

Application Type Renewal
 Facility Type Non-Municipal
 Major / Minor Minor

**NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE**

Application No. PA0034363
 APS ID 10467
 Authorization ID 961877

Applicant and Facility Information

Applicant Name	<u>Hess, Stuart A.</u>	Facility Name	<u>Pine View Acres MHP WWTP</u>
Applicant Address	<u>116-B Blantz Road</u> <u>Lititz, PA 17543</u>	Facility Address	<u>N Pine Street</u> <u>Manheim, PA 17545</u>
Applicant Contact	<u>Stuart Hess</u>	Facility Contact	<u>Stuart Hess</u>
Applicant Phone	<u>(717) 625-2466</u>	Facility Phone	<u>(717) 625-2466</u>
Client ID	<u>39343</u>	Site ID	<u>250902</u>
Ch 94 Load Status	<u>Not Overloaded</u>	Municipality	<u>Penn Township</u>
Connection Status		County	<u>Lancaster</u>
Date Application Received	<u>February 1, 2013</u>	EPA Waived?	<u>No</u>
Date Application Accepted	<u>February 7, 2013</u>	If No, Reason	<u>Chiques Creek Alternate TMDL</u>
Purpose of Application	<u>NPDES Renewal with Authorization to discharge to Chickies Creek in Watershed 7G.</u>		

Summary of Review

Pine View Acres MHP 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 14, 2008 and became effective on June 1, 2008. The permit authorized discharge of treated sewage from the existing wastewater treatment plant (WWTP) located in Penn Township, Lancaster County into Chiques Creek. The existing permit expiration date was May 31, 2013, and the permit has been administratively extended since that time.

Changes in this renewal: Fecal coliform instantaneous maximum (IMAX) limits were added. An ammonia-nitrogen wintertime limit was added. A Total Phosphorus limit and Total Nitrogen monitoring requirement were added.

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
		Benjamin R. Lockwood / Environmental Engineering Specialist	September 16, 2019
		Daniel W. Martin, P.E. / Environmental Engineer Manager	
		Maria D. Bebenek, P.E. / Program Manager	

Summary of Review

Supplemental information for this report is located in an attachment below:



Pine View Acres
MHP PA0034363 Sup

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	<u>001</u>	Design Flow (MGD)	<u>.0036</u>
Latitude	<u>40° 11' 57.1"</u>	Longitude	<u>76° 22' 50.7"</u>
Quad Name	<u></u>	Quad Code	<u></u>
Wastewater Description: <u>Sewage Effluent</u>			
Receiving Waters	<u>Unnamed Tributary to Chiques Creek (WWF)</u>	Stream Code	<u>08006</u>
NHD Com ID	<u>57462117</u>	RMI	<u>0.6</u>
Drainage Area	<u>0.4 mi²</u>	Yield (cfs/mi ²)	<u>0.12</u>
Q ₇₋₁₀ Flow (cfs)	<u>0.048</u>	Q ₇₋₁₀ Basis	<u>USGS Gage # 01576500</u>
Elevation (ft)	<u>466</u>	Slope (ft/ft)	<u></u>
Watershed No.	<u>7-G</u>	Chapter 93 Class.	<u>WWF</u>
Existing Use	<u>N/A</u>	Existing Use Qualifier	<u>N/A</u>
Exceptions to Use	<u>N/A</u>	Exceptions to Criteria	<u>N/A</u>
Assessment Status	<u>Impaired</u>		
Cause(s) of Impairment	<u>Siltation, Pathogens</u>		
Source(s) of Impairment	<u>Agriculture, Source Unknown</u>		
TMDL Status	<u>N/A</u>	Name	<u>N/A</u>
Nearest Downstream Public Water Supply Intake	<u>Columbia Water Company</u>		
PWS Waters	<u>Susquehanna River</u>	Flow at Intake (cfs)	<u></u>
PWS RMI	<u>27.5</u>	Distance from Outfall (mi)	<u>25.5</u>

