

EXHIBIT 02



January 21, 2022

Jasson Urey, Manager
Greenville Borough
125 Main Street
Greenville, PA 16125

Johnathan Bailey, Chairman
Greenville Borough Sanitary Authority
125 Main Street
Greenville, PA 16125

Re: December 27, 2021 Consent Order and Agreement
Greenville Borough, Mercer County

Dear Jason Urey and Johnathan Bailey:

As you are aware, the Department of Environmental Protection (“Department”), Greenville Borough (“Borough”) and Greenville Borough Sanitary Authority (“Authority”) entered into a Consent Order and Agreement (“COA”), to address violations of the Clean Streams Law at the Authority’s sewage treatment plant (“Plant”). It has come to the Department’s attention that there are discrepancies on the date executed between the Departments executed copy of the COA and the executed copy provided to the Borough and Authority. Therefore, the Department’s records of the COA will be updated to match the date executed on the copy provided to the Borough and the Authority of December 27, 2021.

Thank you for your cooperation in this matter.

Should you have any questions, please contact me at 814.332.6431. Thank you.

Sincerely,

Shawn Kiskadden

Shawn Kiskadden
Compliance Specialist
Clean Water Program

cc: A. Erde, OCC (via email)
E. Kicher/S.Kiskadden (via email)
File (OnBase)



September 28, 2021

Jasson Urey, Manager
Greenville Borough
125 Main Street
Greenville, PA 16125

Johnathan Bailey, Chairman
Greenville Borough Sanitary Authority
125 Main Street
Greenville, PA 16125

Dear Jasson Urey and Johnathan Bailey:

Enclosed please find a copy of the executed Consent Order an Agreement document, as executed by the Department on September 27, 2021.

Thank you for your cooperation in this matter.

Should you have any questions, please contact me at 814.332.6431. Thank you.

Sincerely,

A handwritten signature in blue ink that reads "Shawn Kiskadden". The signature is fluid and cursive, with the first name being the most prominent.

Shawn Kiskadden
Compliance Specialist
Clean Water Program

Enclosure:

cc: A Erde, OCC, (via email)
Kicher/Singer/S. Kiskadden/Corres File

**COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

In the Matter of:

Greenville Borough Sanitary Authority and Greenville Borough : Clean Streams Law
: Sewage Facilities Act
: NPDES Permit No. PA0027367

CONSENT ORDER AND AGREEMENT

This Consent Order and Agreement is entered into this 27th day of September 2021 by

and between the Commonwealth of Pennsylvania, Department of Environmental Protection (“Department”), Greenville Borough Sanitary Authority and Greenville Borough.

Findings

The Department has found and determined the following Findings:

A. The Department is the agency with the duty and authority to administer and enforce The Clean Streams Law, Act of June 22, 1937, P.L. 1987, *as amended*, 35 P.S. §§ 691.1-691.1001 (“Clean Streams Law”); the Pennsylvania Sewage Facilities Act, Act of January 24, 1966, P.L. 1535, *as amended*, 35 P.S. §§ 750.1-750.20a (“Sewage Facilities Act”); Section 1917-A of the Administrative Code of 1929, Act of April 9, 1929, P.L. 177, *as amended*, 71 P.S. § 510-17 (“Administrative Code”); and the rules and regulations promulgated thereunder (“Regulations”).

B. Greenville Borough Sanitary Authority is a municipal authority created under the Pennsylvania Municipal Authorities Act, 53 Pa. C.S. §§ 5601, *et seq.*, and has a mailing address of 125 Main Street, P.O. Box 604, Greenville, PA 16125 (“Authority”).

C. Greenville Borough is a municipal entity organized and existing under the laws of the Commonwealth of Pennsylvania and has a mailing address of 125 Main Street, P.O. Box 604, Greenville, PA 16125.

D. The Authority owns a sewage treatment plant (“Plant”) serving Greenville Borough and portions of Hempfield and West Salem Townships, in Mercer County, Pennsylvania. The Plant

Updated
11/21/22
SK

**COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

In the Matter of:

Greenville Borough Sanitary Authority and Greenville Borough	:	Clean Streams Law
	:	Sewage Facilities Act
	:	NPDES Permit No. PA0027367

CONSENT ORDER AND AGREEMENT

This Consent Order and Agreement is entered into this 27th day of December 2021 by and between the Commonwealth of Pennsylvania, Department of Environmental Protection (“Department”), Greenville Borough Sanitary Authority and Greenville Borough.

Findings

The Department has found and determined the following Findings:

- A. The Department is the agency with the duty and authority to administer and enforce The Clean Streams Law, Act of June 22, 1937, P.L. 1987, *as amended*, 35 P.S. §§ 691.1-691.1001 (“Clean Streams Law”); the Pennsylvania Sewage Facilities Act, Act of January 24, 1966, P.L. 1535, *as amended*, 35 P.S. §§ 750.1-750.20a (“Sewage Facilities Act”); Section 1917-A of the Administrative Code of 1929, Act of April 9, 1929, P.L. 177, *as amended*, 71 P.S. § 510-17 (“Administrative Code”); and the rules and regulations promulgated thereunder (“Regulations”).
- B. Greenville Borough Sanitary Authority is a municipal authority created under the Pennsylvania Municipal Authorities Act, 53 Pa. C.S. §§ 5601, *et seq.*, and has a mailing address of 125 Main Street, P.O. Box 604, Greenville, PA 16125 (“Authority”).
- C. Greenville Borough is a municipal entity organized and existing under the laws of the Commonwealth of Pennsylvania and has a mailing address of 125 Main Street, P.O. Box 604, Greenville, PA 16125.
- D. The Authority owns a sewage treatment plant (“Plant”) serving Greenville Borough and portions of Hempfield and West Salem Townships, in Mercer County, Pennsylvania. The Plant

is operated by Greenville Borough pursuant to the terms of a lease agreement between the Authority and Greenville Borough.

