pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**New**	Application No.	**PA0285170**
Wastewater Type	**Sewage**	APS ID	**1094503**
Facility Type	**SRSTP**	Authorization ID	**1450328**

NPDES PERMIT FACT SHEET
INDIVIDUAL SFTF/SRSTP

Applicant, Facility and Project Information

Applicant Name	**Jeremy Peck**	Facility Name	**Peck Properties SRSTP**
Applicant Address	101 Cabin Road	Facility Address	101 Cabin Road
	Normalville, PA 15469-1145		Normalville, PA 15469-1145
Applicant Contact	Jeremy Peck	Facility Contact	Same
Applicant Phone	(814) 566-3337	Facility Phone	Same
Client ID	379163	Site ID	866425
SIC Code	8800	Municipality	Springfield Township
SIC Description	Private Households	County	Fayette
Date Application Received	August 9, 2023	WQM Required	Yes
Date Application Accepted	August 14, 2023	WQM App. No.	2623400

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

Summary of Review

The applicant proposes to construct a 500 GPD (1.25 EDUs) Small Residential Sewage Treatment Plant (SRSTP) that will serve an existing four-bedroom dwelling in Springfield Township, Fayette County. The proposed SRSTP will replace an existing malfunctioning on-lot system.

WQM Permit 2623400 will be issued concurrently with the final issuance of the NPDES Permit.

The discharge is directly to UNT to Laurel Run which is classified as HQ-CWF and located in State Watershed 19-E.

This NPDES permit is being issued to approve the operation and discharge of treated sewage effluent from a Single Residence Sewage Treatment Plant (SRSTP) Module 16 consisting of:

- One Singulair Bio-Kinetic Model 960-500 Treatment tank.
- Three treatment chambers (Pretreatment, Extended Aeration, and Final Clarification) connected in series with a total volume of 1300 gallons.
- Bio-Kinetic system installed in the clarification chamber which mainly include Micronically Molded Design Flow Filter, and a peak flow filter.
- A Norweco AT 1500 UV Disinfection System preinstalled by the manufacturer.

Approve	Deny	Signatures	Date
X		Hazim Aldalli / Environmental Engineering Specialist	October 13, 2023
x		Mahbuba Iasmin / Mahbuba Iasmin, Ph.D., P.E. / Environmental Engineer Manager	October 13, 2023

Summary of Review

The Site Plan 3 of 4 (attached to the application) shows an average of 190 feet of a 4 in schedule 40 pipe that will deliver the effluent to the point of discharge, which is located adjacent to the applicant property. The last 10 feet of the discharge pipe will be perforated.

Act 537 Planning was approved for this project on July 18, 2023. The facility has on-lot malfunctions, and therefore, stream discharge is proposed.

A Notice indicate that the application was received, was published in the PA Bulletin on August 26, 2023.

The Act – 14 PL 834 Municipal Notifications were provided by the July 28, 2023 letters and no comments were received.

The applicant has no open, or unresolved violations.

Permit issuance is recommended.

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)	0.0005
Latitude	40º 0' 34"	Longitude	-79º 22' 39"
Quad Name	Donegal	Quad Code	40079A4
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary to Laurel Run (HQ-CWF (existing use))	Stream Code	38288
NHD Com ID	69917399	RMI	0.69
Drainage Area	0.1	Yield (cfs/mi^2)	0.00634
Q_{7-10} Flow (cfs)	0.000634	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	1972	Slope (ft/ft)	0.0355
Watershed No.	19-E	Chapter 93 Class.	CWF
Existing Use	HQ-CWF(HIGH QUALITY-COLD WATER FISHES)	Existing Use Qualifier	RBP - Antidegradation
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	INDIAN CREEK VALLEY WATER AUTH		
PWS Waters	Indian Creek	Flow at Intake (cfs)	3.59
PWS RMI	5.17	Distance from Outfall (mi)	>9.0

Changes Since Last Permit Issuance: N/A

Other Comments: None.

Treatment Facility Summary				
Treatment Facility Name: Peck Properties SRSTP.				
WQM Permit No.	**Issuance Date**			
2623400	Processing			
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Tertiary	Extended Aeration	Ultraviolet	0.0005
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.0005	0.90	Not Overloaded	Aerobic Tank	None/Semi Annual Cleaning

Changes Since Last Permit Issuance: N/A (New Facility).

