pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**New**	Application No.	**PA0284777**
Wastewater Type	**Sewage**	APS ID	**1053977**
Facility Type	**SRSTP**	Authorization ID	**1380290**

NPDES PERMIT FACT SHEET
INDIVIDUAL SFTF/SRSTP

Applicant, Facility and Project Information

Applicant Name	**Michael E Hallam**	Facility Name	**Hallam Property STP**
Applicant Address	225 Tate Road	Facility Address	130 Paradise Road
	Hookstown, PA 15050-1237		Hookstown, PA 15052
Applicant Contact	Michael Hallam	Facility Contact	Same as Applicant
Applicant Phone	(412) 855-1901	Facility Phone	Same as Applicant
Client ID	334166	Site ID	854055
SIC Code	8800	Municipality	Aliquippa City
SIC Description	Private Households	County	Beaver
Date Application Received	December 29, 2021	WQM Required	Yes
Date Application Accepted	December 29, 2021	WQM App. No.	0421409

Project Description: Application for a new NPDES permit authorize a discharge of a treated Sewage.

Summary of Review

The applicant proposes to construct a 400 GPD single residence sewage treatment plant to replace a malfunctioning on-lot system at an existing single residence home of 3 bedrooms (1 EDU) in Industry Borough, Beaver County.

WQM Permit 0421409 will be issued concurrently with this NPDES Permit. The discharge is to Tributary 33531 of Wolf Run, which is classified as at WWF located in State Watershed 20-C.

The Site Plan (attached to the application) and the zoom in section on the plan shows an average of 50 feet of 3 in schedule 40 pipe that will deliver the effluent to the point of discharge (Manhole), which is located on the applicant property and eventually discharges to Tributary 33531.

The treatment plant that will be constructed on site (see page 8) consists of a Premier Tech EC7-500-C-P PACK, which contains a concrete integrated septic tank, coco filter, DiUV disinfection unit of 600 GPD and effluent pump. The Premier Tech treatment unit has a rated capacity of 400 GPD and is NSF Certified for the treatment of Residential Wastewater.

Checking on the effluent pump specs and operation, the CPEH5 pump will generate a 65 inch of head that can travel a 100 ft max. using a 1 1/2 Ø pipe. The pipe diameter listed on the Site plan is 3 inches which should deliver the produced head to the discharge point about 50 ft distance (see page 9)

The grade of ¼ inch per 1foot listed on the Site Plan would be applicable to the discharge pipe to ensure gravity for the pumped effluent.

Approve	Deny	Signatures	Date
X		Hazim Aldalli / Environmental Engineering Specialist	May 06, 2022
x		Mahbuba Iasmin / Mahbuba Iasmin, Ph.D., P.E. / Environmental Engineering Manager	May 06, 2022

Summary of Review

Sampling should be grabbed after disinfection. Sampling point is prescribed under -F- on page 2 of the Owner's Manual (see page 12 of the WQM application).

Current policy does not require eDMR to be used for SRSTPs.

Act 537 Planning was approved for this project on August 12, 2021.

The Act – 14 PL 834 Municipal Notification were provided by the June 27 and July 7, 2021 letters and no comments were received.

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 and Stream Data – 2 - Receiving Waters and PWS

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.0004
Latitude	40º 39' 48.82"	Longitude	-80º 25' 4.88"
Quad Name	Midland	Quad Code	40080F4
Wastewater Description:	Sewage Effluent		
Receiving Waters	Tributary 33531 of Wolf Run (WWF)	Stream Code	33531
NHD Com ID	99680612	RMI	0.59
Drainage Area	0.0375	Yield (cfs/mi^2)	0.00376
Q_{7-10} Flow (cfs)	0.000141	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	1172	Slope (ft/ft)	0.0175
Watershed No.	20-B	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status		Name	

Background/Ambient Data		Data Source
pH (SU)		
Temperature (°F)		
Hardness (mg/L)		
Other:		

Nearest Downstream Public Water Supply Intake	DUQUESNE LIGHT CO-BVPS #1		
PWS Waters	Ohio River	Flow at Intake (cfs)	5880
PWS RMI	4.7	Distance from Outfall (mi)	3.5

Changes Since Last Permit Issuance: N/A

Other Comments: New Permit Issuance. Facility is not yet constructed.

