

**DRAFT MODIFICATION FOR AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM**

In compliance with the provisions of the Federal Clean Water Act, as amended, (33 U.S.C. §§1251 et seq.; the “CWA”),

Granite Shore Power Merrimack LLC

is authorized to discharge from a facility located at

**Merrimack Station
431 River Road
Bow, NH 03304**

to receiving water named

Merrimack River (Hydrologic Basin Code; 01070002)

in accordance with effluent limitations, monitoring requirements and other conditions contained in the permit issued on May 22, 2020, with an effective date of September 1, 2020, as specified in the Notice of Uncontested and Severable Conditions letter issued on September 1, 2020, except those provisions challenged and remanded by Environmental Appeals Board Remand Order, dated August 3, 2021 (NPDES Appeal Nos. 20-05 & 20-06) and identified as shaded areas (note: the corresponding 1992 permit limits are in effect for certain remanded provisions) and except for changes as set forth herein in red and italics, including strike-through text proposed for deletion from the 2020 Permit, and summarized as follows:

- Page 8** Part I.A.4: regarding the list of effluent authorized to discharge through Outfall 003A, specifically bottom ash transport water, the phrase “generated before December 31, 2023” has been removed (page 7 of the 2020 Permit).
- Page 9-11** Parts I.A.4A through I.A.4.D have been added to include requirements for Low Utilization Electric Generating Units and Units Permanently Ceasing Coal Combustion that discharge bottom ash transport water. Page numbering for the remainder of the permit has been adjusted accordingly.
- Page 27** Part I.C provides that the submittal of a final biological monitoring report is not required if, on or before March 4, 2025, the Permittee formally notifies EPA of its plans to opt into the permanent cessation subcategory for both generating units (page 23 of the 2020 Permit).
- Page 34** Part I.H.2, which requires that “[b]ottom ash transport water generated after December 30, 2023 is prohibited from being discharged to the slag settling pond or the Merrimack River” has been removed. Part I.H has been renumbered accordingly (page 30 of the 2020 Permit).

This permit modification shall become effective on DATE.¹

This permit modification does not affect the expiration date of the permit signed May 22, 2020. Therefore, the original 2020 Permit and this permit modification expire at midnight, August 31, 2025.

This permit supersedes the permit issued on June 25, 1992.

This permit consists of this cover page, Part I, Attachment A (Freshwater Acute Toxicity Test Procedure and Protocol, February 2011) and Part II (NPDES Part II Standard Conditions, April 2018).

Signed this day of

Ken Moraff, Director
Water Division
U.S. Environmental Protection Agency
Region 1 Boston, Massachusetts

¹ Pursuant to 40 Code of Federal Regulations (CFR) § 124.15(b)(3), if no comments requesting a change to the Draft Permit are received, the Permit will become effective upon the date of signature. Procedures for appealing EPA's Final Permit decision may be found at 40 CFR § 124.19.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. **Outfall 001.** During the period beginning on the effective date and lasting through the expiration date, the Permittee is authorized to discharge once through cooling water from the MK-1 condenser outlet, through Internal Outfall Serial Number 001 to the Merrimack River, via the Discharge Canal. The discharge shall be limited and monitored as specified below.

Effluent Characteristic	Effluent Limitations			Monitoring Requirements ^{1,2,3}	
	Average Monthly	Maximum Daily	Instantaneous Maximum	Measurement Frequency ⁴	Sample Type
Effluent Flow ⁶	Report MGD	69.1 MGD	_____	Continuous	Calculation
Temperature ⁷	Report °C Report °F	Report °C Report °F	_____	Continuous	Recorder
Total Residual Oxidants ⁸	_____	_____	0.2 mg/L ⁹	1/Week	Grab
Intake Velocity (April 1 to August 15) ¹⁹	_____	_____	0.5 fps	Continuous	Calculation

2. **Outfall 002.** During the period beginning on the effective date and lasting through the expiration date, the Permittee is authorized to discharge once through cooling water from the MK-2 condenser outlet, through Internal Outfall Serial Number 002 to the Merrimack River, via the Discharge Canal. The discharge shall be limited and monitored as specified below.

Effluent Characteristic	Effluent Limitations			Monitoring Requirements ^{1,2,3}	
	Average Monthly	Maximum Daily	Instantaneous Maximum	Measurement Frequency ⁴	Sample Type
Effluent Flow ⁶	Report MGD	187.2 MGD	_____	Continuous	Calculation
Temperature ⁷	Report °C Report °F	Report °C Report °F	_____	Continuous	Recorder
Total Residual Oxidants ⁸	_____	_____	0.2 mg/L ⁹	1/Week	Grab
Intake Velocity (April 1 to August 15) ¹⁹	_____	_____	0.5 fps	Continuous	Calculation

3. **Outfall 003.** During the period beginning on the effective date and lasting through the expiration date of this permit, the Permittee is authorized to discharge through Outfall Serial Number 003 to the Merrimack River, via the Discharge Canal, the following wastewater: Internal Outfall 003A (Slag Settling Pond) and Internal Outfalls 001 and 002 (once through cooling water). The discharge shall be limited and monitored as specified below; the receiving water shall be monitored as specified below.

Effluent Characteristic	Effluent Limitations		Monitoring Requirements ^{1,2,3}	
	Average Monthly	Maximum Daily	Measurement Frequency ⁴	Sample Type ⁵
Effluent Flow ⁶	265.3 MGD	275.4 MGD	Continuous	Calculation
Temperature ⁷	Report °C Report °F	Report °C Report °F	Continuous	Recorder
Instream Temperature Limits	See Part I.A.11			
Total Residual Oxidants ⁸	——	0.026 mg/L ^{10,11}	1/Week	Grab
Dissolved Oxygen Saturation	——	75% (minimum)	Monthly	Grab
pH Range ¹²	6.5 - 8.0 standard units		Continuous	Recorder
Whole Effluent Toxicity (WET) ^{13, 14}				
LC ₅₀	——	Report %	1/Quarter	Composite

Effluent Characteristic	Effluent Limitations		Monitoring Requirements ^{1,2,3}	
	Average Monthly	Maximum Daily	Measurement Frequency ⁴	Sample Type ⁵
NOAEL	_____	Report %	1/Quarter	Composite
Ammonia	_____	Report mg/L	1/Quarter	Composite
Total Solids	_____	Report mg/L	1/Quarter	Composite
Total Dissolved Solids	_____	Report mg/L	1/Quarter	Composite
Hardness	_____	Report mg/L	1/Quarter	Composite
Total Cadmium	_____	Report mg/L	1/Quarter	Composite
Total Lead	_____	Report mg/L	1/Quarter	Composite
Total Copper	_____	Report mg/L	1/Quarter	Composite
Total Zinc	_____	Report mg/L	1/Quarter	Composite
Total Nickel	_____	Report mg/L	1/Quarter	Composite
Total Aluminum	_____	Report mg/L	1/Quarter	Composite

Ambient Characteristic ¹⁵	Reporting Requirements		Monitoring Requirements ^{1,2,3}	
	Average Monthly	Maximum Daily	Measurement Frequency ⁴	Sample Type
Hardness	_____	Report mg/L	1/Quarter	Grab
Ammonia	_____	Report mg/L	1/Quarter	Grab
Total Cadmium	_____	Report mg/L	1/Quarter	Grab
Total Lead	_____	Report mg/L	1/Quarter	Grab
Total Copper	_____	Report mg/L	1/Quarter	Grab
Total Zinc	_____	Report mg/L	1/Quarter	Grab
Total Nickel	_____	Report mg/L	1/Quarter	Grab
Total Aluminum	_____	Report mg/L	1/Quarter	Grab
pH ¹⁶	_____	Report standard units	1/Quarter	Grab
Temperature ¹⁶	_____	Report °C Report °F	1/Quarter	Grab

4. **Outfall 003A.** During the period beginning on the effective date and lasting through the expiration date the Permittee is authorized to discharge the following effluent from the Slag Settling Pond: slag sluice settling area (bottom ash transport water) *generated before December 31, 2023*; stormwater, landfill leachate, and low volume wastewater from Waste Treatment Plant No. 1; treated chemical and non-chemical metal cleaning from Waste Treatment Plant No. 1 (Internal Outfall 003B); MK-1 boiler blowdown and roof drains; MK-1 and MK-2 slag tank overflow and storm drains; boiler drains; yard drains; and screen and filter backwash and the quench pump test water from the FGD service water pump house. *(For any generating units covered by the Permanent Cessation of Coal Combustion Subcategory, no discharges of bottom ash transport water produced by such generating units after December 31, 2028, or any earlier date by which the unit may have ceased coal combustion, are authorized. See Part I.A.4B.3 of this Permit, below.)* Discharges from Outfall 003A shall be limited and monitored as specified below.

Effluent Characteristic	Effluent Limitations		Monitoring Requirements ^{1,2,3}	
	Average Monthly	Daily Maximum	Measurement Frequency ⁴	Sample Type ⁵
Effluent Flow ⁶	5.3 MGD	13.0 MGD	Continuous	Recorder
Total Recoverable Copper	_____	Report mg/L	1/Quarter	Composite
Total Suspended Solids	30.0 mg/L	100.0 mg/L	1/Month	Composite
Oil & Grease	15.0 mg/L	20.0 mg/L	1/Month	Grab
pH	Report standard units		1/Week	Grab

4A. Requirements for Low Utilization Electric Generating Units Discharging Bottom Ash Transport Water

- (1) *The term “low utilization electric generating unit” means any electric generating unit for which the Permittee annually recertifies, under Part I.A.4A(4) below, that the two-year average annual capacity utilization rating is less than 10 percent. If the annual capacity utilization rating is above 10 percent, that unit’s bottom ash transport water (BATW) no longer meets the eligibility requirements for this subcategory.*
- (2) *Discharges of bottom ash transport water generated by a low utilization electric generating unit must comply with the limitations for Internal Outfall 003A set forth in Part I.A.4 above and the Permittee shall comply with the requirements for implementing a Best Management Practices (BMP) Plan as described in Part I.A.4A(3) below.*
- (3) *The Permittee shall implement, review, and update the Facility’s BMP Plan for the recycle of BATW, in accordance with 40 CFR 423.13(k)(3), as promulgated in 85 FR 64650, 64719 (Oct. 13, 2020).*
- (4) *Annual Certification Statement to Qualify as a Low Utilization Electric Generating Unit*
 - (i) *To continue to qualify as a low utilization electric generating unit under this permit, an annual recertification statement shall be made to EPA within 60 days of submitting annual electricity production data to the Energy Information Administration.*
 - (ii) *Annual recertification shall be based on the information submitted to the Energy Information Administration and shall include copies of the underlying forms submitted to the Energy Information Administration, as well as any supplemental information and calculations used to determine the two-year average annual capacity utilization rating.*
- (5) *Certification Requirements for BATW BMP Plan*
 - (i) *Where required by Part I.A.4A(3) above, an annual recertification shall be made to EPA by February 28th of each year.*
 - (ii) *The certification statements must be signed and certified (stamped) by a professional engineer and include the following:*
 - (a) *A statement that the professional engineer is a licensed professional engineer;*
 - (b) *A statement that the professional engineer is familiar with the regulation requirements;*
 - (c) *A statement that the professional engineer is familiar with Merrimack Station;*
 - (d) *A statement that the BMP Plan is being implemented.*
 - (e) *Any updates to the BMP Plan;*
 - (f) *An attachment of weekly flow measurements from the previous year;*
 - (g) *The average amount of recycled bottom ash transport water in gallons per day;*
 - (h) *Copies of inspection reports and a summary of preventative maintenance performed on the system; and*
 - (i) *A statement that the BMP Plan and corresponding flow records are being maintained at the office of the plant and will be made available to EPA upon request.*

4B. Requirements for Bottom Ash Transport Water Discharged from Electric Generating Units Permanently Ceasing Coal Combustion

- (1) *The term “permanent cessation of coal combustion” means any electric generating unit for which the Permittee submits a Notice of Planned Participation (NOPP) consistent with Part I.A.4C(3) certifying that the unit will cease combustion of coal no later than December 31, 2028.*
- (2) *Provided the Permittee is in compliance with Part I.A.4C(2), after the Permittee has submitted a NOPP*

certifying to EPA that it will cease combustion of coal by no later than December 31, 2028, each applicable electric generating unit shall continue to comply with the limitations for Internal Outfall 003A set forth in Part I.A.4 above and comply, pursuant to Part I.A.4C(3), with the BMP Plan requirements described above in Part I.A.4A(3) and (5).

- (3) There shall be no discharge of pollutants in bottom ash transport water generated after December 31, 2028, or after any earlier date by which the generating unit ceases the combustion of coal.*
- (4) The NOPP shall identify the electric generating units for which the Permittee intends to change from requirements for Low Utilization Electric Generating Units in Part I.A.4A to requirements for Permanently Ceasing Coal Combustion in Part I.A.4B. For each such electric generating unit, the notice shall:
 - (i) List the specific permit provisions under which this transfer will occur and the reason such a transfer is warranted;*
 - (ii) Include a narrative discussion demonstrating that each electric generating unit will be able to maintain compliance with the relevant permit provisions;*
 - (iii) Identify the expected date that each electric generating unit is projected to achieve permanent cessation of coal combustion;*
 - (iv) Identify whether each date represents a retirement or a fuel conversion and whether each retirement or fuel conversion has been approved by a regulatory body;*
 - (v) Provide a copy of the most recent integrated resource plan for which the applicable state agency approved the retirement or repowering of the unit subject to this permit, certification of electric generating unit cessation under 40 CFR 257.103(b), or other documentation supporting that the electric generating unit will permanently cease the combustion of coal by December 31, 2028; and*
 - (vi) Include a timeline for achieving the permanent cessation of coal combustion by December 31, 2028. Each timeline shall include interim milestones and the projected dates of completion.**
- (5) After submission of the NOPP in Part I.A.4B(4) above, a progress report shall be filed annually on February 28th with EPA. The Annual Progress Report shall detail the completion of any interim milestones listed in the NOPP since the previous progress report, provide a narrative discussion of any completed, missed, or delayed milestones, and provide updated milestones.*

4C. Conditions for Transferring from Requirements Based on the Low Utilization Subcategory to Requirements Based on the Permanently Ceasing Coal Combustion Subcategory

- (1) On or before December 31, 2025, the Permittee may convert from limitations for low utilization electric generating units under Part I.A.4A to limitations for electric generating units permanently ceasing coal combustion under Part I.A.4B.*
- (2) The Permittee must be in compliance with all its currently applicable requirements to become subject to a different set of applicable requirements.*
- (3) Where the Permittee seeking a transfer from one subcategory to another is currently subject to more stringent limitations than the limitations being sought, the Permittee must continue to meet those more stringent limitations.*
- (4) The Permittee must submit a NOPP to EPA, as described in Part I.A.4B(4) above, prior to converting to the requirements based on Permanently Ceasing Coal Combustion allowed by this Permit.*

4D. Qualification Deadlines, Reporting and Record Keeping Requirements

- (1) *An electric generating unit shall qualify as a low utilization electric generating unit or a unit permanently ceasing the combustion of coal by December 31, 2028, if such qualification would have been demonstrated absent the following qualifying event:*
- (i) *An emergency order is issued by the Department of Energy under Section 202(c) of the Federal Power Act,*
 - (ii) *A Reliability Must Run Agreement issued by a Public Utility Commission, or*
 - (iii) *Any other reliability-related order or agreement issued by a competent electricity regulator (e.g., an independent system operator) which results in that unit operating in a way not contemplated when the certification was made; or*
 - (iv) *The operation of the electric generating unit was necessary for load balancing in an area subject to a declaration under 42 U.S.C. 5121 et seq., that there exists:*
 - (a) *An “Emergency,” or a “Major Disaster,” and*
 - (b) *That load balancing was due to the event that caused the “Emergency” or “Major Disaster” to be declared.*
- (2) *Reporting and recordkeeping requirements for seeking the protections listed in Part I.A.4D(1) above are as follows:*
- (i) *All certifications and recertifications must be signed and certified pursuant to 40 CFR 122.22.*
 - (ii) *For each instance the Permittee seeks these protections, a one-time certification statement shall be submitted to EPA no later than:*
 - (a) *In the case of an order or agreement under Part I.A.4D(1)(i) above, 30 days from receipt of the order or agreement pursuant to Part I.A.4D(2)(iii)(b) of this section; or*
 - (b) *In the case of an “Emergency” or “Major Disaster” under Part I.A.4D(1)(ii) above, 30 days from the date that a load balancing need arose.*
 - (iii) *Each certification statement must include the following:*
 - (a) *The qualifying event description from the list in Part I.A.4D(1) above, the individual or entity that issued or triggered the event, and the date that such an event was issued or triggered.*
 - (b) *A copy of any documentation of the qualifying event from the individual or entity listed under Part I.A.4D(2)(iii)(a) above or, where such documentation does not exist, other documentation with indicia of reliability for EPA to confirm the qualifying event.*
 - (c) *An analysis and accompanying narrative discussion which demonstrates that the electric generating unit would have qualified for the subcategory at issue absent the event detailed in Part I.A.4D(2)(iii)(a), including the material data, assumptions, and methods used.*
 - (iv) *For sources filing a certification statement under Part I.A.4D(2)(ii) above, and for each such certification statements, a one-time Termination of Need Statement shall be submitted to EPA no later than 30 days from when the source is no longer subject to increased production from the qualifying event.*
 - (v) *The Termination of Need Statement must include a narrative discussion including the date the qualifying event terminated, or if it has not terminated, why the Permittee believes the capacity utilization will no longer be elevated to a level requiring the protection described in Part I.A.4D(1) above.*
- (3) *Notice of Material Delay*
- (i) *Within 30 days of experiencing a material delay in the milestones set forth in Part I.A.4B(4) and where such a delay may preclude permanent cessation of coal combustion limitations by December 31, 2028, the Permittee shall file a notice of material delay with EPA.*
 - (ii) *The contents of such a notice shall include the reason for the delay, the projected length of the delay, and a proposed resolution to maintain compliance.*

5. **Outfall 003B.** During the period beginning on the effective date and lasting through expiration date of this permit, the Permittee is authorized to discharge chemical and non-chemical metal cleaning effluent through Waste Treatment Plant No.1. Chemical and non-chemical metal cleaning consists of but not limited to MK-1 and MK-2 water and gas side boiler cleaning, gas side equipment ash wash, precipitator washes and air preheater cleaning. Low volume waste or other sources of water can be used as metal cleaning wash water but sampling at this location shall not include mixing with any other waste stream prior to discharge to the Slag Settling Pond. The discharge from Outfall 003B shall be limited and monitored as specified below.

