pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0081299**
Facility Type	**Non-Municipal**	APS ID	**1949**
Major / Minor	**Minor**	Authorization ID	**1213092**

Applicant and Facility Information

Applicant Name	**Model Enterprises Inc.**	Facility Name	**Rolling Hills MHP**
Applicant Address	630 Delp Road	Facility Address	1570 Habecker Road
	Lancaster, PA 17601-3077		Columbia, PA 17512-9636
Applicant Contact	Stuart Loss	Facility Contact	Stuart Loss
Applicant Phone	(717) 278-6872	Facility Phone	(717) 278-6872
Client ID	285	Site ID	450058
Ch 94 Load Status	Not Overloaded	Municipality	Rapho Township
Connection Status		County	Lancaster
Date Application Received	November 28, 2017	EPA Waived?	No
Date Application Accepted	January 18, 2018	If No, Reason	Chiques Creek Alternate TMDL

Purpose of Application: NPDES Renewal.

Summary of Review

Model Enterprises Inc. 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 May 24, 2013 and became effective on June 1, 2013, authorizing discharge of treated sewage from the existing wastewater treatment plant (WWTP) located in Rapho Township, Lancaster County into Chiques Creek. The existing permit expiration date was May 31, 2018, and the permit has been administratively extended since that time.

Changes in this renewal: An ammonia-nitrogen monitoring requirement was added. TN and TP measurement frequencies were increase to 2/month.

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.

Supplemental information for this report is located in an attachment.

Approve	Deny	Signatures	Date
		Benjamin R. Lockwood / Environmental Engineering Specialist	October 30, 2019
		Daniel W. Martin, P.E. / Environmental Engineer Manager	
		Maria D. Bebenek, P.E. / Program Manager	

Summary of Review
Rolling Hills MHP PA0081299 Supplem

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	.02
Latitude	40º 4' 11"	Longitude	76º 30' 00"
Quad Name	Columbia East	Quad Code	1834
Wastewater Description:	Sewage Effluent		
Receiving Waters	Chiques Creek (WWF, MF)	Stream Code	7919
NHD Com ID	57464203	RMI	3.4
Drainage Area	62.7 mi^2	Yield (cfs/mi^2)	0.12
Q_{7-10} Flow (cfs)	7.52	Q_{7-10} Basis	USGS Gage # 01576500
Elevation (ft)	271	Slope (ft/ft)	
Watershed No.	7-G	Chapter 93 Class.	WWF, MF
Existing Use	N/A	Existing Use Qualifier	N/A
Exceptions to Use	N/A	Exceptions to Criteria	N/A
Assessment Status	Impaired		
Cause(s) of Impairment	Nutrients, Siltation, Siltation, Pathogens		
Source(s) of Impairment	Agriculture, Urban Runoff/Storm Sewers, Agriculture, Source Unknown		
TMDL Status	N/A	Name	N/A
Nearest Downstream Public Water Supply Intake	Columbia Water Company		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	5.9

Changes Since Last Permit Issuance: A drainage area of 62.7 mi^2 and a Q_{7-10} flow of 7.52 cubic feet per second (cfs) were determined by establishing a correlation to the yield of USGS Gage Station #01576500 on the Conestoga River. The Q_{7-10} and drainage area at the gage are 38.6 cfs and 324 mi^2, respectively. These values are taken from the USGS document "Selected Streamflow Statistics for Streamgage Locations in and near Pennsylvania". The Q_{7-10} runoff rate at the gage station was calculated as follows:

Yield = (38.6 cfs)/ 324 mi^2 = 0.12 cfs/mi^2

The drainage area at the discharge point, taken from USGS PA StreamStats = 62.7 mi^2

The Q_{7-10} at the discharge point = 62.7 mi^2 x 0.12 cfs/mi^2 = 7.52 cfs

Other Comments: None

Treatment Facility Summary				
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Secondary	Extended Aeration	Hypochlorite	0.02
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.02		Not Overloaded	Sludge Holding	Other WWTP

Changes Since Last Permit Issuance: The treatment process is as follows: Comminutor – EQ Tank – Two (2) Aeration Tanks – Clarifiers – Steel Filter Screens – Chlorine Contact Tank – Post Aeration – Dechlorination – Outfall 001 to Chiques Creek

