

Application Type Renewal
 Facility Type Industrial
 Major / Minor Major

**NPDES PERMIT FACT SHEET
ADDENDUM**

Application No. PA0012823
 APS ID 985837
 Authorization ID 1317252

Applicant and Facility Information

Applicant Name	<u>MC Project Company, LLC</u>	Facility Name	<u>Martins Creek Steam Electric Station</u>
Applicant Address	<u>6605 Foul Rift Road</u> <u>Bangor, PA 18013-4857</u>	Facility Address	<u>6605 Foul Rift Road</u> <u>Bangor, PA 18013-4857</u>
Applicant Contact	<u>Dax Fleckenstein</u>	Facility Contact	<u>Dax Fleckenstein</u>
Applicant Phone	<u>(610) 498-6210</u>	Facility Phone	<u>(610) 498-6210</u>
Client ID	<u>347577</u>	Site ID	<u>239923</u>
SIC Code	<u>4911</u>	Municipality	<u>Lower Mount Bethel Township</u>
SIC Description	<u>Trans. & Utilities - Electric Services</u>	County	<u>Northampton</u>
Date Published in PA Bulletin	<u>October 25, 2025</u>	EPA Waived?	<u>No</u>
Comment Period End Date	<u>November 24, 2025</u>	If No, Reason	<u>Major Facility</u>
Purpose of Application	<u>Renewal of NPDES permit.</u>		

Internal Review and Recommendations

Public notification of draft permit issuance was published in the PA Bulletin on October 25, 2025. Comments were received from the permittee in an email dated December 1, 2025. After DEP's initial reply to the permittee's comments, additional clarifications were provided by the permittee in an email dated January 7, 2026. A comment was also received from the Martins Jacoby Watershed Association in an email dated December 5, 2025. The comments and responses are below. Due to changes made to the permit, another draft permit will be issued with a new public comment period.

MC Comment 1:

Part A, Outfall 010 – E.Coli (No./100 ml) has been added as a new parameter for sampling. The Fact Sheet states that the parameter has been added to the DRAFT permit as per current guidance.

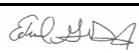
Question: What is the "current guidance" referenced in the Fact Sheet? Please provide the title, date, and URL where the guidance can be reviewed. Martins Creek may submit additional comments after a response is received.

Response:

The current guidance document is titled *Standard Operating Procedure (SOP) for Clean Water Program Establishing Effluent Limitations for Individual Sewage Permits* (SOP No. BCW-PMT-033). The SOP was created on November 9, 2012, and the latest revision to the SOP occurred on February 5, 2024.

The URL is:

https://files.dep.state.pa.us/Water/Wastewater%20Management/EDMRPortalFiles/SOPs/BNPNSM_NPDES_SOP_Sewage_Effluent_Limits.pdf

Approve	Return	Deny	Signatures	Date
X			 Brian Burden, E.I.T. / Project Manager	February 18, 2026
X			 Edward Dudick, P.E. / Environmental Engineer Manager	February 18, 2026

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Note 12 at the bottom of page 3 of the SOP states: "Sewage discharges will include monitoring, at a minimum, for E. Coli, in new and reissued permits, with a monitoring frequency of 1/month for design flows \geq 1 MGD, 1/quarter for design flows \geq 0.05 and $<$ 1 MGD, 1/year for design flows of 0.002 – 0.05 MGD."

Although the SOP is intended for individual sewage permits (major and minor), the guidance also applies to industrial wastewater facilities with outfalls that discharge treated sewage.

Note: For consistency with table 5-3 of DEP's *Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits* (document No. 362-0400-001), an IMAX limitation of 40.0 mg/L is added to the permit for Ammonia-N.

MC Comment 2:

Part A, Outfall 010 – The required sample types for several parameters have been changed from Grab to 8-Hr Composite.

Question: What was the basis for this change? Where other Outfalls (020 and 413) monitor similar analytes, the sample type remains grab. Martins Creek requests the sample type is continued as grab for Outlet 010 also.