Effluent Characteristic	Effluent Limitations		Monitoring Requirements ^{1,2,3}	
	Average Monthly	Daily Maximum	Measurement Frequency ⁴	Sample Type ⁵
Effluent Flow ⁶	Report MGD	Report MGD	Continuous	Calculation
Total Suspended Solids	Report mg/L	Report mg/L	1/Day	Composite
Total Recoverable Iron	1.0 mg/L	1.0 mg/L	1/Day	Composite
Total Recoverable Copper	1.0 mg/L	1.0 mg/L	1/Day	Composite
Oil & Grease	Report mg/L	Report mg/L	1/Day	Grab

6. **Outfall 004A.** During the period beginning on the effective date and lasting through expiration date of this permit, the Permittee is authorized to discharge into the Merrimack River from Outfall Serial Number 004A¹⁷ wastewater consisting of MK-1 screen wash water and MK-2 screen wash water. The discharge from Outfall 004A shall be limited and monitored as specified below

Effluent Characteristic	Effluent Limitations		Monitoring Requirements ^{1,2,3}	
	Average Monthly	Daily Maximum	Measurement Frequency ⁴	Sample Type
Effluent Flow ⁶	_____	Report MGD	1/Year	Estimate
Oil & Grease ¹⁸	_____	Report mg/L	1/Year	Grab
pH ¹²	6.5-8.0 standard units		1/Year	Grab

7. **Outfall 004B.** During the period beginning on the effective date and lasting through expiration date of this permit, the Permittee is authorized to discharge into the Merrimack River from areas directly in front of the cooling water intake structures, Outfall Serial Number 004B,¹⁷ wastewater consisting of fire protection overflow effluent and ice dam removal spray. The discharge from Outfall 004B shall be limited and monitored as specified below.

Effluent Characteristic	Effluent Limitations		Monitoring Requirements ^{1,2,3}	
	Average Monthly	Daily Maximum	Measurement Frequency ⁴	Sample Type
Effluent Flow ⁶	_____	Report MGD	1/Year	Estimate
Oil & Grease ¹⁸	_____	Report mg/L	1/Year	Grab
pH ¹²	6.5-8.0 standard units		1/Year	Grab

8. **Outfall 004C.** During the period beginning on the effective date and lasting through expiration date of this permit, the Permittee is authorized to discharge into the Merrimack River from Outfall Serial Number 004C¹⁷ wastewater consisting of MK-1 and MK-2 greenhouse floor sump water. The discharge from Outfall 004C shall be limited and monitored as specified below.

Effluent Characteristic	Effluent Limitations		Monitoring Requirements ^{1,2,3}	
	Average Monthly	Daily Maximum	Measurement Frequency ⁴	Sample Type
Effluent Flow ⁶	_____	Report MGD	1/Year	Estimate
Oil & Grease ¹⁸	_____	Report mg/L	1/Year	Grab
pH ¹²	6.5-8.0 standard units		1/Year	Grab

9. **Outfall 005A.** During the period beginning on the effective date and lasting through expiration date of this permit, the Permittee is authorized to discharge MK-1 cooling water intake structure maintenance sump effluent from Outfall Serial Number 005A¹⁷ into the Merrimack River. Such discharges shall be limited and monitored as specified below.

Effluent Characteristic	Effluent Limitations		Monitoring Requirements ^{1,2,3}	
	Total Annual	Daily Maximum	Measurement Frequency ⁴	Sample Type
Effluent Flow ⁶	Report MGD	_____	1/Year	Estimate
Oil & Grease ¹⁸	_____	Report mg/L	1/Year	Grab
pH ¹²	6.5-8.0 standard units		1/Year	Grab

10. **Outfall 005B.** During the period beginning on the effective date and lasting through expiration date of this permit, the Permittee is authorized to discharge MK-2 cooling water intake structure maintenance sump effluent from Outfall Serial Number 005B¹⁷ into the Merrimack River. Such discharges shall be limited and monitored as specified below.

Effluent Characteristic	Effluent Limitations		Monitoring Requirements ^{1,2,3}	
	Total Annual	Daily Maximum	Measurement Frequency ⁴	Sample Type
Effluent Flow ⁶	Report MGD	_____	1/Year	Estimate
Oil & Grease ¹⁸	_____	Report mg/L	1/Year	Grab
pH ¹²	6.5-8.0 standard units		1/Year	Grab

Footnotes for PART I.A.1 through I.A.12:

- (1) Effluent samples shall yield data representative of the discharge. A routine sampling program shall be developed in which samples are taken at the outfall discharge point, prior to co-mingling with any other wastestream or the receiving water. Changes in sampling location must be approved in writing by the Environmental Protection Agency Region 1 (EPA) and the State. The Permittee shall report the results to EPA and the State of any additional testing above that required herein, if testing is done in accordance with 40 CFR Part 136.
- (2) In accordance with 40 CFR § 122.44(i)(1)(iv), the Permittee shall monitor according to sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR Part 136 or required under 40 CFR chapter I, subchapter N or O, for the analysis of pollutants or pollutant parameters (except WET). A method is “sufficiently sensitive” when: 1) The method minimum level (ML) is at or below the level of the effluent limitation established in the permit for the measured pollutant or pollutant parameter; or 2) The method has the lowest ML of the analytical methods approved under 40 CFR Part 136 or required under 40 CFR chapter I, subchapter N or O for the measured pollutant or pollutant parameter. The term “minimum level” refers to either the sample concentration equivalent to the lowest calibration point in a method or a multiple of the method detection limit (MDL), whichever is higher. Minimum levels may be obtained in several ways: They may be published in a method; they may be based on the lowest acceptable calibration point used by a laboratory; or they may be calculated by multiplying the MDL in a method, or the MDL determined by a laboratory, by a factor.
- (3) When a parameter is not detected above the ML, the Permittee must report the data qualifier signifying less than the ML for that parameter (e.g., < 50 µg/L, if the ML for a parameter is 50 µg/L). For calculating and reporting the average monthly concentration when one or more values are not detected, assign a value of zero to all non-detects and report the average of all the results. The number of exceedances shall be enumerated for each parameter in the field provided on every Discharge Monitoring Report (DMR).
- (4) Measurement frequency of 1/day is defined as the recording of one measurement for each 24-hour period. Measurement frequency of 1/week is defined as the sampling of one discharge event in each seven-day calendar week. Measurement frequency of 1/month is defined as the sampling of one discharge event in each calendar month. Measurement frequency of 1/year is defined as the sampling of one discharge event during one calendar year. Calendar quarters are defined as January through March, inclusive, April through June, inclusive, July through September, inclusive and October through December, inclusive. If no sample is collected during the measurement frequencies defined above, the Permittee must report an appropriate No Data Indicator Code.
- (5) Each composite sample will consist of at least eight grab samples taken during one consecutive 24-hour period, either collected at equal intervals and combined proportional to flow or continuously collected proportionally to flow.

- (6) Effluent flow shall be reported in million gallons per day (MGD). Flow measurement is required by either 1) estimates, 2) calculated based on pump curves and hours of operation or 3) automatically recorded using appropriate instrumentation. Flow at Outfall 003 shall be the sum of the flow from internal Outfall 003A (slag settling pond) and once-through cooling water from internal Outfalls 001 and 002.
- (7) Discharge temperatures shall be monitored year-round at Outfall 003 (Station S0: 43° 08.156' N, 71° 27.842' W) and separately at Internal Outfalls 001 and 002 prior to entering the discharge canal. The discharge temperature will be recorded by appropriate instrumentation and automatically recorded at 15-minute intervals. The average daily temperature shall be calculated as the 24-hour average of the hourly average (per calendar day). The highest average hourly temperature value for the month will be reported as the daily maximum temperature in the monthly Discharge Monitoring Reports (DMRs). The average of the average daily temperatures for the month will be reported as the average monthly temperature in the DMRs.
- (8) Samples for total residual oxidants (TRO) shall be taken only when biocide is in use and the discharge of cooling water contains the biocide. Chlorine or bromine may be used as the biocide. No other biocide shall be used without written permission from the EPA and the New Hampshire Department of Environmental Services-Water Division (NHDES). TRO may not be discharged from any single generating unit for more than two hours per day unless the Permittee demonstrates to EPA that more than two hours is required for macroinvertebrate control.
- (9) This is a “maximum concentration” or instantaneous maximum limit not to be exceeded at any time.
- (10) For the purposes of this permit, TRO analysis must be completed using a test method in 40 CFR § Part 136 that achieves a minimum level of detection no greater than 0.030 mg/L (30 µg/L).
- (11) The compliance level for TRO at Outfall 003 is 0.030 mg/L (30 µg/L).
- (12) This pH range limit shall not be exceeded at any time (instantaneous lower and upper range values). The Permittee shall report minimum and maximum values as well as the total number of exceedances in the field provided on each DMR. See Part I.F.4 for instructions allowing the Permittee to submit a demonstration that the pH range should be widened due to naturally occurring conditions.
- (13) The Permittee shall conduct acute toxicity tests (LC₅₀) four times per year in accordance with test procedures and protocols specified in Attachment A of this permit. LC₅₀ is defined in Part II.E. of this permit. The Permittee shall conduct tests using the daphnid, *Ceriodaphnia dubia*, and the fathead minnow, *Pimephales promelas*. Toxicity test samples shall be collected, and tests completed during the calendar quarters ending March 31st, June 30th, September 30th and December 31st of each year. The complete report for each toxicity test shall be submitted as an attachment to the DMR submittal which includes the results for that toxicity test. If there is any discharge of metal cleaning wastes during any sampling quarter, the WET samples shall be collected at times when metal cleaning waste is being discharged.

- (14) For Part I.A.3., Whole Effluent Toxicity Testing, the Permittee shall conduct the analyses specified in Attachment A, Part VI. CHEMICAL ANALYSIS for the effluent sample. If toxicity test(s) using the receiving water as diluent show the receiving water to be toxic or unreliable, the Permittee shall follow procedures outlined in Attachment A, Section IV., DILUTION WATER. Even where alternate dilution water has been used, the results of the receiving water control (0% effluent) analyses must be reported. Minimum levels and test methods are specified in Attachment A, Part VI. CHEMICAL ANALYSIS.
- (15) For Part I.A.3., Ambient Characteristic, the Permittee shall conduct the analyses specified in **Attachment A**, Part VI. CHEMICAL ANALYSIS for the receiving water sample collected as part of the WET testing requirements. Such samples shall be taken from the receiving water at a point immediately upstream of the permitted discharge's zone of influence at a reasonably accessible location, as specified in **Attachment A**. Minimum levels and test methods are specified in **Attachment A**, Part VI. CHEMICAL ANALYSIS.
- (16) A pH and temperature measurement shall be taken of each receiving water sample at the time of collection and the results reported on the appropriate DMR. These pH and temperature measurements are independent from any pH and temperature measurements required by the WET testing protocols. A pH and temperature measurement shall be taken of each receiving water sample at the time of collection and the results reported on the appropriate DMR. These pH and temperature measurements are independent from any pH and temperature measurements required by the WET testing protocols.
- (17) A visual inspection of this outfall shall be conducted daily when discharging. A daily visual inspection of the Outfall 004C floor sump shall be made just prior to discharge. A log of these inspections, including observations, shall be kept and shall be made available to EPA and NHDES inspectors on request.
- (18) In addition to yearly testing, grab sampling and analysis for Oil and Grease shall be immediately initiated if a visible oil sheen is observed. The discharge shall be ceased until the source of the oil can be identified and removed from the wastewater prior to re-initiating the discharge. The results of the analysis and cause of the excursion shall be documented and reported to EPA as an attachment to the next monthly DMR report.
- (19) Compliance with the intake velocity limit will become effective upon final compliance with the requirement to install and operate wedgewire screens at Part I.E of the permit.

Part I.A. continued

11. **In-stream Temperature Monitoring 006.** Compliance with the in-stream temperature limits below shall be demonstrated at Station S4 (43° 07.851' N, 71° 27.818' W) downstream from the discharge canal.

Ambient Characteristic	Effective Period	Discharge Limitations ¹		Monitoring Requirements ²	
		Weekly Average ³	Daily Maximum ⁴	Measurement Frequency ⁵	Sample Type
S4 Temperature	Jan 1 – Mar 31	8.0°C 46.4°F	Report °C Report °F	Continuous	Recorder
S4 Temperature	Apr 1 – Apr 30	12.0°C 53.6°F	Report °C Report °F	Continuous	Recorder
S4 Temperature ⁶	May 1 – May 31	18.0°C 64.4°F	29.3°C ⁷ 84.7°F	Continuous	Recorder
S4 Temperature ⁶	Jun 1 – Jun 21	22.7°C 72.9°F	30.9°C ⁷ 87.6°F	Continuous	Recorder
S4 Temperature ⁶	Jun 22 – Jul 31	25.1°C 77.2°F	31.3°C ⁷ 88.3°F	Continuous	Recorder
S4 Temperature ⁶	Aug 1 – Sep 30	25.1°C 77.2°F	Report °C Report °F	Continuous	Recorder
S4 Temperature	Oct 1 – Oct 31	25.1°C 77.2°F	Report °C Report °F	Continuous	Recorder
S4 Temperature	Nov 1 – Dec 31	8.0°C 46.4°F	Report °C Report °F	Continuous	Recorder

Ambient Characteristic	Effective Period	Discharge Limitations ¹		Monitoring Requirements ²	
		Weekly Average ³	Daily Maximum ⁴	Measurement Frequency ⁵	Sample Type
Rise in Temperature ⁸		2.0°C 3.6°F	_____	Calculated	Recorder
Capacity Factor ⁶	May 1 – Sep 30	40%	_____	Calculated	Calculation

Footnotes for Part I.A.11:

- (1) Discharge limitations shall apply when the Facility is operating and generating electricity. The Permittee shall not be considered in non-compliance with the temperature limits if any exceedance of weekly average and/or maximum daily temperature limits occurs during a period when the Facility is not producing a megawatt output and the exceedance is due to either ambient weather conditions or thermal input from another source rather than the Facility’s thermal discharges.
- (2) In addition to sampling at Station S4, sampling for ambient temperature shall be conducted at Station N10 (43° 09.123,’ N 71° 28.782’ W) upstream of the cooling water intake structure from April 1 to October 31 and at Station N5 (located at the intake bay upstream of the traveling screens) from November 1 to March 31. Each in-stream monitoring station (N10, N5, and S4) shall be equipped with a continuous temperature monitor that shall record temperature at 15-minute intervals. In-stream temperature monitoring stations (N10, N5, and S4) shall be located at a depth of 1 foot from the surface, except that the temperature at Station S4 shall be monitored at a depth of 1 foot or less above the river bottom from November 1 to March 31. In the event that temperature monitors become inoperable due to frozen conditions and temperature data cannot be obtained for the reporting period, the Permittee shall enter the appropriate NODI code (e.g., for frozen conditions) in the DMR and explain in the comment field the reason for the equipment failure. The DMR cover letter for that reporting period should provide an explanation for the equipment failure and describe what actions the Permittee is taking to address the failure.
- (3) The Permittee shall calculate the weekly average temperature as a 7-day average beginning on the first day of the calendar month. The last weekly average temperature of the reporting period shall include the dates between the 22nd and the last day of the month. The Permittee shall report the highest weekly average temperature recorded during the calendar month.