Treatment Facility Summary				
Treatment Facility Name: Hallam Prop. STP				
WQM Permit No.	**Issuance Date**			
0421409	Processing			
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Tertiary	Septic Tank, Sand Filter	Ultraviolet	0.0004
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.0004	---	Not Overloaded	Septic Tank	-----

Changes Since Last Permit Issuance: None.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.0004
Latitude 40º 39' 48.82" **Longitude** -80º 25' 4.88"
Wastewater Description: Sewage Effluent

Technology-Based Limitations (TBELs)

The following effluent limitations and monitoring requirements, at a minimum, will be established in all new and renewed SRSTP permits based on the requirements of DEP's "Standard Operating Procedure (SOP) for Clean Water Program New and Reissuance Small Flow Treatment Facility Individual NPDES Permit Application" (SOP No. BCW-PMT-003, Version 1.8, Final, November 9, 2012, Revised May 17, 2019).

Parameter	Avg	IMAX	Sample Type	Frequency: SFTFs	Frequency: SRSTPs
Flow (GPD)	Report	XXX	Estimate (SRSTPs) Measured (SFTFs)	1/month	1/year
BOD5 (mg/L)	10	20	Grab	1/month	1/year
TSS (mg/L)	10	20	Grab	1/month	1/year
pH*	6.0 S.U. Inst. Min.	9.0 S.U.	Grab	1/month	1/year
TRC (mg/L)	Report for SRSTPs; Use TRC Spreadsheet to determine WQBELs or 0.02 mg/L for SFTFs		Grab	1/month	1/year
Fecal Coliform (No./100 ml)	200 Geometric Mean (SFTFs) / Average (SRSTPs)		Grab	1/month	1/year

***** Technology-Based effluent limits for pH will be imposed based upon Federal Regulation 133.102(c) and State Regulation 95.2(1).
** Use the Geometric Mean if the Sampling Frequency is at least 1/month. Use Annual Average, Semi-Annual Average or Quarterly Average if the Sampling Frequency is less than 1/month.

Additional Considerations:

The stream flow (Q7-10) to wastewater flow (design flow) ratio is = 0.00007588/0.0004= 0.19; The stream flow (Q7-10) to wastewater flow (design flow) ratio is less than 3:1. The dry stream advanced treatment requirements do not apply to SRSTPs/SFTFs.

Annual average concentrations will be imposed for BOD_5, Fecal, and TSS, which is consistent with the Department's SOP – New and Reissuance Individual SFTF NPDES Permits.

BOD_5 limitations were imposed instead of $CBOD_5$ which reflect the most stringent limitation amongst the Technology-Based Effluent Limitations and based upon the Department's SOP – New and Reissuance Individual SRSTP NPDES Permits, and per DEP Small Flow Treatment Facilities Manual (Dec. 2006).

Technology-based effluent limits for pH will be imposed based upon State Regulation 95.2(1).

After checking on the proposed treatment plant (Premier Tech EC7-500-C-P) technical specs, this treatment unit can achieve the stringent limits imposed since its included in the design manual, and NSF approved.

Special application for the Dry condition was set in the Engineers Report & Project Narrative document attached to the WQM application.

For SFTFs / SRSTPs with UV disinfection systems, it is not necessary to require UV intensity or transmittance monitoring in the permit.

Sewage discharges with design flows < 2,000 gpd do not require monitoring for Total Nitrogen and Total Phosphorus in new and reissued permits.

Sampling frequency for all parameters is 1/year which is consistent with the Department's SOP - New and Reissuance of SFTF Individual NPDES Permit Applications.

The applicant does not use eDMR and current policy does not require eDMR to be used for SRSTPs.