Response:

The previous permit (issued 11/12/2015) included 8-hour composite sampling requirements for CBOD₅, TSS, and Ammonia-N at Outfall 010. The draft permit carried over the composite sampling requirements for those parameters and added composite sampling requirements for Total Phosphorus, Total Kjeldahl Nitrogen, Nitrate-Nitrite as N, and Total Dissolved Solids.

For consistency with table 6-3 of DEP's *Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits* (document No. 362-0400-001), the required sample type for all parameters at Outfall 010 is updated to grab.

MC Comment 3:

Part A, Outfall 011 – Type of Effluent: "*Wastewater from stilling pond (stormwater runoff from both existing Martins Creek unit and Mt. Bethel Energy, and Delaware River water to maintain pond levels).*" (emphasis added)

Comment: Change the word unit to plural – units – as wastewater from Units 3 and 4 are discharged.

Response:

The typographical error in Part A for Outfall 011 is fixed.

MC Comment 4:

Part A, Outfall 013 – Type of Effluent: "*Wastewater from industrial waste treatment basin (Units 3 & 4 Cooling Tower Blowdown); Units (1 & 2) Units (3 & 4) Main Station sump; Units (3 & 4) ash hopper sumps; filtered solid sump; coal yard sump; demineralizer waste sump; East PIP sump; Mt. Bethel Energy cooling water; stormwater from closed Ash Basin No. 4 cap area and other waste streams similar to those already entering waste basin.*" (emphasis added)

Comment: Please delete Units 1 & 2 from the description. These units are no longer present at the site and no longer contribute any wastewater to this outfall.

Response:

Units 1 & 2 are deleted from the description in Part A for Outfall 013.

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MC Comment 5:

Part A, Outfall 013 – Effluent Limitations: Effluent Limitations for Total Copper were reduced from 1.0 mg/L to 0.028 mg/L. However, the Toxic Management Spreadsheet (TMS) indicates the maximum reported Total Copper concentration is >10% of the governing WQBEL; therefore, a Reasonable Potential does not exist. DEP’s SOP for WQBELs¹ states the standard practice is “[f]or conservative pollutants, in general, establish monitoring requirements where the effluent concentration ... is between 10% - 50% of the WQBEL.” (page 2, Section I.C). Therefore, a numeric WQBEL is not generally established in this situation.

As a result, the Technology Based Effluent Limitation (TBEL) established in the previous permit is the most stringent numerical value to include in the permit. Per DEP’s Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits², “the most stringent effluent limit(s) (i.e. water quality-based, technology-based, or effluent standard-based) shall govern and shall be incorporated into the permit” (page 97, Chapter 4.A).

Moreover, Copper and Iron were included in the permit due to the intermittent discharge of rinse water from storage tanks holding metal chemical cleaning water to this outfall, per the facility’s 2015 Fact Sheet. Martins Creek only generates and discharges rinse water every few decades.

Comment: Martins Creek requests the TBEL permit limits from the previous permit be continued for Average Monthly and Daily Maximum and that monitoring for Copper and Iron be required only when rinse water from metal cleaning waste is discharged. Martins Creek suggests the following language be added as a footnote to the monitoring frequency for Copper and Iron at Outfall 013:

Monitoring and limitations for Total Copper and Total Iron apply only when chemical metal cleaning waste rinsewater are present. If there is no discharge of chemical metal cleaning waste rinsewater during a monitoring period, the permittee shall report "NODI 9" in the DMR.

Additional Discussion:

Had there been no TBEL applied to this wastewater type, the TMS results would have required monitoring only with no numeric limit, essentially a limit of nothing. Imposing a WQBEL of 0.028 mg/l for copper would be an unnecessary departure from standard and documented agency practice (equivalent to the approach had the application data been higher and within the range of <10% - >50% of the water quality standard) and would be unnecessary stringent. In Table 1 of the Fact Sheet entitled “TBEL and WQBEL Comparison for Outfall 013”, the WQBEL listed should have been “monitor only”.

