pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northwest Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0239160**
Facility Type	**Municipal**	APS ID	**985367**
Major / Minor	**Minor**	Authorization ID	**1259768**

Applicant and Facility Information

Applicant Name	**McCalmont Township**	Facility Name	**McCalmont Township WWTP**
Applicant Address	PO Box 255 127 Firehouse Lane	Facility Address	127 Firehouse Lane
	Anita, PA 15711-0255		Anita, PA 15711
Applicant Contact	Carolyn Heitzenrater	Facility Contact	Vincent Hess
Applicant Phone	(814) 938-9711	Facility Phone	(814) 938-9711
E-Mail	pxychas@verizon		
Client ID	75798	Site ID	613542
Municipality	McCalmont Township	County	Jefferson
Ch 94 Load Status	Not Overloaded	Connection Status	No Limitations
SIC code	4952	SIC Description	Sewage treatment
Application Received	January 25, 2019	EPA Waived?	Yes
Application Accepted	February 15, 2019	If No, Reason	

Purpose of Application: POTW NPDES permit renewal

Summary of Review

In compliance as of May 2, 2019 when an October 18, 2018 when a storage tank performance violation was corrected. High effluent CBOD5 report in April 2020, high fecals in June 2020 and high ammonia in May 2020.

DO, pH

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 3, 2020
X		Justin C. Dickey Justin C. Dickey, P.E. Environmental Engineer Manager	September 14, 2020

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.097
Latitude NHD	40º 59' 38.74"	Longitude NHD	-78º 58' 19.02"
Latitude DP	40º 59' 39.00"	Longitude DP	-78º 58' 20.00"
Quad Name	Punxsutawney	Quad Code	1114
Wastewater:	Treated municipal sanitary sewer wastes		

Receiving Waters	Elk Run	Stream Code	47783
NHD Com ID	123852323	RMI	3.6900
Drainage Area	6.7	Yield (cfs/mi^2)	0.023
Q_{7-10} Flow (cfs)	0.15	Q_{7-10} Basis	Little Mahoning Creek
Elevation (ft)	1334.73	Slope (ft/ft)	0.0124
Watershed No.	17-D	Chapter 93 Class.	CWF
Existing Use	**statewide**	Existing Use Qualifier	none
Exceptions to Use	none	Exceptions to Criteria	none
Comments	Data at mouth: Drainage 12.9-square miles Elevation 807.40-feet		

Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status		Name	

Background/Ambient Data		Data Source
pH (SU)		
Temperature (°F)		
Hardness (mg/L)		
Other:		

Nearest Downstream Public Water Supply Intake	Pa Am Kittaning		
PWS Waters	Allegheny River	Flow at Intake (cfs)	NA
PWS RMI	48	Distance from Outfall (mi)	42

Changes Since Last Permit Issuance: none

Other Comments: none

Treatment Facility Summary

Treatment Facility Name: Mccalmont Township WWTP

WQM Permit No.	Issuance Date
3303401	23 September 2003
3303401 A1	19 May 2011
3304401	4 February 2005

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Activated Sludge	Ultraviolet	0.097

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.097	194.2	Not Overloaded	Gravity Thickening	Off-site

Changes Since Last Permit Issuance: none

Other Comments:

WQM 3304401 was issued to Young Township on 4 February 2005 for an 80-gpm Adrian Mines pump station and sanitary sewers. The application is dated 7 October 2004. Issued with 2004 sewerage conditions 1, 2, 4, 5, 6,8, 9, 11,12, 13, 14, 17, 18, 19, 20, 21. 23, 24, and 26.

WQM 3303401 A-1 was issued on 19 May 2011. The engineer's certificate is dated 24 October 2011 and was received on 26 October 2011. Noted as not completed was an influent composite sampler UV/Post aeration tank sump pump. **This permit is for 0.098-MGD and 196.2-PPD.** The design is the manufacturer's system rating.

With the additional proposed monitoring the influent composite sampler will be needed and may be already installed.

