Pennsylvania Department of Environmental Protection

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**New**	Application No.	**PA0294420**
Facility Type	**Industrial**	APS ID	**14861**
Major / Minor	**Minor**	Authorization ID	**1485829**

NPDES PERMIT FACT SHEET INDIVIDUAL INDUSTRIAL WASTE (IW) AND IW STORMWATER

Applicant and Facility Information

Applicant Name	**Cycle Chem Inc. dba ACV Enviro, a Republic Services Company**	Facility Name	**ACV Enviro**
Applicant Address	550 Industrial Drive Lewisberry, PA 17339-9534	Facility Address	550 Industrial Drive Lewisberry, PA 17339-9534
Applicant Contact	Sean Mcdonnell	Facility Contact	Sean Mcdonnell
Applicant Phone	(717) 938-4700	Facility Phone	(717) 938-4700
Client ID	69461	Site ID	255985
SIC Code	9511	Municipality	Fairview Township
SIC Description	Public Admin. - Air, Water, And Solid Waste Management	County	York
Date Application Received	May 15, 2024	EPA Waived?	Yes
Date Application Accepted	July 17, 2024	If No, Reason	

Purpose of Application: NPDES discharge of treated stormwater associated with industrial activity.

Summary of Review

Permit Background:

This is a new application for a NPDES individual industrial waste permit located in Fairview Township, York County. See Figures 1, 2, and 3 for a Site Location Map, Site Plan, and Stormwater Treatment Process Diagram.

Cycle Chem Inc. dba ACV Enviro, a Republic Services Company (ACV) is currently covered under PA0084107, which expired on 10/31/2019 but is administratively extended. PA0084107 is an NPDES individual permit for discharges of stormwater associated with industrial activity.

In August 2020, ACV voluntarily ceased discharging from their stormwater pond at Outfall 001 due the presence of PFAS compounds in the stormwater. The discharge was ceased by closing an isolation valve at the outfall of the stormwater pond. From August 2020 to December 2023, stormwater at the facility was hauled to various wastewater treatment plants for treatment and disposal.

In 2022, ACV contracted with Barton and Loguidice and Theia, LLC to install a pilot treatment system to reduce PFAS compound concentrations in the stormwater pond. In May 2023, ACV began operating a pilot stormwater treatment system on a continuous, recirculating loop. The treatment system effluent was pumped into a series of frac tanks that allowed ACV to hook up tanker trucks and haul the treated stormwater to other treatment facilities for disposal. Any overflows from the frac tanks were directed back into the stormwater pond.

In December 2023, DEP issued a Temporary Discharge Approval (TDA) letter that allowed ACV to discharge treated stormwater until ACV obtained proper DEP Clean Water permits, including a Water Quality Management (WQM) permit and an Individual Industrial Waste (IW) permit for the discharge of treated stormwater. As a result, ACV submitted an IW permit

Approve	Deny	Signatures	Date
X		*Jacob S. Rakowsky* Jacob S Rakowsky, E.I.T. / Project Manager	11/13/2024
X		*Scott M. Arwood* Scott M. Arwood, P.E. / Environmental Engineer Manager	11/13/2024

Summary of Review

application and WQM permit application. The facility remains covered under the TDA until their IW and WQM permits are issued. When the IW and WQM permits are issued, the TDA will be cancelled and IW permit PA0294420 will replace PA0084107.

A new IW application was received on 5/15/2024 via PUP 234156 and a new WQM application was received on 5/31/2024 via PUP 237293. The applications were deemed complete on 7/17/2024. Technical deficiency notices for the applications were issued on 9/18/2024 via email. The deficiencies were addressed on 10/17/2024 via email.

Facility Description:

ACV is a hazardous and non-hazardous waste treatment and storage facility located at 550 Industrial Drive in Lewisberry, Fairview Township, York County, Pennsylvania. The facility receives material in bulk and drum quantities from waste generators representing a wide range of industries. These waste materials are delivered to the facility by outside contractors and offloaded by ACV staff. The materials are stored in containers or tanks until a sufficient quantity is obtained to ship to an off-site treatment facility, recycling facility, or final disposal facility. In order to maximize transportation efficiency, comparable wastes may be consolidated together before or after any processing activities prior to transport off site. All hazardous waste storage activities are conducted indoors. Some wastes are temporarily staged outdoors. Waste materials accepted at the facility fall under Ignitable, Corrosive, Reactive, TC Toxic, Acutely Hazardous, and Toxic US EPA/PA DEP Hazard Codes. No disposal activities have been, are, or will be conducted at the site.

