pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northeast Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0061093**
Facility Type	**Non-Municipal**	APS ID	**570308**
Major / Minor	**Minor**	Authorization ID	**1436970**

Applicant and Facility Information

Applicant Name	**Monroe Career & Tech Institution (MCTI)**	Facility Name	**MCTI STP**
Applicant Address	194 Laurel Lake Road Bartonsville, PA 18321-9448	Facility Address	195 Laurel Lake Road Bartonsville, PA 18321
Applicant Contact	Rick Barz	Facility Contact	Rick Barz (alternate contact is Mr. Joel Tyler Bruch at Ext. 1109).
Applicant Phone	(570) 629-2001	Facility Phone	(570) 629-2001
Client ID	82551	Site ID	3056
Ch 94 Load Status	Not Overloaded	Municipality	Pocono Township
Connection Status	-	County	Monroe
Date Application Received	April 14, 2023	EPA Waived?	Yes
Date Application Accepted	May 15, 2023	If No, Reason	-

Purpose of Application: RENEWAL OF EXISTING NPDES PERMIT.

Summary of Review

This is a 0.015 MGD Sewage Treatment Plant discharging to UNT# 04791 to Pocono Creek (HQ-CWF). Annual Average Daily Flows were estimated at 0.0014 MGD (2020), 0.0013 MGD (2021) and 0.0019 MGD (2022), with highest monthly average flow of 0.0032 MGD in January 2022. Daily maximum flows reached 0.020 MGD in February 2023.

Background:

- POTW: Application clarified facility is a public school, subject to POTW requirements, that does not discharge non-sewage wastewater to the facility. Chapter 92a.2 definitions for POTW and municipality are inclusive of schools, institutions or other public body created by or pursuant to State Law.
- Intermittent Variable Loadings: The MCTI operates 7 AM to 3 PM, MF, with night courses 2 or 3 days per week (4 – 7 PM), with reduced summer flows (admin and maintenance staff only). The facility treatment plant is underloaded much of the time.
- Future Connection: The 8/26/2024 Response Letter to the 8/14/2024 NOV stated: “Pocono Township has amended its Act 537 Sewage Plan, to include among other properties, the MCTI campus, and has requested that MCTI connect to the Township’s Municipal Sewer System, once the Township extends sewer lines to the campus. To our knowledge, the timeline for this sewer line extension has not yet been established. If the MCTI does ultimately connect to the municipal sewer system, the on-site WWTP will be decommissioned and abandoned”.
- Proposed Dechlorination Pilot Study: The 9/30/2024 Application update stated: “MCTI is proposing a pilot study to investigate the feasibility of providing dechlorination at the WWTP, to allow higher chlorine residuals to be maintained in the chlorine contact tank prior to dechlorination of the final effluent discharged at the outfall”. Two options are being considered (below), with either option involving monitoring of chlorine residuals at Outfall 001, with recording on a daily basis for every day that the WWTP discharges to the stream. MCTI proposes to commence this pilot study within four (4) months of the date of the letter (9/30/2024) and to be completed eighteen (18) months later.

Approve	Deny	Signatures	Date
X		James D. Berger (signed) James D. Berger, P.E. / Environmental Engineer	October 3, 2024
X		Amy M. Bellanca (signed) Amy M. Bellanca, P.E. / Environmental Program Manager	10-16-24

Summary of Review

Upon completion, a report of findings will be provided and if appropriate, a WQM Part II Permit application for the installation of a permanent dechlorination system to be installed in the future five (5) year NPDES permit term.

- The addition of a Sodium Sulfite tablet feeder immediately downstream of the chlorine contact tank
- Provision of a liquid chemical feed system(s) for dechlorination of effluent prior to discharge.

NOTE: This pilot study had been mentioned in responses to DEP NOVs. Chapter 92a.51 (Schedules of Compliance) states: "the applicant shall be required in the permit to take specific steps to remedy a violation of the standards and limitations in accordance with a legally applicable schedule of compliance, in the shortest, reasonable period of time, the period to be consistent with the Federal Act". (Underlining added.) Because the permittee has chosen this option to address a long-term pattern of noncompliance with existing Fecal Coliform limits (triggering some potential for future TRC permit limits exceeded), the permittee must resolve the noncompliance in the shortest reasonable period of time. Additional chlorination and dechlorination provisions can easily be designed, permitted, and installed within two (2) years. They are well known and understood technologies that do not require extensive pilot testing. See the PA Domestic Wastewater Facilities Manual for current technical guidance on the design of chlorine disinfection and dechlorination systems.

- **Application:**
  - **On-Base No. 102872 (received 4/14/2023)**. Renewal application due 5/1/2023. They responded by e-mail on 5/11/2023. Upload on 9/30/2024. (8/30/2024 DEP (Berger) E-mail requiring resubmittal of 5/11/2023 response by public upload and to update the application to address recurrent fecal coliform exceedances by compliance history and any application updating.)
- DRBC Docket No. D-2019-002 CP-2 applies.

Sludge use and disposal description and location(s): Approximately 7,000 – 10,500 gallons of liquid sludge is annually hauled to the Greater Hazleton WWTP for disposal.

Part C Special Conditions: Changes bolded.

- **Part C.I.A, B, C**: Existing Stormwater Prohibition, Necessary property rights, and Residuals Management Conditions.
- **Part C.I.D**: **New Chlorine minimization condition due to chlorine toxicity.**
- **Part C.I.E**: **New Responsible Operator notification due to previous DMR reporting issues, etc.**
- **Part C.I.F**: **New condition to clarify POTW reporting requirements (Chapter 94 Report and Sewage Sludge Management Inventory upon request only).**
- **Part C.II**: Existing Solids Management conditions
- **Part C.III**: Retained (was in previous permit for existing TRC limits) Requirements for Total Residual Chlorine (TRC) **with 2-year schedule of compliance for the proposed final TRC limits**.

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)	.015
Latitude	41º 1' 3.90"	Longitude	-75º 17' 9.77"
Quad Name	Mount Pocono	Quad Code	1043 (4.22.2)
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary to Pocono Creek (HQ-CWF)	Stream Code	04791
NHD Com ID	26158700	RMI	~0.63 (DRBC Docket)
Drainage Area	0.53 square miles	Yield (cfs/mi^2)	0.0783
Q_{7-10} Flow (cfs)	0.041	Q_{7-10} Basis	See below
Elevation (ft)	~855 Feet (USGS terrain mapper)	Slope (ft/ft)	-
Watershed No.	1-E	Chapter 93 Class.	HQ-CWF
Existing Use	-	Existing Use Qualifier	-
Exceptions to Use	-	Exceptions to Criteria	-
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment	-		
Source(s) of Impairment	-		
TMDL Status	-	Name	-

Background/Ambient Data:		Data Source
pH (SU)	-	Sample ID: 1629509, Sequence Number: 3 Date Collected: 10/3/2011 (upstream at Laurel Lake)
Temperature (°C)	15.6	See above
Hardness (mg/L)	41	See above
Aluminum (ug/l)	29.300	See above
Manganese (ug/l)	51.000	See above
Total Iron (ug/l)	264.000	See above

Nearest Downstream Public Water Supply Intake	Easton Suburban Water Authority		
PWS Waters	Delaware River	Flow at Intake (cfs)	-
PWS RMI	-	Distance from Outfall (mi)	~42 miles

Changes Since Last Permit Issuance: This stream is now classified a Natural Trout Reproduction stream.

Other Comments:

- The outfall is near the headwaters, downstream of Laurel Lake. Above sampling point was on the upstream side of Laurel Lake per E-maps.
- There is a downstream POCONO TWP MONROE CTY MS4 NPDES Permit No. PAI132270 Outfall No. 054 on this stream.
- Pocono Creek (HQ-CWF; Stream# 4779) is impaired by pathogens (unknown origin) downstream, but facility will not contribute if it meets existing permit limits.
- Q7-10 Low Flow and LFY: The LFY method was used. The Pocono Creek confluence with the UNT location was used to derive the LFY. PA Streamstats-determined 2.86 CFS divided by 36.6 square mile drainage area equated to 0.0783 CFS/square mile LFY. The LFY was used with the USGS-determined Outfall No. 001 drainage area to calculate the Q7-10 low flow.
    - The previous NPDES Permit Fact Sheet used the 0.1 CFS/square mile default which is superseded here.

- The Department's LFY determination (using the more recent USGS PA Streamstats methodology, and which takes topography, elevation and other site-specific factors including all available gage data) is considered more accurate than the alternate LFY determination by MCTI's technical consultant. The 8/26/2024 Response Letter to the 8/14/2024 NOV stated: "MCTI previously requested that the PADEP re-run its TRC model utilizing a more accurate stream flow Q7-10 value of 0.11 cfs, to assess whether some modification of or relief from the current TRC limits is warranted" (without specifying details on the date and nature of the request). MCTI believed that this higher value was supported by data obtained from two USGS gauging stations (USGS Gage #0141500 Pocono Creek near Stroudsburg using 1932 – 2001 data; USGS Gage #01441495 Pocono Creek upstream of confluence with Wigwam Run near Stroudsburg (2002 – present data) referenced in a 2005 USGS Study:
  - USGS Gage #0141500 Pocono Creek near Stroudsburg: 6.4 CFS Q7-10 low flow divided by 41 square miles drainage area to calculate 0,156 CFS/square mile LFY.
  - USGS Gage #01441495 Pocono Creek upstream of confluence with Wigwam Run near Stroudsburg: 6.6 CFS Q7-10 low flow divided by 38.9 square mile drainage area to calculate 0.169 CFS/square mile LFY.
  - The DRBC Docket D-2019-002 CP-2 also estimated the Q7-10 low flow at 0.07 MGD (0.11 CFS) but did not explain how it was derived.

  NOTE: In practical terms, the antibacksliding prohibition would have prevented any relief from existing TRC limits even if the Q7-10 low flow was greater than previously estimated.

Treatment Facility Summary

Treatment Facility Name: Monroe Career & Tech Institute (MCTI) WWTP

WQM Permit No.	Issuance Date	Scope
4596404	9/9/1996	10,000-gal EQ tank (with comminutor and bar screen), new blowers, other upgrades including ultrasonic flowmeter with totalizer & chart
4585402	5/13/1985	Expansion/Replacement 0.015 MGD extended aeration system including two 2,000-gal surge tanks with submersible grinder pumps
4575403	4/25/1975	4000-gal EQ Tank and lift station
4570404	1/11/1971	Original 0.0048 MGD STP including sludge holding tank and chlorine contact tank.

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Extended aeration	Sodium hypochlorite (liquid)	0.015

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.015	31.3	Not Overloaded	Sludge holding tank	Disposal

Changes Since Last Permit Issuance: None known.

Other Comments:

Description:

- Application Information: 10,000-gallon EQ Tank, splitter box, 15,000 GPD extended aeration activated sludge treatment system (aeration tank and clarifier). Chlorine contact tank for disinfection. Sludge digestor.
- DRBC Docket description noted two (2) additional 2,000-gallon equalization tanks and specified a 3,000-gallon Extended aeration tank with blowers & clarifier, and a 5,000-gallon aerobic digester with air lift to 1,500-gallon sludge holding tank.
- 2022 Inspection report noted comminutor and bar screen.
- 2022 Inspection Report:
    - Department staff observed heavy corrosion on the RAS lines, WAS line, and air lines in the aeration basin. Heavy corrosion was also observed on the interior surfaces of the clarifier. The Department requests that these items/areas be assessed and replaced and/or repaired as needed.
    - Liquid Chlorine: fed at the chlorine contact tank for disinfection. Soda Ash: fed at the influent E.Q. Tank by hand as a powder for pH adjustment.

Underloading: The facility is underloaded per Application/EDMR-reported AADF flows. School loadings also vary greatly depending on school schedules/events.

Compliance History

DMR Data for Outfall 001 (from July 1, 2023 to June 30, 2024)

Parameter	JUN-24	MAY-24	APR-24	MAR-24	FEB-24	JAN-24	DEC-23	NOV-23	OCT-23	SEP-23	AUG-23	JUL-23
Flow (MGD) Average Monthly	0.0008	0.0035	0.0049	0.0032	0.0019	0.0027	0.0022	0.0024	0.0024	0.0017	0.0007	0.0004
Flow (MGD) Daily Maximum	0.0078	0.81	0.0134	0.0114	0.0054	0.0098	0.0036	0.0082	0.0075	0.0069	0.0040	0.0027
pH (S.U.) Instantaneous Minimum	7.0	6.5	6.6	6.7	6.9	6.5	6.5	6.6	6.3	6.3	6.5	7.1
pH (S.U.) Instantaneous Maximum	7.5	7.6	7.6	7.2	7.4	7.0	7.3	7.6	7.5	6.9	7.2	7.6
DO (mg/L) Instantaneous Minimum	5.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0	6.0	6.0	6.0	6.0
TRC (mg/L) Average Monthly	0.09	0.26	0.20	0.21	0.20	0.18	0.0182	0.17	0.153	0.11	0.15	0.07
TRC (mg/L) Instantaneous Maximum	0.85	0.85	0.62	0.83	0.48	0.50	0.78	**1.08**	0.66	0.53	0.82	0.45
CBOD5 (mg/L) Average Monthly	< 3.65	< 3.0	< 3.00	21.2	< 3.54	3.60	6.065	< 3.11	< 3.00	< 3.00	< 3.00	< 6.53
TSS (mg/L) Average Monthly	18.9	12.89	< 5.365	< 13.5	7.19	14.1	7.835	< 11.0	6.8	14.2	16.5	6.73
Fecal Coliform (No./100 ml) Geometric Mean	< 2.00	12.3	49.89	**> 271.7**	446	52.56	5.0	12.9	6.4	96	1	1.42
Fecal Coliform (No./100 ml) Instantaneous Maximum	2	36.8	**> 2419.6**	**> 2419**	1119.9	920.8	12.2	165	20.1	95.9	1	2
Nitrate-Nitrite (mg/L) Average Quarterly	26.5			21.3			26.4			3.07		
Total Nitrogen (mg/L) Average Quarterly	33.95			25.05			27.4			4.37		
Ammonia (mg/L) Average Monthly	2.09	1.425	< 0.2995	3.41	1.155	1.38	2.125	0.39	1.39	0.98	0.702	0.561

TKN (mg/L) Average Quarterly	7.45			3.75			1.00			1.30		
Total Phosphorus (mg/L) Average Quarterly	9.06			5.68			6.18			7.12		

DMR Data for Outfall 001 (from March 1, 2022 to February 28, 2023)*

Parameter	FEB-23	JAN-23	DEC-22	NOV-22	OCT-22	SEP-22	AUG-22	JUL-22	JUN-22	MAY-22	APR-22	MAR-22
Flow (MGD) Average Monthly	0.0073	0.0017	0.0021	0.0020	0.0018	0.0017	0.0003	0.0002	0.0008	0.0023	0.0029	0.0027
Flow (MGD) Daily Maximum	**0.020**	0.010	0.0082	0.0081	0.0084	0.0074	0.002	0.0012	0.0057	0.0088	0.0127	0.0065
pH (S.U.) Instantaneous Minimum	6.3	6.8	6.6	6.6	6.6	6.8	6.6	7.0	6.6	6.7	6.7	6.4
pH (S.U.) Instantaneous Maximum	7.5	7.7	7.4	7.5	7.7	7.8	7.5	7.3	7.3	7.5	7.6	8.0
DO (mg/L) Instantaneous Minimum	7.0	5.0	6.0	6.0	6.0	5.0	6.0	7.0	6.0	6.0	6.0	6.0
TRC (mg/L) Average Monthly	0.20	0.23	0.147	0.195	0.186	0.218	0.08	0.06	0.15	0.204	0.109	0.172
TRC (mg/L) Instantaneous Maximum	0.80	**0.90**	0.47	0.72	**1.02**	**1.01**	0.54	0.53	**0.92**	0.76	0.60	0.55
CBOD5 (mg/L) Average Monthly	< 3.225	< 3.00	**E**	< 3.00	**E**	**E**	**E**	**E**	3.93	3.58	5.66	< 4.61
TSS (mg/L) Average Monthly	8.85	< 7.47	**35.1**	8.38	< 11.5	8.945	20.95	20.25	7.24	10.03	10.02	8.90
Fecal Coliform (No./100 ml) Geometric Mean	1	< 1	63.03	< 1	**> 2192**	4.4	**> 2419.6**	20.25	1	16.6	**> 69.56**	159.1
Fecal Coliform (No./100 ml) Instantaneous Maximum	1	< 1	1986.3	< 1	**> 2419.6**	6.3	**> 2419.6**	114.5	1	37.3	**> 2419**	178.2
Nitrate-Nitrite (mg/L) Average Quarterly			26.7			28.85			22.6			43.0

Total Nitrogen (mg/L) Average Quarterly			28.78			31.735			25.5			46.11
Ammonia (mg/L) Average Monthly	0.98	2.545	0.571	2.72	< 0.2335	0.68	0.50	0.25	0.79	0.586	0.424	0.289
TKN (mg/L) Average Quarterly			2.08			2.885			2.90			3.11
Total Phosphorus (mg/L) Average Quarterly			9.6			7.725			13.3			3.42

*The 5/20/2022 DEP Inspection Report indicated potential sampling issue regarding 2022 and earlier composite samples:

- "All composite samples for this facility are to be flow proportional as defined by NPDES Permit No. PA0061093, Part A.II and the Department requests that changes be made to sampling procedures here to meet this requirement. Department staff discussed the use of manual composite samples as an alternative to using a flow proportional controlled auto sampler. If manual composite samples are to be used the Department further requests that a written SOP detailed how this will be accomplished be generated and sent to the Department for review".
- "Department staff also discussed with Mr. DeHaven a significant number of CBOD results with qualifiers and how these qualifiers could affect the validity of the analytical data that they are associated with".

Compliance History

Effluent Violations for Outfall 001, from: April 1, 2022 To: June 30, 2024

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
Fecal Coliform	04/30/24	IMAX	> 2419.6	No./100 ml	10000	No./100 ml
Fecal Coliform	03/31/24	Geo Mean	> 271.7	No./100 ml	2000	No./100 ml
Fecal Coliform	03/31/24	IMAX	> 2419	No./100 ml	10000	No./100 ml
Fecal Coliform	05/31/23	Geo Mean	> 2419.6	No./100 ml	200	No./100 ml
Fecal Coliform	05/31/23	IMAX	> 49.19	No./100 ml	1000	No./100 ml
Fecal Coliform	10/31/22	Geo Mean	> 2192	No./100 ml	2000	No./100 ml
Fecal Coliform	10/31/22	IMAX	> 2419.6	No./100 ml	10000	No./100 ml
Fecal Coliform	08/31/22	Geo Mean	> 2419.6	No./100 ml	200	No./100 ml
Fecal Coliform	08/31/22	IMAX	> 2419.6	No./100 ml	1000	No./100 ml

Fecal Coliform	04/30/22	Geo Mean	> 69.56	No./100 ml	2000	No./100 ml
Fecal Coliform	04/30/22	IMAX	> 2419	No./100 ml	10000	No./100 ml
TSS	12/31/22	Avg Mo	35.1	mg/L	30.0	mg/L

Summary of Inspections:

FACILITY NAME	INSP PROGRAM	INSP ID	INSPECTED DATE	INSP TYPE	INSPECTION RESULT DESC	# OF VIOLATIONS
MONROE CAREER & TECH INSTITUTE	WPCNP	3014495	05/20/2022	Administrative/File Review	No Violations Noted	0
MONROE CAREER & TECH INSTITUTE	WPCNP	2533912	11/22/2021	Compliance Evaluation	No Violations Noted	0
MONROE CAREER & TECH INSTITUTE	WPCNP	2867781	05/14/2020	Administrative/File Review	Violation(s) Noted	2
MONROE CAREER & TECH INSTITUTE	WPCNP	3289488	03/25/2020	Administrative/File Review	Viol(s) Noted & Immediately Corrected	1
MONROE CAREER & TECH INSTITUTE	WPCNP	3368745	03/18/2019	Compliance Evaluation	No Violations Noted	0
MONROE CAREER & TECH INSTITUTE	WPCNP	3033836	04/12/2018	Administrative/File Review	No Violations Noted	0
MONROE CAREER & TECH INSTITUTE	WPCNP	2718025	11/03/2016	Compliance Evaluation	No Violations Noted	0