WQM permit is for a 32 894-gallon equalization tank, 2 aeration tanks with a 98 502-gallon total capacity, clarifier geyer pumps, chemical feed (alkalinity), clarifier covers, post aeration tank sump pumps, influent and effluent composite samplers; 32 834-gallon aerobic digester. The application is dated 3 January 2011 and was revised on 7 March 2011 and 6 April 2011. This is a modification to WQM permit 3303401 issued on 23 September 2003. Issued with 2001 sewerage conditions 1, 2, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 17, 18, 19, 20, 21, 22, 23, 24, 25, and 26.

WQM permit 3303401 was issued on 23 September 2003 based on an application dated 4 December 2002 and revised on 14 May 2003. The permit was for (collection) 33 000-feet 8-inch gravity sewers, 2 000-feet 4-inch laterals, 163-gpm pump station with forch main, and 6 grinder pump stations; (treatment) aerated equalization with comminution, bypass bar screen, and two submersible pumps, two diffused aeration chambers, to clarifier chambers, UV disinfection, and flow meter. Design is for 0.097-MGD and 194.2 PPD.

Planning approval is for 0.097-MGD and dated 16 April 2002.

Compliance History

DMR Data for Outfall 001 (from April 1, 2018 to March 31, 2019)

Parameter	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18	SEP-18	AUG-18	JUL-18	JUN-18	MAY-18	APR-18
Flow (MGD) Average Monthly	0.031	0.045	0.019	0.023	0.022	0.021	0.034	0.032	0.028	0.029	0.048	0.032
Flow (MGD) Daily Maximum	0.049	0.094	0.042	0.037	0.057	0.029	0.124	0.059	0.041	0.058	0.063	0.061
pH (S.U.) Minimum	6.4	6.1	6.1	6.1	6.1	6.1	6.2	6.4	6.7	6.1	6.5	6.6
pH (S.U.) Maximum	7.3	7.1	7.1	6.8	6.9	6.7	6.9	7.1	7.5	7.1	7.1	7.1
DO (mg/L) Minimum	5.2	5.5	5.4	5.2	5.5	4.9	5.1	4.5	5.0	4.9	5.2	6.0
CBOD5 (lbs/day) Average Monthly	0.8	1.5	0.37	0.47	0.48	0.25	0.39	0.4	0.3	0.43	2.9	2.1
CBOD5 (lbs/day) Weekly Average	0.9	1.6	0.72	0.54	0.66	0.3	0.40	0.4	0.4	0.53	4.3	2.8
CBOD5 (mg/L) Average Monthly	3.5	4.6	2.41	2.8	2.2	1.2	2.2	1.9	1.4	2.3	7.3	4.2
CBOD5 (mg/L) Weekly Average	4.3	6.4	4.16	3.2	2.6	1.24	2.3	2.5	1.87	2.89	11.5	5.5
TSS (lbs/day) Average Monthly	1.3	2.3	< 0.34	0.44	< 0.60	0.8	1.9	1.6	0.9	0.9	2.5	4.0
TSS (lbs/day) Weekly Average	1.4	2.5	1.6	0.47	0.77	0.9	2.1	1.9	1.1	1.2	3.5	6.6
TSS (mg/L) Average Monthly	5.6	6.7	< 2.8	2.7	< 2.8	3.8	10.3	7.1	3.8	5.0	6.7	8.1
TSS (mg/L) Weekly Average	6.4	8.0	3.0	2.8	3.0	4.0	11.2	7.5	4.8	6.4	9.3	13.0
Fecal Coliform (#/100 ml) Geo Mean	10.8	89.6	< 5.8	1.4	2.2	< 1.4	< 7.0	11.8	< 1.0	1.8	< 3.1	< 31.3
Fecal Coliform (#/100 ml) Inst Max	203.4	4839	387	< 2.0	7.4	2.0	2419.6	43.5	1.0	11.0	146.4	1986
UV Intensity (µw/cm²) Average Monthly	74.4	74.4	74.4	74.4	74.3	74.5	74.1	74.4	74.4	74.4	74.4	74.4
Total Nitrogen (mg/L) Average Monthly	24.5			13.9			18.3			13.4		
Ammonia (lbs/day) Average Monthly	2.0	1.5	0.56	1.8	1.4	0.25	0.13	0.05	0.07	0.2	1.5	7.9
Ammonia (mg/L) Average Monthly	8.3	3.3	3.3	10.9	6.3	1.2	0.66	0.24	0.29	1.0	0.34	16.4
Total Phosphorus (mg/L) Ave Monthly	6.11			3.84			7.35			5.82		