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.0005
Latitude 40º 0' 34" **Longitude** -79º 22' 39"

Wastewater Description: Treated 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 TBELs:

Outfall 001 discharges to Laurel Run, which is classified as a HQ-CWF. The proposed discharge for this SRSTP is a treated residential sewage flow of 500 GPD from an existing on-lot system.

The following Antidegradation Best Available Combination of Technologies (ABACT) effluent limits, at a minimum, will be established based on the requirements of DEP's "Water Quality Antidegradation Implementation Guidance" (Doc. No. 391-0300-002; November 29, 2003).

Parameter	Treatment Process Performance Expectations (mg/L)		
	<2,000 gpd	2,000-50,000 gpd	>50,000 gpd
$CBOD_5$ (May 1 – Oct. 31)	**10**	10	10
$CBOD_5$ (Nov. 1 – Apr. 30)	**20**	20	10
Suspended Solids	**20**	10	10
NH_3-N (May 1 – Oct. 31)	**5.0**	3.0	1.5
NH_3-N (Nov. 1 – Apr. 30)	**15.0**	9.0	4.5
Effective disinfection	Disinfection should be accomplished using a method that leaves no detectable residual. Disinfection using ultra-violet light or other non-chlorine based systems is encouraged and must be considered.		
Other parameters, as needed	*Determined by the size and characteristics of the proposed discharge, may include – NO_2/NO_3-N, Total Phosphorus, Copper, Lead, Zinc*		

The limitations and monitoring requirements specified on page 7 of this factsheet reflect the most stringent limitation amongst the above Technology-Based Effluent Limitations.

Additional Considerations:

After checking on the proposed treatment plant (One Singulair Bio-Kinetic Model 960-500) technical specs, this treatment unit can achieve the stringent limits imposed since it is included within the plant's design manual with BOD_5 of 6 mg/L and TSS of 10 mg/L, and it is NSF approved.

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

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

For 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 DEP's policy does not require eDMR to be used for SRSTPs.

Proposed Effluent Limitations and Monitoring Requirements

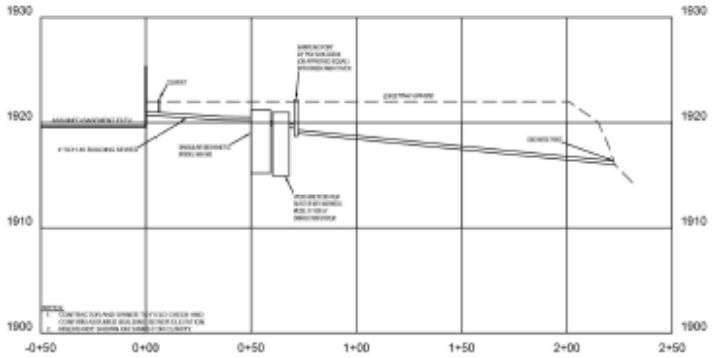
The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). 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.

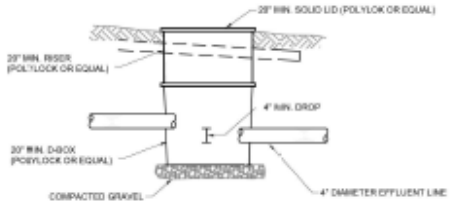
Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Annual Average	Average Weekly	Minimum	Annual Average	Maximum	Instant. Maximum		
Flow (MGD)	Report	XXX	XXX	XXX	XXX	XXX	1/year	Estimate
pH (S.U.)	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
NH_3-N (May 1 – Oct. 31)	XXX	XXX	XXX	5.0	XXX	10.0	1/month	Grab
NH_3-N (Nov. 1 – Apr. 30)	XXX	XXX	XXX	15	XXX	30	1/month	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200	XXX	XXX	1/year	Grab

Compliance Sampling Location: Outfall 001.

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
FREDERICK RICHARD BRANT
ENGINEER
No. PE064382E



SYSTEM PROFILE
1"=50' H. & 1"=10' V.



SAMPLING PORT DETAIL

OUTFALL DETAIL

GENERAL INFORMATION
The Small Flow Treatment Facility (SFTF) should be installed by a competent, experienced individual to ensure that the treatment units and structures are constructed in accordance with the guidelines of the DEP and all manufacturer's recommendations.

