SCHEDULE 1 – SCOPE OF WORK FORMER COVIDIEN PLANT WA NO. D009812-12 SITE CHARACTERIZATION MARCH 2021

The New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation (DER) has issued this Work Assignment (WA No. 12) under Standby Engineering Contract D009812 for the Former Covidien Plant ("the Site") (NYSDEC Site No. 633089), located in the Village of Oriskany Falls, Oneida County, New York. This Scope of Work (SOW) includes the following Site Characterization (SC) activities:

- WA Package preparation;
- Soil boring/subsurface investigation;
- Monitoring well installation;
- Groundwater sampling and analysis;
- Surface water and sediment sampling and analysis; and
- SC Report preparation.

This WA SOW has been prepared in accordance with the September 2020 WA Issuance/Notice to Proceed (WAI/NTP) letter, subsequent correspondence with the NYSDEC Project Manager (PM), and a preliminary Site visit. A schedule is provided at the end of this SOW and includes anticipated milestone dates for the completion of each WA task. The proposed tasks, as received in the NYSDEC September 2020 WAI/NTP letter, are listed below and described in detail on the following pages:

- Task 1 Preliminary Activities
- Task 2 Environmental Sampling
- Task 3 Reporting

Task 1 – Preliminary Activities

As part of Task 1, TRC Engineers, Inc. (TRC) will complete the following activities: a review of available historic Site information, a Site visit with the NYSDEC PM, and development of the WA Package. Each Task 1 activity is described below.

File Review

TRC will review available project documents provided by the NYSDEC under this subtask. In addition, TRC will obtain environmental and government database listings, historical aerial photographs, and fire



insurance maps (as available) from Environmental Data Resources, LLC (EDR) for the Site. The intent will be to gain an understanding of known and potential contamination and the historical operations at the Site for the purposes of developing SC recommendations.

Site Visit (completed)

The investigation area includes the Former Covidien Plant as well as upstream and downstream surface water/sediment sampling locations associated with the adjacent Oriskany Creek. TRC met with the NYSDEC PM on December 30, 2020 to discuss Site access, physical features, and SC activities.

WA Package

As part of this subtask, TRC will prepare the WA Package for this assignment, including a cover letter and Schedule 1, Schedule 2, and Schedule 3 documentation. The complete WA Package will be sent to the NYSDEC's Contract Manager and PM for review and approval. TRC will review comments provided by the NYSDEC and revise the WA Package (as necessary), also as part of this subtask.

Task 2 – Environmental Sampling

For Task 2, TRC will perform/oversee the following site activities: mobilization, utility locating survey, Community Air Monitoring Plan (CAMP) implementation, a subsurface investigation, monitoring well installations, monitoring well development, groundwater sampling, surface water/sediment sampling, survey, and investigation derived waste (IDW) management. It is TRC's understanding that laboratory sample analysis will be completed by a NYSDEC call-out laboratory. Each of the Task 2 activities are described in detail below.

General

- A site-specific Health and Safety Plan (HASP) will be prepared for the investigation activities based on the generic HASP and site-specific HASP template.
- A CAMP will be implemented (as necessary) during ground intrusive activities in accordance with the New York State Department of Health (NYSDOH) generic CAMP. The CAMP will include real-time monitoring for volatile organic compounds (VOCs) and particulates (i.e., dust) at one upwind and one downwind perimeter location during intrusive activities only. The CAMP will be implemented by the TRC scientist/engineer overseeing investigation activities.
- Investigation activities, including sample collection and analysis, will be completed in accordance with the Standby Engineering Services Contract, 6 NYCRR Part 375 Environmental Remediation Programs, NYSDEC DER-10 Technical Guidance for Site Investigation and Remediation (DER-10), NYSDEC Guidelines for Sampling and Analysis of PFAS under NYSDEC's Part 375 Programs (NYSDEC PFAS Guidance), the HASPs, CAMP, Field Activities Plan (FAP), and Quality Assurance Project Plan (QAPP). Samples selected for analysis of per- and polyfluoroalkyl substances (PFAS) will be containerized first at each location. Equipment blanks will be collected



in accordance with the QAPP utilizing water provided and certified to not contain PFAS by the call-out laboratory.

