

Application Type Renewal  
Facility Type Industrial  
Major / Minor Minor

**NPDES PERMIT FACT SHEET  
INDIVIDUAL INDUSTRIAL WASTE (IW)  
AND IW STORMWATER**

Application No. PA0263567  
APS ID 1006820  
Authorization ID 1297302

**Applicant and Facility Information**

Applicant Name	<u>Ridgway Borough</u>	Facility Name	<u>Ridgway Borough WTP</u>
Applicant Address	<u>P O Box 149</u> <u>Ridgway, PA 15853</u>	Facility Address	<u>Big Mill Curn Reservoir Road</u> <u>Ridgway, PA 15853</u>
Applicant Contact	<u>Josh Quattro</u>	Facility Contact	<u>Josh Quattro</u>
Applicant Phone	<u>(814) 772-6423</u>	Facility Phone	<u>(814) 772-6423</u>
Client ID	<u>66627</u>	Site ID	<u>615646</u>
SIC Code	<u>4941</u>	Municipality	<u>Ridgway Borough</u>
SIC Description	<u>Trans. &amp; Utilities - Water Supply</u>	County	<u>Elk</u>
Date Application Received	<u>November 1, 2019</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted	<u>November 27, 2019</u>	If No, Reason	<u></u>
Purpose of Application	<u>Individual NPDES permit renewal for Industrial Waste</u>		

**Summary of Review**

This is a permit renewal for a minor industrial waste discharge. (SIC Code: 4941 – Water Supply Systems)

The treatment system consists of a sedimentation basin and a filter. Backwash water from the filter is treated using a clarifier and sludge thickening tank, which then discharges 0.029 MGD into Big Mill Creek (HQ-CWF).

There are no open violations in WMS for the subject Client ID (66627) as of 2/7/2020.

The last inspection was conducted on 1/18/2019.

A Water Quality Management permit is not required at this time.

Phenolics were not modeled in PentoxSD due to significant dilution prior to the nearest downstream public water supply located 59.53 miles away at PA American Water Co. Clarion.

This discharge has existed since 1909 and was first permitted on March 1, 2010. The receiving stream, Big Mill Creek, became a special protection watershed in 1979.

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		Jonathan F. Bucha / Civil Engineer Trainee	
X		Justin C. Dickey, P.E. / Environmental Engineer Manager	

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	<u>001</u>	Design Flow (MGD)	<u>.029</u>
Latitude	<u>41° 25' 25"</u>	Longitude	<u>-78° 46' 43"</u>
Quad Name	<u>Portland Mills</u>	Quad Code	<u>0715</u>
Wastewater Description: <u>IW Process Effluent without ELG</u>			
Receiving Waters	<u>Big Mill Creek (HQ-CWF)</u>	Stream Code	<u>50422</u>
NHD Com ID	<u>102665779</u>	RMI	<u>2.27</u>
Drainage Area	<u>30.8 sq. mi. (Streamstats)</u>	Yield (cfs/mi <sup>2</sup> )	<u>0.1</u>
Q <sub>7-10</sub> Flow (cfs)	<u>3.08</u>	Q <sub>7-10</sub> Basis	<u>Default</u>
Elevation (ft)	<u>1404 (Google Earth)</u>	Slope (ft/ft)	<u>-</u>
Watershed No.	<u>17-A</u>	Chapter 93 Class.	<u>HQ-CWF</u>
Existing Use	<u>Cold Water Fishes</u>	Existing Use Qualifier	<u>-</u>
Exceptions to Use	<u>-</u>	Exceptions to Criteria	<u>-</u>
Assessment Status	<u>Attaining Use(s)</u>		
Cause(s) of Impairment	<u>-</u>		
Source(s) of Impairment	<u>-</u>		
TMDL Status	<u>-</u>	Name	<u>-</u>
Background/Ambient Data		Data Source	
pH (SU)	<u>-</u>	<u>-</u>	
Temperature (°F)	<u>-</u>	<u>-</u>	
Hardness (mg/L)	<u>-</u>	<u>-</u>	
Other:	<u>-</u>	<u>-</u>	
Nearest Downstream Public Water Supply Intake	<u>PA American Water Co. Clarion</u>		
PWS Waters	<u>Clarion River</u>	Flow at Intake (cfs)	<u>90.7</u>
PWS RMI	<u>33.3</u>	Distance from Outfall (mi)	<u>59.53</u>

Changes Since Last Permit Issuance: None

Other Comments: The yield is obtained from previous permit and is based off the default yield rate of 0.1 cfs/mi<sup>2</sup> for impoundment controlled streams w/o a regulated release requirement.

Based on the availability of Streamstats, the drainage area was able to be refined to 30.8 sq. mi. compare to 30.2 sq. mi. utilized in the previous renewal.

According to the NPDES permit renewal application, the discharge 0.029 MGD occurs over a discharge period of 2 to 3 hours. Therefore, the discharge flow utilized for modeling purposes is equal to the equivalent 24-hour flow of 0.348 MGD. The previous renewal utilized a model design flow of 0.372 MGD based on an average flow of 0.03 MGD.