Changes Since Last Permit Issuance: A drainage area of 0.4 mi² and a Q₇₋₁₀ flow of 0.048 cubic feet per second (cfs) were determined by establishing a correlation to the yield of USGS Gage Station #01576500 on the Conestoga River. The Q₇₋₁₀ and drainage area at the gage are 38.6 cfs and 324 mi², respectively. These values are taken from the USGS document "Selected Streamflow Statistics for Streamgage Locations in and near Pennsylvania". The Q₇₋₁₀ runoff rate at the gage station was calculated as follows:

$$\text{Yield} = (38.6 \text{ cfs}) / 324 \text{ mi}^2 = 0.12 \text{ cfs/mi}^2$$

The drainage area at the discharge point, taken from USGS PA StreamStats = 0.4 mi²

The Q₇₋₁₀ at the discharge point = 0.4 mi² x 0.12 cfs/mi² = 0.048 cfs

Other Comments: None

Treatment Facility Summary				
Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Septic Tank Sand Filter	Hypochlorite	0.0036
Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.0036		Not Overloaded	Septic Tank	Other WWTP

Changes Since Last Permit Issuance: The treatment process is as follows: 3 Septic Tanks – Dosing Tank – Sand Filtration – Chlorine Contact Tank – Outfall 001 to UNT 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:	<p>9/23/2014: A routine inspection was performed by Andrew Hall, DEP Water Quality Specialist. At the time of inspection the sand was well groomed. It was recently raked with very little growth or weeds present. No ponding was present in the sand filter. The effluent from the WWTP looked clear, and no solids were present at the outfall.</p> <p>3/10/2015: A routine inspection was performed by Bob Haines, DEP Water Quality Specialist. An effluent grab sample was collected, and the pH and TRC test results were within the permitted range. The outfall area was clear. There was some standing water on one of the sand filters that was being used. The operator stated that this was due to freezing conditions.</p> <p>3/30/2017: A routine inspection was performed by Kevin Buss, DEP Water Quality Specialist. It was noted that the dosing tank doses the sand filter on the shed side. The sand filters are rotated every couple of months and rototilled once a year. The main discharge pipe at the outfall was cracked from a downed tree.</p>

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

Compliance History

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

Parameter	AUG-18	SEP-18	OCT-18	NOV-18	DEC-18	JAN-19	FEB-19	MAR-19	APR-19	MAY-19	JUN-19	JUL-19
Flow (MGD) Average Monthly				0.00092	0.00084	0.00099	0.00092				0.00090	0.00086
Flow (MGD) Daily Maximum				0.00098	0.00098	0.00125	0.00108				0.00096	0.00088
pH (S.U.) Instantaneous Minimum				6.74	6.71	6.65	6.62				6.37	6.39
pH (S.U.) Instantaneous Maximum				6.83	6.83	6.77	6.75				6.53	6.73
TRC (mg/L) Average Monthly				0.22	0.22	0.17	0.21				0.24	0.27
TRC (mg/L) Instantaneous Maximum				0.33	0.34	0.27	0.32				0.39	0.73
CBOD5 (mg/L) Average Monthly				<2.45	<2	5.55	<5.3				< 2.0	< 2.0
TSS (mg/L) Average Monthly				<5	<6.5	<5.5	<9				9.5	< 5.0
Fecal Coliform (No./100 ml) Geometric Mean				<1	<7.48	2,361	<31				< 1.0	< 1.41
Ammonia (mg/L) Average Monthly				-	-	-	-				0.355	1.61

Existing Effluent Limitations and Monitoring Requirements

The table below summarizes the effluent limits and monitoring requirements implemented in the existing NPDES permit.

Outfall 001

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	1/week	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	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
Ammonia May 1 - Oct 31	XXX	XXX	XXX	9.0	XXX	18	2/month	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	XXX	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	XXX	2/month	Grab

Development of Effluent Limitations

Outfall No. 001
Latitude 40° 11' 57.1"
Wastewater Description: Sewage Effluent

Design Flow (MGD) .0036
Longitude 76° 22' 50.7"

