pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Bureau of Clean Water
NPDES PERMITTING DIVISION

Application Type	**New**	Application No.	**PA0207849**
Facility Type	**Industrial**	APS ID	**1008069**
Major / Minor	**Minor**	Authorization ID	**1299469**

NPDES PERMIT FACT SHEET INDIVIDUAL INDUSTRIAL WASTE (IW) AND IW STORMWATER

Applicant and Facility Information

Applicant Name	**Williams Gas Pipeline Transco**	Facility Name	**Leidy South Project**
Applicant Address	2800 Oak Post Boulevard Level 11	Facility Address	Hilltop Lane & Dry Run Road
	Houston, TX 77056		Chapman Township, PA 17760
Applicant Contact	Joseph Dean	Facility Contact	Joseph Dean
Applicant Phone	(713) 215-3427	Facility Phone	(713) 215-3427
Client ID	163321	Site ID	838662
SIC Code	4619	Municipality	Multiple
SIC Description	Trans. & Utilities - Pipelines, Nec	County	Multiple
Date Application Received	December 18, 2019	EPA Waived?	Yes
Date Application Accepted		If No, Reason	

Purpose of Application: New IW NPDES application for discharge of hydrostatic test water

Summary of Review

On December 18, 2019 Transcontinental Gas Pipe Line Company, LLC (Transco) submitted an individual industrial permit application for the discharge of hydrostatic test water from the Leidy South Project. The application includes proposed discharges from 7 different outfalls in Clinton, Columbia, Luzerne, Lycoming and Schuylkill Counites. These discharges would normally qualify for coverage under the PAG-10 General Permit for Discharges from Hydrostatic Testing of Tanks and Pipelines. However, this project does not qualify for a PAG-10 because four of the proposed outfalls are in High Quality (HQ) or Exceptional Value (EV) waters. The discharges will occur in counites covered by both the Northcentral and Northeast Regional Offices, so the permit will be issued by the Bureau of Clean Water.

Hydrostatic testing will be conducted on two new pipeline loops, one pipeline replacement, one compressor station modification and two new compressor stations. Transco expects that each section will only be hydrostatically tested once. All testing will be completed before placing the facilities into service. At each discharge location water will flow through a hydrostatic dewatering structure into well vegetated upland areas and will flow overland before potentially reaching a surface water. When necessary, water will be dechlorinated prior to discharge. Water sources to conduct the hydrostatic testing will come from potable municipal water sources or surface waters within proximity of each facility. Transco projects that a total of 3.72 million gallons of water will be used for testing. It is expected that discharges will occur in the 4th quarter of 2021.

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

Approve	Deny	Signatures	Date
X		*Maria Schumack* Maria L Schumack, P.E. / Environmental Engineer Consultant	April 20, 2020
X		*Sean Furjanic* Sean M. Furjanic, P.E. / Environmental Program Manager	April 20, 2020

Summary of Review
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)	0.96
Latitude	41º 24' 8.78"	Longitude	-77º 44' 34.02"
Quad Name		Quad Code	
Wastewater Description:	Hydrostatic Test Water		
Receiving Waters	Mudlick Run	Stream Code	23515
NHD Com ID	61114525	RMI	0.5800
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)	0.00055	Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	9-B	Chapter 93 Class.	EV, MF
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	

Discharge, Receiving Waters and Water Supply Information

Outfall No.	002	Design Flow (MGD)	0.65
Latitude	41º 22' 1.39"	Longitude	-77º 39' 59.99"
Quad Name		Quad Code	
Wastewater Description:	Hydrostatic Test Water		
Receiving Waters	Unnamed Tributary to Dry Run (HQ-CWF, MF)	Stream Code	23506
NHD Com ID	61114637	RMI	0.2800
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)	0.00013	Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	9-B	Chapter 93 Class.	HQ-CWF, MF
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	

Discharge, Receiving Waters and Water Supply Information

Outfall No.	003	Design Flow (MGD)	0.96
Latitude	41º 15' 43.41"	Longitude	-76º 31' 56.20"
Quad Name		Quad Code	
Wastewater Description:	Hydrostatic Test Water		
Receiving Waters	West Branch Little Muncy Creek (EV (existing use))	Stream Code	19581
NHD Com ID	66912781	RMI	0.5200
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)	0.153	Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	10-D	Chapter 93 Class.	CWF, MF
Existing Use	EV(EXCEPTIONAL VALUE)	Existing Use Qualifier	RBP - Antidegradation
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status		Name	

