Pennsylvania Department of Environmental Protection

Northeast Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0063401**
Facility Type	**Non-Municipal**	APS ID	**536544**
Major / Minor	**Minor**	Authorization ID	**1445114**

Applicant and Facility Information

Applicant Name	**Monteforte Enterprises, Inc.**	Facility Name	**Monteforte Enterprises, Inc. Wastewater Treatment Facility**
Applicant Address	1491 Oliver Road	Facility Address	1491 Oliver Road
	New Milford, PA 18834-7516		New Milford, PA 18834
Applicant Contact	Ireno Monteforte, President/Treasurer	Facility Contact	Ireno Monteforte, President/Treasurer
Applicant Phone	(570) 465-4567	Facility Phone	(570) 465-4567
Client ID	64952	Site ID	256546
Ch 94 Load Status	Not Overloaded	Municipality	New Milford Township
Connection Status	-	County	Susquehanna
Date Application Received	June 26, 2023	EPA Waived?	Yes
Date Application Accepted	July 27, 2023	If No, Reason	-

Purpose of Application: Renewal of NPDES permit for discharge of treated sewage.

Summary of Review

The applicant is requesting the renewal of an NPDES permit to discharge up to 0.06 MGD of treated sewage into an Unnamed Tributary to Nine Partners Creek, a Cold-Water Fishery, Migratory Fish (CWF, MF) receiving stream in State Water Plan Basin 4-F (Tunkhannock Creek). As per the Department's current existing use list, the receiving stream does not have an existing use classification that is more protective than its designated use. This stream segment is not designated as a naturally reproducing trout stream as per PA Fish & Boat Commission. This discharge is not expected to affect public water supplies.

Limitations for pH, Dissolved Oxygen (DO), $CBOD_5$, Total Suspended Solids (TSS), and Fecal Coliform are technology-based and carried over from the previous permit.

Limitations for Ammonia-Nitrogen are water quality-based and carried over from the previous permit. WQM 7.0 modeling did not recommend stricter limits.

WQM Permit 5899401 A-1 was issued on March 24, 2023 for the installation/construction of a UV disinfection unit and WQM Permit 5899401 A-2 was issued on October 26, 2023 for the installation of a mechanical bar screen. As of the sewage inspection report dated June 25, 2024, both the UV disinfection unit and mechanical bar screen has been installed.

The Total Residual Chlorine (TRC) Calculation Spreadsheet recommends a slightly stricter IMAX limitation than the previous permit. eDMR data from September 2023 to August 2024 (seen on pages 4 and 5 of this Fact Sheet) indicates that the facility is consistently at 0.01 mg/L TRC due to the installation of the UV Disinfection Unit. The TRC average monthly effluent limitation has been removed because the facility utilizes UV disinfection as the primary disinfection method. In the event the facility uses chlorine for cleaning purposes or as a back-up disinfection option, Total Residual Chlorine (TRC) should be sampled "daily when discharging" (see requirements under Part C.I.E).

Approve	Deny	Signatures	Date
X		/s/ Allison S. Zukosky / Project Manager	October 15, 2024
X		/s/ Amy M. Bellanca, P.E. / Acting Engineer Manager	10-28-24

Summary of Review

The Nitrate as N limitations and semi-annual groundwater monitoring requirements (at MW1, MW2, and MW3A for Nitrate as N, Nitrite as N, Total Nitrogen, Specific Conductance, and TDS) were previously established by the Department's Hydrogeologist and will be retained in this renewal.

The annual monitoring and reporting for Total Nitrogen, Total Phosphorous, Total Kjeldahl Nitrogen, and Nitrate-Nitrite as N has been maintained in this permit.

The monthly monitoring/reporting for Nitrite as N and Nitrate-Nitrite as N has also been maintained due to the numerous violations for Nitrate and because of the large variations in values from month to month. Only requiring the annual sample result may not be accurate for the facility. A Municipal Wasteload Management Report is required by Chapter 94.

