds Criteria
- No Compounds Exceed Criteria
- No Compounds Detected
- PH I ESA REC
- Cistern

Location ID & Depth | Criteria | Sample Date

MW-13 (24" - 36")	CRIT 1	CRIT 2	CRIT 3	02/15
VOCs:				
Acetone	2.2	0.05	1000	0.063

Parameter | Criteria Value (mg/kg) | Concentration (mg/kg)

100 0 100 Feet

CRIT 1: 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.
CRIT 2: 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.
CRIT 3: 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Source: NYS ITS GIS Program Office, 2020

FORMER BERNZOMATIC FACILITY
VILLAGE OF MEDINA, NEW YORK
SOIL ANALYTICAL RESULTS

URS

FIGURE 2-5

L:\DCS\Projects\2536923\GIS\Maps\SO ANALYTICAL (RI & PDI).mxd 6/21/2023

N

GSP-22	CRIT	04/15
VOCs:		
1,2-Dichloroethene (cis)	5	170
Tetrachloroethene	5	6.5
Trichloroethene	5	28
Vinyl chloride	2	7.5

GSP-19	CRIT	04/15
VOCs:		
1,2-Dichloroethene (cis)	5	11
Tetrachloroethene	5	22
Trichloroethene	5	7.7

PDI-11	CRIT	04/22
VOCs:		
1,1-Dichloroethane	5	53
1,2-Dichloroethene (cis)	5	300
Acetone	50	73
Tetrachloroethene	5	6.3
Trichloroethene	5	52
Vinyl chloride	2	7.6

MW-05R	CRIT	05/22
VOCs:		
1,1-Dichloroethane	5	22
1,2-Dichloroethene (cis)	5	210
Tetrachloroethene	5	5.7
Trichloroethene	5	31
Vinyl chloride	2	2.4

PDI-10	CRIT	04/22
VOCs:		
1,1-Dichloroethane	5	15
1,2-Dichloroethene (cis)	5	140
Trichloroethene	5	13
Vinyl chloride	2	23

GSP-01	CRIT	03/15
VOCs:		
Chloroform	7	50
Tetrachloroethene	5	15
Trichloroethene	5	14

GSP-02	CRIT	03/15
VOCs:		
Tetrachloroethene	5	9.9

GSP-14	CRIT	04/15
VOCs:		
1,2-Dichloroethene (cis)	5	35
Trichloroethene	5	11
Vinyl chloride	2	8.1

GSP-04	CRIT	03/15
VOCs:		
1,2-Dichloroethene (cis)	5	72

GSP-31	CRIT	06/15
VOCs:		
1,1-Dichloroethane	5	22
1,2-Dichloroethene (cis)	5	390
1,2-Dichloropropane	1	2
Trichloroethene	5	13
Vinyl chloride	2	2.8

SB-04	CRIT	05/14
VOCs:		
1,2-Dichloroethene (cis)	5	14
Tetrachloroethene	5	36
Trichloroethene	5	24

MW-21	CRIT	03/17	05/22
VOCs:			
1,1-Dichloroethane	5	BC	13
1,2-Dichloroethene (cis)	5	23	65
Trichloroethene	5	11	13

MW-06	CRIT	10/14
VOCs:		
1,2-Dichloroethene (cis)	5	63
1,2-Dichloroethene (trans)	5	7.1
Tetrachloroethene	5	18
Trichloroethene	5	25

PDI-04	CRIT	04/22
VOCs:		
1,1-Dichloroethane	5	410
1,1-Dichloroethene	5	13
1,2-Dichloroethene (cis)	5	1400
1,2-Dichloroethene (trans)	5	37
Acetone	50	73
Trichloroethene	5	11
Vinyl chloride	2	250

MW-10	CRIT	02/15
VOCs:		
Acetone	50	80

GSP-08	CRIT	03/15
VOCs:		
1,1,2-Trichloro-1,2,2-trifluoroethane	5	6.2
1,2-Dichloroethene (cis)	5	6.5
Trichloroethene	5	15

MW-20	CRIT	03/17
VOCs:		
Trichloroethene	5	8.6

GSP-10	CRIT	03/15
VOCs:		
Trichloroethene	5	6.7

GSP-26	CRIT	06/15
VOCs:		
Trichloroethene	5	13

GSP-24	CRIT	04/15
VOCs:		
1,1,1-Trichloroethane	5	21
1,1-Dichloroethane	5	87
1,1-Dichloroethene	5	8.8
1,2-Dichloroethene (cis)	5	440
Tetrachloroethene	5	7.1
Trichloroethene	5	11
Vinyl chloride	2	3.6
Xylene (total)	5	9.4

MW-07	CRIT	10/14	05/22
VOCs:			
Tetrachloroethene	5	10	BC
Trichloroethene	5	13	6.1

PDI-03	CRIT	04/22
VOCs:		
1,2-Dichloroethene (cis)	5	300

SB-01	CRIT	05/14
VOCs:		
Tetrachloroethene	5	6.8
Trichloroethene	5	5.4

MW-22	CRIT	05/22
VOCs:		
1,2-Dichloroethene (cis)	5	130

MW-11	CRIT	02/15	03/17
VOCs:			
1,2-Dichloroethene (cis)	5	8.2	BC
Trichloroethene	5	18	13

GSP-33	CRIT	06/15
VOCs:		
Trichloroethene	5	7.5

GSP-34	CRIT	06/15
VOCs:		
Trichloroethene	5	16

GSP-13	CRIT	03/15
VOCs:		
1,1-Dichloroethane	5	11
1,2-Dichloroethene (cis)	5	53
Tetrachloroethene	5	18
Trichloroethene	5	72
Vinyl chloride	2	3.3

MW-04	CRIT	03/17
VOCs:		
1,2-Dichloroethene (cis)	5	20
Trichloroethene	5	15
Vinyl chloride	2	3.8

GSP-21	CRIT	04/15
VOCs:		
1,2-Dichloroethene (cis)	5	5.3

MW-01	CRIT	10/14	03/17
VOCs:			
1,2-Dichloroethene (cis)	5	13	15
Vinyl chloride	2	BC	15

GSP-25	CRIT	04/15
VOCs:		
1,2-Dichloroethene (cis)	5	32
Tetrachloroethene	5	8.8
Trichloroethene	5	7.7

PDI-12	CRIT	04/22
VOCs:		
1,1-Dichloroethane	5	20
1,2-Dichloroethene (cis)	5	1400
Acetone	50	160
Chloroethane	5	11
Trichloroethene	5	45
Vinyl chloride	2	34

PDI-09	CRIT	04/22
VOCs:		
1,1-Dichloroethane	5	8.3
1,2-Dichloroethene (cis)	5	87
Tetrachloroethene	5	9
Trichloroethene	5	11
Vinyl chloride	2	7.1

PDI-08	CRIT	04/22
VOCs:		
1,2-Dichloroethene (cis)	5	18

GSP-18, GSP-17, MW-17, GSP-16, GSP-15, MW-16, GSP-30, MW-15, GSP-29, PDI-05, GSP-28, GSP-27, GSP-35, PDI-07, GSP-36, PDI-02, PDI-01, PDI-06, GSP-32, MW-02, MW-12, MW-03, MW-13, MW-14, GSP-05, MW-18, GSP-03, GSP-06, MW-09, SB-03, MW-05, MW-08, GSP-07, GSP-09, GSP-23, SB-02, GSP-20, GSP-11, MW-19R, MW-19, GSP-12

Legend

- At Least One Compound Exceeds Criteria
- No Compounds Exceed Criteria
- No Compounds Detected
- PH I ESA REC
- Cistern

Location ID | Criteria | Sample Date

MW-07	CRIT	05/22
VOCs:		
Trichloroethene	5	6.1

Parameter | Criteria Value (µg/L) | Concentration (µg/L)

BC = Below Criteria
ND = Not Detected

Criteria: NYSDEC TOGS (1.1.1), Ambient water quality standards and guidance values and groundwater effluent limitations

Source: NYS ITS GIS Program Office, 2020

Notes:
1. PDI locations were sampled as groundwater grab samples, whereas Monitoring Well locations were sampled as low flow samples.
2. Concentrations shown in µg/L.

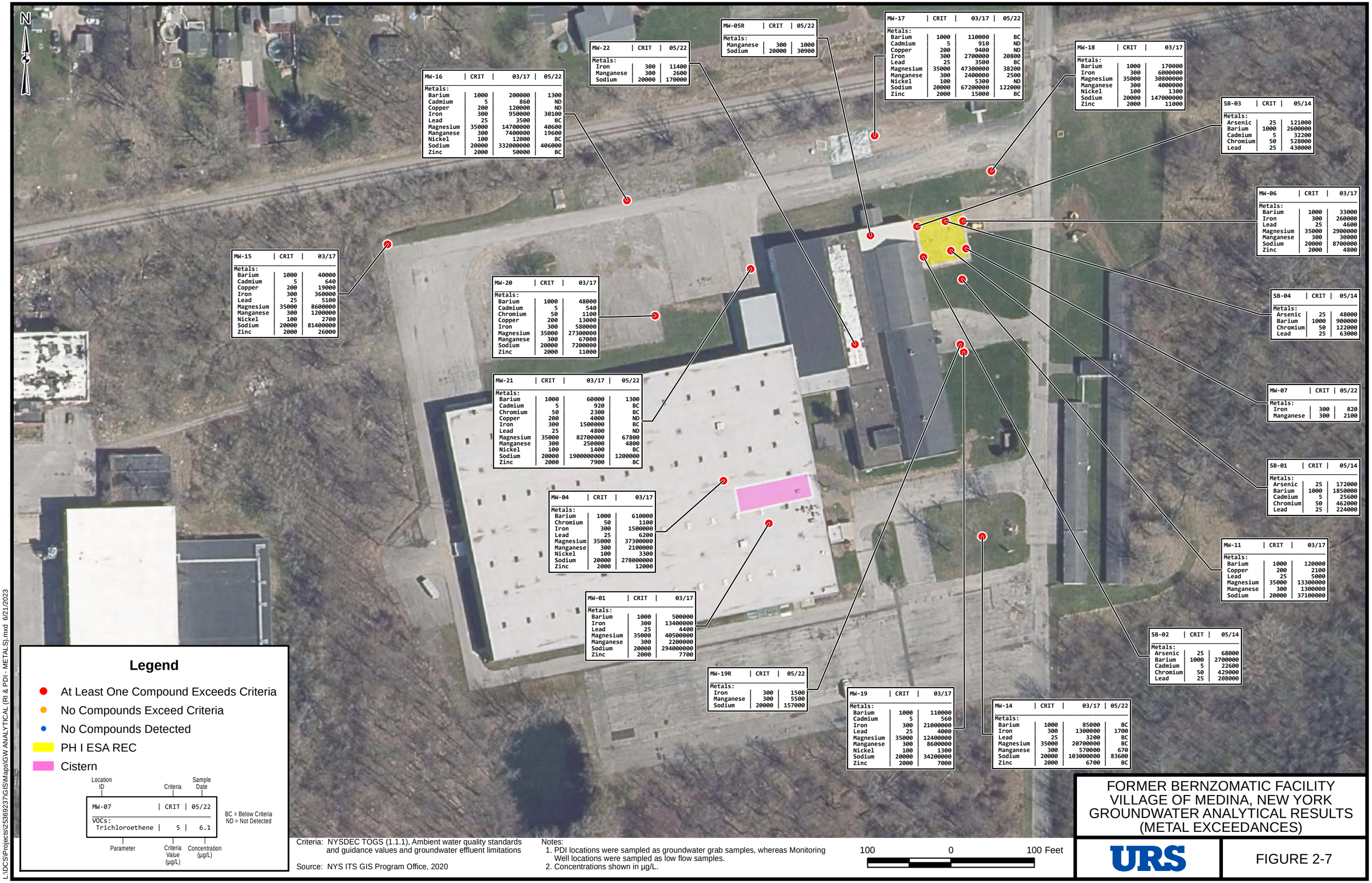
100 0 100 Feet

FORMER BERNZOMATIC FACILITY
VILLAGE OF MEDINA, NEW YORK
GROUNDWATER ANALYTICAL RESULTS
(VOC EXCEEDANCES)

URS

FIGURE 2-6

L:\DCS\Projects\25369237\GIS\Maps\GW ANALYTICAL (RI & PDI - VOCS).mxd 6/21/2023



Criteria: NYSDEC TOGS (1.1.1), Ambient water quality standards and guidance values and groundwater effluent limitations

Source: NYS ITS GIS Program Office, 2020

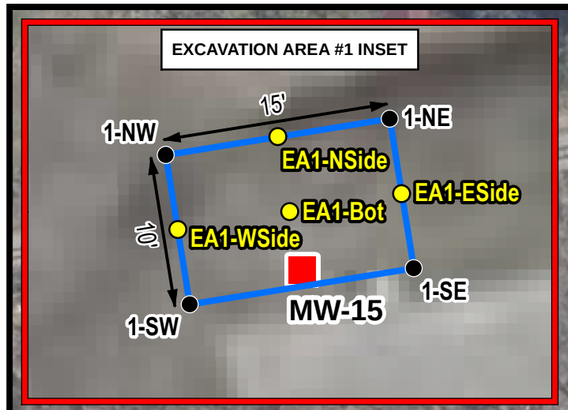
Notes:
1. PDI locations were sampled as groundwater grab samples, whereas Monitoring Well locations were sampled as low flow samples.
2. Concentrations shown in µg/L.

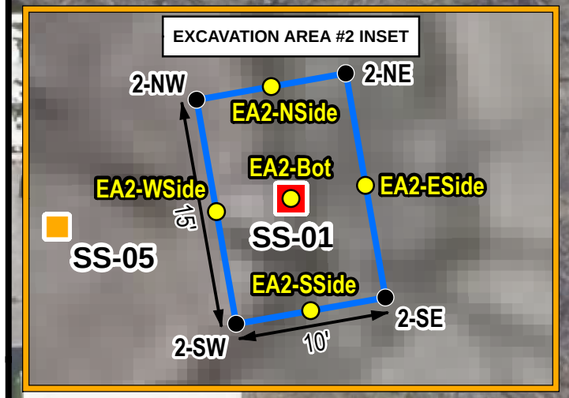
FORMER BERNZOMATIC FACILITY VILLAGE OF MEDINA, NEW YORK GROUNDWATER ANALYTICAL RESULTS (METAL EXCEEDANCES)

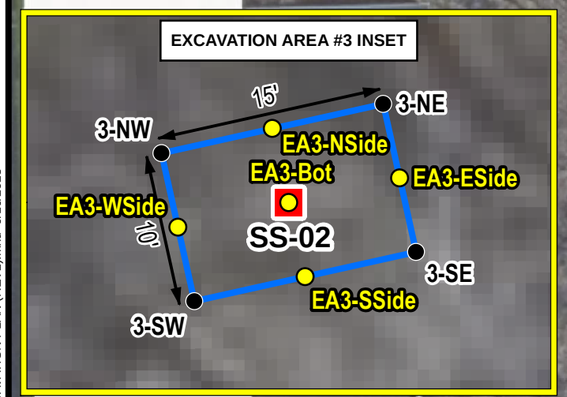
URS

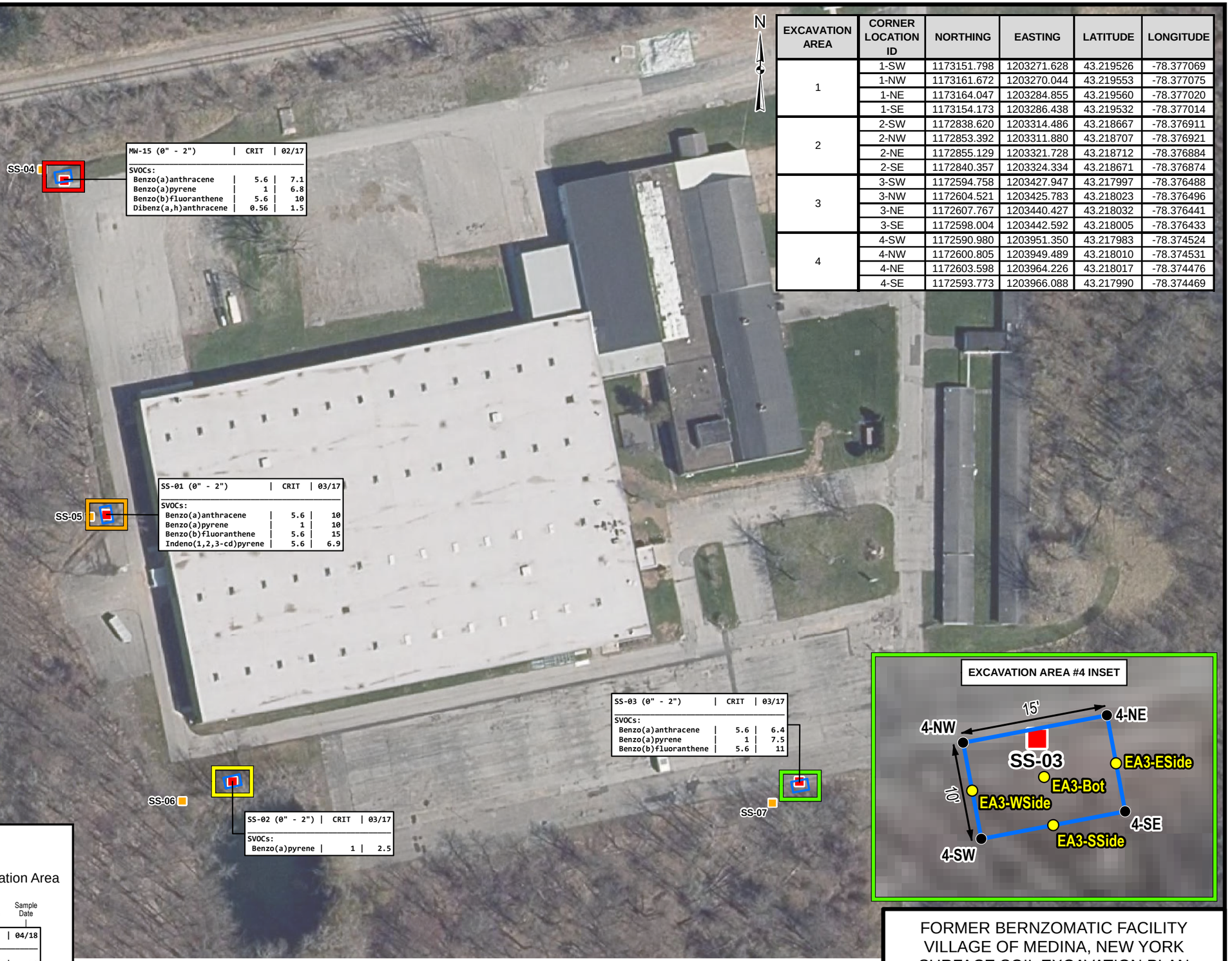
FIGURE 2-7

L:\DCS\Projects\25369237\GIS\Maps\GW ANALYTICAL (RI & PDI - METALS).mxd 6/21/2023









EXCAVATION AREA	CORNER LOCATION ID	NORTHING	EASTING	LATITUDE	LONGITUDE
1	1-SW	1173151.798	1203271.628	43.219526	-78.377069
	1-NW	1173161.672	1203270.044	43.219553	-78.377075
	1-NE	1173164.047	1203284.855	43.219560	-78.377020
	1-SE	1173154.173	1203286.438	43.219532	-78.377014
2	2-SW	1172838.620	1203314.486	43.218667	-78.376911
	2-NW	1172853.392	1203311.880	43.218707	-78.376921
	2-NE	1172855.129	1203321.728	43.218712	-78.376884
	2-SE	1172840.357	1203324.334	43.218671	-78.376874
3	3-SW	1172594.758	1203427.947	43.217997	-78.376488
	3-NW	1172604.521	1203425.783	43.218023	-78.376496
	3-NE	1172607.767	1203440.427	43.218032	-78.376441
	3-SE	1172598.004	1203442.592	43.218005	-78.376433
4	4-SW	1172590.980	1203951.350	43.217983	-78.374524
	4-NW	1172600.805	1203949.489	43.218010	-78.374531
	4-NE	1172603.598	1203964.226	43.218017	-78.374476
	4-SE	1172593.773	1203966.088	43.217990	-78.374469

Legend

- Proposed Confirmation Sampling Location
- Proposed Excavation Corner Location
- At Least One Compound Exceeds Criterion
- No Compounds Exceed Criterion
- Proposed Excavation Area

Location ID | Depth (inches) | Criteria | Sample Date

SS-01 (0" - 2") | CRIT | 04/18

SVOCs:
Benzo(a)anthracene | 5.6 | 10

Parameter | Criteria Value (mg/kg) | Concentration (mg/kg)

CRIT: 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Notes: Only compounds that exceed at least one listed criteria are shown. If a field duplicate was collected at a particular location, the greater of two detected values is displayed. Excavation areas will be 10' x 15' and will be excavated to 1' deep.

Source: NYS ITS GIS Program Office, 2020

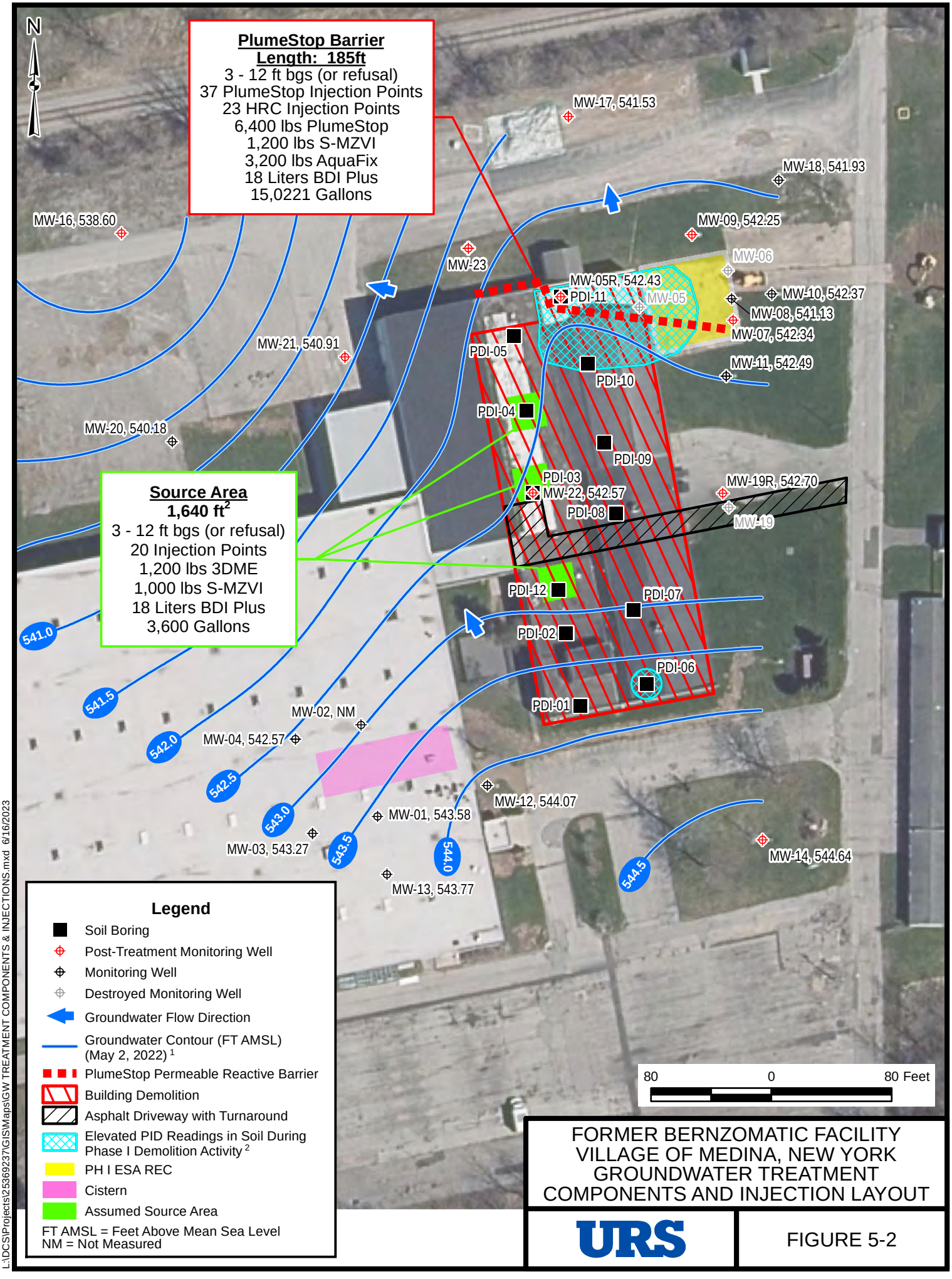
90 0 90 Feet

FORMER BERNZOMATIC FACILITY
VILLAGE OF MEDINA, NEW YORK
SURFACE SOIL EXCAVATION PLAN

URS

FIGURE 5-1

L:\DCS\Projects\25369237\GIS\Maps\SURFACE SOIL EXCAVATION PLAN (REV2).mxd 6/16/2023



L:\DCS\Projects\25369237\GIS\Maps\GW TREATMENT COMPONENTS & INJECTIONS.mxd 6/16/2023

FORMER BERNZOMATIC FACILITY
VILLAGE OF MEDINA, NEW YORK
GROUNDWATER TREATMENT
COMPONENTS AND INJECTION LAYOUT

URS

FIGURE 5-2

Figure 9-1

Remedial Action Work Plan - Project Schedule
Former Bernzomatic Facility BCP Site
Medina, Orleans County, New York

Activity	Anticipated Completion	2023										2024								
		Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr	May	Jun	Jul	Aug	Sep
Submit draft RAWP for NYSDEC Review	3/31/2023																			
NYSDEC Review of draft RAWP	5/22/2023																			
Submit Final RAWP	7/6/2023																			
NYSDEC Approval Final RAWP	7/31/2023																			
Perform DVT (In-situ remedy)	8/15/2023																			
Submit DVT Letter Report (In-situ remedy)	8/30/2023																			
NYSDEC Approval of DVT Letter Report (In-situ remedy)	9/15/2023																			
Commencement of Remediation Work	9/18/2023																			
Completion of Remediation Work	10/6/2023																			
Prepare draft FER	12/1/2023																			
NYSDEC Review of draft FER	1/17/2024																			
Submit Final FER	2/28/2024																			
NYSDEC Approval of Final FER	3/31/2024																			
Prepare Environmental Easement Package	12/31/2023																			
Prepare draft SMP	4/13/2024																			
NYSDEC Review of draft SMP	5/28/2024																			
Submit Final SMP	6/30/2024																			
NYSDEC Approval of Final SMP	7/31/2024																			
Certificate of Completion	9/30/2024																			

Notes:
BCP - Brownfield Cleanup Program
DVT - Design Verification Testing
FER - Final Engineering Report
SMP - Site Management Plan
RAWP - Remedial Action Work Plan

Revised: June 30, 2023

Attachment 1 – NYSDEC Decision Document (February 2021)

DECISION DOCUMENT

Former Bernzomatic Facility
Brownfield Cleanup Program
Medina, Orleans County
Site No. C837018
February 2021

Prepared by
Division of Environmental Remediation
New York State Department of Environmental Conservation

DECLARATION STATEMENT - DECISION DOCUMENT

Former Bernzomatic Facility
Brownfield Cleanup Program
Medina, Orleans County
Site No. C837018
February 2021

Statement of Purpose and Basis

This document presents the remedy for the Former Bernzomatic Facility site, a brownfield cleanup site. The remedial program was chosen in accordance with the New York State Environmental Conservation Law and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) Part 375.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the Former Bernzomatic Facility site and the public's input to the proposed remedy presented by the Department.

Description of Selected Remedy

The elements of the selected remedy are as follows:

1. Remedial Design

A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows:

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;
- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings will include, at a minimum, a 20-mil vapor barrier/waterproofing membrane on the foundation to

improve energy efficiency as an element of construction.

2. Excavation

The existing on-site eastern machining building(s) will be demolished and the nature and extent of contamination in this area, where access was previously limited or unavailable, will be immediately and thoroughly investigated pursuant to a plan approved by the Department. Based on the investigation results and the Department's determination of the need for a remedy, the Remedial Action Work Plan (RAWP) will include removal and/or treatment of any source areas to the extent feasible.

At a minimum, all soils in the upper foot which exceed the commercial use Soil Cleanup Objectives (SCOs) will be excavated and transported off-site for disposal. Approximately 21 cubic yards of contaminated soil will be removed from the site.

3. Backfill

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil and establish the designed grades at the site.

4. Cover System

A site cover will be required to allow for commercial or industrial use of the site in areas where the upper one foot of exposed surface soil will exceed the applicable SCOs. Where a soil cover is to be used it will be a minimum of one foot of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs.

5. Enhanced Bioremediation

Monitoring will be required up-gradient, down-gradient, and within the treatment zone. Monitoring will be conducted for volatile organic compounds (VOCs) and metals up-gradient, down-gradient, and within the treatment zone. To evaluate the enhanced bioremediation remedy, the treatment zone will also be monitored for the following: dissolved-oxygen, nitrate, iron, sulfate, alkalinity, oxidation-reduction potential, pH, chloride, and methane. A baseline groundwater monitoring program will be implemented to provide groundwater quality data prior to in-situ enhanced bioremediation.

In-situ enhanced biodegradation will be employed to treat chlorinated VOCs in groundwater in the area of the eastern machining building. The biological breakdown of contaminants through anaerobic reductive dechlorination will be enhanced by the placement of bacteria and nutrients into the subsurface to promote microbe growth. The bacteria and nutrients will be placed into the subsurface via injection points from 3 to 10 feet. In the event that appropriate aquifer pH (6-8) and total organic carbon (TOC) concentration (greater than 50 mg/l) cannot be simultaneously

maintained, the injection solution will be buffered with sodium bicarbonate to counteract the organic acids generated from biological activity.

6. Engineering and Institutional Controls

Imposition of an institutional control in the form of an environmental easement and a Site Management Plan, as described below, will be required. The remedy will achieve a Track 4 commercial cleanup at a minimum and will include a site cover.

Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

- require the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allow the use and development of the controlled property for commercial or industrial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County Department of Health; and
- require compliance with the Department approved SMP.

7. Site Management Plan

An SMP is required, which includes the following:

a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:
   Institutional Controls: The environmental easement discussed in paragraph 6 above.
   Engineering Controls: The soil cover discussed in paragraph 4 above.

   This plan includes, but may not be limited to:
   - an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
   - descriptions of the provisions of the environmental easement including any land use, and/or groundwater use restrictions;
   - a provision for evaluation of the potential for soil vapor intrusion for any occupied buildings on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
   - a provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described above will be placed in any areas where the upper one foot of exposed surface soil exceeds the applicable SCOs;
   - provisions for the management and inspection of the identified engineering controls;
   - maintaining site access controls and Department notification; and
   - the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
    - monitoring of groundwater and soil vapor intrusion to assess the performance and effectiveness of the remedy;
    - a schedule of monitoring and frequency of submittals to the Department; and,
    - monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.

Declaration

The remedy conforms with promulgated standards and criteria that are directly applicable, or that are relevant and appropriate and takes into consideration Department guidance, as appropriate. The remedy is protective of public health and the environment.

Michael Cruden

02/10/21

Date

Michael Cruden, Director
Remedial Bureau E

DECISION DOCUMENT

Former Bernzomatic Facility
Medina, Orleans County
Site No. C837018
February 2021

SECTION 1: SUMMARY AND PURPOSE

The New York State Department of Environmental Conservation (the Department), in consultation with the New York State Department of Health (NYSDOH), has selected a remedy for the above referenced site. The disposal of contaminants at the site has resulted in threats to public health and the environment that would be addressed by the remedy. The disposal or release of contaminants at this site, as more fully described in this document, has contaminated various environmental media. Contaminants include hazardous waste and/or petroleum.

The New York State Brownfield Cleanup Program (BCP) is a voluntary program. The goal of the BCP is to enhance private-sector cleanups of brownfields and to reduce development pressure on "greenfields." A brownfield site is real property, the redevelopment or reuse of which may be complicated by the presence or potential presence of a contaminant.

The Department has issued this document in accordance with the requirements of New York State Environmental Conservation Law and 6 NYCRR Part 375. This document is a summary of the information that can be found in the site-related reports and documents.

SECTION 2: CITIZEN PARTICIPATION

The Department seeks input from the community on all remedies. A public comment period was held, during which the public was encouraged to submit comment on the proposed remedy. All comments on the remedy received during the comment period were considered by the Department in selecting a remedy for the site. Site-related reports and documents were made available for review by the public at the following document repository:

DECInfo Locator - Web Application
https://gisservices.dec.ny.gov/gis/dil/index.html?rs=C837018

Lee-Whedon Memorial Library
620 West Ave.
Medina, NY 14103
Phone: 858-789-3430

Receive Site Citizen Participation Information By Email

Please note that the Department's Division of Environmental Remediation (DER) is "going paperless" relative to citizen participation information. The ultimate goal is to distribute citizen participation information about contaminated sites electronically by way of county email listservs. Information will be distributed for all sites that are being investigated and cleaned up in a particular county under the State Superfund Program, Environmental Restoration Program, Brownfield Cleanup Program and Resource Conservation and Recovery Act Program. We encourage the public to sign up for one or more county listservs at http://www.dec.ny.gov/chemical/61092.html

SECTION 3: SITE DESCRIPTION AND HISTORY

Site Location:
The site is comprised of two adjoining lots located at 1 Bernzomatic Drive, within the Village of Medina. The northern lot spans Bernzomatic Drive and is located in the Town of Ridgeway. The adjoining southern lot also spans Bernzomatic Drive and is located in the Town of Shelby.

Site Features:
Improvements on the 14.49-acre site include two connected buildings (the western main manufacturing building and the eastern machining building) totaling approximately 160,000 square feet. These buildings are located on the west side of Bernzomatic Drive. Truck and trailer parking areas are located to the north of the main manufacturing building, and employee and visitor parking is located to its south. Areas west and south of the main manufacturing building are generally wooded and vacant as a buffer zone to neighboring residential and commercial properties. Roof drains from the building discharge into a cistern system which stores water underneath the building as a backup supply for fire suppression. Overflow from the cistern discharges to a storm water pond located on the southwestern side of the property. Structures outside the site boundary, but located on the overall former Bernzomatic facility, include an approximately 4,000 square foot engineering laboratory and an approximately 8,000 square foot storage building on the east side of Bernzomatic Drive. A small ancillary fire pump house building is also present just north and outside the northeast corner of the site boundary. The topography of the site is generally flat and surrounding properties are of similar elevation.

Current Zoning and Land Use:
The site is located in zoning district I (Industrial District) and is currently utilized for storage, material assembly, packaging, and shipping. Anticipated future uses are limited to commercial and industrial activities.

Past Use of Site:
The subject property has a history of industrial use beginning in approximately 1915, including canneries and food processing companies. These uses involved process areas including a pipe shed, machine shop, and oil house that may have involved the use of hazardous materials and/or petroleum. In addition, the subject property historically utilized hazardous substances including solvents and oils. Records indicate that parts cleaning operations were once performed using solvent degreasing agents, particularly in the eastern machining building. Recent site operations involved the machining, assembly, packing, and shipping of hand-held torches by Bernzomatic, a division of Newell Rubbermaid Corporation. In 2011, Newell Rubbermaid sold the business

(Newell Rubbermaid maintained ownership of the property) to Worthington Industries who continued manufacturing torches until July 2014. Newell Rubbermaid completed a preliminary environmental investigation of the site in 2014. The industrial chemical, acetone, was detected at elevated levels in the soil and various chlorinated and volatile organic compounds were detected at elevated levels in the groundwater. Based on this information, Newell Rubbermaid notified the DEC and submitted an application to enter into the Brownfield Cleanup Program.

Site Geology and Hydrogeology
The site is located in the Erie-Ontario Lowlands Physiographic Province. The site is underlain by sand and silt mixtures with some gravel encountered just beneath the concrete surface. Overburden thickness at the site varies from approximately 9 feet on the east side of the main building to approximately 12 feet near the cistern beneath the main manufacturing building. Bedrock at the site consists of a 10-foot-thick layer of Irondequoit Limestone over Medina Sandstone.

Depth to groundwater in the overburden ranges from 0.5 to 6.7 feet below ground surface. Overall groundwater flow is to the northwest.

A site location map is attached as Figure 1 and a site boundary map is attached as Figure 2.

SECTION 4: LAND USE AND PHYSICAL SETTING

The Department may consider the current, intended, and reasonably anticipated future land use of the site and its surroundings when evaluating a remedy for soil remediation. For this site, alternatives that restrict the use of the site to commercial use as described in Part 375-1.8(g) were evaluated in addition to an alternative which would allow for unrestricted use of the site.

A comparison of the results of the Remedial Investigation (RI) to the appropriate standards, criteria and guidance values (SCGs) for the identified land use and the unrestricted use SCGs for the site contaminants is available in the RI Report.

SECTION 5: ENFORCEMENT STATUS

One or more of the Applicants under the Brownfield Cleanup Agreement is a Participant. The Participant has an obligation to address on-site and off-site contamination. Accordingly, no enforcement actions are necessary.

SECTION 6: SITE CONTAMINATION

6.1: Summary of the Remedial Investigation

A remedial investigation (RI) serves as the mechanism for collecting data to:

- characterize site conditions;
- determine the nature of the contamination; and
- assess risk to human health and the environment.

The RI is intended to identify the nature (or type) of contamination which may be present at a site and the extent of that contamination in the environment on the site, or leaving the site. The RI reports on data gathered to determine if the soil, groundwater, soil vapor, indoor air, surface water or sediments may have been contaminated. Monitoring wells are installed to assess groundwater and soil borings or test pits are installed to sample soil and/or waste(s) identified. If other natural resources are present, such as surface water bodies or wetlands, the water and sediment may be sampled as well. Based on the presence of contaminants in soil and groundwater, soil vapor will also be sampled for the presence of contamination. Data collected in the RI influence the development of remedial alternatives. The RI report is available for review in the site document repository and the results are summarized in section 6.3.

The analytical data collected on this site includes data for:

- groundwater
- surface water
- soil
- sediment
- indoor air
- sub-slab vapor

6.1.1: Standards, Criteria, and Guidance (SCGs)

The remedy must conform to promulgated standards and criteria that are directly applicable or that are relevant and appropriate. The selection of a remedy must also take into consideration guidance, as appropriate. Standards, Criteria and Guidance are hereafter called SCGs.

To determine whether the contaminants identified in various media are present at levels of concern, the data from the RI were compared to media specific SCGs. The Department has developed SCGs for groundwater, surface water, sediments, and soil. The NYSDOH has developed SCGs for drinking water and soil vapor intrusion. For a full listing of all SCGs see: http://www.dec.ny.gov/regulations/61794.html

6.1.2: RI Results

The data have identified contaminants of concern. A "contaminant of concern" is a contaminant that is sufficiently present in frequency and concentration in the environment to require evaluation for remedial action. Not all contaminants identified on the property are contaminants of concern. The nature and extent of contamination and environmental media requiring action are summarized below. Additionally, the RI Report contains a full discussion of the data. The contaminant(s) of concern identified at this site is/are:

dibenz[a,h]anthracene	cadmium
benzo(a)pyrene	chromium
benzo(b)fluoranthene	lead
arsenic	tetrachloroethane

trichloroethene (TCE)	vinyl chloride
cis-1,2-dichloroethene	1,1,1-trichloroethane (TCA)
1,1 dichloroethene	1,1-dichloroethane

The contaminant(s) of concern exceed the applicable SCGs for:

- groundwater
- soil

6.2: Interim Remedial Measures

An interim remedial measure (IRM) is conducted at a site when a source of contamination or exposure pathway can be effectively addressed before issuance of the Decision Document.

There were no IRMs performed at this site during the RI.

6.3: Summary of Environmental Assessment

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts may include existing and potential future exposure pathways to fish and wildlife receptors, wetlands, groundwater resources, and surface water. The RI report presents a detailed discussion of any existing and potential impacts from the site to fish and wildlife receptors.

Nature and Extent of Contamination

Soil, groundwater, sediment, surface water, and soil vapor were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, per- and polyfluoroalkyl substances (PFAS), polychlorinated biphenyls (PCBs), and pesticides. Based upon investigations to date, the primary contaminants of concern are chlorinated VOCs and metals in groundwater and SVOCs in surface soils.

Soil
Polycyclic aromatic hydrocarbons (PAHs) including benzo(a)pyrene, benzo(b)fluoranthene, and dibenz(a,h)anthracene were detected in surface soils on the south and west portions of the site above commercial use soil cleanup objectives (SCOs). Benzo(a)pyrene was detected at 10 parts per million (ppm) which exceeds the commercial use SCO of 1 ppm; benzo(b)fluoranthene was detected at 15 ppm which exceeds the commercial use SCO of 5.6 ppm; and dibenz(a,h)anthracene was detected at 1.5 ppm which exceeds the commercial use SCO of 0.56 ppm.

VOCs and metals were not detected above protection of groundwater or commercial use SCOs. Contaminants are not migrating off-site in soils.

Groundwater

Tetrachloroethene (PCE), 1,1,1-trichloroethane (TCA), and their associated degradation products were found in groundwater on the eastern portions of the site, exceeding the groundwater standard which is 5 parts per billion (ppb) for all compounds except vinyl chloride, which has a groundwater standard of 2 ppb. Maximum concentrations were 36 ppb for PCE, 72 ppb for trichloroethene, 440 ppb for cis-1,2-dichloroethene, 8.8 ppb for 1,1-dichloroethene, 21 ppb for TCA, 87 ppb for 1,1-dichloroethane, and 11 ppb for vinyl chloride.

Metals, such as arsenic, lead, cadmium, and chromium were also detected in groundwater above standards near the former aboveground storage tank area. The maximum concentrations (and groundwater standards) for arsenic, lead, cadmium, and chromium were 172 ppb (25 ppb), 430 ppb (25 ppb), 32 (5 ppb), and 462 ppb (50 ppb), respectively.

Perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS) were reported at concentrations of up to 2.9 and 7.2 parts per trillion (ppt), respectively, which is below the Maximum Contaminant Level (drinking water standard) of 10 ppt in groundwater for both PFOA and PFOS.

1,4-Dioxane was reported at concentrations of up to 3.7 parts per billion (ppb), exceeding the Maximum Contaminant Level (drinking water standard) of 1 ppb in groundwater.

Contaminants are not migrating off-site in groundwater.

Soil Vapor and Indoor Air
No compounds were detected in the indoor air at levels above New York State Department of Health air guideline values. PCE was the only compound detected in sub-slab soil vapor at levels indicating additional action should be considered.

PCE was detected in one sub-slab soil vapor sample at 1,200 micrograms per cubic meter (ug/m3) in the western portion of the manufacturing building during the 2017 soil vapor intrusion investigation. This area was resampled in 2019 due to a change in occupancy and PCE was detected at 40 ug/m3. The maximum indoor air concentration for PCE was 1.3 ug/m3 which is well below the air guideline value of 30 ug/m3. No further action was needed based on a full review of all sub-slab soil vapor and indoor air data.

Sub-slab soil vapor and indoor air samples were not collected from the eastern machining building because it is unoccupied and scheduled for demolition.

Contaminants are not migrating off-site in soil vapor.

Sediment
Chromium, copper, and zinc were found in storm water pond sediment above the Screening and Assessment of Contaminated Sediments Class C guidance values in one location. Chromium was detected up to 151 ppm; the guidance value is 110 ppm. Copper was detected up to 574 ppm; the guidance value is 150 ppm. Zinc was detected up to 1,090 ppm; the guidance value is 460 ppm. The extent of contaminants found in sediments is limited and no further action is required.

Surface Water
No compounds were found in surface water above standards.

6.4: Summary of Human Exposure Pathways

This human exposure assessment identifies ways in which people may be exposed to site-related contaminants. Chemicals can enter the body through three major pathways (breathing, touching or swallowing). This is referred to as *exposure.*

Access is not restricted and people who enter the site could contact contaminants in the soil, surface water or sediments by walking, digging or otherwise disturbing the soil or collection pond. People are not drinking the contaminated groundwater because the area is served by a public water supply that is not affected by this contamination. Volatile organic compounds in the soil vapor (air spaces within the soil), may move into buildings and affect indoor air quality. This process, which is similar to the movement of radon gas from the subsurface into the indoor air of buildings, is referred to as soil vapor intrusion. Environmental sampling indicates that soil vapor intrusion is a not a concern for one onsite building and offsite buildings. However, additional investigation is recommended for future redevelopment or change in use in the area of the eastern machining building, currently proposed for demolition, to determine if action is needed to address soil vapor intrusion.

6.5: Summary of the Remediation Objectives

The objectives for the remedial program have been established through the remedy selection process stated in 6 NYCRR Part 375. The goal for the remedial program is to restore the site to pre-disposal conditions to the extent feasible. At a minimum, the remedy shall eliminate or mitigate all significant threats to public health and the environment presented by the contamination identified at the site through the proper application of scientific and engineering principles.

The remedial action objectives for this site are:

Groundwater

RAOs for Public Health Protection

- Prevent ingestion of groundwater with contaminant levels exceeding drinking water standards.
- Prevent contact with, or inhalation of volatiles, from contaminated groundwater.

RAOs for Environmental Protection

- Restore ground water aquifer to pre-disposal/pre-release conditions, to the extent practicable.
- Prevent the discharge of contaminants to surface water.
- Remove the source of ground or surface water contamination.

Soil

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated soil.

- Prevent inhalation of or exposure from contaminants volatilizing from contaminants in soil.

RAOs for Environmental Protection

- Prevent impacts to biota from ingestion/direct contact with soil causing toxicity or impacts from bioaccumulation through the terrestrial food chain.

Sediment

RAOs for Public Health Protection

- Prevent ingestion/direct contact with contaminated sediments.
- Prevent surface water contamination which may result in fish advisories.

RAOs for Environmental Protection

- Prevent releases of contaminants from sediments that would result in surface water levels in excess of ambient water quality criteria.
- Prevent impacts to biota from ingestion/direct contact with sediments causing toxicity or impacts from bioaccumulation through the marine or aquatic food chain.

Soil Vapor

RAOs for Public Health Protection

- Mitigate impacts to public health resulting from existing, or the potential for, soil vapor intrusion into buildings at a site.

SECTION 7: ELEMENTS OF THE SELECTED REMEDY

The alternatives developed for the site and the evaluation of the remedial criteria are presented in the Alternative Analysis. The remedy is selected pursuant to the remedy selection criteria set forth in DER-10, Technical Guidance for Site Investigation and Remediation and 6 NYCRR Part 375.

The selected remedy is a Track 4: Restricted use with site-specific soil cleanup objectives remedy.

The selected remedy is referred to as the Enhanced Bioremediation with Targeted PAH and Source Area Excavation and ICs remedy.

The elements of the selected remedy, as shown in Figures 3 and 4, are as follows:

1. Remedial Design

A remedial design program will be implemented to provide the details necessary for the construction, operation, optimization, maintenance, and monitoring of the remedial program. Green remediation principles and techniques will be implemented to the extent feasible in the design, implementation, and site management of the remedy as per DER-31. The major green remediation components are as follows:

- Considering the environmental impacts of treatment technologies and remedy stewardship over the long term;
- Reducing direct and indirect greenhouse gases and other emissions;

- Increasing energy efficiency and minimizing use of non-renewable energy;
- Conserving and efficiently managing resources and materials;
- Reducing waste, increasing recycling and increasing reuse of materials which would otherwise be considered a waste;
- Maximizing habitat value and creating habitat when possible;
- Fostering green and healthy communities and working landscapes which balance ecological, economic and social goals;
- Integrating the remedy with the end use where possible and encouraging green and sustainable re-development; and
- Additionally, to incorporate green remediation principles and techniques to the extent feasible in the future development at this site, any future on-site buildings will include, at a minimum, a 20-mil vapor barrier/waterproofing membrane on the foundation to improve energy efficiency as an element of construction.

2. Excavation

The existing on-site eastern machining building(s) will be demolished and the nature and extent of contamination in this area, where access was previously limited or unavailable, will be immediately and thoroughly investigated pursuant to a plan approved by the Department. Based on the investigation results and the Department's determination of the need for a remedy, the Remedial Action Work Plan (RAWP) will include removal and/or treatment of any source areas to the extent feasible.

At a minimum, all soils in the upper foot which exceed the commercial use Soil Cleanup Objectives (SCOs) will be excavated and transported off-site for disposal. Approximately 21 cubic yards of contaminated soil will be removed from the site.

3. Backfill

Clean fill meeting the requirements of 6 NYCRR Part 375-6.7(d) will be brought in to replace the excavated soil and establish the designed grades at the site.

4. Cover System

A site cover will be required to allow for commercial or industrial use of the site in areas where the upper one foot of exposed surface soil will exceed the applicable SCOs. Where a soil cover is to be used it will be a minimum of one foot of soil placed over a demarcation layer, with the upper six inches of soil of sufficient quality to maintain a vegetative layer. Soil cover material, including any fill material brought to the site, will meet the SCOs for cover material for the use of the site as set forth in 6 NYCRR Part 375-6.7(d). Substitution of other materials and components may be allowed where such components already exist or are a component of the tangible property to be placed as part of site redevelopment. Such components may include, but are not necessarily limited to: pavement, concrete, paved surface parking areas, sidewalks, building foundations and building slabs.

5. Enhanced Bioremediation

In-situ enhanced biodegradation will be employed to treat chlorinated VOCs in groundwater in the area of the eastern machining building. The biological breakdown of contaminants through

anaerobic reductive dechlorination will be enhanced by the placement of bacteria and nutrients into the subsurface to promote microbe growth. The bacteria and nutrients will be placed into the subsurface via injection points from 3 to 10 feet. In the event that appropriate aquifer pH (6-8) and total organic carbon (TOC) concentration (greater than 50 mg/l) cannot be simultaneously maintained, the injection solution will be buffered with sodium bicarbonate to counteract the organic acids generated from biological activity.

Monitoring will be required upgradient, downgradient, and within the treatment zone. Monitoring will be conducted for volatile organic compounds (VOCs) and metals upgradient, downgradient, and within the treatment zone. To evaluate the enhanced bioremediation remedy, the treatment zone will also be monitored for the following: dissolved-oxygen, nitrate, iron, sulfate, alkalinity, oxidation-reduction potential, pH, chloride, and methane. A baseline groundwater monitoring program will be implemented to provide groundwater quality data prior to in-situ enhanced bioremediation.

6. Engineering and Institutional Controls

Imposition of an institutional control in the form of an environmental easement and a Site Management Plan, as described below, will be required. The remedy will achieve a Track 4 commercial cleanup at a minimum and will include a site cover.

Imposition of an institutional control in the form of an environmental easement for the controlled property which will:

- require the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3);
- allow the use and development of the controlled property for commercial or industrial use as defined by Part 375-1.8(g), although land use is subject to local zoning laws;
- restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDOH or County Department of Health; and
- require compliance with the Department approved SMP.

7. Site Management Plan

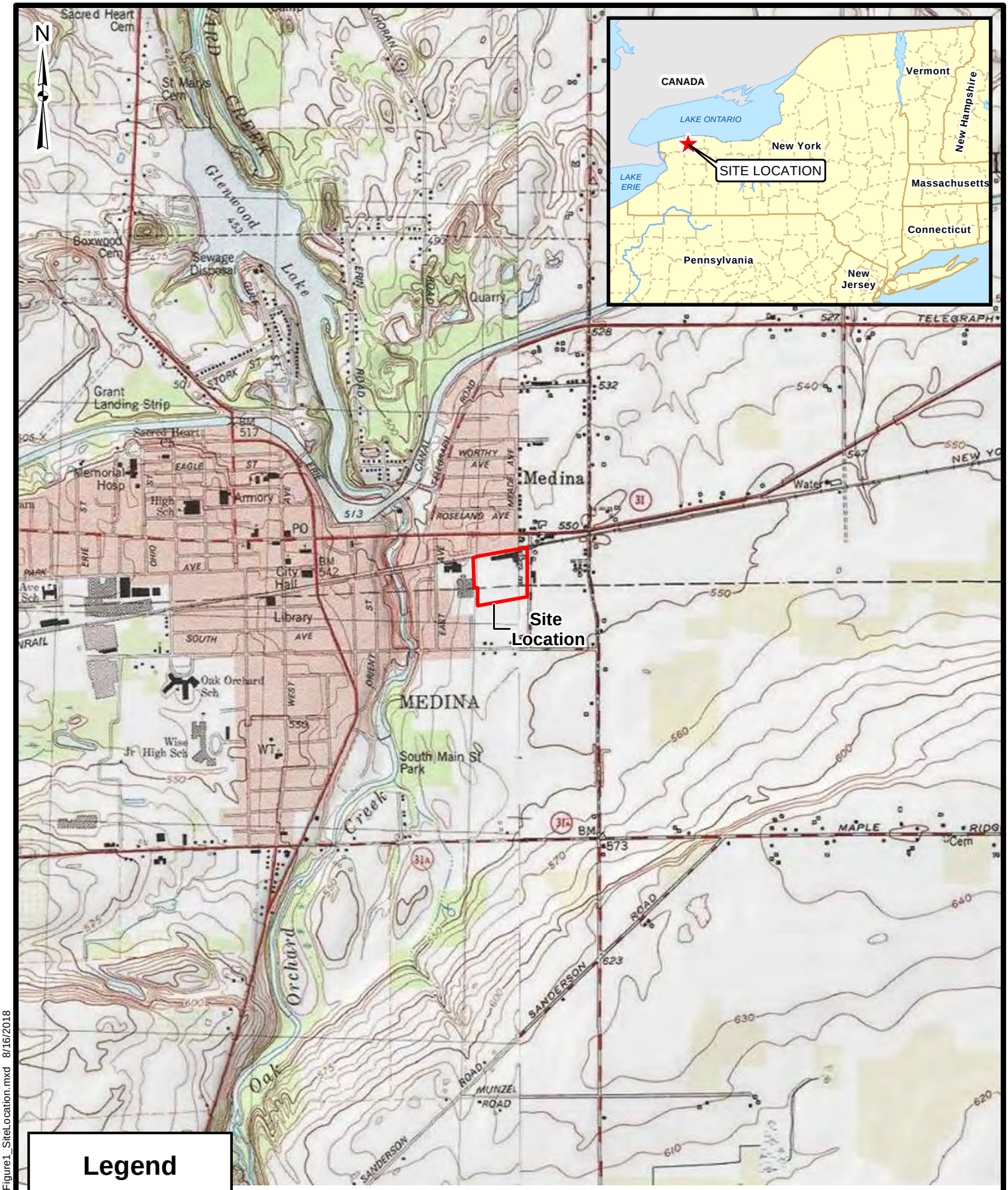
An SMP is required, which includes the following:

a. an Institutional and Engineering Control Plan that identifies all use restrictions and engineering controls for the site and details the steps and media-specific requirements necessary to ensure the following institutional and/or engineering controls remain in place and effective:
   Institutional Controls: The environmental easement discussed in paragraph 6 above.
   Engineering Controls: The soil cover discussed in paragraph 4 above.

   This plan includes, but may not be limited to:
   - an Excavation Plan which details the provisions for management of future excavations in areas of remaining contamination;
   - descriptions of the provisions of the environmental easement including any land

use, and/or groundwater use restrictions;
- a provision for evaluation of the potential for soil vapor intrusion for any occupied buildings on the site, including provision for implementing actions recommended to address exposures related to soil vapor intrusion;
- a provision that should a building foundation or building slab be removed in the future, a cover system consistent with that described above will be placed in any areas where the upper one foot of exposed surface soil exceeds the applicable SCOs;
- provisions for the management and inspection of the identified engineering controls;
- maintaining site access controls and Department notification; and
- the steps necessary for the periodic reviews and certification of the institutional and/or engineering controls.

b. a Monitoring Plan to assess the performance and effectiveness of the remedy. The plan includes, but may not be limited to:
   - monitoring of groundwater and soil vapor intrusion to assess the performance and effectiveness of the remedy;
   - a schedule of monitoring and frequency of submittals to the Department; and,
   - monitoring for vapor intrusion for any buildings on the site, as may be required by the Institutional and Engineering Control Plan discussed above.



Legend

Site Boundary

Source: © 2013 National Geographic Society, i-cubed;
1:24:000-scale USGS Topographic Maps, Medina & Knowlesville Quadrangle

2,000 0 2,000 Feet

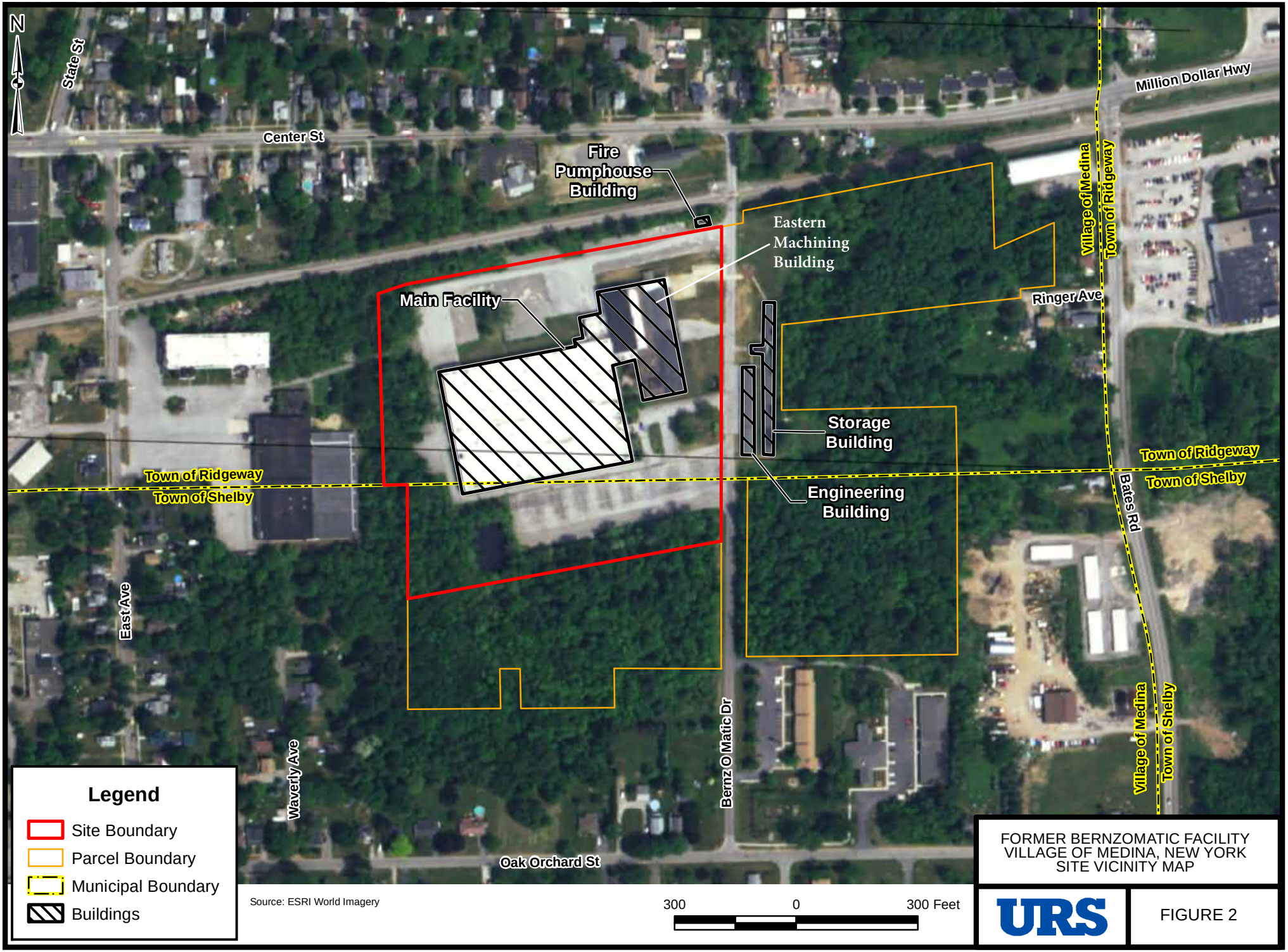
URS

FORMER BERNZOMATIC FACILITY
VILLAGE OF MEDINA, NEW YORK
SITE LOCATION MAP

FIGURE 1

J:\Projects\25369237\GIS\Maps\Figure1_SiteLocation.mxd 8/16/2018

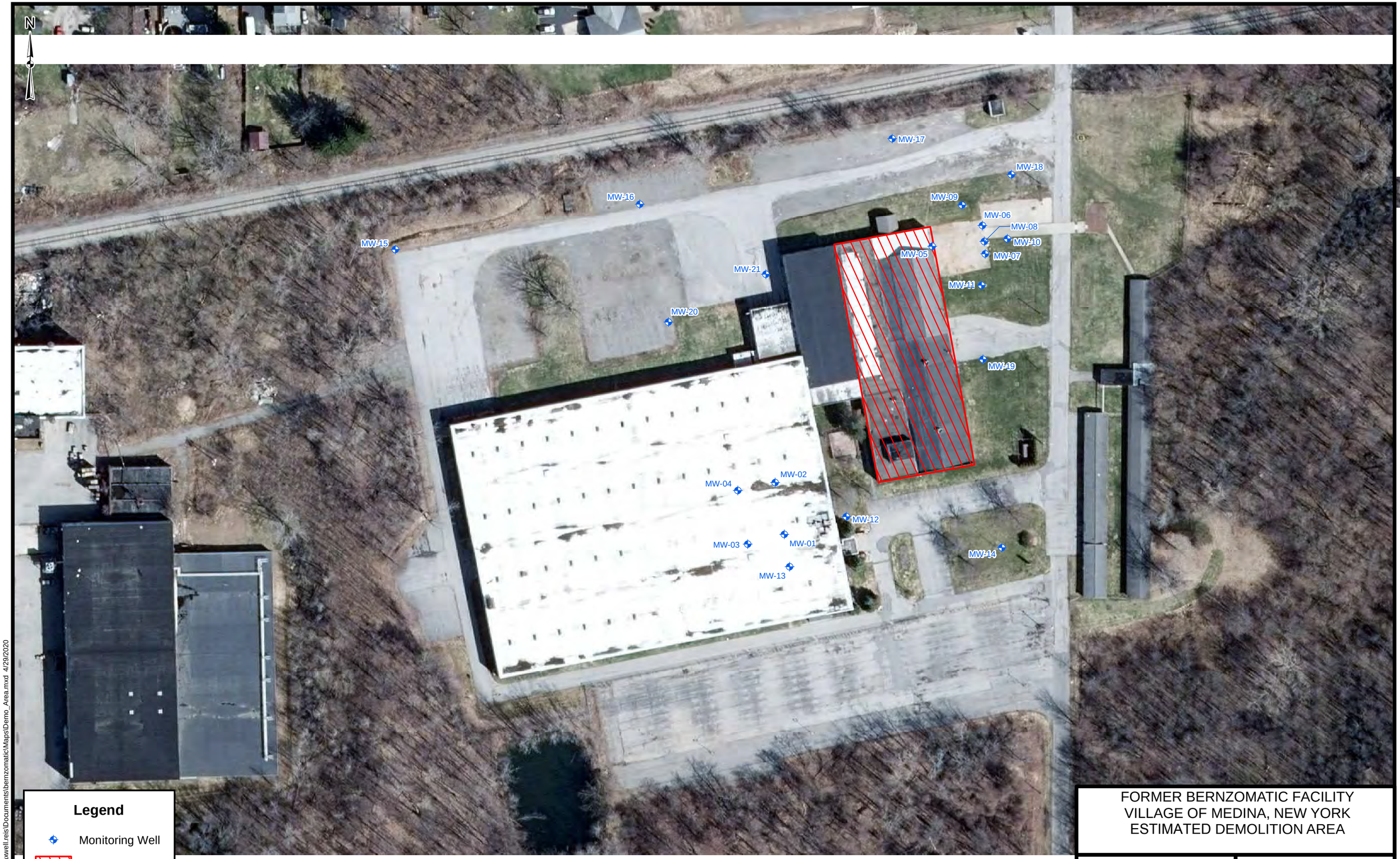
J:\Projects\25369237\GIS\Maps\Figure2_SiteVicinity.mxd 6/8/2017



FORMER BERNZOMATIC FACILITY
VILLAGE OF MEDINA, NEW YORK
SITE VICINITY MAP

URS

FIGURE 2



Legend

- Monitoring Well
- Demolition Area

Source: NYS Digital Ortho-Imagery Program, Orleans County, 2015

100 0 100 Feet

FORMER BERNZOMATIC FACILITY
VILLAGE OF MEDINA, NEW YORK
ESTIMATED DEMOLITION AREA

URS

FIGURE 3

C:\Users\maxwell.reis\Documents\bernzomatic\Maps\Demo_Area.mxd 4/29/2020

N

MW-17
MW-18
MW-16
MW-09
MW-06
MW-08
MW-10
MW-15
MW-05
MW-07
MW-21
MW-11
MW-20
MW-19
MW-04
MW-02
SS-01
MW-12
MW-03
MW-01
MW-14
MW-13
SS-02
SS-03

Legend

- PAH Excavation Location (5'x5'x1')
- Monitoring Well
- Line of Injection Points
- Potential Line of Injection Points
- PH I ESA REC
- Assumed Source Area
- Potential Treatment Area

Note: Extent of treatment area and location of injection points will be determined during a pre-design investigation to be performed following building demolition.

Source: NYS Digital Ortho-Imagery Program, Orleans County, 2015

100 0 100 Feet

FORMER BERNZOMATIC FACILITY
VILLAGE OF MEDINA, NEW YORK
ESTIMATED TREATMENT AREAS

URS

FIGURE 4

C:\Users\maxwell.reis\Documents\bernzomatic\Maps\Alt4_ProposedTreatmentAreas.mxd 10/20/2020

Attachment 2 – PDI Phase II Subsurface Soil and Groundwater Pre-design Investigation Summary Report

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July 6, 2023

SUBMITTED VIA ELECTRONIC MAIL

Mr. Joshuah Klier
Division of Environmental Remediation
New York State Department of Environmental Conservation, Region 8
6274 East Avon-Lima Road
Avon, NY 14414-9516

RE: Pre-Design Investigation Report Phase II: Subsurface Soil and Groundwater
Former Bernzomatic Facility, Medina NY (BCP Site No. C837018)

Dear Mr. Klier,

On behalf of Newell Operating Company (Newell), URS Corporation (URS), an AECOM Company, submits this pre-design investigation report (PDI Phase II Report) for the completed investigation described in the *Pre-Design Investigation Work Plan Phase II: Subsurface Soil and Groundwater* (PDI Phase II Work Plan) dated March 2022 for the above-referenced Former Bernzomatic Facility site (Site).

The results of previous investigations at the Site (see PDI Phase II Work Plan) indicated that potential volatile organic compounds (VOCs) and metals impacts existed in the subsurface beneath the footprint of the eastern machining building; however, full delineation of this area was not previously completed due to the presence of the building. The PDI Phase II Work Plan subsurface soil and groundwater investigation was therefore performed upon demolition of the eastern machine building which was completed as part of the PDI Phase I.

The PDI Phase II Work Plan was approved by the New York State Department of Environmental Conservation (NYSDEC) on May 18, 2022, to implement the Decision Document (DD) for the Site issued by the NYSDEC on February 9, 2021. The purpose of the PDI Phase II Work Plan was to gather additional information to complete the remedial design. Results of this PDI Phase II will be used to prepare a Remedial Action Work Plan (RAWP) to address the removal and/or treatment of any source areas to the extent feasible. Figure 1 presents the Site plan with the planned PDI Phase II Work Plan investigation locations.

The scope of work described in the PDI Phase II Work Plan included the following activities:

- Complete 12 soil borings (PDI-1 through PDI-12) within the footprint of the former eastern machining building. Nine of the borings were to be installed in the investigation area identified in the Alternatives Analysis Report (URS, October 2020) and three were to be in the areas identified during the PDI Phase I building demolition activity (two at the north end and one at the south end of the former eastern machining building noted during removal of foundation).
- Submit one unsaturated soil sample from each boring (PDI-1 through PDI-12) for VOC and metals analyses.
- Submit one groundwater grab sample from each PDI boring (PDI-1 through PDI-12 [prior to converting any location to a monitoring well]) for VOC analysis.
- Complete one of the 12 borings as a treatment area monitoring well (MW-22).

- Collect one round of groundwater samples from seven existing wells (MW-05, MW-07, MW-14, MW-16, MW-17, MW-19, and MW-21) and the new treatment area monitoring well MW-22 to establish baseline groundwater quality conditions prior to implementation of the in-situ enhanced bioremediation program.
- Complete an elevation and location survey of the investigation locations.

This letter report has been prepared to transmit a summary and analysis of the investigation work described above.

INVESTIGATION ACTIVITIES

Utility Clearance

Prior to the start of work, Dig Safely New York was contacted for public utility mark outs. Utility clearance was performed on April 22, 2022, by subcontractor by Matrix Environmental Technologies Inc. of Orchard Park, NY. URS marked the proposed boring locations with pin-flags prior to the utility mark out. Known utility changes in the area of the eastern machining buildings were discussed with the building facility manager. Utility mark out using ground penetrating radar (GPR) was performed. Recent changes to the gas line and fire loop water systems were noted within the work area and sampling locations were adjusted in some locations to avoid these utilities and the new asphalt driveway installed during the Phase I PDI work by others. With the concurrence of the NYSDEC project manager, location PDI-8 was moved approximately 10 feet north of the planned location to avoid the new asphalt driveway. Location PDI-12 was moved approximately 20 feet south of the planned location to avoid the same driveway and remain south of the main gas line to the facility.

Soil Borings and Sampling

On April 27 through 29, 2022, a series of soil borings were completed using the direct-push technology (DPT) method. This soil boring and sampling program was completed for the purpose of further delineating contamination under the eastern refining building.

Borings were performed by Matrix Environmental Technologies Inc., under the direction of a URS geologist.

Borings were advanced to the bedrock surface refusal (approximately 9-10 feet below ground surface [bgs]). The PDI Phase II Work Plan called for the completion of twelve soil borings with one completed as a treatment area monitoring well (PDI-01 through PDI-11, and MW-22, whose location was renamed PDI-12 when the well was moved to PDI-03 location.)

The twelve soil borings (PDI-01 through PDI-12) were completed in accordance with the PDI Phase II Work Plan. One unsaturated soil sample was collected from each boring and submitted to Eurofins TestAmerica Laboratories, Amherst, NY, for VOCs and metals analyses along with quality control (QC) samples. Potential impacts were not observed (based on visual and olfactory characteristics) in any of the borings except for some suspected grey staining in PDI-6 and PDI-7 at approximately 5-6 feet bgs). There were no elevated photoionization detector (PID) readings above background associated with the soils.

Sampling locations were hand-cleared using an air knife and hand auger to a depth of approximately 5 feet bgs, after which soil samples were collected continuously to the bottom of the boring using 5-foot long, 2-inch diameter MacroCore™ samplers. Soil samples were visually described and recorded by the field geologist. The descriptions were in accordance with the An Engineering Description of Soils: Visual-Manual Procedure – Geotechnical Test Procedure (GTP-2) (State of New York Department of Transportation, August 2015). The field geologist recorded the soil descriptions and any other observations (e.g., visual and olfactory observations, soil staining, etc.) in the field logbook.

Immediately after describing the soil core, the field geologist scanned the soil with a 10.2 eV PID for organic vapors and recorded results. Boring logs are provided in Attachment 1.

Upon completion of borings, a single soil sample for laboratory analysis was collected from the interval directly above observed groundwater since impacts were not observed at any soil boring location, including during the hand clearing of soils. The soil sample was collected directly from hand-clearing soils or the MacroCore™ liners and placed into appropriate laboratory-supplied sample containers.

Samples were delivered to Eurofins TestAmerica, Amherst, NY. The subsurface soil samples were submitted for the following analyses:

- VOCs by United States Environmental Protection Agency (USEPA) Method SW8260C.
- Metals/Mercury by USEPA Method 6010C, 7470A, and 7471B.

Well Installations and Development

One well (MW-22) was installed at the location of PDI-3 in the footprint of the former eastern machining building. After reviewing the boring logs, the original selected location (PDI-12) was one that had been moved south to avoid utilities and was found to be in an area of apparently less permeable soils than that of other locations. The well was moved one location to the north at PDI-03 with the concurrence of the NYSDEC project manager. In addition to MW-22, per the PDI Phase II Work Plan, seven existing wells were scheduled to be groundwater sampled; however, two of those existing wells (MW-05 and MW-19) were unable to be located and it is assumed that they were destroyed during the demolition of the eastern machining building. One additional well that was not scheduled to be sampled (MW-06) was also unable to be located. MW-05R, a replacement for MW-05, was installed at the location of PDI-11. MW-19R, the replacement well for MW-19, was placed on the north side of the new asphalt driveway due north of the original MW-19 which is believed to lie underneath the driveway. Following discussion with NYSDEC, no soil samples were collected at the replacement well MW-19R due to the existence of other subsurface soil data in that immediate area. Well construction logs are provided in Attachment 1. There was no replacement well drilled from MW-06 as it was not part of the PDI Phase II Work Plan sampling schedule.

New monitoring wells were installed on April 29, 2022, in accordance with the PDI Phase II Work Plan. Relatively shallow water depths (3-4 feet bgs) resulted in sandpacks approximately 1.5-2.0 feet bgs, and the bentonite was then brought to the bottom of the flush mount road boxes, and no grout was necessary. PVC risers were protected with Sonotube for the final well completions. The well risers were initially left high pending additional topsoil placement as part of final grading of the area as part of the PDI Phase I restoration. The three newly installed wells were developed on May 2, 2022, in accordance with the PDI Phase II Work Plan. The PDI Phase I final grading and reseeding was completed in May 2022. Final completion of the new PDI Phase II monitoring well road boxes was on July 7, 2022. Well development logs are presented in Attachment 1.

Groundwater Grab Sampling and Groundwater Well Sampling

Following completion of each of the twelve soil borings, an initial water level measurement was collected. Then a groundwater grab sample was collected from the bottom four feet of the boring using a Geoprobe® Screen Point 22 sampler (SP-22). Grab samples were collected using a peristaltic pump. Following sample collection, the screen point sampler was removed, and the borehole was backfilled with bentonite grout (approximately 50/50 water/powdered bentonite). Following development, the one new well, two replacement wells, and five additional existing wells were sampled using low-flow protocols with a peristaltic pump on May 9-10, 2022. Field parameters for grab samples and well samples were collected using a YSI water quality meter (temperature, pH,

conductivity, dissolved oxygen, oxidation-reduction potential (ORP), and turbidity). Field parameter data are presented in Table 1. Groundwater grab and groundwater well sampling forms are presented in Attachment 1.

Samples were delivered to Eurofins TestAmerica, Amherst, New York.

Groundwater grab samples were collected from the completed soil borings for the following analyses:

- VOCs by USEPA Method SW8260C.

Monitoring well low-flow groundwater samples were collected for the following analyses:

- VOCs by USEPA Method SW8260C.
- Metals/Mercury by USEPA Method 6010C, 7470A, and 7471B.

Groundwater samples from four select monitoring wells were collected for the following additional monitored natural attenuation (MNA) analyses:

- Methane by USEPA Robert S. Kerr (RSK)-175.
- Dissolved Iron by USEPA Method 6010C.
- Total Alkalinity by Standard Methods SM2320B.
- Chloride/Nitrate/Sulfate by USEPA Method 300.0.

A summary of the soil and groundwater sample results is provided below in the Investigation Results section.

A round of water levels from the new, replacement, and existing groundwater monitoring wells was collected on May 2, 2022. Depth to water and groundwater elevation data are presented in Table 2. Figure 2 presents the groundwater elevation contours.

INVESTIGATION RESULTS

Soil Sample Analytical Results

Table 3 and Figure 3 present the soil results from the twelve PDI Phase II borings. The concentrations of the detected compounds were compared against the criteria in New York Codes, Rules, and Regulations (NYCRR) Part 375, Subpart 375-6, Table 375-6.8(a) *Unrestricted Use Soil Cleanup Objectives (SCOs)* and Table 375-6.8(b) *Protection of Groundwater Use SCOs and Commercial Use SCOs*. No VOCs were detected above any of these criteria in the collected soil samples.

Eight VOCs were detected below criteria in at least one PDI location, including: 1,1,1-trichloroethane, cis -1,2-dichloroethene (cis-1,2-DCE), trans - 1,2-dichloroethene (trans-1,2-DCE), acetone, methyl acetate, methyl ethyl ketone (2-Butanone), methylcyclohexane, and tetrachloroethene (PCE). No VOC concentrations exceeded Unrestricted Use, Protection of Groundwater, or Commercial Use SCOs.

Three metals were detected above Unrestricted Use SCOs as described below:

- Aluminum in 3 of 12 samples: in PDI-06, PDI-07, and PDI-12.
- Calcium in 9 of 12 samples: in PDI-01, PDI-02, PDI-04, PDI-05, PDI-06, PDI-07, PDI-09, PDI-10, and PDI-11.
- Iron: in all 12 samples: PDI-01 thru PDI-12.

Although there were detections of other metals at each PDI Phase II location, there were no exceedances of metals for Protection of Groundwater or Commercial Use SCOs. These results are consistent with the results of the remedial investigation (RI) (i.e., aluminum, calcium, and iron were detected in the same range of concentrations in the PDI Phase II as were detected in subsurface soils in the RI.)

Groundwater Grab and Groundwater Well Analytical Results

Table 4 and Figure 4 present the groundwater grab samples from the twelve PDI borings, as well as the eight groundwater samples from new, replacement and existing Site wells. The concentrations of the detected compounds were compared against the criteria in *NYSDEC TOGS (1,1,1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations, April 2000*.

Five metals were detected above groundwater standards and guidance values as described below:

- Barium in 2 of 8 samples: MW-16 and MW-21.
- Iron in 6 of 8 samples: MW-07, MW-14, MW-16, MW-17, MW-19R, and MW-22.
- Magnesium in 3 of 8 samples: MW-16, MW-17, and MW-21.
- Manganese in 8 of 8 samples: MW-05R, MW-07, MW-14, MW-16, MW-17, MW-19R, MW-21, and MW-22.
- Sodium in 7 of 8 samples: MW-05R, MW-14, MW-16, MW-17, MW-19R, MW-21, and MW-22.

Although there were detections of other metals at each PDI Phase II location, there were no other exceedances of metals for the listed groundwater standards and guidance values.

Nine VOCs were detected above the groundwater standards and guidance values as follows: 1,1-dichloroethane, 1,1-dichloroethene, cis -1,2-DCE, trans - 1,2-DCE, acetone, chloroethane, PCE, trichloroethene (TCE), and vinyl chloride.

Monitoring well locations where criteria exceeded VOC groundwater standards included: MW-05R, MW-07, MW-21 (and duplicate), and MW-22. Other locations had detections for other select VOCs but were not in exceedance of the groundwater criteria. A summary of VOC exceedance detections in low-flow monitoring well samples includes:

- MW-05R – maximum concentration cis-1,2-DCE at 210 µg/L; four other compounds detected at 22 µg/L or less.
- MW-07 - maximum concentration TCE at 6.1 µg/L; no other compounds detected above criteria.
- MW-21 - maximum concentration cis-1,2-DCE at 65 µg/L; two other compounds detected at 13 µg/L each.
- MW-22 - maximum concentration cis-1,2-DCE at 130 µg/L; no other compounds detected above criteria.

Groundwater grab locations where criteria exceeded VOC groundwater standards included: PDI-03, PDI-04, PDI-08, PDI-09, PDI-10, PDI-11, PDI-12. Grab sample VOC exceedances were predominantly located north of the new asphalt driveway, except for PDI-12, located just south of the western end of the new asphalt driveway. Other locations had detections for other select VOCs but were not in exceedance of the groundwater criteria. A summary of VOC exceedance detections in direct-push boring grab sample locations includes:

- PDI-03 – maximum concentration cis-1,2-DCE at 300 µg/L; no other compounds detected above criteria.

- PDI-04 – maximum concentration cis-1,2-DCE at 1,400 µg/L; two other compounds detected at 430 µg/L and 250 µg/L respectively, and four other compounds detected at 73 µg/L or less.
- PDI-08 – maximum concentration cis-1,2-DCE at 18 µg/L; no other compounds detected above criteria.
- PDI-09 – maximum concentration cis-1,2-DCE at 87 µg/L; four other compounds detected at 11 µg/L or less.
- PDI-10 – maximum concentration cis-1,2-DCE at 140 µg/L; three other compounds detected at 23 µg/L or less.
- PDI-11 – maximum concentration cis-1,2-DCE at 300 µg/L; three compounds detected between 52 µg/L and 73 µg/L, and two compounds detected below 10 µg/L.
- PDI-12 – maximum concentration cis-1,2-DCE at 1,400 µg/L; one other compound detected at 160 µg/L, and four other compounds detected at 45 µg/L or less.

Groundwater grab samples were collected from the pilot borings for two new wells (PDI-11 at MW-05R and PDI-3 at MW-22). In each case, compounds detected were similar, but concentrations were greater in the groundwater grab sample as compared to the low-flow sample, which would be expected given the differences in the sample collection techniques.

The individual constituents detected in the PDI Phase II VOCs and metals groundwater data are consistent with the results of the RI. The range of VOC concentrations detected in the PDI Phase II groundwater samples focused within the footprint of the former eastern machining building were generally greater than observed in the RI areas outside the footprint of the former eastern machining building. The RI concluded VOC levels in groundwater suggest the likely source was in the former eastern machining building. PDI Phase II VOC groundwater data support this conclusion.

Four wells were sampled for MNA parameters. The analytical results and relevant MNA field parameter results from all the groundwater samples are included below:

- Sulfate in all four were all greater than 20 milligrams per liter (mg/L). Sulfate lower than 20 mg/L is desirable, otherwise sulfate may compete with the reductive pathway for anerobic degradation of chlorinated solvents.
- Methane ranged from 21 mg/L to 280 mg/L.
- Nitrate-Nitrogen ranged from non-detect to 0.83 mg/L. High concentrations may compete with the reductive pathway.
- Chloride ranged from 28.6 mg/L to 2,900 mg/L.
- Alkalinity ranged from 186 mg/L to 637 mg/L.
- pH ranged from 6.8 to 8.34, within the optimal range for reductive pathway.
- ORP ranged from -146.1 milliVolts (mV) to 121.7 mV, all but 2 were below +50 mV where reductive pathway is possible.
- Dissolved oxygen ranged from 0.34 mg/L to 4.93 mg/L with 6 of the 8 low-flow sampled wells under 0.5 mg/L which is desired for reductive pathway.

Data Validation

A Data Usability Summary Report (DUSR) (Attachment 2). was prepared for the PDI Phase II soil boring and groundwater samples. The DUSR was prepared following the guidelines provided in NYSDEC Division of Environmental Remediation *DER-10 Technical Guidance for Site Investigation and Remediation, Appendix 2B-Guidance for Data Deliverables and the Development of Data Usability and Summary Reports*, May 2010. The DUSR is provided as Attachment 2. All sample

analyses were found to be compliant with the method criteria, except where noted in the DUSR. Those results qualified 'J' or UJ are considered conditionally usable. Those results qualified "U" should be considered non-detect. All other sample results are usable as reported. URS does not recommend the recollection of any samples.

Community Air Monitoring Plan (CAMP) Results

Community air monitoring was performed during drilling activities to verify that contaminants from the site activity did not impact nearby residents or visitors during site characterization in accordance with the NYSDOH's Generic CAMP (NYSDOH, 2000). Monitoring was performed using perimeter air monitoring (PAM) stations equipped to monitor for VOCs and airborne particulates (PM-10).

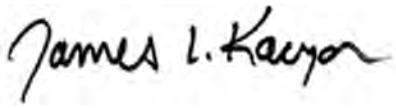
On April 27-29, 2022, air monitoring was performed during soil boring and well installation activities. A total of two temporary monitoring stations collected data on the upwind and downwind perimeter and nearest receptor during intrusive activities. VOCs and dust monitoring results did not exceed the action levels identified in the PDI Phase II Work Plan.

CONCLUSIONS

The intent of the PDI Phase II was to delineate the extent of impacts at the Site beneath the former eastern machine building, determine pilot test injection areas and incorporate the PDI Phase II data in the RAWP. PDI Phase II data show that chlorinated VOC impacts in soil under the former eastern machining building are below Protection of Groundwater and Industrial Use SCOs and in groundwater are predominantly isolated to the area north of the new asphalt driveway. The PDI Phase II VOC and metals data are consistent with the results of the RI (i.e., the VOCs and metals detected in the PDI Phase II were similar in variety and concentration to VOCs and metals detected in the RI). MNA and field parameters collected from four select groundwater monitoring wells indicate a reductive pathway is possible in keeping with the remedial actions selected in the NYSDEC's Decision Document.

