

Application Type Renewal
Facility Type Industrial
Major / Minor Major

**NPDES PERMIT FACT SHEET
ADDENDUM No. 2**

Application No. PA0010031
APS ID 1033213
Authorization ID 1344726

Applicant and Facility Information

Applicant Name	<u>Shawville Power LLC</u>	Facility Name	<u>Shawville Generating Station</u>
Applicant Address	<u>250 Power Plant Road, Box F</u> <u>Shawville, PA 16873</u>	Facility Address	<u>250 Power Plant Drive</u> <u>Shawville, PA 16873</u>
Applicant Contact	<u>Karen E. McClelland</u>	Facility Contact	<u>John Telford</u>
Applicant Phone	<u>(724) 877-4462</u>	Facility Phone	<u>(814) 768-4283</u>
Client ID	<u>350842</u>	Site ID	<u>244416</u>
SIC Code	<u>4911</u>	Municipality	<u>Bradford Township</u>
SIC Description	<u>Trans. & Utilities - Electric Services</u>	County	<u>Clearfield</u>
Date Published in PA Bulletin	<u>January 15, 2022</u>	EPA Waived?	<u>No</u>
Comment Period End Date	<u>February 13, 2022</u>	If No, Reason	<u>Major Facility</u>

Purpose of Application Renewal of an existing NPDES permit for the discharge of industrial wastewater, stormwater, and sewage.

Internal Review and Recommendations

A comment letter was received from the permittee dated February 8, 2022. The letter contained one comment as follows:

Part A.I.A. Outfall 005 - The addition of concentration and mass loading limits for Thallium – Under the current permit, monitoring and reporting of Thallium has been required at Outfall 405 and calculated results reported at Outfall 005. Limits on Thallium are new in the draft permit. As we discussed in our call with the Department on January 19, 2022, Shawville Power performed a comparison of past monitoring data versus the new limits to determine our ability to comply with the new limits. Over the years, there have been several results that would have exceeded the new concentration limits due to the variation in flows based on station operations and/or rainfall. However, the treated effluent at Outfall 005 does meet the proposed mass loading limitations. The most significant variation in thallium concentrations appears to be associated with the significant change in flow at Outfall 005 when the Shawville Generating Station is generating power (high flow) and when the station is not operating. The source of thallium appear to be primarily associated with landfill leachate. The flow of landfill leachate and associated thallium concentrations also vary with rainfall. In addition, the mass loading of thallium from the landfill is believed to remain relatively constant. Therefore, Shawville Power requests only mass loading limits be applied for Thallium. Use of only mass loading limitations is equally protective of water quality and consistent with NPDES permit No. PA0063606 that became effective on July 1, 2014 for the Bangor Ash Disposal Site located in Bangor Borough, Northampton County, Pennsylvania. For this permit, only mass loading limitations were included for the discharge of boron and selenium at Outfall 001 as a water quality based effluent limitation.

Since the Thallium limits are new to this permit and 25 PA Code 95.4(d) allows for an extension of time to achieve compliance limits for a limited period of time, not to exceed 5 years:

Approve	Return	Deny	Signatures	Date
X			<i>Derek S. Garner</i> Derek S. Garner / Project Manager	April 5, 2022
X			<i>Nicholas W. Hartranft</i> Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	April 5, 2022

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1. GenOn requests a 3 year extension of the compliance period in order to perform a Toxics Reduction Evaluation of Thallium. At the end of the 3 year compliance period, GenOn requests only mass loading limits be applied for Thallium.
2. If concentration limits would need to be applied for Thallium, then GenOn requests a 5 year extension of the compliance period in order to also determine how to modify operations and/or treatment in order to meet the limits.

DEP has considered Shawville’s request and is willing to establish a condition that sets forth requirements for site-specific data collection studies and a Toxics Reduction Evaluation (“TRE”). DEP believes that Shawville’s request for a TRE is a more appropriate option than removing the total thallium concentration limits and only retaining the mass limits. By removing the concentration limits DEP believes that the permit would allow for water quality exceedances in the West Branch Susquehanna River. Accordingly, DEP has proposed the following condition at Part C V of the permit:

V. WATER QUALITY-BASED EFFLUENT LIMITATIONS FOR TOTAL THALLIUM

A. Final Water Quality Based Effluent Limitations (WQBELs)

The final WQBELs listed below will become effective on May 1, 2027 unless DEP issues an amendment to this permit prior to that date:

Outfall No.	Pollutant	Average Monthly (mg/L)	Maximum Daily (mg/L)	IMAX (mg/L)
005	Total Thallium	2.78	4.34	6.96

These limits are necessary to achieve water quality standards in the receiving waters. The permittee has not demonstrated the ability to achieve these limits as of the effective date of the permit. Prior to the WQBEL Effective Date, the permittee shall complete studies as described below.

B. Site-Specific Data Collection Studies

The WQBELs were developed by DEP using the default or model-derived estimates for the parameters listed below in DEP’s Toxics Management Spreadsheet (TMS). The permittee may collect site-specific data for all of the parameters listed below and submit the data to DEP as part of a Final WQBEL Compliance Report.