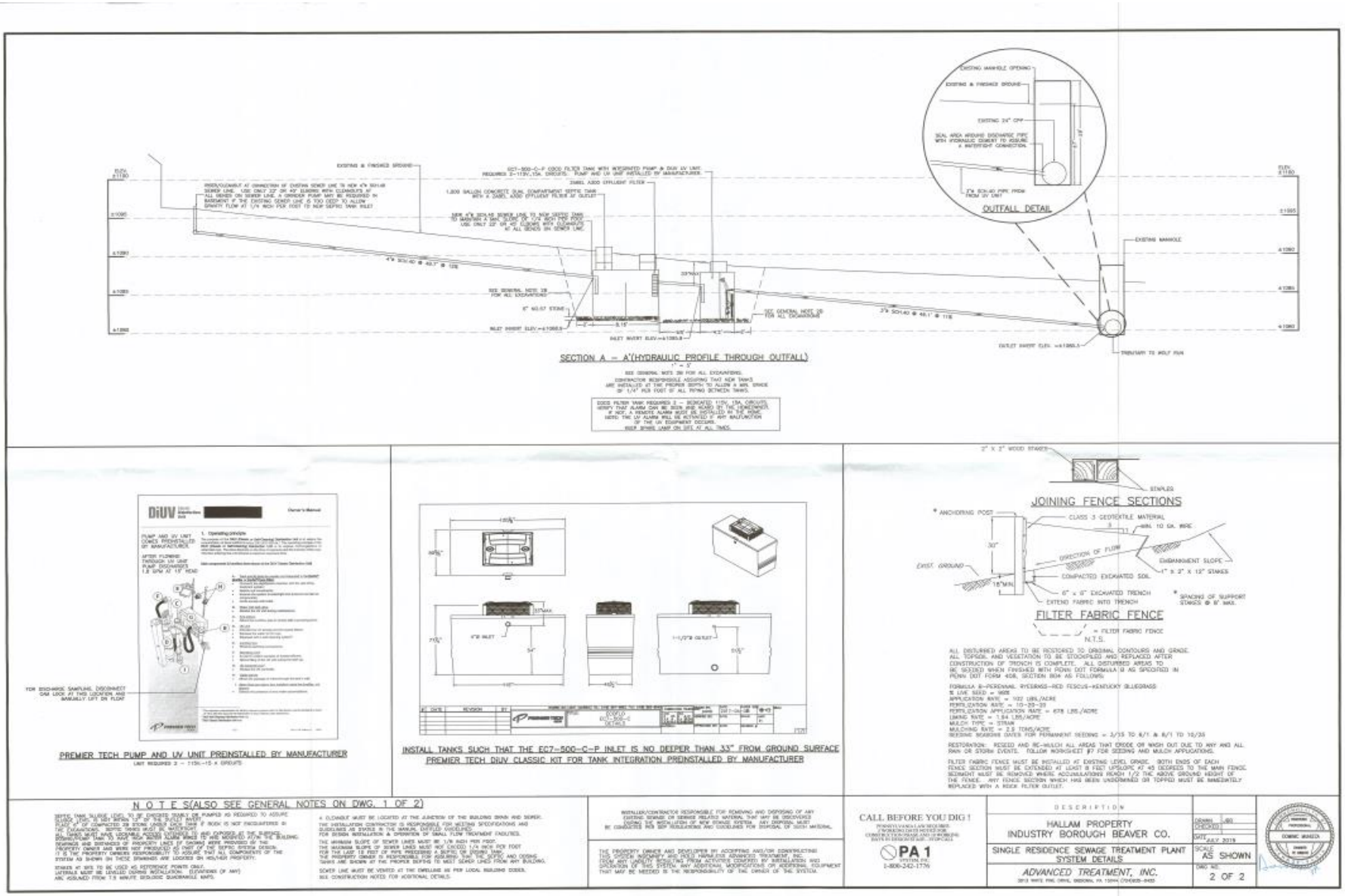
Proposed Effluent Limitations and Monitoring Requirements