Mobilization (Estimated Field Days to Complete: 1)

Under this subtask, TRC will prepare for the SC and coordinate field work with the NYSDEC call-out laboratory and TRC utility locating, drilling, IDW management, and land surveying subcontractors. TRC will confirm that the drilling subcontractor has contacted Dig Safely New York (or appropriate utility locating service), received/reviewed utility confirmation receipts, and verify public utility mark-outs prior to intrusive work.

No less than four weeks prior to scheduled subcontractor mobilization, the drilling subcontractor will propose a potential water source for equipment decontamination during SC activities. TRC will collect one water sample for PFAS (21-compound list) analysis via United States Environmental Protection Agency (USEPA) Method 537 Modified from the proposed water source. Upon receipt of analytical results TRC will consult with NYSDEC as to the acceptability of the water source. Subcontractor mobilization will not occur until a suitable water source has been approved by NYSDEC.

Utility Locating Survey (Estimated Field Days to Complete: 1)

Prior to intrusive activities, a private utility locating survey will be conducted, in addition to the public utility mark outs, to clear six proposed soil boring locations. The utility locating surveyor will survey an approximately 15-foot radius around each proposed investigation location. Any subsurface utilities/structures/anomalies will be identified on the ground surface with spray paint and/or pin flags.

TRC will discuss any required soil boring repositioning, due to identified subsurface utilities/structures/anomalies, with the NYSDEC PM prior to installation. It is anticipated that minor offsets (10 feet or less) will not require prior notification/approval.

Direct Push Soil Borings (Estimated Field Days to Complete: 2)

Up to six soil borings will be advanced to terminal depths of 25 feet below ground surface (bgs), apparent depth to water, or refusal, whichever is encountered first. Proposed soil boring locations are shown on **Figure 1**. Each soil borings will be advanced to a depth of five feet bgs via hand clearing or soft dig methods and then advanced via direct push technology (DPT). Soil samples will be collected continuously from five feet bgs to the termination depth utilizing 4-foot long Macro-Core® samplers. Recovered soil will be classified for lithology by TRC personnel and screened [visual, olfactory, and photoionization detector (PID)] for indications of contamination. A sampling plan summary with location rationale is provided in **Table 1**.

At each soil boring location, up to three soil samples will be selected for laboratory analysis. Samples will be selected from the following intervals: one from the surface (0 to 2 inches below bottom of ground cover),



one from the interval 2 to 12 inches below bottom of ground cover, and one from the interval exhibiting the greatest evidence of contamination (or directly above the groundwater table if no evidence of contamination is observed).

A summary of the proposed analytical sampling plan is presented in **Table 1**. All soil samples selected for analysis will be analyzed for PFAS (21-compound list) via USEPA Method 537 Modified. Additionally, soil samples selected for analysis from four soil borings, as indicated in **Table 1**, will be submitted to the NYSDEC call-out laboratory, for:

- Target Compound List (TCL) VOCs plus 10 Tentatively Identified Compounds (TICs) via USEPA Method 8260 low level;
- TCL Semi-volatile organic compounds (SVOCs) plus 20 TICs via USEPA Method 8270;
- TCL Pesticides and Herbicides via USEPA Methods 8081 and 8151, respectively;
- Target Analyte List (TAL) metals plus mercury and cyanide via USEPA Methods 6010, 7471, and 9010, respectively;
- Polychlorinated biphenyls (PCBs), 7-aroclor list, via USEPA Method 8082; and
- 1,4-Dioxane via USEPA Method 8270 Selected Ion Monitoring (SIM).

Samples selected for analysis from the 2 to 12-inch interval from each boring will also be analyzed for pH, Total Organic Carbon (TOC), and extracted by Synthetic Precipitation Leaching Procedure (SPLP) for subsequent analysis of PFAS (21-compound list) via USEPA Method 537 Modified.