E. The Plant was constructed under the terms and conditions of Water Quality Management Permit No. 4391412, issued to the Authority by the Department on February 28, 1992, and amended on June 24, 2014 (“WQM Permit”).

F. The WQM Permit authorizes the following processes to treat sewage flows of up to 4.0 million gallons per day and an organic loading of 5,000 pounds per day of Biological Oxygen Demand: comminution, raw sewage pumping, pH adjustment, primary settling, two-stage trickling filters, short term aeration, alum feed, secondary settling, chlorine disinfection, and sludge handling.

G. Every municipality in Pennsylvania is required to develop and implement a comprehensive official sewage plan that provides for the resolution of existing and future sewage disposal needs of the municipality (“Official Plan”).

H. On January 24, 2017, the Department approved an update to Greenville Borough’s Official Plan that proposed upgrades to the Plant, including construction of a membrane bioreactor treatment system and refurbishment of the Plant’s sludge digestion, dewatering and disinfection processes (“Plan Update”). The implementation schedule contained in the Plan Update provided for completion of the Plant upgrades by March 2020, however, the proposed upgrades have not been constructed.

I. All entities that discharge pollutants into “waters of the Commonwealth” must first obtain a National Pollutant Discharge Elimination System (“NPDES”) permit for their discharges, as required by the Federal Water Pollution Control Act, 33 U.S.C. § 1251, *et seq.*, and Section 202 of the Clean Streams Law, 35 P.S. § 691.202. Any violation of the terms, conditions, or effluent limitations contained in an NPDES permit issued by the Department is a violation of the Clean Streams Law.

J. On December 9, 2017, the Department issued NPDES Permit No. PA0027367 to the Authority authorizing the Authority's discharges of treated sewage effluent from the Plant to the Shenango River for a period of five years ("NPDES Permit"). The NPDES Permit contains an expiration date of December 31, 2022.

K. Pursuant to Part A of the NPDES Permit, from December 9, 2017 to December 31, 2020, the effluent limitations for Total Residual Chlorine were 0.37 milligrams per liter ("mg/l") monthly average and 1.2 mg/l instantaneous maximum.

L. On and after January 1, 2021, the effluent limitations for Total Residual Chlorine set forth in Part A of the NPDES Permit changed to 0.19 mg/l monthly average and 0.62 mg/l instantaneous maximum.

M. For various months between June 2019 and June 2021, the Authority reported discharges from the Plant that exceeded the effluent limits in the NPDES Permit. A summary of the effluent discharges that exceeded the applicable limits in the NPDES Permit is set forth in Exhibit A.

N. The Authority has informed the Department that it is unable to comply with the 0.19 mg/l monthly average and 0.62 mg/l instantaneous maximum effluent limits for Total Residual Chlorine until the Plant upgrades proposed in the Plan Update are completed.

O. The Authority reported in its wasteload management annual report that the Plant was organically overloaded in 2020, and that the overload will be addressed as part of the Plant upgrades proposed in the Plan Update.

Applicable Law

P. The Authority is a "municipality," as defined in Section 1 of the Clean Streams Law, 35 P.S. § 691.1.

Q. Greenville Borough is a "municipality," as defined in Section 1 of the Clean Streams Law, 35 P.S. § 691.1, and Section 2 of the Sewage Facilities Act, 35 P.S. § 750.2.

R. The Shenango River is “waters of the Commonwealth,” as that term is defined in Section 1 of the Clean Streams Law, 35 P.S. § 691.1, and is designated and protected for *Warmwater Fishes* under 25 Pa. Code § 93.9w.

S. Pursuant to Section 202 of the Clean Streams Law, 35 P.S. § 691.202, no municipality or person shall discharge sewage into waters of the Commonwealth without a permit or contrary to the terms and conditions of a permit or contrary to the rules and regulations of the Department and a discharge of sewage contrary to the terms and conditions of a permit is declared to be a nuisance.

T. Pursuant to Section 611 of the Clean Streams Law, 35 P.S. § 691.611, it is unlawful conduct to violate any of the provisions of the Clean Streams Law or fail to comply with any permit from the Department.

U. Pursuant to Section 5 of the Sewage Facilities Act, 35 P.S. § 750.5, and 25 Pa. Code § 71.11, every municipality must develop and implement a comprehensive official plan, which, among other things, provides for the resolution of existing sewage disposal problems and for the safe and sanitary treatment of sewage now and in the future.

Unlawful Conduct

V. The Authority’s discharges of treated sewage effluent to the Shenango River exceeding the effluent limits set forth in the NPDES Permit as described in Paragraphs M, above, and Exhibit A, violate Sections 202 and 611 of the Clean Streams Law, 35 P.S. §§ 691.202 and 691.611.

W. Greenville Borough’s failure to implement the Department-approved Plan Update as described in Paragraph H, above, is a violation of 25 Pa. Code § 71.11.

X. The violations described in Paragraph V, above, are unlawful conduct under Section 611 of the Clean Streams Law, 35 P.S. § 691.611, constitute a statutory nuisance under Section 202

of the Clean Streams Law, 35 P.S. § 691.202, and subject the Authority to civil penalty liability pursuant to Section 605 of the Clean Streams Law, 35 P.S. § 691.605.

Y. The violation described in Paragraph W, above, constitutes a statutory nuisance under Section 14 of the Sewage Facilities Act, 35 P.S. § 750.14, and subjects Greenville Borough to civil penalty liability under Section 13a of the Sewage Facilities Act, 35 P.S. § 750.13a.

