



July 2, 2025

Ms. Nicole L. Hinze
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233

**RE: THIRD ADDENDUM TO REMEDIAL INVESTIGATION WORK PLAN
Rickett's Dry Cleaners – Site # 546058
2017-2019 DOUBLEDAY AVENUE, BALLSTON SPA, NEW YORK
(HRP # DEC1002.P3)**

Dear Ms. Hinze:

On February 27, 2020, HRP Associates, Inc. (HRP) was authorized to complete this New York State Department of Environmental Conservation (NYSDEC) Work Assignment (WA) No. 2 (D009808-02) for Remedial Investigation/Feasibility Study (RI/FS) at the Rickett's Dry Cleaners site, located at 2017-2019 Doubleday Avenue, Ballston Spa, New York (the Site). The Site is depicted on **Figure 1**.

HRP completed the initial phase of the investigation in accordance with the RI Work Plan (RIWP) dated July 15, 2020. During this initial phase of RI work, the source area of Site contamination, which was suspected to exist beneath the former dry-cleaning building, was not accessible due to the building's dilapidated condition and the presence of friable asbestos. In March 2022, demolition of the Site building was completed, allowing for additional investigation within the building footprint. Source area investigations were completed in May and June 2022 in accordance with the First RIWP Addendum dated May 17, 2022. In April 2024, further investigation was completed to define the nature and extent of the suspected onsite source of groundwater contamination in accordance with the Second RIWP Addendum dated August 3, 2023. Based on analysis of the data collected during the RI investigation to date, further delineation is required to define the areal and vertical extent of contamination emanating from the Site.

The purpose of this RIWP Addendum is to outline the proposed additional RI activities. The activities described in this work plan addendum are to be completed in general accordance with the RIWP, including the Field Activities Plan (FAP), Health and Safety Plan (HASP), Community Air Monitoring Program (CAMP, **Appendix A**), Quality Assurance Project Plan (QAPP), as well as HRP's generic FAP, HASP, and QAPP.

Based on analysis of Site data collected to date, field observations made during and following the completion of source area investigation sampling in May 2022 and April 2024, and discussions with NYSDEC, HRP proposes additional investigation tasks be completed as outlined below. Analytical results and conceptual site models are presented in **Figures 2A, 2B, 3A, 3B, 3C, and 4**.

Proposed investigation locations are depicted in **Figure 5A and 5B**. Sample types and locations are summarized on **Table 1** and sample Quality Assurance/ Quality Control (QA/QC) details (analyses, containers, hold times etc.) are summarized on **Table 2**.

Investigation, Environmental Sampling, and Implementation

HRP proposes the following field activities be completed in general accordance with the RIWP:

Preliminary Activities:

- Call in Underground Utility Clearance through NYS Code Rule 753/Dig Safe System.
- Complete a new Ground Penetrating Radar (GPR) survey to locate utilities and/or obstructions in the ground that may affect the locations of soil borings and/or monitoring well.

Surface Soil Sampling:

- Collect one surface soil sample and three QA/QC samples (1 field duplicate (FD), 1 matrix spike (MS), and 1 matrix spike duplicate (MSD)) from the area of soil boring B-1/monitoring well HRP-MW-29 to confirm impacts identified in the shallow soil sample from B-1 (**Figure 3B**). Soil samples will be analyzed for Target Compound List (TCL) Volatile Organic Compounds (VOCs) +10 via EPA Method 8260. Proposed surface soil sample locations are depicted on **Figure 5A**.

Soil Boring / Monitoring Well Installation and Sampling:

- Investigate the areal extent of contamination upgradient of the suspected waste disposal area by installing up to 12 soil borings northwest of boring B-1/monitoring well HRP-MW-29 and north of boring B-2. Soil borings will be installed to a depth between 15 to 30 feet (ft) to the depth of refusal at clay or bedrock. Proposed soil boring locations are depicted on **Figure 5A**. Final locations may be adjusted in the field based on results of the GPR survey.
- Collect up to three soil samples from each boring for laboratory analysis. Samples should be selected for analysis based on observed indications of contamination (PID readings, odor, staining, etc.). If no indications of contamination are observed, samples should be collected from the top of the first soil horizon, at the water table interface, and from the terminal depth of the soil boring. Up to 36 soil samples plus six QA/QC samples (2 FD, 2 MS, and 2 MSD) will be analyzed for TCL VOCs +10 via EPA Method 8260 and per and polyfluoroalkyl substances (PFAS) via EPA Method 537 (modified). Soil cuttings will be returned to the borehole when borings are not converted to monitoring wells in accordance with the RIWP and FAP.

- To further delineate the groundwater plume, five soil borings will be converted to permanent overburden monitoring wells, three upgradient wells on Park St. and two onsite wells in between boring B-12 and B-14. Selection of monitoring well locations will be based on the results of the soil boring field screening. Four of the five monitoring wells will be installed to an estimated depth of 20 ft below grade (bg) (estimated depth to confining layer). Monitoring wells are to be screened in the overburden saturated zone above the silt/clay confining layer, or above bedrock if there is no overburden confining layer present. One monitoring well (B-38/HRP-MW-37D) will be installed and screened entirely below the clay confining layer, the depth to which will be determined based on the results of the soil boring field screening. The wells will be constructed of 2-inch PVC with slotted screen installed from the confining layer to 2 feet above the water table. The wells will be fitted with a sand pack installed from the bottom of the boring to 1 foot above the well screen, then sealed with hydrated bentonite to approximately 6 inches below the ground surface. The wells will be finished with flush-mounted protective casings and locking covers or a locking protective steel stick-up as appropriate. Preliminary proposed monitoring well location is depicted in **Figure 5A**.
- The five monitoring wells will be developed at least 24 hours after installation. Development will consist of pumping and surging at least three well volumes, continuing until field parameters stabilize within 10% over three readings and turbidity is below 50 NTUs, or until five volumes are removed, whichever comes first. Field parameters should include temperature, pH, specific conductance and turbidity. All purge water removed during well development and sampling will be containerized and managed in accordance with the RIWP and FAP.
- Collect one groundwater sample from each of the five newly installed monitoring wells for laboratory analysis. Groundwater samples will be collected in accordance with low-flow groundwater sampling procedures with up to five groundwater samples and five QA/QC samples (1 FD, 1 MS, 1 MSD, 1 field blank (FB), and 1 trip blank (TB)) collected for analysis of TCL VOCs +10 via EPA Method 8260 and PFAS via EPA Method 537 (modified).

Surface Water / Sediment Sampling:

- Three additional co-located surface water and sediment samples will be collected. The sample locations are based on the groundwater seep and its potential pathway into Kayaderosseras Creek along catch basins and storm drains. Samples will be submitted for laboratory analysis of VOCs +10 via EPA Method 8260, and PFAS via EPA Method 537 (modified). Proposed surface water and sediment sampling locations are depicted in **Figure 5B**.