Chapter 94 Monitoring/ Reporting requirements have been added for this facility. This includes the addition of influent monitoring/reporting for TSS and BOD_5. A 2/month monitoring frequency has been applied to be consistent with the discharge sampling frequency. A "Sewage Sludge Management Inventory" and Municipal Wasteload Management Report will be required to be submitted annually. Please refer to Part C. II. C. of the draft NPDES permit.

Sewage discharges now require monitoring and reporting for E. Coli. A monitoring frequency of 1/month for design flows >= 1 MGD, 1/quarter for design flows >= 0.05 and < 1 MGD, 1/year for design flows of 0.002 – 0.05 MGD will be utilized.

For this permit renewal, all monitoring frequencies for parameters with limitations are consistent with the Department's *Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits* (document no. 362-0400-001).

There are no representative stream gages in the vicinity of the outfall and the drainage area at Outfall 001 is too small for USGS StreamStats to estimate accurate low flow values. Therefore, the default Low Flow Yield (LFY) of 0.1 cfs/mi^2 was used to model the discharge. For modeling inputs, RMI values were obtained using the "PA Historic Streams" feature of eMapPA, drainage areas were delineated using USGS's StreamStats Interactive Map, and elevations were obtained using the elevation profile feature of StreamStats.

Note that this facility was historically evaluated by the Department as a dry stream in accordance with applicable guidance in place at the time (see requirements under Part C.I.F).

The existing permit expired on January 31, 2024 and the application for renewal was received on time.

A Water Management System Inspection query indicated that on June 25, 2024 a Routine/Partial Inspection was performed.

There are currently no open violations for this client that warrant withholding issuance of this permit.

Sludge use and disposal description and location(s): As per the permittee's NPDES Renewal Application, sludge is hauled to the Montrose Wastewater Treatment Plant in Montrose, PA by Hallstead Sanitary Service.

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)	0.06
Latitude	41º 49' 20.00"	Longitude	-75º 40' 54.00"
Quad Name	0440	Quad Code	Harford
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary to Nine Partners Creek	Stream Code	29153
NHD Com ID	66393043	RMI	1.46
Drainage Area	0.78 mi^2	Yield (cfs/mi^2)	0.1
Q_{7-10} Flow (cfs)	0.078	Q_{7-10} Basis	State-wide default
Elevation (ft)	1,486	Slope (ft/ft)	-
Watershed No.	4-F	Chapter 93 Class.	CWF, MF
Existing Use	-	Existing Use Qualifier	-
Exceptions to Use	-	Exceptions to Criteria	-
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment	-		
Source(s) of Impairment	-		
TMDL Status	-	Name	-
Nearest Downstream Public Water Supply Intake	United Water Pennsylvania		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	-
PWS RMI	61.2	Distance from Outfall (mi)	~ 178

Treatment Facility Summary

Treatment Facility Name: Monteforte Enterprises

WQM Permit No.	Issuance Date	Project
5899401 A-2	10/26/2023	Automatic bar screen
5899401 A-1	3/24/2023	UV Disinfection
5899401	11/03/1999	Original Permit

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Sequencing Batch Reactors	Ultraviolet	0.0261 (2020-2022)

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.06	134	Not Overloaded	Holding Tank	Hauled

Compliance History

DMR Data for Outfall 001 (from September 1, 2023 to August 31, 2024)