- (4) The daily maximum temperature at Station S4 shall be calculated as an hourly average beginning at 12:00 AM and ending at 11:59 PM daily. The Permittee shall report the highest hourly average as the daily maximum temperature.
- (5) The Permittee shall provide average and maximum daily in-stream temperature data for Stations N10, S0, and S4 (both as degrees Celsius and degrees Fahrenheit) as a separate attachment to the discharge monitoring report. Data shall be provided following the format from the 2018-2019 Environmental Monitoring Program Annual Report and shall be provided in an electronic spreadsheet format. Temperature data in 15-minute intervals shall be provided to EPA upon request.
- (6) During the period May 1 through September 30, the Permittee must either maintain a rolling 45-day average operating capacity factor no greater than 40 percent of the total rated capacity for both units or meet the effective weekly average temperature limits at Station S4. A rolling 45-day capacity factor shall be calculated as $[(\text{Total Unit 1 MWh output over 45 days} + \text{Total Unit 2 MWh output over 45 days}) / (\text{Total Rated MWh Output for Unit 1} + \text{Unit 2})] * 100$. The first rolling 45-day capacity factor shall be calculated for May 31 and shall be based on the previous 45 days (beginning on April 17). The Permittee must report the highest 45-day rolling average capacity factor in a reporting period. , A 45-day rolling average capacity greater than 40% on any date during the reporting period (during the months between May 1 and September 30) triggers the weekly average temperature limits and the Permittee must report the highest weekly average temperature value for that reporting period. If the 45-day rolling average capacity for the reporting period does not exceed 40%, the Permittee shall report the appropriate No Data Indicator (“NODI”) code (i.e., Conditional Monitoring – Not Required This Period) for the weekly average temperature value for the reporting period. The daily temperature data shall continue to be recorded and reported in an attachment to the DMR. See footnote 5.
- (7) If the hourly average temperature exceeds the daily maximum temperature limit, the Permittee shall take action to reduce the temperature at Station S4 to a value below the daily maximum temperature limit. The instantaneous temperature at Station S4 must be no greater than the daily maximum temperature limit within 3 hours from the hour in which the exceedance occurs. The Permittee shall report the instantaneous temperature recorded during the final 15-minute increment of the third hour following the hour in which the exceedance of the daily maximum temperature limit was observed.
- (8) If the weekly average ambient temperature measured at Station N10, or N5 when applicable, is within 2.0°C (3.6°F) of, or above, the effective weekly average temperature limit for that compliance period, then the rise in average ambient temperature at Station S4 as compared to ambient at Station N10 or N5 over the same weekly averaging period shall be no greater than 2.0°C (3.6°F). The Permittee shall report the maximum difference between the weekly average temperatures calculated concurrently at Stations N10 and S4. For reporting periods in which the weekly average temperature limits do not apply (see fn 6, above) the Permittee shall report the appropriate NODI code (e.g., Conditional Monitoring – Not Required This Period) for the rise in temperature value.

Part I.A. continued

12. Discharges and water withdrawals from Merrimack Station shall not cause a violation of the water quality standards of the receiving water.
13. The discharge shall be free from substances in kind or quantity that settle to form harmful benthic deposits; float as foam, debris, scum or other visible substances; produce odor, color, taste or turbidity that is not naturally occurring and would render the surface water unsuitable for its designated uses; result in the dominance of nuisance species; or interfere with recreational activities.
14. Tainting substances shall not be present in the discharge in concentrations that individually or in combination are detectable by taste and odor tests performed on the edible portions of aquatic organisms.
15. The discharge shall not result in toxic substances or chemical constituents in concentrations or combinations in the receiving water that injure or are inimical to plants, animals, humans or aquatic life; or persist in the environment or accumulate in aquatic organisms to levels that result in harmful concentrations in edible portions of fish, shellfish, other aquatic life, or wildlife that might consume aquatic life.
16. The discharge shall not result in benthic deposits that have a detrimental impact on the benthic community. The discharge shall not result in oil and grease, color, slicks, odors, or surface floating solids that would impair any existing or designated uses in the receiving water.
17. The discharge shall not result in an exceedance of the naturally occurring turbidity in the receiving water by more than 10 NTUs.
18. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe (40 CFR Section 122.42):
 - a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
 - (1) One hundred micrograms per liter (100 µg/L);
 - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4,6- dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR Section 122.21(g)(7); or
 - (4) Any other notification level established by the Director in accordance with 40 CFR Section 122.44(f) and New Hampshire regulations.

- b. That any activity has occurred or will occur which would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following notification levels:
 - (1) Five hundred micrograms per liter (500 µg/L);
 - (2) One milligram per liter (1 mg/L) for antimony;
 - (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR Section 122.21(g)(7); or
 - (4) Any other notification level established by the Director in accordance with 40 CFR Section 122.44(f) and New Hampshire regulations.
 - c. That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant which was not reported in the permit application.
19. This permit may be modified in accordance with 40 CFR Section 122.62(a)(3) if the standards or regulations on which the permit is based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit is issued in accordance with 40 CFR Section 122.62(a)(3).

B. REPORTING REQUIREMENTS

Unless otherwise specified in this permit, the Permittee shall submit reports, requests, and information and provide notices in the manner described in this section.

1. Submittal of Reports Using NetDMR

- a. The Permittee shall continue to submit its monthly monitoring data in discharge monitoring reports (DMRs) to EPA and the State no later than the 15th day of the month electronically using NetDMR. When the Permittee submits DMRs using NetDMR, it is not required to submit hard copies of DMRs to EPA or the State. NetDMR is accessible through EPA's Central Data Exchange at <https://cdx.epa.gov/>.

2. Submittal of Reports as NetDMR Attachments

Unless otherwise specified in this permit, the Permittee shall electronically submit all reports to EPA as NetDMR attachments rather than as hard copies. See Part I.D.5. for more information on State reporting. Because the due dates for reports described in this permit may not coincide with the due date for submitting DMRs (which is no later than the 15th day of the month), a report submitted electronically as a NetDMR attachment shall be considered timely if it is electronically submitted to EPA using NetDMR with the next DMR due following the particular report due date specified in this permit.

3. Submittal of Requests and Reports to EPA Water Division (WD)

- a. The following requests, reports, and information described in this permit shall be submitted to the NPDES Applications Coordinator in the EPA WD:

- (1) Transfer of Permit notice;
 - (2) Request for changes in sampling location;
 - (3) Request to discharge new chemicals or additives;
 - (4) Request for pH effluent limitation adjustment;
 - (5) Request for change in WET testing requirements;
 - (6) Report on unacceptable dilution water/request for alternative dilution water for WET testing;
 - (7) Fish and invertebrate draft sampling plan;
 - (8) Final report of fish and invertebrate sampling results and related analyses;
 - (9) Traveling screen optimization study;
 - (10) Wedgewire screen preliminary design and final design; and
 - (11) Wedgewire screen installation status reports.
- b. These reports, information, and requests shall be submitted to EPA WD electronically at R1NPDESReporting@epa.gov or by hard copy mail to the following address:

**U.S. Environmental Protection Agency Water
Division
NPDES Applications Coordinator
5 Post Office Square - Suite 100 (06-03)
Boston, MA 02109-3912**

4. Submittal of Reports in Hard Copy Form

- a. The following notifications and reports shall be signed and dated originals, submitted in hard copy, with a cover letter describing the submission:
- (1) Prior to December 21, 2020, written notifications required under Part II. Starting on December 21, 2020, such notifications must be done electronically using EPA's NPDES Electronic Reporting Tool ("NeT"), or another approved EPA system, which will be accessible through EPA's Central Data Exchange at <https://cdx.epa.gov/>.
- b. This information shall be submitted to EPA ECAD at the following address:

**U.S. Environmental Protection Agency Enforcement and
Compliance Assurance Division Water Compliance
Section
5 Post Office Square, Suite 100 (04-SMR)
Boston, MA 02109-3912**

5. State Reporting

Unless otherwise specified in this permit or by the State, duplicate signed copies of all reports, information, requests or notifications described in this permit, including the reports, information, requests or notifications described in Parts I.B.3 through I.B.6 shall also be submitted to the Hampshire Department of Environmental Services, Water Division (NHDES-WD) electronically to the Permittee's assigned NPDES inspector at NHDES-WD or as a hardcopy to the following

address:

**New Hampshire Department of Environmental Services Water
Division
Wastewater Engineering Bureau 29
Hazen Drive, P.O. Box 95
Concord, New Hampshire 03302-0095**

6. Verbal Reports and Verbal Notifications

- a. Any verbal reports or verbal notifications, if required in Parts I and/or II of this permit, shall be made to both EPA and to the State. This includes verbal reports and notifications which require reporting within 24 hours (e.g., Part II.B.4.c. (2), Part II.B.5.c. (3), and Part II.D.1.e.).
- b. Verbal reports and verbal notifications shall be made to EPA's Enforcement and Compliance Assurance Division at:

617-918-1510

- c. Verbal reports and verbal notifications shall also be made to the State's Regional NPDES inspector at:

603-271-2985

C. BIOLOGICAL MONITORING – SAMPLING AND REPORTING REQUIREMENTS

Fish and invertebrate sampling, and related analyses, shall be required in support of *the Permittee's any future* thermal variance request *by the Permittee*. A draft sampling plan shall be submitted to EPA and NHDES for review and approval prior to the commencement of any sampling. Sampling shall be conducted over two *consecutive* years and begin within two years of the effective date of this permit. A final report of sampling results and related analyses shall be submitted to EPA and NHDES *within four years of the effective date of this permit on or before March 4, 2025; provided, however, that if the Permittee, in accordance with Part I.A.4B of this Permit, opts into the permanent cessation subcategory for both generating units, then the Permittee is not required to submit the final report but must submit all biological monitoring data collected as of the date that the Permittee opts into the permanent cessation subcategory.*

D. UNUSUAL IMPINGEMENT EVENT

1. The Permittee shall visually inspect the traveling screens of the cooling water intake structures for Units 1 and 2 at least every eight hours that each unit's water intake pumps are operated for the duration of the permit.
2. If the Permittee observes on the traveling screens, or estimates, based on temporally limited observations, 40 or more impinged fish within any 8-hour period, the Permittee shall:
 - a. Rotate the affected traveling screens until the impingement rate decreases to less than five fish per hour.
 - b. Report to the Director and the Commissioner within 24 hours by telephone as required by Part II of this permit. A written confirmation report shall be provided within five business

days. These oral and written reports shall include the following information:

(1) All impinged fish shall be enumerated and recorded by species. All live fish shall then be returned to the river. Report the species, size ranges, and approximate number of organisms involved in the incident. In addition, up to 25 percent of the total of each species killed, up to a maximum of 25 individuals from each species, shall be measured to the nearest centimeter, total length.

(2) The time and date of the occurrence.

3. The operational mode of the specific system that may have caused the occurrence.

4. The opinion of the Permittee as to the reason the incident occurred; and

5. The remedial action that the Permittee recommends to reduce or eliminate this type of incident.

E. COOLING WATER INTAKE STRUCTURE REQUIREMENTS TO MINIMIZE ADVERSE IMPACTS FROM IMPINGEMENT AND ENTRAINMENT

Best Technology Available. The design, location, construction, and capacity of the Permittee's cooling water intake structures (CWISs) shall reflect the best technology available (BTA) for minimizing adverse environmental impacts from the impingement and entrainment of various life stages of fish and other organisms (e.g., eggs, larvae, juveniles, adults) by the CWISs. ***Nothing in this permit authorizes take for the purposes of a facility's compliance with the Endangered Species Act.*** The following requirements have been determined by the EPA to represent the BTA for minimizing impingement and entrainment impacts at Merrimack Station:

1. To minimize entrainment mortality from April 1 through August 15, the Permittee shall install and operate for the CWIS's of Units 1 and 2 a fine mesh wedgewire screen intake system with the slot openings oriented perpendicular to the predominant direction of ambient flow current, a pressurized airburst system to clear debris from the screens, and a through-screen intake velocity of no more than 0.5 feet per second (fps). The mesh or slot size shall be no greater than 3.0 mm. The wedgewire screen units must be positioned as close to the west bank of the Hooksett Pool segment of the Merrimack River and the CWIS as possible, while 1) meeting all operational specifications required by this permit; 2) meeting the conditions of any other permits for the equipment; and 3) assuring that the equipment performs as designed.
2. To minimize impingement mortality from April 1 through August 15, the Permittee shall maintain a through-screen velocity at the wedgewire screens no greater than 0.5 fps. The Permittee shall verify that the through-screen velocity at the wedgewire screen surface is 0.5 fps or less through measurement or calculation, and that the ratio of through-screen velocity to ambient sweeping current velocity is maintained at 1:1 or greater under all river and plant operating conditions when the wedgewire screens are deployed. The Permittee shall report the average monthly and daily maximum through-screen intake velocity at the screens in the discharge monitoring report.

3. To minimize impingement mortality from August 16 through March 31, the Permittee shall operate traveling screens with low pressure (<30 psi) spray wash systems to remove fish and a fish return sluice that returns all live fish and other aquatic organisms collected or trapped on the intake screens to the river with minimal stress.
 - a. A new fish return sluice with the following features shall be installed for each CWIS. The new fish return sluice shall be in place and operational at all times.
 - (1) Maximum water velocities of 3-5 ft/s within the sluice;
 - (2) A minimum water depth of 4-6 inches at all times;
 - (3) No sharp radius turns (i.e., no turns greater than 45 degrees);
 - (4) A point of discharge to the river that is slightly below the low water level at all times;
 - (5) A removable cover to prevent access by birds, etc;
 - (6) Escape openings in the removable cover along the portion of the sluice that could potentially be submerged; and,
 - (7) A slope not to exceed 1/16-foot drop per linear foot, unless the plant can demonstrate that this is not feasible.
 - b. The Permittee shall complete an impingement technology performance optimization study demonstrating that operation of the system of technologies, operational measures, and best management practices has been optimized to minimize impingement mortality. The study shall begin once the fish return system is operational and shall include a minimum of two years of biological monitoring. The optimization study shall be consistent with the requirements in 40 CFR § 122.21(r)(6)(ii) and include a description of the screens and associated equipment, pressure sprays and operation, fish return mechanism, rotation speed and frequency, and best management practices to limit impinged organisms exposure to chlorinated wash water, as well as a description of how any operational measures (e.g., flow reductions, seasonal operation) contribute to the system's performance. The results of the optimization study shall be submitted to EPA and NHDES within four months of the completion of two years of biological monitoring.
4. The Permittee shall at all times properly operate and maintain the wedgewire screen intake system in compliance with conditions (1) and (2) of this section except when operation of the wedgewire screens would result in unavoidable loss of human life, personal injury, or severe property damage. Severe property damage means substantial physical damage to property or damage to cooling water intake-related equipment that causes it to become inoperable. When operation of the wedgewire screen intake system would cause loss of human life, injury, or severe property damage, the Permittee may cease use of the wedgewire screens and operate an emergency intake (i.e., divert water withdrawals from the wedgewire screens to the existing CWIS and traveling screens). The Permittee shall minimize the use of the emergency intake system to the greatest extent possible. Within 24 hours of the start of each use of the emergency

intake system, the Permittee must notify EPA and NHDES of the reason for operation of the emergency intake and identify all steps taken or to be taken to address the cause and minimize the use of the emergency intake. The Permittee shall notify EPA and NHDES within twenty-four hours of the resumption of full operation of the wedgewire screens. During operation of the emergency intake the Permittee must operate the traveling screens consistent with the requirements of Part I.E.2, above.

5. No change in the location, design or capacity of the present structure, unless specified by this permit, can be made without prior approval by EPA.
6. During deicing, the Permittee must employ an alternative water source that is not chlorinated, dechlorinate the deicing water, or perform deicing only at times when chlorination of the condensers is not taking place. In addition, each screen shall be continuously rotated during deicing to reduce the amount of time impinged organisms are subjected to elevated temperatures.
7. Compliance Schedule. Permit requirements under CWA § 316(b) must be complied with as soon as practicable. 40 CFR §§ 125.94(b)(1) and (2), 125.98(c). In order to comply with Part I.E.1, 2, and 3 of this permit, the Permittee needs to install and operate new equipment. As a result, the Permittee needs a period of time to install this equipment and achieve compliance. Therefore, this permit sets forth below a schedule according to which the Permittee shall attain compliance with the permit's BTA requirements under CWA § 316(b). Specifically, steps for the installation and operation of equipment required to comply with Part I.E.1, 2, and 3 of this permit shall be completed as soon as practicable but no later than the schedule of milestones set forth below. The Permittee shall notify EPA in writing of compliance or non-compliance with the requirements for each milestone no later than 14 days following each specified deadline.

a. Design

- (1) Within six months of the effective date of this permit, the Permittee shall submit to EPA and NHDES a preliminary design of the wedgewire screens to be installed at Merrimack Station. The design must include justifications for 1) the proposed screen slot size based on consideration of each option's ability to reduce impingement mortality and entrainment, minimize through-screen velocity, avoid screen clogging, fouling or other maintenance issues, and any other relevant considerations; 2) the proposed material or alloy chosen for the equipment in order to reduce bio-fouling; and 3) the Permittee's choice of either traditional cylindrical wedgewire screens or wedgewire half-screens in order to reduce entrainment and impingement mortality. The preliminary design shall also provide data establishing the through-screen velocities that will be maintained by the Facility under various river and plant operating conditions, while also identifying the ratios of through-screen velocities to ambient sweeping current velocities that will be maintained under the different river and plant operating conditions. The screen slot size selected will be subject to EPA approval and based upon consideration of the results of the Permittee's "confirmatory study" during the spring/summer of 2017, as well as any other pertinent information.
- (2) Data collection, including but not limited to topographic and bathymetric surveys, geotechnical exploration, and other design and aquatic construction variables that need to

be evaluated for installation of the wedgewire screens to satisfy the BTA requirements of this Final Permit, shall be completed no later than six months from the effective date of the permit.

