pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0098345**
Facility Type	**Non-Municipal**	APS ID	**1013029**
Major / Minor	**Minor**	Authorization ID	**1308463**

Applicant and Facility Information

Applicant Name	**CNP Mountain Plaza, LLC**	Facility Name	**CNP Mountain Plaza**
Applicant Address	3508 Regent Court Murrysville, PA 15668-8520	Facility Address	1542 Indian Creek Valley Road Melcroft, PA 15462-1004
Applicant Contact	Jerry Lewis	Facility Contact	Jerry Lewis
Applicant Phone	(724) 708-4122	Facility Phone	(724) 708-4122
Client ID	354950	Site ID	239866
Ch 94 Load Status	Not Overloaded	Municipality	Saltlick Township
Connection Status	No Limitations	County	Fayette
Date Application Received	March 11, 2020	EPA Waived?	Yes
Date Application Accepted		If No, Reason	

Purpose of Application: Renewal and Transfer of Minor Sewage Facility <0.05 MGD NPDES Permit.

Summary of Review

The Department received an NPDES Permit Renewal Application (received March 11, 2020) and Transfer Application (received February 05, 2020) from CNP Mountain Plaza, LLC for the CNP Mountain Plaza property located in Saltlick Township, Fayette County.

The existing permittee of the property is the Connellsville Area School District – Clifford Pritts Elementary School with NPDES Permit PA0098345 and Water Quality Management (WQM) Part II Permit 466S35. The Clifford Pritts Elementary School has been closed and has not processed wastewater since August 2017.

The existing treatment system is a Minor Sewage Facility <0.05 MGD consisting of: Flow Equalization. Extended Aeration, WAS, Final Clarification, Tablet Chlorination followed by Tablet De-chlorination.

The receiving stream is Indian Creek, which is classified by Chapter 93 as High-Quality Cold-Water Fishes (HQ-CWF) located in watershed 19-E.

To establish the renewal effluent limitations, the Water Quality Based Effluent Limitations (WQBEL) are compared to the minimum technology based and BPJ standards for individual sewage permits. The most stringent of those limitations are imposed on the renewal permit as per the SOP-Establishing Effluent Limitations for Individual Sewage Permits.

WQM 7.0 and TRC spreadsheet modeling results are enclosed.

The applicant submitted eDMR transfer forms.

Approve	Deny	Signatures	Date
X		*Curtis Holes* Curtis Holes, P.E. / Environmental Engineering Specialist	January 22, 2021
X		*Donald Leone* Donald J. Leone, P.E. / Environmental Engineer Manager	January 28, 2021

Summary of Review

The Act – 14 PL 834 Municipal Notification were provided by the February 27, 2020 letters and no comments were received.

An Operations Compliance Check Summary Report was completed, and permit transfer is suggested.

It is recommended that a draft permit be published for public comment in response to this application.

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.

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.007735
Latitude	40° 03’ 31”	Longitude	79° 22’ 14”
Quad Name	Seven Springs	Quad Code	1811
Wastewater Description:	Treated Sewage		
Receiving Waters	Indian Creek	Stream Code	38235
NHD Com ID	69915995	RMI	18.9
Drainage Area	32.9 mi^2	Yield (cfs/mi^2)	0.0255
Q_{7-10} Flow (cfs)	0.838 cfs	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	1435	Slope (ft/ft)	
Watershed No.	19-E	Chapter 93 Class.	HQ-CWF
Existing Use	Recreational	Existing Use Qualifier	
Exceptions to Use	None	Exceptions to Criteria	
Assessment Status	Supporting		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status		Name	
Nearest Downstream Public Water Supply Intake	Indian Creek Valley Water Authority (400,000 GPD)		
PWS Waters	Mill Run Reservoir	Flow at Intake (cfs)	3.59
PWS RMI	4.3	Distance from Outfall (mi)	14.4

Changes Since Last Permit Issuance:

Other Comments: None

Treatment Facility Summary

Treatment Facility Name: CNP Mountain Plaza STP

WQM Permit No.	Issuance Date
466S24-A1	10/31/1990
466S24	04/29/1966

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary with Ammonia Reduction	Extended Aeration	Chlorine with Dechlorination	

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.0077		Not Overloaded	Dewatering	Other WWTP

Changes Since Last Permit Issuance:

Other Comments:

Compliance History

Facility: CNP Mountain Plaza/Connellsville Elementary School

NPDES Permit No.: PA0098345

Compliance Review Period: 11/2015 – 11/2020

Inspection Summary:

INSP ID	INSPECTED DATE	INSP TYPE	INSPECTION RESULT DESC
2944101	10/02/2019	Routine/Partial Inspection	No Violations Noted

Violation Summary:

VIOL ID	VIOLATION DATE	VIOLATION TYPE	VIOLATION TYPE DESC	RESOLVED DATE	INSP TYPE
788432	06/15/2017	92A.41(A)5	NPDES - Failure to properly operate and maintain all facilities which are installed or used by the permittee to achieve compliance	06/20/2017	Routine/Partial Inspection
777478	01/11/2017	92A.41(A)5	NPDES - Failure to properly operate and maintain all facilities which are installed or used by the permittee to achieve compliance	01/30/2017	Routine/Partial Inspection
777479	01/11/2017	92A.61(G)	NPDES - Failure to use a format or process required by DEP for self-monitoring results	01/30/2017	Routine/Partial Inspection
755183	03/09/2016	92A.61(C)	NPDES - Failure to monitor pollutants as required by the NPDES permit	03/25/2016	Compliance Evaluation

Open Violations by Client ID:

No open violations for Client ID 63783

Enforcement Summary:

ENF ID	ENF TYPE	ENF CREATION DATE	VIOLATIONS	# OF VIOLATIONS	ENF FINALSTATUS	ENF CLOSED DATE
354415	NOV	06/20/2017	92A.41(A)5	1	Administrative Close Out	08/30/2019
350602	NOV	01/30/2017	92A.41(A)5; 92A.61(G)	2	Administrative Close Out	08/30/2019
341078	NOV	03/25/2016	92A.61(C)	1	Administrative Close Out	08/27/2019

DMR Violation Summary: No DMR exceedances.

Compliance Status: Permit transfer/issuance is suggested.

Completed by: John Murphy

Completed date: 11/16/2019

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.007735
Latitude 40º 03' 31" **Longitude** -79º 22' 14"
Wastewater Description: Treated 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)
	50	IMAX	133.102(a)(4)(ii)	92a.47(a)(2)
	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
Total Suspended Solids	60	IMAX	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

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

Parameter	Limit (mg/l)	SBC	Model
TRC	0.5	Average Monthly	TRC_CALC

Comments:
WQM 7.0 Modeling confirmed Technology-Based Limitations and Best Professional Judgment Limitations for $CBOD_5$, Ammonia and DO.

In-stream and discharge chlorine demand of 0.3 $^{mg}/_{L}$ and 0.0 $^{mg}/_{L}$ respectively are to be used as default values in the TRC spreadsheet model to calculate water quality-based TRC limits unless site-specific data supporting different values have been collected in accordance with the Implementation Guidance Total Residual Chlorine Regulation. A TRC limit of 0.5 $^{mg}/_{L}$ as an average monthly limit, which confirms the technology-based limitation.

Please refer to Attachment C for the DMR Summary of TRC Concentration. The summary of TRC concentrations are from March 2015 to May 2017. The average of the reported concentrations are within the more stringent TRC effluent limitations. The facility will have to evaluate the system and add de-chlorination if needed prior to re-activating the treatment system.

Best Professional Judgment (BPJ) Limitations

Comments:
A minimum DO limit of 4.0 $^{mg}/_{L}$ per Pa Code Chapter 93 and BPJ. The WQM 7.0 Modeling confirmed the BPJ limitation of DO.

For existing sewage discharges, if WQM 7.0 Modeling results for summer indicates that an average monthly limit of 25 $^{mg}/_{L}$ is acceptable, the minimum requirement for Ammonia-Nitrogen is year-round Monitor and Report requirement.

Sewage discharges with design flows > 2,000 GPD are required to monitor for Total Nitrogen and Total Phosphorus in new and reissued permits. Monitor and Report requirements for Total Nitrogen and Total Phosphorus with a once per year sampling frequency is imposed.

Additional Comments:

Monitoring frequencies for the proposed effluent limits are based upon Table 6-3 Self-Monitoring Requirements for Sewage Dischargers of the DEP's Technical Guidance for the Development and Specification of Effluent Limitations.

Anti-Backsliding

Section 402(o) of the Clean Water Act (CWA), enacted in the Water Quality Act of 1987, establishes anti-backsliding rules governing two situations. The first situation occurs when a permittee seeks to revise a Technology-Based effluent limitation based on BPJ to reflect a subsequently promulgated effluent guideline which is less stringent. The second situation addressed by Section 402(o) arises when a permittee seeks relaxation of an effluent limitation which is based upon a State treatment standard of water quality standard.

Previous limits can be used pursuant to EPA's anti-backsliding regulation 40 CFR 122.44 (l) Reissued permits. (1) Except as provided in paragraph (l)(2) of this section when a permit is renewed or reissued. Interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit (unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under §122.62). (2) In the case of effluent limitations established on the basis of Section 402(a)(1)(B) of the CWA, a permit may not be renewed, reissued, or modified on the basis of effluent guidelines promulgated under section 304(b) subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit.

The facility is not seeking to revise the previously permitted effluent limits.

