Pennsylvania Department of Environmental Protection

NORTHWEST REGIONAL OFFICE
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0026697**
Facility Type	**Sewage**	APS ID	**1124242**
Major / Minor	**Major**	Authorization ID	**1506857**

NPDES PERMIT FACT SHEET ADDENDUM

Applicant and Facility Information

Applicant Name	**PA American Water Company**	Facility Name	**Butler Area STP**
Applicant Address	852 Wesley Drive	Facility Address	100 Litman Road
	Mechanicsburg, PA 17055-4436		Butler, PA 16001-3256
Applicant Contact	James Runzer	Facility Contact	Mason Miller
Applicant Phone	(717) 550-1540	Facility Phone	(724) 961-4851
Client ID	87712	Site ID	262833
SIC Code	4952	Municipality	Butler Township
SIC Description	Trans. & Utilities - Sewerage Systems	County	Butler
Date Published in PA Bulletin	April 19, 2025	EPA Waived?	No
Comment Period End Date	May 19, 2025	If No, Reason	Major Sewage

Purpose of Application: Renewal/Transfer of an NPDES permit for discharge of treated sewage

Internal Review and Recommendations

Comment letters(attached) were received on the draft permit during the comment period from the permittee in an email dated 5/16/2025 and from Environmental Integrity Project in an email dated 5/15/2025. USEPA did not provide comments or feedback on the draft permit.

Below are the permittee's comments, and the Department's corresponding responses.

Comment 1: Monitoring Table I. C. includes daily monitoring for Ultraviolet Light Intensity. The facility does not utilize UV light for disinfection. PAWC requests that the monitoring requirements be removed from the final permit.

Response 1: The Department held discussions with PAWC after the draft comment period explaining that installation of UV disinfection equipment was a proposed means that was being discussed by other employees of PAWC due to the more stringent TRC limits being proposed in the draft permit. It was further explained that depending on how the permittee ultimately proceeded, they would either report TRC or UV intensity in the final period. Monitoring for UV intensity will remain in the proposed permit.

Comment 2: Part C.V. (of the permit) includes a compliance schedule for the facility to meet compliance with reduced total chlorine residual limits. PAWC respectively requests a final implementation schedule of 4 years and 11 months to comply with the more stringent limits. Installation of a dechlorination system presents challenges for the facility and therefore alternative methods of disinfection may be required.

PAWC requests a meeting with the Department to determine whether a TRC Minimization Plan or Compliance Schedule for the installation of alternative disinfection method is more appropriate.

Response 2: The Department and the permittee had numerous discussions after the draft comment period upon which the Permittee verified that they were switching to UV disinfection as a result of the more stringent TRC limit. The permittee

Approve	Return	Deny	Signatures	Date
X			Adam J. Pesek Adam J. Pesek, E.I.T. / Project Manager	February 19, 2026
X			Adam Olesnanik Adam Olesnanik, P.E. / Environmental Engineer Manager	February 20, 2026

Internal Review and Recommendations

followed up by submitting a proposed compliance schedule extending the final compliance date for installing UV disinfection of 60 months after permit effective date, in an email dated 12/23/2025. The Department is amendable to extending the TRC compliance date to 4 years and 11 months in the Permit and will make the changes in the revised permit.

Although not binding, the Permittee has submitted a WQM Permit amendment since the draft NPDES Permit comment period ended for installation of UV disinfection equipment, with a stated completion date of Spring of 2028. Because this option of compliance is not mandatory as a means of complying with the more stringent final TRC limit, monitoring for UV intensity will have its own start date in the revised permit which will start at the startup of the upgraded facility, if and whenever that occurs, and no compliance schedule will be included for implementation.

Comment 3: Monitoring table I. C. (of the permit) includes weekly monitoring for Free Cyanide. PAWC believes the detection for Free Cyanide that was used to establish the limits was based on a sample outlier as Free Cyanide is not typically found in sanitary sewers and there are no industries in the system discharging Free Cyanide into the collection system. We request the option to complete a TRE Study to remove Free Cyanide from the monitoring requirements for the facility.

We would also like to note that Free Cyanide should be collected as a grab sample however the monitoring requirements in Table I. C. requires 24-hour composite samples to be collected. If monitoring requirements for Free Cyanide remain in the permit, we request the sample type be changed to grab rather than 24-hour composite in order to meet method requirements.

Response 3: The Department held discussions with the permittee after the draft comment period regarding this comment, as similar arguments have been made at other sewage treatment facilities. The Department relayed that a detection could not be simply disregarded without an explanation of why it was detected and shared that potential reasons it could be falsely detected in application sampling could be due to the sample preservation method using sodium hydroxide and the use of chlorine disinfection at the plant.

The permittee elected to do a sampling study after the draft comment period to demonstrate whether the sodium hydroxide preservative, chlorine disinfection, or a combination of the two was having an impact on free cyanide results. The results of that study, submitted 11/10/2025, appear to demonstrate that there is obvious interference using the sodium hydroxide preservative and minor interference with samples collected post chlorine. The Department agrees with this conclusion. Noting that application sampling was conducted using the preservative method and collected post chlorine, the Department is amendable to disregard the application detection. The Toxics Management Spreadsheet (TMS) (attached) was reran using only the non-detect value (3 tests) from the study results that were collected prior to chlorine disinfection and tested without the preservative method, which did not recommend effluent limits or monitoring. Effluent limits for free cyanide will be removed from the revised permit.

Regarding the second part of this comment, the Department verified with our Bureau of Laboratories that free cyanide should be given a sampling type of “Grab” instead of a composite sample. No action was taken in the revised proposed permit as this parameter has been removed.

Comment 4: Monitoring table I. C. requires weekly monitoring for Free Cyanide and Total Copper. PAWC respectively requests the frequency be changed to 2/month to align with the remaining monitoring requirements in the permit. Synchronizing monitoring frequencies in permits helps ensure compliance with the monitoring requirements and preventing missed sampling events.

Response 4: Monitoring frequency for free cyanide and total copper was based on Table 6-3 of DEP’s “Technical Guidance for the Development and Specification of Effluent Limitations (362-0400-001).” Toxics modeling done for the permit renewal determined reasonable potential for the discharge to exceed instream water quality criterion for these parameters. Other metals that were assigned less frequent monitoring in the permit at the permit writer’s discretion because toxics modeling just found them to be parameters of concern. No changes to the monitoring frequencies will be made as a result of this comment, other than the effluent limits and monitoring for free cyanide was removed as discussed in Response No. 3 above.

Comment 5: Definition for “Composite Sample (for GC/MS volatile organic compounds)” requires four aliquots or grab samples to be collected during the sampling event. The samples must be combined in the laboratory immediately before analysis then one analysis is performed. Butler’s contract laboratory service indicated that they were advised by DEP not to composite volatile organic compound samples immediately before analysis. We request that the definition is removed from the permit if DEP does not want the volatile organic compound aliquots composited at the laboratory.

Internal Review and Recommendations

Response 5: Permit writers have been instructed that for Volatile Organic Compounds (VOCs), the sample type should generally be grab samples (as well as free cyanide). Where VOCs sampling was designated as a composite sample, a revised definition was added to standard language in Part A of the permit template for major sewage facilities in some previous versions but was reverted back to the old definition in the latest version for an unknown reason. The definition language will be edited in the revised permit to use the old, revised language as follows:

Composite Sample (for GC/MS volatile organic analysis) consists of at least four aliquots or grab samples collected during the sampling event (not necessarily flow proportioned). A separate analysis should be performed for each sample and results should be averaged.

Comments were received on May 15, 2025 from Lori Kier of The Environmental Integrity Project (EIP) and on December 15, 2025, DEP received a Response to Comments document from Brandy Braun of PA American Water. Both documents are reproduced in full at the end of this addendum. Below is a summary of their comments and the Department's corresponding responses.

Comment 1: Secondary treatment standards do not apply to privately owned treatment works (PrOTW). The Clean Water Act mandates the application of BCT and BAT on point sources other than POTWs. EPA's regulations provide authority to impose BCT and BAT limits on PrOTWs. In the absence of ELGs for private WWTPs, DEP must establish case-by-case TBELs based on BCT and BAT in PrOTW permits. DEP's regulations incorporate the federal TBEL regulation and require BCT and BAT TBELs in permits.

Response 1: DEP does not believe that the Clean Water Act or EPA regulations compel state permitting agencies or EPA to conduct best professional judgment (BPJ) analyses for every possible pollutant that could be present in a discharge. DEP generally completes BPJ analyses when a pollutant is not subject to an ELG or state wastewater treatment standard and it is clear, through observation of influent pollutant concentrations and other factors, that controlling the pollutant is necessary. It is noted that DEP considers influent pollutant concentrations, which goes above and beyond federal requirements. Further, TBELs were applied to this permit based on 25 Pa. Code § 92a.47.

Comment 2.A: This facility is no longer a Publicly Owned Treatment Works (POTW).

Response 2.A: That is correct.

Comment 2.B: BAT and BCT-based TBELs should be established for every pollutant detected in effluent through permit application sampling.

Response 2.B: DEP reviewed all of the data for the listed pollutants, as recommended by the comment, while preparing the draft permit. DEP utilized its 25 Pa. Code § 92a.47 regulation to determine the applicable TBELs for comparison with WQBELs.

Comment 2.B.1: The Department should establish BAT for Butler Area STP that is no more than 3 mg/L for Total Nitrogen and no more than 1 mg/L for Total Phosphorus.

Response 2.B.1: The Department does not believe it is necessary to establish BPJ TBELs for Total Nitrogen (TN) or Total Phosphorus (TP) for this discharge. DEP has decided to impose monitoring requirements on TN and WQBELs for TP for the permit term. Based on consideration of influent concentrations, the facility is providing treatment of TN.

Comment 2.B.2: The draft permit does not include Total Suspended Solids (TSS) limits based on BCT.

Response 2.B.2: TBELs were applied to TSS consistent with the standards in 25 Pa. Code § 92a.47.

Comment 3: Use of pretreatment requirements in the permit is misplaced. Industries discharging to a PrOTW must comply with industry-specific ELGs.

Response 3: DEP is using its authority under state law to impose pretreatment requirements substantially similar to a federal pretreatment program. DEP rather than EPA is the pretreatment authority for PrOTWs.

Internal Review and Recommendations
During considerations of comments, it was observed that there was a Part C condition in the draft permit regarding UV Functional reporting (Part C.I.F.) that was included in error. This condition will be removed in the revised proposed permit. Due to the changes made as a result of the permittee's comments and public interest, a second draft has been prepared and will be posted for public comment. There are currently six open violations listed in EFACTS for this permittee, all at other facilities in other Regions (2/17/2026).

PENNSYLVANIA AMERICAN WATER

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P 610-292-3578
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May 15, 2025

Adam Pesek
Program Manager
Clean Water Program
Pennsylvania Department of Environmental Protection

Re: Draft permit comments
PA American Water Butler Area STP
Application # PA0026697
Authorization ID No. 1506857
Butler Township, Butler County

Mr. Pesek

Pennsylvania American Water has received and reviewed the draft permit published in the Pennsylvanian Bulletin on April 19, 2025. I am providing the following comments for your consideration.

Part A- Effluent Limitations, Monitoring, Recordkeeping and Reporting Requirements

1. Monitoring Table I. C. includes daily monitoring for Ultraviolet Light Intensity. The facility does not utilize UV light for disinfection. PAWC requests that the monitoring requirements be removed from the final permit.

2. Part C. V includes a compliance schedule for the facility to meet compliance with reduced total chlorine residual limits. PAWC respectively requests a final implementation schedule of 4 years and 11 months to comply with the more stringent limits. Installation of a dechlorination system presents challenges for the facility and therefore alternative methods of disinfection may be required.

   PAWC requests a meeting with the Department to determine whether a TRC Minimization Plan or Compliance Schedule for the installation of alternative disinfection method is more appropriate.

3. Monitoring table I. C. includes weekly monitoring for Free Cyanide. PAWC believes the detect for Free Cyanide that was used to establish the limits was based on a sample outlier as Free Cyanide is not typically found in sanitary sewers and there are no industries in the system discharging Free Cyanide into the collection system. We request the option to complete a TRE Study to remove Free Cyanide from the monitoring requirements for the facility.

   We would also like to note that Free Cyanide should be collected as a grab sample however the monitoring requirements in Table I. C. requires 24-hour composite samples

to be collected. If monitoring requirements for Free Cyanide remain in the permit, we request the sample type be changed to grab rather than 24-hour composite in order to meet method requirements.

4. Monitoring table I. C. requires weekly monitoring for Free Cyanide and Total Copper. PAWC respectively requests the frequency be changed to 2/month to align with the remaining monitoring requirements in the permit. Synchronizing monitoring frequencies in permits helps ensure compliance with the monitoring requirements and preventing missed sampling events.

4. Definition for "Composite Sample (for GC/MS volatile organic compounds)" requires four aliquots or grab samples to be collected during the sampling event. The samples must be combined in the laboratory immediately before analysis then one analysis is performed. Butler's contract laboratory service indicated that they were advised by DEP not to composite volatile organic compound samples immediately before analysis. We request that the definition is removed from the permit if DEP does not want the volatile organic compound aliquots composited at the laboratory.

Pennsylvania American Water appreciates the opportunity to submit comments on the draft permit and looks forward to discussing alternative options for disinfection with the Department. I can be reached at 610-233-6553 or Jennifer.green01@amwater.com to schedule a meeting.

Thank you

Jennifer Green

Jennifer Green
Manager, Wastewater Compliance
Pennsylvania American Water

ENVIRONMENTAL INTEGRITY PROJECT

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May 15, 2025

Via Electronic Delivery Only

Adam Olesnanik, P.E.
Adam J. Pesek, E.I.T.
Pennsylvania Department of Environmental Protection
Northwest Regional Office
230 Chestnut Street
Meadville, PA 16335

Re: Comments on Draft NPDES Permit Renewal
NPDES Permit No. PA0026697
Permittee: Pennsylvania American Water Company
Facility: Butler Area STP, 100 Litman Road, Butler, PA 16001-3256

Dear Mr. Olesanik and Mr. Pesek:

The Environmental Integrity Project (EIP), Three Rivers Waterkeeper (3RWK), Citizens' Environmental Association of the Slippery Rock Area (CEASRA, Inc.), and PennEnvironment (collectively, Commenters) respectfully submit the following comments to the Pennsylvania Department of Environmental Protection (DEP or the Department) on the application of Pennsylvania American Water Company (PAAW) for the renewal of NPDES Permit No. PA0026697 (the Permit), for discharges from the Butler Area Sewage Treatment Plant (STP) (the Facility). These comments describe improvements needed in a renewed permit to protect Connoquenessing Creek and Butcher Run, the receiving streams covered by the Permit, and to comply with federal and state permitting requirements.

EIP is a national nonprofit organization headquartered at 888 17th Street NW, Suite 810, Washington, D.C. 20006 that is deeply involved in numerous administrative, legal and regulatory matters in Pennsylvania and nationally, with several employees residing in the Commonwealth, including in the Pittsburgh area. Our organization is dedicated to advocating for more effective environmental laws and better enforcement. EIP has three goals: (1) to illustrate through objective facts and figures how the failure to enforce or implement environmental laws increases pollution and harms public health; (2) to hold federal and state agencies, as well as individual corporations, accountable for failing to enforce or comply with environmental laws; and (3) to help local communities obtain the protection of environmental laws.

3RWK was founded in 2009 and serves as both a scientific and legal advocate for the Allegheny, Mongahela, and Ohio Rivers and their watersheds in Southwestern PA. 3RWK aims to protect the region's water quality by holding polluters accountable and empowering communities to protect their right to clean water. 3RWK's work is grounded in research, policy enforcement,

environmental justice, and education and has a vision of drinkable, fishable, and swimmable waters.

CEASRA is a tax-exempt organization, founded in 1987, whose purpose is to assure environmental integrity within its communities. Specific objectives include the protection of underground aquifers and streams, the protection of endangered species' habitats and the protection of general health and well-being of residents.

PennEnvironment works for clean air, clean water, clean energy, wildlife and open spaces, and a livable climate, envisioning a greener Pennsylvania: one that protects more places where nature can thrive, and offers us and our children a greater opportunity to live healthier, more enriching lives.

Background

EPA authorized Pennsylvania to administer the NPDES program in the Commonwealth through a Memorandum of Agreement (MOA) in 1991.[1] Pursuant to that authorization, DEP has issued the Permit to the Facility for discharges of pollution via Outfall 001 directly to Connoquenessing Creek; and via Outfall 005 directly to Butcher Run; both streams are designated for warm water fishes (WWF).[2] Currently, the Connoquenessing is impaired for that use by nutrients and sediment, and by siltation from urban runoff and storm sewers, while Butcher Run has no impairments.[3] The draft Fact Sheet shows the TMDL status for the Connoquenessing as "pending," with none listed for the Butcher.