- (3) Within two months after receipt of correspondence from EPA approving the Permittee's preliminary design, including the screen slot size and through-screen velocity for the wedgewire screens, the Permittee shall submit a final design for the wedgewire screens and all other technologies needed to satisfy the BTA requirements of this Final Permit.

b. Permitting

- (1) Within four months of submitting the final design, the Permittee shall complete submission of all permit applications and notices necessary to obtain authorization for installation and construction of the wedgewire screens and all other technologies needed to satisfy the BTA requirements of this Final Permit, including any permits or authorizations required from the U.S. Army Corps of Engineers (ACOE), the United States Fish and Wildlife Service (USFWS), the NHDES, the New Hampshire Fish & Game, any local conservation commissions, and any other relevant regulatory authorities, as necessary. This task shall include all necessary engineering to support development and submission of adequate permit applications and the collection of all necessary supplementary data.

c. Construction

- (1) Within four months of submitting the final design, the Permittee shall select and enter into an Engineering, Procurement and Construction agreement (or agreements) with all needed contractors.
- (2) The Permittee shall provide a status report to EPA and NHDES within six months of completing the submission of all permit applications and notices necessary to obtain authorization for installation and construction of the wedgewire screens and all other technologies and for each six month period following until all permits and approvals are obtained.
- (3) The Permittee shall comply with the conditions of all permits and approvals related to installing the wedgewire screens and any other technologies needed to satisfy the BTA requirements of this Final Permit. In addition, EPA will work with representatives of Merrimack Station and, as appropriate, the New England ISO to schedule any necessary power plant downtime associated with installing the wedgewire screens or other equipment needed to comply with the BTA requirements of this permit – though no such downtime is currently anticipated – so as to minimize or eliminate any effects on the adequacy of the region's supply of electricity.
- (4) No later than 12 months from obtaining all necessary permits and approvals the Permittee shall submit a status report to EPA and NHDES on the progress toward completion and indicate a projected completion date.

- (5) No later than 16 months from obtaining all necessary permits and approvals, the Permittee shall complete site mobilization and modifications, installation, tie-in, testing, startup and commissioning of the wedgewire screens and all other technologies needed to satisfy the BTA requirements of this Final Permit for the cooling water intake structures serving Units 1 and 2 at Merrimack Station.

d. Installation of Fish Return Sluices

Within six months of the effective date of the permit, the Permittee shall install fish return sluices consistent with the requirements of Part I.E.3.a, above.

F. STATE PERMIT CONDITIONS

1. The Permittee shall not at any time, either alone or in conjunction with any person or persons, cause directly or indirectly the discharge of waste into the said receiving water unless it has been treated in such a manner as will not lower the legislated water quality classification or interfere with the uses assigned to said water by the New Hampshire Legislature (RSA 485-A:12).
2. This NPDES Discharge Permit is issued by EPA under Federal and State law. Upon final issuance by EPA, the New Hampshire Department of Environmental Services-Water Division (NHDES-WD) may adopt this permit, including all terms and conditions, as a State permit pursuant to RSA 485-A:13.
3. Each Agency shall have the right to enforce the terms and conditions of this. Any modification, suspension or revocation of this Permit shall be effective only with respect to the Agency taking such action and shall not affect the validity or status of the Permit as issued by the other Agency, unless and until each Agency has concurred in writing with such modification, suspension or revocation.
4. The pH range of 6.5 to 8.0 Standard Units (S.U.) must be achieved in the final effluent unless the Permittee can demonstrate to NHDES-WD: (1) that the range should be widened due to naturally occurring conditions in the receiving water or (2) that the naturally occurring receiving water pH is not significantly altered by the Permittee's discharge. The scope of any demonstration project must receive prior approval from NHDES-WD. In no case, shall the above procedure result in pH limits outside the range of 6.0 - 9.0 S.U., which is the federal effluent limitation guidelines for pH commonly found in 40 CFR subchapter N Parts 405 through 471.

G. SPECIAL PERMIT CONDITIONS

1. Change in pH range

The pH range may be modified if the Permittee satisfies conditions set forth in Part I.F.4 above. Upon notification of an approval by the State, EPA will review and, if acceptable, will submit written notice to the Permittee of the permit change. The modified pH range will not be in effect until the Permittee receives written notice from EPA.

2. Discharges of Chemicals and Additives

The discharge of any chemical or additive, including chemical substitution, which was not reported in the application submitted to EPA and the State or provided through a subsequent written notification submitted to EPA and the State is prohibited. Upon the effective date of this permit, chemicals and/or additives which have been disclosed to EPA and the State may be discharged up to the frequency and level disclosed, provided that such discharge does not violate §§ 307 or 311 of the CWA or applicable State water quality standards. Discharges of a new chemical or additive are authorized under this permit 30 days following written notification to EPA and the State unless otherwise notified by EPA and/or the State. To request authorization to discharge a new chemical or additive, the Permittee must submit a written notification to EPA and the State in accordance with Part I.D.3 of this permit. The written notification must include the following information, at a minimum:

a. The following information for each chemical and/or additive that will be discharged:

- (1) Product name, chemical formula, general description, and manufacturer of the chemical/additive;
- (2) Purpose or use of the chemical/additive;
- (3) Safety Data Sheet (SDS), Chemical Abstracts Service (CAS) Registry number, and EPA registration number, if applicable, for each chemical/additive;
- (4) The frequency (e.g., daily), magnitude (i.e., maximum application concentration), duration (e.g., hours), and method of application for the chemical/additive;
- (5) The maximum discharge concentration; and
- (6) The vendor's reported aquatic toxicity, if available (i.e., NOAEL and/or LC50 in percent for aquatic organism(s)).

b. Written rationale which demonstrates that the discharge of such chemicals and/or additives as proposed will not: 1) will not add any pollutants in concentrations which exceed any permit effluent limitation; and 2) will not add any pollutants that would justify the application of permit conditions different from, or in addition to those currently in this permit.

3. To the extent practicable, and subject to approval by ISO-New England, the Permittee shall schedule the annual Unit 2 maintenance outage to occur between May 15 and June 15.
4. The Permittee shall institute a best management practice (BMP) of shutting down the intake pumps associated with a particular generating unit to the extent practicable when that generating unit is not operating, and water is not needed for fire prevention or other emergency conditions.
5. Reduction in WET Test Frequency

If after four consecutive sampling periods, i.e., one year, one test of which must contain metal cleaning waste, no test shows a LC50 < 100 %, the Permittee may request a reduction in toxicity testing. A reduction in the above WET testing frequency may be allowed upon written approval by EPA with concurrence from NHDES. Until written notice is received by certified mail from

the EPA indicating that the Whole Effluent Testing requirement has been changed, the Permittee is required to continue testing at the frequency specified in this Permit.

H. UNAUTHORIZED DISCHARGES

1. This permit authorizes discharges only from the outfall(s) listed in Part I.A.1, in accordance with the terms and conditions of this permit. Discharges of wastewater from any other point sources are not authorized by this permit and shall be reported in accordance with Part D.1.e.(1) of the Standard Conditions of this permit (24-hour reporting).
- ~~2. *Bottom ash transport water generated after December 30, 2023 is prohibited from being discharged to the slag settling pond or the Merrimack River.*~~
2. The discharge of any sludge and/or bottom deposits from any storage tank or basin at the Facility to the receiving water is prohibited. The Permittee shall comply with all existing federal, state, and local laws and regulations that apply to the reuse or disposal of solids.
3. Water drawn from fuel oil tanks shall not be discharged into any Merrimack Station wastewater treatment system or discharged directly to the Merrimack River.
4. Pursuant to 40 CFR 423.13(a), there shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.
5. No deicing water shall be discharged from the intake forebays to the Merrimack River. The Permittee shall adjust the deicing water flow rates, as required, to ensure no deicing water is discharged from the intake forebays to the Merrimack River.
 - a. While deicing water is in use the intake forebays shall be inspected visually to determine whether deicing water is being discharged to the Merrimack River. If it is determined deicing water is being discharged to the Merrimack River, the Permittee shall take immediate action to adjust the deicing water flow rate to stop its discharge to the Merrimack River.
 - b. A log of the daily forebay inspections shall be kept; specifically recording whether there was any adjustment to the deicing water flow. The log must be made available to EPA and NHDES inspectors on request.

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND - REGION 1
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MASSACHUSETTS 02109-3912**

FACT SHEET

**DRAFT MODIFICATION OF NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT
TO DISCHARGE TO WATERS OF THE UNITED STATES PURSUANT TO THE CLEAN WATER ACT**

NPDES PERMIT NUMBER: NH0001465

PUBLIC NOTICE START AND END DATES: February 1, 2024 – March 4, 2024 (corrected)

NAME AND MAILING ADDRESS OF APPLICANT:

GSP Merrimack LLC
431 River Road Bow, NH 03304

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

Merrimack Station
431 River Road Bow, NH 03304

RECEIVING WATER AND CLASSIFICATION:

Merrimack River (Hydrologic Basin Code: 01070002)
Merrimack River Watershed
Class B

SIC CODE: 4911 (Electric Power Generation)

NAICS CODE: 221100 (Electric Power Generation, Transmission and Distribution)

CURRENT PERMIT: The current permit was issued on May 22, 2020, became effective on September 1, 2020, and expires on August 31, 2025, except for the provisions of the May 22, 2020, permit that were appealed to EPA's Environmental Appeals Board (EAB) and remanded to EPA Region 1, the corresponding provisions of the permit issued by EPA Region 1 on June 25, 1992, remain in effect.

Table of Contents

1.0 PROPOSED ACTION, TYPE OF FACILITY AND ACTIVITY SUBJECT TO THE PERMIT MODIFICATION 3

 1.1 INTRODUCTION: PROPOSAL TO MODIFY MERRIMACK STATION’S NPDES PERMIT’S LIMITS FOR BOTTOM ASH TRANSPORT WATER TO BE CONSISTENT WITH THE CURRENTLY EFFECTIVE EFFLUENT LIMITATION GUIDELINES IN 40 CFR PART 423..... 3

 1.2 BASIS OF MODIFIED DRAFT PERMIT CONDITIONS 5

2.0 BACKGROUND INFORMATION 6

 2.1 THE FACILITY AND THE RECEIVING WATERBODY 6

 2.2 STATE WATER QUALITY STANDARDS APPLICABLE TO THE RECEIVING WATERBODY..... 7

 2.3 MERRIMACK STATION’S BOTTOM ASH TRANSPORT WATER 8

3.0 THE 2020 PERMIT’S EFFLUENT LIMITS FOR BATW DISCHARGES 9

 3.1 APPLICABILITY TO THE 2020 PERMIT OF THE 2015 ELGS EFFLUENT LIMITATIONS FOR BATW DISCHARGES..... 9

 3.2 LIMITS ON “LEGACY” BATW DISCHARGES IN THE 2020 PERMIT..... 10

 3.3 EFFLUENT LIMITS ON DISCHARGES OF BATW IN THE 2020 PERMIT..... 12

4.0 EFFLUENT LIMITATIONS FOR DISCHARGES OF BATW UNDER THE 2020 ELGS 13

 4.1 EFFLUENT LIMITATIONS FOR “LEGACY” BATW 14

 4.2 BATW EFFLUENT LIMITATIONS APPLICABLE TO EXISTING SOURCES (GENERALLY APPLICABLE LIMITATIONS) 14

 4.3 BATW EFFLUENT LIMITATIONS FOR THE LOW UTILIZATION ELECTRIC GENERATING UNITS SUBCATEGORY 14

 4.4 EFFLUENT LIMITATIONS BASED ON THE PERMANENT CESSATION OF COAL COMBUSTION SUBCATEGORY..... 15

5.0 APPLICATION OF THE 2020 ELGS TO THE BATW LIMITS IN MERRIMACK STATION’S NPDES PERMIT 16

 5.1 EFFLUENT LIMITATIONS FOR “LEGACY” BATW 17

 5.2 EFFLUENT LIMITATIONS BASED ON THE LOW UTILIZATION ELECTRIC GENERATING UNIT SUBCATEGORY..... 17

 5.3 EFFLUENT LIMITATIONS BASED ON PERMANENT CESSATION OF COAL COMBUSTION SUBCATEGORY 19

 5.4 ADDITIONAL PERMIT CONDITIONS FOR QUALIFYING EVENTS..... 20

6.0 BIOLOGICAL MONITORING SAMPLING AND REPORTING REQUIREMENTS 21

7.0 FEDERAL PERMITTING REQUIREMENTS 22

 7.1 ENDANGERED SPECIES ACT 22

 7.2 ESSENTIAL FISH HABITAT 23

8.0 PUBLIC COMMENTS, HEARING REQUESTS, AND PERMIT APPEALS..... 24

9.0 ADMINISTRATIVE RECORD 25

FIGURE 1: LOCATION MAP 26

FIGURE 2: WASTE TREATMENT NO. 4 PROCESS FLOW DIAGRAM 27

1.0 Proposed Action, Type of Facility and Activity Subject to the Permit Modification

1.1 Introduction: Proposal to Modify Merrimack Station's NPDES Permit's Limits for Bottom Ash Transport Water to Be Consistent with the Currently Effective Effluent Limitation Guidelines in 40 CFR Part 423

The United States Environmental Protection Agency's (EPA) Region 1 office (Region 1 or the Region) is proposing to modify National Pollutant Discharge Elimination System (NPDES) Permit NH0001465, issued on May 22, 2020, to GSP Merrimack LLC (GSP or the Permittee) (the 2020 Permit). The 2020 Permit authorizes Merrimack Station (Merrimack Station, the Station, or the Facility) to discharge pollutants to, and withdraw water for cooling from, the Merrimack River, subject to the conditions specified in the permit.

Merrimack Station is a coal-burning steam electric power plant in Bow, NH. Many pollutant discharges from steam electric power plants, such as Merrimack Station, are subject to the EPA's effluent limitations guidelines (ELGs) for the Steam Electric Power Generating Point Source Category promulgated in 40 CFR Part 423 (the Steam Electric ELGs). In response to a request submitted by GSP, *see* Jan. 11, 2021, Letter from Elizabeth Tillotson, GSP, to Damien Houlihan, EPA (seeking permit modifications to make limits consistent with the Steam Electric ELGs promulgated by EPA in 2020) (GSP's 2021 Modification Request), EPA is now proposing to modify the 2020 Permit's effluent limits for discharges of "bottom ash transport water" (BATW), *see* 40 CFR §§ 423.11(f) and (p) (definitions of "bottom ash" and "transport water"), to establish limits and conditions consistent with the currently effective Steam Electric ELGs, which were promulgated by EPA in late 2020, after Region 1 had issued the 2020 Permit to the Facility. 85 FR 64650, 64718-19 (Oct. 13, 2020) (Final Rule) (the 2020 ELGs).

The 2020 Permit sets effluent limits restricting Merrimack Station's discharges of pollutants contained in a variety of wastewaters, one of them being BATW. The 2020 Permit's limits for BATW, *see* 2020 Permit at Part I.A.4, are based on the Steam Electric ELGs that were promulgated by EPA in 2015 (the 2015 ELGs). 80 FR 67838 (Nov. 3, 2015) (Final Rule). The 2015 ELGs were in effect at the time the 2020 Permit was issued. *See also* 40 CFR §§ 122.43(b)(1) and 125.3(c)(1) (permit limits are to be based on applicable regulations in effect at time of permit issuance). More specifically, the 2020 Permit's limits on discharges of BATW included the 2015 ELGs limitations on BATW discharges based on the "best available treatment economically achievable" technology standard (BAT). *See* 33 U.S.C. § 1311(b)(2)(A). The 2015 ELGs BAT limitations for BATW were promulgated at 40 CFR § 423.13(k)(1)(i) and (ii), 80 FR at 67896, and required achievement of zero discharge for BATW by December 31, 2023.

Even as EPA was finalizing Merrimack Station's NPDES permit in May 2020, however, it was understood that the Agency was working on potential revisions to the 2015 ELGs. Indeed, EPA had proposed such revisions in October 2019. 84 FR 64620 (Nov. 22, 2019) (2019 Proposed Rule). It was also understood that the 2019 Proposed Rule proposed to make the effluent limitations applicable to BATW discharges less stringent in certain ways than the limitations in the 2015 ELGs. Specifically, in the 2019 Proposed Rule, EPA proposed creating certain industry "subcategories" which, if applicable, would subject a facility to less stringent limitations than were specified in the 2015 Rule. *Compare* 80 FR at 67896 (40 CFR §§

423.13(k)(1)(i) and (ii)), *with* 84 FR 64674-75 (40 CFR §§ 423.13(k)(1) and (2)). Nevertheless, EPA Region 1 decided not to delay issuance of the 2020 Permit to await issuance of a Final Rule to revise the 2015 ELGs. EPA made this decision for several reasons including those listed below.