Quality control samples, including matrix spike and matrix spike duplicates (MS/MSDs), field duplicates, equipment blanks, and trip blanks will be collected in accordance with the generic QAPP. The NYSDEC call-out laboratory will provide Category B data deliverable packages to TRC. Electronic data deliverables (EDDs), in EQuIS format, will be submitted to the NYSDEC following validation (to be performed under Task 3, described below), and the results will be presented in the SC Report.

Monitoring Well Installation (Estimated Field Days to Complete: 3)

Up to six overburden groundwater monitoring wells, co-located with soil borings, will be installed. Proposed monitoring well locations are shown on **Figure 1**.

Each monitoring well borehole will be advanced using 4.25-inch inside diameter hollow stem augers (HSAs) to a maximum depth of 25 feet. Monitoring wells will be constructed utilizing 2-inch diameter Schedule 40 poly-vinyl chloride (PVC) riser and 10 feet of 10-slot screen. The top of well screen will installed two feet above the surface of the water table. The annulus between the well and borehole wall will be backfilled with No. 2 Morie sand to 2 feet above the well screen. A 1-foot thick (minimum) layer of choker sand (Morie No. 00) shall be placed directly above the filter pack. A 2-foot thick (minimum) hydrated bentonite seal will be placed directly above the choker sand, and the remaining annular space



above the seal will be grouted to the ground surface. Each well will be completed at ground surface with a locking expansion plug and within a standard flush-mount protective casing and concrete pad. Final well constructions may be modified based upon encountered field conditions. Up to three equipment blanks will be collected from the materials used for well construction and analyzed for PFAS (21-compound list) by via USEPA Method 537 Modified.

Monitoring Well Development (Estimated Field Days to Complete: 2)

Following installation, the drilling subcontractor will develop each of the newly installed monitoring wells utilizing surging and pumping techniques. High-density polyethylene (HDPE) tubing and equipment compatible with the recommendations for PFAS purging protocols will be used. Groundwater quality parameters (e.g., temperature, conductivity, turbidity, oxidation-reduction potential, etc.) will be monitored prior to, during (at a minimum frequency of once per well volume purged), and at the conclusion of development. Development will be considered complete when either turbidity is below 50 nephelometric turbidity units (NTUs), the well purges dry, or 10 well volumes have been removed, whichever occurs first.

Groundwater Sampling (Estimated Field Days to Complete: 2)

A minimum of two weeks after well development activities have been completed, groundwater samples will be collected from the newly installed monitoring wells utilizing low-flow sampling techniques. Similar to the well development subtask, HDPE tubing and equipment compatible with the recommendations for PFAS purging protocols will be used. Prior to sampling, the monitoring wells will be screened with a PID and gauged for total well depth and depth to water. Field data will be recorded in a field log book. Depth to water measurements will be used to prepare groundwater surface elevation contour maps, to be provided in the SC Report (to be prepared as part of Task 3, described below).

A summary of the proposed analytical sampling plan is presented in **Table 1**. All groundwater samples will be analyzed for PFAS (21-compound list) via USEPA Method 537 Modified. Additionally, four groundwater samples for analysis from four wells, as indicated in **Table 1**, will be submitted to the NYSDEC call-out laboratory, for:

- TCL VOCs plus 10 TICs via USEPA Method 8260 low level;
- TCL SVOCs plus 20 TICs via USEPA Method 8270;
- TCL Pesticides and Herbicides via USEPA Methods 8081 and 8151;
- TAL metals plus mercury and cyanide via USEPA Methods 6010, 7470, and 9010, respectively;
- PCBs, 7-aroclor list, via USEPA Method 8082; and
- 1,4-Dioxane via USEPA Method 8270 SIM.

Quality control samples, including MS/MSDs, equipment blanks, duplicates, and trip blanks will be collected at the frequencies specified in the generic QAPP. The NYSDEC call-out laboratory will provide



Category B data deliverable packages to TRC, EDDs in EQuIS format will be submitted to the NYSDEC following validation, and the results will be presented in the SC Report.