Connoquenessing Creek is a tributary of the Beaver River, which flows into the Ohio River, thence to the Mississippi, thence to the Gulf of Mexico. Butcher Run is a tributary to the Connoquenessing. In addition, Connoquenessing Creek is receiving wastewater discharges from Seneca Landfill leachate, located in Evans City, Butler County.

DEP issued the current Permit for the Butler STP to the Butler Area Sewer Authority effective September 1, 2018, and it expired on August 31, 2023. A renewal application for the Permit was submitted to DEP by PAAW – the current owner of the Facility -- on February 14, 2023, and accepted by the Department on February 28, 2023. The existing Permit has been administratively extended since it expired in 2023. On April 19, 2025, the Department published a Draft Permit in the Pennsylvania Bulletin,[4] and comments are due on May 19, 2025.

During previous cycles of the Permit, the STP was owned by the Butler Area Sewer Authority, a publicly-owned treatment works. In October 2024, PAAW, a subsidiary of American Water Works Company, Inc. (American Water), finalized its purchase of the STP for $230 million,

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[1] https://www.epa.gov/sites/default/files/2013-09/documents/pa-moa-npdes.pdf. At the time that the Memorandum of Agreement was executed, the relevant state agency was the "Department of Environmental Resources" (DER). As of July 1, 1995, DER was split between the Department of Environmental Protection (DEP) and another state agency. Regardless, the MOA is between EPA and the Commonwealth, so the applicable state agency is irrelevant.
[2] *See* 25 Pa. Code § 93.9w for stream designation list.
[3] *See* PA DEP, *2024 Pennsylvania Integrated Water Quality Report*, available at: https://storymaps.arcgis.com/stories/7af67824d6924b88b544dbad302ebc4f.
[4] 55 Pa. B. 2858 (Apr. 19, 2025).

following a settlement with interested stakeholders and approval by the Pennsylvania Public Utility Commission on November 9, 2023.[5] American Water is a publicly-traded private utility.

I. DEP Must Include Technology-Based Limits in Private WWTP NPDES Permits

A. Secondary Treatment Standards Only Apply to POTWs

The federal Clean Water Act ("CWA") requires two distinct kinds of technology-based permit limits (TBELs):

> (1) For facilities "other than publicly owned treatment works," limits for conventional pollutants based on the best conventional technology (BCT) and limits for all toxic and nonconventional pollutants based on the best available treatment technology economically achievable (BAT). 33 U.S.C. 1311(b)(2)(A), (E). These TBELs are expressed through federal category-by-category effluent guidelines and effluent limits (collectively referred to as "ELGs") and through case-by-case TBELs. 33 U.S.C. § 1311(b); 40 C.F.R. § 125.3(c).
>
> (2) For publicly owned treatment works (POTWs), pollution limits attainable through secondary treatment technology, called "secondary treatment standards." 33 U.S.C. 1311(b)(1), (b)(2)(A). Secondary treatment standards contain limits for only three parameters: biochemical oxygen demand (BOD), total suspended solids (TSS), and pH. 40 C.F.R. § 133.102.[6] The CWA does not require that POTW permits include additional case-by-case TBELs beyond the secondary treatment standards. 40 C.F.R. § 125.3(c)(2).

Before the Butler STP was privatized, federal secondary treatment standards applied to the Facility and were properly included in the permit. 40 C.F.R. § 403.3(q). Now that the plant is no longer a POTW, however, ***these secondary treatment standards no longer apply***. Instead, the CWA requires that, like for any other wastewater discharger, the Facility's permit includes TBELs for conventional pollutants based on the best conventional technology (BCT) and TBELs for all toxic and nonconventional pollutants based on the best available treatment technology economically achievable (BAT). 33 U.S.C. § 1311(b)(2).

First, regarding conventional pollutants, CWA Section 301(b)(2)(E) requires "facilities with effluent limitations for categories and classes of point sources, ***other than publicly owned treatment works***, which in the case of pollutants identified pursuant to section 1314(a)(4) of this

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[5] Draft Fact Sheet (indication that "[t]he transfer date was 10/29/2024"); *see also* American Water, "Pennsylvania American Water Completes Acquisition of the Butler Area Sewer Authority Wastewater System," available at: https://www.amwater.com/press-room/press-releases/pennsylvania/pennsylvania-american-water-completes-acquisition-of-the-butler-area-sewer-authority-wastewater-systemPA#:~:text=(Oct.,wastewater%20system%20for%20%24230%20million (Oct. 29, 2024) .

[6] There are exceptions to these limits, not relevant here, including alternative treatment standards with different parameters that are "equivalent to secondary treatment," as well as provisions allowing permitting authorities to make case-by-case basis adjustments in the standards for lagoons, combined sewer systems (CSOs), and other more challenging facilities. 40 C.F.R. §§ 133.105, 133.103.

title shall require application of the best conventional pollutant control technology as determined in accordance with regulations issued by the Administrator pursuant to section 1314(b)(4) of this title." 33 U.S.C. § 1311(b)(2)(E) (emphasis added).[7]

Second, regarding toxics and nonconventional pollutants, CWA Section 301(b)(2)(A) requires "for pollutants identified in subparagraphs (C), (D), and (F) of this paragraph, effluent limitations for categories and classes of point sources, ***other than publicly owned treatment work***s, which (i) shall require application of the best available technology economically achievable for such category or class" *i.e.*, BAT. 33 U.S.C. § 1311(b)(2)(A). The CWA's reference to "pollutants identified in subparagraphs (C), (D), and (F) of this paragraph," means all known toxic and nonconventional pollutants.[8]

Federal regulations also explicitly authorize the imposition of BCT and BAT standards on privately-owned treatment works: "[E]ach NPDES permit shall include conditions meeting the following requirements when applicable. . . . For a ***privately owned treatment works***, any conditions expressly applicable to any user, as a limited co-permittee, that may be necessary in the permit issued to the treatment works to ensure compliance with applicable requirements under this part." 40 C.F.R. § 122.44(m) (emphasis added). This section is applicable to state NPDES programs, including DEP's. 40 C.F.R. 123.25(m); *see also* EPA delegation of NPDES program to Pennsylvania.[9] Imposing BAT standards on private WWTPs falls within conditions that may be necessary to ensure compliance with TBELs, as discussed above.

EPA has further made clear in longstanding guidance documents that private WWTPs like the Butler Facility are to be regulated like other privately-owned industrial facilities through ELGs. "[W]here a POTW is sold to a private party who also operates the plant, that party must apply for, and comply with, an NPDES permit. The permit limitations for the facility are no longer based on secondary treatment, but on BPT, BAT, BCT and/or NSPS." Martha G. Prothro, Director, EPA Office of Water, Permits Division, *Permit Implications of Privatization* (Apr. 16, 1987).[10] Efforts to change this status of privatized WWTPs have failed. For example, in 1993, Sen. Frank Lautenberg (D-NJ) introduced a bill to amend the CWA to allow certain privately owned public treatment works to be treated as publicly owned treatment works, but it did not pass.[11]

B. Permits for Private WWTPs Must Include TBELs Based on Best Conventional Technology (BCT) and Best Available Treatment Technology Economically Achievable (BAT)

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[7] The "pollutants identified pursuant to section 1314(a)(4)" are BOD, TSS, pH, fecal coliform, and oil and grease. 40 C.F.R. § 401.16.

[8] Subparagraph C identifies all toxic pollutants referred to in Congress's "Committee Print No. 95-30, House Committee on Public Works and Transportation," which was codified at 40 C.F.R. § 401.15 and includes nickel, lead, mercury, and zinc. 33 U.S.C. § 1311(b)(2)(C). Subparagraph D identifies all toxic pollutants other than those listed in Committee Print No. 95-30. *Id.* § 1311(b)(2)(D). Subparagraph F then identifies "***all*** pollutants" except those covered by the preceding subparagraphs and Subparagraph E, which addresses conventional pollutants. *Id.* § 1311(b)(2)(F) (emphasis added).

[9] *See supra,* n. 1.

[10] Available at: www.epa.gov/system/files/documents/2021-07/owm0397_0.pdf.

[11] *See* Municipal Wastewater Treatment Facility Private Investment Act of 1993. S. 1681. 103d Congress. 1993.

TBELs for wastewater dischargers other than POTWs are to be based on the best conventional technology (BCT) for conventional pollutants and TBELs for all toxic and nonconventional pollutants based on the best available treatment technology economically achievable (BAT). 33 U.S.C. § 1311(b)(2).

EPA has established these TBELs for some specific categories of industrial sources in federal regulations as effluent limitation guidelines and new source performance standards (collectively referred to herein as "ELGs"). 40 C.F.R. Chap. 1, Part N. However, EPA has not set such ELGs for privately-owned WWTPs. *Id.*

When "EPA-promulgated effluent limitations are inapplicable," CWA-delegated permitting agencies like DEP are required to step in and, using the technology and cost factors listed in 40 C.F.R. § 125.3(c)(2) and 40 C.F.R. § 125.3(d)(2), (3), establish case-by-case BCT and BAT TBELs for conventional, toxic, and nonconventional pollutants known to be present in the discharge. 40 C.F.R. § 125.3(c)(2); *see also* Comment to 40 C.F.R. § 125.3 ("These factors must be considered in all cases, regardless of whether the permit is being issued by EPA or an approved State").

Establishing these case-by-case limits in the absence of federal ELGs is not optional. CWA Section 301 requires that permits contain TBELs even when EPA has not established ELGs. 33 U.S.C. § 1311(b). CWA Section 402 then provides EPA and state permitting agencies like DEP with the authority to issue permits only "upon condition that such discharge will meet either (A) all applicable requirements under sections 1311, 1312, 1316, 1317, 1318, and 1343 of this title, or (B) prior to the taking of necessary implementing actions relating to all such requirements, such conditions as the Administrator determines are necessary to carry out the provisions of this chapter." 33 U.S.C. § 1342(a)(1).

Similarly, federal regulations require that

> [E]ach NPDES permit shall include conditions meeting the following requirements when applicable … (a) (1) Technology-based effluent limitations and standards based on: effluent limitations and standards promulgated under section 301 of the CWA, or new source performance standards promulgated under section 306 of CWA, ***on case-by-case effluent limitations determined under section 402(a)(1) of CWA, or a combination of the three, in accordance with § 125.3 of this chapter.***

40 C.F.R. 122.44(a)(1) (emphasis added). EPA's CWA TBEL regulation similarly note that there are two ways to include these TBELs in permits: ELGs and "[o]n a case-by-case basis." 40 C.F.R. § 125.3(c)(1), (c)(2).

In 2010, EPA reiterated that case-by-case TBELs were mandatory:

> [A]n authorized state must include technology-based effluent limitations in its permits for pollutants not addressed by the effluent guidelines for that industry. . . In the absence of an effluent guideline for those pollutants, the CWA requires

> permitting authorities to conduct the 'BPJ' analysis discussed above on a case-by-case basis for those pollutants in each permit.

James A. Hanlon, Director, EPA Office of Wastewater Management, *National Pollutant Discharge Elimination System (NPDES) Permitting of Wastewater Discharges from Flue Gas Desulfurization (FGD) and Coal Combustion Residuals (CCR) Impoundments at Steam Electric Power Plants*, Attachment A at 2 (June 7, 2010) (citing 33 U.S.C. § 1314(b); 40 C.F.R. §§ 122.44(a)(1), 123.25, 125.3) (emphasis added).[12]

Thus, in the absence of ELGs for private WWTPs, DEP must establish case-by-case TBELs based on BCT and BAT in private WWTP permits.

BCT limits for conventional pollutants like TSS and BOD are to reflect both the costs and benefits of reducing effluent pollution, a comparison of treatment with POTWs, and other factors. 33 U.S.C. § 1314(b)(4)(A).

BAT limits for toxic pollutants and nonconventional pollutants like nutrients must be based, at a minimum, "on the performance of the single best-performing plant in an industrial field." *Sw. Elec. Power Co. v. EPA*, 920 F.3d 999, 1006 (5th Cir. 2019) (quoting *Chem. Mfrs. Ass'n v. EPA*, 870 F.2d 177, 226 (5th Cir. 1989)); *see also Kennecott v. EPA*, 780 F.2d 445, 448 (4th Cir. 1985) ("In setting BAT, EPA uses not the average plant, but the optimally operating plant, the pilot plant which acts as a beacon to show what is possible."). BAT "may reflect a higher level of performance than is currently being achieved based on technology transferred from a different subcategory or category, bench scale or pilot plant studies, or foreign plants." 89 Fed. Reg. 40198, 40202 (May 9, 2024); *see also Kennecott*, 780 F.2d at 453. BAT must represent the "gold standard for controlling water pollution from existing sources." *Sw. Elec. Power Co.*, 920 F.3d at 1003.

C. Establishing Case-by-Case Standards for Private WWTPs Supported by Federal Authority and DEP Regulations

Not only does the CWA require that permits for facilities which are not POTWs, like the Butler STP, include case-by-case technology-based limits, but establishing such limits for the Facility is also mandated by EPA's authorization of DEP's program, federal regulations, and the Department's own regulations.

First, federal authority requires case-by-case standards for the Butler STP's discharges. DEP's CWA delegation agreement with EPA, documented in a 1991 Memorandum of Agreement (MOA), requires that the Commonwealth "[c]reate and maintain the legal capability (including State regulations) and the resources required to carry out all aspects of the NPDES program."[13] Further, Pennsylvania is required to interpret its regulations and write permits in a manner consistent with both the federal CWA and a number of EPA permitting regulations, including 40 C.F.R. § 122.44, which requires that NPDES permits include TBELs based on ELGs and case-by-case effluent limitations. 40 C.F.R. §§ 123.25(a)(15) (applying 40 C.F.R. 122.44 to states).

[12] Available at: https://www3.epa.gov/region1/npdes/merrimackstation/pdfs/ar/AR-1564.pdf.
[13] https://www.epa.gov/sites/default/files/2013-09/documents/pa-moa-npdes.pdf (May 7, 1991) at Section II.A.

Another provision states that "Permits ***shall*** contain the following technology-based treatment requirements … (2) For dischargers other than POTWs except as provided in § 122.29(d) [new sources]," BCT limits for conventional pollutants and BAT limits for the toxic pollutants listed in Committee Print No. 95-30, other toxics, and all pollutants which are neither toxic nor conventional. 40 C.F.R. § 123.25(a)(2). The regulation further requires that these TBELs be included through ELGs and "[o]n a case-by-case basis." 40 C.F.R. § 125.3.

Second, DEP regulations already directly incorporate the federal TBEL regulation, 40 C.F.R. § 125.3. For example, the Department's regulation on industrial waste permits provides that, for industrial categories for which no ELGs have been established, permits must reflect "Department-developed technology-based limitations established in accordance with 40 C.F.R. 125.3 (relating to technology-based treatment requirements in permits)." 25 Pa. Code § 92a.48; *see also* 25 Pa. Code § 92a.3(4) (incorporating by reference 40 C.F.R. 125.3, among other provisions, into state regulations).

Third, there is no regulatory reason that DEP cannot require more treatment for privately-owned WWTPs than for POTWs. While DEP's Sewage Permit regulation provides that sewage "shall be given a *minimum* of secondary treatment," the regulation does not bar permits from including the additional TBELs needed to reflect BCT and BAT, meet 40 C.F.R. § 125.3, and meet the CWA. 25 Pa. Code § 92a.47(a) (emphasis added).

In addition, state regulations already require BCT and BAT TBELs in permits for several categories discharging effluent that meets the definition of "sewage" under 25 Pa. Code § 92a.2, *i.e.*, "substance that contains any of the waste products or excrementitious or other discharge from the bodies of human beings or animals," including CAFOs and AAFs. 25 Pa. Code § 92a.29, 92a.30.

Consequently, establishing TBELs for privatized WWTPs is mandated under both federal and state law.

II. DEP Must Establish Case-by-Case TBELs for the Privatized Butler WWTP

A. The Butler STP is No Longer a Publicly-Owned Treatment Works (POTW)

Upon the Butler STP's purchase by a private entity, PAAW, the Facility changed from its status as a municipal publicly-owned treatment works to a privately-owned entity. The Draft Fact Sheet unambiguously acknowledges this status: the STP "is a ***privately owned*** treatment works treating municipal sewage received from the City of Butler, Butler Township, Center Township, East Butler Borough, Summit Township, Connoquenessing Township, Oakland Township, and Penn Township, Butler County."[14] The Draft Fact Sheet further explains:

> A transfer application was submitted during the technical review for the permit renewal to change the permittee from Butler Area Sewer Authority to PA American Water Company due to change in ownership. The transfer date was 10/29/24. ***This***

[14] Draft Fact Sheet at p. 1 (emphasis added).