DMR Data for Outfall 001 (from August 1, 2019 to July 31, 2020)

Parameter	JUL-20	JUN-20	MAY-20	APR-20	MAR-20	FEB-20	JAN-20	DEC-19	NOV-19	OCT-19	SEP-19	AUG-19
Flow (MGD) Average Monthly	0.041	0.026	0.035	0.031	0.035	0.037	0.035	0.039	0.021	0.022	0.025	0.034
Flow (MGD) Daily Maximum	0.056	0.052	0.060	0.080	0.088	0.086	0.080	0.065	0.034	0.070	0.046	0.046
pH (S.U.) Minimum	6.1	6.4	6.5	6.1	6.2	6.4	6.1	6.2	6.1	6.1	6.2	6.2
pH (S.U.) Maximum	6.9	7.1	7.0	6.9	7.1	7.2	7.0	6.7	6.7	7.0	7.1	7.4
DO (mg/L) Minimum	4.8	5.3	5.5	4.6	6.3	6.3	5.4	4.4	4.4	4.6	4.6	4.7
CBOD5 (lbs/day) Average Monthly	< 1.7	0.67	1.1	5.4	1.1	2.98	1.2	2.1	0.56	0.28	0.37	0.3
CBOD5 (lbs/day) Weekly Average	2.9	1.1	1.1	6.1	1.6	5.0	1.4	2.7	0.69	0.31	0.42	0.4
CBOD5 (mg/L) Average Monthly	< 5.9	4.1	2.98	**27.2**	4.9	10.28	5.0	5.6	3.9	1.80	1.71	1.5
CBOD5 (mg/L) Weekly Average	9.9	6.2	3.45	**35.0**	6.23	17.3	6.5	5.9	5.5	1.86	2.1	1.64
TSS (lbs/day) Average Monthly	< 3.2	< 0.7	< 1.2	5.2	1.3	2.7	1.4	4.5	0.93	0.69	1.2	0.8
TSS (lbs/day) Weekly Average	5.8	1.1	1.2	5.3	1.3	4.1	1.5	6.7	1.13	0.73	1.7	1.1
TSS (mg/L) Average Monthly	< 11.3	< 4.3	< 3.25	26.0	6.8	9.25	5.9	11.1	6.50	4.4	5.6	3.2
TSS (mg/L) Weekly Average	20.0	6.0	4.0	30.0	8.67	14.0	7.3	13.0	9.0	4.8	8.4	3.6
Fecal Coliform (#/100 ml) Geometric Mean	< 2.0	10.1	3.2	7.8	3.4	222	16.0	< 1.4	< 2.5	2.1	1.2	3.0
Fecal Coliform (#/100 ml) Instant Maximum	18.9	2420	14.8	172.3	56.5	4839.2	2419	2.0	5.2	43.9	2.0	75.9
UV Intensity (µw/cm²) Average Monthly	74.0	74.8	75.0	74.5	75.0	74.0	75.0	75.0	74.5	74.5	74.5	74.4
Total Nitrogen (mg/L) Average Monthly		0.5			3.41			< 1.0			19.2	
Ammonia (lbs/day) Average Monthly	< 0.21	< 0.27	2.4	0.3	0.10	4.78	0.24	1.7	0.14	0.11	0.8	1.3
Ammonia (mg/L) Average Monthly	< 0.8	< 2.3	6.6	1.37	0.5	16.46	1.0	3.76	3.30	0.67	3.6	6.2
Total Phosphorus (mg/L) Ave Monthly		4.4			4.52			5.48			6.04	