Surface Water and Sediment Sampling (Estimated Field Days to Complete: 1)

Surface water samples will be collected at three locations: one downstream (northeast) of the Site, one in the central portion of the Site, and one upstream (southwest) of the Site. Sediment samples will be colocated with surface water samples. The proposed surface water and sediment sample locations are shown on **Figure 1**. Sediment samples will be collected utilizing a hand auger equipped with a sludge sampler to prevent the loss of solids upon retrieval. Samples will be collected in accordance with the generic FAP and in accordance with NYSDEC PFAS Guidance. Surface water and sediment sampling will begin at the location downstream of the Site and progress upstream.

A summary of the proposed analytical sampling plan is presented in **Table 1**. All surface water and sediment samples will be analyzed for PFAS (21-compound list) via USEPA Method 537 Modified. Two surface water and two sediment samples (collected from locations upstream and downstream of the Site) will be selected for analysis for the complete list of analytes included in the Groundwater Sampling section above.

Site Survey (Estimated Field Days to Complete: 1)

The Site Survey will include Task 2 sampling locations and significant Site physical features. The surveyor will collect locations (coordinates) and elevations of the following:

- Up to six monitoring wells including elevations of adjacent ground surface, top of flush-mount protective casing elevations, and top of PVC riser elevations;
- Three surface water/sediment sample locations; and
- Significant Site physical features.

A survey report, documenting the coordinates/elevations of Task 2 sampling locations and including a drawing showing surveyed points and significant Site features, will be signed and sealed by a Professional Land Surveyor (PLS) licensed to practice in the State of New York, and provided in the SC Report.

Investigation Derived Waste

Investigation derived waste is anticipated to include the following: decontamination fluids, well development and purge water, and soil cuttings. Wash and rinse water used for equipment decontamination, development water, purge water, and soil cuttings will be containerized in Department of Transportation (DOT)-approved 55-gallon drums for off-Site disposal. Waste characterization sampling and analysis will be performed. A summary of the proposed analytical sampling plan is presented in **Table 1**. Used personal protective equipment (PPE) and disposable sampling equipment will be bagged as regular refuse and disposed as solid waste, unless grossly contaminated.



Materials containerized for off-Site disposal will be temporarily staged on pallets at a location that is acceptable to the NYSDEC and the property owner. Containerized materials will be clearly marked to indicate the contents of the containers, the date of generation, and the material source. IDW will be properly disposed of within 120 days of generation.

<u>Task 3 – Reporting</u>

The SC Report will present the results of the investigation and be prepared in accordance with the applicable provisions of NYSDEC DER-10 and include the following:

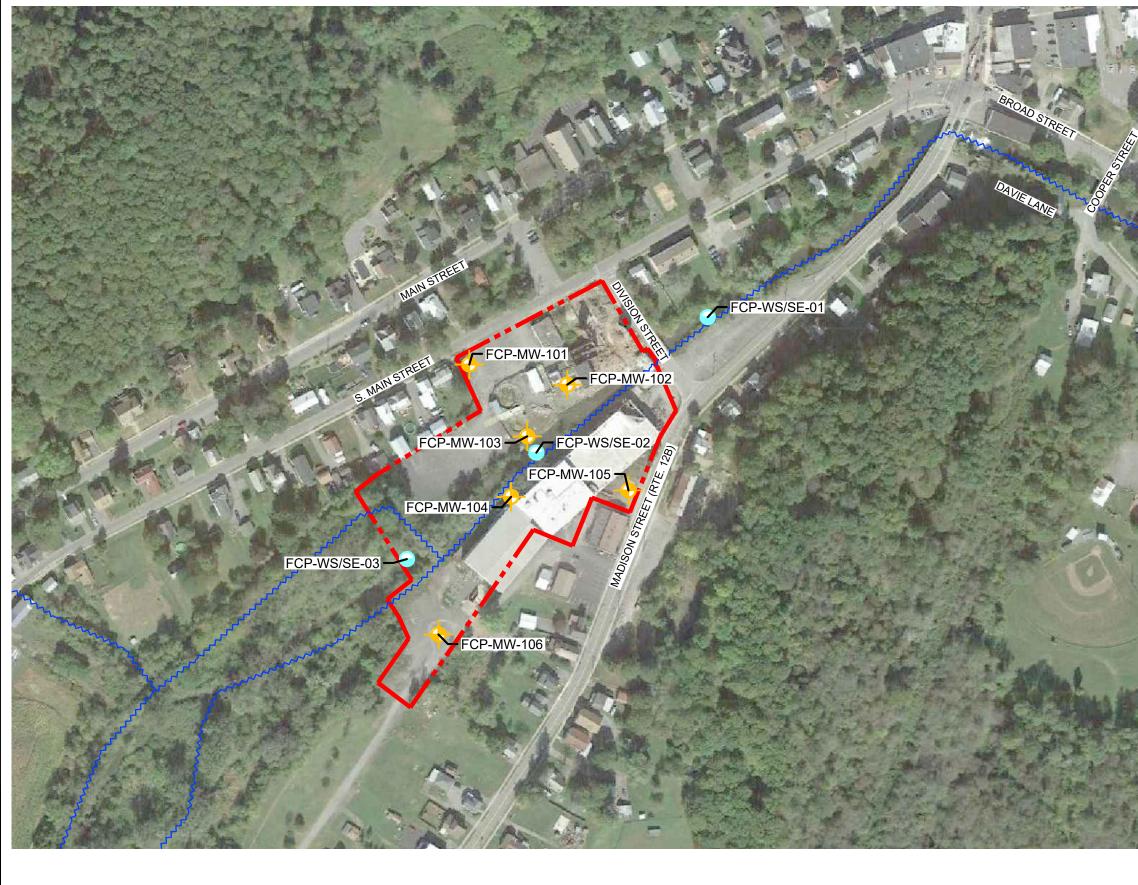
- Background information for the Site;
- Description of field investigation activities performed;
- Characteristics of the area investigated, including physical features, geology and hydrogeology, geologic cross-sections, and groundwater potentiometric surface figures;
- Identification of applicable standards, criteria and guidance (SCGs);
- Investigation, testing, and sampling results including a comparison to SCGs (as applicable);
- Data usability evaluation including a data usability summary report (DUSR);
- Figures showing site features, sample locations, contaminant distribution, etc.; and,
- Conclusions regarding the significance of SC findings including an evaluation for reclassification/delisting or recommendations for additional investigation activities.



Project Schedule

Task No.	Task Description	Est. Time of Completion				
	Preliminary Activities					
1	File Review					
1	Site Visit	March 2021				
	WA Package					
	Environmental Sampling					
	Utility Locating Survey					
	Direct Push Soil Borings	2 months after WA				
	Monitoring Well Installation					
2	Monitoring Well Development	approval				
	Groundwater Sampling					
	Surface Water and Sediment Sampling					
	Site Survey					
	Investigation Derived Waste	3 months following generation				
3	Reporting	July 2021				







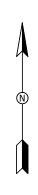
SITE BOUNDARY

ORISKANY CREEK

FCP-WS/SE-##



SURFACE WATER / SEDIMENT SAMPLE LOCATION AND IDENTIFICATION NUMBER



GROUNDWATER / SOIL SAMPLE LOCATION AND IDENTIFICATION NUMBER

NOTES:

- 1. LOCATIONS AND DIMENSIONS OF PHYSICAL FEATURES, BOUNDARIES, AND SAMPLE LOCATIONS ARE APPROXIMATE.
- 2. AERIAL IMAGE FROM GOOGLE EARTH PRO DATED OCTOBER 2, 2017.

