

Application Type Amendment, Major
 Facility Type Municipal
 Major / Minor Major

**NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE**

Application No. PA0218413 A-1
 APS ID 1098839
 Authorization ID 1458302

Applicant and Facility Information

Applicant Name	<u>Economy Borough Municipal Authority</u>	Facility Name	<u>Big Sewickley Creek WWTP</u>
Applicant Address	<u>2860 Conway Wallrose Road</u> <u>Baden, PA 15005-2306</u>	Facility Address	<u>120 Wine Road</u> <u>Sewickley, PA 15143</u>
Applicant Contact	<u>Ms. Janet Miklow</u>	Facility Contact	<u>Mr. Joseph DeLuca</u>
Applicant Phone	<u>(724) 869-3201</u>	Facility Phone	<u>Same as Applicant</u>
Client ID	<u>64903</u>	Site ID	<u>532567</u>
Ch 94 Load Status	<u>Not Overloaded</u>	Municipality	<u>Economy Borough</u>
Connection Status	<u>No Limitations</u>	County	<u>Beaver</u>
Date Application Received	<u>October 12, 2023</u>	EPA Waived?	<u>No</u>
Date Application Accepted	<u></u>	If No, Reason	<u>Major Facility</u>
Purpose of Application	<u>Application for an amendment of an NPDES permit for the discharge of treated Sewage</u>		

Summary of Review

The Economy Borough Municipal Authority owns and operates the Big Sewickley Creek WWTP. This permit authorizes the discharge of treated sewage to Big Sewickley Creek, which is currently classified as a TSF, located in State Watershed No. 20-G. The permit was effective on May 1, 2022 and will expire on April 30, 2027.



WQM Permit 400406, issued on August 29, 2001, approved construction of a STP with a hydraulic design capacity of 1.25 MGD. The existing treatment process consists of SBRs, UV Disinfection and aerobic digestion.

A Final WQBEL Compliance Report was submitted to the Department on July 28, 2023, as discussed in Part C.III.D of the NPDES Permit.

The report concludes the following:

- The Authority will be able to achieve the final WQBEL for total zinc by May 1, 2024.
- The Authority will not be able to meet the final WQBEL for free cyanide by May 1, 2024.
- The Authority has requested a time extension to April 1, 2027 to achieve the final WQBEL for free cyanide.

The time extension is necessary for non-domestic industrial users to evaluate and eliminate sources of free cyanide in their discharge or provide pretreatment to achieve compliance with the free cyanide final WQBEL. The time extension will also allow the Authority more time to issue the necessary pretreatment permits to non-domestic industrial users.

Approve	Deny	Signatures	Date
X		 William C. Mitchell, E.I.T. / Project Manager	March 13, 2024
X		 Mahbuba Iasmin, Ph.D., P.E. / Environmental Engineering Manager	March 14, 2024

Summary of Review

The following changes have been made to the Authority's existing NPDES Permit, as issued on April 6, 2022:

- Part A.I.A & Part A.I.B have been revised to state the Authority must meet the final WQBEL for free cyanide on April 1, 2027.
- Part A.I.C has been revised to include the final WQBEL for total zinc that will be effective upon NPDES Permit Amendment issuance. Attached eDMR data indicates the Authority can comply with this WQBEL.
- Part A.I.C has been revised to correct a mistake to the monitoring requirements of BOD5 Raw Sewage Influent & TSS Raw Sewage Influent. For POTWs with design flows greater than 2,000 GPD and for non-municipal sewage facilities that service municipalities or portions thereof, the application manager will establish influent BOD5 and TSS monitoring in the permit using the same frequency and sample type as is used for other effluent parameters (Section IV.E.8, SOP for Clean Water Program, New and Reissuance Sewage Individual NPDES Permit Applications, Final November 9, 2012, Revised February 3, 2022, Version 2.0).
- Part C.I.D has been removed from the permit, as the condition is only applicable to facilities using chlorine disinfection (Attachment A, SOP for Clean Water Program, New and Reissuance Sewage Individual NPDES Permit Applications, Final November 9, 2012, Revised February 3, 2022, Version 2.0).
- Part C.III, Water Quality-Based Effluent Limitation for Toxic Pollutants, has been removed from the permit, as the Final WQBEL Compliance Report has been submitted to the Department, and the condition is no longer applicable.

The applicant has complied with Act 14 Notifications and no comments were received.

Sludge use and disposal description and location(s): Solids are dewatered via a belt filter press and disposed of at a municipal landfill.

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.

