pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0085235**
Facility Type	**SFTF**	APS ID	**571224**
Major / Minor		Authorization ID	**1270183**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Degrazia, LLC**	Facility Name	**Emilys Restaurant**
Applicant Address	3790 Morgantown Road	Facility Address	3790 Morgantown Road
	Mohnton, PA 19540-7920		Mohnton, PA 19540-7920
Applicant Contact	Carl Degrazia	Facility Contact	Carl Degrazia
Applicant Phone	(610) 856-7887	Facility Phone	(610) 856-7887
Client ID	228022	Site ID	260810
Ch 94 Load Status	Not Overloaded	Municipality	Robeson Township
Connection Status		County	Berks
Date Application Received	April 17, 2019	EPA Waived?	Yes
Date Application Accepted	April 23, 2019	If No, Reason	
Purpose of Application	NPDES permit renewal.		

Summary of Review

DeGrazia, LLC 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 October 20, 2014 and became effective on November 1, 2014. The permit authorized discharge of treated sewage from the existing wastewater treatment plant (WWTP) located in Robeson Township, Berks County to Unnamed Tributary to Allegheny Creek.

The existing permit expiration date was October 31, 2019, and the permit has been administratively extended since that time. The discharge design flow is 0.0012 MGD; therefore, it is a small flow treatment facility (SFTF).

Changes from the previous permit: Unit of Fecal Coliform changed from CFU/100 ml to No./100 ml. The monitoring requirements frequency for $CBOD_5$, TSS, Fecal Coliform, and Ammonia changed from 2/month to 1/month; sample type for $CBOD_5$, TSS, and Ammonia changed from 8-hr composite to grab; and frequency for Flow, pH, DO, and TRC changed from 1/week to 1/month (SOP No. BCW-PMT-003 revised May 17, 2019).

Based on the review outline in this fact sheet, it is recommended that the permit be drafted and published in the Pennsylvania Bulletin for public comments for 30 days.

Approve	Deny	Signatures	Date
X		Hilary H. Le / Environmental Engineering Specialist	January 7, 2020
		Daniel W. Martin, P.E. / Environmental Engineer Manager	
		Maria D. Bebenek, P.E. / Clean Water Program Manager	

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.0012
Latitude	40º 14' 3.53"	Longitude	-75º 54' 29.24"
Quad Name	Morgantown	Quad Code	
Wastewater Description:	Domestic Wastewater from Restaurant		
Receiving Waters	Unnamed Tributary to Allegheny Creek (CWF)	Stream Code	64016
NHD Com ID	25982924	RMI	1.04 mile
Drainage Area	0.91 mi.^{2}	Yield (cfs/mi^2)	See comments below
Q_{7-10} Flow (cfs)	See comments below	Q_{7-10} Basis	See comments below
Elevation (ft)	403	Slope (ft/ft)	
Watershed No.	3-C	Chapter 93 Class.	CWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status		Name	
Nearest Downstream Public Water Supply Intake	Pottstown Borough Water Authority, Montgomery County		
PWS Waters	Schuylkill River	Flow at Intake (cfs)	
PWS RMI	57 miles	Distance from Outfall (mi)	Approximate 17 miles

Changes Since Last Permit Issuance: none

Drainage Area
The discharge is to Unnamed Tributary to Allegheny Creek at RMI 1.04 mile. A drainage area upstream of the discharge is estimated to be 0.91 mi.^{2}, according to USGS PA StreamStats available at https://streamstats.usgs.gov/ss/.

Stream Flow
Streamflow will be correlated with past streamflow records taken from the nearby USGS gage station on the Allegheny Creek. The Q_{7-10} is 1.13 cfs and the drainage area is 11.4 mi.^{2} (according to USGS PA StreamStats available at https://streamstats.usgs.gov/ss/), which results in a Q_{7-10} low flow yield of 0.1 cfs/mi.^{2}. This information is used to obtain a chronic or 30-day (Q_{30-10}), and an acute or 1-day (Q_{1-10}) exposure stream flow for the discharge point as follows (Guidance No. 391-2000-023):