> ***will change the facility from a publicly owned treatment works to a privately owned treatment works***.[15]

The Fact Sheet's acknowledgment of the change to the Butler STP's status is consistent with federal law. EPA defines "POTWs" as treatment works "owned by a state or municipality." 40 C.F.R. § 403.3(q); *see also* 33 U.S.C. § 1362(4) (defining "municipality" as "a city, town, borough, county, parish, district, association, or other public body created by or pursuant to State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 1288 of this title").

Thus, the Butler STP is no longer owned by a state or municipality—and it is no longer a POTW. 40 C.F.R. § 403.3(q).

B. The Draft Permit for the Butler STP Must Be Revised to Include Limits That Represent BAT

As discussed above, CWA Section 301(b)(2) NPDES permits for private WWTPs are to include BCT and BAT TBELs for the WWTP's known pollutants/pollution parameters. To review which parameters need BCT or BAT TBELs, Commenters attempted to obtain a copy of the Permittee's renewal application for the Draft Permit by submitting a Right-to-Know Act (RTK) request on April 16, 2025. DEP assigned the RTK No. 2025-0552 (NW) and responded on April 23, 2025 that it was unable to meet the April 23 deadline for response such that it was giving itself an additional 30 days, until May 23, 2025, to respond.[16] As its basis for being unable to respond by the deadline, DEP stated that it was affected by "bona fide staffing limitations" and that "[t]he extent or nature of the request precludes a response within the required time-period." Sharing the application on which a draft permit was based should have been simple for the Department to do (especially if it received the application electronically), did not require extra staffing, and did not have an extent or nature which was complicated in any way. Yet, we have not received the requested renewal application and will apparently not do so until after the May 19, 2025 comment period deadline. However, it is likely that the following pollutants require BCT or BAT TBELs in the Permit:

- BOD
- Chlorine, total residual
- Coliform, fecal general and/or *E. Coli*
- Nitrogen, ammonia total
- Nitrogen, total
- Oxygen, dissolved
- pH
- Phosphorus, total
- Solids, total suspended (TSS)
- Copper

[15] *Id.* (emphases added).
[16] In its Interim Response letter, DEP attached one requested document, the fact sheet for the Draft Permit.

- Cyanide

We ask that DEP review all of the data for all of these pollutants – and any others disclosed in the renewal application -- when issuing the new NPDES permit for the Butler STP to PAAW, and establish TBELs for each pollutant that reflect the appropriate treatment standard. For pollutants already limited in the permit based on water quality standards (WQBELs), we request that DEP adopt the more stringent of the WQBEL or the TBEL.

1. DEP Should Tighten Permit Limits for Total Nitrogen and Total Phosphorus to 8 mg/L and 1 mg/L, Respectively

In particular, we ask that DEP establish limits for total nitrogen and total phosphorus that reflect BAT. BAT must be based, at a minimum, "on the performance of the single best-performing plant in an industrial field." *Sw. Elec. Power Co. v. EPA*, 920 F.3d 999, 1005 (5th Cir. 2019) (citing *Chem. Mfrs. Ass'n v. EPA*, 870 F.2d 177, 226 (5th Cir. 1989)); *see also Kennecott v. EPA*, 780 F.2d 445, 448 (4th Cir. 1985) (holding that, "[i]n setting BAT, EPA uses not the average plant, but the optimally operating plant, the pilot plant which acts as a beacon to show what is possible.").

There is broad consensus that treating domestic wastewater to 8 mg/L total nitrogen and 1 mg/L total phosphorus through nitrification/denitrification and biological phosphorus removal is widely feasible at domestic WWTPs. From 2019 to 2021, EPA conducted a nationwide survey to assess the effectiveness and costs of different nutrient removal approaches at POTWs. Based on survey results to date, EPA concluded that "improved nutrient removal is attainable by all types of POTWs," with various biological treatment types able to achieve effluent totals of at least 8 mg/L total nitrogen and 1 mg/L phosphorus.[17] EPA found that "more than 1,000 POTWs with different biological treatment types (including both conventional and advanced treatment technologies) can achieve effluent containing total nitrogen of 8 mg/L and total phosphorus of 1 mg/L."[18] This was true even for basic nitrification/denitrification and biological phosphorus removal (referred to as basic "Level 2 treatment").[19] In addition, at least six states now have technology-based nutrient limits for WWTPs, most of which are set around the proposed 8 mg/L nitrogen and 1 mg/L phosphorus basic limits.[20]

WWTPs can do even better than Level 2 treatment, however. In the Chesapeake Bay watershed, for example, WWTPs have used enhanced nutrient removal (ENR) technologies, which adds filters laden with microorganisms to cut nutrient discharges, to achieve under 3 mg/L total

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[17] EPA, *National Study of Nutrient Removal and Secondary Technologies* (last updated Jan. 15, 2025) (available at: https://www.epa.gov/eg/national-study-nutrient-removal-and-secondary-technologies#information).

[18] *Id.; see also,* EPA, *EPA's Review of Nutrients in Industrial Wastewater Discharge,* Docket No. EPA-HQ-OW-2018-0618, *at Table 3-1* (Dec. 2020) (available at: https://www.regulations.gov/document/EPA-HQ-OW-2018-0618-0659; *see generally,* Water Research Foundation, "Nutrients" (available at: https://www.waterrf.org/research/topics/nutrients).

[19] *Id.*

[20] These states (Colorado, Wisconsin, Utah, Virginia, Indiana, and Ohio) have relied upon separate state authority to promulgate such limits, since the CWA does not authorize them. *See* EPA, Compendium of State and Regional NPDES Nutrient Permitting Approaches (July 2022) (available at: https://www.epa.gov/system/files/documents/2022-04/compendium-of-npdes-nutrient-permitting-approaches.pdf).

nitrogen and 0.3 mg/L total phosphorus. Maryland has prioritized the installation of ENR technologies at every one of the 67 publicly owned wastewater treatment plants in the Chesapeake Bay with a design flow of 0.5 MGD or more.[21]

The Draft Permit does not have *any* total nitrogen limits (although it does have monitoring requirements). Monitoring for nitrogen from October 1, 2023-September 30, 2024 showed values as high as 15.5 mg/L (May 2024), 14.3 mg/L (June and July 2024), and 11.1 mg/L (October 2023). These values are far above the 8 mg/L total nitrogen attained by basic POTW nutrient removal technologies.[22] Commenters ask that DEP include total nitrogen limits in the permit that reflect BAT. We expect these will be, at the highest, 8 mg/L but may be lower.

In addition, the Draft Permit's phosphorus limits do not reflect these BAT technologies. The Draft Permit includes average monthly phosphorus limits of 2.0 mg/L and instant maximum limits of 4 mg/L. These limits are WQBELs based on "Stream Enrichment Risk Analysis (SERA) study on Conn[oquenessing Creek]."[23] These phosphorus WQBELs are above the 1 mg/L phosphorus limit that EPA has found to be broadly feasible at POTWs, as discussed above. We ask that DEP revise the phosphorus limits to better reflect current technology and BAT. We expect these will be, at the highest, 1 mg/L but may be lower.

2. DEP Should Tighten Permit Limits for TSS to 3 mg/L

Commenters request that DEP establish a limit of 3 mg/L TSS in the Permit, which represents BCT for that parameter. BCT limits for conventional pollutants like TSS must be based on, among other factors:

> [the] reasonableness of the relationship between the costs of attaining a reduction in effluents and the effluent reduction benefits derived, and the comparison of the cost and level of reduction of such pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources, and . . . the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, non-water quality environmental impact (including energy requirements). . .

33 U.S.C. § 1314(b)(4)(B).

The current permit contains an average monthly discharge limit of 30 mg/L, but the Facility has discharged concentrations of TSS as low as 3 mg/L on at least three recent occasions: December 2022, February 2023, and July 2023. Therefore, a limit of 3 mg/L TSS is achievable and should be considered as part of permit reissuance. *See* EPA, *NPDES Permit Writers' Manual* (Sept.

[21] https://mde.maryland.gov/programs/water/bayrestorationfund/pages/enr.aspx
[22] *See* n. 17, *supra.*
[23] Draft Fact Sheet at p. 11.

2010) at Ch. 5, p. 79 (stating that "[t]he capability and performance of an individual plant is assessed, and limits are selected from a range of possible values.").[24]

Of note, the Facility has also regularly achieved a concentration of just over 3 mg/L in its discharge. During the following months, it achieved 4 mg/L TSS in its discharge: August 2022, September 2022, January 2023, March 2023, April 2023, May 2023, June 2023, August 2023, September 2023, October 2023, November 2023, December 2023, February 2024, March 2024, May 2024, June 2024, July 2024, November 2024, December 2024, and January 2025. And during the following months, it achieved a TSS concentration of 5 mg/L: March 2021, including during March 2021, April 2021, November 2021, December 2021, January 2022, March 2022, May 2022, June 2022, July 2022, October 2022, November 2022, January 2024, August 2024, September 2024, and March 2025. So, a 3 mg/L limit would not be based on aberrational values or too challenging for the Facility to achieve.

Therefore, we ask that DEP revise the TSS limit for the Butler STP to 3 mg/L, to better reflect BCT. That limits represents BCT for the Facility, which it has achieved on several occasions, and it has also regularly achieved concentrations just above that amount.

III. DEP Must Revise the Draft Permit's Pretreatment Provisions to Reflect the Facility's Privately-Owned Status

As of 2021, the Butler STP had one categorical industrial user, three significant non-categorical industrial users and three non-significant industrial users discharging through its system.[25] At the current time, the Butler STP has no industrial users.[26]

The Draft Permit currently requires that the Butler STP "develop and implement an industrial pretreatment program . . . to assure that the permittee's facilities are capable of maintaining compliance with the terms and conditions of this permit and are not subject to pass through, interference, or reductions in sludge quality due to contributions from industrial users as defined by 25 Pa. Code § 94.1."[27] This pretreatment provision is misplaced in a private WWTP permit. Only POTWs have the authority to rely upon a pretreatment program to address discharges from industrial users. 33 U.S.C. § 1342(b)(8); 40 C.F.R. § 403.1. When an industrial user discharges to a private WWTP, the portion of the WWTP discharge from the industrial user is to be covered by its own, industry-specific TBELs. 40 C.F.R. § 122.44(m).

Attached to this comment letter is a 2016 email to DEP from EPA Region 3 regarding the privately-owned Scranton WWTP and its industrial users that further supports this legal distinction:

[24] EPA *Permit Writers' Manual* (Sept. 2010) (available at: https://www.epa.gov/sites/default/files/2015-09/documents/pwm_2010.pdf).
[25] Butler Area Sewer Authority, *Annual Wasteload Management Report* (Jan. 25, 2022) (available at: https://www.basapa.org/wp-content/uploads/2022/09/2021-Chapter-94-Report-FINAL.pdf).
[26] Fact Sheet for draft Permit at p. 12.
[27] Draft Permit at p. 23.

Once the Scranton Sewer Authority is sold the WWTP will no longer be a POTW, ***and the pretreatment requirements from the effluent guidelines no longer apply***. In this case, ***PADEP would be required to apply direct-discharger standards (i.e, BAT, BCT, BPT, NSPS standards) to the facilities that fall within any of the effluent guidelines***. 40 CFR 122.44(m) contains the requirements for conditions in a permit related to privately owned treatment works, and we offer a link to EPA's 1987 memo that discusses Permit Implications of Privatization: https://www3.epa.gov/npdes/pubs/owm0397.pdf. We offer a few comments related to this issue:

a. If PADEP and Pennsylvania American Water Company (PAWC) choose to apply Pretreatment standards to the industrial discharges within its system, it would be in addition to the applicable BAT/BCT/BPT/NSPS ELG requirements rather than in place of them.
b. PADEP should consider adding a condition to Appendix A, requiring PAWC to evaluate all of the industrial discharges to its system that may be subject to BAT/BCT/BPT/NSPS requirements, and to report that information to PADEP in an appropriate timeframe.
c. As Appendix A is written, it is EPA's understanding that the PAWC permit does not intend to apply BAT/BCT/BPT/NPSPS requirements for applicable industrial discharges, and that PADEP intends to regulate these discharges in some other manner. We expect that this issue will be addressed on a statewide basis and that PADEP and EPA will need to meet to discuss a proposed path forward to address this.
d. Until the applicable BAT/BCT/BPT/NSPS ELG requirements are imposed in an NPDES permit, it is EPA's understanding that any industrial discharges to the PAWC system may be liable for discharging without an NPDES permit.[28]

We ask that DEP follow EPA's comments on the Scranton permit, and apply 40 C.F.R. 122.44(m) to this Permit -- not federal pretreatment requirements.

[28] EPA Region 3, Email to Brian Burden, Scranton Sewer Authority WWTP (Nov. 2, 2016), appended as Attachment 1 (emphasis added).

Conclusion

In sum, we request that DEP revise the draft Permit for the Butler STP to reflect the legal requirements for privately-owned domestic wastewater treatment plants, not POTWs. As part of this revision, we ask that PA add TBELs to the Permit which limit the Butler STP's known pollutants based on BCT and BAT standards.

Sincerely,

/s/ Lori Kier
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cc: Ms. Carissa Moncavage
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Ms. Dana Hales
Pennsylvania NPDES Permits
Water Division, EPA Region 3
hales.dana@epa.gov

Attachment 1

Hales, Dana

From: Hales, Dana
Sent: Wednesday, November 02, 2016 3:55 PM
To: Burden, Brian
Cc: Bellanca, Amy; Patel, Jay (DEP); Furjanic, Sean; Trulear, Brian; Cruz, Francisco; Joel Blanco-Gonzalez; Lopez Carrasquillo, Valerie
Subject: Scranton Sewer Authority WWTP Draft Permit (PA0026492)

Brian,

According to our Memorandum of Agreement, the Environmental Protection Agency (EPA) Region III has received the draft National Pollutant Discharge Elimination System (NPDES) permit for:

Scranton Sewer Authority WWTP
NPDES Number: PA0026492
EPA Received: October 5, 2016

This is a major permit that discharges to the Lackawanna River. EPA has chosen to perform a limited review of the draft permit based on the wasteload allocation (WLA) requirements of the Chesapeake Bay TMDL, and CSO and Pretreatment requirements. I have completed my review and offer the following comments on the SSA permit and Appendix A:

1. The Reporting Requirement language at Part C.I.E. (Chesapeake Bay) does not appear to be the most current language that PADEP has developed. We understand that this language was revised, because new eDMR language and requirements were to be included in Part A.III.B., which also does not seem to be updated in this draft permit. I would assume that if Part A.III.B. is updated, the condition at Part C.II. (Requirement to Use EDMR System) may no longer be necessary. Please clarify any proposed changes to the language in the various sections of the SSA permit and Appendix A.
2. Part C. IV.H. of the permit and Appendix A propose a 2 year CSO-Related Bypass schedule for construction related to increasing the hydraulic capacity of the BNR process to 46 MGD, while Part C.III. provides the permittee 4 years to operate the facility in this manner. These two periods of time conflict. Should Part C.IV.H of the permit/Appendix A be revised to provide a 4-year schedule?
3. We offer the following revisions to the CSO performance standard language in the SSA permit and Appendix A. We want to clarify that including a reference to the typical year would be appropriate in this condition, since the performance standard applies during the average design conditions upon which the controls are based. If the reference to the typical year is included in this condition, the term "typical year" should be defined.