The TBEL establishes monitoring and a numeric limit of 1 mg/l. The numeric limit of 1 mg/l is more stringent because it imposes an enforceable concentration cap, whereas a monitoring-only requirement does not restrict pollutant loading and only applies data collection and reporting. The table below summarizes this argument:

Feature	Technology-Based Limit (TBEL)	Water Quality-Based Action (Application of TMS Results)
Type	Numeric Limit	Procedural Requirement (Monitoring)
Value	1 mg/L	Monitoring (No numeric value)
Function	Caps the maximum allowable discharge.	Requires data collection and reporting.
Is it a "limit"?	Yes.	No.
Which is more stringent?	This is the only actual limit, therefore it is the most stringent.	This action is not a limit, so it cannot be "more stringent" in a direct comparison.

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Unnecessarily establishing a WQBEL limit for this discharge may make the facility subject to anti-backsliding requirements under Clean Water Act (CWA) section 402(o) in future permits.

The request for monitoring only when discharging chemical metal waste rinsewater is withdrawn.

Response:

The request to only monitor Total Copper and Total Iron when chemical metal cleaning waste rinsewater is present in the discharge was discussed with the permittee in a meeting that occurred between the receipt of the comments and the additional clarifications. The request cannot be granted. 40 CFR 423 specifies monthly average limitations for Total Copper and Total Iron, however, the permit was previously adjusted to allow for a minimum of quarterly sampling. Both copper and iron were detected in each of the eight samples summarized in the permit renewal application as well.

The most stringent of the water quality-based, technology-based, or effluent standard-based limitations shall govern and be incorporated into the permit. DEP's Central Office was consulted to ensure consistent procedures across the state are followed when WQBELs are calculated but not recommended in modeling.

As per DEP's Central Office guidance provided in an email dated January 15, 2026, if the TMS recommends monitoring, then the monitoring requirement should be used as the WQBEL when comparing all effluent limitations to determine the most stringent. In this scenario, the TBEL is more stringent than the recommended monitoring requirement. Therefore, the permittee's request is granted, and the Total Copper TBELs replace the limitations from the previous draft permit.

MC Comment 6:

Part A, Outfall 013 – Effluent Limitations: Effluent Limitations for Total Zinc were reduced from 1.0 mg/L to 0.25 mg/L. However, the Toxic Management Spreadsheet (TMS) indicates the maximum reported Total Zinc concentration is >10% of the governing WQBEL; therefore, a Reasonable Potential does not exist. DEP's SOP for WQBELs states the standard practice is "[f]or conservative pollutants, in general, establish monitoring requirements where the effluent concentration ... is between 10% - 50% of the WQBEL." (page 2, Section I.C). Therefore, a numeric WQBEL is not generally established in this situation. As a result, the Technology Based Effluent Limitation (TBEL) established in the previous permit is the most stringent numerical value to include in the permit. Per DEP's Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits, "the most stringent effluent limit(s) (i.e. water quality-based, technology-based, or effluent standard-based) shall govern and shall be incorporated into the permit" (page 97, Chapter 4.A). The TBEL in the previous permit was required for cooling tower blowdown per 40 CFR 423.13(d)(1) and is still appropriate to include in the permit.

Comment: Martins Creek requests the TBEL permit limits from the previous permit be continued for Average Monthly and Daily Maximum.

Additional Discussion:

The additional discussion of the copper limit in Comment 5 is also applicable to zinc in Comment 6.

Response:

For the same reasons cited in the Comment 5 response, the TBEL from the previous permit is continued for Total Zinc.

MC Comment 7:

Part A, Outfall 020 – Effluent Limitations: The Fact Sheet states that: "Discharge parameters and monitoring frequencies are consistent with the current PAG-03 Appendix H requirements."