Extreme care shall be exercised in the operation of machinery and vehicles during and after installation to prevent damage to the system.

Notify DEP, the municipality, and the design engineer prior to construction and at the completion of construction to schedule inspections. No part of a SFTF may be covered until a final inspection is conducted and final written approval is given.

The design engineer must inspect the system and certify that the installation is consistent with the design.

The SFTF shall be inspected, approved and covered before the structure is occupied.

The SFTF shall be covered by the permittee within 5 calendar days after final inspection and approval to prevent damage.

Liquid wastes, including kitchen and laundry wastes, shall be discharged to the SFTF.

Discharge from roof gutters, foundation drainage and surface runoff may not be discharged to a treatment tank; nor may the discharges be permitted to flow over the SFTF.

To minimize water usage, water conservation fixtures are required.

The permit requires specific levels of operation, maintenance, monitoring and reporting. Some routine testing, such as the monthly chlorine residual test, can be conducted by the permittee. Other monitoring requirements, such as the annual fecal coliform test and inspection and maintenance functions described on the Annual Maintenance Report, are to be conducted by a trained service provider contracted by the permittee.

MINIMUM HORIZONTAL ISOLATION DISTANCES
The following minimum horizontal isolation distances must be maintained between all treatment or mechanical components of the SFTF and the features named. Where conditions warrant, greater isolation distances may be required.
-Property line, easement or right-of-way - 10 ft.
-Occupied buildings, swimming pools and driveways - 10 ft.
-Individual water supply or water supply system suction line - 50 ft.
-Water supply line under pressure - 10 ft.
-Streams, watercourses, lakes or other surface waters - 25 ft.

SUBSURFACE SEWERS
Building sewers must be constructed of a durable material acceptable to DEP (Schedule 40 DWV or better) and as specified by local plumbing or building codes.

When the average daily flow from an establishment is 1000 gallons or less, all building sewers shall be at least 3" in diameter unless otherwise specified by local plumbing or building codes. Where the average daily flow exceeds 1000 gallons per day, all building sewers shall be at least 6" in diameter unless otherwise specified by local building or plumbing codes.

Cleanouts shall be provided at the junction of the building drain and building sewer. Cleanouts shall be provided at intervals not greater than 100 feet.

Bends ahead of the treatment tanks shall be limited to 45° or less where possible.

The grade of the building sewer shall be at least 1/8 inch per foot; however, the grade of the 10 feet of building sewer immediately preceding the treatment tank shall not exceed 1/4 inch per foot.

TREATMENT TANKS
The treatment tanks shall consist of a Norweco Singulair Bio-Kinetic Model 900 and a Hydro-Kinetic Bio-Film Reactor in series supplied by the local/Norweco distributor.

The tanks shall have access manholes with removable covers extended to grade. Access covers shall be secured by bolts or locking mechanisms, or have sufficient weight to prevent unauthorized access.

The ground surface shall slope away from any access extended to grade level.

Bi-annual inspection of the system by the service provider is required.

DOSING TANKS (IF NECESSARY)
The dosing tank shall be a rectangular precast concrete tank.

Unless otherwise regulated by local electrical codes, all electrical connections shall be moisture resistant and at a point higher than the inlet pipe, or mounted above grade outside of the dosing tank or manhole extension within a tamper resistant, lockable control box.

A watertight manhole, at least 28 inches square (28 x 28) or in diameter, extended to grade, shall be provided for access to the dosing tank. The access cover shall be secured by bolts or locking mechanisms, or have sufficient weight to prevent unauthorized access.

The ground surface shall slope away from any access extended to grade level.

Annual inspection of the system and pumping of the dosing tank by the service provider is required.

DOSING PUMP (IF NECESSARY)
A disconnect shall be incorporated into the piping within the dosing tank for ease of pump removal. This shall be located so that entering the tank to remove the pump is not necessary. A non-biodegradable rope may be provided to remove the dosing tank pump.

An effective warning device shall be installed in the dosing tank to indicate failure of the pump or siphon. Warning devices requiring electricity shall be provided with a circuit separate from the pump circuit.

WASTEWATER DISINFECTION
A Norweco Model A " UV Disinfection System shall be installed prior to the dose tank.