1. **Discharge pollutant concentration coefficients of variability** using DEP’s *Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics* (391-2000-024).
2. **Background / ambient pollutant concentrations** using DEP’s *Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances* (391-2000-022).
3. **Chemical translator(s)** using EPA’s *The Metals Translator: Guidance for Calculating A Total Recoverable Permit Limit From A Dissolved Criterion* (EPA 823-B-96-007) or other EPA guidance.
4. **The slope and width of the receiving waters** for the reach of stream modeled by DEP using the TMS as measured in the field.
5. **The velocity of the receiving waters** for the reach of stream modeled by DEP using the TMS as measured through a time of travel study that provides an estimate of velocity under design stream flow conditions.
6. **The acute and chronic partial mix factors** for the reach of stream modeled by DEP using the TMS as determined through a mixing study that provides an estimate of mixing under design stream flow conditions.

The permittee may, at its discretion, submit a work plan to DEP for review and comment prior to initiating the site-specific data collection studies. If the permittee decides to submit a work plan, DEP’s approval is not necessary prior to commencing the studies.

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C. Toxics Reduction Evaluation (TRE)

The permittee shall conduct a TRE in accordance with DEP’s *Water Quality Toxics Management Strategy, Appendix C, Permittee Guidance for Conducting a Toxics Reduction Evaluation (TRE)* (361-0100-003). The permittee shall investigate and address the following as part of the TRE:

1. The source(s) of the toxic pollutants in the effluent through a comprehensive review of influent and effluent quality and contributors to the facility, if applicable.
2. An evaluation of approaches and strategies that exist to reduce or eliminate sources in order to achieve the final WQBELs.
3. An evaluation of approaches and strategies that exist to provide treatment to achieve the final WQBELs.
4. An analysis of the feasibility of the approaches and strategies identified in paragraphs 2 and 3, above.

The permittee shall develop a TRE work plan and submit the work plan to DEP for review and comment when requested by DEP. DEP’s approval of the work plan is not necessary prior to commencing the TRE.

D. Schedule and Final WQBEL Compliance Report

1. The permittee shall submit complete required studies and a Final WQBEL Compliance Report to DEP in accordance with the following schedule:

Action	Due Date
Complete TRE Work Plan and Submit Work Plan if Requested by DEP	December 1, 2022
Complete TRE and Site-Specific Data Collection	December 1, 2025
Submit Final WQBEL Compliance Report	May 1, 2026
Complete Actions Identified in TRE and Comply with Final Permit Limit	May 1, 2027

2. The Final WQBEL Compliance Report shall consist of the following components:
 - a. Site-specific data collected in accordance with paragraph B, above.
 - b. If the permittee is requesting a modification to the final WQBELs based on the site-specific data, the permittee shall submit:
 - (1) Printouts of the TMS using the site-specific data along with all other assumptions and data used by DEP to establish the final WQBELs; and
 - (2) An application (3800-PM-BCW0027b) to DEP for a Major Amendment to the permit.
 - c. A TRE Report including a feasibility analysis or study, if applicable.
 - d. An assessment of whether the permittee will be capable of achieving the final WQBELs on the WQBEL Effective Date. The permittee shall notify DEP of one of the following conclusions:
 - (1) The permittee will achieve the final WQBELs on the WQBEL Effective Date. The permittee shall notify DEP of the measures that will be taken to comply.

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- (2) The permittee will or may be able to achieve the final WQBELs, but after the WQBEL Effective Date. The permittee shall notify DEP of its proposed alternative WQBEL Effective Date and include justification for the alternative date.
 - (3) The permittee will not be able to achieve the final WQBELs because all alternatives to control the toxic pollutant(s) are infeasible.
- e. An application (3800-PM-BCW0027b) for a Major Amendment to the permit if the permittee concludes that it is not capable of achieving the final WQBELs on the WQBEL Effective Date or compliance is infeasible, or if the permittee believes the final WQBELs should be modified based on site-specific data.
3. In response to the receipt of the Final WQBEL Compliance Report, DEP may:
 - a. Request additional research, studies or clarification if the permittee concludes that it cannot achieve final WQBELs by the WQBEL Effective Date or compliance is infeasible and DEP disagrees with this conclusion or believes that additional efforts are necessary before reaching this conclusion. The permittee shall comply with the schedule provided by DEP in writing for such additional efforts or an alternative agreed upon schedule.
 - b. Issue a draft Major Amendment to the permit that modifies the WQBELs in response to site-specific data or modifies the WQBEL Effective Date, for public comment.
 - c. Deny the application for a Major Amendment to the permit or place review of the application on hold until additional research or studies requested by DEP are complete.
 - d. Notify the permittee that DEP will consider a time extension to achieve the final WQBELs under 25 Pa. Code § 95.4 for the discharge upon the receipt of a request submitted by the permittee using Form No. 3800-FM-BCW0302, if it can be demonstrated that the criteria for a time extension under § 95.4 are met.
 - e. Notify the permittee that DEP will consider the submission of a site-specific criterion study (SSCS) to further modify WQBELs, where applicable. The permittee shall comply with the requirements set forth in DEP's notification letter for completion of a SSCS, including submission of a SSCS work plan.

An email dated January 24, 2022 from the U.S. EPA states that the agency has no further comments. No comments were received from the public. An internal review of the permit did not yield any comments.

It is recommended that the permit is redrafted and published in the PA Bulletin for an additional thirty-day commenting period.