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

Very truly yours,



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Tables
Figures
Attachment 1 – Field Forms
Attachment 2 - DUSR

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Tables

TABLE 1

GROUNDWATER SAMPLING FIELD PARAMETER DATA
Former Bernzomatic Facility, Medina, NY
BCP Site No. C837018

Monitoring Well ID	Date	Temperature (deg C)	Specific Conductance (mS/cm)	Dissolved Oyxgen (mg/L)	pH (standard units)	Oxidation Reduction Potential (mV)	Turbidity (NTU)
MW-05R	5/9/2022	10.4	0.758	0.60	7.53	42.1	4.57
MW-07	5/9/2022	10.4	0.663	0.47	7.24	-37.7	9.45
MW-14	5/9/2022	11.0	1.176	0.34	6.81	-32.1	7.80
MW-16	5/10/2022	11.9	3.600	0.56	7.00	-108.6	4.76
MW-17	5/10/2022	10.0	1.618	0.47	7.45	-139.9	10.21
MW-19R	5/10/2022	13.2	1.398	4.36	7.89	121.7	20.0
MW-21	5/10/2022	12.8	8.786	0.47	7.40	-5.5	6.28
MW-22	5/9/2022	10.8	1.638	0.50	7.03	-4.0	154.25
PDI-01	4/27/2022	8.8	1.480	1.55	8.11	-101.2	2249
PDI-02	4/27/2022	7.4	1.48	2.92	7.51	-67.6	2362
PDI-03	4/27/2022	8.8	1.459	1.15	7.11	-78.6	3189
PDI-04	4/28/2022	11.1	1.705	0.51	7.25	-146.1	3563
PDI-05	4/28/2022	1.1	1.223	1.29	8.34	-143.7	4458
PDI-06	4/27/2022	8.3	1.596	1.02	7.49	-127.3	697
PDI-07	4/27/2022	7.7	1.990	2.40	7.50	-34.7	1402
PDI-08	4/27/2022	9.0	1.758	4.33	7.39	-62.4	4927
PDI-09	4/28/2022	11.0	0.857	1.69	7.46	-61.5	4219
PDI-10	4/28/2022	11.1	1.287	1.12	7.37	-56.4	1232
PDI-11	4/28/2022	11.3	0.831	1.91	7.82	-3.3	5469
PDI-12	4/28/2022	13.1	1.344	4.93	7.77	103.0	6309

Notes:
PDI 01-12 are screen point grab samples - parameters (especially dissolved oxygen and turbidity) may not reflect aquifer conditions.
deg C - degrees Celcius
mS/cm - milliSiemens per centimeter
mg/L - milligrams per Liter
mV - milliVolts
NTU - nephelometric turbidity unit
NA - not applicable

TABLE 2

GROUNDWATER ELEVATION DATA - MAY 2, 2022
Former Bernzomatic Facility, Medina, NY
BCP Site No. C837018

Location ID	Northing	Easting	Ground Elevation (feet)	Casing Elevation (feet)	Meas.point (Riser) Elev. (feet)	Geol. Zone	Date	Depth to Water (feet)	Water Elev. (feet)
MW-01	1172819.43	1203736.30	546.63	546.63	546.31	OB	5/02/2022	2.73	543.58
MW-02	1172880.23	1203725.44	546.66	546.66	546.36	OB	5/02/2022	NM	NA
MW-03	1172808.01	1203693.17	546.71	546.71	546.42	OB	5/02/2022	3.15	543.27
MW-04	1172870.67	1203681.71	546.68	546.68	546.42	OB	5/02/2022	3.85	542.57
MW-05R	1173164.72	1203858.08	546.62	546.62	546.28	OB	5/02/2022	3.85	542.43
MW-06	1173182.13	1203969.20	546.22	546.22	545.97	OB	5/02/2022	NM	NA
MW-07	1173149.14	1203972.60	546.25	546.25	545.92	OB	5/02/2022	3.58	542.34
MW-08	1173163.30	1203971.60	546.49	546.49	546.22	BR	5/02/2022	5.09	541.13
MW-09	1173205.98	1203945.35	546.42	546.42	545.91	OB	5/02/2022	3.66	542.25
MW-10	1173166.60	1203998.41	546.82	546.82	546.43	OB	5/02/2022	4.06	542.37
MW-11	1173112.01	1203968.18	546.56	546.56	545.98	OB	5/02/2022	3.49	542.49
MW-12	1172840.05	1203809.31	545.97	545.97	545.55	OB	5/02/2022	1.48	544.07
MW-13	1172780.88	1203742.61	546.60	546.60	546.18	OB	5/02/2022	2.41	543.77
MW-14	1172803.63	1203992.26	545.90	545.90	545.57	OB	5/02/2022	0.93	544.64
MW-15	1173154.06	1203279.07	541.51	541.51	541.26	OB	5/02/2022	1.09	540.17
MW-16	1173206.91	1203566.09	541.69	541.69	541.41	OB	5/02/2022	2.81	538.60
MW-17	1173284.50	1203863.17	545.69	545.69	545.42	OB	5/02/2022	3.89	541.53
MW-18	1173242.17	1204003.08	546.09	546.09	545.73	OB	5/02/2022	3.80	541.93
MW-19R	1173034.11	1203965.90	546.16	546.16	545.83	OB	5/02/2022	3.13	542.70
MW-20	1173068.44	1203599.86	542.69	542.69	542.38	OB	5/02/2022	2.20	540.18
MW-21	1173124.67	1203714.67	542.83	542.83	542.60	OB	5/02/2022	1.69	540.91
MW-22	1173034.33	1203839.52	546.21	546.21	545.94	OB	5/02/2022	3.37	542.57

Geologic Zone:

OB Shallow Unconfined Zone in Overburden
BR Upper Bedrock Zone

Notes:

NM - Not measured - MW-02 inaccessible due to stack of loaded pallets; MW-06 not located, presumed destroyed in PDI Phase I
NA - Not available

TABLE 3
VALIDATED SOIL SAMPLE RESULTS
FORMER BERNZOMATIC FACILITY, MEDINA, NY

Location ID					PDI-01	PDI-02	PDI-03	PDI-04	PDI-05
Sample ID					PDI-1_0405	PDI-2_0203	PDI-3_0203	PDI-4_0304	PDI-5_0405
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					4.0-5.0	2.0-3.0	2.0-3.0	3.0-4.0	4.0-5.0
Date Sampled					04/27/22	04/27/22	04/27/22	04/28/22	04/28/22
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
1,1,1-Trichloroethane	UG/KG	680	100000	5.00E+05	0.31 U	0.29 U	0.35 U	0.30 U	0.28 U
1,1,2,2-Tetrachloroethane	UG/KG	600	-	-	0.69 U	0.65 U	0.78 U	0.68 U	0.63 U
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/KG	6000	-	-	0.97 U	0.91 U	1.1 U	0.95 U	0.88 U
1,1,2-Trichloroethane	UG/KG	-	-	-	0.55 U	0.52 U	0.63 U	0.54 U	0.50 U
1,1-Dichloroethane	UG/KG	270	26000	2.40E+05	0.52 U	0.49 U	0.59 U	1.2 J	0.47 U
1,1-Dichloroethene	UG/KG	330	100000	5.00E+05	0.52 U	0.49 U	0.59 U	0.51 U	0.47 U
1,2,4-Trichlorobenzene	UG/KG	3400	-	-	0.26 U	0.24 U	0.29 U	0.25 U	0.23 U
1,2-Dibromo-3-chloropropane	UG/KG	-	-	-	2.1 U	2.0 U	2.4 U	2.1 U	1.9 U
1,2-Dibromoethane (Ethylene dibromide)	UG/KG	-	-	-	0.55 U	0.51 U	0.62 U	0.53 U	0.50 U
1,2-Dichlorobenzene	UG/KG	1100	100000	5.00E+05	0.33 U	0.31 U	0.38 U	0.33 U	0.30 U
1,2-Dichloroethane	UG/KG	20	3100	30000	0.21 U	0.20 U	0.24 U	0.21 U	0.19 U
1,2-Dichloroethene (cis)	UG/KG	250	100000	5.00E+05	0.54 U	0.68 J	1.2 J	12	26
1,2-Dichloroethene (trans)	UG/KG	190	100000	5.00E+05	0.44 U	0.41 U	0.50 U	0.68 J	1.3 J
1,2-Dichloropropane	UG/KG	7.00E+05	-	-	2.1 U	2.0 U	2.4 U	2.1 U	1.9 U
1,3-Dichlorobenzene	UG/KG	2400	49000	2.80E+05	0.22 U	0.21 U	0.25 U	0.21 U	0.20 U
1,3-Dichloropropene (cis)	UG/KG	-	-	-	0.61 U	0.58 U	0.70 U	0.60 U	0.56 U
1,3-Dichloropropene (trans)	UG/KG	-	-	-	1.9 U	1.8 U	2.1 U	1.8 U	1.7 U
1,4-Dichlorobenzene	UG/KG	1800	13000	1.30E+05	0.60 U	0.56 U	0.68 U	0.58 U	0.54 U
2-Hexanone	UG/KG	-	-	-	2.1 U	2.0 U	2.4 U	2.1 U	1.9 U

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Restricted Residential, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

U - Not detected above the reported quantitation limit.

UJ - Not detected. The reported quantitation limit is an estimated value.

J - The reported concentration is an estimated value.

Detection Limits shown are MDL

Advanced Selection: AMK-TEMP
C:\Users\Ann.Marie.Kropovitch\Desktop\Small Chem Local\EDMS.mde
Printed: 3/21/2023 10:42:30 AM
[SITE KEY] = 22 AND [LOGDATE] > #01/1/2022# AND [MATRIX] = 'SO'

TABLE 3
VALIDATED SOIL SAMPLE RESULTS
FORMER BERNZOMATIC FACILITY, MEDINA, NY

Location ID					PDI-01	PDI-02	PDI-03	PDI-04	PDI-05
Sample ID					PDI-1_0405	PDI-2_0203	PDI-3_0203	PDI-4_0304	PDI-5_0405
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					4.0-5.0	2.0-3.0	2.0-3.0	3.0-4.0	4.0-5.0
Date Sampled					04/27/22	04/27/22	04/27/22	04/28/22	04/28/22
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
4-Methyl-2-pentanone	UG/KG	1000	-	-	1.4 U	1.3 U	1.6 U	1.4 U	1.3 U
Acetone	UG/KG	50	100000	5.00E+05	4.4 J	3.4 U	31	3.5 U	10 J
Benzene	UG/KG	60	4800	44000	0.21 U	0.20 U	0.24 U	0.20 U	0.19 U
Bromodichloromethane	UG/KG	-	-	-	0.57 U	0.54 U	0.65 U	0.56 U	0.52 U
Bromoform	UG/KG	-	-	-	2.1 U	2.0 U	2.4 U	2.1 U	1.9 U
Bromomethane	UG/KG	-	-	-	0.38 U	0.36 U	0.43 U	0.37 U	0.35 U
Carbon disulfide	UG/KG	2700	-	-	2.1 U	2.0 U	2.4 U	2.1 U	1.9 U
Carbon tetrachloride	UG/KG	760	2400	22000	0.41 U	0.39 U	0.47 U	0.40 U	0.37 U
Chlorobenzene	UG/KG	1100	100000	5.00E+05	0.56 U	0.53 U	0.64 U	0.55 U	0.51 U
Chloroethane	UG/KG	1900	-	-	0.96 U	0.91 U	1.1 U	0.94 U	0.87 U
Chloroform	UG/KG	370	49000	3.50E+05	0.26 U	0.25 U	0.30 U	0.26 U	0.24 U
Chloromethane	UG/KG	-	-	-	0.26 U	0.24 U	0.29 U	0.25 U	0.23 U
Cyclohexane	UG/KG	-	-	-	0.60 U	0.56 U	0.68 U	0.58 U	0.54 U
Dibromochloromethane	UG/KG	10000	-	-	0.54 U	0.51 U	0.62 U	0.53 U	0.49 U
Dichlorodifluoromethane	UG/KG	-	-	-	0.35 U	0.33 U	0.40 U	0.34 U	0.32 U
Ethylbenzene	UG/KG	1000	41000	3.90E+05	0.29 U	0.28 U	0.33 U	0.29 U	0.27 U
Isopropylbenzene (Cumene)	UG/KG	2300	-	-	0.64 U	0.60 U	0.73 U	0.63 U	0.58 U
Methyl acetate	UG/KG	-	-	-	2.6 U	2.4 U	2.9 U	2.5 U	6.3 J
Methyl ethyl ketone (2-Butanone)	UG/KG	120	100000	5.00E+05	1.6 U	1.5 U	1.8 U	1.5 U	1.4 U

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Restricted Residential, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

U - Not detected above the reported quantitation limit.

UJ - Not detected. The reported quantitation limit is an estimated value.

J - The reported concentration is an estimated value.

Detection Limits shown are MDL

Advanced Selection: AMK-TEMP
C:\Users\Ann.Marie.Kropovitch\Desktop\Small Chem Local\EDMS.mde
Printed: 3/21/2023 10:42:30 AM
[SITE KEY] = 22 AND [LOGDATE] > #01/1/2022# AND [MATRIX] = 'SO'

TABLE 3
VALIDATED SOIL SAMPLE RESULTS
FORMER BERNZOMATIC FACILITY, MEDINA, NY

Location ID					PDI-01	PDI-02	PDI-03	PDI-04	PDI-05
Sample ID					PDI-1_0405	PDI-2_0203	PDI-3_0203	PDI-4_0304	PDI-5_0405
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					4.0-5.0	2.0-3.0	2.0-3.0	3.0-4.0	4.0-5.0
Date Sampled					04/27/22	04/27/22	04/27/22	04/28/22	04/28/22
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Volatile Organic Compounds									
Methyl tert-butyl ether	UG/KG	930	100000	5.00E+05	0.42 U	0.39 U	0.47 U	0.41 U	0.38 U
Methylcyclohexane	UG/KG	-	-	-	0.65 U	0.61 U	0.73 U	0.63 U	0.67 J
Methylene chloride	UG/KG	50	100000	5.00E+05	2.0 U	1.8 U	2.2 U	1.9 U	1.8 U
Styrene	UG/KG	3.00E+05	-	-	0.21 U	0.20 U	0.24 U	0.21 U	0.19 U
Tetrachloroethene	UG/KG	1300	19000	1.50E+05	0.57 U	0.54 U	0.65 U	0.56 U	3.9
Toluene	UG/KG	700	100000	5.00E+05	0.32 U	0.30 U	0.37 U	0.31 U	0.29 U
Trichloroethene	UG/KG	470	21000	2.00E+05	0.94 U	0.88 U	1.1 U	0.92 U	0.85 U
Trichlorofluoromethane	UG/KG	-	-	-	0.40 U	0.38 U	0.46 U	0.39 U	0.37 U
Vinyl chloride	UG/KG	20	900	13000	0.52 U	0.49 U	0.59 U	0.51 U	0.47 U
Xylene (total)	UG/KG	260	100000	5.00E+05	0.71 U	0.67 U	0.81 U	0.70 U	0.65 U
Metals									
Aluminum	MG/KG	10000	-	-	8,810	9,690	4,250	8,780	6,530
Antimony	MG/KG	12	-	-	2.7 J	1.5 J	0.77 J	1.4 J	1.2 J
Arsenic	MG/KG	13	16	16	4.4	2.7	3.9	2.7	2.7
Barium	MG/KG	350	400	400	66.2	50	24.9	46.9	32.2
Beryllium	MG/KG	7.2	72	590	0.46	0.33	0.2 J	0.39	0.27
Cadmium	MG/KG	2.5	4.3	9.3	0.17 J	0.16 J	0.059 J	0.23 J	0.16 J
Calcium	MG/KG	10000	-	-	33,100	14,900	2,160	16,600	24,300
Chromium	MG/KG	30	180	1500	9.5	9.8	6.2	9.4	7.8

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Restricted Residential, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

U - Not detected above the reported quantitation limit.

UJ - Not detected. The reported quantitation limit is an estimated value.

J - The reported concentration is an estimated value.

Detection Limits shown are MDL

Advanced Selection: AMK-TEMP
C:\Users\Ann.Marie.Kropovitch\Desktop\Small Chem Local\EDMS.mde
Printed: 3/21/2023 10:42:30 AM
[SITE KEY] = 22 AND [LOGDATE] > #01/1/2022# AND [MATRIX] = 'SO'

TABLE 3
VALIDATED SOIL SAMPLE RESULTS
FORMER BERNZOMATIC FACILITY, MEDINA, NY

Location ID					PDI-01	PDI-02	PDI-03	PDI-04	PDI-05
Sample ID					PDI-1_0405	PDI-2_0203	PDI-3_0203	PDI-4_0304	PDI-5_0405
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					4.0-5.0	2.0-3.0	2.0-3.0	3.0-4.0	4.0-5.0
Date Sampled					04/27/22	04/27/22	04/27/22	04/28/22	04/28/22
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					
Metals									
Cobalt	MG/KG	20	-	-	5.7	4.3	2.5	4.8	4
Copper	MG/KG	50	270	270	18.2	11.7	11.6	11.6	25.7
Iron	MG/KG	2000	-	-	16,900	11,500	7,200	11,300	9,200
Lead	MG/KG	63	400	1000	37.7	14	3.4	7.3	6.4
Magnesium	MG/KG	-	-	-	6,160	5,100	1,240	7,030	13,300
Manganese	MG/KG	1600	2000	10000	553	361	207	654	387
Mercury	MG/KG	0.18	0.81	2.8	0.021 J	0.031	0.011 J	0.019 J	0.019 J
Nickel	MG/KG	30	310	310	10.3	8.3	5.8 J	10.3	8.3
Potassium	MG/KG	-	-	-	1,300	1,130	827	1,700	1,290
Selenium	MG/KG	3.9	180	1500	2 J	1.2 J	0.51 J	0.95 J	0.73 J
Silver	MG/KG	2	180	1500	0.24 U	0.24 U	0.24 U	0.24 U	0.22 U
Sodium	MG/KG	-	-	-	167 J	246	72.5 J	122 J	136 J
Thallium	MG/KG	5	-	-	0.36 U	0.36 U	0.37 U	0.36 U	0.34 U
Vanadium	MG/KG	39	-	-	17.7	18.2	8.8	15.3	12.9
Zinc	MG/KG	109	10000	10000	50.2	55.4	12.7	43.2	36.3 J

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Restricted Residential, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

U - Not detected above the reported quantitation limit.

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Detection Limits shown are MDL

Advanced Selection: AMK-TEMP
C:\Users\Ann.Marie.Kropovitch\Desktop\Small Chem Local\EDMS.mde
Printed: 3/21/2023 10:42:30 AM
[SITE KEY] = 22 AND [LOGDATE] > #01/1/2022# AND [MATRIX] = 'SO'

TABLE 3
VALIDATED SOIL SAMPLE RESULTS
FORMER BERNZOMATIC FACILITY, MEDINA, NY

Location ID					PDI-06	PDI-07	PDI-08	PDI-09	PDI-10
Sample ID					PDI-6_0304	PDI-7_0203	PDI-8_0405	PDI-9_0203	DUP_042822
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					3.0-4.0	2.0-3.0	4.0-5.0	2.0-3.0	3.0-4.0
Date Sampled					04/27/22	04/27/22	04/27/22	04/28/22	04/28/22
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					Field Duplicate (1-1)
Volatile Organic Compounds									
1,1,1-Trichloroethane	UG/KG	680	100000	5.00E+05	0.31 U	0.32 U	0.80 J	0.27 U	0.31 U
1,1,2,2-Tetrachloroethane	UG/KG	600	-	-	0.70 U	0.72 U	0.63 U	0.61 U	0.70 U
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/KG	6000	-	-	0.98 U	1.0 U	0.88 U	0.85 U	0.99 U
1,1,2-Trichloroethane	UG/KG	-	-	-	0.56 U	0.58 U	0.50 U	0.49 U	0.56 U
1,1-Dichloroethane	UG/KG	270	26000	2.40E+05	0.52 U	0.54 U	0.47 U	0.46 U	0.53 U
1,1-Dichloroethene	UG/KG	330	100000	5.00E+05	0.52 U	0.55 U	0.47 U	0.46 U	0.53 U
1,2,4-Trichlorobenzene	UG/KG	3400	-	-	0.26 U	0.27 U	0.24 U	0.23 U	0.26 U
1,2-Dibromo-3-chloropropane	UG/KG	-	-	-	2.1 U	2.2 U	1.9 U	1.9 U	2.2 U
1,2-Dibromoethane (Ethylene dibromide)	UG/KG	-	-	-	0.55 U	0.57 U	0.50 U	0.48 U	0.56 U
1,2-Dichlorobenzene	UG/KG	1100	100000	5.00E+05	0.34 U	0.35 U	0.30 U	0.29 U	0.34 U
1,2-Dichloroethane	UG/KG	20	3100	30000	0.22 U	0.22 U	0.19 U	0.19 U	0.22 U
1,2-Dichloroethene (cis)	UG/KG	250	100000	5.00E+05	0.55 U	0.57 U	1.8 J	43	23
1,2-Dichloroethene (trans)	UG/KG	190	100000	5.00E+05	0.44 U	0.46 U	0.40 U	1.4 J	0.85 J
1,2-Dichloropropane	UG/KG	7.00E+05	-	-	2.1 U	2.2 U	1.9 U	1.9 U	2.2 U
1,3-Dichlorobenzene	UG/KG	2400	49000	2.80E+05	0.22 U	0.23 U	0.20 U	0.19 U	0.22 U
1,3-Dichloropropene (cis)	UG/KG	-	-	-	0.62 U	0.64 U	0.56 U	0.54 U	0.62 U
1,3-Dichloropropene (trans)	UG/KG	-	-	-	1.9 U	2.0 U	1.7 U	1.6 U	1.9 U
1,4-Dichlorobenzene	UG/KG	1800	13000	1.30E+05	0.60 U	0.62 U	0.54 U	0.52 U	0.61 U
2-Hexanone	UG/KG	-	-	-	2.1 U	2.2 U	1.9 U	1.9 U	2.2 U

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Restricted Residential, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

U - Not detected above the reported quantitation limit.

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Detection Limits shown are MDL

Advanced Selection: AMK-TEMP
C:\Users\Ann.Marie.Kropovitch\Desktop\Small Chem Local\EDMS.mde
Printed: 3/21/2023 10:42:31 AM
[SITE KEY] = 22 AND [LOGDATE] > #01/1/2022# AND [MATRIX] = 'SO'

TABLE 3
VALIDATED SOIL SAMPLE RESULTS
FORMER BERNZOMATIC FACILITY, MEDINA, NY

Location ID					PDI-06	PDI-07	PDI-08	PDI-09	PDI-10
Sample ID					PDI-6_0304	PDI-7_0203	PDI-8_0405	PDI-9_0203	DUP_042822
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					3.0-4.0	2.0-3.0	4.0-5.0	2.0-3.0	3.0-4.0
Date Sampled					04/27/22	04/27/22	04/27/22	04/28/22	04/28/22
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					Field Duplicate (1-1)
Volatile Organic Compounds									
4-Methyl-2-pentanone	UG/KG	1000	-	-	1.4 U	1.5 U	1.3 U	1.2 U	1.4 U
Acetone	UG/KG	50	100000	5.00E+05	29	3.8 U	3.8 J	13 J	14 J
Benzene	UG/KG	60	4800	44000	0.21 U	0.22 U	0.19 U	0.18 U	0.21 U
Bromodichloromethane	UG/KG	-	-	-	0.57 U	0.60 U	0.52 U	0.50 U	0.58 U
Bromoform	UG/KG	-	-	-	2.1 U	2.2 U	1.9 U	1.9 U	2.2 U
Bromomethane	UG/KG	-	-	-	0.39 U	0.40 U	0.35 U	0.34 U	0.39 U
Carbon disulfide	UG/KG	2700	-	-	2.1 U	2.2 U	1.9 U	1.9 U	2.2 U
Carbon tetrachloride	UG/KG	760	2400	22000	0.42 U	0.43 U	0.37 U	0.36 U	0.42 U
Chlorobenzene	UG/KG	1100	100000	5.00E+05	0.57 U	0.59 U	0.51 U	0.49 U	0.57 U
Chloroethane	UG/KG	1900	-	-	0.97 U	1.0 U	0.87 U	0.84 U	0.98 U
Chloroform	UG/KG	370	49000	3.50E+05	0.26 U	0.28 U	0.24 U	0.23 U	0.27 U
Chloromethane	UG/KG	-	-	-	0.26 U	0.27 U	0.23 U	0.23 U	0.26 U
Cyclohexane	UG/KG	-	-	-	0.60 U	0.62 U	0.54 U	0.52 U	0.61 U
Dibromochloromethane	UG/KG	10000	-	-	0.55 U	0.57 U	0.50 U	0.48 U	0.55 U
Dichlorodifluoromethane	UG/KG	-	-	-	0.35 U	0.37 U	0.32 U	0.31 U	0.36 U
Ethylbenzene	UG/KG	1000	41000	3.90E+05	0.30 U	0.31 U	0.27 U	0.26 U	0.30 U
Isopropylbenzene (Cumene)	UG/KG	2300	-	-	0.65 U	0.67 U	0.58 U	0.56 U	0.65 U
Methyl acetate	UG/KG	-	-	-	2.6 U	2.7 U	2.3 U	2.3 U	2.6 U
Methyl ethyl ketone (2-Butanone)	UG/KG	120	100000	5.00E+05	4.9 J	1.6 U	1.4 U	1.4 U	1.6 U

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Restricted Residential, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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Detection Limits shown are MDL

Advanced Selection: AMK-TEMP
C:\Users\Ann.Marie.Kropovitch\Desktop\Small Chem Local\EDMS.mde
Printed: 3/21/2023 10:42:31 AM
[SITE KEY] = 22 AND [LOGDATE] > #01/1/2022# AND [MATRIX] = 'SO'

TABLE 3
VALIDATED SOIL SAMPLE RESULTS
FORMER BERNZOMATIC FACILITY, MEDINA, NY

Location ID					PDI-06	PDI-07	PDI-08	PDI-09	PDI-10
Sample ID					PDI-6_0304	PDI-7_0203	PDI-8_0405	PDI-9_0203	DUP_042822
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					3.0-4.0	2.0-3.0	4.0-5.0	2.0-3.0	3.0-4.0
Date Sampled					04/27/22	04/27/22	04/27/22	04/28/22	04/28/22
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					Field Duplicate (1-1)
Volatile Organic Compounds									
Methyl tert-butyl ether	UG/KG	930	100000	5.00E+05	0.42 U	0.44 U	0.38 U	0.37 U	0.42 U
Methylcyclohexane	UG/KG	-	-	-	0.65 U	0.68 U	0.59 U	0.57 U	0.66 U
Methylene chloride	UG/KG	50	100000	5.00E+05	2.0 U	2.1 U	1.8 U	1.7 U	2.0 U
Styrene	UG/KG	3.00E+05	-	-	0.21 U	0.22 U	0.19 U	0.19 U	0.22 U
Tetrachloroethene	UG/KG	1300	19000	1.50E+05	0.58 U	0.60 U	0.93 J	1.2 J	1.6 J
Toluene	UG/KG	700	100000	5.00E+05	0.32 U	0.34 U	0.29 U	0.28 U	0.33 U
Trichloroethene	UG/KG	470	21000	2.00E+05	0.94 U	0.98 U	0.85 U	0.82 U	0.95 U
Trichlorofluoromethane	UG/KG	-	-	-	0.41 U	0.42 U	0.37 U	0.35 U	0.41 U
Vinyl chloride	UG/KG	20	900	13000	0.52 U	0.54 U	0.47 U	0.46 U	0.53 U
Xylene (total)	UG/KG	260	100000	5.00E+05	0.72 U	0.75 U	0.65 U	0.63 U	0.73 U
Metals									
Aluminum	MG/KG	10000	-	-	11,900	10,600	8,360	5,740	7,080
Antimony	MG/KG	12	-	-	2.6 J	1.4 J	1.2 J	1.1 J	1.4 J
Arsenic	MG/KG	13	16	16	3.6	2.7	2.7	2 J	2.9
Barium	MG/KG	350	400	400	59.6	34.4	56.4	36	39.8
Beryllium	MG/KG	7.2	72	590	0.49	0.26	0.33	0.26	0.28
Cadmium	MG/KG	2.5	4.3	9.3	0.14 J	0.15 J	0.18 J	0.11 J	0.25
Calcium	MG/KG	10000	-	-	22,400	18,100	5,980	22,100	32,400
Chromium	MG/KG	30	180	1500	13.6	9.1	8.7	7.5	8.5

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Restricted Residential, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

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Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

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Advanced Selection: AMK-TEMP
C:\Users\Ann.Marie.Kropovitch\Desktop\Small Chem Local\EDMS.mde
Printed: 3/21/2023 10:42:31 AM
[SITE KEY] = 22 AND [LOGDATE] > #01/1/2022# AND [MATRIX] = 'SO'

TABLE 3
VALIDATED SOIL SAMPLE RESULTS
FORMER BERNZOMATIC FACILITY, MEDINA, NY

Location ID					PDI-06	PDI-07	PDI-08	PDI-09	PDI-10
Sample ID					PDI-6_0304	PDI-7_0203	PDI-8_0405	PDI-9_0203	DUP_042822
Matrix					Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)					3.0-4.0	2.0-3.0	4.0-5.0	2.0-3.0	3.0-4.0
Date Sampled					04/27/22	04/27/22	04/27/22	04/28/22	04/28/22
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**					Field Duplicate (1-1)
Metals									
Cobalt	MG/KG	20	-	-	6.1	3	5.6	4.2	4.4
Copper	MG/KG	50	270	270	14.2	10	25.8	10.3	12.9
Iron	MG/KG	2000	-	-	16,800	9,340	9,440	9,030	10,100
Lead	MG/KG	63	400	1000	10.8	9.8	12.7	4.2	5.8
Magnesium	MG/KG	-	-	-	6,360	3,510	1,960	4,980	5,530
Manganese	MG/KG	1600	2000	10000	310	236	481	427	366
Mercury	MG/KG	0.18	0.81	2.8	0.02 J	0.039	0.025	0.012 J	0.013 J
Nickel	MG/KG	30	310	310	13.7	6.4	9.8	9.1	9.1
Potassium	MG/KG	-	-	-	2,220	1,060	1,370	1,300	1,150
Selenium	MG/KG	3.9	180	1500	1.4 J	1 J	0.76 J	0.62 J	0.91 J
Silver	MG/KG	2	180	1500	0.24 U	0.25 U	0.24 U	0.22 U	0.23 U
Sodium	MG/KG	-	-	-	193	241	122 J	146 J	135 J
Thallium	MG/KG	5	-	-	0.37 U	0.37 U	0.36 U	0.33 U	0.34 U
Vanadium	MG/KG	39	-	-	23.9	15.7	13.8	13.2	15
Zinc	MG/KG	109	10000	10000	37.9	39.2	37.3	22.1	79.3 J

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Restricted Residential, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

U - Not detected above the reported quantitation limit.

UJ - Not detected. The reported quantitation limit is an estimated value.

J - The reported concentration is an estimated value.

Detection Limits shown are MDL

Advanced Selection: AMK-TEMP
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TABLE 3
VALIDATED SOIL SAMPLE RESULTS
FORMER BERNZOMATIC FACILITY, MEDINA, NY

Location ID					PDI-10	PDI-11	PDI-12
Sample ID					PDI-10_0304	PDI-11_0304	PDI-12_0405
Matrix					Soil	Soil	Soil
Depth Interval (ft)					3.0-4.0	3.0-4.0	4.0-5.0
Date Sampled					04/28/22	04/28/22	04/28/22
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**			
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/KG	680	100000	5.00E+05	0.29 U	0.31 U	0.31 U
1,1,2,2-Tetrachloroethane	UG/KG	600	-	-	0.64 U	0.69 U	0.70 U
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/KG	6000	-	-	0.90 U	0.97 U	0.98 U
1,1,2-Trichloroethane	UG/KG	-	-	-	0.51 U	0.56 U	0.56 U
1,1-Dichloroethane	UG/KG	270	26000	2.40E+05	0.48 U	0.52 U	0.53 U
1,1-Dichloroethene	UG/KG	330	100000	5.00E+05	0.48 U	0.52 U	0.53 U
1,2,4-Trichlorobenzene	UG/KG	3400	-	-	0.24 U	0.26 U	0.26 U
1,2-Dibromo-3-chloropropane	UG/KG	-	-	-	2.0 U	2.1 U	2.2 U
1,2-Dibromoethane (Ethylene dibromide)	UG/KG	-	-	-	0.51 U	0.55 U	0.55 U
1,2-Dichlorobenzene	UG/KG	1100	100000	5.00E+05	0.31 U	0.33 U	0.34 U
1,2-Dichloroethane	UG/KG	20	3100	30000	0.20 U	0.21 U	0.22 U
1,2-Dichloroethene (cis)	UG/KG	250	100000	5.00E+05	20	1.7 J	0.55 U
1,2-Dichloroethene (trans)	UG/KG	190	100000	5.00E+05	0.61 J	0.44 U	0.44 U
1,2-Dichloropropane	UG/KG	7.00E+05	-	-	2.0 U	2.1 U	2.2 U
1,3-Dichlorobenzene	UG/KG	2400	49000	2.80E+05	0.20 U	0.22 U	0.22 U
1,3-Dichloropropene (cis)	UG/KG	-	-	-	0.57 U	0.62 U	0.62 U
1,3-Dichloropropene (trans)	UG/KG	-	-	-	1.7 U	1.9 U	1.9 U
1,4-Dichlorobenzene	UG/KG	1800	13000	1.30E+05	0.55 U	0.60 U	0.60 U
2-Hexanone	UG/KG	-	-	-	2.0 U	2.1 U	2.2 U

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Restricted Residential, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

U - Not detected above the reported quantitation limit.

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J - The reported concentration is an estimated value.

Detection Limits shown are MDL

Advanced Selection: AMK-TEMP
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[SITE KEY] = 22 AND [LOGDATE] > #01/1/2022# AND [MATRIX] = 'SO'

TABLE 3
VALIDATED SOIL SAMPLE RESULTS
FORMER BERNZOMATIC FACILITY, MEDINA, NY

Location ID					PDI-10	PDI-11	PDI-12
Sample ID					PDI-10_0304	PDI-11_0304	PDI-12_0405
Matrix					Soil	Soil	Soil
Depth Interval (ft)					3.0-4.0	3.0-4.0	4.0-5.0
Date Sampled					04/28/22	04/28/22	04/28/22
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**			
Volatile Organic Compounds							
4-Methyl-2-pentanone	UG/KG	1000	-	-	1.3 U	1.4 U	1.4 U
Acetone	UG/KG	50	100000	5.00E+05	12 J	3.6 U	48
Benzene	UG/KG	60	4800	44000	0.19 U	0.21 U	0.21 U
Bromodichloromethane	UG/KG	-	-	-	0.53 U	0.57 U	0.58 U
Bromoform	UG/KG	-	-	-	2.0 U	2.1 U	2.2 U
Bromomethane	UG/KG	-	-	-	0.36 U	0.38 U	0.39 U
Carbon disulfide	UG/KG	2700	-	-	2.0 U	2.1 U	2.2 U
Carbon tetrachloride	UG/KG	760	2400	22000	0.38 U	0.41 U	0.42 U
Chlorobenzene	UG/KG	1100	100000	5.00E+05	0.52 U	0.56 U	0.57 U
Chloroethane	UG/KG	1900	-	-	0.89 U	0.97 U	0.97 U
Chloroform	UG/KG	370	49000	3.50E+05	0.24 U	0.26 U	0.27 U
Chloromethane	UG/KG	-	-	-	0.24 U	0.26 U	0.26 U
Cyclohexane	UG/KG	-	-	-	0.55 U	0.60 U	0.60 U
Dibromochloromethane	UG/KG	10000	-	-	0.51 U	0.55 U	0.55 U
Dichlorodifluoromethane	UG/KG	-	-	-	0.33 U	0.35 U	0.36 U
Ethylbenzene	UG/KG	1000	41000	3.90E+05	0.27 U	0.30 U	0.30 U
Isopropylbenzene (Cumene)	UG/KG	2300	-	-	0.60 U	0.64 U	0.65 U
Methyl acetate	UG/KG	-	-	-	2.4 U	2.6 U	2.6 U
Methyl ethyl ketone (2-Butanone)	UG/KG	120	100000	5.00E+05	1.4 U	1.6 U	3.8 J

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Restricted Residential, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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Detection Limits shown are MDL

Advanced Selection: AMK-TEMP
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TABLE 3
VALIDATED SOIL SAMPLE RESULTS
FORMER BERNZOMATIC FACILITY, MEDINA, NY

Location ID					PDI-10	PDI-11	PDI-12
Sample ID					PDI-10_0304	PDI-11_0304	PDI-12_0405
Matrix					Soil	Soil	Soil
Depth Interval (ft)					3.0-4.0	3.0-4.0	4.0-5.0
Date Sampled					04/28/22	04/28/22	04/28/22
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**			
Volatile Organic Compounds							
Methyl tert-butyl ether	UG/KG	930	100000	5.00E+05	0.39 U	0.42 U	0.42 U
Methylcyclohexane	UG/KG	-	-	-	0.60 U	0.65 U	0.65 U
Methylene chloride	UG/KG	50	100000	5.00E+05	1.8 U	2.0 U	2.0 U
Styrene	UG/KG	3.00E+05	-	-	0.20 U	0.21 U	0.22 U
Tetrachloroethene	UG/KG	1300	19000	1.50E+05	2.3 J	0.57 U	0.58 U
Toluene	UG/KG	700	100000	5.00E+05	0.30 U	0.32 U	0.33 U
Trichloroethene	UG/KG	470	21000	2.00E+05	0.87 U	0.94 U	0.95 U
Trichlorofluoromethane	UG/KG	-	-	-	0.37 U	0.40 U	0.41 U
Vinyl chloride	UG/KG	20	900	13000	0.48 U	0.52 U	0.53 U
Xylene (total)	UG/KG	260	100000	5.00E+05	0.66 U	0.72 U	0.72 U
Metals							
Aluminum	MG/KG	10000	-	-	5,700	6,790	14,300
Antimony	MG/KG	12	-	-	1.3 J	1.8 J	2.4 J
Arsenic	MG/KG	13	16	16	2.5	2.5	3.3
Barium	MG/KG	350	400	400	34.5	42.2	57
Beryllium	MG/KG	7.2	72	590	0.24	0.32	0.67
Cadmium	MG/KG	2.5	4.3	9.3	0.12 J	0.13 J	0.076 J
Calcium	MG/KG	10000	-	-	24,600	31,000	2,690
Chromium	MG/KG	30	180	1500	7	9.2	14.8

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Restricted Residential, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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Detection Limits shown are MDL

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TABLE 3
VALIDATED SOIL SAMPLE RESULTS
FORMER BERNZOMATIC FACILITY, MEDINA, NY

Location ID					PDI-10	PDI-11	PDI-12
Sample ID					PDI-10_0304	PDI-11_0304	PDI-12_0405
Matrix					Soil	Soil	Soil
Depth Interval (ft)					3.0-4.0	3.0-4.0	4.0-5.0
Date Sampled					04/28/22	04/28/22	04/28/22
Parameter	**Units**	**Criteria (1)**	**Criteria (2)**	**Criteria (3)**			
Metals							
Cobalt	MG/KG	20	-	-	3.8	4.6	7.4
Copper	MG/KG	50	270	270	10.6	13.7	15.7
Iron	MG/KG	2000	-	-	9,400	11,300	18,700
Lead	MG/KG	63	400	1000	4.9	5.6	9
Magnesium	MG/KG	-	-	-	7,220	7,940	2,440
Manganese	MG/KG	1600	2000	10000	372	317	373
Mercury	MG/KG	0.18	0.81	2.8	0.023	0.012 J	0.025
Nickel	MG/KG	30	310	310	7.6	9.5	10.5
Potassium	MG/KG	-	-	-	1,030	1,470	1,520
Selenium	MG/KG	3.9	180	1500	1 J	1.1 J	1.7 J
Silver	MG/KG	2	180	1500	0.22 U	0.22 U	0.23 U
Sodium	MG/KG	-	-	-	130 J	153 J	95.7 J
Thallium	MG/KG	5	-	-	0.33 U	0.34 U	0.34 U
Vanadium	MG/KG	39	-	-	13.3	15.9	30.3
Zinc	MG/KG	109	10000	10000	23 J	25.2	27.9

Criteria (1)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

Criteria (2)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Restricted Residential, including CP-51 Table 1, Effective 12/2/10.

Criteria (3)- 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria 1

Concentration Exceeds Criteria (2)

Border Concentration Exceeds Criteria (3)

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Detection Limits shown are MDL

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TABLE 4
VALIDATED GROUNDWATER SAMPLE RESULTS
FORMER BERNZOMATIC FACILITY, MEDINA, NY

Location ID			MW-05R	MW-07	MW-14	MW-16	MW-17
Sample ID			MW-05R	MW-07	MW-14	MW-16	MW-17
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/09/22	05/09/22	05/09/22	05/10/22	05/10/22
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5	1.2	1.0 U	1.0 U	2.0 U	2.0 U
1,1,2,2-Tetrachloroethane	UG/L	5	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/L	5	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
1,1,2-Trichloroethane	UG/L	1	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
1,1-Dichloroethane	UG/L	5	22	0.83 J	1.0 U	2.0 U	2.0 U
1,1-Dichloroethene	UG/L	5	0.29 J	1.0 U	1.0 U	2.0 U	2.0 U
1,2,4-Trichlorobenzene	UG/L	5	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
1,2-Dibromo-3-chloropropane	UG/L	0.04	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
1,2-Dibromoethane (Ethylene dibromide)	UG/L	0.006	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene	UG/L	3	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
1,2-Dichloroethane	UG/L	0.6	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
1,2-Dichloroethene (cis)	UG/L	5	210 D	2.8	1.0 U	2.0 U	2.0 U
1,2-Dichloroethene (trans)	UG/L	5	1.7	1.0 U	1.0 U	2.0 U	2.0 U
1,2-Dichloropropane	UG/L	1	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
1,3-Dichlorobenzene	UG/L	3	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
1,3-Dichloropropene (cis)	UG/L	0.4	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
1,3-Dichloropropene (trans)	UG/L	0.4	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
1,4-Dichlorobenzene	UG/L	3	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
2-Hexanone	UG/L	50	5.0 U	5.0 U	5.0 U	10 U	10 U
4-Methyl-2-pentanone	UG/L	-	5.0 U	5.0 U	5.0 U	10 U	10 U
Acetone	UG/L	50	10 U	10 U	10 U	20 U	20 U
Benzene	UG/L	1	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Not detected above the reported quantitation limit.

UJ - Not detected. The reported quantitation limit is an estimated value.

J - The reported concentration is an estimated value.

D - Result reported from a secondary dilution analysis.

Detection Limits shown are PQL

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TABLE 4
VALIDATED GROUNDWATER SAMPLE RESULTS
FORMER BERNZOMATIC FACILITY, MEDINA, NY

Location ID			MW-05R	MW-07	MW-14	MW-16	MW-17
Sample ID			MW-05R	MW-07	MW-14	MW-16	MW-17
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/09/22	05/09/22	05/09/22	05/10/22	05/10/22
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
Bromodichloromethane	UG/L	50	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Bromoform	UG/L	50	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Bromomethane	UG/L	5	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Carbon disulfide	UG/L	60	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Carbon tetrachloride	UG/L	5	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Chlorobenzene	UG/L	5	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Chloroethane	UG/L	5	0.51 J	1.0 U	1.0 U	2.0 U	2.0 U
Chloroform	UG/L	7	1.5	1.0 U	1.0 U	2.0 U	2.0 U
Chloromethane	UG/L	5	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Cyclohexane	UG/L	-	0.24 J	1.0 U	1.0 U	2.0 U	2.0 U
Dibromochloromethane	UG/L	50	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Dichlorodifluoromethane	UG/L	5	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Ethylbenzene	UG/L	5	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Isopropylbenzene (Cumene)	UG/L	5	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Methyl acetate	UG/L	-	2.5 U	2.5 U	2.5 U	5.0 U	5.0 U
Methyl ethyl ketone (2-Butanone)	UG/L	50	10 U	10 U	10 U	20 U	20 U
Methyl tert-butyl ether	UG/L	10	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Methylcyclohexane	UG/L	-	0.21 J	1.0 U	1.0 U	2.0 U	2.0 U
Methylene chloride	UG/L	5	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Styrene	UG/L	5	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Tetrachloroethene	UG/L	5	5.7	4.2	1.0 U	2.0 U	2.0 U
Toluene	UG/L	5	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

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J - The reported concentration is an estimated value.

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Detection Limits shown are PQL

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[LOGDATE] BETWEEN #04/01/22# AND #05/30/22# AND [MATRIX] = 'WG

TABLE 4
VALIDATED GROUNDWATER SAMPLE RESULTS
FORMER BERNZOMATIC FACILITY, MEDINA, NY

Location ID			MW-05R	MW-07	MW-14	MW-16	MW-17
Sample ID			MW-05R	MW-07	MW-14	MW-16	MW-17
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/09/22	05/09/22	05/09/22	05/10/22	05/10/22
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
Trichloroethene	UG/L	5	31	6.1	1.0 U	2.0 U	2.0 U
Trichlorofluoromethane	UG/L	5	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Vinyl chloride	UG/L	2	2.4	1.0 U	1.0 U	2.0 U	2.0 U
Xylene (total)	UG/L	5	2.0 U	2.0 U	2.0 U	4.0 U	4.0 U
Metals							
Aluminum	UG/L	-	100 J	110 J	200 U	200 U	85 J
Antimony	UG/L	3	20 U	20 U	20 U	20 U	20 U
Arsenic	UG/L	25	15 U	15 U	15 U	22	9.3 J
Barium	UG/L	1000	160	190	92	1,300	200
Beryllium	UG/L	3	2 U	2 U	2 U	2 U	2 U
Cadmium	UG/L	5	2 U	2 U	2 U	2 U	2 U
Calcium	UG/L	-	105,000	118,000	153,000	230,000	210,000
Chromium	UG/L	50	4 U	4 U	4 U	4 U	4 U
Cobalt	UG/L	-	4 U	4.3	1.3 J	140	1.2 J
Copper	UG/L	200	10 U	10 U	10 U	20 U	10 U
Iron	UG/L	300	160	820	1,700	30,100	20,800
Lead	UG/L	25	10 U	10 U	3.3 J	5.4 J	4.2 J
Magnesium	UG/L	35000	13,800	14,400	19,800	40,600	38,200
Manganese	UG/L	300	1,000	2,100	670	19,600	2,500
Mercury	UG/L	0.7	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	UG/L	100	1.9 J	1.5 J	2.8 J	15	10 U
Potassium	UG/L	-	5,400	3,800	7,500	7,800	9,300

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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TABLE 4
VALIDATED GROUNDWATER SAMPLE RESULTS
FORMER BERNZOMATIC FACILITY, MEDINA, NY

Location ID			MW-05R	MW-07	MW-14	MW-16	MW-17
Sample ID			MW-05R	MW-07	MW-14	MW-16	MW-17
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/09/22	05/09/22	05/09/22	05/10/22	05/10/22
Parameter	**Units**	**Criteria***					
Metals							
Selenium	UG/L	10	25 U	25 U	25 U	25 U	25 U
Silver	UG/L	50	6 U	6 U	6 U	6 U	6 U
Sodium	UG/L	20000	30,900	18,900	83,600	406,000	122,000
Thallium	UG/L	0.5	20 U	20 U	20 U	20 U	20 U
Vanadium	UG/L	-	5 U	5 U	5 U	1.5 J	1.7 J
Zinc	UG/L	2000	10 U	10 U	130	40	3.1 J
Dissolved Metals							
Iron	MG/L	-	0.033 J	0.95	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	229	347	NA	NA	NA
Chloride	MG/L	250	65.2	28.6	NA	NA	NA
Nitrate-Nitrogen	MG/L	10	0.83	0.053	NA	NA	NA
Sulfate (as SO4)	MG/L	2.50E+05	86.5	24.4	NA	NA	NA
Dissolved Gases							
Methane	UG/L	-	73	21	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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TABLE 4
VALIDATED GROUNDWATER SAMPLE RESULTS
FORMER BERNZOMATIC FACILITY, MEDINA, NY

Location ID			MW-19R	MW-21	MW-21	MW-22	PDI-01
Sample ID			MW-19R	FD-051022	MW-21	MW-22	PDI-1_GW
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/10/22	05/10/22	05/10/22	05/09/22	04/27/22
Parameter	**Units**	**Criteria***		Field Duplicate (1-1)			
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
1,1,2,2-Tetrachloroethane	UG/L	5	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/L	5	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
1,1,2-Trichloroethane	UG/L	1	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
1,1-Dichloroethane	UG/L	5	2.0 U	13	12	2.3	1.0 U
1,1-Dichloroethene	UG/L	5	2.0 U	1.3 J	1.3 J	2.0 U	1.0 U
1,2,4-Trichlorobenzene	UG/L	5	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
1,2-Dibromo-3-chloropropane	UG/L	0.04	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	UG/L	0.006	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
1,2-Dichlorobenzene	UG/L	3	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
1,2-Dichloroethane	UG/L	0.6	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
1,2-Dichloroethene (cis)	UG/L	5	2.0 U	65	60	130	1.0 U
1,2-Dichloroethene (trans)	UG/L	5	2.0 U	2.0 U	2.0 U	1.8 J	1.0 U
1,2-Dichloropropane	UG/L	1	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
1,3-Dichlorobenzene	UG/L	3	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
1,3-Dichloropropene (cis)	UG/L	0.4	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
1,3-Dichloropropene (trans)	UG/L	0.4	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
1,4-Dichlorobenzene	UG/L	3	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
2-Hexanone	UG/L	50	10 U	10 U	10 U	10 U	5.0 U
4-Methyl-2-pentanone	UG/L	-	10 U	10 U	10 U	10 U	5.0 U
Acetone	UG/L	50	8.9 J	20 U	20 U	20 U	10 U
Benzene	UG/L	1	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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TABLE 4
VALIDATED GROUNDWATER SAMPLE RESULTS
FORMER BERNZOMATIC FACILITY, MEDINA, NY

Location ID			MW-19R	MW-21	MW-21	MW-22	PDI-01
Sample ID			MW-19R	FD-051022	MW-21	MW-22	PDI-1_GW
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/10/22	05/10/22	05/10/22	05/09/22	04/27/22
Parameter	**Units**	**Criteria***		Field Duplicate (1-1)			
Volatile Organic Compounds							
Bromodichloromethane	UG/L	50	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Bromoform	UG/L	50	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Bromomethane	UG/L	5	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Carbon disulfide	UG/L	60	2.0 U	2.0 U	2.0 U	2.0 U	0.34 J
Carbon tetrachloride	UG/L	5	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Chlorobenzene	UG/L	5	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Chloroethane	UG/L	5	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Chloroform	UG/L	7	0.68 J	2.0 U	2.0 U	1.2 J	1.0 U
Chloromethane	UG/L	5	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Cyclohexane	UG/L	-	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Dibromochloromethane	UG/L	50	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Dichlorodifluoromethane	UG/L	5	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Ethylbenzene	UG/L	5	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Isopropylbenzene (Cumene)	UG/L	5	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Methyl acetate	UG/L	-	5.0 U	5.0 U	5.0 U	5.0 U	2.5 U
Methyl ethyl ketone (2-Butanone)	UG/L	50	20 U	20 U	20 U	20 U	10 U
Methyl tert-butyl ether	UG/L	10	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Methylcyclohexane	UG/L	-	2.0 U	2.0 U	2.0 U	2.0 U	0.24 J
Methylene chloride	UG/L	5	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Styrene	UG/L	5	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Tetrachloroethene	UG/L	5	2.0 U	2.0 U	2.0 U	0.75 J	1.0 U
Toluene	UG/L	5	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U

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TABLE 4
VALIDATED GROUNDWATER SAMPLE RESULTS
FORMER BERNZOMATIC FACILITY, MEDINA, NY

Location ID			MW-19R	MW-21	MW-21	MW-22	PDI-01
Sample ID			MW-19R	FD-051022	MW-21	MW-22	PDI-1_GW
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/10/22	05/10/22	05/10/22	05/09/22	04/27/22
Parameter	**Units**	**Criteria***		Field Duplicate (1-1)			
Volatile Organic Compounds							
Trichloroethene	UG/L	5	2.0 U	13	12	1.5 J	1.0 U
Trichlorofluoromethane	UG/L	5	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Vinyl chloride	UG/L	2	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Xylene (total)	UG/L	5	4.0 U	4.0 U	4.0 U	4.0 U	2.0 U
Metals							
Aluminum	UG/L	-	1,400	72 J	120 J	8,900	NA
Antimony	UG/L	3	20 U	20 U	20 U	20 U	NA
Arsenic	UG/L	25	15 U	15 U	15 U	6.2 J	NA
Barium	UG/L	1000	110	1,300	1,300	570	NA
Beryllium	UG/L	3	2 U	2 U	2 U	0.34 J	NA
Cadmium	UG/L	5	2 U	0.57 J	0.61 J	2 U	NA
Calcium	UG/L	-	111,000	395,000	402,000	139,000	NA
Chromium	UG/L	50	1.5 J	1.3 J	1.3 J	9.6	NA
Cobalt	UG/L	-	1.9 J	3.4 J	3.5 J	7.2	NA
Copper	UG/L	200	10 U	10 U	10 U	36 U	NA
Iron	UG/L	300	1,500	210	220	11,400 J	NA
Lead	UG/L	25	10 U	10 U	10 U	9 J	NA
Magnesium	UG/L	35000	19,400	66,700	67,800	34,500	NA
Manganese	UG/L	300	5,500	4,700	4,800	2,600	NA
Mercury	UG/L	0.7	0.2 U	0.2 U	0.2 U	0.2 U	NA
Nickel	UG/L	100	3.2 J	3.1 J	3.3 J	15	NA
Potassium	UG/L	-	7,200	5,600	5,700	39,500	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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TABLE 4
VALIDATED GROUNDWATER SAMPLE RESULTS
FORMER BERNZOMATIC FACILITY, MEDINA, NY

Location ID			MW-19R	MW-21	MW-21	MW-22	PDI-01
Sample ID			MW-19R	FD-051022	MW-21	MW-22	PDI-1_GW
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			05/10/22	05/10/22	05/10/22	05/09/22	04/27/22
Parameter	**Units**	**Criteria***		Field Duplicate (1-1)			
Metals							
Selenium	UG/L	10	25 U	25 U	25 U	25 U	NA
Silver	UG/L	50	6 U	6 U	6 U	6 U	NA
Sodium	UG/L	20000	157,000	1,190,000	1,200,000	170,000	NA
Thallium	UG/L	0.5	20 U	20 U	20 U	20 U	NA
Vanadium	UG/L	-	2.5 J	5 U	5 U	15	NA
Zinc	UG/L	2000	6.1 J	2.9 J	4 J	34	NA
Dissolved Metals							
Iron	MG/L	-	NA	0.16	0.16	2.4	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	186	188	637 J	NA
Chloride	MG/L	250	NA	2,830	2,900	133	NA
Nitrate-Nitrogen	MG/L	10	NA	0.050 U	0.050 U	0.050 U	NA
Sulfate (as SO4)	MG/L	2.50E+05	NA	76.4	77.3	94.8	NA
Dissolved Gases							
Methane	UG/L	-	NA	240	280	230	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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TABLE 4
VALIDATED GROUNDWATER SAMPLE RESULTS
FORMER BERNZOMATIC FACILITY, MEDINA, NY

Location ID			PDI-02	PDI-03	PDI-04	PDI-05	PDI-06
Sample ID			PDI-2_GW	PDI-3_GW	PDI-4_GW	PDI-5_GW	PDI-6_GW
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/27/22	04/27/22	04/28/22	04/28/22	04/27/22
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
1,1,2,2-Tetrachloroethane	UG/L	5	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/L	5	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
1,1,2-Trichloroethane	UG/L	1	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
1,1-Dichloroethane	UG/L	5	1.0 U	4.7 J	410 J	1.0 UJ	1.0 U
1,1-Dichloroethene	UG/L	5	1.0 U	8.0 U	13 J	1.0 UJ	1.0 U
1,2,4-Trichlorobenzene	UG/L	5	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
1,2-Dibromo-3-chloropropane	UG/L	0.04	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	UG/L	0.006	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
1,2-Dichlorobenzene	UG/L	3	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
1,2-Dichloroethane	UG/L	0.6	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
1,2-Dichloroethene (cis)	UG/L	5	1.0 U	300	1,400 J	1.0 UJ	1.0 U
1,2-Dichloroethene (trans)	UG/L	5	1.0 U	8.0 U	37 J	1.0 UJ	1.0 U
1,2-Dichloropropane	UG/L	1	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
1,3-Dichlorobenzene	UG/L	3	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
1,3-Dichloropropene (cis)	UG/L	0.4	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
1,3-Dichloropropene (trans)	UG/L	0.4	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
1,4-Dichlorobenzene	UG/L	3	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
2-Hexanone	UG/L	50	5.0 U	40 U	100 UJ	5.0 UJ	5.0 U
4-Methyl-2-pentanone	UG/L	-	5.0 U	40 U	100 UJ	5.0 UJ	5.0 U
Acetone	UG/L	50	6.4 J	80 U	73 J	15 J	3.4 J
Benzene	UG/L	1	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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TABLE 4
VALIDATED GROUNDWATER SAMPLE RESULTS
FORMER BERNZOMATIC FACILITY, MEDINA, NY

Location ID			PDI-02	PDI-03	PDI-04	PDI-05	PDI-06
Sample ID			PDI-2_GW	PDI-3_GW	PDI-4_GW	PDI-5_GW	PDI-6_GW
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/27/22	04/27/22	04/28/22	04/28/22	04/27/22
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
Bromodichloromethane	UG/L	50	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Bromoform	UG/L	50	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Bromomethane	UG/L	5	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Carbon disulfide	UG/L	60	1.0 U	8.0 U	20 UJ	0.48 J	1.0 U
Carbon tetrachloride	UG/L	5	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Chlorobenzene	UG/L	5	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Chloroethane	UG/L	5	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Chloroform	UG/L	7	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Chloromethane	UG/L	5	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Cyclohexane	UG/L	-	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Dibromochloromethane	UG/L	50	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Dichlorodifluoromethane	UG/L	5	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Ethylbenzene	UG/L	5	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Isopropylbenzene (Cumene)	UG/L	5	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Methyl acetate	UG/L	-	2.5 U	20 U	50 UJ	2.5 UJ	2.5 U
Methyl ethyl ketone (2-Butanone)	UG/L	50	10 U	80 U	200 UJ	2.4 J	10 U
Methyl tert-butyl ether	UG/L	10	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Methylcyclohexane	UG/L	-	1.0 U	8.0 U	20 UJ	0.23 J	1.0 U
Methylene chloride	UG/L	5	0.53 J	8.0 U	20 UJ	1.0 UJ	1.0 U
Styrene	UG/L	5	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Tetrachloroethene	UG/L	5	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Toluene	UG/L	5	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U

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TABLE 4
VALIDATED GROUNDWATER SAMPLE RESULTS
FORMER BERNZOMATIC FACILITY, MEDINA, NY

Location ID			PDI-02	PDI-03	PDI-04	PDI-05	PDI-06
Sample ID			PDI-2_GW	PDI-3_GW	PDI-4_GW	PDI-5_GW	PDI-6_GW
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/27/22	04/27/22	04/28/22	04/28/22	04/27/22
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
Trichloroethene	UG/L	5	1.0 U	8.0 U	11 J	1.0 UJ	1.0 U
Trichlorofluoromethane	UG/L	5	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Vinyl chloride	UG/L	2	1.0 U	8.0 U	250 J	1.0 UJ	1.0 U
Xylene (total)	UG/L	5	2.0 U	16 U	40 UJ	2.0 UJ	2.0 U
Metals							
Aluminum	UG/L	-	NA	NA	NA	NA	NA
Antimony	UG/L	3	NA	NA	NA	NA	NA
Arsenic	UG/L	25	NA	NA	NA	NA	NA
Barium	UG/L	1000	NA	NA	NA	NA	NA
Beryllium	UG/L	3	NA	NA	NA	NA	NA
Cadmium	UG/L	5	NA	NA	NA	NA	NA
Calcium	UG/L	-	NA	NA	NA	NA	NA
Chromium	UG/L	50	NA	NA	NA	NA	NA
Cobalt	UG/L	-	NA	NA	NA	NA	NA
Copper	UG/L	200	NA	NA	NA	NA	NA
Iron	UG/L	300	NA	NA	NA	NA	NA
Lead	UG/L	25	NA	NA	NA	NA	NA
Magnesium	UG/L	35000	NA	NA	NA	NA	NA
Manganese	UG/L	300	NA	NA	NA	NA	NA
Mercury	UG/L	0.7	NA	NA	NA	NA	NA
Nickel	UG/L	100	NA	NA	NA	NA	NA
Potassium	UG/L	-	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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TABLE 4
VALIDATED GROUNDWATER SAMPLE RESULTS
FORMER BERNZOMATIC FACILITY, MEDINA, NY

Location ID			PDI-02	PDI-03	PDI-04	PDI-05	PDI-06
Sample ID			PDI-2_GW	PDI-3_GW	PDI-4_GW	PDI-5_GW	PDI-6_GW
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/27/22	04/27/22	04/28/22	04/28/22	04/27/22
Parameter	**Units**	**Criteria***					
Metals							
Selenium	UG/L	10	NA	NA	NA	NA	NA
Silver	UG/L	50	NA	NA	NA	NA	NA
Sodium	UG/L	20000	NA	NA	NA	NA	NA
Thallium	UG/L	0.5	NA	NA	NA	NA	NA
Vanadium	UG/L	-	NA	NA	NA	NA	NA
Zinc	UG/L	2000	NA	NA	NA	NA	NA
Dissolved Metals							
Iron	MG/L	-	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Nitrate-Nitrogen	MG/L	10	NA	NA	NA	NA	NA
Sulfate (as SO4)	MG/L	2.50E+05	NA	NA	NA	NA	NA
Dissolved Gases							
Methane	UG/L	-	NA	NA	NA	NA	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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TABLE 4
VALIDATED GROUNDWATER SAMPLE RESULTS
FORMER BERNZOMATIC FACILITY, MEDINA, NY

Location ID			PDI-07	PDI-08	PDI-09	PDI-10	PDI-11
Sample ID			PDI-7_GW	PDI-8_GW	PDI-9_GW	PDI-10_GW	PDI-11_GW
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/27/22	04/27/22	04/28/22	04/28/22	04/28/22
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
1,1,1-Trichloroethane	UG/L	5	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
1,1,2,2-Tetrachloroethane	UG/L	5	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/L	5	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
1,1,2-Trichloroethane	UG/L	1	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
1,1-Dichloroethane	UG/L	5	1.0 U	0.83 J	8.3 J	15 J	53 J
1,1-Dichloroethene	UG/L	5	1.0 U	1.0 U	1.2 J	5.0 UJ	5.0 UJ
1,2,4-Trichlorobenzene	UG/L	5	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
1,2-Dibromo-3-chloropropane	UG/L	0.04	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
1,2-Dibromoethane (Ethylene dibromide)	UG/L	0.006	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
1,2-Dichlorobenzene	UG/L	3	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
1,2-Dichloroethane	UG/L	0.6	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
1,2-Dichloroethene (cis)	UG/L	5	1.0 U	18	87 J	140 J	300 J
1,2-Dichloroethene (trans)	UG/L	5	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
1,2-Dichloropropane	UG/L	1	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
1,3-Dichlorobenzene	UG/L	3	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
1,3-Dichloropropene (cis)	UG/L	0.4	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
1,3-Dichloropropene (trans)	UG/L	0.4	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
1,4-Dichlorobenzene	UG/L	3	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
2-Hexanone	UG/L	50	5.0 U	5.0 U	10 UJ	25 UJ	25 UJ
4-Methyl-2-pentanone	UG/L	-	5.0 U	5.0 U	10 UJ	25 UJ	25 UJ
Acetone	UG/L	50	4.2 J	3.4 J	11 J	50 UJ	73 J
Benzene	UG/L	1	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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TABLE 4
VALIDATED GROUNDWATER SAMPLE RESULTS
FORMER BERNZOMATIC FACILITY, MEDINA, NY

Location ID			PDI-07	PDI-08	PDI-09	PDI-10	PDI-11
Sample ID			PDI-7_GW	PDI-8_GW	PDI-9_GW	PDI-10_GW	PDI-11_GW
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/27/22	04/27/22	04/28/22	04/28/22	04/28/22
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
Bromodichloromethane	UG/L	50	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
Bromoform	UG/L	50	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
Bromomethane	UG/L	5	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
Carbon disulfide	UG/L	60	0.68 J	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
Carbon tetrachloride	UG/L	5	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
Chlorobenzene	UG/L	5	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
Chloroethane	UG/L	5	1.0 U	1.0 U	2.0 UJ	5.0 UJ	2.1 J
Chloroform	UG/L	7	0.67 J	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
Chloromethane	UG/L	5	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
Cyclohexane	UG/L	-	1.0 U	0.23 J	2.0 UJ	5.0 UJ	5.0 UJ
Dibromochloromethane	UG/L	50	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
Dichlorodifluoromethane	UG/L	5	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
Ethylbenzene	UG/L	5	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
Isopropylbenzene (Cumene)	UG/L	5	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
Methyl acetate	UG/L	-	2.5 U	2.5 U	5.0 UJ	13 UJ	13 UJ
Methyl ethyl ketone (2-Butanone)	UG/L	50	10 U	10 U	20 UJ	50 UJ	50 UJ
Methyl tert-butyl ether	UG/L	10	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
Methylcyclohexane	UG/L	-	1.0 U	0.34 J	2.0 UJ	5.0 UJ	5.0 UJ
Methylene chloride	UG/L	5	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
Styrene	UG/L	5	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
Tetrachloroethene	UG/L	5	1.0 U	1.5	9.0 J	5.0 UJ	6.3 J
Toluene	UG/L	5	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ

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TABLE 4
VALIDATED GROUNDWATER SAMPLE RESULTS
FORMER BERNZOMATIC FACILITY, MEDINA, NY

Location ID			PDI-07	PDI-08	PDI-09	PDI-10	PDI-11
Sample ID			PDI-7_GW	PDI-8_GW	PDI-9_GW	PDI-10_GW	PDI-11_GW
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/27/22	04/27/22	04/28/22	04/28/22	04/28/22
Parameter	**Units**	**Criteria***					
Volatile Organic Compounds							
Trichloroethene	UG/L	5	1.0 U	2.2	11 J	13 J	52 J
Trichlorofluoromethane	UG/L	5	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
Vinyl chloride	UG/L	2	1.0 U	1.0 U	7.1 J	23 J	7.6 J
Xylene (total)	UG/L	5	2.0 U	2.0 U	4.0 UJ	10 UJ	10 UJ
Metals							
Aluminum	UG/L	-	NA	NA	NA	NA	NA
Antimony	UG/L	3	NA	NA	NA	NA	NA
Arsenic	UG/L	25	NA	NA	NA	NA	NA
Barium	UG/L	1000	NA	NA	NA	NA	NA
Beryllium	UG/L	3	NA	NA	NA	NA	NA
Cadmium	UG/L	5	NA	NA	NA	NA	NA
Calcium	UG/L	-	NA	NA	NA	NA	NA
Chromium	UG/L	50	NA	NA	NA	NA	NA
Cobalt	UG/L	-	NA	NA	NA	NA	NA
Copper	UG/L	200	NA	NA	NA	NA	NA
Iron	UG/L	300	NA	NA	NA	NA	NA
Lead	UG/L	25	NA	NA	NA	NA	NA
Magnesium	UG/L	35000	NA	NA	NA	NA	NA
Manganese	UG/L	300	NA	NA	NA	NA	NA
Mercury	UG/L	0.7	NA	NA	NA	NA	NA
Nickel	UG/L	100	NA	NA	NA	NA	NA
Potassium	UG/L	-	NA	NA	NA	NA	NA

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TABLE 4
VALIDATED GROUNDWATER SAMPLE RESULTS
FORMER BERNZOMATIC FACILITY, MEDINA, NY

Location ID			PDI-07	PDI-08	PDI-09	PDI-10	PDI-11
Sample ID			PDI-7_GW	PDI-8_GW	PDI-9_GW	PDI-10_GW	PDI-11_GW
Matrix			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)			-	-	-	-	-
Date Sampled			04/27/22	04/27/22	04/28/22	04/28/22	04/28/22
Parameter	**Units**	**Criteria***					
Metals							
Selenium	UG/L	10	NA	NA	NA	NA	NA
Silver	UG/L	50	NA	NA	NA	NA	NA
Sodium	UG/L	20000	NA	NA	NA	NA	NA
Thallium	UG/L	0.5	NA	NA	NA	NA	NA
Vanadium	UG/L	-	NA	NA	NA	NA	NA
Zinc	UG/L	2000	NA	NA	NA	NA	NA
Dissolved Metals							
Iron	MG/L	-	NA	NA	NA	NA	NA
Miscellaneous Parameters							
Alkalinity, Total (as CaCO3)	MG/L	-	NA	NA	NA	NA	NA
Chloride	MG/L	250	NA	NA	NA	NA	NA
Nitrate-Nitrogen	MG/L	10	NA	NA	NA	NA	NA
Sulfate (as SO4)	MG/L	2.50E+05	NA	NA	NA	NA	NA
Dissolved Gases							
Methane	UG/L	-	NA	NA	NA	NA	NA

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TABLE 4
VALIDATED GROUNDWATER SAMPLE RESULTS
FORMER BERNZOMATIC FACILITY, MEDINA, NY

Location ID			PDI-12
Sample ID			PDI-12_GW
Matrix			Groundwater
Depth Interval (ft)			-
Date Sampled			04/28/22
Parameter	**Units**	**Criteria***	
Volatile Organic Compounds			
1,1,1-Trichloroethane	UG/L	5	20 UJ
1,1,2,2-Tetrachloroethane	UG/L	5	20 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/L	5	20 UJ
1,1,2-Trichloroethane	UG/L	1	20 UJ
1,1-Dichloroethane	UG/L	5	20 J
1,1-Dichloroethene	UG/L	5	20 UJ
1,2,4-Trichlorobenzene	UG/L	5	20 UJ
1,2-Dibromo-3-chloropropane	UG/L	0.04	20 UJ
1,2-Dibromoethane (Ethylene dibromide)	UG/L	0.006	20 UJ
1,2-Dichlorobenzene	UG/L	3	20 UJ
1,2-Dichloroethane	UG/L	0.6	20 UJ
1,2-Dichloroethene (cis)	UG/L	5	1,400 J
1,2-Dichloroethene (trans)	UG/L	5	20 UJ
1,2-Dichloropropane	UG/L	1	20 UJ
1,3-Dichlorobenzene	UG/L	3	20 UJ
1,3-Dichloropropene (cis)	UG/L	0.4	20 UJ
1,3-Dichloropropene (trans)	UG/L	0.4	20 UJ
1,4-Dichlorobenzene	UG/L	3	20 UJ
2-Hexanone	UG/L	50	100 UJ
4-Methyl-2-pentanone	UG/L	-	100 UJ
Acetone	UG/L	50	160 J
Benzene	UG/L	1	20 UJ

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VALIDATED GROUNDWATER SAMPLE RESULTS
FORMER BERNZOMATIC FACILITY, MEDINA, NY

Location ID			PDI-12
Sample ID			PDI-12_GW
Matrix			Groundwater
Depth Interval (ft)			-
Date Sampled			04/28/22
Parameter	**Units**	**Criteria***	
Volatile Organic Compounds			
Bromodichloromethane	UG/L	50	20 UJ
Bromoform	UG/L	50	20 UJ
Bromomethane	UG/L	5	20 UJ
Carbon disulfide	UG/L	60	20 UJ
Carbon tetrachloride	UG/L	5	20 UJ
Chlorobenzene	UG/L	5	20 UJ
Chloroethane	UG/L	5	11 J
Chloroform	UG/L	7	20 UJ
Chloromethane	UG/L	5	20 UJ
Cyclohexane	UG/L	-	20 UJ
Dibromochloromethane	UG/L	50	20 UJ
Dichlorodifluoromethane	UG/L	5	20 UJ
Ethylbenzene	UG/L	5	20 UJ
Isopropylbenzene (Cumene)	UG/L	5	20 UJ
Methyl acetate	UG/L	-	50 UJ
Methyl ethyl ketone (2-Butanone)	UG/L	50	200 UJ
Methyl tert-butyl ether	UG/L	10	20 UJ
Methylcyclohexane	UG/L	-	20 UJ
Methylene chloride	UG/L	5	20 UJ
Styrene	UG/L	5	20 UJ
Tetrachloroethene	UG/L	5	20 UJ
Toluene	UG/L	5	20 UJ

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TABLE 4
VALIDATED GROUNDWATER SAMPLE RESULTS
FORMER BERNZOMATIC FACILITY, MEDINA, NY

Location ID			PDI-12
Sample ID			PDI-12_GW
Matrix			Groundwater
Depth Interval (ft)			-
Date Sampled			04/28/22
Parameter	**Units**	**Criteria***	
Volatile Organic Compounds			
Trichloroethene	UG/L	5	45 J
Trichlorofluoromethane	UG/L	5	20 UJ
Vinyl chloride	UG/L	2	34 J
Xylene (total)	UG/L	5	40 UJ
Metals			
Aluminum	UG/L	-	NA
Antimony	UG/L	3	NA
Arsenic	UG/L	25	NA
Barium	UG/L	1000	NA
Beryllium	UG/L	3	NA
Cadmium	UG/L	5	NA
Calcium	UG/L	-	NA
Chromium	UG/L	50	NA
Cobalt	UG/L	-	NA
Copper	UG/L	200	NA
Iron	UG/L	300	NA
Lead	UG/L	25	NA
Magnesium	UG/L	35000	NA
Manganese	UG/L	300	NA
Mercury	UG/L	0.7	NA
Nickel	UG/L	100	NA
Potassium	UG/L	-	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

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[LOGDATE] BETWEEN #04/01/22# AND #05/30/22# AND [MATRIX] = 'WG

TABLE 4
VALIDATED GROUNDWATER SAMPLE RESULTS
FORMER BERNZOMATIC FACILITY, MEDINA, NY

Location ID			PDI-12
Sample ID			PDI-12_GW
Matrix			Groundwater
Depth Interval (ft)			-
Date Sampled			04/28/22
Parameter	**Units**	**Criteria***	
Metals			
Selenium	UG/L	10	NA
Silver	UG/L	50	NA
Sodium	UG/L	20000	NA
Thallium	UG/L	0.5	NA
Vanadium	UG/L	-	NA
Zinc	UG/L	2000	NA
Dissolved Metals			
Iron	MG/L	-	NA
Miscellaneous Parameters			
Alkalinity, Total (as CaCO3)	MG/L	-	NA
Chloride	MG/L	250	NA
Nitrate-Nitrogen	MG/L	10	NA
Sulfate (as SO4)	MG/L	2.50E+05	NA
Dissolved Gases			
Methane	UG/L	-	NA

*Criteria- NYSDEC TOGS (1.1.1), Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations. June 1998 (includes 4/2000 and 6/2004 Addenda) Class GA.

Flags assigned during chemistry validation are shown.

Concentration Exceeds Criteria

U - Not detected above the reported quantitation limit.

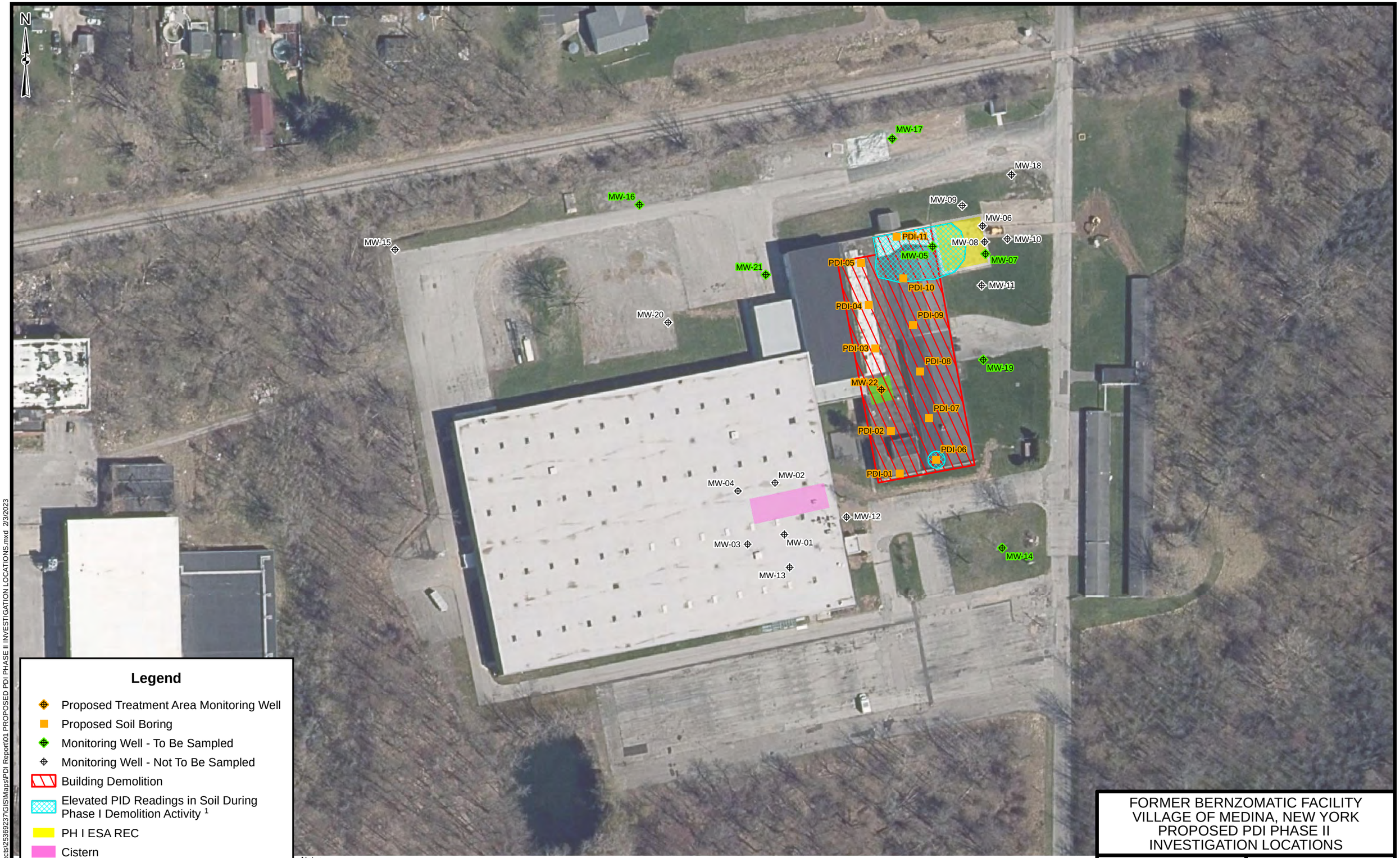
UJ - Not detected. The reported quantitation limit is an estimated value.

J - The reported concentration is an estimated value.

D - Result reported from a secondary dilution analysis.

Detection Limits shown are PQL

Figures


N
MW-17
MW-18
MW-16
MW-09
MW-06
MW-15
PDI-11
MW-08
MW-10
MW-05
MW-07
MW-21
PDI-05
PDI-10
MW-11
PDI-04
MW-20
PDI-09
PDI-03
PDI-08
MW-19
MW-22
PDI-07
PDI-02
PDI-06
PDI-01
MW-04
MW-02
MW-12
MW-03
MW-01
MW-14
MW-13
Legend
Proposed Treatment Area Monitoring Well
Proposed Soil Boring
Monitoring Well - To Be Sampled
Monitoring Well - Not To Be Sampled
Building Demolition
Elevated PID Readings in Soil During Phase I Demolition Activity 1
PH I ESA REC
Cistern
Assumed Source Area
Notes:
1. Based on site sketch provided by LaBella Associates.
Source: NYS ITS GIS Program Office, 2020
100 0 100 Feet
FORMER BERNZOMATIC FACILITY
VILLAGE OF MEDINA, NEW YORK
PROPOSED PDI PHASE II
INVESTIGATION LOCATIONS
URS
FIGURE 1
L:\DCS\Projects\25369237\GIS\Maps\PDI Report\01 PROPOSED PDI PHASE II INVESTIGATION LOCATIONS.mxd 2/3/2023

N

MW-17, 541.53
MW-18, 541.93
MW-16, 538.60
MW-09, 542.25
MW-06
MW-15, 540.17
PDI-11
MW-05R, 542.43
MW-05
MW-10, 542.37
MW-08, 541.13
MW-07, 542.34
MW-21, 540.91
PDI-05
PDI-10
MW-11, 542.49
PDI-04
MW-20, 540.18
PDI-09
PDI-03
MW-22, 542.57
PDI-08
MW-19R, 542.70
MW-19
PDI-12
PDI-07
PDI-02
PDI-06
PDI-01
MW-02, NM
MW-04, 542.57
MW-12, 544.07
MW-01, 543.58
MW-03, 543.27
MW-14, 544.64
MW-13, 543.77

539.0
539.5
540.0
540.5
541.0
541.5
542.0
542.5
543.0
543.5
544.0
544.5

Legend

- Soil Boring
- Monitoring Well
- Destroyed Monitoring Well
- Groundwater Flow Direction
- Groundwater Contour (FT AMSL) (May 2, 2022) [1]
- Building Demolition
- Asphalt Driveway with Turnaround
- Elevated PID Readings in Soil During Phase I Demolition Activity [2]
- PH I ESA REC
- Cistern
- Assumed Source Area

FT AMSL = Feet Above Mean Sea Level
NM = Not Measured

Notes:
1. Monitoring well, MW-08, is a bedrock well; therefore, it was not used for generating groundwater contours.
2. Based on site sketch provided by LaBella Associates.

Source: NYS ITS GIS Program Office, 2020

100 0 100 Feet

FORMER BERNZOMATIC FACILITY
VILLAGE OF MEDINA, NEW YORK
GROUNDWATER ELEVATION CONTOURS (MAY 2, 2022)

URS

FIGURE 2

L:\DCS\Projects\25369237\GIS\Maps\PDI Report\02 GW CONTOURS (050222).mxd 2/3/2023

PDI-05 (4' - 5')	CRIT 1	CRIT 2	CRIT 3	04/22
Metals:				
Calcium	10000	--	--	24300
Iron	2000	--	--	9200

PDI-11 (3' - 4')	CRIT 1	CRIT 2	CRIT 3	04/22
Metals:				
Calcium	10000	--	--	31000
Iron	2000	--	--	11300

PDI-04 (3' - 4')	CRIT 1	CRIT 2	CRIT 3	04/22
Metals:				
Calcium	10000	--	--	16600
Iron	2000	--	--	11300

PDI-10 (3' - 4')	CRIT 1	CRIT 2	CRIT 3	04/22
Metals:				
Calcium	10000	--	--	32400
Iron	2000	--	--	10100

PDI-03 (2' - 3')	CRIT 1	CRIT 2	CRIT 3	04/22
Metals:				
Iron	2000	--	--	7200

PDI-09 (2' - 3')	CRIT 1	CRIT 2	CRIT 3	04/22
Metals:				
Calcium	10000	--	--	22100
Iron	2000	--	--	9030

PDI-12 (4' - 5')	CRIT 1	CRIT 2	CRIT 3	04/22
Metals:				
Aluminum	10000	--	--	14300
Iron	2000	--	--	18700

PDI-08 (4' - 5')	CRIT 1	CRIT 2	CRIT 3	04/22
Metals:				
Iron	2000	--	--	9440

PDI-07 (2' - 3')	CRIT 1	CRIT 2	CRIT 3	04/22
Metals:				
Aluminum	10000	--	--	10600
Calcium	10000	--	--	18100
Iron	2000	--	--	9340

PDI-02 (2' - 3')	CRIT 1	CRIT 2	CRIT 3	04/22
Metals:				
Calcium	10000	--	--	14900
Iron	2000	--	--	11500

PDI-06 (3' - 4')	CRIT 1	CRIT 2	CRIT 3	04/22
Metals:				
Aluminum	10000	--	--	11900
Calcium	10000	--	--	22400
Iron	2000	--	--	16800

PDI-01 (4' - 5')	CRIT 1	CRIT 2	CRIT 3	04/22
Metals:				
Calcium	10000	--	--	33100
Iron	2000	--	--	16900

Legend

- At Least One Compound Exceeds Criteria
- No Compounds Exceed Criteria
- No Compounds Detected
- PH I ESA REC
- Cistern

Location ID & Depth | Criteria | Sample Date

MW-13 (24" - 36")	CRIT 1	CRIT 2	CRIT 3	02/15
VOCs:				
Acetone	2.2	0.05	1000	0.063

Parameter | Criteria Value (mg/kg) | Concentration (mg/kg)

100 0 100 Feet

CRIT 1: 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Unrestricted Use, including CP-51 Table 1, Effective 12/2/10.

CRIT 2: 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Restricted Use. Protection of Groundwater, including CP-51 Table 1, Effective 12/2/10.

CRIT 3: 6 NYCRR Part 375.6, Remedial Program Soil Cleanup Objectives, Effective 12/14/06. Protection of Public Health, Commercial, including CP-51 Table 1, Effective 12/2/10.