Soil Vapor Intrusion Investigation:

- Soil vapor intrusion (SVI) investigations to be completed to evaluate the potential exposure pathway to VOCs through SVI during the 2025-2026 heating season in up to eight adjacent properties on six upgradient and two downgradient residences. SVI



investigations will be conducted in accordance with the NYSDOH *Guidance for Evaluating Soil Vapor Intrusion in the State of New York* (NYDSOH SVI guidance, NYSDOH 2006). Each SVI investigation will consist of installation and sampling of one sub-slab soil vapor point on the lowest floor, the collection of an indoor air sample on the lowest occupied floor, and at least one outdoor air sample. Sub-slab soil vapor points will be installed with a ½" hammer drill bit to a depth of approximately 6" below the slab. Temporary vapor points will be backfilled with #0 filter sand and sealed at grade with clay. The soil vapor points will be removed and sealed with a concrete patch after collection of the sub-slab soil vapor sample.

- Approximately 18 SVI samples (8 sub-slab soil vapor, 8 indoor air, and 2 outdoor air samples) plus 1 additional QA/QC field duplicate will be collected and analyzed for VOCs via EPA Method TO-15. Ambient outdoor air samples will be collected at a frequency of one sample per day per area so sample quantity may be adjusted in the field. Samples will be collected using 6-liter summa canisters equipped with 24-hour regulators not exceeding flow rates of 0.2 liters per minute.
- Analytical results for SVI samples will be compared to the NYSDOH *Soil Vapor/Indoor Air Matrices A, B, C, D, E and F* (Decision Matrices, NYSDOH 2017). Recommendations will be made based on laboratory analytical results and comparisons of sub-slab soil vapor concentrations to indoor air concentrations on the Decision Matrices.
- Paired sub-slab soil vapor/indoor air locations will be determined in the field at the time of the building inspection. Locations will be selected in accordance with Section 2.6.2 of the NYSDOH SVI guidance. Paired samples will be installed and collected in central locations away from building footing foundations and if possible, biased towards the Site/source of soil vapor impacts. Other factors which may impact SVI sample locations include presence of flooring (tile or wood flooring), building operations/traffic, and chemical storage solutions.
- At each residence a chemical inventory of products within the sample collection areas will be documented as well as completion of the NYSDOH SVI guidance questionnaire.

Additional Investigations:

- Perform additional slug testing to determine the hydraulic conductivity of the onsite aquifer. Slug testing will be conducted in up to four of the newly installed monitoring wells by installing a data logger and recording an initial depth to water measurement. A solid 1-meter-long PVC slug will be used to conduct rising and falling head tests for the designated wells and the data logger will record the groundwater-level recovery. An analytical method, such as the Bower-Rice Method, will be used to fit a solution to the data in the AQTESOLV program.

Decontamination Procedures

Non-dedicated sampling equipment will be subject to decontamination procedures prior to each sample collected to reduce the potential for cross-contamination, as described in the RIWP and the FAP.

Disposal of Investigation Derived Waste

Investigation derived waste (IDW) shall be handled and disposed of in general accordance with the RIWP and the FAP. Representative samples of soil cuttings and well development water will be analyzed to determine classification, treatment, and disposal of IDW.

Each drum of soil generated as IDW will be sampled to assess hazardous waste toxicity using toxic characteristics leachate protocol (TCLP) analysis (TCL VOCs by EPA Method 8260, TCL semi-volatile organic compounds (SVOCs) by EPA Method 8270, Resource Conservation and Recovery Act (RCRA) 8 metals by EPA Method 6010 and 7471, pesticides by EPA Method 8081, and herbicides by EPA Method 8151), as well as analysis for polychlorinated biphenyls (PCBs) by EPA Method 8082, and PFAS by EPA Method 1633, corrosivity, reactivity, and flashpoint. To assess F listed contained-in determination each drum of soil will also be sampled for TCL VOCs.

Each drum of development water generated as IDW will be sampled to assess waste toxicity consistent with analysis for soil waste (TCL VOCs, TCL SVOCs, PFAS, PCBs, RCRA 8 metals, and pesticides and herbicides). The TCL VOC results will also be used to assess F listed waste contained-in determination.

The analysis provided in this section is subject to change based on the Treatment, Storage, and Disposal Facility (TSDF) review of the waste profiles.

Analytical Data Quality Evaluation

As per the RIWP, all laboratory analysis will be completed by an Environmental Laboratory Approval Program (ELAP) laboratory selected by the NYSDEC. The selected laboratory will provide data deliverables in formats acceptable to the NYSDEC and data validator (NY ASP B and NYSDEC EQuIS formats). All laboratory data will be reviewed by a third-party data validator according to the requirements referenced in the RIWP and HRP's Quality Assurance Performance Plan (QAPP).

Site Survey

Upon completion of investigation field work, a survey will be conducted to properly locate additional sample locations (including soil borings, monitoring wells, surface water samples, and sediment samples). The sample locations will be surveyed by a New York State licensed land surveyor as per the RIWP and will be added to the existing Site base map. The elevations of all monitoring well casings will be established within an accuracy of plus or minus 0.01 feet based on an arbitrary local vertical benchmark. A notch will be etched in all interior casings, or a



permanent black mark, to provide a reference point for all future groundwater elevation measurements.

Remedial Investigation Report, Feasibility Study and Alternatives Analysis

Following the completion of additional RI field work, HRP will complete a Remedial Investigation Report (RIR), Feasibility Study (FS), and Alternatives Analysis (AA) as per the RIWP.

HRP has the responsibility of the overall management of this project and will respond to any NYSDEC requests. A proposed project schedule, key milestones, key project personnel, and project-specific subcontractors follow.

Project Schedule and Key Milestones

The proposed project schedule for this work assignment is outlined below. Key milestones are identified to monitor work progress. The following milestones will be applicable for this project:

	<u>Est. Start Date</u>
Milestone 1: Collection of Surface Water and Sediment Samples	July 2025
Milestone 2: Subsurface soil sampling	July 2025
Milestone 3: Installation and sampling of monitoring wells	July 2025
Milestone 4: Removal of any investigation-derived waste	Fall 2025
Milestone 5: Soil Vapor Intrusion Investigation	Winter 2025
Milestone 6: Complete Data Validation	February 2026
Milestone 7: RIR	April 2026
Milestone 8: Feasibility Study and Alternatives Analysis	Spring 2026

The field work associated with soil and groundwater sampling (Milestones 1 through 3) will begin within 1-2 weeks of NYSDEC review and approval of all site-specific plans, contingent upon availability of subcontractors. Soil and groundwater samples will be submitted for laboratory analysis within 24 hours of field collection, and laboratory results can generally be expected within 10 days of submission.

Any investigation-derived waste generated from the Site during the RI will be scheduled to be removed within one week of the completion of Milestone 3 (sampling of the monitoring wells). The timeframe of pickup and removal of this waste (Milestone 4) will be determined by the contractor upon scheduling. Data validation (Milestone 6) will begin upon receipt of the first set of laboratory results and will continue to be submitted for validation as the results are received from the laboratory. Data validation is expected within a four-week timeframe. The RIR (Milestone 7) will be submitted as a draft report within 60 days after HRP receives the last round of analytical data from the laboratory. A second draft RIR will be submitted, if needed, within two weeks after the data validation company has reviewed the final analytical submitted for the investigation. A final version of the RIR will be submitted within two weeks after the NYSDEC Project Manager's comments on both draft reports are received by HRP.



