pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0084506**
Facility Type	**Non-Municipal**	APS ID	**731539**
Major / Minor	**Minor**	Authorization ID	**1342556**

Applicant and Facility Information

Applicant Name	**Kitch Inc. Dba Starlite Camping Resort**	Facility Name	**Starlite Camping Resort**
Applicant Address	1500 Furnace Hill Road	Facility Address	1500 Furnace Hill Road
	Stevens, PA 17578-9675		Stevens, PA 17578-9675
Applicant Contact	David Kitch	Facility Contact	David Kitch
Applicant Phone	(717) 733-9655	Facility Phone	(717) 733-9655
Client ID	59345	Site ID	444152
Ch 94 Load Status	Not Overloaded	Municipality	Clay Township
Connection Status	No Limitations	County	Lancaster
Date Application Received	February 9, 2021	EPA Waived?	Yes
Date Application Accepted	March 8, 2021	If No, Reason	

Purpose of Application: NPDES Renewal.

Summary of Review

Starlite Camping Resort has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of its National Pollutant Discharge Elimination System (NPDES) permit. The permit was issued on August 17, 2016, and became effective on September 1, 2016. The permit authorized discharge of treated wastewater from the existing wastewater treatment plant (WWTP) located in Clay Township into Dry Swale to Middle Creek. The existing permit expiration date was August 31, 2021, and the permit has been administratively extended since that time.

Per the previous fact sheet, Starlite Camping Resort has been operating since the early 1960s. The campground was divided into two sewage systems. A subsurface on-lot system as built for the camping sites, dump station, and office, while a septic tank/covered sand filter/chlorination discharge system was built to serve a bathhouse for the pool. The original discharge was to an intermittent ditch fed by a spring which would eventually reach Middle Creek about 3,000 ft. away; it was later relocated about 50 ft. downstream due to possible ponding at the spring. More recent inspections have revealed no spring or ditch to be present. The owner's son reported that the spring no longer flows due to site work while constructing campsite facilities. Currently, the wastewater is discharged into a rock pile located on the side of the mountainside below campsite No. 91. The wastewater then soaks into the ground and does not reach Middle Creek. The system was originally permitted on March 20, 1964 (Permit No. 663S64) to Mr. Paul Weachter. The permit was transferred to Mr. David Kitch Sr. on November 3, 1969. The design flow in the existing permit was based on 3,240 gpd with 27 campsites. There are now over 100 campsites, but waste flow at the bathhouse has been estimated to be about 880 gpd.

Changes in this renewal: E. Coli monitoring has been added to the permit.

Sludge use and disposal description and location(s): Offsite WWTP

Approve	Deny	Signatures	Date
X		Benjamin R. Lockwood Benjamin R. Lockwood / Environmental Engineering Specialist	February 9, 2022
X		Maria D. Bebenek for Daniel W. Martin, P.E. / Environmental Engineer Manager	February 28, 2022
X		Maria D. Bebenek Maria D. Bebenek, P.E. / Program Manager	February 28, 2022

Summary of Review

Supplemental information is located at the end of this fact sheet.

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)	.002
Latitude	40º 15' 6"	Longitude	76º 14' 18"
Quad Name		Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Dry Swale UNT to Middle Creek (TSF, MF)	Stream Code	NA
NHD Com ID	57461427	RMI	0.40
Drainage Area	<0.01 mi^2	Yield (cfs/mi^2)	NA
Q_{7-10} Flow (cfs)	0	Q_{7-10} Basis	NA
Elevation (ft)	800	Slope (ft/ft)	
Watershed No.	7-J	Chapter 93 Class.	TSF, MF
Existing Use	NA	Existing Use Qualifier	NA
Exceptions to Use	NA	Exceptions to Criteria	NA
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment	NA		
Source(s) of Impairment	NA		
TMDL Status	NA	Name	NA
Nearest Downstream Public Water Supply Intake	Lancaster City Water Bureau		
PWS Waters	Conestoga River	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	24

Changes Since Last Permit Issuance: None

Treatment Facility Summary				
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Secondary	Septic Tank Sand Filter	Hypochlorite	0.002
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.002		Not Overloaded	Holding	Other WWTP

Changes Since Last Permit Issuance: None

Other Comments: The WWTP consists of: 1 Holding Tank – 2 Septic Tanks – 1 Dosing Tank – 1 Subsurface Mixed Media Filter Bed – 1 Chlorine Contact Tank – Outfall 001 to Dry Swale UNT to Middle Creek.