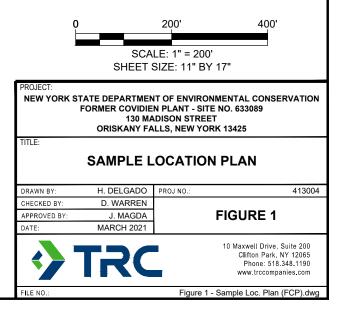


Table 1 New York State Department of Environmental Conservation Former Covidien Plant - NYSDEC Site No. 633089 130 Madison Street, Oriskany Falls, New York Site Characterization Sample Analysis Summary

		N N N	Sample Analysis Summary			
		Number of Samples for				
Sample Location	Sample Matrix	Analysis	Analytical Parameters			
SUBSURFACE INVESTIGATION						
FCP-MW-101	Soil	3	PFAS, TCL VOCs +10, TCL SVOCs +20, TCL Pesticides/Herbicides, PCBs, TAL Metals (plus Hg and CN), and 1,4-Dioxane			
FCP-MW-102	Soil	3	PFAS			
FCP-MW-103	Soil	3	PFAS, TCL VOCs +10, TCL SVOCs +20, TCL Pesticides/Herbicides, PCBs, TAL Metals (plus Hg and CN), and 1,4-Dioxane			
FCP-MW-104	Soil	3	PFAS, TCL VOCs +10, TCL SVOCs +20, TCL Pesticides/Herbicides, PCBs, TAL Metals (plus Hg and CN), and 1,4-Dioxane			
FCP-MW-105	Soil	3	PFAS			
FCP-MW-106	Soil	3	PFAS, TCL VOCs +10, TCL SVOCs +20, TCL Pesticides/Herbicides, PCBs, TAL Metals (plus Hg and CN), and 1,4-Dioxane			
MS/MSD	Soil	1	PFAS, TCL VOCs +10, TCL SVOCs +20, TCL Pesticides/Herbicides, PCBs, TAL Metals (plus Hg and CN), and 1,4-Dioxane			
Blind Duplicate	Soil	1	PFAS, TCL VOCs +10, TCL SVOCs +20, TCL Pesticides/Herbicides, PCBs, TAL Metals (plus Hg and CN), and 1,4-Dioxane			
Equipment Blank	Water	2	PFAS, TCL VOCs +10, TCL SVOCs +20, TCL Pesticides/Herbicides, PCBs, TAL Metals (plus Hg and CN), and 1,4-Dioxane			
Equipment Blank	Water	3	PFAS			
	Total	25				
Note:		•				
Samples collected from	n the 2-12" interva	l will also be a	nalyzed for pH, Total Organic Carbon (TOC), and tested by Synthetic Precipitation Leaching Procedure (SPLP).			
GROUNDWATER S	AMPLING					
FCP-MW-101	Groundwater	1	PFAS, TCL VOCs +10, TCL SVOCs +20, TCL Pesticides/Herbicides, PCBs, TAL Metals (plus Hg and CN), and 1,4-Dioxane			
FCP-MW-102	Groundwater	1	PFAS			
FCP-MW-103	Groundwater	1	PFAS, TCL VOCs +10, TCL SVOCs +20, TCL Pesticides/Herbicides, PCBs, TAL Metals (plus Hg and CN), and 1,4-Dioxane			
FCP-MW-104	Groundwater	1	PFAS, TCL VOCs +10, TCL SVOCs +20, TCL Pesticides/Herbicides, PCBs, TAL Metals (plus Hg and CN), and 1,4-Dioxane			
FCP-MW-105	Groundwater	1	PFAS			
FCP-MW-106	Groundwater	1	PFAS, TCL VOCs +10, TCL SVOCs +20, TCL Pesticides/Herbicides, PCBs, TAL Metals (plus Hg and CN), and 1,4-Dioxane			
Trip Blank	Water	1	TCL VOCs +10			
MS/MSD	Groundwater	1	PFAS, TCL VOCs +10, TCL SVOCs +20, TCL Pesticides/Herbicides, PCBs, TAL Metals (plus Hg and CN), and 1,4-Dioxane			
Blind Duplicate	Groundwater	1	PFAS, TCL VOCs +10, TCL SVOCs +20, TCL Pesticides/Herbicides, PCBs, TAL Metals (plus Hg and CN), and 1,4-Dioxane			
Equipment Blank	Water	2	PFAS, TCL VOCs +10, TCL SVOCs +20, TCL Pesticides/Herbicides, PCBs, TAL Metals (plus Hg and CN), and 1,4-Dioxane			
	Total	11				
SURFACE WATER						
FCP-WS-01	Surface Water	1	PFAS, TCL VOCs +10, TCL SVOCs +20, TCL Pesticides/Herbicides, PCBs, TAL Metals (plus Hg and CN), and 1,4-Dioxane			
FCP-WS-02	Surface Water	1	PFAS			
FCP-WS-03	Surface Water	1	PFAS, TCL VOCs +10, TCL SVOCs +20, TCL Pesticides/Herbicides, PCBs, TAL Metals (plus Hg and CN), and 1,4-Dioxane			
Trip Blank	Water	1	TCL VOCs +10			
MS/MSD	Surface Water	1	PFAS, TCL VOCs +10, TCL SVOCs +20, TCL Pesticides/Herbicides, PCBs, TAL Metals (plus Hg and CN), and 1,4-Dioxane			
Blind Duplicate	Surface Water	1	PFAS, TCL VOCs +10, TCL SVOCs +20, TCL Pesticides/Herbicides, PCBs, TAL Metals (plus Hg and CN), and 1,4-Dioxane			
Equipment Blank	Water	1	PFAS, TCL VOCs +10, TCL SVOCs +20, TCL Pesticides/Herbicides, PCBs, TAL Metals (plus Hg and CN), and 1,4-Dioxane			
	Total 7					