The following practices are in place at the facility:

1. Separate areas are maintained for storage and handling of hazardous and non-hazardous (residual) wastes.
2. The drum storage area contains several segregated areas with individual secondary containment to prevent the co-mingling of incompatibles in the event of a spill. Additionally, Dangerous When Wet and Pyrophoric materials are stored separately in two purpose-built sheds.
3. Bulk storage of a variety of liquids is above ground and indoors. A key feature of the bulk liquid storage is that Flammable Liquids are stored under a nitrogen blanket to suppress flammable vapors to further augment the explosion-proofing mechanisms used thus providing enhanced safety.

If the facility qualified for a PAG-03 General Permit for discharges of stormwater associated with industrial activity, the applicable PAG-03 Appendix would be Appendix A – Hazardous Waste Treatment, Storage, or Disposal Facilities. Since the facility is discharging treated stormwater, the facility does not qualify for a stormwater-only permit.

Outfall Description:

The facility has one outfall, Outfall 001. Under PA0084107, the stormwater pond outfall was Outfall 001. The stormwater pond outfall is located near the southeast corner of the pond. The stormwater pond outfall is controlled by an isolation valve that can be opened to allow stormwater to exit the pond and enter a creek to the south of the pond. This creek is typically dry and is an unnamed tributary to Fishing Creek, with eventual discharge to the Susquehanna River. The isolation valve that allows untreated stormwater to leave the pond has been closed since ACV voluntarily ceased discharging stormwater in August 2020 and will continue to remain closed under PA0294420.

Under PA0294420, the treatment system influent will consist of stormwater pumped from the stormwater pond. Treated stormwater will be piped into the top of the manhole at Outfall 001. Treated stormwater will be discharged in a batched manner. Due to the nature of the system, discharges are largely dependent on regional precipitation and the overall level of the stormwater pond. For example, an extended period of dry weather may result in the temporary suspension of discharges while a wet period may result in more frequent discharges.

The stormwater pond is a lined pond used to collect stormwater runoff from structure roofs, the concrete pad area, and the grassy areas immediately surrounding the pond. The pond is underlined by a clay layer capped with a high-density polyethylene (HDPE) texturized liner. The liner covers the entirety of the pond bottom and continues up the side slopes to the height of the emergency spillway. The pond was cleaned out and the pond liner was replaced during the first quarter of 2023. The concrete pad area contains multiple stormwater inlets that facilitate the transport of stormwater into the pond through a central pipe along the east side of the pond, generally opposite of the existing outfall. The inlet into the pond can be closed via an isolation valve located within a concrete vault.

Summary of Review

Additional Info:

Per the application, the facility's SPCC Plan was last updated in July 2017, PPC was last updated in July 2017, and Stormwater Management Plan was last updated in May 2009. The reviewer recommends updating these plans to reflect current operations.

Part C permit conditions require semi-annual site inspections as well as implementation of BMPs and implementation of the facility PPC Plan. Given the BMPs in place, the discharge is not expected to have any measurable effect on the water quality of the receiving stream.

The EPA waiver is in effect.

Public Participation:

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.029
Latitude	40º 9' 57.00"	Longitude	-76º 50' 15.00"
Wastewater Description:	Treated stormwater associated with industrial activity.		
Receiving Waters	Unnamed Tributary of Fishing Creek (CWF (existing use))	Stream Code	9344
NHD Com ID	56405989	RMI	0.90
Drainage Area	0.0506 sq. mi.	Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)	Parameters are outside of StreamStats' suggested range.	Q_{7-10} Basis	StreamStats
Watershed No.	7-E	Chapter 93 Class.	TSF, MF
Existing Use	CWF(COLD WATER FISHES)	Existing Use Qualifier	Use Attainability Analysis
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	HABITAT ALTERATIONS, SILTATION		
Source(s) of Impairment	CONSTRUCTION, HABITAT MODIFICATION - OTHER THAN HYDROMODIFICATION		
TMDL Status		Name	
Nearest Downstream Public Water Supply Intake	PPL Bruner Island		
PWS Waters	Susquehanna River	Municipality	East Manchester Twp, York County
PWS RMI	40.24	Distance from Outfall (mi)	~12.3