Comment: Request that a new footnote be added to the Footnotes Section of Part A of the Permit that provides guidance on how Total Nitrogen is calculated, as per PAG-03, Appendix H, Footnote 3: *Total Nitrogen is the sum of Total Kjeldahl-N (TKN) plus Nitrite-Nitrate as N (NO₂+NO₃-N), where TKN and NO₂+NO₃-N are measured in the same sample.*

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Response:

The requested wording is added as a footnote under the Part A tables for all monitoring points where Total Nitrogen concentrations are to be reported (Outfall 010, Outfall 020, and IMP 413).

MC Comment 8:

Part A, Outfall 413 – Effluent Limitations: The Fact Sheet states that: *“Discharge parameters and monitoring frequencies are consistent with the current PAG-03 Appendix H requirements.”*

Comment: Request that a new footnote be added to the Footnotes Section of Part A of the Permit that provides guidance on how Total Nitrogen is calculated, as per PAG-03, Appendix H, Footnote 3: *Total Nitrogen is the sum of Total Kjeldahl-N (TKN) plus Nitrite-Nitrate as N (NO₂+NO₃-N), where TKN and NO₂+NO₃-N are measured in the same sample.*

Response:

The requested wording is added as a footnote under the Part A tables for all monitoring points where Total Nitrogen concentrations are to be reported (Outfall 010, Outfall 020, and IMP 413).

MC Comment 9:

Part A, Effluent Limitations, Monitoring, Recordkeeping and Reporting Requirements – Footnotes – Footnote (3): *“Exceedances of the Maximum Daily limitation for this parameter is subject to 24-hour reporting as specified in Part A III.C.4.b.(i).”* (emphasis added)

Question: What parameter does this footnote reference? There didn't appear to be a Footnote (3) noted for any of the outfalls in the “Daily Maximum” column.

Response:

Footnote 3 is a template footnote added to the permit automatically in the document generation process. If no parameters that the permittee monitors for include the “3” designation, then the footnote wording can be ignored. Template Part A wording cannot be removed from the permit.

MC Comment 10:

Part C.III.E.1.b – Stormwater Management Best Management Practices (BMPs): *“Use dust control and collection systems in ash handling and transport systems.”*

Comment: Request that this be removed from the Permit. Martins Creek no longer combusts coal and no longer generates ash. There are no ash handling activities being performed across the permitted area.

Response:

The BMP is removed from Part C of the permit.

MC Comment 11:

Part C.III.H.1 – Annual Inspection and Compliance Evaluation states: *“The permittee shall submit a complete Annual Report to the DEP office that issued the permit by May 1 each year using DEP’s Annual Report template, attached to this permit. The Annual Report shall address activities under the permit for the previous calendar year. The permittee shall submit the Annual Report electronically.”* (emphasis added)

Comment: The Draft permit did not include a copy of the Annual Report template as noted in this condition. Please attach a copy of the Annual Report template to the Final Permit.

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Response:

Supplemental reports aren't issued with the draft permit documents in general. A copy of the annual report will be provided with the next draft permit for reference. Other supplemental reports will be included with the final permit documents.

MC Comment 12:

Part C.IV.D.2&3 – Cooling Water Intake Structure(s) states:

2. *“Monitor the actual intake flows at a minimum frequency of daily, including measurements of cooling water withdrawals, make-up water and blow down volume or alternatively monitor cycles of concentration at a minimum frequency of daily.”*

3. *“Submit the results of monitoring in paragraph D.2 above on the Cooling Water Intake Monitoring Supplemental Report (3800-FM-BCW0010) as an attachment to monthly DMRs.”*

Comment: These are new monitoring requirements that have been added to the Permit. With the exception of monitoring flow at the intake structure, Martins Creek does not have monitoring equipment installed for measuring flow volumes for cooling water withdrawals, make-up water, cooling tower blow down volumes or the daily monitoring of cycles of concentration.