Discharge, Receiving Waters and Water Supply Information

Outfall No.	004	Design Flow (MGD)	0.061
Latitude	41º 18' 0.70"	Longitude	-76º 13' 3.55"
Quad Name		Quad Code	
Wastewater Description:	Hydrostatic Test Water		
Receiving Waters	Lick Branch (HQ-CWF, MF)	Stream Code	27890
NHD Com ID	65634183	RMI	1.8700
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)	0.0626	Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	5-C	Chapter 93 Class.	HQ-CWF, MF
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	

Discharge, Receiving Waters and Water Supply Information

Outfall No.	005	Design Flow (MGD)	0.031
Latitude	41º 6' 29.74"	Longitude	-76º 26' 31.08"
Quad Name		Quad Code	
Wastewater Description:	Hydrostatic Test Water		
Receiving Waters	Unnamed Tributary to Green Creek (TSF, MF)	Stream Code	27770
NHD Com ID	65638881	RMI	1.6400
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	5-C	Chapter 93 Class.	TSF, MF
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	

Discharge, Receiving Waters and Water Supply Information

Outfall No.	006	Design Flow (MGD)	0.031
Latitude	41º 6' 29.74"	Longitude	-76º 26' 31.08"
Quad Name		Quad Code	
Wastewater Description:	Hydrostatic Test Water		
Receiving Waters	Unnamed Tributary to Green Creek (TSF, MF)	Stream Code	27770
NHD Com ID	65638881	RMI	1.6400
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	5-C	Chapter 93 Class.	TSF, MF
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	

Discharge, Receiving Waters and Water Supply Information

Outfall No.	007	Design Flow (MGD)	0.078
Latitude	40º 40' 23.10"	Longitude	-76º 28' 30.67"
Quad Name		Quad Code	
Wastewater Description:	Hydrostatic Test Water		
Receiving Waters	Deep Creek (CWF, MF)	Stream Code	17236
NHD Com ID	54969011	RMI	2.4300
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	6-C	Chapter 93 Class.	CWF, MF
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	Final	Name	Pine Creek - Schuylkill County

Development of Effluent Limitations

This is a new permit application so effluent screening information is not available, therefore a traditional reasonable potential analysis will not be conducted. The permittee will only be hydrostatically testing each section once, therefore an effluent screening will not be required during the permit term. It is expected that the permittee will terminate the permit shortly after the hydrostatic tests are conducted. The permittee will not be allowed to use any chemical additives that would add pollutants to the source water used for testing.

Four of the proposed outfalls are to special protection watersheds or the facility would otherwise qualify for the PAG-10 General Permit. The permittee conducted an anti-degradation analysis and submitted Module 4 of the NPDES Permit Application for Industrial Discharges. Transco has selected the non-discharge alternative of land application for these discharges. They have concluded that discharge to surface waters would likely not occur due to the distance between the outfall structures and receiving streams. However, these outfalls will still be regulated in case of an event that the wastewater does make it to surface waters. While it is expected that all wastewater will be infiltrated, non-degrading limits for parameters of concern associated with hydrostatic testing of pipelines will be developed. Non-degrading limits are utilized to protect the exisiting quality of HQ and EV waters.

It is expected that each segment will only be hydrostatically tested once. Transco is proposing to use batch discharges at each outfall. Each discharge will last 10 hours/day based on employee work schedules. Discharges will continue until all water used for hydrostatic testing has been discharged.

Development of limits for each outfall is as follows:

Outfall No.	001	**Design Flow (MGD)**	0.96
Latitude	41º 23' 58.82"	**Longitude**	-77º 45' 5.97"
Wastewater Description:	Hydrostatic Test Water		

Outfall 001 is proposed to discharge to Mudlick Run which is designated as EV. Hydrostatic test water from 6.3 miles of 36-inch pipeline from the Hensel replacement will be discharged via Outfall 001. The proposed outfall location is approximately 0.5 miles from Mudlick Run.