DEP has evaluated information indicating that the existing use of the receiving waters is different than the designated use under 25 Pa. Code § 93.9. In developing the draft NPDES permit, DEP is proposing to protect the existing use of the receiving waters. Following DEP's notice of the receipt of the application and the draft permit in the Pennsylvania Bulletin, DEP will accept written comments during the public comment period regarding DEP's tentative determination to protect the existing use. DEP will make a final determination on existing use protection for the receiving waters as part of the final permit action.

Drainage Area: 90,000 SF

% Impervious: 100%

Description of Materials/Activities in Drainage Area Exposed to Precipitation:
Stormwater drained from paved/unpaved areas, roofs, and temporary chemical storage area.

Description of Treatment or BMPs in Drainage Area to Control Pollutants in Stormwater:
HDPE-Lined Stormwater Pond and PFAS Treatment System.

Treatment Facility Summary

Treatment Facility Name: ACV Enviro PFAS Treatment System

WQM Permit No.	Issuance Date
6724203	To be issued in conjunction with PA0294420.

Outfall No.	Waste Source	Design Flow (MGD)	Annual Average Flow (MGD)	Waste Flow Pattern
001	Industrial stormwater pond	0.029	0.016	Batch as needed (precipitation dependent)

Treatment Unit Description	Number of Units
1-micron bag filters	2
UV disinfection	1
1-micron cartridge filters	3
Media filters	2

The stormwater system is primarily a media filtration system (see Figure 3). The system consists of two pumps (one self-priming as the primary pump and one centrifugal as the backup pump) to remove water from the stormwater pond. Stormwater is drawn into the system via a 3-inch flexible hose, attached to a pontoon float to keep the hose above the base of the pond. The intake is affixed with a screen to prevent debris from entering the system. The flexible hose is connected to a PVC pipe near the edge of the pond and piped into the treatment system. Water entering the treatment system is then passed through a pair of 1-micron bag filters to remove particulate matter. After bag filtration, water passes through a UV system to limit the growth of biological activity. Next, water passes through three (3) parallel canister filters containing multiple 1- micron cartridge filters to further decrease particulate matter. Water then passes through a piping manifold that allows ACV staff to set up the lead and lag configuration of two media filter vessels. The media filter vessels include a layer of gravel topped with CETCO FluroSorb™, a bentonite-based clay sorbent material. Water passes through each of the media filters in series before passing through a flow meter and leaving the treatment system.

Water discharged during media filter backwash is directed back into the stormwater pond. PFAS-laden filters and media are placed inside 55-gallon drums that are secured and transported to ACV's waste handling facility in Elizabeth, New Jersey for final disposal.