   As set forth in the LTCP, the permittee shall on a system-wide, annual average basis compared to the typical year, eliminate or capture for treatment, or storage and subsequent treatment, at least 90 percent of the combined sewage volume collected in the CSS during precipitation events. Captured combined sewage shall receive the treatment specified in the LTCP but at a minimum, primary clarification, solids and floatables disposal and disinfection. ***[Insert definition of typical year]*** *In addition, the permittee shall allow no more than four (4) activations to occur from a CSO to the natural channels of the tributary streams and no more than nine (9) activations to occur from a CSO to channelized sections of the tributary streams and the Lackawanna River.*

4. Regarding the permit language at Part C.V. in Appendix A: Once the Scranton Sewer Authority is sold the WWTP will no longer be a POTW, and the pretreatment requirements from the effluent guidelines no longer apply. In this case, PADEP would be required to apply direct-discharger standards (i.e, BAT, BCT, BPT, NSPS standards) to the facilities that fall within any of the effluent guidelines. 40 CFR 122.44(m) contains the requirements for conditions in a permit related to privately owned treatment works, and we offer a link to EPA's 1987 memo that

discusses Permit Implications of Privatization: https://www3.epa.gov/npdes/pubs/owm0397.pdf. We offer a few comments related to this issue:

a. If PADEP and Pennsylvania American Water Company (PAWC) choose to apply Pretreatment standards to the industrial discharges within its system, it would be in addition to the applicable BAT/BCT/BPT/NSPS ELG requirements rather than in place of them.
b. PADEP should consider adding a condition to Appendix A, requiring PAWC to evaluate all of the industrial discharges to its system that may be subject to BAT/BCT/BPT/NSPS requirements, and to report that information to PADEP in an appropriate timeframe.
c. As Appendix A is written, it is EPA's understanding that the PAWC permit does not intend to apply BAT/BCT/BPT/NPSPS requirements for applicable industrial discharges, and that PADEP intends to regulate these discharges in some other manner. We expect that this issue will be addressed on a statewide basis and that PADEP and EPA will need to meet to discuss a proposed path forward to address this.
d. Until the applicable BAT/BCT/BPT/NSPS ELG requirements are imposed in an NPDES permit, it is EPA's understanding that any industrial discharges to the PAWC system may be liable for discharging without an NPDES permit.

Please address the above and provide me with any changes to the draft permit and/or fact sheet, if necessary.
Thank you,
Dana

Please note that my email has changed to hales.dana@epa.gov.

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Pennsylvania-American Water Company's Response to Comments Submitted by Environmental Integrity Project, Three Rivers Waterkeeper, Citizens' Environmental Association of the Slippery Rock Area, and PennEnvironment Regarding Draft Renewal of NPDES Permit No. PA0026697 for Butler Area Sewage Treatment Plant

December 15, 2025

By letter dated May 15, 2025, the Environmental Integrity Project, Three Rivers Waterkeeper, Citizens' Environmental Association of the Slippery Rock Area, and PennEnvironment (collectively referred to as the "**Commenters**") submitted comments ("**Comments**") to the Pennsylvania Department of Environmental Protection ("**Department**") regarding the proposed renewal of NPDES Permit No. PA0026697 ("**Proposed Permit**"). The Proposed Permit would authorize continued discharges from the facility identified in Department records as the Butler Area Sewage Treatment Plant ("**Butler Area STP**"), which is owned and operated by Pennsylvania-American Water Company ("**PAWC**"). By letter dated September 16, 2025, the Department invited PAWC to respond to the Comments. PAWC appreciates the opportunity to address the Comments and to explain certain key points that support the proposed effluent limits and conditions in the Proposed Permit.

1. Background Regarding PAWC and the Butler Area STP

1.1 PAWC Acquisition of the Butler Area STP and related collection system

On October 29, 2024, PAWC acquired the Butler Area Sewer Authority wastewater system. The Butler system serves more than 15,000 customer connections in Butler County, including the City of Butler and six other municipalities. As part of the acquisition transaction, PAWC applied to the Department for the transfer and reissuance of the NPDES Permit governing treated wastewater discharges from the Butler Area STP, and the Department issued public notice of a draft NPDES permit on April 19, 2025.

1.2 Description of the Butler Area STP, Treatment Processes, and Site Constraints

The Butler Area STP and related collection system are community wastewater treatment facilities that predominately treat domestic wastewater with minor commercial/industrial contributions. Under the Proposed Permit, industrial customers would be regulated under an industrial pretreatment program (IPP) that is incorporated as part of PAWC's PUC-approved tariff regulations governing all customers connected to the system. All significant industrial contributors would be required to obtain IPP permits, comply with pretreatment limits based on headworks analyses and USEPA categorical pretreatment standards, be monitored regularly, and be subject to enforcement procedures spelled out in the IPP program.

The Butler Area STP was originally constructed in 1924 to provide sedimentation-based treatment. In 1962, the Butler Area Sewer Authority (BASA) was established as a municipal authority to operate the facility and manage the wastewater collection system. In 2022, BASA agreed to the sale of the plant and collection system to PAWC. The Pennsylvania Public Utility Commission issued final approval of the transaction in 2023, and the transfer of ownership was completed in 2024. The treatment facility is located in Butler Township and serves the City of Butler, East Butler Borough, Butler Township, the majority of Center Township, and small areas within Connoquenessing Township, Oakland Township, and Summit Township.

Today, the Butler Area STP is a two-stage biological treatment plant with a permitted design capacity of 10.0 million gallons per day (MGD), a peak hydraulic capacity of 25.0 MGD, and a permitted organic loading of 12,750 lbs/day. Key treatment elements include coarse screening and grit removal, primary clarifiers, trickling filters, aeration basins, secondary clarifiers, tertiary reactor clarifiers, and chlorine disinfection contact tanks.

The Butler Area STP site has substantial constraints due to the existing facility footprint and surrounding steep slopes. **Attachment 1** is a map of the existing site along Connoquenessing Creek and its tributary, Butcher Run, showing the location of existing wastewater treatment equipment and facilities. Although there are wooded portions of the property to the south of the existing wastewater plant, those are sloped areas unsuitable for the placement of wastewater facilities. The flatter land along the stream which is suitable for such facilities is substantially occupied by existing wastewater treatment units, buildings, piping and roadways.

1.3 Butler Area STP Improvements Since PAWC's Acquisition of the Butler Area System

Since PAWC took ownership and operational control of the system on October 29, 2024, PAWC has undertaken concerted efforts to improve performance of the Butler Area STP. Performance improvements have included:

- Primary Clarifier Number 5 Rebuild: Rebuilt the mechanical drive components. This work was completed as preventative maintenance to replace aging components for proper operation of primary clarification.

- Secondary Sedimentation (Traveling Bridge) Tank Improvements. Rebuilt electrical components and equipment. This process is used for additional settling and removal of activated sludge back based on biological demand requirements.

In addition to the improvements already made, PAWC is in the process of replacing the existing chlorine disinfection system with an ultraviolet light system. This project will address the new proposed environmental discharge limit for residual chlorine. Under current operations, the STP would not be able to meet this proposed discharge limit and additional de-chlorination chemical treatment would be required to meet the permit limits. This project will also eliminate the 1-ton chlorine gas cylinders, simplifying operations and compliance at the plant.

2. Support for Effluent Limits in the Proposed Permit

2.1 Fact Sheet to Proposed Permit

The Department's Fact Sheet dated April 4, 2025 ("**Fact Sheet**"), prepared in conjunction with the Proposed Permit, contains descriptions of the basis for the effluent limits proposed in the permits. Pertinent portions of the Fact Sheet explain that the Department identified technology-based effluent limits ("**TBELs**") for certain pollutants (in some cases referring to "BPJ" (i.e., best professional judgement"), and established water quality based effluent limits ("**WQBELs**") for other pollutants based on modeling indicating that such WQBELs were necessary to attain and

protect instream water quality criteria. The responses provided below supplement and further support some of the analyses provided in the Fact Sheet.

2.2 TBELs Based on State Regulations

In the absence of technology-based limits established via federal effluent limit guidelines ("**ELGs**"), Pennsylvania's Environmental Quality Board has adopted TBELs that apply to ***all*** discharges of sewage. Unlike the federal limits set forth in 40 C.F.R. §§133.102(a)(4)(i)-(ii), 133.102(b)(1)-(2) and 133.102(c), which apply only to publicly-owned treatment works, Pennsylvania has established in 25 Pa. Code §92a.47 a universal set of technology-based effluent limits applicable to sewage discharges – whether they be from POTWs or facilities operated by developers, homeowner associations, institutions, apartment complexes, churches, or public utilities. As set forth in §92a.47, all such sewage discharge must meet the following:

- Monthly average discharge limitation for BOD5 and TSS may not exceed 30 milligrams per liter. If CBOD5 is specified instead of BOD5, the limitation may not exceed 25 milligrams per liter. §92a.47(a)(1).

- Weekly average discharge limitation for BOD5 and TSS may not exceed 45 milligrams per liter for POTW facilities. If CBOD5 is specified instead of BOD5, the limitation may not exceed 40 milligrams per liter. §92a.47(a)(2).

- From May through September, a monthly average discharge limitation for fecal coliform of 200/100 mL as a geometric mean and an instantaneous maximum effluent limitation not greater than 1,000/100 mL. §92a.47(a)(4).

- From October through April, a monthly average discharge limitation for fecal coliform of 2,000/100 mL as a geometric mean and an instantaneous maximum effluent limitation not greater than 10,000/100 mL. §92a.47(a)(5).

- Where chlorine is used, compliance with 25 Pa. Code §92a.48(b). §92a.47(a)(7). In turn, §92a.48(b)(2) stipulates that "[f]or facilities where the EPA has not promulgated a National ELG setting forth limits for TRC or free available chlorine for an industry or activity, and the Department has not developed a facility-specific BAT effluent limitation for TRC under the factors in paragraph (1), an effluent limitation for TRC of 0.5 milligrams per liter (30-day average) constitutes BAT."

The rationale for such a single set of statewide standards is understandable. The premise behind §92a.47 is straightforward: such sewage discharges are similar in nature, such sewage wastewaters are amenable to the same forms of treatment, and in fairness, the same standards should apply to all, unless water quality considerations (that is, the necessity to set more stringent limits to attain and protect existing and designated uses) require imposition of WQBELs.

At the same time, as discussed below, beyond the foundational premise of §92a.47, application of the factors relevant to establishment of TBELs based on application of BPJ supports the limits proposed in the Proposed Permit.

2.3 Establishment of Case-by-Case TBELs Involves Consideration of Certain Factors for the Particular Facility Involved

The Commenters claim that the proposed NPDES Permit must be revised to impose more stringent requirements because acquisition of the Butler Area WWTP by PAWC (an investor-owned public utility) disqualifies the Butler Area STP as a "publicly-owned treatment works" ("POTW") as that term is defined under federal law. In brief summary, the Commenters claim that as a utility-owned treatment plant, federal secondary treatment standards no longer apply, and instead more stringent TBELs apply based on (1) "best conventional technology" ("**BCT**") for conventional pollutants such as BOD5, dissolved oxygen and bacteria, and (2) "best available treatment technology economically achievable" ("**BAT**") for toxic and non-conventional pollutants, including chlorine, total suspended solids, nitrogen, phosphorus, copper and cyanide.

The Commenters mistakenly claim that where USEPA has not established ELGs defining BCT or BAT for a category, such as public utility owned community sewage plants, the Department must establish BCT or BAT based on the "single best performing plant." To the contrary, if required to determine TBELs on a case-by-case basis applying BPJ, a permit writer must consider the relevant statutory and regulatory factors for BCT and BAT ***for the particular facility***.

Under 40 C.F.R. §125.3(c)(2), the permit writer may impose TBELs: "On a case-by-case basis under section 402(a)(1) of the Act, to the extent that EPA-promulgated effluent limitations are inapplicable. The permit writer shall apply the appropriate factors listed in § 125.3(d) and shall consider: (i) The appropriate technology for the category or class of point sources of which the applicant is a member, based upon all available information; and (ii) Any unique factors relating to the applicant."

The factors listed in 40 C.F.R. §125.3(d) are as follows:

> (2) *For BCT requirements:*
>
> > (i) The reasonableness of the relationship between the costs of attaining a reduction in effluent and the effluent reduction benefits derived;
> >
> > (ii) The comparison of the cost and level of reduction of such pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources;
> >
> > (iii) The age of equipment and facilities involved;
> >
> > (iv) The process employed;
> >
> > (v) The engineering aspects of the application of various types of control techniques;
> >
> > (vi) Process changes; and

(vii) Non-water quality environmental impact (including energy requirements).

(3) *For BAT requirements:*

(i) The age of equipment and facilities involved;

(ii) The process employed;

(iii) The engineering aspects of the application of various types of control techniques;

(iv) Process changes;

(v) The cost of achieving such effluent reduction; and

(vi) Non-water quality environmental impact (including energy requirements).

Although these regulatory BPJ factors are the same as the statutory factors that USEPA must consider in adopting effluent limitation guidelines, they are to be applied differently in a case-by-case analysis. In case-by-case BPJ, the regulatory factors must be applied to the specific site. As EPA explained:

> Permits containing case-by-case effluent limitations are based on a permit writer's "best professional judgment" (BPJ) and represent the appropriate statutory requirement— "best practicable control technology currently available" (BPT), "best conventional pollutant control technology currently available" (BCT), or "best available technology economically available" (BAT)—***for that particular facility***.

49 Fed. Reg. 37,908, at 38,025 (Sept. 26, 1984) (emphasis added). In considering case-by-case effluent limits, technological feasibility, equipment and facility age, processes employed and potential process changes, cost, and other factors would be evaluated not only for the particular sector but also for that particular facility (i.e., considering "any unique factors relating to the applicant").

In considering what is the "appropriate technology for the category or class of point sources of which the applicant is a member, based upon all available information," it is important to first identify what is the appropriate category. In this case, that category is best described as "sewage facilities" (as reflected in 25 Pa. Code §92a.47), and more specifically that subset of sewage facilities that might be best described as *community sewage facilities* (that is, sewage facilities that collect and treat domestic sewage and related wastewaters from a service area in one or more municipalities). The Butler Area STP is not akin to industrial facilities. It serves the sewage collection and treatment needs of a large community, with highly variable flows depending on climatic conditions, and the starting point for applicable technologies are those prescribed for similar community systems (the vast majority of which are, due to their ownership, POTWs). For that category of point sources, the Clean Water Act requires secondary treatment, recognizing that secondary treatment technologies are appropriate and reasonable for the vast majority of community sewage systems. Accordingly, for purposes of imposing case-by-case TBELs under 40 C.F.R. 125.3(c)(2), a permit writer should consider the treatment technologies that have been found appropriate to and are being implemented by community sewage systems across the

nation, applying the appropriate factors listed in § 125.3(d) and considering any unique factors relating to the applicant (i.e., to the particular facilities under consideration).

As set forth below, an analysis of such factors as applied to the Butler Area STP supports the limits proposed by the Department in the Proposed Permit.

2.4 *Analysis of BPJ Factors for Conventional Pollutants*

The Commenters generally advocate for establishment via BPJ of BCT limits for virtually all conventional pollutants (Fecal Coliform, E. Coli, CBOD5, DO, pH and TSS). However, they propose a specific BCT value for only one: Total Suspended Solids (TSS).

The following summarizes the BCT factors for the conventional pollutants at issue.

Fecal Coliform and/or E. Coli: Consistent with 25 Pa. Code §92a.47(a), the current and proposed NPDES Permit impose a Fecal Coliform limit with seasonal limits, specifying that from May 1 to Sept. 30, Fecal Coliform not exceed 200/100 ml (Geo Mean) or 1,000/100 mg/L (IMAX); and that from October 1 to April 30, values not exceed 2,000/100 ml (Geo Mean) and 10,000/100 ml (IMAX). Those values reflect the efficiency of typical disinfection systems at community wastewater treatment plants over a wide range of flows, while at the same time imposing stricter summer limits correspond to the recreational use season and reflect the need to control pathogens when human exposure risk is greatest.

Additionally, as noted above, PAWC is in the process of replacing the existing chlorine disinfection system with an ultraviolet light system, a fact that the Commenters have not taken into account. The ultraviolet light system will provide robust and reliable treatment of the effluent without the addition of chlorine. The Commenters offer no analysis to support lower limits for Fecal Coliform than the permit already provides and no suggestion of technologies superior to what is already planned.

CBOD5: The proposed NPDES limit for CBOD5 in the effluent is 11 mg/L as a monthly average, which is a water quality-based limit and more stringent than the standard technology-based limit. Typical community sewage plants of the size of the Butler Area STP have one major biological treatment process. The Butler STP has two biological processes, both trickling filters and aeration tanks. This allows the plant to achieve reliable and consistent treatment for CBOD5 at a range of flows. Since 2015, the average of monthly CBOD5 concentrations in the effluent was 2.60 mg/L and the maximum monthly average was 7.8 mg/L. These values are noted to be below the permit limits, which is the result of prudent operating practices which deliberately aim to achieve better than permit limits in order to avoid regulatory exceedances with a margin of safety. The inclusion of additional treatment to further reduce these values is unwarranted.

Notably, the current NPDES Permit for the plant includes seasonal CBOD5 limits (12 mg/L in the summer; 24 mg/L in the winter). The proposed permit eliminates these seasonal limits and imposes a more stringent single limit of 11 mg/L at all times.

Other technologies do exist for achieving more stringent levels of CBOD5 removal, such as membrane bioreactors (MBRs) and other advanced technologies. These technologies are cost prohibitive, typically costing tens of millions of dollars to install. They would also require substantial operational modifications to the existing plant and are energy intensive, increasing operation and maintenance costs. Based on these factors, the CBOD5 limits that are proposed in the NPDES permit are reasonable BCT limits.