Parameter	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24	FEB-24	JAN-24	DEC-23	NOV-23	OCT-23	SEP-23
Flow (MGD) Average Monthly	0.03001	0.02831	0.02547	0.02556	0.02755	0.02632	0.02209	0.02497	0.02677	0.02364	0.02864	0.02796
Flow (MGD) Daily Maximum	0.03825	0.03853	0.03719	0.03883	0.05124	0.03787	0.04643	0.03861	0.04805	0.03967	0.04695	0.04699
pH (S.U.) Instantaneous Minimum	7.0	7.1	7.2	7.4	7.4	7.3	7.1	7.8	7.8	7.8	7.9	7.4
pH (S.U.) Instantaneous Maximum	7.6	7.8	7.8	7.8	7.8	7.7	7.7	8.2	8.2	8.3	8.2	8.2
DO (mg/L) Instantaneous Minimum	5.21	5.22	5.09	5.48	5.19	6.8	5.38	5.29	5.24	5.28	5.29	5.19
TRC (mg/L) Average Monthly	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
TRC (mg/L) Instantaneous Maximum	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
CBOD5 (mg/L) Average Monthly	2.999	7.64	4.26	5.48	4.515	6.18	4.55	3.00	2.55	3.00	3.00	3.91
TSS (mg/L) Average Monthly	4.00	3.80	3.60	3.25	1.60	2.60	12.32	1.60	3.20	1.80	2.00	3.20
Fecal Coliform (No./100 ml) Geometric Mean	16.895	25.799	14.148	8.56272	3.2071	7.5361	10.86	11.215	2.06	4.1935	5.27	13.26
Fecal Coliform (No./100 ml) Instantaneous Maximum	17.6965	29.50	20.861	12.4056	5.0199	11.9542	14.2	11.536	2.28	4.443	6.693	16.13
Nitrate-Nitrite (mg/L) Annual Average									6.37			
Nitrate-Nitrite (mg/L) Average Monthly	21.10	19.854	18.221	18.32	5.018	11.214	12.34	6.034	6.593	6.191	8.778	12.40
Total Nitrogen (mg/L) Annual Average									0.2428			
Ammonia (mg/L) Average Monthly	0.100	0.5843	0.1268	0.1105	0.3877	0.6635	0.3472	1.9979	0.100	0.1000	0.100	0.11

Nitrate (mg/L) Average Monthly	19.90	19.18	18.000	18.12	4.818	11.014	12.32	5.834	6.393	5.991	8.678	12.20
Nitrate (mg/L) Instantaneous Maximum	19.57	20.14	18.59	20.51	4.818	14.16	12.32	5.834	6.393	5.991	8.678	12.20
Nitrite (mg/L) Average Monthly	0.200	0.674	0.221	0.200	0.20	0.20	0.02	0.200	0.200	0.200	0.200	0.20
TKN (mg/L) Annual Average									0.500			
Total Phosphorus (mg/L) Annual Average									0.482			

Compliance History

Effluent Violations for Outfall 001, from: October 1, 2023 To: August 31, 2024

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
Nitrate	06/30/24	Avg Mo	18.000	mg/L	10.0	mg/L
Nitrate	07/31/24	Avg Mo	19.18	mg/L	10.0	mg/L
Nitrate	05/31/24	Avg Mo	18.12	mg/L	10.0	mg/L
Nitrate	02/29/24	Avg Mo	12.32	mg/L	10.0	mg/L
Nitrate	08/31/24	Avg Mo	19.90	mg/L	10.0	mg/L
Nitrate	03/31/24	Avg Mo	11.014	mg/L	10.0	mg/L
Nitrate	05/31/24	IMAX	20.51	mg/L	20.0	mg/L
Nitrate	07/31/24	IMAX	20.14	mg/L	20.0	mg/L

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .006
Latitude 41º 49' 24.00" **Longitude** -75º 40' 54.00"
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
$CBOD_5$	25.0	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	50.0	IMAX	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30.0	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	60.0	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)
Dissolved Oxygen	5.0	Minimum	-	BPJ
E. Coli	Report	IMAX	-	92a.61

Water Quality-Based Limitations

The following limitations were determined through water quality modeling:

Parameter	Limit (mg/l)	SBC	Model
Total Residual Chlorine	0.43	Average Monthly	TRC Calculation Spreadsheet
Ammonia-Nitrogen Nov 1 - Apr 30	3.9	Average Monthly	Previous permit/modeling
	7.8	IMAX	
Ammonia-Nitrogen May 1 - Oct 31	1.3	Average Monthly	
	2.6	IMAX	
Nitrate as N	10.0	Average Monthly	
	20.0	IMAX	
Nitrite an N	Report	Average Monthly	Previous Permit
Nitrate-Nitrite as N	Report	Average Monthly	
	Report	IMAX	
Total Nitrogen	Report	IMAX	
Total Kjeldahl Nitrogen	Report	IMAX	
Total Phosphorus	Report	IMAX	

Anti-Backsliding

No limitations were made less stringent.