Compliance History	
Summary of DMRs:	A summary of the past 12-month DMR effluent data is presented on the next page of this fact sheet.
Summary of Inspections:	5/9/2017: A routine inspection was conducted. The treatment units were not online as the WWTP operates seasonally. No issues with the facility were noted. 10/24/2019: A routine inspection was conducted. Field and lab samples were not collected. The outfall was not inspected as it could not be located due to recent timbering. 11/1/2019: A Notice of Violation (NOV) was issued due to late DMR submissions and effluent violations. 8/12/2020: An administrative inspection was conducted. The WWTP was operating normally and all units were online. The WWTP had not experienced any emergency conditions and there were no outstanding needs.

Other Comments: There are currently no open violations associated with the permittee or the facility.

Compliance History

DMR Data for Outfall 001 (from January 1, 2021 to December 31, 2021)

Parameter	DEC-21	NOV-21	OCT-21	SEP-21	AUG-21	JUL-21	JUN-21	MAY-21	APR-21	MAR-21	FEB-21	JAN-21
Flow (MGD) Average Monthly			0.00017	0.000425	0.000375	0.000395	0.00009 7					
Flow (MGD) Daily Maximum			0.000225	0.00075	0.000675	0.00065	0.00075					
pH (S.U.) Minimum			6.2	6.2	6.0	6.5	6.0					
pH (S.U.) Instantaneous Maximum			6.9	6.9	6.9	7.6	7.7					
TRC (mg/L) Average Monthly			1.07	0.96	0.88	1.24	0.76					
TRC (mg/L) Instantaneous Maximum			1.9	2.5	2.2	2.5	1.9					
CBOD5 (mg/L) Average Monthly			< 2.0	< 2.0	< 2.0	< 3	20.0					
TSS (mg/L) Average Monthly			< 2.0	< 2.0	5.0	4	9.0					
Fecal Coliform (CFU/100 ml) Geometric Mean			< 1	< 1.0	< 1.0	< 29	< 1.0					
Fecal Coliform (CFU/100 ml) Instantaneous Maximum			< 1	< 1.0	< 1.0	816.4	< 1.0					
Nitrate-Nitrite (mg/L) Average Monthly			< 25.8	< 17.31	< 14.86	< 18.89	< 0.8					
Nitrate-Nitrite (lbs) Total Monthly			< 2	< 3.0	< 0.6	< 3	< 0.1					
Total Nitrogen (mg/L) Average Monthly			< 26.92	< 17.93	< 17.66	< 20.79	< 6.4					
Total Nitrogen (lbs) Total Monthly			< 2	< 3.0	< 0.7	< 3	< 0.8					
TKN (mg/L) Average Monthly			1.12	0.62	2.8	1.9	5.6					
TKN (lbs) Total Monthly			0.07	0.1	0.1	0.3	0.7					

Total Phosphorus (mg/L) Average Monthly			1.4	1.53	1.97	2.24	1.92					
Total Phosphorus (lbs) Total Monthly			0.08	0.3	0.08	0.4	0.3					

Existing Effluent Limitations and Monitoring Requirements

The tables below summarize the effluent limits and monitoring requirements implemented in the existing NPDES permit.

Outfall 001

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Total Monthly	Total Annual	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report Avg Mo	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
TRC	XXX	XXX	XXX	Report	XXX	Report	1/day	Grab
CBOD5	XXX	XXX	XXX	25.0	XXX	50	2/month	Grab
TSS	XXX	XXX	XXX	30.0	XXX	60	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Nitrate-Nitrite as N	Report	XXX	XXX	Report	XXX	XXX	1/month	Grab
TKN	Report	XXX	XXX	Report	XXX	XXX	1/month	Grab
Total Nitrogen	Report	XXX	XXX	Report	XXX	XXX	1/month	Calculation
Total Nitrogen (lbs)	XXX	Report	XXX	XXX	XXX	XXX	1/month	Calculation
Total Phosphorus	Report	XXX	XXX	Report	XXX	XXX	1/month	Grab
Total Phosphorus (lbs)	XXX	Report	XXX	XXX	XXX	XXX	1/month	Grab

Compliance Sampling Location: At discharge from facility

Other Comments: None

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .002
Latitude 40º 15' 6" **Longitude** 76º 14' 18"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)

Ammonia and Carbonaceous Biochemical Oxygen Demand (NH_3-N & $CBOD_5$)

As this discharge does not reach any surface water, WQM 7.0 was not utilized for this permit renewal. The discharge does not reach what would be the point-of-first use, therefore, NH_3-N consideration is not necessary. This is consistent with how the existing permit was developed. The technology limits for $CBOD_5$ listed above will be included in the permit, which is consistent with the existing limits.

Total Suspended Solids (TSS)

The technology limits for TSS, listed above, will be included in the renewal permit. This is consistent with the existing permit.

pH

A limit of 6.0 – 9.0 S.U. has been included for pH, based on the 25 Pa Code § 95.2(1). This is consistent with the existing permit.