Source: NYS ITS GIS Program Office, 2020

FORMER BERNZOMATIC FACILITY
VILLAGE OF MEDINA, NEW YORK
SOIL ANALYTICAL RESULTS
(APRIL 2022)

URS

FIGURE 3

L:\DCS\Projects\25369237\GIS\Maps\PDI Report\03 SO ANALYTICAL (APR 2022).mxd 3/22/2023

N

MW-05R	CRIT	05/22
VOCs:		
1,1-Dichloroethane	5	22
1,2-Dichloroethene (cis)	5	210
Tetrachloroethene	5	5.7
Trichloroethene	5	31
Vinyl chloride	2	2.4
Metals:		
Manganese	300	1000
Sodium	20000	30900

PDI-11	CRIT	04/22
VOCs:		
1,1-Dichloroethane	5	53
1,2-Dichloroethene (cis)	5	300
Acetone	50	73
Tetrachloroethene	5	6.3
Trichloroethene	5	52
Vinyl chloride	2	7.6

MW-17	CRIT	05/22
Metals:		
Iron	300	20800
Magnesium	35000	38200
Manganese	300	2500
Sodium	20000	122000

PDI-10	CRIT	04/22
VOCs:		
1,1-Dichloroethane	5	15
1,2-Dichloroethene (cis)	5	140
Trichloroethene	5	13
Vinyl chloride	2	23

MW-16	CRIT	05/22
Metals:		
Barium	1000	1300
Iron	300	30100
Magnesium	35000	40600
Manganese	300	19600
Sodium	20000	406000

MW-07	CRIT	05/22
VOCs:		
Trichloroethene	5	6.1
Metals:		
Iron	300	820
Manganese	300	2100

PDI-05

MW-21	CRIT	05/22
VOCs:		
1,1-Dichloroethane	5	13
1,2-Dichloroethene (cis)	5	65
Trichloroethene	5	13
Metals:		
Barium	1000	1300
Magnesium	35000	67800
Manganese	300	4800
Sodium	20000	1200000
Miscellaneous:		
Chloride	250	2900

PDI-09	CRIT	04/22
VOCs:		
1,1-Dichloroethane	5	8.3
1,2-Dichloroethene (cis)	5	87
Tetrachloroethene	5	9
Trichloroethene	5	11
Vinyl chloride	2	7.1

PDI-04	CRIT	04/22
VOCs:		
1,1-Dichloroethane	5	410
1,1-Dichloroethene	5	13
1,2-Dichloroethene (cis)	5	1400
1,2-Dichloroethene (trans)	5	37
Acetone	50	73
Trichloroethene	5	11
Vinyl chloride	2	250

MW-19R	CRIT	05/22
Metals:		
Iron	300	1500
Manganese	300	5500
Sodium	20000	157000

PDI-07

PDI-02

PDI-06

PDI-01

PDI-08	CRIT	04/22
VOCs:		
1,2-Dichloroethene (cis)	5	18

PDI-03	CRIT	04/22
VOCs:		
1,2-Dichloroethene (cis)	5	300

MW-22	CRIT	05/22
VOCs:		
1,2-Dichloroethene (cis)	5	130
Metals:		
Iron	300	11400
Manganese	300	2600
Sodium	20000	170000

PDI-12	CRIT	04/22
VOCs:		
1,1-Dichloroethane	5	20
1,2-Dichloroethene (cis)	5	1400
Acetone	50	160
Chloroethane	5	11
Trichloroethene	5	45
Vinyl chloride	2	34

MW-14	CRIT	05/22
Metals:		
Iron	300	1700
Manganese	300	670
Sodium	20000	83600

Legend

- At Least One Compound Exceeds Criteria
- No Compounds Exceed Criteria
- No Compounds Detected
- PH I ESA REC
- Cistern

Location ID | Criteria | Sample Date

MW-07	CRIT	05/22
VOCs:		
Trichloroethene	5	6.1

Parameter | Criteria Value (µg/L) | Concentration (µg/L)

Criteria: NYSDEC TOGS (1.1.1), Ambient water quality standards and guidance values and groundwater effluent limitations

Source: NYS ITS GIS Program Office, 2020

Notes:
1. PDI locations were sampled as groundwater grab samples, whereas Monitoring Well locations were sampled as low flow samples.
2. Concentrations shown in µg/L, except for Miscellaneous, which are shown in mg/L.

100 0 100 Feet

FORMER BERNZOMATIC FACILITY VILLAGE OF MEDINA, NEW YORK GROUNDWATER ANALYTICAL RESULTS (APRIL/MAY 2022)

URS

FIGURE 4

L:\DCS\Projects\25369237\GIS\Maps\PDI Report\04 GW ANALYTICAL (APR & MAY 2022).mxd 2/3/2023

Attachment 1

Boring Logs

Select Remedial Investigation Boring Logs

URS Corporation

TEST BORING LOG

BORING NO. : MW-05

PROJECT/PROJECT LOCATION: Newell Ph II ESA, 1 Bernzomatic Dr., Medina

SHEET: 1 **OF** 1

CLIENT: Newell Rubbermaid

JOB NO. : 25369237

BORING CONTRACTOR: Nothnagle Drilling

NORTHING: 1173158.809 **EASTING:** 1203918.098

GROUNDWATER: 5' bgs

GROUND ELEVATION: 546.64 ft amsl

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	CORE	TUBE
				DIA.		2"		
				WT.		140 lbs.		
				FALL		30"		
				* POCKET PENETROMETER READING				

DATE STARTED: 10/21/2014

DATE FINISHED: 10/21/2014

DRILLER: Tom Mangefrida

GEOLOGIST: Kevin McGovern

REVIEWED BY: Kevin Connare

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1	X,3,2,1	25	Brown	Loose to Very Loose	CONCRETE	Conc	0.0	Moist, No Odor
							FILL: Coarse to fine Gravel and Sand	Fill		
		2	1,2,2,4	15					0.0	
-5		3	2,2,5,4	35	Red Brown		Medium to fine SAND, some coarse sand and fine gravel and silt	SW	0.0	Wet, No Odor
		4	9,15,37,22	55		Very Dense	Coarse to fine SAND, some finegravel and silt		0.0	
		5	15,22,17,21	0		Dense	8'-10': No Recovery		NA	
-10		6	50/3	0			Boring Refusal at 10.25' bgs, Top of Rock		NA	
-15										
-20										
-25										

COMMENTS: Boring advanced with a track-mounted CME-55LC drill rig using a 4 1/4" HSA and 2" split spoon sampler
Collected soil samples MW-05(0-2) @ 0'-2' bgs for TCL VOCs analyses. Completed as 2" overburden monitoring well.
"X" = No Blow Counts at 6" Interval

URS Corporation

TEST BORING LOG

BORING NO. : MW-07

PROJECT/PROJECT LOCATION: Newell Ph II ESA, 1 Bernzomatic Dr., Medina

SHEET: 1 **OF** 1

CLIENT: Newell Rubbermaid

JOB NO. : 25369237

BORING CONTRACTOR: Nothnagle Drilling

NORTHING: 1173151.08 **EASTING:** 1203976.768

GROUNDWATER: 5' bgs

GROUND ELEVATION: 546.25 ft amsl

DATE	TIME	LEVEL	TYPE	CAS.	SAMPLER	CORE	TUBE
			TYPE		Split Spoon		
			DIA.		2"		
			WT.		140 lbs.		
			FALL		30"		
			* POCKET PENETROMETER READING				

DATE STARTED: 10/22/2014

DATE FINISHED: 10/22/2014

DRILLER: Tom Mangefrida

GEOLOGIST: Kevin McGovern

REVIEWED BY: Kevin Connare

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1	1,2,2,8	20	Brown	Loose	TOPSOIL	Topsoil	0.0	Moist, No Odor
		2	5,5,3,8	70	Red Brown		Medium to fine SAND, some coarse sand and fine gravel and silt	SW	0.0	
-5		3	6,9,8,13	0		Medium Dense	4'-6': No Recovery		NA	Wet, No Odor
		4	11,12,13,17	90					0.0	
							Coarse to fine SAND and medium to fine GRAVEL, some silt	SW/GW		
		5	6,50/3	45		Very Dense			0.0	
-10							Boring Refusal at 9.25' bgs, Top of Rock			
-15										
-20										
-25										

COMMENTS: Boring advanced with a track-mounted CME-55LC drill rig using a 4 1/4" HSA and 2" split spoon sampler
Collected soil samples MW-07(0-2) & MW-07(8-9) @ 0'-2' & 8'-9' bgs for TCL VOCs analyses. Completed as 2" overburden monitoring well.
"X" = No Blow Counts at 6" Interval

URS Corporation

TEST BORING LOG

BORING NO. : MW-09

PROJECT/PROJECT LOCATION: Newell Ph II ESA, 1 Bernzomatic Dr., Medina

SHEET: 1 **OF** 1

CLIENT: Newell Rubbermaid

JOB NO. : 25369237

BORING CONTRACTOR: Nothnagle Drilling

NORTHING: 1173205.982 **EASTING:** 1203945.346

GROUNDWATER: 4' bgs

GROUND ELEVATION: 546.42 ft amsl

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	CORE	TUBE
				DIA.		2"		
				WT.		140 lbs.		
				FALL		30"		
				* POCKET PENETROMETER READING				

DATE STARTED: 2/3/2015

DATE FINISHED: 2/3/2015

DRILLER: Jeff Schweitzer

GEOLOGIST: Kevin McGovern

REVIEWED BY: Tim Ifkovich

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0		1	Macrocore	75	Brown / Red Brown	Loose	TOPSOIL	Topsoil	0.0	Moist, No Odor
							FILL - silt, medium to coarse sand, and medium to fine Gravel	Fill	0.0	
								SM	0.0	
							Silty fine SAND, some to trace medium to fine gravel		0.0	
-5		2	7,10,14,13	70		Medium Dense			0.0	Wet, No Odor
							No gravel at 4' bgs		0.0	
		3	14,20,28,25	40		Dense	SILT and fine SAND, some medium to coarse gravel	SM/ MH	0.0	Moist, No Odor
		4	6,16,22,50/4	79			Fine sandy SILT, some medium to fine gravel	MH	0.0	Wet, No Odor
-10									0.0	
							Boring Refusal on Top of Rock at 9.75' bgs.			
-15										
-20										
-25										

COMMENTS: Boring advanced with a track-mounted CME-75 drill rig using a 4 1/4" HSA and 2" split spoon sampler. Collected soil sample MW-09(8-9) from 8'-9' bgs for TCL VOCs analyses. Completed as 2" overburden monitoring well.

URS Corporation

TEST BORING LOG

BORING NO. : MW-14

PROJECT/PROJECT LOCATION: Newell Ph II ESA, 1 Bernzomatic Dr., Medina

SHEET: 1 **OF** 1

CLIENT: Newell Rubbermaid

JOB NO. : 25369237

BORING CONTRACTOR: Nothnagle Drilling, Inc.

NORTHING: 1172803.626 **EASTING:** 1203992.257

GROUNDWATER: 2.5' bgs				CAS.	SAMPLER	CORE	TUBE
DATE	TIME	LEVEL	TYPE	TYPE		Macrocore		
				DIA.		1.5"		
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

GROUND ELEVATION: 545.90 ft amsl

DATE STARTED: 2/27/17

DATE FINISHED: 3/2/17

DRILLER: Steve Loranty & Bryan Swartz

GEOLOGIST: Emily Laity & Ernest Thalhamer

REVIEWED BY: Kevin Connare

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0							TOP SOIL		0.0	
							FILL: silt, some fine-med sand, little gravel		0.0	
							FILL: cobbles, little silt, fine-med sand, little gravel		0.0	Wet @ 2.5' bgs
-5							FILL: cinder blocks & wood			
		1		75	Brown		Fine SAND, trace to some gravel		0.0	
									0.0	
									0.0	
		2		100					0.0	
-10							Boring Refusal at 10' bgs, Top of Rock			
-15										
-20										
-25										

COMMENTS: Boring hand-cleared from 0' to 5' bgs and then advanced with a truck-mounted CME-75 drill rig using a 4' long macrocore sampler. Collected soil samples MW14-SS-(0-2") at 0 to 2" bgs and MW14(0102) at 1' to 2' bgs. Completed as 2" overburden monitoring well.

URS Corporation

TEST BORING LOG

BORING NO. : MW-16

PROJECT/PROJECT LOCATION: Newell Ph II ESA, 1 Bernzomatic Dr., Medina

SHEET: 1 **OF** 1

CLIENT: Newell Rubbermaid

JOB NO. : 25369237

BORING CONTRACTOR: Nothnagle Drilling, Inc..

NORTHING: 1173206.905 **EASTING:** 1203566.094

GROUNDWATER: 4.8' bgs

GROUND ELEVATION: 541.69 ft amsl

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	CORE	TUBE
				DIA.		1.5"		
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 2/28/17

DATE FINISHED: 2/28/17

DRILLER: Steve Loranty & Bryan Swartz

GEOLOGIST: Emily Laity & John Boyd

REVIEWED BY: Kevin Connare

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0					Grey Brown		SAND, little fine gravel		0.0	
									0.0	
							Fine-coarse SAND and fine-coarse GRAVEL, few subangular cobbles		0.0	
									0.0	
					Red Brown		SAND and med-coarse GRAVEL		0.1	
-5		1		15	Brown		Fractured BEDROCK, fine-med sand, trace silt		0.0	Wet @ 4.8' bgs
							Boring refusal at 6' bgs, Top of Rock			
-10										
-15										
-20										
-25										

COMMENTS: Boring hand-cleared from 0' to 5' bgs and then advanced with a truck-mounted CME-75 drill rig using a 4' long macrocore sampler. Collected soil samples MW16-SS(0-2") at 0 to 2" bgs and MW16-0405 at 4' to 5' bgs. Completed as 2"overburden monitoring well.

URS Corporation

TEST BORING LOG

BORING NO. : MW-17

PROJECT/PROJECT LOCATION: Newell Ph II ESA, 1 Bernzomatic Dr., Medina

SHEET: 1 **OF** 1

CLIENT: Newell Rubbermaid

JOB NO. : 25369237

BORING CONTRACTOR: Nothnagle Drilling, Inc.

NORTHING: 1173284.501 **EASTING:** 1203863.170

GROUNDWATER: 5.1' bgs

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	CORE	TUBE
				DIA.		1.5"		
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

GROUND ELEVATION: 545.69 ft amsl

DATE STARTED: 2/28/17

DATE FINISHED: 2/28/17

DRILLER: Steve Loranty & Bryan Swartz

GEOLOGIST: Emily Laity & John Boyd

REVIEWED BY: Kevin Connare

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0					Grey Brown		Med-coarse SAND and fine angular GRAVEL		0.0	
									0.0	
					Red Brown		SAND, little silt, little fine-coarse sub rounded gravel, few cobbles		0.0	
									0.1	
									0.2	
-5					Dark Brown		SILT, trace fine-coarse sand, trace fine gravel		0.1	Wet @ 5.1' bgs
		1		62.5					0.0	
					Light Brown		SILT and fine SAND, trace fine gravel		0.0	
					Brown		Fine SAND, trace fine gravel		0.0	
-10							Boring Refusal at 9' bgs, Top of Rock			
-15										
-20										
-25										

COMMENTS: Boring hand-cleared from 0' to 5' bgs and then advanced with a truck-mounted CME-75 drill rig using a 4' long macrocore sampler. Collected soil samples MW17-SS(0-2") at 0 to 2" bgs and MW17-05 at 5' bgs. Completed as 2" overburden monitoring well.

URS Corporation

TEST BORING LOG

BORING NO. : MW-19

PROJECT/PROJECT LOCATION: Newell Ph II ESA, 1 Bernzomatic Dr., Medina

SHEET: 1 **OF** 1

CLIENT: Newell Rubbermaid

JOB NO. : 25369237

BORING CONTRACTOR: Nothnagle Drilling, Inc.

NORTHING: 1173024.709 **EASTING:** 1203969.902

GROUNDWATER: 4.0' bgs

	CAS.	SAMPLER	CORE	TUBE
TYPE		Macrocore		
DIA.		1.5"		
WT.				
FALL				

DATE	TIME	LEVEL	TYPE

* POCKET PENETROMETER READING

GROUND ELEVATION: 545.94 ft amsl

DATE STARTED: 2/28/17

DATE FINISHED: 2/28/17

DRILLER: Steve Loranty & Bryan Swartz

GEOLOGIST: Emily Laity & John Boyd

REVIEWED BY: Kevin Connare

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0					Brown		TOPSOIL, silt, little fine-med sand		0.0	
									0.0	
					Mottled Tan		SILT, little fine-med sand, some gravel, trace fine-med angular cobbles @ 1.0' bgs, increasing sand content, decreasing cobbles		0.0	
									0.0	Wet @ 4.0' bgs
-5					Brown		Fine-med SAND, little gravel		0.0	
		1		33			Fine to very fine SAND, some to trace silt @9.0' bgs trace angular fine gravel			
-10							Boring Refusal at 9.1' bgs, Top of Rock			
-15										
-20										
-25										

COMMENTS: Boring hand-cleared from 0' to 5' bgs and then advanced with a truck-mounted CME-75 drill rig using a 4' long macrocore sampler. Collected soil samples MW19-SS(0-2") at 0 to 2" bgs and MW19-0203 at 2' to 3' bgs. Completed as 2" overburden monitoring well.

URS Corporation

TEST BORING LOG

BORING NO. : MW-21

PROJECT/PROJECT LOCATION: Newell Ph II ESA, 1 Bernzomatic Dr., Medina

SHEET: 1 **OF** 1

CLIENT: Newell Rubbermaid

JOB NO. : 25369237

BORING CONTRACTOR: Nothnagle Drilling, Inc.

NORTHING: 1173124.672 **EASTING:** 1203714.671

GROUNDWATER: 3.9' bgs

GROUND ELEVATION: 542.83 ft amsl

DATE	TIME	LEVEL	TYPE	TYPE	CAS.	SAMPLER	CORE	TUBE
						Macrocore		
				DIA.		1.5"		
				WT.				
				FALL				
				* POCKET PENETROMETER READING				

DATE STARTED: 3/1/17

DATE FINISHED: 3/1/17

DRILLER: Steve Loranty & Bryan Swartz

GEOLOGIST: John Boyd & Ernest Thalhamer

REVIEWED BY: Kevin Connare

DEPTH FEET	STRATA	SAMPLE NO.	SAMPLE BLOW COUNT	REC% / RQD%	COLOR	SOIL CONSISTENCY / ROCK HARDNESS	MATERIAL DESCRIPTION	USCS	PID	REMARKS
0					Brown		CONCRETE		0.0	
							ASPHALT		0.0	
							Coarse GRAVEL		0.0	
							Fine-med SAND, some fine gravel and silt		0.0	Wet @ 3.9' bgs
-5		1		100			SILT and fine SAND		0.0	
							Fine-med SAND, trace fine gravel			
							Boring Refusal at 6.5' bgs, Top of Rock			
-10										
-15										
-20										
-25										

COMMENTS: Boring hand-cleared from 0' to 5' bgs and then advanced with a truck-mounted CME-75 drill rig using a 4' long macrocore sampler. Collected soil sample MW21-02.8-03.8 at 2.8' to 3.8' bgs. No surface sample collected . Completed as overburden monitoring well.

Pre-Design Investigation
Boring Logs

URS

Client:	Newell Rubbermaid
Project Number:	60636810
Boring Location:	1 Bernzomatic Drive
Drilling Method:	Geoprobe 5' macrocores
Weather:	40°F Sunny
Logged By:	E. Au
Drilled By:	R. Reagan (Matrix Enviromental)

BORING ID:

MW-19R

Sheet: 1 of 1

Date/Time Started: 4/29/22 0905

Date/Time Finished: 4/29/22 0940

Depth (ft)	Sample Number	Sample Type	Recovery (ft)	PID reading*	U.S.C.S	Lithologic Description	Lab Sample ID	Well Construction Details
1	0	0-5' Handclear	-	0.0 0.0 0.0	Fill	0-2' 6" topsoil then dark brown f-c SAND, little gravel, apshalt chunks, wood, loose, moist		Well MW-19R 2" PVC Well 10 Slot Screen: 2.5-9' 00N Sand: 2-9' Bentonite: 1-2'
2								
3				0.0	SW/GW	2-4' Tan/Brown. mottled silty f. SAND w/ cobbles, little gravel, moist		
4				0.0				
5				0.7	SW	4-5' SAA, little subrounded m-c gravel, moist		
6	1	5' macrocore	2.9	0.1	SW	5-5.5' SAA, wet		
7				0.1	SW	5.5-7.5' Brown/Red Brown F. SAND, little silt, little f. gravel, wet. (TILL)		
8				0.1	SP	7.5-8.5' Red-brown f-m SAND, tr. silt, saturated		
9				0.1	ML	8.5-9' Red-brown f. sandy SILT, little angular f-c gravel, wet.		
10						Refusal @ 9'.		
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

END OF BORING @ 9'

NOTES:

* units relative to isobutylene/methane span gas in parts per million (ppm)
f - fine; m - medium; c - coarse; tr. - trace
NA - not applicable
SAA - Same as above

Checked by:_____ Date:_____

URS

Client:	Newell Rubbermaid
Project Number:	60636810
Boring Location:	1 Bernzomatic Drive
Drilling Method:	Geoprobe 5' macrocores
Weather:	45°F Cloudy
Logged By:	E. Au
Drilled By:	R. Reagan (Matrix Environmental)

BORING ID: **PDI-1**

Sheet: 1 of 1

Date/Time Started: 4/27/22 0845

Date/Time Finished: 4/27/2022 0930

Depth (ft)	Sample Number	Sample Type	Recovery (ft)	PID reading*	U.S.C.S	Lithologic Description	Lab Sample ID	Well Construction Details
1	0	0-5' Handclear	-	0.6	FILL	0-1' Brown Topsoil, tr. rounded, f-c gravel, moist	PDI-1_0405 @0940	SP-22 GW Grab Temp Screen 8-12'
2				0.9	SW	1-2' Brown m. SAND, little f-c gravel, moist		
3				0.8	SW	2-3' Brown m. SAND, little silt, little f-c angular gravel & cobbles		
4				0.1	SW	3-4' Br. SAA, Root/wood chip		
5				0.7	SW	4-5' Brown SAA, No Cobbles, rootlets		
6	1	5' macrocore	3.7'	0.5	SW	5-6.0' Red-brown f. Silty SAND, little f-m gravel, m.dense, wet		
7								
8				0.0	SM	~6-9' f. SAND tr.f. gravel, m. dense, wet		
9								
10				0.0	ML	9-10' F. Sandy SILT, f. rounded gravel, m. dense, wet (TILL)		
11	2	5' macro-core	1.5'	0.0	SW	10-10.3' c. Sand layer, loose, wet		
12				0.0	ML	10.3-12' F. Sandy SILT/Silty F. SAND, F. angular gravel, SAA. m. dense, wet (TILL)		
13						Refusal @ 12'.	PDI-1_GW @ 1015	
14								
15								
16								
17								
18								
19								
20								

END OF BORING @ 12'

NOTES:

* units relative to isobutylene/methane span gas in parts per million (ppm)
f - fine; m - medium; c - coarse; tr. - trace
NA - not applicable
SAA - Same as above

Checked by:_____ Date:_____

URS

Client:	Newell Rubbermaid
Project Number:	60636810
Boring Location:	1 Bernzomatic Drive
Drilling Method:	Geoprobe 5' macrocores
Weather:	40°F
Logged By:	E. Au
Drilled By:	R. Reagan (Matrix Enviromental)

BORING ID: PDI-2

Sheet: 1 of 1

Date/Time Started: 4/27/22 1130

Date/Time Finished: 4/27/2022 1230

Depth (ft)	Sample Number	Sample Type	Recovery (ft)	PID reading*	U.S.C.S	Lithologic Description	Lab Sample ID	Well Construction Details
1	0	0-5' Handclear	-	0.1	FILL	0-1' Topsoil, little f-c gravel, moist	PDI-2_0203 @1105	SP-22 GW Grab Temp Screen 7-11'
2				0.1	FILL	1-2' SAA, Cobbles, f-c gravel, moist		
3				0.1	FILL	2-3' Brown f. silty SAND, f-c gravel, cobbles, moist		
4	▼			0.1	ML	3-5' Red-Brown, f. sandy SILT, moist to wet @ 4'		
5				0.0				
6	1	5' macrocore	3.9'	0.0	SW	5-5.5' Red-brown f. SAND, little subrounded f-m gravel, wet		
7				0.0	SP	5.5-6.5' f. SAND, clean. (m-c sand layer @6.5-6.8'), wet. Grades to		
8				0.0	ML	6.8-11' F. sandy SILT, m. dense, wet		
9				0.0				
10								
11	2	5' macrocore		0.0			PDI-2_GW @ 1220	
12						Refusal 11'. Rock in shoe.		
13								
14								
15								
16								
17								
18								
19								
20								

END OF BORING @ 11'

NOTES: Background 0.1 ppm

* units relative to isobutylene/methane span gas in parts per million (ppm)

f - fine; m - medium; c - coarse; tr. - trace

NA - not applicable

SAA - Same as above

Checked by:_____ Date:_____

URS

Client:	Newell Rubbermaid
Project Number:	60636810
Boring Location:	1 Bernzomatic Drive
Drilling Method:	Geoprobe 5' macrocores
Weather:	40°F Cloudy
Logged By:	E. Au
Drilled By:	R. Reagan (Matrix Enviromental)

BORING ID:

PDI-3 / MW-22

Sheet: 1 of 1

Date/Time Started: 4/27/22 1345

Date/Time Finished: 4/27/2022 1420

Depth (ft)	Sample Number	Sample Type	Recovery (ft)	PID reading*	U.S.C.S	Lithologic Description	Lab Sample ID	Well Construction Details
1	0	0-5' Handclear	-	0.0 0.0	FILL	0-1' Fill 6" Topsoil then Brown silty SAND, loose	PDI-3_0203 @1345	Well MW-22 2" PVC Well 10 Slot Screen: 2.7-9.7' 00N Sand: 2-9.7' Bentonite: 1-2'
2				0.0		1-2' SAA moist, loose		
3				0.0	SW	2-3' Red-Brown f. SAND, little f-m gravel moist		
4	▼			0.0	SW	3-4' Red-Brown f. SAND, little f-m gravel, moist to wet, water ~4'		
5				0.0	SW	4-5' SAA, soft		
6	1	5' macrocore	NA	0.0	SW	5-7' Br. silty f. SAND, little rounded f-c gravel, m. dense, wet		
7								
8				0.0	SP	cobble to 7.5' 7.5-9.2' clean m. SAND, m. dense, saturated		
9								
10				0.0	SW	9.2-10' Red-Brown f-c SAND, little silt, poorly sorted, wet/saturated. Rock in shoe.	PDI-3-GW @1430	SP-22 GW Grab Temp Screen 6-10'
11						Refusal @ 10'.		
12								
13								
14								
15								
16								
17								
18								
19								
20								

END OF BORING @ 10'

NOTES:

* units relative to isobutylene/methane span gas in parts per million (ppm)

f - fine; m - medium; c - coarse; tr. - trace

NA - not applicable

SAA - Same as above

Checked by:_____ Date:_____

URS

Client:	Newell Rubbermaid
Project Number:	60636810
Boring Location:	1 Bernzomatic Drive
Drilling Method:	Geoprobe 5' macrocores
Weather:	40°F Cloudy
Logged By:	E. Au
Drilled By:	R. Reagan (Matrix Enviromental)

BORING ID: **PDI-4**

Sheet: 1 of 1

Date/Time Started: 4/28/22 0845

Date/Time Finished: 4/28/2022 0900

Depth (ft)	Sample Number	Sample Type	Recovery (ft)	PID reading*	U.S.C.S	Lithologic Description	Lab Sample ID	Well Construction Details
1	0	0-5' Handclear	-	0.0	FILL	0-1' 6" Topsoil; then Brown silty SAND, loose, moist	PDI-4_0304 @ 0910	
2				0.0		1-2' SAA		
3				0.0	SW	2-3' Red Brown f. SAND, little f-m gravel, moist		
4				0.0		3-4' SAA		
5				0.0		4-5' Rock/Cobble; no recovery		
6	1	5' macrocore	3.6	0.6	SW	4-6.5' Red Brown silty f. SAND, little f-c angular gravel, m. dense, wet		
7				0.7	SP	6.5-9' Grey/Red-Brown f-m SAND, clean, no odors, not stained grey		
8				0.2				
9				0.0				
10	2	5' macro-core	1.0	0.1		9-9.2' SAA, wet 9.2-10' SAA, coarsens w/ little silt, little f. gravel, saturated	PDI-4-GW @ 0926	SP-22 GW Grab Temp Screen 6-10'
11						Refual @ 10'.		
12								
13								
14								
15								
16								
17								
18								
19								
20								

END OF BORING @ 10'

NOTES:

* units relative to isobutylene/methane span gas in parts per million (ppm)
f - fine; m - medium; c - coarse; tr. - trace
NA - not applicable
SAA - Same as above

Checked by:_____ Date:_____

URS

Client:	Newell Rubbermaid
Project Number:	60636810
Boring Location:	1 Bernzomatic Drive
Drilling Method:	Geoprobe 5' macrocores
Weather:	40°F Cloudy
Logged By:	E. Au
Drilled By:	R. Reagan (Matrix Enviromental)

BORING ID: **PDI-5**

Sheet: 1 of 1

Date/Time Started: 4/28/22 1145

Date/Time Finished: 4/28/2022 1215

Depth (ft)	Sample Number	Sample Type	Recovery (ft)	PID reading*	U.S.C.S	Lithologic Description	Lab Sample ID	Well Construction Details
1	0	0-5' Handclear		0.0	FILL	0-6" Topsoil	PDI-5-0405 @ 1151 +MS/MSD	
2				0.0		0.5-3' Brown to Brown-grey m. SAND & angular GRAVEL (Base Gravel), loose, dry to moist		
3				0.0				
4				0.0	SM	3-5' Red-brown f. silty SAND, little f-c subrounded gravel, loose, moist		
5				0.0				
6	1	5' macrocore	3.0	0.0	SM	5-6' SAA wet, saturated, m dense.		
7				0.0	SP	6-7' f-m SAND, clean, little fines, wet		
8				0.0	ML	7-8' Red-Brown SILT, clean moist to wet		
					CL	8-8.5' Red-Brown CLAY lense, little silt, dense		
9				0.0	Rock	8.5-9' Red SANDSTONE chunk/cobble, hard, dry		
10				0.0	SP	9-10' Brown-Grey m. SAND clean, loose, wet		
11						Refusal @ 10'.	PDI-5-GW @1230	SP-22 GW Grab Temp Screen 6-10'
12								
13								
14								
15								
16								
17								
18								
19								
20								

END OF BORING @ 10'

NOTES:

* units relative to isobutylene/methane span gas in parts per million (ppm)
f - fine; m - medium; c - coarse; tr. - trace
NA - not applicable
SAA - Same as above

Checked by:_____ Date:_____

URS

Client:	Newell Rubbermaid
Project Number:	60636810
Boring Location:	1 Bernzomatic Drive
Drilling Method:	Geoprobe 5' macrocores
Weather:	40°F Cloudy
Logged By:	E. Au
Drilled By:	R. Reagan (Matrix Enviromental)

BORING ID: **PDI-6**

Sheet: 1 of 1

Date/Time Started: 4/27/22 1045

Date/Time Finished: 4/27/2022 1120

Depth (ft)	Sample Number	Sample Type	Recovery (ft)	PID reading*	U.S.C.S	Lithologic Description	Lab Sample ID	Well Construction Details
1	0	0-5' Handclear		0.8	FILL	0-1' Brown Topsoil, SILT & SAND, loose, moist	PDI-6_0304 @1042	
2				1.2		1-2' SAA, Trace f-m subrounded gravel		
3				0.5		2-3' SAA little gravel, moist		
4	▼			1.2	SW	3-4' Red Brown silty F. SAND, little f-c gravel, cobbles, moist		
5				0.3	ML	4-5' F. sandy SILT, silty sand, wet		
6	1	5' macrocore	3.3	0.1	ML	5-6' Dark grey stained, red-brown f. sandy SILT, wet		
7						6-6.2' cobble		
8				0.0	SW	6.2-9.5' f. SAND, little silt & f. angular gravel (TILL), wet		
9								
10				0.0	SP	9.5-10' c. SAND, clean, well sorted, wet.		SP-22 GW Grab Temp Screen 7-11'
11	2	5' macrocore	NA	0.0	SP	10-11' SAA c. SAND, wet, clean, well sorted		
				0.1		11-11.3' Brown f. SAND, clean, well sorted		
12						Refusal @ 11.3'.	PDI-6-GW @ 1108	
13								
14								
15								
16								
17								
18								
19								
20								

END OF BORING @ 11.3'

NOTES:

* units relative to isobutylene/methane span gas in parts per million (ppm)

f - fine; m - medium; c - coarse; tr. - trace

NA - not applicable

SAA - Same as above

Checked by:_____ Date:_____

URS

Client:	Newell Rubbermaid
Project Number:	60636810
Boring Location:	1 Bernzomatic Drive
Drilling Method:	Geoprobe 5' macrocores
Weather:	40°F Cloudy
Logged By:	E. Au
Drilled By:	R. Reagan (Matrix Enviromental)

BORING ID: **PDI-7**

Sheet: 1 of 1

Date/Time Started: 4/27/22 1140

Date/Time Finished: 4/27/22 1315

Depth (ft)	Sample Number	Sample Type	Recovery (ft)	PID reading*	U.S.C.S	Lithologic Description	Lab Sample ID	Well Construction Details
1	0	0-5' Handclear		0.0	FILL	0-1' Topsoil, f. silty SAND, loose, moist	PDI-7-0203 @ 1209	
2				0.0		1-2' SAA, tr. cobbles, loose, moist		
3				0.0	SW	2-3' Tan/Brown mottled f. silty SAND, little f-c gravel, tr. cobbles, moist		
4	▼			0.0		3-4' Tan brown COBBLES & f. SAND, moist to wet		
5				0.0		4-5' Light red-brown f. SAND, tr. cobbles & gravel, wet		
6	1	5' macrocore	4.0	0.0	ML/SW SP	5-5.5' Red-Brown f. silty SAND; Dark Grey mottled staining to 6.5', wet; Grades to clean f-m SAND to 6.5'		
7				0.0	ML	6.5-7.5' f. sandy SILT, m. dense, wet		
8								
9				0.0	SP	7.5-10' f. SAND, little m. sand in last few inches		
10				0.0				
11						Refusal @ 10'.	PDI-7-GW @1315	SP-22 GW Grab Temp Screen 6-10'
12								
13								
14								
15								
16								
17								
18								
19								
20								

END OF BORING @ 10'

NOTES:

* units relative to isobutylene/methane span gas in parts per million (ppm)

f - fine; m - medium; c - coarse; tr. - trace

NA - not applicable

SAA - Same as above

Checked by:_____ Date:_____

URS

Client:	Newell Rubbermaid
Project Number:	60636810
Boring Location:	1 Bernzomatic Drive
Drilling Method:	Geoprobe 5' macrocores
Weather:	40°F Cloudy
Logged By:	E. Au
Drilled By:	R. Reagan (Matrix Enviromental)

BORING ID: PDI-8

Sheet: 1 of 1

Date/Time Started: 4/27/22 1400

Date/Time Finished: 4/27/22 1500

Depth (ft)	Sample Number	Sample Type	Recovery (ft)	PID reading*	U.S.C.S	Lithologic Description	Lab Sample ID	Well Construction Details
1	0	0-5' Handclear		0.0 0.0	FILL	0-1' 6" Topsoil, f. silty SAND, little f-c gravel. 1-2' COBBLES w/ SAA, moist, loose	PDI-8-0405 @ 1409	
2				0.0				
3				0.0		2-3' SAA, moist		
4	▼			0.0	SW	3-4' Red-brown SAND, f-c gravel, tr. cobbles, moist		
5				0.0		4-5' SAA, moist to wet		
6	1	5' macrocore	4.0	0.0	SP	5-6' Red-brown silty f. SAND, little f-c gravel, moist to wet.		
7				0.0		6-6.2' Cobble		
8					SW	6.2-10' Red-brown f. SAND, tr.-little f. subrounded gravel, wet/saturated, increasing f-c gravel last foot.		
9				0.0				
10				0.0				
11						Refusal @ 10'.	PDI-8-GW @1510	SP-22 GW Grab Temp Screen 6-10'
12								
13								
14								
15								
16								
17								
18								
19								
20								

END OF BORING @ 10'

NOTES:

* units relative to isobutylene/methane span gas in parts per million (ppm)
f - fine; m - medium; c - coarse; tr. - trace
NA - not applicable
SAA - Same as above

Checked by:_____ Date:_____

URS

Client:	Newell Rubbermaid
Project Number:	60636810
Boring Location:	1 Bernzomatic Drive
Drilling Method:	Geoprobe 5' macrocores
Weather:	40°F Sunny
Logged By:	E. Au
Drilled By:	R. Reagan (Matrix Enviromental)

BORING ID: PDI-9

Sheet: 1 of 1

Date/Time Started: 4/28/22 0900

Date/Time Finished: 4/28/2022 1030

Depth (ft)	Sample Number	Sample Type	Recovery (ft)	PID reading*	U.S.C.S	Lithologic Description	Lab Sample ID	Well Construction Details
1				0.0		0-1' 6" Topsoil; then f. silty SAND, little f-c gravel.		
				0.0	FILL			
2						1-2' COBBLES w/ SAA, moist, loose		
				0.0				
3	0	0-5' Handclear	-			2-3' SAA, moist	PDI-9-0203 @ 1009	
				0.4				
4				0.1				
5				0.1	SW	3-6.5' Red-Brown silty f. SAND, little c. sand and f-m gravel, m. dense, wet		
6				0.0				
7	1	5' macrocore	3.3	0.0				
					SW	6.5-8' Red-Brown c. SAND, little f-m gravel, t. silt, wet, loose		
8								
9	2	5' macrocore	1.7	0.0	SW	8-9.3' SAA, but less gravel, (m-c SAND, little f-c gravel, wet)		SP-22 GW Grab Temp Screen 6-10'
10				0.0	SW	9.3-10' Red-Brown c. SAND, little f-m gravel, t. silt, wet, loose	PDI-9-GW @1030	
11						Refusal @ 10'.		
12								
13								
14								
15								
16								
17								
18								
19								
20								

END OF BORING @ 10'

NOTES:

* units relative to isobutylene/methane span gas in parts per million (ppm)
f - fine; m - medium; c - coarse; tr. - trace
NA - not applicable
SAA - Same as above

Checked by:_____ Date:_____

URS

Client:	Newell Rubbermaid
Project Number:	60636810
Boring Location:	1 Bernzomatic Drive
Drilling Method:	Geoprobe 5' macrocores
Weather:	40°F Sunny
Logged By:	E. Au
Drilled By:	R. Reagan (Matrix Enviromental)

BORING ID: **PDI-10**

Sheet: 1 of 1

Date/Time Started: 4/28/22 1030

Date/Time Finished: 4/28/22 1130

Depth (ft)	Sample Number	Sample Type	Recovery (ft)	PID reading*	U.S.C.S	Lithologic Description	Lab Sample ID	Well Construction Details
1	0	0-5' Handclear		0.0 0.0	Fill	0-2' 6" Topsoil, Brown f. silty SAND, little f-c gravel, loose, moist	PDI-10-0304 @ 1051 Dup_042822 @ 1025	
2				0.0				
3				0.0	SM	2-6' Red-brown f. SAND, little silt, little f-c gravel, loose, moist		
4				0.4		moist to wet.		
5	▼			0.0				
6	1	5' macrocore	4.0	0.0		wet/saturated @ 5', m. dense		
7					GW/SW	6-10' f-c SAND, some f-c gravel, t. silt grading to little silt bottom foot, loose, saturated		
8								
9								
10								
11						Refusal @ 10'.	PDI-10-GW @ 1130	SP-22 GW Grab Temp Screen 6-10'
12								
13								
14								
15								
16								
17								
18								
19								
20								

END OF BORING @ 10'

NOTES:

* units relative to isobutylene/methane span gas in parts per million (ppm)
f - fine; m - medium; c - coarse; tr. - trace
NA - not applicable
SAA - Same as above

Checked by:_____ Date:_____

URS

Client:	Newell Rubbermaid
Project Number:	60636810
Boring Location:	1 Bernzomatic Drive
Drilling Method:	Geoprobe 5' macrocores
Weather:	40°F Sunny
Logged By:	E. Au
Drilled By:	R. Reagan (Matrix Enviromental)

BORING ID:

PDI-11 / MW-05R

Sheet: 1 of 1

Date/Time Started: 4/28/22 1250

Date/Time Finished: 4/28/22 1335

Depth (ft)	Sample Number	Sample Type	Recovery (ft)	PID reading*	U.S.C.S	Lithologic Description	Lab Sample ID	Well Construction Details
1	0	0-5' Handclear		0.0	Fill	0-6' Topsoil 6"-2' Brown f. silty SAND, little f-c gravel, moist	PDI-11-0304 @ 1311	Well MW-05R 2" PVC Well 10 Slot Screen: 3-10' 00N Sand: 2-10' Bentonite: 1-2'
2				0.0				
3				0.0	SW	2-6' Red-brown f. SAND, little silt & gravel, moist; cobbles starting at 3'; wet/saturated 5-6'		
4				0.0				
5	▼			0.0				
6	1	5' macrocore	3.6	0.0				
7				0.0	SP/ML	6-8.5' Red-brown f. SAND/SILT, clean, no gravel, last 3" coarsens to f-m sand.		
8								
9				0.0	SW	8.5-10' Red-brown f. silty SAND & f-c subangular GRAVEL		
10								
11						Refusal @ 10'. No odors or staining.	PDI-11-GW @ 1340	SP-22 GW Grab Temp Screen 6-10'
12								
13								
14								
15								
16								
17								
18								
19								
20								

END OF BORING @ 10'

NOTES:

* units relative to isobutylene/methane span gas in parts per million (ppm)

f - fine; m - medium; c - coarse; tr. - trace

NA - not applicable

SAA - Same as above

Checked by:_____ Date:_____

URS

Client:	Newell Rubbermaid
Project Number:	60636810
Boring Location:	1 Bernzomatic Drive
Drilling Method:	Geoprobe 5' macrocores
Weather:	45°F Sunny
Logged By:	E. Au
Drilled By:	R. Reagan (Matrix Enviromental)

BORING ID: **PDI-12**

Sheet: 1 of 1

Date/Time Started: 4/28/22 1400

Date/Time Finished: 4/28/2022 1420

Depth (ft)	Sample Number	Sample Type	Recovery (ft)	PID reading*	U.S.C.S	Lithologic Description	Lab Sample ID	Well Construction Details
1	0	0-5' Handclear		0.0 0.0	Fill	0-1' 6" topsoil, Grey/brown f. silty SAND & GRAVEL	PDI-12-0405 @ 1421	
2				0.0		1-2' SAA cobbles, loose, moist		
3				0.0		2-3' SAA tr. brick fragments, loose, moist		
4				0.0		3-4' SAA cobbles, loose, moist,		
5 ▼				0.0	ML	4-5' Tan mottled w/ Grey-brown SILT, little f-m sand, little gravel, tr. clay; cobbles @ depth. Wet at 5'.		
6	1	5' macrocore	3.7	0.1	ML	5-10' Red-brown f. sandy SILT, little f-c sand and f-c gravel (TILL), wet but not saturated, dense 2" lense of m. sand @ bottom.		
7								
8								
9								
10								
11						Refusal @ 10'.	PDI-12-GW @1455	SP-22 GW Grab Temp Screen 6-10'
12								
13								
14								
15								
16								
17								
18								
19								
20								

END OF BORING @ 10'

NOTES:

* units relative to isobutylene/methane span gas in parts per million (ppm)
f - fine; m - medium; c - coarse; tr. - trace
NA - not applicable
SAA - Same as above

Checked by:_____ Date:_____

Monitoring Well Construction Logs

Select Remedial Investigation Monitoring Well Construction Logs

DRILLING SUMMARY

Geologist: Kevin J. McGovern

Drilling Company: Nothnagle Drilling

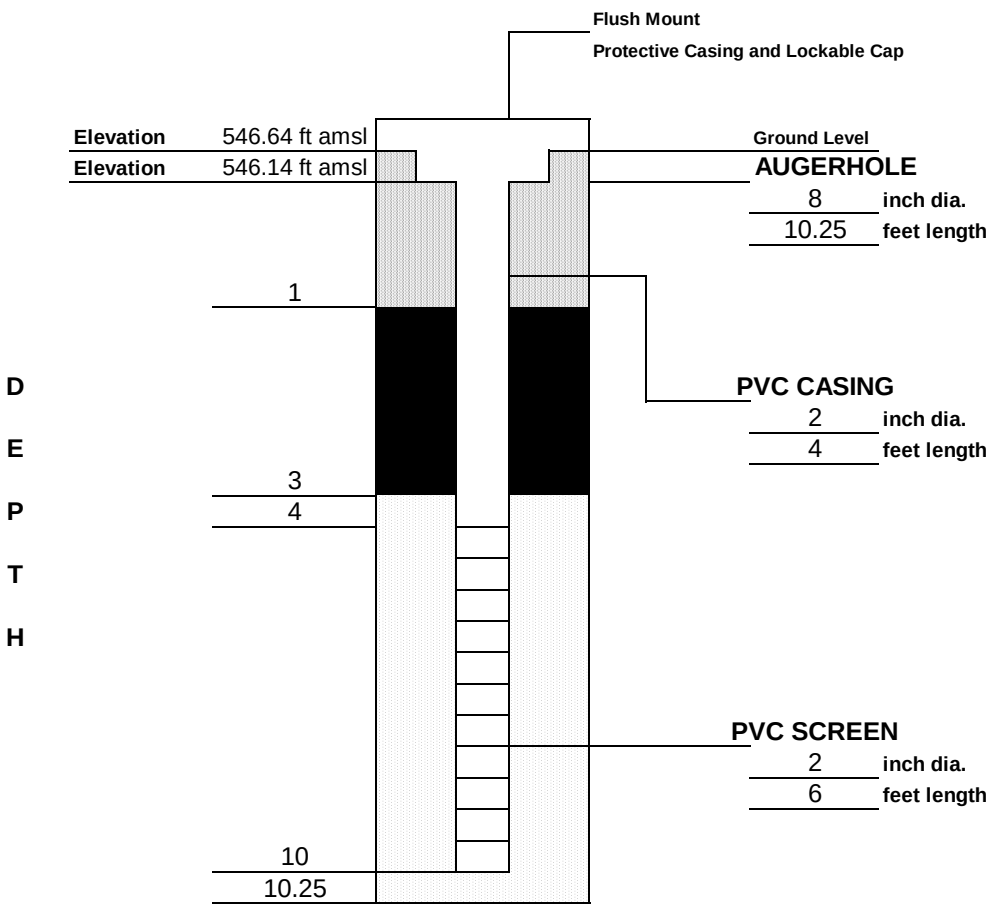
Driller: Tom Mangefrida

Rig Make/Model: CME-55LC

Date: 10/22/2014

GEOLOGIC LOG

Depth(ft.)	Description
	See boring log for lithologic description.



WELL DESIGN

CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" PVC	**Type:** 00N Sand **Setting:** 3 to 10 ft
Monitor: 2" PVC	**Slot Size:** 0.010"	***SEAL MATERIAL*** **Type:** Bentonite **Setting:** 1 to 3 ft

COMMENTS:

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: Newell Rubbermaid	**Location:** 1 Bernzomatic Dr., Medina	**Project No.:** 25369237.00003
URS Corporation	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number:** MW-05

DRILLING SUMMARY

Geologist: Kevin J. McGovern

Drilling Company: Nothnagle Drilling

Driller: Tom Mangefrida

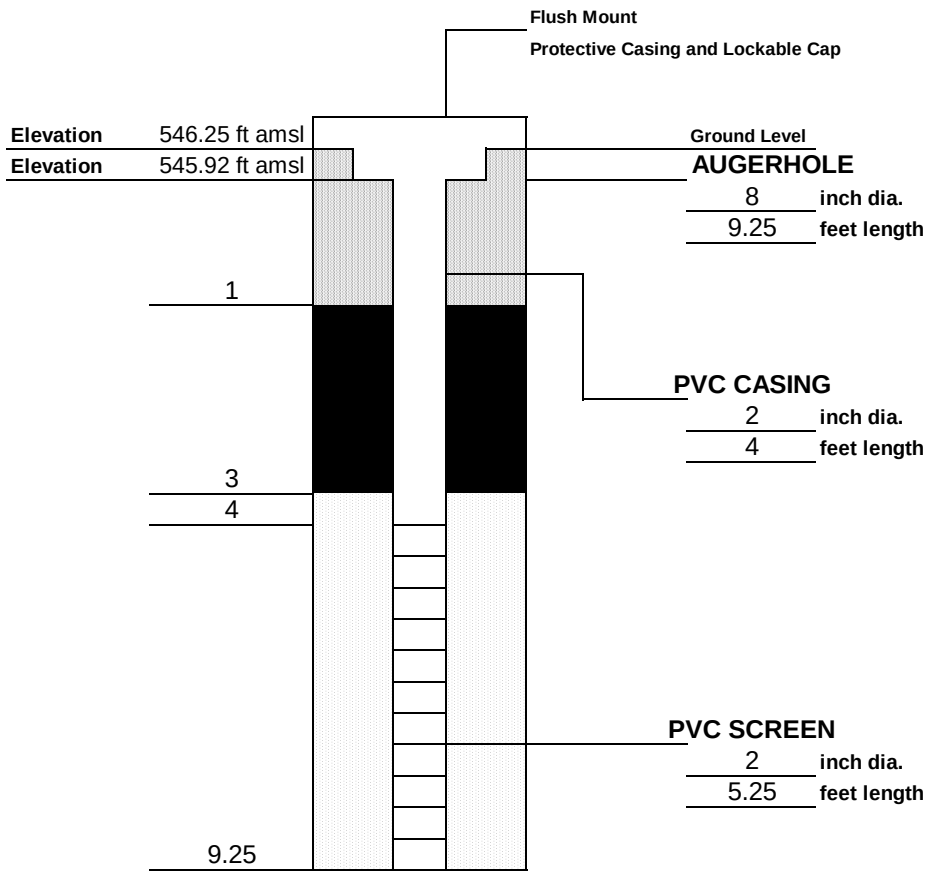
Rig Make/Model: CME-55LC

Date: 10/22/2014

GEOLOGIC LOG

Depth(ft.)	Description
	See boring log for lithologic description.

DEPTH



WELL DESIGN

CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" PVC	**Type:** 00N Sand **Setting:** 3 to 9.25 ft
Monitor: 2" PVC	**Slot Size:** 0.010"	***SEAL MATERIAL*** **Type:** Bentonite **Setting:** 1 to 3 ft

COMMENTS:

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: Newell Rubbermaid	**Location:** 1 Bernzomatic Dr., Medina	**Project No.:** 25369237.00003
URS Corporation	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number:** MW-07

DRILLING SUMMARY

Geologist: Kevin J. McGovern

Drilling Company: Nothnagle Drilling

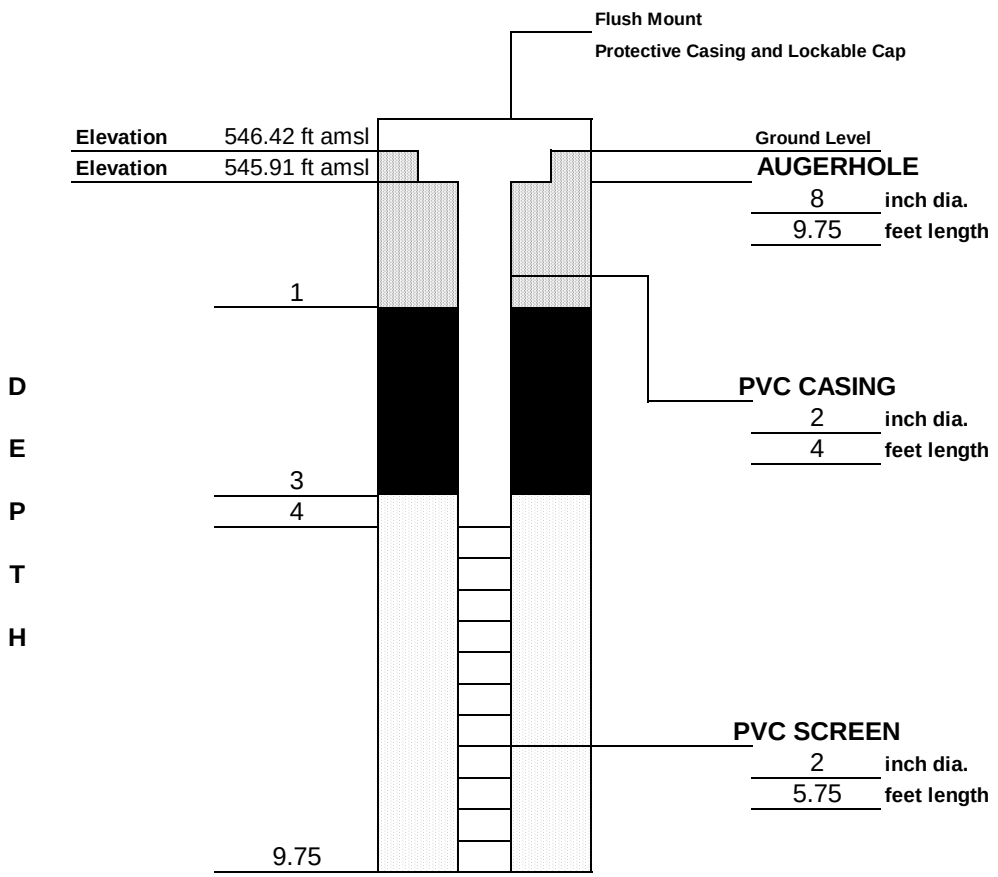
Driller: Jeff Schweitzer

Rig Make/Model: CME-75

Date: 2/3/2015

GEOLOGIC LOG

Depth(ft.)	Description
	See boring log for lithologic description.



WELL DESIGN

CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" PVC	**Type:** 00N Sand **Setting:** 3 to 9.75 ft
Monitor: 2" PVC	**Slot Size:** 0.010"	***SEAL MATERIAL*** **Type:** Bentonite **Setting:** 1 to 3 ft

COMMENTS:

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: Newell Rubbermaid	**Location:** 1 Bernzomatic Dr., Medina	**Project No.:** 25369237.00003
URS Corporation	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number:** MW-09

DRILLING SUMMARY

Geologist: Ernest Thalhamer

Drilling Company: Nothnagle Drilling

Driller: Steve Loranty

Rig Make/Model: CME-75

Date: 3/2/2017

GEOLOGIC LOG

Depth(ft.)	Description
	See boring log for lithologic description.

D
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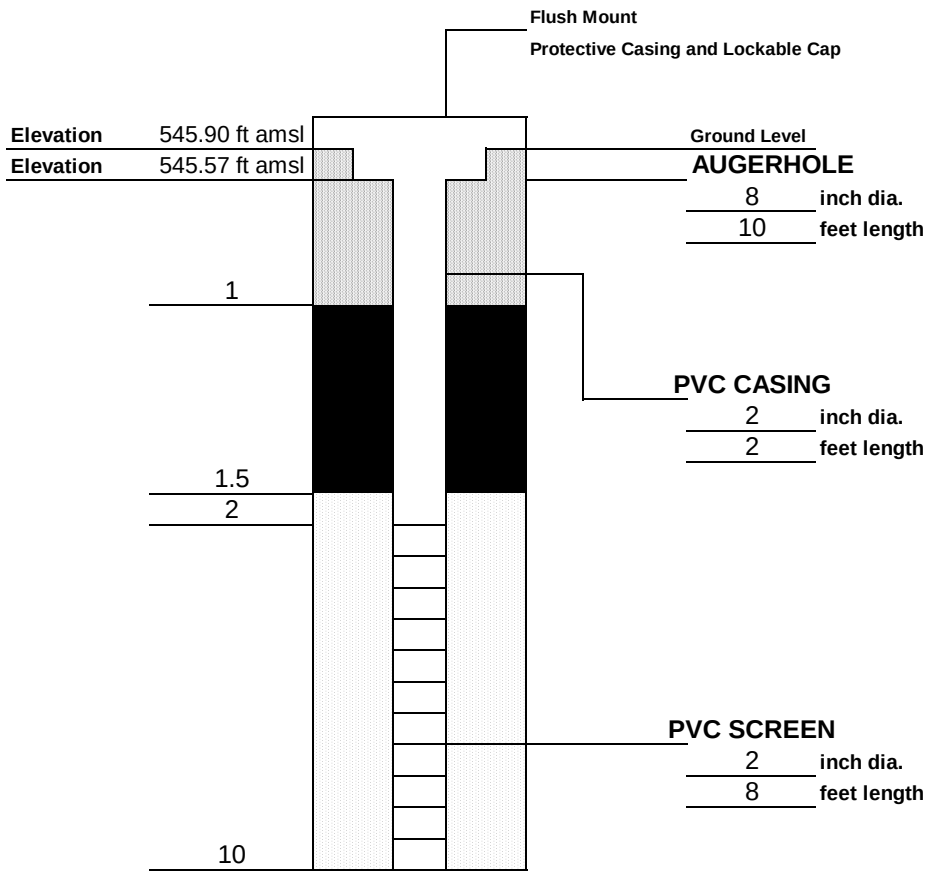
H



WELL DESIGN

CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" PVC	**Type:** 00N Sand **Setting:** 1.5 to 10 ft
Monitor: 2" PVC	**Slot Size:** 0.010"	***SEAL MATERIAL*** **Type:** Bentonite **Setting:** 1 to 1.5 ft

COMMENTS:

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: Newell Rubbermaid	**Location:** 1 Bernzomatic Dr., Medina	**Project No.:** 25369237.00003
URS Corporation	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number:** MW-14

DRILLING SUMMARY

Geologist: John Boyd

Drilling Company: Nothnagle Drilling

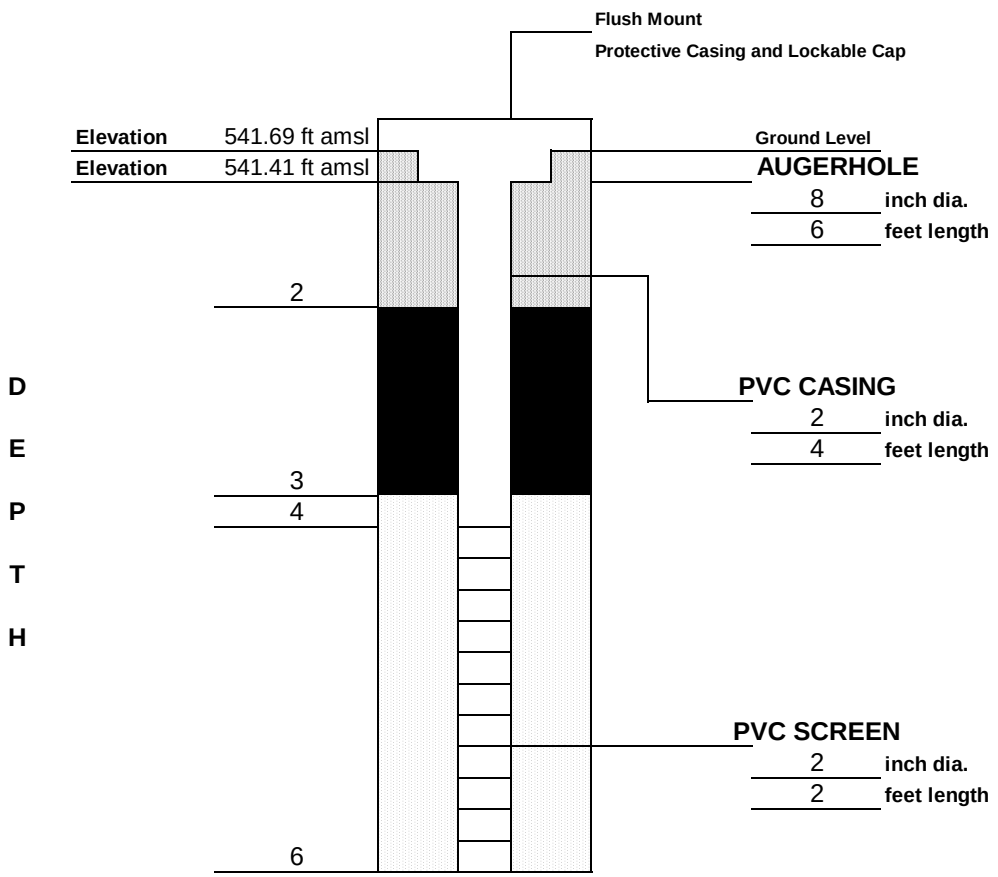
Driller: Steve Loranty

Rig Make/Model: CME-75

Date: 2/28/2017

GEOLOGIC LOG

Depth(ft.)	Description
	See boring log for lithologic description.



WELL DESIGN

CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" PVC	**Type:** 00N Sand **Setting:** 3 to 6 ft
Monitor: 2" PVC	**Slot Size:** 0.010"	***SEAL MATERIAL*** **Type:** Bentonite **Setting:** 2 to 3 ft

COMMENTS:

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: Newell Rubbermaid	**Location:** 1 Bernzomatic Dr., Medina	**Project No.:** 25369237.00003
URS Corporation	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number:** MW-16

DRILLING SUMMARY

Geologist: John Boyd

Drilling Company: Nothnagle Drilling

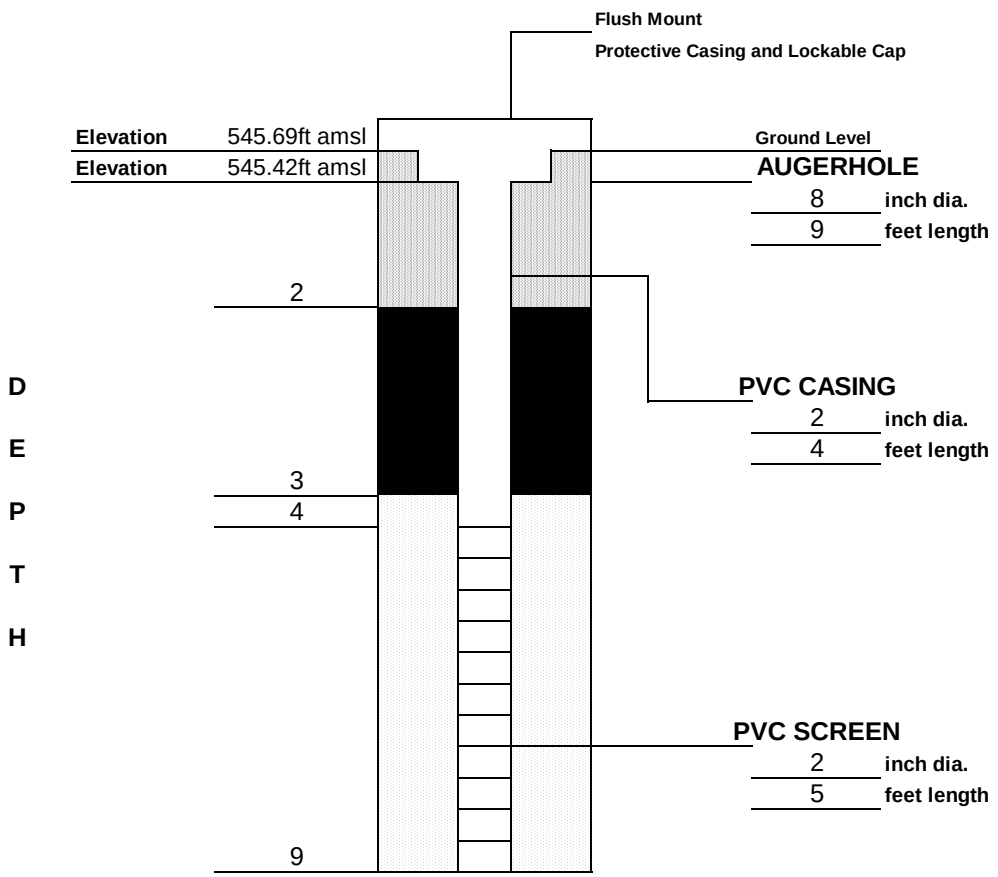
Driller: Steve Loranty

Rig Make/Model: CME-75

Date: 2/28/2017

GEOLOGIC LOG

Depth(ft.)	Description
	See boring log for lithologic description.



WELL DESIGN

CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" PVC	**Type:** 00N Sand **Setting:** 3 to 9 ft
Monitor: 2" PVC	**Slot Size:** 0.010"	***SEAL MATERIAL*** **Type:** Bentonite **Setting:** 2 to 3 ft

COMMENTS:

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: Newell Rubbermaid	**Location:** 1 Bernzomatic Dr., Medina	**Project No.:** 25369237.00003
URS Corporation	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number:** MW-17

DRILLING SUMMARY

Geologist: John Boyd

Drilling Company: Nothnagle Drilling

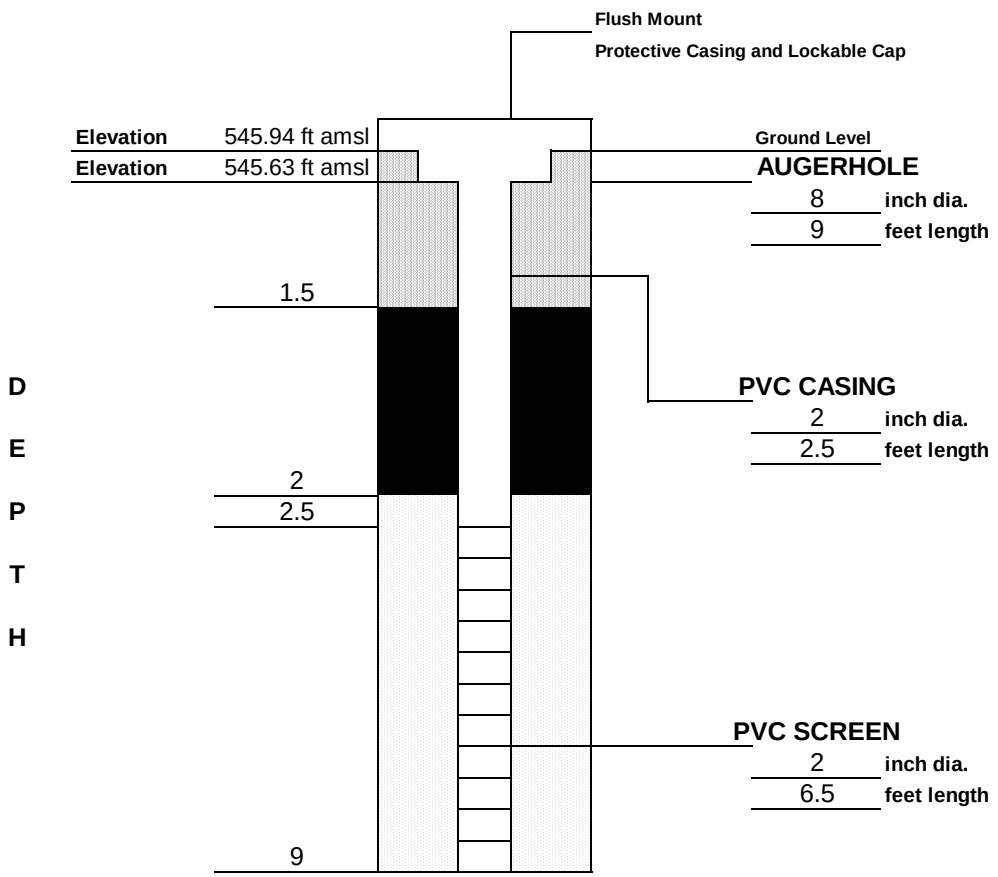
Driller: Steve Loranty

Rig Make/Model: CME-75

Date: 2/28/2017

GEOLOGIC LOG

Depth(ft.)	Description
	See boring log for lithologic description.



WELL DESIGN

CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" PVC	**Type:** 00N Sand **Setting:** 2 to 9 ft
Monitor: 2" PVC	**Slot Size:** 0.010"	***SEAL MATERIAL*** **Type:** Bentonite **Setting:** 1.5 to 2 ft

COMMENTS:

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: Newell Rubbermaid	**Location:** 1 Bernzomatic Dr., Medina	**Project No.:** 25369237.00003
URS Corporation	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number:** MW-19

DRILLING SUMMARY

Geologist: Ernest Thalhamer

Drilling Company: Nothnagle Drilling

Driller: Steve Loranty

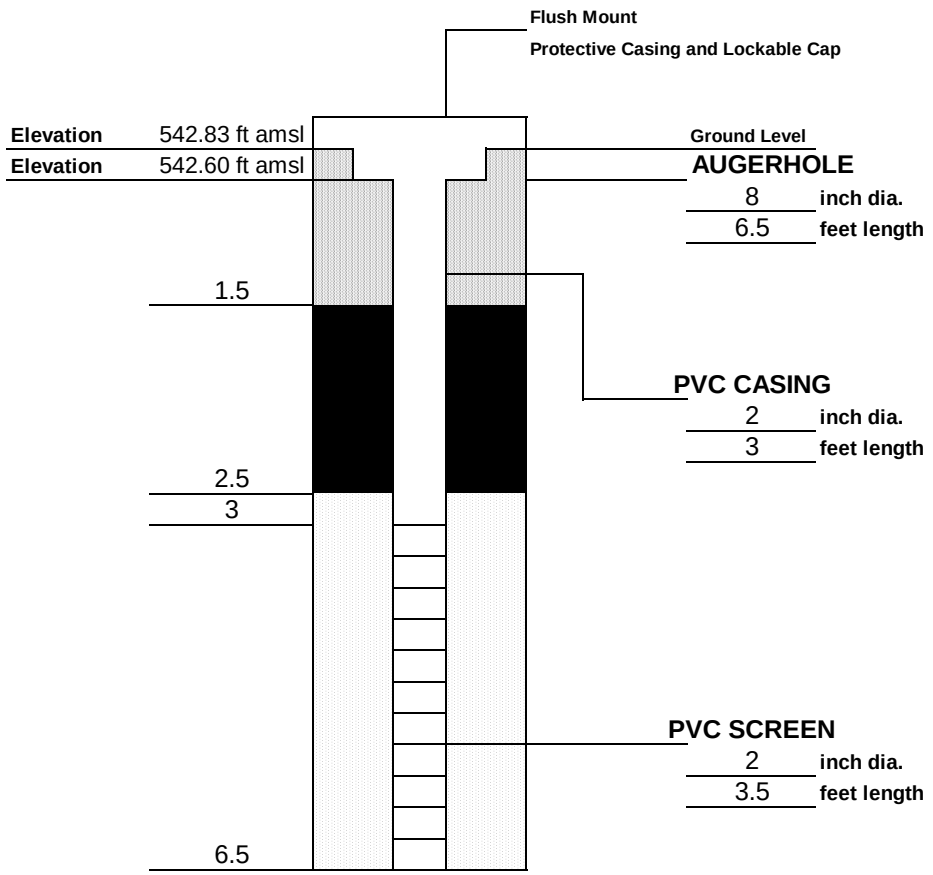
Rig Make/Model: CME-75

Date: 3/1/2017

GEOLOGIC LOG

Depth(ft.)	Description
	See boring log for lithologic description.

DEPTH



WELL DESIGN

CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" PVC	**Type:** 00N Sand **Setting:** 2.5 to 6.5 ft
Monitor: 2" PVC	**Slot Size:** 0.010"	***SEAL MATERIAL*** **Type:** Bentonite **Setting:** 1.5 to 2.5 ft

COMMENTS:

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: Newell Rubbermaid	**Location:** 1 Bernzomatic Dr., Medina	**Project No.:** 25369237.00003
URS Corporation	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number:** MW-21

Pre-Design Investigation
Monitoring Well Construction Logs

DRILLING SUMMARY

Geologist:
E. Au

Drilling Company:
Matrix Envirnonmental

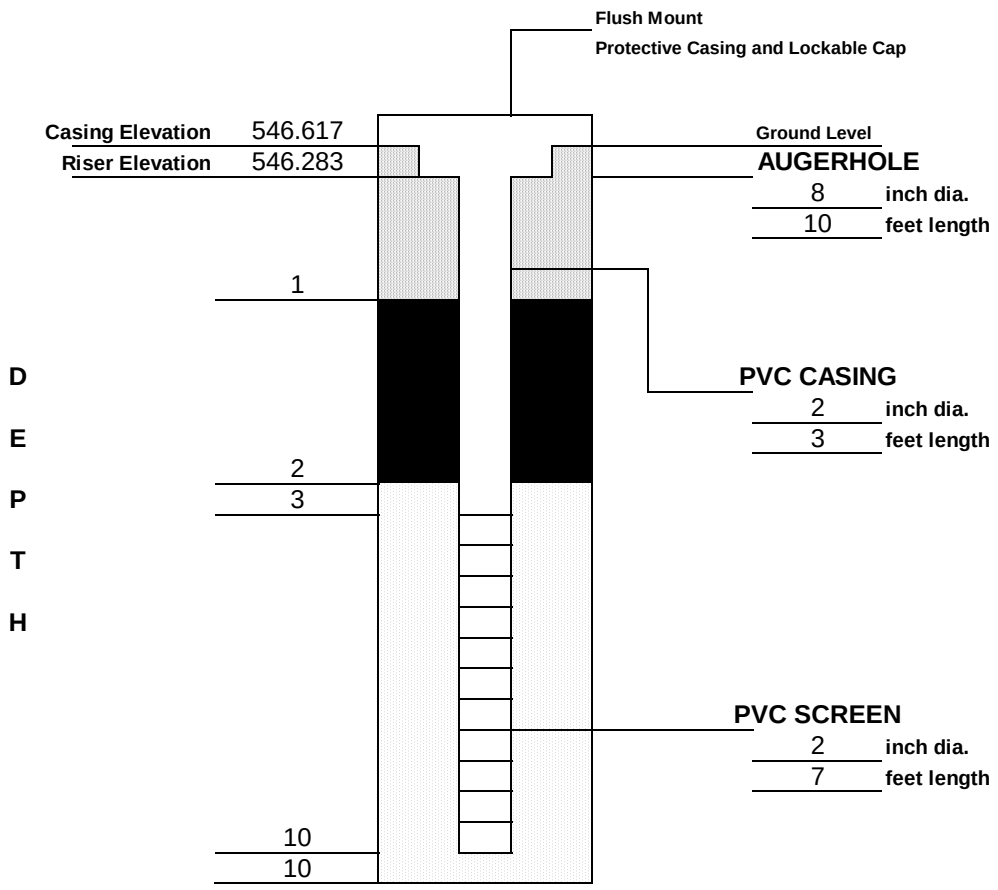
Driller:
R. Reagan

Rig Make/Model:
Geoprobe 6620DT

Date:
4/29/2022

GEOLOGIC LOG

Depth(ft.)	Description
	See Boring Log



WELL DESIGN

CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" PVC	**Type:** 00N Sand **Setting:** 2 to 10 ft
Monitor: 2" PVC	**Slot Size:** 0.010"	***SEAL MATERIAL*** **Type:** Bentonite Holeplug 3/8" **Setting:** 1 to 2 ft

COMMENTS:

7 gal water added.

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: Newell Operating Company	**Location: 1 Bernzomatic Dr., Medina**	**Project No.: 60636810**
URS Corporation	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number: MW-05R**

DRILLING SUMMARY

Geologist:
E. Au

Drilling Company:
Matrix Envirnonmental

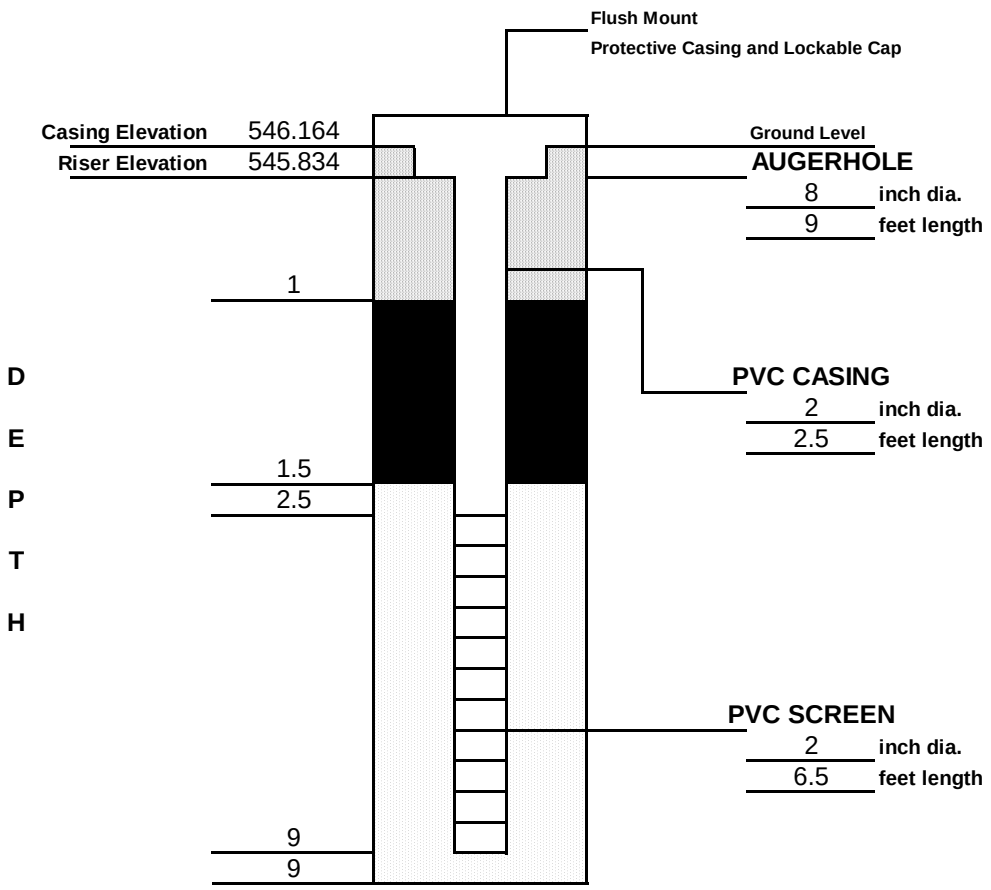
Driller:
R. Reagan

Rig Make/Model:
Geoprobe 6620DT

Date:
4/29/2022

GEOLOGIC LOG

Depth(ft.)	Description
	See Boring Log



WELL DESIGN

CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" PVC	**Type:** 00N Sand **Setting:** 1.5 to 9 ft
Monitor: 2" PVC	**Slot Size:** 0.010"	***SEAL MATERIAL***
		Type: Bentonite Holeplug 3/8" **Setting:** 1 to 1.5 ft

COMMENTS:

5 gal water added.

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: Newell Operating Company	**Location: 1 Bernzomatic Dr., Medina**	**Project No.: 60636810**
URS Corporation	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number: MW-19R**

DRILLING SUMMARY

Geologist:
E. Au

Drilling Company:
Matrix Envirnonmental

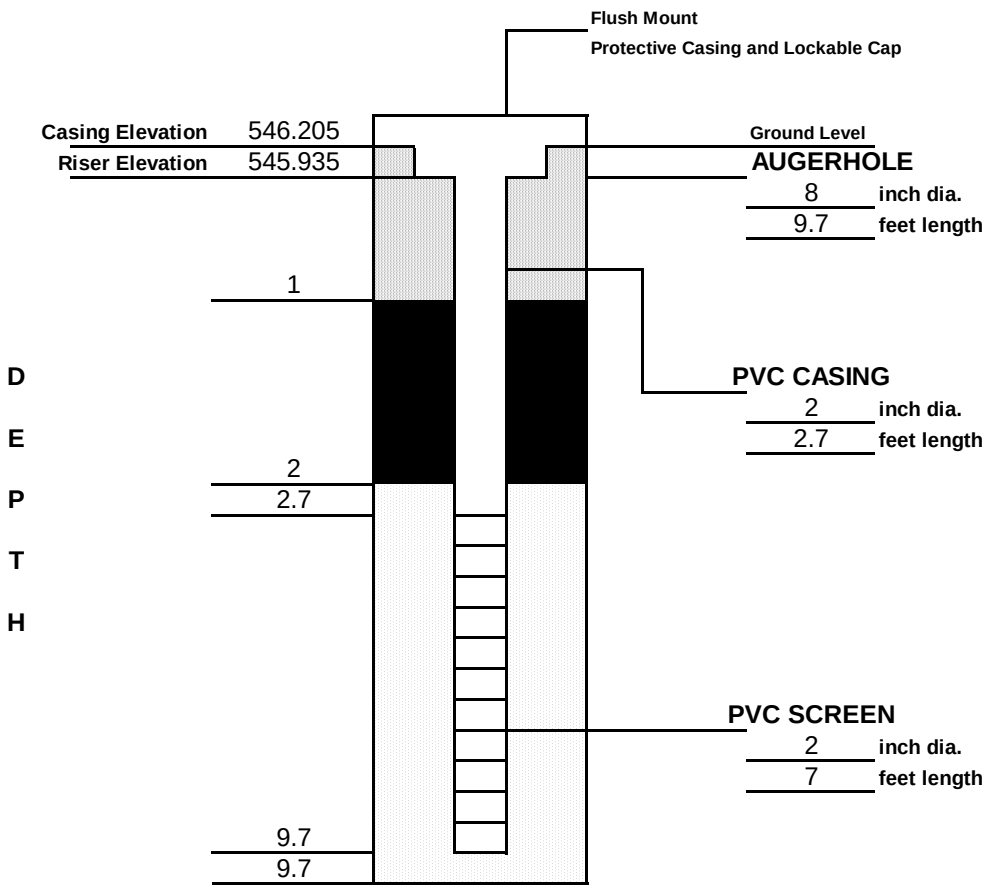
Driller:
R. Reagan

Rig Make/Model:
Geoprobe 6620DT

Date:
4/29/2022

GEOLOGIC LOG

Depth(ft.)	Description
	See Boring Log



D
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WELL DESIGN

CASING MATERIAL	*SCREEN MATERIAL*	*FILTER MATERIAL*
Surface: Steel grade box	**Type:** 2" PVC	**Type:** 00N Sand **Setting:** 2 to 9.7 ft
Monitor: 2" PVC	**Slot Size:** 0.010"	***SEAL MATERIAL*** **Type:** Bentonite Holeplug 3/8" **Setting:** 1 to 2 ft

COMMENTS:

7 gal water added.