Compliance History

DMR Data for Outfall 001 (from November 1, 2018 to October 31, 2019)

Parameter	OCT-19	SEP-19	AUG-19	JUL-19	JUN-19	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18
Flow (MGD) Average Monthly	17278	0.017	0.017	18114	0.0195	0.018	0.018	0.017	0.025	0.031	0.031	0.031
pH (S.U.) Minimum	6.8	7.2	7.2	7.0	6.8	7.6	7.4	7.2	7.4	7.0	7.4	7.2
pH (S.U.) Maximum	7.4	7.5	7.6	8.0	7.6	8.0	8.2	8.1	8.1	7.7	8.4	7.6
TRC (mg/L) Average Monthly	0.4	0.04	0.05	0.03	0.02	0.01	0.01	0.01	0.02	0.03	0.03	0.01
TRC (mg/L) Instantaneous Maximum	0.12	0.12	0.09	0.08	0.08	0.04	0.03	0.03	0.03	0.04	0.04	0.04
TSS (mg/L) Average Monthly	2.5	2.0	< 2.0	24	14.5	2.0	4	3	7	2.0	2.0	3.0
TSS (mg/L) Daily Maximum	3.0	2.0	4.0	30	29	2.0	4	3	10	2.0	2.0	3.0
Total Aluminum (mg/L) Average Monthly	0.25	0.29	0.26	3.48	1.7	0.20	0.17	0.34	1.6	0.19	0.25	0.25
Total Aluminum (mg/L) Daily Maximum	0.28	0.29	0.26	3.89	2.9	0.24	0.19	0.55	1.66	0.18	0.27	0.25
Total Iron (mg/L) Average Monthly	0.05	0.06	< 0.05	0.84	0.4	0.05	0.05	0.08	0.29	0.05	0.05	0.05
Total Iron (mg/L) Daily Maximum	0.05	0.06	< 0.05	1.03	0.8	0.05	0.05	0.11	0.38	0.05	0.05	0.05
Total Manganese (mg/L) Average Monthly	0.07	0.15	0.05	0.85	0.4	0.05	0.06	0.21	0.11	0.05	0.06	0.07
Total Manganese (mg/L) Daily Maximum	0.06	0.15	0.05	0.89	0.8	0.05	0.06	0.36	0.13	0.05	0.06	0.07

**Compliance History**

**Effluent Violations for Outfall 001, from: December 1, 2018 To: October 31, 2019**

<b>Parameter</b>	<b>Date</b>	<b>SBC</b>	<b>DMR Value</b>	<b>Units</b>	<b>Limit Value</b>	<b>Units</b>
Total Aluminum	07/31/19	Avg Mo	3.48	mg/L	2.8	mg/L

Summary of Inspections: Last inspection occurred on 1/18/2019 with no violations reported.

Other Comments: Based on previous DMR sample results, total aluminum does not appear to be a problem.

**Development of Effluent Limitations**

<b>Outfall No.</b>	001	<b>Design Flow (MGD)</b>	0.03
<b>Latitude</b>	41° 25' 25"	<b>Longitude</b>	-78° 46' 43"
<b>Wastewater Description:</b> Water Treatment Plant Filter Backwash			

**Technology-Based Limitations**

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Parameter	Limit (mg/l)	SBC	Federal Regulation	State Regulation
CBOD <sub>5</sub>	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)

**Water Quality-Based Limitations**

A "Reasonable Potential Analysis" determined Total Aluminum was a candidate for limitations:

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

Parameter	Limit (mg/l)	SBC	Model
Aluminum (Total)	2.8	Average Monthly	PENTOX
	5.6	Daily Max	2x Average Monthly Limit - SOP
	7.0	IMAX	2.5x Average Monthly Limit - SOP

Comments: The Application reported an Average Flow of 0.029 MGD and a Maximum Flow of 0.055 MGD with the Design Flow of the facility being 0.03 MGD. The Average Flow during Production of 0.029 MDG was used to calculate WQBEL limitations.

**Best Professional Judgment (BPJ) Limitations**

BPT Technology-Based Effluent Limits for Water Treatment Plants

Source: Technology-Based Control Requirements for Water Treatment Plant Wastes (Document No. 362-2183-003)

Parameter	Limit (mg/l)	SBC
Total Suspended Solids	30	Average Monthly
	60	Daily Max
Iron (Total)	2	Average Monthly
	4	Daily Max
Aluminum (Total)	4	Average Monthly
	8	Daily Max
Manganese (Total)	1	Average Monthly
	2	Daily Max
pH	6.0 – 9.0 S.U.	Min – Max
Total Residual Chlorine	0.5	Average Monthly

Comments: Aluminum limits are established as a water quality based effluent limit.

**Additional Considerations**

Phenolics were not modeled in PentoxSD due to significant dilution prior to the nearest downstream public water supply located 59.53 miles away at PA American Water Co. Clarion.

**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) <sup>(1)</sup>		Concentrations (mg/L)				Minimum <sup>(2)</sup> Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/day	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
TSS	XXX	XXX	XXX	30.0	60.0	75	2/month	Grab
Total Aluminum	0.67	1.34 Daily Max	XXX	2.8	5.6	7.0	2/month	Grab
Total Iron	XXX	XXX	XXX	2.0	4.0	5	2/month	Grab
Total Manganese	XXX	XXX	XXX	1.0	2.0	2.5	2/month	Grab

Compliance Sampling Location: Outfall 001 prior to mixing with any other waters.

Other Comments: The limits for Flow, pH, TRC, TSS, Total Iron, and Total Manganese are based on Best Practicable Control Technology Available (BPT) from DEP guidance for Water Treatment Plant Wastes (Doc. No. 362-2183-003). The limit for Total Aluminum is based on WQBEL modeling results.

Water Quality Modeling results of 2.8 mg/L for Total Aluminum were more stringent than the minimum BPJ limit of 4 mg/L.

**Anti-Backsliding:** Anti-Backsliding considerations do not apply since the effluent limitations are all remaining the same as in the previous permit renewal.

## Attachments



Ridgway WTP  
eMAP.docx



Modeling.pdf



Ridgway WTP TRC  
Spreadsheet.pdf



Streamstats.pdf