Z. The Authority and Greenville Borough have requested that they be allowed to come into compliance with the Clean Streams Law, Sewage Facilities Act, Regulations and the NPDES Permit on a schedule that is acceptable to the Department.

Order

After full and complete negotiation of all matters set forth in this Consent Order and Agreement, and upon mutual exchange of the covenants contained herein, the parties desiring to avoid litigation and intending to be legally bound, it is hereby ORDERED by the Department and AGREED to by the Authority and Greenville Borough as follows:

1. **Authority.** This Consent Order and Agreement is an Order of the Department authorized and issued pursuant to Sections 5 and 610 of the Clean Streams Law, 35 P.S. §§ 691.5 and 691.610; Section 10 of the Sewage Facilities Act, 35 P.S. § 750.10; and Section 1917-A of the Administrative Code, 71 P.S. § 510-17.

2. **Findings.**

a. The Authority and Greenville Borough agree that the Findings in Paragraphs A through Z, above, are true and correct and, in any matter or proceeding involving the Authority, Greenville Borough and the Department, the Authority and Greenville Borough shall not challenge the accuracy or validity of these Findings.

b. The parties do not authorize any other persons to use the Findings in this Consent Order and Agreement in any matter or proceeding.

3. ***Corrective Actions.***

a. Within **90 days** after the date of this Consent Order and Agreement, the Authority and Greenville Borough shall complete an evaluation of the Plant's existing chlorine disinfection system, and submit to the Department a written report describing the findings of the evaluation of the Plant's chlorine disinfection system ("Evaluation Report"). The Evaluation Report shall contain, at a minimum, a description of available improvements and operational changes, if any, that can be implemented to optimize performance of the Plant's existing chlorine disinfection system and minimize Total Chlorine Residual Concentration in the Plant's effluent and an implementation schedule for the improvements and operational changes.

b. Upon the Department's approval of the Evaluation Report, the Authority and Greenville Borough shall implement the corrective actions contained in the Department-approved Evaluation Report in accordance with the Department-approved implementation schedule.

c. By **February 1, 2023**, the Authority and Greenville Borough shall submit to the Department an administratively complete application for a Water Quality Management permit for the proposed Plant upgrades contained in the Plan Update.

d. By **January 1, 2024**, the Authority and Greenville Borough shall start construction of the Department-approved Plant upgrades.

e. By **January 1, 2026**, the Authority and Greenville Borough shall complete construction of the Department-approved Plant upgrades.

4. ***Semi-Annual Progress Reports.*** Beginning January 30, 2022, and continuing for each semi-annual period thereafter, the Authority and Greenville Borough shall submit to the Department written progress reports of its efforts to comply with the requirements of this Consent Order and Agreement. The written progress reports shall be submitted by the 30th day following each semi-annual period (*i.e.* January 30, July 30, etc.) and continue every semi-annual period

thereafter until this Consent Order and Agreement is terminated in accordance with Paragraph 22, below.

5. ***Administratively Complete.*** For the purposes of this Consent Order and Agreement, the term “administratively complete” shall mean that all necessary permit applications submitted pursuant to Paragraph 3, above, shall contain all applicable fees, modules, signatures, certifications/reports by applicable licensed professionals, with all necessary laboratory analyses, plans, maps, drawings, specifications and/or supporting calculations, and any other necessary information/documents of sufficient quality to merit a full technical review by the Department.

6. ***Submission of Documents.*** With regard to the Evaluation Report the Authority and Greenville Borough are required to submit pursuant to Paragraph 3.a., above, the Department will review the document and will approve or disapprove the document, or portion thereof, in writing. If the document, or any portion thereof, is disapproved by the Department, the Authority and Greenville Borough shall submit a revised document to the Department that addresses the Department’s concerns within a reasonable time, as specified by the Department. The Department will approve, or modify and approve, the document in writing. Upon approval by the Department, the document shall become a part of this Consent Order and Agreement for all purposes and shall be enforceable as such.

7. ***Civil Penalty Settlement.*** The Authority consents to the assessment of a civil penalty in the amount of \$ 1,000, which shall be paid in full upon signing this Consent Order and Agreement. This payment is in settlement of the Department’s claim for civil penalties for the violations set forth in Paragraph S, above, covering the dates set forth herein. The payment shall be made by corporate check or the like, payable to “Commonwealth of Pennsylvania - Clean Water Fund” and sent to the Department at the address set forth in Paragraph 13 (Correspondence with the Department), below.

8. ***Stipulated Civil Penalties.***

a. In the event the Authority and Greenville Borough fail to comply in a timely manner with any term or provision of this Consent Order and Agreement, the Authority and Greenville Borough shall be in violation of this Consent Order and Agreement and, in addition to other applicable remedies, shall pay a civil penalty in the amount determined under the following schedule:

- i. \$250 per month for any and all exceedances of the NPDES Permit limits set forth in the NPDES Permit;
- ii. \$1500 for each failure to comply with Paragraph 3.a., 3.b. or 3.c., above.

b. Stipulated civil penalty payments paid pursuant to Paragraph 8.a.i. through 8.a.ii., above, shall be payable monthly on or before the 30th day of each succeeding month, shall be made by corporate check or the like, payable to “Commonwealth of Pennsylvania – Clean Water Fund,” and shall be sent to the Department at the address set forth in Paragraph 13 (Correspondence with the Department), below.

c. Any payment under this paragraph shall neither waive the Authority’s and Greenville Borough’s duty to meet its obligations under this Consent Order and Agreement nor preclude the Department from commencing an action to compel the Authority’s and Greenville Borough’s compliance with the terms and conditions of this Consent Order and Agreement. The payment resolves only the Authority’s and Greenville Borough’s liability for civil penalties arising from the violation of this Consent Order and Agreement for which payment is made.

d. Stipulated civil penalties shall be due automatically and without notice.