Key Project Personnel

A list of the project personnel of the prime consultant and subcontractors responsible for performance of the investigation has been submitted to the NYSDEC for approval. Primary project staff are listed below:

Personnel	Company	Title for this Work Assignment	Responsibility
<u>Kevin Ballou</u> (Project Manager)	HRP Associates, Inc. (Prime Consultant)	Project Manager	Overall management of the WA
<u>Bryan Sherman</u> , ASP (Project Manager)	HRP Associates, Inc.	Office Health & Safety Manager	Approval of HASP and responsible for overall health and safety issues with the WA
<u>Michael Varni</u> (Project Manager)	HRP Associates, Inc.	Corporate QA/QC Officer	Responsible for QA/QC on the WA
Noah Zaffino (Project Consultant)	HRP Associates, Inc.	Field Manager and Site Health & Safety Officer	Responsible for the on-site sampling and investigative tasks

Subcontractors for this project will include:

- Survey – Susan M. Anacker Professional Land Surveyor, PLLC
- GPR – American Geophysics, Inc.
- Drilling – LaBella Associates, Inc.
- Laboratory – NYSDEC Call-Out Laboratory (Pace)
- Data Validation – Environmental Data Services
- Investigation Derived Waste Disposal – US Ecology (now Republic Services)

References

NYSDOH, 2017. *Soil Vapor/Indoor Air Decision Matrices (Matrices A–F)*. New York State Department of Health, Center for Environmental Health, Troy, NY.

NYSDOH, 2006. *Guidance for Evaluating Soil Vapor Intrusion in the State of New York*. New York State Department of Health, Center for Environmental Health, Troy, NY.



If you have any questions or require additional information, please feel free to contact HRP at (518) 877-7101.

Sincerely,
HRP Associates, Inc.

A handwritten signature in blue ink, appearing to read "Kevin Ballou".

Kevin Ballou
Project Manager

Attachments: Tables, Figures, and Appendices (see enclosed)

TABLES

**Table 1
Sampling Summary
Remedial Investigation**

**Rickett's Dry Cleaners
NYSDEC Site # 546058
2017-2019 Doubleday Avenue
Ballston Spa, New York**

Activity/ Matrix	Number of Sample Locations	Proposed Sample Locations	Number of Samples to be Collected	Analyses
Surface Water Sampling	3	One sample to be collected from each of three locations along the path of the impacted surface water from the groundwater seep to the creek.	6 (3 env., 3 QA/QC)	TCL VOCs+10 by EPA Method 8260 PFAS by EPA Method 537 (modified) QA/QC includes field duplicate, MS, MSD
Sediment Sampling	3	Paired with downgradient surface water samples	6 (3 env., 3 QA/QC)	TCL VOCs+10 by EPA Method 8260 PFAS by EPA Method 537 (modified) QA/QC includes field duplicate, MS, MSD
Surface Soil Sampling	1	One sample to be collected by B-1/HRP-MW-29 to confirm impacts identified in the shallow soil sample from B-1	4 (1 env., 3 QA/QC)	TCL VOCs+10 by EPA Method 8260 PFAS by EPA Method 537 (modified) QA/QC includes field duplicate, MS, MSD
Soil Boring Sampling	12	Up to three soil samples will be collected from each boring for VOC and PFAS analysis	42 (36 env., 6 QA/QC)	TCL VOCs+10 by EPA Method 8260 PFAS by EPA Method 537 (modified) QA/QC includes field duplicate, MS, MSD
Groundwater Sampling	5	One sample to be collected from each of the 5 newly installed monitoring wells	10 (5 env., 5 QA/QC)	TCL VOCs+10 by EPA Method 8260 PFAS by EPA Method 537 (modified) QA/QC includes field duplicate, MS, MSD, field blank, trip blank
Soil Vapor Intrusion Sampling	8	One sub slab soil vapor sample and one indoor air sample from each property adjacent to and downgradient from the Site, two outdoor air samples, and one duplicate	19 (18 env., 1 QA/QC)	VOCs by EPA Method TO-15 QA/QC includes field duplicate

Acronym List:

PFAS: Per- and polyfluoroalkyl substances

TCL: Total compound list

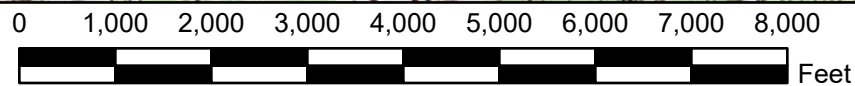
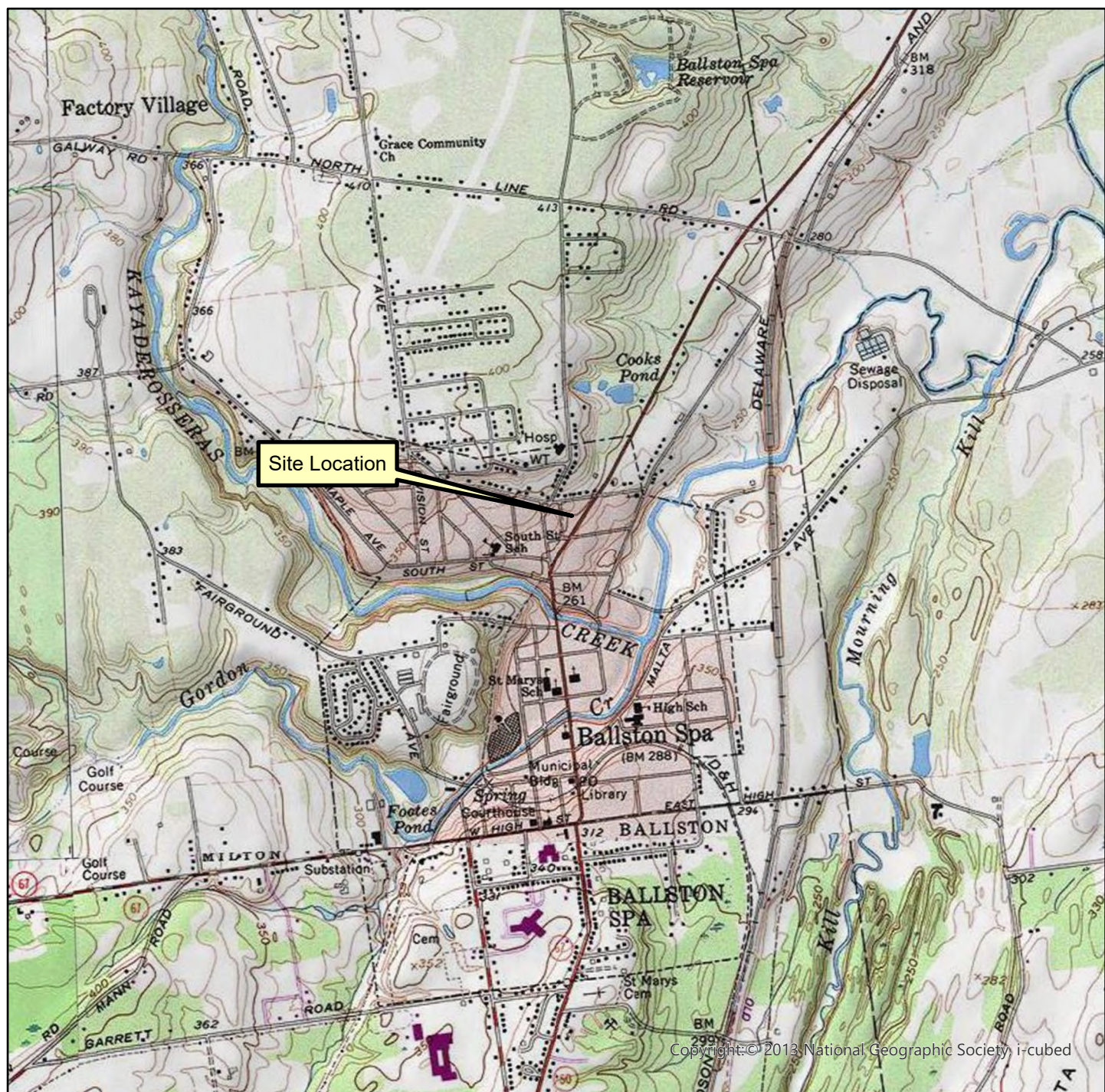
VOCs: Volatile organic compounds