Other Comments: None

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. All DMR data available was entered into the table.
Summary of Inspections:	11/4/2014: A routine inspection was conducted. Field testing results were within their permitted range. The outfall area was checked and appeared to be clear. There were two sand bed filters that were no longer in use. Overall treatment appeared to be good. The mixed liquor had no foam and good floc formation. There was some minor pic floc in the #1 clarifier and the clarifier effluent box had a build-up of solids and algae that needed to be cleaned out. 7/24/2015: A routine inspection was conducted. The effluent was clear upstream and downstream. No solids accumulation or other water quality concerns were noted. The #1 aeration tank had several holes in the side of the steel tank. It was requested that these holes be addressed. Both clarifiers had some bulking sludge; most was kept back by the baffles. Baffles and the weir were clean and free from growth. Open hose ports were present in the #2 sludge holding tank. It was requested that these holes be plugged or removed. The filters were clean and the effluent from the plant was clear. 8/19/2015: An inspection was conducted. On 8/18/15, Gary Eyster (operator) notified DEP that composite samples had not been taken since the end of June 2015. ALS was contracted to take samples, but none were taken. The outfall and effluent were clear. No water quality concerns were noted. The stream was clear upstream and downstream. Recommendations made during the previous inspection had been addressed. 5/12/2016: A routine inspection was conducted. The plant was well maintained. Since the previous inspection, a new motor had been installed for one of the blowers. No other issues were noted. 5/2/2019: A routine inspection was conducted. A small amount of screenings was present in the basket screen. The western aeration tank had a rope temporarily holding a return pipe in place. The operator stated that a more permanent fix will be installed. The western clarifier had several clumps of bulking sludge, and the skimmer was only partially returning. The chlorine feed line was functioning. Calcium hypochlorite tablets were present in the chlorine contact tank. The metal post aeration tank showed signs of deterioration. There are future plans to replace this metal tank with a concrete tank. The effluent appeared clear. The results from the field samples taken were within permit limits.

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

Compliance History

DMR Data for Outfall 001 (from September 1, 2018 to August 31, 2019)

Parameter	SEP-18	OCT-18	NOV-18	DEC-18	JAN-19	FEB-19	MAR-19	APR-19	MAY-19	JUN-19	JUL-19	AUG-19
Flow (MGD) Average Monthly	0.004	0.003	0.002	0.002	0.002	0.004	0.002	0.002	0.003	0.003	0.002	0.002
Flow (MGD) Daily Maximum	0.006	0.005	0.005	0.003	0.003	0.007	0.004	0.004	0.005	0.005	0.007	0.003
pH (S.U.) Minimum	7.67	7.4	7.67	7.86	7.98	6.59	6.83	7.06	6.86	7.11	7.27	7.14
pH (S.U.) Maximum	8.53	8.17	8.43	8.31	8.32	8.32	7.88	7.93	8.16	8.18	7.98	7.93
DO (mg/L) Minimum	5.74	5.16	5.04	5.98	7.01	6.34	7.61	6.40	6.88	7.27	5.42	6.68
TRC (mg/L) Average Monthly	0.03	0.01	0.076	0.05	0.150	0.23	0.106	0.126	0.120	0.07	0.03	0.03
TRC (mg/L) Instantaneous Maximum	0.33	0.06	0.79	0.45	1.15	2.20	0.77	0.67	0.49	0.48	0.29	0.37
CBOD5 (mg/L) Average Monthly	4.25	4.20	< 3.0	4.85	7.35	14.65	< 6.0	7.1	5.25	< 2.0	2.15	3.35
TSS (mg/L) Average Monthly	< 5.5	5.5	< 5.0	< 6.5	< 6.5	38.5	< 7.0	6.5	< 6.0	< 5.5	6.5	< 5.0
Fecal Coliform (CFU/100 ml) Geometric Mean	92.91	22.58	76.49	14.49	269.39	955.46	< 1.0	< 2.0	< 1.0	< 1.0	70	9.165
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	166	510	390.0	210	1230	53700	1.0	4.0	< 1.0	1.0	4900	42.0
Nitrate-Nitrite (lbs/day) Annual Average				0.11								
Nitrate-Nitrite (mg/L) Annual Average				3.3								
Total Nitrogen (lbs/day) Annual Average				0.213								
Total Nitrogen (mg/L) Annual Average				6.4								

Total Nitrogen (lbs) Other Annual Final Effluent Total Annual				77.75								
TKN (lbs/day) Annual Average				0.10								
TKN (mg/L) Annual Average				3.1								
Total Phosphorus (lbs/day) Average Monthly	0.0219	0.013	0.00775	0.010	0.0125	0.0265	0.0065	0.014	0.0215	0.017	0.013	0.0125
Total Phosphorus (mg/L) Average Monthly	0.575	0.51	0.455	1.3	1.525	0.685	0.485	1.02	1.3	0.82	0.61	1.04
Total Phosphorus (lbs) Total Monthly	0.657	0.403	0.2325	0.31	0.3875	0.742	0.20	0.42	0.6665	0.51	0.41	0.388
Total Phosphorus (lbs) Other Annual Final Effluent Total Annual				6.10								