Effluent Violations for Outfall 001, from: September 1, 2019 To: July 31, 2020

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
CBOD5	04/30/20	Avg Mo	27.2	mg/L	18	mg/L
CBOD5	04/30/20	Wkly Avg	35.0	mg/L	27	mg/L
Fecal Coliform	06/30/20	IMAX	2420	CFU/100 ml	1000	CFU/100 ml
Ammonia	05/31/20	Avg Mo	6.6	mg/L	6.5	mg/L

			Influent						Effluent				
month	year	Flow	Min	Mean	Max	Min	Mean	Max	#	Min	Mean	Max	#
		MGD	PPD	PPD	PPD	mg/L	mg/L	mg/L					
Hydraulic Design Flow		**0.097**											
Organic Design Load				**194.2**									
Annual Average	**2017**	**0.034**											
	2016	**0.030**											
	2015	**0.033**											
July	**2017**	**0.047**											
pH			**7.41**		**7.62**					**6.1**		**7.3**	**260**
BOD5			**64**	**74.5**	**86**	**266**	**274**	**366**	**12**	**1.2**	**4.2**	**10.2**	**48**
Fecal Coliform										**< 1**	**135**	**2420**	**78**
TSS			**69**	**69**	**69**	**284**	**284**	**284**	**1**	**< 2.5**	**6.9**	**21**	
Nitrogen			**21.2**	**21.2**	**21.2**	**87.7**	**87.7**	**87.7**	**1**	**6.3**	**13.3**	**23.1**	**10**
Phosphorus			**2.16**	**2.16**	**2.16**	**8.94**	**8.94**	**8.94**	**1**	**2.6**	**4.7**	**6.3**	**8**
Ammonia			**10.6**	**10.6**	**10.6**	**43.7**	**43.7**	**43.7**	**1**	**< 0.04**	**2.5**	**20.6**	
TDS			**81.2**	**81.2**	**81.2**	**487**	**487**	**487**	**1**				
TKN						**87.7**	**87.7**	**87.7**	**1**				
Nitrate-Nitrite						**< 0.25**	**< 0.25**	**< 0.25**	**1**				
Copper										**0.00909**	**0.00909**	**0.00909**	**1**
Lead										**< 0.01**	**< 0.01**	**< 0.01**	**1**
Zinc										**0.128**	**0.128**	**0.128**	**1**

4.03 dry tons sludge sent to the Punxsutawney WWTP.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .097
Latitude 40º 59' 39.00" **Longitude** -78º 58' 20.00"
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)
DO	4			BPJ

Water Quality-Based Limitations

A Sewerage Program based “Reasonable Potential Analysis” determined the following parameters were candidates for limitations: CBOD5, TSS, nitrogen, ammonia, phosphorus, and pH. Nitrogen and phosphorus are to be monitored as part of a treatability study.

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
CBOD5			18.0	36.0			25.0	50.0
Ammonia	Summer		6.5	13.0			6.01	12.02
	Winter		19.5	39.0			18.03	36.06
DO		4.0				4.0		
pH		6.0		9.0		6.0		9.0

Best Professional Judgment (BPJ) Limitations

Comments: DO only

Anti-Backsliding

As a single monthly and weekly average CBOD5 violations occurred in April CBOD 5 is a candidate. No action is proposed as the change is not large enough to provide monthly average compliance.

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	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/week	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	4.0 Daily Min	XXX	XXX	XXX	1/day	Grab
CBOD5	14.5	21	XXX	18.0	27.0	36.0	2/month	8-Hr Composite
TSS	24.0	36.0	XXX	30.0	45.0	60.0	2/month	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	1/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/week	Grab
UV Intensity (µw/cm²)	XXX	XXX	XXX	Report	XXX	XXX	1/day	Measured
Total Nitrogen	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	8-Hr Composite
Ammonia Nov 1 - Apr 30	15.8	XXX	XXX	19.5	XXX	39.0	2/month	8-Hr Composite
Ammonia May 1 - Oct 31	5.3	XXX	XXX	6.5	XXX	13.0	2/month	8-Hr Composite
Total Phosphorus	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	8-Hr Composite

Compliance Sampling Location: Outfall 001 after disinfection