Table 2
Analytical Methods/Quality Assurance Summary
Remedial Investigation

Rickett's Dry Cleaners
NYSDEC Site # 546058
2017-2019 Doubleday Avenue
Ballston Spa, New York

					Containers per Sample			Preservation Requirements			
Parameter	Matrix	Number of Samples (including Field QC)	Preparation Method	Analytical Method	No.	Size	Type	Temp.	Light Sensitive	Chemical	Maximum Holding Time
SOIL											
VOCs by GC/MS	Soil	46	5035A	SW-846 Method 8260B	1	2 oz	clear glass jar	2-6° C	No	NA	14 days
PFAS		46	NA	Method 537 (modified)	2	8 oz	polypropylene	2-6° C	No	NA	90 days
SEDIMENT											
VOCs by GC/MS	Sediment	6	5035A	SW-846 Method 8260B	1	2 oz	clear glass jar	2-6° C	No	NA	14 days
PFAS		6	NA	Method 537 (modified)	2	8 oz	polypropylene	2-6° C	No	NA	90 days
SURFACE WATER											
VOCs by GC/MS	Aqueous	6	5035	SW-846 Method 8260B	3	40 ml	glass vial	2-6° C	No	HCL	14 days
PFAS		6	NA	Method 537 (modified)	3	250 ml	polypropylene	2-6° C	No	NA	28 days
GROUNDWATER											
VOCs by GC/MS	Aqueous	10	5035	SW-846 Method 8260B	3	40 ml	glass vial	2-6° C	No	HCL	14 days
PFAS		10	NA	Method 537 (modified)	3	250 ml	polypropylene	2-6° C	No	NA	28 days
SOIL VAPOR											
VOCs	Soil Vapor, Air	19	NA	EPA TO-15	1	6-liter	summa canister, 24-hour regulator	NA	No	NA	30 days (summa canister)

FIGURES



USGS Quadrangle Information
 Quad ID: 43073-A7
 Name: Saratoga Springs, New York
 Date Pub: 1970

Figure 1
Site Location
Rickett's Dry Cleaners
2017-2019 Doubleday Avenue
Ballston Spa, New York
HRP # DEC1002.P3
Scale 1" = 2,000'



ONE FAIRCHILD SQUARE
 SUITE 110
 CLIFTON PARK, NY 12065
 (518) 877-7101
 HRPASSOCIATES.COM

Path: S:\Data\NINYDEC - NYSDEC\MILTON\2017 DOUBLEDAY AVENUE, BALLSTON SPA (MILTON), NY\DEC1002P3\GIS\revised IIRM 2025\ricketts_irm_2025.aprx



Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Revisions	No.	Date			
Designed By:	CMS				
Drawn By:	CMS				
Reviewed By:	DCS				
Issue Date:	6/11/2025				
Project No:	DEC1002.P3				
Sheet Size:	11x17				

Overburden Groundwater
and Seep
PCE Concentrations
Rickett's Dry Cleaners
Site #546058
2017-2019 double Day Avenue
Ballston Spa New York

HRP-MW-11		
Date	6/7/2022	
6:2 FTS	0.89	
PFHxS	0.46	
PFOS	61	
PFOA	2.4	

S-4		
Date	4/18/2022	
PFBS	2.7	
PFHpA	4.9	
PFHxS	5.8	
PFHxA	4.7	
PFOS	110	
PFOA	29	

HRP-MW-28		
Date	6/15/2022	
FBSA	0.23	
PFBS	0.4	
PFBA	3.1	
PFHpA	2.1	
PFHxA	3.5	
PFPeA	6.2	

HRP-MW-25		
Date	6/8/2022	
6:2 FTS	0.49	
PFBS	2	
PFBA	4.3	
PFHpA	5.4	
PFHxS	3.8	
PFHxA	5.6	
PFNA	1	
PFOS	62	
PFOA	15	
PFPeS	0.33	
PFPeA	4.9	

HRP-MW-26		
Date	6/15/2022	
6:2 FTS	0.53	

HRP-MW-27		
Date	6/15/2022	
6:2 FTS	0.77	
FBSA	2.2	
PFBS	3.1	
PFBA	6.2	
PFHpA	6.4	
PFHxS	2.3	
PFHxA	6.7	
PFNA	0.76	
PFOS	13	
PFOA	13	
PFPeS	0.5	
PFPeA	9.5	

MW-10		
Date	12/3/2020	
PFBS	0.98	
PFHpA	0.7	
PFHxS	0.97	
PFHxA	0.8	
PFNA	0.55	
PFOS	5.7	
PFOA	2.5	
PFPeA	1.2	

PES-4		
Date	6/8/2022	
PFBS	0.27	
PFBA	1.8	
PFHpA	0.43	
PFHxA	0.62	
PFPeA	0.84	

S-1		
Date	4/18/2022	
PFBS	7.9	
PFDA	3.9	
PFHpA	31	
PFHxS	12	
PFHxA	23	
PFNA	9	
PFOS	100	
PFOA	77	

PES-2		
Date	12/4/2020 6/8/2022	
6:2 FTS	< 4.6 0.51	
FBSA	NA 2.1	
FHxSA	NA 0.66	
FOSA	< 1.8 1.7	
PFBS	3.5 2.2	
PFBA	5.2 13	
PFDA	2.7 2.9	
PFHpS	1.3 4.4	
PFHpA	13 22	
PFHxS	7.2 9.2	
PFHxA	7.7 19	
PFNA	3.7 7.3	
PFOS	110 150	
PFOA	43 75	
PFPeS	NA 2.3	
PFPeA	5.8 21	

PES-5		
Date	6/8/2022	
6:2 FTS	0.44	
FBSA	2	
FHxSA	0.58	
FOSA	1.8	
PFBA	29	
PFDA	2.8	
PFHpS	4	
PFHpA	44	
PFHxS	20	
PFHxA	21	
PFNA	10	
PFOS	220	
PFOA	250	
PFPeS	5.8	
PFPeA	14	
PFUnA	0.42	

PES-1		
Date	6/7/2022	
FBSA	2.4	
PFBS	7.9	
PFBA	10	
PFDA	0.84	
PFHpS	1.8	
PFHpA	11	
PFHxS	8.5	
PFHxA	11	
PFNA	3.9	
PFOS	96	
PFOA	35	
PFPeS	1.6	
PFPeA	14	