LEGEND

- Cement/Bentonite Grout
- Bentonite Seal
- Silica Sandpack

Client: Newell Operating Company	**Location: 1 Bernzomatic Dr., Medina**	**Project No.: 60636810**
URS Corporation	**MONITORING WELL CONSTRUCTION DETAILS**	**Well Number: MW-22**

Well Development Logs

WELL DEVELOPMENT LOG

URS Corporation

PROJECT TITLE: 1 Bernzomatic Drive, Medina, NY WELL NO.: MW-19R

PROJECT NO.: 60636810

STAFF: E.Au / P. Fairbanks

DATE(S): 5/2/2022

			WELL ID.	VOL. (GAL/FT)
1. TOTAL CASING AND SCREEN LENGTH (FT.)	=	8.8	1"	0.04
2. WATER LEVEL BELOW TOP OF CASING (FT.)	=	3.1	2"	0.17
3. NUMBER OF FEET STANDING WATER (#1 - #2)	=	5.7	3"	0.38
4. VOLUME OF WATER/FOOT OF CASING (GAL.)	=	0.17	4"	0.66
5. VOLUME OF WATER IN CASING (GAL.)(#3 x #4)	=	1.0	5"	1.04
6. VOLUME OF WATER TO REMOVE (GAL.)(#5 x ___)	=	4.8	6"	1.50
7. VOLUME OF WATER ACTUALLY REMOVED (GAL.)	=	2	8"	2.60

OR

$V=0.0408 \times (\text{CASING DIAMETER})^2$

	ACCUMULATED VOLUME PURGED (GALLONS)										
PARAMETERS	0.5	1	-	1.5	1.75	2					
pH	-	7.6	-	8.5	8.0	7.9					
SPEC. COND. (umhos)	-	1.214	-	1.440	1.436	1.5					
APPEARANCE	-	choc.milk	-	sl. cloudy	sl. cloudy	sl. cloudy					
TURBIDITY (NTU)	-	2920	-	72.70	51.08	117.31					
TEMPERATURE (°C)	-	10.2	-	10.0	10.0	10.0					
WATER LEVEL (ft bgs)	8.90	7.97	8.33	7.25	7.76	7.13					
TIME	9:49	11:40	13:20	14:30	15:15	16:03					

COMMENTS:

Riser currently left high for final grading prior to completing flushmount. Current stickup 2.20' ft above ground surface - all measurements above as below ground surface (bgs)

Dry @ 0.5 gallons; surged well with surgeblock; purged with peristaltic pump 250 mL/min
11:30 DTW = 7.97. Resurge well and pump - Dry < 5 min @ 11:40
13:20 DTW = 8.33; Turn on pump; < 1/2 gal purged then dry @ 13:23; no parameters
14:30 DTW = 7.25; Turned on pump; pumped dry
15:15 DTW = 7.76; dry after < 1 min
16:00 DTW = 7.13; Dry after < 1 min
Final DTB = 9.08' bgs hard bottom

WELL DEVELOPMENT LOG

URS Corporation

PROJECT TITLE: 1 Bernzomatic Drive, Medina, NY WELL NO.: MW-05R

PROJECT NO.: 60636810

STAFF: E.Au / P. Fairbanks

DATE(S): 5/2/2022

			WELL ID.	VOL. (GAL/FT)
1. TOTAL CASING AND SCREEN LENGTH (FT.)	=	9.0	1"	0.04
2. WATER LEVEL BELOW TOP OF CASING (FT.)	=	3.9	2"	0.17
3. NUMBER OF FEET STANDING WATER (#1 - #2)	=	5.1	3"	0.38
4. VOLUME OF WATER/FOOT OF CASING (GAL.)	=	0.17	4"	0.66
5. VOLUME OF WATER IN CASING (GAL.)(#3 x #4)	=	0.9	5"	1.04
6. VOLUME OF WATER TO REMOVE (GAL.)(#5 x ___)	=	4.3	6"	1.50
7. VOLUME OF WATER ACTUALLY REMOVED (GAL.)	=	14.5	8"	2.60

OR

$V=0.0408 \times (\text{CASING DIAMETER})^2$

	ACCUMULATED VOLUME PURGED (GALLONS)										
PARAMETERS	0	1	2.5	4	6	8	10	12	14.5		
pH	-	7.87	7.18	7.42	7.32	7.28	7.29	7.27	7.27		
SPEC. COND. (umhos)	-	0.700	0.724	0.748	0.769	0.782	0.784	0.794	0.792		
APPEARANCE	choc.milk	choc.milk	choc.milk	cloudy	cloudy	cloudy	sl. cloudy	sl. cloudy	sl. cloudy		
TURBIDITY (NTU)	-	5546	4260	1363	300	250	78.50	68.75	68.49		
TEMPERATURE (°C)	-	9.0	9.0	8.8	8.8	8.8	8.8	8.8	8.8		
WATER LEVEL (ft bgs)	5.80	6.80	6.85	6.9	7.15	7.21	6.88	7.17	7.25		
TIME	10:10	10:15	10:20	10:25	10:30	10:40	10:50	11:00	11:10		

COMMENTS:

Riser currently left high for final grading prior to completing flushmount. Current stickup 1.95 ft above ground surface - all measurements above as below ground surface (bgs)

9:53 Start surge with block; 10:03 done with surge
10:10 pupming with peristatic pump at approx. 1000 ml/min. approx 1.25 gal every 5 min
10:20 resurge with just tubing; started to clear up after about 2 min, surged again.
need to pull an extra 7 gallons out to acocunt for drilling water used to prevent blockage/bridging when the well was built
Done at 11:10

Final DTB = 9.85ft bgs hard bottom

WELL DEVELOPMENT LOG

URS Corporation

PROJECT TITLE: 1 Bernzomatic Drive, Medina, NY WELL NO.: MW-22 (pg 1 of 2)

PROJECT NO.: 60636810

STAFF: E.Au / P. Fairbanks

DATE(S): 5/2/2022

			WELL ID.	VOL. (GAL/FT)
1. TOTAL CASING AND SCREEN LENGTH (FT.)	=	9.2	1"	0.04
2. WATER LEVEL BELOW TOP OF CASING (FT.)	=	3.4	2"	0.17
3. NUMBER OF FEET STANDING WATER (#1 - #2)	=	5.8	3"	0.38
4. VOLUME OF WATER/FOOT OF CASING (GAL.)	=	0.17	4"	0.66
5. VOLUME OF WATER IN CASING (GAL.)(#3 x #4)	=	1.0	5"	1.04
6. VOLUME OF WATER TO REMOVE (GAL.)(#5 x ___)	=	5.0	6"	1.50
7. VOLUME OF WATER ACTUALLY REMOVED (GAL.)	=	15	8"	2.60

OR

$V=0.0408 \times (\text{CASING DIAMETER})^2$

	ACCUMULATED VOLUME PURGED (GALLONS)										
PARAMETERS	0	1	2	2.5	3	4	4.5	5	6	7	9
pH	-	7.46	7.01	7.01	7.55	7.07	8.08	7.26	7.13	7.10	7.09
SPEC. COND. (umhos)	-	1.214	1.283	1.308	1.283	1.406	1.537	1.537	1.496	1.587	1.573
APPEARANCE	choc.milk	choc.milk	choc.milk	choc.milk	choc.milk	choc.milk	choc.milk	choc.milk	cloudy	cloudy	cloudy
TURBIDITY (NTU)	-	5722	4498	758	1467	5636	1700	3972	1094	1037	245
TEMPERATURE (°C)	-	9.9	9.7	9.7	11.2	9.9	12.1	10	10.0	10.1	10.4
WATER LEVEL (ft bgs)	5.25	6.85	7.15	dry 7.15	6.1	dry 9.23	3.5	6.25	7.95	9.52	dry 9.60
TIME	9:20	9:25	9:30	9:35	11:55	12:05	12:45	12:50	13:00	13:05	13:10

COMMENTS:

Riser currently left high for final grading prior to completing flushmount. Current stickup 2.55 ft above ground surface - all measurements above as below ground surface (bgs)

9:00 soft bottom at start; start surging with surge block; 9:20 switch to peristaltic pump for purging; 800-900 mL/min; dry after about 2.5 gallons

11:50 DTW = 3.47 ft bgs; surge with surge block again for approx. 5 min. then repurge; dry after 1.5 additional gallons purged (4 total)

12:45 DTW = 3.50 ft bgs; no additional surge; turn on pump;

13:05 started to get slugs of air, water coming up is pure recharge; pumping at approx. 500 mL/min

13:15 dry stopped and let recharge

14:35 Recharged to 3.45 ft bgs; reastart pump; at 14:47 started to get air slugs again, continued to purge recharging water until 15 gals

Final DTB = 9.60 ft bgs

WELL DEVELOPMENT LOG

URS Corporation

PROJECT TITLE: 1 Bernzomatic Drive, Medina, NY WELL NO.: MW-22 (pg 2 of 2)

PROJECT NO.: 60636810

STAFF: E.Au / P. Fairbanks

DATE(S): 5/2/2022

			WELL ID.	VOL. (GAL/FT)
1. TOTAL CASING AND SCREEN LENGTH (FT.)	=	9.2	1"	0.04
2. WATER LEVEL BELOW TOP OF CASING (FT.)	=	3.4	2"	0.17
3. NUMBER OF FEET STANDING WATER (#1 - #2)	=	5.8	3"	0.38
4. VOLUME OF WATER/FOOT OF CASING (GAL.)	=	0.17	4"	0.66
5. VOLUME OF WATER IN CASING (GAL.)(#3 x #4)	=	1.0	5"	1.04
6. VOLUME OF WATER TO REMOVE (GAL.)(#5 x ___)	=	5.0	6"	1.50
7. VOLUME OF WATER ACTUALLY REMOVED (GAL.)	=	15	8"	2.60

OR

$V=0.0408 \times (\text{CASING DIAMETER})^2$

	ACCUMULATED VOLUME PURGED (GALLONS)										
PARAMETERS	10	11	12	13	14	15					
pH	6.98	6.99	7.06	7.06	7.06	7.07					
SPEC. COND. (umhos)	1.580	1.559	1.605	1.588	1.612	1.605					
APPEARANCE	cloudy	sl. cloudy	sl. cloudy	sl. cloudy	sl. cloudy	clearing					
TURBIDITY (NTU)	611	633	52.06	49.87	63.70	27.41					
TEMPERATURE (°C)	9.7	9.9	9.9	9.9	9.9	9.9					
WATER LEVEL (ft bgs)	8.46	9.60	9.60	9.60	9.60	9.60					
TIME	13:45	14:50	14:55	15:00	15:05	15:10					

COMMENTS:

Riser currently left high for final grading prior to completing flushmount. Current stickup 2.55 ft above ground surface - all measurements above as below ground surface (bgs)

9:00 soft bottom at start; start surging with surge block; 9:20 switch to peristaltic pump for purging; 800-900 mL/min; dry after about 2.5 gallons

11:50 DTW = 3.47 ft bgs; surge with surge block again for approx. 5 min. then repurge; dry after 1.5 additional gallons purged (4 total)

12:45 DTW = 3.50 ft bgs; no additional surge; turn on pump;

13:05 started to get slugs of air, water coming up is pure recharge; pumping at approx. 500 mL/min

13:15 dry stopped and let recharge

14:35 Recharged to 3.45 ft bgs; reastart pump; at 14:47 started to get air slugs again, continued to purge recharging water until 15 gals

Final DTB = 9.60 ft bgs

Groundwater Purge Logs

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 60636810.00000 Site: Benzomatic Well I.D.: PDI-1

Date: 4/29/21 Sampling Personnel: E. AU Company: URS

Purging/Sampling Device: Peri pump Tubing Type: LDPE Pump/Tubing Inlet Location: Screen midpoint

SP-22 Screenpoint 8-12' Temp Samp

Measuring Point: Below Top of Riser Initial Depth to Water: _____ Depth to Well Bottom: 12 Well Diameter: _____ Screen Length: 4'

Casing Type: PVC Volume in 1 Well Casing (liters): _____ Estimated Purge Volume (liters): _____

Sample ID: PDI-1_GW Sample Time: 1015 QA/QC: NO

Sample Parameters: VOCs

PURGE PARAMETERS

TIME	pH	TEMP (°C)	SP. COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
1015	3.11	8.8	1.480	1.58	2249	-101.2	—	—
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---	

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

Remarks:

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 60636810 Site: Bernzomatic Well I.D.: PDI-2

Date: 4/27/22 Sampling Personnel: E.Av Company: URS

Purging/Sampling Device: Peristaltic Tubing Type: LDPE Pump/Tubing Inlet Location: SP-22 Screenpoint Sample / Screen midpoint

Measuring Point: Below Top of Riser Initial Depth to Water: _____ Depth to Well Bottom: 11 Well Diameter: Hydropunch Screen Length: 7-11 (4')

Casing Type: PVC Volume in 1 Well Casing (liters): _____ Estimated Purge Volume (liters): _____

Sample ID: PDI-2-GW Sample Time: 1220 QA/QC: None

Sample Parameters: VOCs

PURGE PARAMETERS

TIME	pH	TEMP (°C)	Sp. COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
1220	7.51	7.4	1.482	2.92	236.2	-67.6	—	
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---	

Information: WATER VOLUMES–0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

Remarks:

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 60636810 Site: Bernzomatic Well I.D.: PDI-3

Date: 4/27/22 Sampling Personnel: E. AV Company: URS

Purging/Sampling Device: Peristaltic Tubing Type: LDPE Pump/Tubing Inlet Location: SP-22 Screenpoint Grab Screen midpoint

Measuring Point: Below Top of Riser Initial Depth to Water: 4.0 Depth to Well Bottom: 10 Well Diameter: 1 Screen Length: 6-10

Casing Type: PVC Volume in 1 Well Casing (liters): — Estimated Purge Volume (liters): —

Sample ID: PDI-3_GW Sample Time: 1430 QA/QC: None

Sample Parameters: VOCS

PURGE PARAMETERS

TIME	pH	TEMP (°C)	Sp. COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
1430	7.11	8.8	1.459	1.15	3189	-78.6	—	4.0
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---	

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

Remarks:

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 60636810 Site: Bernzomatic Well I.D.: PDI-4

Date: 4/28/22 Sampling Personnel: E.Au / P. Fairbanks Company: URS

Purging/Sampling Device: Peristaltic Tubing Type: LDPE Pump/Tubing Inlet Location: SP-22 Screening Well point Screen midpoint

Measuring Point: Below Top of Riser Initial Depth to Water: 4' Depth to Well Bottom: 10' Well Diameter: 1" Screen Length: 4 ft

Casing Type: PVC Volume in 1 Well Casing (liters): - Estimated Purge Volume (liters): -

Sample ID: PDI-4_GW Sample Time: 926 QA/QC: None

Sample Parameters: VOCs

PURGE PARAMETERS

TIME	pH	TEMP (°C)	Sp. COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
926	7.25	11.1	1.705	0.51	3563	-146.1	-	4'
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---	

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

Remarks:

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 60636810 Site: Bernzomatic Well I.D.: PDI-5

Date: 4/28/22 Sampling Personnel: E.Au / P. Fairbanks Company: URS

Purging/Sampling Device: Peristaltic Tubing Type: LDPE Pump/Tubing Inlet Location: SP-22 Screening Well point Screen midpoint

Measuring Point: Below Top of Riser Initial Depth to Water: 3' Depth to Well Bottom: 10' Well Diameter: 1" Screen Length: 4 ft

Casing Type: PVC Volume in 1 Well Casing (liters): - Estimated Purge Volume (liters): -

Sample ID: PDI-5_GW Sample Time: 1230 QA/QC: None

Sample Parameters: VOCs

PURGE PARAMETERS

TIME	pH	TEMP (°C)	Sp. COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
1230	8.34	14.4	1.223	1.29	4458	-145.7	—	3'
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---	

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

Remarks:

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 60636810 Site: Bernzomatic Well I.D.: PDI-6

Date: 4/27/22 Sampling Personnel: E.Av Company: URS

Purging/Sampling Device: Peri Tubing Type: LDPE Pump/Tubing Inlet Location: Screen midpoint

Measuring Point: Below Top of Riser Initial Depth to Water: 2' Depth to Well Bottom: 11.3' Well Diameter: — Screen Length: 7-11

Casing Type: PVC Volume in 1 Well Casing (liters): — Estimated Purge Volume (liters): —

Sample ID: PDI-6_GW Sample Time: 1108 QA/QC: NONE

Sample Parameters: VOCs

PURGE PARAMETERS

TIME	pH	TEMP (°C)	Sp. COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
1108	7.49	8.13	1.596	1.02	696.7	-127.3	—	— 2'
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---	

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

Remarks:

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 60636810 Site: Bernzomatic Well I.D.: PDI-7

Date: 4/27/22 Sampling Personnel: E. Au Company: URS

Purging/Sampling Device: Peristaltic Tubing Type: LDPE Pump/Tubing Inlet Location: SP-22 Grab sample Screen midpoint

Measuring Point: Below Top of Riser Initial Depth to Water: _____ Depth to Well Bottom: 10 Well Diameter: _____ Screen Length: 6-10'

Casing Type: PVC Volume in 1 Well Casing (liters): — Estimated Purge Volume (liters): —

Sample ID: PDI-7 Sample Time: 1315 QA/QC: None

Sample Parameters: VOCs

PURGE PARAMETERS

TIME	pH	TEMP (°C)	Sp. COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
1315	7.50	7.7	1.990	2.40	1402	-34.7	—	
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---	

Information: WATER VOLUMES–0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

Remarks:

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 60636810 Site: Bernzomatic Well I.D.: PDI-8

Date: 4/27/22 Sampling Personnel: E.Au Company: URS

Purging/Sampling Device: Peristaltic Tubing Type: LDPE Pump/Tubing Inlet Location: SP-22 Screenpoint sample Screen midpoint

Measuring Point: Below Top of Riser Initial Depth to Water: est. 6 Depth to Well Bottom: 10 Well Diameter: 1 Screen Length: 6-10

Casing Type: PVC Volume in 1 Well Casing (liters): Estimated Purge Volume (liters):

Sample ID: PDI-8_GW Sample Time: 1510 QA/QC: None

Sample Parameters: VOCs

PURGE PARAMETERS

TIME	pH	TEMP (°C)	Sp. COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
1510	7.39	9.0	1.758	4.33	4927	-62.4	—	~6
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---	

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

Remarks:

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 60636810 Site: Bernzomatic Well I.D.: PDI-9 ~~GW~~

Date: 4/28/22 Sampling Personnel: E.Au / P. Fairbanks Company: URS

Purging/Sampling Device: Peristaltic Tubing Type: LDPE Pump/Tubing Inlet Location: SP-22 Screening Well point Screen midpoint

Measuring Point: Below Top of Riser Initial Depth to Water: 3.4* Depth to Well Bottom: 10' Well Diameter: 1" Screen Length: 4 ft

Casing Type: PVC Volume in 1 Well Casing (liters): - Estimated Purge Volume (liters): -

Sample ID: PDI-9_GW Sample Time: 1030 QA/QC: None

Sample Parameters: VOCs

PURGE PARAMETERS

TIME	pH	TEMP (°C)	Sp. COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
1030	7.46	11.0	0.857	1.69	4219	-61.3	-	3.4'
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---	

* after tubing comes out.

Information: WATER VOLUMES–0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

Remarks:

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 60636810 Site: Bernzomatic Well I.D.: PDI-10

Date: 4/28/22 Sampling Personnel: E.Au / P. Fairbanks Company: URS

Purging/Sampling Device: Peristaltic Tubing Type: LDPE Pump/Tubing Inlet Location: SP-22 Screening Well point Screen midpoint

Measuring Point: Below Top of Riser Initial Depth to Water: 3.50 Depth to Well Bottom: 10' Well Diameter: 1" Screen Length: 4 ft

Casing Type: PVC Volume in 1 Well Casing (liters): - Estimated Purge Volume (liters): -

Sample ID: PDI-10-GW Sample Time: 1130 QA/QC: None

Sample Parameters: VOCs

PURGE PARAMETERS

TIME	pH	TEMP (°C)	Sp. COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
1130	7.37	11.1	1.287	1.12	1232	-56.4	-	3.80
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---	

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

Remarks:

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 60636810 Site: Bernzomatic Well I.D.: PDI - 11

Date: 4/28/22 Sampling Personnel: E.Au / P. Fairbanks Company: URS

Purging/ Sampling Device: Peristaltic Tubing Type: LDPE Pump/Tubing Inlet Location: SP-22 Screening Well point Screen midpoint

Measuring Point: Below Top of Riser Initial Depth to Water: 4.30' Depth to Well Bottom: 10 Well Diameter: 1" Screen Length: 4 ft

Casing Type: PVC Volume in 1 Well Casing (liters): - Estimated Purge Volume (liters): -

Sample ID: PDI - 11 - GW Sample Time: 1340 QA/QC: None

Sample Parameters: VOCs

PURGE PARAMETERS

TIME	pH	TEMP (°C)	Sp. COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
1340	7.82	11.3	0.831	1.91	5469	-3.3	-	4.30
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---	

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

Remarks:

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 60636810.00000 Site: Benzomatic Well I.D.: PDI-12

Date: 4/28/22 Sampling Personnel: E. Au / P. Faibanks Company: URS

Purging/Sampling Device: Peristatic Tubing Type: LDPE Pump/Tubing Inlet Location: SP-22 Screenpoint 6-10' Screen midpoint

Measuring Point: Below Top of Riser Initial Depth to Water: ~5' Depth to Well Bottom: 10 Well Diameter: 1" Screen Length: 4'

Casing Type: PVC Volume in 1 Well Casing (liters): — Estimated Purge Volume (liters): —

Sample ID: PDI-12_GW Sample Time: 1455 QA/QC: None

Sample Parameters: VOCs

PURGE PARAMETERS

TIME	pH	TEMP (°C)	SP. COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
1455	7.77	13.1	1.344	4.93	6309	103.0	—	~5'
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---	

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

Remarks: went dry while taking sample (sucking air) lowered tubing. (tightened fill)

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 60636810 Site: Bernzomatic Well I.D.: MW-05R

Date: 5/9/22 Sampling Personnel: E.Au Company: URS

Purging/Sampling Device: Peristaltic Tubing Type: LDPE Pump/Tubing Inlet Location: Screen midpoint

Measuring Point: Below Top of Riser Initial Depth to Water: 5.16 ft Depth to Well Bottom: 11.77 ft Well Diameter: 2" Screen Length: ft

Casing Type: PVC Volume in 1 Well Casing (liters): - Estimated Purge Volume (liters): -

Sample ID: MW-05R Sample Time: 1333 QA/QC: none

Sample Parameters: VOCs (8260C); Total Metals (6010C/7470B); Dissolved Iron (6010 C - Field Filtered); Alkalinity (2320-B); Chloride (300.0); Methane (RSK-175); Nitrate (300.0); Sulfate (300.0)

PURGE PARAMETERS

TIME	pH	TEMP (°C)	Sp. COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
1258	9.34	11.2	0.736	2.12	48.19	61.6	320	5.16
1303	8.07	10.5	0.732	1.18	29.67	64.2	280	5.56
1308	7.76	10.5	0.736	0.84	9.37	59.4	280	5.57
1313	7.64	10.6	0.742	0.71	6.15	53.5	280	5.59
1318	7.60	10.5	0.746	0.64	7.04	49.7	280	5.60
1323	7.57	10.6	0.750	0.60	4.99	46.7	280	5.61
1328	7.55	10.5	0.754	0.59	4.72	44.3	280	5.61
1333	7.53	10.4	0.758	0.60	4.57	42.1	280	5.61
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---	

Information: WATER VOLUMES–0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

Remarks:

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 60636810 Site: Bernzomatic Well I.D.: MW-07

Date: 5/9/22 Sampling Personnel: E.Au Company: URS

Purging/Sampling Device: Peristaltic Tubing Type: LDPE Pump/Tubing Inlet Location: Screen midpoint

Measuring Point: Below Top of Riser Initial Depth to Water: 4.38' Depth to Well Bottom: 8.84 ft Well Diameter: 2" Screen Length: ft

Casing Type: PVC Volume in 1 Well Casing (liters): - Estimated Purge Volume (liters): -

Sample ID: MW-07 Sample Time: 1449 QA/QC: none

Sample Parameters: VOCs (8260C); Total Metals (6010C/7470B); Dissolved Iron (6010 C - Field Filtered); Alkalinity (2320-B); Chloride (300.0); Methane (RSK-175); Nitrate (300.0); Sulfate (300.0)

PURGE PARAMETERS

TIME	pH	TEMP (°C)	Sp. COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
1409	8.90	11.2	0.683	1.38	87.27	80.5	300	3.95
1414	7.58	10.6	0.672	0.54	24.58	52.2	300	4.11
1419	7.41	10.5	0.662	0.50	15.16	8.4	300	4.13
1424	7.35	10.6	0.657	0.49	13.85	-12.1	300	4.20
1429	7.33	10.4	0.658	0.57	14.45	-19.9	300	4.23
1434	7.29	10.4	0.658	0.57	12.67	-26.6	300	4.24
1439	7.26	10.5	0.663	0.52	9.31	-32.1	300	4.25
1444	7.25	10.4	0.663	0.49	9.70	-35.4	300	4.28
1449	7.24	10.4	0.663	0.47	9.45	-37.7	300	4.27
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---	

Information: WATER VOLUMES–0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

Remarks:

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 60636810 Site: Bernzomatic Well I.D.: MW-14

Date: 5/9/22 Sampling Personnel: P. Fairbanks Company: URS

Purging/Sampling Device: Peristaltic Tubing Type: LDPE Pump/Tubing Inlet Location: Screen midpoint

Measuring Point: Below Top of Riser Initial Depth to Water: 1.80 Depth to Well Bottom: 9.22 Well Diameter: 2" Screen Length:

Casing Type: PVC Volume in 1 Well Casing (liters): Estimated Purge Volume (liters):

Sample ID: MW-14 Sample Time: 0922 QA/QC: none

Sample Parameters: VOCs, Metals

PURGE PARAMETERS

TIME	pH	TEMP (°C)	Sp. COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
0842	7.41	10.2	1.113	1.58	70.60	-14.8	300	1.88
0847	6.99	10.4	1.041	0.66	37.99	-16.2	300	1.89
0852	6.95	10.7	0.902	0.83	42.14	-11.7	300	1.90
0857	6.92	10.9	0.928	0.80	16.01	-23.0	300	1.90
0902	6.89	10.9	0.988	0.53	5.70	-28.1	300	1.91
0907	6.86	10.9	1.057	0.42	4.00	-30.4	300	1.91
0912	6.84	11.0	1.111	0.38	3.68	-32.1	300	1.92
0917	6.83	11.0	1.140	0.36	4.09	-32.0	300	1.92
0922	6.81	11.0	1.176	0.34	7.80	-32.1	300	1.92
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---	

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

Remarks:

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 60636810 Site: Bernzomatic Well I.D.: MW-16

Date: 5/10/22 Sampling Personnel: ~~BMB~~ T. Urban Company: URS

Purging/Sampling Device: Peristaltic Tubing Type: LDPE Pump/Tubing Inlet Location: Screen midpoint

Measuring Point: Below Top of Riser Initial Depth to Water: 2.60 Depth to Well Bottom: ~~2.60~~ 5.45 ft Well Diameter: 2" Screen Length: ft

Casing Type: PVC Volume in 1 Well Casing (liters): 1.76 Estimated Purge Volume (liters): -

Sample ID: MW-16 Sample Time: 10:00 QA/QC: None

Sample Parameters: VOCs (8260C); Total Metals (6010C/7470B); ~~Dissolved Iron (6010 C - Field Filtered); Alkalinity (2320-B); Chloride (300.0); Methane (RSK-175); Nitrate (300.0); Sulfate (300.0)~~

PURGE PARAMETERS

TIME	pH	TEMP (°C)	Sp. COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
0940	7.32	12.1	3.642	1.16	10.36	-98.4	170	2.60
0945	7.05	12.0	3.490	0.74	9.10	-104.8	170	3.55
0950	7.01	11.9	3.570	0.61	8.99	-105.8	170	3.85
0955	7.00	11.9	3.595	0.58	5.29	-107.6	170	3.87
1000	7.00	11.9	3.600	0.56	4.76	-108.6	170	3.88
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---	

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

Remarks:

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 60636810 Site: Bernzomatic Well I.D.: MW-17

Date: 5/10/22 Sampling Personnel: T. O'Leary Company: URS

Purging/Sampling Device: Peristaltic Tubing Type: LDPE Pump/Tubing Inlet Location: Screen midpoint

Measuring Point: Below Top of Riser Initial Depth to Water: 3.25 Depth to Well Bottom: 8.68 ft Well Diameter: 2" Screen Length: ft

Casing Type: PVC Volume in 1 Well Casing (liters): 3.35 Estimated Purge Volume (liters): -

Sample ID: MW-17 Sample Time: 1220 QA/QC: none

Sample Parameters: VOCs (8260C); Total Metals (6010C/7470B); ~~Dissolved Iron (6010 C - Field Filtered); Alkalinity (2320-B); Chloride (300.0); Methane (RSK-175); Nitrate (300.0); Sulfate (300.0)~~

PURGE PARAMETERS

TIME	pH	TEMP (°C)	Sp. COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
1155	7.16	10.7	1.654	1.34	96	132.3	180	3.25
1200	7.51	10.1	1.650	0.64	25.9	-135.6	180	4.50
1205	7.48	10.0	1.602	0.51	12.36	-140.2	180	5.45
1210	7.47	10.0	1.592	0.47	13.1	-140.7	180	5.45
1215	7.46	10.0	1.606	0.49	12.4	-139.5	180	5.45
1220	7.45	10.0	1.618	0.47	10.21	-139.7	180	5.45
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---	

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

Remarks:

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 60636810 Site: Bernzomatic Well I.D.: MW-19R

Date: 5/9/22 Sampling Personnel: P. Fairbanks Company: URS

Purging/Sampling Device: Peristaltic Tubing Type: LDPE Pump/Tubing Inlet Location: Screen midpoint

Measuring Point: Below Top of Riser Initial Depth to Water: 5.48 Depth to Well Bottom: 11.26 Well Diameter: 2" Screen Length: 6.5'

Casing Type: PVC Volume in 1 Well Casing (liters): Estimated Purge Volume (liters):

Sample ID: MW-19R Sample Time: 0910 (5/10/22) QA/QC: none

Sample Parameters: VOCs + metals

PURGE PARAMETERS

TIME	pH	TEMP (°C)	Sp. COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
0948	8.41	11.5	1.437	2.14	2.70	44.7	250	5.48
0953	7.76	10.9	1.247	1.59	167.2	36.2	240	7.40
0958	7.44	11.0	1.167	1.55	309.23	22.8	240	8.72
1003	7.34	11.1	1.134	2.17	331.65	33.7	220	10.49
1232								6.65
0910	7.87	13.2	1.398	4.36	20.0	121.7	—	5.46
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---	

5/10

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

Remarks:

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 60636810 Site: Bernzomatic Well I.D.: MW-21

Date: 5/10/22 Sampling Personnel: T. Urban E.Au Company: URS

Purging/Sampling Device: Peristaltic Tubing Type: LDPE Pump/Tubing Inlet Location: Screen midpoint

Measuring Point: Below Top of Riser Initial Depth to Water: 1.72 Depth to Well Bottom: 5.86 ft Well Diameter: 2" Screen Length: ft

Casing Type: PVC Volume in 1 Well Casing (liters): 2.55 Estimated Purge Volume (liters): -

Sample ID: MW-21 Sample Time: 1115 QA/QC: Dup. FD-051022

Sample Parameters: VOCs (8260C); Total Metals (6010C/7470B); Dissolved Iron (6010 C - Field Filtered); Alkalinity (2320-B); Chloride (300.0); Methane (RSK-175); Nitrate (300.0); Sulfate (300.0)

PURGE PARAMETERS

TIME	pH	TEMP (°C)	Sp. COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
1045	8.15	12.8	9.620	3.07	43.7	80.0	200	1.72
1050	7.67	12.5	9.556	0.86	15.9	56.1	200	2.76
1055	7.49	12.9	9.361	0.60	19.4	34.8	200	3.10
1100	7.44	12.9	8.764	0.61	23.7	11.3	200	3.12
1105	7.43	12.9	8.605	0.57	13.1	2.7	200	3.15
1110	7.41	12.9	8.822	0.52	9.59	-2.5	200	3.20
1115	7.40	12.8	8.786	0.47	6.28	-5.5	200	3.35
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---	

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

Remarks:

LOW FLOW GROUNDWATER PURGING/SAMPLING LOG

Project: 60636810 Site: Bernzomatic Well I.D.: MW-22

Date: 5/9/22 Sampling Personnel: P. Fairbanks ~~E.Au~~ Company: URS

Purging/Sampling Device: Peristaltic Tubing Type: LDPE Pump/Tubing Inlet Location: Screen midpoint

Measuring Point: Below Top of Riser Initial Depth to Water: 5.57' Depth to Well Bottom: 12.16 ft Well Diameter: 2" Screen Length: ft

Casing Type: PVC Volume in 1 Well Casing (liters): - Estimated Purge Volume (liters): -

Sample ID: MW-22 Sample Time: 1129 QA/QC: MS/MSD

Sample Parameters: VOCs (8260C); Total Metals (6010C/7470B); Dissolved Iron (6010 C - Field Filtered); Alkalinity (2320-B); Chloride (300.0); Methane (RSK-175); Nitrate (300.0); Sulfate (300.0)

PURGE PARAMETERS

TIME	pH	TEMP (°C)	Sp. COND. (mS/cm)	DISS. O_2 (mg/l)	TURB. (NTU)	ORP (mV)	FLOW RATE (ml/min.)	DEPTH TO WATER (btor)
1037	7.65	11.3	1.821	1.46	108.42	96.6	300	6.18
1042	7.24	10.9	1.688	0.69	84.19	54.0	320	6.38
1047	7.16	10.8	1.687	0.64	214.74	28.7	300	6.50
1052	7.12	10.8	1.670	0.59	238.01	13.5	320	6.57
1059	7.09	10.7	1.656	0.57	222.35	7.2	300	6.53
1104	7.07	10.9	1.653	0.55	202.43	4.0	300	6.56
1109	7.07	10.9	1.658	0.57	187.33	2.1	300	6.55
1114	7.06	10.9	1.644	0.58	180.09	0.6	300	6.56
1119	7.04	10.8	1.646	0.53	136.75	-0.9	300	6.58
1124	7.03	10.8	1.642	0.50	127.68	-2.8	300	6.60
1129	7.03	10.8	1.638	0.50	104.25	-4.0	300	6.54
Tolerance:	0.1	---	3%	10%	10%	+ or - 10	---	

Information: WATER VOLUMES--0.75 inch diameter well = 87 ml/ft; 1 inch diameter well = 154 ml/ft; 2 inch diameter well = 617 ml/ft; 4 inch diameter well = 2470 ml/ft ($vol_{cyl} = \pi r^2 h$)

Remarks:

Attachment 2

DATA USABILITY SUMMARY REPORT

REMEDIAL INVESTIGATION
FORMER BERNZOMATIC FACILITY
MEDINA, NEW YORK
NYSDEC SITE #C837018

Analyses Performed by:

TESTAMERICA LABORATORIES, INC.
AMHERST, NY

Prepared for:

IRWIN INDUSTRIAL TOOL COMPANY
c/o NEWELL BRANDS, INC.

Prepared by:

AECOM
ONE JOHN JAMES AUDUBON PARKWAY
SUITE 210
AMHERST, NEW YORK 14228

JUNE 2022

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Table 2 Validated Groundwater Sample Results

Table 3 Validated Field QC Sample Results

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Attachment A Validated Form 1's

Attachment B Support Documentation

1.0 INTRODUCTION

This Data Usability Summary Report (DUSR) has been prepared following the guidelines provided in New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation *DER-10, Technical Guidance for Site Investigation and Remediation, Appendix 2B - Guidance for Data Deliverables and the Development of Data Usability and Summary Reports*, May 2010. This DUSR discusses the data usability for: 12 soil samples, 1 soil field duplicate (FD), 1 soil matrix spike/matrix spike duplicate (MS/MSD) pair; 20 groundwater (GW) samples, 1 GW FD, 1 GW MS/MSD, 2 rinse blanks, and 4 trip blanks collected by AECOM personnel on April 27 thru May 10, 2022. The samples were collected in support of the Remedial Investigation at the Former Bernzomatic Facility (NYSDEC Site #C837018), located in Medina, New York.

2.0 ANALYTICAL METHODOLOGIES/DATA VALIDATION PROCEDURES

The samples were sent to TestAmerica Laboratories, Inc. (Amherst, NY) for analysis, and were analyzed for the following parameters (not all samples were analyzed for all parameters):

- Volatile Organic Compounds (VOCs) by United States Environmental Protection Agency (USEPA) Method SW8260C;
- Methane by USEPA Robert S. Kerr (RSK)-175;
- Metals/Mercury by USEPA Method 6010C, 7470A, and 7471B;
- Dissolved Iron by USEPA Method 6010C;
- Total Alkalinity by Standard Methods SM2320B; and
- Chloride/Nitrate/Sulfate by USEPA Method 300.0.

A limited data validation was performed in accordance with the guidelines in the following USEPA Region II documents:

- *Validating Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry SW-846 Method 8260B & 8260C*, SOP HW-24, Revision 4, October 2014;
- *ICP-AES Data Validation, SOP HW-3a, Rev. 1,* September 2016*;* and
- *Mercury and Cyanide Data Validation, SOP HW-3c, Rev. 1,* September 2016.

The limited validation included: a review of completeness of all required deliverables; holding times; a review of quality control (QC) results [blanks, instrument tunes, calibration standards, MS/MSD recoveries, and laboratory control sample (LCS) recoveries] to determine if the data are within the protocol-required limits and specifications; a determination that all samples were analyzed using established and agreed upon analytical protocols; an evaluation of the raw data to confirm the results provided in the data summary sheets; and a review of laboratory data qualifiers.

Qualifications applied to the data during the validation include 'J' (estimated concentration), 'UJ' [estimated quantitation limit (QL)], and 'U' (non-detect). Definitions of USEPA Region II data qualifiers are presented at the end of this text. The validated analytical results for all samples are presented in Tables 1 through 3. Copies of the validated laboratory results (i.e., Form 1's) are presented in Attachment A. Documentation supporting the qualification of data is presented in Attachment B. Only analytical deviations affecting data usability are discussed in this report.

3.0 DATA DELIVERABLE COMPLETENESS

Full deliverable data packages [i.e., NYSDEC Analytical Services Protocol (ASP) Category B (or equivalent)] were provided by the laboratory, which included all reporting forms and raw data necessary to fully evaluate and verify the reported analytical results.

4.0 SAMPLE RECEIPT/PRESERVATION/HOLDING TIMES

All samples were received by the laboratory intact, properly preserved, and under proper chain-of-custody (COC) with the following exceptions:

The volatile vials for several samples in SDG J197248 were not properly preserved (i.e., pH >2). Since these samples were analyzed within the 7-day holding time for unpreserved samples, no qualification of the sample results is necessary.

The volatile vials for samples PDI-04 GW, PDI-05 GW, PDI-09 GW, PDI-10 GW, PDI-11 GW, and PDI-12 GW were not properly preserved (i.e., pH > 2). These samples were analyzed after the 7 day holding time for unpreserved samples but less than the holding time of 14 days. All volatile results in these samples have been qualified 'UJ'.

All samples were analyzed within the required holding times.

5.0 NON-CONFORMANCES

Matrix Spikes/Matrix Duplicates (MS/MD)

The metals MS/MSD performed on soil sample PDI-05 was below QC limits (i.e., <75%) for total iron (Fe). and zinc (Zn). The post-digestion spike was acceptable. The results for these metals in this sample have been qualified 'J'.

The metals MS/MSD performed on GW sample MW-22 was below QC limits (i.e., <75%) for total Fe. The post-digestion spike was acceptable. The results for total Fe in this sample has been qualified 'J'.

The alkalinity MS/MSD performed on sample MW-22 was below the QC limit (i.e., <60%). The sample was re-analyzed, outside of the holding time, and still showed percent recoveries (%Rs) below the QC limits. The initial result has been reported and the alkalinity qualified 'J'.

Support documentation (i.e., Form 5A and Form 5B) are presented in Attachment B.

Serial Dilutions

The serial dilution (SD) performed on soil sample PDI-05 exceeded the QC limit of 15% for Zn. The Zn was previously qualified 'J' due to the MS/MSD outlier.

Support documentation (i.e., Form 9) is provided in Attachment B.

Method Blanks

Total Fe was detected in the method blank at a concentration greater than the reporting limit (RL). The samples associated with this method blank were either non-detect or greater than 10x the value detected in the method blank. The 'B' qualifier applied by the lab has been removed.

Calcium, manganese, and dissolved Fe were detected in the method blanks at concentrations greater than the method detection limit (MDL) but less than the RL (i.e., J value). Since the associated samples were greater than the RL, the 'B' qualifier applied by the laboratory has been removed.

Zinc was detected in the method blank at a concentration greater than the MDL but less than the RL (i.e., J value). The result for Zn in sample MW-07 has been qualified 'U' at the RL.

Copper (Cu) was detected in the rinse blank at a concentration greater than the MDL but less than the RL (i.e., J value). The results for Cu in samples MW-07, MW-05R, MW-14, MW-21, FD-051022, MW-19R, and MW-17 were qualified 'U' at the RL. The results for Cu in samples MW-16 and MW-22 were slightly above the RL (less than 5x the RB result). The detected results for Cu in these samples were qualified 'U' at the detected value.

Support documentation (i.e. Form 3) are presented in Attachment B.

Field Duplicates

Field duplicates were collected at the following sample locations:

Matrix	Parent Sample ID	Field Duplicate ID
GW	MW-21	FD-051022
Soil	PDI-10 (3-4)	DUP_042822

The field duplicate relative percent differences (RPD) generally exhibited good analytical precision (e.g., for results >5x QL: <50% for solids and <20% for waters; for results <5x QL: absolute difference <2x QL). The results for zinc in soil samples PDI-10(3-4) and DUP 042822 were qualified 'J'.

6.0 SAMPLE RESULTS AND REPORTING

All results and quantitation/detection limits were reported in accordance with method requirements and were adjusted for sample volume, percent solids, and dilution factors (where applicable).

Several samples were only analyzed at dilutions for VOCs due to high concentrations of target compounds. The quantitation limits for the non-detect compounds are the lowest achievable at the diluted level.

7.0 SUMMARY

All sample analyses were found to be compliant with the method criteria, except where previously noted. Those results qualified 'J' and 'UJ' are considered conditionally usable. Those results qualified 'U' should be considered non-detect. All other sample results are usable as reported. AECOM does not recommend the recollection of any samples at this time.

Prepared By: Ann Marie Kropovitch, Chemist **Date:** 6/6/22

Reviewed By: George E. Kisluk, Senior Chemist **Date:** 6/6/22

DEFINITIONS OF USEPA REGION II DATA QUALIFIERS

U – The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

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

J- – The result is an estimated quantity, but the result may be biased low.

J+ – The result is an estimated quantity, but the result may be biased high.

UJ – The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R – The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

D – The positive value is the result from a secondary dilution analysis.

TABLE 1
VALIDATED SOIL SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		PDI-01	PDI-02	PDI-03	PDI-04	PDI-05
Sample ID		PDI-1_0405	PDI-2_0203	PDI-3_0203	PDI-4_0304	PDI-5_0405
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		4.0-5.0	2.0-3.0	2.0-3.0	3.0-4.0	4.0-5.0
Date Sampled		04/27/22	04/27/22	04/27/22	04/28/22	04/28/22
Parameter	Units					
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
1,1,2,2-Tetrachloroethane	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
1,1,2-Trichloroethane	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
1,1-Dichloroethane	UG/KG	4.3 U	4.0 U	4.8 U	1.2 J	3.9 U
1,1-Dichloroethene	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
1,2,4-Trichlorobenzene	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
1,2-Dibromo-3-chloropropane	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
1,2-Dibromoethane (Ethylene dibromide)	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
1,2-Dichlorobenzene	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
1,2-Dichloroethane	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
1,2-Dichloroethene (cis)	UG/KG	4.3 U	0.68 J	1.2 J	12	26
1,2-Dichloroethene (trans)	UG/KG	4.3 U	4.0 U	4.8 U	0.68 J	1.3 J
1,2-Dichloropropane	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
1,3-Dichlorobenzene	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
1,3-Dichloropropene (cis)	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
1,3-Dichloropropene (trans)	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
1,4-Dichlorobenzene	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
2-Hexanone	UG/KG	21 U	20 U	24 U	21 U	19 U
4-Methyl-2-pentanone	UG/KG	21 U	20 U	24 U	21 U	19 U
Acetone	UG/KG	4.4 J	20 U	31	21 U	10 J
Benzene	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
Bromodichloromethane	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/03/22
Checked By: GEK 6/6/22

Detection Limits shown are PQL

TABLE 1
VALIDATED SOIL SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		PDI-01	PDI-02	PDI-03	PDI-04	PDI-05
Sample ID		PDI-1_0405	PDI-2_0203	PDI-3_0203	PDI-4_0304	PDI-5_0405
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		4.0-5.0	2.0-3.0	2.0-3.0	3.0-4.0	4.0-5.0
Date Sampled		04/27/22	04/27/22	04/27/22	04/28/22	04/28/22
Parameter	Units					
Volatile Organic Compounds						
Bromoform	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
Bromomethane	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
Carbon disulfide	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
Carbon tetrachloride	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
Chlorobenzene	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
Chloroethane	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
Chloroform	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
Chloromethane	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
Cyclohexane	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
Dibromochloromethane	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
Dichlorodifluoromethane	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
Ethylbenzene	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
Isopropylbenzene (Cumene)	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
Methyl acetate	UG/KG	21 U	20 U	24 U	21 U	6.3 J
Methyl ethyl ketone (2-Butanone)	UG/KG	21 U	20 U	24 U	21 U	19 U
Methyl tert-butyl ether	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
Methylcyclohexane	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	0.67 J
Methylene chloride	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
Styrene	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
Tetrachloroethene	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9
Toluene	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
Trichloroethene	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
Trichlorofluoromethane	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/03/22
Checked By: GEK 6/6/22

Detection Limits shown are PQL

TABLE 1
VALIDATED SOIL SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		PDI-01	PDI-02	PDI-03	PDI-04	PDI-05
Sample ID		PDI-1_0405	PDI-2_0203	PDI-3_0203	PDI-4_0304	PDI-5_0405
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		4.0-5.0	2.0-3.0	2.0-3.0	3.0-4.0	4.0-5.0
Date Sampled		04/27/22	04/27/22	04/27/22	04/28/22	04/28/22
Parameter	Units					
Volatile Organic Compounds						
Vinyl chloride	UG/KG	4.3 U	4.0 U	4.8 U	4.2 U	3.9 U
Xylene (total)	UG/KG	8.5 U	8.0 U	9.7 U	8.3 U	7.7 U
Metals						
Aluminum	MG/KG	8,810	9,690	4,250	8,780	6,530
Antimony	MG/KG	2.7 J	1.5 J	0.77 J	1.4 J	1.2 J
Arsenic	MG/KG	4.4	2.7	3.9	2.7	2.7
Barium	MG/KG	66.2	50.0	24.9	46.9	32.2
Beryllium	MG/KG	0.46	0.33	0.20 J	0.39	0.27
Cadmium	MG/KG	0.17 J	0.16 J	0.059 J	0.23 J	0.16 J
Calcium	MG/KG	33,100	14,900	2,160	16,600	24,300
Chromium	MG/KG	9.5	9.8	6.2	9.4	7.8
Cobalt	MG/KG	5.7	4.3	2.5	4.8	4.0
Copper	MG/KG	18.2	11.7	11.6	11.6	25.7
Iron	MG/KG	16,900	11,500	7,200	11,300	9,200
Lead	MG/KG	37.7	14.0	3.4	7.3	6.4
Magnesium	MG/KG	6,160	5,100	1,240	7,030	13,300
Manganese	MG/KG	553	361	207	654	387
Mercury	MG/KG	0.021 J	0.031	0.011 J	0.019 J	0.019 J
Nickel	MG/KG	10.3	8.3	5.8 J	10.3	8.3
Potassium	MG/KG	1,300	1,130	827	1,700	1,290
Selenium	MG/KG	2.0 J	1.2 J	0.51 J	0.95 J	0.73 J
Silver	MG/KG	0.72 U	0.72 U	0.73 U	0.73 U	0.67 U
Sodium	MG/KG	167 J	246	72.5 J	122 J	136 J

Flags assigned during chemistry validation are shown.

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Checked By: GEK 6/6/22

Detection Limits shown are PQL

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TABLE 1
VALIDATED SOIL SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		PDI-01	PDI-02	PDI-03	PDI-04	PDI-05
Sample ID		PDI-1_0405	PDI-2_0203	PDI-3_0203	PDI-4_0304	PDI-5_0405
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		4.0-5.0	2.0-3.0	2.0-3.0	3.0-4.0	4.0-5.0
Date Sampled		04/27/22	04/27/22	04/27/22	04/28/22	04/28/22
Parameter	**Units**					
Metals						
Thallium	MG/KG	7.2 U	7.2 U	7.3 U	7.3 U	6.7 U
Vanadium	MG/KG	17.7	18.2	8.8	15.3	12.9
Zinc	MG/KG	50.2	55.4	12.7	43.2	36.3 J

Flags assigned during chemistry validation are shown.

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Detection Limits shown are PQL

TABLE 1
VALIDATED SOIL SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		PDI-06	PDI-07	PDI-08	PDI-09	PDI-10
Sample ID		PDI-6_0304	PDI-7_0203	PDI-8_0405	PDI-9_0203	DUP_042822
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		3.0-4.0	2.0-3.0	4.0-5.0	2.0-3.0	3.0-4.0
Date Sampled		04/27/22	04/27/22	04/27/22	04/28/22	04/28/22
Parameter	Units					Field Duplicate (1-1)
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/KG	4.3 U	4.5 U	0.80 J	3.7 U	4.3 U
1,1,2,2-Tetrachloroethane	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
1,1,2-Trichloroethane	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
1,1-Dichloroethane	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
1,1-Dichloroethene	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
1,2,4-Trichlorobenzene	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
1,2-Dibromo-3-chloropropane	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
1,2-Dibromoethane (Ethylene dibromide)	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
1,2-Dichlorobenzene	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
1,2-Dichloroethane	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
1,2-Dichloroethene (cis)	UG/KG	4.3 U	4.5 U	1.8 J	43	23
1,2-Dichloroethene (trans)	UG/KG	4.3 U	4.5 U	3.9 U	1.4 J	0.85 J
1,2-Dichloropropane	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
1,3-Dichlorobenzene	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
1,3-Dichloropropene (cis)	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
1,3-Dichloropropene (trans)	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
1,4-Dichlorobenzene	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
2-Hexanone	UG/KG	21 U	22 U	19 U	19 U	22 U
4-Methyl-2-pentanone	UG/KG	21 U	22 U	19 U	19 U	22 U
Acetone	UG/KG	29	22 U	3.8 J	13 J	14 J
Benzene	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
Bromodichloromethane	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U

Flags assigned during chemistry validation are shown.

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Detection Limits shown are PQL

TABLE 1
VALIDATED SOIL SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		PDI-06	PDI-07	PDI-08	PDI-09	PDI-10
Sample ID		PDI-6_0304	PDI-7_0203	PDI-8_0405	PDI-9_0203	DUP_042822
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		3.0-4.0	2.0-3.0	4.0-5.0	2.0-3.0	3.0-4.0
Date Sampled		04/27/22	04/27/22	04/27/22	04/28/22	04/28/22
Parameter	Units					Field Duplicate (1-1)
Volatile Organic Compounds						
Bromoform	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
Bromomethane	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
Carbon disulfide	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
Carbon tetrachloride	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
Chlorobenzene	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
Chloroethane	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
Chloroform	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
Chloromethane	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
Cyclohexane	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
Dibromochloromethane	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
Dichlorodifluoromethane	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
Ethylbenzene	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
Isopropylbenzene (Cumene)	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
Methyl acetate	UG/KG	21 U	22 U	19 U	19 U	22 U
Methyl ethyl ketone (2-Butanone)	UG/KG	4.9 J	22 U	19 U	19 U	22 U
Methyl tert-butyl ether	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
Methylcyclohexane	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
Methylene chloride	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
Styrene	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
Tetrachloroethene	UG/KG	4.3 U	4.5 U	0.93 J	1.2 J	1.6 J
Toluene	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
Trichloroethene	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
Trichlorofluoromethane	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U

Flags assigned during chemistry validation are shown.

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Detection Limits shown are PQL

TABLE 1
VALIDATED SOIL SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		PDI-06	PDI-07	PDI-08	PDI-09	PDI-10
Sample ID		PDI-6_0304	PDI-7_0203	PDI-8_0405	PDI-9_0203	DUP_042822
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		3.0-4.0	2.0-3.0	4.0-5.0	2.0-3.0	3.0-4.0
Date Sampled		04/27/22	04/27/22	04/27/22	04/28/22	04/28/22
Parameter	Units					Field Duplicate (1-1)
Volatile Organic Compounds						
Vinyl chloride	UG/KG	4.3 U	4.5 U	3.9 U	3.7 U	4.3 U
Xylene (total)	UG/KG	8.6 U	8.9 U	7.7 U	7.5 U	8.7 U
Metals						
Aluminum	MG/KG	11,900	10,600	8,360	5,740	7,080
Antimony	MG/KG	2.6 J	1.4 J	1.2 J	1.1 J	1.4 J
Arsenic	MG/KG	3.6	2.7	2.7	2.0 J	2.9
Barium	MG/KG	59.6	34.4	56.4	36.0	39.8
Beryllium	MG/KG	0.49	0.26	0.33	0.26	0.28
Cadmium	MG/KG	0.14 J	0.15 J	0.18 J	0.11 J	0.25
Calcium	MG/KG	22,400	18,100	5,980	22,100	32,400
Chromium	MG/KG	13.6	9.1	8.7	7.5	8.5
Cobalt	MG/KG	6.1	3.0	5.6	4.2	4.4
Copper	MG/KG	14.2	10	25.8	10.3	12.9
Iron	MG/KG	16,800	9,340	9,440	9,030	10,100
Lead	MG/KG	10.8	9.8	12.7	4.2	5.8
Magnesium	MG/KG	6,360	3,510	1,960	4,980	5,530
Manganese	MG/KG	310	236	481	427	366
Mercury	MG/KG	0.020 J	0.039	0.025	0.012 J	0.013 J
Nickel	MG/KG	13.7	6.4	9.8	9.1	9.1
Potassium	MG/KG	2,220	1,060	1,370	1,300	1,150
Selenium	MG/KG	1.4 J	1.0 J	0.76 J	0.62 J	0.91 J
Silver	MG/KG	0.73 U	0.75 U	0.71 U	0.66 U	0.68 U
Sodium	MG/KG	193	241	122 J	146 J	135 J

Flags assigned during chemistry validation are shown.

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TABLE 1
VALIDATED SOIL SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		PDI-06	PDI-07	PDI-08	PDI-09	PDI-10
Sample ID		PDI-6_0304	PDI-7_0203	PDI-8_0405	PDI-9_0203	DUP_042822
Matrix		Soil	Soil	Soil	Soil	Soil
Depth Interval (ft)		3.0-4.0	2.0-3.0	4.0-5.0	2.0-3.0	3.0-4.0
Date Sampled		04/27/22	04/27/22	04/27/22	04/28/22	04/28/22
Parameter	Units					Field Duplicate (1-1)
Metals						
Thallium	MG/KG	7.3 U	7.5 U	7.1 U	6.6 U	6.8 U
Vanadium	MG/KG	23.9	15.7	13.8	13.2	15.0
Zinc	MG/KG	37.9	39.2	37.3	22.1	79.3 J

Flags assigned during chemistry validation are shown.

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Checked By: GEK 6/6/22

Detection Limits shown are PQL

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TABLE 1
VALIDATED SOIL SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		PDI-10	PDI-11	PDI-12
Sample ID		PDI-10_0304	PDI-11_0304	PDI-12_0405
Matrix		Soil	Soil	Soil
Depth Interval (ft)		3.0-4.0	3.0-4.0	4.0-5.0
Date Sampled		04/28/22	04/28/22	04/28/22
Parameter	Units			
Volatile Organic Compounds				
1,1,1-Trichloroethane	UG/KG	4.0 U	4.3 U	4.3 U
1,1,2,2-Tetrachloroethane	UG/KG	4.0 U	4.3 U	4.3 U
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/KG	4.0 U	4.3 U	4.3 U
1,1,2-Trichloroethane	UG/KG	4.0 U	4.3 U	4.3 U
1,1-Dichloroethane	UG/KG	4.0 U	4.3 U	4.3 U
1,1-Dichloroethene	UG/KG	4.0 U	4.3 U	4.3 U
1,2,4-Trichlorobenzene	UG/KG	4.0 U	4.3 U	4.3 U
1,2-Dibromo-3-chloropropane	UG/KG	4.0 U	4.3 U	4.3 U
1,2-Dibromoethane (Ethylene dibromide)	UG/KG	4.0 U	4.3 U	4.3 U
1,2-Dichlorobenzene	UG/KG	4.0 U	4.3 U	4.3 U
1,2-Dichloroethane	UG/KG	4.0 U	4.3 U	4.3 U
1,2-Dichloroethene (cis)	UG/KG	20	1.7 J	4.3 U
1,2-Dichloroethene (trans)	UG/KG	0.61 J	4.3 U	4.3 U
1,2-Dichloropropane	UG/KG	4.0 U	4.3 U	4.3 U
1,3-Dichlorobenzene	UG/KG	4.0 U	4.3 U	4.3 U
1,3-Dichloropropene (cis)	UG/KG	4.0 U	4.3 U	4.3 U
1,3-Dichloropropene (trans)	UG/KG	4.0 U	4.3 U	4.3 U
1,4-Dichlorobenzene	UG/KG	4.0 U	4.3 U	4.3 U
2-Hexanone	UG/KG	20 U	21 U	22 U
4-Methyl-2-pentanone	UG/KG	20 U	21 U	22 U
Acetone	UG/KG	12 J	21 U	48
Benzene	UG/KG	4.0 U	4.3 U	4.3 U
Bromodichloromethane	UG/KG	4.0 U	4.3 U	4.3 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/03/22
Checked By: GEK 6/6/22

Detection Limits shown are PQL

TABLE 1
VALIDATED SOIL SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		PDI-10	PDI-11	PDI-12
Sample ID		PDI-10_0304	PDI-11_0304	PDI-12_0405
Matrix		Soil	Soil	Soil
Depth Interval (ft)		3.0-4.0	3.0-4.0	4.0-5.0
Date Sampled		04/28/22	04/28/22	04/28/22
Parameter	Units			
Volatile Organic Compounds				
Bromoform	UG/KG	4.0 U	4.3 U	4.3 U
Bromomethane	UG/KG	4.0 U	4.3 U	4.3 U
Carbon disulfide	UG/KG	4.0 U	4.3 U	4.3 U
Carbon tetrachloride	UG/KG	4.0 U	4.3 U	4.3 U
Chlorobenzene	UG/KG	4.0 U	4.3 U	4.3 U
Chloroethane	UG/KG	4.0 U	4.3 U	4.3 U
Chloroform	UG/KG	4.0 U	4.3 U	4.3 U
Chloromethane	UG/KG	4.0 U	4.3 U	4.3 U
Cyclohexane	UG/KG	4.0 U	4.3 U	4.3 U
Dibromochloromethane	UG/KG	4.0 U	4.3 U	4.3 U
Dichlorodifluoromethane	UG/KG	4.0 U	4.3 U	4.3 U
Ethylbenzene	UG/KG	4.0 U	4.3 U	4.3 U
Isopropylbenzene (Cumene)	UG/KG	4.0 U	4.3 U	4.3 U
Methyl acetate	UG/KG	20 U	21 U	22 U
Methyl ethyl ketone (2-Butanone)	UG/KG	20 U	21 U	3.8 J
Methyl tert-butyl ether	UG/KG	4.0 U	4.3 U	4.3 U
Methylcyclohexane	UG/KG	4.0 U	4.3 U	4.3 U
Methylene chloride	UG/KG	4.0 U	4.3 U	4.3 U
Styrene	UG/KG	4.0 U	4.3 U	4.3 U
Tetrachloroethene	UG/KG	2.3 J	4.3 U	4.3 U
Toluene	UG/KG	4.0 U	4.3 U	4.3 U
Trichloroethene	UG/KG	4.0 U	4.3 U	4.3 U
Trichlorofluoromethane	UG/KG	4.0 U	4.3 U	4.3 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/03/22
Checked By: GEK 6/6/22

Detection Limits shown are PQL

TABLE 1
VALIDATED SOIL SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		PDI-10	PDI-11	PDI-12
Sample ID		PDI-10_0304	PDI-11_0304	PDI-12_0405
Matrix		Soil	Soil	Soil
Depth Interval (ft)		3.0-4.0	3.0-4.0	4.0-5.0
Date Sampled		04/28/22	04/28/22	04/28/22
Parameter	**Units**			
Volatile Organic Compounds				
Vinyl chloride	UG/KG	4.0 U	4.3 U	4.3 U
Xylene (total)	UG/KG	7.9 U	8.6 U	8.6 U
Metals				
Aluminum	MG/KG	5,700	6,790	14,300
Antimony	MG/KG	1.3 J	1.8 J	2.4 J
Arsenic	MG/KG	2.5	2.5	3.3
Barium	MG/KG	34.5	42.2	57.0
Beryllium	MG/KG	0.24	0.32	0.67
Cadmium	MG/KG	0.12 J	0.13 J	0.076 J
Calcium	MG/KG	24,600	31,000	2,690
Chromium	MG/KG	7.0	9.2	14.8
Cobalt	MG/KG	3.8	4.6	7.4
Copper	MG/KG	10.6	13.7	15.7
Iron	MG/KG	9,400	11,300	18,700
Lead	MG/KG	4.9	5.6	9.0
Magnesium	MG/KG	7,220	7,940	2,440
Manganese	MG/KG	372	317	373
Mercury	MG/KG	0.023	0.012 J	0.025
Nickel	MG/KG	7.6	9.5	10.5
Potassium	MG/KG	1,030	1,470	1,520
Selenium	MG/KG	1.0 J	1.1 J	1.7 J
Silver	MG/KG	0.65 U	0.67 U	0.68 U
Sodium	MG/KG	130 J	153 J	95.7 J

Flags assigned during chemistry validation are shown.

Made By: AMK 06/03/22
Checked By: GEK 6/6/22

Detection Limits shown are PQL

TABLE 1
VALIDATED SOIL SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		PDI-10	PDI-11	PDI-12
Sample ID		PDI-10_0304	PDI-11_0304	PDI-12_0405
Matrix		Soil	Soil	Soil
Depth Interval (ft)		3.0-4.0	3.0-4.0	4.0-5.0
Date Sampled		04/28/22	04/28/22	04/28/22
Parameter	Units			
Metals				
Thallium	MG/KG	6.5 U	6.7 U	6.8 U
Vanadium	MG/KG	13.3	15.9	30.3
Zinc	MG/KG	23.0 J	25.2	27.9

Flags assigned during chemistry validation are shown.

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Checked By: GEK 6/6/22

Detection Limits shown are PQL

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TABLE 2
VALIDATED GROUNDWATER SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		MW-05R	MW-07	MW-14	MW-16	MW-17
Sample ID		MW-05R	MW-07	MW-14	MW-16	MW-17
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		05/09/22	05/09/22	05/09/22	05/10/22	05/10/22
Parameter	Units					
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/L	1.2	1.0 U	1.0 U	2.0 U	2.0 U
1,1,2,2-Tetrachloroethane	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
1,1,2-Trichloroethane	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
1,1-Dichloroethane	UG/L	22	0.83 J	1.0 U	2.0 U	2.0 U
1,1-Dichloroethene	UG/L	0.29 J	1.0 U	1.0 U	2.0 U	2.0 U
1,2,4-Trichlorobenzene	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
1,2-Dibromo-3-chloropropane	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
1,2-Dibromoethane (Ethylene dibromide)	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
1,2-Dichlorobenzene	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
1,2-Dichloroethane	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
1,2-Dichloroethene (cis)	UG/L	210 D	2.8	1.0 U	2.0 U	2.0 U
1,2-Dichloroethene (trans)	UG/L	1.7	1.0 U	1.0 U	2.0 U	2.0 U
1,2-Dichloropropane	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
1,3-Dichlorobenzene	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
1,3-Dichloropropene (cis)	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
1,3-Dichloropropene (trans)	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
1,4-Dichlorobenzene	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
2-Hexanone	UG/L	5.0 U	5.0 U	5.0 U	10 U	10 U
4-Methyl-2-pentanone	UG/L	5.0 U	5.0 U	5.0 U	10 U	10 U
Acetone	UG/L	10 U	10 U	10 U	20 U	20 U
Benzene	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Bromodichloromethane	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/03/22
Checked By: GEK 6/6/22

Detection Limits shown are PQL

TABLE 2
VALIDATED GROUNDWATER SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		MW-05R	MW-07	MW-14	MW-16	MW-17
Sample ID		MW-05R	MW-07	MW-14	MW-16	MW-17
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		05/09/22	05/09/22	05/09/22	05/10/22	05/10/22
Parameter	Units					
Volatile Organic Compounds						
Bromoform	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Bromomethane	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Carbon disulfide	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Carbon tetrachloride	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Chlorobenzene	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Chloroethane	UG/L	0.51 J	1.0 U	1.0 U	2.0 U	2.0 U
Chloroform	UG/L	1.5	1.0 U	1.0 U	2.0 U	2.0 U
Chloromethane	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Cyclohexane	UG/L	0.24 J	1.0 U	1.0 U	2.0 U	2.0 U
Dibromochloromethane	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Dichlorodifluoromethane	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Ethylbenzene	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Isopropylbenzene (Cumene)	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Methyl acetate	UG/L	2.5 U	2.5 U	2.5 U	5.0 U	5.0 U
Methyl ethyl ketone (2-Butanone)	UG/L	10 U	10 U	10 U	20 U	20 U
Methyl tert-butyl ether	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Methylcyclohexane	UG/L	0.21 J	1.0 U	1.0 U	2.0 U	2.0 U
Methylene chloride	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Styrene	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Tetrachloroethene	UG/L	5.7	4.2	1.0 U	2.0 U	2.0 U
Toluene	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U
Trichloroethene	UG/L	31	6.1	1.0 U	2.0 U	2.0 U
Trichlorofluoromethane	UG/L	1.0 U	1.0 U	1.0 U	2.0 U	2.0 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/03/22
Checked By: GEK 6/6/22

Detection Limits shown are PQL

TABLE 2
VALIDATED GROUNDWATER SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		MW-05R	MW-07	MW-14	MW-16	MW-17
Sample ID		MW-05R	MW-07	MW-14	MW-16	MW-17
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		05/09/22	05/09/22	05/09/22	05/10/22	05/10/22
Parameter	**Units**					
Volatile Organic Compounds						
Vinyl chloride	UG/L	2.4	1.0 U	1.0 U	2.0 U	2.0 U
Xylene (total)	UG/L	2.0 U	2.0 U	2.0 U	4.0 U	4.0 U
Metals						
Aluminum	MG/L	0.10 J	0.11 J	0.20 U	0.20 U	0.085 J
Antimony	MG/L	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Arsenic	MG/L	0.015 U	0.015 U	0.015 U	0.022	0.0093 J
Barium	MG/L	0.16	0.19	0.092	1.3	0.20
Beryllium	MG/L	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
Cadmium	MG/L	0.0020 U	0.0020 U	0.0020 U	0.0020 U	0.0020 U
Calcium	MG/L	105	118	153	230	210
Chromium	MG/L	0.0040 U	0.0040 U	0.0040 U	0.0040 U	0.0040 U
Cobalt	MG/L	0.0040 U	0.0043	0.0013 J	0.14	0.0012 J
Copper	MG/L	0.010 U	0.010 U	0.010 U	0.020 U	0.010 U
Iron	MG/L	0.16	0.82	1.7	30.1	20.8
Lead	MG/L	0.010 U	0.010 U	0.0033 J	0.0054 J	0.0042 J
Magnesium	MG/L	13.8	14.4	19.8	40.6	38.2
Manganese	MG/L	1.0	2.1	0.67	19.6	2.5
Mercury	MG/L	0.00020 U	0.00020 U	0.00020 U	0.00020 U	0.00020 U
Nickel	MG/L	0.0019 J	0.0015 J	0.0028 J	0.015	0.010 U
Potassium	MG/L	5.4	3.8	7.5	7.8	9.3
Selenium	MG/L	0.025 U	0.025 U	0.025 U	0.025 U	0.025 U
Silver	MG/L	0.0060 U	0.0060 U	0.0060 U	0.0060 U	0.0060 U
Sodium	MG/L	30.9	18.9	83.6	406	122

Flags assigned during chemistry validation are shown.

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TABLE 2
VALIDATED GROUNDWATER SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		MW-05R	MW-07	MW-14	MW-16	MW-17
Sample ID		MW-05R	MW-07	MW-14	MW-16	MW-17
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		05/09/22	05/09/22	05/09/22	05/10/22	05/10/22
Parameter	Units					
Metals						
Thallium	MG/L	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Vanadium	MG/L	0.0050 U	0.0050 U	0.0050 U	0.0015 J	0.0017 J
Zinc	MG/L	0.010 U	0.010 U	0.13	0.040	0.0031 J
Dissolved Metals						
Iron	MG/L	0.033 J	0.95	NA	NA	NA
Miscellaneous Parameters						
Alkalinity, Total (as CaCO3)	MG/L	229	347	NA	NA	NA
Chloride	MG/L	65.2	28.6	NA	NA	NA
Nitrate-Nitrogen	MG/L	0.83	0.053	NA	NA	NA
Sulfate (as SO4)	MG/L	86.5	24.4	NA	NA	NA
Dissolved Gases						
Methane	UG/L	73	21	NA	NA	NA

Flags assigned during chemistry validation are shown.

Made By: AMK 06/03/22
Checked By: GEK 6/6/22

Detection Limits shown are PQL

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[LOGDATE] > #3/31/2022# AND [MATRIX] = 'WG'

TABLE 2
VALIDATED GROUNDWATER SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		MW-19R	MW-21	MW-21	MW-22	PDI-01
Sample ID		MW-19R	FD-051022	MW-21	MW-22	PDI-1_GW
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		05/10/22	05/10/22	05/10/22	05/09/22	04/27/22
Parameter	Units		Field Duplicate (1-1)			
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
1,1,2,2-Tetrachloroethane	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
1,1,2-Trichloroethane	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
1,1-Dichloroethane	UG/L	2.0 U	13	12	2.3	1.0 U
1,1-Dichloroethene	UG/L	2.0 U	1.3 J	1.3 J	2.0 U	1.0 U
1,2,4-Trichlorobenzene	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
1,2-Dibromo-3-chloropropane	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
1,2-Dichlorobenzene	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
1,2-Dichloroethane	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
1,2-Dichloroethene (cis)	UG/L	2.0 U	65	60	130	1.0 U
1,2-Dichloroethene (trans)	UG/L	2.0 U	2.0 U	2.0 U	1.8 J	1.0 U
1,2-Dichloropropane	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
1,3-Dichlorobenzene	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
1,3-Dichloropropene (cis)	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
1,3-Dichloropropene (trans)	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
1,4-Dichlorobenzene	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
2-Hexanone	UG/L	10 U	10 U	10 U	10 U	5.0 U
4-Methyl-2-pentanone	UG/L	10 U	10 U	10 U	10 U	5.0 U
Acetone	UG/L	8.9 J	20 U	20 U	20 U	10 U
Benzene	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Bromodichloromethane	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/03/22
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Detection Limits shown are PQL

TABLE 2
VALIDATED GROUNDWATER SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		MW-19R	MW-21	MW-21	MW-22	PDI-01
Sample ID		MW-19R	FD-051022	MW-21	MW-22	PDI-1_GW
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		05/10/22	05/10/22	05/10/22	05/09/22	04/27/22
Parameter	Units		Field Duplicate (1-1)			
Volatile Organic Compounds						
Bromoform	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Bromomethane	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Carbon disulfide	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	0.34 J
Carbon tetrachloride	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Chlorobenzene	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Chloroethane	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Chloroform	UG/L	0.68 J	2.0 U	2.0 U	1.2 J	1.0 U
Chloromethane	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Cyclohexane	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Dibromochloromethane	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Dichlorodifluoromethane	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Ethylbenzene	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Isopropylbenzene (Cumene)	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Methyl acetate	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	2.5 U
Methyl ethyl ketone (2-Butanone)	UG/L	20 U	20 U	20 U	20 U	10 U
Methyl tert-butyl ether	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Methylcyclohexane	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	0.24 J
Methylene chloride	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Styrene	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Tetrachloroethene	UG/L	2.0 U	2.0 U	2.0 U	0.75 J	1.0 U
Toluene	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Trichloroethene	UG/L	2.0 U	13	12	1.5 J	1.0 U
Trichlorofluoromethane	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/03/22
Checked By: GEK 6/6/22

Detection Limits shown are PQL

TABLE 2
VALIDATED GROUNDWATER SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		MW-19R	MW-21	MW-21	MW-22	PDI-01
Sample ID		MW-19R	FD-051022	MW-21	MW-22	PDI-1_GW
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		05/10/22	05/10/22	05/10/22	05/09/22	04/27/22
Parameter	Units		Field Duplicate (1-1)			
Volatile Organic Compounds						
Vinyl chloride	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	1.0 U
Xylene (total)	UG/L	4.0 U	4.0 U	4.0 U	4.0 U	2.0 U
Metals						
Aluminum	MG/L	1.4	0.072 J	0.12 J	8.9	NA
Antimony	MG/L	0.020 U	0.020 U	0.020 U	0.020 U	NA
Arsenic	MG/L	0.015 U	0.015 U	0.015 U	0.0062 J	NA
Barium	MG/L	0.11	1.3	1.3	0.57	NA
Beryllium	MG/L	0.0020 U	0.0020 U	0.0020 U	0.00034 J	NA
Cadmium	MG/L	0.0020 U	0.00057 J	0.00061 J	0.0020 U	NA
Calcium	MG/L	111	395	402	139	NA
Chromium	MG/L	0.0015 J	0.0013 J	0.0013 J	0.0096	NA
Cobalt	MG/L	0.0019 J	0.0034 J	0.0035 J	0.0072	NA
Copper	MG/L	0.010 U	0.010 U	0.010 U	0.036 U	NA
Iron	MG/L	1.5	0.21	0.22	11.4 J	NA
Lead	MG/L	0.010 U	0.010 U	0.010 U	0.0090 J	NA
Magnesium	MG/L	19.4	66.7	67.8	34.5	NA
Manganese	MG/L	5.5	4.7	4.8	2.6	NA
Mercury	MG/L	0.00020 U	0.00020 U	0.00020 U	0.00020 U	NA
Nickel	MG/L	0.0032 J	0.0031 J	0.0033 J	0.015	NA
Potassium	MG/L	7.2	5.6	5.7	39.5	NA
Selenium	MG/L	0.025 U	0.025 U	0.025 U	0.025 U	NA
Silver	MG/L	0.0060 U	0.0060 U	0.0060 U	0.0060 U	NA
Sodium	MG/L	157	1,190	1,200	170	NA

Flags assigned during chemistry validation are shown.

Made By: AMK 06/03/22
Checked By: GEK 6/6/22

Detection Limits shown are PQL

TABLE 2
VALIDATED GROUNDWATER SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		MW-19R	MW-21	MW-21	MW-22	PDI-01
Sample ID		MW-19R	FD-051022	MW-21	MW-22	PDI-1_GW
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		05/10/22	05/10/22	05/10/22	05/09/22	04/27/22
Parameter	Units		Field Duplicate (1-1)			
Metals						
Thallium	MG/L	0.020 U	0.020 U	0.020 U	0.020 U	NA
Vanadium	MG/L	0.0025 J	0.0050 U	0.0050 U	0.015	NA
Zinc	MG/L	0.0061 J	0.0029 J	0.0040 J	0.034	NA
Dissolved Metals						
Iron	MG/L	NA	0.16	0.16	2.4	NA
Miscellaneous Parameters						
Alkalinity, Total (as CaCO3)	MG/L	NA	186	188	637 J	NA
Chloride	MG/L	NA	2,830	2,900	133	NA
Nitrate-Nitrogen	MG/L	NA	0.050 U	0.050 U	0.050 U	NA
Sulfate (as SO4)	MG/L	NA	76.4	77.3	94.8	NA
Dissolved Gases						
Methane	UG/L	NA	240	280	230	NA

Flags assigned during chemistry validation are shown.

Made By: AMK 06/03/22
Checked By: GEK 6/6/22

Detection Limits shown are PQL

TABLE 2
VALIDATED GROUNDWATER SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		PDI-02	PDI-03	PDI-04	PDI-05	PDI-06
Sample ID		PDI-2_GW	PDI-3_GW	PDI-4_GW	PDI-5_GW	PDI-6_GW
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/27/22	04/27/22	04/28/22	04/28/22	04/27/22
Parameter	Units					
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
1,1,2,2-Tetrachloroethane	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
1,1,2-Trichloroethane	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
1,1-Dichloroethane	UG/L	1.0 U	4.7 J	410 J	1.0 UJ	1.0 U
1,1-Dichloroethene	UG/L	1.0 U	8.0 U	13 J	1.0 UJ	1.0 U
1,2,4-Trichlorobenzene	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
1,2-Dibromo-3-chloropropane	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
1,2-Dichlorobenzene	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
1,2-Dichloroethane	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
1,2-Dichloroethene (cis)	UG/L	1.0 U	300	1,400 J	1.0 UJ	1.0 U
1,2-Dichloroethene (trans)	UG/L	1.0 U	8.0 U	37 J	1.0 UJ	1.0 U
1,2-Dichloropropane	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
1,3-Dichlorobenzene	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
1,3-Dichloropropene (cis)	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
1,3-Dichloropropene (trans)	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
1,4-Dichlorobenzene	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
2-Hexanone	UG/L	5.0 U	40 U	100 UJ	5.0 UJ	5.0 U
4-Methyl-2-pentanone	UG/L	5.0 U	40 U	100 UJ	5.0 UJ	5.0 U
Acetone	UG/L	6.4 J	80 U	73 J	15 J	3.4 J
Benzene	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Bromodichloromethane	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/03/22
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Detection Limits shown are PQL

TABLE 2
VALIDATED GROUNDWATER SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		PDI-02	PDI-03	PDI-04	PDI-05	PDI-06
Sample ID		PDI-2_GW	PDI-3_GW	PDI-4_GW	PDI-5_GW	PDI-6_GW
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/27/22	04/27/22	04/28/22	04/28/22	04/27/22
Parameter	**Units**					
Volatile Organic Compounds						
Bromoform	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Bromomethane	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Carbon disulfide	UG/L	1.0 U	8.0 U	20 UJ	0.48 J	1.0 U
Carbon tetrachloride	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Chlorobenzene	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Chloroethane	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Chloroform	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Chloromethane	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Cyclohexane	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Dibromochloromethane	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Dichlorodifluoromethane	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Ethylbenzene	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Isopropylbenzene (Cumene)	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Methyl acetate	UG/L	2.5 U	20 U	50 UJ	2.5 UJ	2.5 U
Methyl ethyl ketone (2-Butanone)	UG/L	10 U	80 U	200 UJ	2.4 J	10 U
Methyl tert-butyl ether	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Methylcyclohexane	UG/L	1.0 U	8.0 U	20 UJ	0.23 J	1.0 U
Methylene chloride	UG/L	0.53 J	8.0 U	20 UJ	1.0 UJ	1.0 U
Styrene	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Tetrachloroethene	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Toluene	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U
Trichloroethene	UG/L	1.0 U	8.0 U	11 J	1.0 UJ	1.0 U
Trichlorofluoromethane	UG/L	1.0 U	8.0 U	20 UJ	1.0 UJ	1.0 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/03/22
Checked By: GEK 6/6/22

Detection Limits shown are PQL

TABLE 2
VALIDATED GROUNDWATER SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		PDI-02	PDI-03	PDI-04	PDI-05	PDI-06
Sample ID		PDI-2_GW	PDI-3_GW	PDI-4_GW	PDI-5_GW	PDI-6_GW
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/27/22	04/27/22	04/28/22	04/28/22	04/27/22
Parameter	**Units**					
Volatile Organic Compounds						
Vinyl chloride	UG/L	1.0 U	8.0 U	250 J	1.0 UJ	1.0 U
Xylene (total)	UG/L	2.0 U	16 U	40 UJ	2.0 UJ	2.0 U
Metals						
Aluminum	MG/L	NA	NA	NA	NA	NA
Antimony	MG/L	NA	NA	NA	NA	NA
Arsenic	MG/L	NA	NA	NA	NA	NA
Barium	MG/L	NA	NA	NA	NA	NA
Beryllium	MG/L	NA	NA	NA	NA	NA
Cadmium	MG/L	NA	NA	NA	NA	NA
Calcium	MG/L	NA	NA	NA	NA	NA
Chromium	MG/L	NA	NA	NA	NA	NA
Cobalt	MG/L	NA	NA	NA	NA	NA
Copper	MG/L	NA	NA	NA	NA	NA
Iron	MG/L	NA	NA	NA	NA	NA
Lead	MG/L	NA	NA	NA	NA	NA
Magnesium	MG/L	NA	NA	NA	NA	NA
Manganese	MG/L	NA	NA	NA	NA	NA
Mercury	MG/L	NA	NA	NA	NA	NA
Nickel	MG/L	NA	NA	NA	NA	NA
Potassium	MG/L	NA	NA	NA	NA	NA
Selenium	MG/L	NA	NA	NA	NA	NA
Silver	MG/L	NA	NA	NA	NA	NA
Sodium	MG/L	NA	NA	NA	NA	NA

Flags assigned during chemistry validation are shown.

Made By: AMK 06/03/22
Checked By: GEK 6/6/22

Detection Limits shown are PQL

TABLE 2
VALIDATED GROUNDWATER SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		PDI-02	PDI-03	PDI-04	PDI-05	PDI-06
Sample ID		PDI-2_GW	PDI-3_GW	PDI-4_GW	PDI-5_GW	PDI-6_GW
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/27/22	04/27/22	04/28/22	04/28/22	04/27/22
Parameter	**Units**					
Metals						
Thallium	MG/L	NA	NA	NA	NA	NA
Vanadium	MG/L	NA	NA	NA	NA	NA
Zinc	MG/L	NA	NA	NA	NA	NA
Dissolved Metals						
Iron	MG/L	NA	NA	NA	NA	NA
Miscellaneous Parameters						
Alkalinity, Total (as CaCO3)	MG/L	NA	NA	NA	NA	NA
Chloride	MG/L	NA	NA	NA	NA	NA
Nitrate-Nitrogen	MG/L	NA	NA	NA	NA	NA
Sulfate (as SO4)	MG/L	NA	NA	NA	NA	NA
Dissolved Gases						
Methane	UG/L	NA	NA	NA	NA	NA

Flags assigned during chemistry validation are shown.

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TABLE 2
VALIDATED GROUNDWATER SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		PDI-07	PDI-08	PDI-09	PDI-10	PDI-11
Sample ID		PDI-7_GW	PDI-8_GW	PDI-9_GW	PDI-10_GW	PDI-11_GW
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/27/22	04/27/22	04/28/22	04/28/22	04/28/22
Parameter	Units					
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/L	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
1,1,2,2-Tetrachloroethane	UG/L	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/L	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
1,1,2-Trichloroethane	UG/L	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
1,1-Dichloroethane	UG/L	1.0 U	0.83 J	8.3 J	15 J	53 J
1,1-Dichloroethene	UG/L	1.0 U	1.0 U	1.2 J	5.0 UJ	5.0 UJ
1,2,4-Trichlorobenzene	UG/L	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
1,2-Dibromo-3-chloropropane	UG/L	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
1,2-Dibromoethane (Ethylene dibromide)	UG/L	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
1,2-Dichlorobenzene	UG/L	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
1,2-Dichloroethane	UG/L	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
1,2-Dichloroethene (cis)	UG/L	1.0 U	18	87 J	140 J	300 J
1,2-Dichloroethene (trans)	UG/L	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
1,2-Dichloropropane	UG/L	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
1,3-Dichlorobenzene	UG/L	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
1,3-Dichloropropene (cis)	UG/L	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
1,3-Dichloropropene (trans)	UG/L	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
1,4-Dichlorobenzene	UG/L	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
2-Hexanone	UG/L	5.0 U	5.0 U	10 UJ	25 UJ	25 UJ
4-Methyl-2-pentanone	UG/L	5.0 U	5.0 U	10 UJ	25 UJ	25 UJ
Acetone	UG/L	4.2 J	3.4 J	11 J	50 UJ	73 J
Benzene	UG/L	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
Bromodichloromethane	UG/L	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ

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TABLE 2
VALIDATED GROUNDWATER SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		PDI-07	PDI-08	PDI-09	PDI-10	PDI-11
Sample ID		PDI-7_GW	PDI-8_GW	PDI-9_GW	PDI-10_GW	PDI-11_GW
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/27/22	04/27/22	04/28/22	04/28/22	04/28/22
Parameter	Units					
Volatile Organic Compounds						
Bromoform	UG/L	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
Bromomethane	UG/L	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
Carbon disulfide	UG/L	0.68 J	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
Carbon tetrachloride	UG/L	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
Chlorobenzene	UG/L	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
Chloroethane	UG/L	1.0 U	1.0 U	2.0 UJ	5.0 UJ	2.1 J
Chloroform	UG/L	0.67 J	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
Chloromethane	UG/L	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
Cyclohexane	UG/L	1.0 U	0.23 J	2.0 UJ	5.0 UJ	5.0 UJ
Dibromochloromethane	UG/L	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
Dichlorodifluoromethane	UG/L	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
Ethylbenzene	UG/L	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
Isopropylbenzene (Cumene)	UG/L	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
Methyl acetate	UG/L	2.5 U	2.5 U	5.0 UJ	13 UJ	13 UJ
Methyl ethyl ketone (2-Butanone)	UG/L	10 U	10 U	20 UJ	50 UJ	50 UJ
Methyl tert-butyl ether	UG/L	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
Methylcyclohexane	UG/L	1.0 U	0.34 J	2.0 UJ	5.0 UJ	5.0 UJ
Methylene chloride	UG/L	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
Styrene	UG/L	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
Tetrachloroethene	UG/L	1.0 U	1.5	9.0 J	5.0 UJ	6.3 J
Toluene	UG/L	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ
Trichloroethene	UG/L	1.0 U	2.2	11 J	13 J	52 J
Trichlorofluoromethane	UG/L	1.0 U	1.0 U	2.0 UJ	5.0 UJ	5.0 UJ

Flags assigned during chemistry validation are shown.

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TABLE 2
VALIDATED GROUNDWATER SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		PDI-07	PDI-08	PDI-09	PDI-10	PDI-11
Sample ID		PDI-7_GW	PDI-8_GW	PDI-9_GW	PDI-10_GW	PDI-11_GW
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/27/22	04/27/22	04/28/22	04/28/22	04/28/22
Parameter	Units					
Volatile Organic Compounds						
Vinyl chloride	UG/L	1.0 U	1.0 U	7.1 J	23 J	7.6 J
Xylene (total)	UG/L	2.0 U	2.0 U	4.0 UJ	10 UJ	10 UJ
Metals						
Aluminum	MG/L	NA	NA	NA	NA	NA
Antimony	MG/L	NA	NA	NA	NA	NA
Arsenic	MG/L	NA	NA	NA	NA	NA
Barium	MG/L	NA	NA	NA	NA	NA
Beryllium	MG/L	NA	NA	NA	NA	NA
Cadmium	MG/L	NA	NA	NA	NA	NA
Calcium	MG/L	NA	NA	NA	NA	NA
Chromium	MG/L	NA	NA	NA	NA	NA
Cobalt	MG/L	NA	NA	NA	NA	NA
Copper	MG/L	NA	NA	NA	NA	NA
Iron	MG/L	NA	NA	NA	NA	NA
Lead	MG/L	NA	NA	NA	NA	NA
Magnesium	MG/L	NA	NA	NA	NA	NA
Manganese	MG/L	NA	NA	NA	NA	NA
Mercury	MG/L	NA	NA	NA	NA	NA
Nickel	MG/L	NA	NA	NA	NA	NA
Potassium	MG/L	NA	NA	NA	NA	NA
Selenium	MG/L	NA	NA	NA	NA	NA
Silver	MG/L	NA	NA	NA	NA	NA
Sodium	MG/L	NA	NA	NA	NA	NA

Flags assigned during chemistry validation are shown.