Fecal Coliform

PA Code § 92a.47.(a)(4) requires a monthly average limit of 200/100 mL as a geometric mean and an instantaneous maximum limit not greater than 1,000/100 mL from May through September for fecal coliform. PA Code § 92a.47.(a)(5) requires a monthly average limit of 2,000/100 mL as a geometric mean and an instantaneous maximum limit not greater than 10,000/100 mL from October through April for fecal coliform. These limits are included in the existing permit, and will remain in the renewal permit.

E. Coli

PA Code § 92a.61 requires IMAX reporting of E. Coli. Per DEP's SOP No. BCW-PMT-033, sewage dischargers with a design flow of 0.002 – 0.05 mgd will include E. Coli monitoring with a frequency of 1/year. This parameter has been added to the renewal permit.

Flow Monitoring

Flow monitoring is recommended by DEP's technical guidance and is also required by 25 PA Code §§ 92a.27 and 92a.61.

Total Residual Chlorine (TRC)

Due to the fact that the facility discharges directly to the ground, TRC has not been a parameter of concern for this facility and a water quality based limit has not been analyzed. The monitoring requirement for TRC will remain in the renewal permit.

Chesapeake Bay Total Maximum Daily Load (TMDL)

DEP developed a strategy to comply with the EPA and Chesapeake Bay Foundation requirements by reducing point source loadings of Total Nitrogen (TN) and Total Phosphorus (TP). This strategy can be located in the *Pennsylvania Chesapeake Watershed Implementation Plan* (WIP), dated January 11, 2011. Subsequently, an update to the WIP was published as the Phase 2 WIP. As part of the Phase 2 WIP, a *Phase 2 Watershed Implementation Plan Wastewater Supplement* (Phase 2 Supplement) was developed, providing an update on TMDL implementation for point sources and DEP's current implementation strategy for wastewater. A new update to the WIP was published as the Phase 3 WIP in August 2019. As part of the Phase 3 WIP, a *Phase 3 Watershed Implementation Plan Wastewater Supplement* (Phase 3 Supplement) was developed, and was most recently revised on December 17, 2019, and is the basis for the development of any Chesapeake Bay related permit parameters. Sewage discharges have been prioritized based on their design flow to the Bay. The highest priority (Phases 1, 2, and 3) dischargers will receive annual Cap Loads based on their design flow on August 29, 2005 and concentrations of 6 mg/l TN and 0.8 mg/l TP. These limits may be achieved through a combination of treatment technology, credits, or offsets. For Phase 4 and 5 facilities, Cap Loads are not currently being implemented for renewed or amended permits for facilities that do not increase design flow.

This facility is considered a Phase 5 non-significant discharger with a design flow less than 0.2 MGD but greater than 0.002 MGD. According to DEP's latest-revised Phase 3 Supplement, issuance of permits with monitoring and reporting for TN and TP is recommended for any Phase 5 non-significant sewage facilities. Furthermore, DEP's SOP No. BCW-PMT-033 states that in general, at a minimum, monitoring for TN and TP should be included in new and reissued permits for sewage discharges with design flows > 2,000 gpd. Therefore, TN and TP monitoring will be included in the renewed permit, which is consistent with the existing permit.

Anti-Degradation (93.4)

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. No High Quality Waters are impacted by this discharge. No Exceptional Value Waters are impacted by this discharge.

303d Listed Streams

The discharge is located on a stream segment that is listed as attaining uses.

Class A Wild Trout Fisheries

No Class A Wild Trout Fisheries are impacted by this discharge.

Anti-Backsliding

Pursuant to 40 CFR § 122.44(l)(1), all proposed permit requirements addressed in this fact sheet are at least as stringent as the requirements implemented in the existing NPDES permit unless any exceptions are addressed by DEP in this fact sheet.

Permit No. PA0084506

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.