MW-13		
Date	12/4/2020 6/9/2022	
FBSA	NA 0.48	
PFBS	3 < 0.27	
PFBA	4.5 6.5	
PFDA	0.55 < 0.46	
PFHpS	0.67 < 0.89	
PFHpA	6.6 6.9	
PFHxS	4.5 2.4	
PFHxA	6 6.2	
PFNA	2.2 0.81	
PFOS	47 18	
PFOA	19 13	
PFPeS	NA 0.47	
PFPeA	6.2 7.1	

MW-12		
Date	12/4/2020 6/9/2022	
6:2 FTS	< 4.6 40	
FBSA	NA 0.39	
FOSA	< 1.8 0.49	
PFBS	4.1 2.5	
PFBA	4.3 5.3	
PFHpS	0.53 < 0.92	
PFHpA	5 6.4	
PFHxS	3.7 3.7	
PFHxA	4.6 6	
PFNA	1.6 1.5	
PFOS	38 28	
PFOA	17 19	
PFPeS	NA 0.64	
PFPeA	6.2 7.1	

HRP-MW-15		
Date	12/3/2020 6/7/2022	
PFBS	3.9 5.5	
PFBA	3.4 2.6	
PFHpA	0.68 0.86	
PFHxS	1.5 1.2	
PFHxA	< 2 1.1	
PFOS	5.9 5.7	
PFOA	1.6 1.4	
PFPeA	0.98 1.6	

S-2		
Date	4/18/2022	
PFBS	8.2	
PFDA	3.5	
PFHpA	36	
PFHxS	20	
PFHxA	21	
PFNA	7.8	
PFOS	280	
PFOA	220	

HRP-MW-17		
Date	6/15/2022	
6:2 FTS	0.78	
PFBS	1	
PFBA	4.5	
PFHpA	2.5	
PFHxA	2.9	
PFOA	3	
PFPeA	4.1	

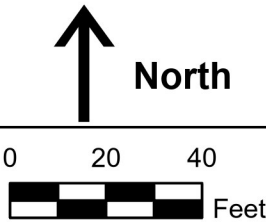
HRP-MW-18		
Date	12/3/2020 6/9/2022	
6:2 FTS	< 500 6.1	
FBSA	NA 0.25	
PFBS	< 200 3.8	
PFBA	< 500 5.9	
PFHpA	< 200 5.3	
PFHxS	< 200 3.3	
PFHxA	< 200 4.1	
PFNA	< 200 1.3	
PFOS	< 200 49	
PFOA	< 200 22	
PFPeS	NA 0.79	
PFPeA	< 200 6.2	

NYSDEC Raw Water Source - Human Health Criteria Per and Polyfluoroalkyl Substances (PFAS) (ng/L)		
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid (6:2 FTS)		NP
Perfluoro-1-butanefulfonamide (FBSA)		NP
Perfluoro-1-hexanesulfonamide (FHxSA)		NP
Perfluoro-1-octanesulfonamide (FOSA)		NP
Perfluorobutanesulfonic acid (PFBS)		NP
Perfluorobutanoic acid (PFBA)		NP
Perfluorodecanoic acid (PFDA)		NP
Perfluoroheptanesulfonic acid (PFHpS)		NP
Perfluoroheptanoic acid (PFHpA)		NP
Perfluorohexanesulfonic acid (PFHxS)		NP
Perfluorohexanoic acid (PFHxA)		NP
Perfluorononanoic acid (PFNA)		NP
Perfluorooctanesulfonic acid (PFOS)		2.7
Perfluorooctanoic acid (PFOA)		6.7
Perfluoropentane sulfonate (PFPeS)		NP
Perfluoropentanoic acid (PFPeA)		NP
Perfluoroundecanoic acid (PFUnA)		NP

Notes
ng/L = nanograms per liter
NP = Not Promulgated
NA = Not Analyzed

Legend

- ⊕ Surface Water Samples
- ⊗ Overburden Groundwater Monitoring Wells
- Groundwater Flow Direction



Revisions	No.	Date	Designed By: CMS	Drawn By: CMS	Reviewed By: MEW
Issue Date:	11/10/2022	Project No:	DEC1002.P3	Sheet Size:	11x17

Overburden Groundwater
and Seep
PFAS Detections

Rickett's Dry Cleaners
Site #546058
2017-2019 Doubleday Avenue
Ballston Spa, New York

Figure No.
2B

Path: S:\Data\NINYDEC - NYSDEC\MILTON\2017 DOUBLEDAY AVENUE, BALLSTON SPA (MILTON), NY\DEC1002P3\GIS\Ricketts\2022\Ricketts2022.aprx

Notes:


- PCE = Tetrachloroethene
- TCE = Trichloroethene
- cis-1,2-DCE = cis-1,2-Dichloroethene
- VC = Vinyl Chloride
- SCO = Soil Cleanup Objective
- CVOC = Chlorinated Volatile Organic Compound
- PFAS = Per- and Polyfluoralkyl Substances
- All concentrations reported in milligrams per kilogram.
- Only soil borings with exceedances of NYSDEC Part 375 SCOs are given callouts.
- Soil samples collected between 2020 and 2024 in multiple mobilization by HRP Associates, Inc.

B-16				
Date	4/8/2024			
Depth (ft bg)	0-2	5-7.5	13-15	
VC	0.043	< 0.0050	< 0.045	


B-17				
Date	4/8/2024			
Depth (ft bg)	0-2	7-9	10-12	
PCE	0.044	52	0.59	
TCE	0.055	16	0.21	
cis-1,2-DCE	0.030 J	34	0.13	
VC	< 0.065	0.73 J	< 0.054	

B-18				
Date	4/8/2024			
Depth (ft bg)	0-2	4-5	6-8	
TCE	0.91	< 0.00097	0.14	
cis-1,2-DCE	8.5	0.011	0.47	
VC	0.82	0.0055	0.019 J	


Legend




Groundwater Flow Direction




Soil Sample Locations (2024)




Overburden Groundwater Monitoring Wells (Installed 2024)



Soil Investigation Locations



Soil Samples Exceeding Commercial SCOs - CVOCs



Soil Samples Exceeding Protection of Groundwater SCOs - PFAS

B-19				
Date	4/8/2024			
Depth (ft bg)	0-2	5-7	10-12	
cis-1,2-DCE	< 0.033	2.2	2.4	
VC	< 0.067	1.2	0.22	

SB-3				
Date	5/16/2022			
Depth (ft bg)	1-2	3-4	7-8	
PCE	0.0024 J	0.0026	860	
TCE	0.0016 J	0.0020 J	9.9	
cis-1,2-DCE	0.029	0.015	4.1	

SL-2		
Date	4/18/2022	
Depth (ft bg)	Surface	
Sample Type	Parent	Duplicate
cis-1,2-DCE	0.45	0.50

NYSDEC Part 375-6 SCOs				
Parameter	Protection of Groundwater SCO	Restricted Residential SCO	Commercial SCO	Industrial SCO
Tetrachloroethene (PCE)	1.3	19	150	300
Trichloroethene (TCE)	0.47	21	200	400
cis-1,2-Dichloroethene (cis-1,2-DCE)	0.25	100	500	1000
Vinyl chloride (VC)	0.02	0.9	13	27

<1	Parameter not detected above the laboratory reporting limit
1	Parameter reported above the laboratory reporting limit but below the applicable regulatory
1	Parameter reported at a concentration greater than Part 375 Protection of Groundwater SCOs
1	Parameter reported at a concentration greater than Part 375 Restricted Residential SCOs
1	Parameter reported at a concentration greater than Part 375 Commercial SCOs
1	Parameter reported at a concentration greater than Part 375 Industrial SCOs