Made By: AMK 06/03/22
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Detection Limits shown are PQL

TABLE 2
VALIDATED GROUNDWATER SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		PDI-07	PDI-08	PDI-09	PDI-10	PDI-11
Sample ID		PDI-7_GW	PDI-8_GW	PDI-9_GW	PDI-10_GW	PDI-11_GW
Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/27/22	04/27/22	04/28/22	04/28/22	04/28/22
Parameter	**Units**					
Metals						
Thallium	MG/L	NA	NA	NA	NA	NA
Vanadium	MG/L	NA	NA	NA	NA	NA
Zinc	MG/L	NA	NA	NA	NA	NA
Dissolved Metals						
Iron	MG/L	NA	NA	NA	NA	NA
Miscellaneous Parameters						
Alkalinity, Total (as CaCO3)	MG/L	NA	NA	NA	NA	NA
Chloride	MG/L	NA	NA	NA	NA	NA
Nitrate-Nitrogen	MG/L	NA	NA	NA	NA	NA
Sulfate (as SO4)	MG/L	NA	NA	NA	NA	NA
Dissolved Gases						
Methane	UG/L	NA	NA	NA	NA	NA

Flags assigned during chemistry validation are shown.

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TABLE 2
VALIDATED GROUNDWATER SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		PDI-12
Sample ID		PDI-12_GW
Matrix		Groundwater
Depth Interval (ft)		-
Date Sampled		04/28/22
Parameter	**Units**	
Volatile Organic Compounds		
1,1,1-Trichloroethane	UG/L	20 UJ
1,1,2,2-Tetrachloroethane	UG/L	20 UJ
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/L	20 UJ
1,1,2-Trichloroethane	UG/L	20 UJ
1,1-Dichloroethane	UG/L	20 J
1,1-Dichloroethene	UG/L	20 UJ
1,2,4-Trichlorobenzene	UG/L	20 UJ
1,2-Dibromo-3-chloropropane	UG/L	20 UJ
1,2-Dibromoethane (Ethylene dibromide)	UG/L	20 UJ
1,2-Dichlorobenzene	UG/L	20 UJ
1,2-Dichloroethane	UG/L	20 UJ
1,2-Dichloroethene (cis)	UG/L	1,400 J
1,2-Dichloroethene (trans)	UG/L	20 UJ
1,2-Dichloropropane	UG/L	20 UJ
1,3-Dichlorobenzene	UG/L	20 UJ
1,3-Dichloropropene (cis)	UG/L	20 UJ
1,3-Dichloropropene (trans)	UG/L	20 UJ
1,4-Dichlorobenzene	UG/L	20 UJ
2-Hexanone	UG/L	100 UJ
4-Methyl-2-pentanone	UG/L	100 UJ
Acetone	UG/L	160 J
Benzene	UG/L	20 UJ
Bromodichloromethane	UG/L	20 UJ

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TABLE 2
VALIDATED GROUNDWATER SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		PDI-12
Sample ID		PDI-12_GW
Matrix		Groundwater
Depth Interval (ft)		-
Date Sampled		04/28/22
Parameter	**Units**	
Volatile Organic Compounds		
Bromoform	UG/L	20 UJ
Bromomethane	UG/L	20 UJ
Carbon disulfide	UG/L	20 UJ
Carbon tetrachloride	UG/L	20 UJ
Chlorobenzene	UG/L	20 UJ
Chloroethane	UG/L	11 J
Chloroform	UG/L	20 UJ
Chloromethane	UG/L	20 UJ
Cyclohexane	UG/L	20 UJ
Dibromochloromethane	UG/L	20 UJ
Dichlorodifluoromethane	UG/L	20 UJ
Ethylbenzene	UG/L	20 UJ
Isopropylbenzene (Cumene)	UG/L	20 UJ
Methyl acetate	UG/L	50 UJ
Methyl ethyl ketone (2-Butanone)	UG/L	200 UJ
Methyl tert-butyl ether	UG/L	20 UJ
Methylcyclohexane	UG/L	20 UJ
Methylene chloride	UG/L	20 UJ
Styrene	UG/L	20 UJ
Tetrachloroethene	UG/L	20 UJ
Toluene	UG/L	20 UJ
Trichloroethene	UG/L	45 J
Trichlorofluoromethane	UG/L	20 UJ

Flags assigned during chemistry validation are shown.

Made By: AMK 06/03/22
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Detection Limits shown are PQL

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TABLE 2
VALIDATED GROUNDWATER SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		PDI-12
Sample ID		PDI-12_GW
Matrix		Groundwater
Depth Interval (ft)		-
Date Sampled		04/28/22
Parameter	**Units**	
Volatile Organic Compounds		
Vinyl chloride	UG/L	34 J
Xylene (total)	UG/L	40 UJ
Metals		
Aluminum	MG/L	NA
Antimony	MG/L	NA
Arsenic	MG/L	NA
Barium	MG/L	NA
Beryllium	MG/L	NA
Cadmium	MG/L	NA
Calcium	MG/L	NA
Chromium	MG/L	NA
Cobalt	MG/L	NA
Copper	MG/L	NA
Iron	MG/L	NA
Lead	MG/L	NA
Magnesium	MG/L	NA
Manganese	MG/L	NA
Mercury	MG/L	NA
Nickel	MG/L	NA
Potassium	MG/L	NA
Selenium	MG/L	NA
Silver	MG/L	NA
Sodium	MG/L	NA

Flags assigned during chemistry validation are shown.

Made By: AMK 06/03/22
Checked By: GEK 6/6/22

Detection Limits shown are PQL

TABLE 2
VALIDATED GROUNDWATER SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		PDI-12
Sample ID		PDI-12_GW
Matrix		Groundwater
Depth Interval (ft)		-
Date Sampled		04/28/22
Parameter	**Units**	
Metals		
Thallium	MG/L	NA
Vanadium	MG/L	NA
Zinc	MG/L	NA
Dissolved Metals		
Iron	MG/L	NA
Miscellaneous Parameters		
Alkalinity, Total (as CaCO3)	MG/L	NA
Chloride	MG/L	NA
Nitrate-Nitrogen	MG/L	NA
Sulfate (as SO4)	MG/L	NA
Dissolved Gases		
Methane	UG/L	NA

Flags assigned during chemistry validation are shown.

Made By: AMK 06/03/22
Checked By: GEK 6/6/22

Detection Limits shown are PQL

Advanced Selection: AMK-TEMP2
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[LOGDATE] > #3/31/2022# AND [MATRIX] = 'WG'

TABLE 3
VALIDATED FIELD QC SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		FIELDQC	FIELDQC	FIELDQC	FIELDQC	FIELDQC
Sample ID		TRIP BLANK-042722	RB_042822	TB_042822	RB-050922	TB-050922
Matrix		Water Quality	Water Quality	Water Quality	Water Quality	Water Quality
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/27/22	04/28/22	04/28/22	05/09/22	05/09/22
Parameter	Units	Trip Blank (1-1)	Rinse Blank (1-1)	Trip Blank (1-1)	Rinse Blank (1-1)	Trip Blank (1-1)
Volatile Organic Compounds						
1,1,1-Trichloroethane	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2,2-Tetrachloroethane	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1,2-Trichloroethane	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethane	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,1-Dichloroethene	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2,4-Trichlorobenzene	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromo-3-chloropropane	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethane	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethene (cis)	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloroethene (trans)	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichloropropane	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropene (cis)	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichloropropene (trans)	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Hexanone	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
4-Methyl-2-pentanone	UG/L	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Acetone	UG/L	10 U	10 U	10 U	10 U	10 U
Benzene	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromodichloromethane	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/03/22
Checked By: GEK 6/6/22

Detection Limits shown are PQL

Advanced Selection: amk-temp3
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[LOGDATE] > #3/31/2022# AND [MATRIX] = 'WQ' AND [SITE KEY] = 22

TABLE 3
VALIDATED FIELD QC SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		FIELDQC	FIELDQC	FIELDQC	FIELDQC	FIELDQC
Sample ID		TRIP BLANK-042722	RB_042822	TB_042822	RB-050922	TB-050922
Matrix		Water Quality	Water Quality	Water Quality	Water Quality	Water Quality
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/27/22	04/28/22	04/28/22	05/09/22	05/09/22
Parameter	Units	Trip Blank (1-1)	Rinse Blank (1-1)	Trip Blank (1-1)	Rinse Blank (1-1)	Trip Blank (1-1)
Volatile Organic Compounds						
Bromoform	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Bromomethane	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon disulfide	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Carbon tetrachloride	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chlorobenzene	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroethane	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloroform	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chloromethane	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Cyclohexane	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibromochloromethane	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dichlorodifluoromethane	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Ethylbenzene	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Isopropylbenzene (Cumene)	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methyl acetate	UG/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U
Methyl ethyl ketone (2-Butanone)	UG/L	10 U	10 U	10 U	10 U	10 U
Methyl tert-butyl ether	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylcyclohexane	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Methylene chloride	UG/L	1.0 U	1.0 U	0.72 J	1.0 U	1.0 U
Styrene	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroethene	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Toluene	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichloroethene	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Trichlorofluoromethane	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/03/22
Checked By: GEK 6/6/22

Detection Limits shown are PQL

TABLE 3
VALIDATED FIELD QC SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		FIELDQC	FIELDQC	FIELDQC	FIELDQC	FIELDQC
Sample ID		TRIP BLANK-042722	RB_042822	TB_042822	RB-050922	TB-050922
Matrix		Water Quality	Water Quality	Water Quality	Water Quality	Water Quality
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/27/22	04/28/22	04/28/22	05/09/22	05/09/22
Parameter	Units	Trip Blank (1-1)	Rinse Blank (1-1)	Trip Blank (1-1)	Rinse Blank (1-1)	Trip Blank (1-1)
Volatile Organic Compounds						
Vinyl chloride	UG/L	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Xylene (total)	UG/L	2.0 U	2.0 U	2.0 U	2.0 U	2.0 U
Metals						
Aluminum	MG/L	NA	0.20 U	NA	0.20 U	NA
Antimony	MG/L	NA	0.020 U	NA	0.020 U	NA
Arsenic	MG/L	NA	0.015 U	NA	0.015 U	NA
Barium	MG/L	NA	0.0020 U	NA	0.0020 U	NA
Beryllium	MG/L	NA	0.0020 U	NA	0.0020 U	NA
Cadmium	MG/L	NA	0.0020 U	NA	0.0020 U	NA
Calcium	MG/L	NA	0.50 U	NA	0.50 U	NA
Chromium	MG/L	NA	0.0040 U	NA	0.0040 U	NA
Cobalt	MG/L	NA	0.0040 U	NA	0.0040 U	NA
Copper	MG/L	NA	0.017	NA	0.017	NA
Iron	MG/L	NA	0.050 U	NA	0.050 U	NA
Lead	MG/L	NA	0.010 U	NA	0.010 U	NA
Magnesium	MG/L	NA	0.20 U	NA	0.20 U	NA
Manganese	MG/L	NA	0.00062 J	NA	0.0030 U	NA
Mercury	MG/L	NA	0.00020 U	NA	0.00020 U	NA
Nickel	MG/L	NA	0.010 U	NA	0.010 U	NA
Potassium	MG/L	NA	0.50 U	NA	0.50 U	NA
Selenium	MG/L	NA	0.025 U	NA	0.025 U	NA
Silver	MG/L	NA	0.0060 U	NA	0.0060 U	NA
Sodium	MG/L	NA	1.0 U	NA	1.0 U	NA

Flags assigned during chemistry validation are shown.

Made By: AMK 06/03/22
Checked By: GEK 6/6/22

Detection Limits shown are PQL

TABLE 3
VALIDATED FIELD QC SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		FIELDQC	FIELDQC	FIELDQC	FIELDQC	FIELDQC
Sample ID		TRIP BLANK-042722	RB_042822	TB_042822	RB-050922	TB-050922
Matrix		Water Quality	Water Quality	Water Quality	Water Quality	Water Quality
Depth Interval (ft)		-	-	-	-	-
Date Sampled		04/27/22	04/28/22	04/28/22	05/09/22	05/09/22
Parameter	Units	Trip Blank (1-1)	Rinse Blank (1-1)	Trip Blank (1-1)	Rinse Blank (1-1)	Trip Blank (1-1)
Metals						
Thallium	MG/L	NA	0.020 U	NA	0.020 U	NA
Vanadium	MG/L	NA	0.0050 U	NA	0.0050 U	NA
Zinc	MG/L	NA	0.010 U	NA	0.010 U	NA
Dissolved Metals						
Iron	MG/L	NA	NA	NA	0.050 U	NA
Miscellaneous Parameters						
Alkalinity, Total (as CaCO3)	MG/L	NA	NA	NA	1.0 J	NA
Chloride	MG/L	NA	NA	NA	0.50 U	NA
Nitrate-Nitrogen	MG/L	NA	NA	NA	0.033 J	NA
Sulfate (as SO4)	MG/L	NA	NA	NA	2.0 U	NA
Dissolved Gases						
Methane	UG/L	NA	NA	NA	4.0 U	4.0 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/03/22
Checked By: GEK 6/6/22

Detection Limits shown are PQL

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[LOGDATE] > #3/31/2022# AND [MATRIX] = 'WQ' AND [SITE KEY] = 22

TABLE 3
VALIDATED FIELD QC SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		FIELDQC
Sample ID		TB-051022
Matrix		Water Quality
Depth Interval (ft)		-
Date Sampled		05/10/22
Parameter	Units	Trip Blank (1-1)
Volatile Organic Compounds		
1,1,1-Trichloroethane	UG/L	1.0 U
1,1,2,2-Tetrachloroethane	UG/L	1.0 U
1,1,2-Trichloro-1,2,2-trifluoroethane	UG/L	1.0 U
1,1,2-Trichloroethane	UG/L	1.0 U
1,1-Dichloroethane	UG/L	1.0 U
1,1-Dichloroethene	UG/L	1.0 U
1,2,4-Trichlorobenzene	UG/L	1.0 U
1,2-Dibromo-3-chloropropane	UG/L	1.0 U
1,2-Dibromoethane (Ethylene dibromide)	UG/L	1.0 U
1,2-Dichlorobenzene	UG/L	1.0 U
1,2-Dichloroethane	UG/L	1.0 U
1,2-Dichloroethene (cis)	UG/L	1.0 U
1,2-Dichloroethene (trans)	UG/L	1.0 U
1,2-Dichloropropane	UG/L	1.0 U
1,3-Dichlorobenzene	UG/L	1.0 U
1,3-Dichloropropene (cis)	UG/L	1.0 U
1,3-Dichloropropene (trans)	UG/L	1.0 U
1,4-Dichlorobenzene	UG/L	1.0 U
2-Hexanone	UG/L	5.0 U
4-Methyl-2-pentanone	UG/L	5.0 U
Acetone	UG/L	10 U
Benzene	UG/L	1.0 U
Bromodichloromethane	UG/L	1.0 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/03/22
Checked By: GEK 6/6/22

Detection Limits shown are PQL

Advanced Selection: amk-temp3
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TABLE 3
VALIDATED FIELD QC SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		FIELDQC
Sample ID		TB-051022
Matrix		Water Quality
Depth Interval (ft)		-
Date Sampled		05/10/22
Parameter	**Units**	Trip Blank (1-1)
Volatile Organic Compounds		
Bromoform	UG/L	1.0 U
Bromomethane	UG/L	1.0 U
Carbon disulfide	UG/L	1.0 U
Carbon tetrachloride	UG/L	1.0 U
Chlorobenzene	UG/L	1.0 U
Chloroethane	UG/L	1.0 U
Chloroform	UG/L	1.0 U
Chloromethane	UG/L	1.0 U
Cyclohexane	UG/L	1.0 U
Dibromochloromethane	UG/L	1.0 U
Dichlorodifluoromethane	UG/L	1.0 U
Ethylbenzene	UG/L	1.0 U
Isopropylbenzene (Cumene)	UG/L	1.0 U
Methyl acetate	UG/L	2.5 U
Methyl ethyl ketone (2-Butanone)	UG/L	10 U
Methyl tert-butyl ether	UG/L	1.0 U
Methylcyclohexane	UG/L	1.0 U
Methylene chloride	UG/L	1.0 U
Styrene	UG/L	1.0 U
Tetrachloroethene	UG/L	1.0 U
Toluene	UG/L	1.0 U
Trichloroethene	UG/L	1.0 U
Trichlorofluoromethane	UG/L	1.0 U

Flags assigned during chemistry validation are shown.

Made By: AMK 06/03/22
Checked By: GEK 6/6/22

Detection Limits shown are PQL

TABLE 3
VALIDATED FIELD QC SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		FIELDQC
Sample ID		TB-051022
Matrix		Water Quality
Depth Interval (ft)		-
Date Sampled		05/10/22
Parameter	**Units**	Trip Blank (1-1)
Volatile Organic Compounds		
Vinyl chloride	UG/L	1.0 U
Xylene (total)	UG/L	2.0 U
Metals		
Aluminum	MG/L	NA
Antimony	MG/L	NA
Arsenic	MG/L	NA
Barium	MG/L	NA
Beryllium	MG/L	NA
Cadmium	MG/L	NA
Calcium	MG/L	NA
Chromium	MG/L	NA
Cobalt	MG/L	NA
Copper	MG/L	NA
Iron	MG/L	NA
Lead	MG/L	NA
Magnesium	MG/L	NA
Manganese	MG/L	NA
Mercury	MG/L	NA
Nickel	MG/L	NA
Potassium	MG/L	NA
Selenium	MG/L	NA
Silver	MG/L	NA
Sodium	MG/L	NA

Flags assigned during chemistry validation are shown.

Made By: AMK 06/03/22
Checked By: GEK 6/6/22

Detection Limits shown are PQL

TABLE 3
VALIDATED FIELD QC SAMPLE RESULTS
IRWIN INDUSTRIAL TOOL COMPANY

Location ID		FIELDQC
Sample ID		TB-051022
Matrix		Water Quality
Depth Interval (ft)		-
Date Sampled		05/10/22
Parameter	**Units**	Trip Blank (1-1)
Metals		
Thallium	MG/L	NA
Vanadium	MG/L	NA
Zinc	MG/L	NA
Dissolved Metals		
Iron	MG/L	NA
Miscellaneous Parameters		
Alkalinity, Total (as CaCO3)	MG/L	NA
Chloride	MG/L	NA
Nitrate-Nitrogen	MG/L	NA
Sulfate (as SO4)	MG/L	NA
Dissolved Gases		
Methane	UG/L	NA

Flags assigned during chemistry validation are shown.

Made By: AMK 06/03/22
Checked By: GEK 6/6/22

Detection Limits shown are PQL

Advanced Selection: amk-temp3
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[LOGDATE] > #3/31/2022# AND [MATRIX] = 'WQ' AND [SITE KEY] = 22

ATTACHMENT A

VALIDATED FORM 1's

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197248-1

SDG No.:

Client Sample ID: PDI-1_0405 | Lab Sample ID: 480-197248-1

Matrix: Solid | Lab File ID: M03437.D

Analysis Method: 8260C | Date Collected: 04/27/2022 09:40

Sample wt/vol: 6.788(g) | Date Analyzed: 05/02/2022 12:54

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (30) VOA ID: 0.25(mm)

% Moisture: 13.4 | Level: (low/med) Low

Analysis Batch No.: 624070 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		4.3	0.31
79-34-5	1,1,2,2-Tetrachloroethane	ND		4.3	0.69
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.3	0.97
79-00-5	1,1,2-Trichloroethane	ND		4.3	0.55
75-34-3	1,1-Dichloroethane	ND		4.3	0.52
75-35-4	1,1-Dichloroethene	ND		4.3	0.52
120-82-1	1,2,4-Trichlorobenzene	ND		4.3	0.26
96-12-8	1,2-Dibromo-3-Chloropropane	ND		4.3	2.1
106-93-4	1,2-Dibromoethane	ND		4.3	0.55
95-50-1	1,2-Dichlorobenzene	ND		4.3	0.33
107-06-2	1,2-Dichloroethane	ND		4.3	0.21
78-87-5	1,2-Dichloropropane	ND		4.3	2.1
541-73-1	1,3-Dichlorobenzene	ND		4.3	0.22
106-46-7	1,4-Dichlorobenzene	ND		4.3	0.60
78-93-3	2-Butanone (MEK)	ND		21	1.6
591-78-6	2-Hexanone	ND		21	2.1
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		21	1.4
67-64-1	Acetone	4.4	J	21	3.6
71-43-2	Benzene	ND		4.3	0.21
75-27-4	Bromodichloromethane	ND		4.3	0.57
75-25-2	Bromoform	ND		4.3	2.1
74-83-9	Bromomethane	ND		4.3	0.38
75-15-0	Carbon disulfide	ND		4.3	2.1
56-23-5	Carbon tetrachloride	ND		4.3	0.41
108-90-7	Chlorobenzene	ND		4.3	0.56
75-00-3	Chloroethane	ND		4.3	0.96
67-66-3	Chloroform	ND		4.3	0.26
74-87-3	Chloromethane	ND		4.3	0.26
156-59-2	cis-1,2-Dichloroethene	ND		4.3	0.54
10061-01-5	cis-1,3-Dichloropropene	ND		4.3	0.61
110-82-7	Cyclohexane	ND		4.3	0.60
124-48-1	Dibromochloromethane	ND		4.3	0.54
75-71-8	Dichlorodifluoromethane	ND		4.3	0.35
100-41-4	Ethylbenzene	ND		4.3	0.29
98-82-8	Isopropylbenzene	ND		4.3	0.64

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197248-1

SDG No.:

Client Sample ID: PDI-1_0405 | Lab Sample ID: 480-197248-1

Matrix: Solid | Lab File ID: M03437.D

Analysis Method: 8260C | Date Collected: 04/27/2022 09:40

Sample wt/vol: 6.788(g) | Date Analyzed: 05/02/2022 12:54

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (30) VOA ID: 0.25(mm)

% Moisture: 13.4 | Level: (low/med) Low

Analysis Batch No.: 624070 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		21	2.6
1634-04-4	Methyl tert-butyl ether	ND		4.3	0.42
108-87-2	Methylcyclohexane	ND		4.3	0.65
75-09-2	Methylene Chloride	ND		4.3	2.0
100-42-5	Styrene	ND		4.3	0.21
127-18-4	Tetrachloroethene	ND		4.3	0.57
108-88-3	Toluene	ND		4.3	0.32
156-60-5	trans-1,2-Dichloroethene	ND		4.3	0.44
10061-02-6	trans-1,3-Dichloropropene	ND		4.3	1.9
79-01-6	Trichloroethene	ND		4.3	0.94
75-69-4	Trichlorofluoromethane	ND		4.3	0.40
75-01-4	Vinyl chloride	ND		4.3	0.52
1330-20-7	Xylenes, Total	ND		8.5	0.71

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		64-126
460-00-4	4-Bromofluorobenzene (Surr)	95		72-126
1868-53-7	Dibromofluoromethane (Surr)	102		60-140
2037-26-5	Toluene-d8 (Surr)	97		71-125

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197248-1

SDG No.:

Client Sample ID: PDI-1_GW | Lab Sample ID: 480-197248-2

Matrix: Water | Lab File ID: N3572.D

Analysis Method: 8260C | Date Collected: 04/27/2022 10:15

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2022 06:39

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 623887 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
75-34-3	1,1-Dichloroethane	ND		1.0	0.38
75-35-4	1,1-Dichloroethene	ND		1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	ND		10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND		1.0	0.69
75-15-0	Carbon disulfide	0.34	J	1.0	0.19
56-23-5	Carbon tetrachloride	ND		1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	ND		1.0	0.34
74-87-3	Chloromethane	ND		1.0	0.35
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	ND		1.0	0.18
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-71-8	Dichlorodifluoromethane	ND		1.0	0.68
100-41-4	Ethylbenzene	ND		1.0	0.74
98-82-8	Isopropylbenzene	ND		1.0	0.79

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197248-1

SDG No.:

Client Sample ID: PDI-1_GW | Lab Sample ID: 480-197248-2

Matrix: Water | Lab File ID: N3572.D

Analysis Method: 8260C | Date Collected: 04/27/2022 10:15

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2022 06:39

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 623887 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.16
108-87-2	Methylcyclohexane	0.24	J	1.0	0.16
75-09-2	Methylene Chloride	ND		1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	ND		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	ND		1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	106		77-120
460-00-4	4-Bromofluorobenzene (Surr)	105		73-120
1868-53-7	Dibromofluoromethane (Surr)	101		75-123
2037-26-5	Toluene-d8 (Surr)	102		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197248-1

SDG No.:

Client Sample ID: PDI-2_0203 | Lab Sample ID: 480-197248-3

Matrix: Solid | Lab File ID: M03438.D

Analysis Method: 8260C | Date Collected: 04/27/2022 11:05

Sample wt/vol: 7.041(g) | Date Analyzed: 05/02/2022 13:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (30) VOA ID: 0.25(mm)

% Moisture: 11.4 | Level: (low/med) Low

Analysis Batch No.: 624070 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		4.0	0.29
79-34-5	1,1,2,2-Tetrachloroethane	ND		4.0	0.65
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.0	0.91
79-00-5	1,1,2-Trichloroethane	ND		4.0	0.52
75-34-3	1,1-Dichloroethane	ND		4.0	0.49
75-35-4	1,1-Dichloroethene	ND		4.0	0.49
120-82-1	1,2,4-Trichlorobenzene	ND		4.0	0.24
96-12-8	1,2-Dibromo-3-Chloropropane	ND		4.0	2.0
106-93-4	1,2-Dibromoethane	ND		4.0	0.51
95-50-1	1,2-Dichlorobenzene	ND		4.0	0.31
107-06-2	1,2-Dichloroethane	ND		4.0	0.20
78-87-5	1,2-Dichloropropane	ND		4.0	2.0
541-73-1	1,3-Dichlorobenzene	ND		4.0	0.21
106-46-7	1,4-Dichlorobenzene	ND		4.0	0.56
78-93-3	2-Butanone (MEK)	ND		20	1.5
591-78-6	2-Hexanone	ND		20	2.0
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		20	1.3
67-64-1	Acetone	ND		20	3.4
71-43-2	Benzene	ND		4.0	0.20
75-27-4	Bromodichloromethane	ND		4.0	0.54
75-25-2	Bromoform	ND		4.0	2.0
74-83-9	Bromomethane	ND		4.0	0.36
75-15-0	Carbon disulfide	ND		4.0	2.0
56-23-5	Carbon tetrachloride	ND		4.0	0.39
108-90-7	Chlorobenzene	ND		4.0	0.53
75-00-3	Chloroethane	ND		4.0	0.91
67-66-3	Chloroform	ND		4.0	0.25
74-87-3	Chloromethane	ND		4.0	0.24
156-59-2	cis-1,2-Dichloroethene	0.68	J	4.0	0.51
10061-01-5	cis-1,3-Dichloropropene	ND		4.0	0.58
110-82-7	Cyclohexane	ND		4.0	0.56
124-48-1	Dibromochloromethane	ND		4.0	0.51
75-71-8	Dichlorodifluoromethane	ND		4.0	0.33
100-41-4	Ethylbenzene	ND		4.0	0.28
98-82-8	Isopropylbenzene	ND		4.0	0.60

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197248-1

SDG No.:

Client Sample ID: PDI-2_0203 | Lab Sample ID: 480-197248-3

Matrix: Solid | Lab File ID: M03438.D

Analysis Method: 8260C | Date Collected: 04/27/2022 11:05

Sample wt/vol: 7.041(g) | Date Analyzed: 05/02/2022 13:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (30) VOA ID: 0.25(mm)

% Moisture: 11.4 | Level: (low/med) Low

Analysis Batch No.: 624070 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		20	2.4
1634-04-4	Methyl tert-butyl ether	ND		4.0	0.39
108-87-2	Methylcyclohexane	ND		4.0	0.61
75-09-2	Methylene Chloride	ND		4.0	1.8
100-42-5	Styrene	ND		4.0	0.20
127-18-4	Tetrachloroethene	ND		4.0	0.54
108-88-3	Toluene	ND		4.0	0.30
156-60-5	trans-1,2-Dichloroethene	ND		4.0	0.41
10061-02-6	trans-1,3-Dichloropropene	ND		4.0	1.8
79-01-6	Trichloroethene	ND		4.0	0.88
75-69-4	Trichlorofluoromethane	ND		4.0	0.38
75-01-4	Vinyl chloride	ND		4.0	0.49
1330-20-7	Xylenes, Total	ND		8.0	0.67

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		64-126
460-00-4	4-Bromofluorobenzene (Surr)	95		72-126
1868-53-7	Dibromofluoromethane (Surr)	106		60-140
2037-26-5	Toluene-d8 (Surr)	96		71-125

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197248-1

SDG No.:

Client Sample ID: PDI-6_GW | Lab Sample ID: 480-197248-4

Matrix: Water | Lab File ID: N3573.D

Analysis Method: 8260C | Date Collected: 04/27/2022 11:08

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2022 07:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 623887 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
75-34-3	1,1-Dichloroethane	ND		1.0	0.38
75-35-4	1,1-Dichloroethene	ND		1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	3.4	J	10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND		1.0	0.69
75-15-0	Carbon disulfide	ND		1.0	0.19
56-23-5	Carbon tetrachloride	ND		1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	ND		1.0	0.34
74-87-3	Chloromethane	ND		1.0	0.35
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	ND		1.0	0.18
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-71-8	Dichlorodifluoromethane	ND		1.0	0.68
100-41-4	Ethylbenzene	ND		1.0	0.74
98-82-8	Isopropylbenzene	ND		1.0	0.79

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197248-1

SDG No.:

Client Sample ID: PDI-6_GW | Lab Sample ID: 480-197248-4

Matrix: Water | Lab File ID: N3573.D

Analysis Method: 8260C | Date Collected: 04/27/2022 11:08

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2022 07:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 623887 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.16
108-87-2	Methylcyclohexane	ND		1.0	0.16
75-09-2	Methylene Chloride	ND		1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	ND		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	ND		1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		77-120
460-00-4	4-Bromofluorobenzene (Surr)	104		73-120
1868-53-7	Dibromofluoromethane (Surr)	97		75-123
2037-26-5	Toluene-d8 (Surr)	100		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197248-1

SDG No.:

Client Sample ID: PDI-7_0203 | Lab Sample ID: 480-197248-5

Matrix: Solid | Lab File ID: M03439.D

Analysis Method: 8260C | Date Collected: 04/27/2022 12:09

Sample wt/vol: 6.743(g) | Date Analyzed: 05/02/2022 13:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (30) VOA ID: 0.25(mm)

% Moisture: 16.9 | Level: (low/med) Low

Analysis Batch No.: 624070 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		4.5	0.32
79-34-5	1,1,2,2-Tetrachloroethane	ND		4.5	0.72
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.5	1.0
79-00-5	1,1,2-Trichloroethane	ND		4.5	0.58
75-34-3	1,1-Dichloroethane	ND		4.5	0.54
75-35-4	1,1-Dichloroethene	ND		4.5	0.55
120-82-1	1,2,4-Trichlorobenzene	ND		4.5	0.27
96-12-8	1,2-Dibromo-3-Chloropropane	ND		4.5	2.2
106-93-4	1,2-Dibromoethane	ND		4.5	0.57
95-50-1	1,2-Dichlorobenzene	ND		4.5	0.35
107-06-2	1,2-Dichloroethane	ND		4.5	0.22
78-87-5	1,2-Dichloropropane	ND		4.5	2.2
541-73-1	1,3-Dichlorobenzene	ND		4.5	0.23
106-46-7	1,4-Dichlorobenzene	ND		4.5	0.62
78-93-3	2-Butanone (MEK)	ND		22	1.6
591-78-6	2-Hexanone	ND		22	2.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		22	1.5
67-64-1	Acetone	ND		22	3.8
71-43-2	Benzene	ND		4.5	0.22
75-27-4	Bromodichloromethane	ND		4.5	0.60
75-25-2	Bromoform	ND		4.5	2.2
74-83-9	Bromomethane	ND		4.5	0.40
75-15-0	Carbon disulfide	ND		4.5	2.2
56-23-5	Carbon tetrachloride	ND		4.5	0.43
108-90-7	Chlorobenzene	ND		4.5	0.59
75-00-3	Chloroethane	ND		4.5	1.0
67-66-3	Chloroform	ND		4.5	0.28
74-87-3	Chloromethane	ND		4.5	0.27
156-59-2	cis-1,2-Dichloroethene	ND		4.5	0.57
10061-01-5	cis-1,3-Dichloropropene	ND		4.5	0.64
110-82-7	Cyclohexane	ND		4.5	0.62
124-48-1	Dibromochloromethane	ND		4.5	0.57
75-71-8	Dichlorodifluoromethane	ND		4.5	0.37
100-41-4	Ethylbenzene	ND		4.5	0.31
98-82-8	Isopropylbenzene	ND		4.5	0.67

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197248-1

SDG No.:

Client Sample ID: PDI-7_0203 | Lab Sample ID: 480-197248-5

Matrix: Solid | Lab File ID: M03439.D

Analysis Method: 8260C | Date Collected: 04/27/2022 12:09

Sample wt/vol: 6.743(g) | Date Analyzed: 05/02/2022 13:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (30) VOA ID: 0.25(mm)

% Moisture: 16.9 | Level: (low/med) Low

Analysis Batch No.: 624070 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		22	2.7
1634-04-4	Methyl tert-butyl ether	ND		4.5	0.44
108-87-2	Methylcyclohexane	ND		4.5	0.68
75-09-2	Methylene Chloride	ND		4.5	2.1
100-42-5	Styrene	ND		4.5	0.22
127-18-4	Tetrachloroethene	ND		4.5	0.60
108-88-3	Toluene	ND		4.5	0.34
156-60-5	trans-1,2-Dichloroethene	ND		4.5	0.46
10061-02-6	trans-1,3-Dichloropropene	ND		4.5	2.0
79-01-6	Trichloroethene	ND		4.5	0.98
75-69-4	Trichlorofluoromethane	ND		4.5	0.42
75-01-4	Vinyl chloride	ND		4.5	0.54
1330-20-7	Xylenes, Total	ND		8.9	0.75

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	106		64-126
460-00-4	4-Bromofluorobenzene (Surr)	89		72-126
1868-53-7	Dibromofluoromethane (Surr)	108		60-140
2037-26-5	Toluene-d8 (Surr)	99		71-125

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197248-1

SDG No.:

Client Sample ID: PDI-2_GW | Lab Sample ID: 480-197248-6

Matrix: Water | Lab File ID: N3574.D

Analysis Method: 8260C | Date Collected: 04/27/2022 12:20

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2022 07:25

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 623887 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
75-34-3	1,1-Dichloroethane	ND		1.0	0.38
75-35-4	1,1-Dichloroethene	ND		1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	6.4	J	10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND		1.0	0.69
75-15-0	Carbon disulfide	ND		1.0	0.19
56-23-5	Carbon tetrachloride	ND		1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	ND		1.0	0.34
74-87-3	Chloromethane	ND		1.0	0.35
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	ND		1.0	0.18
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-71-8	Dichlorodifluoromethane	ND		1.0	0.68
100-41-4	Ethylbenzene	ND		1.0	0.74
98-82-8	Isopropylbenzene	ND		1.0	0.79

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197248-1

SDG No.:

Client Sample ID: PDI-2_GW | Lab Sample ID: 480-197248-6

Matrix: Water | Lab File ID: N3574.D

Analysis Method: 8260C | Date Collected: 04/27/2022 12:20

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2022 07:25

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 623887 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.16
108-87-2	Methylcyclohexane	ND		1.0	0.16
75-09-2	Methylene Chloride	0.53	J	1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	ND		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	ND		1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		77-120
460-00-4	4-Bromofluorobenzene (Surr)	99		73-120
1868-53-7	Dibromofluoromethane (Surr)	94		75-123
2037-26-5	Toluene-d8 (Surr)	97		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197248-1

SDG No.:

Client Sample ID: PDI-7_GW | Lab Sample ID: 480-197248-7

Matrix: Water | Lab File ID: N3575.D

Analysis Method: 8260C | Date Collected: 04/27/2022 13:15

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2022 07:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 623887 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
75-34-3	1,1-Dichloroethane	ND		1.0	0.38
75-35-4	1,1-Dichloroethene	ND		1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	4.2	J	10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND		1.0	0.69
75-15-0	Carbon disulfide	0.68	J	1.0	0.19
56-23-5	Carbon tetrachloride	ND		1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	0.67	J	1.0	0.34
74-87-3	Chloromethane	ND		1.0	0.35
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	ND		1.0	0.18
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-71-8	Dichlorodifluoromethane	ND		1.0	0.68
100-41-4	Ethylbenzene	ND		1.0	0.74
98-82-8	Isopropylbenzene	ND		1.0	0.79

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197248-1

SDG No.:

Client Sample ID: PDI-7_GW | Lab Sample ID: 480-197248-7

Matrix: Water | Lab File ID: N3575.D

Analysis Method: 8260C | Date Collected: 04/27/2022 13:15

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2022 07:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 623887 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.16
108-87-2	Methylcyclohexane	ND		1.0	0.16
75-09-2	Methylene Chloride	ND		1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	ND		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	ND		1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		77-120
460-00-4	4-Bromofluorobenzene (Surr)	101		73-120
1868-53-7	Dibromofluoromethane (Surr)	100		75-123
2037-26-5	Toluene-d8 (Surr)	98		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197248-1

SDG No.:

Client Sample ID: PDI-3_0203 | Lab Sample ID: 480-197248-8

Matrix: Solid | Lab File ID: M03440.D

Analysis Method: 8260C | Date Collected: 04/27/2022 13:45

Sample wt/vol: 6.077(g) | Date Analyzed: 05/02/2022 14:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (30) VOA ID: 0.25(mm)

% Moisture: 14.8 | Level: (low/med) Low

Analysis Batch No.: 624070 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		4.8	0.35
79-34-5	1,1,2,2-Tetrachloroethane	ND		4.8	0.78
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.8	1.1
79-00-5	1,1,2-Trichloroethane	ND		4.8	0.63
75-34-3	1,1-Dichloroethane	ND		4.8	0.59
75-35-4	1,1-Dichloroethene	ND		4.8	0.59
120-82-1	1,2,4-Trichlorobenzene	ND		4.8	0.29
96-12-8	1,2-Dibromo-3-Chloropropane	ND		4.8	2.4
106-93-4	1,2-Dibromoethane	ND		4.8	0.62
95-50-1	1,2-Dichlorobenzene	ND		4.8	0.38
107-06-2	1,2-Dichloroethane	ND		4.8	0.24
78-87-5	1,2-Dichloropropane	ND		4.8	2.4
541-73-1	1,3-Dichlorobenzene	ND		4.8	0.25
106-46-7	1,4-Dichlorobenzene	ND		4.8	0.68
78-93-3	2-Butanone (MEK)	ND		24	1.8
591-78-6	2-Hexanone	ND		24	2.4
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		24	1.6
67-64-1	Acetone	31		24	4.1
71-43-2	Benzene	ND		4.8	0.24
75-27-4	Bromodichloromethane	ND		4.8	0.65
75-25-2	Bromoform	ND		4.8	2.4
74-83-9	Bromomethane	ND		4.8	0.43
75-15-0	Carbon disulfide	ND		4.8	2.4
56-23-5	Carbon tetrachloride	ND		4.8	0.47
108-90-7	Chlorobenzene	ND		4.8	0.64
75-00-3	Chloroethane	ND		4.8	1.1
67-66-3	Chloroform	ND		4.8	0.30
74-87-3	Chloromethane	ND		4.8	0.29
156-59-2	cis-1,2-Dichloroethene	1.2	J	4.8	0.62
10061-01-5	cis-1,3-Dichloropropene	ND		4.8	0.70
110-82-7	Cyclohexane	ND		4.8	0.68
124-48-1	Dibromochloromethane	ND		4.8	0.62
75-71-8	Dichlorodifluoromethane	ND		4.8	0.40
100-41-4	Ethylbenzene	ND		4.8	0.33
98-82-8	Isopropylbenzene	ND		4.8	0.73

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197248-1

SDG No.:

Client Sample ID: PDI-3_0203 | Lab Sample ID: 480-197248-8

Matrix: Solid | Lab File ID: M03440.D

Analysis Method: 8260C | Date Collected: 04/27/2022 13:45

Sample wt/vol: 6.077(g) | Date Analyzed: 05/02/2022 14:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (30) VOA ID: 0.25(mm)

% Moisture: 14.8 | Level: (low/med) Low

Analysis Batch No.: 624070 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		24	2.9
1634-04-4	Methyl tert-butyl ether	ND		4.8	0.47
108-87-2	Methylcyclohexane	ND		4.8	0.73
75-09-2	Methylene Chloride	ND		4.8	2.2
100-42-5	Styrene	ND		4.8	0.24
127-18-4	Tetrachloroethene	ND		4.8	0.65
108-88-3	Toluene	ND		4.8	0.37
156-60-5	trans-1,2-Dichloroethene	ND		4.8	0.50
10061-02-6	trans-1,3-Dichloropropene	ND		4.8	2.1
79-01-6	Trichloroethene	ND		4.8	1.1
75-69-4	Trichlorofluoromethane	ND		4.8	0.46
75-01-4	Vinyl chloride	ND		4.8	0.59
1330-20-7	Xylenes, Total	ND		9.7	0.81

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	104		64-126
460-00-4	4-Bromofluorobenzene (Surr)	96		72-126
1868-53-7	Dibromofluoromethane (Surr)	106		60-140
2037-26-5	Toluene-d8 (Surr)	95		71-125

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197248-1

SDG No.:

Client Sample ID: PDI-8_0405 | Lab Sample ID: 480-197248-9

Matrix: Solid | Lab File ID: M03441.D

Analysis Method: 8260C | Date Collected: 04/27/2022 14:09

Sample wt/vol: 7.526(g) | Date Analyzed: 05/02/2022 14:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (30) VOA ID: 0.25(mm)

% Moisture: 14.1 | Level: (low/med) Low

Analysis Batch No.: 624070 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	0.80	J	3.9	0.28
79-34-5	1,1,2,2-Tetrachloroethane	ND		3.9	0.63
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.9	0.88
79-00-5	1,1,2-Trichloroethane	ND		3.9	0.50
75-34-3	1,1-Dichloroethane	ND		3.9	0.47
75-35-4	1,1-Dichloroethene	ND		3.9	0.47
120-82-1	1,2,4-Trichlorobenzene	ND		3.9	0.24
96-12-8	1,2-Dibromo-3-Chloropropane	ND		3.9	1.9
106-93-4	1,2-Dibromoethane	ND		3.9	0.50
95-50-1	1,2-Dichlorobenzene	ND		3.9	0.30
107-06-2	1,2-Dichloroethane	ND		3.9	0.19
78-87-5	1,2-Dichloropropane	ND		3.9	1.9
541-73-1	1,3-Dichlorobenzene	ND		3.9	0.20
106-46-7	1,4-Dichlorobenzene	ND		3.9	0.54
78-93-3	2-Butanone (MEK)	ND		19	1.4
591-78-6	2-Hexanone	ND		19	1.9
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		19	1.3
67-64-1	Acetone	3.8	J	19	3.3
71-43-2	Benzene	ND		3.9	0.19
75-27-4	Bromodichloromethane	ND		3.9	0.52
75-25-2	Bromoform	ND		3.9	1.9
74-83-9	Bromomethane	ND		3.9	0.35
75-15-0	Carbon disulfide	ND		3.9	1.9
56-23-5	Carbon tetrachloride	ND		3.9	0.37
108-90-7	Chlorobenzene	ND		3.9	0.51
75-00-3	Chloroethane	ND		3.9	0.87
67-66-3	Chloroform	ND		3.9	0.24
74-87-3	Chloromethane	ND		3.9	0.23
156-59-2	cis-1,2-Dichloroethene	1.8	J	3.9	0.50
10061-01-5	cis-1,3-Dichloropropene	ND		3.9	0.56
110-82-7	Cyclohexane	ND		3.9	0.54
124-48-1	Dibromochloromethane	ND		3.9	0.50
75-71-8	Dichlorodifluoromethane	ND		3.9	0.32
100-41-4	Ethylbenzene	ND		3.9	0.27
98-82-8	Isopropylbenzene	ND		3.9	0.58

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197248-1

SDG No.:

Client Sample ID: PDI-8_0405 | Lab Sample ID: 480-197248-9

Matrix: Solid | Lab File ID: M03441.D

Analysis Method: 8260C | Date Collected: 04/27/2022 14:09

Sample wt/vol: 7.526(g) | Date Analyzed: 05/02/2022 14:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (30) VOA ID: 0.25(mm)

% Moisture: 14.1 | Level: (low/med) Low

Analysis Batch No.: 624070 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		19	2.3
1634-04-4	Methyl tert-butyl ether	ND		3.9	0.38
108-87-2	Methylcyclohexane	ND		3.9	0.59
75-09-2	Methylene Chloride	ND		3.9	1.8
100-42-5	Styrene	ND		3.9	0.19
127-18-4	Tetrachloroethene	0.93	J	3.9	0.52
108-88-3	Toluene	ND		3.9	0.29
156-60-5	trans-1,2-Dichloroethene	ND		3.9	0.40
10061-02-6	trans-1,3-Dichloropropene	ND		3.9	1.7
79-01-6	Trichloroethene	ND		3.9	0.85
75-69-4	Trichlorofluoromethane	ND		3.9	0.37
75-01-4	Vinyl chloride	ND		3.9	0.47
1330-20-7	Xylenes, Total	ND		7.7	0.65

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		64-126
460-00-4	4-Bromofluorobenzene (Surr)	98		72-126
1868-53-7	Dibromofluoromethane (Surr)	106		60-140
2037-26-5	Toluene-d8 (Surr)	95		71-125

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197248-1

SDG No.:

Client Sample ID: PDI-3_GW | Lab Sample ID: 480-197248-10

Matrix: Water | Lab File ID: N3576.D

Analysis Method: 8260C | Date Collected: 04/27/2022 14:30

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2022 08:12

Soil Aliquot Vol: | Dilution Factor: 8

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 623887 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		8.0	6.6
79-34-5	1,1,2,2-Tetrachloroethane	ND		8.0	1.7
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		8.0	2.5
79-00-5	1,1,2-Trichloroethane	ND		8.0	1.8
75-34-3	1,1-Dichloroethane	4.7	J	8.0	3.0
75-35-4	1,1-Dichloroethene	ND		8.0	2.3
120-82-1	1,2,4-Trichlorobenzene	ND		8.0	3.3
96-12-8	1,2-Dibromo-3-Chloropropane	ND		8.0	3.1
106-93-4	1,2-Dibromoethane	ND		8.0	5.8
95-50-1	1,2-Dichlorobenzene	ND		8.0	6.3
107-06-2	1,2-Dichloroethane	ND		8.0	1.7
78-87-5	1,2-Dichloropropane	ND		8.0	5.8
541-73-1	1,3-Dichlorobenzene	ND		8.0	6.2
106-46-7	1,4-Dichlorobenzene	ND		8.0	6.7
78-93-3	2-Butanone (MEK)	ND		80	11
591-78-6	2-Hexanone	ND		40	9.9
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		40	17
67-64-1	Acetone	ND		80	24
71-43-2	Benzene	ND		8.0	3.3
75-27-4	Bromodichloromethane	ND		8.0	3.1
75-25-2	Bromoform	ND		8.0	2.1
74-83-9	Bromomethane	ND		8.0	5.5
75-15-0	Carbon disulfide	ND		8.0	1.5
56-23-5	Carbon tetrachloride	ND		8.0	2.2
108-90-7	Chlorobenzene	ND		8.0	6.0
75-00-3	Chloroethane	ND		8.0	2.6
67-66-3	Chloroform	ND		8.0	2.7
74-87-3	Chloromethane	ND		8.0	2.8
156-59-2	cis-1,2-Dichloroethene	300		8.0	6.5
10061-01-5	cis-1,3-Dichloropropene	ND		8.0	2.9
110-82-7	Cyclohexane	ND		8.0	1.4
124-48-1	Dibromochloromethane	ND		8.0	2.6
75-71-8	Dichlorodifluoromethane	ND		8.0	5.4
100-41-4	Ethylbenzene	ND		8.0	5.9
98-82-8	Isopropylbenzene	ND		8.0	6.3

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197248-1

SDG No.:

Client Sample ID: PDI-3_GW | Lab Sample ID: 480-197248-10

Matrix: Water | Lab File ID: N3576.D

Analysis Method: 8260C | Date Collected: 04/27/2022 14:30

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2022 08:12

Soil Aliquot Vol: | Dilution Factor: 8

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 623887 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		20	10
1634-04-4	Methyl tert-butyl ether	ND		8.0	1.3
108-87-2	Methylcyclohexane	ND		8.0	1.3
75-09-2	Methylene Chloride	ND		8.0	3.5
100-42-5	Styrene	ND		8.0	5.8
127-18-4	Tetrachloroethene	ND		8.0	2.9
108-88-3	Toluene	ND		8.0	4.1
156-60-5	trans-1,2-Dichloroethene	ND		8.0	7.2
10061-02-6	trans-1,3-Dichloropropene	ND		8.0	3.0
79-01-6	Trichloroethene	ND		8.0	3.7
75-69-4	Trichlorofluoromethane	ND		8.0	7.0
75-01-4	Vinyl chloride	ND		8.0	7.2
1330-20-7	Xylenes, Total	ND		16	5.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		77-120
460-00-4	4-Bromofluorobenzene (Surr)	100		73-120
1868-53-7	Dibromofluoromethane (Surr)	101		75-123
2037-26-5	Toluene-d8 (Surr)	103		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197248-1

SDG No.:

Client Sample ID: PDI-6_0304 | Lab Sample ID: 480-197248-11

Matrix: Solid | Lab File ID: M03442.D

Analysis Method: 8260C | Date Collected: 04/27/2022 10:42

Sample wt/vol: 6.872(g) | Date Analyzed: 05/02/2022 14:54

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (30) VOA ID: 0.25(mm)

% Moisture: 15.1 | Level: (low/med) Low

Analysis Batch No.: 624070 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		4.3	0.31
79-34-5	1,1,2,2-Tetrachloroethane	ND		4.3	0.70
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.3	0.98
79-00-5	1,1,2-Trichloroethane	ND		4.3	0.56
75-34-3	1,1-Dichloroethane	ND		4.3	0.52
75-35-4	1,1-Dichloroethene	ND		4.3	0.52
120-82-1	1,2,4-Trichlorobenzene	ND		4.3	0.26
96-12-8	1,2-Dibromo-3-Chloropropane	ND		4.3	2.1
106-93-4	1,2-Dibromoethane	ND		4.3	0.55
95-50-1	1,2-Dichlorobenzene	ND		4.3	0.34
107-06-2	1,2-Dichloroethane	ND		4.3	0.22
78-87-5	1,2-Dichloropropane	ND		4.3	2.1
541-73-1	1,3-Dichlorobenzene	ND		4.3	0.22
106-46-7	1,4-Dichlorobenzene	ND		4.3	0.60
78-93-3	2-Butanone (MEK)	4.9	J	21	1.6
591-78-6	2-Hexanone	ND		21	2.1
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		21	1.4
67-64-1	Acetone	29		21	3.6
71-43-2	Benzene	ND		4.3	0.21
75-27-4	Bromodichloromethane	ND		4.3	0.57
75-25-2	Bromoform	ND		4.3	2.1
74-83-9	Bromomethane	ND		4.3	0.39
75-15-0	Carbon disulfide	ND		4.3	2.1
56-23-5	Carbon tetrachloride	ND		4.3	0.42
108-90-7	Chlorobenzene	ND		4.3	0.57
75-00-3	Chloroethane	ND		4.3	0.97
67-66-3	Chloroform	ND		4.3	0.26
74-87-3	Chloromethane	ND		4.3	0.26
156-59-2	cis-1,2-Dichloroethene	ND		4.3	0.55
10061-01-5	cis-1,3-Dichloropropene	ND		4.3	0.62
110-82-7	Cyclohexane	ND		4.3	0.60
124-48-1	Dibromochloromethane	ND		4.3	0.55
75-71-8	Dichlorodifluoromethane	ND		4.3	0.35
100-41-4	Ethylbenzene	ND		4.3	0.30
98-82-8	Isopropylbenzene	ND		4.3	0.65

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197248-1

SDG No.:

Client Sample ID: PDI-6_0304 | Lab Sample ID: 480-197248-11

Matrix: Solid | Lab File ID: M03442.D

Analysis Method: 8260C | Date Collected: 04/27/2022 10:42

Sample wt/vol: 6.872(g) | Date Analyzed: 05/02/2022 14:54

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (30) VOA ID: 0.25(mm)

% Moisture: 15.1 | Level: (low/med) Low

Analysis Batch No.: 624070 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		21	2.6
1634-04-4	Methyl tert-butyl ether	ND		4.3	0.42
108-87-2	Methylcyclohexane	ND		4.3	0.65
75-09-2	Methylene Chloride	ND		4.3	2.0
100-42-5	Styrene	ND		4.3	0.21
127-18-4	Tetrachloroethene	ND		4.3	0.58
108-88-3	Toluene	ND		4.3	0.32
156-60-5	trans-1,2-Dichloroethene	ND		4.3	0.44
10061-02-6	trans-1,3-Dichloropropene	ND		4.3	1.9
79-01-6	Trichloroethene	ND		4.3	0.94
75-69-4	Trichlorofluoromethane	ND		4.3	0.41
75-01-4	Vinyl chloride	ND		4.3	0.52
1330-20-7	Xylenes, Total	ND		8.6	0.72

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	104		64-126
460-00-4	4-Bromofluorobenzene (Surr)	95		72-126
1868-53-7	Dibromofluoromethane (Surr)	107		60-140
2037-26-5	Toluene-d8 (Surr)	95		71-125

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197248-1

SDG No.:

Client Sample ID: PDI-8_GW | Lab Sample ID: 480-197248-12

Matrix: Water | Lab File ID: N3577.D

Analysis Method: 8260C | Date Collected: 04/27/2022 15:10

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2022 08:35

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 623887 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
75-34-3	1,1-Dichloroethane	0.83	J	1.0	0.38
75-35-4	1,1-Dichloroethene	ND		1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	3.4	J	10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND		1.0	0.69
75-15-0	Carbon disulfide	ND		1.0	0.19
56-23-5	Carbon tetrachloride	ND		1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	ND		1.0	0.34
74-87-3	Chloromethane	ND		1.0	0.35
156-59-2	cis-1,2-Dichloroethene	18		1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	0.23	J	1.0	0.18
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-71-8	Dichlorodifluoromethane	ND		1.0	0.68
100-41-4	Ethylbenzene	ND		1.0	0.74
98-82-8	Isopropylbenzene	ND		1.0	0.79

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197248-1

SDG No.:

Client Sample ID: PDI-8_GW | Lab Sample ID: 480-197248-12

Matrix: Water | Lab File ID: N3577.D

Analysis Method: 8260C | Date Collected: 04/27/2022 15:10

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2022 08:35

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 623887 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.16
108-87-2	Methylcyclohexane	0.34	J	1.0	0.16
75-09-2	Methylene Chloride	ND		1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	1.5		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	2.2		1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		77-120
460-00-4	4-Bromofluorobenzene (Surr)	96		73-120
1868-53-7	Dibromofluoromethane (Surr)	98		75-123
2037-26-5	Toluene-d8 (Surr)	102		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197248-1

SDG No.:

Client Sample ID: TRIP BLANK-042722 | Lab Sample ID: 480-197248-13

Matrix: Water | Lab File ID: N3578.D

Analysis Method: 8260C | Date Collected: 04/27/2022 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2022 08:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 623887 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
75-34-3	1,1-Dichloroethane	ND		1.0	0.38
75-35-4	1,1-Dichloroethene	ND		1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	ND		10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND		1.0	0.69
75-15-0	Carbon disulfide	ND		1.0	0.19
56-23-5	Carbon tetrachloride	ND		1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	ND		1.0	0.34
74-87-3	Chloromethane	ND		1.0	0.35
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	ND		1.0	0.18
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-71-8	Dichlorodifluoromethane	ND		1.0	0.68
100-41-4	Ethylbenzene	ND		1.0	0.74
98-82-8	Isopropylbenzene	ND		1.0	0.79

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197248-1

SDG No.:

Client Sample ID: TRIP BLANK-042722 | Lab Sample ID: 480-197248-13

Matrix: Water | Lab File ID: N3578.D

Analysis Method: 8260C | Date Collected: 04/27/2022 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2022 08:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 623887 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.16
108-87-2	Methylcyclohexane	ND		1.0	0.16
75-09-2	Methylene Chloride	ND		1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	ND		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	ND		1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		77-120
460-00-4	4-Bromofluorobenzene (Surr)	100		73-120
1868-53-7	Dibromofluoromethane (Surr)	98		75-123
2037-26-5	Toluene-d8 (Surr)	95		80-120

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: PDI-1_0405 Lab Sample ID: 480-197248-1

Lab Name: Eurofins Buffalo Job No.: 480-197248-1

SDG ID.:

Matrix: Solid Date Sampled: 04/27/2022 09:40

Reporting Basis: DRY Date Received: 04/27/2022 16:40

% Solids: 86.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	8810	12.1	5.3	mg/Kg			1	6010C
7440-36-0	Antimony	2.7	18.1	0.48	mg/Kg	J		1	6010C
7440-38-2	Arsenic	4.4	2.4	0.48	mg/Kg			1	6010C
7440-39-3	Barium	66.2	0.60	0.13	mg/Kg			1	6010C
7440-41-7	Beryllium	0.46	0.24	0.034	mg/Kg			1	6010C
7440-43-9	Cadmium	0.17	0.24	0.036	mg/Kg	J		1	6010C
7440-70-2	Calcium	33100	60.4	4.0	mg/Kg			1	6010C
7440-47-3	Chromium	9.5	0.60	0.24	mg/Kg			1	6010C
7440-48-4	Cobalt	5.7	0.60	0.060	mg/Kg			1	6010C
7440-50-8	Copper	18.2	1.2	0.25	mg/Kg			1	6010C
7439-89-6	Iron	16900	12.1	4.2	mg/Kg			1	6010C
7439-92-1	Lead	37.7	1.2	0.29	mg/Kg			1	6010C
7439-95-4	Magnesium	6160	24.2	1.1	mg/Kg			1	6010C
7439-96-5	Manganese	553	0.24	0.039	mg/Kg			1	6010C
7440-02-0	Nickel	10.3	6.0	0.28	mg/Kg			1	6010C
7440-09-7	Potassium	1300	36.2	24.2	mg/Kg			1	6010C
7782-49-2	Selenium	2.0	4.8	0.48	mg/Kg	J		1	6010C
7440-22-4	Silver	ND	0.72	0.24	mg/Kg			1	6010C
7440-23-5	Sodium	167	169	15.7	mg/Kg	J		1	6010C
7440-28-0	Thallium	ND	7.2	0.36	mg/Kg			1	6010C
7440-62-2	Vanadium	17.7	0.60	0.13	mg/Kg			1	6010C
7440-66-6	Zinc	50.2	2.4	0.77	mg/Kg			1	6010C
7439-97-6	Mercury	0.021	0.023	0.0053	mg/Kg	J		1	7471B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: PDI-2_0203 Lab Sample ID: 480-197248-3

Lab Name: Eurofins Buffalo Job No.: 480-197248-1

SDG ID.:

Matrix: Solid Date Sampled: 04/27/2022 11:05

Reporting Basis: DRY Date Received: 04/27/2022 16:40

% Solids: 88.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	9690	12.0	5.3	mg/Kg			1	6010C
7440-36-0	Antimony	1.5	17.9	0.48	mg/Kg	J		1	6010C
7440-38-2	Arsenic	2.7	2.4	0.48	mg/Kg			1	6010C
7440-39-3	Barium	50.0	0.60	0.13	mg/Kg			1	6010C
7440-41-7	Beryllium	0.33	0.24	0.033	mg/Kg			1	6010C
7440-43-9	Cadmium	0.16	0.24	0.036	mg/Kg	J		1	6010C
7440-70-2	Calcium	14900	59.8	3.9	mg/Kg			1	6010C
7440-47-3	Chromium	9.8	0.60	0.24	mg/Kg			1	6010C
7440-48-4	Cobalt	4.3	0.60	0.060	mg/Kg			1	6010C
7440-50-8	Copper	11.7	1.2	0.25	mg/Kg			1	6010C
7439-89-6	Iron	11500	12.0	4.2	mg/Kg			1	6010C
7439-92-1	Lead	14.0	1.2	0.29	mg/Kg			1	6010C
7439-95-4	Magnesium	5100	23.9	1.1	mg/Kg			1	6010C
7439-96-5	Manganese	361	0.24	0.038	mg/Kg			1	6010C
7440-02-0	Nickel	8.3	6.0	0.28	mg/Kg			1	6010C
7440-09-7	Potassium	1130	35.9	23.9	mg/Kg			1	6010C
7782-49-2	Selenium	1.2	4.8	0.48	mg/Kg	J		1	6010C
7440-22-4	Silver	ND	0.72	0.24	mg/Kg			1	6010C
7440-23-5	Sodium	246	167	15.6	mg/Kg			1	6010C
7440-28-0	Thallium	ND	7.2	0.36	mg/Kg			1	6010C
7440-62-2	Vanadium	18.2	0.60	0.13	mg/Kg			1	6010C
7440-66-6	Zinc	55.4	2.4	0.77	mg/Kg			1	6010C
7439-97-6	Mercury	0.031	0.022	0.0050	mg/Kg			1	7471B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: PDI-7_0203 Lab Sample ID: 480-197248-5

Lab Name: Eurofins Buffalo Job No.: 480-197248-1

SDG ID.:

Matrix: Solid Date Sampled: 04/27/2022 12:09

Reporting Basis: DRY Date Received: 04/27/2022 16:40

% Solids: 83.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	10600	12.4	5.5	mg/Kg			1	6010C
7440-36-0	Antimony	1.4	18.6	0.50	mg/Kg	J		1	6010C
7440-38-2	Arsenic	2.7	2.5	0.50	mg/Kg			1	6010C
7440-39-3	Barium	34.4	0.62	0.14	mg/Kg			1	6010C
7440-41-7	Beryllium	0.26	0.25	0.035	mg/Kg			1	6010C
7440-43-9	Cadmium	0.15	0.25	0.037	mg/Kg	J		1	6010C
7440-70-2	Calcium	18100	62.1	4.1	mg/Kg			1	6010C
7440-47-3	Chromium	9.1	0.62	0.25	mg/Kg			1	6010C
7440-48-4	Cobalt	3.0	0.62	0.062	mg/Kg			1	6010C
7440-50-8	Copper	10	1.2	0.26	mg/Kg			1	6010C
7439-89-6	Iron	9340	12.4	4.3	mg/Kg			1	6010C
7439-92-1	Lead	9.8	1.2	0.30	mg/Kg			1	6010C
7439-95-4	Magnesium	3510	24.9	1.2	mg/Kg			1	6010C
7439-96-5	Manganese	236	0.25	0.040	mg/Kg			1	6010C
7440-02-0	Nickel	6.4	6.2	0.29	mg/Kg			1	6010C
7440-09-7	Potassium	1060	37.3	24.9	mg/Kg			1	6010C
7782-49-2	Selenium	1.0	5.0	0.50	mg/Kg	J		1	6010C
7440-22-4	Silver	ND	0.75	0.25	mg/Kg			1	6010C
7440-23-5	Sodium	241	174	16.2	mg/Kg			1	6010C
7440-28-0	Thallium	ND	7.5	0.37	mg/Kg			1	6010C
7440-62-2	Vanadium	15.7	0.62	0.14	mg/Kg			1	6010C
7440-66-6	Zinc	39.2	2.5	0.80	mg/Kg			1	6010C
7439-97-6	Mercury	0.039	0.025	0.0057	mg/Kg			1	7471B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: PDI-3_0203 Lab Sample ID: 480-197248-8

Lab Name: Eurofins Buffalo Job No.: 480-197248-1

SDG ID.:

Matrix: Solid Date Sampled: 04/27/2022 13:45

Reporting Basis: DRY Date Received: 04/27/2022 16:40

% Solids: 85.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	4250	12.2	5.4	mg/Kg			1	6010C
7440-36-0	Antimony	0.77	18.3	0.49	mg/Kg	J		1	6010C
7440-38-2	Arsenic	3.9	2.4	0.49	mg/Kg			1	6010C
7440-39-3	Barium	24.9	0.61	0.13	mg/Kg			1	6010C
7440-41-7	Beryllium	0.20	0.24	0.034	mg/Kg	J		1	6010C
7440-43-9	Cadmium	0.059	0.24	0.037	mg/Kg	J		1	6010C
7440-70-2	Calcium	2160	61.2	4.0	mg/Kg			1	6010C
7440-47-3	Chromium	6.2	0.61	0.24	mg/Kg			1	6010C
7440-48-4	Cobalt	2.5	0.61	0.061	mg/Kg			1	6010C
7440-50-8	Copper	11.6	1.2	0.26	mg/Kg			1	6010C
7439-89-6	Iron	7200	12.2	4.3	mg/Kg			1	6010C
7439-92-1	Lead	3.4	1.2	0.29	mg/Kg			1	6010C
7439-95-4	Magnesium	1240	24.5	1.1	mg/Kg			1	6010C
7439-96-5	Manganese	207	0.24	0.039	mg/Kg			1	6010C
7440-02-0	Nickel	5.8	6.1	0.28	mg/Kg	J		1	6010C
7440-09-7	Potassium	827	36.7	24.5	mg/Kg			1	6010C
7782-49-2	Selenium	0.51	4.9	0.49	mg/Kg	J		1	6010C
7440-22-4	Silver	ND	0.73	0.24	mg/Kg			1	6010C
7440-23-5	Sodium	72.5	171	15.9	mg/Kg	J		1	6010C
7440-28-0	Thallium	ND	7.3	0.37	mg/Kg			1	6010C
7440-62-2	Vanadium	8.8	0.61	0.13	mg/Kg			1	6010C
7440-66-6	Zinc	12.7	2.4	0.78	mg/Kg			1	6010C
7439-97-6	Mercury	0.011	0.023	0.0054	mg/Kg	J		1	7471B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: PDI-8_0405 Lab Sample ID: 480-197248-9

Lab Name: Eurofins Buffalo Job No.: 480-197248-1

SDG ID.:

Matrix: Solid Date Sampled: 04/27/2022 14:09

Reporting Basis: DRY Date Received: 04/27/2022 16:40

% Solids: 85.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	8360	11.9	5.2	mg/Kg			1	6010C
7440-36-0	Antimony	1.2	17.8	0.47	mg/Kg	J		1	6010C
7440-38-2	Arsenic	2.7	2.4	0.47	mg/Kg			1	6010C
7440-39-3	Barium	56.4	0.59	0.13	mg/Kg			1	6010C
7440-41-7	Beryllium	0.33	0.24	0.033	mg/Kg			1	6010C
7440-43-9	Cadmium	0.18	0.24	0.036	mg/Kg	J		1	6010C
7440-70-2	Calcium	5980	59.4	3.9	mg/Kg			1	6010C
7440-47-3	Chromium	8.7	0.59	0.24	mg/Kg			1	6010C
7440-48-4	Cobalt	5.6	0.59	0.059	mg/Kg			1	6010C
7440-50-8	Copper	25.8	1.2	0.25	mg/Kg			1	6010C
7439-89-6	Iron	9440	11.9	4.2	mg/Kg			1	6010C
7439-92-1	Lead	12.7	1.2	0.28	mg/Kg			1	6010C
7439-95-4	Magnesium	1960	23.7	1.1	mg/Kg			1	6010C
7439-96-5	Manganese	481	0.24	0.038	mg/Kg			1	6010C
7440-02-0	Nickel	9.8	5.9	0.27	mg/Kg			1	6010C
7440-09-7	Potassium	1370	35.6	23.7	mg/Kg			1	6010C
7782-49-2	Selenium	0.76	4.7	0.47	mg/Kg	J		1	6010C
7440-22-4	Silver	ND	0.71	0.24	mg/Kg			1	6010C
7440-23-5	Sodium	122	166	15.4	mg/Kg	J		1	6010C
7440-28-0	Thallium	ND	7.1	0.36	mg/Kg			1	6010C
7440-62-2	Vanadium	13.8	0.59	0.13	mg/Kg			1	6010C
7440-66-6	Zinc	37.3	2.4	0.76	mg/Kg			1	6010C
7439-97-6	Mercury	0.025	0.022	0.0051	mg/Kg			1	7471B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: PDI-6_0304 Lab Sample ID: 480-197248-11

Lab Name: Eurofins Buffalo Job No.: 480-197248-1

SDG ID.:

Matrix: Solid Date Sampled: 04/27/2022 10:42

Reporting Basis: DRY Date Received: 04/27/2022 16:40

% Solids: 84.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	11900	12.2	5.4	mg/Kg			1	6010C
7440-36-0	Antimony	2.6	18.3	0.49	mg/Kg	J		1	6010C
7440-38-2	Arsenic	3.6	2.4	0.49	mg/Kg			1	6010C
7440-39-3	Barium	59.6	0.61	0.13	mg/Kg			1	6010C
7440-41-7	Beryllium	0.49	0.24	0.034	mg/Kg			1	6010C
7440-43-9	Cadmium	0.14	0.24	0.037	mg/Kg	J		1	6010C
7440-70-2	Calcium	22400	61.1	4.0	mg/Kg			1	6010C
7440-47-3	Chromium	13.6	0.61	0.24	mg/Kg			1	6010C
7440-48-4	Cobalt	6.1	0.61	0.061	mg/Kg			1	6010C
7440-50-8	Copper	14.2	1.2	0.26	mg/Kg			1	6010C
7439-89-6	Iron	16800	12.2	4.3	mg/Kg			1	6010C
7439-92-1	Lead	10.8	1.2	0.29	mg/Kg			1	6010C
7439-95-4	Magnesium	6360	24.4	1.1	mg/Kg			1	6010C
7439-96-5	Manganese	310	0.24	0.039	mg/Kg			1	6010C
7440-02-0	Nickel	13.7	6.1	0.28	mg/Kg			1	6010C
7440-09-7	Potassium	2220	36.7	24.4	mg/Kg			1	6010C
7782-49-2	Selenium	1.4	4.9	0.49	mg/Kg	J		1	6010C
7440-22-4	Silver	ND	0.73	0.24	mg/Kg			1	6010C
7440-23-5	Sodium	193	171	15.9	mg/Kg			1	6010C
7440-28-0	Thallium	ND	7.3	0.37	mg/Kg			1	6010C
7440-62-2	Vanadium	23.9	0.61	0.13	mg/Kg			1	6010C
7440-66-6	Zinc	37.9	2.4	0.78	mg/Kg			1	6010C
7439-97-6	Mercury	0.020	0.024	0.0056	mg/Kg	J		1	7471B

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197309-1

SDG No.:

Client Sample ID: PDI-4_0304 | Lab Sample ID: 480-197309-1

Matrix: Solid | Lab File ID: M03446.D

Analysis Method: 8260C | Date Collected: 04/28/2022 09:10

Sample wt/vol: 6.872(g) | Date Analyzed: 05/02/2022 16:31

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (30) VOA ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) Y pH:

% Moisture: 12.6 % Solids: 87.4 | Level: (low/med) Low

Analysis Batch No.: 624070 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		4.2	0.30
79-34-5	1,1,2,2-Tetrachloroethane	ND		4.2	0.68
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.2	0.95
79-00-5	1,1,2-Trichloroethane	ND		4.2	0.54
75-34-3	1,1-Dichloroethane	1.2	J	4.2	0.51
75-35-4	1,1-Dichloroethene	ND		4.2	0.51
120-82-1	1,2,4-Trichlorobenzene	ND		4.2	0.25
96-12-8	1,2-Dibromo-3-Chloropropane	ND		4.2	2.1
106-93-4	1,2-Dibromoethane	ND		4.2	0.53
95-50-1	1,2-Dichlorobenzene	ND		4.2	0.33
107-06-2	1,2-Dichloroethane	ND		4.2	0.21
78-87-5	1,2-Dichloropropane	ND		4.2	2.1
541-73-1	1,3-Dichlorobenzene	ND		4.2	0.21
106-46-7	1,4-Dichlorobenzene	ND		4.2	0.58
78-93-3	2-Butanone (MEK)	ND		21	1.5
591-78-6	2-Hexanone	ND		21	2.1
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		21	1.4
67-64-1	Acetone	ND		21	3.5
71-43-2	Benzene	ND		4.2	0.20
75-27-4	Bromodichloromethane	ND		4.2	0.56
75-25-2	Bromoform	ND		4.2	2.1
74-83-9	Bromomethane	ND		4.2	0.37
75-15-0	Carbon disulfide	ND		4.2	2.1
56-23-5	Carbon tetrachloride	ND		4.2	0.40
108-90-7	Chlorobenzene	ND		4.2	0.55
75-00-3	Chloroethane	ND		4.2	0.94
67-66-3	Chloroform	ND		4.2	0.26
74-87-3	Chloromethane	ND		4.2	0.25
156-59-2	cis-1,2-Dichloroethene	12		4.2	0.53
10061-01-5	cis-1,3-Dichloropropene	ND		4.2	0.60
110-82-7	Cyclohexane	ND		4.2	0.58
124-48-1	Dibromochloromethane	ND		4.2	0.53
75-71-8	Dichlorodifluoromethane	ND		4.2	0.34

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197309-1

SDG No.:

Client Sample ID: PDI-4_0304 | Lab Sample ID: 480-197309-1

Matrix: Solid | Lab File ID: M03446.D

Analysis Method: 8260C | Date Collected: 04/28/2022 09:10

Sample wt/vol: 6.872(g) | Date Analyzed: 05/02/2022 16:31

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (30) VOA ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) Y pH:

% Moisture: 12.6 % Solids: 87.4 | Level: (low/med) Low

Analysis Batch No.: 624070 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
100-41-4	Ethylbenzene	ND		4.2	0.29
98-82-8	Isopropylbenzene	ND		4.2	0.63
79-20-9	Methyl acetate	ND		21	2.5
1634-04-4	Methyl tert-butyl ether	ND		4.2	0.41
108-87-2	Methylcyclohexane	ND		4.2	0.63
75-09-2	Methylene Chloride	ND		4.2	1.9
100-42-5	Styrene	ND		4.2	0.21
127-18-4	Tetrachloroethene	ND		4.2	0.56
108-88-3	Toluene	ND		4.2	0.31
156-60-5	trans-1,2-Dichloroethene	0.68	J	4.2	0.43
10061-02-6	trans-1,3-Dichloropropene	ND		4.2	1.8
79-01-6	Trichloroethene	ND		4.2	0.92
75-69-4	Trichlorofluoromethane	ND		4.2	0.39
75-01-4	Vinyl chloride	ND		4.2	0.51
1330-20-7	Xylenes, Total	ND		8.3	0.70

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		64-126
460-00-4	4-Bromofluorobenzene (Surr)	91		72-126
1868-53-7	Dibromofluoromethane (Surr)	106		60-140
2037-26-5	Toluene-d8 (Surr)	99		71-125

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197309-1

SDG No.:

Client Sample ID: PDI-4_GW | Lab Sample ID: 480-197309-2

Matrix: Water | Lab File ID: T9151.D

Analysis Method: 8260C | Date Collected: 04/28/2022 09:26

Sample wt/vol: 5(mL) | Date Analyzed: 05/06/2022 18:49

Soil Aliquot Vol: | Dilution Factor: 20

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH: 7.0

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 624854 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND	UJ	20	16
79-34-5	1,1,2,2-Tetrachloroethane	ND	UJ	20	4.2
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND	UJ	20	6.2
79-00-5	1,1,2-Trichloroethane	ND	UJ	20	4.6
75-34-3	1,1-Dichloroethane	410	J	20	7.6
75-35-4	1,1-Dichloroethene	13	J	20	5.8
120-82-1	1,2,4-Trichlorobenzene	ND	UJ	20	8.2
96-12-8	1,2-Dibromo-3-Chloropropane	ND	UJ	20	7.8
106-93-4	1,2-Dibromoethane	ND	UJ	20	15
95-50-1	1,2-Dichlorobenzene	ND	UJ	20	16
107-06-2	1,2-Dichloroethane	ND	UJ	20	4.2
78-87-5	1,2-Dichloropropane	ND	UJ	20	14
541-73-1	1,3-Dichlorobenzene	ND	UJ	20	16
106-46-7	1,4-Dichlorobenzene	ND	UJ	20	17
78-93-3	2-Butanone (MEK)	ND	UJ	200	26
591-78-6	2-Hexanone	ND	UJ	100	25
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	UJ	100	42
67-64-1	Acetone	73	J	200	60
71-43-2	Benzene	ND	UJ	20	8.2
75-27-4	Bromodichloromethane	ND	UJ	20	7.8
75-25-2	Bromoform	ND	UJ	20	5.2
74-83-9	Bromomethane	ND	UJ	20	14
75-15-0	Carbon disulfide	ND	UJ	20	3.8
56-23-5	Carbon tetrachloride	ND	UJ	20	5.4
108-90-7	Chlorobenzene	ND	UJ	20	15
75-00-3	Chloroethane	ND	UJ	20	6.4
67-66-3	Chloroform	ND	UJ	20	6.8
74-87-3	Chloromethane	ND	UJ	20	7.0
156-59-2	cis-1,2-Dichloroethene	1400	J	20	16
10061-01-5	cis-1,3-Dichloropropene	ND	UJ	20	7.2
110-82-7	Cyclohexane	ND	UJ	20	3.6
124-48-1	Dibromochloromethane	ND	UJ	20	6.4
75-71-8	Dichlorodifluoromethane	ND	UJ	20	14

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197309-1

SDG No.:

Client Sample ID: PDI-4_GW | Lab Sample ID: 480-197309-2

Matrix: Water | Lab File ID: T9151.D

Analysis Method: 8260C | Date Collected: 04/28/2022 09:26

Sample wt/vol: 5(mL) | Date Analyzed: 05/06/2022 18:49

Soil Aliquot Vol: | Dilution Factor: 20

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH: 7.0

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 624854 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
100-41-4	Ethylbenzene	ND	UJ	20	15
98-82-8	Isopropylbenzene	ND	UJ	20	16
79-20-9	Methyl acetate	ND	UJ	50	26
1634-04-4	Methyl tert-butyl ether	ND	UJ	20	3.2
108-87-2	Methylcyclohexane	ND	UJ	20	3.2
75-09-2	Methylene Chloride	ND	UJ	20	8.8
100-42-5	Styrene	ND	UJ	20	15
127-18-4	Tetrachloroethene	ND	UJ	20	7.2
108-88-3	Toluene	ND	UJ	20	10
156-60-5	trans-1,2-Dichloroethene	37	J	20	18
10061-02-6	trans-1,3-Dichloropropene	ND	UJ	20	7.4
79-01-6	Trichloroethene	11	J	20	9.2
75-69-4	Trichlorofluoromethane	ND	UJ	20	18
75-01-4	Vinyl chloride	250	J	20	18
1330-20-7	Xylenes, Total	ND	UJ	40	13

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		77-120
460-00-4	4-Bromofluorobenzene (Surr)	89		73-120
1868-53-7	Dibromofluoromethane (Surr)	96		75-123
2037-26-5	Toluene-d8 (Surr)	99		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197309-1

SDG No.:

Client Sample ID: PDI-9_0203 | Lab Sample ID: 480-197309-3

Matrix: Solid | Lab File ID: M03447.D

Analysis Method: 8260C | Date Collected: 04/28/2022 10:09

Sample wt/vol: 7.334(g) | Date Analyzed: 05/02/2022 16:55

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (30) VOA ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) Y pH:

% Moisture: 8.8 % Solids: 91.2 | Level: (low/med) Low

Analysis Batch No.: 624070 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		3.7	0.27
79-34-5	1,1,2,2-Tetrachloroethane	ND		3.7	0.61
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.7	0.85
79-00-5	1,1,2-Trichloroethane	ND		3.7	0.49
75-34-3	1,1-Dichloroethane	ND		3.7	0.46
75-35-4	1,1-Dichloroethene	ND		3.7	0.46
120-82-1	1,2,4-Trichlorobenzene	ND		3.7	0.23
96-12-8	1,2-Dibromo-3-Chloropropane	ND		3.7	1.9
106-93-4	1,2-Dibromoethane	ND		3.7	0.48
95-50-1	1,2-Dichlorobenzene	ND		3.7	0.29
107-06-2	1,2-Dichloroethane	ND		3.7	0.19
78-87-5	1,2-Dichloropropane	ND		3.7	1.9
541-73-1	1,3-Dichlorobenzene	ND		3.7	0.19
106-46-7	1,4-Dichlorobenzene	ND		3.7	0.52
78-93-3	2-Butanone (MEK)	ND		19	1.4
591-78-6	2-Hexanone	ND		19	1.9
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		19	1.2
67-64-1	Acetone	13	J	19	3.1
71-43-2	Benzene	ND		3.7	0.18
75-27-4	Bromodichloromethane	ND		3.7	0.50
75-25-2	Bromoform	ND		3.7	1.9
74-83-9	Bromomethane	ND		3.7	0.34
75-15-0	Carbon disulfide	ND		3.7	1.9
56-23-5	Carbon tetrachloride	ND		3.7	0.36
108-90-7	Chlorobenzene	ND		3.7	0.49
75-00-3	Chloroethane	ND		3.7	0.84
67-66-3	Chloroform	ND		3.7	0.23
74-87-3	Chloromethane	ND		3.7	0.23
156-59-2	cis-1,2-Dichloroethene	43		3.7	0.48
10061-01-5	cis-1,3-Dichloropropene	ND		3.7	0.54
110-82-7	Cyclohexane	ND		3.7	0.52
124-48-1	Dibromochloromethane	ND		3.7	0.48
75-71-8	Dichlorodifluoromethane	ND		3.7	0.31

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197309-1

SDG No.:

Client Sample ID: PDI-9_0203 | Lab Sample ID: 480-197309-3

Matrix: Solid | Lab File ID: M03447.D

Analysis Method: 8260C | Date Collected: 04/28/2022 10:09

Sample wt/vol: 7.334(g) | Date Analyzed: 05/02/2022 16:55

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (30) VOA ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) Y pH:

% Moisture: 8.8 % Solids: 91.2 | Level: (low/med) Low

Analysis Batch No.: 624070 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
100-41-4	Ethylbenzene	ND		3.7	0.26
98-82-8	Isopropylbenzene	ND		3.7	0.56
79-20-9	Methyl acetate	ND		19	2.3
1634-04-4	Methyl tert-butyl ether	ND		3.7	0.37
108-87-2	Methylcyclohexane	ND		3.7	0.57
75-09-2	Methylene Chloride	ND		3.7	1.7
100-42-5	Styrene	ND		3.7	0.19
127-18-4	Tetrachloroethene	1.2	J	3.7	0.50
108-88-3	Toluene	ND		3.7	0.28
156-60-5	trans-1,2-Dichloroethene	1.4	J	3.7	0.39
10061-02-6	trans-1,3-Dichloropropene	ND		3.7	1.6
79-01-6	Trichloroethene	ND		3.7	0.82
75-69-4	Trichlorofluoromethane	ND		3.7	0.35
75-01-4	Vinyl chloride	ND		3.7	0.46
1330-20-7	Xylenes, Total	ND		7.5	0.63

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		64-126
460-00-4	4-Bromofluorobenzene (Surr)	97		72-126
1868-53-7	Dibromofluoromethane (Surr)	107		60-140
2037-26-5	Toluene-d8 (Surr)	95		71-125

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197309-1

SDG No.:

Client Sample ID: PDI-9_GW | Lab Sample ID: 480-197309-4

Matrix: Water | Lab File ID: T9152.D

Analysis Method: 8260C | Date Collected: 04/28/2022 10:30

Sample wt/vol: 5(mL) | Date Analyzed: 05/06/2022 19:12

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH: 7.0

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 624854 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND	UJ	2.0	1.6
79-34-5	1,1,2,2-Tetrachloroethane	ND	UJ	2.0	0.42
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND	UJ	2.0	0.62
79-00-5	1,1,2-Trichloroethane	ND	UJ	2.0	0.46
75-34-3	1,1-Dichloroethane	8.3	J	2.0	0.76
75-35-4	1,1-Dichloroethene	1.2	J	2.0	0.58
120-82-1	1,2,4-Trichlorobenzene	ND	UJ	2.0	0.82
96-12-8	1,2-Dibromo-3-Chloropropane	ND	UJ	2.0	0.78
106-93-4	1,2-Dibromoethane	ND	UJ	2.0	1.5
95-50-1	1,2-Dichlorobenzene	ND	UJ	2.0	1.6
107-06-2	1,2-Dichloroethane	ND	UJ	2.0	0.42
78-87-5	1,2-Dichloropropane	ND	UJ	2.0	1.4
541-73-1	1,3-Dichlorobenzene	ND	UJ	2.0	1.6
106-46-7	1,4-Dichlorobenzene	ND	UJ	2.0	1.7
78-93-3	2-Butanone (MEK)	ND	UJ	20	2.6
591-78-6	2-Hexanone	ND	UJ	10	2.5
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	UJ	10	4.2
67-64-1	Acetone	11	J	20	6.0
71-43-2	Benzene	ND	UJ	2.0	0.82
75-27-4	Bromodichloromethane	ND	UJ	2.0	0.78
75-25-2	Bromoform	ND	UJ	2.0	0.52
74-83-9	Bromomethane	ND	UJ	2.0	1.4
75-15-0	Carbon disulfide	ND	UJ	2.0	0.38
56-23-5	Carbon tetrachloride	ND	UJ	2.0	0.54
108-90-7	Chlorobenzene	ND	UJ	2.0	1.5
75-00-3	Chloroethane	ND	UJ	2.0	0.64
67-66-3	Chloroform	ND	UJ	2.0	0.68
74-87-3	Chloromethane	ND	UJ	2.0	0.70
156-59-2	cis-1,2-Dichloroethene	87	J	2.0	1.6
10061-01-5	cis-1,3-Dichloropropene	ND	UJ	2.0	0.72
110-82-7	Cyclohexane	ND	UJ	2.0	0.36
124-48-1	Dibromochloromethane	ND	UJ	2.0	0.64
75-71-8	Dichlorodifluoromethane	ND	UJ	2.0	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197309-1

SDG No.:

Client Sample ID: PDI-9_GW | Lab Sample ID: 480-197309-4

Matrix: Water | Lab File ID: T9152.D

Analysis Method: 8260C | Date Collected: 04/28/2022 10:30

Sample wt/vol: 5(mL) | Date Analyzed: 05/06/2022 19:12

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH: 7.0

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 624854 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
100-41-4	Ethylbenzene	ND	UJ	2.0	1.5
98-82-8	Isopropylbenzene	ND	UJ	2.0	1.6
79-20-9	Methyl acetate	ND	UJ	5.0	2.6
1634-04-4	Methyl tert-butyl ether	ND	UJ	2.0	0.32
108-87-2	Methylcyclohexane	ND	UJ	2.0	0.32
75-09-2	Methylene Chloride	ND	UJ	2.0	0.88
100-42-5	Styrene	ND	UJ	2.0	1.5
127-18-4	Tetrachloroethene	9.0	J	2.0	0.72
108-88-3	Toluene	ND	UJ	2.0	1.0
156-60-5	trans-1,2-Dichloroethene	ND	UJ	2.0	1.8
10061-02-6	trans-1,3-Dichloropropene	ND	UJ	2.0	0.74
79-01-6	Trichloroethene	11	J	2.0	0.92
75-69-4	Trichlorofluoromethane	ND	UJ	2.0	1.8
75-01-4	Vinyl chloride	7.1	J	2.0	1.8
1330-20-7	Xylenes, Total	ND	UJ	4.0	1.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		77-120
460-00-4	4-Bromofluorobenzene (Surr)	91		73-120
1868-53-7	Dibromofluoromethane (Surr)	88		75-123
2037-26-5	Toluene-d8 (Surr)	99		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197309-1

SDG No.:

Client Sample ID: PDI-10_0304 | Lab Sample ID: 480-197309-5

Matrix: Solid | Lab File ID: M03448.D

Analysis Method: 8260C | Date Collected: 04/28/2022 10:51

Sample wt/vol: 7.146(g) | Date Analyzed: 05/02/2022 17:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (30) VOA ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) Y pH:

% Moisture: 11.6 % Solids: 88.4 | Level: (low/med) Low

Analysis Batch No.: 624070 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		4.0	0.29
79-34-5	1,1,2,2-Tetrachloroethane	ND		4.0	0.64
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.0	0.90
79-00-5	1,1,2-Trichloroethane	ND		4.0	0.51
75-34-3	1,1-Dichloroethane	ND		4.0	0.48
75-35-4	1,1-Dichloroethene	ND		4.0	0.48
120-82-1	1,2,4-Trichlorobenzene	ND		4.0	0.24
96-12-8	1,2-Dibromo-3-Chloropropane	ND		4.0	2.0
106-93-4	1,2-Dibromoethane	ND		4.0	0.51
95-50-1	1,2-Dichlorobenzene	ND		4.0	0.31
107-06-2	1,2-Dichloroethane	ND		4.0	0.20
78-87-5	1,2-Dichloropropane	ND		4.0	2.0
541-73-1	1,3-Dichlorobenzene	ND		4.0	0.20
106-46-7	1,4-Dichlorobenzene	ND		4.0	0.55
78-93-3	2-Butanone (MEK)	ND		20	1.4
591-78-6	2-Hexanone	ND		20	2.0
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		20	1.3
67-64-1	Acetone	12	J	20	3.3
71-43-2	Benzene	ND		4.0	0.19
75-27-4	Bromodichloromethane	ND		4.0	0.53
75-25-2	Bromoform	ND		4.0	2.0
74-83-9	Bromomethane	ND		4.0	0.36
75-15-0	Carbon disulfide	ND		4.0	2.0
56-23-5	Carbon tetrachloride	ND		4.0	0.38
108-90-7	Chlorobenzene	ND		4.0	0.52
75-00-3	Chloroethane	ND		4.0	0.89
67-66-3	Chloroform	ND		4.0	0.24
74-87-3	Chloromethane	ND		4.0	0.24
156-59-2	cis-1,2-Dichloroethene	20		4.0	0.51
10061-01-5	cis-1,3-Dichloropropene	ND		4.0	0.57
110-82-7	Cyclohexane	ND		4.0	0.55
124-48-1	Dibromochloromethane	ND		4.0	0.51
75-71-8	Dichlorodifluoromethane	ND		4.0	0.33

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197309-1

SDG No.:

Client Sample ID: PDI-10_0304 | Lab Sample ID: 480-197309-5

Matrix: Solid | Lab File ID: M03448.D

Analysis Method: 8260C | Date Collected: 04/28/2022 10:51

Sample wt/vol: 7.146(g) | Date Analyzed: 05/02/2022 17:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (30) VOA ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) Y pH:

% Moisture: 11.6 % Solids: 88.4 | Level: (low/med) Low

Analysis Batch No.: 624070 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
100-41-4	Ethylbenzene	ND		4.0	0.27
98-82-8	Isopropylbenzene	ND		4.0	0.60
79-20-9	Methyl acetate	ND		20	2.4
1634-04-4	Methyl tert-butyl ether	ND		4.0	0.39
108-87-2	Methylcyclohexane	ND		4.0	0.60
75-09-2	Methylene Chloride	ND		4.0	1.8
100-42-5	Styrene	ND		4.0	0.20
127-18-4	Tetrachloroethene	2.3	J	4.0	0.53
108-88-3	Toluene	ND		4.0	0.30
156-60-5	trans-1,2-Dichloroethene	0.61	J	4.0	0.41
10061-02-6	trans-1,3-Dichloropropene	ND		4.0	1.7
79-01-6	Trichloroethene	ND		4.0	0.87
75-69-4	Trichlorofluoromethane	ND		4.0	0.37
75-01-4	Vinyl chloride	ND		4.0	0.48
1330-20-7	Xylenes, Total	ND		7.9	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		64-126
460-00-4	4-Bromofluorobenzene (Surr)	94		72-126
1868-53-7	Dibromofluoromethane (Surr)	104		60-140
2037-26-5	Toluene-d8 (Surr)	95		71-125

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197309-1

SDG No.:

Client Sample ID: PDI-10_GW | Lab Sample ID: 480-197309-6

Matrix: Water | Lab File ID: T9270.D

Analysis Method: 8260C | Date Collected: 04/28/2022 10:25

Sample wt/vol: 5(mL) | Date Analyzed: 05/11/2022 01:19

Soil Aliquot Vol: | Dilution Factor: 5

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH: 7.0

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 625418 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND	UJ	5.0	4.1
79-34-5	1,1,2,2-Tetrachloroethane	ND	UJ	5.0	1.1
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND	UJ	5.0	1.6
79-00-5	1,1,2-Trichloroethane	ND	UJ	5.0	1.2
75-34-3	1,1-Dichloroethane	15	J	5.0	1.9
75-35-4	1,1-Dichloroethene	ND	UJ	5.0	1.5
120-82-1	1,2,4-Trichlorobenzene	ND	UJ	5.0	2.1
96-12-8	1,2-Dibromo-3-Chloropropane	ND	UJ	5.0	2.0
106-93-4	1,2-Dibromoethane	ND	UJ	5.0	3.7
95-50-1	1,2-Dichlorobenzene	ND	UJ	5.0	4.0
107-06-2	1,2-Dichloroethane	ND	UJ	5.0	1.1
78-87-5	1,2-Dichloropropane	ND	UJ	5.0	3.6
541-73-1	1,3-Dichlorobenzene	ND	UJ	5.0	3.9
106-46-7	1,4-Dichlorobenzene	ND	UJ	5.0	4.2
78-93-3	2-Butanone (MEK)	ND	J	50	6.6
591-78-6	2-Hexanone	ND	UJ	25	6.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	UJ	25	11
67-64-1	Acetone	ND	UJ	50	15
71-43-2	Benzene	ND	UJ	5.0	2.1
75-27-4	Bromodichloromethane	ND	UJ	5.0	2.0
75-25-2	Bromoform	ND	UJ	5.0	1.3
74-83-9	Bromomethane	ND	UJ	5.0	3.5
75-15-0	Carbon disulfide	ND	UJ	5.0	0.95
56-23-5	Carbon tetrachloride	ND	UJ	5.0	1.4
108-90-7	Chlorobenzene	ND	UJ	5.0	3.8
75-00-3	Chloroethane	ND	UJ	5.0	1.6
67-66-3	Chloroform	ND	UJ	5.0	1.7
74-87-3	Chloromethane	ND	UJ	5.0	1.8
156-59-2	cis-1,2-Dichloroethene	140	J	5.0	4.1
10061-01-5	cis-1,3-Dichloropropene	ND	UJ	5.0	1.8
110-82-7	Cyclohexane	ND	UJ	5.0	0.90
124-48-1	Dibromochloromethane	ND	UJ	5.0	1.6
75-71-8	Dichlorodifluoromethane	ND	UJ	5.0	3.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197309-1

SDG No.:

Client Sample ID: PDI-10_GW | Lab Sample ID: 480-197309-6

Matrix: Water | Lab File ID: T9270.D

Analysis Method: 8260C | Date Collected: 04/28/2022 10:25

Sample wt/vol: 5(mL) | Date Analyzed: 05/11/2022 01:19

Soil Aliquot Vol: | Dilution Factor: 5

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH: 7.0

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 625418 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
100-41-4	Ethylbenzene	ND	UJ	5.0	3.7
98-82-8	Isopropylbenzene	ND	UJ	5.0	4.0
79-20-9	Methyl acetate	ND	UJ	13	6.5
1634-04-4	Methyl tert-butyl ether	ND	UJ	5.0	0.80
108-87-2	Methylcyclohexane	ND	UJ	5.0	0.80
75-09-2	Methylene Chloride	ND	UJ	5.0	2.2
100-42-5	Styrene	ND	UJ	5.0	3.7
127-18-4	Tetrachloroethene	ND	UJ	5.0	1.8
108-88-3	Toluene	ND	UJ	5.0	2.6
156-60-5	trans-1,2-Dichloroethene	ND	UJ	5.0	4.5
10061-02-6	trans-1,3-Dichloropropene	ND	UJ	5.0	1.9
79-01-6	Trichloroethene	13	J	5.0	2.3
75-69-4	Trichlorofluoromethane	ND	UJ	5.0	4.4
75-01-4	Vinyl chloride	23	J	5.0	4.5
1330-20-7	Xylenes, Total	ND	UJ	10	3.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		77-120
460-00-4	4-Bromofluorobenzene (Surr)	100		73-120
1868-53-7	Dibromofluoromethane (Surr)	110		75-123
2037-26-5	Toluene-d8 (Surr)	102		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197309-1

SDG No.:

Client Sample ID: DUP_042822 | Lab Sample ID: 480-197309-7

Matrix: Solid | Lab File ID: M03449.D

Analysis Method: 8260C | Date Collected: 04/28/2022 11:30

Sample wt/vol: 6.439(g) | Date Analyzed: 05/02/2022 17:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (30) VOA ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) Y pH:

% Moisture: 10.3 % Solids: 89.7 | Level: (low/med) Low

Analysis Batch No.: 624070 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		4.3	0.31
79-34-5	1,1,2,2-Tetrachloroethane	ND		4.3	0.70
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.3	0.99
79-00-5	1,1,2-Trichloroethane	ND		4.3	0.56
75-34-3	1,1-Dichloroethane	ND		4.3	0.53
75-35-4	1,1-Dichloroethene	ND		4.3	0.53
120-82-1	1,2,4-Trichlorobenzene	ND		4.3	0.26
96-12-8	1,2-Dibromo-3-Chloropropane	ND		4.3	2.2
106-93-4	1,2-Dibromoethane	ND		4.3	0.56
95-50-1	1,2-Dichlorobenzene	ND		4.3	0.34
107-06-2	1,2-Dichloroethane	ND		4.3	0.22
78-87-5	1,2-Dichloropropane	ND		4.3	2.2
541-73-1	1,3-Dichlorobenzene	ND		4.3	0.22
106-46-7	1,4-Dichlorobenzene	ND		4.3	0.61
78-93-3	2-Butanone (MEK)	ND		22	1.6
591-78-6	2-Hexanone	ND		22	2.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		22	1.4
67-64-1	Acetone	14	J	22	3.6
71-43-2	Benzene	ND		4.3	0.21
75-27-4	Bromodichloromethane	ND		4.3	0.58
75-25-2	Bromoform	ND		4.3	2.2
74-83-9	Bromomethane	ND		4.3	0.39
75-15-0	Carbon disulfide	ND		4.3	2.2
56-23-5	Carbon tetrachloride	ND		4.3	0.42
108-90-7	Chlorobenzene	ND		4.3	0.57
75-00-3	Chloroethane	ND		4.3	0.98
67-66-3	Chloroform	ND		4.3	0.27
74-87-3	Chloromethane	ND		4.3	0.26
156-59-2	cis-1,2-Dichloroethene	23		4.3	0.55
10061-01-5	cis-1,3-Dichloropropene	ND		4.3	0.62
110-82-7	Cyclohexane	ND		4.3	0.61
124-48-1	Dibromochloromethane	ND		4.3	0.55
75-71-8	Dichlorodifluoromethane	ND		4.3	0.36

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197309-1

SDG No.:

Client Sample ID: DUP_042822 | Lab Sample ID: 480-197309-7

Matrix: Solid | Lab File ID: M03449.D

Analysis Method: 8260C | Date Collected: 04/28/2022 11:30

Sample wt/vol: 6.439(g) | Date Analyzed: 05/02/2022 17:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (30) VOA ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) Y pH:

% Moisture: 10.3 % Solids: 89.7 | Level: (low/med) Low

Analysis Batch No.: 624070 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
100-41-4	Ethylbenzene	ND		4.3	0.30
98-82-8	Isopropylbenzene	ND		4.3	0.65
79-20-9	Methyl acetate	ND		22	2.6
1634-04-4	Methyl tert-butyl ether	ND		4.3	0.42
108-87-2	Methylcyclohexane	ND		4.3	0.66
75-09-2	Methylene Chloride	ND		4.3	2.0
100-42-5	Styrene	ND		4.3	0.22
127-18-4	Tetrachloroethene	1.6	J	4.3	0.58
108-88-3	Toluene	ND		4.3	0.33
156-60-5	trans-1,2-Dichloroethene	0.85	J	4.3	0.45
10061-02-6	trans-1,3-Dichloropropene	ND		4.3	1.9
79-01-6	Trichloroethene	ND		4.3	0.95
75-69-4	Trichlorofluoromethane	ND		4.3	0.41
75-01-4	Vinyl chloride	ND		4.3	0.53
1330-20-7	Xylenes, Total	ND		8.7	0.73

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		64-126
460-00-4	4-Bromofluorobenzene (Surr)	94		72-126
1868-53-7	Dibromofluoromethane (Surr)	104		60-140
2037-26-5	Toluene-d8 (Surr)	96		71-125

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197309-1

SDG No.:

Client Sample ID: PDI-5_0405 | Lab Sample ID: 480-197309-8

Matrix: Solid | Lab File ID: M03450.D

Analysis Method: 8260C | Date Collected: 04/28/2022 11:51

Sample wt/vol: 6.971(g) | Date Analyzed: 05/02/2022 18:07

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (30) VOA ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) Y pH:

% Moisture: 7.1 % Solids: 92.9 | Level: (low/med) Low

Analysis Batch No.: 624070 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		3.9	0.28
79-34-5	1,1,2,2-Tetrachloroethane	ND		3.9	0.63
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		3.9	0.88
79-00-5	1,1,2-Trichloroethane	ND		3.9	0.50
75-34-3	1,1-Dichloroethane	ND		3.9	0.47
75-35-4	1,1-Dichloroethene	ND		3.9	0.47
120-82-1	1,2,4-Trichlorobenzene	ND		3.9	0.23
96-12-8	1,2-Dibromo-3-Chloropropane	ND		3.9	1.9
106-93-4	1,2-Dibromoethane	ND		3.9	0.50
95-50-1	1,2-Dichlorobenzene	ND		3.9	0.30
107-06-2	1,2-Dichloroethane	ND		3.9	0.19
78-87-5	1,2-Dichloropropane	ND		3.9	1.9
541-73-1	1,3-Dichlorobenzene	ND		3.9	0.20
106-46-7	1,4-Dichlorobenzene	ND		3.9	0.54
78-93-3	2-Butanone (MEK)	ND		19	1.4
591-78-6	2-Hexanone	ND		19	1.9
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		19	1.3
67-64-1	Acetone	10	J	19	3.2
71-43-2	Benzene	ND		3.9	0.19
75-27-4	Bromodichloromethane	ND		3.9	0.52
75-25-2	Bromoform	ND		3.9	1.9
74-83-9	Bromomethane	ND		3.9	0.35
75-15-0	Carbon disulfide	ND		3.9	1.9
56-23-5	Carbon tetrachloride	ND		3.9	0.37
108-90-7	Chlorobenzene	ND		3.9	0.51
75-00-3	Chloroethane	ND		3.9	0.87
67-66-3	Chloroform	ND		3.9	0.24
74-87-3	Chloromethane	ND		3.9	0.23
156-59-2	cis-1,2-Dichloroethene	26		3.9	0.49
10061-01-5	cis-1,3-Dichloropropene	ND		3.9	0.56
110-82-7	Cyclohexane	ND		3.9	0.54
124-48-1	Dibromochloromethane	ND		3.9	0.49
75-71-8	Dichlorodifluoromethane	ND		3.9	0.32

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197309-1

SDG No.:

Client Sample ID: PDI-5_0405 | Lab Sample ID: 480-197309-8

Matrix: Solid | Lab File ID: M03450.D

Analysis Method: 8260C | Date Collected: 04/28/2022 11:51

Sample wt/vol: 6.971(g) | Date Analyzed: 05/02/2022 18:07

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (30) VOA ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) Y pH:

% Moisture: 7.1 % Solids: 92.9 | Level: (low/med) Low

Analysis Batch No.: 624070 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
100-41-4	Ethylbenzene	ND		3.9	0.27
98-82-8	Isopropylbenzene	ND		3.9	0.58
79-20-9	Methyl acetate	6.3	J	19	2.3
1634-04-4	Methyl tert-butyl ether	ND		3.9	0.38
108-87-2	Methylcyclohexane	0.67	J	3.9	0.59
75-09-2	Methylene Chloride	ND		3.9	1.8
100-42-5	Styrene	ND		3.9	0.19
127-18-4	Tetrachloroethene	3.9		3.9	0.52
108-88-3	Toluene	ND		3.9	0.29
156-60-5	trans-1,2-Dichloroethene	1.3	J	3.9	0.40
10061-02-6	trans-1,3-Dichloropropene	ND		3.9	1.7
79-01-6	Trichloroethene	ND		3.9	0.85
75-69-4	Trichlorofluoromethane	ND		3.9	0.37
75-01-4	Vinyl chloride	ND		3.9	0.47
1330-20-7	Xylenes, Total	ND		7.7	0.65

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	106		64-126
460-00-4	4-Bromofluorobenzene (Surr)	94		72-126
1868-53-7	Dibromofluoromethane (Surr)	105		60-140
2037-26-5	Toluene-d8 (Surr)	95		71-125

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197309-1

SDG No.:

Client Sample ID: PDI-11_0304 | Lab Sample ID: 480-197309-9

Matrix: Solid | Lab File ID: M03451.D

Analysis Method: 8260C | Date Collected: 04/28/2022 13:11

Sample wt/vol: 6.674(g) | Date Analyzed: 05/02/2022 18:31

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (30) VOA ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) Y pH:

% Moisture: 12.4 % Solids: 87.6 | Level: (low/med) Low

Analysis Batch No.: 624070 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		4.3	0.31
79-34-5	1,1,2,2-Tetrachloroethane	ND		4.3	0.69
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.3	0.97
79-00-5	1,1,2-Trichloroethane	ND		4.3	0.56
75-34-3	1,1-Dichloroethane	ND		4.3	0.52
75-35-4	1,1-Dichloroethene	ND		4.3	0.52
120-82-1	1,2,4-Trichlorobenzene	ND		4.3	0.26
96-12-8	1,2-Dibromo-3-Chloropropane	ND		4.3	2.1
106-93-4	1,2-Dibromoethane	ND		4.3	0.55
95-50-1	1,2-Dichlorobenzene	ND		4.3	0.33
107-06-2	1,2-Dichloroethane	ND		4.3	0.21
78-87-5	1,2-Dichloropropane	ND		4.3	2.1
541-73-1	1,3-Dichlorobenzene	ND		4.3	0.22
106-46-7	1,4-Dichlorobenzene	ND		4.3	0.60
78-93-3	2-Butanone (MEK)	ND		21	1.6
591-78-6	2-Hexanone	ND		21	2.1
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		21	1.4
67-64-1	Acetone	ND		21	3.6
71-43-2	Benzene	ND		4.3	0.21
75-27-4	Bromodichloromethane	ND		4.3	0.57
75-25-2	Bromoform	ND		4.3	2.1
74-83-9	Bromomethane	ND		4.3	0.38
75-15-0	Carbon disulfide	ND		4.3	2.1
56-23-5	Carbon tetrachloride	ND		4.3	0.41
108-90-7	Chlorobenzene	ND		4.3	0.56
75-00-3	Chloroethane	ND		4.3	0.97
67-66-3	Chloroform	ND		4.3	0.26
74-87-3	Chloromethane	ND		4.3	0.26
156-59-2	cis-1,2-Dichloroethene	1.7	J	4.3	0.55
10061-01-5	cis-1,3-Dichloropropene	ND		4.3	0.62
110-82-7	Cyclohexane	ND		4.3	0.60
124-48-1	Dibromochloromethane	ND		4.3	0.55
75-71-8	Dichlorodifluoromethane	ND		4.3	0.35

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197309-1

SDG No.:

Client Sample ID: PDI-11_0304 | Lab Sample ID: 480-197309-9

Matrix: Solid | Lab File ID: M03451.D

Analysis Method: 8260C | Date Collected: 04/28/2022 13:11

Sample wt/vol: 6.674(g) | Date Analyzed: 05/02/2022 18:31

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (30) VOA ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) Y pH:

% Moisture: 12.4 % Solids: 87.6 | Level: (low/med) Low

Analysis Batch No.: 624070 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
100-41-4	Ethylbenzene	ND		4.3	0.30
98-82-8	Isopropylbenzene	ND		4.3	0.64
79-20-9	Methyl acetate	ND		21	2.6
1634-04-4	Methyl tert-butyl ether	ND		4.3	0.42
108-87-2	Methylcyclohexane	ND		4.3	0.65
75-09-2	Methylene Chloride	ND		4.3	2.0
100-42-5	Styrene	ND		4.3	0.21
127-18-4	Tetrachloroethene	ND		4.3	0.57
108-88-3	Toluene	ND		4.3	0.32
156-60-5	trans-1,2-Dichloroethene	ND		4.3	0.44
10061-02-6	trans-1,3-Dichloropropene	ND		4.3	1.9
79-01-6	Trichloroethene	ND		4.3	0.94
75-69-4	Trichlorofluoromethane	ND		4.3	0.40
75-01-4	Vinyl chloride	ND		4.3	0.52
1330-20-7	Xylenes, Total	ND		8.6	0.72

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		64-126
460-00-4	4-Bromofluorobenzene (Surr)	96		72-126
1868-53-7	Dibromofluoromethane (Surr)	101		60-140
2037-26-5	Toluene-d8 (Surr)	95		71-125

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197309-1

SDG No.:

Client Sample ID: PDI-11_GW | Lab Sample ID: 480-197309-10

Matrix: Water | Lab File ID: T9154.D

Analysis Method: 8260C | Date Collected: 04/28/2022 11:34

Sample wt/vol: 5(mL) | Date Analyzed: 05/06/2022 19:57

Soil Aliquot Vol: | Dilution Factor: 5

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH: 7.0

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 624854 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND	UJ	5.0	4.1
79-34-5	1,1,2,2-Tetrachloroethane	ND	UJ	5.0	1.1
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND	UJ	5.0	1.6
79-00-5	1,1,2-Trichloroethane	ND	UJ	5.0	1.2
75-34-3	1,1-Dichloroethane	53	J	5.0	1.9
75-35-4	1,1-Dichloroethene	ND	UJ	5.0	1.5
120-82-1	1,2,4-Trichlorobenzene	ND	UJ	5.0	2.1
96-12-8	1,2-Dibromo-3-Chloropropane	ND	UJ	5.0	2.0
106-93-4	1,2-Dibromoethane	ND	UJ	5.0	3.7
95-50-1	1,2-Dichlorobenzene	ND	UJ	5.0	4.0
107-06-2	1,2-Dichloroethane	ND	UJ	5.0	1.1
78-87-5	1,2-Dichloropropane	ND	UJ	5.0	3.6
541-73-1	1,3-Dichlorobenzene	ND	UJ	5.0	3.9
106-46-7	1,4-Dichlorobenzene	ND	UJ	5.0	4.2
78-93-3	2-Butanone (MEK)	ND	UJ	50	6.6
591-78-6	2-Hexanone	ND	UJ	25	6.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	UJ	25	11
67-64-1	Acetone	73	J	50	15
71-43-2	Benzene	ND	UJ	5.0	2.1
75-27-4	Bromodichloromethane	ND	UJ	5.0	2.0
75-25-2	Bromoform	ND	UJ	5.0	1.3
74-83-9	Bromomethane	ND	UJ	5.0	3.5
75-15-0	Carbon disulfide	ND	UJ	5.0	0.95
56-23-5	Carbon tetrachloride	ND	UJ	5.0	1.4
108-90-7	Chlorobenzene	ND	UJ	5.0	3.8
75-00-3	Chloroethane	2.1	J	5.0	1.6
67-66-3	Chloroform	ND	UJ	5.0	1.7
74-87-3	Chloromethane	ND	UJ	5.0	1.8
156-59-2	cis-1,2-Dichloroethene	300	J	5.0	4.1
10061-01-5	cis-1,3-Dichloropropene	ND	UJ	5.0	1.8
110-82-7	Cyclohexane	ND	UJ	5.0	0.90
124-48-1	Dibromochloromethane	ND	UJ	5.0	1.6
75-71-8	Dichlorodifluoromethane	ND	UJ	5.0	3.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197309-1

SDG No.:

Client Sample ID: PDI-11_GW | Lab Sample ID: 480-197309-10

Matrix: Water | Lab File ID: T9154.D

Analysis Method: 8260C | Date Collected: 04/28/2022 11:34

Sample wt/vol: 5(mL) | Date Analyzed: 05/06/2022 19:57

Soil Aliquot Vol: | Dilution Factor: 5

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH: 7.0

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 624854 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
100-41-4	Ethylbenzene	ND	UJ	5.0	3.7
98-82-8	Isopropylbenzene	ND	UJ	5.0	4.0
79-20-9	Methyl acetate	ND	UJ	13	6.5
1634-04-4	Methyl tert-butyl ether	ND	UJ	5.0	0.80
108-87-2	Methylcyclohexane	ND	UJ	5.0	0.80
75-09-2	Methylene Chloride	ND	UJ	5.0	2.2
100-42-5	Styrene	ND	UJ	5.0	3.7
127-18-4	Tetrachloroethene	6.3	J	5.0	1.8
108-88-3	Toluene	ND	UJ	5.0	2.6
156-60-5	trans-1,2-Dichloroethene	ND	UJ	5.0	4.5
10061-02-6	trans-1,3-Dichloropropene	ND	UJ	5.0	1.9
79-01-6	Trichloroethene	52	J	5.0	2.3
75-69-4	Trichlorofluoromethane	ND	UJ	5.0	4.4
75-01-4	Vinyl chloride	7.6	J	5.0	4.5
1330-20-7	Xylenes, Total	ND	UJ	10	3.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		77-120
460-00-4	4-Bromofluorobenzene (Surr)	87		73-120
1868-53-7	Dibromofluoromethane (Surr)	94		75-123
2037-26-5	Toluene-d8 (Surr)	97		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197309-1

SDG No.:

Client Sample ID: PDI-12_0405 | Lab Sample ID: 480-197309-11

Matrix: Solid | Lab File ID: M03452.D

Analysis Method: 8260C | Date Collected: 04/28/2022 14:21

Sample wt/vol: 6.66(g) | Date Analyzed: 05/02/2022 18:55

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (30) VOA ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) Y pH:

% Moisture: 12.8 % Solids: 87.2 | Level: (low/med) Low

Analysis Batch No.: 624070 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		4.3	0.31
79-34-5	1,1,2,2-Tetrachloroethane	ND		4.3	0.70
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.3	0.98
79-00-5	1,1,2-Trichloroethane	ND		4.3	0.56
75-34-3	1,1-Dichloroethane	ND		4.3	0.53
75-35-4	1,1-Dichloroethene	ND		4.3	0.53
120-82-1	1,2,4-Trichlorobenzene	ND		4.3	0.26
96-12-8	1,2-Dibromo-3-Chloropropane	ND		4.3	2.2
106-93-4	1,2-Dibromoethane	ND		4.3	0.55
95-50-1	1,2-Dichlorobenzene	ND		4.3	0.34
107-06-2	1,2-Dichloroethane	ND		4.3	0.22
78-87-5	1,2-Dichloropropane	ND		4.3	2.2
541-73-1	1,3-Dichlorobenzene	ND		4.3	0.22
106-46-7	1,4-Dichlorobenzene	ND		4.3	0.60
78-93-3	2-Butanone (MEK)	3.8	J	22	1.6
591-78-6	2-Hexanone	ND		22	2.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		22	1.4
67-64-1	Acetone	48		22	3.6
71-43-2	Benzene	ND		4.3	0.21
75-27-4	Bromodichloromethane	ND		4.3	0.58
75-25-2	Bromoform	ND		4.3	2.2
74-83-9	Bromomethane	ND		4.3	0.39
75-15-0	Carbon disulfide	ND		4.3	2.2
56-23-5	Carbon tetrachloride	ND		4.3	0.42
108-90-7	Chlorobenzene	ND		4.3	0.57
75-00-3	Chloroethane	ND		4.3	0.97
67-66-3	Chloroform	ND		4.3	0.27
74-87-3	Chloromethane	ND		4.3	0.26
156-59-2	cis-1,2-Dichloroethene	ND		4.3	0.55
10061-01-5	cis-1,3-Dichloropropene	ND		4.3	0.62
110-82-7	Cyclohexane	ND		4.3	0.60
124-48-1	Dibromochloromethane	ND		4.3	0.55
75-71-8	Dichlorodifluoromethane	ND		4.3	0.36

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197309-1

SDG No.:

Client Sample ID: PDI-12_0405 | Lab Sample ID: 480-197309-11

Matrix: Solid | Lab File ID: M03452.D

Analysis Method: 8260C | Date Collected: 04/28/2022 14:21

Sample wt/vol: 6.66(g) | Date Analyzed: 05/02/2022 18:55

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (30) VOA ID: 0.25(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) Y pH:

% Moisture: 12.8 % Solids: 87.2 | Level: (low/med) Low

Analysis Batch No.: 624070 | Units: ug/Kg

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
100-41-4	Ethylbenzene	ND		4.3	0.30
98-82-8	Isopropylbenzene	ND		4.3	0.65
79-20-9	Methyl acetate	ND		22	2.6
1634-04-4	Methyl tert-butyl ether	ND		4.3	0.42
108-87-2	Methylcyclohexane	ND		4.3	0.65
75-09-2	Methylene Chloride	ND		4.3	2.0
100-42-5	Styrene	ND		4.3	0.22
127-18-4	Tetrachloroethene	ND		4.3	0.58
108-88-3	Toluene	ND		4.3	0.33
156-60-5	trans-1,2-Dichloroethene	ND		4.3	0.44
10061-02-6	trans-1,3-Dichloropropene	ND		4.3	1.9
79-01-6	Trichloroethene	ND		4.3	0.95
75-69-4	Trichlorofluoromethane	ND		4.3	0.41
75-01-4	Vinyl chloride	ND		4.3	0.53
1330-20-7	Xylenes, Total	ND		8.6	0.72

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	104		64-126
460-00-4	4-Bromofluorobenzene (Surr)	99		72-126
1868-53-7	Dibromofluoromethane (Surr)	106		60-140
2037-26-5	Toluene-d8 (Surr)	92		71-125

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197309-1

SDG No.:

Client Sample ID: PDI-12_GW | Lab Sample ID: 480-197309-12

Matrix: Water | Lab File ID: T9155.D

Analysis Method: 8260C | Date Collected: 04/28/2022 14:55

Sample wt/vol: 5(mL) | Date Analyzed: 05/06/2022 20:20

Soil Aliquot Vol: | Dilution Factor: 20

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH: 7.0

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 624854 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND	UJ	20	16
79-34-5	1,1,2,2-Tetrachloroethane	ND	UJ	20	4.2
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND	UJ	20	6.2
79-00-5	1,1,2-Trichloroethane	ND	UJ	20	4.6
75-34-3	1,1-Dichloroethane	20	J	20	7.6
75-35-4	1,1-Dichloroethene	ND	UJ	20	5.8
120-82-1	1,2,4-Trichlorobenzene	ND	UJ	20	8.2
96-12-8	1,2-Dibromo-3-Chloropropane	ND	UJ	20	7.8
106-93-4	1,2-Dibromoethane	ND	UJ	20	15
95-50-1	1,2-Dichlorobenzene	ND	UJ	20	16
107-06-2	1,2-Dichloroethane	ND	UJ	20	4.2
78-87-5	1,2-Dichloropropane	ND	UJ	20	14
541-73-1	1,3-Dichlorobenzene	ND	UJ	20	16
106-46-7	1,4-Dichlorobenzene	ND	UJ	20	17
78-93-3	2-Butanone (MEK)	ND	UJ	200	26
591-78-6	2-Hexanone	ND	UJ	100	25
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	UJ	100	42
67-64-1	Acetone	160	J	200	60
71-43-2	Benzene	ND	UJ	20	8.2
75-27-4	Bromodichloromethane	ND	UJ	20	7.8
75-25-2	Bromoform	ND	UJ	20	5.2
74-83-9	Bromomethane	ND	UJ	20	14
75-15-0	Carbon disulfide	ND	UJ	20	3.8
56-23-5	Carbon tetrachloride	ND	UJ	20	5.4
108-90-7	Chlorobenzene	ND	UJ	20	15
75-00-3	Chloroethane	11	J	20	6.4
67-66-3	Chloroform	ND	UJ	20	6.8
74-87-3	Chloromethane	ND	UJ	20	7.0
156-59-2	cis-1,2-Dichloroethene	1400	J	20	16
10061-01-5	cis-1,3-Dichloropropene	ND	UJ	20	7.2
110-82-7	Cyclohexane	ND	UJ	20	3.6
124-48-1	Dibromochloromethane	ND	UJ	20	6.4
75-71-8	Dichlorodifluoromethane	ND	UJ	20	14

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197309-1

SDG No.:

Client Sample ID: PDI-12_GW | Lab Sample ID: 480-197309-12

Matrix: Water | Lab File ID: T9155.D

Analysis Method: 8260C | Date Collected: 04/28/2022 14:55

Sample wt/vol: 5(mL) | Date Analyzed: 05/06/2022 20:20

Soil Aliquot Vol: | Dilution Factor: 20

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH: 7.0

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 624854 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
100-41-4	Ethylbenzene	ND	UJ	20	15
98-82-8	Isopropylbenzene	ND	UJ	20	16
79-20-9	Methyl acetate	ND	UJ	50	26
1634-04-4	Methyl tert-butyl ether	ND	UJ	20	3.2
108-87-2	Methylcyclohexane	ND	UJ	20	3.2
75-09-2	Methylene Chloride	ND	UJ	20	8.8
100-42-5	Styrene	ND	UJ	20	15
127-18-4	Tetrachloroethene	ND	UJ	20	7.2
108-88-3	Toluene	ND	UJ	20	10
156-60-5	trans-1,2-Dichloroethene	ND	UJ	20	18
10061-02-6	trans-1,3-Dichloropropene	ND	UJ	20	7.4
79-01-6	Trichloroethene	45	J	20	9.2
75-69-4	Trichlorofluoromethane	ND	UJ	20	18
75-01-4	Vinyl chloride	34	J	20	18
1330-20-7	Xylenes, Total	ND	UJ	40	13

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		77-120
460-00-4	4-Bromofluorobenzene (Surr)	84		73-120
1868-53-7	Dibromofluoromethane (Surr)	97		75-123
2037-26-5	Toluene-d8 (Surr)	96		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197309-1

SDG No.:

Client Sample ID: TB_042822 | Lab Sample ID: 480-197309-13

Matrix: Water | Lab File ID: T9156.D

Analysis Method: 8260C | Date Collected: 04/28/2022 15:13

Sample wt/vol: 5(mL) | Date Analyzed: 05/06/2022 20:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 624854 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
75-34-3	1,1-Dichloroethane	ND		1.0	0.38
75-35-4	1,1-Dichloroethene	ND		1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	ND		10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND		1.0	0.69
75-15-0	Carbon disulfide	ND		1.0	0.19
56-23-5	Carbon tetrachloride	ND		1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	ND		1.0	0.34
74-87-3	Chloromethane	ND		1.0	0.35
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	ND		1.0	0.18
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-71-8	Dichlorodifluoromethane	ND		1.0	0.68

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197309-1

SDG No.:

Client Sample ID: TB_042822 | Lab Sample ID: 480-197309-13

Matrix: Water | Lab File ID: T9156.D

Analysis Method: 8260C | Date Collected: 04/28/2022 15:13

Sample wt/vol: 5(mL) | Date Analyzed: 05/06/2022 20:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 624854 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
100-41-4	Ethylbenzene	ND		1.0	0.74
98-82-8	Isopropylbenzene	ND		1.0	0.79
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.16
108-87-2	Methylcyclohexane	ND		1.0	0.16
75-09-2	Methylene Chloride	0.72	J	1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	ND		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	ND		1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		77-120
460-00-4	4-Bromofluorobenzene (Surr)	84		73-120
1868-53-7	Dibromofluoromethane (Surr)	91		75-123
2037-26-5	Toluene-d8 (Surr)	93		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197309-1

SDG No.:

Client Sample ID: RB_042822 | Lab Sample ID: 480-197309-14

Matrix: Water | Lab File ID: T9157.D

Analysis Method: 8260C | Date Collected: 04/28/2022 15:15

Sample wt/vol: 5(mL) | Date Analyzed: 05/06/2022 21:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 624854 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
75-34-3	1,1-Dichloroethane	ND		1.0	0.38
75-35-4	1,1-Dichloroethene	ND		1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	ND		10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND		1.0	0.69
75-15-0	Carbon disulfide	ND		1.0	0.19
56-23-5	Carbon tetrachloride	ND		1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	ND		1.0	0.34
74-87-3	Chloromethane	ND		1.0	0.35
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	ND		1.0	0.18
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-71-8	Dichlorodifluoromethane	ND		1.0	0.68

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197309-1

SDG No.:

Client Sample ID: RB_042822 | Lab Sample ID: 480-197309-14

Matrix: Water | Lab File ID: T9157.D

Analysis Method: 8260C | Date Collected: 04/28/2022 15:15

Sample wt/vol: 5(mL) | Date Analyzed: 05/06/2022 21:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 624854 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
100-41-4	Ethylbenzene	ND		1.0	0.74
98-82-8	Isopropylbenzene	ND		1.0	0.79
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.16
108-87-2	Methylcyclohexane	ND		1.0	0.16
75-09-2	Methylene Chloride	ND		1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	ND		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	ND		1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		77-120
460-00-4	4-Bromofluorobenzene (Surr)	80		73-120
1868-53-7	Dibromofluoromethane (Surr)	91		75-123
2037-26-5	Toluene-d8 (Surr)	91		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197309-1

SDG No.:

Client Sample ID: PDI-5_GW | Lab Sample ID: 480-197309-15

Matrix: Water | Lab File ID: T9158.D

Analysis Method: 8260C | Date Collected: 04/28/2022 12:30

Sample wt/vol: 5(mL) | Date Analyzed: 05/06/2022 21:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH: 7.0

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 624854 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND	UJ	1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND	UJ	1.0	0.21
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND	UJ	1.0	0.31
79-00-5	1,1,2-Trichloroethane	ND	UJ	1.0	0.23
75-34-3	1,1-Dichloroethane	ND	UJ	1.0	0.38
75-35-4	1,1-Dichloroethene	ND	UJ	1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND	UJ	1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND	UJ	1.0	0.39
106-93-4	1,2-Dibromoethane	ND	UJ	1.0	0.73
95-50-1	1,2-Dichlorobenzene	ND	UJ	1.0	0.79
107-06-2	1,2-Dichloroethane	ND	UJ	1.0	0.21
78-87-5	1,2-Dichloropropane	ND	UJ	1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND	UJ	1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND	UJ	1.0	0.84
78-93-3	2-Butanone (MEK)	2.4	J	10	1.3
591-78-6	2-Hexanone	ND	UJ	5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	UJ	5.0	2.1
67-64-1	Acetone	15	J	10	3.0
71-43-2	Benzene	ND	UJ	1.0	0.41
75-27-4	Bromodichloromethane	ND	UJ	1.0	0.39
75-25-2	Bromoform	ND	UJ	1.0	0.26
74-83-9	Bromomethane	ND	UJ	1.0	0.69
75-15-0	Carbon disulfide	0.48	J	1.0	0.19
56-23-5	Carbon tetrachloride	ND	UJ	1.0	0.27
108-90-7	Chlorobenzene	ND	UJ	1.0	0.75
75-00-3	Chloroethane	ND	UJ	1.0	0.32
67-66-3	Chloroform	ND	UJ	1.0	0.34
74-87-3	Chloromethane	ND	UJ	1.0	0.35
156-59-2	cis-1,2-Dichloroethene	ND	UJ	1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND	UJ	1.0	0.36
110-82-7	Cyclohexane	ND	UJ	1.0	0.18
124-48-1	Dibromochloromethane	ND	UJ	1.0	0.32
75-71-8	Dichlorodifluoromethane	ND	UJ	1.0	0.68

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197309-1

SDG No.:

Client Sample ID: PDI-5_GW | Lab Sample ID: 480-197309-15

Matrix: Water | Lab File ID: T9158.D

Analysis Method: 8260C | Date Collected: 04/28/2022 12:30

Sample wt/vol: 5(mL) | Date Analyzed: 05/06/2022 21:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH: 7.0

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 624854 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
100-41-4	Ethylbenzene	ND	UJ	1.0	0.74
98-82-8	Isopropylbenzene	ND	UJ	1.0	0.79
79-20-9	Methyl acetate	ND	UJ	2.5	1.3
1634-04-4	Methyl tert-butyl ether	ND	UJ	1.0	0.16
108-87-2	Methylcyclohexane	0.23	J	1.0	0.16
75-09-2	Methylene Chloride	ND	UJ	1.0	0.44
100-42-5	Styrene	ND	UJ	1.0	0.73
127-18-4	Tetrachloroethene	ND	UJ	1.0	0.36
108-88-3	Toluene	ND	UJ	1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND	UJ	1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND	UJ	1.0	0.37
79-01-6	Trichloroethene	ND	UJ	1.0	0.46
75-69-4	Trichlorofluoromethane	ND	UJ	1.0	0.88
75-01-4	Vinyl chloride	ND	UJ	1.0	0.90
1330-20-7	Xylenes, Total	ND	UJ	2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		77-120
460-00-4	4-Bromofluorobenzene (Surr)	90		73-120
1868-53-7	Dibromofluoromethane (Surr)	96		75-123
2037-26-5	Toluene-d8 (Surr)	97		80-120

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: PDI-4_0304 Lab Sample ID: 480-197309-1

Lab Name: Eurofins Buffalo Job No.: 480-197309-1

SDG ID.:

Matrix: Solid Date Sampled: 04/28/2022 09:10

Reporting Basis: DRY Date Received: 04/28/2022 16:40

% Solids: 87.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	8780	12.1	5.3	mg/Kg			1	6010C
7440-36-0	Antimony	1.4	18.2	0.49	mg/Kg	J		1	6010C
7440-38-2	Arsenic	2.7	2.4	0.49	mg/Kg			1	6010C
7440-39-3	Barium	46.9	0.61	0.13	mg/Kg			1	6010C
7440-41-7	Beryllium	0.39	0.24	0.034	mg/Kg			1	6010C
7440-43-9	Cadmium	0.23	0.24	0.036	mg/Kg	J		1	6010C
7440-70-2	Calcium	16600	60.6	4.0	mg/Kg			1	6010C
7440-47-3	Chromium	9.4	0.61	0.24	mg/Kg			1	6010C
7440-48-4	Cobalt	4.8	0.61	0.061	mg/Kg			1	6010C
7440-50-8	Copper	11.6	1.2	0.25	mg/Kg			1	6010C
7439-89-6	Iron	11300	12.1	4.2	mg/Kg			1	6010C
7439-92-1	Lead	7.3	1.2	0.29	mg/Kg			1	6010C
7439-95-4	Magnesium	7030	24.3	1.1	mg/Kg			1	6010C
7439-96-5	Manganese	654	0.24	0.039	mg/Kg			1	6010C
7440-02-0	Nickel	10.3	6.1	0.28	mg/Kg			1	6010C
7440-09-7	Potassium	1700	36.4	24.3	mg/Kg			1	6010C
7782-49-2	Selenium	0.95	4.9	0.49	mg/Kg	J		1	6010C
7440-22-4	Silver	ND	0.73	0.24	mg/Kg			1	6010C
7440-23-5	Sodium	122	170	15.8	mg/Kg	J		1	6010C
7440-28-0	Thallium	ND	7.3	0.36	mg/Kg			1	6010C
7440-62-2	Vanadium	15.3	0.61	0.13	mg/Kg			1	6010C
7440-66-6	Zinc	43.2	2.4	0.78	mg/Kg			1	6010C
7439-97-6	Mercury	0.019	0.021	0.0049	mg/Kg	J		1	7471B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: PDI-9_0203 | Lab Sample ID: 480-197309-3

Lab Name: Eurofins Buffalo | Job No.: 480-197309-1

SDG ID.:

Matrix: Solid | Date Sampled: 04/28/2022 10:09

Reporting Basis: DRY | Date Received: 04/28/2022 16:40

% Solids: 91.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	5740	11.0	4.8	mg/Kg			1	6010C
7440-36-0	Antimony	1.1	16.5	0.44	mg/Kg	J		1	6010C
7440-38-2	Arsenic	2.0	2.2	0.44	mg/Kg	J		1	6010C
7440-39-3	Barium	36.0	0.55	0.12	mg/Kg			1	6010C
7440-41-7	Beryllium	0.26	0.22	0.031	mg/Kg			1	6010C
7440-43-9	Cadmium	0.11	0.22	0.033	mg/Kg	J		1	6010C
7440-70-2	Calcium	22100	55.0	3.6	mg/Kg			1	6010C
7440-47-3	Chromium	7.5	0.55	0.22	mg/Kg			1	6010C
7440-48-4	Cobalt	4.2	0.55	0.055	mg/Kg			1	6010C
7440-50-8	Copper	10.3	1.1	0.23	mg/Kg			1	6010C
7439-89-6	Iron	9030	11.0	3.9	mg/Kg			1	6010C
7439-92-1	Lead	4.2	1.1	0.26	mg/Kg			1	6010C
7439-95-4	Magnesium	4980	22.0	1.0	mg/Kg			1	6010C
7439-96-5	Manganese	427	0.22	0.035	mg/Kg			1	6010C
7440-02-0	Nickel	9.1	5.5	0.25	mg/Kg			1	6010C
7440-09-7	Potassium	1300	33.0	22.0	mg/Kg			1	6010C
7782-49-2	Selenium	0.62	4.4	0.44	mg/Kg	J		1	6010C
7440-22-4	Silver	ND	0.66	0.22	mg/Kg			1	6010C
7440-23-5	Sodium	146	154	14.3	mg/Kg	J		1	6010C
7440-28-0	Thallium	ND	6.6	0.33	mg/Kg			1	6010C
7440-62-2	Vanadium	13.2	0.55	0.12	mg/Kg			1	6010C
7440-66-6	Zinc	22.1	2.2	0.70	mg/Kg			1	6010C
7439-97-6	Mercury	0.012	0.022	0.0050	mg/Kg	J		1	7471B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: PDI-10_0304 Lab Sample ID: 480-197309-5

Lab Name: Eurofins Buffalo Job No.: 480-197309-1

SDG ID.:

Matrix: Solid Date Sampled: 04/28/2022 10:51

Reporting Basis: DRY Date Received: 04/28/2022 16:40

% Solids: 88.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	5700	10.9	4.8	mg/Kg			1	6010C
7440-36-0	Antimony	1.3	16.3	0.44	mg/Kg	J		1	6010C
7440-38-2	Arsenic	2.5	2.2	0.44	mg/Kg			1	6010C
7440-39-3	Barium	34.5	0.54	0.12	mg/Kg			1	6010C
7440-41-7	Beryllium	0.24	0.22	0.030	mg/Kg			1	6010C
7440-43-9	Cadmium	0.12	0.22	0.033	mg/Kg	J		1	6010C
7440-70-2	Calcium	24600	54.4	3.6	mg/Kg			1	6010C
7440-47-3	Chromium	7.0	0.54	0.22	mg/Kg			1	6010C
7440-48-4	Cobalt	3.8	0.54	0.054	mg/Kg			1	6010C
7440-50-8	Copper	10.6	1.1	0.23	mg/Kg			1	6010C
7439-89-6	Iron	9400	10.9	3.8	mg/Kg			1	6010C
7439-92-1	Lead	4.9	1.1	0.26	mg/Kg			1	6010C
7439-95-4	Magnesium	7220	21.8	1.0	mg/Kg			1	6010C
7439-96-5	Manganese	372	0.22	0.035	mg/Kg			1	6010C
7440-02-0	Nickel	7.6	5.4	0.25	mg/Kg			1	6010C
7440-09-7	Potassium	1030	32.7	21.8	mg/Kg			1	6010C
7782-49-2	Selenium	1.0	4.4	0.44	mg/Kg	J		1	6010C
7440-22-4	Silver	ND	0.65	0.22	mg/Kg			1	6010C
7440-23-5	Sodium	130	152	14.2	mg/Kg	J		1	6010C
7440-28-0	Thallium	ND	6.5	0.33	mg/Kg			1	6010C
7440-62-2	Vanadium	13.3	0.54	0.12	mg/Kg			1	6010C
7440-66-6	Zinc	23.0	2.2	0.70	mg/Kg	J		1	6010C
7439-97-6	Mercury	0.023	0.022	0.0050	mg/Kg			1	7471B

FD OF PDI-10

Client Sample ID: DUP_042822 Lab Sample ID: 480-197309-7

Lab Name: Eurofins Buffalo Job No.: 480-197309-1

SDG ID.:

Matrix: Solid Date Sampled: 04/28/2022 11:30

Reporting Basis: DRY Date Received: 04/28/2022 16:40

% Solids: 89.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	7080	11.3	5.0	mg/Kg			1	6010C
7440-36-0	Antimony	1.4	16.9	0.45	mg/Kg	J		1	6010C
7440-38-2	Arsenic	2.9	2.3	0.45	mg/Kg			1	6010C
7440-39-3	Barium	39.8	0.56	0.12	mg/Kg			1	6010C
7440-41-7	Beryllium	0.28	0.23	0.032	mg/Kg			1	6010C
7440-43-9	Cadmium	0.25	0.23	0.034	mg/Kg			1	6010C
7440-70-2	Calcium	32400	56.3	3.7	mg/Kg			1	6010C
7440-47-3	Chromium	8.5	0.56	0.23	mg/Kg			1	6010C
7440-48-4	Cobalt	4.4	0.56	0.056	mg/Kg			1	6010C
7440-50-8	Copper	12.9	1.1	0.24	mg/Kg			1	6010C
7439-89-6	Iron	10100	11.3	3.9	mg/Kg			1	6010C
7439-92-1	Lead	5.8	1.1	0.27	mg/Kg			1	6010C
7439-95-4	Magnesium	5530	22.5	1.0	mg/Kg			1	6010C
7439-96-5	Manganese	366	0.23	0.036	mg/Kg			1	6010C
7440-02-0	Nickel	9.1	5.6	0.26	mg/Kg			1	6010C
7440-09-7	Potassium	1150	33.8	22.5	mg/Kg			1	6010C
7782-49-2	Selenium	0.91	4.5	0.45	mg/Kg	J		1	6010C
7440-22-4	Silver	ND	0.68	0.23	mg/Kg			1	6010C
7440-23-5	Sodium	135	158	14.6	mg/Kg	J		1	6010C
7440-28-0	Thallium	ND	6.8	0.34	mg/Kg			1	6010C
7440-62-2	Vanadium	15.0	0.56	0.12	mg/Kg			1	6010C
7440-66-6	Zinc	79.3	2.3	0.72	mg/Kg	J		1	6010C
7439-97-6	Mercury	0.013	0.021	0.0049	mg/Kg	J		1	7471B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: PDI-5_0405 Lab Sample ID: 480-197309-8

Lab Name: Eurofins Buffalo Job No.: 480-197309-1

SDG ID.:

Matrix: Solid Date Sampled: 04/28/2022 11:51

Reporting Basis: DRY Date Received: 04/28/2022 16:40

% Solids: 92.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	6530	11.2	4.9	mg/Kg			1	6010C
7440-36-0	Antimony	1.2	16.9	0.45	mg/Kg	J		1	6010C
7440-38-2	Arsenic	2.7	2.2	0.45	mg/Kg			1	6010C
7440-39-3	Barium	32.2	0.56	0.12	mg/Kg			1	6010C
7440-41-7	Beryllium	0.27	0.22	0.031	mg/Kg			1	6010C
7440-43-9	Cadmium	0.16	0.22	0.034	mg/Kg	J		1	6010C
7440-70-2	Calcium	24300	56.2	3.7	mg/Kg			1	6010C
7440-47-3	Chromium	7.8	0.56	0.22	mg/Kg			1	6010C
7440-48-4	Cobalt	4.0	0.56	0.056	mg/Kg			1	6010C
7440-50-8	Copper	25.7	1.1	0.24	mg/Kg			1	6010C
7439-89-6	Iron	9200	11.2	3.9	mg/Kg			1	6010C
7439-92-1	Lead	6.4	1.1	0.27	mg/Kg			1	6010C
7439-95-4	Magnesium	13300	22.5	1.0	mg/Kg			1	6010C
7439-96-5	Manganese	387	0.22	0.036	mg/Kg			1	6010C
7440-02-0	Nickel	8.3	5.6	0.26	mg/Kg			1	6010C
7440-09-7	Potassium	1290	33.7	22.5	mg/Kg			1	6010C
7782-49-2	Selenium	0.73	4.5	0.45	mg/Kg	J		1	6010C
7440-22-4	Silver	ND	0.67	0.22	mg/Kg			1	6010C
7440-23-5	Sodium	136	157	14.6	mg/Kg	J		1	6010C
7440-28-0	Thallium	ND	6.7	0.34	mg/Kg			1	6010C
7440-62-2	Vanadium	12.9	0.56	0.12	mg/Kg			1	6010C
7440-66-6	Zinc	36.3	2.2	0.72	mg/Kg	J		1	6010C
7439-97-6	Mercury	0.019	0.022	0.0050	mg/Kg	J		1	7471B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: PDI-11_0304 | Lab Sample ID: 480-197309-9

Lab Name: Eurofins Buffalo | Job No.: 480-197309-1

SDG ID.:

Matrix: Solid | Date Sampled: 04/28/2022 13:11

Reporting Basis: DRY | Date Received: 04/28/2022 16:40

% Solids: 87.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	6790	11.2	4.9	mg/Kg			1	6010C
7440-36-0	Antimony	1.8	16.9	0.45	mg/Kg	J		1	6010C
7440-38-2	Arsenic	2.5	2.2	0.45	mg/Kg			1	6010C
7440-39-3	Barium	42.2	0.56	0.12	mg/Kg			1	6010C
7440-41-7	Beryllium	0.32	0.22	0.031	mg/Kg			1	6010C
7440-43-9	Cadmium	0.13	0.22	0.034	mg/Kg	J		1	6010C
7440-70-2	Calcium	31000	56.2	3.7	mg/Kg			1	6010C
7440-47-3	Chromium	9.2	0.56	0.22	mg/Kg			1	6010C
7440-48-4	Cobalt	4.6	0.56	0.056	mg/Kg			1	6010C
7440-50-8	Copper	13.7	1.1	0.24	mg/Kg			1	6010C
7439-89-6	Iron	11300	11.2	3.9	mg/Kg			1	6010C
7439-92-1	Lead	5.6	1.1	0.27	mg/Kg			1	6010C
7439-95-4	Magnesium	7940	22.5	1.0	mg/Kg			1	6010C
7439-96-5	Manganese	317	0.22	0.036	mg/Kg			1	6010C
7440-02-0	Nickel	9.5	5.6	0.26	mg/Kg			1	6010C
7440-09-7	Potassium	1470	33.7	22.5	mg/Kg			1	6010C
7782-49-2	Selenium	1.1	4.5	0.45	mg/Kg	J		1	6010C
7440-22-4	Silver	ND	0.67	0.22	mg/Kg			1	6010C
7440-23-5	Sodium	153	157	14.6	mg/Kg	J		1	6010C
7440-28-0	Thallium	ND	6.7	0.34	mg/Kg			1	6010C
7440-62-2	Vanadium	15.9	0.56	0.12	mg/Kg			1	6010C
7440-66-6	Zinc	25.2	2.2	0.72	mg/Kg			1	6010C
7439-97-6	Mercury	0.012	0.021	0.0049	mg/Kg	J		1	7471B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: PDI-12_0405 Lab Sample ID: 480-197309-11

Lab Name: Eurofins Buffalo Job No.: 480-197309-1

SDG ID.:

Matrix: Solid Date Sampled: 04/28/2022 14:21

Reporting Basis: DRY Date Received: 04/28/2022 16:40

% Solids: 87.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	14300	11.4	5.0	mg/Kg			1	6010C
7440-36-0	Antimony	2.4	17.1	0.46	mg/Kg	J		1	6010C
7440-38-2	Arsenic	3.3	2.3	0.46	mg/Kg			1	6010C
7440-39-3	Barium	57.0	0.57	0.13	mg/Kg			1	6010C
7440-41-7	Beryllium	0.67	0.23	0.032	mg/Kg			1	6010C
7440-43-9	Cadmium	0.076	0.23	0.034	mg/Kg	J		1	6010C
7440-70-2	Calcium	2690	57.0	3.8	mg/Kg			1	6010C
7440-47-3	Chromium	14.8	0.57	0.23	mg/Kg			1	6010C
7440-48-4	Cobalt	7.4	0.57	0.057	mg/Kg			1	6010C
7440-50-8	Copper	15.7	1.1	0.24	mg/Kg			1	6010C
7439-89-6	Iron	18700	11.4	4.0	mg/Kg			1	6010C
7439-92-1	Lead	9.0	1.1	0.27	mg/Kg			1	6010C
7439-95-4	Magnesium	2440	22.8	1.1	mg/Kg			1	6010C
7439-96-5	Manganese	373	0.23	0.036	mg/Kg			1	6010C
7440-02-0	Nickel	10.5	5.7	0.26	mg/Kg			1	6010C
7440-09-7	Potassium	1520	34.2	22.8	mg/Kg			1	6010C
7782-49-2	Selenium	1.7	4.6	0.46	mg/Kg	J		1	6010C
7440-22-4	Silver	ND	0.68	0.23	mg/Kg			1	6010C
7440-23-5	Sodium	95.7	160	14.8	mg/Kg	J		1	6010C
7440-28-0	Thallium	ND	6.8	0.34	mg/Kg			1	6010C
7440-62-2	Vanadium	30.3	0.57	0.13	mg/Kg			1	6010C
7440-66-6	Zinc	27.9	2.3	0.73	mg/Kg			1	6010C
7439-97-6	Mercury	0.025	0.023	0.0054	mg/Kg			1	7471B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: RB_042822 Lab Sample ID: 480-197309-14

Lab Name: Eurofins Buffalo Job No.: 480-197309-1

SDG ID.:

Matrix: Water Date Sampled: 04/28/2022 15:15

Reporting Basis: WET Date Received: 04/28/2022 16:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	ND	0.20	0.060	mg/L			1	6010C
7440-36-0	Antimony	ND	0.020	0.0068	mg/L			1	6010C
7440-38-2	Arsenic	ND	0.015	0.0056	mg/L			1	6010C
7440-39-3	Barium	ND	0.0020	0.00070	mg/L			1	6010C
7440-41-7	Beryllium	ND	0.0020	0.00030	mg/L			1	6010C
7440-43-9	Cadmium	ND	0.0020	0.00050	mg/L			1	6010C
7440-70-2	Calcium	ND	0.50	0.10	mg/L			1	6010C
7440-47-3	Chromium	ND	0.0040	0.0010	mg/L			1	6010C
7440-48-4	Cobalt	ND	0.0040	0.00063	mg/L			1	6010C
7440-50-8	Copper	0.017	0.010	0.0016	mg/L			1	6010C
7439-89-6	Iron	ND	0.050	0.019	mg/L			1	6010C
7439-92-1	Lead	ND	0.010	0.0030	mg/L			1	6010C
7439-95-4	Magnesium	ND	0.20	0.043	mg/L			1	6010C
7439-96-5	Manganese	0.00062	0.0030	0.00040	mg/L	J		1	6010C
7440-02-0	Nickel	ND	0.010	0.0013	mg/L			1	6010C
7440-09-7	Potassium	ND	0.50	0.10	mg/L			1	6010C
7782-49-2	Selenium	ND	0.025	0.0087	mg/L			1	6010C
7440-22-4	Silver	ND	0.0060	0.0017	mg/L			1	6010C
7440-23-5	Sodium	ND	1.0	0.32	mg/L			1	6010C
7440-28-0	Thallium	ND	0.020	0.010	mg/L			1	6010C
7440-62-2	Vanadium	ND	0.0050	0.0015	mg/L			1	6010C
7440-66-6	Zinc	ND	0.010	0.0015	mg/L			1	6010C
7439-97-6	Mercury	ND	0.00020	0.000043	mg/L			1	7470A

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197706-1

SDG No.:

Client Sample ID: MW-14 | Lab Sample ID: 480-197706-1

Matrix: Water | Lab File ID: D9579.D

Analysis Method: 8260C | Date Collected: 05/09/2022 09:22

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2022 01:44

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 626280 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
75-34-3	1,1-Dichloroethane	ND		1.0	0.38
75-35-4	1,1-Dichloroethene	ND		1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	ND		10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND		1.0	0.69
75-15-0	Carbon disulfide	ND		1.0	0.19
56-23-5	Carbon tetrachloride	ND		1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	ND		1.0	0.34
74-87-3	Chloromethane	ND		1.0	0.35
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	ND		1.0	0.18
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-71-8	Dichlorodifluoromethane	ND		1.0	0.68

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197706-1

SDG No.:

Client Sample ID: MW-14 | Lab Sample ID: 480-197706-1

Matrix: Water | Lab File ID: D9579.D

Analysis Method: 8260C | Date Collected: 05/09/2022 09:22

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2022 01:44

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 626280 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
100-41-4	Ethylbenzene	ND		1.0	0.74
98-82-8	Isopropylbenzene	ND		1.0	0.79
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.16
108-87-2	Methylcyclohexane	ND		1.0	0.16
75-09-2	Methylene Chloride	ND		1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	ND		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	ND		1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		77-120
460-00-4	4-Bromofluorobenzene (Surr)	102		73-120
1868-53-7	Dibromofluoromethane (Surr)	103		75-123
2037-26-5	Toluene-d8 (Surr)	101		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197706-1

SDG No.:

Client Sample ID: MW-22 | Lab Sample ID: 480-197706-2

Matrix: Water | Lab File ID: D9580.D

Analysis Method: 8260C | Date Collected: 05/09/2022 11:29

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2022 02:06

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 626280 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		2.0	1.6
79-34-5	1,1,2,2-Tetrachloroethane	ND		2.0	0.42
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		2.0	0.62
79-00-5	1,1,2-Trichloroethane	ND		2.0	0.46
75-34-3	1,1-Dichloroethane	2.3		2.0	0.76
75-35-4	1,1-Dichloroethene	ND		2.0	0.58
120-82-1	1,2,4-Trichlorobenzene	ND		2.0	0.82
96-12-8	1,2-Dibromo-3-Chloropropane	ND		2.0	0.78
106-93-4	1,2-Dibromoethane	ND		2.0	1.5
95-50-1	1,2-Dichlorobenzene	ND		2.0	1.6
107-06-2	1,2-Dichloroethane	ND		2.0	0.42
78-87-5	1,2-Dichloropropane	ND		2.0	1.4
541-73-1	1,3-Dichlorobenzene	ND		2.0	1.6
106-46-7	1,4-Dichlorobenzene	ND		2.0	1.7
78-93-3	2-Butanone (MEK)	ND		20	2.6
591-78-6	2-Hexanone	ND		10	2.5
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		10	4.2
67-64-1	Acetone	ND		20	6.0
71-43-2	Benzene	ND		2.0	0.82
75-27-4	Bromodichloromethane	ND		2.0	0.78
75-25-2	Bromoform	ND		2.0	0.52
74-83-9	Bromomethane	ND		2.0	1.4
75-15-0	Carbon disulfide	ND		2.0	0.38
56-23-5	Carbon tetrachloride	ND		2.0	0.54
108-90-7	Chlorobenzene	ND		2.0	1.5
75-00-3	Chloroethane	ND		2.0	0.64
67-66-3	Chloroform	1.2	J	2.0	0.68
74-87-3	Chloromethane	ND		2.0	0.70
156-59-2	cis-1,2-Dichloroethene	130	F1	2.0	1.6
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.72
110-82-7	Cyclohexane	ND		2.0	0.36
124-48-1	Dibromochloromethane	ND		2.0	0.64
75-71-8	Dichlorodifluoromethane	ND		2.0	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197706-1

SDG No.:

Client Sample ID: MW-22 | Lab Sample ID: 480-197706-2

Matrix: Water | Lab File ID: D9580.D

Analysis Method: 8260C | Date Collected: 05/09/2022 11:29

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2022 02:06

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 626280 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
100-41-4	Ethylbenzene	ND		2.0	1.5
98-82-8	Isopropylbenzene	ND		2.0	1.6
79-20-9	Methyl acetate	ND		5.0	2.6
1634-04-4	Methyl tert-butyl ether	ND		2.0	0.32
108-87-2	Methylcyclohexane	ND		2.0	0.32
75-09-2	Methylene Chloride	ND		2.0	0.88
100-42-5	Styrene	ND		2.0	1.5
127-18-4	Tetrachloroethene	0.75	J	2.0	0.72
108-88-3	Toluene	ND		2.0	1.0
156-60-5	trans-1,2-Dichloroethene	1.8	J	2.0	1.8
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.74
79-01-6	Trichloroethene	1.5	J	2.0	0.92
75-69-4	Trichlorofluoromethane	ND		2.0	1.8
75-01-4	Vinyl chloride	ND		2.0	1.8
1330-20-7	Xylenes, Total	ND		4.0	1.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		77-120
460-00-4	4-Bromofluorobenzene (Surr)	105		73-120
1868-53-7	Dibromofluoromethane (Surr)	102		75-123
2037-26-5	Toluene-d8 (Surr)	102		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197706-1

SDG No.:

Client Sample ID: MW-05R | Lab Sample ID: 480-197706-3

Matrix: Water | Lab File ID: D9581.D

Analysis Method: 8260C | Date Collected: 05/09/2022 13:33

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2022 02:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 626280 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	1.2		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
75-34-3	1,1-Dichloroethane	22		1.0	0.38
75-35-4	1,1-Dichloroethene	0.29	J	1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	ND		10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND		1.0	0.69
75-15-0	Carbon disulfide	ND		1.0	0.19
56-23-5	Carbon tetrachloride	ND		1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
75-00-3	Chloroethane	0.51	J	1.0	0.32
67-66-3	Chloroform	1.5		1.0	0.34
74-87-3	Chloromethane	ND		1.0	0.35
~~156-59-2~~	~~cis-1,2-Dichloroethene~~	~~200~~	~~E~~	~~1.0~~	~~0.81~~
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	0.24	J	1.0	0.18
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-71-8	Dichlorodifluoromethane	ND		1.0	0.68

Use cis-1,2-DCE result from the dilution

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197706-1

SDG No.:

Client Sample ID: MW-05R | Lab Sample ID: 480-197706-3

Matrix: Water | Lab File ID: D9581.D

Analysis Method: 8260C | Date Collected: 05/09/2022 13:33

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2022 02:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 626280 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
100-41-4	Ethylbenzene	ND		1.0	0.74
98-82-8	Isopropylbenzene	ND		1.0	0.79
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.16
108-87-2	Methylcyclohexane	0.21	J	1.0	0.16
75-09-2	Methylene Chloride	ND		1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	5.7		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	1.7		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	31		1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	2.4		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		77-120
460-00-4	4-Bromofluorobenzene (Surr)	105		73-120
1868-53-7	Dibromofluoromethane (Surr)	104		75-123
2037-26-5	Toluene-d8 (Surr)	103		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197706-1

SDG No.:

Client Sample ID: MW-05R DL | Lab Sample ID: 480-197706-3 DL

Matrix: Water | Lab File ID: T9647.D

Analysis Method: 8260C | Date Collected: 05/09/2022 13:33

Sample wt/vol: 5(mL) | Date Analyzed: 05/18/2022 08:13

Soil Aliquot Vol: | Dilution Factor: 4

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 626469 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		4.0	3.3
79-34-5	1,1,2,2-Tetrachloroethane	ND		4.0	0.84
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.0	1.2
79-00-5	1,1,2-Trichloroethane	ND		4.0	0.92
75-34-3	1,1-Dichloroethane	26		4.0	1.5
75-35-4	1,1-Dichloroethene	ND		4.0	1.2
120-82-1	1,2,4-Trichlorobenzene	ND		4.0	1.6
96-12-8	1,2-Dibromo-3-Chloropropane	ND		4.0	1.6
106-93-4	1,2-Dibromoethane	ND		4.0	2.9
95-50-1	1,2-Dichlorobenzene	ND		4.0	3.2
107-06-2	1,2-Dichloroethane	ND		4.0	0.84
78-87-5	1,2-Dichloropropane	ND		4.0	2.9
541-73-1	1,3-Dichlorobenzene	ND		4.0	3.1
106-46-7	1,4-Dichlorobenzene	ND		4.0	3.4
78-93-3	2-Butanone (MEK)	ND		40	5.3
591-78-6	2-Hexanone	ND		20	5.0
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		20	8.4
67-64-1	Acetone	ND	*-	40	12
71-43-2	Benzene	ND		4.0	1.6
75-27-4	Bromodichloromethane	ND		4.0	1.6
75-25-2	Bromoform	ND		4.0	1.0
74-83-9	Bromomethane	ND		4.0	2.8
75-15-0	Carbon disulfide	ND		4.0	0.76
56-23-5	Carbon tetrachloride	ND		4.0	1.1
108-90-7	Chlorobenzene	ND		4.0	3.0
75-00-3	Chloroethane	ND		4.0	1.3
67-66-3	Chloroform	1.7	J	4.0	1.4
74-87-3	Chloromethane	ND		4.0	1.4
156-59-2	cis-1,2-Dichloroethene	* 210	D	4.0	3.2
10061-01-5	cis-1,3-Dichloropropene	ND		4.0	1.4
110-82-7	Cyclohexane	ND		4.0	0.72
124-48-1	Dibromochloromethane	ND		4.0	1.3
75-71-8	Dichlorodifluoromethane	ND		4.0	2.7

* Use this result

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197706-1

SDG No.:

Client Sample ID: RB-050922 | Lab Sample ID: 480-197706-4

Matrix: Water | Lab File ID: D9582.D

Analysis Method: 8260C | Date Collected: 05/09/2022 14:30

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2022 02:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 626280 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
75-34-3	1,1-Dichloroethane	ND		1.0	0.38
75-35-4	1,1-Dichloroethene	ND		1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	ND		10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND		1.0	0.69
75-15-0	Carbon disulfide	ND		1.0	0.19
56-23-5	Carbon tetrachloride	ND		1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	ND		1.0	0.34
74-87-3	Chloromethane	ND		1.0	0.35
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	ND		1.0	0.18
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-71-8	Dichlorodifluoromethane	ND		1.0	0.68

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197706-1

SDG No.:

Client Sample ID: RB-050922 | Lab Sample ID: 480-197706-4

Matrix: Water | Lab File ID: D9582.D

Analysis Method: 8260C | Date Collected: 05/09/2022 14:30

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2022 02:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 626280 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
100-41-4	Ethylbenzene	ND		1.0	0.74
98-82-8	Isopropylbenzene	ND		1.0	0.79
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.16
108-87-2	Methylcyclohexane	ND		1.0	0.16
75-09-2	Methylene Chloride	ND		1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	ND		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	ND		1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		77-120
460-00-4	4-Bromofluorobenzene (Surr)	105		73-120
1868-53-7	Dibromofluoromethane (Surr)	103		75-123
2037-26-5	Toluene-d8 (Surr)	103		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197706-1

SDG No.:

Client Sample ID: MW-07 | Lab Sample ID: 480-197706-5

Matrix: Water | Lab File ID: D9583.D

Analysis Method: 8260C | Date Collected: 05/09/2022 14:49

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2022 03:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 626280 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
75-34-3	1,1-Dichloroethane	0.83	J	1.0	0.38
75-35-4	1,1-Dichloroethene	ND		1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	ND		10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND		1.0	0.69
75-15-0	Carbon disulfide	ND		1.0	0.19
56-23-5	Carbon tetrachloride	ND		1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	ND		1.0	0.34
74-87-3	Chloromethane	ND		1.0	0.35
156-59-2	cis-1,2-Dichloroethene	2.8		1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	ND		1.0	0.18
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-71-8	Dichlorodifluoromethane	ND		1.0	0.68

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197706-1

SDG No.:

Client Sample ID: MW-07 | Lab Sample ID: 480-197706-5

Matrix: Water | Lab File ID: D9583.D

Analysis Method: 8260C | Date Collected: 05/09/2022 14:49

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2022 03:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 626280 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
100-41-4	Ethylbenzene	ND		1.0	0.74
98-82-8	Isopropylbenzene	ND		1.0	0.79
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.16
108-87-2	Methylcyclohexane	ND		1.0	0.16
75-09-2	Methylene Chloride	ND		1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	4.2		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	6.1		1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		77-120
460-00-4	4-Bromofluorobenzene (Surr)	105		73-120
1868-53-7	Dibromofluoromethane (Surr)	102		75-123
2037-26-5	Toluene-d8 (Surr)	102		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197706-1

SDG No.:

Client Sample ID: TB-050922 | Lab Sample ID: 480-197706-6

Matrix: Water | Lab File ID: D9584.D

Analysis Method: 8260C | Date Collected: 05/09/2022 16:00

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2022 03:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 626280 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
75-34-3	1,1-Dichloroethane	ND		1.0	0.38
75-35-4	1,1-Dichloroethene	ND		1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	ND		10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND		1.0	0.69
75-15-0	Carbon disulfide	ND		1.0	0.19
56-23-5	Carbon tetrachloride	ND		1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	ND		1.0	0.34
74-87-3	Chloromethane	ND		1.0	0.35
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	ND		1.0	0.18
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-71-8	Dichlorodifluoromethane	ND		1.0	0.68

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197706-1

SDG No.:

Client Sample ID: TB-050922 | Lab Sample ID: 480-197706-6

Matrix: Water | Lab File ID: D9584.D

Analysis Method: 8260C | Date Collected: 05/09/2022 16:00

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2022 03:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 626280 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
100-41-4	Ethylbenzene	ND		1.0	0.74
98-82-8	Isopropylbenzene	ND		1.0	0.79
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.16
108-87-2	Methylcyclohexane	ND		1.0	0.16
75-09-2	Methylene Chloride	ND		1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	ND		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	ND		1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	104		77-120
460-00-4	4-Bromofluorobenzene (Surr)	103		73-120
1868-53-7	Dibromofluoromethane (Surr)	104		75-123
2037-26-5	Toluene-d8 (Surr)	102		80-120

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197706-1

SDG No.:

Client Sample ID: MW-22 | Lab Sample ID: 480-197706-2

Matrix: Water | Lab File ID: pe3_070_259.D

Analysis Method: RSK-175 | Date Collected: 05/09/2022 11:29

Sample wt/vol: 17(mL) | Date Analyzed: 05/18/2022 08:03

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: Alumina ID: 0.53(mm)

Purge Volume: | Heated Purge: (Y/N) N pH: 2.0

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 626528 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-82-8	Methane	230		4.0	1.0

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197706-1

SDG No.:

Client Sample ID: MW-05R | Lab Sample ID: 480-197706-3

Matrix: Water | Lab File ID: pe3_070_260.D

Analysis Method: RSK-175 | Date Collected: 05/09/2022 13:33

Sample wt/vol: 17(mL) | Date Analyzed: 05/18/2022 08:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: Alumina ID: 0.53(mm)

Purge Volume: | Heated Purge: (Y/N) N pH: 2.0

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 626528 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-82-8	Methane	73		4.0	1.0

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197706-1

SDG No.:

Client Sample ID: RB-050922 | Lab Sample ID: 480-197706-4

Matrix: Water | Lab File ID: pe3_070_261.D

Analysis Method: RSK-175 | Date Collected: 05/09/2022 14:30

Sample wt/vol: 17(mL) | Date Analyzed: 05/18/2022 08:41

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: Alumina ID: 0.53(mm)

Purge Volume: | Heated Purge: (Y/N) N pH: 2.0

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 626528 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-82-8	Methane	ND		4.0	1.0

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197706-1

SDG No.:

Client Sample ID: MW-07 | Lab Sample ID: 480-197706-2

Matrix: Water | Lab File ID: pe3_070_565.D

Analysis Method: RSK-172 | Date Collected: 02/09/5055 14:49

Sample wt/vol: 17(mL) | Date Analyzed: 02/18/5055 09:00

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: Alumina ID: 0.23(mm)

Purge Volume: | Heated Purge: (Y/N) N pH: 5.0

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 656258 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-8	Methane	51		4.0	1.0

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197706-1

SDG No.:

Client Sample ID: TB-050922 | Lab Sample ID: 480-197706-6

Matrix: Water | Lab File ID: pe3_070_263.D

Analysis Method: RSK-175 | Date Collected: 05/09/2022 16:00

Sample wt/vol: 17(mL) | Date Analyzed: 05/18/2022 09:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: Alumina ID: 0.53(mm)

Purge Volume: | Heated Purge: (Y/N) N pH: 2.0

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 626528 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-82-8	Methane	ND		4.0	1.0

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MW-14 | Lab Sample ID: 480-197706-1

Lab Name: Eurofins Buffalo | Job No.: 480-197706-1

SDG ID.:

Matrix: Water | Date Sampled: 05/09/2022 09:22

Reporting Basis: WET | Date Received: 05/09/2022 16:22

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	ND	0.20	0.060	mg/L			1	6010C
7440-36-0	Antimony	ND	0.020	0.0068	mg/L			1	6010C
7440-38-2	Arsenic	ND	0.015	0.0056	mg/L			1	6010C
7440-39-3	Barium	0.092	0.0020	0.00070	mg/L			1	6010C
7440-41-7	Beryllium	ND	0.0020	0.00030	mg/L			1	6010C
7440-43-9	Cadmium	ND	0.0020	0.00050	mg/L			1	6010C
7440-70-2	Calcium	153	0.50	0.10	mg/L			1	6010C
7440-47-3	Chromium	ND	0.0040	0.0010	mg/L			1	6010C
7440-48-4	Cobalt	0.0013	0.0040	0.00063	mg/L	J		1	6010C
7440-50-8	Copper	ND	0.010	0.010	mg/L	U		1	6010C
7439-89-6	Iron	1.7	0.050	0.019	mg/L			1	6010C
7439-92-1	Lead	0.0033	0.010	0.0030	mg/L	J		1	6010C
7439-95-4	Magnesium	19.8	0.20	0.043	mg/L			1	6010C
7439-96-5	Manganese	0.67	0.0030	0.00040	mg/L			1	6010C
7440-02-0	Nickel	0.0028	0.010	0.0013	mg/L	J		1	6010C
7440-09-7	Potassium	7.5	0.50	0.10	mg/L			1	6010C
7782-49-2	Selenium	ND	0.025	0.0087	mg/L			1	6010C
7440-22-4	Silver	ND	0.0060	0.0017	mg/L			1	6010C
7440-23-5	Sodium	83.6	1.0	0.32	mg/L			1	6010C
7440-28-0	Thallium	ND	0.020	0.010	mg/L			1	6010C
7440-62-2	Vanadium	ND	0.0050	0.0015	mg/L			1	6010C
7440-66-6	Zinc	0.13	0.010	0.0015	mg/L			1	6010C
7439-97-6	Mercury	ND	0.00020	0.000043	mg/L			1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MW-22 | Lab Sample ID: 480-197706-2

Lab Name: Eurofins Buffalo | Job No.: 480-197706-1

SDG ID.:

Matrix: Water | Date Sampled: 05/09/2022 11:29

Reporting Basis: WET | Date Received: 05/09/2022 16:22

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	8.9	0.20	0.060	mg/L			1	6010C
7440-36-0	Antimony	ND	0.020	0.0068	mg/L			1	6010C
7440-38-2	Arsenic	0.0062	0.015	0.0056	mg/L	J		1	6010C
7440-39-3	Barium	0.57	0.0020	0.00070	mg/L			1	6010C
7440-41-7	Beryllium	0.00034	0.0020	0.00030	mg/L	J		1	6010C
7440-43-9	Cadmium	ND	0.0020	0.00050	mg/L			1	6010C
7440-70-2	Calcium	139	0.50	0.10	mg/L			1	6010C
7440-47-3	Chromium	0.0096	0.0040	0.0010	mg/L			1	6010C
7440-48-4	Cobalt	0.0072	0.0040	0.00063	mg/L			1	6010C
7440-50-8	Copper	ND	0.036	0.0036	mg/L	U		1	6010C
7439-89-6	Iron	11.4	0.050	0.019	mg/L	J		1	6010C
7439-92-1	Lead	0.0090	0.010	0.0030	mg/L	J		1	6010C
7439-95-4	Magnesium	34.5	0.20	0.043	mg/L			1	6010C
7439-96-5	Manganese	2.6	0.0030	0.00040	mg/L			1	6010C
7440-02-0	Nickel	0.015	0.010	0.0013	mg/L			1	6010C
7440-09-7	Potassium	39.5	0.50	0.10	mg/L			1	6010C
7782-49-2	Selenium	ND	0.025	0.0087	mg/L			1	6010C
7440-22-4	Silver	ND	0.0060	0.0017	mg/L			1	6010C
7440-23-5	Sodium	170	1.0	0.32	mg/L			1	6010C
7440-28-0	Thallium	ND	0.020	0.010	mg/L			1	6010C
7440-62-2	Vanadium	0.015	0.0050	0.0015	mg/L			1	6010C
7440-66-6	Zinc	0.034	0.010	0.0015	mg/L			1	6010C
7439-97-6	Mercury	ND	0.00020	0.000043	mg/L			1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MW-22 | Lab Sample ID: 480-197706-2

Lab Name: Eurofins Buffalo | Job No.: 480-197706-1

SDG ID.:

Matrix: Water | Date Sampled: 05/09/2022 11:29

Reporting Basis: WET | Date Received: 05/09/2022 16:22

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron, Dissolved	2.4	0.050	0.019	mg/L			1	6010C

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MW-05R
Lab Sample ID: 480-197706-3
Lab Name: Eurofins Buffalo
Job No.: 480-197706-1
SDG ID.:
Matrix: Water
Date Sampled: 05/09/2022 13:33
Reporting Basis: WET
Date Received: 05/09/2022 16:22

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	0.10	0.20	0.060	mg/L	J		1	6010C
7440-36-0	Antimony	ND	0.020	0.0068	mg/L			1	6010C
7440-38-2	Arsenic	ND	0.015	0.0056	mg/L			1	6010C
7440-39-3	Barium	0.16	0.0020	0.00070	mg/L			1	6010C
7440-41-7	Beryllium	ND	0.0020	0.00030	mg/L			1	6010C
7440-43-9	Cadmium	ND	0.0020	0.00050	mg/L			1	6010C
7440-70-2	Calcium	105	0.50	0.10	mg/L			1	6010C
7440-47-3	Chromium	ND	0.0040	0.0010	mg/L			1	6010C
7440-48-4	Cobalt	ND	0.0040	0.00063	mg/L			1	6010C
7440-50-8	Copper	ND	0.010	0.010	mg/L	U		1	6010C
7439-89-6	Iron	0.16	0.050	0.019	mg/L			1	6010C
7439-92-1	Lead	ND	0.010	0.0030	mg/L			1	6010C
7439-95-4	Magnesium	13.8	0.20	0.043	mg/L			1	6010C
7439-96-5	Manganese	1.0	0.0030	0.00040	mg/L			1	6010C
7440-02-0	Nickel	0.0019	0.010	0.0013	mg/L	J		1	6010C
7440-09-7	Potassium	5.4	0.50	0.10	mg/L			1	6010C
7782-49-2	Selenium	ND	0.025	0.0087	mg/L			1	6010C
7440-22-4	Silver	ND	0.0060	0.0017	mg/L			1	6010C
7440-23-5	Sodium	30.9	1.0	0.32	mg/L			1	6010C
7440-28-0	Thallium	ND	0.020	0.010	mg/L			1	6010C
7440-62-2	Vanadium	ND	0.0050	0.0015	mg/L			1	6010C
7440-66-6	Zinc	ND	0.010	0.0015	mg/L			1	6010C
7439-97-6	Mercury	ND	0.00020	0.000043	mg/L			1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MW-05R
Lab Sample ID: 480-197706-3
Lab Name: Eurofins Buffalo
Job No.: 480-197706-1
SDG ID.:
Matrix: Water
Date Sampled: 05/09/2022 13:33
Reporting Basis: WET
Date Received: 05/09/2022 16:22

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron, Dissolved	0.033	0.050	0.019	mg/L	J		1	6010C

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: RB-050922 Lab Sample ID: 480-197706-4

Lab Name: Eurofins Buffalo Job No.: 480-197706-1

SDG ID.:

Matrix: Water Date Sampled: 05/09/2022 14:30

Reporting Basis: WET Date Received: 05/09/2022 16:22

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	ND	0.20	0.060	mg/L			1	6010C
7440-36-0	Antimony	ND	0.020	0.0068	mg/L			1	6010C
7440-38-2	Arsenic	ND	0.015	0.0056	mg/L			1	6010C
7440-39-3	Barium	ND	0.0020	0.00070	mg/L			1	6010C
7440-41-7	Beryllium	ND	0.0020	0.00030	mg/L			1	6010C
7440-43-9	Cadmium	ND	0.0020	0.00050	mg/L			1	6010C
7440-70-2	Calcium	ND	0.50	0.10	mg/L			1	6010C
7440-47-3	Chromium	ND	0.0040	0.0010	mg/L			1	6010C
7440-48-4	Cobalt	ND	0.0040	0.00063	mg/L			1	6010C
7440-50-8	Copper	ND	0.010	0.0016	mg/L			1	6010C
7439-89-6	Iron	ND	0.050	0.019	mg/L			1	6010C
7439-92-1	Lead	ND	0.010	0.0030	mg/L			1	6010C
7439-95-4	Magnesium	ND	0.20	0.043	mg/L			1	6010C
7439-96-5	Manganese	ND	0.0030	0.00040	mg/L			1	6010C
7440-02-0	Nickel	ND	0.010	0.0013	mg/L			1	6010C
7440-09-7	Potassium	ND	0.50	0.10	mg/L			1	6010C
7782-49-2	Selenium	ND	0.025	0.0087	mg/L			1	6010C
7440-22-4	Silver	ND	0.0060	0.0017	mg/L			1	6010C
7440-23-5	Sodium	ND	1.0	0.32	mg/L			1	6010C
7440-28-0	Thallium	ND	0.020	0.010	mg/L			1	6010C
7440-62-2	Vanadium	ND	0.0050	0.0015	mg/L			1	6010C
7440-66-6	Zinc	ND	0.010	0.0015	mg/L			1	6010C
7439-97-6	Mercury	ND	0.00020	0.000043	mg/L			1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: RB-050922 Lab Sample ID: 480-197706-4

Lab Name: Eurofins Buffalo Job No.: 480-197706-1

SDG ID.:

Matrix: Water Date Sampled: 05/09/2022 14:30

Reporting Basis: WET Date Received: 05/09/2022 16:22

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron, Dissolved	ND	0.050	0.019	mg/L			1	6010C

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MW-07 | Lab Sample ID: 480-197706-5

Lab Name: Eurofins Buffalo | Job No.: 480-197706-1

SDG ID.:

Matrix: Water | Date Sampled: 05/09/2022 14:49

Reporting Basis: WET | Date Received: 05/09/2022 16:22

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	0.11	0.20	0.060	mg/L	J		1	6010C
7440-36-0	Antimony	ND	0.020	0.0068	mg/L			1	6010C
7440-38-2	Arsenic	ND	0.015	0.0056	mg/L			1	6010C
7440-39-3	Barium	0.19	0.0020	0.00070	mg/L			1	6010C
7440-41-7	Beryllium	ND	0.0020	0.00030	mg/L			1	6010C
7440-43-9	Cadmium	ND	0.0020	0.00050	mg/L			1	6010C
7440-70-2	Calcium	118	0.50	0.10	mg/L			1	6010C
7440-47-3	Chromium	ND	0.0040	0.0010	mg/L			1	6010C
7440-48-4	Cobalt	0.0043	0.0040	0.00063	mg/L			1	6010C
7440-50-8	Copper	ND	0.010	0.010	mg/L	U		1	6010C
7439-89-6	Iron	0.82	0.050	0.019	mg/L			1	6010C
7439-92-1	Lead	ND	0.010	0.0030	mg/L			1	6010C
7439-95-4	Magnesium	14.4	0.20	0.043	mg/L			1	6010C
7439-96-5	Manganese	2.1	0.0030	0.00040	mg/L			1	6010C
7440-02-0	Nickel	0.0015	0.010	0.0013	mg/L	J		1	6010C
7440-09-7	Potassium	3.8	0.50	0.10	mg/L			1	6010C
7782-49-2	Selenium	ND	0.025	0.0087	mg/L			1	6010C
7440-22-4	Silver	ND	0.0060	0.0017	mg/L			1	6010C
7440-23-5	Sodium	18.9	1.0	0.32	mg/L			1	6010C
7440-28-0	Thallium	ND	0.020	0.010	mg/L			1	6010C
7440-62-2	Vanadium	ND	0.0050	0.0015	mg/L			1	6010C
7440-66-6	Zinc	ND	0.010	0.010	mg/L	U		1	6010C
7439-97-6	Mercury	ND	0.00020	0.000043	mg/L			1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MW-07 | Lab Sample ID: 480-197706-5

Lab Name: Eurofins Buffalo | Job No.: 480-197706-1

SDG ID.:

Matrix: Water | Date Sampled: 05/09/2022 14:49

Reporting Basis: WET | Date Received: 05/09/2022 16:22

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron, Dissolved	0.95	0.050	0.019	mg/L			1	6010C

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MW-22 | Lab Sample ID: 480-197706-2

Lab Name: Eurofins Buffalo | Job No.: 480-197706-1

SDG ID.:

Matrix: Water | Date Sampled: 05/09/2022 11:29

Reporting Basis: WET | Date Received: 05/09/2022 16:22

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
16887-00-6	Chloride	133	2.5	1.4	mg/L			5	300.0
14808-79-8	Sulfate	94.8	10.0	1.7	mg/L			5	300.0
14797-55-8	Nitrate	ND	0.050	0.020	mg/L			1	Nitrate by calc
	Alkalinity, Total	637	5.0	0.79	mg/L		J	1	SM 2320B
	~~Alkalinity, Total~~	~~665~~	~~5.0~~	~~0.79~~	~~mg/L~~		H-B F1	~~1~~	~~SM 2320B~~

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MW-05R
Lab Sample ID: 480-197706-3
Lab Name: Eurofins Buffalo
Job No.: 480-197706-1
SDG ID.:
Matrix: Water
Date Sampled: 05/09/2022 13:33
Reporting Basis: WET
Date Received: 05/09/2022 16:22

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
16887-00-6	Chloride	65.2	2.5	1.4	mg/L			5	300.0
14808-79-8	Sulfate	86.5	10.0	1.7	mg/L			5	300.0
14797-55-8	Nitrate	0.83	0.050	0.020	mg/L			1	Nitrate by calc
	Alkalinity, Total	229	5.0	0.79	mg/L			1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: RB-050922 Lab Sample ID: 480-197706-4

Lab Name: Eurofins Buffalo Job No.: 480-197706-1

SDG ID.:

Matrix: Water Date Sampled: 05/09/2022 14:30

Reporting Basis: WET Date Received: 05/09/2022 16:22

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
16887-00-6	Chloride	ND	0.50	0.28	mg/L			1	300.0
14808-79-8	Sulfate	ND	2.0	0.35	mg/L			1	300.0
14797-55-8	Nitrate	0.033	0.050	0.020	mg/L	J		1	Nitrate by calc
	Alkalinity, Total	1.0	5.0	0.79	mg/L	J		1	SM 2320B

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MW-07 Lab Sample ID: 480-197706-5

Lab Name: Eurofins Buffalo Job No.: 480-197706-1

SDG ID.:

Matrix: Water Date Sampled: 05/09/2022 14:49

Reporting Basis: WET Date Received: 05/09/2022 16:22

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
16887-00-6	Chloride	28.6	1.0	0.56	mg/L			2	300.0
14808-79-8	Sulfate	24.4	4.0	0.70	mg/L			2	300.0
14797-55-8	Nitrate	0.053	0.050	0.020	mg/L			1	Nitrate by calc
	Alkalinity, Total	347	5.0	0.79	mg/L			1	SM 2320B

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197773-1

SDG No.:

Client Sample ID: MW-19R | Lab Sample ID: 480-197773-1

Matrix: Water | Lab File ID: D9585.D

Analysis Method: 8260C | Date Collected: 05/10/2022 09:10

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2022 03:55

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 626280 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		2.0	1.6
79-34-5	1,1,2,2-Tetrachloroethane	ND		2.0	0.42
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		2.0	0.62
79-00-5	1,1,2-Trichloroethane	ND		2.0	0.46
75-34-3	1,1-Dichloroethane	ND		2.0	0.76
75-35-4	1,1-Dichloroethene	ND		2.0	0.58
120-82-1	1,2,4-Trichlorobenzene	ND		2.0	0.82
96-12-8	1,2-Dibromo-3-Chloropropane	ND		2.0	0.78
106-93-4	1,2-Dibromoethane	ND		2.0	1.5
95-50-1	1,2-Dichlorobenzene	ND		2.0	1.6
107-06-2	1,2-Dichloroethane	ND		2.0	0.42
78-87-5	1,2-Dichloropropane	ND		2.0	1.4
541-73-1	1,3-Dichlorobenzene	ND		2.0	1.6
106-46-7	1,4-Dichlorobenzene	ND		2.0	1.7
78-93-3	2-Butanone (MEK)	ND		20	2.6
591-78-6	2-Hexanone	ND		10	2.5
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		10	4.2
67-64-1	Acetone	8.9	J	20	6.0
71-43-2	Benzene	ND		2.0	0.82
75-27-4	Bromodichloromethane	ND		2.0	0.78
75-25-2	Bromoform	ND		2.0	0.52
74-83-9	Bromomethane	ND		2.0	1.4
75-15-0	Carbon disulfide	ND		2.0	0.38
56-23-5	Carbon tetrachloride	ND		2.0	0.54
108-90-7	Chlorobenzene	ND		2.0	1.5
75-00-3	Chloroethane	ND		2.0	0.64
67-66-3	Chloroform	0.68	J	2.0	0.68
74-87-3	Chloromethane	ND		2.0	0.70
156-59-2	cis-1,2-Dichloroethene	ND		2.0	1.6
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.72
110-82-7	Cyclohexane	ND		2.0	0.36
124-48-1	Dibromochloromethane	ND		2.0	0.64
75-71-8	Dichlorodifluoromethane	ND		2.0	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197773-1

SDG No.:

Client Sample ID: MW-19R | Lab Sample ID: 480-197773-1

Matrix: Water | Lab File ID: D9585.D

Analysis Method: 8260C | Date Collected: 05/10/2022 09:10

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2022 03:55

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 626280 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
100-41-4	Ethylbenzene	ND		2.0	1.5
98-82-8	Isopropylbenzene	ND		2.0	1.6
79-20-9	Methyl acetate	ND		5.0	2.6
1634-04-4	Methyl tert-butyl ether	ND		2.0	0.32
108-87-2	Methylcyclohexane	ND		2.0	0.32
75-09-2	Methylene Chloride	ND		2.0	0.88
100-42-5	Styrene	ND		2.0	1.5
127-18-4	Tetrachloroethene	ND		2.0	0.72
108-88-3	Toluene	ND		2.0	1.0
156-60-5	trans-1,2-Dichloroethene	ND		2.0	1.8
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.74
79-01-6	Trichloroethene	ND		2.0	0.92
75-69-4	Trichlorofluoromethane	ND		2.0	1.8
75-01-4	Vinyl chloride	ND		2.0	1.8
1330-20-7	Xylenes, Total	ND		4.0	1.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		77-120
460-00-4	4-Bromofluorobenzene (Surr)	103		73-120
1868-53-7	Dibromofluoromethane (Surr)	102		75-123
2037-26-5	Toluene-d8 (Surr)	102		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197773-1

SDG No.:

Client Sample ID: MW-16 | Lab Sample ID: 480-197773-2

Matrix: Water | Lab File ID: D9586.D

Analysis Method: 8260C | Date Collected: 05/10/2022 10:00

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2022 04:18

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 626280 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		2.0	1.6
79-34-5	1,1,2,2-Tetrachloroethane	ND		2.0	0.42
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		2.0	0.62
79-00-5	1,1,2-Trichloroethane	ND		2.0	0.46
75-34-3	1,1-Dichloroethane	ND		2.0	0.76
75-35-4	1,1-Dichloroethene	ND		2.0	0.58
120-82-1	1,2,4-Trichlorobenzene	ND		2.0	0.82
96-12-8	1,2-Dibromo-3-Chloropropane	ND		2.0	0.78
106-93-4	1,2-Dibromoethane	ND		2.0	1.5
95-50-1	1,2-Dichlorobenzene	ND		2.0	1.6
107-06-2	1,2-Dichloroethane	ND		2.0	0.42
78-87-5	1,2-Dichloropropane	ND		2.0	1.4
541-73-1	1,3-Dichlorobenzene	ND		2.0	1.6
106-46-7	1,4-Dichlorobenzene	ND		2.0	1.7
78-93-3	2-Butanone (MEK)	ND		20	2.6
591-78-6	2-Hexanone	ND		10	2.5
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		10	4.2
67-64-1	Acetone	ND		20	6.0
71-43-2	Benzene	ND		2.0	0.82
75-27-4	Bromodichloromethane	ND		2.0	0.78
75-25-2	Bromoform	ND		2.0	0.52
74-83-9	Bromomethane	ND		2.0	1.4
75-15-0	Carbon disulfide	ND		2.0	0.38
56-23-5	Carbon tetrachloride	ND		2.0	0.54
108-90-7	Chlorobenzene	ND		2.0	1.5
75-00-3	Chloroethane	ND		2.0	0.64
67-66-3	Chloroform	ND		2.0	0.68
74-87-3	Chloromethane	ND		2.0	0.70
156-59-2	cis-1,2-Dichloroethene	ND		2.0	1.6
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.72
110-82-7	Cyclohexane	ND		2.0	0.36
124-48-1	Dibromochloromethane	ND		2.0	0.64
75-71-8	Dichlorodifluoromethane	ND		2.0	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197773-1

SDG No.:

Client Sample ID: MW-16 | Lab Sample ID: 480-197773-2

Matrix: Water | Lab File ID: D9586.D

Analysis Method: 8260C | Date Collected: 05/10/2022 10:00

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2022 04:18

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 626280 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
100-41-4	Ethylbenzene	ND		2.0	1.5
98-82-8	Isopropylbenzene	ND		2.0	1.6
79-20-9	Methyl acetate	ND		5.0	2.6
1634-04-4	Methyl tert-butyl ether	ND		2.0	0.32
108-87-2	Methylcyclohexane	ND		2.0	0.32
75-09-2	Methylene Chloride	ND		2.0	0.88
100-42-5	Styrene	ND		2.0	1.5
127-18-4	Tetrachloroethene	ND		2.0	0.72
108-88-3	Toluene	ND		2.0	1.0
156-60-5	trans-1,2-Dichloroethene	ND		2.0	1.8
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.74
79-01-6	Trichloroethene	ND		2.0	0.92
75-69-4	Trichlorofluoromethane	ND		2.0	1.8
75-01-4	Vinyl chloride	ND		2.0	1.8
1330-20-7	Xylenes, Total	ND		4.0	1.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		77-120
460-00-4	4-Bromofluorobenzene (Surr)	106		73-120
1868-53-7	Dibromofluoromethane (Surr)	101		75-123
2037-26-5	Toluene-d8 (Surr)	101		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197773-1

SDG No.:

Client Sample ID: MW-21 | Lab Sample ID: 480-197773-3

Matrix: Water | Lab File ID: D9587.D

Analysis Method: 8260C | Date Collected: 05/10/2022 11:15

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2022 04:40

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 626280 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		2.0	1.6
79-34-5	1,1,2,2-Tetrachloroethane	ND		2.0	0.42
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		2.0	0.62
79-00-5	1,1,2-Trichloroethane	ND		2.0	0.46
75-34-3	1,1-Dichloroethane	12		2.0	0.76
75-35-4	1,1-Dichloroethene	1.3	J	2.0	0.58
120-82-1	1,2,4-Trichlorobenzene	ND		2.0	0.82
96-12-8	1,2-Dibromo-3-Chloropropane	ND		2.0	0.78
106-93-4	1,2-Dibromoethane	ND		2.0	1.5
95-50-1	1,2-Dichlorobenzene	ND		2.0	1.6
107-06-2	1,2-Dichloroethane	ND		2.0	0.42
78-87-5	1,2-Dichloropropane	ND		2.0	1.4
541-73-1	1,3-Dichlorobenzene	ND		2.0	1.6
106-46-7	1,4-Dichlorobenzene	ND		2.0	1.7
78-93-3	2-Butanone (MEK)	ND		20	2.6
591-78-6	2-Hexanone	ND		10	2.5
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		10	4.2
67-64-1	Acetone	ND		20	6.0
71-43-2	Benzene	ND		2.0	0.82
75-27-4	Bromodichloromethane	ND		2.0	0.78
75-25-2	Bromoform	ND		2.0	0.52
74-83-9	Bromomethane	ND		2.0	1.4
75-15-0	Carbon disulfide	ND		2.0	0.38
56-23-5	Carbon tetrachloride	ND		2.0	0.54
108-90-7	Chlorobenzene	ND		2.0	1.5
75-00-3	Chloroethane	ND		2.0	0.64
67-66-3	Chloroform	ND		2.0	0.68
74-87-3	Chloromethane	ND		2.0	0.70
156-59-2	cis-1,2-Dichloroethene	60		2.0	1.6
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.72
110-82-7	Cyclohexane	ND		2.0	0.36
124-48-1	Dibromochloromethane	ND		2.0	0.64
75-71-8	Dichlorodifluoromethane	ND		2.0	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197773-1

SDG No.:

Client Sample ID: MW-21 | Lab Sample ID: 480-197773-3

Matrix: Water | Lab File ID: D9587.D

Analysis Method: 8260C | Date Collected: 05/10/2022 11:15

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2022 04:40

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 626280 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
100-41-4	Ethylbenzene	ND		2.0	1.5
98-82-8	Isopropylbenzene	ND		2.0	1.6
79-20-9	Methyl acetate	ND		5.0	2.6
1634-04-4	Methyl tert-butyl ether	ND		2.0	0.32
108-87-2	Methylcyclohexane	ND		2.0	0.32
75-09-2	Methylene Chloride	ND		2.0	0.88
100-42-5	Styrene	ND		2.0	1.5
127-18-4	Tetrachloroethene	ND		2.0	0.72
108-88-3	Toluene	ND		2.0	1.0
156-60-5	trans-1,2-Dichloroethene	ND		2.0	1.8
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.74
79-01-6	Trichloroethene	12		2.0	0.92
75-69-4	Trichlorofluoromethane	ND		2.0	1.8
75-01-4	Vinyl chloride	ND		2.0	1.8
1330-20-7	Xylenes, Total	ND		4.0	1.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		77-120
460-00-4	4-Bromofluorobenzene (Surr)	105		73-120
1868-53-7	Dibromofluoromethane (Surr)	102		75-123
2037-26-5	Toluene-d8 (Surr)	101		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197773-1

SDG No.:

Client Sample ID: FD-051022 | Lab Sample ID: 480-197773-4

Matrix: Water | Lab File ID: D9588.D

Analysis Method: 8260C | Date Collected: 05/10/2022 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2022 05:01

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 626280 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		2.0	1.6
79-34-5	1,1,2,2-Tetrachloroethane	ND		2.0	0.42
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		2.0	0.62
79-00-5	1,1,2-Trichloroethane	ND		2.0	0.46
75-34-3	1,1-Dichloroethane	13		2.0	0.76
75-35-4	1,1-Dichloroethene	1.3	J	2.0	0.58
120-82-1	1,2,4-Trichlorobenzene	ND		2.0	0.82
96-12-8	1,2-Dibromo-3-Chloropropane	ND		2.0	0.78
106-93-4	1,2-Dibromoethane	ND		2.0	1.5
95-50-1	1,2-Dichlorobenzene	ND		2.0	1.6
107-06-2	1,2-Dichloroethane	ND		2.0	0.42
78-87-5	1,2-Dichloropropane	ND		2.0	1.4
541-73-1	1,3-Dichlorobenzene	ND		2.0	1.6
106-46-7	1,4-Dichlorobenzene	ND		2.0	1.7
78-93-3	2-Butanone (MEK)	ND		20	2.6
591-78-6	2-Hexanone	ND		10	2.5
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		10	4.2
67-64-1	Acetone	ND		20	6.0
71-43-2	Benzene	ND		2.0	0.82
75-27-4	Bromodichloromethane	ND		2.0	0.78
75-25-2	Bromoform	ND		2.0	0.52
74-83-9	Bromomethane	ND		2.0	1.4
75-15-0	Carbon disulfide	ND		2.0	0.38
56-23-5	Carbon tetrachloride	ND		2.0	0.54
108-90-7	Chlorobenzene	ND		2.0	1.5
75-00-3	Chloroethane	ND		2.0	0.64
67-66-3	Chloroform	ND		2.0	0.68
74-87-3	Chloromethane	ND		2.0	0.70
156-59-2	cis-1,2-Dichloroethene	65		2.0	1.6
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.72
110-82-7	Cyclohexane	ND		2.0	0.36
124-48-1	Dibromochloromethane	ND		2.0	0.64
75-71-8	Dichlorodifluoromethane	ND		2.0	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197773-1

SDG No.:

Client Sample ID: FD-051022 | Lab Sample ID: 480-197773-4

Matrix: Water | Lab File ID: D9588.D

Analysis Method: 8260C | Date Collected: 05/10/2022 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2022 05:01

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 626280 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
100-41-4	Ethylbenzene	ND		2.0	1.5
98-82-8	Isopropylbenzene	ND		2.0	1.6
79-20-9	Methyl acetate	ND		5.0	2.6
1634-04-4	Methyl tert-butyl ether	ND		2.0	0.32
108-87-2	Methylcyclohexane	ND		2.0	0.32
75-09-2	Methylene Chloride	ND		2.0	0.88
100-42-5	Styrene	ND		2.0	1.5
127-18-4	Tetrachloroethene	ND		2.0	0.72
108-88-3	Toluene	ND		2.0	1.0
156-60-5	trans-1,2-Dichloroethene	ND		2.0	1.8
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.74
79-01-6	Trichloroethene	13		2.0	0.92
75-69-4	Trichlorofluoromethane	ND		2.0	1.8
75-01-4	Vinyl chloride	ND		2.0	1.8
1330-20-7	Xylenes, Total	ND		4.0	1.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		77-120
460-00-4	4-Bromofluorobenzene (Surr)	105		73-120
1868-53-7	Dibromofluoromethane (Surr)	103		75-123
2037-26-5	Toluene-d8 (Surr)	102		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197773-1

SDG No.:

Client Sample ID: MW-17 | Lab Sample ID: 480-197773-5

Matrix: Water | Lab File ID: D9589.D

Analysis Method: 8260C | Date Collected: 05/10/2022 12:20

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2022 05:23

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 626280 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		2.0	1.6
79-34-5	1,1,2,2-Tetrachloroethane	ND		2.0	0.42
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		2.0	0.62
79-00-5	1,1,2-Trichloroethane	ND		2.0	0.46
75-34-3	1,1-Dichloroethane	ND		2.0	0.76
75-35-4	1,1-Dichloroethene	ND		2.0	0.58
120-82-1	1,2,4-Trichlorobenzene	ND		2.0	0.82
96-12-8	1,2-Dibromo-3-Chloropropane	ND		2.0	0.78
106-93-4	1,2-Dibromoethane	ND		2.0	1.5
95-50-1	1,2-Dichlorobenzene	ND		2.0	1.6
107-06-2	1,2-Dichloroethane	ND		2.0	0.42
78-87-5	1,2-Dichloropropane	ND		2.0	1.4
541-73-1	1,3-Dichlorobenzene	ND		2.0	1.6
106-46-7	1,4-Dichlorobenzene	ND		2.0	1.7
78-93-3	2-Butanone (MEK)	ND		20	2.6
591-78-6	2-Hexanone	ND		10	2.5
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		10	4.2
67-64-1	Acetone	ND		20	6.0
71-43-2	Benzene	ND		2.0	0.82
75-27-4	Bromodichloromethane	ND		2.0	0.78
75-25-2	Bromoform	ND		2.0	0.52
74-83-9	Bromomethane	ND		2.0	1.4
75-15-0	Carbon disulfide	ND		2.0	0.38
56-23-5	Carbon tetrachloride	ND		2.0	0.54
108-90-7	Chlorobenzene	ND		2.0	1.5
75-00-3	Chloroethane	ND		2.0	0.64
67-66-3	Chloroform	ND		2.0	0.68
74-87-3	Chloromethane	ND		2.0	0.70
156-59-2	cis-1,2-Dichloroethene	ND		2.0	1.6
10061-01-5	cis-1,3-Dichloropropene	ND		2.0	0.72
110-82-7	Cyclohexane	ND		2.0	0.36
124-48-1	Dibromochloromethane	ND		2.0	0.64
75-71-8	Dichlorodifluoromethane	ND		2.0	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197773-1

SDG No.:

Client Sample ID: MW-17 | Lab Sample ID: 480-197773-5

Matrix: Water | Lab File ID: D9589.D

Analysis Method: 8260C | Date Collected: 05/10/2022 12:20

Sample wt/vol: 5(mL) | Date Analyzed: 05/17/2022 05:23

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 626280 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
100-41-4	Ethylbenzene	ND		2.0	1.5
98-82-8	Isopropylbenzene	ND		2.0	1.6
79-20-9	Methyl acetate	ND		5.0	2.6
1634-04-4	Methyl tert-butyl ether	ND		2.0	0.32
108-87-2	Methylcyclohexane	ND		2.0	0.32
75-09-2	Methylene Chloride	ND		2.0	0.88
100-42-5	Styrene	ND		2.0	1.5
127-18-4	Tetrachloroethene	ND		2.0	0.72
108-88-3	Toluene	ND		2.0	1.0
156-60-5	trans-1,2-Dichloroethene	ND		2.0	1.8
10061-02-6	trans-1,3-Dichloropropene	ND		2.0	0.74
79-01-6	Trichloroethene	ND		2.0	0.92
75-69-4	Trichlorofluoromethane	ND		2.0	1.8
75-01-4	Vinyl chloride	ND		2.0	1.8
1330-20-7	Xylenes, Total	ND		4.0	1.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		77-120
460-00-4	4-Bromofluorobenzene (Surr)	104		73-120
1868-53-7	Dibromofluoromethane (Surr)	102		75-123
2037-26-5	Toluene-d8 (Surr)	102		80-120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197773-1

SDG No.:

Client Sample ID: TB-051022 | Lab Sample ID: 480-197773-6

Matrix: Water | Lab File ID: T9714.D

Analysis Method: 8260C | Date Collected: 05/10/2022 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 05/19/2022 14:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 626760 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	ND		1.0	0.82
79-34-5	1,1,2,2-Tetrachloroethane	ND		1.0	0.21
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ND		1.0	0.31
79-00-5	1,1,2-Trichloroethane	ND		1.0	0.23
75-34-3	1,1-Dichloroethane	ND		1.0	0.38
75-35-4	1,1-Dichloroethene	ND		1.0	0.29
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	0.41
96-12-8	1,2-Dibromo-3-Chloropropane	ND		1.0	0.39
106-93-4	1,2-Dibromoethane	ND		1.0	0.73
95-50-1	1,2-Dichlorobenzene	ND		1.0	0.79
107-06-2	1,2-Dichloroethane	ND		1.0	0.21
78-87-5	1,2-Dichloropropane	ND		1.0	0.72
541-73-1	1,3-Dichlorobenzene	ND		1.0	0.78
106-46-7	1,4-Dichlorobenzene	ND		1.0	0.84
78-93-3	2-Butanone (MEK)	ND		10	1.3
591-78-6	2-Hexanone	ND		5.0	1.2
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		5.0	2.1
67-64-1	Acetone	ND		10	3.0
71-43-2	Benzene	ND		1.0	0.41
75-27-4	Bromodichloromethane	ND		1.0	0.39
75-25-2	Bromoform	ND		1.0	0.26
74-83-9	Bromomethane	ND		1.0	0.69
75-15-0	Carbon disulfide	ND		1.0	0.19
56-23-5	Carbon tetrachloride	ND		1.0	0.27
108-90-7	Chlorobenzene	ND		1.0	0.75
75-00-3	Chloroethane	ND		1.0	0.32
67-66-3	Chloroform	ND		1.0	0.34
74-87-3	Chloromethane	ND		1.0	0.35
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.81
10061-01-5	cis-1,3-Dichloropropene	ND		1.0	0.36
110-82-7	Cyclohexane	ND		1.0	0.18
124-48-1	Dibromochloromethane	ND		1.0	0.32
75-71-8	Dichlorodifluoromethane	ND		1.0	0.68

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197773-1

SDG No.:

Client Sample ID: TB-051022 | Lab Sample ID: 480-197773-6

Matrix: Water | Lab File ID: T9714.D

Analysis Method: 8260C | Date Collected: 05/10/2022 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 05/19/2022 14:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: ZB-624 (20) ID: 0.18(mm)

Purge Volume: 5.0(mL) | Heated Purge: (Y/N) N pH:

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 626760 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
100-41-4	Ethylbenzene	ND		1.0	0.74
98-82-8	Isopropylbenzene	ND		1.0	0.79
79-20-9	Methyl acetate	ND		2.5	1.3
1634-04-4	Methyl tert-butyl ether	ND		1.0	0.16
108-87-2	Methylcyclohexane	ND		1.0	0.16
75-09-2	Methylene Chloride	ND		1.0	0.44
100-42-5	Styrene	ND		1.0	0.73
127-18-4	Tetrachloroethene	ND		1.0	0.36
108-88-3	Toluene	ND		1.0	0.51
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.90
10061-02-6	trans-1,3-Dichloropropene	ND		1.0	0.37
79-01-6	Trichloroethene	ND		1.0	0.46
75-69-4	Trichlorofluoromethane	ND		1.0	0.88
75-01-4	Vinyl chloride	ND		1.0	0.90
1330-20-7	Xylenes, Total	ND		2.0	0.66

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		77-120
460-00-4	4-Bromofluorobenzene (Surr)	100		73-120
1868-53-7	Dibromofluoromethane (Surr)	115		75-123
2037-26-5	Toluene-d8 (Surr)	98		80-120

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197773-1

SDG No.:

Client Sample ID: MW-21 | Lab Sample ID: 480-197773-3

Matrix: Water | Lab File ID: pe3_070_268.D

Analysis Method: RSK-175 | Date Collected: 05/10/2022 11:15

Sample wt/vol: 17(mL) | Date Analyzed: 05/18/2022 10:53

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: Alumina ID: 0.53(mm)

Purge Volume: | Heated Purge: (Y/N) N pH: 2.0

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 626528 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-82-8	Methane	280		4.0	1.0

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Buffalo | Job No.: 480-197773-1

SDG No.:

Client Sample ID: FD-051022 | Lab Sample ID: 480-197773-4

Matrix: Water | Lab File ID: pe3_070_269.D

Analysis Method: RSK-175 | Date Collected: 05/10/2022 00:00

Sample wt/vol: 17(mL) | Date Analyzed: 05/18/2022 11:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: Alumina ID: 0.53(mm)

Purge Volume: | Heated Purge: (Y/N) N pH: 2.0

% Moisture: % Solids: | Level: (low/med) Low

Analysis Batch No.: 626528 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-82-8	Methane	240		4.0	1.0

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MW-19R
Lab Sample ID: 480-197773-1
Lab Name: Eurofins Buffalo
Job No.: 480-197773-1
SDG ID.:
Matrix: Water
Date Sampled: 05/10/2022 09:10
Reporting Basis: WET
Date Received: 05/10/2022 15:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	1.4	0.20	0.060	mg/L			1	6010C
7440-36-0	Antimony	ND	0.020	0.0068	mg/L			1	6010C
7440-38-2	Arsenic	ND	0.015	0.0056	mg/L			1	6010C
7440-39-3	Barium	0.11	0.0020	0.00070	mg/L			1	6010C
7440-41-7	Beryllium	ND	0.0020	0.00030	mg/L			1	6010C
7440-43-9	Cadmium	ND	0.0020	0.00050	mg/L			1	6010C
7440-70-2	Calcium	111	0.50	0.10	mg/L			1	6010C
7440-47-3	Chromium	0.0015	0.0040	0.0010	mg/L	J		1	6010C
7440-48-4	Cobalt	0.0019	0.0040	0.00063	mg/L	J		1	6010C
7440-50-8	Copper	ND	0.010	0.010	mg/L	J U		1	6010C
7439-89-6	Iron	1.5	0.050	0.019	mg/L			1	6010C
7439-92-1	Lead	ND	0.010	0.0030	mg/L			1	6010C
7439-95-4	Magnesium	19.4	0.20	0.043	mg/L			1	6010C
7439-96-5	Manganese	5.5	0.0030	0.00040	mg/L			1	6010C
7440-02-0	Nickel	0.0032	0.010	0.0013	mg/L	J		1	6010C
7440-09-7	Potassium	7.2	0.50	0.10	mg/L			1	6010C
7782-49-2	Selenium	ND	0.025	0.0087	mg/L			1	6010C
7440-22-4	Silver	ND	0.0060	0.0017	mg/L			1	6010C
7440-23-5	Sodium	157	1.0	0.32	mg/L			1	6010C
7440-28-0	Thallium	ND	0.020	0.010	mg/L			1	6010C
7440-62-2	Vanadium	0.0025	0.0050	0.0015	mg/L	J		1	6010C
7440-66-6	Zinc	0.0061	0.010	0.0015	mg/L	J		1	6010C
7439-97-6	Mercury	ND	0.00020	0.000043	mg/L			1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MW-16 | Lab Sample ID: 480-197773-2

Lab Name: Eurofins Buffalo | Job No.: 480-197773-1

SDG ID.:

Matrix: Water | Date Sampled: 05/10/2022 10:00

Reporting Basis: WET | Date Received: 05/10/2022 15:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	ND	0.20	0.060	mg/L			1	6010C
7440-36-0	Antimony	ND	0.020	0.0068	mg/L			1	6010C
7440-38-2	Arsenic	0.022	0.015	0.0056	mg/L			1	6010C
7440-39-3	Barium	1.3	0.0020	0.00070	mg/L			1	6010C
7440-41-7	Beryllium	ND	0.0020	0.00030	mg/L			1	6010C
7440-43-9	Cadmium	ND	0.0020	0.00050	mg/L			1	6010C
7440-70-2	Calcium	230	0.50	0.10	mg/L			1	6010C
7440-47-3	Chromium	ND	0.0040	0.0010	mg/L			1	6010C
7440-48-4	Cobalt	0.14	0.0040	0.00063	mg/L			1	6010C
7440-50-8	Copper	ND	0.020	0.020	mg/L	U		1	6010C
7439-89-6	Iron	30.1	0.050	0.019	mg/L			1	6010C
7439-92-1	Lead	0.0054	0.010	0.0030	mg/L	J		1	6010C
7439-95-4	Magnesium	40.6	0.20	0.043	mg/L			1	6010C
7439-96-5	Manganese	19.6	0.0030	0.00040	mg/L			1	6010C
7440-02-0	Nickel	0.015	0.010	0.0013	mg/L			1	6010C
7440-09-7	Potassium	7.8	0.50	0.10	mg/L			1	6010C
7782-49-2	Selenium	ND	0.025	0.0087	mg/L			1	6010C
7440-22-4	Silver	ND	0.0060	0.0017	mg/L			1	6010C
7440-23-5	Sodium	406	1.0	0.32	mg/L			1	6010C
7440-28-0	Thallium	ND	0.020	0.010	mg/L			1	6010C
7440-62-2	Vanadium	0.0015	0.0050	0.0015	mg/L	J		1	6010C
7440-66-6	Zinc	0.040	0.010	0.0015	mg/L			1	6010C
7439-97-6	Mercury	ND	0.00020	0.000043	mg/L			1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MW-21 | Lab Sample ID: 480-197773-3

Lab Name: Eurofins Buffalo | Job No.: 480-197773-1

SDG ID.:

Matrix: Water | Date Sampled: 05/10/2022 11:15

Reporting Basis: WET | Date Received: 05/10/2022 15:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	0.12	0.20	0.060	mg/L	J		1	6010C
7440-36-0	Antimony	ND	0.020	0.0068	mg/L			1	6010C
7440-38-2	Arsenic	ND	0.015	0.0056	mg/L			1	6010C
7440-39-3	Barium	1.3	0.0020	0.00070	mg/L			1	6010C
7440-41-7	Beryllium	ND	0.0020	0.00030	mg/L			1	6010C
7440-43-9	Cadmium	0.00061	0.0020	0.00050	mg/L	J		1	6010C
7440-70-2	Calcium	402	0.50	0.10	mg/L			1	6010C
7440-47-3	Chromium	0.0013	0.0040	0.0010	mg/L	J		1	6010C
7440-48-4	Cobalt	0.0035	0.0040	0.00063	mg/L	J		1	6010C
7440-50-8	Copper	ND	0.010	0.010	mg/L	U		1	6010C
7439-89-6	Iron	0.22	0.050	0.019	mg/L			1	6010C
7439-92-1	Lead	ND	0.010	0.0030	mg/L			1	6010C
7439-95-4	Magnesium	67.8	0.20	0.043	mg/L			1	6010C
7439-96-5	Manganese	4.8	0.0030	0.00040	mg/L			1	6010C
7440-02-0	Nickel	0.0033	0.010	0.0013	mg/L	J		1	6010C
7440-09-7	Potassium	5.7	0.50	0.10	mg/L			1	6010C
7782-49-2	Selenium	ND	0.025	0.0087	mg/L			1	6010C
7440-22-4	Silver	ND	0.0060	0.0017	mg/L			1	6010C
7440-23-5	Sodium	1200	2.0	0.65	mg/L			2	6010C
7440-28-0	Thallium	ND	0.020	0.010	mg/L			1	6010C
7440-62-2	Vanadium	ND	0.0050	0.0015	mg/L			1	6010C
7440-66-6	Zinc	0.0040	0.010	0.0015	mg/L	J		1	6010C
7439-97-6	Mercury	ND	0.00020	0.000043	mg/L			1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MW-21 Lab Sample ID: 480-197773-3

Lab Name: Eurofins Buffalo Job No.: 480-197773-1

SDG ID.:

Matrix: Water Date Sampled: 05/10/2022 11:15

Reporting Basis: WET Date Received: 05/10/2022 15:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron, Dissolved	0.16	0.050	0.019	mg/L			1	6010C

FD OF MW-21

Client Sample ID: FD-051022 Lab Sample ID: 480-197773-4

Lab Name: Eurofins Buffalo Job No.: 480-197773-1

SDG ID.:

Matrix: Water Date Sampled: 05/10/2022 00:00

Reporting Basis: WET Date Received: 05/10/2022 15:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	0.072	0.20	0.060	mg/L	J		1	6010C
7440-36-0	Antimony	ND	0.020	0.0068	mg/L			1	6010C
7440-38-2	Arsenic	ND	0.015	0.0056	mg/L			1	6010C
7440-39-3	Barium	1.3	0.0020	0.00070	mg/L			1	6010C
7440-41-7	Beryllium	ND	0.0020	0.00030	mg/L			1	6010C
7440-43-9	Cadmium	0.00057	0.0020	0.00050	mg/L	J		1	6010C
7440-70-2	Calcium	395	0.50	0.10	mg/L			1	6010C
7440-47-3	Chromium	0.0013	0.0040	0.0010	mg/L	J		1	6010C
7440-48-4	Cobalt	0.0034	0.0040	0.00063	mg/L	J		1	6010C
7440-50-8	Copper	ND	0.010	0.010	mg/L	U		1	6010C
7439-89-6	Iron	0.21	0.050	0.019	mg/L			1	6010C
7439-92-1	Lead	ND	0.010	0.0030	mg/L			1	6010C
7439-95-4	Magnesium	66.7	0.20	0.043	mg/L			1	6010C
7439-96-5	Manganese	4.7	0.0030	0.00040	mg/L			1	6010C
7440-02-0	Nickel	0.0031	0.010	0.0013	mg/L	J		1	6010C
7440-09-7	Potassium	5.6	0.50	0.10	mg/L			1	6010C
7782-49-2	Selenium	ND	0.025	0.0087	mg/L			1	6010C
7440-22-4	Silver	ND	0.0060	0.0017	mg/L			1	6010C
7440-23-5	Sodium	1190	2.0	0.65	mg/L			2	6010C
7440-28-0	Thallium	ND	0.020	0.010	mg/L			1	6010C
7440-62-2	Vanadium	ND	0.0050	0.0015	mg/L			1	6010C
7440-66-6	Zinc	0.0029	0.010	0.0015	mg/L	J		1	6010C
7439-97-6	Mercury	ND	0.00020	0.000043	mg/L			1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

FD OF MW-21

Client Sample ID: FD-051022 Lab Sample ID: 480-197773-4

Lab Name: Eurofins Buffalo Job No.: 480-197773-1

SDG ID.:

Matrix: Water Date Sampled: 05/10/2022 00:00

Reporting Basis: WET Date Received: 05/10/2022 15:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-89-6	Iron, Dissolved	0.16	0.050	0.019	mg/L			1	6010C

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MW-17 | Lab Sample ID: 480-197773-5

Lab Name: Eurofins Buffalo | Job No.: 480-197773-1

SDG ID.:

Matrix: Water | Date Sampled: 05/10/2022 12:20

Reporting Basis: WET | Date Received: 05/10/2022 15:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	0.085	0.20	0.060	mg/L	J		1	6010C
7440-36-0	Antimony	ND	0.020	0.0068	mg/L			1	6010C
7440-38-2	Arsenic	0.0093	0.015	0.0056	mg/L	J		1	6010C
7440-39-3	Barium	0.20	0.0020	0.00070	mg/L			1	6010C
7440-41-7	Beryllium	ND	0.0020	0.00030	mg/L			1	6010C
7440-43-9	Cadmium	ND	0.0020	0.00050	mg/L			1	6010C
7440-70-2	Calcium	210	0.50	0.10	mg/L			1	6010C
7440-47-3	Chromium	ND	0.0040	0.0010	mg/L			1	6010C
7440-48-4	Cobalt	0.0012	0.0040	0.00063	mg/L	J		1	6010C
7440-50-8	Copper	ND	0.010	0.010	mg/L	U		1	6010C
7439-89-6	Iron	20.8	0.050	0.019	mg/L			1	6010C
7439-92-1	Lead	0.0042	0.010	0.0030	mg/L	J		1	6010C
7439-95-4	Magnesium	38.2	0.20	0.043	mg/L			1	6010C
7439-96-5	Manganese	2.5	0.0030	0.00040	mg/L			1	6010C
7440-02-0	Nickel	ND	0.010	0.0013	mg/L			1	6010C
7440-09-7	Potassium	9.3	0.50	0.10	mg/L			1	6010C
7782-49-2	Selenium	ND	0.025	0.0087	mg/L			1	6010C
7440-22-4	Silver	ND	0.0060	0.0017	mg/L			1	6010C
7440-23-5	Sodium	122	1.0	0.32	mg/L			1	6010C
7440-28-0	Thallium	ND	0.020	0.010	mg/L			1	6010C
7440-62-2	Vanadium	0.0017	0.0050	0.0015	mg/L	J		1	6010C
7440-66-6	Zinc	0.0031	0.010	0.0015	mg/L	J		1	6010C
7439-97-6	Mercury	ND	0.00020	0.000043	mg/L			1	7470A

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MW-21 | Lab Sample ID: 480-197773-3

Lab Name: Eurofins Buffalo | Job No.: 480-197773-1

SDG ID.:

Matrix: Water | Date Sampled: 05/10/2022 11:15

Reporting Basis: WET | Date Received: 05/10/2022 15:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
16887-00-6	Chloride	2900	10.0	5.6	mg/L			20	300.0
14808-79-8	Sulfate	77.3	40.0	7.0	mg/L			20	300.0
14797-55-8	Nitrate	ND	0.050	0.020	mg/L			1	Nitrate by calc
	Alkalinity, Total	188	5.0	0.79	mg/L			1	SM 2320B

FD OF MW-21

Client Sample ID: FD-051022 Lab Sample ID: 480-197773-4

Lab Name: Eurofins Buffalo Job No.: 480-197773-1

SDG ID.:

Matrix: Water Date Sampled: 05/10/2022 00:00

Reporting Basis: WET Date Received: 05/10/2022 15:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
16887-00-6	Chloride	2830	10.0	5.6	mg/L			20	300.0
14808-79-8	Sulfate	76.4	40.0	7.0	mg/L			20	300.0
14797-55-8	Nitrate	ND	0.050	0.020	mg/L			1	Nitrate by calc
	Alkalinity, Total	186	5.0	0.79	mg/L			1	SM 2320B

ATTACHMENT B

SUPPORT DOCUMENTATION

Eurofins Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Fairbanks / Emily Au	Lab PM: Schove, John R	Carrier Tracking No(s):	COC No: 480-173200-37435.1
Client Contact: Ms. Ann Marie Kropovitch	Phone: 716-531-3312	E-Mail: John.Schove@et.eurofinsus.com	State of Origin:	Page: Page 1 of 2
Company: AECOM	PWSID:			Job #:
Address: One John James Audubon Parkway Suite 210	Due Date Requested:			
City: Amherst	TAT Requested (days): STD			
State, Zip: NY, 14228	Compliance Project: Δ Yes Δ No			
Phone: 716-923-1137(Tel)	PO #: 60636810			
Email: ann.marie.kropovitch@aecom.com	WO #: Ann.Marie.Kropovitch@aecom.com			
Project Name: Former Bernzomatic Site - Medina, NY	Project #: 48015562			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3

480-197248 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260C - TCL VOCs	6010C, 7471B	6010C, 7470A	8260C - TCL VOCs	Total Numb	Special Instructions/Note:
Preservation Code:							N	N	D	A		
PDI ~~PDI~~-1_0405	4/27/22	0940	G	Solid			4	1			5	
PDI ~~PDI~~-1_GW	4/27/22	1015	G	~~WG~~ Solid						3	3	
PDI-2_0203	4/27/22	1105	G	Solid			4	1			5	
PDI-6_GW	4/27/22	1108	G	~~WG~~ Solid						3	3	
PDI-7_0203	4/27/22	1209	G	Solid			4	1			5	
PDI-2_GW	4/27/22	1220	G	~~WG~~ Solid						3	3	
PDI-7_GW	4/27/22	1315	G	~~WG~~ Solid						3	3	
PDI-3_0203	4/27/22	1345	G	Solid			4	1			5	
PDI-8_0405	4/27/22	1409	G	Solid			4	1			5	
PDI-3_GW	4/27/22	1430	G	~~WG~~ Solid						3	3	
PDI-6_0304	4/27/22	1042	G	Solid			4	1			5	

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

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

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

Special Instructions/QC Requirements:

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	4/27/22 1640	AECOM			
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by: [signature]	Date/Time: 4/27/22 1640	Company

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

Cooler Temperature(s) °C and Other Remarks: 5.6 #1 ICE

Ver: 06/08/2021

Eurofins Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Emily Au / P. Fairbanks	Lab PM: Schove, John R	Carrier Tracking No(s):	COC No: 480-173200-37435.2
Client Contact: Ms. Ann Marie Kropovitch	Phone: 716-531-3312	E-Mail: John.Schove@et.eurofinsus.com	State of Origin:	Page: Page 2 of 2
Company: AECOM	PWSID:			Job #:

Address: One John James Audubon Parkway Suite 210	Due Date Requested:	
City: Amherst	TAT Requested (days): STANDARD	
State, Zip: NY, 14228	Compliance Project: Δ Yes Δ No	
Phone: 716-923-1137(Tel)	PO #: 60636810	
Email: ann.marie.kropovitch@aecom.com	WO #: Ann.Marie.Kropovitch@aecom.com	
Project Name: Former Bernzomatic Site - Medina, NY	Project #: 48015562	
Site:	SSOW#:	

Analysis Requested

Preservation Codes:

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

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260C - TCL VOCs	6010C, 7471B	6010C, 7470A	8260C - TCL VOCs	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	D	A		
PDI-8-GW	4/27/22	1510	G	~~Solid~~ H2O	N	N				3	3	
TRIPBLANK-042722	4/27/22	—	TRIP	Solid	N	N				1	1	
				Solid								
				Solid								
				Solid								
				Water								

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

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

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

Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:	
Relinquished by: Emily Au	Date/Time: 4/27/22 1640	Company: AECOM	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 4/27/22 1640	Company

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

Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

05/06/2022

Job Narrative
480-197248-1

Comments
No additional comments.

Receipt
The samples were received on 4/27/2022 4:40 PM. 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 5.6º C.

GC/MS VOA
Method 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: PDI-3_GW (480-197248-10). Elevated reporting limits (RLs) are provided.

Method 8260C: The following sample(s) was collected in a properly preserved vial; however, the pH was outside the required criteria when verified by the laboratory. The samples were analyzed within the 7-day holding time specified for unpreserved samples: PDI-1_GW (480-197248-2), PDI-6_GW (480-197248-4), PDI-7_GW (480-197248-7), PDI-3_GW (480-197248-10) and PDI-8_GW (480-197248-12). pH is 7.

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

Metals
Method 6010C: The continuing calibration blank (CCB 480-624702/28) contained Total Iron above the reporting limit (RL). All reported samples PDI-1_0405 (480-197248-1), PDI-2_0203 (480-197248-3), PDI-7_0203 (480-197248-5), PDI-3_0203 (480-197248-8), PDI-8_0405 (480-197248-9), PDI-6_0304 (480-197248-11), (LCSSRM 480-624111/2-A) and (MB 480-624111/1-A) associated with this CCB were either ND for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCB; therefore, re-analysis of samples was not performed.

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

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Buffalo Job No.: 480-197248-1

SDG No.:

Concentration Units: mg/L

Analyte	RL	ICB 480-624702/7 05/04/2022 09:46		CCB 480-624702/20 05/04/2022 20:54		CCB 480-624702/28 05/04/2022 21:40		CCB 480-624702/40 05/04/2022 22:26	
		Found	C	Found	C	Found	C	Found	C
Aluminum	0.20	ND		ND		0.0927	J	ND	
Antimony	0.020	ND		ND		ND		ND	
Arsenic	0.015	ND		ND		ND		ND	
Barium	0.0020	ND		ND		ND		ND	
Beryllium	0.0020	ND		ND		0.000400	J	ND	
Cadmium	0.0020	ND		ND		ND		ND	
Calcium	0.50	ND		ND		0.117	J	ND	
Chromium	0.0040	ND		ND		ND		ND	
Cobalt	0.0040	ND		ND		ND		ND	
Copper	0.010	ND		ND		ND		ND	
Iron	0.050	ND		ND		0.0691		ND	
Lead	0.010	ND		ND		ND		ND	
Magnesium	0.20	ND		ND		ND		ND	
Manganese	0.0030	ND		ND		0.00212	J	ND	
Nickel	0.010	ND		ND		ND		ND	
Potassium	0.50	ND		ND		ND		ND	
Selenium	0.025	ND		ND		ND		ND	
Silver	0.0060	ND		ND		ND		ND	
Sodium	1.0	ND		ND		ND		ND	
Thallium	0.020	ND		ND		ND		ND	
Vanadium	0.0050	ND		ND		ND		ND	
Zinc	0.010	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS

Lab Name: Eurofins Buffalo Job No.: 480-197248-1

SDG No.:

Concentration Units: mg/Kg Lab Sample ID: MB 480-624111/1-A

Instrument Code: ICAP2 Batch No.: 624702

CAS No.	Analyte	Concentration	C	Q	Method
7429-90-5	Aluminum	ND			6010C
7440-36-0	Antimony	ND			6010C
7440-38-2	Arsenic	ND			6010C
7440-39-3	Barium	ND			6010C
7440-41-7	Beryllium	ND			6010C
7440-43-9	Cadmium	ND			6010C
7440-70-2	Calcium	4.84	J		6010C
7440-47-3	Chromium	ND			6010C
7440-48-4	Cobalt	ND			6010C
7440-50-8	Copper	ND			6010C
7439-89-6	Iron	ND			6010C
7439-92-1	Lead	ND			6010C
7439-95-4	Magnesium	ND			6010C
7439-96-5	Manganese	0.105	J		6010C
7440-02-0	Nickel	ND			6010C
7440-09-7	Potassium	ND			6010C
7782-49-2	Selenium	ND			6010C
7440-22-4	Silver	ND			6010C
7440-23-5	Sodium	ND			6010C
7440-28-0	Thallium	ND			6010C
7440-62-2	Vanadium	ND			6010C
7440-66-6	Zinc	ND			6010C

Eurofins Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: P. Fairbanks	Lab PM: Schove, John R	Carrier Tracking No(s):	COC No: 480-173200-37435.2
Client Contact: Ms. Ann Marie Kropovitch	Phone:	E-Mail: John.Schove@et eurofinsus.com	State of Origin:	Page: Page 1 of 2
Company: AECOM	PWSID:	Analysis Requested		Job #:
Address: One John James Audubon Parkway Suite 210	Due Date Requested:			Preservation Codes: A - HCL; M - Hexane; ne; NaO2; O4S; SO3; S2O3; O4; Dodecahydrate; one; A; 4-5; Z - other (specify)
City: Amherst	TAT Requested (days): STD			
State, Zip: NY, 14228	Compliance Project: Δ Yes Δ No			
Phone: 716-923-1137(Tel)	PO #: 60636810			
Email: ann.marie.kropovitch@aecom.com	WO #: Ann.Marie.Kropovitch@aecom.com			
Project Name: Former Bernzomatic Site - Medina, NY	Project #: 48015562			
Site:	SSOW#:			Other:

480-197309 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	8260C - TCL VOCs	6010C, 7471B	6010C, 7470A	8260C - TCL VOCs	Total Number of conta	Special Instructions/Note:
			Preservation Code:			N	N	D	A		
PDI-4_0304	4/28/22	0910	G	Solid		4	1			5	
PDI-4_GW	4/28/22	0926	G	~~Solid~~ GW					3	3	
PDI-9_0203	4/28/22	1009	G	Solid		4	1			5	
PDI-9_GW	4/28/22	1030	G	~~Solid~~ GW					3	3	
PDI-10_0304	4/28/22	1051	G	Solid		4	1			5	
DUP_042822	4/28/22	1025	G	~~Solid~~ Water		4	1			5	
PDI-10_GW	4/28/22	1130	G	GW					3	3	
PDI-5_0405	4/28/22	1157	G	Solid	X	12	3			15	MS/MSD
PDI-11_0304	4/28/22	1311	G	Solid		4	1			5	
PDI-11_GW	4/28/22	1340	G	GW					3	3	
PDI-12_0405	4/28/22	1421	G	Solid		4	1			5	

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

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

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

Special Instructions/QC Requirements:

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

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	[signature]	4/28/22 1640	AECOM	[signature]	4/28/22 1640	ETA
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Cooler Temperature(s) °C and Other Remarks: 3.5

Ver: 06/08/2021

05/13/2022

Eurofins Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: P. Fairbanks	Lab PM: Schove, John R	Carrier Tracking No(s):	COC No: 480-173200-37435.2
Client Contact: Ms. Ann Marie Kropovitch	Phone:	E-Mail: John.Schove@et.eurofinsus.com	State of Origin:	Page: Page 2 of 2
Company: AECOM	PWSID:	Analysis Requested		Job #:
Address: One John James Audubon Parkway Suite 210	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
City: Amherst	TAT Requested (days): STD			
State, Zip: NY, 14228	Compliance Project: Δ Yes Δ No			
Phone: 716-923-1137(Tel)	PO #: 60636810			
Email: ann.marie.kropovitch@aecom.com	WO #: Ann.Marie.Kropovitch@aecom.com			
Project Name: Former Bernzomatic Site - Medina, NY	Project #: 48015562			
Site:	SSOW#:			Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	8260C - TCL VOCs	6010C, 7471B	6010C, 7470A	8260C - TCL VOCs	Total Number of containers	Special Instructions/Note:
			Preservation Code:			N	N	D	A		
PDI-12_GW	4/28/22	1455	G	~~Solid~~ W					3	3	
TB-042822	4/28/22	1513	G	~~Solid~~ W					2	2	
RB-042822	4/28/22	1515	G	~~Solid~~ W				1	3	4	
PDI-5_GW	4/28/22	1230	G	Solid					3	3	
				Solid							
				Water							

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

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

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

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date: 4	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1		4/28/22 1640	AECOM		4/28/22 1640	
2	Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
3	Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Ver: 06/08/2021

05/13/2022

Job Narrative
480-197309-1

Comments
No additional comments.

Receipt
The samples were received on 4/28/2022 4:40 PM. 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 3.5º C.

GC/MS VOA
Method 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: PDI-4_GW (480-197309-2), PDI-9_GW (480-197309-4), PDI-11_GW (480-197309-10) and PDI-12_GW (480-197309-12). Elevated reporting limits (RLs) are provided.

Method 8260C: Surrogate recovery in the continuing calibration verification (CCV) was outside the 20%D recovery but within house limits. The following samples are impacted: PDI-4_GW (480-197309-2), PDI-9_GW (480-197309-4), PDI-11_GW (480-197309-10), PDI-12_GW (480-197309-12), TB_042822 (480-197309-13), RB_042822 (480-197309-14) and PDI-5_GW (480-197309-15).

Method 8260C: The following sample(s) was collected in a properly preserved vial; however, the pH was outside the required criteria when verified by the laboratory. The samples were analyzed outside the 7-day holding time specified for unpreserved samples but within the 14-day holding time specified for preserved samples: PDI-4_GW (480-197309-2), PDI-9_GW (480-197309-4), PDI-11_GW (480-197309-10), PDI-12_GW (480-197309-12) and PDI-5_GW (480-197309-15).

Method 8260C: The following sample(s) was collected in a properly preserved vial; however, the pH was outside the required criteria when verified by the laboratory. The sample was analyzed outside the 7-day holding time specified for unpreserved samples but within the 14-day holding time specified for preserved samples: PDI-10_GW (480-197309-6). pH is 7.

Method 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: PDI-10_GW (480-197309-6). Elevated reporting limits (RLs) are provided.

Method 8260C: The laboratory control sample (LCS) and / or laboratory control sample duplicate (LCSD) for analytical batch 480-625418 recovered outside control limits for the following analytes: 1,1-Dichloroethene and Tetrachloroethene. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported. The following sample was affected : PDI-10_GW (480-197309-6).

Method 8260C: Due to the coelution of Ethyl Acetate with 2-Butanone in the full spike solution, these analytes exceeded control limits in the laboratory control sample (LCS) and/or laboratory control sample duplicate (LCSD) associated with batch 625418. The following sample was affected : PDI-10_GW (480-197309-6).

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

Metals
Method 6010C: The continuing calibration blank (CCB 480-624702/28) contained Total Iron above the reporting limit (RL). All reported samples PDI-4_0304 (480-197309-1), PDI-9_0203 (480-197309-3), PDI-10_0304 (480-197309-5), DUP_042822 (480-197309-7), (LCSSRM 480-624111/2-A) and (MB 480-624111/1-A) associated with this CCB were either ND for this analyte or contained this analyte at a concentration greater than 10X the value found in the CCB; therefore, re-analysis of samples was not performed.

Method 6010C: The serial dilution and post spike (480-197309-A-8-A PDS) and (480-197309-A-8-A SD ^5), associated with batch 480-624111, exceeded the quality control limits for Total Manganese. Sample matrix is suspected, therefore, no corrective action was necessary.

Method 6010C: The serial dilution (480-197309-A-8-A SD ^5) associated with batch 480-624702, exhibited a result outside the quality control limits for Total Calcium, Iron, and Zinc. However, the post digestion spike (PDS) was compliant, therefore no corrective action was necessary.

Method 6010C: The recovery of post spike, (480-197309-A-8-A PDS), associated with batch 480-624702, exhibited a result outside quality control limits for Total Magnesium. However, the serial dilution (SD) of this sample was compliant, therefore no corrective action was necessary.

Method 6010C: The method blank for preparation batch 480-624201 contained Total Iron above the reporting limit (RL). None of the samples RB_042822 (480-197309-14) associated with this method blank contained the target compound; therefore, re-extraction and/or re-analysis of samples were not performed: RB_042822 (480-197309-14).

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

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Buffalo Job No.: 480-197309-1

SDG No.:

Batch Number: 624854 Batch Start Date: 05/06/22 09:57 Batch Analyst: Repka, Carly

Batch Method: 8260C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	8260 CORP mix 00222	BFB_WRK 00133	GAS CORP mix 00508
BFB 480-624854/2		8260C		1 uL	1 uL			1 uL	
CCVIS 480-624854/3		8260C		5 mL	5 mL		12.5 uL		12.5 uL
LCS 480-624854/5		8260C		5 mL	5 mL		12.5 uL		12.5 uL
MB 480-624854/7		8260C		5 mL	5 mL				
480-197309-B-2	PDI-4_GW	8260C	T	5 mL	5 mL	7 SU			
480-197309-B-4	PDI-9_GW	8260C	T	5 mL	5 mL	7 SU			
480-197309-B-10	PDI-11_GW	8260C	T	5 mL	5 mL	7 SU			
480-197309-B-12	PDI-12_GW	8260C	T	5 mL	5 mL	7 SU			
480-197309-A-13	TB_042822	8260C	T	5 mL	5 mL	<2 SU			
480-197309-B-14	RB_042822	8260C	T	5 mL	5 mL	<2 SU			
480-197309-B-15	PDI-5_GW	8260C	T	5 mL	5 mL	7 SU			

Lab Sample ID	Client Sample ID	Method Chain	Basis	T_8260_IS 00262	T_8260_Surr 00223	AnalysisComment			
BFB 480-624854/2		8260C							
CCVIS 480-624854/3		8260C		1 uL	1 uL				
LCS 480-624854/5		8260C		1 uL	1 uL				
MB 480-624854/7		8260C		1 uL	1 uL				
480-197309-B-2	PDI-4_GW	8260C	T	1 uL	1 uL	preserved, T			
480-197309-B-4	PDI-9_GW	8260C	T	1 uL	1 uL	preserved, T			
480-197309-B-10	PDI-11_GW	8260C	T	1 uL	1 uL	preserved, T			
480-197309-B-12	PDI-12_GW	8260C	T	1 uL	1 uL	preserved, T			
480-197309-A-13	TB_042822	8260C	T	1 uL	1 uL				
480-197309-B-14	RB_042822	8260C	T	1 uL	1 uL				
480-197309-B-15	PDI-5_GW	8260C	T	1 uL	1 uL				

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Buffalo Job No.: 480-197309-1

SDG No.:

Concentration Units: mg/L

Analyte	RL	ICB 480-624702/7 05/04/2022 09:46		CCB 480-624702/20 05/04/2022 20:54		CCB 480-624702/28 05/04/2022 21:40		CCB 480-624702/40 05/04/2022 22:26	
		Found	C	Found	C	Found	C	Found	C
Aluminum	0.20	ND		ND		0.0927	J	ND	
Antimony	0.020	ND		ND		ND		ND	
Arsenic	0.015	ND		ND		ND		ND	
Barium	0.0020	ND		ND		ND		ND	
Beryllium	0.0020	ND		ND		0.000400	J	ND	
Cadmium	0.0020	ND		ND		ND		ND	
Calcium	0.50	ND		ND		0.117	J	ND	
Chromium	0.0040	ND		ND		ND		ND	
Cobalt	0.0040	ND		ND		ND		ND	
Copper	0.010	ND		ND		ND		ND	
Iron	0.050	ND		ND		0.0691		ND	
Lead	0.010	ND		ND		ND		ND	
Magnesium	0.20	ND		ND		ND		ND	
Manganese	0.0030	ND		ND		0.00212	J	ND	
Nickel	0.010	ND		ND		ND		ND	
Potassium	0.50	ND		ND		ND		ND	
Selenium	0.025	ND		ND		ND		ND	
Silver	0.0060	ND		ND		ND		ND	
Sodium	1.0	ND		ND		ND		ND	
Thallium	0.020	ND		ND		ND		ND	
Vanadium	0.0050	ND		ND		ND		ND	
Zinc	0.010	ND		ND		ND		ND	

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS

Lab Name: Eurofins Buffalo Job No.: 480-197309-1

SDG No.:

Concentration Units: mg/L Lab Sample ID: MB 480-624201/1-A

Instrument Code: ICAP1 Batch No.: 625759

CAS No.	Analyte	Concentration	C	Q	Method
7429-90-5	Aluminum	ND			6010C
7440-36-0	Antimony	ND			6010C
7440-38-2	Arsenic	ND			6010C
7440-39-3	Barium	ND			6010C
7440-41-7	Beryllium	ND			6010C
7440-43-9	Cadmium	ND			6010C
7440-70-2	Calcium	0.365	J		6010C
7440-47-3	Chromium	ND			6010C
7440-48-4	Cobalt	ND			6010C
7440-50-8	Copper	ND			6010C
7439-89-6	Iron	0.0622			6010C
7439-92-1	Lead	ND			6010C
7439-95-4	Magnesium	ND			6010C
7439-96-5	Manganese	0.00210	J		6010C
7440-02-0	Nickel	ND			6010C
7440-09-7	Potassium	0.460	J		6010C
7782-49-2	Selenium	ND			6010C
7440-22-4	Silver	ND			6010C
7440-23-5	Sodium	0.884	J		6010C
7440-28-0	Thallium	ND			6010C
7440-62-2	Vanadium	ND			6010C
7440-66-6	Zinc	ND			6010C

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: PDI-5_0405 MS
Lab ID: 480-197309-8 MS
Lab Name: Eurofins Buffalo
Job No.: 480-197309-1
SDG No.:
Matrix: Solid
Concentration Units: mg/Kg
% Solids: 92.9

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Aluminum	14500		6530		2210	360	75-125	F1	6010C
Antimony	32.36		1.2	J	44.2	71	75-125	F1	6010C
Arsenic	41.77		2.7		44.2	88	75-125		6010C
Barium	81.96		32.2		44.2	113	75-125		6010C
Beryllium	38.23		0.27		44.2	86	75-125		6010C
Cadmium	37.41		0.16	J	44.2	84	75-125		6010C
Calcium	26870		24300		2210	114	75-125	4	6010C
Chromium	49.59		7.8		44.2	94	75-125		6010C
Cobalt	51.28		4.0		44.2	107	75-125		6010C
Copper	66.35		25.7		44.2	92	75-125		6010C
Iron	14950		9200		2210	260	75-125	4	6010C
Lead	54.57		6.4		44.2	109	75-125		6010C
Magnesium	16220		13300		2210	133	75-125	4	6010C
Manganese	429.6		387		44.2	95	75-125	4	6010C
Nickel	54.52		8.3		44.2	105	75-125		6010C
Potassium	5403		1290		2210	186	75-125	F1	6010C
Selenium	36.59		0.73	J	44.2	81	75-125		6010C
Silver	9.88		ND		11.0	89	75-125		6010C
Sodium	2044		136	J	2210	86	75-125		6010C
Thallium	43.57		ND		44.2	99	75-125		6010C
Vanadium	58.20		12.9		44.2	102	75-125		6010C
Zinc	67.67		36.3		44.2	71	75-125	F1	6010C
Mercury	0.392		0.019	J	0.363	103	80-120		7471B

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.
Note - Results and Reporting Limits have been adjusted for dry weight.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: PDI-5_0405 MSD
Lab ID: 480-197309-8 MSD
Lab Name: Eurofins Buffalo
Job No.: 480-197309-1
SDG No.:
Matrix: Solid
Concentration Units: mg/Kg
% Solids: 92.9

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Aluminum	11840		2260	235	75-125	20	20	F1	6010C
Antimony	35.73		45.1	77	75-125	10	20		6010C
Arsenic	42.81		45.1	89	75-125	2	20		6010C
Barium	78.89		45.1	104	75-125	4	20		6010C
Beryllium	39.86		45.1	88	75-125	4	20		6010C
Cadmium	39.17		45.1	87	75-125	5	20		6010C
Calcium	25190		2250	38	75-125	6	20	4	6010C
Chromium	48.68		45.1	91	75-125	2	20		6010C
Cobalt	51.01		45.1	104	75-125	1	20		6010C
Copper	65.40		45.1	88	75-125	1	20		6010C
Iron	11890		2250	119	75-125	23	20	4 F2	6010C
Lead	54.16		45.1	106	75-125	1	20		6010C
Magnesium	14250		2250	43	75-125	13	20	4	6010C
Manganese	414.1		45.1	59	75-125	4	20	4	6010C
Nickel	53.85		45.1	101	75-125	1	20		6010C
Potassium	4467		2260	141	75-125	19	20	F1	6010C
Selenium	38.40		45.1	84	75-125	5	20		6010C
Silver	10.29		11.3	91	75-125	4	20		6010C
Sodium	2113		2260	88	75-125	3	20		6010C
Thallium	45.23		45.1	100	75-125	4	20		6010C
Vanadium	56.08		45.1	96	75-125	4	20		6010C
Zinc	66.87		45.1	68	75-125	1	20	F1	6010C
Mercury	0.398		0.344	110	80-120	1	20		7471B

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.
Note - Results and Reporting Limits have been adjusted for dry weight.

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS

Client ID: PDI-5_0405 PDS
Lab ID: 480-197309-8 PDS
Lab Name: Eurofins Buffalo
Job No.: 480-197309-1
SDG No.:
Matrix: Solid
Concentration Units: mg/Kg

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Aluminum	8545		6530		2250	89	80-120		6010C
Antimony	43.80		1.2	J	45.0	95	80-120		6010C
Arsenic	43.63		2.7		45.0	91	80-120		6010C
Barium	70.58		32.2		45.0	85	80-120		6010C
Beryllium	40.41		0.27		45.0	89	80-120		6010C
Cadmium	39.69		0.16	J	45.0	88	80-120		6010C
Calcium	25380		24300		2250	NC	80-120		6010C
Chromium	46.16		7.8		45.0	85	80-120		6010C
Cobalt	50.77		4.0		45.0	104	80-120		6010C
Copper	63.59		25.7		45.0	84	80-120		6010C
Iron	11080		9200		2250	83	80-120		6010C
Lead	53.60		6.4		45.0	105	80-120		6010C
Magnesium	14410		13300		2250	50	80-120	W	6010C
Manganese	398.7		387		45.0	25	80-120	W	6010C
Nickel	52.81		8.3		45.0	99	80-120		6010C
Potassium	3219		1290		2250	86	80-120		6010C
Selenium	38.86		0.73	J	45.0	85	80-120		6010C
Silver	10.27		ND		11.2	91	80-120		6010C
Sodium	2132		136	J	2250	89	80-120		6010C
Thallium	45.42		ND		45.0	101	80-120		6010C
Vanadium	50.40		12.9		45.0	83	80-120		6010C
Zinc	74.01		36.3		45.0	84	80-120		6010C

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.
Note - Results and Reporting Limits have been adjusted for dry weight.

FORM VB - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS

Lab ID: 480-197309-8

SDG No:

Lab Name: Eurofins Buffalo Job No: 480-197309-1

Matrix: Solid Concentration Units: mg/Kg

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Aluminum	6530		7358		13	V	6010C
Antimony	1.2	J	ND		NC		6010C
Arsenic	2.7		3.23	J	NC		6010C
Barium	32.2		35.39		10		6010C
Beryllium	0.27		0.298	J	NC		6010C
Cadmium	0.16	J	0.259	J	NC		6010C
Calcium	24300		27430		13	V	6010C
Chromium	7.8		8.62		9.9		6010C
Cobalt	4.0		3.87		2.2		6010C
Copper	25.7		27.63		7.5		6010C
Iron	9200		10570		15	V	6010C
Lead	6.4		5.76		NC		6010C
Magnesium	13300		14370		8.3		6010C
Manganese	387		432.7		12	V	6010C
Nickel	8.3		7.53	J	9.5		6010C
Potassium	1290		1358		4.9		6010C
Selenium	0.73	J	ND		NC		6010C
Silver	ND		ND		NC		6010C
Sodium	136	J	169.1	J	NC		6010C
Thallium	ND		ND		NC		6010C
Vanadium	12.9		13.92		7.7		6010C
Zinc	36.3		42.48		17	V	6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

Eurofins Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: P. Fairbanks	Lab PM: Schove, John R	Carrier Tracking No(s):	COC No: 480-173201-37439.1
Client Contact: Ms. Ann Marie Kropovitch	Phone:	E-Mail: John.Schove@et.eurofinsus.com	State of Origin:	Page: Page 1 of 6
Company: AECOM	PWSID:			Job #:
Address: One John James Audubon Parkway Suite 210	Due Date Requested:			
City: Amherst	TAT Requested (days): std			
State, Zip: NY, 14228	Compliance Project: Δ Yes Δ No			
Phone: 716-923-1137(Tel)	PO #: 60636810			
Email: ann.marie.kropovitch@aecom.com	WO #: Ann.Marie.Kropovitch@aecom.com			
Project Name: Former Bernzomatic Site - Medina, NY	Project #: 48015562			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL
B - NaOH
M - Hexane
N - None
O - AsNaO2
...2O4S
...ydrate
...iy)
Other:

480-197706 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260C - TCL VOCs	6010C, 7470A	6010C - Dissolved Iron	300.0_28D - Chloride & Sulfate	RSK_175 - Methane	2320B - Alkalinity	Nitrate_Calc - Nitrate						Total Number of conta	Special Instructions/Note:
Preservation Code:							A	D	D	N	A	N	N							
MW-14	5/9/22	0922	G	Water			3	1											4	
MW-22	5/9/22	1129	G	Water		X	3	1	1	1	3	1	1	×	3	=			33	MS/MSD
MW-05R	5/9/22	1333	G	Water			3	1	1	1	3	1	1						11	
RB-050922	5/9/22	1430	G	Water			3	1	1	1	3	1	1						11	
MW-07	5/9/22	1449	G	Water			3	1	1	1	3	1	1						11	
TB-050922	5/5/22	1600	G	Water			1				1								2	
				Water																
				Water																
				Water																
				Water																
				Water																

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

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

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

Special Instructions/QC Requirements:

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

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Peter Fairbanks	5/9/22 1622	CURS/AECOM	Courtney	5/9/22 1622	TAL
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:	1.4,2 #1 No ICE

Ver: 06/08/2021

Job Narrative
480-197706-1

Comments
No additional comments.

Receipt
The samples were received on 5/9/2022 4:22 PM. 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 14.2º C.

GC/MS VOA
Method 8260C: The continuing calibration verification (CCV) associated with batch 480-626280 recovered outside acceptance criteria, low biased, for Methylcyclohexane. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported. The associated samples are impacted: MW-14 (480-197706-1), MW-22 (480-197706-2), MW-05R (480-197706-3), RB-050922 (480-197706-4), MW-07 (480-197706-5) and TB-050922 (480-197706-6).

Method 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-22 (480-197706-2), MW-22 (480-197706-2[MS]) and MW-22 (480-197706-2[MSD]). Elevated reporting limits (RLs) are provided.

Method 8260C: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-05R (480-197706-3). Elevated reporting limits (RLs) are provided.

Method 8260C: The laboratory control sample (LCS) for analytical batch 480-626469 recovered outside control limits for the following analyte(s): Acetone. Acetone has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. The associated sample is impacted: MW-05R (480-197706-3).

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

HPLC/IC
Method 300.0: The following sample was diluted due to the nature of the sample matrix: MW-07 (480-197706-5). Elevated reporting limits (RLs) are provided.

Method 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-22 (480-197706-2) and MW-05R (480-197706-3). Elevated reporting limits (RLs) are provided.

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

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

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

General Chemistry
Method SM 2320B: The following samples were analyzed within analytical hold with low recovering QC: MW-22 (480-197706-2), MW-22 (480-197706-2[MS]) and MW-22 (480-197706-2[MSD]). The samples were then re-analyzed outside of analytical hold with acceptable QC standard recoveries.

Method SM 2320B: Reanalysis of the following samples were performed outside of the analytical holding time due to initial QC failing : MW-22 (480-197706-2), MW-22 (480-197706-2[MS]) and MW-22 (480-197706-2[MSD]). Both sets of data has been reported.

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

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: MW-22 MS | Lab ID: 480-197706-2 MS

Lab Name: Eurofins Buffalo | Job No.: 480-197706-1

SDG No.:

Matrix: Water | Concentration Units: mg/L

% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Aluminum	20.53		8.9		10.0	116	75-125		6010C
Antimony	0.215		ND		0.200	107	75-125		6010C
Arsenic	0.206		0.0062	J	0.200	100	75-125		6010C
Barium	0.754		0.57		0.200	90	75-125		6010C
Beryllium	0.207		0.00034	J	0.200	103	75-125		6010C
Cadmium	0.198		ND		0.200	99	75-125		6010C
Calcium	144.0		139		10.0	51	75-125	4	6010C
Chromium	0.210		0.0096		0.200	100	75-125		6010C
Cobalt	0.206		0.0072		0.200	100	75-125		6010C
Copper	0.226		0.036		0.200	95	75-125		6010C
Iron	18.32		11.4		10.0	70	75-125	F1	6010C
Lead	0.206		0.0090	J	0.200	98	75-125		6010C
Magnesium	43.92		34.5		10.0	94	75-125		6010C
Manganese	2.52		2.6		0.200	-22	75-125	4	6010C
Nickel	0.207		0.015		0.200	96	75-125		6010C
Potassium	51.63		39.5		10.0	121	75-125		6010C
Selenium	0.202		ND		0.200	101	75-125		6010C
Silver	0.0478		ND		0.0500	96	75-125		6010C
Sodium	178.7		170		10.0	85	75-125	4	6010C
Thallium	0.202		ND		0.200	101	75-125		6010C
Vanadium	0.215		0.015		0.200	100	75-125		6010C
Zinc	0.224		0.034		0.200	95	75-125		6010C
Mercury	0.00663		ND		0.00667	99	80-120		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: MW-22 MSD
Lab ID: 480-197706-2 MSD
Lab Name: Eurofins Buffalo
Job No.: 480-197706-1
SDG No.:
Matrix: Water
Concentration Units: mg/L
% Solids:

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Aluminum	17.84		10.0	89	75-125	14	20		6010C
Antimony	0.209		0.200	105	75-125	3	20		6010C
Arsenic	0.206		0.200	100	75-125	0	20		6010C
Barium	0.736		0.200	81	75-125	2	20		6010C
Beryllium	0.205		0.200	102	75-125	1	20		6010C
Cadmium	0.195		0.200	97	75-125	1	20		6010C
Calcium	142.2		10.0	33	75-125	1	20	4	6010C
Chromium	0.204		0.200	97	75-125	3	20		6010C
Cobalt	0.202		0.200	98	75-125	2	20		6010C
Copper	0.218		0.200	91	75-125	4	20		6010C
Iron	16.37		10.0	50	75-125	11	20	F1	6010C
Lead	0.200		0.200	96	75-125	3	20		6010C
Magnesium	43.08		10.0	86	75-125	2	20		6010C
Manganese	2.41		0.200	-79	75-125	5	20	4	6010C
Nickel	0.202		0.200	94	75-125	3	20		6010C
Potassium	50.92		10.0	114	75-125	1	20		6010C
Selenium	0.197		0.200	99	75-125	2	20		6010C
Silver	0.0464		0.0500	93	75-125	3	20		6010C
Sodium	175.8		10.0	57	75-125	2	20	4	6010C
Thallium	0.200		0.200	100	75-125	1	20		6010C
Vanadium	0.208		0.200	97	75-125	3	20		6010C
Zinc	0.212		0.200	89	75-125	5	20		6010C
Mercury	0.00665		0.00667	100	80-120	0	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS

Client ID: MW-22 PDS | Lab ID: 480-197706-2 PDS

Lab Name: Eurofins Buffalo | Job No.: 480-197706-1

SDG No.:

Matrix: Water | Concentration Units: mg/L

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Aluminum	19.07		8.9		10.0	101	80-120		6010C
Antimony	0.219		ND		0.200	110	80-120		6010C
Arsenic	0.216		0.0062	J	0.200	105	80-120		6010C
Barium	0.739		0.57		0.200	82	80-120		6010C
Beryllium	0.212		0.00034	J	0.200	106	80-120		6010C
Cadmium	0.203		ND		0.200	102	80-120		6010C
Calcium	143.7		139		10.0	NC	80-120		6010C
Chromium	0.214		0.0096		0.200	102	80-120		6010C
Cobalt	0.213		0.0072		0.200	103	80-120		6010C
Copper	0.237		0.036		0.200	101	80-120		6010C
Iron	20.98		11.4		10.0	96	80-120		6010C
Lead	0.212		0.0090	J	0.200	101	80-120		6010C
Magnesium	43.16		34.5		10.0	86	80-120		6010C
Manganese	2.65		2.6		0.200	NC	80-120		6010C
Nickel	0.214		0.015		0.200	100	80-120		6010C
Potassium	48.08		39.5		10.0	86	80-120		6010C
Selenium	0.207		ND		0.200	103	80-120		6010C
Silver	0.0496		ND		0.0500	99	80-120		6010C
Sodium	173.9		170		10.0	NC	80-120		6010C
Thallium	0.208		ND		0.200	104	80-120		6010C
Vanadium	0.218		0.015		0.200	102	80-120		6010C
Zinc	0.230		0.034		0.200	98	80-120		6010C

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VB - IN

3-IN
METHOD BLANK
METALS

Lab Name: Eurofins Buffalo Job No.: 480-197706-1

SDG No.:

Concentration Units: mg/L Lab Sample ID: MB 480-625558/1-A

Instrument Code: ICAP2 Batch No.: 626220

CAS No.	Analyte	Concentration	C	Q	Method
7429-90-5	Aluminum	ND			6010C
7440-36-0	Antimony	ND			6010C
7440-38-2	Arsenic	ND			6010C
7440-39-3	Barium	ND			6010C
7440-41-7	Beryllium	ND			6010C
7440-43-9	Cadmium	ND			6010C
7440-70-2	Calcium	ND			6010C
7440-47-3	Chromium	ND			6010C
7440-48-4	Cobalt	ND			6010C
7440-50-8	Copper	ND			6010C
7439-89-6	Iron	ND			6010C
7439-92-1	Lead	ND			6010C
7439-95-4	Magnesium	ND			6010C
7439-96-5	Manganese	0.000430	J		6010C
7440-02-0	Nickel	ND			6010C
7440-09-7	Potassium	ND			6010C
7782-49-2	Selenium	ND			6010C
7440-22-4	Silver	ND			6010C
7440-23-5	Sodium	ND			6010C
7440-28-0	Thallium	ND			6010C
7440-62-2	Vanadium	ND			6010C
7440-66-6	Zinc	0.00295	J		6010C

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: Eurofins Buffalo Job No.: 480-197706-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 625608 Date: 05/11/2022 16:31							
300.0	MB 480-625608/4	Chloride	ND		mg/L	0.50	1
300.0	MB 480-625608/4	Sulfate	ND		mg/L	2.0	1
Batch ID: 626375 Date: 05/17/2022 02:45							
SM 2320B	MB 480-626375/30	Alkalinity, Total	ND		mg/L	5.0	1
Batch ID: 626878 Date: 05/19/2022 18:56							
SM 2320B	MB 480-626878/7	Alkalinity, Total	0.940	J	mg/L	5.0	1
Batch ID: 626878 Date: 05/19/2022 20:49							
SM 2320B	MB 480-626878/29	Alkalinity, Total	ND	^-	mg/L	5.0	1
Batch ID: 627462 Date: 05/24/2022 11:01							
SM 2320B	MB 480-627462/4	Alkalinity, Total	2.40	J	mg/L	5.0	1
Batch ID: 627462 Date: 05/24/2022 13:45							
SM 2320B	MB 480-627462/28	Alkalinity, Total	3.84	J	mg/L	5.0	1

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: Eurofins Buffalo Job No.: 480-197706-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 625608 Date: 05/11/2022 19:08											
300.0	480-197706-2	Chloride	133		mg/L						
300.0	480-197706-2 MS	Chloride	371.8		mg/L	251	95	81-120			
300.0	480-197706-2	Sulfate	94.8		mg/L						
300.0	480-197706-2 MS	Sulfate	337.4		mg/L	250	97	80-120			
Batch ID: 625608 Date: 05/11/2022 23:23											
300.0	480-197706-5	Chloride	28.6		mg/L						
300.0	480-197706-5 MS	Chloride	124.1		mg/L	100	95	81-120			
300.0	480-197706-5	Sulfate	24.4		mg/L						
300.0	480-197706-5 MS	Sulfate	122.6		mg/L	100	98	80-120			
Batch ID: 626878 Date: 05/19/2022 21:07											
SM 2320B	480-197706-2	Alkalinity, Total	637		mg/L						B ^-
SM 2320B	480-197706-2 MS	Alkalinity, Total	666.3		mg/L	100	29	60-140			4 ^-
Batch ID: 627462 Date: 05/24/2022 11:26											
SM 2320B	480-197706-2	Alkalinity, Total	665		mg/L						H B F1
SM 2320B	480-197706-2 MS RA	Alkalinity, Total	692.0		mg/L	1000	3	60-140			H F1

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: Eurofins Buffalo Job No.: 480-197706-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 625608 Date: 05/11/2022 19:27											
300.0	480-197706-2 MSD	Chloride	372.7		mg/L	251	96	81-120	0	15	
300.0	480-197706-2 MSD	Sulfate	337.6		mg/L	250	97	80-120	0	15	
Batch ID: 626878 Date: 05/19/2022 21:14											
SM 2320B	480-197706-2 MSD	Alkalinity, Total	668.8		mg/L	100	32	60-140	0	20	4 ^-
Batch ID: 627462 Date: 05/24/2022 11:35											
SM 2320B	480-197706-2 MSD RA	Alkalinity, Total	687.6		mg/L	1000	2	60-140	1	20	H F1

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

Eurofins Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone: 716-691-2600 Fax: 716-691-7991

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Tom Urban	Lab PM: Schove, John R	Carrier Tracking No(s):	COC No: 480-173201-37439.2
Client Contact: Ms. Ann Marie Kropovitch	Phone: 716-856-5636	E-Mail: John.Schove@et.eurofinsus.com	State of Origin:	Page: Page 2 of 6
Company: AECOM	PWSID:			Job #:

Address: One John James Audubon Parkway Suite 210	Due Date Requested:
City: Amherst	TAT Requested (days): Standard
State, Zip: NY, 14228	Compliance Project: Δ Yes Δ No
Phone: 716-923-1137(Tel)	PO #: 60636810
Email: ann.marie.kropovitch@aecom.com	WO #: Ann.Marie.Kropovitch@aecom.com
Project Name: Former Bernzomatic Site - Medina, NY	Project #: 48015562
Site:	SSOW#:

Analysis Requested

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

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260C - TCL VOCs	6010C, 7470A	6010C - Dissolved Iron Filtered & Filtered	300.0_28D - Chloride & Sulfate	RSK_175 - Methane	2320B - Alkalinity	Nitrate_Calc - Nitrate	Total Number of containers	Special Instructions/Note:
			Preservation Code:				A	D	D	N	A	N	N		
MW-19R	5/10/22	0910	G	Water			3	1						4	
MW-16	5/10/22	1000	G	Water			3	1						4	
MW-21	5/10/22	1115	G	Water			3	1	1	1	3	1	1	11	
FD-051022	5/10/22	—	G	Water			3	1	1	1	3	1	1	11	
MW-17	5/10/22	1220	G	Water			3	1						4	
TB-051022	5/10/22	—	G	Water			2							1	
				Water											
				Water											
				Water											
				Water											
				Water											

480-197773 Chain of Custody

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

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

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

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: Drop off

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Tom Urban	5/10/22 @	AECOM	[signature]	5/10/22 1530	TA
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: Cool #1 NO ICE

Ver: 06/08/2021

Job Narrative
480-197773-1

Comments
No additional comments.