- Merrimack Station’s NPDES permit had last been issued in 1992 and the permit had been administratively continued for a very long time, which, in general, made further delay undesirable. *See* AR-236.¹
- Related to the first point, Sierra Club sued EPA in November 2016 for alleged unreasonable delay in reissuing the Merrimack Station permit, and although the United States Court of Appeals for the First Circuit granted EPA’s motion to dismiss the case, both EPA and the court indicated their agreement that it was important to complete reissuance of a new, updated permit for Merrimack Station. *See* AR-1397.
- Delaying Merrimack Station’s permit to await possible changes to the Steam Electric ELGs would have meant also delaying new permit provisions needed to address pollutant discharges not governed by the Steam Electric ELGs, such as discharges of waste heat, and new permit provisions needed to address the Facility’s cooling water withdrawals.
- While EPA had a timeline for finalizing its revisions to the 2015 ELGs, the Agency also knew both that the rulemaking schedule could be delayed for any number of reasons and that any final rule might include requirements different from the provisions included in the 2019 Proposed Rule. Therefore, EPA could not be certain how long a delay would result from holding up the permit to await finalization of the revisions to the 2015 ELGs.
- GSP did not want EPA to delay issuance of the new NPDES permit. *See* AR-1690.
- Finally, EPA recognized that if the permit was issued based on the 2015 ELGs but the Agency later revised the ELGs to relax the requirements underlying any of the permit limits, then the permittee could request that the limits be modified to be consistent with the revised ELGs and such a modification would not violate CWA “anti-backsliding” requirements. *See* 40 CFR §§ 122.62(a)(3)(i)(A)-(C), 122.44(l)(1). Indeed, the 2019 Proposed Rule stated that:

[i]n cases where a facility’s final NPDES permit is issued before these ELGs are finalized, and includes limitations for [BATW] and/or FGD wastewater from the 2015 rule, EPA recommends such a permit be reopened as soon as practicable, and modified consistent with any new rule provisions.

84 FR 64664. Consistent with this, Region 1 addressed this issue directly in both the final 2020 Permit and the supporting Responses to Comments (2020 RTC), identifying that the Permittee could seek a

¹ Records included in EPA’s Administrative Record supporting the development of the 2020 Final Permit are noted as “AR-#.” This Administrative Record can be accessed at <https://www.epa.gov/npdes-permits/merrimack-station-administrative-record>.

modification if any permit limits were based on the requirements of the 2015 ELGs but EPA later promulgated regulations that relaxed those requirements. See AR-1886 (2020 Permit), p. 21, Part I.A.19; AR-1885 (RTC), pp. 657-58, 679-80/750.²

1.2 Basis of Modified Draft Permit Conditions

Consistent with the discussion immediately above, EPA now proposes to modify the 2020 Permit's limits and conditions for BATW discharges. The basis for this modification is as follows: (a) after the permit was issued in May 2020 with limits for BATW based on the 2015 ELGs, EPA revised the 2015 ELGs for BATW by promulgating the 2020 ELGs, 85 FR at 64718-19 (see 40 CFR § 423.13(k)), (b) when promulgating the 2020 ELGs, EPA generally indicated that any permits already issued with limits based on the 2015 ELGs should be modified to align with the new 2020 ELGs, 85 FR at 64705, (c) GSP timely applied for modification of the permit's BATW requirements to align them with the new 2020 ELGs, see GSP's 2021 Modification Request, pp. 6-8; see also 40 CFR § 122.62(a)(3)(i)(C) (request for modification due to amended standards or regulations must be filed within 90 days of Federal Register notice of the action on which the request is based), and (d) although EPA has now proposed certain revisions to the 2020 ELGs, see 88 FR 18824 (Mar. 29, 2023), the 2020 ELGs currently remain in effect and EPA expressly affirmed that it was not vacating them and that they continue to apply until any new revisions supplant them in the future. See 88 FR at 18885-86.

While the 2021 Modification Request included a request that the Region include alternative BATW limits based on either a Fundamentally Different Factors variance or the generally applicable ("default") limitations established in 40 CFR § 423.13(k)(1), GSP subsequently withdrew this request via letter dated January 29, 2024. See Letter from James S. Andrews, GSP, to Ken Moraff, EPA (Jan. 29, 2024). Therefore, GSP now only seeks a modification of the current permit's authorization to discharge BATW based on the low utilization subcategory (40 CFR § 423.13(k)(2)(iii)) and the permanent cessation of coal combustion subcategory (40 CFR § 423.13(k)(2)(ii)).

EPA notes that in addition to requesting modification of the 2020 Permit's limits for BATW discharges, GSP also requested that the permit be modified to authorize and prescribe effluent limits for discharges of flue gas desulfurization (FGD) wastewater based on the 2020 ELGs. See GSP's 2021 Modification Request, pp. 6-8.³ Region 1 was not able to address the modification request until now due to several factors, most importantly of which are the Region's many competing priorities and staffing levels in conjunction with the time commitment involved with processing GSP's 2021 Modification Request. However, EPA has now determined that, based on current resources and priorities, it is appropriate to respond by granting GSP's request for modification with respect to *BATW only*, specifically the request for limitations based on the

² Because AR-1885, the RTC supporting the 2020 Permit, is so large, citations will be made to page numbers out of the total number of pages in the pdf, or 750 pages. For example, p. 1/750. This will make it easier for readers to find the cited pages in an electronic copy of the document.

³ The 2020 Permit does not address FGD wastewater discharges because GSP did not request authorization of such discharges for that permit. See AR-1690. See also GSP's 2021 Modification Request, p. 5.

low utilization and permanent cessation of coal combustion subcategories.⁴ The Region continues to consider the request for modification of the permit to authorize the discharge of FGD wastewater, and takes no action on this portion of the 2021 Request at this time.

The proposed permit modifications are explained and described in more detail below. For the reader's convenience, EPA has identified the proposed modifications in the attached Draft Permit Modification by including the proposed changes to the 2020 Permit in red and italics and striking through text proposed for deletion from the 2020 Permit. EPA is seeking, and will accept, only comments that address the proposed modifications indicated in the Draft Permit Modification and discussed in this Fact Sheet. Beyond those identified here, no other aspects of the 2020 Permit are being reopened for public comment and modification. See 40 CFR § 124.5(c)(2).

2.0 Background Information

2.1 The Facility and the Receiving Waterbody

Merrimack Station is located on the western shore of the Merrimack River on approximately 400 acres of land in Bow, New Hampshire. See Figure 1 (Location of Merrimack Station). The Station discharges pollutants to, and withdraws water for cooling from, the Hooksett Pool section of the Merrimack River (Hooksett Pool or the Pool). Hooksett Pool is formed by the upstream Garvins Falls Dam in the City of Concord, NH, and the downstream Hooksett Dam in the Town of Hooksett, NH. The Pool is bordered by the towns of Allenstown and Pembroke, NH, on its eastern bank, and by the town of Bow, NH, on its western bank. See AR-379 (aerial photograph) (Figure 1 to this Fact Sheet). Merrimack Station is located approximately midway between the Garvins Falls Dam and the Hooksett Dam. Hooksett Pool is approximately 5.8 miles long and has a surface area of approximately 350 acres and a volume of approximately 130 million cubic feet at "full-pond level" (Normandeau 2007d).

Merrimack Station is a steam electric power plant, see 40 CFR § 423.10, with four electrical generating units with a total rated capacity of approximately 570 megawatts (MW). Units No. 1 and 2 are both coal-fired, steam-driven generating units. Unit No. 1 (referred to as MK-1) began operation in 1960 and has a rated capacity of 120 MW, while Unit No. 2 (referred to as MK-2) began operation in 1968 and has a rated capacity of 350 MW. The two remaining units are combustion turbines firing No. 1 fuel oil and account for 50 MW of generation each.

Merrimack Station is described in detail in the Fact Sheet issued with the Draft Permit in 2011, AR-608 (2011 Fact Sheet), and in the Responses to Comments (RTC) issued with the 2020 Final Permit. AR-1886 (2020 RTC). The Facility is made up of a variety of components, including, among other things, the following: the main electrical generation building, including generating units MK-1 and MK-2, each with an

⁴ After its 2021 Modification Request, GSP also requested modification of Part I.C of the 2020 Permit to reflect the fact that the only remaining subcategories for BATW discharges reflect reduced unit operations (*i.e.*, limitations based on the low utilization or the permanent cessation of coal combustion subcategories). See Letter from James S. Andrews, GSP, to Ken Moraff, EPA (Jan. 29, 2024). EPA's response to this request is explained below in Section 6.0 of this Fact Sheet.

associated cooling water intake structure (CWISs); a flue gas desulfurization (FGD) air scrubber system; the coal railcar unloading building and coal pile; an administration building; several storage buildings; a coal ash slag pile with a slag processing building; various wastewater treatment facilities, such as Waste Treatment Plant No. 1, Waste Treatment Plant No. 4 (also known as the “slag settling pond”), primary and secondary treatment systems to treat the FGD wastewater (secondary treatment uses vapor compression evaporation (VCE)); and an onsite coal combustion residuals landfill.

Prior to approximately 2012, Merrimack Station operated as a “baseload” generator of electricity. This means that during that time, the Facility generated electricity nearly all the time to help meet regional demand, except, for example, during planned or unplanned maintenance outages. As of approximately 2012, however, the declining price of natural gas enabled gas-burning plants to undersell coal-burning power plants, such as Merrimack Station. As a result, coal-burning facilities lost market share and many went out of business, such as Brayton Point Station in Somerset, MA, and Salem Station in Salem, MA. While Merrimack Station did not go out of business, as of 2012, it no longer operated as a baseload generator, and it began to generate less and less electricity.

Under its new mode of operation, the Facility only generates electricity during occasional periods when, for various reasons, electrical demand in the region outstrips the supply provided by other less expensive generators. At present, Merrimack Station rarely generates electricity in the fall and spring, but occasionally does in the winter and (less frequently) in the summer. See AR-1534, pp. 34-36; AR-1885, pp. 35-36/750.

As part of its process for generating electricity, Merrimack Station uses an open-cycle (or “once-through”) cooling system. The Facility withdraws water from the Merrimack River through its two CWISs and uses it to condense the steam sent through the electrical generating turbines to generate electricity. The heated non-contact cooling water (NCCW) is then discharged back to the river. Likewise, river water is used to sluice bottom ash/slag from the bottom of both boiler units to a Slag Sluice Settling Area (also referred to as Waste Treatment Plant No. 3). Wastewater from this area discharges to the river via the Slag Settling Pond (also referred to as Waste Treatment Plant No. 4 and more recently the Service Water Pond) and the Facility’s discharge canal.

Facts concerning the Facility and the waterbody that are relevant for the purpose of NPDES permitting are also discussed in the 2011 Fact Sheet, AR-608, that EPA issued together with the draft NPDES permit for the Facility, AR-609, and in the 2020 RTC, AR-1885, issued by EPA with the 2020 Final Permit, AR-1886. These documents are incorporated herein by reference for purposes of providing additional background information concerning the Facility, the Final Permit, and the relevant law.

2.2 State Water Quality Standards Applicable to the Receiving Waterbody

The Merrimack River, including the Hooksett Pool, is classified by the State of New Hampshire as a Class B water body. See Legislative Classification of Surface Waters in New Hampshire, October 2003. p. 2-23. In the 2011 Fact Sheet, AR-608 pp. 9-10, and throughout the 2020 RTC, AR-1885 *passim*, Region 1 discusses the relevant provisions of New Hampshire statutes and regulations that set the state’s water quality

standards (NHWQS) and determine how they apply to the Hooksett Pool and the Merrimack Station NPDES permit. The Region incorporates that discussion here by reference and discusses NHWQS in more detail below.

Section 303(d) of the CWA requires states to identify water bodies under their jurisdiction that are not expected to meet surface water quality standards after the implementation of technology-based controls and that, as a result, require the development of total maximum daily loads (TMDL). The NHDES classifies the Hooksett Pool of the Merrimack River, Assessment Unit ID NHIMP700060802-02, as a Category 3-PNS “Potentially Full Supporting.”⁵ The parameter listed as “likely bad” based on limited data is for nonnative fish, shellfish, or zooplankton. In addition, this section of the river is listed as not supporting fish consumption due to elevated mercury levels and is included in a statewide fish consumption advisory for mercury. The 2007 Northeast Regional Mercury TMDL identifies atmospheric deposition as the primary source of the impairment.⁶

The proposed permit modification would authorize BATW discharges that were previously evaluated for the 2014 Draft Permit issued for public comment by EPA. AR-1135. For the 2014 Draft Permit, EPA considered the BATW discharge and the relevant NHWQS and concluded that water quality-based requirements were not needed for the BATW discharges other than monitoring and reporting for pH. AR-1135, p. 53. *See also* AR-1086. The relevant considerations have not changed and EPA, therefore, reaches the same conclusion for the current modification.

2.3 Merrimack Station’s Bottom Ash Transport Water

Merrimack Station’s process for generating electricity from its two coal burning units (MK-1 and MK-2) produces coal combustion residuals in the form of fly ash leaving the boilers with the exhaust gases and hot coal ash or slag (i.e., molten ash), which is deposited into a slag tank containing quenching water at the bottom of each boiler. The Facility explains that when the slag contacts the quenching water, it fractures instantly and crystallizes. The resulting “boiler slag” is a material that is hard, coarse, black, angular, and glassy. AR-608, p. 14; *see also* AR-1699, pp. 2-3. As indicated below, boiler slag is expressly covered by the regulatory definition of “bottom ash.”

The boiler slag is then conveyed through clinker grinders to reduce the size of slag material and then flushed out of the slag tank and transported using water (i.e., the bottom ash transport water (BATW)) from the boiler building to a Slag Sluice Settling Area where bottom ash solids are collected and processed for beneficial use. AR-1699, pp. 2-3. The BATW or sluice water from the Slag Sluice Settling Area is routed along a manmade channel to an impounded settling area, once known as the “swamp.” As shown in Figure 2 (Waste Treatment No. 4 Process Flow Diagram) of this Fact Sheet,⁷ water flows from this impoundment

⁵ See New Hampshire’s Watershed Report Cards built from the 2020/2022, 305(b)/303(d) at https://www4.des.state.nh.us/onestoppub/SWQA/010700060802_2020.pdf, p. 2 of 63.

⁶ See <https://attains.epa.gov/attains-public/api/documents/actions/11113300/33883/107297>.

⁷ A Process flow diagram was included in “Appendix B – Schematic of Water Flow” of the Bottom Ash Transport Water Best

through a pipe and into another larger impoundment called the Slag Settling Pond. In the Slag Settling Pond, the BATW commingles with other process wastewaters prior to being discharged to Merrimack Station's main cooling water discharge canal through internal Outfall 003A and from there to the Merrimack River through Outfall 003. AR-608, pp. 13-15. *See also* AR-615 (Att. C to 2011 Fact Sheet (process flow diagram)).⁸ As stated in the 2020 Responses to Comments issued by Region 1 along with the 2020 Permit, Merrimack Station has explained that "...an overwhelming majority of process wastewater effluent generated at the facility is BATW..." AR-1885, p. 655/750. Unit MK-1's average BATW (i.e., slag sludge) flow is 2.0 million gallons per day (MGD), while Unit MK-2's average BATW flow is 4.23 MGD, for a total continuous BATW discharge flow of 6.23 MGD when operating. AR-608, pp. 14-15. The Merrimack River is the source of the slag sludge water and, although not considered cooling water, this water is withdrawn from the MK-1 and MK-2 cooling water tunnels after withdrawal from the river.

3.0 The 2020 Permit's Effluent Limits for BATW Discharges

3.1 Applicability to the 2020 Permit of the 2015 ELGs Effluent Limitations for BATW Discharges

Merrimack Station is a steam electric power plant, *see* 40 CFR § 423.10 (applicability), and, as a result, many of the pollutants it discharges, including those in BATW, are subject to technology-based effluent limits specified in the Steam Electric ELGs. As explained above, Region 1 issued the 2020 Permit to the Facility on May 22, 2020, AR-1886, prior to EPA's promulgation of the 2020 ELGs. 85 FR 64650, 64718-19 (Oct. 13, 2020) (Final Rule) (the Final Rule for the 2020 ELGs was not published in the Federal Register until Oct. 13, 2020, and did not become effective until Dec. 14, 2020). As a result, for the 2020 Permit, the Region set technology-based limits for BATW discharges based on the then-effective 2015 ELGs, 80 FR 67838 (Nov. 3, 2015) (Final Rule), except to the extent, as explained below, that certain effluent limitations from the 2015 ELGs were later vacated by a federal court decision. *See* AR-1885, pp. 654, 657-58/750.⁹

The 2015 ELGs define "bottom ash" as follows:

[t]he term bottom ash means the ash, *including boiler slag*, which settles in the furnace or is dislodged from furnace walls. Economizer ash is included in this definition when it is collected with bottom ash.

Management Practice Plan (October 2023), prepared by Sanborn, Head & Associates, Inc., which was submitted to EPA by GSP on December 31, 2023 (BMP Plan). GSP recently revised the figure and incorporated the new version into the BMP Plan and then submitted the updated BMP Plan to EPA as an attachment to a January 23, 2024, email to S. DeMeo, EPA from E. Tillotson, GSP (Updated BMP Plan). EPA has included an excerpt from the new version of the process flow diagram as Figure 2 in this Fact Sheet.