SB-10				
Date	5/17/2022			
Depth (ft bg)	0.5-2	3.5-4	10-11	
Sample Type	Parent	Duplicate	Parent	Parent
PCE	3.1	3.1	2.7	740 J
TCE	0.10	0.099	0.81	8
cis-1,2-DCE	0.24	0.24	7.0	0.48 J

SB-11				
Date	5/17/2022			
Depth (ft bg)	0.5-1.5	9-10	12.5-15	
Sample Type	Parent	Parent	Parent	Duplicate
PCE	100	81	350 J	1200 J
TCE	3.2	11 J	9.2 J	47 J
cis-1,2-DCE	0.90 J	3.5	0.60 J	< 65

SB-14				
Date	5/17/2022			
Depth (ft bg)	1-2	7.5-9	10-12	17-18
PCE	66 J	250 J	3300	450
TCE	4.3	11	< 54	< 11
cis-1,2-DCE	0.45	1.5	< 54	< 2.1

SB-15			
Date	5/17/2022		
Depth (ft bg)	0.5-1.5	9-10	14-15
PCE	11	0.41	6.0
TCE	0.78	0.012 J	0.34
cis-1,2-DCE	0.78	0.015 J	0.10 J

SB-6			
Date	5/16/2022		
Depth (ft bg)	0.5-1.5	4-5	11-12
PCE	120 J	71	7.7
TCE	6.0	9.8	0.36
cis-1,2-DCE	3.2	6.5	0.081

SB-13			
Date	5/17/2022		
Depth (ft bg)	0.5-1.5	9-10	12-13
PCE	70	8200	130
TCE	5	51 J	1.9 J
cis-1,2-DCE	2.4	< 65	< 5.0

MW-20		
Date	10/13/2020	
Depth (ft bg)	2-4	6-8
PCE	0.47 J	1.7
TCE	< 0.55	0.66
cis-1,2-DCE	< 0.55	0.26
VC	< 0.55	0.059

SB-7				
Date	5/16/2022			
Depth (ft bg)	0-1.5	4-5	6-7	11-12
Sample Type	Parent	Parent	Duplicate	Parent
PCE	0.43	880 J	920 J	1300 J
TCE	0.054	8.2	9.1	5.6
cis-1,2-DCE	0.076	2.2	2.2	1.2 J
VC	< 0.012	< 2.6	0.039 J	< 0.12

SB-5			
Date	5/16/2022		
Depth (ft bg)	0.5-1.5	10-11	12.5-15
PCE	1.6	670 J	39
TCE	0.32	12	5.0
cis-1,2-DCE	16	2.3	0.92 J
VC	0.97	< 2.6	< 2.4

SB-12			
Date	5/17/2022		
Depth (ft bg)	0-1	9-10	13-15
PCE	0.007	67	1.7
TCE	< 0.0021	46	0.044 J
cis-1,2-DCE	< 0.0021	6.4	0.033 J

SB-22				
Date	5/18/2022			
Depth (ft bg)	0.5-2	4.5-5	7-10	13-14.5
PCE	0.0020 J	1.3	3.2	< 0.063
TCE	< 0.0022	0.12	1.2	< 0.063
cis-1,2-DCE	< 0.0022	0.11	1.3	0.016 J
VC	< 0.011	< 0.11	0.022 J	0.12 J


MW-23		
Date	10/20/2020	
Depth (ft bg)	3-5	
VC	0.16	

B-23			
Date	4/10/2024		
Depth (ft bg)	1-2	2-4	4-6
cis-1,2-DCE	< 0.0012	< 0.0010	1.3

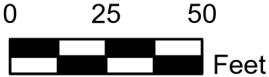


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Issue Date:	6/27/2025	Project No:	DEC1002.P3	Sheet Size:	11x17
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CVOC Soil Analytical Results
Sitewide
(Exceedances Only)

Rickett's Dry Cleaners
Site #546058
2017-2019 Doubleday Avenue
Ballston Spa, New York

Figure No.
3A

Path: S:\Data\NYSDEC - NYSDEC\MILTON\2017 DOUBLEDAY AVENUE, BALLSTON SPA (MILTON), NY\DEC1002P3\GIS\Ricketts2022\Ricketts2022.aprx

B-1				
Date	4/9/2024			
Depth (ft bg)	0-1	4-5	5.5-7.5	
Sample Type	Parent	Duplicate	Parent	Parent
PCE	2.3	480	6.9	0.0015
TCE	0.086	8.9 J	34	0.00047 J
cis-1,2-DCE	< 0.070	< 14	12	0.00068 J

B-2			
Date	4/9/2024		
Depth (ft bg)	0-1.5	5-6	8-10
Sample Type			
PCE	31	0.50	0.10
TCE	1.9	0.26	0.025 J
cis-1,2-DCE	0.17 J	1.2	0.018 J
VC	< 0.46	2.1	< 0.11

B-5			
Date	4/9/2024		
Depth (ft bg)	0-1.5	4-6	6-8
Sample Type			
PCE	110	< 0.70	0.0038
TCE	5.4	0.21 J	< 0.0010
cis-1,2-DCE	0.71 J	20	< 0.0010

B-4			
Date	4/9/2024		
Depth (ft bg)	0-2	2-4	5-6
Sample Type			
PCE	340	7.9	5.1
TCE	10	6.6	0.51
cis-1,2-DCE	2.1	27	1.9
VC	< 2.6	0.20 J	0.056 J

B-3			
Date	4/9/2024		
Depth (ft bg)	0-2	4-5	6-7
Sample Type			
PCE	22	4.9	0.0064
TCE	1.4	4.6	0.0019
cis-1,2-DCE	< 0.89	6.6	0.0047
VC	< 1.8	0.20	0.0047 J

B-6				
Date	4/9/2024			
Depth (ft bg)	0-2	2-4	4-6	
Sample Type	Parent	Duplicate	Parent	Parent
PCE	13	9.1	0.023	< 0.00099
TCE	3.8	3.5	0.014	< 0.00099
cis-1,2-DCE	4.3	10	0.038	0.00085 J
VC	< 1.1	0.19 J	0.00086 J	< 0.0049

B-7			
Date	4/10/2024		
Depth (ft bg)	0-1	2-4	4-6
Sample Type			
TCE	0.54	0.014	0.0098

Legend

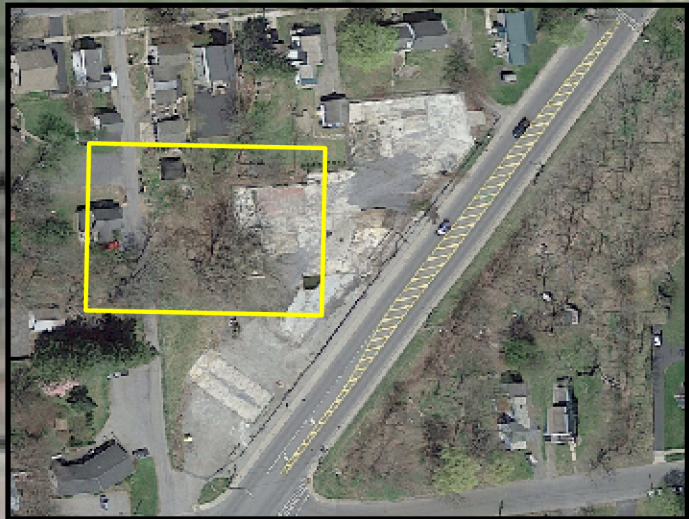
- Groundwater Flow Direction
- Soil Sample Locations (2024)
- Overburden Groundwater Monitoring Wells (Installed 2024)
- Soil Investigation Locations
- Soil Samples Exceeding Commercial SCOs - CVOCs
- Soil Samples Exceeding Protection of Groundwater SCOs - PFAS