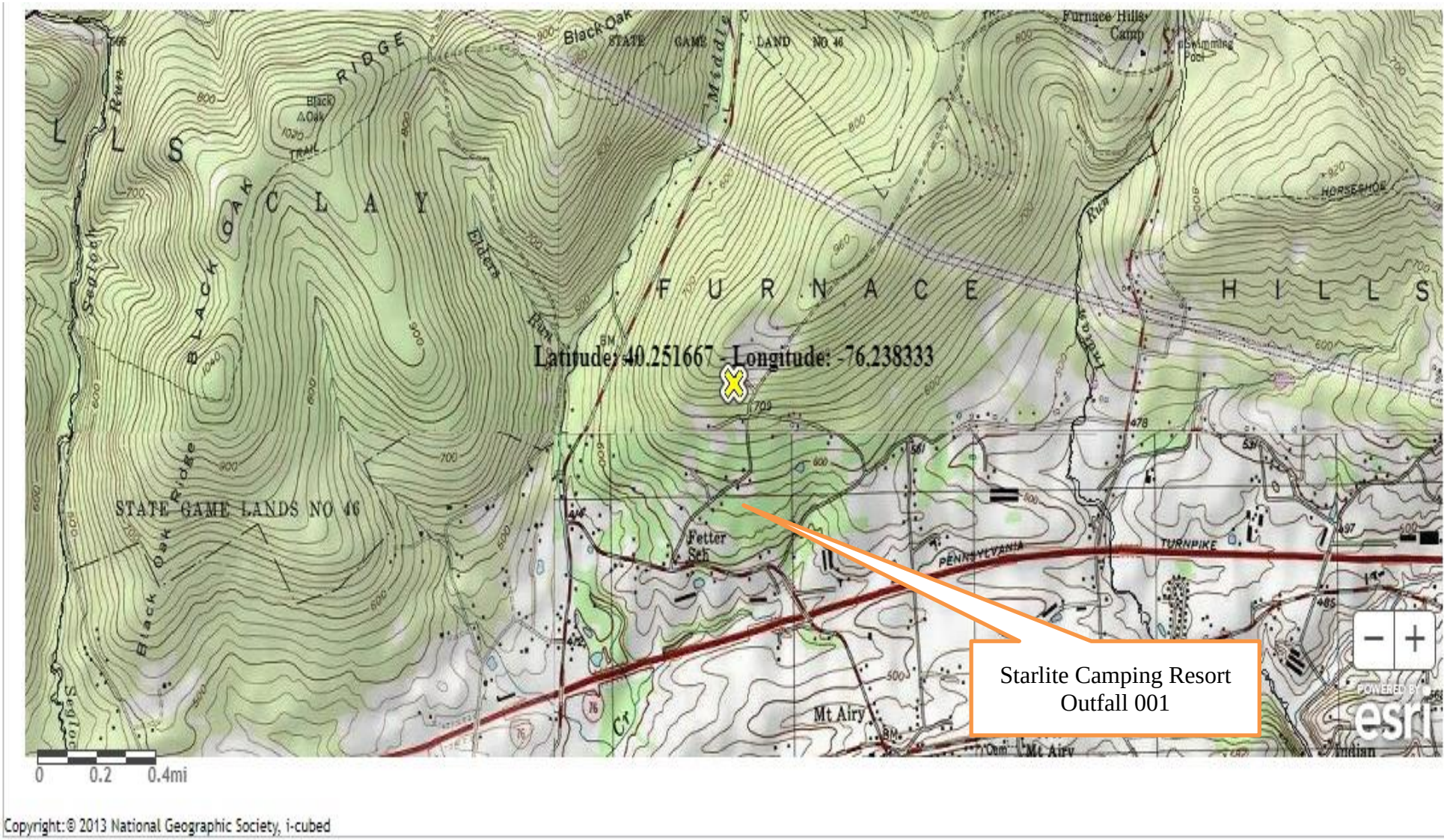
Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date.

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	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report Avg Mo	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
TRC	XXX	XXX	XXX	Report	XXX	Report	1/day	Grab
CBOD5	XXX	XXX	XXX	25.0	XXX	50	2/month	Grab
TSS	XXX	XXX	XXX	30.0	XXX	60	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	2/month	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Nitrate-Nitrite as N	Report	XXX	XXX	Report	XXX	XXX	1/month	Grab
TKN	Report	XXX	XXX	Report	XXX	XXX	1/month	Grab
Total Nitrogen	Report	XXX	XXX	Report	XXX	XXX	1/month	Calculation
Total Nitrogen (lbs)	XXX	Report Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
Total Phosphorus	Report	XXX	XXX	Report	XXX	XXX	1/month	Grab
Total Phosphorus (lbs)	XXX	Report Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation

Compliance Sampling Location: At discharge from facility

Other Comments: None

Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment)
☐	Toxics Management Spreadsheet (see Attachment)
☒	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☒	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
☐	Pennsylvania CSO Policy, 385-2000-011, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
☐	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
☐	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
☒	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 391-2000-019, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 3/99.
☐	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 391-2000-022, 3/1999.
☐	Design Stream Flows, 391-2000-023, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 391-2000-024, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☒	SOP: No. BCW-PMT-002, No. BCW-PMT-033
☐	Other:


Latitude: 40.251667 - Longitude: -76.238333
Starlite Camping Resort
Outfall 001
STATE GAME LANDS NO 46
FURNACE HILLS
BLACK OAK RIDGE
CLAY
Black Oak Ridge
Elders Run
Middle Creek
Furnace Hills Camp
Swimming Pool
HORSESHOE
Fetter Sch
PENNSYLVANIA TURNPIKE
Mt Airy
Mt Airy
0 0.2 0.4mi
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