Outfall No.	002	**Design Flow (MGD)**	0.65
Latitude	41º 21' 59.19"	**Longitude**	-77º 40' 29.79"
Wastewater Description:	Hydrostatic Test Water		

Outfall 002 is proposed to discharge to an Unnamed Tributary to Dry Run which is designated as HQ-CWF. Hydrostatic test waster from 2.4 miles of 36-inch pipeline from the Hilltop Loop will be discharged via Outfall 002. The outfall location is approximately 0.45 miles from the Unnamed Tributary to Dry Run.

Because the outfalls discharge to special protection waters, non-degrading limits for Outfalls 001 & 002 were developed. Site-specific data is not available to determine exisiting quality, therefore, Water Quality Network Station WQN458 was used as a reference station to determine the water quality objective and upstream concentration. Geologic characteristic data between the outfalls and WQN458 is presented in Table 1 below:

Table 1. Geological Characteristics

Outfall/ WQN	Lat/Long Coordinates	Stream Name	Period of Record	Desig. Use	D.A. mi^2	% Urban	% Forest	Elevation	Physiographic Province	Distance (mi)
001	41.399672 -77.751658	Mudlick Run		EV	0.067	0	100	1750	Appalachian Plateau - Mountainous High Plateau	32
002	41.366442 -77.674108	Trib to Dry Run		HQ-CWF	0.07	0	76	1748.2	Appalachian Plateau - Mountainous High Plateau	28

458	41.327742 -77.128981	Hoagland Run	10/10 - present		10.7	0	98	1619	Appalachian Plateau - Mountainous High Plateau	

The anti-degradation analysis spreadsheet was run to determine non-degrading limits (see Attachment A). This spreadsheet implements the concepts in the *Water Quality Antidegradation Implementation Guidance* (391-0300-002). A separate analysis was done for each outfall due to differing discharge and design stream flows, however the results were the same. A summary of the resulting limits is presented in Table 2 below:

Table 2. Non-degrading limits for Outfalls 001 & 002

Parameter	AML (mg/L)	IMAX (mg/L)
Total Suspended Solids	8.6	17.2
TRC	0	0
Dissolved Iron	0.17	0.43
Total Dissolved Solids	72.3	181.0

Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). To measure compliance with the TRC requirement Transco will be required to achieve a non-detect results using a Quantitation Limit of 0.02 mg/L or less.

All applicable limits from the PAG-10 will also be applied. Those limits are presented in Table 3 below.

Table 3. Applicable PAG-10 limits

Parameter	Average Monthly (mg/L)	IMAX (mg/L)
Dissolved Oxygen		5.0 (min)
pH (S.U.)	6.0 (min)	9.0
Total Suspended Solids	30	60
Oil and Grease	15	30
Dissolved Iron	XXX	7.0

The more stringent of the limits in Table 2 and Table 3 will apply.

Table 4. Recommended Limits for Outfalls 001 & 002

Parameter	AML (mg/L)	IMAX (mg/L)
Total Suspended Solids	8.6	17.2
Total Dissolved Solids	72.3	181.0
Dissolved Oxygen	5.0 (min)	
pH (S.U.)	6.0 (min)	9.0
Oil & Grease	15	30
Total Residual Chlorine	<0.02	<0.02
Dissolved Iron	0.17	0.43

In addition, Flow, Duration of Discharge and Total Monthly Volume Discharge will be monitored.

Outfall No. 003 **Design Flow (MGD)** 0.96
Latitude 41º 15' 43.10" **Longitude** -76º 31' 45.91"
Wastewater Description: Hydrostatic Test Water

Outfall 003 is proposed to discharge to West Branch Little Muncy Creek which has an exisiting use of EV. Hydrostatic test water from 3.5 miles of 42-inch pipeline from the Benton Loop will be discharged via Outfall 003. The outfall location is approximately 0.15 miles from West Branch Little Muncy Creek.