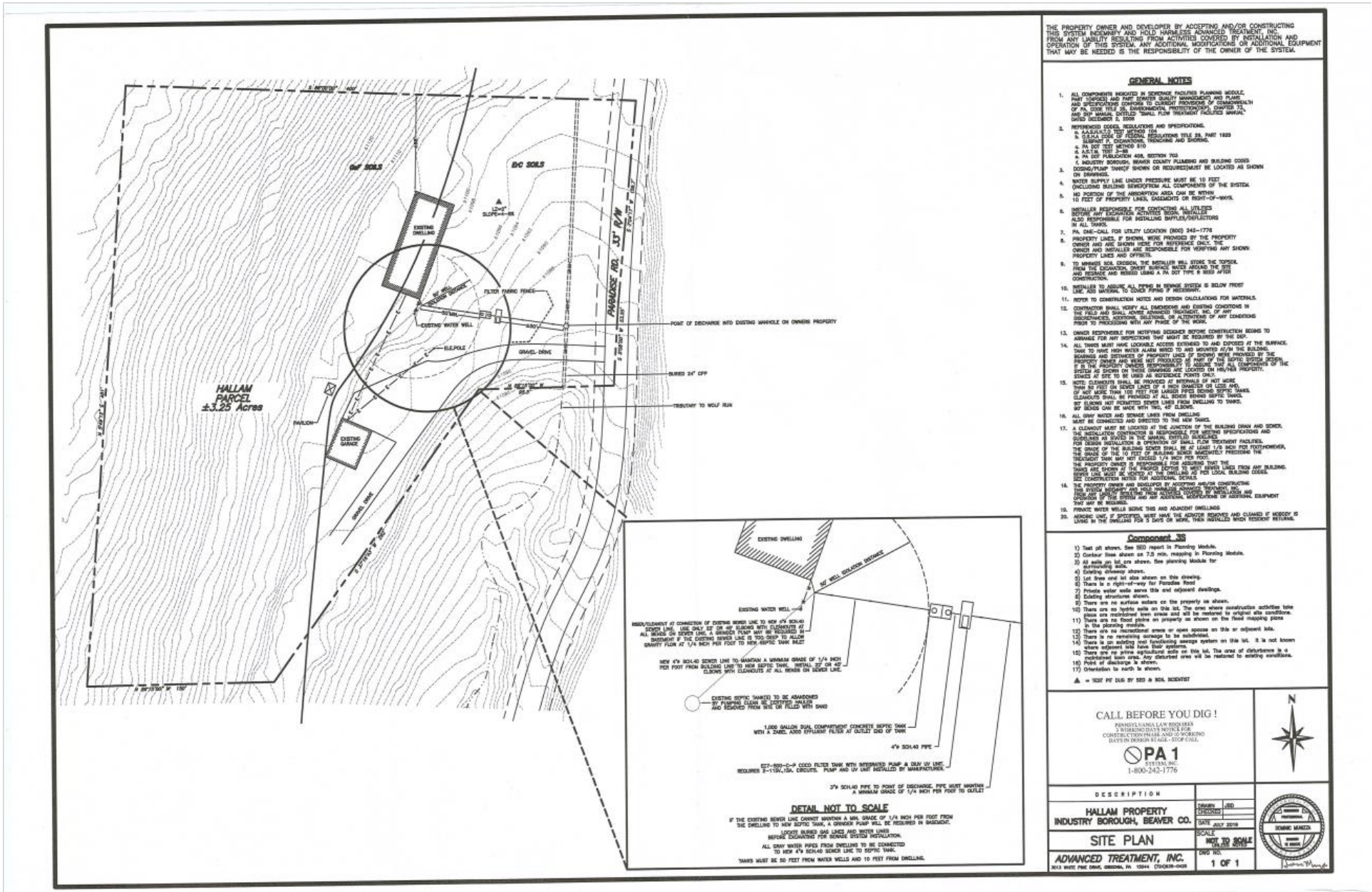
The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Annual Average	Average Weekly	Minimum	Annual Average	Maximum	Instant. Maximum		
Flow (MGD)	Report	XXX	XXX	XXX	XXX	XXX	1/year	Estimate
pH (S.U.)	XXX	XXX	6.0 Inst. Min	XXX	9.0 Inst. Max	XXX	1/year	Grab
BOD5	XXX	XXX	XXX	10	XXX	20	1/year	Grab
TSS	XXX	XXX	XXX	10	XXX	20	1/year	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200	XXX	1000	1/year	Grab

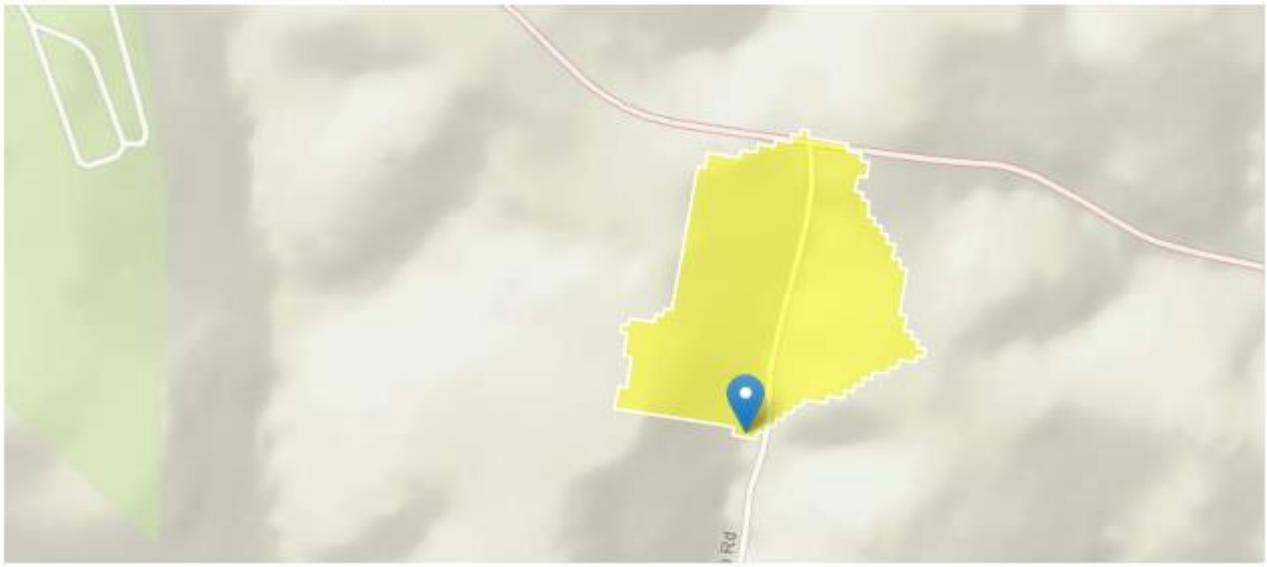
Compliance Sampling Location: Outfall 001