⁸ The Slag Settling Pond also receives MK-1 and MK-2's slag tank (boiler quench water) overflow, which along with stormwater has been estimated to generate a flow of between 9400 gpd to 1 MGD when operating. *See* AR-1286 and AR-608, Table 2, p. 15.

⁹ *See* 40 CFR §§ 122.43(b)(1) (permit conditions should require compliance with regulatory requirements that are in effect before the permit is issued) and 125.3(c)(1) and (3) (technology-based permit conditions should be based on promulgated ELGs unless they have been remanded by a court).

80 FR 67893 (40 CFR § 423.11(f)) (emphasis added).¹⁰ In addition, the 2015 ELGs define the term “transport water” to mean:

... any wastewater that is used to convey fly ash, bottom ash, or economizer ash from the ash collection or storage equipment, or boiler, and has direct contact with the ash. Transport water does not include low volume, short duration discharges of wastewater from minor leaks (e.g., leaks from valve packing, pipe flanges, or piping) or minor maintenance events (e.g., replacement of valves or pipe sections).

80 FR 67894 (40 CFR § 423.11(p)). These definitions indicate that the 2015 Steam Electric ELGs for BATW applied to the BATW generated at Merrimack Station, as described above.¹¹ The 2020 Permit’s limits on discharges of BATW were subject to the 2015 ELGs limitations on BATW discharges based on the “best available treatment economically achievable” technology standard (BAT).¹² See 80 FR 67896 (40 CFR § 423.13(k)(1)(i) and (ii)). See also 33 U.S.C. § 1311(b)(2)(A); 40 CFR § 125.3(a)(2)(iii) and (iv). For coal-burning power plants with generating capacity above 50 MW, such as Merrimack Station, the 2015 ELGs’ BAT limits for BATW required “no discharge of pollutants in bottom ash transport water ... by a date determined by the permitting authority that is as soon as possible beginning November 1, 2018, but no later than December 31, 2023.” 80 FR 67896 (40 CFR § 423.13(k)(1)(i)).

The 2015 ELGs define BATW discharged *before* the “as soon as possible” compliance date as “legacy wastewater.” See 80 FR 67854. Distinct from legacy wastewater, BATW discharged on or after the “as soon as possible” compliance date is referred to in this document simply as discharges of BATW. See 80 FR 67896 (40 CFR § 423.13(k)(1)(i)) (requirement for no BATW discharges applies “on and after” the compliance date).

3.2 Limits on “Legacy” BATW Discharges in the 2020 Permit

For the 2020 Permit, Region 1 determined that the “as soon as possible” compliance date for Merrimack Station’s BATW discharges was December 31, 2023. See AR-1885, pp. 15, 17, 654-56, 662-66/750. See also

¹⁰ This definition slightly revised the prior definition of bottom ash which was promulgated as part of the 1982 Steam Electric ELGs. 47 FR 52305 (Nov. 19, 1982) (40 CFR § 423.11(f)). The 2020 ELGs, which are now in effect, retained without revision the definition of bottom ash promulgated in the 2015 ELGs. See 85 FR 64716 (Oct. 13, 2020). In addition, EPA’s current proposal to amend the Steam Electric ELGs, issued for public comment in March 2023, does not propose changes to the definition of bottom ash. 88 FR 18824, 18896 (Mar. 29, 2023).

¹¹ For the 2020 ELGs, the definition of transport water retains the text from the 2015 ELGs, but also adds new text to reflect the newly added definitions of “FGD paste,” “FGD paste equipment cleaning water,” and “bottom ash purge water.” See 85 FR 64716 (Oct. 13, 2020) (40 CFR §§ 423.11(p), (u), (v) and (cc)). The new proposed amendments to the Steam Electric ELGs that were issued for public comment in March 2023 do not propose any changes to the definition of transport water in the 2020 ELGs. 88 FR 18824, 18896.

¹² Region 1 concluded that the 2020 Permit was required to include the no BATW discharge limitations from the applicable provisions of the 2015 ELGs, but, as discussed in the text above, the Region also acknowledged that GSP could seek a permit modification based on any subsequent revisions to the ELGs that were ultimately promulgated by EPA. AR-1885, pp. 657-58/750. EPA also included a provision in the 2020 Permit to be sure that it was clear that the Permittee could seek a permit modification under appropriate circumstances. AR-1886, p. 21 (Part I.A.19).

id. at 657/750 n. 734. This date is reflected in the 2020 Permit, *see* AR-1886, p. 7 (2020 Permit, Part I.A.4), and the Facility's discharges of BATW *before* that date are considered legacy wastewater. AR-1885, pp. 653-55/750. This includes any BATW that was generated before the compliance date and stored on-site in either the Slag Sluice Settling Area or the Slag Settling Pond. 80 FR 67854-67855.

In its Responses to Comments accompanying the 2020 Permit, Region 1 explained its approach to setting permit limits for legacy BATW discharges, AR-1885, pp. 654-55/750, based on both the regulations and subsequent judicial actions related to the 2015 legacy limits. *See* 80 FR 67854, 67896 (40 CFR § 423.13(k)(1)(ii)), and 67894 (40 CFR § 423.12); 47 FR 52290, 52305 (Nov. 19, 1982) (40 CFR § 423.12(b)(4)). *See also* 33 U.S.C. § 1311(b)(2)(A) and 40 CFR § 125.3(a)(2)(i); *Southwestern Electric Power Co., et al. v. EPA*, 920 F.3d 999, 1004, 1019 (5th Cir. 2019) ("*SWEPCO*"). EPA noted and explained that the 2020 Permit:

includes limitations for TSS and O&G in legacy BATW. These interim limits, which apply only prior to the compliance date for the long-term limits, December 31, 2023, are consistent with [the BPT] ELGs currently in effect and are equal to limits proposed in previous drafts of the Merrimack Station permit, prior to promulgation of the 2015 ELGs, as well as the limits proposed in the 2017 public notice period [based on the 2015 ELGs BAT limits for legacy BATW discharges]. . . and would also be consistent with a BPJ determination of BAT limits, if the Agency conducted such BPJ analysis.

AR-1885, pp. 654-55/750 (footnotes omitted).

Consistent with the above discussion, Part I.A.4 of 2020 Permit provides as follows regarding Outfall 003A:

[d]uring the period beginning on the effective date and lasting through the expiration date the Permittee is authorized to discharge the following effluent from the Slag Settling Pond: slag sluice settling area (bottom ash transport water) generated before December 31, 2023.

AR-1886, p. 7. Part I.A.4 of the 2020 Permit goes on to specify effluent limits applicable to BATW discharges from Outfall 003A prior to December 31, 2023 (i.e., for legacy BATW discharges), for flow, Total Suspended Solids (TSS), and Oil & Grease (O&G). *Id.* These permit limits for legacy BATW were not appealed, went into effect, and remain in effect.

In addition, as expected, the later promulgated 2020 ELGs did not include new BAT effluent limitations for legacy BATW, and the Permittee has not requested modification of the 2020 Permit's limits for legacy BATW.¹³ Therefore, EPA is not modifying or addressing legacy BATW limits from the 2020 Permit in this action.

¹³ Region 1 notes that in EPA's 2023 Proposed Rule proposing future amendments to the Steam Electric ELGs, EPA has proposed that permitting agencies apply BPJ to determine permit limits for legacy BATW based on the BAT standard, *see* 88 FR 18838, 18850-53, but EPA has also sought comments on other potential approaches to setting BAT limits. *Id.* at 18853. In any event, new changes to the 2020 ELGs have yet to be finalized. Any new Merrimack Station NPDES permit limits for legacy BATW discharges that will be developed in the future will be based on whatever ELG regulations are in effect at that time. *See* 40 CFR §§ 122.43(b)(1), 125.3(c)(1).

3.3 Effluent Limits on Discharges of BATW in the 2020 Permit

As explained above, the 2020 Permit incorporated the 2015 ELGs' BAT limits for BATW, which required "no discharge of pollutants in bottom ash transport water ... by a date determined by the permitting authority that is as soon as possible beginning November 1, 2018, but no later than December 31, 2023." 80 FR 67896 (40 CFR § 423.13(k)(1)(i)). Region 1 determined that the "as soon as possible" compliance date for Merrimack Station's BATW discharges was December 31, 2023. *See* AR-1885, pp. 15, 17, 654-56, 662-66/750. *See also id.* at 657/750 n. 734. Therefore, this date is reflected in the 2020 Permit, *see* AR-1886, p. 7 (2020 Permit, Part I.A.4), and no discharges of BATW are authorized on or after that date. *See* 80 FR 67896 (40 CFR § 423.13(k)(1)(i) (requirement for no BATW discharges applies "on and after" the compliance date). Specifically, Part I.A.4 (Outfall 003A) requires:

During the period beginning on the effective date and lasting through the expiration date the Permittee is authorized to discharge the following effluent from the Slag Settling Pond: slag sluice settling area (bottom ash transport water) generated before December 31, 2023.

In addition, Part I.H.2, Unauthorized Discharges, of the 2020 Permit provides as follows:

Bottom ash transport water generated after December 30, 2023 is prohibited from being discharged to the slag settling pond or the Merrimack River.

AR-1886, p. 30. Neither the Part I.A.4 nor Part I.H.2 permit requirements were appealed and, therefore, they went into effect with the 2020 Permit and remain in effect.

As mentioned above, when Region 1 issued the permit on May 22, 2020, EPA had previously issued a Proposed Rule in 2019 that proposed to amend the 2015 ELGs by, among other things, making the BAT effluent limitation guidelines for BATW less stringent for certain newly defined subcategories of facilities within the steam electric power generation industrial category (e.g., low-capacity utilization generators, facilities planning to permanently cease operations). *Compare* 80 FR at 67896 (40 CFR §§ 423.13(k)(1)(i) and (ii)), *with* 84 FR 64674-75 (40 CFR §§ 423.13(k)(1) and (2)). For the reasons discussed above, Region 1 decided to issue the 2020 Permit rather than delay the final permit to await EPA's future issuance of the Final Rule for the 2020 ELGs.

Recognizing, however, that the ELGs might later be amended to include less stringent limitations for BATW discharges, EPA noted in the RTC that GSP could seek a permit modification if such amendments were later promulgated. AR-1885, pp. 657-58/750. This statement recognized that when a permit's limits are based on applicable ELGs but those ELGs are later revised by EPA to be less stringent, then the permit limits may be modified to be consistent with the new, less stringent ELGs without running afoul of antibacksliding requirements in EPA regulations or the CWA. *See* 40 CFR §§ 122.44(l)(1) and 122.62(a)(3)(i). *See also* 33 U.S.C. § 1342(o). This approach was also supported by EPA in the preamble to the 2019 Proposed Rule, which stated as follows:

[i]n cases where a facility's final NPDES permit is issued before these ELGs are finalized, and includes limitations for BA transport water and/or FGD wastewater from the 2015 rule, EPA recommends such a permit be reopened as soon as practicable, and modified consistent with any new rule provisions.

84 FR 64664. Accordingly, EPA included Part I.A.19 in the Final Permit. This permit condition reads as follows:

19. This permit may be modified in accordance with 40 CFR Section 122.62(a)(3) if the standards or regulations on which the permit is based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit is issued in accordance with 40 CFR Section 122.62(a)(3).

AR-1886, p. 21. This provision does not provide a guarantee that the permit would be modified under any particular circumstances, but it does make clear that the permit *may* be modified under appropriate circumstances in accordance with the regulations.¹⁴

4.0 Effluent Limitations for Discharges of BATW Under the 2020 ELGs

After the 2015 ELGs were finalized, the Agency received two petitions for administrative reconsideration. In response, EPA agreed to reconsider the Effluent Guidelines for two waste streams – FGD and BATW – and ultimately decided to address the Steam Electric ELGs again in a new rulemaking. EPA published the 2019 Proposed Rule on November 22, 2019, and the 2020 ELGs (Final Rule) on October 13, 2020. See 84 FR 64620 and 85 FR 64650, respectively. Among other revisions to the 2015 ELGs, the 2020 ELGs add subcategories for high-flow units, low-utilization units, and units that will cease the combustion of coal by 2028, they tailor specific requirements for facilities in these subcategories. In addition, the 2020 ELGs modify the effluent limitations applicable to facilities that do not fall within one of the newly specified subcategories (i.e., the “generally applicable” limits). See 85 FR 64661, 64684 (discussing “generally applicable” effluent limitations).

The 2020 ELGs' effluent limitations for BATW, as well as certain procedural requirements pertaining to the application of these effluent limitations, are discussed below. In comparison to the BAT limitations for BATW discharges in the 2015 ELGs, the BAT effluent limitations for BATW discharges in the 2020 ELGs are

¹⁴ As indicated above, the 2020 Permit does not authorize new discharges of BATW after December 31, 2023. As also explained above, however, GSP timely applied for a permit modification that could allow continued discharges of BATW by the Facility subject to the applicable effluent limitations specified in the 2020 ELGs. While awaiting EPA action on the permit modification, GSP did not install the wastewater management equipment needed to enable the Facility to operate without BATW discharges after December 31, 2023, as required by the 2020 Permit. As a result, when the Facility operates, it will unavoidably continue to have new BATW discharges in violation of the 2020 Permit. Therefore, EPA has issued, and GSP has agreed to, an Administrative Order on Consent (AOC) which provides a reasonable compliance schedule according to which the Facility will take the necessary steps to terminate its BATW discharges. See *In the Matter of: GSP Merrimack LLC* (Docket No. CWA-AO-R01-FY24-14), Administrative Order on Consent, Section IV, pp. 5-7. At the same time, the AOC provides that it will terminate if and when the 2020 Permit is modified to authorize BATW discharges by Merrimack Station, and that any such discharges would then be governed by the modified permit and not the ACO. *Id.*, p. 9, ¶ 30.

similar in certain respects, but quite different in other respects.

4.1 Effluent Limitations for “Legacy” BATW

As mentioned previously, the 2015 ELGs refer to BATW discharged before the “as soon as possible” compliance date as “legacy wastewater.” See 80 FR 67854. The 2015 ELGs at 40 CFR § 423.13(k)(ii) specified that the BAT limits for legacy BATW would be equal to the TSS limits set under the Best Practicable Control Technology (BPT) standard and promulgated at 40 CFR § 423.12(b)(4). See 80 FR 67896.

As noted above, however, the 2015 ELGs’ BAT limitations for legacy BATW discharges were vacated by the United States Court of Appeals for the Fifth Circuit in *SWEPCO*, 920 F.3d at 1004, 1019. See AR-1885, pp. 652, 654/750. The later-promulgated 2020 ELGs did *not* address the vacated BAT limitations for legacy BATW. Compare 80 FR 67896 (2015 ELGs) with 85 FR 64718 (deleting 40 CFR § 423.13(k)(1)(ii)). Therefore, BAT limits would need to be developed on a BPJ basis for legacy wastewaters.

4.2 BATW Effluent Limitations Applicable to Existing Sources (Generally Applicable Limitations)

Like the 2015 ELGs, the BAT limits for BATW in the 2020 ELGs generally require zero discharge of BATW, but they also add certain new exceptions. First, the “as soon as possible” date was extended to December 31, 2025. 40 CFR § 423.13(k)(1)(i). Second, the rule allows for the discharge of a certain amount of “purge water” from a properly installed, operated, and maintained bottom ash system in accordance with 40 CFR § 423.13(k)(2)(i). Both the purge volume, not to exceed a 30-day rolling average of ten percent of the primary active wetted bottom ash system volume, and the discharge limitations applied to such purge water are to be determined on a case-by-case basis by the permitting authority using its best professional judgment. *Id.*; see also, 85 FR at 64661, 64707.

4.3 BATW Effluent Limitations for the Low Utilization Electric Generating Units Subcategory

Unlike the 2015 ELGs, the 2020 ELGs create alternative compliance requirements, other than the generally applicable effluent limitations, for facilities that qualify for, and opt into, newly created industry subcategories. Units that operate infrequently (i.e., have a low-capacity factor) may be eligible for less stringent BATW permit requirements consistent with the limitations for low utilization electric generating units in 40 CFR § 423.13(k)(2)(iii). A low utilization electric generating unit is defined as “any electric generating unit for which the facility owner certifies, and annually recertifies, under § 423.19(e) that the two-year average annual capacity utilization rating is less than 10 percent.” 40 CFR § 423.11(z). Capacity utilization rating “means the total MWh production of an electric generating unit over a calendar year divided by the product of the number of hours in that year times the nameplate capacity.” 40 CFR § 423.11(y).

For BATW, the rule specifically allows that for each eligible low utilization electric generating unit:

the quantity of pollutants discharged in bottom ash transport water shall not exceed the quantity determined by multiplying the flow of the applicable wastewater times the concentration for TSS

listed in [§ 423.12\(b\)\(4\)](#), and shall incorporate the elements of a best management practices plan as described in [\(k\)\(3\)](#) of this section.