Modeling Using USGS StreamStats:

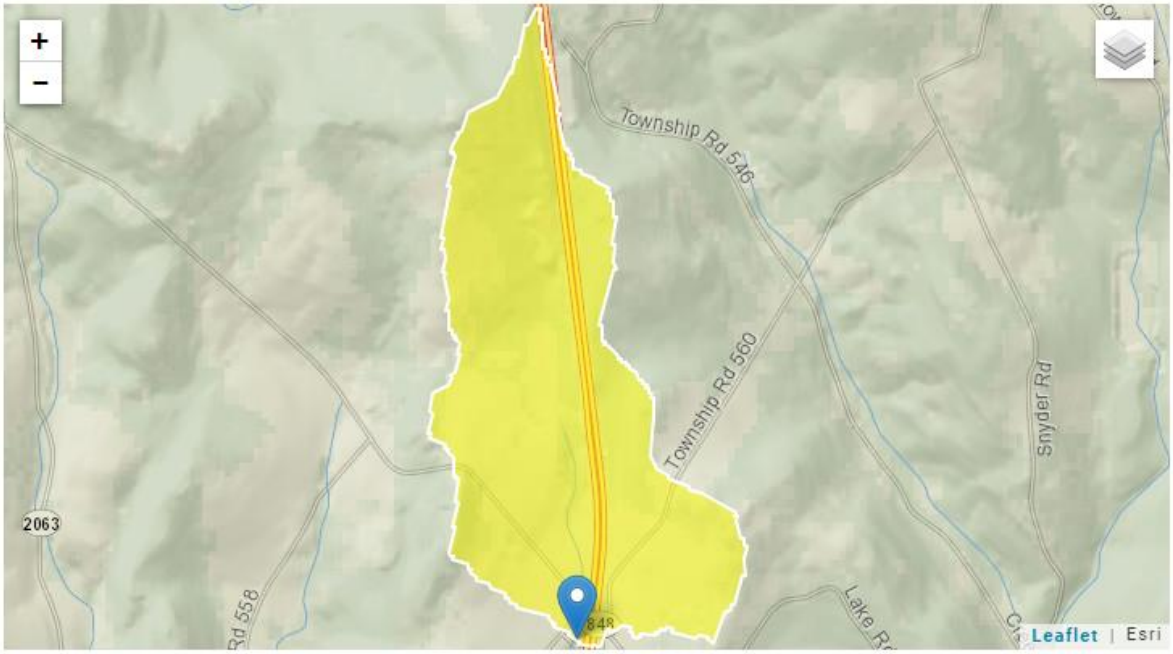
At Outfall 001 on Unnamed Tributary to Nine Partners Creek:

RMI	Elevation (ft)	Drainage Area (mi^2)	Q_{7-10} Flow (cfs)
1.46	1,486	0.78	0.00627

$$Low\ Flow\ Yield\ using\ StreamStats = \frac{0.00627\ ft^3/sec}{0.78\ mi^2} = \mathbf{0.008}\ \frac{\boldsymbol{ft^3/sec}}{\boldsymbol{mi^2}}$$

StreamStats Report

Region ID: PA
Workspace ID: PA20241007170646883000
Clicked Point (Latitude, Longitude): 41.82309, -75.68132
Time: 2024-10-07 13:07:13 -0400



Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.78	square miles

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

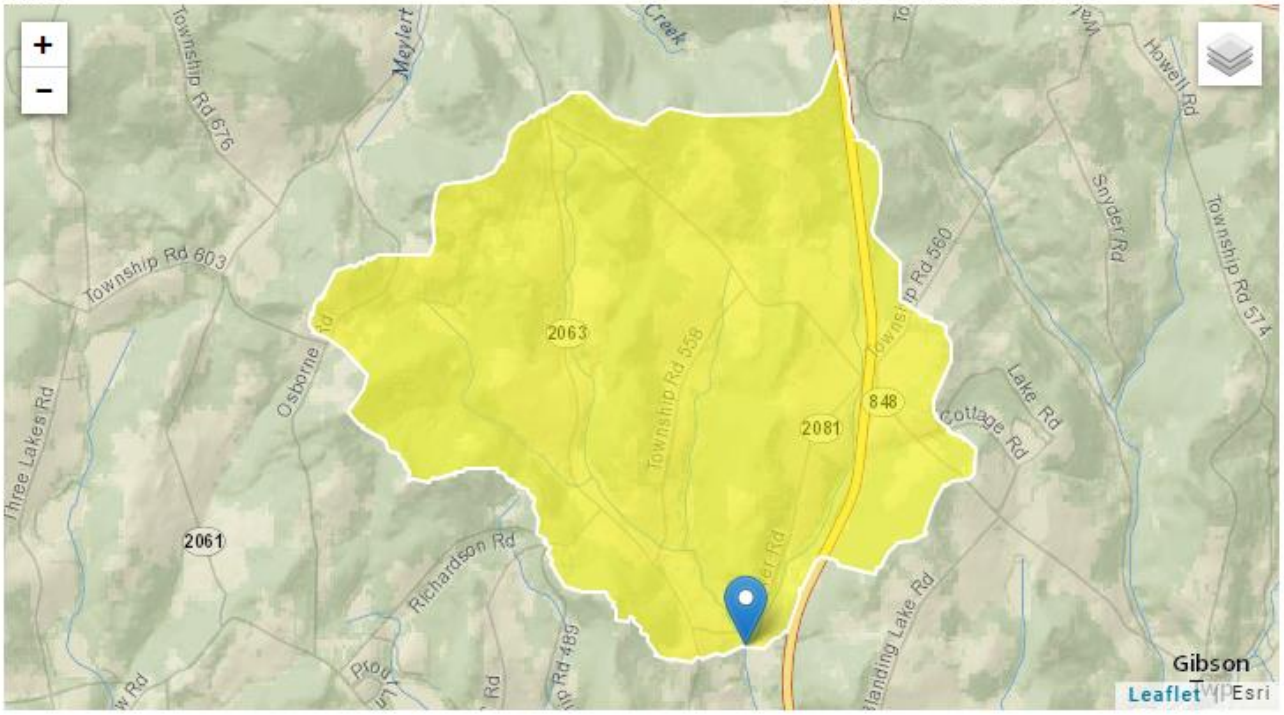
Statistic	Value	Unit
7 Day 2 Year Low Flow	0.0268	ft^3/s
30 Day 2 Year Low Flow	0.0435	ft^3/s
7 Day 10 Year Low Flow	0.00627	ft^3/s

At confluence with Martins Creek (4680):

RMI	Elevation (ft)	Drainage Area (mi^2)
0.0 6.97 (on Nine Partners Creek)	1,207.57	6.00

StreamStats Report

Region ID: PA
Workspace ID: PA20241007173324761000
Clicked Point (Latitude, Longitude): 41.80488, -75.69237
Time: 2024-10-07 13:33:50 -0400



Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	6	square miles

Using the state-wide Low-Flow Yield (LFY) of 0.1 cfs/mi^2:

$$\frac{0.1\ ft^3/sec}{mi^2} \times 0.78\ mi^2 = \frac{\mathbf{0.078\ ft^3}}{\mathbf{sec}}$$

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
04F	29153	Trib 29153 to Nine Partners 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)
1.460	Monteforte	PA0063401	0.060	CBOD5	25		
				NH3-N	3.47	6.94	
				Dissolved Oxygen			3

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

0.078	= Q stream (cfs)	0.5	= CV Daily
0.06	= 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)
0.5	= 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 = 0.287	1.3.2.iii	WLA cfc = 0.272
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 0.107	5.1d	LTA_cfc = 0.158

Source		Effluent Limit Calculations	
PENTOXSD TRG	5.1f	AML MULT = 1.231	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.132	AFC
		INST MAX LIMIT (mg/l) = 0.431	

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)

WQM 7.0 Monteforte 2024.pd

TRC Calculation Spreadsheet.pdf

Sewage Inspection Report 6-25-2024.PD

Pennsylvania
Department of
Environmental Protection

Approve	Deny	Signatures	Date
X		/s/ Allison S. Zukosky / Project Manager	October 15, 2024
X		/s/ Amy M. Bellanca, P.E. / Acting Engineer Manager	10-28-24