OUTFALL DETAIL
SECTION A – A'(HYDRAULIC PROFILE THROUGH OUTFALL)
PREMIER TECH PUMP AND UV UNIT PREINSTALLED BY MANUFACTURER
INSTALL TANKS SUCH THAT THE EC7-500-C-P INLET IS NO DEEPER THAN 33" FROM GROUND SURFACE
PREMIER TECH DIUV CLASSIC KIT FOR TANK INTEGRATION PREINSTALLED BY MANUFACTURER
JOINING FENCE SECTIONS
FILTER FABRIC FENCE
N.O.T.E.S(ALSO SEE GENERAL NOTES ON DWG. 1 OF 2)
CALL BEFORE YOU DIG!
PA 1
HALLAM PROPERTY
INDUSTRY BOROUGH BEAVER CO.
SINGLE RESIDENCE SEWAGE TREATMENT PLANT SYSTEM DETAILS
ADVANCED TREATMENT, INC.
AS SHOWN
2 OF 2


THE PROPERTY OWNER AND DEVELOPER BY ACCEPTING AND/OR CONSTRUCTING THIS SYSTEM INDEMNIFY AND HOLD HARMLESS ADVANCED TREATMENT, INC. FROM ANY LIABILITY RESULTING FROM ACTIVITIES COVERED BY INSTALLATION AND OPERATION OF THIS SYSTEM. ANY ADDITIONAL MODIFICATIONS OR ADDITIONAL EQUIPMENT THAT MAY BE NEEDED IS THE RESPONSIBILITY OF THE OWNER OF THE SYSTEM.
GENERAL NOTES
Component 3S
DETAIL NOT TO SCALE
CALL BEFORE YOU DIG !
PA 1
1-800-242-1776
HALLAM PROPERTY
INDUSTRY BOROUGH, BEAVER CO.
SITE PLAN
ADVANCED TREATMENT, INC.
DRAWN JSD
CHECKED
DATE JULY 2018
SCALE NOT TO SCALE
DWG NO. 1 OF 1
DOMINIC MANZZA
HALLAM PARCEL ±3.25 Acres
EXISTING DWELLING
EXISTING GARAGE
EXISTING WATER WELL
FILTER FABRIC FENCE
GRAVEL DRIVE
ELE.POLE
PAVILION
SMALL BARN
PARADISE RD. 33' R/W
POINT OF DISCHARGE INTO EXISTING MANHOLE ON OWNERS PROPERTY
BURIED 24" CPP
TRIBUTARY TO WOLF RUN
0sF SOILS
BC SOILS

StreamStats Report

Region ID: PA
Workspace ID: PA20220321172015960000
Clicked Point (Latitude, Longitude): 40.66320, -80.41810
Time: 2022-03-21 13:20:40 -0400



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.0375	square miles
ELEV	Mean Basin Elevation	1172	feet

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.0375	square miles	2.26	1400
ELEV	Mean Basin Elevation	1172	feet	1050	2580

Low-Flow Statistics Disclaimers [Low Flow Region 4]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

Low-Flow Statistics Flow Report [Low Flow Region 4]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.000654	ft^3/s

Statistic	Value	Unit
30 Day 2 Year Low Flow	0.00147	ft^3/s
7 Day 10 Year Low Flow	0.000141	ft^3/s
30 Day 10 Year Low Flow	0.000387	ft^3/s
90 Day 10 Year Low Flow	0.000923	ft^3/s

Low-Flow Statistics Citations

Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)

Application Version: 4.7.0
StreamStats Services Version: 1.2.22
NSS Services Version: 2.1.2