Martins Creek is proposing to alternatively monitor daily cycles of concentration, however, will require time to install this monitoring equipment and is requesting that this condition start one (1) year from the date of permit issuance to install this additional monitoring equipment. In addition, since this additional monitoring parameter is associated with the cooling towers, Martins Creek is proposing to report daily cycles of concentration values when the cooling towers are in operation. Martins Creek will use Units 3 and 4 cooling tower circulation pump “on” signals for indicating process on / process off. The Cooling Water Intake Monitoring Supplemental Report (3800-FM-BCW0010) attached to the monthly DMRs will include this data.

Response:

The request to fulfill the requirements of Part C.IV.D.2 by alternatively monitoring the daily cycles of concentration is acknowledged and the request to require reporting commence 1 year from the permit effective date is granted. The wording in the condition is updated to require the reporting commence 1 year from the permit effective date.

MC Comment 13:

Part C.VII.A – Chlorine Requirements & Part C.I.F – Other Requirements

1. *Chlorine or other approved biocides may not be discharged from any single generating unit for more than two hours per day unless the discharger demonstrates to the permitting authority that discharges for more than two hours are required for macroinvertebrate control. Simultaneous multi-unit chlorination/biocide application is permitted.*

2. *For cooling tower blowdown and once-through cooling water discharges to receiving waters, free available chlorine (FAC) may not be discharged from any unit for more than (2) hours in any one (1) day and not more than one (1) unit in any plant may discharge FAC at any one time unless the utility can demonstrate to the Department that the units in a particular location cannot operate at this level of chlorination. FAC may be analyzed using the DPD Spectrophotometric method or the respective amperometric titration method.*

Comment: These two conditions are similar and were brought over from the previous permit. Martins Creek would like some clarification on these two conditions. Is the intent to limit the time of cooling tower chlorination or the cooling tower blowdown? If the intent is to limit the time of cooling tower blowdown to two hours, Martins Creek would request that this time limit be increased or eliminated. The run profile of the plant has changed significantly. Martins Creek has historically been a peaking plant, often with long durations of time with no generation. Cooling tower chemistry and cycles of concentration were not a concern at that time. Unit operation has increased significantly and to maintain optimal cooling tower chemistry, blow down times have also increased significantly. Even though there has been an increase in operation and cooling tower blowdown, the monthly FAC sample results have been well below the permit's effluent limits.

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Response:

The conditions cited are derived from the applicable technology-based requirements of 40 CFR 423 and have been carried over during previous NPDES permit renewals. The conditions do not limit the specific discharge durations, only the chlorination (or biocide application) durations. If the chlorination duration becomes a concern, the permittee may demonstrate to DEP that the units in a particular location cannot operate at that level of chlorination and can request a permit amendment to update the Part C condition.

Part C.I.F. of the draft permit states: *Chlorine or other approved biocides may not be discharged from any single generating unit for more than two hours per day unless the discharger demonstrates to the permitting authority that discharges for more than two hours are required for macroinvertebrate control. Simultaneous multi-unit chlorination/biocide application is permitted.* This condition is removed from the permit since it's applicable to once through cooling water and this facility utilizes closed loop cooling.

Clarification is added to Part C.I.E. that specifies the "daily when discharging" TRC requirements are only applicable for discharges through Outfall 010 (sewage effluent).

Martins Jacoby Watershed Association Comment:

"My comment is based on reviewing documents provided to me by PA DEP through a file review request. In particular my comment is about the content of the Burns McDonnell report "Thermal Compliance Evaluation at the Martins Creek Steam Electric Station" dated 12/8/25. In the introduction (Section 1), in paragraph two, they state the heat dissipation area dimensions (203 feet long and 66 feet wide) that are sufficient to achieve water quality standards. On pdf page 22 of the document is figure 3-4 which I have pasted below. I added some numbers to the figure in red to reference my comments better. I don't have the technical knowledge to understand everything in the entire document but my focus on figure 3-4 is based on the verbiage describing that figure. That verbiage appears to indicate the figure matches the heat dissipation area dimensions stated in the introduction. I therefore assume this figure is an important part of the justification to achieve water quality standards.