Outfall No.	004	**Design Flow (MGD)**	0.061
Latitude	41º 18' 1.15"	**Longitude**	-76º 13' 17.51"
Wastewater Description:	Hydrostatic Test Water		

Outfall 004 is proposed to discharge to Lick Branch which has a designated use of HQ-CWF. Hydrostatic test water from the new Compressor Station 607 in Luzerne County will be discharged via Outfall 004. At this location the project will install two gas turbine-driven compressor units and gas coolers. The outfall location is approximately 0.2 miles from Lick Creek

Because the outfalls discharge to special protection waters, non-degrading limits for Outfalls 003 & 004 were developed. Site-specific data is not available to determine exisiting quality, therefore, WQN447 was used as a reference station to determine the water quality objective and upstream concentration. Geologic characteristic data between the outfalls and WQN447 is presented in Table 5 below:

Table 5. Geological Characteristics

Outfall/ WQN	Lat/Long Coordinates	Stream Name	Period of Record	Desig. Use	D.A. mi^2	% Urban	% Forest	Elevation	Physiographic Province	Distance (mi)
003	41.261972 -76.529419	West Branch Little Muncy Creek		EV (Existing use)	3.42	0	82	1641	Ridge and Valley - Appalachian Mountain Section	32.8
004	41.300319 -77.674108	Lick Branch		HQ-CWF	0.93	0	99	1537	Ridge and Valley - Appalachian Mountain Section	48.2
447	41.023889 -76.221531	Spruce Run	8/98 - 12/04	EV	6.5	1.8	97.9	1575	Ridge and Valley - Appalachian Mountain Section	

The anti-degradation analysis spreadsheet was run to determine non-degrading limits (see Attachment A). This spreadsheet implements the concepts in the *Water Quality Antidegradation Implementation Guidance* (391-0300-002). A separate analysis was done for each outfall due to differing discharge and design stream flows. A summary of the resulting limits is presented in Table 6 and Table 7 below:

Table 6. Non-degrading limits for Outfall 003

Parameter	AML (mg/L)	IMAX (mg/L)
Total Suspended Solids	10.2	20.4
TRC	0	0
Dissolved Iron	0.034	0.085
Total Dissolved Solids	54.8	137.0

Table 7. Non-degrading limits for Outfall 004

Parameter	AML (mg/L)	IMAX (mg/L)
Total Suspended Solids	30.9	61.8
TRC	0	0
Dissolved Iron	0.034	0.085
Total Dissolved Solids	96.2	240.5

Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). To measure compliance with the TRC requirement Transco will be required to achieve a non-detect results using a Quantitation Limit of 0.02 mg/L or less.

All applicable limits from the PAG-10 will also be applied. Those limits are presented in Table 8 below.

Table 8. Applicable PAG-10 limits

Parameter	Average Monthly (mg/L)	IMAX (mg/L)
Dissolved Oxygen		5.0 (min)
pH (S.U.)	6.0 (min)	9.0
Total Suspended Solids	30	60
Oil and Grease	15	30
Dissolved Iron	XXX	7.0

The more stringent of the limits in Tables 6-7 and Table 8 will apply.

Table 9. Recommended limits for Outfall 003

Parameter	AML (mg/L)	IMAX (mg/L)
Total Suspended Solids	10.2	20.4
Dissolved Iron	0.034	0.085
Total Dissolved Solids	54.8	137.0
Dissolved Oxygen		5.0 (min)
pH (S.U.)	6.0	9.0
Oil & Grease	15	30
Total Residual Chlorine	<0.02	<0.02

Table 10. Recommended limits for Outfall 004

Parameter	AML (mg/L)	IMAX (mg/L)
Total Suspended Solids	30	60
Dissolved Iron	0.034	0.85
Total Dissolved Solids	96.2	240.5
Dissolved Oxygen		5.0 (min)
pH (S.U.)	6.0	9.0
Oil & Grease	15	30
Total Residual Chlorine	<0.02	<0.02

In addition, Flow, Duration of Discharge and Total Monthly Volume Discharge will be monitored.

Outfall No. 005 **Design Flow (MGD)** .031
Latitude 41º 6' 27.77" **Longitude** -76º 26' 52.41"
Wastewater Description: Hydrostatic Test Water

Outfall No. 006 **Design Flow (MGD)** .031
Latitude 41º 6' 32.06" **Longitude** -76º 26' 59.75"
Wastewater Description: Hydrostatic Test Water

Outfalls 005 and 006 are proposed to receive hydrostatic test waster from exisiting Compressor Station 610 in Columbia County. The permittee only expects to use one of these outfalls. At this location the project will add one gas turbine-driven compressor unit at the station and increase the total certificated horsepower of two electric motor-driven units from 40,000 HP to 42,000 HP and re-wheel the exisiting compressors. Both outfalls discharge to an Unnamed Tributary to Green Creek. Outfalls 005 and 006 will be subject to the effluent limits and monitoring conditions laid out in PAG-10 for exisiting pipelines.