9. ***Additional Remedies.***

a. In the event the Authority or Greenville Borough fail to comply with any provision of this Consent Order and Agreement, the Department may, in addition to the remedies

prescribed herein, pursue any remedy available for a violation of an order of the Department, including an action to enforce this Consent Order and Agreement.

b. The remedies provided by this paragraph and Paragraph 8 (Stipulated Civil Penalties), above, are cumulative and the exercise of one does not preclude the exercise of any other. The failure of the Department to pursue any remedy shall not be deemed to be a waiver of that remedy. The payment of a stipulated civil penalty, however, shall preclude any further assessment of civil penalties for the violation for which the stipulated civil penalty is paid.

10. ***Reservation of Rights.*** The Department reserves the right to require additional measures to achieve compliance with applicable law. The Authority and Greenville Borough reserve the right to challenge any action which the Department may take to require those measures.

11. ***Liability of the Authority and Greenville Borough.*** The Authority and Greenville Borough shall be jointly and severally liable for any violation of this Consent Order and Agreement, including those caused by, contributed to, or allowed by its council members, chairpersons, managers, agents, employees, and contractors. Except as provided in Paragraph 12.c., below, the Authority and Greenville Borough also shall be jointly and severally liable for any violation of this Consent Order and Agreement caused by, contributed to, or allowed by their successors and assigns.

12. ***Transfer of the Plant.***

a. The duties and obligations under this Consent Order and Agreement shall not be modified, diminished, terminated, or otherwise altered by the transfer of any legal or equitable interest in the Plant or Site, or any part thereof.

b. If the Authority intends to transfer any legal or equitable interest in the Plant, or any part thereof, which is affected by this Consent Order and Agreement, the Authority shall serve a copy of this Consent Order and Agreement upon the prospective transferee of the legal or equitable interest at least 30 days prior to the contemplated transfer and shall simultaneously inform

the Department of such intent pursuant to Paragraph 13 (Correspondence with the Department), below.

c. The Department in its sole discretion may agree to modify or terminate the Authority's and Greenville Borough's duties and obligations under this Consent Order and Agreement upon transfer of the Plant or Site, or any part thereof. The Authority and Greenville Borough agree to waive any rights that they may have to challenge the Department's decision in this regard.

13. ***Correspondence with the Department.*** All correspondence with the Department concerning the Plant and this Consent Order and Agreement shall be addressed to:

Mr. Shawn Kiskadden
Environmental Protection Compliance Specialist
Clean Water Program
Department of Environmental Protection
230 Chestnut Street
Meadville, PA 16335-3481
Telephone: 814-332-6431
Email: skiskadden@pa.gov

14. ***Correspondence with Greenville Borough.*** All correspondence with Greenville Borough concerning this Consent Order and Agreement shall be addressed to:

Mr. Jasson Urey
Borough Manager
Greenville Borough
125 Main Street
Greenville, PA 16125
Telephone: 724-588-4193 ext. 407
Email: jurey@greenvilleborough.com

Greenville Borough shall notify the Department whenever there is a change in the contact person's name, title, or address. Service of any notice or any legal process for any purpose under this Consent Order and Agreement, including its enforcement, may be made by mailing a copy by first-class mail to the above address.

15. ***Correspondence with the Authority.*** All correspondence with the Authority concerning this Consent Order and Agreement shall be addressed to:

Chairperson
Greenville Borough Sanitary Authority
125 Main Street
Greenville, PA 16125
Telephone: 724-588-4193

The Authority shall notify the Department whenever there is a change in the contact person's name, title, or address. Service of any notice or any legal process for any purpose under this Consent Order and Agreement, including its enforcement, may be made by mailing a copy by first-class mail to the above address.

16. ***Severability.*** The paragraphs of this Consent Order and Agreement shall be severable and should any part hereof be declared invalid or unenforceable, the remainder shall continue in full force and effect between the parties.

17. ***Entire Agreement.*** This Consent Order and Agreement shall constitute the entire integrated agreement of the parties. No prior or contemporaneous communications or prior drafts shall be relevant or admissible for purposes of determining the meaning or intent of any provisions herein in any litigation or any other proceeding.

18. ***Attorney Fees.*** The parties shall bear their respective attorney fees, expenses, and other costs in the prosecution or defense of this matter or any related matters, arising prior to execution of this Consent Order and Agreement.

19. ***Modifications.*** No changes, additions, modifications, or amendments of this Consent Order and Agreement shall be effective unless they are set out in writing and signed by the parties.

20. ***Titles.*** A title used at the beginning of any paragraph of this Consent Order and Agreement may be used to aid in the construction of that paragraph but shall not be treated as controlling.

21. ***Decisions Under Consent Order and Agreement.*** The Authority and Greenville Borough waive their rights to appeal to the Environmental Hearing Board any decision that the Department makes under the provisions of this Consent Order and Agreement, including a notice that stipulated civil penalties are due, which rights may be available under Section 4 of the Environmental Hearing Board Act, the Act of July 13, 1988, P.L. 530, 35 P.S. § 7514; the Administrative Agency Law, 2 Pa. C.S. § 103(a) and Chapters 5A and 7A; or any other provision of law. Except as set forth in Paragraphs 12.c., above, and 22.b., below, the Department agrees any objection that the Authority and Greenville Borough may have to the decision may be raised as a defense in any Court where the Department enforces this Consent Order and Agreement.