Reference #1 in the pasted figure below - I interpret the color chart to show the temperature in degrees Celsius that the discharge causes the river temperature to rise. If that is correct then 5 degrees Fahrenheit would be at the transition from dark green to the middle color green.

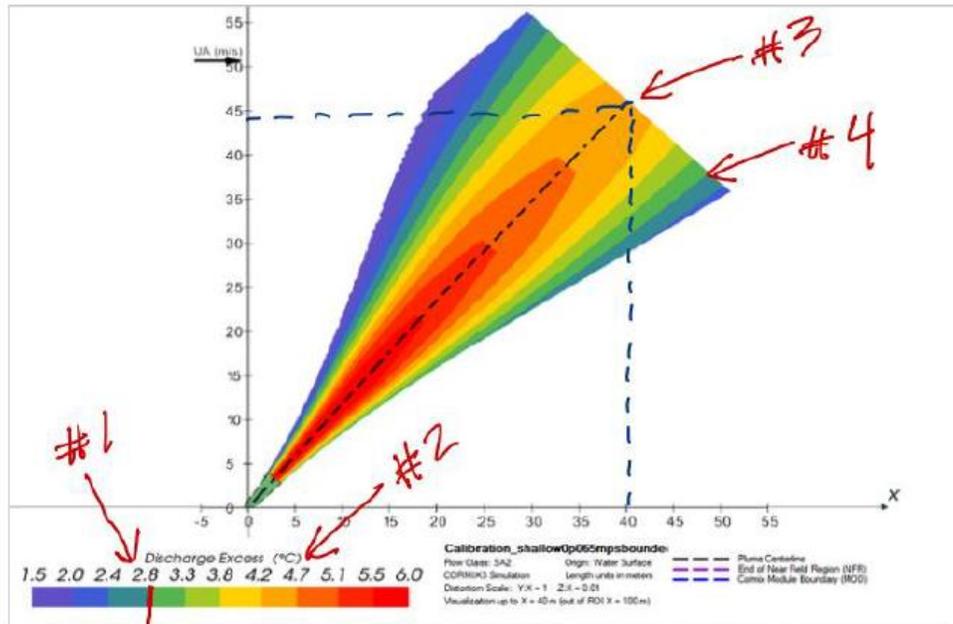
Reference #2 in the pasted figure below - The medium orange color is 4.2 to 4.7 Celsius (7.6 to 8.5 Fahrenheit).

Reference #3 in the pasted figure below - I drew dotted lines in blue from the x and y axis to the tip of the end of the center line they show in the plume. A rough calculation of that centerline assuming my lines are somewhat square, I get about 197 feet along the centerline. Which is pretty close to their stated 203 feet along the centerline. So far so good. I used 40 meters as the x distance and 45 meters for the y axis, which makes the hypotenuse about 60 meters, which is about 197 feet. However, the color at the end of that centerline is medium orange, which I read the color chart to be 4.2 to 4.7 Celsius (7.6 to 8.5 Fahrenheit). So, it would appear to me they stopped the figure of the plume before the water dropped below 5 degrees Fahrenheit rise in river temperature.

Reference #4 in the pasted figure below - Wouldn't the true limit of the mixing zone be where the 5 degree Fahrenheit colors converge in the river? The yellows, oranges and light greens should all be enveloped by dark green somewhere in the middle of the river. That is not shown on this figure because the figure is cut off too soon. Therefore, it would seem their stated mixing zone centerline is not long enough."

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Figure 3-4: Plan View of Thermal Plume



Note: X-axis represents distance (meters) along the right descending bank of the Delaware River; Y-axis represents the distance (meters) to the left descending bank parallel to river flow (UA); Water Quality Criterion is 2.78°C above ambient river temperature (°Discharge Excess °C).

Response:

The referenced diagram appears to depict the method for calculating the maximum cross-section width of the heat dissipation areas using the theoretical 2.78 °C excess heat boundaries from the mixing zone. It's agreed that the diagram doesn't show the entire length of the mixing zone along the center line, however, that doesn't appear to be the intention of Figure 3-4.