pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northwest Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0097535**
Facility Type	**Non-Municipal**	APS ID	**1056140**
Major / Minor	**Minor**	Authorization ID	**1384063**

Applicant and Facility Information

Applicant Name	**Norma Pennsylvania Inc.**	Facility Name	**Breeze Ind Clamp Division**
	DBA Breeze Ind Products Corp		
Applicant Address	3582 Tunnelton Road	Facility Address	3582 Tunnelton Road
	Saltsburg, PA 15681-3305		Saltsburg, PA 15681-3305
Applicant Contact	Sean Gillespie	Facility Contact	
Applicant Phone	(724) 639-1018	Facility Phone	
Applicant E Mail	Sean.gillespie@normagroup.com	Facility E Mail	
Client ID	27210	Site ID	237060
Municipality	Conemaugh Township	County	Indiana
Ch 94 Load Status	Not Overloaded	Connection Status	**No requirements**
Date Application Received	February 1, 2022	EPA Waived?	Yes
Date Application Accepted	February 23, 2022	If No, Reason	
Purpose of Application	NPDES renewal		

Summary of Review

A NOV was issued on February 8, 2022 for effluent violations by Susan Black and remains pending in WMS. *In reviewing this with operations, it appears that the facility has been in compliance, and it is anticipated that this violation will be closed.* *JCD*

Previously storm water discharges were reported.

Sludge use and disposal description and location(s): 1.021 tons dry sludge was sent to AVISA at Cheswick for disposal.

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
X		*William H. Mentzer* William H. Mentzer, P.E. Environmental Engineering Specialist	October 12, 2022
X		vacant Environmental Engineer Manager	Okay to Draft JCD 12/7/2022

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.002
Latitude DP	40º 28' 52.00"	Longitude DP	-79º 23' 5.00"
Latitude NHD	40º 28' 50.52"	Longitude NHD	-79º 23' 4.83"
Quad Name	Saltsburg	Quad Code	1510
Wastewater Description:	Treated Sewage Effluent		

Receiving Waters	Unnamed Tributary to Elders Run	Stream Code	43845
NHD Com ID	123722098	RMI	1.20
Drainage Area	0.55	Yield (cfs/mi^2)	0.0157
Q_{7-10} Flow (cfs)	0.0086	Q_{7-10} Basis	Beaver Run
Elevation (ft)	1155.00	Slope (ft/ft)	0.0548
Watershed No.	18-C	Chapter 93 Class.	CWF
Existing Use	**statewide**	Existing Use Qualifier	none
Exceptions to Use	none	Exceptions to Criteria	none
Comments	End of Reach RMI 0,4 Elevation 900 feet Drainage 1.0 square mile		

Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status	Final	Name	Kiskiminetas-Conemaugh River TMDL

Background/Ambient Data		Data Source
pH (SU)	7.0	default
Temperature (°C)	20	CWF default
Hardness (mg/L)		
Other:		

Nearest Downstream Public Water Supply Intake	Municipal Authority of Westmoreland County		
PWS Waters	Conemaugh River	Flow at Intake (cfs)	NA
PWS RMI	0.930661	Distance from Outfall (mi)	4.852218

Changes Since Last Permit Issuance: none

Other Comments: Alternate name for Municipal Authority of Westmoreland County is Saltsburg Boro Muni Waterworks.

Treatment Facility Summary

Treatment Facility Name: Norma PA Inc. Dba Breeze Ind Products Corp

WQM Permit No.	Issuance Date
3287402	12/30/1987
3287402-A1	1999

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Tertiary with NH3-N removal	Septic tank/sand filter/ biotower	tablet	0.002

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.002	29.75	Not Overloaded	Septic tank	

Changes Since Last Permit Issuance: None

Other Comments: Organic capacity calculated by multiplying 0.17 lbs/capita x 175 workers.

The existing STP has 3 septic tanks, 1 dosing tank, 1 bio-tower, 2 above ground sand filters, 1 recirculation tank, 1 chlorine contact tank, and 1 de-chlorination tank. The facility was initially constructed to treat a design flow of 5600 gpd. It obviously was not designed in accordance with Small Flow Treatment Facilities Manual (32-0300-002) due to the design flow volume. In addition, the facility was constructed prior to publication of that design manual.

Flow measurement is taken by using a bucket and stopwatch.

Compliance History

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

Parameter	DEC-21	NOV-21	OCT-21	SEP-21	AUG-21	JUL-21	JUN-21	MAY-21	APR-21	MAR-21	FEB-21	JAN-21
Flow (MGD) Average Monthly	0.0020	**0.0047**	**0.0047**	**0.0069**	0.0020	0.0020	0.0020	0.0013	0.0013	0.0014	0.0016	0.0013
pH (S.U.) Minimum	6.54	6.15	6.09	6.0	6.16	6.20	6.0	6.10	6.10	6.1	6.64	6.90
pH (S.U.) Maximum	7.01	7.07	6.92	6.79	6.76	7.03	6.69	6.64	7.12	7.12	7.3	7.33
DO (mg/L) Minimum	7.04	8.32	6.10	5.97	7.38	4.15	4.15	4.09	6.20	6.2	6.63	8.82
TRC (mg/L) Average Monthly	0.24	0.30	0.41	0.15	0.44	**0.53**	0.21	**0.54**	0.34	0.2	0.05	0.17
TRC (mg/L) Instantaneous Max	0.62	0.65	**1.35**	0.33	**1.40**	**1.50**	**1.30**	**1.44**	0.85	0.5	0.12	0.27
CBOD5 (mg/L) Average Monthly	3.0	3.0	3.0	3.0	3.4	3.0	3.0	3.0	3.0	3.7	3.0	7.7
CBOD5 (mg/L) Instantaneous Max	3.0	3.0	3.0	3.0	3.8	3.0	3.0	3.0	3.0	4.4	3.0	12.3
TSS (mg/L) Average Monthly	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	4.5	6.5	3.5	8.5
TSS (mg/L) Instantaneous Max	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	6.0	10.0	4.0	14.0
Fecal Coliform (#100 ml) Geometric Mean	1	1.0	6.0	13.0	50	1.0	50	**2420**	1.0	14	38	1
Fcal Coliform (#/100 ml) Instant Max	1	1.0	32	153.0	**2420**	1.0	**2420**	**2420**	1.0	194	1414	1
Ammonia (mg/L) Average Monthly	12.80	2.31	3.39	2.23	2.20	1.05	**11.31**	**15.10**	8.34	7.35	16.84	26.43
Ammonia (mg/L) Instantaneous Max	14.10	4.46	4.44	4.09	2.68	1.80	15.30	**24.30**	8.77	8.18	24.60	37.90

Summer pH median 6.480 SU Annual median 6.665 SU
Ammonia high average in May and June, High Maximum in May.
Fecal coliforms high average in May and high maximums in May, June and August
De-chlorination permitted. High average in May and high maximums in May, June, July, August, and October
Design hydraulic capacity 0.0056-MGD The facility has been down rated to 0.002-MGD. The high September through November flows should not cause any operation failures.
Minimum 4.0-mg/l DO should be acceptable

DMR Data for Outfall 001 (from September 1, 2021 to August 31, 2022)

Parameter	AUG-22	JUL-22	JUN-22	MAY-22		APR-22	MAR-22	FEB-22	JAN-22				
Flow (MGD) Average Monthly	0.0020	0.0020	0.0020	0.0020		0.0020	0.0020	0.0020	0.0020				
pH (S.U.) Minimum	6.20	6.2	6.24	6.49		6.45	6.78	7.05	7.04				
pH (S.U.) Maximum	7.21	6.87	7.23	8.50		6.89	7.50	7.80	7.60				
DO (mg/L) Minimum	8.54	9.50	7.19	6.50		8.30	7.20	8.70	9.72				
TRC (mg/L) Average Monthly	0.23	0.19	0.21	0.07		0.14	0.07	0.22	0.31				
TRC (mg/L) Instantaneous Maximum	0.62	0.52	0.41	0.21		0.62	0.27	0.68	0.71				
CBOD5 (mg/L) Average Monthly	3.0	3.0	3.0	3.0		3.0	3.0	3.8	3.0				
CBOD5 (mg/L) Instantaneous Max	3.0	3.0	3.0	3.0		3.0	3.0	4.0	3.0				
TSS (mg/L) Average Monthly	3.0	3.0	4.5	4.0		3.0	3.0	3.0	3.0				
TSS (mg/L) Instantaneous Max	3.0	3.0	6.0	5.0		3.0	3.0	3.0	3.0				
Fecal Coliform (#./100 ml) Geometric Mean	1	8.0	1.0	42.00		1.0	1.0	1.0	1				
Fecal Coliform (#./100 ml) Instantaneous Maximum	1.0	58.0	1.0	**1733**		1.0	1.0	1.0	1				
Ammonia (mg/L) Average Monthly	0.21	1.31	0.214	7.14		5.65	16.30	**38.95**	23.35				
Ammonia (mg/L) Instantaneous Maxi	0.27	1.46	4.08	9.48		6.17	18.60	**49.60**	32.50				

Summer pH median 6,535 SU Annual median 6.965 SU
Long term Summer pH median 6,480 SU Annual median 6.830 SU
No problems reported after May 2022
Minimum 4.0-mg/l DO should be acceptable
High ammonia average and maximum in February

Compliance History

Effluent Violations for Outfall 001, from: February 1, 2021 To: December 31, 2021

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
Flow	09/30/21	Avg Mo	0.0069	MGD	.002	MGD
Flow	10/31/21	Avg Mo	0.0047	MGD	.002	MGD
Flow	11/30/21	Avg Mo	0.0047	MGD	.002	MGD
pH	04/30/21	Min	3.0	S.U.	6.0	S.U.
TRC	05/31/21	Avg Mo	0.54	mg/L	.5	mg/L
TRC	07/31/21	Avg Mo	0.53	mg/L	.5	mg/L
Fecal Coliform	05/31/21	Geo Mean	2420	No./100 ml	200	No./100 ml
Fecal Coliform	06/30/21	IMAX	2420	No./100 ml	1000	No./100 ml
Fecal Coliform	05/31/21	IMAX	2420	No./100 ml	1000	No./100 ml
Fecal Coliform	08/31/21	IMAX	2420	No./100 ml	1000	No./100 ml
Ammonia	06/30/21	Avg Mo	11.31	mg/L	9.2	mg/L
Ammonia	05/31/21	Avg Mo	15.10	mg/L	9.2	mg/L
Ammonia	05/31/21	IMAX	24.30	mg/L	18.4	mg/L
Flow	11/30/21	Avg Mo	0.0047	MGD	.002	MGD
Flow	10/31/21	Avg Mo	0.0047	MGD	.002	MGD
Fecal Coliform	05/31/22	IMAX	1733	No./100 ml	1000	No./100 ml
Ammonia	02/28/22	Avg Mo	38.95	mg/L	27.6	mg/L

Other Comments: Flows are well within the original design basis. The TRC violations are not significant. No current violations reported

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .002
Latitude 40º 28' 51.00" **Longitude** -79º 23' 5.00"
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)
E.Coli	monitoring			
DO	4.0	Daily Minimum		BPJ

Comments: Self-monitoring reports the 4.0-mg/L daily minimum DO is achievable. Because of the small flow classification E.Coli monitoring is not proposed.

Water Quality-Based Limitations

A Sewerage Program “Reasonable Potential Analysis” determined the following parameters were candidates for limitations: CBOD5, TSS, ammonia, TGRC and pH.

The following limitations were determined through water quality modeling (output files attached):

Parameter		Limit (mg/l)			SBC	Model		
Name	Period	Minimum	Average	Maximum		Minimum	Average	Maximum
Ammonia	Summer		8.5	17.0	NA		8.54	17.08
	Winter		25.5	51.0			25.5	51.0

Comments: *The previous NH3-N limitations were 9.2 mg/l AML summertime and 27.6 mg/l AML wintertime. The facility should be able to meet the slightly more stringent limitations. Therefore, no compliance schedule is being proposed as part of the draft permit.*

Best Professional Judgment (BPJ) Limitations

Comments: Applicable to the proposed achievable 4.0-mg/L minimum daily DO limitation.

Anti-Backsliding

Applied to CBOD5 and TSS.

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
18C	43845	Trib 43845 to Elders Run	**0.000**	900.00	1.00	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.016	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
		0.0000	0.0000	0.0000	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
18C	43845	Trib 43845 to Elders Run	**1.212**	1155.00	0.55	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.016	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
Breeze Ind	PA0097535A	0.0020	0.0020	0.0020	0.000	25.00	6.50

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	4.00	8.24	0.00	0.00
NH3-N	25.00	0.10	0.00	0.70

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	Uniform Treatme	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	☑
D.O. Saturation	95.00%	Use Balanced Technology	☑
D.O. Goal	5		

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
18C	43845	Trib 43845 to Elders Run

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
1.212	0.01	0.00	0.01	.0031	0.03985	.251	1.98	7.91	0.02	3.137	21.32	6.80
Q1-10 Flow												
1.212	0.01	0.00	0.01	.0031	0.03985	NA	NA	NA	0.02	3.727	21.79	6.75
Q30-10 Flow												
1.212	0.01	0.00	0.01	.0031	0.03985	NA	NA	NA	0.03	2.750	21.04	6.84

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
18C	43845	Trib 43845 to Elders Run

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
1.212	Breeze Ind	NA	50	17.33	48.1	1	4

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
1.212	Breeze Ind	NA	25	1.86	8.54	1	66

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
1.21	Breeze Ind	25	25	8.54	8.54	4	4	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
18C	43845	Trib 43845 to Elders Run

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
1.212	0.002	21.319	6.804
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
1.982	0.251	7.907	0.024
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
8.07	0.418	2.33	0.775
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
7.124	23.541	Owens	5
Reach Travel Time (days)			
3.137			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.314	7.02	1.82	8.24
0.627	6.10	1.43	8.24
0.941	5.31	1.12	8.24
1.255	4.62	0.88	8.24
1.568	4.02	0.69	8.24
1.882	3.49	0.54	8.24
2.196	3.04	0.42	8.24
2.509	2.64	0.33	8.24
2.823	2.30	0.26	8.24
3.137	2.00	0.20	8.24

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
18C	43845	Trib 43845 to Elders Run

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
1.212	0.01	0.00	0.01	.0031	0.03985	.251	1.98	7.91	0.02	3.137	21.32	6.80
Q1-10 Flow												
1.212	0.01	0.00	0.01	.0031	0.03985	NA	NA	NA	0.02	3.727	21.79	6.75
Q30-10 Flow												
1.212	0.01	0.00	0.01	.0031	0.03985	NA	NA	NA	0.03	2.750	21.04	6.84

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
18C	43845	Trib 43845 to Elders Run

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
1.212	Breeze Ind	PA0097535A	0.002	CBOD5	25		
				NH3-N	8.54	17.08	
				Dissolved Oxygen			4

1A	B	C	D	E	F	G	H	I	J	K	L	M
	Discharger		Breeze Industrial STP						Wednesday, October 12, 2022			
	Site		Breeze Industrial STP					Revised	Wednesday, October 12, 2022			
	Municipality		Conemaugh Township									
	County		Indiana									
	NPDES Permit		PA0097535									
	0.5											
2	**TRC EVALUATION**											
3	Input appropriate values in B4:B8 and E4:E7											
4	0.0086		**= Q stream (cfs)**			**0.5**	**= CV Daily**					
5	0.0020		**= Q discharge (MGD)**			**0.5**	**= CV Hourly**					
6	4		**= no. samples**			**1**	**= AFC_Partial Mix Factor**					
7	0.3		**= Chlorine Demand of Stream**			**1**	**= CFC_Partial Mix Factor**					
8	0		**= Chlorine Demand of Discharge**			**15**	**= AFC_Criteria Compliance Time (min)**					
9			**= BAT/BPJ Value**			**720**	**= CFC_Criteria Compliance Time (min)**					
	0		**= % Factor of Safety (FOS)**				**=Decay Coefficient (K)**					
10	Source		Reference	AFC Calculations			Reference		CFC Calculations			
11	TRC		**1.3.2.iii**		WLA afc = 0.909		**1.3.2.iii**		WLA cfc = 0.879			
12	PENTOXSD TRG		**5.1a**		LTAMULT afc = 0.373		**5.1c**		LTAMULT cfc = 0.581			
13	PENTOXSD TRG		**5.1b**		LTA_afc= 0.339		**5.1d**		LTA_cfc = 0.511			
14												
15	Source					Effluent Limit Calculations						
16	PENTOXSD TRG		5.1f			AML MULT = 1.720						
17	PENTOXSD TRG		5.1g			AVG MON LIMIT = 0.500			BAT/BPJ			
18						INST MAX LIMIT = 1.170						

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)**	

(0.011/EXP(-K*CFC_tc/1440))+(((CFC_Yc*Qs*0.011)/(1.547*Qd)....
....*EXP(-K*CFC_tc/1440)))+Xd+(CFC_Yc*Qs*Xs/1.547*Qd))*(1-FOS/100)

Chlorine Required				=	perennial	Chlorine Demand	+ Chlorine Residual
Stream	Reach/Node			1	1		
Stream	Flow	Conditions			intermittent		
Stream	Code				43845		
	Function						
Samples					4		
reach	outfall		RMI		1.20		
	Reach End		RMI		0		
reach			feet		6336		
drainage			sq miles		0.55		
TRC	limitation	average	mg/L		0.148		
		maximum	mg/L		0.484		
elevation		modelled	feet		1155		
elevation		modelled	feet		900		
slope		modelled	foot/foot		0.040		
low flow			cfs/sq mi		0.016		
discharge			mgd		0.0020		
Runoff	Period		hours		24.000		
BAT should suffice							
stream	flow		cfs		0.00864		
stream	flow		MGD		0.005581		
stream	flow	total	MGD		0.007581		
stream	chlorine	demand	mg/L		0.3		
discharge	discharge	demand	mg/L				
stream	Total Stream/Waste		ratio		3.8		
BAT	TRC	mean	BAT		0.5		
BAT	TRC	maximum	BAT		1.6		
		Municipality					

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Average Monthly	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	0.002	XXX	XXX	XXX	XXX	XXX	2/month	Measured
pH (S.U.)	XXX	XXX	6.0 Min	XXX	9.0	XXX	2/month	Grab
Dissolved Oxygen	XXX	XXX	4.0 Min	XXX	XXX	XXX	2/month	Grab
Total Residual Chlorine (TRC)	XXX	XXX	0.5	XXX	XXX	1.2	4/month	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	XXX	XXX	20.0	XXX	XXX	40.0	2/month	Grab
Total Suspended Solids	XXX	XXX	20.0	XXX	XXX	40.0	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Ammonia-Nitrogen Nov 1 - Apr 30	XXX	XXX	25.5	XXX	XXX	51.0	2/month	Grab
Ammonia-Nitrogen May 1 - Oct 31	XXX	XXX	8.5	XXX	XXX	17.0	2/month	Grab

Compliance Sampling Location: Outfall 00 after disinfection

Public Water Intake Notes

4.852218	1.2	43845 To Elders Run
3.652218	0.396557	43844 Elders Run
2.255601	4.186262	43832 Conemaugh River
0	0.930661	Intake/Source SALTSBURG BORO MUNI WATERWORKS/WESTMORELAND CNTY MUNI AUTH
	27.1157	42816 Kiskiminetas River
	313.045495	42122 Allegheny River
	310.994374	intake/source BUFFALO TWP MUNI