B-10				
Date	4/10/2024			
Depth (ft bg)	0-2	3-5	5-7	
Sample Type	Parent	Duplicate	Parent	Parent
PCE	1.2	5.1	0.13	0.00083 J
cis-1,2-DCE	0.062	0.15	0.67	0.00080 J

B-11				
Date	4/10/2024			
Depth (ft bg)	0-2	3-5	5-7	
Sample Type	Parent	Duplicate	Parent	Parent
PCE	0.028	0.73	7.1	0.058
TCE	0.0014	0.023 J	1.5	0.0094
cis-1,2-DCE	0.0012 J	< 0.045	3.4	0.025

NYSDEC Part 375-6 SCOs				
Parameter	Protection of Groundwater SCO	Restricted Residential SCO	Commercial SCO	Industrial SCO
Tetrachloroethene (PCE)	1.3	19	150	300
Trichloroethene (TCE)	0.47	21	200	400
cis-1,2-Dichloroethene (cis-1,2-DCE)	0.25	100	500	1000
Vinyl chloride (VC)	0.02	0.9	13	27

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1	Parameter reported at a concentration greater than Part 375 Industrial SCOs



SB-21			
Date	5/17/2022		
Depth (ft bg)	0-2.5	2.5-5	12-15
Sample Type			
PCE	150	13	0.0027
TCE	7.0	5.3	< 0.0026
cis-1,2-DCE	1.2	21	< 0.0026
VC	< 2.1	0.053 J	< 0.013

SB-9			
Date	5/17/2022		
Depth (ft bg)	0.5-1	4-5	9-10
Sample Type			
PCE	0.17	3.3	0.058
cis-1,2-DCE	1.8	13	0.033
VC	0.055 J	0.030 J	0.0029 J

B-9			
Date	4/10/2024		
Depth (ft bg)	0-2	4-5	5-7
Sample Type			
PCE	2.3	2.5	0.20
TCE	0.15	0.95	0.040 J
cis-1,2-DCE	0.014 J	2.1	0.020 J

Notes:

- PCE = Tetrachloroethene
- TCE = Trichloroethene
- cis-1,2-DCE = cis-1,2-Dichloroethene
- VC = Vinyl Chloride
- SCO = Soil Cleanup Objective
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- Only soil borings with exceedances of NYSDEC Part 375 SCOs are given callouts.
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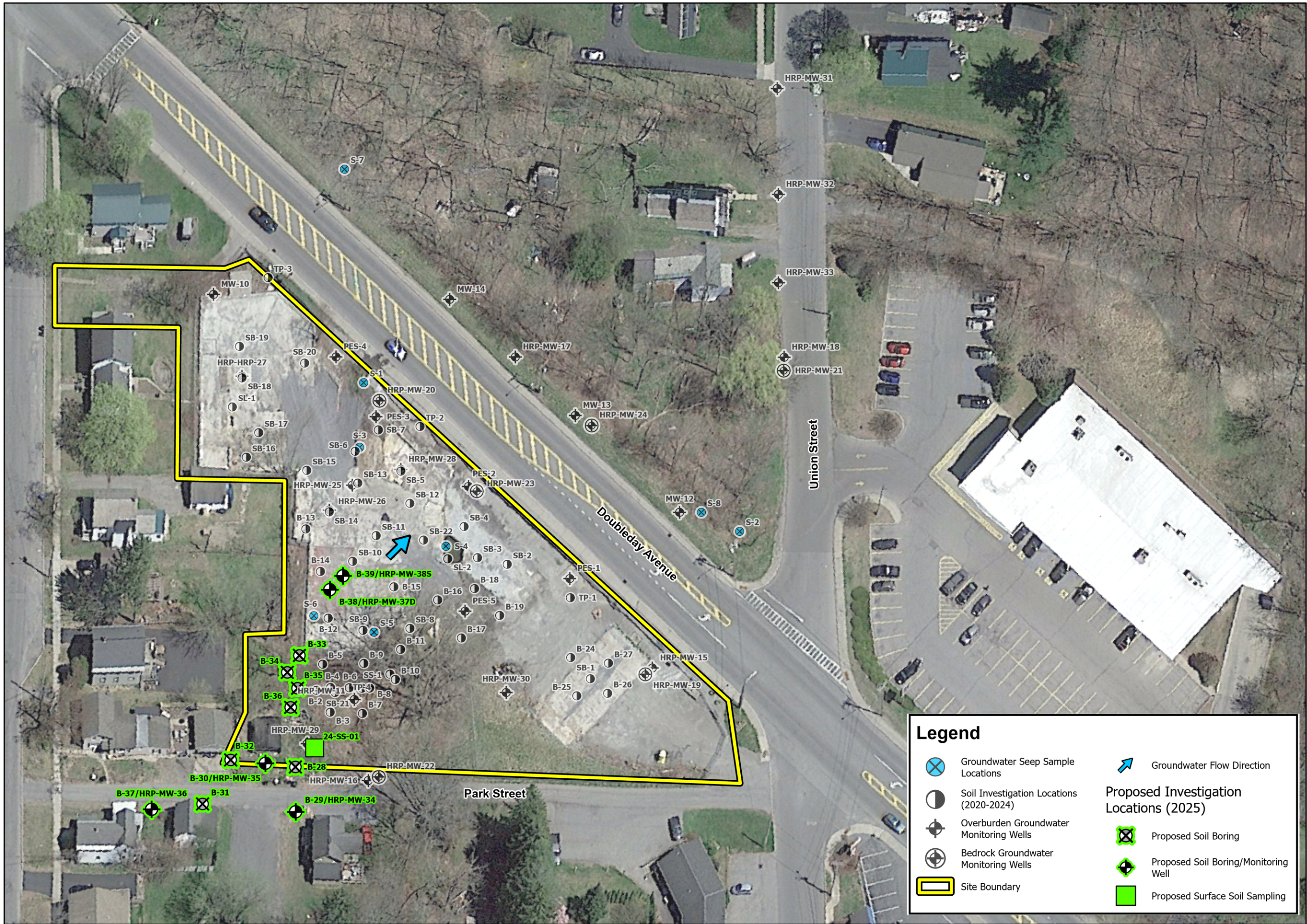
Revisions	No.	Date	Designed By:	Drawn By:	Reviewed By:
			CMS	EY	MEW
Issue Date:	6/27/2025	Project No:	DEC1002.P3	Sheet Size:	11x17

CVOC Soil Analytical Results
Upgradient of Site
(Exceedances Only)

Rickett's Dry Cleaners
Site #546058
2017-2019 Doubleday Avenue
Ballston Spa, New York

Figure No.
3B

Path: S:\Data\NIN\DEC - NYS\DEC\MILTON\2017 DOUBLEDAY AVENUE, BALLSTON SPA (MILTON), NY\DEC1002P3\GIS\Ricketts2022\Ricketts2022.aprx