Receipt
The samples were received on 5/10/2022 3:30 PM. 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 16.4º C.

GC/MS VOA
Method 8260C: The continuing calibration verification (CCV) associated with batch 480-626280 recovered outside acceptance criteria, low biased, for Methylcyclohexane. A reporting limit (RL) standard was analyzed, and the target analytes are detected. Since the associated samples were non-detect for the analyte(s), the data are reported. The associated samples are impacted: MW-19R (480-197773-1), MW-16 (480-197773-2), MW-21 (480-197773-3), FD-051022 (480-197773-4) and MW-17 (480-197773-5).

Method 8260C: The following volatiles samples were diluted due to foaming at the time of purging during the original sample analysis: MW-19R (480-197773-1), MW-16 (480-197773-2) and MW-17 (480-197773-5). Elevated reporting limits (RLs) are provided.

Method 8260C: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-21 (480-197773-3) and FD-051022 (480-197773-4). Elevated reporting limits (RLs) are provided.

Method 8260C: The laboratory control sample (LCS) for analytical batch 480-626760 recovered outside control limits for the following analytes: Methylene Chloride, Carbon disulfide, 1,1-Dichloroethene and 1,1,2-Trichloro-1,2,2-trifluoroethane. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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

HPLC/IC
Method 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-21 (480-197773-3) and FD-051022 (480-197773-4). Elevated reporting limits (RLs) are provided.

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

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

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

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

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Buffalo Job No.: 480-197773-1

SDG No.:

Concentration Units: mg/L Lab Sample ID: MB 480-625841/1-A

Instrument Code: ICAP1 Batch No.: 627212

CAS No.	Analyte	Concentration	C	Q	Method
7439-89-6	Iron, Dissolved	0.0264	J		6010C

Attachment 3 – Regenesis Technical Design for In-situ Groundwater Remedy

REGENESIS

Technology-Based Solutions for the Environment

PROJECT NAME

1 Bernzomatic Drive

Preliminary Proposal Revision 1

PREPARED FOR

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March 24, 2023

Project Summary

REGENESIS appreciates the opportunity to provide AECOM this remedial design and cost estimate for this project. Included within is a brief summary of our proposed solution, our understanding of your project goals, the technologies proposed, and a table summarizing the design.

Proposed Solution

We are proposing a permeable reactive barrier utilizing PlumeStop, S-MicroZVI, AquaFix, and BioDechlor INOCULUM Plus (BDI Plus) to address migrating cVOC impacts along the previous building perimeter. We have also provided source treatment options with 3-D Micro Emulsion, S-MZVI, and BDI Plus. These reagents will be applied via direct push injection. We have also provided an alternate layout for consideration by AECOM.

Project Goals

- Prevent migration of cVOCs near MW-5r
- Reduce cVOC mass in the suspected source

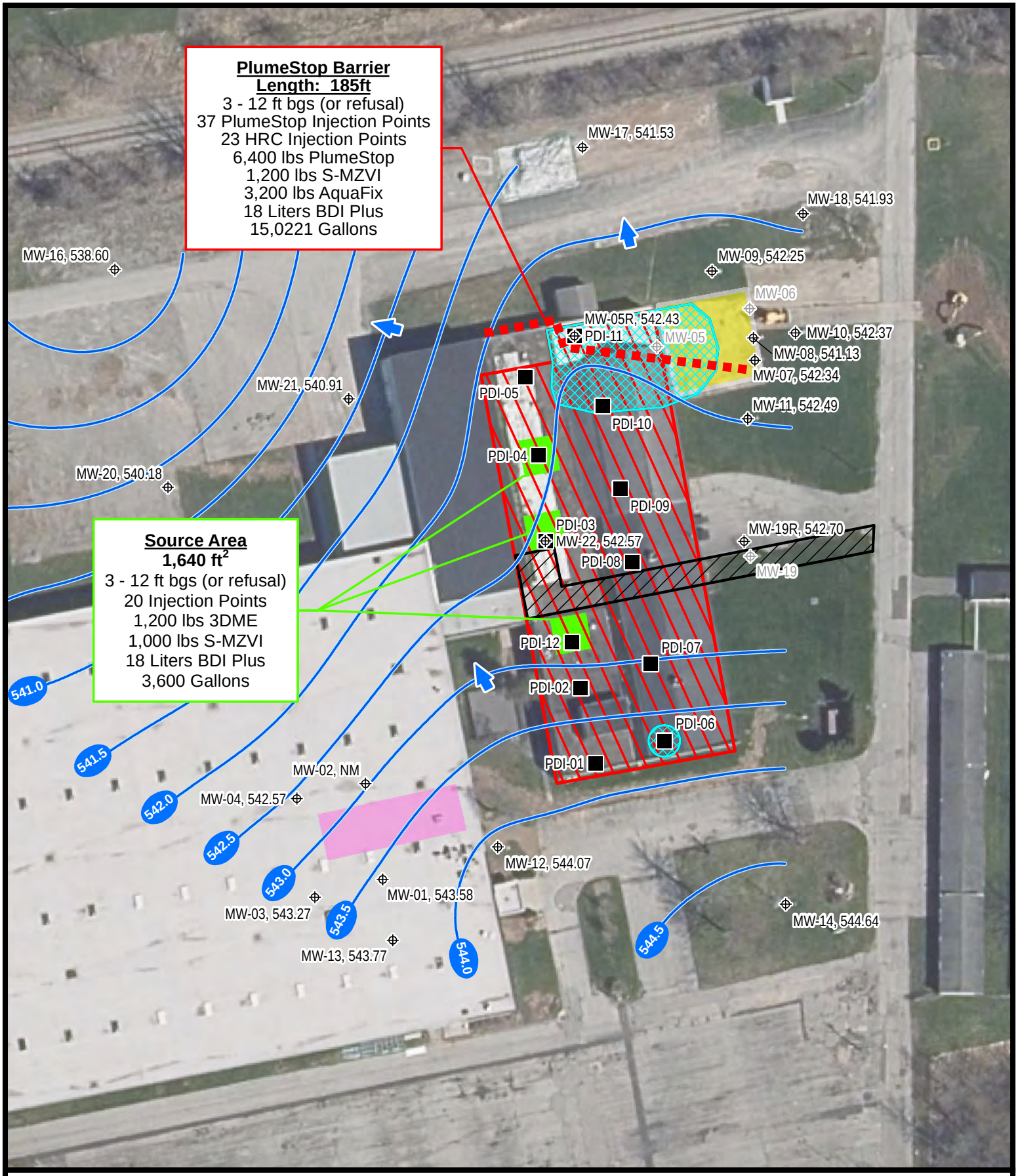
Technologies Proposed

- PlumeStop®
- S-MicroZVI®
- AquaFix
- Bio-Dechlor INOCULUM® Plus (BDI Plus)
- 3-D Microemulsion®

Design Summary

MW-5R Barrier		
Design Parameters	**Unit**	**Value**
Treatment Type		Barrier
Distance Perpendicular to Flow (ft)		185
Top Application Depth (ft bgs)		3
Bottom Application Depth (ft bgs)		12
Vertical Treatment Interval	ft	9
Soil Type		sand
Porosity	cm3/cm3	0.33
Effective Porosity	cm3/cm3	0.20
Hydraulic Gradient	ft/ft	0.015
GW Velocity	ft/yr	232.85
Eff. Pore Voume Occupancy		60%
Application Summary		
Spacing Within Rows (ft)		5
Number of Rows		1
DPT Injection Points		37
Product Dosage		
PlumeStop	lbs	6,400
S-MZVI	lbs	1,200
AquaFix	lbs	3,200
BDI Plus	Liters	18
Water Required	gallons	14,221
Total Volume Applied	gallons	15,021

Source Area		
Design Parameters	**Unit**	**Value**
Treatment Type		Grid
Treatment Areal Extent (sq ft)		1,640
Top Application Depth (ft bgs)		3
Bottom Application Depth (ft. bgs)		12
Vertical Treatment Interval	ft	9
Soil Type		sand
Porosity	cm3/cm3	0.33
Effective Porosity	cm3/cm3	0.20
Hydraulic Gradient	ft/ft	0.015
GW Velocity	ft/yr	232.85
Eff. Pore Voume Occupancy		15%
Application Summary		
Spacing Within Rows (ft)		9
Spacing Between Rows (ft)		9
DPT Injection Points		20
Product Dosage		
3DME to be Applied	lbs	1,200
S-MZVI to be Applied	lbs	1,000
BDI Plus to be Applied	L	18
Water Required	gallons	3,385
Total Volume Applied	gallons	3,600



1 Bernzomatic Drive

AECOM

March 24, 2023

Figure 1 - Injection Layout

Technical Approach

We are proposing the application of PlumeStop® Liquid Activated Carbon™ (PlumeStop), Sulfidated-Micro Zero Valient Iron (S-MicroZVI®), AquaFix, and Bio-Dechlor Inoculum Plus (BDI Plus®) to treat residual chlorinated solvents. Together, these technologies will foster rapid concentration reductions and provide long-term treatment of the target compounds through sorption plus abiotic and biological destructive pathways, while minimizing the potential for daughter product formation. PlumeStop is a colloidal form of activated carbon with a surface treatment which reduces its interactions with the soil matrix. This allows it to move through soil pores leaving a coating on the soil matrix as it distributes from the injection point. This provides a very large sorption surface which will result in immediate reduction of these contaminants while concentrating contaminants to allow for more efficient and controlled remediation through destructive technologies like S-MicroZVI and HRC. S-MicroZVI is a concentrated suspension of sulfidated, colloidal zero-valent iron, designed for enhanced, long-lasting reactivity and ease of application relative to other forms of ZVI. When applied to the subsurface it imparts an *in-situ* chemical reduction (ISCR) mechanism that allows for the direct destruction of chlorinated ethenes (i.e. TCE) via abiotic degradation pathways, which minimizes the formation of daughter products such as vinyl chloride. Sulfidation of the ZVI surface significantly decreases the reaction that occurs between water and the ZVI particles, allowing the reagent to be more effective for the chemical reduction of chlorinated ethenes. In addition, the inclusion of S-MicroZVI can enhance the biological degradation of contaminants by creating and sustaining a reduced environment for the dechlorinating bacteria. AquaFix is a new colloidal electron donor that provides a controlled release of hydrogen for an extended period of time to stimulate anaerobic bioremediation. BDI Plus is added to bioaugment the site with a live microbial culture that is known to fully degrade these compounds. As contaminants are degraded to non-toxic and non-sorptive end products, the PlumeStop sorption surface will be regenerated. This allows for further sorption and treatment of contaminants which may diffuse back into the groundwater from the soil matrix over time.

TECHNICAL BULLETINS

- PlumeStop® Technical Bulletin 2.1: Sorption of Contaminants from Solution
- PlumeStop® Technical Bulletin 2.2: Sorption of Contaminants from Solution-Column Study
- PlumeStop® Technical Bulletin 3.1 Post-Sorption Contaminant Biodegradation
- PlumeStop® Technical Bulletin 4.1: Regeneration of Sorptive Capacity
- PlumeStop® Technical Bulletin 6.1: Treatment Solution of Back Diffusion-Tank Study
- 3-D Microemulsion® Technical Bulletin: Micelluar Distribution

CASE STUDIES

- PlumeStop Case Study-Michigan Plating Facility
- PlumeStop® Case Study: Site Goals Achieved Within 2 Months at Manufacturing Facility
- 3-D Microemulsion® Case Study: Combined Remedy Protects Michigan Neighborhood

Table 2: Remedial Design Parameters Summary

Target Treatment Zone (TTZ) Info	Unit	Value
Barrier Length	ft	185
Top Treat Depth	ft	3.0
Bot Treat Depth	ft	12.0
Vertical Treatment Interval	ft	9.0
Treatment Zone Volume	ft^3	16,650
Treatment Zone Volume	cy	617
Soil Type	---	sand
Porosity	cm^3/cm^3	0.33
Effective Porosity	cm^3/cm^3	0.20
Treatment Zone Pore Volume	gals	41,102
Treatment Zone Effective Pore Volume	gals	24,910
Treatment Zone Pore Volume	liters	155,586
Treatment Zone Effective Pore Volume	liters	94,295
Fraction Organic Carbon (foc)	g/g	0.002
Soil Density	g/cm^3	1.7
Soil Density	lb/ft^3	108
Soil Weight	lbs	1.8E+06
Hydraulic Conductivity	ft/day	8.5
Hydraulic Conductivity	cm/sec	3.00E-03
Hydraulic Gradient	ft/ft	0.015
GW Velocity	ft/day	0.64
GW Velocity	ft/yr	233

Performance Monitoring

To measure performance at your site, we recommend the following analytical parameters be collected at key wells within the zone of influence of treatment.

In-Situ Anaerobic Bioremediation Performance Monitoring Parameters	
Analytical Parameter	**Method**
Contaminants of Concern (COC's)	Varies
pH	Meter reading taken in flow-through cell (DO can also be measured with a Hach kit)
Dissolved Oxygen (DO)	
Oxidation Reduction Potential (ORP)	
Total Fe	Colorimetric Hach Method or EPA 6000 series with filtered and unfiltered samples
Total Mn	
Dissolved Fe	
Dissolved Mn	
Sulfate	EPA 375.3 or EPA 9056
Sulfide	EPA 376.1
Nitrate	EPA 353.1 or EPA 9056
Total Organic Carbon (TOC)	EPA 415.1 or EPA 9060
Alkalinity	EPA 310.2
Chloride	EPA 300
Methane, Ethane, Ethene, CO2	ASTM D1945

Design Verification Testing (DVT)

Design Verification Testing (DVT) is a term used to describe a suite of field sampling/testing activities carried out before implementing a subsurface substrate injection program. The purpose is to verify that the subsurface conditions at the selected application location match those conditions used in the design. Performing the DVT step provides critical data input to the design team allowing to adjust the necessary elements in the design. These design adjustments significantly improve substrate placement and result in an overall improvement in remedial performance and a reduction in overall project cost. Additional information regarding our DVT program can be found via the following link: **DVT TECHNICAL MEMO**

REGENESIS is recommending installing a FluxTracer in at the target wells (MW-5R). FluxTracer is a device that is deployed into the saturated screened interval of a monitoring well, that can accurately determine groundwater speed and chlorinated solvent mass flux, both are instrumental in the successful design of PlumeStop barriers. A FluxTracer unit consists of a series of 2-foot pre-strung canisters, that can be installed into a 2-inch monitoring well for approximately 2 weeks. Each canister contains activated carbon and biodegradable tracers. As groundwater naturally moves through the FluxTracer, contaminants are sorbed to the activated carbon, and the tracers are depleted from activated carbon. The amount of sorbed contaminants is used to determine mass flux, while the depletion of the tracers can estimate groundwater speed. Initial construction and lab analysis is completed by REGENESIS, leaving only the installation and retrieval to AECOM.

To best ensure a successful treatment, REGENESIS recommends design verification testing (DVT) be completed prior to the application of the proposed remedy.

Performance Objectives

This section only applied to the PlumeStop Barrier, not the source treatment.

Purpose/Goals

The purpose of this remedial approach is to address migration concerns near MW-5R. The goal will be to achieve reductions of PCE, TCE, DCE and VC below regulatory standards at the defined compliance wells downgradient of the PlumeStop permeable reactive barrier. The table below outlines the baseline concentrations for key performance monitoring wells.

TABLE 2: BASELINE CONTAMINANT CONCENTRATIONS

Well ID	Groundwater Sampling Date**	Tetrachloroethene (ug/L)*	Trichloroethene (ug/L)	Dichloroethene (ug/L)	Dichlorethane (ug/L)	Vinyl Chloride (ug/L)
MW-5R	5/2022	5.7	31	210	22	2.4

* groundwater sampling data reported in parts per billion (ppb)

** Based on groundwater sampling data as provided in Table 2 entitled "Validated Groundwater Sample Results" dated 2022.

Monitoring

To evaluate and measure performance at this site, monitoring wells MW-5R will be utilized. Within this proposal it is suggested that groundwater monitoring parameters will be collected after 3 months, and quarterly thereafter. To help support performance evaluations, REGENESIS requests the data collected be provided to us in a timely manner.

Qualifiers (Design Considerations)

Included below, a list of pertinent qualifiers has been provided to better define performance expectations at this site. REGENESIS will be happy to discuss these with you in detail.

- Seepage velocity/mass flux is a primary driver of dose for PlumeStop projects. This is the basis for our recommendation of Passive Flux Meters at your site.
- As indicated above MW-5R and MW-7 are the key wells which should be used to evaluate the performance of the PlumeStop barrier.
- Placement validation will be performed during the application to confirm proper reagent distribution and placement.

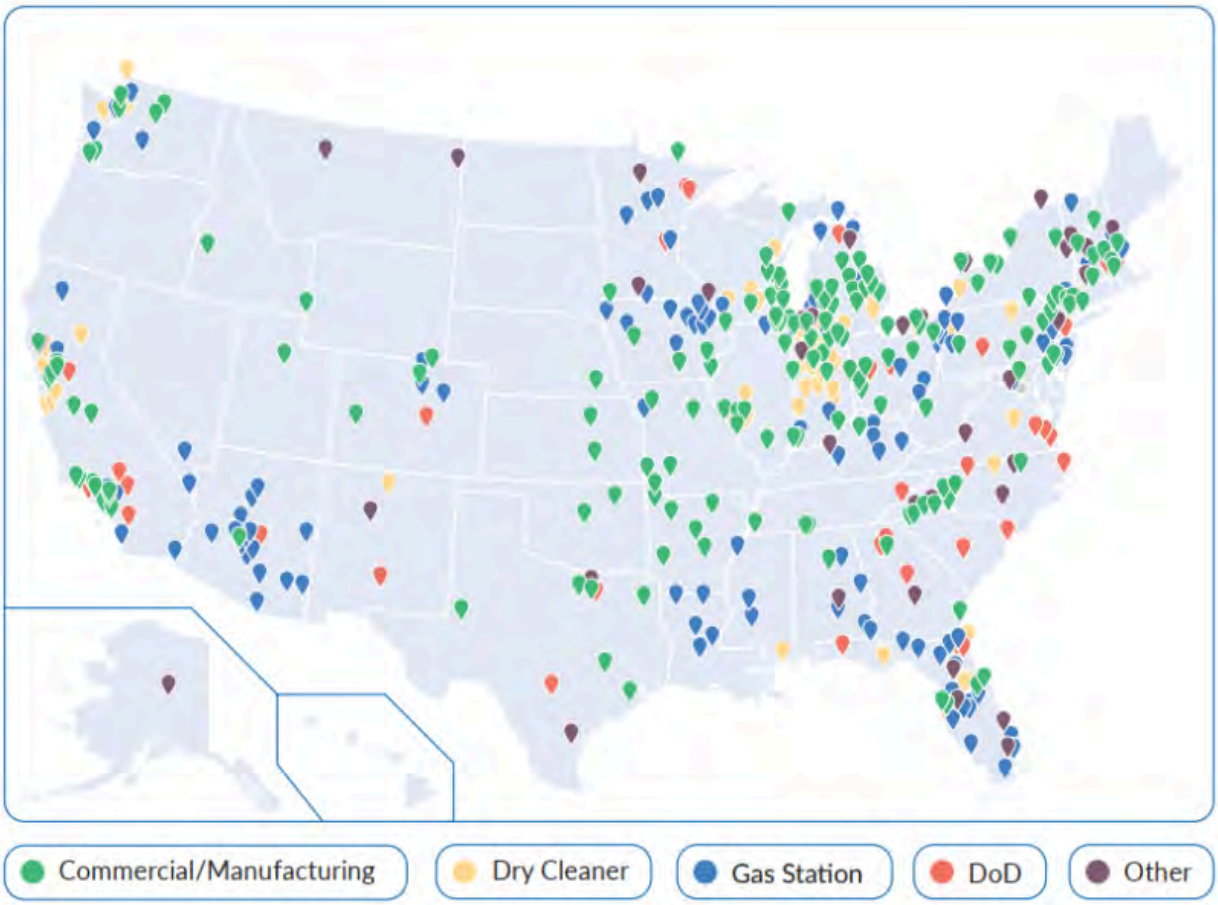
Statement of Qualifications

RRS provides turn-key remediation planning, design, and application services. RRS field scientists are college degreed professionals that understand an accurate remediation design using the proper chemistry and appropriate dosage can fail to show good performance if management of the injection program is not performed in a manner to validate the intended treatment rationale and design. They have the unique background and experience to understand the significance of modifications made in the field. No one has more professional experience handling and applying in-situ remediation products than RRS personnel. The direct management of the injection program through RRS will optimize the design and ultimately the overall performance of the injection program.

For years, RRS has been offering industry-leading application services combined with excellence in field activity management. Our success is achieved after meeting cleanup objectives established by the environmental engineering firms who contract our services. To produce this outcome, we field project teams with the experience, discipline and dedication to work hand-in-hand with our client to address the unique requirements of each project site. Technical insight and timely, direct, and honest communication are hallmarks of RRS. Our reputation for meeting or exceeding clients' objectives and those of environmental regulators have been proven in project successes throughout North America.

With decades of application experience, our Field Service Team is strategically located across the country to mobilize and assist on a wide range of sites throughout the US.

Over 100 Projects Completed Annually Across the US



RRS Scope of Services

RRS will work under the direction of AECOM to implement the fieldwork associated with the application of the selected remediation technologies. Responsibilities for the implementation of this scope of work will be shared between RRS and AECOM. Responsibilities for each are outlined in this section and further under the Assumptions/ Qualification section.

At the beginning of each day, a safety tailgate meeting will be conducted and an overview of the procedures, responsibilities, and goals for the day will be discussed. RRS will be equipped with multiple injection tool options to use with 1.5-inch diameter DPT rods.

The injection tool string will be advanced to the top or bottom of the TTZ and injections will be performed in a bottom-up or top-down method depending on site and lithology conditions. The remediation technologies will be mixed in an injection trailer (Figure 2) with water in batches at the designated solution percentage and kept in constant suspension throughout the injection application. Pressures, flow rates, and total volume will be monitored and digitally documented for each injection interval. Multiple injection points may be injected into simultaneously to increase efficiencies on-site. The injection points and surrounding areas will be monitored for any signs of surfacing and a spill response kit will be on standby.

During the application, real-time information will be collected and analyzed to help verify design assumptions and subsurface reagent distribution. Depending on the primary product applied, data collected and analyzed may consist of groundwater quality parameters (i.e., pH, conductivity, DO, ORP, etc.), depth to water measurements, visual indicators through groundwater or soil samples, and in-field injection concentration test kits. This information is typically collected during the application when within 10 feet of an appropriately screened monitoring well. Based on the information collected, the project team may choose to modify the remediation design to further optimize the injection application. This includes modification to injection concentrations, volume per vertical foot, injection intervals, etc.

Once the injection event is completed, RRS will demobilize all equipment and personnel off-site. A detailed injection summary report which includes injection point data (interval depths, injection pressure/flow rates, reagent volume, time elapsed and if surfacing occurred), field observations and any other noteworthy information will be generated and made available to AECOM.

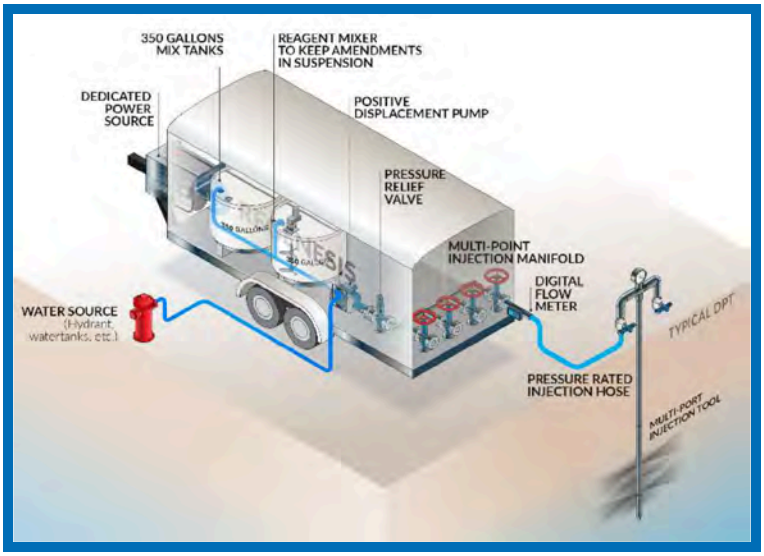


Figure 2: RRS Application Trailer

Scope of Services Summary (Both Areas)	
Application Type	Direct-Push Injection
Volume	18,326 gallons
# of Injection Points	57
Days of Injection	8
Direct-Push Services Provided by	**AECOM**

Project Responsibilities

RRS will:

- Provide and ship the specified quantities of the remediation reagents to the site address provided by AECOM. RRS shipping estimates assume all products will be shipped to the site at the same time.
- Coordinate with AECOM prior to any shipment of product. Alternative shipping locations or phases could lead to an increase in freight costs.
- Mobilize a 40-hour HAZWOPER certified crew experienced in the proper application of REGENESIS remediation technologies.
- Provide a forklift to maneuver the product containers for the duration of the project.

AECOM will:

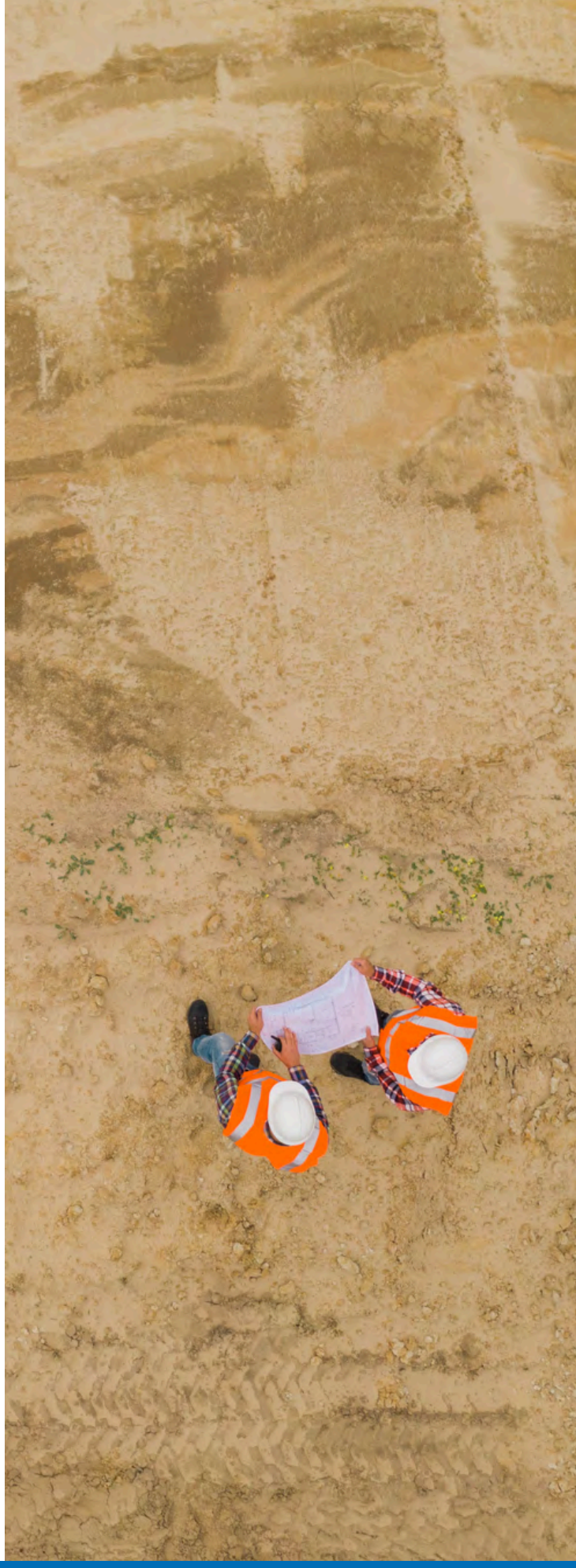
- Coordinate project schedule and reagent order with REGENESIS to ensure adequate shipping and mobilization time.
- Coordinate site access with property owner to coincide with project schedule and identify a secure product staging area.
- Should private underground utilities be within the treatment area, AECOM will contract with a private utility locating service to mark utilities prior to RRS mobilization. RRS can provide costs if requested.
- Provide a water source (e.g. hydrant) capable of producing at least 30 GPM for the duration of the project within 300 ft. of the project staging area, at no cost to RRS.
- Responsible for transportation and disposal of any contaminated waste generated on-site during injection activities, though we do not anticipate generating any such waste during injection activities.
- Contract a qualified, licensed DPT drilling operator equipped with the necessary tooling and materials to safely complete the application scope of work outlined within this proposal

Services Assumptions and Qualifications

In generating this proposal, REGENESIS relied upon professional judgment and site-specific information provided by others. Using this information as input, we performed calculations based upon known chemical and geologic relationships to generate an estimate of the mass of product and subsurface placement required to affect remediation of the site. The attached design summary tables specify the assumptions used in preparation for this technical design. We request that these modeling input assumptions be verified by your firm prior to application of the product. Other assumptions and qualifications related to this proposal are as follows:

- The product and services cost outlined will be valid for 60 days from date of proposal. If beyond 60 days, REGENESIS reserves the right to update cost.
- The freight charges included for product delivery above are estimated at the time of proposal generation. Actual freight charges are neither set nor guaranteed by REGENESIS and are calculated when the product order is placed. This price may vary from what is estimated above. Actual freight charges for product delivery will be invoiced.
- Freight delivery time frames cannot be guaranteed and RRS will not be responsible for any delays or any resulting increase in cost associated with those delays.
- If applicable, sales tax charges for product, freight, and services are considered estimated at the time of proposal submittal. The appropriate sales tax category (i.e., product, freight, and services) and actual sales tax rate is finalized at the time of invoice and may change from date of proposal submittal.
- AECOM personnel will take delivery of the remediation chemistry prior to RRS mobilization and stage inside a secure storage location where the material will not be affected by inclement weather. RRS will provide a sea shipping container rental for such storage.
- AECOM is responsible for disposal or recycling of totes, drums, pails and pallets. All non-hazardous refuse will be collected and placed in a AECOM-provided an on-site refuse container for disposal. RRS will collect project-related refuse and empty treatment chemistry containers daily to keep the site clean.
- RRS will have access to the site for equipment operation and secure storage of materials and equipment throughout the duration of the project. All access to each work area location will be clear and free of obstructions. RRS also assumes the injection trailer will be staged within 80 feet of the furthest injection point location.
- AECOM will provide a field water quality meter similar to a YSI 556 with a down-hole sensor, a water level meter, bailers, and a technician while on-site for injection activities to assist RRS in assessing groundwater from monitoring wells.
- AECOM is responsible for securing any permits prior to mobilizing to the site.
- AECOM is responsible for all soil, air, and groundwater sampling and analysis.
- AECOM is responsible for transportation and disposal of any contaminated waste generated on-site, though we do not anticipate generating any such waste during direct push injection activities.
- For safety reasons, access to the treatment area will be limited to RRS and AECOM personnel.
- The remediation design and injection procedures contain the necessary precautions to minimize the likelihood of surfacing the treatment chemistry. RRS will monitor treatment chemistry application flow rates and pressures as well as observe for signs of reagent surfacing around active injection areas. If surfacing is detected, RRS will stop or slow down injection activities at that location to stop additional surfacing and remove/vacuum up recoverable surfaced fluid. RRS is not responsible for treatment chemistry infiltration into undesired locations beyond our visible control.

- RRS personnel will have access to the site for work up to 12 hours per day Monday through Friday (daylight hours). However, the standard workday does not exceed 10 hours with travel time Monday through Friday. A 10-hour workday does not mean 10 hours on-site and/or injection pumping. Additional charges may apply for Saturday and/or Sunday work schedules.
- RRS is not responsible for damage to unmarked utilities and subsurface structures. AECOM will review as-built drawings with RRS to confirm clearance prior to advancing DPT injection tooling and marking injection point locations.
- Pricing and work schedule assume union labor and prevailing wages (Davis-Bacon) are not required.
- This proposal assumes probing and drilling will begin at the ground surface. If hand auger, concrete/asphalt coring, or air knife services are required, additional charges, including surface restoration charges could apply.
- RRS assumes that direct-push style drill rig can access all injection point locations and drive injection tooling to the required depth. If site conditions limit the use of the provided direct-push rig for any injection point and other drilling methods are required to complete the task, additional charges will apply.
- All traffic control requirements, if necessary, will be provided by AECOM.
- All injection points will be closed/backfilled with bentonite to ground surface by RRS. Additional costs associated with restoration of the ground surface have not been included. If restoration of the ground surface is needed, additional charges will apply.
- Site conditions can change over time and should be monitored post-injection. REGENESIS is not responsible for changing site conditions after completing the scope of work and demobilizing from the site. This includes but is not limited to changes related to borehole abandonment (i.e., swelling of backfill material), surface restoration, well conditions, and on-site utilities.



Health and Safety Plan

REGENESIS is committed to providing a safe and healthy working environment for all employees, AECOMs and contractors on-site. Prior to mobilization RRS will develop a site-specific Health and Safety Plan (HASP) and designate an on-site safety officer. All personnel on-site are required to participate in daily safety tailgate meetings with the goal of proactively identifying potential hazards and mitigating risks to the full extent possible.

In addition to the hours of rigorous safety training courses all personnel are required to complete, REGENESIS also incorporates a behavior-based safety program by utilizing our DoneSafe mobile application (app) interface on every site. This app encourages our personnel to actively search for potential on-site risks and document mitigation actions taken. The effectiveness of our safety program can be seen in our industry-leading EMR ratings listed in Table 3.

Year	Total Hours	EMR
2021	125,592	0.71
2020	162,037	0.64
2019	169,964	0.66
2018	144,600	0.70
2017	140,706	0.70

RRS safety tailgate meetings and HASP will include the following:

- Site map with entrance and exit points and best possible muster points depending on conditions.
- List of personnel and contact information for employees on-site and supporting the project.
- Route to the nearest occupational treatment facility and hospital along with contact information.
- Job Hazard Analysis (JHA) detailing each job task on-site with its potential hazards and best practices to avoid those hazards.
- Description and hazards of the contaminants of concern (COC) with appropriate Personal Protection Equipment (PPE) requirements.
- COVID-19 precautions will be discussed, and personnel will be equipped with face coverings.
- List and description of REGENESIS chemicals on-site including a Safety Data Sheet (SDS) for each chemical.
- Checklist of site safety equipment including fire extinguishers, eyewash station, first aid kit, spill prevention kit, and any site-specific equipment needed.
- Daily Tailgate safety meeting sheet with identified hazards and risks associated with the site and job tasks for that day, along with shared learning observations from the previous day.

Detailed Design Table

Project Info		
Bernzomatic Medina, NY MW-5R Barrier		
Prepared For:		
Kevin Connare, AECOM		
Target Treatment Zone (TTZ) Info	**Unit**	**Value**
Barrier Length	ft	185
Top Treat Depth	ft	3.0
Bot Treat Depth	ft	12.0
Vertical Treatment Interval	ft	9.0
Treatment Zone Volume	ft^3	16,650
Treatment Zone Volume	cy	617
Soil Type	---	sand
Porosity	cm^3/cm^3	0.33
Effective Porosity	cm^3/cm^3	0.20
Treatment Zone Pore Volume	gals	41,102
Treatment Zone Effective Pore Volume	gals	24,910
Treatment Zone Pore Volume	liters	155,586
Treatment Zone Effective Pore Volume	liters	94,295
Fraction Organic Carbon (foc)	g/g	0.002
Soil Density	g/cm^3	1.7
Soil Density	lb/ft^3	108
Soil Weight	lbs	1.8E+06
Hydraulic Conductivity	ft/day	8.5
Hydraulic Conductivity	cm/sec	3.00E-03
Hydraulic Gradient	ft/ft	0.015
GW Velocity	ft/day	0.64
GW Velocity	ft/yr	233
Application Dosing	**Unit**	**Value**
PlumeStop to be Applied	**lbs**	**6,400**
S-MZVI to be Applied	**lbs**	**1,200**
AquaFix to be Applied	**lbs**	**3,200**
BDI Plus to be Applied	**Liters**	**18**

PlumeStop® Application Design Summary

MW-5R Barrier

PlumeStop + S-MZVI		Technical Notes
Treatment Type	**Barrier**	
Distance Perpendicular to Flow (ft)	185	Injection Radius for Soil Coverage (ft-est ave.)
Spacing Within Rows (ft)	5	3.8
Number of Rows	1	
DPT Injection Points	**37**	PlumeStop Inject. Conc. (mg/L)
Top Application Depth (ft bgs)	3	10,273
Bottom Application Depth (ft bgs)	12	
PlumeStop to be Applied (lbs)	**6,400**	
PlumeStop to be Applied (gals)	710	
In Situ Chemical Reduction - S-MZVI		**Special Instructions:**
S-MZVI to be added to PlumeStop (lbs)	**1,200**	
S-MZVI to be added to PlumeStop (gals)	79	
PlumeStop + S-MZVI Volume Totals		
Mixing Water (gal)	14,221	
Total Application Volume (gals)	**15,021**	
Injection Volume per Point (gals)	406	
Anaerobic Bioremediation - AquaFix		
AquaFix to be Applied (lbs)	**3,200**	
AquaFix per point (lbs)	86	
Bioaugmentation - BDI Plus		
BDI Plus Application Points	**37**	
BDI Plus to be Applied (liters)	**18**	
BDI Plus per point (Liters)	0.5	

Prepared by: Ian Doliana - Design Specialist
Date: 3/24/2023

Detailed Design Table (continued)

Project Information		
Bernzomatic		
Medina, NY		
Source Area		
Prepared For:		
Kevin Connare, AECOM		
Target Treatment Zone (TTZ) Info	**Unit**	**Value**
Areal Extent	sq ft	1,640
Top Treat Depth	ft	3.0
Bot Treat Depth	ft	12.0
Vertical Treatment Interval	ft	9.0
Treatment Zone Volume	ft^3	14,760
Treatment Zone Volume	cy	547
Soil Type	---	sand
Porosity	cm^3/cm^3	0.33
Effective Porosity	cm^3/cm^3	0.20
Treatment Zone Pore Volume	gals	36,436
Treatment Zone Effective Pore Volume	gals	22,082
Fraction Organic Carbon (foc)	g/g	0.002
Soil Density	g/cm^3	1.7
Soil Density	lb/ft^3	108
Soil Weight	lbs	1.6E+06
Hydraulic Conductivity	ft/day	8.5
Hydraulic Conductivity	cm/sec	3.00E-03
Hydraulic Gradient	ft/ft	0.015
GW Velocity	ft/day	0.64
GW Velocity	ft/yr	233
Application Dosing		
3-D Microemulsion to be Applied	**lbs**	**1,200**
S-MZVI to be Applied	**lbs**	**1,000**
BDI Plus to be Applied	**liters**	**18**

3-D Microemulsion®, S-MZVI®, BDI® Plus Application Design Summary		
Source Area		
Treatment Type	**Grid**	
Treatment Areal Extent (sq ft)	1,640	
Spacing Within Rows (ft)	9	
Spacing Between Rows (ft)	9	
DPT Injection Points	20	
Top Application Depth (ft bgs)	3	**Field Mixing Ratios**
Bottom Application Depth (ft bgs)	12	3DME Concentrate per Pt (gals)
3DME to be Applied (lbs)	**1,200**	7
3DME to be Applied (gals)	144	Mix Water per Pt (gals)
3DME Mix %	4%	169
Volume Water (gals)	**3,385**	3DME Mix Volume per Pt (gals)
3DME Mix Volume (gals)	3,529	176
S-MZVI to be Applied (lbs)	**1,000**	S-MZVI Volume per Pt (gals)
S-MZVI Volume (gals)	66	3
BDI Plus to be Applied (L)	**18**	BDI Volume per Pt (L)
		0.9
Total Application Volume (gals)	**3,600**	Volume per pt (gals)
		180
Prepared by: Ian Doliana - Design Specia		Volume per vertical ft (gals)
Date: 3/23/2023		20
Technical Notes/Discussion		

AquiFix Technical Description

AquiFix™ is an innovative electron donor designed to be compatible and co-injectable with PlumeStop. AquiFix is formulated with both fast-acting as well as long-lasting, slow releasing electron donor materials to drive the biodegradation of chlorinated solvents present in the groundwater. This formulation includes a solid phase source of fatty acids and beneficial nutrients to support the dechlorinating microbe population. It is designed to initially provide a rapid release of organic carbon to quickly establish a reducing environment and provide a hydrogen source to dechlorinating bacteria then followed by slow-release fatty acids to promote and sustain the reductive dechlorination of cVOCs. While the slow-release feature will decrease the frequency of re-application of the product, AquiFix's key benefit is its mobility and compatibility with PlumeStop. This solid-phase organic donor causes minimal interference with target contaminants for adsorption onto activated carbon, enabling AquiFix to be co-injected with the Liquid Activated Carbon safely. In summary, the function of AquiFix is to:

- Serve as a PlumeStop-compatible electron donor to support enhanced reductive dechlorination.
- Quickly create reducing conditions and acclimate dechlorinating bacteria by providing a fast-degrading source of organic carbon.
- Provide a slow-release fatty acids that extends the time between re-applications and offers bacteria a low-level source of organic carbon for efficient and sustained degradation.

Chemical Composition

- Emulsified solid fatty acids
- Sodium lactate
- Water
- Proprietary additives

Properties

Physical State	Liquid
Form	Aqueous suspension
Color	Cream
Odor	Slight
pH	~4.0-6.0 in a 10% Solution
Density	8.34 lb/gal
Viscosity	10-200 cP @ 25° C

Application

AquiFix is diluted with water on site and easily applied with PlumeStop into the subsurface through low-pressure injections using injection wells or by direct push methods.

Storage and Handling Guidelines

Storage

- Shelf life of 1 year
- Store in original tightly closed container
- Store away from incompatible materials (see SDS)
- Store at (40°F to 95°F)
- Do not allow product to freeze or store in direct sunlight

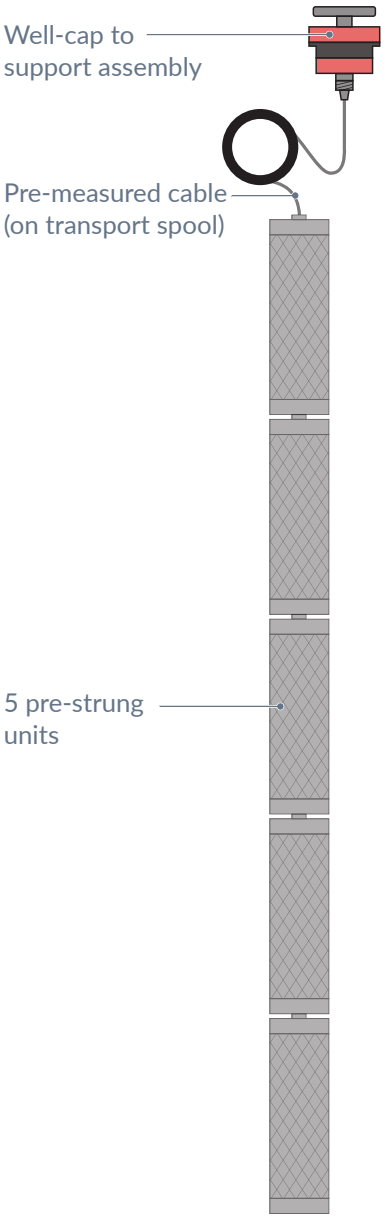
Handling

- Avoid contact with skin and eyes
- Wear appropriate protective equipment
- Do not taste or swallow
- Observe good industrial hygiene practices
- Dispose of waste and residue in accordance with the local authority requirements

Health and Safety

The material is relatively safe to handle, but avoids contact with eyes, skin and clothing. OSHA Level D personal protection equipment including vinyl or rubber gloves and eyes protection are recommended when handling this product. Please review the Safety Data Sheet (SDS) for additional information

FluxTracer®
Flux Mapping Tool



Specification Sheet

FluxTracer® Flux Mapping Tools are easy-to-use devices that vertically delineate contaminant mass flux and groundwater speed within an existing monitoring well to aid in site characterization and remedial designs. The FluxTracers consist of five separate two-foot-long stainless-steel screen canisters that are secured in series on a pre-measured central wire line equipped with a modified J-Plug well cap. FluxTracers are always pre-assembled, arriving at your site ready to deploy with no on-site construction required. The unique design provides joint-like flexibility between the closely stacked canisters to easily install and remove from a well.

Each FluxTracer canister is filled with granular activated carbon pre-loaded with biodegradable tracers. The tracers are composed of five different alcohols each having well-known partitioning characteristics with the activated carbon. As groundwater passively flows through a FluxTracer canister over the deployment period, the alcohol tracers are depleted from the activated carbon, with the net loss of the tracers directly correlating to the groundwater speed. At the same time, any contaminants present in the groundwater adsorb to the activated carbon during the deployment period. The total mass of contaminants accumulated on the activated carbon is then quantified and the contaminant mass flux is calculated.

A study consists of a FluxTracer installation into a well across a predetermined vertical interval of the saturated zone. The FluxTracer unit is typically in the well for two weeks and then retrieved. Once removed from the well, the FluxTracer devices are simply repackaged into the provided sleeves with zip ties and returned to the REGENESIS Lab for analysis. No on-site disassembly or sampling is required.

Upon receipt in the REGENESIS lab, each FluxTracer canister's contents will be sampled and analyzed at one-foot intervals. From those analyses, an accurate vertical profile of contaminant mass flux ($mg/m^2/day$) and groundwater Darcy flux (speed) (cm/day) is generated, and the results are provided in a report. The generated data provides remedial designers with important information on the flux zones within the aquifer, which ultimately aids to improve the results of remediation efforts.

FluxTracer®
Flux Mapping Tool

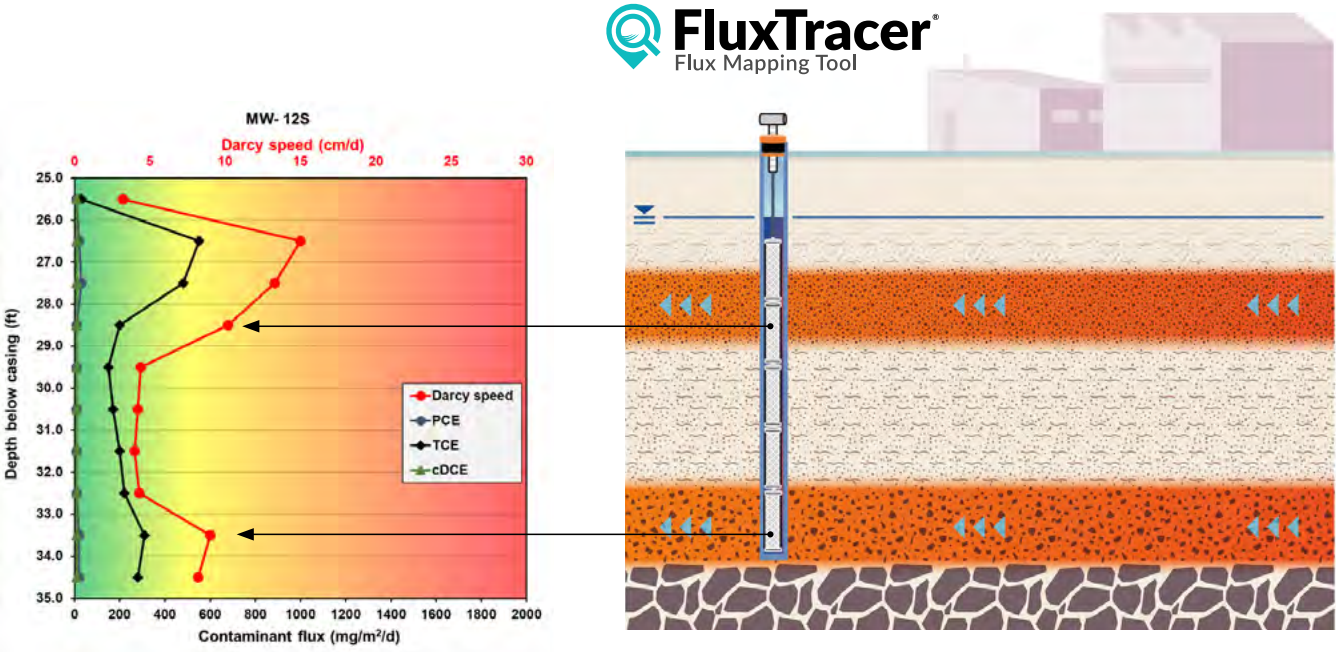


Illustration of a FluxTracer installed in a heterogeneous aquifer, and the ability to identify higher water and contaminant flux zones in an example data set.

FluxTracer®
Flux Mapping Tool

Storage and Handling Guidelines

- Follow all installation and retrieval directions.
- Store the FluxTracers in the original shipping cooler until deployment. The cooler should be stored in a cool, dark location until deployment.
- Do not remove the FluxTracers from the packaging until the time of deployment.
- FluxTracers should be deployed within five days of receipt.
- Wear appropriate personal protective equipment when handling.

Applications

- REGENESIS currently only offers FluxTracer units for 2-inch diameter schedule 40 PVC wells.
- FluxTracers are currently only appropriate for determining contaminant flux of chlorinated VOCs: PCE, TCE, and cDCE.

1011 Calle Sombra, San Clemente, California 92673 T: (949) 366-8000 www.REGENESIS.com

REGENESIS®

FluxTracer®
Flux Mapping Tool

Installation and Retrieval Instructions

The following document outlines the procedures for installing, retrieving, and returning the REGENESIS® FluxTracer® device.

Equipment Checklist

REGENESIS will construct and ship a fully contained, ready to install FluxTracer. There is minimal preparation required to install and retrieve the FluxTracer.

Materials provided by REGENESIS

- FluxTracer device (fully assembled)
- Blue ice
- Pair of wire cutters for unpacking
- 10' x 10' tarp
- Chain of custody form
- FluxTracer return kit (used to package the device for return to REGENESIS)

Return kit contents:

- Zip ties to secure FluxTracer canisters inside return sleeves
- Plastic cover sleeves (one per canister plus extra)
- Large plastic bag

Tools that are not provided but are required for installation and retrieval:

- Water level indicator
- Tools to access monitoring well (e.g. socket set/open end wrenches)
- PPE

Installation Instructions

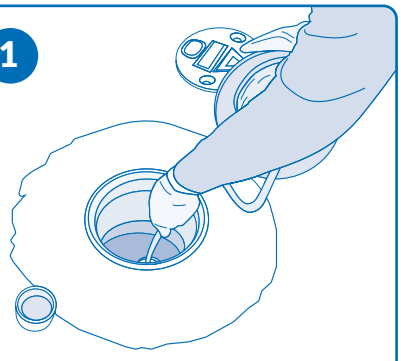
All installation materials that are listed in the REGENESIS-provided equipment section above will be included inside the cooler the device is shipped in.

Each FluxTracer device arrives fully assembled. Installation will require:

- Confirming the well depth
- Device unpacking
- Canister insertion
- Retaining S-clip attachment

Below is a detailed description of the installation process:

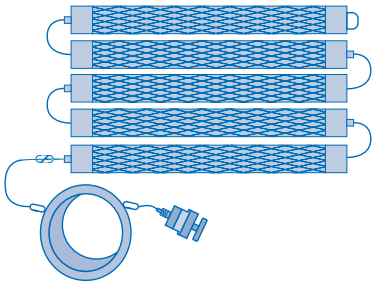
1



Measure and record the depth to groundwater and the total depth of the monitoring well on the Chain of Custody form.

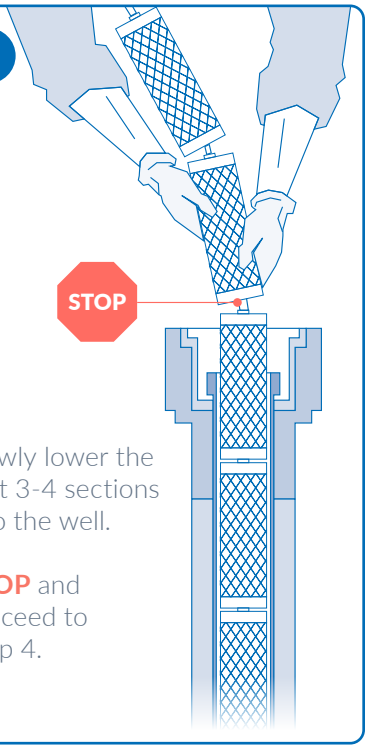
If the measurements do not match with what was provided to REGENESIS, pause the installation and contact REGENESIS for guidance.

2



Lay the FluxTracer on the tarp and remove the device from the plastic bag and individual sleeves. Use wire cutters to remove zip ties. Inspect device for damage and confirm that all carabineers are locked.

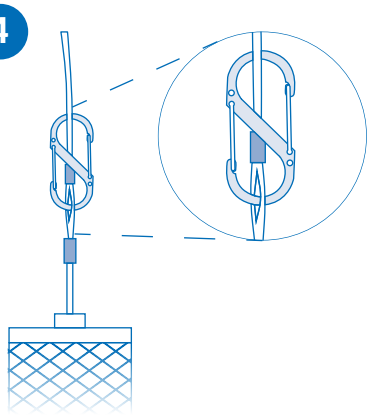
3



Slowly lower the first 3-4 sections into the well.

STOP and proceed to Step 4.

4



Clip one side of the retaining S-clip (already located on the center wire) in the gap between the two wires located just above the top canister. This clip guarantees the canisters remain together and in the correct position in the well.

5

Slide the remaining canisters down the well.

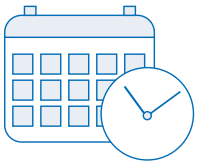
Unreel the centerline cable from the spool (if provided) until the hanger cap can be secured to the top of the monitoring well.

Tighten the hanger cap.

Cover the monitoring well lid.

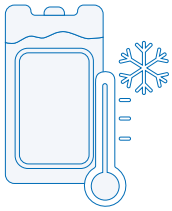
Verify that the device is fully suspended and that there is no slack on the line in the well.

6



Record the installation date and time on the chain-of-custody form.

7



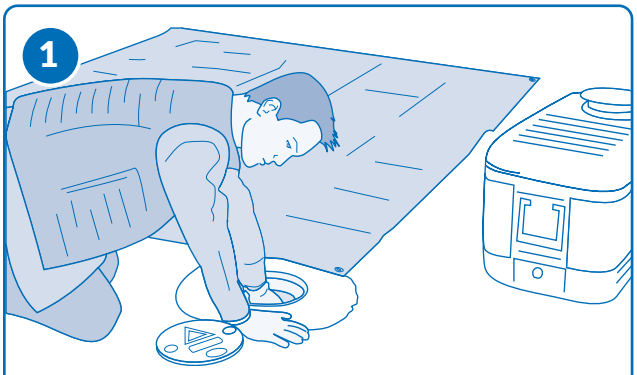
Store Blue Ice in a freezer until retrieval.

Retrieval Instructions

After the FluxTracer canisters have been installed inside of the monitoring well for the recommended deployment period, the units are ready to be retrieved and shipped back to REGENESIS.

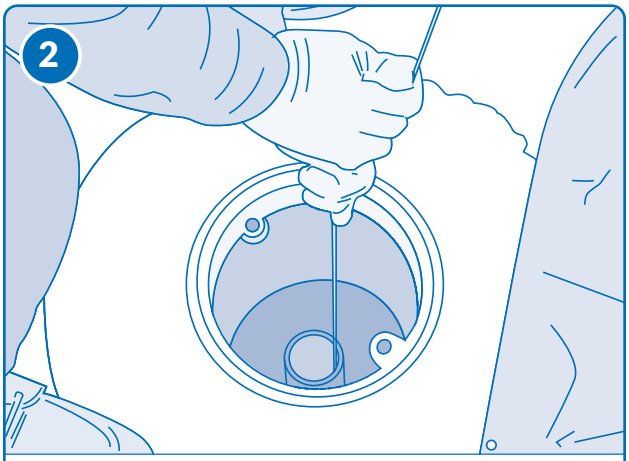
The FluxTracer canisters should be shipped via overnight shipping and with cold blue ice to preserve the alcohol tracers and contaminants for measurement. DO NOT PACK COOLER WITH WET ICE! Doing so may adversely affect the final data.

1



Lay the provided tarp near the monitoring well. Ensure that the return plastic bags (large and small) are available for packaging.

2

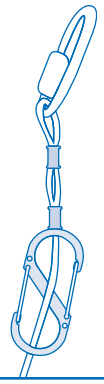


Loosen the hanger cap and pull the FluxTracer canisters out of the monitoring well by slowly pulling on the centerline cable. There may be a slight tension on the cable while pulling. It is helpful to wind the cable back onto the spool as you retireve the units.

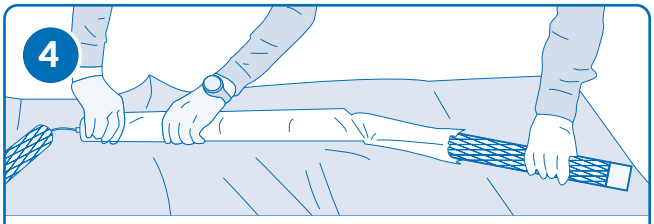
Take care not to lift and drop the FluxTracer inside of the monitoring well as this will wash additional alcohol tracers from the granular activated carbon which can result in skewed data.

3

Unclip the retaining S-clip from the gap between the wires and slide it up the cable.



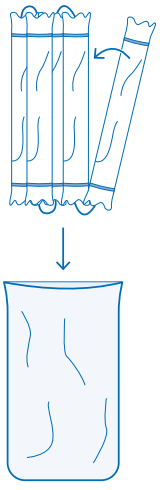
4



Lay the retrieved FluxTracer canisters on the tarp. Carefully slide the small plastic return bags over each FluxTracer canister. Secure a zip tie over the top and bottom of each canister as well as a zip tie over the plastic bag that extends onto the centerline cable. It is normal to have some water inside the return bags.

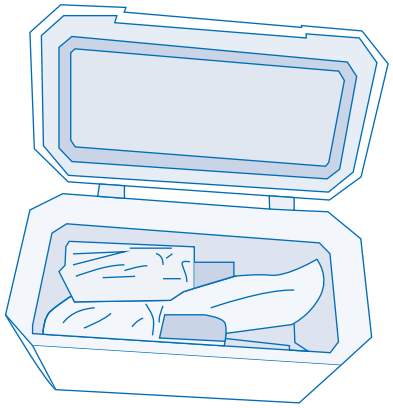
5

After the small plastic return sleeves have been secured around each FluxTracer canister, fold each unit together and place inside the large plastic return bag. Secure the large plastic return bag by tightening a zip tie around the top of the bag.



Instructions continue on the next page.

6



Pack the cooler:

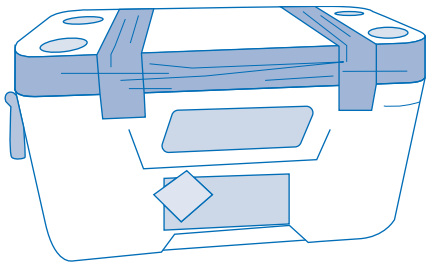
Place the plastic bag wrapped FluxTracer canisters inside the cooler and cover with blue ice.

Place the provided equipment inside the cooler, please crosscheck with equipment checklist.

Record the retrieval date and time as well as any issues that you may have observed (high ambient air temperatures, rain while installing, etc.) on the provided chain-of-custody. Take a picture of the COC and then place it inside the plastic document bag within the cooler.

Secure the cooler and close with duct tape.

7



Ship cooler to REGENESIS

Using the provided return label, ship the cooler overnight to REGENESIS. Please provide your REGENESIS lab contact with the shipping tracking number.

After retrieval, the device must be immediately shipped overnight back to REGENESIS **Monday-Thursday.**

Weekend receiving is **not** available.

Note: Use ground shipping label if device was **not** deployed.

Shipping address:

REGENESIS FluxTracer
1011 Calle Sombra
San Clemente, CA 92673
949-366-8000

FluxTracer®
Flux Mapping Tool

Important Technical Notes

- The FluxTracer is designed to be installed inside of a 2-inch diameter schedule 40 monitoring well.
- Take care not to drop or bend the FluxTracer canisters as this may affect the installation into a monitoring well.
- REGENESIS constructs each FluxTracer unit specific to the monitoring well targeted for installation. Therefore, it is critical to accurately measure the depth to water and total depth of the monitoring well and provide the recorded measurements to REGENESIS for FluxTracer construction. The FluxTracer should not be installed into sediment in a well as this will skew the data and can result in the FluxTracer becoming stuck in the monitoring well.

Storage and Handling Guidelines

- The FluxTracer should be installed within four days of receipt.
- Store the FluxTracer in the original shipping cooler until installation. The cooler should be stored in a cool, dark area until installation.
- Do not remove the FluxTracer from the packaging until the time of installation.

Health and Safety

REGENESIS recommends that a two-person crew be used to install and retrieve the FluxTracer. Recommended PPE for installation and retrieval include (but are not limited to): work gloves, safety glasses, and high visibility vests.

Consult your health and safety officer for site-specific requirements.

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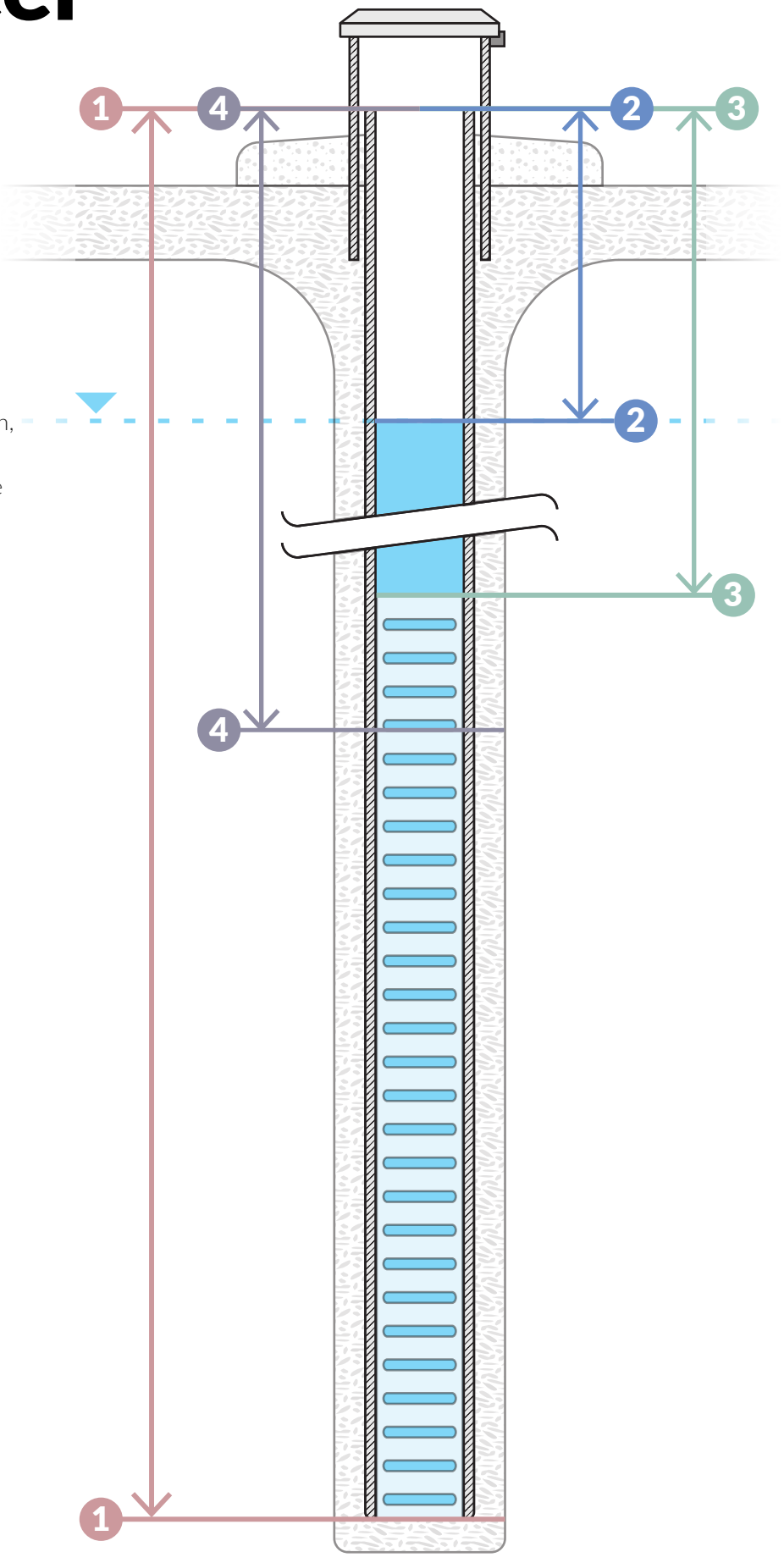


Measurement Guidelines

REGENESIS® will provide a customized, pre-assembled FluxTracer device using the measurements provided in this form, which will rest within the targeted 10 ft vertical interval of the tested monitoring well.

To ensure a successful FluxTracer installation, please follow the measurement guidelines when providing your well dimensions on the Well Evaluation Form.

Length Guide

All units in feet

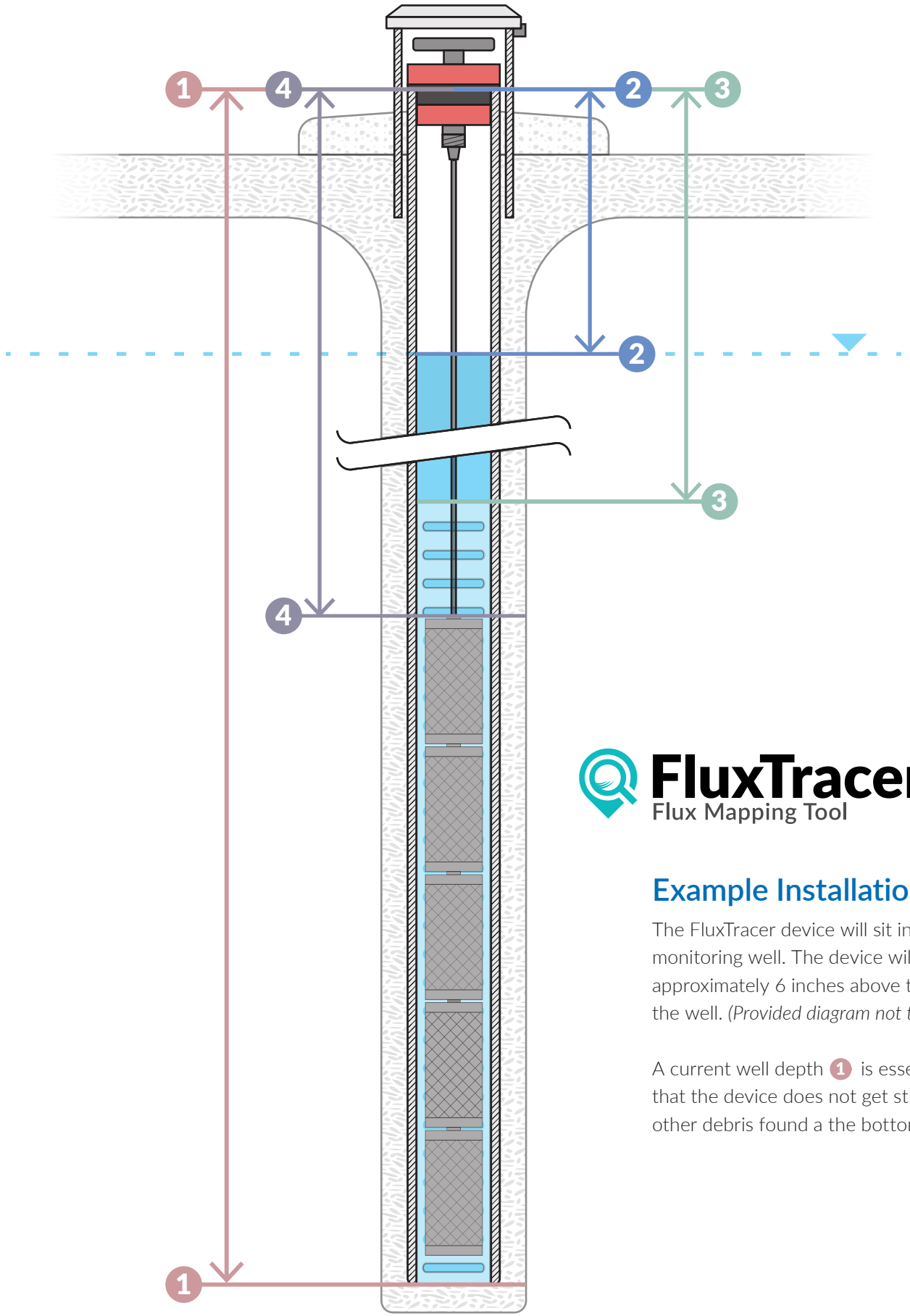
1 Total Depth
Measured from top of well casing to bottom/silt

2 Water Table
Anticipated depth to water at time of installation

3 Depth to Top of Screen
Measured from top of well casing to top of screened interval

4 Start of Target Interval
Depth the device will begin at.
For a 10' screen, 3 = 4

REGENESIS®



FluxTracer®
Flux Mapping Tool

Example Installation

The FluxTracer device will sit inside a monitoring well. The device will be suspended approximately 6 inches above the bottom of the well. *(Provided diagram not to scale.)*

A current well depth 1 is essential to ensure that the device does not get stuck in silt or other debris found a the bottom of the well.

Well Evaluation Form

REGENESIS

FluxTracer® Flux Mapping Tool

Important Information:

- Review the Measurement Guidelines and Example Installation
- I confirm the target well(s) total depth (1) has been measured within the past 3 months and is not obstructed to this reported depth. **REGENESIS is not responsible for devices that become stuck due to improperly reported well depths, materials or dimensions.**

Initials: _____

FORM NOT COMPLETE WITHOUT INITIALS

Remember to Include:

Please provide the following (when available):

- Site map with groundwater monitoring wells
- Representative boring logs/ cross sections
- Historical and current analytical tables
- Hydraulic parameters
- Geochemical data
- Potentiometric map

Site Information

Site Name _____ Customer Name and Company _____

Site Address _____ Lead Regulatory Agency _____

Receiving Address _____ Project Manager _____

Deployment Date _____ Phone _____ Email _____

Wells Targeted for FluxTracer Investigation

Using the included guidelines, fill in the table below:

Monitoring Well Name	Well Diameter	Device Length	Total Depth (feet) (1)	Water Table (feet) (2)	Depth to Top of Screen (feet) (3)	Start of Target Interval (feet) (4)	Contaminants of Concern	Installation Date/Time	Retrieval Date/Time
	2”								
	2”								
	2”								
	2”								

Note: Schedule 40 PVC only

Leave Blank Until Installation

Chain of Custody

Fill out before returning to REGENESIS.

Relinquished By	Date/Time	Received By	Date/Time

Please submit form to lab@regenesis.com. For additional questions please contact 949-366-8000

Attachment 4 - DER-10 Appendix 1A, New York State Department of Health Generic Community Air Monitoring Plan & DER-10 Appendix 1B Fugitive Dust and Particulate Monitoring

Appendix 1A
New York State Department of Health
Generic Community Air Monitoring Plan

Overview

A Community Air Monitoring Plan (CAMP) requires real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at the downwind perimeter of each designated work area when certain activities are in progress at contaminated sites. The CAMP is not intended for use in establishing action levels for worker respiratory protection. Rather, its intent is to provide a measure of protection for the downwind community (i.e., off-site receptors including residences and businesses and on-site workers not directly involved with the subject work activities) from potential airborne contaminant releases as a direct result of investigative and remedial work activities. The action levels specified herein require increased monitoring, corrective actions to abate emissions, and/or work shutdown. Additionally, the CAMP helps to confirm that work activities did not spread contamination off-site through the air.

The generic CAMP presented below will be sufficient to cover many, if not most, sites. Specific requirements should be reviewed for each situation in consultation with NYSDOH to ensure proper applicability. In some cases, a separate site-specific CAMP or supplement may be required. Depending upon the nature of contamination, chemical- specific monitoring with appropriately-sensitive methods may be required. Depending upon the proximity of potentially exposed individuals, more stringent monitoring or response levels than those presented below may be required. Special requirements will be necessary for work within 20 feet of potentially exposed individuals or structures and for indoor work with co-located residences or facilities. These requirements should be determined in consultation with NYSDOH.

Reliance on the CAMP should not preclude simple, common-sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Community Air Monitoring Plan

Depending upon the nature of known or potential contaminants at each site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary. Most sites will involve VOC and particulate monitoring; sites known to be contaminated with heavy metals alone may only require particulate monitoring. If radiological contamination is a concern, additional monitoring requirements may be necessary per consultation with appropriate DEC/NYSDOH staff.

Continuous monitoring will be required for all ground intrusive activities and during the demolition of contaminated or potentially contaminated structures. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching, and the installation of soil borings or monitoring wells.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil and sediment samples or the collection of groundwater samples from existing monitoring wells. "Periodic" monitoring during sample collection might reasonably consist of taking a reading upon arrival at a sample location, monitoring while opening a well cap or

overturning soil, monitoring during well baling/purging, and taking a reading prior to leaving a sample location. In some instances, depending upon the proximity of potentially exposed individuals, continuous monitoring may be required during sampling activities. Examples of such situations include groundwater sampling at wells on the curb of a busy urban street, in the midst of a public park, or adjacent to a school or residence.

VOC Monitoring, Response Levels, and Actions

Volatile organic compounds (VOCs) must be monitored at the downwind perimeter of the immediate work area (i.e., the exclusion zone) on a continuous basis or as otherwise specified. Upwind concentrations should be measured at the start of each workday and periodically thereafter to establish background conditions, particularly if wind direction changes. The monitoring work should be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment should be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment should be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

1. If the ambient air concentration of total organic vapors at the downwind perimeter of the work area or exclusion zone exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities must be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities can resume with continued monitoring.

2. If total organic vapor levels at the downwind perimeter of the work area or exclusion zone persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities must be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities can resume provided that the total organic vapor level 200 feet downwind of the exclusion zone or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less - but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.

3. If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shutdown.

4. All 15-minute readings must be recorded and be available for State (DEC and NYSDOH) personnel to review. Instantaneous readings, if any, used for decision purposes should also be recorded.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations should be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring should be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 micrometers in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level. The equipment must be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration should be visually assessed during all work activities.

1. If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques must be employed. Work may continue with dust suppression techniques provided that downwind PM-10 particulate levels do not exceed 150 mcg/m^3 above the upwind level and provided that no visible dust is migrating from the work area.

2. If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work must be stopped and a re-evaluation of activities initiated. Work can resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 particulate concentration to within 150 mcg/m^3 of the upwind level and in preventing visible dust migration.

3. All readings must be recorded and be available for State (DEC and NYSDOH) and County Health personnel to review.

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Appendix 1B
Fugitive Dust and Particulate Monitoring

A program for suppressing fugitive dust and particulate matter monitoring at hazardous waste sites is a responsibility on the remedial party performing the work. These procedures must be incorporated into appropriate intrusive work plans. The following fugitive dust suppression and particulate monitoring program should be employed at sites during construction and other intrusive activities which warrant its use:

1. Reasonable fugitive dust suppression techniques must be employed during all site activities which may generate fugitive dust.

2. Particulate monitoring must be employed during the handling of waste or contaminated soil or when activities on site may generate fugitive dust from exposed waste or contaminated soil. Remedial activities may also include the excavation, grading, or placement of clean fill. These control measures should not be considered necessary for these activities.

3. Particulate monitoring must be performed using real-time particulate monitors and shall monitor particulate matter less than ten microns (PM10) with the following minimum performance standards:

(a) Objects to be measured: Dust, mists or aerosols;
(b) Measurement Ranges: 0.001 to 400 mg/m3 (1 to 400,000 :ug/m3);
(c) Precision (2-sigma) at constant temperature: +/- 10 :g/m3 for one second averaging; and +/- 1.5 g/m3 for sixty second averaging;
(d) Accuracy: +/- 5% of reading +/- precision (Referred to gravimetric calibration with SAE fine test dust (mmd= 2 to 3 :m, g= 2.5, as aerosolized);
(e) Resolution: 0.1% of reading or 1g/m3, whichever is larger;
(f) Particle Size Range of Maximum Response: 0.1-10;
(g) Total Number of Data Points in Memory: 10,000;
(h) Logged Data: Each data point with average concentration, time/date and data point number
(i) Run Summary: overall average, maximum concentrations, time/date of maximum, total number of logged points, start time/date, total elapsed time (run duration), STEL concentration and time/date occurrence, averaging (logging) period, calibration factor, and tag number;
(j) Alarm Averaging Time (user selectable): real-time (1-60 seconds) or STEL (15 minutes), alarms required;
(k) Operating Time: 48 hours (fully charged NiCd battery); continuously with charger;
(l) Operating Temperature: -10 to 50^{o} C (14 to 122^{o} F);
(m) Particulate levels will be monitored upwind and immediately downwind at the working site and integrated over a period not to exceed 15 minutes.

4. In order to ensure the validity of the fugitive dust measurements performed, there must be appropriate Quality Assurance/Quality Control (QA/QC). It is the responsibility of the remedial party to adequately supplement QA/QC Plans to include the following critical features: periodic instrument calibration, operator training, daily instrument performance (span) checks, and a record keeping plan.

5. The action level will be established at 150 ug/m3 (15 minutes average). While conservative,

this short-term interval will provide a real-time assessment of on-site air quality to assure both health and safety. If particulate levels are detected in excess of 150 ug/m3, the upwind background level must be confirmed immediately. If the working site particulate measurement is greater than 100 ug/m3 above the background level, additional dust suppression techniques must be implemented to reduce the generation of fugitive dust and corrective action taken to protect site personnel and reduce the potential for contaminant migration. Corrective measures may include increasing the level of personal protection for on-site personnel and implementing additional dust suppression techniques (see paragraph 7). Should the action level of 150 ug/m3 continue to be exceeded work must stop and DER must be notified as provided in the site design or remedial work plan. The notification shall include a description of the control measures implemented to prevent further exceedances.

6. It must be recognized that the generation of dust from waste or contaminated soil that migrates off-site, has the potential for transporting contaminants off-site. There may be situations when dust is being generated and leaving the site and the monitoring equipment does not measure PM10 at or above the action level. Since this situation has the potential to allow for the migration of contaminants off-site, it is unacceptable. While it is not practical to quantify total suspended particulates on a real-time basis, it is appropriate to rely on visual observation. If dust is observed leaving the working site, additional dust suppression techniques must be employed. Activities that have a high dusting potential--such as solidification and treatment involving materials like kiln dust and lime--will require the need for special measures to be considered.

7. The following techniques have been shown to be effective for the controlling of the generation and migration of dust during construction activities:

(a) Applying water on haul roads;
(b) Wetting equipment and excavation faces;
(c) Spraying water on buckets during excavation and dumping;
(d) Hauling materials in properly tarped or watertight containers;
(e) Restricting vehicle speeds to 10 mph;
(f) Covering excavated areas and material after excavation activity ceases; and
(g) Reducing the excavation size and/or number of excavations.

Experience has shown that the chance of exceeding the 150ug/m3 action level is remote when the above-mentioned techniques are used. When techniques involving water application are used, care must be taken not to use excess water, which can result in unacceptably wet conditions. Using atomizing sprays will prevent overly wet conditions, conserve water, and provide an effective means of suppressing the fugitive dust.

8. The evaluation of weather conditions is necessary for proper fugitive dust control. When extreme wind conditions make dust control ineffective, as a last resort remedial actions may need to be suspended. There may be situations that require fugitive dust suppression and particulate monitoring requirements with action levels more stringent than those provided above. Under some circumstances, the contaminant concentration and/or toxicity may require additional monitoring to protect site personnel and the public. Additional integrated sampling and chemical analysis of the dust may also be in order. This must be evaluated when a health and safety plan is developed and when appropriate suppression and monitoring requirements are established for protection of health and the environment.