Compliance History

Effluent Violations for Outfall 001, from: October 1, 2018 To: August 31, 2019

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
TRC	02/28/19	IMAX	2.20	mg/L	1.6	mg/L
TSS	02/28/19	Avg Mo	38.5	mg/L	30	mg/L
Fecal Coliform	02/28/19	IMAX	53700	CFU/100 ml	10000	CFU/100 ml
Fecal Coliform	07/31/19	IMAX	4900	CFU/100 ml	1000	CFU/100 ml

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
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	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
DO	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
CBOD5	XXX	XXX	XXX	25	XXX	50	2/month	8-Hr Composite
TSS	XXX	XXX	XXX	30	XXX	60	2/month	8-Hr Composite
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
Total Phosphorus	Report	XXX	XXX	2.0	XXX	4.0	2/month	8-Hr Composite
Total Phosphorus	Report Total Month	XXX	XXX	XXX	XXX	XXX	1/month	Calculation

Parameter	Effluent Limitations					Monitoring Requirements	
	Mass Units		Concentrations (mg/L)			Minimum Measurement Frequency	Required Sample Type
	(lbs/day)	(lbs)	Minimum	Monthly Average	Maximum		
Kjeldahl--N	XXX	XXX	XXX	Report Annual Avg	XXX	1/year	8-Hr Composite
Nitrite-Nitrate as N	XXX	XXX	XXX	Report Annual Avg	XXX	1/year	8-Hr Composite
Total Nitrogen	XXX	XXX	XXX	Report Annual Avg	XXX	1/year	Calculation
Total Phosphorus	XXX	122 Total Annual	XXX	XXX	XXX	1/year	Calculation

Compliance Sampling Location: Outfall 001

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .02
Latitude 40º 4' 11." **Longitude** 76º 30' 0.0"
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)

Water Quality-Based Limitations

Pursuant to 40 CFR § 122.44(d)(1)(i), more stringent requirements should be considered when pollutants are discharged at the levels which have the reasonable potential to cause or contribute to excursions above water quality standards.

WQM 7.0 ver. 1.0b is a water quality model designed to assist DEP in determining appropriate water quality based effluent limits (WQBELs) for carbonaceous biochemical oxygen demand ($CBOD_5$), ammonia (NH_3-N), and dissolved oxygen (D.O.). The model simulates two basic processes: In the NH_3-N module, the model simulates the mixing and degradation of NH_3-N in the stream and compares calculated instream NH_3-N concentrations to NH_3-N water quality criteria. In the D.O. module, the model simulates the mixing and consumption of D.O. in the stream due to the degradation of $CBOD_5$ and NH_3-N and compares calculated instream D.O. concentrations to D.O. water quality criteria. The model then determines the highest pollutant loadings that the stream can assimilate while still meeting water quality criteria under design conditions. DEP's Technical Guidance No. 391-2000-007 provides the technical methods contained in WQM 7.0 for determining wasteload allocations and for determining recommended NPDES effluent limits for point source discharges.

The model was utilized for this permit application. The flow data used to run the model was acquired from USGS PA StreamStats, and USGS Gage # 01576500 on the Conestoga River, and is included in an attachment. Stream pH and temperature inputs for this model run were based on data acquired from the National Water Quality Monitoring Council website. Data was analyzed from the Water Quality Network (WQN) Station ID 206 on Chiques Creek from October 1998 to March 2019 for pH, and from October 1998 to October 2017 for temperature. DEP's Standard Operating Procedure (SOP) No. BPNPSM-PMT-033 (Establishing Effluent Limitations for Individual Sewage Permits) recommends using the 90th percentile of long-term data for background and discharge characteristics when using WQM 7.0. A 90th percentile analysis was performed on the data and resulted in a Stream pH of 8.3 and a Stream Temperature of 21°C. The model output indicated a $CBOD_5$ average monthly limit of 25 mg/l, an NH_3-N average monthly limit of 25 mg/l, and a D.O. minimum limit of 5.0 mg/l were protective of water quality. The $CBOD_5$ limit is the same as the existing limit, and will remain in the permit. DEP's SOP No. BCW-PMT-033 states that, "for existing discharges, when WQM modeling results for summer indicates that an average monthly limit of 25 mg/l is acceptable, the application manager will generally establish a year-round monitoring requirement for ammonia-nitrogen, at a minimum." Therefore, a year-round monitoring requirement for NH_3-N will be included in the permit. Monitoring requirements of 2/month using an 8-hr composite sample will be applied to be consistent with the existing permit limits.