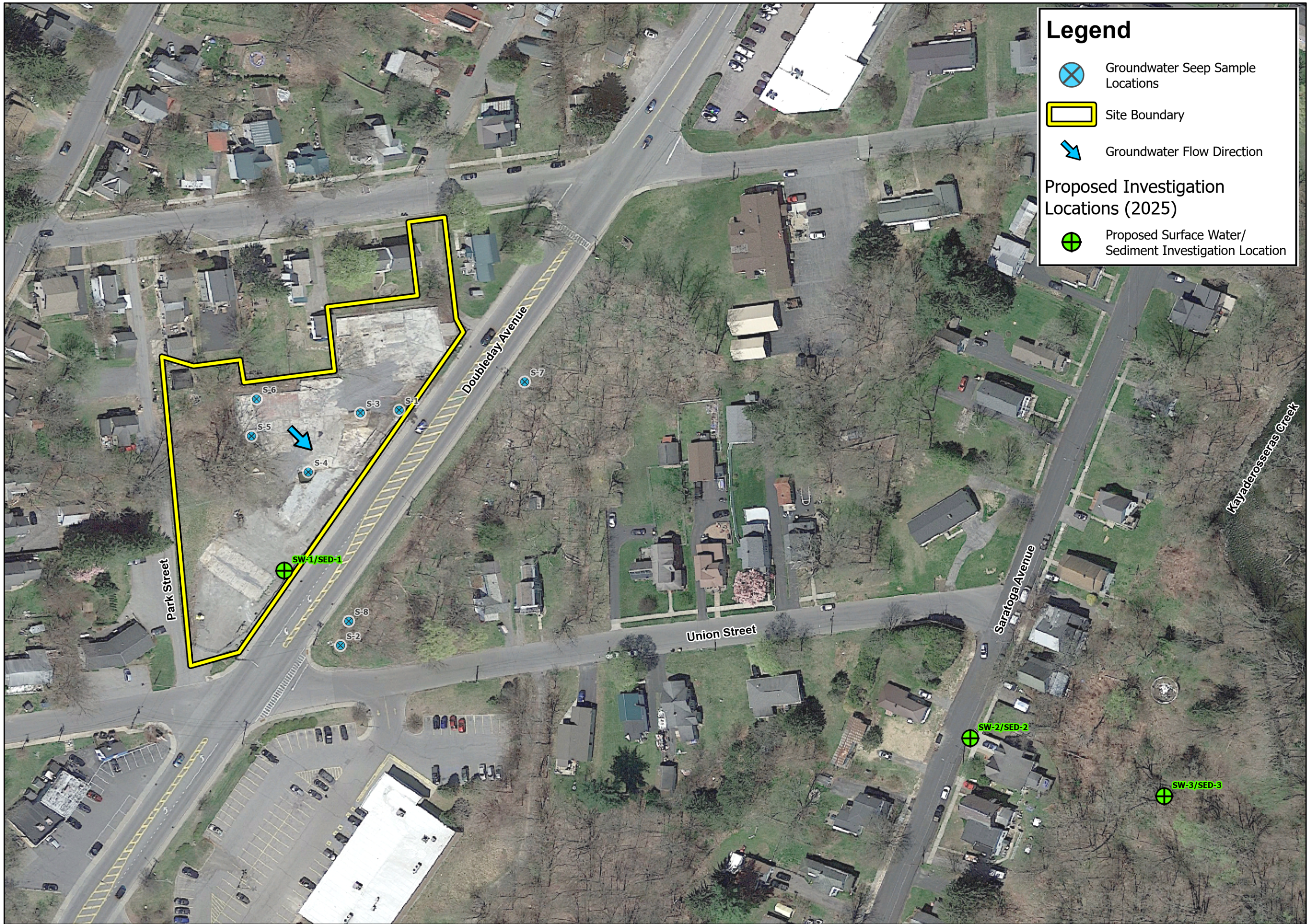


Revisions	No.	Date
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Drawn By:	EY	
Reviewed By:		
Issue Date:	6/27/2025	
Project No:	DEC1002.P3	
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Proposed Additional
Soil and Groundwater
Investigation Locations


Rickett's Dry Cleaners
Site #546058
2017-2019 Doubleday Avenue
Ballston Spa, New York


Path: S:\Data\NIN\DEC - NYSDEC\MILTON\2017 DOUBLEDAY AVENUE, BALLSTON SPA (MILTON), NY\DEC1002P3\GIS\Ricketts\2022\Ricketts2022.aprx




Legend


 Groundwater Seep Sample Locations


 Site Boundary

 Groundwater Flow Direction

Proposed Investigation Locations (2025)

 Proposed Surface Water/
Sediment Investigation Location


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Issue Date: 6/27/2025			Project No: DEC1002.P3	Sheet Size: 11x17	
<div><div>Proposed Additional Surface Water and Sediment Investigation Locations</div><div>Rickett's Dry Cleaners Site #546058 2017-2019 Doubleday Avenue Ballston Spa, New York</div></div>					
<div><div>Figure No.</div><div>5B</div></div>					

APPENDIX A

Community Air Monitoring Plan

Community Air Monitoring Plan
2017 Doubleday Ave, Ballston Spa, New York

This 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 during remedial activities at the site. The CAMP is not intended for use in establishing action levels for workers 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.

Reliance on the CAMP should not preclude simple, common sense measures to keep VOCs, dust, and odors at a minimum around the work areas.

Depending on the nature of known or potential contaminants at the site, real-time air monitoring for VOCs and/or particulate levels at the perimeter of the exclusion zone or work area will be necessary.

Continuous monitoring will be required for all ground intrusive activities. Ground intrusive activities include, but are not limited to, soil/waste excavation and handling, test pitting or trenching.

Periodic monitoring for VOCs will be required during non-intrusive activities such as the collection of soil samples. "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, continuing monitoring may be required during sampling activities.

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations will be monitored continuously at the upwind and downwind perimeters of the exclusion zone at temporary particulate monitoring stations. The particulate monitoring will 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 will be equipped with an audible alarm to indicate exceedance of the action level. In addition, fugitive dust migration will be visually assessed during all work activities.

- If the downwind PM-10 particulate level is 100 micrograms per cubic meter (mcg/m^3) greater than the background (upwind perimeter) for the 15-minute period or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Work may continue with dust suppression techniques provided that no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM-10 particulate levels are greater than 150 mcg/m^3 above the upwind level, work will 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/m³ of the upwind level and in preventing visible dust migration.

All readings will be recorded and be available for State (DEC and DOH) personnel to review.

VOC Monitoring, Response Levels, and Actions

VOCs will 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 will be measured at the start of each workday and periodically thereafter to establish background conditions. The monitoring work will be performed using a photo ionization detector (PID) equipped with a 10.2 eV bulb. The PID will be calibrated at least daily for the contaminant(s) of concern or for an appropriate surrogate. The equipment will be capable of calculating 15-minute running average concentrations, which will be compared to the levels specified below.

- 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.
- 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 will be halted, the source of the 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.
- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities will be shutdown.

All 15-minute readings will be recorded and be available for State (DEC and DOH) personnel to review. Instantaneous readings, if any, used for decision purposes will also be recorded.