pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**New**	Application No.	**PA0285145**
Wastewater Type	**Sewage**	APS ID	**1092664**
Facility Type	**SRSTP**	Authorization ID	**1446953**

NPDES PERMIT FACT SHEET
INDIVIDUAL SFTF/SRSTP

Applicant, Facility and Project Information

Applicant Name	**Cassandra Glessner**	Facility Name	**Glessner Properties SRSTP**
Applicant Address	1517 Staunton Drive	Facility Address	1042 Middle Road
	Coraopolis, PA 15108-8975		Glenshaw, PA 15116-2714
Applicant Contact	Cassandra Glessner	Facility Contact	Cassandra Glessner
Applicant Phone	(415) 255-9344	Facility Phone	(415) 255-9344
Client ID	378527	Site ID	865870
SIC Code	8800	Municipality	Shaler Township
SIC Description	Private Households	County	Allegheny
Date Application Received	July 11, 2023	WQM Required	Yes
Date Application Accepted		WQM App. No.	0223402

Project Description: New NPDES permit Application

Summary of Review

The PA Department of Environmental Protection (DEP) received a new Part 1 NPDES and Part II WQM permit application for the Glessner Properties Single Residence Sewage Treatment Plant (SRSTP) on July 11, 2023. The applications are for an SRSTP located in Shaler Township, Allegheny County with an annual average flow of 400 GPD. The proposed facility is being constructed to serve an existing two-bedroom home with a new additional bedroom. The residence is currently served by a malfunctioning onlot sewage system that will be replaced by this SRSTP. A final WQM permit will be issued concurrently with this NPDES Permit under WQM Number 0223402.

This fact sheet is developed in accordance with 40 CFR §124.56.

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.

Approve	Deny	Signatures	Date
x		John Price Jack Price / Environmental Engineering Manager	August 9, 2023
x		Mahbuba Iasmin Mahbuba Iasmin, Ph.D., P.E./Environmental Engineer Manager	August 18, 2023

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 31' 21.46"	Longitude	-79º 56' 23.56"
Quad Name		Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	UNT to Little Pine Creek (TSF)	Stream Code	UNT to 42144
NHD Com ID	123972055	RMI	0.7700
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)	*	Q_{7-10} Basis	
Elevation (ft)	978	Slope (ft/ft)	
Watershed No.	18-A	Chapter 93 Class.	TSF
Existing Use	TSF	Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	PATHOGENS		
Source(s) of Impairment	SOURCE UNKNOWN		
TMDL Status	Final	Name	Pine Creek Watershed
Background/Ambient Data		Data Source	
pH (SU)			
Temperature (°F)			
Hardness (mg/L)			
Other:			
Nearest Downstream Public Water Supply Intake		West View Water Authority (PWS 5020043)	
PWS Waters	Ohio River	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	7.28 Linear Miles

*This facility discharges to an unnamed tributary to Little Pine Creek as indicated in the Act 537 planning approval. The flow from this unnamed tributary is not available in USGS StreamStats.

Changes Since Last Permit Issuance: N/A. This is a new facility.

Other Comments:

Anti-Degradation Requirement

Chapter 93.4a(b) of the Department's rules and regulations require that "Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected." The discharge is into a stream segment designated as Trout-Stock Fisheries (TSF). No High-Quality Waters are impacted by this discharge. No Exceptional Value Waters are impacted by this discharge.

303d Listed Streams:

The receiving stream segment is impaired for pathogens. The March 2013 TMDL lists malfunctioning septic systems as a potential contributor to the impairment. The TMDL model assumes that properly installed and maintained septic tanks do not contribute to the impairment.

Treatment Facility summary:

The application was submitted for a new SRSTP named Glessner Property SRSTP that will be constructed to serve an existing 2-bedroom house with a new additional bedroom located at 1042 Middle Road, Shaler Township, PA. The proposed discharge will be into a buried pipe that runs approximately 186 ft until discharge into an unnamed tributary to Little Pine Creek (TSF, perennial stream). Since the buried pipe is new construction, an easement is needed from downstream property owners. The granting of the easement was recorded by Allegheny County on March 30, 2023 as submitted in the Act 537 planning application. Due to the fact that the discharge doesn't touch the ground until it reaches the perennial stream, the discharge may be considered as into a perennial stream and the downstream well water users aren't required to be notified.