Compliance History

DMR Data for Outfall 001 (from February 1, 2023 to January 31, 2024)

Parameter	JAN-24	DEC-23	NOV-23	OCT-23	SEP-23	AUG-23	JUL-23	JUN-23	MAY-23	APR-23	MAR-23	FEB-23
Flow (MGD) Average Monthly	0.599	0.392	0.337	0.311	0.319	0.442	0.381	0.317	0.366	0.373	0.437	0.372
Flow (MGD) Daily Maximum	1.660	1.139	0.649	0.494	0.640	1.222	0.882	0.388	0.568	0.538	0.718	0.535
pH (S.U.) Instantaneous Minimum	6.15	6.48	6.34	6.58	6.64	6.44	6.38	6.31	6.32	6.3	6.37	6.28
pH (S.U.) Instantaneous Maximum	7.11	7.23	7.2	7.20	7.24	7.23	7.17	7.48	7.07	7.27	7.07	7.09
DO (mg/L) Instantaneous Minimum	6.81	6.81	6.25	6.23	6.22	6.14	6.32	6.33	6.73	6.51	6.51	7.28
CBOD5 (lbs/day) Average Monthly	< 16.1	< 15.0	< 8.7	< 7.2	< 8.7	< 9.8	< 9.7	< 8.2	< 9.6	< 10.7	< 10.9	< 9.8
CBOD5 (lbs/day) Weekly Average	< 22.0	< 31.0	< 11.0	< 7.5	< 12.0	< 11.1	< 12.3	< 9.0	< 13.5	11.7	< 13.8	< 11.5
CBOD5 (mg/L) Average Monthly	< 3.3	< 3.6	< 3.0	< 3.0	< 3.0	< 3.0	< 3.2	< 3.0	< 3.0	< 3.5	< 3.0	< 3.0
CBOD5 (mg/L) Weekly Average	< 4.0	< 4.0	< 3.0	< 3.0	< 3.0	< 3.0	< 4.0	< 3.0	< 3.0	4.2	< 3.2	< 3.0
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	910	994	805	701	744	689	763	660	767	898	861	774
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	1926	2414	1399	819	1233	882	1316	916	1059	1292	1642	1155
BOD5 (mg/L) Raw Sewage Influent Average Monthly	147	193	209	222	206	167	190	179	199	227	178	182
TSS (lbs/day) Average Monthly	< 14.7	< 14.4	< 8.7	< 7.2	< 8.7	< 9.8	< 10.4	< 8.2	< 10.4	< 9.9	< 13.3	< 9.8

**NPDES Permit Fact Sheet
Big Sewickley Creek WWTP**

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TSS (lbs/day) Raw Sewage Influent Average Monthly	1073	1223	888	836	1004	807	718	740	703	781	849	812
TSS (lbs/day) Raw Sewage Influent Daily Maximum	2056	2759	1745	1049	2582	1235	1403	1011	1197	1063	1838	1144
TSS (lbs/day) Weekly Average	< 21.8	< 32.8	< 10.7	< 7.5	< 12.0	< 11.1	< 12.8	< 9.0	< 15.8	< 12.0	< 17.0	< 11.5
TSS (mg/L) Average Monthly	< 3.0	< 3.3	< 3.0	< 3.0	< 3.0	< 3.0	< 3.5	< 3.0	< 3.2	< 3.3	< 3.8	< 3.0
TSS (mg/L) Raw Sewage Influent Average Monthly	176	249	229	265	260	194	177	200	182	198	173	190
TSS (mg/L) Weekly Average	< 3.0	< 4.0	< 3.0	< 3.0	< 3.0	< 3.0	< 5.0	< 3.0	< 3.5	4.0	4.5	< 3.0
Fecal Coliform (No./100 ml) Geometric Mean	< 1	< 1	< 1	< 3	< 4.0	< 3	< 3	< 2	< 2	< 1	< 3	< 1
Fecal Coliform (No./100 ml) Instantaneous Maximum	5	1	2	30	981	21	78	7	16	21	88	2
E. Coli (No./100 ml) Instantaneous Maximum	1	< 1	< 1	5	2420	6	6	15	14	1	9.0	< 1
UV Transmittance (%) Instantaneous Minimum	45	45	45	45	45	55	55	55	55	55	55	55
Total Nitrogen (mg/L) Daily Maximum		7.01			8.23			6.06			10.8	
Ammonia (lbs/day) Average Monthly	3.0	< 1.0	< 0.3	< 0.3	< 0.4	< 0.4	< 0.5	< 0.3	0.6	< 0.4	< 0.5	< 0.5
Ammonia (mg/L) Average Monthly	0.5	< 0.2	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.2	< 0.1	< 0.1	< 0.2
Total Phosphorus (mg/L) Daily Maximum		6.70			6.60			3.10			4.27	
Total Boron (lbs/day) Average Monthly	0.9	0.8	0.7	0.8	1	1	1	0.9	0.7	0.8	0.8	0.8
Total Boron (lbs/day) Daily Maximum	2.0	1.0	1	1.0	2	1	2	1	0.9	0.9	1.0	0.9

