pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0024864**
Facility Type	**Municipal**	APS ID	**768731**
Major / Minor	**Minor**	Authorization ID	**1212374**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Municipal Authority of Westmoreland County**	Facility Name	**Ligonier WPCP**
Applicant Address	PO Box 730	Facility Address	2132 SR 30
	Greensburg, PA 15601-0730		Ligonier, PA 15658
Applicant Contact	Michael Kennedy	Facility Contact	Michael Kennedy
Applicant Phone	724-755-5816	Facility Phone	724-755-5816
Client ID	64197	Site ID	250822
Ch 94 Load Status	Not Overloaded	Municipality	Ligonier Borough
Connection Status	Self Imposed Connection Prohibition	County	Westmoreland
Date Application Received	January 2, 2018	EPA Waived?	Yes
Date Application Accepted	January 4, 2019	If No, Reason	

Purpose of Application: Renewal of NPDES Permit PA 0024864

Summary of Review

This application is for a renewal, which was previously issued on June 6, 2013. The discharge is to Mill Creek, which is classified as a CWF.

WQM Permit No. 461S038-A1 authorized the construction of the plant to treat an average daily design flow of 0.9 MGD. The Plant consists of comminutor, grit chamber, influent wet well, fine screen auger, two SBR tanks, four aerobic digester tanks , sludge thickener tank, effluent wet well, UV disinfection, and belt filter press.

The hydraulic design capacity for this plant is 0.9 MGD. The organic design capacity is 1080 lbs/day. The plant is not projected to be hydraulically and organically overloaded.

The permit application was evaluated based on applicable regulations, policies, procedures and guidelines. Since there have been no changes to the discharge, the receiving stream, or Department Modeling Policies, most of the limitations are kept the same. The annual monitoring and reporting of Total Nitrogen and Total Phosphorous are re- imposed according to Chapter 92a.61. The effluent limits for $CBOD_5$, TSS, DO, pH, NH_3 – N are re-imposed from the previous permit. The monitoring and reporting for Raw Sewage Influent BOD_5, TSS and UV Light Dosage are carried over to this permit from the previous permit. Yearly monitoring for Total Iron, Total Aluminum, and Total Manganese is included in this permit as the discharge is to Kiski-Conemaugh Watershed which is impaired with acid mine drainage and has TMDL for aluminum, iron and manganese. For pH, Dissolved Oxygen (DO), and UV Light Dosage, a monitoring frequency of “1/day” has been imposed in this permit.

The review of recent eDMR reports indicates no effluent violations with this plant. The review of compliance history in eFacts indicates no recent violations of any permit conditions. A Compliance Check Report from Operations dated October 1, 2019 also shows no current violations and/ or any compliance issues with his facility.

Approve	Deny	Signatures	Date
X		/s/ Harris Mahmud/ Permit Reviewer	October 1, 2019
X		/s/ Donald J. Leone, P.E. / Environmental Engineer Manager	10/2/19

Summary of Review
The applicant has complied with Act 14 Notifications. 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. Previous Pollution Report:  PREV_POLLU_REP_PA0024864

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.9
Latitude	40º 14' 53"	Longitude	-79º 14' 59"
Quad Name	Ligonier	Quad Code	1712
Wastewater Description:	Sewage Effluent		
Receiving Waters	Mill Creek	Stream Code	43675
NHD Com ID	125294222	RMI	0.2
Drainage Area	33.2 sq.mi.	Yield (cfs/mi^2)	0.06
Q_{7-10} Flow (cfs)	1.992	Q_{7-10} Basis	W.R. Bulletin 12, Sta. 03044700, Pg. 374
Elevation (ft)		Slope (ft/ft)	
Watershed No.	18-C	Chapter 93 Class.	CWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Attaining Uses		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status	Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL

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

Nearest Downstream Public Water Supply Intake		Latrobe Municipal Authority	
PWS Waters	Impoundment – Loyalhanna Reservoir	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	

Changes Since Last Permit Issuance:

Other Comments:

Treatment Facility Summary

Treatment Facility Name: Ligonier WPCP

WQM Permit No.	Issuance Date
461S38	6/30/1963
461S38 A-1	4/15/1998

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary With Ammonia Reduction	Sequencing Batch Reactor	Ultraviolet	0.9

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.9	1080	Not Overloaded	Aerobic Digestion	Land Application

Changes Since Last Permit Issuance: None

Other Comments: The plant was organically overloaded once in last 5 years based on 2018 Chapter 94 Report.

Compliance History	
Summary of DMRs:	The review of recent eDMR reports indicates no effluent violations with this plant
Summary of Inspections:	The review of compliance history in eFacts indicates no recent violations of any permit conditions. A Compliance Check Report from Operations dated October 1, 2019 also shows no current violations and/ or any compliance issues with his facility.