Table 1 New York State Department of Environmental Conservation Former Covidien Plant - NYSDEC Site No. 633089 130 Madison Street, Oriskany Falls, New York Site Characterization Sample Analysis Summary

Sample Location	Sample Matrix	Number of Samples for Analysis	Analytical Parameters	
SEDIMENT				
FCP-SE-01	Sediment	1	PFAS, TCL VOCs +10, TCL SVOCs +20, TCL Pesticides/Herbicides, PCBs, TAL Metals (plus Hg and CN), and 1,4-Dioxane	
FCP-SE-02	Sediment	1	PFAS	
FCP-SE-03	Sediment	1	PFAS, TCL VOCs +10, TCL SVOCs +20, TCL Pesticides/Herbicides, PCBs, TAL Metals (plus Hg and CN), and 1,4-Dioxane	
MS/MSD	Sediment	1	PFAS, TCL VOCs +10, TCL SVOCs +20, TCL Pesticides/Herbicides, PCBs, TAL Metals (plus Hg and CN), and 1,4-Dioxane	
Blind Duplicate	Sediment	1	PFAS, TCL VOCs +10, TCL SVOCs +20, TCL Pesticides/Herbicides, PCBs, TAL Metals (plus Hg and CN), and 1,4-Dioxane	
Equipment Blank	Water	1	PFAS, TCL VOCs +10, TCL SVOCs +20, TCL Pesticides/Herbicides, PCBs, TAL Metals (plus Hg and CN), and 1,4-Dioxane	
	Total	6		
OTHER				
FCP-SP	Water Source	1	PFAS	
FCP-WC-LIQUID	Liquid Waste	1	pH, Total Organic Halides, Ignitability, Corrosivity, and Reactivity	
FCP-WC-SOLID Solid Waste		1	Full List TCLP (TCL VOCs, TCL SVOCs, TCL Pesticides/Herbicides, TAL Metals plus Hg and CN), pH, Paint Filter, Total Organic Halides Ignitability, Corrosivity, and Reactivity	

Notes:

1.00000		
FCP	: Former Covidien Plant	SVOCs
GW	: Groundwater	TAL
MS/MSD	: Matrix Spike/Matrix Spike Duplicate	TCL
MW	: Monitoring Well	TCLP
PCBs	: Polychlorinated Biphenyls (7 Aroclor List)	TICs
PFAS	: Per- and Polyfluoroalkyl Substances (List of 21)	VOCs
SE	: Sediment	WS
SP	: Standpipe	WC
SPLP	: Synthetic Precipitation Leaching Procedure	

Semi-volatile Organic Compounds
Target Analyte List
Target Compound List
Toxicity Characteristic Leaching Procedure
Tentatively Identified Compounds
Volatile Organic Compounds
Surface Water
Waste Characterization