Low Flow Yield = 1.13 cfs / 11.4 mi.^{2} ≈ 0.1 cfs/mi.^{2}
Q_{7-10} = 0.1 cfs/mi.^{2} * 0.91 mi.^{2} ≈ 0.091 cfs
Q_{30-10} = 1.36 * 0.091 cfs ≈ 0.12 cfs
Q_{1-10} = 0.64 * 0.091 cfs ≈ 0.058 cfs

The resulting Q_{7-10} dilution ratio is: Q_{stream} / $Q_{discharge}$ = 0.091 cfs / [0.0012 MGD * (1.55 cfs/MGD)] = 48.9:1

Unnamed Tributary to Allegheny Creek
25 Pa. Code 93.9f classifies Unnamed Tributary to Allegheny Creek as Cold-Water Fishes (CWF) surface water. Based on the 2016 Integrated Report, Allegheny Creek, is not impaired. A TMDL currently does not exist for this stream segment, therefore, no TMDL has been taken into consideration during this review.

Potable Water Supply Intake
The nearest downstream public water supply intake is the Pottstown Borough Water Authority intake on the Schuylkill River in Montgomery County, approximately 17.0 miles from the point of discharge. Given the nature and dilution, the discharge is not expected to significantly impact the water supply.

Treatment Facility Summary				
Treatment Facility Name: Emilys Pub				
WQM Permit No.	**Issuance Date**			
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage			Chlorine	0.0012
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.0012		Not Overloaded		

Changes Since Last Permit Issuance: none

The treatment process is as follows: Grease Trap (1) - Aeration Tanks (2) – Final Clarifiers (2) – Chlorine Contact Tank (1) – De-chlorination Bucket (1) – Discharge (Outfall 001)

Grease trap is cleaned one per month.

Compliance History	
Summary of DMRs:	See DMR reported from December 1, 2018 to November 30, 2019 Table below. (Page 4)
Summary of Inspections:	4/05/2017: Mr. Buss, DEP WQS, conducted the compliance evaluation inspection. There was a recommendation such as icing composite samples during collection. There were no violations identified during inspection.
Other Comments:	There are currently no open violations associated with the permittee or the facility.

Other Comments: DMRs for the past 12 months indicate two (2) instances of non-compliance (one exceedance for $CBOD_5$ monthly average, and one exceedance for TSS monthly average). In general, the facility appears to be operating satisfactorily.

Compliance History

DMR Data for Outfall 001 (from December 1, 2018 to November 30, 2019)

Parameter	NOV-19	OCT-19	SEP-19	AUG-19	JUL-19	JUN-19	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18
Flow (MGD) Average Monthly	0.000914	0.000612	0.000589	0.000466	0.000468	0.000417	0.000483	0.000498	0.000411	0.000282	0.000383	0.000426
Flow (MGD) Daily Maximum	0.00171	0.000828	0.000753	0.000713	0.000641	0.000607	0.000632	0.000674	0.000507	0.000446	0.000505	0.000543
pH (S.U.) Minimum	7.5	7.7	7.4	7.3	7.7	7.79	7.6	7.8	7.7	7.7	8.1	7.6
pH (S.U.) Maximum	8.3	8.9	8.1	8.6	8.5	8.9	8.6	8.6	8.5	8.2	8.6	8.1
DO (mg/L) Minimum	5.44	5.07	5.04	5.33	6.72	5.26	5.36	5.39	5.26	5.8	8.61	5.81
TRC (mg/L) Average Monthly	< 0.04	< 0.02	0.1	< 0.1	< 0.03	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.2	< 0.1
TRC (mg/L) Instantaneous Maximum	0.18	0.04	0.35	0.26	0.13	0.20	0.27	0.50	0.37	0.20	1.05	0.22
$CBOD_5$ (mg/L) Average Monthly	9	9	12	16	7	5	13	8	10	33	10	7
TSS (mg/L) Average Monthly	6	17	18	11	< 8	< 6	7	< 4	7	79	5	< 6
Fecal Coliform (CFU/100 ml) Geometric Mean	13	< 13	< 1	< 1	< 1	< 9	< 1	< 1	< 1	< 3	2	1
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	43	176	< 1	1	< 1	79	< 1	< 1	1	5	5	1
Ammonia (mg/L) Average Monthly	2.18	2.15	1.50	1.93	< 0.81	1.20	3.67	1.80	1.32	1.85	< 0.40	3