22. ***Termination of this Consent Order and Agreement.***

a. The Authority's and Greenville Borough's obligations, but not the Findings, of this Consent Order and Agreement shall terminate when the Authority and Greenville Borough have: 1) completed all of the requirements of this Consent Order and Agreement; and 2) paid any outstanding penalties due under Paragraph 8 (Stipulated Civil Penalties), above.

b. The Department, in its sole discretion, may decide to terminate this Consent Order and Agreement at any time on or after December 31, 2026, and the Authority and Greenville Borough agree to waive any right that it may have to challenge the Department's decision in this regard.

23. ***Resolutions.*** Attached as Exhibit B, and incorporated herein by reference, are Resolutions of the Authority and Greenville Borough authorizing their signatory below to enter into this Consent Order and Agreement on their behalf.

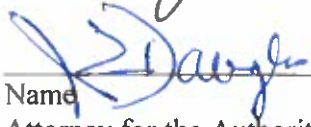
IN WITNESS WHEREOF, the parties hereto have caused this Consent Order and Agreement to be executed by their duly authorized representatives. The undersigned representative of the Authority and Greenville Borough certify under penalty of law, as provided by 18 Pa. C.S. § 4904,

that he or she is authorized to execute this Consent Order and Agreement on behalf of the Authority and Greenville Borough; and that the Authority and Greenville Borough consent to the entry of this Consent Order and Agreement as a final ORDER of the Department; and that the Authority and Greenville Borough hereby knowingly waives their rights to appeal this Consent Order and Agreement and to challenge its content or validity, which rights may be available under Section 4 of the Environmental Hearing Board Act, the Act of July 13, 1988, P.L. 530, 35 P.S. § 7514; the Administrative Agency Law, 2 Pa. C.S. § 103(a) and Chapters 5A and 7A; or any other provision of law. Signature by the Authority's and Greenville Borough's attorney certifies only that the agreement has been signed after consulting with counsel.

**FOR GREENVILLE BOROUGH
SANITARY AUTHORITY:**




Name
Authority Chairperson



Name
Attorney for the Authority

**FOR THE COMMONWEALTH OF
PENNSYLVANIA, DEPARTMENT OF
ENVIRONMENTAL PROTECTION:**




John Holden
Regional Manager
Clean Water Program
Northwest Region




Angela M. Erde
Assistant Counsel

FOR GREENVILLE BOROUGH:



Name
Council President



Name
Attorney for Greenville Borough

Exhibit A
Effluent Discharge Exceedances

MONTH	PARAMETER	SAMPLE VALUE	PERMIT VALUE	UNIT	BASE CODE
Jun-19	Copper, Total	< 0.80	0.76	lbs/day	Average Monthly
Jan-21	Total Residual Chlorine (TRC)	0.32	0.19	mg/L	Average Monthly
Feb-21	Total Residual Chlorine (TRC)	0.26	0.19	mg/L	Average Monthly
Mar-21	Total Residual Chlorine (TRC)	0.26	0.19	mg/L	Average Monthly
Apr-21	Total Phosphorus	1.1	1	mg/L	Average Monthly
Apr-21	Total Residual Chlorine (TRC)	0.24	0.19	mg/L	Average Monthly
May-21	Total Residual Chlorine (TRC)	0.26	0.19	mg/L	Average Monthly
Jun-21	Total Residual Chlorine (TRC)	0.25	0.19	mg/L	Average Monthly
Jun-21	Fecal Coliform	> 2420	1000	No./100 ml	Instantaneous Maximum


Exhibit B
Authority and Greenville Borough Resolutions

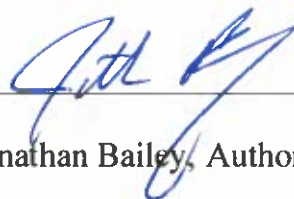
RESOLUTION 2021-03

**A RESOLUTION OF GREENVILLE SANITARY AUTHORITY
MERCER COUNTY, PA, AUTHORIZING AND DIRECTING THE AUTHORITY
CHAIRMAN TO SIGN THE CONSENT ORDER AND AGREEMENT WITH THE
PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECT**

BE IT RESOLVED, by the authority of the Greenville Sanitary Authority of the Borough of Greenville, Mercer County, and it is hereby resolved by authority of the same, that the Authority Chairman of the Greenville Sanitary Authority be authorized and directed to sign the Consent Order and Agreement with the Commonwealth of Pennsylvania Department of Environmental Protection on its behalf and that the Authority Solicitor be authorized and directed to do the same.

RESOLVED AND ENACTED by the Greenville Sanitary Authority of Mercer County, Pennsylvania, this 27th day of August 2021.

ATTEST: 
Robin Douglas, Authority Secretary

BY: 
Jonathan Bailey, Authority Chair

I, Robin Douglas, Secretary of the Greenville Sanitary Authority, do hereby certify that the foregoing is a true and correct copy of the Resolution adopted at a regular meeting of the Greenville Sanitary Authority, held the 27th day of August 2021.

Date: August 27, 2021

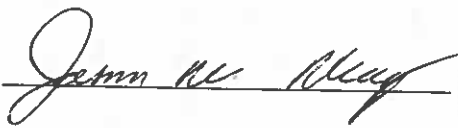

Robin Douglas, Authority Secretary


RESOLUTION 2021-10

**A RESOLUTION OF GREENVILLE BOROUGH COUNCIL
MERCER COUNTY, PA, AUTHORIZING AND DIRECTING THE COUNCIL
PRESIDENT TO SIGN THE CONSENT ORDER AND AGREEMENT WITH THE
PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECT**

BE IT RESOLVED, by the authority of the Borough of Greenville Council of the Borough of Greenville, Mercer County, and it is hereby resolved by authority of the same, that the Council President of the Borough of Greenville be authorized and directed to sign the Consent Order and Agreement with the Commonwealth of Pennsylvania Department of Environmental Protection on its behalf and that the Borough Solicitor be authorized and directed to do the same.