Monthly cleaning and inspection of the UV system water contact surface is required.

A spare UV lube and other necessary equipment must be available to allow prompt repair by qualified personnel properly instructed in the operation and maintenance of the equipment.
An annual inspection of the system and changing of the UV bulb by the service provider is required.

MINIMUM MAINTENANCE CHART

COMPONENT	MAINTENANCE FREQUENCY		
	Monthly	Bi-Annually	Annually
Singulair HKBFR Combo		Inspect and Service	
Dosing Tank (If Provided)		Inspect and Service	
Chlorinator (If Provided)	Inspect and Fill		
UV System (If Provided)	Inspect and Clean		Inspect and Change Bulb

Make all repairs required as a result of the inspections as soon as possible. Maintain disinfection units according to manufacturer's requirements.

engineers + surveyors
F.R. BRANT COMPANY
317 Manyo Road, Berlin, PA 15530 - 814.279.2592

DATE	REVISION

CLIENT
JEREMY PECK
101 CABIN ROAD
NORMALVILLE, PA 15469

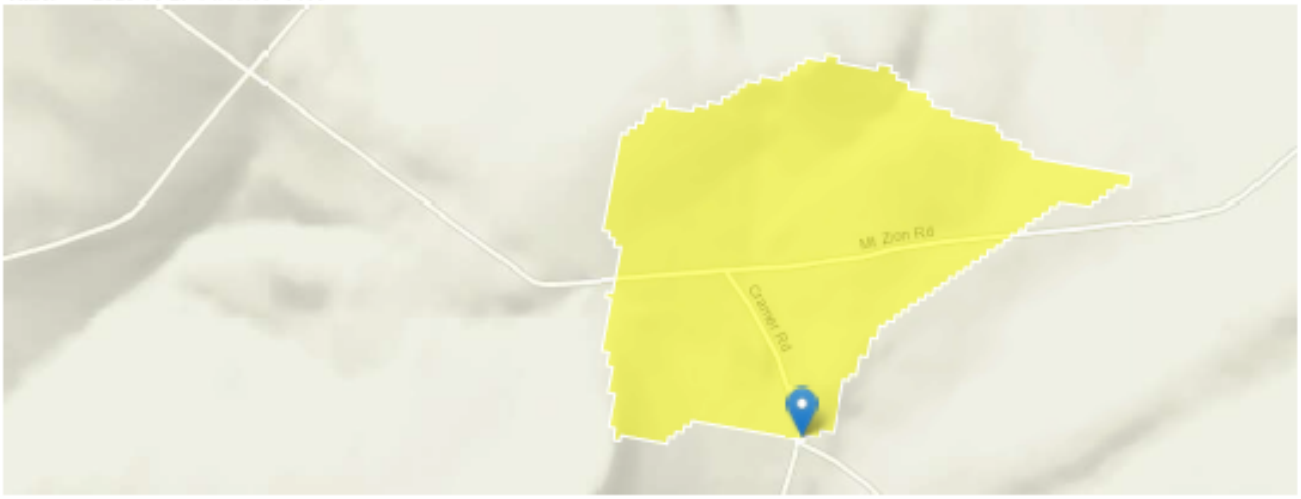
PROJECT
PECK PROPERTY
SMALL FLOW TREATMENT FACILITY
SPRINGFIELD TWP., FAYETTE COUNTY, PA

DATE 7/28/2023
SCALE N.T.S.
DRAWING 1365 PECK
LAYOUT SFTF-3

SHEET NO. 3 OF 4

StreamStats Report

Region ID: PA
Workspace ID: PA20230829184445948000
Clicked Point (Latitude, Longitude): 40.00916, -79.37779
Time: 2023-08-29 14:45:16 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.1	square miles
ELEV	Mean Basin Elevation	1972	feet

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.1	square miles	2.26	1400
ELEV	Mean Basin Elevation	1972	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	0.00308	ft^3/s
30 Day 2 Year Low Flow	0.00682	ft^3/s
7 Day 10 Year Low Flow	0.000634	ft^3/s
30 Day 10 Year Low Flow	0.00169	ft^3/s
90 Day 10 Year Low Flow	0.00433	ft^3/s

Low-Flow Statistics Citations