Other Comments:

- **8/14/2024 NOV**: Issued for repeated fecal coliform violations. Response due in 15 days.
- **2/24/2023 NOV**: Issued for repeated fecal coliform violations, etc. NPDES Permit Application contained response to a 2/24/2023 NOV. The Applicant response discussed TSS exceedances, Fecal Coliform exceedances, late EDMR reporting, responses to May 2022 Inspection comments (other than rusting issues), EDMR reported informational issues, lab sample holding time exceedances, and a 11/22/2021 SSO event (manhole directly upstream of STP). Rick Barz (Supervisor of Building and Grounds) signed the letter response. See also EDMR section also exceedances or “E” reporting.
- **3/18/2019 NOV**: NOV for exceedances (TSS, CBOD5, Fecal coliforms) and DMR reporting issues (missing supplemental reports, late DMR submittals)

Compliance History: One open violation per 10/3/2024 WMS Query (open violations by client number):

CLIENT	INSP PROGRAM	INSP ID	VIOLATION ID	VIOLATION DATE	VIOLATION CODE	VIOLATION
MONROE CAREER & TECH INST	WPC NPDES	3813901	8197827	08/14/2024	92A.44	NPDES - Violation of effluent limits in Part A of permit

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .015
Latitude 41º 1' 3.00" **Longitude** -75º 17' 10.00"
Wastewater Description: Sewage Effluent

Permit Limits/Monitoring (changes bolded)

Parameter	Limit (mg/l unless otherwise specified)	SBC	Model/Basis
$CBOD_5$	**Report (lbs/d)** **Report (lbs/d)** 25.0 **50.0** 50.0	**Monthly Average** **Daily Max** Monthly Average **Daily Max** IMAX	Existing Technology limit (Chapter 92a.47) Application Data: 8.4 mg/l max and 5.41 mg/l average
CBOD5 percent reduction	**Report (%)**	**Minimum Monthly Average**	**New DRBC Docket requirement (Chapter 92a.12)**
Influent CBOD5 monitoring (Raw Sewage)	**Report (lbs/d)** **Report (lbs/d)** **Report** **Report**	**Monthly Average** **Daily Max** **Monthly Average** **Daily Max**	**New DRBC Docket requirement (sampling paired with CBOD5 effluent sampling). (Chapter 92a.12)**
TSS	**Report (lbs/d)** **Report (lbs/d)** 30.0 **60.0** 60.0	**Monthly Average** **Daily Max** Monthly Average **Daily Max** IMAX	Existing Technology limit (Chapter 92a.47) Application Data: 47.1 mg/l max and 14.9 mg/l (average)
Dissolved Oxygen (DO)	5.0	Inst. Minimum	Existing WQBEL Application Data: No data
pH	6.0 – 9.0 SU	Inst. Min - IMAX	Existing Technology limit (Chapter 92a.47) Application Data: 6.3 – 8.2 SU
Fecal Coliform (5/1 – 9/30)	200/100 ml 1,000/100 ml	Geo Mean IMAX	Existing Technology limit (Chapter 92a.47) Application Data: 2419.6/100 ml max and 472.2/100 ml average EDMR: See EDMR data for assorted exceedances.
Fecal Coliform (10/1 – 4/30)	2,000/100 ml 10,000 ml/100 ml	Geo Mean IMAX	Existing Technology limit (Chapter 92a.47)
E Coli	**Report (#/100 ml)**	**IMAX**	**New Annual monitoring requirement due to Chapter 93 WQS.**
Total Residual Chlorine **(Interim)**	0.36 1.20	Average Monthly IMAX	**Interim based on** Existing WQBELs. Application Data: 0.225 mg/l max and 0.167 mg/l average
Total Residual Chlorine **(Final)**	**0.26** **0.87**	Average Monthly IMAX	**New WQBEL based updated TRC Spreadsheet.** Application Data: 0.225 mg/l max and 0.167 mg/l average. Application data indicates the facility can meet the new limits. Most recent 12-month EDMR period shows one exceedance of new limits in 12 months. However, the facility proposes to resolve

