pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northcentral Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0209368**
Facility Type	**Non-Municipal**	APS ID	**1030647**
Major / Minor	**Minor**	Authorization ID	**1340000**

Applicant and Facility Information

Applicant Name	**Benton Foundry Inc.**	Facility Name	**Benton Foundry**
Applicant Address	5297 State Route 487	Facility Address	5297 State Route 487
	Benton, PA 17814-7641		Benton, PA 17814-7641
Applicant Contact	Kevin Trychta	Facility Contact	Kevin Trychta
Applicant Phone	(570) 925-6711	Facility Phone	(570) 925-6711
Client ID	35900	Site ID	458592
Ch 94 Load Status	Not Overloaded	Municipality	Sugarloaf Township
Connection Status	No Limitations	County	Columbia
Date Application Received	January 19, 2021	EPA Waived?	Yes
Date Application Accepted	January 21, 2021	If No, Reason	

Purpose of Application: Renewal of existing NPDES permit

Summary of Review

The above permittee has submitted a renewal NPDES permit application for an existing discharge of treated sewage (outfall 001) and two stormwater outfalls (002 and 003) to an Unnamed Tributary of Coles Creek (locally known as Hess Hollow) in Sugarloaf Township, Columbia County. The existing facility is an iron foundry. The sewage treatment facilities consist of a 0.01 million gallons per day (MGD) extended aeration activated sludge package plant utilizing the following: a 5,000 gallon flow equalization tank, a 10,000 gallon aeration tank, a 64 square foot final clarifier, a 140 gallon dechlorination/post aeration tank, a 2,000 gallon aerated sludge holding tank, and an effluent pump station. All industrial process wastewater is sent to a publicly owned wastewater treatment plant. The facility does not receive any hauled in wastes.

Unless otherwise noted, all applicable Department Standard Operating Procedures (SOPs) were followed during the review of this application.

Sludge use and disposal description and location(s): Hazeltown JSA landfill/incinerator.

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		*Chad A. Fabian* Chad A. Fabian / Project Manager	December 14, 2021
X		*Nicholas W. Hartranft, P.E.* Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	December 15, 2021

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	.01
Latitude	41º 15' 44.88"	Longitude	-76º 20' 39.45"
Quad Name	Red Rock	Quad Code	3-18.2
Wastewater Description:	Sewage Effluent		
Receiving Waters	Coles Creek	Stream Code	27956
NHD Com ID	65634981	RMI	2.51
Drainage Area	7.55	Yield (cfs/mi^2)	0.092
Q_{7-10} Flow (cfs)	0.69	Q_{7-10} Basis	Previous basin delineation
Elevation (ft)	400	Slope (ft/ft)	n/a
Watershed No.	5-C	Chapter 93 Class.	CWF
Existing Use	HQ-CWF	Existing Use Qualifier	Class A Wild Trout
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Attaining Use(s)		
Nearest Downstream Public Water Supply Intake	United Water/Suez near Bloomsburg, PA approximately 27 miles downstream on Fishing Creek		

Changes Since Last Permit Issuance: None

Stormwater Outfalls

Stormwater Outfalls				
	Latitude	Longitude	Stormwater Description	Receiving Stream
002	41° 15’ 44”	-76° 20’ 48”	North area of facility	UNT to Coles Creek (Hess Hollow)
003	41° 15’ 40”	-76° 20’ 48”	South area of facility	UNT to Coles Creek (Hess Hollow)

Compliance History	
Summary of DMRs:	A review of the past 12 months of eDMR data shows no effluent violations have occurred.
Summary of Inspections:	The most recent inspection was completed by the Department on 8/18/2021. No violations were found during the inspections. The sewage facilities appeared be operational. It was recommended that the bar screen be replaced in the future.