Dissolved Oxygen: The proposed NPDES limits call for a minimum DO value of 5.0 mg/L. This is standard for community sewage plants that have properly operating aeration systems and should be considered BCT for biological treatment.

Since 2015, the average level of dissolved oxygen being achieved is 7.1 mg/L, which is well above the recommended minimum DO level for adequate biological treatment. In that time, the plant has only reported a value below 5 mg/L in its effluent one time under an abnormal operating condition.

The costs of additional or more efficient aeration (such as fine bubbling aerators) would be substantial, likely in excess of $3 million, and likely would have no or minimal discernable improvement to dissolved oxygen levels. The BCT analysis requires comparison of the costs incurred by typical well-operated POTWs to meet the DO limits applicable to such plants to the cost involved in meeting an even more stringent limit. The analysis demonstrates that imposition of such an additional requirement and cost on this community wastewater treatment system is unjustified. Moreover, the proposed minimum level of 5.0 mg/L in the effluent is more than sufficient to protect the designated and protected instream uses of Connoquenessing Creek, which is a warm water fishery (see 25 Pa. Code §93.7. Specific water quality criteria. Table 3 for Warm Water Fisheries).

pH: The Proposed Permit sets a pH minimum of 6.0 and maximum of 9.0. The existing WWTP has never had an excursion outside of this 6.0-9.0 range and the Commenters offer no analyses to support an alternate limitation. Moreover, the proposed limit is consistent with 25 Pa. Code §93.7. Specific water quality criteria. Table 3 for Warm Water Fisheries (WWF).

TSS: Consistent with 25 Pa. Code §92a.47(a), the current NPDES Permit and the Proposed Permit impose TSS limits of 30.0 mg/L (monthly) and 45.0 mg/L (weekly), which are typical of what is achieved by a POTW with secondary treatment.

Traditional community sewage plants the size of the Butler Area STP with similar effluent requirements have only primary clarifiers and secondary clarifiers, with the biological process positioned between those sets of clarifiers. The Butler Area STP essentially has a set of tertiary clarifiers that are utilized to achieve additional settling and provide low levels of total suspended solids in its effluent.

The Commenters assert that a limit of 3 mg/L should be imposed because the plant has achieved that level on three occasions in the past. In fact, since 2015, the average of monthly TSS concentrations in the effluent is 5.74 mg/L and the maximum monthly average was 14 mg/L. Reliably achieving an effluent limitation of 3 mg/L in all flow conditions would not be possible with

current plant technology. To achieve such a limit, a direct filtration technology such as tertiary sand filters or filters with another type of fine media, or membrane bioreactor (MBR) technology would be required. Installation of either of those technologies could readily cost $50 million or more. Such an additional cost would be unreasonable when compared to the costs and pollutant control applicable to POTWs as well as the minimal effluent reduction benefits to be derived.

To put an investment of $50 million in context requires consideration of the impact of such investment on the affordability of wastewater services. Whether the system is operated by a municipality or a public utility, such costs are ultimately paid by the system's customers. Under USEPA's Clean Water Act Financial Capability Assessment Guidance ("**FCA Guidance**"), a key indicator of affordability is the Residential Indicator ("**RI**"). The RI compares the average per household costs of wastewater bills to the median household income of the area served. Under the FCA Guidance, an RI of 2% or greater is deemed to present a "large economic impact," meaning that the community's residents are likely to experience economic hardship in complying with federal water quality standards. In the area served by the Butler Area STP, the most recently available US Census data reports a median household income of only $41,705. The current annual wastewater charges paid by an average residential household customer of the Butler Area STP total $551, resulting in an RI of 1.3%. If the $50 million cost of additional improvements to meet the effluent limits for TSS advocated by Commentators were allocated to and had to be recovered via rates paid by Butler Area STP customers, household annual wastewater charges would rise to an estimated $956, resulting in an RI of 2.3%, above the threshold established by the FCA Guidance as representing a "large economic impact." This economic impact affordability concern is heightened when considering another of the FCA Guidance's key factors, which looks at the community's lowest quintile income compared to the national lowest quintile. The Bulter Area's upper limit of the lowest quintile income ($16,074) is 50% below the U.S. lowest quintile income ($32,232),[1] which classifies the Butler Area as "high" impact when considering such an increase in wastewater charges.

Based on the BPJ factors, the TSS limits in the Proposed Permit are reasonable BCT limits.

Notably, while the Butler Area STP frequently does achieve treatment below the NPDES permitted levels for TSS and other constituents, it is important to recognize that fluctuations in the reported data do occur. Common factors that may cause an increase in effluent concentrations include high flows from wet weather, unusually high concentrations in the wastewater influent, operational changes such as taking a process off-line temporarily for maintenance, and seasonal variations that may affect the biological processes. Treatment facilities need to be designed to meet the permit limits even under the worst anticipated conditions, so they normally perform better when conditions are not at their worst.

[1] Source:

https://censusreporter.org/data/table/?table=B19080&geo_ids=01000US,16000US4210464&primary_geo_id=01000US

2.5 *Analysis of BPJ Factors for Non-Conventional Pollutants*

With regard to non-conventional pollutants, the Commenters advocate for specific "BAT" effluent limitations for total nitrogen (TN) and total phosphorus (TP), and they demand unspecified BAT limitations for ammonia nitrogen, copper and free cyanide. The following discussion addresses these points in turn.

Total nitrogen: With regard to total nitrogen (TN), the Commenters assert that a BAT limit of 8 mg/L is achievable and appropriate. This assertion is based upon an EPA survey of treatment technology for nutrient removal. The EPA study, however, is not specific to the Butler Area STP and does not account for the technologies already in place at the plant, the upgrades that would be needed to accomplish such a limit, and the constraints of the site, and therefore is not supportive of a proper BAT analysis.

Total nitrogen has been monitored in the plant effluent since March 2019. The average monthly concentration of total nitrogen in the effluent since that time is 9.6 mg/L, and the maximum monthly average concentration was 23.5 mg/L. In order to reliably and consistently achieve a level of 8 mg/L TN in the effluent, the Butler Area STP would need to install a denitrification system.

The plant already is set up as a two-stage process to provide BOD removal and nitrification for ammonia, but not denitrification for nitrates. Significant modifications would be required to accomplish such an upgrade, including modifications to expand aeration basins and the aeration system to create anoxic zones in the system for achieving denitrification. Under anoxic conditions the denitrifying bacteria would use nitrates as electron acceptors to oxidize organic compounds measured as BOD. This would break the nitrogen oxygen bond and release nitrogen as gas back into the atmosphere, which in turn would lower the total nitrogen level in the plant. At a minimum, these modifications would require increasing the size of the aeration basins, adding mixers to the anoxic zones, installing an internal mixed liquor recycle pumping system, providing a supplementary carbon feed system to ensure that enough organic compounds is available to reduce the nitrates to nitrogen gas, and replacing the existing coarse bubble diffuser system with a fine bubble diffuser system to ensure that air flow rates to the individual aeration tanks are properly controlled to create the appropriate process conditions. Blower, electrical and control upgrades would be required. Process modifications to the existing trickling filters or other modifications likely would be required as well to facilitate more BOD loads to the aeration basins used for the denitrification.

All in, these modifications likely would exceed $15 million to install and would present logistical challenges at the site to maintain the required level of treatment during construction.[2] Operations costs would increase as well due to chemical consumption. These levels of expenditure and risk

[2] The initial cost estimates discussed herein are based on currently available information and do not include potential additional process or equipment changes that may be discovered during the course of a complete design or any costs associated with acquiring additional property or moving treatment facilities to another site.

are not justified given the modest level of nitrogen removal that might be achieved as compared to the current plant system.

Total Phosphorus: With regard to phosphorus, the Commenters assert that a BAT limit of 1 mg/L TP is achievable and appropriate. Again, this assertion is based upon the EPA survey of treatment technology for nutrient removal, not specific to the Butler Area STP, and therefore is not supportive of a proper BAT analysis.

The draft NPDES Permit proposes an effluent limitation of 2 mg/L for phosphorus. This is consistent with 25 Pa. Code § 96.5. Since 2015, the average concentration of phosphorus in plant effluent has been 0.9 mg/L as a monthly average, with a maximum monthly average concentration of 1.95 mg/L. These data show that, as currently configured and operated, the plant is capable of achieving the limit proposed in the Proposed Permit (2.0 mg/L) but not the limit advocated by the Commenters (1.0 mg/L). In order to meet an effluent limitation of 1.0 mg/L on a consistent basis in all flow conditions, the plant would need to be modified to allow for chemical precipitation of phosphorus. Such modifications at a minimum would need to include new tanks, mixers, chemical feed pumps, and related structural, electrical and sludge pumping, processing and disposal upgrades. These changes would require an investment in new equipment likely in excess of $4 million, plus additional ongoing costs for the new chemical feed and solids disposal. These costs are excessive in view of the marginal reduction in phosphorus loading that would be achieved.

Ammonia Nitrogen: The Commenters request a BAT limit for ammonia nitrogen but do not propose a specific numeric limit. Since 2015, the average concentration of ammonia nitrogen in effluent has been 0.56 mg/L as a monthly average, with a maximum monthly average of 5.48 mg/L. While the overall average concentration since 2015 has been well below the limits proposed in the Proposed Permit (5.5 mg/L winter; 2 mg/L summer), the maximum month illustrates the variability of discharges dependent upon a variety of conditions and suggests that a limit lower than the values in the draft Permit would not be consistently achievable. The technology in place is already the accepted technology for community sewage systems.

Copper: The Commenters request a BAT limit for copper but do not propose a specific numeric limit. The limit proposed in the Proposed Permit is 21 ug/L, which is a water quality-based limit and more stringent than the standard technology-based limit. The data available for the Butler Area STP show an average copper concentration in the discharge equal to 12 ug/L and a maximum monthly average concentration of 17 ug/L. The Commenters cite to no technology that would represent BAT that would reliably and consistently achieve a limit that is lower than 21 ug/L.

Free Cyanide: The Commenters request a BAT limit for free cyanide but do not propose a specific numeric limit. The limit proposed in the draft NPDES Permit (based upon a WQBEL analysis) is 5.45 ug/L. That equates to 0.00545 mg/L, which is multiple times lower than the maximum contaminant level of 0.2 mg/L set by the U.S. Environmental Protection Agency for safe drinking water. The Commenters cite to no technology that would represent BAT that would reliably and consistently achieve a limit that is lower than 5.45 ug/L.

3. Draft Permit Conditions Concerning Industrial Pretreatment Requirements

The Commenters claim that the Department may not provide for or allow an industrial pretreatment program, but rather is compelled to apply direct-discharger standards (such as BCT and BAT) to all industrial facilities that fall within any federal effluent guidelines. The Commenters' claims are ill-founded and disregard the comprehensive industrial pretreatment program ("**IPP**") requirements of the Proposed Permit and PAWC approved tariff.

The Proposed Permit establishes conditions requiring that PAWC, as permittee, develop and implement an industrial pretreatment program to assure that the Butler Area STP is capable of maintaining compliance with the terms and conditions of the NPDES Permit and is not subject to pass through, interference, or reductions in sludge quality due to contributions from industrial users. As has been the case with other wastewater facilities acquired by PAWC, the proposed NPDES Permit requires that PAWC submit a copy of its IPP to the Department, and that such program include a series of prescribed elements. The Proposed Permit includes requirements for reporting of IPP program activities, including reporting of industrial user compliance issues, such as situations where industrial users are known or suspected of causing pass-through or interference.

The Department is properly applying a state regulation to impose pretreatment requirements as a condition of this NPDES Permit consistent with the requirements of 25 Pa. Code §94.15 which provides for establishment and implementation of an industrial pretreatment program by any facility operator (not just POTWs) governing industrial users.

The Proposed Permit is comprehensive and robust. Among other elements it provides for:

- Establishment and enforcement of pollutant limits to assure that the mass entering the PrOTW will not result in non-compliance with applicable PrOTW effluent limits (e.g., interference or pass-through).
- That industrial users at a minimum must comply with technology-based pretreatment standards contained in 40 C.F.R. Parts 405-471.
- Performance of a headworks analysis every 5 years, covering certain prescribed pollutants plus any others that might cause interference or pass-through.
- That the permittee revise its local limits for industrial users based on the headworks analysis, and thereafter enforce those local limits.
- Routine monitoring of the treatment plant.
- Notification to the Department of any instance of interference or pass-through.
- Submission of reports documenting activities under the industrial pretreatment program, including information on the compliance performance of each permitted industrial user.
- Triggers for requirement to submit changes to the industrial pretreatment program upon occurrence of certain conditions, such as problems with interference or pass-through, the

proposed introduction of new pollutants, changes in federal or state requirements, or changes needed to assure protection of waters of the Commonwealth.

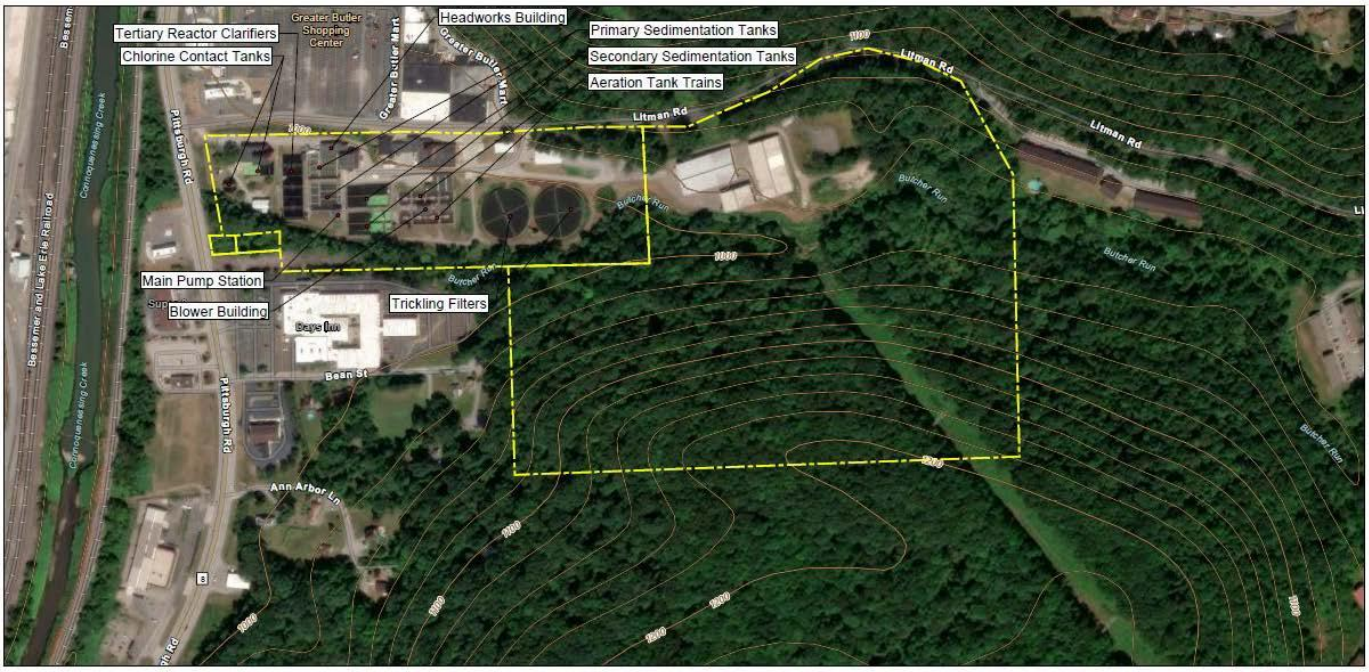
In Pennsylvania, utilities such as PAWC adopt such IPP discharge regulations as a component of their Tariffs which are reviewed and approved by the Pennsylvania Public Utility Commission ("**PAPUC**"). The current IPP regulations adopted and approved by the PAPUC in PAWC's Tariff are published on PAWC's website at: https://amwater.com/paaw/Resources/PDF/water-information/PAWC_Industrial_Pretreatment_Program_updated%2008.07.2024.pdf.