Other Comments: None

Compliance History

DMR Data for Outfall 001 (from August 1, 2018 to July 31, 2019)

Parameter	JUL-19	JUN-19	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18	SEP-18	AUG-18
Flow (MGD) Average Monthly	0.572	0.656	0.7952	0.527	0.446	1.051	0.649	0.663	0.701	0.808	0.961	0.455
Flow (MGD) Daily Maximum	2.061	1.574	2.511	0.789	0.565	2.639	1.618	1.108	1.469	2.016	3.960	0.918
pH (S.U.) Minimum	6.9	6.9	6.9	6.9	6.9	6.9	6.8	7.0	7.1	7.2	7.0	7.1
pH (S.U.) Maximum	6.9	6.9	7.2	7.0	7.0	7.0	7.0	7.1	7.2	7.2	7.2	7.2
DO (mg/L) Minimum	5.9	6.3	6.6	8.5	8.9	8.4	7.9	7.5	7.2	6.5	6.2	5.8
CBOD5 (lbs/day) Average Monthly	< 19	26	< 24	21	< 13	< 28	< 14	< 14	< 19	< 16	< 24	37
CBOD5 (lbs/day) Weekly Average	29	37	49	30	20	< 66	< 16	< 17	27	22	50	62
CBOD5 (mg/L) Average Monthly	< 4.0	5.0	< 5.0	6.0	< 4.0	< 3.0	< 3.0	< 3.0	< 3.0	< 3.0	< 4.0	9.0
CBOD5 (mg/L) Weekly Average	7.0	6.0	7.7	10.7	5.4	< 3.0	< 3.0	< 3.0	4.6	3.6	5.0	12.4
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	388	407	395	279	411	520	375	293	385	287	361	533
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	609	471	896	390	512	1100	569	444	709	354	504	658
BOD5 (mg/L) Raw Sewage Influent Average Monthly	89	86	72	85	124	61	81	65	66	55	66	143
TSS (lbs/day) Average Monthly	< 24	< 26	< 26	< 18	< 17	< 47	< 23	< 23	< 28	< 26	< 31	< 21
TSS (lbs/day) Raw Sewage Influent Average Monthly	234	259	323	196	163	165	198	201	152	244	248	371

TSS (lbs/day) Raw Sewage Influent Daily Maximum	402	289	707	266	206	222	264	253	230	592	504	522
TSS (lbs/day) Weekly Average	35	< 36	< 36	< 22	< 18	< 110	< 26	< 28	< 31	< 34	< 50	< 38
TSS (mg/L) Average Monthly	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
TSS (mg/L) Raw Sewage Influent Average Monthly	54	55	60	60	49	26	43	45	27	44	46	93
TSS (mg/L) Weekly Average	7	6	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	5	< 5
Fecal Coliform (CFU/100 ml) Geometric Mean	< 6	< 2	3	< 4	< 1	< 6	< 2	< 2	< 3	< 4	< 2	< 5
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	24	13	26	28	< 1	512	12	16	12	110	13	75
Total Nitrogen (mg/L) Daily Maximum								5.58				
Ammonia (lbs/day) Average Monthly	< 4	< 6	< 4	< 3	< 3	< 8	< 4	< 4	< 5	< 4	< 5	< 3
Ammonia (mg/L) Average Monthly	< 0.8	< 0.8	0.8	< 0.8	< 0.8	< 0.8	< 0.800	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8
Total Phosphorus (mg/L) Daily Maximum								0.91				
UV Dosage (mjoules/cm²) Minimum	8.3	9.3	13.8	11.4	12.4	13.8	13.9	12.5	12.2	7.1	5.1	6.2
UV Dosage (mjoules/cm²) Average Monthly	14	12.3	13.9	12.4	12.5	13.9	14	13.6	12.8	9.3	6.9	6.6

Development of Effluent Limitations

Outfall No.	001	**Design Flow (MGD)**	0.9
Latitude	40º 14' 53"	**Longitude**	-79º 14' 59"
Wastewater Description:	Sewage Effluent		

Technology-Based Limitations

The permit application was evaluated based on applicable regulations, policies, procedures and guidelines. Since there have been no changes to the discharge, the receiving stream, or Department Modeling Policies, most of the limitations are kept the same. The annual monitoring and reporting of Total Nitrogen and Total Phosphorous are re- imposed according to Chapter 92a.61. The effluent limits for $CBOD_5$, TSS, DO, pH, NH_3 – N are re-imposed from the previous permit. The monitoring and reporting for Raw Sewage Influent BOD_5, TSS and UV Light Dosage are carried over to this permit from the previous permit. Yearly monitoring for Total Iron, Total Aluminum, and Total Manganese is included in this permit as the discharge is to Kiski-Conemaugh Watershed which is impaired with acid mine drainage and has TMDL for aluminum, iron and manganese. For pH, Dissolved Oxygen (DO), and UV Light Dosage, a monitoring frequency of "1/day" has been imposed in this permit.