Compliance History

DMR Data for Outfall 001 (from November 1, 2020 to October 31, 2021)

Parameter	OCT-21	SEP-21	AUG-21	JUL-21	JUN-21	MAY-21	APR-21	MAR-21	FEB-21	JAN-21	DEC-20	NOV-20
Flow (MGD) Average Monthly	0.0018	0.0015	0.0015	0.0014	0.0016	0.0016	0.0024	0.0030	0.0022	0.0020	0.0021	0.0018
pH (S.U.) Minimum	7.9	7.2	7.6	6.9	7.1	7.2	6.9	6.7	6.9	6.8	6.6	6.5
pH (S.U.) Maximum	8.8	8.2	8.1	8.0	7.5	7.8	8.3	8.1	7.8	7.7	7.8	7.3
DO (mg/L) Minimum	4.0	5.6	4.5	5.1	6.0	5.2	6.0	6.3	6.2	5.9	5.5	6.5
TRC (mg/L) Average Monthly	0.05	0.06	0.06	0.06	0.06	0.06	0.06	0.04	0.04	0.04	0.04	0.04
TRC (mg/L) Instantaneous Maximum	0.12	0.09	0.09	0.09	0.13	0.14	0.31	0.15	0.10	0.09	0.10	0.09
CBOD5 (mg/L) Average Monthly	3.0	2.0	2.0	3.0	2.0	2.0	2.0	2.0	2.0	3.0	2.0	2.0
TSS (mg/L) Average Monthly	6.5	7.0	6.0	5.0	4.0	4.0	4.0	4.0	5.0	7.0	4.0	4.0
Fecal Coliform (CFU/100 ml) Geometric Mean	1	1	15	1	1	1	1	6	3	1	1	1
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	1	1	222	1	1	1	1	40	9	1	1	1
Total Nitrogen (mg/L) Average Monthly											8.1	
Ammonia (mg/L) Average Monthly		0.51			0.46			0.35			2.0	
Total Phosphorus (mg/L) Average Monthly											15.6	

DMR Data for Outfall 002 (from November 1, 2020 to October 31, 2021)

Parameter	OCT-21	SEP-21	AUG-21	JUL-21	JUN-21	MAY-21	APR-21	MAR-21	FEB-21	JAN-21	DEC-20	NOV-20
TSS (mg/L) Other Stormwater Daily Maximum					4.0						12	
Total Arsenic (mg/L) Other Stormwater Daily Maximum					< 0.005						< 0.005	
Total Cadmium (mg/L) Other Stormwater Daily Maximum					< 0.003						< 0.003	
Total Chromium (mg/L) Other Stormwater Daily Maximum					< 0.005						< 0.005	
Total Copper (mg/L) Other Stormwater Daily Maximum					< 0.005						< 0.005	
Total Iron (mg/L) Other Stormwater Daily Maximum					3.1						1.4	
Total Lead (mg/L) Other Stormwater Daily Maximum					< 0.005						< 0.0072	

DMR Data for Outfall 003 (from November 1, 2020 to October 31, 2021)

Parameter	OCT-21	SEP-21	AUG-21	JUL-21	JUN-21	MAY-21	APR-21	MAR-21	FEB-21	JAN-21	DEC-20	NOV-20
TSS (mg/L) Other Stormwater Daily Maximum					4.0						9	
Total Arsenic (mg/L) Other Stormwater Daily Maximum					< 0.005						< 0.005	
Total Cadmium (mg/L) Other Stormwater Daily Maximum					< 0.003						< 0.003	
Total Chromium (mg/L) Other Stormwater Daily Maximum					< 0.005						< 0.005	

Total Copper (mg/L) Other Stormwater Daily Maximum					< 0.005						0.0051	
Total Iron (mg/L) Other Stormwater Daily Maximum					< 0.07						1.5	
Total Lead (mg/L) Other Stormwater Daily Maximum					< 0.005						0.0174	

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .01
Latitude 41º 15' 46.00" **Longitude** -76º 2' 39.00"
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(1)	0.5	Average Monthly	-	92a.48(b)(2)

(1) The facility was approved in 1999, prior to the designated use being upgraded to HQ-CWF on 4/22/2011. Therefore, the above BAT standard apply in accordance with §92a.48(b)(3)

Water Quality-Based Limitations

The Department's WQM7.0 model allows the Department to evaluate point source discharges of dissolved oxygen (DO), carbonaceous BOD ($CBOD_5$), and ammonia-nitrogen (NH_3-N) into free-flowing streams and rivers. To accomplish this, the model simulates two basic processes: the mixing and degradation of NH_3-N in the stream and the mixing and consumption of DO in the stream due to the degradation of $CBOD_5$ and NH_3-N. During the previous permit renewal, WQM7.0 modeling was performed for the discharge to the Coles Creek. Per the Department's SOP of reissuance of NPDES permits, since there has been no change to the discharge characteristics or receiving stream, additional modeling is not required.