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Total Boron (mg/L) Average Monthly	0.17	0.23	0.23	0.33	0.34	0.31	0.3	0.32	< 0.25	0.26	0.21	0.009
Total Boron (mg/L) Daily Maximum	0.21	0.25	0.26	0.38	0.36	0.33	0.38	0.35	0.29	0.29	0.26	0.01
Total Copper (lbs/day) Average Monthly	0.03	0.03	0.02	0.02	0.02	0.02	0.03	0.03	0.03	0.02	0.03	0.03
Total Copper (lbs/day) Daily Maximum	0.06	0.05	0.04	0.02	0.04	0.04	0.04	0.03	0.04	0.03	0.05	0.03
Total Copper (ug/L) Average Monthly	7.0	9.0	8.0	8.0	8.0	7.00	10.0	10.0	10.0	8.00	7.0	9.0
Total Copper (ug/L) Daily Maximum	7.0	9.0	8.0	8.0	9.0	12.0	12.0	12.0	11.0	8.00	8.0	10.0
Free Cyanide (lbs/day) Average Monthly	< 0.020	< 0.008	< 0.006	< 0.007	< 0.009	< 0.008	< 0.020	< 0.010	< 0.020	< 0.008	< 0.010	< 0.007
Free Cyanide (lbs/day) Daily Maximum	< 0.050	< 0.010	< 0.010	< 0.010	< 0.010	0.020	0.050	0.020	0.040	0.020	< 0.030	0.010
Free Cyanide (ug/L) Average Monthly	< 4.0	< 3.0	< 2.0	< 3.0	< 3.0	< 3.0	< 7.0	< 4.0	< 7.0	< 3.00	< 3.0	< 2.0
Free Cyanide (ug/L) Daily Maximum	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	7.0	13.0	8.0	16.0	6.00	7.0	4.0
Total Zinc (lbs/day) Average Monthly	0.3	0.2	0.1	0.1	0.2	0.2	0.3	0.7	0.2	0.2	0.2	0.2
Total Zinc (lbs/day) Daily Maximum	0.7	0.3	0.2	0.1	0.4	0.3	0.4	3.0	0.3	0.2	0.4	0.3
Total Zinc (ug/L) Average Monthly	59.0	57.0	39	41	57	60	81	257	73	72.0	61.0	67.0
Total Zinc (ug/L) Daily Maximum	77.0	63.0	43	45	70	74	97	920	83	76.0	69.0	70.0

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” (386-0400-001), SOPs and/or BPJ.

Outfall 001, Effective Period: Permit Effective Date through March 31, 2027.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) ⁽¹⁾		Minimum	Concentrations (mg/L)			Minimum ⁽²⁾ Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum		Average Monthly	Daily Maximum	Instant. Maximum		
Free Cyanide (ug/L)	0.063	0.094	XXX	6.0	9.0	14	1/week	24-Hr Composite

Compliance Sampling Location: 001

Other Comments: N/A

Proposed Effluent Limitations and Monitoring Requirements

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Outfall 001, Effective Period: April 1, 2027 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	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Free Cyanide (ug/L)	0.051	0.092	XXX	4.91	8.82	12.3	1/week	24-Hr Composite

Compliance Sampling Location: 001

Other Comments: N/A

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" (386-0400-001), 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	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	2/week	Metered
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	6.0	XXX	XXX	XXX	1/day	Grab
CBOD5 Nov 1 - Apr 30	145.0	215.0	XXX	14.0	21.0	28	2/week	24-Hr Composite
CBOD5 May 1 - Oct 31	95.0	145.0	XXX	9.5	14.0	19	2/week	24-Hr Composite
BOD5 Raw Sewage Influent	Report	Report	XXX	Report	Report	XXX	2/week	24-Hr Composite
TSS Raw Sewage Influent	Report	Report	XXX	Report	Report	XXX	2/week	24-Hr Composite
TSS	310.0	465.0	XXX	30.0	45.0	60	2/week	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/week	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/month	Grab
UV Transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Measured
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite
Ammonia-Nitrogen Nov 1 - Apr 30	36.0	XXX	XXX	3.5	XXX	7	2/week	24-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	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Ammonia-Nitrogen May 1 - Oct 31	20.0	XXX	XXX	2.0	XXX	4	2/week	24-Hr Composite
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite
Total Boron	Report	Report Daily Max	XXX	Report	Report Daily Max	XXX	1/week	24-Hr Composite
Total Copper (ug/L)	0.15	0.19 Daily Max	XXX	14.6	18.3 Daily Max	18.3	1/week	24-Hr Composite
Total Zinc (ug/L)	1.59	1.95 Daily Max	XXX	153.0	187.0 Daily Max	187.0	1/week	24-Hr Composite

Compliance Sampling Location: 001

Other Comments: N/A