PAWC's industrial discharge regulations parallel the USEPA model IPP program for POTWs, including essentially every element of that model, including:

- General prohibitions on certain discharges by any customer (paralleling 40 C.F.R. §403.5).)
- Specific inclusion by cross-reference to all federal categorical pretreatment standards.
- Requirements for compliance with more stringent local limits based on headworks analysis designed to avoid interference or pass-through.
- Requirements for pretreatment of wastewater and pretreatment facilities.
- An individual wastewater discharge permit ("**IWDP**") system for all significant industrial users (applying the same definition of SIUs as used in Part 403), including (1) all entities that would be subject to federal categorical pretreatment standards if they were discharging to a POTW, and (2) additional entities designated as an SIU by the utility because it has a reasonable potential to adversely affect operation of the WWTP or to violate a pretreatment standard (e.g., a §403.5 general prohibition).
- Requirements for industrial user monitoring, analysis and reporting.
- Provisions for compliance schedules and compliance schedule reporting.
- Enforcement provisions and procedures.

The Proposed Permit and the PAWC Tariff's IPP regulations are comprehensive, approved by the Department and PAPUC and reflect a proper exercise of the Department's authority and discretion to approve the Butler Area STP IPP approach.

Attachment 1 – Butler Area STP Site Map



USGS The National Map: National Transportation Dataset; U.S. Census Bureau – TIGER/Line; U.S. Forest Service. Data Refreshed October, 2025., Vantor, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, USGS The National Map: 3D Elevation Program. Data

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.3, March 2021

Discharge Information

Instructions | Discharge | Stream

Facility: **Butler Area STP** NPDES Permit No.: **PA0026697** Outfall No.: **001**

Evaluation Type: **Major Sewage / Industrial Waste** Wastewater Description: **Municipal Sewage**

Discharge Characteristics								
Design Flow (MGD)*	Hardness (mg/l)*	pH (SU)*	Partial Mix Factors (PMFs)				Complete Mix Times (min)	
			AFC	CFC	THH	CRL	Q_{7-10}	Q_h
10	172	7.1						

					0 if left blank		*0.5 if left blank*		*0 if left blank*			*1 if left blank*	
	Discharge Pollutant	Units	Max Discharge Conc		Trib Conc	Stream Conc	Daily CV	Hourly CV	Stream CV	Fate Coeff	FOS	Criteria Mod	Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L		548									
	Chloride (PWS)	mg/L		186									
	Bromide	mg/L	<	0.1									
	Sulfate (PWS)	mg/L		68.9									
	Fluoride (PWS)	mg/L											
Group 2	Total Aluminum	µg/L		91.2									
	Total Antimony	µg/L	<	2									
	Total Arsenic	µg/L		2									
	Total Barium	µg/L		40.9									
	Total Beryllium	µg/L	<	1									
	Total Boron	µg/L		290									
	Total Cadmium	µg/L	<	0.2									
	Total Chromium (III)	µg/L	<	2									
	Hexavalent Chromium	µg/L		0.11									
	Total Cobalt	µg/L	<	1									
	Total Copper	µg/L		25									
	Free Cyanide	µg/L	<	0.79									
	Total Cyanide	µg/L		22									
	Dissolved Iron	µg/L		0.05									
	Total Iron	µg/L		140									
	Total Lead	µg/L		0.8									
	Total Manganese	µg/L		78.9									
	Total Mercury	µg/L	<	0.2									
	Total Nickel	µg/L		4.04									
	Total Phenols (Phenolics) (PWS)	µg/L	<	5		5							
	Total Selenium	µg/L	<	5									
	Total Silver	µg/L	<	0.5									
	Total Thallium	µg/L	<	2									
	Total Zinc	µg/L		33.1									
	Total Molybdenum	µg/L	<	20									
	Acrolein	µg/L	<	2									
	Acrylamide	µg/L	<										
	Acrylonitrile	µg/L	<	0.5									
	Benzene	µg/L	<	0.2									
	Bromoform	µg/L		1.6									

Group 3	Carbon Tetrachloride	µg/L	<	0.2									
	Chlorobenzene	µg/L	<	0.2									
	Chlorodibromomethane	µg/L	<	0.5									
	Chloroethane	µg/L	<	0.2									
	2-Chloroethyl Vinyl Ether	µg/L	<	0.5									
	Chloroform	µg/L		0.545									
	Dichlorobromomethane	µg/L	<	0.5									
	1,1-Dichloroethane	µg/L	<	0.2									
	1,2-Dichloroethane	µg/L	<	0.2									
	1,1-Dichloroethylene	µg/L	<	0.2									
	1,2-Dichloropropane	µg/L	<	0.2									
	1,3-Dichloropropylene	µg/L	<	0.2									
	1,4-Dioxane	µg/L	<	0.1									
	Ethylbenzene	µg/L	<	0.2									
	Methyl Bromide	µg/L	<	0.5									
	Methyl Chloride	µg/L		0.3									
	Methylene Chloride	µg/L	<	0.4									
	1,1,2,2-Tetrachloroethane	µg/L	<	0.2									
	Tetrachloroethylene	µg/L	<	0.4									
	Toluene	µg/L	<	0.2									
	1,2-trans-Dichloroethylene	µg/L	<	0.5									
	1,1,1-Trichloroethane	µg/L	<	0.2									
	1,1,2-Trichloroethane	µg/L	<	0.5									
	Trichloroethylene	µg/L	<	0.2									
	Vinyl Chloride	µg/L	<	0.2									
Group 4	2-Chlorophenol	µg/L	<	0.2									
	2,4-Dichlorophenol	µg/L	<	0.2									
	2,4-Dimethylphenol	µg/L	<	0.2									
	4,6-Dinitro-o-Cresol	µg/L	<	1									
	2,4-Dinitrophenol	µg/L	<	1									
	2-Nitrophenol	µg/L	<	0.5									
	4-Nitrophenol	µg/L	<	0.5									
	p-Chloro-m-Cresol	µg/L	<	0.1									
	Pentachlorophenol	µg/L	<	0.5									
	Phenol	µg/L	<	0.2									
	2,4,6-Trichlorophenol	µg/L	<	0.2									
Group 5	Acenaphthene	µg/L	<	0.1									
	Acenaphthylene	µg/L	<	0.1									
	Anthracene	µg/L	<	0.1									
	Benzidine	µg/L	<	0.5									
	Benzo(a)Anthracene	µg/L	<	0.1									
	Benzo(a)Pyrene	µg/L	<	0.1									
	3,4-Benzofluoranthene	µg/L	<	0.1									
	Benzo(ghi)Perylene	µg/L	<	0.1									
	Benzo(k)Fluoranthene	µg/L	<	0.1									
	Bis(2-Chloroethoxy)Methane	µg/L	<	0.1									
	Bis(2-Chloroethyl)Ether	µg/L	<	0.1									
	Bis(2-Chloroisopropyl)Ether	µg/L	<	0.1									
	Bis(2-Ethylhexyl)Phthalate	µg/L	<	2									
	4-Bromophenyl Phenyl Ether	µg/L	<	0.1									
	Butyl Benzyl Phthalate	µg/L	<	1									
	2-Chloronaphthalene	µg/L	<	0.1									
	4-Chlorophenyl Phenyl Ether	µg/L	<	0.1									
	Chrysene	µg/L	<	0.1									
	Dibenzo(a,h)Anthrancene	µg/L	<	0.1									
	1,2-Dichlorobenzene	µg/L	<	0.1									
	1,3-Dichlorobenzene	µg/L	<	0.1									
	1,4-Dichlorobenzene	µg/L	<	0.1									
	3,3-Dichlorobenzidine	µg/L	<	0.5									
	Diethyl Phthalate	µg/L	<	1									
	Dimethyl Phthalate	µg/L	<	1									
	Di-n-Butyl Phthalate	µg/L	<	1									
	2,4-Dinitrotoluene	µg/L	<	0.2									

	2,6-Dinitrotoluene	µg/L	<	0.2									
	Di-n-Octyl Phthalate	µg/L	<	1									
	1,2-Diphenylhydrazine	µg/L	<	0.1									
	Fluoranthene	µg/L	<	0.1									
	Fluorene	µg/L	<	0.1									
	Hexachlorobenzene	µg/L	<	0.1									
	Hexachlorobutadiene	µg/L	<	0.1									
	Hexachlorocyclopentadiene	µg/L	<	0.5									
	Hexachloroethane	µg/L	<	0.1									
	Indeno(1,2,3-cd)Pyrene	µg/L	<	0.1									
	Isophorone	µg/L	<	0.2									
	Naphthalene	µg/L	<	0.1									
	Nitrobenzene	µg/L	<	0.1									
	n-Nitrosodimethylamine	µg/L	<	0.1									
	n-Nitrosodi-n-Propylamine	µg/L	<	0.1									
	n-Nitrosodiphenylamine	µg/L	<	0.1									
	Phenanthrene	µg/L	<	0.1									
	Pyrene	µg/L	<	0.1									
	1,2,4-Trichlorobenzene	µg/L	<	0.1									
Group 6	Aldrin	µg/L	<	0.02									
	alpha-BHC	µg/L	<	0.02									
	beta-BHC	µg/L	<	0.02									
	gamma-BHC	µg/L	<	0.02									
	delta BHC	µg/L	<	0.02									
	Chlordane	µg/L	<	0.51									
	4,4-DDT	µg/L	<	0.02									
	4,4-DDE	µg/L	<	0.02									
	4,4-DDD	µg/L	<	0.02									
	Dieldrin	µg/L	<	0.02									
	alpha-Endosulfan	µg/L	<	0.02									
	beta-Endosulfan	µg/L	<	0.02									
	Endosulfan Sulfate	µg/L	<	0.02									
	Endrin	µg/L	<	0.02									
	Endrin Aldehyde	µg/L	<	0.02									
	Heptachlor	µg/L	<	0.02									
	Heptachlor Epoxide	µg/L	<	0.02									
	PCB-1016	µg/L	<	0.02									
	PCB-1221	µg/L	<										
	PCB-1232	µg/L	<										
	PCB-1242	µg/L	<										
	PCB-1248	µg/L	<										
	PCB-1254	µg/L	<										
	PCB-1260	µg/L	<										
	PCBs, Total	µg/L	<										
	Toxaphene	µg/L	<	0.5									
	2,3,7,8-TCDD	ng/L	<	0.0001									
Group 7	Gross Alpha	pCi/L											
	Total Beta	pCi/L	<										
	Radium 226/228	pCi/L	<										
	Total Strontium	µg/L	<										
	Total Uranium	µg/L	<										
	Osmotic Pressure	mOs/kg											

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.3, March 2021

Stream / Surface Water Information

Butler Area STP, NPDES Permit No. PA0026697, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **Connoquenessing Creek**

No. Reaches to Model: **1**

- (●) Statewide Criteria
- ( ) Great Lakes Criteria
- ( ) ORSANCO Criteria

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi²)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	034025	43.73	980	86.07	0.00193		Yes
End of Reach 1	034025	0.2	736	838		8	Yes

$Q_{7\text{-}10}$

Location	RMI	LFY (cfs/mi²)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	43.73	0.04284	5.6									202	7.2		
End of Reach 1	0.2	0.04284	67									100	7		

Q_h

Location	RMI	LFY (cfs/mi²)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	43.73														
End of Reach 1	0.2														

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Toxics Management Spreadsheet
Version 1.3, March 2021

Model Results

Butler Area STP, NPDES Permit No. PA0026697, Outfall 001

Instructions | Results | RETURN TO INPUTS | SAVE AS PDF | PRINT | ◉ All | ○ Inputs | ○ Results | ○ Limits

☑ ***Hydrodynamics***

$Q_{7\text{-}10}$

RMI	Stream Flow (cfs)	PWS Withdrawal (cfs)	Net Stream Flow (cfs)	Discharge Analysis Flow (cfs)	Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Travel Time (days)	Complete Mix Time (min)
43.73	5.60		5.60	15.47	0.002	0.827	63.44	76.691	0.402	6.626	11.789
0.2	67.00	12.376	54.624								

Q_h

RMI	Stream Flow (cfs)	PWS Withdrawal (cfs)	Net Stream Flow (cfs)	Discharge Analysis Flow (cfs)	Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Travel Time (days)	Complete Mix Time (min)
43.73	33.49		33.49	15.47	0.002	1.199	63.44	52.921	0.644	4.132	44.763
0.2	293.075	12.376	280.70								

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 11.789 PMF: 1 Analysis Hardness (mg/l): 179.97 Analysis pH: 7.12

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	750	750	1,021	
Total Antimony	0	0		0	1,100	1,100	1,498	
Total Arsenic	0	0		0	340	340	463	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	28,602	
Total Boron	0	0		0	8,100	8,100	11,032	
Total Cadmium	0	0		0	3.564	3.88	5.28	Chem Translator of 0.919 applied
Total Chromium (III)	0	0		0	921.956	2,918	3,974	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	22.2	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	129	
Total Copper	0	0		0	23.379	24.4	33.2	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	22	22.0	30.0	

Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	121.683	173	235	Chem Translator of 0.705 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	2.24	Chem Translator of 0.85 applied
Total Nickel	0	0		0	769.788	771	1,051	Chem Translator of 0.998 applied
Total Phenols (Phenolics) (PWS)	5	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	Chem Translator of 0.922 applied
Total Silver	0	0		0	8.838	10.4	14.2	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	88.5	
Total Zinc	0	0		0	192.794	197	268	Chem Translator of 0.978 applied
Acrolein	0	0		0	3	3.0	4.09	
Acrylonitrile	0	0		0	650	650	885	
Benzene	0	0		0	640	640	872	
Bromoform	0	0		0	1,800	1,800	2,452	
Carbon Tetrachloride	0	0		0	2,800	2,800	3,814	
Chlorobenzene	0	0		0	1,200	1,200	1,634	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	18,000	18,000	24,516	
Chloroform	0	0		0	1,900	1,900	2,588	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	15,000	15,000	20,430	
1,1-Dichloroethylene	0	0		0	7,500	7,500	10,215	
1,2-Dichloropropane	0	0		0	11,000	11,000	14,982	
1,3-Dichloropropylene	0	0		0	310	310	422	
Ethylbenzene	0	0		0	2,900	2,900	3,950	
Methyl Bromide	0	0		0	550	550	749	
Methyl Chloride	0	0		0	28,000	28,000	38,136	
Methylene Chloride	0	0		0	12,000	12,000	16,344	
1,1,2,2-Tetrachloroethane	0	0		0	1,000	1,000	1,362	
Tetrachloroethylene	0	0		0	700	700	953	
Toluene	0	0		0	1,700	1,700	2,315	
1,2-trans-Dichloroethylene	0	0		0	6,800	6,800	9,262	
1,1,1-Trichloroethane	0	0		0	3,000	3,000	4,086	
1,1,2-Trichloroethane	0	0		0	3,400	3,400	4,631	
Trichloroethylene	0	0		0	2,300	2,300	3,133	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	560	560	763	
2,4-Dichlorophenol	0	0		0	1,700	1,700	2,315	
2,4-Dimethylphenol	0	0		0	660	660	899	
4,6-Dinitro-o-Cresol	0	0		0	80	80.0	109	
2,4-Dinitrophenol	0	0		0	660	660	899	
2-Nitrophenol	0	0		0	8,000	8,000	10,896	
4-Nitrophenol	0	0		0	2,300	2,300	3,133	
p-Chloro-m-Cresol	0	0		0	160	160	218	
Pentachlorophenol	0	0		0	9.885	9.89	13.5	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	460	460	627	

Acenaphthene	0	0		0	83	83.0	113	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	300	300	409	
Benzo(a)Anthracene	0	0		0	0.5	0.5	0.68	
Benzo(a)Pyrene	0	0		0	N/A	N/A	N/A	
3,4-Benzofluoranthene	0	0		0	N/A	N/A	N/A	
Benzo(k)Fluoranthene	0	0		0	N/A	N/A	N/A	
Bis(2-Chloroethyl)Ether	0	0		0	30,000	30,000	40,860	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	4,500	4,500	6,129	
4-Bromophenyl Phenyl Ether	0	0		0	270	270	368	
Butyl Benzyl Phthalate	0	0		0	140	140	191	
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	820	820	1,117	
1,3-Dichlorobenzene	0	0		0	350	350	477	
1,4-Dichlorobenzene	0	0		0	730	730	994	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	4,000	4,000	5,448	
Dimethyl Phthalate	0	0		0	2,500	2,500	3,405	
Di-n-Butyl Phthalate	0	0		0	110	110	150	
2,4-Dinitrotoluene	0	0		0	1,600	1,600	2,179	
2,6-Dinitrotoluene	0	0		0	990	990	1,348	
1,2-Diphenylhydrazine	0	0		0	15	15.0	20.4	
Fluoranthene	0	0		0	200	200	272	
Fluorene	0	0		0	N/A	N/A	N/A	
Hexachlorobenzene	0	0		0	N/A	N/A	N/A	
Hexachlorobutadiene	0	0		0	10	10.0	13.6	
Hexachlorocyclopentadiene	0	0		0	5	5.0	6.81	
Hexachloroethane	0	0		0	60	60.0	81.7	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	10,000	10,000	13,620	
Naphthalene	0	0		0	140	140	191	
Nitrobenzene	0	0		0	4,000	4,000	5,448	
n-Nitrosodimethylamine	0	0		0	17,000	17,000	23,154	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	300	300	409	
Phenanthrene	0	0		0	5	5.0	6.81	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	130	130	177	
Aldrin	0	0		0	3	3.0	4.09	
alpha-BHC	0	0		0	N/A	N/A	N/A	
beta-BHC	0	0		0	N/A	N/A	N/A	
gamma-BHC	0	0		0	0.95	0.95	1.29	
Chlordane	0	0		0	2.4	2.4	3.27	
4,4-DDT	0	0		0	1.1	1.1	1.5	
4,4-DDE	0	0		0	1.1	1.1	1.5	