Outfall 005 is approximately 0.3 miles from the receiving water and Outfall 006 is approximately 1.1 miles from the receiving stream.

The permittee only intends to hydrostatically test new components, however, the limits in PAG-10 for exisiting facilities will be applied at Outfalls 005 & 006 in case the hydrostatic test water inadvertently contacts existing components. The limits for existing pipelines in PAG-10 will be applicable at Outfalls 006 & 007.

Table 11. Recommended limits for Outfalls 005 & 006

Parameter	Minimum (mg/L)	Average Monthly (mg/L)	IMAX (mg/L)
Dissolved Oxygen	5.0	XXX	XXX
pH (S.U.)	6.0	XXX	9.0
Total Residual Chlorine	XXX	Report	0.05
Total Suspended Solids	XXX	30	60
Oil and Grease	XXX	15	30
Dissolved Iron	XXX	XXX	7.0
Benzene	XXX	XXX	0.0025
BTEX	XXX	XXX	0.025
Total PCBs	XXX	Report	Report

In addition, Flow, Duration of Discharge and Total Monthly Volume Discharge will be monitored.

Outfall No. 007 **Design Flow (MGD)** .078
Latitude 40º 40' 27.44" **Longitude** -76º 28' 27.03"
Wastewater Description: Hydrostatic Test Water

Outfall 007 is proposed to discharge to Deep Creek. Hydrostatic test water from the new Compressor Station 620 in Schuylkill County will be discharged via Outfall 007. At this location the project will install one gas turbine-driven compressor unit (31,871 nominal HP at ISO conditions). The outfall location is approximately 0.15 miles from Deep Creek.

Deep Creek is impaired for Pathogens in the vicinity of the proposed discharge, but the hydrostatic test water is not expected to contribute to that impairment. Deep Creek is a part of the TMDL for Pine Creek – Schuylkill County. The TMDL addresses Pine Creek's impairment for metals caused by acid mine drainage. Since this will not be a recurring discharge it is not expected that it will contribute to the impairment. The segment of Deep Creek where the discharge occurs in not impaired due to AMD. Monitoring for Aluminum, Iron and Manganese will not be required.

The limits for new pipelines in PAG-10 will be applicable at Outfall 007.

Table 12. Recommended limits for Outfall 007

Parameter	Minimum (mg/L)	Average Monthly (mg/L)	IMAX (mg/L)
Dissolved Oxygen	5.0	XXX	XXX
pH (S.U.)	6.0	XXX	9.0
Total Residual Chlorine	XXX	Report	0.05
Total Suspended Solids	XXX	30	60
Oil and Grease	XXX	15	30
Dissolved Iron	XXX	XXX	7.0

In addition, Flow, Duration of Discharge and Total Monthly Volume Discharge will be monitored.

Sample Type and Frequency

Sample type for all pollutants will be grab. Flow and duration of discharge will be measured. Dissolved Oxygen, pH and Total Residual Chlorine will be measured twice per discharge. All other parameters will be measured once per discharge. Each batch discharge will be considered a separate discharge for the purposes of this requirement.

Additional Requirements

Applicable conditions in the PAG-10 General Permit will be required as a part of this permit. Because this is an individual permit Transco will not be eligible to use the 15-day Notification Form available to PAG-10 permittees to add additional outfalls. If Transco wishes to add additional outfalls, they must apply for a permit amendment.

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:
☐	Other:

ATTACHMENT A

NON-DEGRADING LIMITS ANALYSIS FOR OUTFALLS 001, 002, 003 and 004

Outfall 001

Spreadsheet to evaluate Non-Degradation of Water Quality

Parameter	WQ Objective C total	Mean Concentration C upstream	Concentration C LTA	Units	Multiplier	Non degrad C AML	Units	
TSS	5	5	5.00	mg/L	1.72	8.60	mg/L	TSS
TRC	0	0	0.00	mg/L	1.72	0.00	mg/L	TRC
TDS	42	36	42.04	mg/L	1.72	72.31	mg/L	TDS
Iron Dissolved	100	100	100.00		1.72	172.00	ug/L	

Q Discharge	0.96	mgd	=	1.48512	cfs	
Q Upstream Q_{7-10}	0.00055	cfs	=	0.010521	Q_{hm} cfs	
			Q total =	1.495641	cfs	

Source of information:
WQ Objective: WQN 458
Upstream Concentration: WQN 458
Multiplier from LTA to AMV @CV of 0.5 TABLE on page 64

$$Q_{hm} = 7.43 \times (Q_{7-10})^{.874}$$

C total	Values are from WQN Station (Upper 95% confidence limit)
C	Values are from WQN Station Median Concentration

Preliminary Limitations are the more stringent of ABACT, Non-degradation or WQBEL for each parameter of concern.