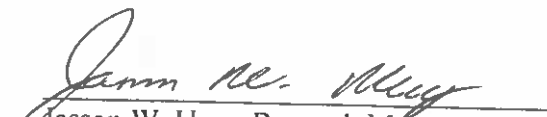
RESOLVED AND ENACTED by the Borough of Greenville of Mercer County, Pennsylvania, this 13th day of September 2021.

ATTEST: 
Jasson W. Urey, Borough Manager

BY: 
Paul R. Hamill, Council President

I, Jasson W. Urey, Borough Manager of the Borough of Greenville, do hereby certify that the foregoing is a true and correct copy of the Resolution adopted at a regular meeting of the Borough of Greenville Council, held the 13th day of September 2021.

Date: September 13, 2021


Jasson W. Urey, Borough Manager

9/10/2021

0008762

Invoice No.	Invoice Date	Description	Commonwealth of Pennsylvania - Clean	Amount
Civil Penalty	8/10/2021	Consent Order and Agreement - civil penalty		1000.00
			Total:	1,000.00



BOROUGH OF GREENVILLE
SEWER OPERATING ACCOUNT
125 MAIN STREET
GREENVILLE, PA 16125



8762

One Thousand and 00/100 Dollars

DATE

AMOUNT

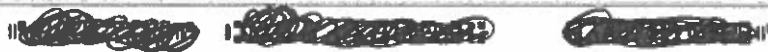
9/10/2021

\$1,000.00

PAY
TO THE
ORDER
OF

Commonwealth of Pennsylvania - Clean Water Fund

David A. Schmidt
AUTHORIZED SIGNATURE



Security features. Details on back.

Handwritten notes and scribbles at the bottom of the page.

EDWARD TRZECIAK, E.I.T.
PROJECT ENGINEER

REF. NO.: 123-98

MEMORANDUM

TO: Mr. Shawn Kiskadden
Clean Water Program
Pennsylvania Department of Environmental Protection
230 Chestnut Street
Meadville, PA 16335-3481

DATE: 04/01/22

SUBJECT: Evaluation Report

COURTESY COPY: Jasson Urey, Greenville Borough
Greenville Sanitary Authority

KLH DISTRIBUTION: John Mowry, P.E.
Joe Gianvito, P.E.
KLH File 123-98

**Greenville Sanitary Authority
Chlorine Disinfection System
Evaluation Report**

Summary

The Greenville Sanitary Authority (GSA) owns and operates a wastewater treatment plant (WWTP), in Greenville, Pennsylvania. The Pennsylvania Department of Environmental Protection (PADEP) put into effect a new Total Residual Chlorine (TRC) Limit on the GSA WWTP on January 1, 2021.

Since implementation of the new TRC Limit, GSA has worked to optimize their chlorine dosage, by adjusting it on a regular basis and optimizing their treatment system as much as possible. However, at the same time, it is expected that GSA will not be able to meet their new TRC limit without large modification to the existing plant. The only viable alternative is the installation of a dechlorination facility.

Meanwhile, GSA is in the process of planning improvements to their WWTP. These improvements will eliminate the need for any reviewed alternative and will allow the plant to meet all permit limits. Therefore, it is recommended that GSA continue planning overall treatment and plant upgrades and implement those improvements to meet their TRC limit. It is recommended that GSA continue optimization of their chlorine dose to limit TRC.

EDWARD TRZECIAK, E.I.T.
PROJECT ENGINEER

Introduction

The Greenville Sanitary Authority (GSA) owns and operates a wastewater treatment plant (WWTP), located at 183 Hamburg Road, in Greenville, Pennsylvania. As part of GSA's Consent Order and Agreement (COA), they are required to evaluate their Chlorine Disinfection System, and provide a written report of the findings to the Pennsylvania Department of Environmental Protection (PADEP). This report will describe those findings.

GSA's received a new Total Residual Chlorine (TRC) Limit, which became effective January 1, 2021. Without significant changes to the operations of the plant or additional equipment, the WWTP is expected to be unable to meet the TRC Limit. GSA would have to install dechlorination facilities to treat its effluent to meet this limit.

Currently, GSA is working to complete the design phase of a WWTP Improvements Project. While working to complete the design phase of the WWTP project, the following issues are being addressed:

1. The existing WWTP has no screening or grit removal facilities. The lack of screening and grit facilities has resulted in reduced equipment life, increased maintenance costs, and reduced treatment reliability.
2. The existing WWTP facilities are at least 30-years old and have all exceeded their design life.
3. The existing WWTP does not have a total nitrogen limit. The planned improvements accommodate for a future total nitrogen limit. It would not be prudent to implement a significant capital expenditure without planning for future nutrient limits.
4. The existing WWTP is out of compliance with this NDPES Permit due to the newly implement TRC Limit. Plans to address the TRC limit are included with Plant Improvements.

To address the four issues above, GSA opted to proceed with design of WWTP upgrades to include a new biological process. The changes include converting the existing Trickling Filter Process to a Membrane Bioreactor (MBR) Process. The MBR Process produces a significantly higher quality effluent. The higher quality effluent reduces the chlorine residual necessary to meet the Fecal Coliform limit. With the reduction in chlorine use, the need for dechlorination is eliminated.

The plant upgrades will include provisions for the use of additional chlorine, should a MBR fail or be taken out of service.