Table 1. Summary of Outfall 001 Treated Effluent Sample Results

Pollutant	Avg. Conc.	Max. Conc.	No. Events Sampled
Oil and Grease (mg/L)	5.1	5.1	3
BOD5 (mg/L)	2.8	4.7	3
COD (mg/L)	27.1	45.3	8
TSS (mg/L)	4.0	4.0	3
TN (mg/L)	0.51	1.26	3
TP (mg/L)	0.06	0.10	3
pH (S.U.)	7.50	7.74	3
Ammonia-N (mg/L)	0.12	0.24	8
Total Arsenic (mg/L)	0.0065	0.0100	8
Total Cadmium (mg/L)	0.0010	0.0001	8
Total Cyanide (mg/L)	0.005	0.005	8
Total Lead (mg/L)	0.010	0.010	8
Total Magnesium (mg/L)	3.10	2.48	8
Total Mercury (mg/L)	2.48	3.10	8
Total Selenium (mg/L)	0.0315	0.0500	8
Total Silver (mg/L)	0.0063	0.0100	8
PFOA (ng/L)	6.5	15.3	7
PFOS (ng/L)	15.1	42.0	7
HFPO-DA (ng/L)	3.79	7.46	3
PFBS (ng/L)	1.74	1.77	3
Chloride (mg/L)	92.7	99.7	3
Chromium VI (ug/L)	0.17	0.32	3
Fluoride (mg/L)	0.38	0.40	3
Total Hardness (mg/L)	102.7	104.0	3
Surfactants (mg/L)	0.14	0.19	3
Nitrate + Nitrite (mg/L)	0.51	1.26	3
Sulfate (mg/L)	26.5	27.8	3
TDS (mg/L)	263	270	3
TKN (mg/L)	0.90	1.13	3
TOC (mg/L)	5.05	7.22	3
Total Aluminum (mg/L)	0.066	0.177	3
Total Antimony (mg/L)	0.0010	0.0011	3
Total Barium (mg/L)	0.108	0.132	3
Total Boron (mg/L)	0.049	0.063	3
Total Chromium (mg/L)	0.0005	0.001	3
Total Cobalt (mg/L)	0.0003	0.0005	3
Total Copper (mg/L)	0.009	0.020	3
Total Iron (mg/L)	0.218	0.334	3
Total Manganese (mg/L)	0.056	0.091	3
Total Molybdenum (mg/L)	0.021	0.023	3
Total Nickel (mg/L)	0.005	0.006	3
Total Thallium (mg/L)	0.0001	0.0002	3
Total Zinc (mg/L)	0.019	0.035	3
Fecal Coliform (cfu/100ml)	17	48	3
Dissolved Iron (mg/L)	0.105	0.111	3

Compliance History	
Summary of DMRs:	A summary of application sample results, which were also included in eDMRs where applicable, can be found in Table 1 above. Under PA0084107, ACV was required to monitor and report Flow, pH, COD, Ammonia-N, Total Arsenic, Total Cadmium, Total Cyanide, Total Lead, Total Magnesium, Total Mercury, Total Selenium, and Total Silver in their eDMR. Additionally, ACV's TDA required monthly reporting of each of the 40 PFAS compounds from EPA Method 1633. PFOA, PFOS, PFBS, and HFPO-DA are of particular interest to DEP's Clean Water Program and were also included in the summary in Table 1 above.
Summary of Inspections:	The facility was last inspected on 10/11/2024. No violations were noted. The client currently has no open violations that should affect issuance of the final permit.

Proposed Effluent Limitations and Monitoring Requirements

All parameters from the previous permit PA0084107 are included in this permit. Additionally, PFOA, PFOS, PFBS, and HFPO-DA are included due to the presence of PFAS compounds in the stormwater pond and nature of the treatment system.

Table 2. Proposed Monitoring Requirements for Outfall 001:

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	1/discharge	Estimate
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/discharge	Grab
COD	XXX	XXX	XXX	XXX	Report	XXX	1/month	Grab
Ammonia	XXX	XXX	XXX	XXX	Report	XXX	1/month	Grab
Total Arsenic	XXX	XXX	XXX	XXX	Report	XXX	1/month	Grab
Total Cadmium	XXX	XXX	XXX	XXX	Report	XXX	1/month	Grab
Total Cyanide	XXX	XXX	XXX	XXX	Report	XXX	1/month	Grab
Total Lead	XXX	XXX	XXX	XXX	Report	XXX	1/month	Grab
Total Magnesium	XXX	XXX	XXX	XXX	Report	XXX	1/month	Grab
Total Mercury	XXX	XXX	XXX	XXX	Report	XXX	1/month	Grab
Total Selenium	XXX	XXX	XXX	XXX	Report	XXX	1/month	Grab
Total Silver	XXX	XXX	XXX	XXX	Report	XXX	1/month	Grab
PFOA (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/month	Grab
PFOS (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/month	Grab
PFBS (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/month	Grab
HFPO-DA (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/month	Grab

Compliance Sampling Location: Outfall 001

Other Comments:

- A benchmark for COD of 120 mg/L is included in this permit, which is typical of the monitoring requirements for PAG-03 appendices (effective 3/24/2023). A benchmark for pH of 9.0 S.U. is not included since pH already has effluent limits.
- Monthly monitoring and reporting of PFOA, PFOS, PFBS, and HFPO-DA are included in this permit due to the presence of PFAS compounds in the stormwater pond.
- Special conditions applicable to dry streams are included in Part C.I of the permit.
- Special conditions applicable to stormwater outfalls are included in Part C.II of the permit, which include an Annual Report and routine inspections on a semi-annual basis.
- Special conditions applicable to the stormwater pond are included in Part C.II.C.5 and Part C.III of the permit.
- Special conditions applicable to Aqueous Film Forming Foam (AFFF) are included in Part C.IV of the permit.

Antidegradation (93.4):

The applicant is not proposing a new or increased discharge to a High Quality (HQ) or Exceptional Value (EV) water, so Module 1 (Anti Degradation Module) was not attached to the application. The effluent limits for this discharge have been developed to ensure that existing instream water uses and the level of water quality necessary to protect the existing uses are maintained and protected. Best Management Practices will ensure that the existing instream uses are protected. No Exceptional Value Waters are impacted by this discharge.

The existing use of the receiving waters are as follows:
UNT to Fishing Creek (CWF, MF)

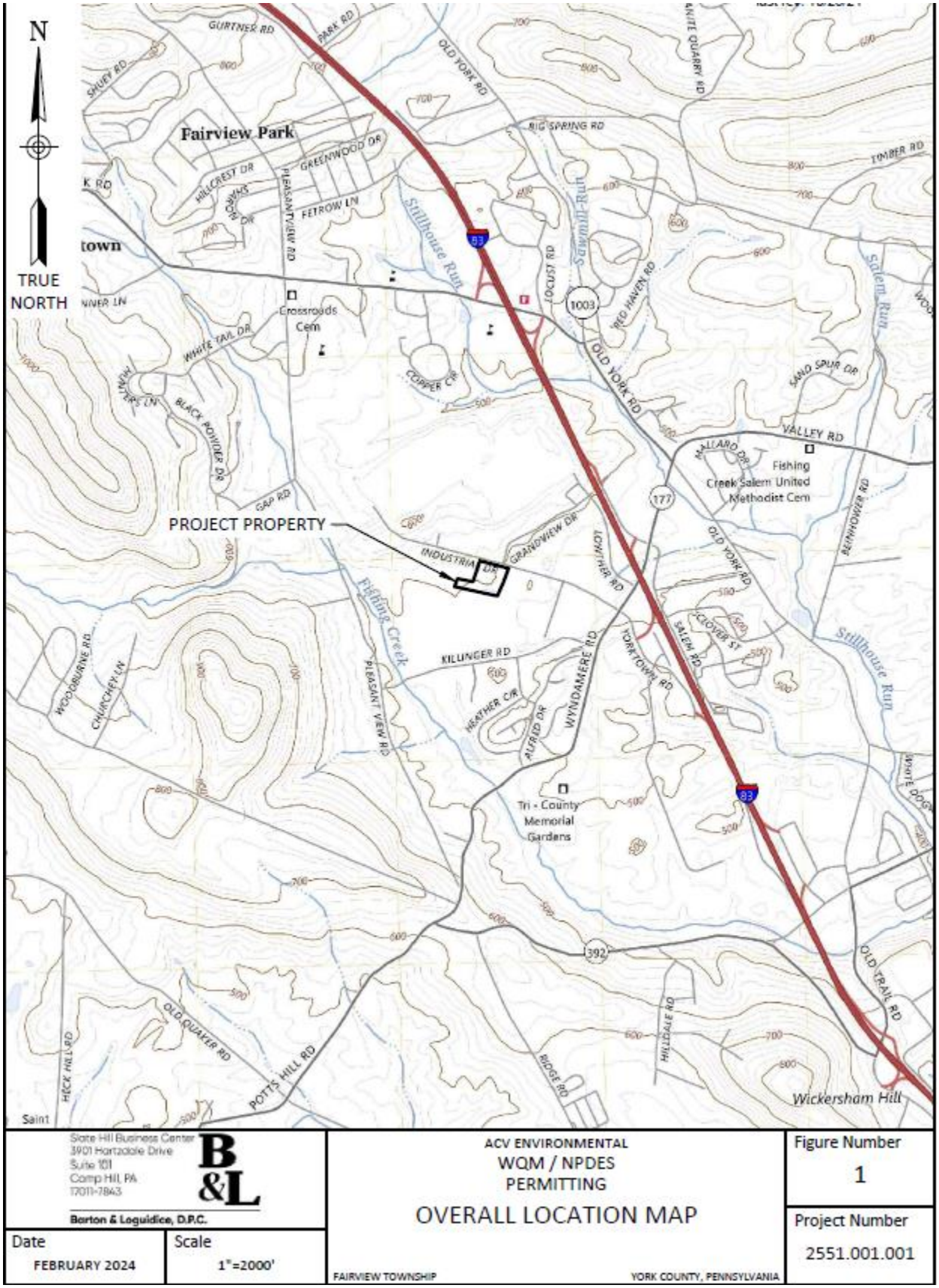

Figure 1. Site Location Map

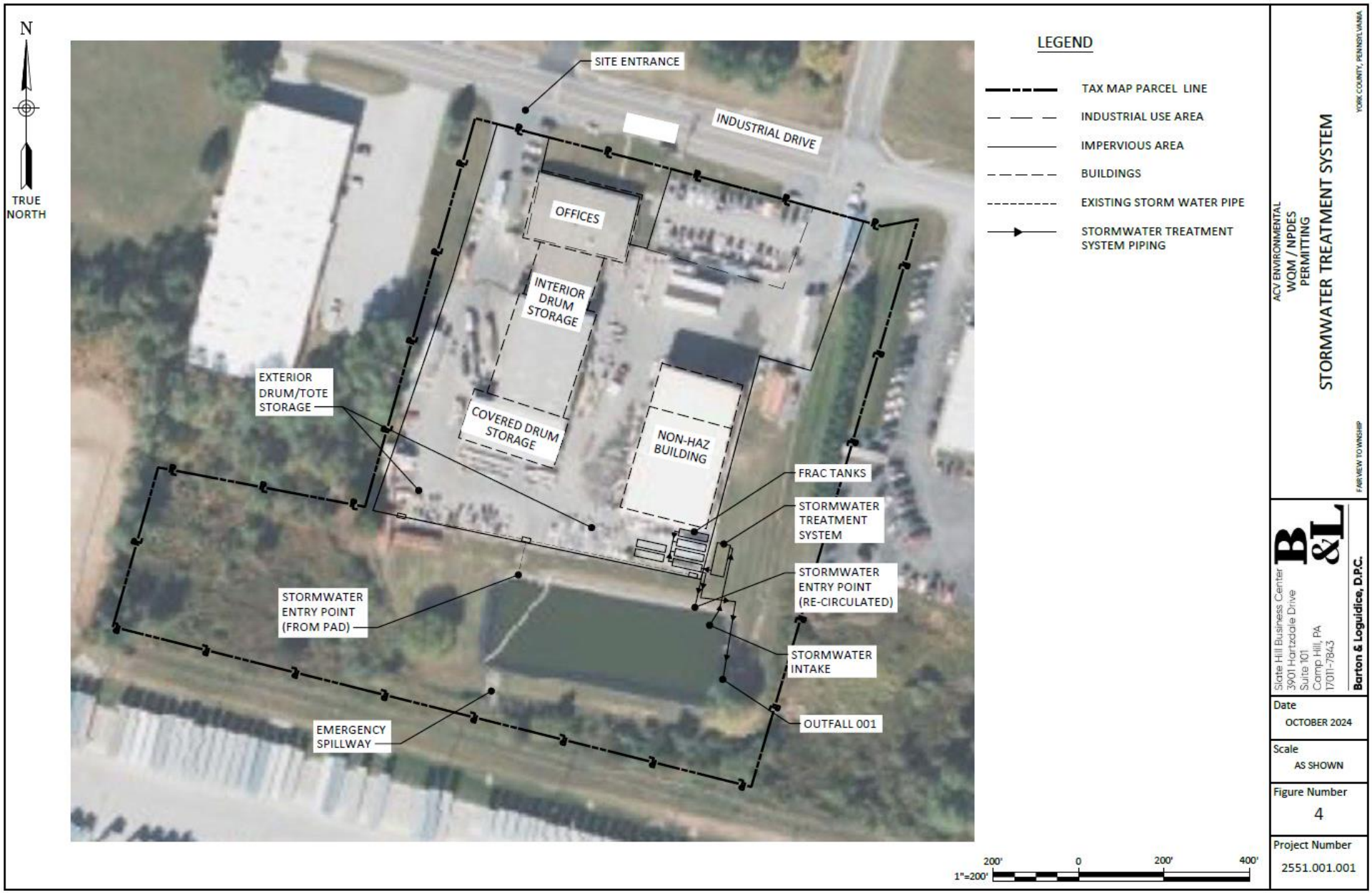

Figure 2. Site Plan

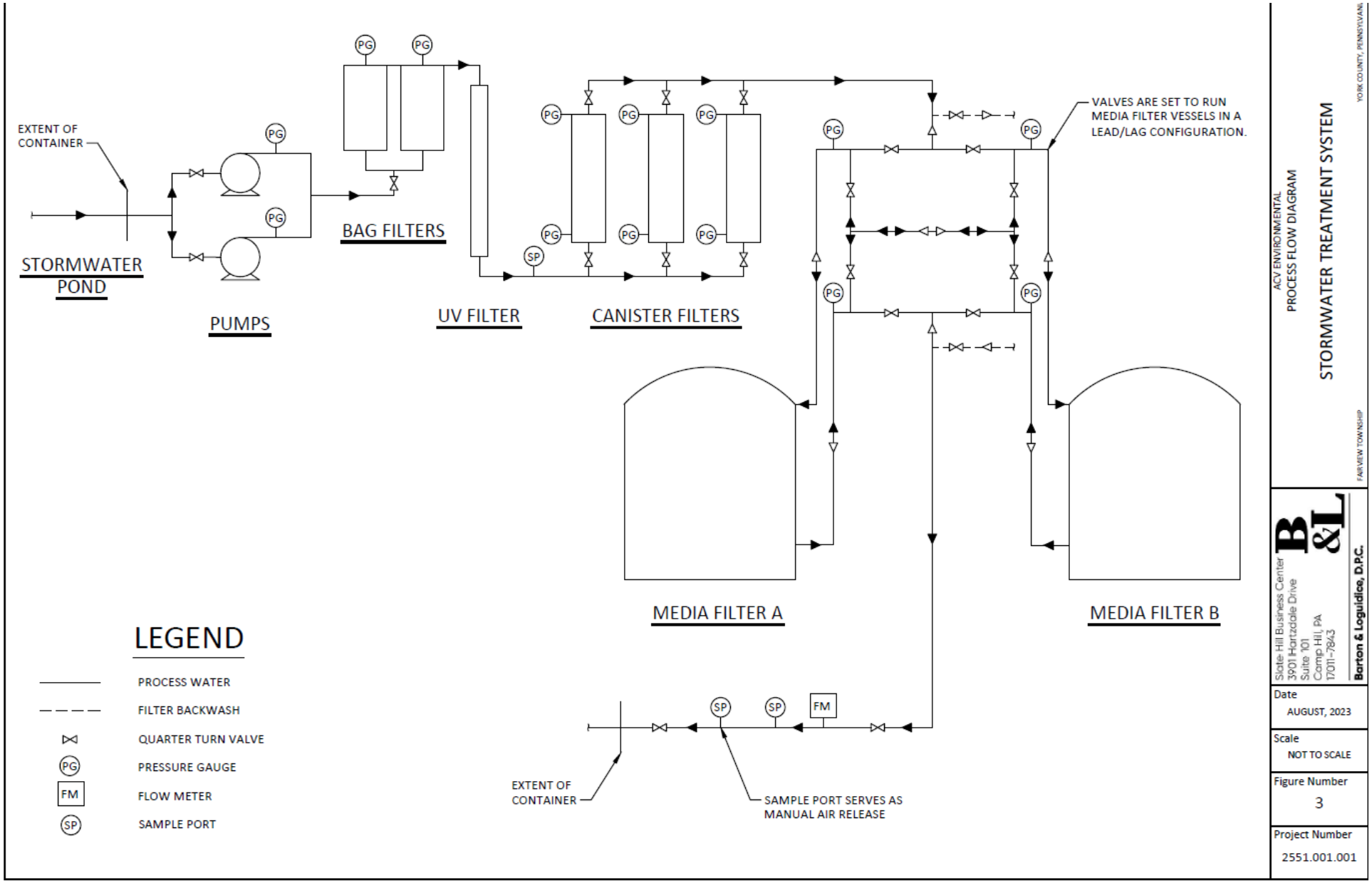

Figure 3. Stormwater Treatment System