A Toxic Management Spreadsheet (TMS) was not performed as there are not any expected toxics in the sewage effluent nor is the applicant required to test for any in the NPDES renewal process.

Modeling for Total Residual Chlorine (TRC) showed that the above technology standard is protective of water quality standards. The existing dissolved oxygen (DO) monitoring will be maintained. Also, per the SOP, E. Coli monitoring at 1/quarter is proposed for this permit cycle.

Chesapeake Bay

According to the Department's Supplement to the Phase 2 Chesapeake Bay Watershed Implementation Plan (WIP), the facility is classified as a Phase 5 bay discharger (>0.002 MGD and <0.2 MGD). Phase 5 facilities are required to monitor for total nitrogen and total phosphorus at a rate of 1/year unless the facility has already conducted at least two years of nutrient monitoring and a summary of the results are included in the next permit fact sheet. The following is a summary of the results obtained during the existing permit cycle:

Parameter	Instantaneous Maximum (mg/l)	Total Annual (lbs)
Total Nitrogen (TN)	90.6	2758
Total Phosphorus (TP)	16.5	502

Since the permittee has had more than 2 years of monitoring for nutrients, it is recommended that the total nitrogen and total phosphorus requirements be removed from the permit per the WIP.

Stormwater Outfalls

The facility has 2 stormwater outfalls, as identified above. These stormwater outfalls are subject to Appendix B (SIC Code Group 33, gray and ductile iron foundries) in the Department's general NPDES permit for stormwater associated with industrial activities. The following are the parameters applicable to the Appendix B stormwater outfalls:

Proposed Parameter	Monitoring Requirements		Benchmark Values
	Minimum Measurement Frequency	Sample Type	
Total Suspended Solids (TSS) (mg/L)	1 / 6 months	Grab	100
Total Suspended Solids (TSS) (mg/L)	1 / 6 months	Grab	X
Total Aluminum (mg/L)	1 / 6 months	Grab	X
Total Zinc (mg/L)	1 / 6 months	Grab	X
Total Copper (mg/L)	1 / 6 months	Grab	X
Total Iron (mg/L)	1 / 6 months	Grab	X

The above proposed parameters vary slightly from the following existing parameters:

Existing Parameters	Monitoring Requirements		Benchmark Values
	Minimum Measurement Frequency	Sample Type	
TSS	1 / 6 months	Grab	X
Total Arsenic	1 / 6 months	Grab	X
Total Cadmium	1 / 6 months	Grab	X
Total Chromium	1 / 6 months	Grab	X
Total Copper	1 / 6 months	Grab	X
Total Iron	1 / 6 months	Grab	X

It is recommended that the above proposed stormwater sampling parameters be used in this draft permit to mirror the existing Appendix B parameters of the Department's general NPDES permit for stormwater associated with industrial activities. Part C of the proposed draft permit will also contain the applicable stormwater BMP conditions as well as the benchmark value of 100 mg/l for TSS.

Best Professional Judgment (BPJ) Limitations

None

Anti-Backsliding

The Department does not propose to relax any of the existing effluent limitations in this draft permit.

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: Start of Final Period 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	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	XXX	XXX	XXX	XXX	XXX	4/week	Estimate
pH (S.U.)	XXX	XXX	6.0	XXX	9.0	XXX	4/week	Grab
DO	XXX	XXX	Report	XXX	XXX	XXX	4/week	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	4/week	Grab
CBOD5	XXX	XXX	XXX	25.0	XXX	50	2/month	Grab
TSS	XXX	XXX	XXX	30.0	XXX	60	2/month	Grab
Fecal Coliform (CFU/100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (CFU/100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/year	Grab
Ammonia	XXX	XXX	XXX	Report	XXX	XXX	1/quarter	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	Report	XXX	XXX	1/quarter	Grab
Total Phosphorus	XXX	XXX	XXX	Report	XXX	XXX	1/year	Grab

Compliance Sampling Location: 001

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 002 and Outfall 003, 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	Average Weekly	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Total Suspended Solids (TSS) (mg/L)	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Lead (mg/l)	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Aluminum (mg/L)	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Zinc (mg/L)	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Copper (mg/L)	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Iron (mg/L)	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab

Compliance Sampling Location: 002 and 003

It is recommended the permit be drafted as described above.