EDWARD TRZECIAK, E.I.T.
PROJECT ENGINEER

The design phase of these improvements is expected to be complete in mid-2022, with permitting beginning in late 2022. Construction for the planned improvements is estimated to begin prior to 2024, with construction being completed prior to January 1, 2026, to comply with their COA.

Existing Disinfection System and Optimization

To eliminate bacteria and virus loads, GSA uses chlorine to disinfect their wastewater. Dosing with chlorine and passing the residual chlorine to waterways is toxic to aquatic life. Chlorine also oxidizes with organic matter creating more hazardous compounds. As such, it is important to limit dosage while maintaining disinfection.

GSA received a TRC Limit which became effective January 1, 2021. Since the implementation of this limit GSA has worked and continues to work to optimize their disinfection system and overall treatment system and methodology.

GSA's primary goal is to meet fecal coliform limits; therefore they dose with enough chlorine to meet the fecal limits. GSA adjusts their chlorine dosage on a regular basis to meet seasonal demands. They keep their chlorine dosage as low as possible to meet their fecal limits and adjust their dosage up or down as necessary. This continued optimization has allowed them to meet the new TRC Limit in at least once instance.

Evaluation of Alternatives

There are several methods that are technically feasible for GSA to continue to meet TRC and fecal limits. Alternate disinfection methods include ozone and UV disinfection. While UV and Ozone can be used to disinfect GSA's wastewater, these alternatives would require a large capital expenditure. These alternatives would involve construction of new facilities that would become unnecessary after construction of planned improvements. The capital expenditure for these two alternatives is expected to be on the level of millions of dollars for equipment, and not including installation.

Other chemicals, such as peracetic acid (PAA) can be used for disinfection, however, this has not been approved by the PADEP within the state. While technically possible to use PAA, the technical hurdles, bench, and pilot testing, permitting, and additional operating costs would eliminate the benefits of a chemical change. It is also unknown at this time if a PAA residual permit limit would be required.

EDWARD TRZECIAK, E.I.T.
PROJECT ENGINEER

The most cost-effective solution for GSA to meet their TRC limit is to install a dechlorination system. A dechlorination system would dose their effluent stream with bisulfite and would remove residual chlorine from their effluent stream to meet permit limits. A dechlorination facility would include, at a minimum a small heated and ventilated structure to house the dechlorination chemical, pump skid, and controls. It would require the construction of buried lines, and some limited site work to allow access to the facility. The structure and the chemical feed lines would have to be protected against freezing by the use of heat trace.

Installation of a bisulfite system would cost approximately \$353,000. A detailed cost estimate sheet is included as an attachment. A 30% COVID Contingency is included with this project price due to recent volatility from COVID-19 related shutdowns and supply chain related issues.

Potential Alternative Implementation Schedule

While installation of a dechlorination facility would be the most cost-effective solution, scheduling and implementation of the most cost-effective solution would result in the use of these facilities for a relatively short period of time before they become outdated for use by GSA.

A potential implementation of a dechlorination facility is included below:

Tentative Implementation Schedule

Begin Design	May 2022
Complete Design	October 2022
Submit Part II Permit	November 2022
Receive Part II Permit	May 2023
Advertise for Bid	June 2023
Award Project	July 2023
Begin Construction	August 2023
Complete Construction	August 2024

There is also the concern for lead times with equipment and components for the dechlorination facility. Prior to the pandemic, a project of this magnitude would easily fit within a one year without concerns of on-time completion. Over the last year, lead times for equipment have grown substantially, with major equipment sometimes taking six months to a year for manufacturing from the approval of submittals.

Simultaneously, GSA is in the process of planning for overall improvements to their WWTP. These improvements will improve operations of the plan, reducing fecal effluent, and reducing

EDWARD TRZECIAK, E.I.T.
PROJECT ENGINEER

the need for total chlorine. The planned improvements are required to be complete prior to January 1, 2026, to comply with their COA. This would mean that improvements to the plant would begin prior to completion of construction of a dechlorination facility, and it would only operate for approximately one year before becoming obsolete.

Conclusion

GSA should continue optimization of their existing system, while continuing to plan for comprehensive plant upgrades that will eliminate the need for dechlorination facilities. Installation of dechlorination facilities would only allow for a small window of operation until those facilities are obsolete by new plant upgrades. Optimization of the existing chlorination system will allow for GSA to limit TRC Levels while still meeting fecal limits.

End of Memorandum

Greenville Sanitary Authority
Chlorine Evaluation - Dechlorination Project - Conceptual Cost Estimate
Updated 3/28/2022

<u>Description</u>	<u>Site Work</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Price Reference</u>	<u>Cost</u>	<u>I&R</u>	<u>Subtotal</u>
	Erosion and Sediment Pollution Control	1	L.S.	\$ 5,400.00	Engineer's Estimate of Probable Cost	\$ 5,400.00	1.00	\$ 5,400.00
	Excavation (Building Only)	32	C.Y.	\$ 49.68	KLH Historical Price	\$ 1,589.76	1.00	\$ 1,589.76
	Stone (Building Only)	11	C.Y.	\$ 47.79	KLH Historical Price - AVJSA	\$ 509.76	1.00	\$ 509.76
	Excavation (Chemical Feed Lines)	74	C.Y.	\$ 49.68	KLH Historical Price - AVJSA	\$ 3,680.00	1.00	\$ 3,680.00
	Stone Bedding (Chemical Feed Lines)	30	C.Y.	\$ 47.79	KLH Historical Price - AVJSA	\$ 1,416.00	1.00	\$ 1,416.00
	Lawn Restoration	1	L.S.	\$ 5,400.00	Engineer's Estimate of Probable Cost	\$ 5,400.00	1.00	\$ 5,400.00
	Asphalt Restoration	133	S.Y.	\$ 58.59	Engineer's Estimate of Probable Cost	\$ 7,812.00	1.00	\$ 7,812.00
							Subtotal	\$ 25,807.52