4,4-DDD	0	0		0	1.1	1.1	1.5	
Dieldrin	0	0		0	0.24	0.24	0.33	
alpha-Endosulfan	0	0		0	0.22	0.22	0.3	
beta-Endosulfan	0	0		0	0.22	0.22	0.3	
Endosulfan Sulfate	0	0		0	N/A	N/A	N/A	
Endrin	0	0		0	0.086	0.086	0.12	
Endrin Aldehyde	0	0		0	N/A	N/A	N/A	
Heptachlor	0	0		0	0.52	0.52	0.71	
Heptachlor Epoxide	0	0		0	0.5	0.5	0.68	
Toxaphene	0	0		0	0.73	0.73	0.99	
2,3,7,8-TCDD	0	0		0	N/A	N/A	N/A	

☑ ***CFC*** CCT (min): 11.789 PMF: 1 Analysis Hardness (mg/l): 179.97 Analysis pH: 7.12

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	220	220	300	
Total Arsenic	0	0		0	150	150	204	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	5,584	
Total Boron	0	0		0	1,600	1,600	2,179	
Total Cadmium	0	0		0	0.370	0.42	0.57	Chem Translator of 0.884 applied
Total Chromium (III)	0	0		0	119.928	139	190	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	14.2	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	25.9	
Total Copper	0	0		0	14.797	15.4	21.0	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	5.2	5.2	7.08	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	1,500	1,500	2,043	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	4.742	6.72	9.16	Chem Translator of 0.705 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	1.23	Chem Translator of 0.85 applied
Total Nickel	0	0		0	85.500	85.8	117	Chem Translator of 0.997 applied
Total Phenols (Phenolics) (PWS)	5	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	4.600	4.99	6.8	Chem Translator of 0.922 applied
Total Silver	0	0		0	N/A	N/A	N/A	Chem Translator of 1 applied
Total Thallium	0	0		0	13	13.0	17.7	
Total Zinc	0	0		0	194.371	197	268	Chem Translator of 0.986 applied
Acrolein	0	0		0	3	3.0	4.09	
Acrylonitrile	0	0		0	130	130	177	
Benzene	0	0		0	130	130	177	
Bromoform	0	0		0	370	370	504	
Carbon Tetrachloride	0	0		0	560	560	763	

Chlorobenzene	0	0		0	240	240	327	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	3,500	3,500	4,767	
Chloroform	0	0		0	390	390	531	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	3,100	3,100	4,222	
1,1-Dichloroethylene	0	0		0	1,500	1,500	2,043	
1,2-Dichloropropane	0	0		0	2,200	2,200	2,996	
1,3-Dichloropropylene	0	0		0	61	61.0	83.1	
Ethylbenzene	0	0		0	580	580	790	
Methyl Bromide	0	0		0	110	110	150	
Methyl Chloride	0	0		0	5,500	5,500	7,491	
Methylene Chloride	0	0		0	2,400	2,400	3,269	
1,1,2,2-Tetrachloroethane	0	0		0	210	210	286	
Tetrachloroethylene	0	0		0	140	140	191	
Toluene	0	0		0	330	330	449	
1,2-trans-Dichloroethylene	0	0		0	1,400	1,400	1,907	
1,1,1-Trichloroethane	0	0		0	610	610	831	
1,1,2-Trichloroethane	0	0		0	680	680	926	
Trichloroethylene	0	0		0	450	450	613	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	110	110	150	
2,4-Dichlorophenol	0	0		0	340	340	463	
2,4-Dimethylphenol	0	0		0	130	130	177	
4,6-Dinitro-o-Cresol	0	0		0	16	16.0	21.8	
2,4-Dinitrophenol	0	0		0	130	130	177	
2-Nitrophenol	0	0		0	1,600	1,600	2,179	
4-Nitrophenol	0	0		0	470	470	640	
p-Chloro-m-Cresol	0	0		0	500	500	681	
Pentachlorophenol	0	0		0	7.584	7.58	10.3	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	91	91.0	124	
Acenaphthene	0	0		0	17	17.0	23.2	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	59	59.0	80.4	
Benzo(a)Anthracene	0	0		0	0.1	0.1	0.14	
Benzo(a)Pyrene	0	0		0	N/A	N/A	N/A	
3,4-Benzofluoranthene	0	0		0	N/A	N/A	N/A	
Benzo(k)Fluoranthene	0	0		0	N/A	N/A	N/A	
Bis(2-Chloroethyl)Ether	0	0		0	6,000	6,000	8,172	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	910	910	1,239	
4-Bromophenyl Phenyl Ether	0	0		0	54	54.0	73.5	
Butyl Benzyl Phthalate	0	0		0	35	35.0	47.7	
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A	

Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	160	160	218	
1,3-Dichlorobenzene	0	0		0	69	69.0	94.0	
1,4-Dichlorobenzene	0	0		0	150	150	204	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	800	800	1,090	
Dimethyl Phthalate	0	0		0	500	500	681	
Di-n-Butyl Phthalate	0	0		0	21	21.0	28.6	
2,4-Dinitrotoluene	0	0		0	320	320	436	
2,6-Dinitrotoluene	0	0		0	200	200	272	
1,2-Diphenylhydrazine	0	0		0	3	3.0	4.09	
Fluoranthene	0	0		0	40	40.0	54.5	
Fluorene	0	0		0	N/A	N/A	N/A	
Hexachlorobenzene	0	0		0	N/A	N/A	N/A	
Hexachlorobutadiene	0	0		0	2	2.0	2.72	
Hexachlorocyclopentadiene	0	0		0	1	1.0	1.36	
Hexachloroethane	0	0		0	12	12.0	16.3	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	2,100	2,100	2,860	
Naphthalene	0	0		0	43	43.0	58.6	
Nitrobenzene	0	0		0	810	810	1,103	
n-Nitrosodimethylamine	0	0		0	3,400	3,400	4,631	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	59	59.0	80.4	
Phenanthrene	0	0		0	1	1.0	1.36	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	26	26.0	35.4	
Aldrin	0	0		0	0.1	0.1	0.14	
alpha-BHC	0	0		0	N/A	N/A	N/A	
beta-BHC	0	0		0	N/A	N/A	N/A	
gamma-BHC	0	0		0	N/A	N/A	N/A	
Chlordane	0	0		0	0.0043	0.004	0.006	
4,4-DDT	0	0		0	0.001	0.001	0.001	
4,4-DDE	0	0		0	0.001	0.001	0.001	
4,4-DDD	0	0		0	0.001	0.001	0.001	
Dieldrin	0	0		0	0.056	0.056	0.076	
alpha-Endosulfan	0	0		0	0.056	0.056	0.076	
beta-Endosulfan	0	0		0	0.056	0.056	0.076	
Endosulfan Sulfate	0	0		0	N/A	N/A	N/A	
Endrin	0	0		0	0.036	0.036	0.049	
Endrin Aldehyde	0	0		0	N/A	N/A	N/A	
Heptachlor	0	0		0	0.0038	0.004	0.005	
Heptachlor Epoxide	0	0		0	0.0038	0.004	0.005	
Toxaphene	0	0		0	0.0002	0.0002	0.0003	

2,3,7,8-TCDD	0	0		0	N/A	N/A	N/A	

☑ ***THH*** CCT (min): 11.789 THH PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A PWS PMF: 1

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	500,000	500,000	2,665,482	WQC applied at RMI 0.2 with a design stream flow of 67 cfs
Chloride (PWS)	0	0		0	250,000	250,000	1,332,741	WQC applied at RMI 0.2 with a design stream flow of 67 cfs
Sulfate (PWS)	0	0		0	250,000	250,000	1,332,741	WQC applied at RMI 0.2 with a design stream flow of 67 cfs
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	5.6	5.6	7.63	
Total Arsenic	0	0		0	10	10.0	13.6	
Total Barium	0	0		0	2,400	2,400	3,269	
Total Boron	0	0		0	3,100	3,100	4,222	
Total Cadmium	0	0		0	N/A	N/A	N/A	
Total Chromium (III)	0	0		0	N/A	N/A	N/A	
Hexavalent Chromium	0	0		0	N/A	N/A	N/A	
Total Cobalt	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Free Cyanide	0	0		0	4	4.0	5.45	
Dissolved Iron	0	0		0	300	300	409	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	1,000	1,000	1,362	
Total Mercury	0	0		0	0.050	0.05	0.068	
Total Nickel	0	0		0	610	610	831	
Total Phenols (Phenolics) (PWS)	5	0		0	5	5.0	5.0	WQC applied at RMI 0.2 with a design stream flow of 67 cfs
Total Selenium	0	0		0	N/A	N/A	N/A	
Total Silver	0	0		0	N/A	N/A	N/A	
Total Thallium	0	0		0	0.24	0.24	0.33	
Total Zinc	0	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	3	3.0	4.09	
Acrylonitrile	0	0		0	N/A	N/A	N/A	
Benzene	0	0		0	N/A	N/A	N/A	
Bromoform	0	0		0	N/A	N/A	N/A	
Carbon Tetrachloride	0	0		0	N/A	N/A	N/A	
Chlorobenzene	0	0		0	100	100.0	136	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	N/A	N/A	N/A	
Chloroform	0	0		0	5.7	5.7	7.76	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	N/A	N/A	N/A	
1,1-Dichloroethylene	0	0		0	33	33.0	44.9	
1,2-Dichloropropane	0	0		0	N/A	N/A	N/A	
1,3-Dichloropropylene	0	0		0	N/A	N/A	N/A	

Ethylbenzene	0	0		0	68	68.0	92.6	
Methyl Bromide	0	0		0	100	100.0	136	
Methyl Chloride	0	0		0	N/A	N/A	N/A	
Methylene Chloride	0	0		0	N/A	N/A	N/A	
1,1,2,2-Tetrachloroethane	0	0		0	N/A	N/A	N/A	
Tetrachloroethylene	0	0		0	N/A	N/A	N/A	
Toluene	0	0		0	57	57.0	77.6	
1,2-trans-Dichloroethylene	0	0		0	100	100.0	136	
1,1,1-Trichloroethane	0	0		0	10,000	10,000	13,620	
1,1,2-Trichloroethane	0	0		0	N/A	N/A	N/A	
Trichloroethylene	0	0		0	N/A	N/A	N/A	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	30	30.0	40.9	
2,4-Dichlorophenol	0	0		0	10	10.0	13.6	
2,4-Dimethylphenol	0	0		0	100	100.0	136	
4,6-Dinitro-o-Cresol	0	0		0	2	2.0	2.72	
2,4-Dinitrophenol	0	0		0	10	10.0	13.6	
2-Nitrophenol	0	0		0	N/A	N/A	N/A	
4-Nitrophenol	0	0		0	N/A	N/A	N/A	
p-Chloro-m-Cresol	0	0		0	N/A	N/A	N/A	
Pentachlorophenol	0	0		0	N/A	N/A	N/A	
Phenol	0	0		0	4,000	4,000	5,448	
2,4,6-Trichlorophenol	0	0		0	N/A	N/A	N/A	
Acenaphthene	0	0		0	70	70.0	95.3	
Anthracene	0	0		0	300	300	409	
Benzidine	0	0		0	N/A	N/A	N/A	
Benzo(a)Anthracene	0	0		0	N/A	N/A	N/A	
Benzo(a)Pyrene	0	0		0	N/A	N/A	N/A	
3,4-Benzofluoranthene	0	0		0	N/A	N/A	N/A	
Benzo(k)Fluoranthene	0	0		0	N/A	N/A	N/A	
Bis(2-Chloroethyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Chloroisopropyl)Ether	0	0		0	200	200	272	
Bis(2-Ethylhexyl)Phthalate	0	0		0	N/A	N/A	N/A	
4-Bromophenyl Phenyl Ether	0	0		0	N/A	N/A	N/A	
Butyl Benzyl Phthalate	0	0		0	0.1	0.1	0.14	
2-Chloronaphthalene	0	0		0	800	800	1,090	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	1,000	1,000	1,362	
1,3-Dichlorobenzene	0	0		0	7	7.0	9.53	
1,4-Dichlorobenzene	0	0		0	300	300	409	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	600	600	817	
Dimethyl Phthalate	0	0		0	2,000	2,000	2,724	
Di-n-Butyl Phthalate	0	0		0	20	20.0	27.2	

2,4-Dinitrotoluene	0	0		0	N/A	N/A	N/A	
2,6-Dinitrotoluene	0	0		0	N/A	N/A	N/A	
1,2-Diphenylhydrazine	0	0		0	N/A	N/A	N/A	
Fluoranthene	0	0		0	20	20.0	27.2	
Fluorene	0	0		0	50	50.0	68.1	
Hexachlorobenzene	0	0		0	N/A	N/A	N/A	
Hexachlorobutadiene	0	0		0	N/A	N/A	N/A	
Hexachlorocyclopentadiene	0	0		0	4	4.0	5.45	
Hexachloroethane	0	0		0	N/A	N/A	N/A	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	34	34.0	46.3	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	10	10.0	13.6	
n-Nitrosodimethylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	N/A	N/A	N/A	
Phenanthrene	0	0		0	N/A	N/A	N/A	
Pyrene	0	0		0	20	20.0	27.2	
1,2,4-Trichlorobenzene	0	0		0	0.07	0.07	0.095	
Aldrin	0	0		0	N/A	N/A	N/A	
alpha-BHC	0	0		0	N/A	N/A	N/A	
beta-BHC	0	0		0	N/A	N/A	N/A	
gamma-BHC	0	0		0	4.2	4.2	5.72	
Chlordane	0	0		0	N/A	N/A	N/A	
4,4-DDT	0	0		0	N/A	N/A	N/A	
4,4-DDE	0	0		0	N/A	N/A	N/A	
4,4-DDD	0	0		0	N/A	N/A	N/A	
Dieldrin	0	0		0	N/A	N/A	N/A	
alpha-Endosulfan	0	0		0	20	20.0	27.2	
beta-Endosulfan	0	0		0	20	20.0	27.2	
Endosulfan Sulfate	0	0		0	20	20.0	27.2	
Endrin	0	0		0	0.03	0.03	0.041	
Endrin Aldehyde	0	0		0	1	1.0	1.36	
Heptachlor	0	0		0	N/A	N/A	N/A	
Heptachlor Epoxide	0	0		0	N/A	N/A	N/A	
Toxaphene	0	0		0	N/A	N/A	N/A	
2,3,7,8-TCDD	0	0		0	N/A	N/A	N/A	

☑ ***CRL*** CCT (min): 44.763 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	

Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	N/A	N/A	N/A	
Total Arsenic	0	0		0	N/A	N/A	N/A	
Total Barium	0	0		0	N/A	N/A	N/A	
Total Boron	0	0		0	N/A	N/A	N/A	
Total Cadmium	0	0		0	N/A	N/A	N/A	
Total Chromium (III)	0	0		0	N/A	N/A	N/A	
Hexavalent Chromium	0	0		0	N/A	N/A	N/A	
Total Cobalt	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Free Cyanide	0	0		0	N/A	N/A	N/A	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	N/A	N/A	N/A	
Total Nickel	0	0		0	N/A	N/A	N/A	
Total Phenols (Phenolics) (PWS)	5	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	
Total Silver	0	0		0	N/A	N/A	N/A	
Total Thallium	0	0		0	N/A	N/A	N/A	
Total Zinc	0	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	N/A	N/A	N/A	
Acrylonitrile	0	0		0	0.06	0.06	0.19	
Benzene	0	0		0	0.58	0.58	1.84	
Bromoform	0	0		0	7	7.0	22.2	
Carbon Tetrachloride	0	0		0	0.4	0.4	1.27	
Chlorobenzene	0	0		0	N/A	N/A	N/A	
Chlorodibromomethane	0	0		0	0.8	0.8	2.53	
2-Chloroethyl Vinyl Ether	0	0		0	N/A	N/A	N/A	
Chloroform	0	0		0	N/A	N/A	N/A	
Dichlorobromomethane	0	0		0	0.95	0.95	3.01	
1,2-Dichloroethane	0	0		0	9.9	9.9	31.3	
1,1-Dichloroethylene	0	0		0	N/A	N/A	N/A	
1,2-Dichloropropane	0	0		0	0.9	0.9	2.85	
1,3-Dichloropropylene	0	0		0	0.27	0.27	0.85	
Ethylbenzene	0	0		0	N/A	N/A	N/A	
Methyl Bromide	0	0		0	N/A	N/A	N/A	
Methyl Chloride	0	0		0	N/A	N/A	N/A	
Methylene Chloride	0	0		0	20	20.0	63.3	
1,1,2,2-Tetrachloroethane	0	0		0	0.2	0.2	0.63	
Tetrachloroethylene	0	0		0	10	10.0	31.6	
Toluene	0	0		0	N/A	N/A	N/A	
1,2-trans-Dichloroethylene	0	0		0	N/A	N/A	N/A	
1,1,1-Trichloroethane	0	0		0	N/A	N/A	N/A	