40 CFR § 423.13(k)(2)(iii).

To be eligible for limits based on the low utilization subcategory, permittees must have submitted a Notice of Planned Participation (NOPP) to the permitting authority by October 13, 2021. The NOPP had to identify the generating unit(s) qualifying for the low utilization subcategory, including at least the most recent two year's capacity utilization rating data showing that the unit(s) were below the 10 percent threshold. The NOPP was also to include either 1) "a statement that the facility has a good faith belief that each low utilization electric generating unit will continue to operate at the required capacity utilization rating," or 2) "[w]here the most recent capacity utilization rating does not meet the low utilization electric generating unit requirement, a discussion of the projected future utilization shall be provided, including material data and assumptions used to make that projection." 40 CFR § 423.19(e)(2).

Furthermore, to qualify for low utilization-based permit limits, a permittee had to submit an initial certification to the permitting authority no later than December 31, 2023, and is required to submit a certification annually thereafter "within 60 days of submitting annual electricity production data to the Energy Information Administration." 40 CFR § 423.19(e)(3). All certifications must:

be based on the information submitted to the Energy Information Administration and shall include copies of the underlying forms submitted to the Energy Information Administration, as well as any supplemental information and calculations used to determine the two year average annual capacity utilization rating.

40 CFR § 423.19(e)(4). Therefore, for units generating at a low-capacity factor (<10%), for which GSP submitted both a NOPP and initial certification, 40 CFR § 423.13(k)(2)(iii) provides that the permittee is eligible to receive BAT permit limits for TSS listed in 40 CFR § 423.12(b)(4) (BPT limits for BATW), provided that the permit requirements also incorporate the elements of a best management practices (BMP) plan in accordance with 40 CFR § 423.13(k)(3).

The 2020 ELGs not only allow permittees to opt into an alternative subcategory such as the one for low utilization units, but as described in more detail below, they also allow permittees to transfer between subcategories under certain conditions and within specified timeframes. See 40 CFR §§ 423.13(o) and 423.19(i).

4.4 Effluent Limitations based on the Permanent Cessation of Coal Combustion Subcategory

Another subcategory included in the 2020 ELGs allows facilities ceasing coal combustion no later than December 31, 2028 (hereinafter the "permanent cessation" or "retirement" subcategory), to meet less stringent limits until the unit(s) retires. To be eligible for limits based on the permanent cessation subcategory, permittees needed to submit a NOPP to the permitting authority by June 27, 2023. See 40 CFR § 423.19(f)(1).

The 2020 ELGs set BAT limits for BATW discharges by units in the permanent cessation subcategory as follows:

[f]or any electric generating unit ... for which the owner has certified to the permitting authority that it will cease combustion of coal pursuant to [§ 423.19\(f\)](#), the quantity of pollutants discharged in bottom ash transport water shall not exceed the quantity determined by multiplying the flow of the applicable wastewater times the concentration for TSS listed in [§ 423.12\(b\)\(4\)](#).

40 CFR § 423.13(k)(2)(ii). As a result, like the low utilization subcategory, the permanent cessation subcategory applies BAT limits for BATW discharges based on the BPT limits for TSS listed in 40 CFR § 423.12(b)(4).

A permittee is also eligible to opt into meeting the retirement subcategory-based limits if its permit allows for the transfer from other applicable limitations pursuant to 40 CFR § 423.19(i). To transfer between applicable limitations under this scenario, 1) the permit must include alternative limits subject to eligibility requirements, and 2) the permittee must notify the permitting authority of its desire to change subcategories under § 423.19(i) (i.e., submit a NOPP) within the timeframes set forth in 40 CFR § 423.13(o). One of several transfer configurations includes that on or before December 31, 2025, a facility may convert from limitations for low utilization electric generating units to limitations for electric generating units permanently ceasing coal combustion by no later than December 31, 2028. 40 CFR § 423.13(o)(1)(ii)(E).

5.0 Application of the 2020 ELGs to the BATW Limits in Merrimack Station's NPDES Permit

At the outset, it is important to underscore that the 2020 ELGs remain in effect. While EPA has proposed possible amendments to the 2020 ELGs, 88 FR 18824 (Mar. 29, 2023) (2023 Proposed Rule), no amendments have yet been finalized. When issuing the 2023 Proposed Rule, EPA clearly stated that it was not vacating the 2020 ELGs and they continue to apply unless and until any new revisions supplant them in the future. *See* 88 FR 18885-86. While EPA is currently planning to issue a new Final Rule in April 2024, *see* <https://www.reginfo.gov/public/do/eAgendaViewRule?pubId=202304&RIN=2040-AG23>, the Agency is also free to change that timeline, if it chooses to do so.

Furthermore, while the 2023 Proposed Rule offers certain possible changes to some of the BATW limitations now in effect under the 2020 ELGs, *see* 88 FR 18898, it is currently impossible to be certain of what the terms of any Final Rule will be. Indeed, the 2023 Proposed Rule indicates that EPA is considering multiple rulemaking options, *see id.* at 18837-38, 18844-48, and the Agency is still considering the public comments submitted on the Proposed Rule.

EPA Region 1 has chosen to act now on GSP's request to modify the 2020 Permit's limits for BATW discharges for several reasons. First, while acting on a permit modification request is not a mandatory duty for EPA, *see* 40 CFR § 122.62(a) ("If cause exists, the Director *may* modify ... the permit accordingly" (emphasis added)), the Region recognizes that EPA's preamble to the 2020 ELGs expressly states that it is

appropriate to modify permit limits based on the 2015 ELGs to align them with less stringent corresponding limitations in the 2020 ELGs. Specifically, the preamble for the 2020 ELGs states as follows:

[w]here permits with the 2015 rule limitations have already been issued, EPA expects that the [2020] final rule requirements will be incorporated through permit modifications in most cases.

85 FR 64705. In addition, the preamble further provides:

[i]n cases where a plant's final NPDES permit was issued before these ELGs were finalized and includes limitations for BA transport water and/or FGD wastewater from the 2015 rule, the permitting authority may modify the permit based on promulgation of this rule pursuant to 40 CFR 122.62(a)(3). EPA recommends that the plant and permitting authority determine whether such a permit should be modified in light of this rule, and if so, that it be modified as soon as practicable and consistent with any new rule provisions.

Id. at 64706. Consistent with the preamble, the Permittee applied for a modification of the 2020 Permit by letter dated January 11, 2021, shortly after the 2020 ELGs became effective on December 14, 2020. GSP's 2021 Modification Request, pp. 6-8. Specifically, GSP sought the modification to change the permit's limits for BATW and FGD wastewater to make them consistent with the recently promulgated 2020 ELGs.

As mentioned above in Section 1.2, however, EPA Region 1 is only acting at this time on GSP's request for modification of the permit's limits for BATW based on the low utilization and permanent cessation subcategories. See Letter from James S. Andrews, GSP, to Ken Moraff, EPA (Jan. 29, 2024).

5.1 Effluent Limitations for "Legacy" BATW

Given that the 2020 Permit's limits for legacy BATW were not appealed, those limits are currently in effect and the Permittee did not request that they be modified. Therefore, this Draft Permit Modification does not address and will not propose changes to the legacy BATW limits in Merrimack Station's permit.

5.2 Effluent Limitations based on the Low Utilization Electric Generating Unit Subcategory

As previously discussed, GSP timely applied for modification of the permit's BATW requirements to align them with the new 2020 ELGs, see GSP's 2021 Modification Request, pp. 6-8; see also 40 CFR § 122.62(a)(3)(i)(C) (request for modification due to amended standards or regulations must be filed within 90 days of Federal Register notice of the action on which the request is based).¹⁵ Furthermore, in accordance with 40 CFR § 423.19(e)(1), GSP submitted a NOPP on October 13, 2021, indicating its intent to comply with the requirements for the low utilization subcategory and seeking, among other things, permit

¹⁵ Although EPA has proposed certain revisions to the 2020 ELGs, see 88 FR 18824 (Mar. 29, 2023), EPA also expressly affirmed that it was not vacating the 2020 ELGs. Accordingly, the 2020 ELGs currently remain in effect and apply until supplanted by new regulations in the future. See 88 FR 18885-86.

limits consistent with that subcategory as well as alternative limits and conditions corresponding to both the cessation of coal combustion subcategory and the generally applicable limitations so that GSP Merrimack could “automatically transfer between the applicable limitations as authorized by 40 C.F.R. 423.13(o).” GSP’s NOPP, p. 6.

On December 31, 2023, in accordance with 40 CFR § 423.19(e)(3), which requires an initial certification no later than December 31, 2023, for sources seeking to qualify as a low utilization electric generating unit, GSP provided EPA with the two-year average capacity utilization rate for 2022-2023, which shows the following capacity factors for each unit: MK-1 = 7.8% and MK-2 = 5.2%. See Letter to K. Moraff, EPA from E. Tillotson, GSP, re. Permit Modification Application, Dec. 31, 2023 (sent as an attachment to a Dec. 31, 2023, email to K. Moraff, EPA, from E. Tillotson, GSP). GSP’s submission indicates that both Units MK-1 and MK-2 are below the 10% threshold for units in the low utilization subcategory and, as such, both units qualify for coverage under that subcategory. See 40 CFR § 423.11(z).

The regulations at 423.13(k)(3) and 423.19(d) require that a permittee provide, as part of its permit application (or in this case, permit modification request), a BMP plan. As such, GSP supplemented its original Modification Request with its BMP Plan, which was submitted on December 31, 2023. See BMP Plan; see also Updated BMP Plan (as described in footnote 7 above).

Based on the foregoing, the Region has determined that the regulatory requirements for the low utilization subcategory have been met, and, therefore, Region 1 is proposing to modify the 2020 Permit to amend the requirements in Part 1.A.4 and remove Part I.H.2 of the currently effective permit.¹⁶ The Region proposes instead to include limitations and conditions based on the low utilization subcategory in accordance with 40 CFR § 423.13(k)(2)(iii). Thus, the limits for TSS listed in Part 1.A.4 of the current permit¹⁷ continue to apply to BATW generated after December 31, 2023, because those limits are consistent with the BAT limitations applicable to the low utilization subcategory and set forth in section 423.13(k)(2)(iii). The Draft Permit Modification at Part I.A.4A also requires that the Permittee comply with the following additional requirements:

- submit and incorporate certain elements of a best management practices (BMP) plan as specified in 40 CFR § 423.13(k)(3);
- continue to qualify as a low utilization electric generating unit as defined in 40 CFR § 423.11(z);
- annually recertify that the two-year average annual capacity utilization rating is less than 10 percent in accordance with 40 CFR § 423.19(e); and
- submit initial and annual BMP Plan certification requirements as specified in 40 CFR § 423.19(d).

¹⁶ As described above, these provisions in the 2020 Permit prohibit the discharge of BATW generated after December 31, 2023 (i.e., not legacy BATW).

¹⁷ The TSS limits in the 2020 Permit are 100 mg/L maximum daily and 30 mg/L average monthly. The quantity of TSS discharged is expressed as a concentration limitation instead of a mass-based limitation in accordance with 40 CFR § 423.13(m).

5.3 Effluent Limitations based on Permanent Cessation of Coal Combustion Subcategory

As previously discussed, the 2020 ELGs allow facilities to transfer between applicable limitations in a permit (40 CFR § 423.13(o)). GSP has accordingly requested alternative permit conditions based on the permanent cessation subcategory so that it could potentially transfer into that subcategory without a future permit modification. Consistent with 40 CFR § 423.13(o) and the GSP's 2021 Modification Request, the Draft Permit Modification proposes to include alternative limitations and conditions based on the permanent cessation subcategory as well as the mechanism and dates by which a transfer can occur. See Part I.A.4B of the Draft Permit Modification.

Specifically, the Draft Permit Modification includes terms that allow GSP to transfer from the low utilization subcategory to the permanent cessation subcategory on or before December 31, 2025, consistent with 40 CFR § 423.13(o). In order to transfer, however, GSP must take the following steps, which are outlined in proposed Part I.A.4C of the Draft Permit Modification:

- demonstrate compliance with the low utilization-based permit requirements, including but not limited to the TSS limits, reporting requirements, and BMP Plan; and
- submit a NOPP, consistent with 40 CFR § 423.19(i), which identifies which units are transferring to another set of alternative limits, that the transfer is being made pursuant to Part I.A.4C of the Permit, the reason such a transfer is warranted, and a narrative discussion demonstrating that each electric generating unit will be able to maintain compliance with the relevant provisions. The NOPP shall also include the relevant information required to demonstrate eligibility for this subcategory set forth in section 423.19(f)(2).

If the required steps are taken, Merrimack Station would then automatically become subject to the permanent cessation subcategory-based limits that are detailed in the Draft Permit Modification. As explained above, the BAT limitations for the low utilization and permanent cessation subcategories both impose the same limits for TSS listed based on the BPT standards in 40 CFR § 423.12(b)(4) – maximum daily limit of 100 mg/L and average monthly limit of 30 mg/L. In addition, these limitations will be in effect only until the Facility permanently ceases coal combustion (*i.e.*, no later than December 31, 2028). After such time, the Permittee is not authorized to discharge pollutants in BATW generated after December 31, 2028. This zero-discharge limitation would automatically apply under the terms of the Draft Permit Modification, as written by the Region. See Draft Permit Modification, Part I.A.4B(3). This requirement would support the Facility's commitment to, and certification that it will, permanently cease coal combustion by December 31, 2028, and as a result permanently cease generating BATW after that date. Including this explicit zero discharge limit is consistent with the rationale underlying this subcategory's requirements; namely, that the Facility is given the benefit of less stringent effluent limitations because it is actually permanently ceasing coal combustion by the December 31, 2028, deadline.

However, in accordance with 40 CFR § 423.13(o)(3)¹⁸, if the Permittee switches from the low utilization

¹⁸ "Where a facility seeking a transfer under paragraph (o)(1)(ii) of this section is currently subject to more stringent limitations than the limitations being sought, the facility must continue to meet those more stringent limitations." 40 CFR § 423.13(o)(3).

subcategory to the permanent cessation subcategory, it will be required to continue to comply with the requirements for implementing a best management practices (BMP) plan as specified in 40 CFR § 423.13(k)(3) and submitting an annual BMP Plan certification as specified in 40 CFR § 423.19(d).

Furthermore, pursuant to 40 CFR §§ 423.19(f)(3)-(4), the Draft Permit Modification requires that if the Permittee switches into the permanent cessation subcategory, it will be required to submit an Annual Progress Report detailing the completion of any interim milestones listed in the NOPP since the previous progress report, providing a narrative discussion of any completed, missed, or delayed milestones, and identifying any updated milestones.¹⁹

Finally, EPA notes that depending on how the record develops for the proposed permit modification, it may become appropriate to issue the final modification with requirements based only on the permanent cessation subcategory (i.e., without also including permit conditions based on the low utilization subcategory). EPA is aware that several years have passed since the Permittee submitted the 2021 Modification Request which sought permit conditions based on both the low utilization and the permanent cessation subcategories. Therefore, if the Permittee should decide prior to issuance of the Final Permit Modification that it wishes to be covered by the permanent cessation subcategory, and it takes the necessary steps to transfer to this subcategory (and receive limits based on this subcategory), EPA may consider issuing a Final Permit Modification without requirements based on the low utilization subcategory and instead based solely on the permanent cessation subcategory, as outlined above. In such a scenario, it could be inefficient to modify the permit to include low utilization subcategory-based limits when the Permittee has already opted to be covered by the permanent cessation subcategory.²⁰

If the Permittee does seek to transfer to the permanent cessation subcategory prior to issuance of a Final Permit Modification, then to complete the transfer, it would still be required to follow all the steps outlined above and submit the required documentation. Additionally, because the Permittee would never have had a permit with the low utilization subcategory-based limits and conditions in effect, the requirements identified above and set forth in 40 CFR § 423.13(o)(3) would not apply and no BMP plan or annual BMP Plan certification requirements would be included in the Final Permit Modification.

5.4 Additional Permit Conditions for Qualifying Events

The regulations at 40 CFR § 423.18 specify that under certain exceptional circumstances, an electric generating unit can still qualify as a low utilization electric generating unit, or as a unit permanently ceasing the combustion of coal, even if it operates at levels beyond the requirements for those subcategories. The exceptional circumstances in question are as follows:

- an emergency order is issued by the Department of Energy under Section 202(c) of the

¹⁹ EPA also notes that under the proposed modification of Part I.C. of the 2020 Permit, if the Permittee opts into the permanent cessation subcategory, it will be relieved of certain biological monitoring requirements. See Section 6.0, below.

²⁰ EPA notes that under the 2020 ELGs, once a facility opts into coverage by the permanent cessation subcategory, it is not allowed to transfer to the low utilization subcategory after December 31, 2023. See 40 CFR §§ 423.13(o)(1)(i) and (ii).

- Federal Power Act;
- a reliability must run agreement is issued by a Public Utility Commission; or
 - any other reliability-related order or agreement issued by a competent electricity regulator (e.g., an independent system operator) which results in that unit operating in a way not contemplated when the certification was made; or
 - the operation of the electric generating unit was necessary for load balancing in an area subject to a declaration under 42 U.S.C. §§ 5121 *et seq.*, that there exists:
 - an “Emergency,” or a “Major Disaster,” and
 - that load balancing was due to the event that caused the “Emergency” or “Major Disaster” to be declared.