<u>Description</u>	<u>Dechlorination Facility</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Price Reference</u>	<u>Cost</u>	<u>I&R</u>	<u>Subtotal</u>
	Prefabricated FRP Building (10' x 12' x 10'H) includes openings, HVAC, etc.	1	EA	\$ 74,367.72	Shelter Works Quote - 3/14/22	\$ 74,367.72	1.65	\$ 122,706.74
	Concrete S.O.G. for FRP Building	5	C.Y.	\$ 1,080.00	KLH Historical Price	\$ 5,400.00	1.00	\$ 5,400.00
	Prefabricated Chemical Dosing Skid	1	EA	\$ 17,280.00	KLH Historical Price	\$ 17,280.00	1.00	\$ 17,280.00
	Bisulfite Spill Deck	1	EA	\$ 2,424.60	Grainger Industrial Supply	\$ 2,424.60	1.65	\$ 4,000.59
	Bisulfite Container	1	EA	\$ 1,053.00	Grainger Industrial Supply	\$ 1,053.00	1.65	\$ 1,737.45
	Chemical Piping and Discharge	1	L.S.	\$ 16,200.00	Engineer's Estimate of Probable Cost	\$ 16,200.00	1.00	\$ 16,200.00
							Subtotal	\$ 167,324.78

<u>Description</u>	<u>Electrical Improvements</u>	<u>Quantity</u>	<u>Unit</u>	<u>Unit Price</u>	<u>Unit Price Reference</u>	<u>Cost</u>	<u>I&R</u>	<u>Subtotal</u>
	Electrical Work (15.5% Project Subtotal)	1	EA	\$ 32,330.35	KLH Historical	\$ 32,330.35	1.00	\$ 32,330.35
							Subtotal	\$ 32,330.35

GENERAL, MECHANICAL, AND ELECTRICAL ESTIMATE

	Construction Subtotal:	Price Estimate
	\$	225,462.64
Division 1:		
Bonds	3.0%	\$ 6,763.88
Mobilization & Demobilization	5.0%	\$ 11,273.13
	Subtotal:	\$ 243,499.66
Contingency Factor	30.0%	\$ 73,049.90
Engineering, Permitting, Legal	15.0%	\$ 36,524.95
<u>TOTAL GENERAL, MECHANICAL, & ELECTRICAL ESTIMATE:</u>		<u>\$ 353,074.50</u>

EDWARD TRZECIAK
PROJECT ENGINEER

REF. NO.: 123-98

MEMORANDUM

TO: Mr. Shawn Kiskadden
Clean Water Program
Pennsylvania Department of Environmental Protection
230 Chestnut Street
Meadville, PA 16335-3481

DATE: 1/27/22

SUBJECT: Evaluation Report

COURTESY COPY: Jasson Urey, Greenville Borough
Greenville Sanitary Authority

KLH DISTRIBUTION: John Mowry, P.E.
Joe Gianvito, P.E.
KLH File 123-98

**Greenville Sanitary Authority
Chlorine Disinfection System
Evaluation Report**

The Greenville Sanitary Authority (GSA) owns and operates a wastewater treatment plant (WWTP), located at 183 Hamburg Road, in Greenville, Pennsylvania 16125. As part of GSA's Consent Order and Agreement, they are required to evaluate their Chlorine Disinfection System, and provide a written report of the findings to the Pennsylvania Department of Environmental Protection (PADEP). This report will describe those findings.

KLH evaluated the chlorine system using a holistic approach, reviewing the new permit limits and the plant's and community's needs.

GSA's received a new Total Residual Chlorine (TRC) Limit, which became effective January 1, 2021. Without significant changes to the operations of the plant or additional equipment, the WWTP is unable to meet the TRC Limit. GSA would have to install dechlorination facilities to treat its effluent to meet this limit.

GSA is currently working to complete the design phase of a WWTP Improvements Project. While working to complete the design phase of the WWTP project, the following issues are being addressed:

**EDWARD TRZECIAK
PROJECT ENGINEER**

1. The existing WWTP has no screening or grit removal facilities. The lack of screening and grit facilities has resulted in reduced equipment life, increased maintenance costs, and reduced treatment reliability.
2. The existing WWTP facilities are at least 30-years old and have all exceeded their design life.
3. The existing WWTP does not have a total nitrogen limit. The planned improvements accommodate for a future total nitrogen limit. It would not be prudent to implement a significant capital expenditure without planning for future nutrient limits.
4. The existing WWTP is out of compliance with this NDPES Permit due to the newly implement TRC Limit. Plans to address the TRC limit are included with Plant Improvements.

To address the four issues above, GSA opted to proceed with major operational changes. The changes include converting the existing Trickling Filter Process to a Membrane Bioreactor (MBR) Process. The MBR Process produces a significantly higher quality effluent. The higher quality effluent reduces the chlorine residual necessary to meet the Fecal Coliform limit. With the reduction in chlorine use, the need for dechlorination is eliminated.

The plant upgrades will include provisions for the use of additional chlorine, should a MBR fail or be taken out of service. Due to the use of additional chlorine, a small dechlorination facility will be constructed to meet the TRC limit during these periods.

As previously mentioned, GSA is unable to meet the new TRC Limit. To meet this limit would involve the construction of, and installation of, dechlorination facilities. The planned upgrades in the WWTP Improvements Project eliminate the need for such facilities. GSA plans to implement the necessary facilities in accordance with their Consent Order and Agreement to meet the required limits for the plant. The overall schedule for the project will be reviewed and approved by the PADEP.

End of Memorandum