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)	0.007735 Annl Avg	XXX	XXX	XXX	XXX	XXX	2/month	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	5/week	Grab
DO	XXX	XXX	4.0 Inst Min	XXX	XXX	XXX	5/week	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	5/week	Grab
CBOD5	XXX	XXX	XXX	25.0	XXX	50.0	2/month	Grab
TSS	XXX	XXX	XXX	30.0	XXX	60.0	2/month	Grab
Fecal Coliform (No./100 ml) (5/1 – 9/30)	XXX	XXX	XXX	200 Geo Mean	XXX	1,000 Geo Mean	2/month	Grab
Fecal Coliform (No./100 ml) (10/1 – 4/30)	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000 Geo Mean	2/month	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	XXX	Report Daily Max	1/year	Grab
Total Phosphorus	XXX	XXX	XXX	XXX	XXX	Report Daily Max	1/year	Grab
Ammonia-Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	2/month	Grab

Compliance Sampling Location: Outfall 001

Tools and References Used to Develop Permit	
☐	WQM for Windows Model (see Attachment **A**)
☐	TMS Model (see Attachment)
☐	TRC Model Spreadsheet (see Attachment **B**)
☐	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 – WQM 7.0 Model Output File

Attachment B – TRC_CALC

Attachment A – WQM 7.0 Model Output File

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
19E	38235	INDIAN CREEK	**18.900**	1435.00	32.90	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	0.025	0.00	0.84	0.000	0.000	0.0	35.00	4.00	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
CNP Plaza	PA0098345	0.0000	0.0077	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	4.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
19E	38235	INDIAN CREEK

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												
18.900	0.84	0.00	0.84	.012	0.00240	4	35	8.75	0.01	146.960	20.07	7.00
Q1-10 Flow												
18.900	0.54	0.00	0.54	.012	0.00240	NA	NA	NA	0.00	227.821	20.11	7.00
Q30-10 Flow												
18.900	1.14	0.00	1.14	.012	0.00240	NA	NA	NA	0.01	108.463	20.05	7.00

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	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	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	5		

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
19E	38235	INDIAN CREEK

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
18.900	CNP Plaza	9.6	50	9.6	50	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
18.900	CNP Plaza	1.91	25	1.91	25	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)		
18.90	CNP Plaza	25	25	25	25	4	4	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
19E	38235	INDIAN CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
18.900	0.008	20.070	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
35.000	4.000	8.750	0.006
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
2.32	0.001	0.35	0.704
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
8.183	0.126	O'Connor	5
Reach Travel Time (days)			
146.960			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
14.696	2.29	0.00	8.23
29.392	2.26	0.00	8.23
44.088	2.22	0.00	8.23
58.784	2.19	0.00	8.23
73.480	2.16	0.00	8.23
88.176	2.12	0.00	8.23
102.872	2.09	0.00	8.23
117.568	2.06	0.00	8.23
132.264	2.03	0.00	8.23
146.960	2.00	0.00	8.23

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
19E	38235	INDIAN CREEK

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)
18.900	CNP Plaza	PA0098345	0.000	CBOD5	25		
				NH3-N	25	50	
				Dissolved Oxygen			4

Attachment B – TRC_CALC

TRC EVALUATION

0.838	**= Q stream (cfs)**	**0.5**	**= CV Daily**
0.007735	**= Q discharge (MGD)**	**0.5**	**= CV Hourly**
30	**= no. samples**	**0.995**	**= 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)**
	= % Factor of Safety (FOS)		**=Decay Coefficient (K)**

Source	Reference	AFC Calculations		Reference	CFC Calculations	
TRC	**1.3.2.iii**	WLA afc =	22.247	**1.3.2.iii**	WLA cfc =	21.791
PENTOXSD TRG	**5.1a**	LTAMULT afc =	0.373	**5.1c**	LTAMULT cfc =	0.581
PENTOXSD TRG	**5.1b**	LTA_afc=	8.290	**5.1d**	LTA_cfc =	12.668

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)**

Attachment C – DMR Summary of TRC Concentration

Cliffard Pritts Elementary School
PA0098345

DMR Summary of TRC Concentration

Date	Average Monthly	IMAX
May-17	0.2	1.3
April-17	0.4	2.2
March-17	0.1	1.8
January-17	0.1	1.4
January-17	0.6	2.0
December-16	0.2	1.2
November-16	0.6	2.7
October-16	0.5	1.3
September-16	0.5	1.0
August-16	0.5	0.8
July-16	0.5	0.7
June-16	0.5	0.6
May-16	0.5	0.9
April-16	0.7	0.9
March-16	0.6	1.1
February-16	0.5	0.9
January-16	0.5	0.8
December-15	0.5	0.7
November-15	0.4	0.8
October-15	0.6	1.2
September-15	0.6	0.9
June-15	0.6	0.9
May-15	0.6	0.9
April-15	0.6	1.0
March-15	0.8	1.1
Average	**0.5**	**1.2**
Proposed New TRC Limit	**0.5**	**1.6**