			long-term pattern of fecal coliform exceedances by increasing chlorine concentrations in the chlorine tank, with subsequent de-chlorination (with pilot study proposed to select de-chlorination method). Therefore, 2-year schedule of compliance included for new limits.
Ammonia-Nitrogen (May 1 - Oct 31)	**Report (lbs/d)** **Report (lbs/d)** 3.0 **6.0** 6.0	**Monthly Average** **Daily Max** Monthly Average **Daily Max** IMAX	Existing WQBEL limit Application Data: 3.79 mg/l max and 1.05 mg/l average
Ammonia-Nitrogen (Nov 1 - Apr 30)	**Report (lbs/d)** **Report (lbs/d)** 9.0 **18.0** 18.0	**Monthly Average** **Daily Max** Monthly Average **Daily Max** IMAX	See above.
Total Phosphorus	**Report (lbs/d)** **Report (lbs/d)** Report **Report**	**Quarterly Average** **Daily Max** Quarterly Average **Daily Max**	Existing quarterly monitoring requirement Application Data: 13.3 mg/l max and 6.9 mg/l average
Total Nitrogen*	**Report (lbs/d)** **Report (lbs/d)** Report **Report**	**Quarterly Average** **Daily Max** Quarterly Average **Daily Max**	Existing quarterly monitoring requirement Application Data: 46.11 mg/l max and 31.4 mg/l average
TKN	**Report (lbs/d)** **Report (lbs/d)** Report **Report**	**Quarterly Average** **Daily Max** Quarterly Average **Daily Max**	Existing quarterly monitoring requirement
Nitrate- Nitrite-N	**Report (lbs/d)** **Report (lbs/d)** Report **Report**	**Quarterly Average** **Daily Max** Quarterly Average **Daily Max**	Existing quarterly monitoring requirement
TDS	**Report (lbs/d)** **Report (lbs/d)** **Report** **Report**	**Quarterly Average** **Daily Max** **Quarterly Average** **Daily Max**	**New DRBC Docket requirement (Chapter 92a.12)**

*Total Nitrogen = Nitrate-Nitrite-N + Total Kjeldahl Nitrogen, where measured in the same sample.

Comments:

- Adding mass loading reporting and daily max limits (set equal to IMAX limit).
- Due to highly variable school flows, the flow rate monitoring has been changed from weekly to “daily when discharging” (i.e. they need to monitor and record the rate of discharge when discharging since weekly measurement might be biasing results due to different loadings on different school days).

WQM Model 7.1.1 Output: Existing limits are adequately protective:

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
01E	4791	Trib 04791 to Pocono 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)
1.130	MCTI STP	PA0061093	0.015	CBOD5	25		
				NH3-N	3	6	
				Dissolved Oxygen			5

MCTIWQModel.pdf

TRC Spreadsheet: More stringent TRC limits needed to protect the waters of the Commonwealth.

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9 — Monroe County Technical Institute STP

0.041	= Q stream (cfs)	0.5	= CV Daily
0.015	= Q discharge (MGD)	0.5	= CV Hourly
30	= no. samples	1	= AFC_Partial Mix Factor
0.3	= Chlorine Demand of Stream	1	= CFC_Partial Mix Factor
0	= Chlorine Demand of Discharge	15	= AFC_Criteria Compliance Time (min)
1.2	= BAT/BPJ Value	720	= CFC_Criteria Compliance Time (min)
0	= % Factor of Safety (FOS)		=Decay Coefficient (K)

Source	Reference	AFC Calculations	Reference	CFC Calculations
TRC	1.3.2.iii	WLA afc = 0.583	1.3.2.iii	WLA cfc = 0.560
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 0.217	5.1d	LTA_cfc = 0.326

Source		Effluent Limit Calculations	
PENTOXSD TRG	5.1f	AML MULT = 1.231	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.267	AFC
		INST MAX LIMIT (mg/l) = 0.874	

Anti-Degradation: No additional degradation is expected in the absence of any new, additional, or increased flows/loading, with the facility continuing to investigate de-chlorination options to eliminate any chlorine-caused degradation.