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)
Dissolved Oxygen	5.0	Minimum	-	Chapter 93
Total Nitrogen	Report	Daily Max	-	92a.61
Total Phosphorous	Report	Daily Max	-	92a.61
Total Suspended Solids Raw Sewage Influent	Report	Average Monthly	-	92a.47(a)(3)
BOD5 Raw Sewage Influent	Report	Average Monthly	-	92a.47(a)(3)
UV Light Dosage	Report	Daily Minimum Average Monthly	-	BPJ
Total Iron	Report	Daily Max	122.44(d)(1)(vii)(B)	TMDL
Total Aluminum	Report	Daily Max	122.44(d)(1)(vii)(B)	TMDL
Total Manganese	Report	Daily Max	122.44(d)(1)(vii)(B)	TMDL

Comments: As there is no TRC limit applicable to UV disinfection system, monitoring for UV Light Dosage is the best professional judgment to ensure the best possible water quality of treated sanitary wastewater discharge. Yearly monitoring for Total Iron, Total Aluminum, and Total Manganese is included in this permit as the discharge is to Kiski-Conemaugh Watershed which is impaired with acid mine drainage and has TMDL for aluminum, iron and manganese.

Water Quality-Based Limitations

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

Parameter	Limit (mg/l)	SBC	Model
Ammonia – Nitrogen May 1 - Oct 31	5.0 10.0	Average Monthly IMAX	WQAM63.0
Ammonia – Nitrogen Nov 1 - Apr 30	15.0 30.0	Average Monthly IMAX	WQAM63.0
CBOD5 May 1-31, Oct 1-31	15.0 30.0	Average Monthly IMAX	WQAM63.0
CBOD5 Apr 1-30, Nov 1-30	25 50	Average Monthly IMAX	WQAM63.0
Dissolved Oxygen	5.0	Minimum	WQAM63.0

Comments: $CBOD_5$ and DO limits are also the results of previous WQM63.0 Modeling.

Total Dissolved Solids (TDS) and its Major Constituents

Total Dissolved Solids (TDS) and its major constituents including sulfate, chloride, and bromide have emerged as pollutants of concern in several major watersheds in the Commonwealth. The conservative nature of these solids allows them to accumulate in surface waters and they may remain a concern even if the immediate downstream public water supply is not directly impacted. Bromide has been linked to formation of disinfection byproducts at increased levels in public water systems. Because of actions associated with Triennial Review 13, the Environmental Quality Board has directed DEP to collect additional data. A facility with a design flow greater than or equal to 0.1 mgd are required to report at least one sample analyzed for these parameters. The permit does not include any additional monitoring for TDS, sulfate, chloride, and bromide because the concentration of TDS in the discharge does not exceed 1,000 mg/L (reported as 307 mg/l), the net TDS load from the discharge does not exceed 20,000 lbs/day, and the concentration of Bromide does not exceed 1 mg/l (reported as 0.106 mg/l).

Monitoring of TN and TP

Nutrient monitoring is required to establish the nutrient load from the waste water treatment facility and the impacts that load may have on the quality of the receiving stream. Sewage discharges with design flows greater than 2,000 gpd require monitoring, at a minimum, for TN and TP in new and reissued permits.

Mass Loadings

Mass loading limits are applicable for publicly owned treatment works. Current policy requires average monthly mass loading limits be established for CBOD5, TSS, and NH_3-N and average weekly mass loading limits be established for CBOD5 and TSS. The previous permit contained average weekly mass loading limits for NH3-N and will be carried over to be consistent with the previous permit.

Average monthly mass loading limits (lbs/day) are based on the formula: design flow (MGD) x concentration limit (mg/L) x conversion factor (8.34).

Mass loading limits are not applicable for non-publicly owned treatment works.

Influent Monitoring

For POTWs with design flows greater than 2,000, influent BOD_5 and TSS monitoring must be established in the permit, and the monitoring should be consistent with the same frequency and sample type as is used for other effluent parameters. This is consistent with the previous permit.

Daily Monitoring

A monitoring frequency of once per year is considered acceptable. For pH, Dissolved Oxygen (DO), and UV Dosage, a monitoring frequency of “1/day” has been imposed. In general, less frequent monitoring may be established only when the permittee demonstrates that there will be no discharge on the days when monitoring is not required. The permittee may remain in compliance with the permit by using a No Discharge on the “Daily Effluent Monitoring” supplemental form to identify the lack of discharge on a particular day.

Anti-Backsliding

None of the effluent limits imposed in this permit is less stringent than the previously imposed 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	Weekly Average	Daily Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Recorded
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/day	Grab
CBOD5 Nov 1 - Apr 30	188	282	XXX	25.0	40.0	50	1/week	8-Hr Composite
CBOD5 May 1 - Oct 31	113	169	XXX	15.0	22.5	30	1/week	8-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	8-Hr Composite
TSS	225	338	XXX	30	45	60	1/week	8-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	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
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Ammonia Nov 1 - Apr 30	113	XXX	XXX	15.0	XXX	30	1/week	8-Hr Composite
Ammonia May 1 - Oct 31	38	XXX	XXX	5.0	XXX	10	1/week	8-Hr Composite

Outfall 001, Continued (from 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	Daily Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Total Iron	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Total Aluminum	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
Total Manganese	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/year	Grab
UV Dosage (mjoules/cm^2)	XXX	XXX	Report	Report	XXX	XXX	1/day	Measured

Compliance Sampling Location: Outfall 001

Other Comments: None