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.0012
Latitude 40º 14' 3.00" **Longitude** -75º 54' 31.00"
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

Carbonaceous Biochemical Oxygen Demand ($CBOD_5$):
The attached computer printout of the WQM 7.0 stream model indicates that a monthly average limit of 25 mg/L, or secondary treatment, is adequate to protect the water quality of the stream. However, the existing limits of 25 mg/L average monthly (AML), and 50 mg/L instantaneous maximum will remain in the proposed permit as per guidance document 391-2000-014. Recent DMRs and inspection reports show that the facility has been consistently achieving these limits.

Ammonia (NH_3-N):
NH_3-N calculations were first based on the Department's Implementation Guidance of Section 93.7 Ammonia Criteria, dated 11/4/97 (ID No. 391-2000-013). The following data is necessary to determine the in-stream NH_3-N criteria used in the attached computer model of the stream:

Discharge pH	=	7.0	(Default)
Discharge Temperature	=	20°C	(Default)
Stream pH	=	7.0	(Default)
Stream Temperature	=	20ºC	(Default for CWF)
Background NH_3-N	=	0	(Default)

The model input data and results are attached. The printout of the WQM 7.0 output indicates that at a discharge of 0.0012 MGD, limits (rounded according to the NPDES Technical Guidance 362-0400-001) of 25.0 mg/L NH_3-N as a monthly average and 50.0 mg/L NH_3-N instantaneous maximum are necessary to protect the aquatic life from toxicity effects. However, the more stringent in existing limits of 20.0 mg/L and 40.0 mg/L will remain in the proposed permit due to anti-backsliding requirements. Additionally, past DMRs and inspection reports show that the facility has been consistently achieving concentrations under these limits.

Total Suspended Solids (TSS):
The existing limits of 30 mg/L average monthly and 60 mg/L instantaneous maximum will remain in the proposed permit based on the minimum level of effluent quality attainable by secondary treatment based on 25 Pa. Code § 92a.47. Past DMRs and inspection reports show that the facility has been consistently achieving concentrations under these limits.

Dissolved Oxygen (D.O.):
A minimum D.O. of 5.0 mg/L is required per 25 Pa. Code § 93.7. This is consistent with the previous permit and current Department criteria.

pH:
The effluent discharge pH should remain above 6 and below 9 standard units according to 25 Pa. Code § 95.2(2).

Fecal Coliform:
The recent coliform guidance in 25 Pa. Code § 92a.47(a)(4) requires a summer technology limit of 200/100 ml as a geometric mean (average monthly) and not greater than 1,000/100 ml (IMAX) and 25 Pa. Code § 92a.47(a)(5) requires a winter limit of 2,000/100 ml as a geometric mean (average monthly) and not greater than 10,000/100 ml (IMAX), respectively.

Total Residual Chlorine (TRC):
Based on the attached TRC Excel Spreadsheet calculator, which uses the equations and calculations from the Department's May 1, 2003 Implementation Guidance for Total Residual Chlorine (ID No. 391-2000-015), indicated monthly average limit of 0.5 mg/L and an instantaneous maximum limit of 1.64 mg/L. Based on the DMRs from the past year, the facility has been consistently achieving these limits. Therefore, these limits will remain in the proposed permit.

Chesapeake Bay Strategy:
Since the WWTP does not discharge to the Chesapeake Bay, the Chesapeake Bay Strategy requirements do not apply.

Toxic:
This is a minor sewage facility receiving domestic wastewater only and the current application does not require sampling of toxic pollutants (or heavy metals) for those facilities with design flows less than 0.1 MGD. Therefore, no reasonable potential analysis for toxic pollutants has been performed for this permit renewal.

Additional Consideration

Flow Monitoring
The requirement to monitor the volume of effluent will remain in the proposed permit per 40 CFR § 122.44(i)(1)(ii).

Antidegradation (93.4)
The effluent limits and monitoring requirements have been established to ensure that the 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.

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

303d Listed Streams
The discharge is not located on a 303d listed stream segment.