The details of the proposed treatment plant will be discussed in the Internal Review & Recommendation (IR&R) that will accompany the WQM permit under WQM permit number 0223402. In summary, the proposed treatment plant will be one a Premier Tech Ecoflo EC7-500-P-P (PACK) coco filter containing UV disinfection and integrated polyethylene tank. The model is listed by the NSF as capable of producing Class I Effluent.

The proposed treatment technology isn't listed in the SFTF Manual; therefore, the facility doesn't qualify for coverage under general PAG04 permit.

Technology-Based Limitations

The following effluent limitations and monitoring requirements, at a minimum, will be established in all new and renewed SFTF 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).

Comments: This is a new SRSTP with UV disinfection. Therefore the facility will use these limits. The facility will not be required to measure TRC due to the UV disinfection.

Development of effluent limitations:

Flow monitoring:
Flow monitoring will be placed in this permit in accordance with DEP's SOP BCW-PMT-003 revised May 17, 2019. The reporting frequency set forth is once a year and sample type is Estimate (for SRSTP.)

Biochemical Oxygen Demand (BOD_5)

An average annual BOD_5 limit of 10 mg/l and IMAX limit of 20 mg/l will be placed in this permit. These limits are consistent with the SOP.

Total Suspended Solids (TSS)
An average annual BOD_5 limit of 10 mg/l and IMAX limit of 20 mg/l will be placed in this permit. These limits are consistent with the SOP.

Fecal Coliform:
A year-round annual average and IMAX limit of 200 No./100 ml will be placed in this permit.

pH:
Daily minimum pH of 6.0 and Daily Maximum pH of 9.0 S.U. will be applied in this permit per Pa Code 25 Ch. 95.2(1).

UV:
The SOP indicates that it is not necessary to require UV intensity or transmittance monitoring in the permit for SRSTPs/SFTFs.

The Design Engineers Report accompanied with the WQM permit indicated that the proposed treatment plant can treat the wastewater to generate an effluent that will have maximum CBOD5 of 10.0 mg/l, TSS of 10.0 mg/l, less than 200 no./100 ml of fecal coliform, and a pH between 6.0 and 9.0.

Act 537 Planning was approved under DEP Code 02135-23-056 on July 6, 2023.

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) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Annual Average	Maximum	Instant. Maximum		
Flow (MGD)	0.0004 Annl Avg	XXX	XXX	XXX	XXX	XXX	1/year	Estimate
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/year	Grab
BOD5	XXX	XXX	XXX	10.0	XXX	20.0	1/year	Grab
TSS	XXX	XXX	XXX	10.0	XXX	20.0	1/year	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200	XXX	XXX	1/year	Grab

Compliance Sampling Location: Outfall 001

Other Comments: None

Attachment 1: NSF Certification of Ecoflow Coco Filter, EC7 Model Series

WASTEWATER TECHNOLOGY

NSF/ANSI Standard 40 - *Residential Wastewater Treatment Systems*

Final Report:

Premier Tech Aqua
Ecoflo Coco Filter, EC7 Model Series
15/02/055/0030

NSF International
789 N. Dixboro Road
PO Box 130140
Ann Arbor, Michigan 48113-0140 USA

Evaluation Report:
Ecoflo Coco Filter, EC7 Model Series- Wastewater Treatment System

Under the provisions of NSF/ANSI Standard 40
Residential Wastewater Treatment Systems

October 2015

EXECUTIVE SUMMARY

Testing of the Premier Tech Aqua was conducted under the provisions of NSF/ANSI Standard 40 for Residential Wastewater Treatment Systems (April 2013 revision). NSF/ANSI Standard 40 was developed by the NSF Joint Committee on Wastewater Technology.

The performance evaluation was conducted at the NSF Testing Facility located in Waco, Texas, using wastewater diverted from the Waco municipal wastewater collection system, which serves predominantly residential development. The evaluation consisted of seventeen weeks of dosing at design flow, seven and one half weeks of stress testing and an additional two and one half weeks of dosing at design flow. Dosing was initiated on March 16, 2015 and the test was officially started on March 23, 2015. Sampling started in the spring and continued through the summer and fall, covering a range of operating temperatures.

Over the course of the evaluation, the average effluent $CBOD_5$ was 8 mg/L, ranging between <1 and 76 mg/L, and the average effluent total suspended solids was 6 mg/L, ranging between <1 mg/L and 26 mg/L.

The Ecoflo CoCo Filter, EC7 Model Series produced an effluent that successfully met the performance requirements established by NSF/ANSI Standard 40 for Class I effluent:

> The maximum 7-day arithmetic mean was 26 mg/L for $CBOD_5$ and 13 mg/L for total suspended solids, both below the allowed maximums of 40 and 45 mg/L, respectively. The maximum 30-day arithmetic mean was 17 mg/L for $CBOD_5$ and 8 mg/L for total suspended solids, both below the allowed maximums of 25 mg/L and 30 mg/L, respectively.

The effluent pH during the evaluation ranged between 6.5 and 8.7, within the required range of 6.0 to 9.0. The Ecoflo CoCo Filter, EC7 Model Series met the requirements for noise levels (less than 60 dbA at a distance of 20 feet), color, threshold odor, oily film and foam.

PREFACE

Performance evaluation of residential wastewater treatment systems is achieved within the provisions of NSF/ANSI Standard 40: *Residential Wastewater Treatment Systems* (revised April 2013), prepared by the NSF Joint Committee on Wastewater Technology and adopted by the NSF Board of Trustees.

Conformance with the Standard is recognized by issuance of the NSF Mark. This is not to be construed as an approval of the equipment, but a certification of the data provided by the test and an indication of compliance with the requirements expressed in the Standard.

Plants conforming to Standard 40 are classified as Class I or Class II plants according to the quality of effluent produced by the plant during the performance evaluation. Class I plants must meet the requirements of EPA Secondary Treatment Guidelines[1] for five day carbonaceous biochemical oxygen demand ($CBOD_5$), total suspended solids (TSS) and pH. Class I plants must also demonstrate performance consistent with the effluent color, odor, oily film and foam requirements of the Standard. Class II plant effluent must have no more than 1% of samples exceeding 60 mg/L $CBOD_5$ and 100 mg/L TSS.

Permission to use the NSF Mark is granted only after the equipment has been tested and found to perform satisfactorily, and all other requirements of the Standard have been satisfied. Continued use of the Mark is dependent upon evidence of compliance with the Standard and NSF General and Program Specific Policies, as determined by periodic reinspection of the equipment at the factory, distributors and reports from the field.

NSF Standard 40 requires the testing laboratory to provide the manufacturer of a residential wastewater treatment system a report including significant data and appropriate commentary relative to the performance evaluation of the plant. NSF policy specifies provision of performance evaluation reports to appropriate state regulatory agencies at publication. Subsequent direct distribution of the report by NSF is made only at the specific request of or by permission of the manufacturer.

The following report contains results of the entire testing program, a description of the plant, its operation and key process control equipment, and a narrative summary of the test program, including test location, procedures and significant occurrences. The plant represented herein reflects the equipment authorized to bear the NSF Mark.

CERTIFICATION

NSF International has determined by performance evaluation under the provisions of NSF/ANSI Standard 40 (revised April 2013) that the Ecoflo Coco Filter, EC7 Model Series manufactured by Premier Tech Aqua has fulfilled the requirements of NSF/ANSI Standard 40. The Ecoflo Coco Filter, EC7 Model Series has therefore been authorized to bear the NSF Mark so long as Premier Tech Aqua continues to meet the requirements of Standard 40 and NSF General and Program Specific Policies.

General performance evaluation and stress tests were performed at the NSF Wastewater Technology Site located in Waco, Texas. The raw wastewater used in the test was residential wastewater. The characteristics of the wastewater during the test are included in the tabulated data of this report.

The observations and analyses included in this report are certified to be correct and true copies of the data secured during the performance tests conducted by NSF on the wastewater treatment system described herein. The manufacturer has agreed to present the data in this certification in its entirety whenever it is used in advertising, prospectuses, bids or similar uses.

Jenny Oorbeck
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Sustainability/Wastewater Certification

Sharon Steiner
Business Unit Manager
Wastewater Treatment Unit Program