There are no industrial/commercial users contributing industrial wastewater to the system and Rolling Hills MHP does not currently have an EPA-approved pretreatment program. Accordingly, evaluating reasonable potential of toxic pollutants is not necessary as effluent levels of toxic pollutants are expected to be insignificant.

Best Professional Judgement (BPJ) Limitations

Dissolved Oxygen (D.O.)

A minimum D.O. limit of 5.0 mg/L is a D.O. water quality criterion found in 25 Pa. Code § 93.7(a). This limit is included in the existing NPDES permit. This limit will continue to be included in the permit to ensure that the facility continues to achieve compliance with DEP water quality standards.

Total Residual Chlorine

The attached computer printout utilizes the equations and calculations as presented in the Department's May 1, 2003 Implementation Guidance for Total Residual Chlorine (TRC) (ID No. 391-2000-015) for developing chlorine limitations. The Guidance references Chapter 92, Section 92.2d (3) which establishes a standard BAT limit of 0.5 mg/l unless a facility-specific BAT has been developed. The attached printout indicates that a water quality limit of 0.5 mg/l would be needed to prevent toxicity concerns. It is recommended that a TRC limit of 0.5 mg/l monthly average and 1.6 mg/l instantaneous maximum be applied this permit cycle, the same as the existing limit.

Additional Considerations

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. The Phase 2 Supplement was most recently revised on September 6, 2017. 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 2 Supplement, issuance of permits with monitoring and reporting for TN and TP is recommended for any Phase 5 non-significant sewage facilities (i.e., facilities with average annual design flows on August 29, 2005 less than 0.2 MGD but greater than 0.002 MGD). Furthermore, DEP's SOP No. BPNPSM-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. Table 6-3 of DEP's Technical Guidance for the Development and Specification of Effluent Limitations (362-0400-001) recommends a measurement frequency of 2/month for NH_3-N and phosphorus, which will be used in the permit renewal.

Chiques Creek Alternate Restoration Plan

This facility discharges to Chiques Creek. Chiques Creek was included on Pennsylvania's 1996 303(d) List of Impaired Waters due to nutrient impairments. A Total Maximum Daily Load (TMDL) for the Chiques Creek Watershed was approved by the United States Environmental Protection Agency (EPA) on April 9, 2001. Due to several deficiencies within the TMDL, it was withdrawn with approval from EPA on October 28, 2015. DEP, Susquehanna River Basin Commission (SRBC) and watershed stakeholders have been in the process of developing a large scale monitoring and restoration plan. The goal of this Alternate Restoration Plan (ARP) is to address impacts to the Chiques Creek Watershed due to suspended solids/siltation and nutrient pollution. During the ongoing ARP development, this discharge permit will be renewed to conform with existing guidance. This permit will include a Total Phosphorus (TP) limit of 2.0 mg/l. The TP limit of 2.0 mg/l is derived from 25 Pa. Code § 96.5(c). This section states that "when it is determined that the discharge of phosphorus, alone or in combination with the discharge of other pollutants, contributes or threatens to impair existing or designated uses in a free

flowing surface water, phosphorus discharges from point source discharges shall be limited to an average monthly concentration of 2 mg/l." This is consistent with existing limits for other dischargers to the Chiques Creek Watershed. This limit is included in the existing permit, and will remain in the renewal. A continued evaluation of dischargers to Chiques Creek will be performed as described in the NPDES Part C Conditions.

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 designated on the 303(d) list as impaired. There is an aquatic life impairment for agriculture due to siltation and nutrients, urban runoff/storm sewers due to siltation, and a recreational impairment for pathogens due to an unknown source. The existing permit includes a fecal coliform and TP limit, and TN monitoring.

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 addressed by DEP in this fact sheet.

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
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	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
DO	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
CBOD5	XXX	XXX	XXX	25	XXX	50	2/month	8-Hr Composite
TSS	XXX	XXX	XXX	30	XXX	60	2/month	8-Hr Composite
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
Ammonia	XXX	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
TKN	XXX	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Nitrate-Nitrite	XXX	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Total Nitrogen	Report	XXX	XXX	Report	XXX	XXX	1/month	Calculation
Total Phosphorus	Report	XXX	XXX	2.0	XXX	4.0	2/month	8-Hr Composite
Total Nitrogen (lbs)	XXX	Report Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation

Outfall 001, Continued (from 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
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Total Phosphorus (lbs)	XXX	122 Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation

Compliance Sampling Location: Outfall 001

Other Comments: None

Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment)
☐	PENTOXSD for Windows Model (see Attachment)
☒	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Toxics Screening Analysis 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.
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