Outfall 002

Spreadsheet to evaluate Non-Degradation of Water Quality

Parameter	WQ Objective C total	Mean Concentration C upstream	Concentration C LTA	Units	Multiplier	Non degrad C AML	Units	
TSS	5	5	5.00	mg/L	1.72	8.60	mg/L	TSS
TRC	0	0	0.00	mg/L	1.72	0.00	mg/L	TRC
TDS	42	36	42.02	mg/L	1.72	72.27	mg/L	TDS
Iron Dissolved	100	100	100.00	ug/L	1.72	172.00	ug/L	Iron Dissolved

Q Discharge	0.65	mgd	=	1.00555	cfs
Q Upstream Q_{7-10}	0.00013	cfs	=	0.002982	Q_{hm} cfs
			Q total =	1.008532	cfs

Source of information:
WQ Objective: WQN 458
Upstream Concentration: WQN 458
Multiplier from LTA to AMV @CV of 0.5 TABLE on page 64

$$Q_{hm} = 7.43 \times (Q_{7-10})^{.874}$$

C total	Values are from WQN Station (Upper 95% confidence limit)
C	Values are from WQN Station Median Concentration

Preliminary Limitations are the more stringent of ABACT, Non-degradation or WQBEL for each parameter of concern.

Outfall 003

Spreadsheet to evaluate Non-Degradation of Water Quality

Parameter	WQ Objective C total	Mean Concentration C upstream	Concentration C LTA	Units	Multiplier	Non degrad C AML	Units	
TSS	4	2	5.94	mg/L	1.72	10.22	mg/L	TSS
TRC	0	0	0.00	mg/L	1.72	0.00	mg/L	TRC
TDS	28	24	31.88	mg/L	1.72	54.83	mg/L	TDS
Iron Dissolved	20	20	20.00	ug/L	1.72	34.40	ug/L	Iron Dissolved

Q Discharge	0.96	mgd	=	1.48512	cfs
Q Upstream Q_{7-10}	0.153	cfs	=	1.440155	Q_{hm} cfs
			Q total =	2.925275	cfs

Source of information:
WQ Objective: WQN 447
Upstream Concentration: WQN 447
Multiplier from LTA to AMV @CV of 0.5 TABLE on page 64

$$Q_{hm} = 7.43 \times (Q_{7-10})^{.874}$$

C total	Values are from WQN Station (Upper 95% confidence limit)
C	Values are from WQN Station Median Concentration

Preliminary Limitations are the more stringent of ABACT, Non-degradation or WQBEL for each parameter of concern.

Outfall 004

Spreadsheet to evaluate Non-Degradation of Water Quality

Parameter	WQ Objective C total	Mean Concentration C upstream	Concentration C LTA	Units	Multiplier	Non degrad C AML	Units	
TSS	4	2	17.98	mg/L	1.72	30.92	mg/L	TSS
TRC	0	0	0.00	mg/L	1.72	0.00	mg/L	TRC
TDS	28	24	55.95	mg/L	1.72	96.24	mg/L	TDS
Iron Dissolved	20	20	20.00	ug/L	1.72	34.40	ug/L	Iron Dissolved

Q Discharge	0.061	mgd	=	0.094367	cfs
Q Upstream Q_{7-10}	0.0626	cfs	=	0.65947	Q_{hm} cfs
			Q total =	0.753837	cfs

Source of information:
WQ Objective: WQN 447
Upstream Concentration: WQN 447
Multiplier from LTA to AMV @CV of 0.5 TABLE on page 64

$$Q_{hm} = 7.43 \times (Q_{7-10})^{.874}$$

C total	Values are from WQN Station (Upper 95% confidence limit)
C	Values are from WQN Station Median Concentration

Preliminary Limitations are the more stringent of ABACT, Non-degradation or WQBEL for each parameter of concern.