WQM 7.0 model inputs:

Node 1: Point of First Use on Unnamed Tributary 64016 to Allegheny Creek

Elevation:	403 ft (USGS National Map Viewer)
Drainage Area:	0.91 $mi.^2$ (USGS PA StreamStats)
River Mile Index:	1.04 miles (PA DEP eMapPA)
Low Flow Yield:	0.1 $cfs/mi.^2$
Discharge Flow:	0.0012 MGD (NPDES PA0085235)

Node 2:

Elevation:	368 ft (USGS National Map Viewer)
Drainage Area:	1.14 $mi.^2$ (USGS PA StreamStats)
River Mile Index:	0.50 mile (PA DEP eMapPA)
Low Flow Yield:	0.1 $cfs/mi.^2$
Discharge Flow:	0.00 MGD

Attachment is the WQM 7.0 data.

Emily's Pub WQM 7.0 data.pdf

TRC Results

TRC EVALUATION			
Input appropriate values in A3:A9 and D3:D9			
0.091	= Q stream (cfs)	0.5	= CV Daily
0.0012	= Q discharge (MGD)	0.5	= CV Hourly
30	= no. samples	1	= AFC_Partial Mix Factor
0.3	= Chlorine Demand of Stream	1	= CFC_Partial Mix Factor
0	= Chlorine Demand of Discharge	15	= AFC_Criteria Compliance Time (min)
0.5	= BAT/BPJ Value	720	= CFC_Criteria Compliance Time (min)
0	= % Factor of Safety (FOS)		=Decay Coefficient (K)

Source	Reference	AFC Calculations	Reference	CFC Calculations
TRC	1.3.2.iii	WLA afc = 15.656	1.3.2.iii	WLA cfc = 15.256
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 5.834	5.1d	LTA_cfc = 8.869

Source		Effluent Limit Calculations	
PENTOXSD TRG	5.1f	AML MULT = 1.231	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.500	BAT/BPJ
		INST MAX LIMIT (mg/l) = 1.635	

WLA afc	**(.019/e(-k*AFC_tc)) + [(AFC_Yc*Qs*.019/Qd*e(-k*AFC_tc))...** **...+ Xd + (AFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)**
LTAMULT afc	EXP((0.5*LN(cvh^2+1))-2.326*LN(cvh^2+1)^0.5)
LTA_afc	wla_afc*LTAMULT_afc
WLA_cfc	**(.011/e(-k*CFC_tc) + [(CFC_Yc*Qs*.011/Qd*e(-k*CFC_tc))...** **...+ Xd + (CFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)**
LTAMULT_cfc	EXP((0.5*LN(cvd^2/no_samples+1))-2.326*LN(cvd^2/no_samples+1)^0.5)
LTA_cfc	wla_cfc*LTAMULT_cfc
AML MULT	EXP(2.326*LN((cvd^2/no_samples+1)^0.5)-0.5*LN(cvd^2/no_samples+1))
AVG MON LIMIT	MIN(BAT_BPJ,MIN(LTA_afc,LTA_cfc)*AML_MULT)
INST MAX LIMIT	**1.5*((av_mon_limit/AML_MULT)/LTAMULT_afc)**

Existing Effluent Limitations and Monitoring Requirements

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) [1]		Concentrations (mg/L)				Minimum [2] Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	1/week	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/week	Grab
DO	XXX	XXX	5.0	XXX	XXX	XXX	1/week	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.64	1/week	Grab
$CBOD_5$	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) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	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
Ammonia	XXX	XXX	XXX	20	XXX	40	2/month	8-Hr Composite

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	Daily Maximum	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	1/month	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/month	Grab
DO	XXX	XXX	5.0	XXX	XXX	XXX	1/month	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.64	1/month	Grab
$CBOD_5$	XXX	XXX	XXX	25.0	XXX	50.0	1/month	Grab
TSS	XXX	XXX	XXX	30.0	XXX	60.0	1/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	1/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	1/month	Grab
Ammonia	XXX	XXX	XXX	20.0	XXX	40.0	1/month	Grab

Compliance Sampling Location:

Other Comments:

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.
☐	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-003, revised May 17, 2019
☐	Other: