pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0104035**
Wastewater Type	**Sewage**	APS ID	**983044**
Facility Type	**SFTF**	Authorization ID	**1255573**

NPDES PERMIT FACT SHEET
INDIVIDUAL SFTF/SRSTP

Applicant, Facility and Project Information

Applicant Name	**Bernard & Virginia Safford**	Facility Name	**Daily Bread Cafe**
	D/B/A Daily Bread Café		
Applicant Address	2906 Route 155	Facility Address	2906 Route 155
	Port Allegany, PA 16743-4918		Port Allegany, PA 16743-4918
Applicant Contact	Virginia Safford	Facility Contact	
Applicant Phone	814-642-7112	Facility Phone	
Applicant E Mail	gsafford@zitomedia.net	Facility E Mail	
Client ID	36868	Site ID	4810
Municipality	Liberty Township	County	McKean
SIC Code	5812	SIC Code	4952
SIC Description	Retail Trade - Eating Places	SIC Description	Trans. & Utilities - Sewerage Systems
Application Received	December 17, 2018	WQM Required	No – present facility should be adequate,
Application Accepted	January 8. 2019	WQM App. No.	4289403

Project Description: NPDES permit renewal

Summary of Review

One violation over a late NPDES renewal submission dated November 14, 2018. *(Resolved – There are no open violations in WMS for the subject Client ID (36868) as of September 29, 2021.* JCD

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	September 27, 2021
X		Justin C. Dickey Justin C. Dickey, P.E. Environmental Engineer Manager	September 29, 2021

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.002
Latitude NHD	41º 50' 48.30"	Longitude NHD	-78º 18' 39.90"
Latitude DF	41° 50' 48.08"	Longitude DP	-78° 18' 34.09"
Quad Name	Port Allegany	Quad Code	0419
Wastewater	Treated restaurant wastes		

Receiving Waters	Drainage swale to the Allegheny River	Stream Code	unknown
NHD Com ID	112369235	RMI	0.17
Drainage Area	0.028 acres	Yield (cfs/mi^2)	0
Q_{7-10} Flow (cfs)	0	Q_{7-10} Basis	Dry stream
Elevation (ft)	1423.34	Slope (ft/ft)	0.06313
Watershed No.	16C	Chapter 93 Class.	Cold Water Fish
Existing Use	statewide	Existing Use Qualifier	none
Exceptions to Use	none	Exceptions to Criteria	none

Comments The discharge is to a drainage swale at Allegheny River node RMI 0.22. This is at Allegheny River mile 285.39, 1391.19-feet elevation and 0.22 mile above tributary 58078.

D Stream Reservoir Kinsua Reservoir
Stream Allegheny River End RMI 225.5

Low Flow Knapp Creek at Eldred Low Flow (cfs) 1.5 Drainage (sq-mi)
Period Yield (cfs/sq-mi) 0.05
Comments Alternative Allegheny River flow basis is 0.026-cfs/sq-mile at Larabee, Pa.

Assessment Status Attaining Use(s)
Impairment Causes
Impairment Sources
TMDL Status Name

Background/Ambient Data		Data Source
pH (SU)	7.03	WQN Sta #807
Temperature (°F)	68	Default (CWF)
Hardness (mg/L)		
Other:		

Nearest Downstream Public Water Supply Intake State of New York

PWS Waters	Allegheny River	Flow at Intake (cfs)	31
PWS RMI	264.32	Distance from Outfall (mi)	21.24

Changes Since Last Permit Issuance: none

Other Comments: Outfall drainage is from an earlier review

Treatment Facility Summary				
Treatment Facility Name: Daily Bread Cafe				
WQM Permit No.	**Amendment**	**Application Date**	**Issuance Date**	
4289403	T1	January 27, 1997	April 23, 1997	
4289403		June 28, 1989	September 14, 1989	
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Secondary	Activated Sludge	Hypochlorite	0.002
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.002	11.88	Not Overloaded	Aerobic Digestion	

Changes Since Last Permit Issuance: None

Other Comments:
Permit is for a grease trap [converted from a 500-galon septic tank, a Chromoglass CA-30 aerobic treatment unit, dual surface intermittent sand filters and disinfection with chlorination and a 500-gallon contact tank. Issued with 1983 Sewerage conditions 1, 7, 9, 10, 11, 12, 13, 14, 15, 16, 20, 21, & 22

No violations are electronically documented.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.002
Latitude 41° 50' 48.08" **Longitude** 78° 18' 34.09"
Wastewater Description: Treated restaurant wastes

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)

Comments:
As the discharge is less than 0.002-MGD with a short dry stream reach to the Allegheny River where a 2130:1 dilution ration is expected, and monthly monitoring is in place, DO requirements were not assessed.

Water Quality-Based Limitations

None required based on available dilution by the Allegheny River.

Due to compliance, back sliding for flow monitoring and the TRC daily maximum is not proposed. Also due to past non-compliance the small flow effluent requirements were not considered and the secondary treatment requirements retained.

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	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/week	Estimate
pH (S.U.)	XXX	XXX	6.0 Daily Min	XXX	9.0 Daily Max	XXX	1/month	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.2	1/month	Grab
CBOD5	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) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	1/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/month	Grab

Compliance Sampling Location: Outfall 001 after disinfection

Discharger	Bernard & Virginia Safford		Tuesday, March 3, 2020
Site	Daily Bread Cafe	Revised	Wednesday, March 11, 2020
Municipality	Liberty Township		
County	McKean		
NPDES Penni!	PA0104035		

TRC EVALUATION

Input appropriate values in 84:86 and E4:E7

21.1200	= Q stream (cfs)	0.5	= CV Dally
0.0020	= Q discharge (MGD)	0.5	= CV Hourly
30	=no. samples	1	= AFC_Partlal Mix Factor
0.3	= Chlorine Demand of Stream	1	= CFC_Partlal Mix Factor
0	= Chlorine Demand of Discharge	15	= AFC_Criterla Compliance Time(min)
0.5	= BATIBPJ Value	720	= CFC_Criterla Compliance Time (min)
0	= % Factor of Safetv IFQSI		=Decav Coefficient (Kl

Source	Reference	\FC Calculations	Reference	CFC Calculations
TRC	1.3.2.111	WLA afc = 2177.550	1.3.2.111	WLA cfc = 2122.933
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 811.407	5.1d	LTA_cfc = 1234.174

Source		Effluent Limit Calculations	
PENTOXSO TRG	5.11	AML MULT = 1.231	
PENTOXSD TRG	5.1g	1 LIMIT (mg/l) = 0.500	BATIBPJ
		(LIMIT (mg/l)= 1.635	

Wl.Aafc	(.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((O.S'LN(cvd'21no_samples+1))-2.326'LN(cvd•21no_samples+1)AQ.5)
LTA_cfc	wla_cfc'LTAMULT_ere
AMLMULT	EXP(2.326"LN((cvd'21no_samples+1)'0.5)-0.5'LN(cvd•2/no_samples+1))
AVGMON LIMIT	MIN(BAT_BPJ,MIN(LTA_afc,LTA_clc)'AML_MULD
INSTMAX LIMIT	1.S'((av_mon_llmlUAML_MUL T)/LTAMULT_alc)

(0.011/EXP(-K'CFC_tcl1440))+(((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			2	1	2
Stream	Flow	Conditions			diy	**perennial**
Stream	Code				**unknown**	42122
	Function				Outfall	**secondary**
Samples					30	30
reach	outfall		RMI		0.15	285.39
	Reach End		RMI		0	0
reach			feet		792	1506859.2
drainage			sq miles		0.00085	264
TRC	limilalion	average	mg/l		0.010	0.500
		maximum	mg/L		0.040	1.635
elevation		modelled	feet		1546.39	1451.19
elevation		modelled	feet		1451.19	*13 4..:/,*
slope		modelled	foot/foot		0.120	0.001
low flow			els/sqmi		0.084	~o:Otm.
discharge			mgd		0.0020	0.0020
Runoff	Period		**hours**		24.000	24.000

In the primaiy stream reach no aquatic life is expected and water quality aquatic life toxicity requirrnents are not necessaiy. At the Allegheny River the total stream flow to waste flow ratio is 7000:1 and water quality requirements should not be necessaiy.

stream	flow		els	0.00007	21.12000
stream	flow		MGD	0.000046	13.650215
stream	flow	total	MGD	0.002046	13.652215
stream	chlorine	demand	mg/l	O.3	0.3
dischaege	discharge	demand	mg/l		
stream	Total Stream/Waste		**ratio**	1.0	6826.1

pennilled	TRC	**mean**	BAT	0.5	0.5
permitted	TRC	**maximum**	WQ	1.2	1.2

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (fl/ft)	PWS Withdrawal (mgd)	Apply FC
20A	36262	Trib 36262 of Little Shenango River	0.730	1160.00	0.29	0.00000	0.00	

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Reh Trav Time (days)	Reh Velocity (fps)	WO Ratio	Reh Width (ft)	Reh Depth (ft)	Tributary Temp ('C)	Tributary pH	Stream Temp ("C)	Stream pH
Q7-10	0.071	0.00	0.00	0.000	0.000		0.00	0.00	25.00	7.80	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
Farma Parks	PA0100315	0.0250	0.0250	0.0250	0.000	25.00	7.10

Parameter Data

Parameter Name	Disc Cone (mg/L)	Trib Cone (mg/L)	Stream Cone (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

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
20A	36262	Trib 36262 of Little Shenango River	**0.610**	1107.55	0.56	0.00000	0.00	

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Reh Trav Time (days)	Reh Velocity (fps)	WO Ratio	Reh Width (ft)	Reh Depth (ft)	Tributary Temp (OC)	Tributary pH	Stream Temp (OC)	Stream pH
Q7-10	0.071	0.00	0.00	0.000	0.000	0.0	0.00	0.00	25.00	7.80	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 (OC)	Disc pH
		0.0000	0.0000	0.0000	0.000	0.00	7.00

Parameter Data

Parameter Name	Disc Cone (mg/L)	Trib Cone (mg/L)	Stream Cone (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

WQM 7.0 Hydrodynamic Outguts

SWP Basin	Stream Code	Stream Name
20A	36262	Trib 36262 of Little Shenango River

RMI	Stream Flow (els)	PWS With (cfs)	Net Stream Flow (els)	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												
0.730	0.02	0.00	0.02	.0387	0.08278	.362	2.29	6.32	O.Q7	0.102	25.00	7.24
Q1-10 Flow												
0.730	0.01	0.00	0.01	.0387	0.08278	NA	NA	NA	0.07	0.110	25.00	7.20
Q30-10 Flow												
0.730	0.03	0.00	0.03	.0387	0.08278	NA	NA	NA	0.08	0.096	25.00	7.28

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted 01-10 and 030-10 Flows	I>']
WLA Method	EMPR	**Use Inputted W/D Ratio**	I>']
01-10/07-10 Ratio	0.64	**Use Inputted Reach Travel Times**	I>']
030-10/07-10 Ratio	1.36	**Temperature Adjust Kr**	☐
D.O. Saturation	**90.00%**	**Use Balanced Technology**	I>']
D.O. Goal	5		

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
20A	36262	Trib 36262 of Little Shenango River

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
0.730	Farma Parks	5.77	7.7	5.77	7.7	0	0

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
0.730	Farma Parks	1.14	1.89	1.14	1.89	0	0

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)		
0.73	Farma Parks	25	25	1.89	1.89	4	4	0	0

WQM I_.O D.O.Simulation

SWP Basin	Strea
20A	3(

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
0.730	0.025	25.000	7.242
Reach Width (ft)	Reach Depth (ft)	Reach WDRatio	Reach Velocity (fps)
2.287	0.362	6.317	0.072
Reach CBOD5 (mg/L)	Reach Kc (1/days)	Reach NH3-N (mg/L)	Reach Kn (1/days)
17.01	1.433	1.27	1.029
Reach DO (mg/L)			
5.474			
Reach Travel Time (days)			

Wednesday, March 11, 2020

OM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
20A	**36262**	Trib 36262 of Little Shenango River

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)
0.730	Farma Parks	PA0100315	0.025	CBOD5	25		
				NH3-N	1.89	3.78	
				Dissolved Oxygen			4

3800-PM-BCW0018c Rev. 7/2019
Checklist

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) APPLICATION FOR PERMIT TO DISCHARGE SEWAGE EFFLUENT FROM SMALL FLOW TREATMENT FACILITIES

APPLICANT'S CHECKLIST

Check the following list to make sure that you have included all the required infonnation. Place a checkmark in the box provided for all items completed and/or provided.

Daily Bread Cafe

ENCLOSE THIS CHECKLIST WITH YOUR COMPLETED APPLICATION FORM.

FAILURE TO SUBMIT ALL REQUIRED INFORMATION MAY RESULT IN DENIAL OF THE APPLICATION.

	REQUIREMENTS FOR ALL APPLICANTS	If Included	DEP use only
1.	Application Fee. Amount Enclosed $ 25.00	☐	X
2.	One original and 2 copies of the completed application (signed).	☐	
3.	One additional copy of application for Erie County Health Department (if located in Erie County).	☐	NA
4.	One copy of application mailed to Allegheny County Health Department (if located in Allegheny County)	☐	NA
5.	One copy of the General Information Form (0210-PM-PIO0001).	[	X
6.	Proper evidence of Act 14 municipal and county notifications.	[	pending
7.	Copy of topographic map identifying the treatment facility and all discharges.	☐	
8.	Copy of Act 537 Sewerage Facilities Planning Approval letter (new or expanding facilities only).	☐	NA
9.	Documentation that tanks have been pumped during permit term (if required by existing permit).	☐	NA

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
18A	42122	ALLEGHENY RIVER	285.540	1546.39	0.10	0.00000	0.00	☐

Stream Data

Design Cond.	LFY (efsm)	Trib Flow (cfs)	Stream Flow (els)	Reh Trav Time (days)	Reh Velocity (fps)	WD Ratio	Reh Width (ft)	Reh Depth (ft)	Tributary Temp ('C)	Tributary pH	Stream Temp ('C)	Stream pH
Q7-10	0.084	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
Daily Bread C	PA0104035	0.0020	0.0020	0.0020	0.002	25.00	7.00

Parameter Data

Parameter Name	Disc Cone (mg/L)	Trib Cone (mg/L)	Stream Cone (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

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
18A	42122	ALLEGHENY RIVER	**285.390**	1451.19	264.00	0.00000	0.00	

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Reh Trav Time (days)	Reh Velocity (fps)	WO Ratio	Reh Width (ft)	Reh Depth (ft)	Tributary Temp (OC)	Tributary pH	Stream Temp (OC)	Stream pH
Q7-10	0.084	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 (OC)	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
18A	42122	ALLEGHENY RIVER	264.490	1344.11	607.79	0.00000	0.00	

Stream Data

Design Cond.	LFY (efsm)	Trib Flow (els)	Stream Flow (els)	Reh Trav Time (days)	Reh Velocity (fps)	WD Ratio	Reh Width (ft)	Reh Dept (ft)	Tributa[Y Temp ("C)	Tributa[Y pH	Stream Temp ("C)	Stream pH
Q7-10	0.084	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

WQM 7.0 H drod namic Out uts

SWP Basin	Stream Code	Stream Name
18A	42122	ALLEGHENY RIVER

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (fl/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp ("C)	Analysis pH
Q7-10 Flow												
285.540	0.01	0.00	0.01	.0031	0.12021	.287	1.08	3.76	0.04	0.246	21.35	7.00
285.390	22.12	0.00	22.12	.0031	0.00097	.91	79.82	87.7	0.30	4.193	20.00	7.00
Q1-10 Flow												
285.540	0.01	0.00	0.01	.0031	0.12021	NA	NA	NA	0.03	0.292	21.83	7.00
285.390	14.16	0.00	14.16	.0031	0.00097	NA	NA	NA	0.24	5.384	20.00	7.00
Q30-10 Flow												
285.540	0.01	0.00	0.01	.0031	0.12021	NA	NA	NA	0.04	0.216	21.07	7.00
285.390	30.09	0.00	30.09	.0031	0.00097	NA	NA	NA	0.36	3.530	20.00	7.00

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	
WLAMethod	EMPR	**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**	☐
0.0. Saturation	**90.00%**	**Use Balanced Technology**	
D.O. Goal	5		

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
18A	42122	ALLEGHENY RIVER

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Mulliple Criterion (mg/L)	Mulliple WLA (mg/L)	Critical Reach	Percent Reduction
285.540	Daily Bread C	NA	50	8.47	50	0	0
285.390		NA	NA	9.67	NA	NA	NA

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Mulliple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
285.540	Daily Bread C	NA	25	1.77	25	0	0
285.390		NA	NA	1.92	NA	NA	NA

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)		
285.54	Daily Bread C	25	25	25	25	4	4	0	0
285.39		NA	NA	NA	NA	NA	NA	NA	NA

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
18A	42122	ALLEGHENY RIVER

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
285.540	0.002	21.348	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WQRatio**	**Reach Velocity (fps)**
1.077	0.287	3.757	0.037
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
8.20	1.186	6.81	0.777
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
7.099	24.146	**Owens**	NA
Reach Travel Time (days)			
0.246			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.025	7.95	6.69	7.19
0.049	7.71	6.56	7.26
0.074	7.47	6.43	7.32
0.099	7.24	6.31	7.36
0.123	7.02	6.19	7.41
0.148	6.81	6.08	7.44
0.173	6.60	5.96	7.48
0.197	6.40	5.85	7.52
0.222	6.20	5.74	7.55
0.246	6.01	5.63	7.58

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
285.390	0.002	20.001	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
79.816	0.910	87.697	0.305
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
2.00	0.000	0.00	0.700
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
8.243	2.017	**Tsivoglou**	5
Reach Travel Time (days)			
4.193			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.419	2.00	0.00	8.24
0.839	2.00	0.00	8.24
1.258	2.00	0.00	8.24
1.677	2.00	0.00	8.24
2.097	2.00	0.00	8.24
2.516	2.00	0.00	8.24
2.935	2.00	0.00	8.24
3.355	2.00	0.00	8.24
3.774	2.00	0.00	8.24
4.193	2.00	0.00	8.24

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
18A	42122	ALLEGHENY RIVER

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)
285.540	**Daily Bread C**	PA0104035	0.002	CBOD5	25		
				NH3-N	25	50	
				Dissolved Oxygen			**4**