1,1,2-Trichloroethane	0	0		0	0.55	0.55	1.74	
Trichloroethylene	0	0		0	0.6	0.6	1.9	
Vinyl Chloride	0	0		0	0.02	0.02	0.063	
2-Chlorophenol	0	0		0	N/A	N/A	N/A	
2,4-Dichlorophenol	0	0		0	N/A	N/A	N/A	
2,4-Dimethylphenol	0	0		0	N/A	N/A	N/A	
4,6-Dinitro-o-Cresol	0	0		0	N/A	N/A	N/A	
2,4-Dinitrophenol	0	0		0	N/A	N/A	N/A	
2-Nitrophenol	0	0		0	N/A	N/A	N/A	
4-Nitrophenol	0	0		0	N/A	N/A	N/A	
p-Chloro-m-Cresol	0	0		0	N/A	N/A	N/A	
Pentachlorophenol	0	0		0	0.030	0.03	0.095	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	1.5	1.5	4.75	
Acenaphthene	0	0		0	N/A	N/A	N/A	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	0.0001	0.0001	0.0003	
Benzo(a)Anthracene	0	0		0	0.001	0.001	0.003	
Benzo(a)Pyrene	0	0		0	0.0001	0.0001	0.0003	
3,4-Benzofluoranthene	0	0		0	0.001	0.001	0.003	
Benzo(k)Fluoranthene	0	0		0	0.01	0.01	0.032	
Bis(2-Chloroethyl)Ether	0	0		0	0.03	0.03	0.095	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	0.32	0.32	1.01	
4-Bromophenyl Phenyl Ether	0	0		0	N/A	N/A	N/A	
Butyl Benzyl Phthalate	0	0		0	N/A	N/A	N/A	
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A	
Chrysene	0	0		0	0.12	0.12	0.38	
Dibenzo(a,h)Anthrancene	0	0		0	0.0001	0.0001	0.0003	
1,2-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
1,3-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
1,4-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
3,3-Dichlorobenzidine	0	0		0	0.05	0.05	0.16	
Diethyl Phthalate	0	0		0	N/A	N/A	N/A	
Dimethyl Phthalate	0	0		0	N/A	N/A	N/A	
Di-n-Butyl Phthalate	0	0		0	N/A	N/A	N/A	
2,4-Dinitrotoluene	0	0		0	0.05	0.05	0.16	
2,6-Dinitrotoluene	0	0		0	0.05	0.05	0.16	
1,2-Diphenylhydrazine	0	0		0	0.03	0.03	0.095	
Fluoranthene	0	0		0	N/A	N/A	N/A	
Fluorene	0	0		0	N/A	N/A	N/A	
Hexachlorobenzene	0	0		0	0.00008	0.00008	0.0003	
Hexachlorobutadiene	0	0		0	0.01	0.01	0.032	
Hexachlorocyclopentadiene	0	0		0	N/A	N/A	N/A	
Hexachloroethane	0	0		0	0.1	0.1	0.32	

Indeno(1,2,3-cd)Pyrene	0	0		0	0.001	0.001	0.003	
Isophorone	0	0		0	N/A	N/A	N/A	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	N/A	N/A	N/A	
n-Nitrosodimethylamine	0	0		0	0.0007	0.0007	0.002	
n-Nitrosodi-n-Propylamine	0	0		0	0.005	0.005	0.016	
n-Nitrosodiphenylamine	0	0		0	3.3	3.3	10.4	
Phenanthrene	0	0		0	N/A	N/A	N/A	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	N/A	N/A	N/A	
Aldrin	0	0		0	0.0000008	8.00E-07	0.000003	
alpha-BHC	0	0		0	0.0004	0.0004	0.001	
beta-BHC	0	0		0	0.008	0.008	0.025	
gamma-BHC	0	0		0	N/A	N/A	N/A	
Chlordane	0	0		0	0.0003	0.0003	0.0009	
4,4-DDT	0	0		0	0.00003	0.00003	0.00009	
4,4-DDE	0	0		0	0.00002	0.00002	0.00006	
4,4-DDD	0	0		0	0.0001	0.0001	0.0003	
Dieldrin	0	0		0	0.000001	0.000001	0.000003	
alpha-Endosulfan	0	0		0	N/A	N/A	N/A	
beta-Endosulfan	0	0		0	N/A	N/A	N/A	
Endosulfan Sulfate	0	0		0	N/A	N/A	N/A	
Endrin	0	0		0	N/A	N/A	N/A	
Endrin Aldehyde	0	0		0	N/A	N/A	N/A	
Heptachlor	0	0		0	0.000006	0.000006	0.00002	
Heptachlor Epoxide	0	0		0	0.00003	0.00003	0.00009	
Toxaphene	0	0		0	0.0007	0.0007	0.002	
2,3,7,8-TCDD	0	0		0	5E-09	5.00E-09	1.58E-08	

☑ ***Recommended WQBELs & Monitoring Requirements***

No. Samples/Month: 4

	Mass Limits		*Concentration Limits*						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Total Dissolved Solids (PWS)	Report	Report	Report	Report	Report	mg/L	2,665	THH-PWS	Discharge Conc > 10% WQBEL (no RP)
Chloride (PWS)	Report	Report	Report	Report	Report	mg/L	1,333	THH-PWS	Discharge Conc > 10% WQBEL (no RP)
Total Aluminum	Report	Report	Report	Report	Report	µg/L	750	AFC	Discharge Conc > 10% WQBEL (no RP)
Total Arsenic	Report	Report	Report	Report	Report	µg/L	13.6	THH	Discharge Conc > 10% WQBEL (no RP)
Total Boron	Report	Report	Report	Report	Report	µg/L	2,179	CFC	Discharge Conc > 10% WQBEL (no RP)
Total Copper	1.75	2.73	21.0	32.8	52.5	µg/L	21.0	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Zinc	Report	Report	Report	Report	Report	µg/L	197	AFC	Discharge Conc > 10% WQBEL (no RP)

☑ ***Other Pollutants without Limits or Monitoring***

The following pollutants do not require effluent limits or monitoring based on water quality because reasonable potential to exceed water quality criteria was not determined and the discharge concentration was less than thresholds for monitoring, or the pollutant was not detected and a sufficiently sensitive analytical method was used (e.g., <= Target QL).

Pollutants	Governing WQBEL	Units	Comments
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	1,333	mg/L	Discharge Conc ≤ 10% WQBEL
Total Antimony	N/A	N/A	Discharge Conc < TQL
Total Barium	3,269	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Cadmium	N/A	N/A	Discharge Conc < TQL
Total Chromium (III)	N/A	N/A	Discharge Conc < TQL
Hexavalent Chromium	14.2	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cobalt	25.9	µg/L	Discharge Conc < TQL
Free Cyanide	5.45	µg/L	Discharge Conc < TQL
Total Cyanide	N/A	N/A	No WQS
Dissolved Iron	409	µg/L	Discharge Conc ≤ 10% WQBEL
Total Iron	2,043	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	9.16	µg/L	Discharge Conc ≤ 10% WQBEL
Total Manganese	1,362	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	0.068	µg/L	Discharge Conc < TQL
Total Nickel	117	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)	5.0	µg/L	Discharge Conc < TQL
Total Selenium	6.8	µg/L	Discharge Conc < TQL
Total Silver	10.4	µg/L	Discharge Conc ≤ 10% WQBEL
Total Thallium	0.33	µg/L	Discharge Conc < TQL
Total Molybdenum	N/A	N/A	No WQS
Acrolein	3.0	µg/L	Discharge Conc < TQL
Acrylonitrile	0.19	µg/L	Discharge Conc < TQL
Benzene	1.84	µg/L	Discharge Conc < TQL
Bromoform	22.2	µg/L	Discharge Conc ≤ 25% WQBEL
Carbon Tetrachloride	1.27	µg/L	Discharge Conc < TQL
Chlorobenzene	136	µg/L	Discharge Conc < TQL

Chlorodibromomethane	2.53	µg/L	Discharge Conc < TQL
Chloroethane	N/A	N/A	No WQS
2-Chloroethyl Vinyl Ether	4,767	µg/L	Discharge Conc < TQL
Chloroform	7.76	µg/L	Discharge Conc ≤ 25% WQBEL
Dichlorobromomethane	3.01	µg/L	Discharge Conc < TQL
1,1-Dichloroethane	N/A	N/A	No WQS
1,2-Dichloroethane	31.3	µg/L	Discharge Conc < TQL
1,1-Dichloroethylene	44.9	µg/L	Discharge Conc < TQL
1,2-Dichloropropane	2.85	µg/L	Discharge Conc < TQL
1,3-Dichloropropylene	0.85	µg/L	Discharge Conc < TQL
1,4-Dioxane	N/A	N/A	No WQS
Ethylbenzene	92.6	µg/L	Discharge Conc < TQL
Methyl Bromide	136	µg/L	Discharge Conc < TQL
Methyl Chloride	7,491	µg/L	Discharge Conc ≤ 25% WQBEL
Methylene Chloride	63.3	µg/L	Discharge Conc < TQL
1,1,2,2-Tetrachloroethane	0.63	µg/L	Discharge Conc < TQL
Tetrachloroethylene	31.6	µg/L	Discharge Conc < TQL
Toluene	77.6	µg/L	Discharge Conc < TQL
1,2-trans-Dichloroethylene	136	µg/L	Discharge Conc < TQL
1,1,1-Trichloroethane	831	µg/L	Discharge Conc < TQL
1,1,2-Trichloroethane	1.74	µg/L	Discharge Conc < TQL
Trichloroethylene	1.9	µg/L	Discharge Conc < TQL
Vinyl Chloride	0.063	µg/L	Discharge Conc < TQL
2-Chlorophenol	40.9	µg/L	Discharge Conc < TQL
2,4-Dichlorophenol	13.6	µg/L	Discharge Conc < TQL
2,4-Dimethylphenol	136	µg/L	Discharge Conc < TQL
4,6-Dinitro-o-Cresol	2.72	µg/L	Discharge Conc < TQL
2,4-Dinitrophenol	13.6	µg/L	Discharge Conc < TQL
2-Nitrophenol	2,179	µg/L	Discharge Conc < TQL
4-Nitrophenol	640	µg/L	Discharge Conc < TQL
p-Chloro-m-Cresol	160	µg/L	Discharge Conc < TQL
Pentachlorophenol	0.095	µg/L	Discharge Conc < TQL
Phenol	5,448	µg/L	Discharge Conc < TQL
2,4,6-Trichlorophenol	4.75	µg/L	Discharge Conc < TQL
Acenaphthene	23.2	µg/L	Discharge Conc < TQL
Acenaphthylene	N/A	N/A	No WQS
Anthracene	409	µg/L	Discharge Conc < TQL
Benzidine	0.0003	µg/L	Discharge Conc < TQL
Benzo(a)Anthracene	0.003	µg/L	Discharge Conc < TQL
Benzo(a)Pyrene	0.0003	µg/L	Discharge Conc < TQL
3,4-Benzofluoranthene	0.003	µg/L	Discharge Conc < TQL
Benzo(ghi)Perylene	N/A	N/A	No WQS
Benzo(k)Fluoranthene	0.032	µg/L	Discharge Conc < TQL
Bis(2-Chloroethoxy)Methane	N/A	N/A	No WQS
Bis(2-Chloroethyl)Ether	0.095	µg/L	Discharge Conc < TQL

Bis(2-Chloroisopropyl)Ether	272	µg/L	Discharge Conc < TQL
Bis(2-Ethylhexyl)Phthalate	1.01	µg/L	Discharge Conc < TQL
4-Bromophenyl Phenyl Ether	73.5	µg/L	Discharge Conc < TQL
Butyl Benzyl Phthalate	0.14	µg/L	Discharge Conc < TQL
2-Chloronaphthalene	1,090	µg/L	Discharge Conc < TQL
4-Chlorophenyl Phenyl Ether	N/A	N/A	No WQS
Chrysene	0.38	µg/L	Discharge Conc < TQL
Dibenzo(a,h)Anthrancene	0.0003	µg/L	Discharge Conc < TQL
1,2-Dichlorobenzene	218	µg/L	Discharge Conc < TQL
1,3-Dichlorobenzene	9.53	µg/L	Discharge Conc < TQL
1,4-Dichlorobenzene	204	µg/L	Discharge Conc < TQL
3,3-Dichlorobenzidine	0.16	µg/L	Discharge Conc < TQL
Diethyl Phthalate	817	µg/L	Discharge Conc < TQL
Dimethyl Phthalate	681	µg/L	Discharge Conc < TQL
Di-n-Butyl Phthalate	27.2	µg/L	Discharge Conc < TQL
2,4-Dinitrotoluene	0.16	µg/L	Discharge Conc < TQL
2,6-Dinitrotoluene	0.16	µg/L	Discharge Conc < TQL
Di-n-Octyl Phthalate	N/A	N/A	No WQS
1,2-Diphenylhydrazine	0.095	µg/L	Discharge Conc < TQL
Fluoranthene	27.2	µg/L	Discharge Conc < TQL
Fluorene	68.1	µg/L	Discharge Conc < TQL
Hexachlorobenzene	0.0003	µg/L	Discharge Conc < TQL
Hexachlorobutadiene	0.032	µg/L	Discharge Conc < TQL
Hexachlorocyclopentadiene	1.36	µg/L	Discharge Conc < TQL
Hexachloroethane	0.32	µg/L	Discharge Conc < TQL
Indeno(1,2,3-cd)Pyrene	0.003	µg/L	Discharge Conc < TQL
Isophorone	46.3	µg/L	Discharge Conc < TQL
Naphthalene	58.6	µg/L	Discharge Conc < TQL
Nitrobenzene	13.6	µg/L	Discharge Conc < TQL
n-Nitrosodimethylamine	0.002	µg/L	Discharge Conc < TQL
n-Nitrosodi-n-Propylamine	0.016	µg/L	Discharge Conc < TQL
n-Nitrosodiphenylamine	10.4	µg/L	Discharge Conc < TQL
Phenanthrene	1.36	µg/L	Discharge Conc < TQL
Pyrene	27.2	µg/L	Discharge Conc < TQL
1,2,4-Trichlorobenzene	0.095	µg/L	Discharge Conc < TQL
Aldrin	0.000003	µg/L	Discharge Conc < TQL
alpha-BHC	0.001	µg/L	Discharge Conc < TQL
beta-BHC	0.025	µg/L	Discharge Conc < TQL
gamma-BHC	0.95	µg/L	Discharge Conc < TQL
delta BHC	N/A	N/A	No WQS
Chlordane	0.0009	µg/L	Discharge Conc < TQL
4,4-DDT	0.00009	µg/L	Discharge Conc < TQL
4,4-DDE	0.00006	µg/L	Discharge Conc < TQL
4,4-DDD	0.0003	µg/L	Discharge Conc < TQL
Dieldrin	0.000003	µg/L	Discharge Conc < TQL

alpha-Endosulfan	0.076	µg/L	Discharge Conc < TQL
beta-Endosulfan	0.076	µg/L	Discharge Conc < TQL
Endosulfan Sulfate	27.2	µg/L	Discharge Conc < TQL
Endrin	0.041	µg/L	Discharge Conc < TQL
Endrin Aldehyde	1.36	µg/L	Discharge Conc < TQL
Heptachlor	0.00002	µg/L	Discharge Conc < TQL
Heptachlor Epoxide	0.00009	µg/L	Discharge Conc < TQL
PCB-1016	N/A	N/A	No WQS
Toxaphene	0.0003	µg/L	Discharge Conc < TQL
2,3,7,8-TCDD	0.00002	ng/L	Discharge Conc < TQL