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 (CBOD₅), ammonia (NH₃-N), and dissolved oxygen (D.O.). The model simulates two basic processes: In the NH₃-N module, the model simulates the mixing and degradation of NH₃-N in the stream and compares calculated instream NH₃-N concentrations to NH₃-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 CBOD₅ and NH₃-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 CBOD₅ average monthly limit of 25 mg/l, an NH₃-N average monthly limit of 9.4 mg/l, and a D.O. minimum limit of 5.0 mg/l were protective of water quality. The CBOD₅ limit is the same as the existing limit, and will remain in the permit. The NH₃-N limit is less stringent than the existing limit of 9.0 mg/l, so the existing limit will remain in the permit. DEP's SOP No. BCW-PMT-033 recommends using a seasonal multiplier of 3 times the summertime average monthly limit to establish a wintertime limit. Therefore, a wintertime NH₃-N limit of 27 mg/l has been added to 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 Pine View Acres 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

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. 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 NH₃-N and phosphorus. This is consistent with existing permit monitoring requirements and will be used for these parameters.

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. 25 Pa. Code 92a.51(a) allows for a compliance schedule to comply with water quality standards. Therefore, the TP limit will become enforceable one (1) year after issuance of the permit. A continued evaluation of dischargers to Chiques Creek will be performed as described in the NPDES Part C Conditions.

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. The instantaneous maximum fecal coliform limits have been included in the renewal 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 designated on the 303(d) list as impaired. There is an aquatic life impairment for agriculture due to siltation, and a recreational impairment for pathogens due to an unknown source. The existing permit includes a fecal coliform limit.

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 One Year From Effective 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	Report Daily Max	XXX	XXX	XXX	XXX	1/week	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	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 Nov 1 - Apr 30	XXX	XXX	XXX	27	XXX	54	2/month	8-Hr Composite
Ammonia May 1 - Oct 31	XXX	XXX	XXX	9.0	XXX	18	2/month	8-Hr Composite
Nitrate-Nitrite as N	XXX	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
TKN	XXX	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/month	Calculation
Total Phosphorus	XXX	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite

Compliance Sampling Location: Outfall 001

Other Comments: None

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: One Year From 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	Report Daily Max	XXX	XXX	XXX	XXX	1/week	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	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 Nov 1 - Apr 30	XXX	XXX	XXX	27	XXX	54	2/month	8-Hr Composite
Ammonia May 1 - Oct 31	XXX	XXX	XXX	9.0	XXX	18	2/month	8-Hr Composite
Nitrate-Nitrite as N	XXX	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
TKN	XXX	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/month	Calculation
Total Phosphorus	XXX	XXX	XXX	2.0	XXX	4.0	2/month	8-Hr Composite

Compliance Sampling Location: Outfall 001

Other Comments: None

Tools and References Used to Develop Permit	
<input checked="" type="checkbox"/>	WQM for Windows Model (see Attachment [redacted])
<input type="checkbox"/>	PENTOXSD for Windows Model (see Attachment [redacted])
<input checked="" type="checkbox"/>	TRC Model Spreadsheet (see Attachment [redacted])
<input type="checkbox"/>	Temperature Model Spreadsheet (see Attachment [redacted])
<input type="checkbox"/>	Toxics Screening Analysis Spreadsheet (see Attachment [redacted])
<input type="checkbox"/>	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
<input checked="" type="checkbox"/>	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
<input type="checkbox"/>	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
<input type="checkbox"/>	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
<input type="checkbox"/>	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
<input type="checkbox"/>	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
<input type="checkbox"/>	Pennsylvania CSO Policy, 385-2000-011, 9/08.
<input type="checkbox"/>	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
<input type="checkbox"/>	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
<input checked="" type="checkbox"/>	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
<input type="checkbox"/>	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
<input checked="" type="checkbox"/>	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.
<input type="checkbox"/>	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
<input type="checkbox"/>	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
<input type="checkbox"/>	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
<input type="checkbox"/>	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
<input type="checkbox"/>	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
<input type="checkbox"/>	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
<input type="checkbox"/>	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
<input checked="" type="checkbox"/>	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 10/97.
<input type="checkbox"/>	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.
<input type="checkbox"/>	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 3/99.
<input type="checkbox"/>	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.
<input type="checkbox"/>	Design Stream Flows, 391-2000-023, 9/98.
<input type="checkbox"/>	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.
<input type="checkbox"/>	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
<input type="checkbox"/>	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
<input type="checkbox"/>	SOP: [redacted]
<input type="checkbox"/>	Other: [redacted]