See 40 § CFR § 423.18(a). In order to be covered by the protections in this subsection, the regulations require certain documentation and recordkeeping by the permittee. See 40 CFR § 423.19(g). EPA has included these protections and documentation/recordkeeping provisions in the Draft Permit Modification in Part I.A.4D.

Additionally, the regulations also provide that a facility within the permanent cessation subcategory experiencing a material delay in meeting milestones for achieving permanent cessation by December 31, 2028, shall submit a Notice of Material Delay in accordance with 40 CFR §§ 423.19(j)(1) and (2). These requirements are also reflected in Part I.A.4D.3 of the Draft Permit Modification.

6.0 Biological Monitoring Sampling and Reporting Requirements

Part I.C requires two consecutive years of fish and invertebrate sampling beginning within two years of the effective date of the permit. On January 29, 2024, GSP requested that EPA modify the Biological Monitoring requirements at Part I.C of the 2020 Permit. See Letter from James S. Andrews, GSP, to Ken Moraff, EPA (Jan. 29, 2024).

Fish and invertebrate sampling is required in the 2020 Final Permit to support the Permittee’s CWA § 316(a) thermal variance request for the next issuance of the permit. GSP submitted a final study plan on June 29, 2022, that indicates biological sampling under Part I.C would be conducted during July through September in 2022 and 2023. See Attachment to June 29, 2022, email from E. Tillotson, GSP, to D. Gaito, EPA. According to an October 2023 communication with GSP staff, GSP completed two consecutive years of fish sampling in September 2023. GSP also completed one year of invertebrate sampling, but, according to GSP, high flows during July 2023 prevented invertebrate sampling during the second year. See Oct. 6, 2023, email thread between A. Palmer, GSP and D. Gaito, EPA. Under Part I.C of the 2020 Final Permit, GSP was required to submit a final report of the sampling results and related analyses by September 1, 2024 (i.e., within four years of the effective date of the Permit). Because conditions in the river prevented GSP from completing sampling in 2023, and consistent with the Permittee’s request, EPA proposes modifying the requirements at Part I.C to eliminate the requirement for consecutive years of sampling. In addition, the Draft Permit Modification extends the deadline for submitting the final report until March 4, 2025, which provides additional time to incorporate results and aligns the date for final report submission with

the submission date of the next permit application.

Finally, as indicated in the text of Part I.C of the 2020 Permit, the sampling results and related analyses in the final report are intended to support any request for a thermal variance for the next permit issuance. However, based on the proposed modifications to Part I.A.4 (including the addition of Parts I.A.4A through I.A.4D) of the permit, as explained above, the Permittee may convert from bottom ash transport limitations for low utilization electric generating units to limitations for electric generating units permanently ceasing coal combustion by December 31, 2028. See Draft Permit Modification Part I.A.4B. If the Permittee elects to permanently cease coal combustion at both generating units on or before December 31, 2028, the thermal discharge from those units will also cease, obviating the need for a future thermal variance. Under this circumstance, a final biological monitoring report with related analyses supporting a thermal variance request would not be necessary. Therefore, EPA proposes to modify Part I.C's requirement for submission of a final report to align with any decision to permanently cease coal combustion. The Draft Permit Modification provides that the Permittee is not required to submit a final biological monitoring report if, on or before March 4, 2025, the Permittee formally notifies EPA of its plans to opt into the permanent cessation subcategory for both generating units. See Part I.A.4B of the Draft Permit Modification. If the Permittee opts into the permanent cessation subcategory, it must still provide all biological monitoring data (in spreadsheet format) collected as of the date that it opts into the permanent cessation subcategory.

7.0 Federal Permitting Requirements

7.1 Endangered Species Act

Section 7(a) of the Endangered Species Act of 1973, as amended (ESA), grants authority to and imposes requirements on Federal agencies regarding species of fish, wildlife, or plants that have been federally listed as endangered or threatened ("listed species") and regarding habitat of such species that has been designated as critical ("critical habitat").

Section 7(a)(2) of the ESA requires every federal agency, in consultation with and with the assistance of the Secretary of Interior and/or the Secretary of Commerce, as appropriate, to ensure that any action it authorizes, funds, or carries out, in the United States or upon the high seas, is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of critical habitat. The United States Fish and Wildlife Service (USFWS) within the Department of Interior administers Section 7 consultations for terrestrial and freshwater organisms, while the National Oceanic and Atmospheric Administration's National Marine Fisheries Service within the Department of Commerce (NOAA Fisheries) administers Section 7 consultations for listed species of marine organisms (including marine mammals and marine reptiles), as well as for anadromous fish.

The federal action being considered in this case is EPA's proposed issuance of a modification of the 2020 Permit's limits and conditions for BATW discharges for the Merrimack Station. As the federal agency charged with authorizing Merrimack Station's pollutant discharges, EPA assesses potential impacts to

federally listed species and critical habitat and initiates consultation to the extent required under Section 7(a)(2) of the ESA.

EPA has researched whether federal endangered or threatened species of fish, wildlife, and plants are expected in the action area of the outfall to determine if EPA's proposed NPDES permit could potentially impact any such listed species in the Hooksett Pool area of the Merrimack River. There are no known federally listed threatened or endangered species or their critical habitat under the jurisdiction of NOAA Fisheries within the vicinity of the Facility's discharge(s).²¹ Therefore, ESA consultation with NOAA Fisheries is not required for this federal action.

For protected species under the jurisdiction of the USFWS, one listed endangered species, the northern long-eared bat (*Myotis septentrionalis*), was identified as potentially occurring in the action area of the Facility's discharge(s). According to the USFWS, the endangered northern long-eared bat is found in "winter – mines and caves, summer – wide variety of forested habitats." Because the Facility's projected action area associated with the Merrimack River overlaps with the general statewide range of the northern long-eared bat, EPA prepared a northern long-eared bat Determination Key profile for the Merrimack Station NPDES Permit modification and submitted it to USFWS. In response, the USFWS notified EPA by letter, dated December 22, 2023,²² that based upon the project information provided by EPA, along with a standing USFWS analysis, the USFWS has determined that the permit modification will have "No Effect" on the northern long-eared bat. The USFWS determination letter concluded EPA's consultation responsibilities for the Merrimack Station NPDES permit modification action under ESA Section 7(a)(2) with respect to the northern long-eared bat. No further ESA Section 7 consultation is required with USFWS.

Although the proposed permit action is deemed to have no effect on this listed species, EPA notified USFWS and NOAA Fisheries Protected Resources Division, at the beginning of the public comment period, that the Draft Permit Modification and Fact Sheet were available for review and provided a link to the EPA NPDES Permit website to allow direct access to the documents.

7.2 Essential Fish Habitat

Under the 1996 Amendments (PL 104-267) to the Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. §§ 1801, *et seq.*, EPA is required to consult with NOAA Fisheries if proposed actions that EPA funds, permits, or undertakes, "may adversely impact any essential fish habitat." See 16 U.S.C. § 1855(b).

The Amendments broadly define "essential fish habitat" (EFH) as: "waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." See 16 U.S.C. § 1802(10). "Adverse impact" means any impact that reduces the quality and/or quantity of EFH. 50 CFR § 600.910(a). Adverse effects may include direct effects (e.g., contamination or physical disruption), indirect effects (e.g., loss of prey,

²¹ For USFWS species, see <https://ipac.ecosphere.fws.gov/> and/or for NOAA Fisheries species at <https://www.fisheries.noaa.gov/resource/map/greater-atlantic-region-esa-section-7-mapper>

²² USFWS Consistency Letter, Project: 2024-0029728; December 22, 2023.

reduction in species' fecundity), site-specific effects, or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

EFH is only designated for fish species for which federal Fisheries Management Plans exist. See 16 U.S.C. § 1855(b)(1)(A). EFH designations for New England were approved by the U.S. Department of Commerce on March 3, 1999. A New England Fishery Management Council's Omnibus Essential Fish Habitat Amendment in 2017 updated the descriptions. In some cases, a narrative identifies rivers and other waterways that should be considered EFH due to present or historic use by federally managed species. In a letter to EPA New England dated October 10, 2000, NOAA Fisheries agreed that for NPDES permit actions, EFH initial notification for purposes of consultation can be accomplished in the EFH section of the Draft Permit's supporting Fact Sheet or Federal Register Notice.

A review of the relevant essential fish habitat information provided by NOAA Fisheries²³ indicated that the Merrimack Station discharge to the Hooksett Pool of the Merrimack River exists within designated EFH for Atlantic salmon (*Salmo salar*). EPA has determined that the operation of this Facility, as governed by this proposed permit modification, may adversely affect the EFH in the Merrimack River Hooksett Pool. However, the Draft Permit Modification has been conditioned to minimize impacts that could reduce the quality and/or quantity of EFH.

EPA believes that the conditions and limitations contained in the Draft Permit Modification adequately protect all aquatic life, as well as the essential fish habitat in the Hooksett Pool of the Merrimack River. Further mitigation is not warranted. Should adverse impacts to EFH be detected as a result of this permit action, or if new information is received that changes the basis for EPA's conclusions, NOAA Fisheries Habitat and Ecosystem Services Division will be contacted and an EFH consultation will be initiated.

At the beginning of the public comment period, EPA notified NOAA Fisheries Habitat and Ecosystem Services Division that the Draft Permit Modification and Fact Sheet were available for review and provided a link to the EPA NPDES Permit website to allow direct access to the documents. In addition to this Fact Sheet and the Draft Permit Modification, information to support EPA's finding was included in a memorandum under separate cover sent to the NOAA Fisheries Habitat and Ecosystem Services Division during the public comment period.

8.0 Public Comments, Hearing Requests, and Permit Appeals

All persons, including applicants, who believe any condition of the Draft Permit Modification is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to the permit writer, Sharon DeMeo at the following email address: demeo.sharon@epa.gov.

Prior to the close of the public comment period, any person may submit a written request to EPA for a public hearing to consider the Draft Permit Modification. Such requests shall state the nature of the issues

²³ NOAA Fisheries EFH information found at https://www.habitat.noaa.gov/apps/efhmapper/?page=page_3

proposed to be raised in the hearing. A public hearing may be held if the criteria stated in 40 CFR § 124.12 are satisfied. In reaching a final decision on the Draft Permit Modification, EPA will respond to all significant comments in a Response to Comments document attached to the Final Permit and make these responses available to the public on EPA's website.

Following the close of the comment period, and after any public hearings, if such hearings are held, EPA will issue a Final Permit decision, forward a copy of the final decision to the applicant, and provide a copy or notice of availability of the final decision to each person who submitted written comments or requested notice. Within 30 days after EPA serves notice of the issuance of the Final Permit decision, an appeal of the federal NPDES permit may be commenced by filing a petition for review of the permit with the Clerk of EPA's Environmental Appeals Board in accordance with the procedures at 40 CFR § 124.19.

If for any reason, comments on the Draft Permit and/or a request for a public hearing cannot be emailed to the permit writer specified above, please contact them at telephone number: (617) 918-1995.

9.0 Administrative Record

The administrative record on which this Draft Permit Modification is based may be accessed by contacting Sharon DeMeo at 617-918-1995 or via email to demeo.sharon@epa.gov.

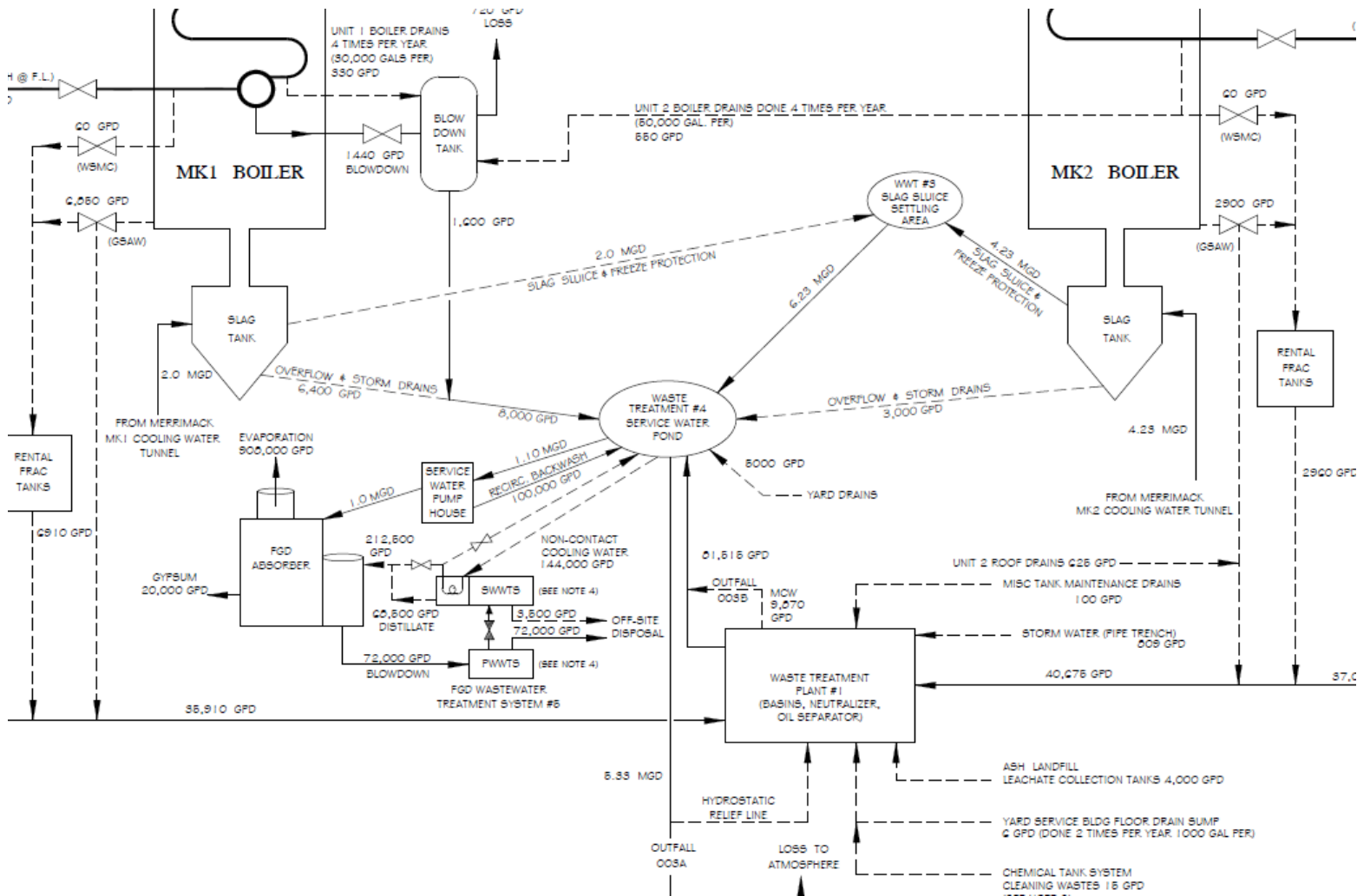
February 2024

Ken Moraff, Director
Water Division
U.S. Environmental Protection Agency

Figure 1: Location Map



Figure 2: Waste Treatment No. 4 Process Flow Diagram



Source: Updated BMP Plan (as described in footnote 7 above)

UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY-REGION 1 (EPA)
WATER DIVISION
5 POST OFFICE SQUARE
BOSTON, MASSACHUSETTS 02109

NEW HAMPSHIRE DEPARTMENT OF
ENVIRONMENTAL SERVICES (NHDES)
WATER DIVISION
P.O. BOX 95
CONCORD, NEW HAMPSHIRE 03302-0095

JOINT EPA PUBLIC NOTICE OF A DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT MODIFICATION TO DISCHARGE INTO WATERS OF THE UNITED STATES UNDER SECTION 402 OF THE CLEAN WATER ACT (CWA), AS AMENDED; NHDES PUBLIC NOTICE OF EPA REQUEST FOR STATE CERTIFICATION UNDER SECTION 401 OF THE ACT; AND NHDES PUBLIC NOTICE OF ISSUANCE OF A STATE SURFACE WATER PERMIT UNDER NH RSA 485-A:13, I(a).

PUBLIC NOTICE PERIOD: February 1, 2024 to March 4, 2024 (corrected)

PERMIT NUMBER: **NH0001465**

NAME AND MAILING ADDRESS OF APPLICANT:

Granite Shore Power Merrimack LLC
431 River Road
Bow, NH 03304

NAME AND LOCATION OF FACILITY WHERE DISCHARGE OCCURS:

Merrimack Station
431 River Road
Bow, NH 03304

RECEIVING WATER: Merrimack River

PREPARATION OF THE DRAFT PERMIT MODIFICATION:

EPA is issuing for public notice and comment the Draft NPDES Permit Modification for Granite Shore Power Merrimack LLC. The limits and permit conditions imposed have been drafted pursuant to, and assure compliance with, the CWA, including EPA-approved State Surface Water Quality Standards at Env-Wq 1700 et seq. NHDES cooperated with EPA in the development of the Draft NPDES Permit Modification. NHDES plans to adopt EPA's permit under Chapter 485-A of the New Hampshire Statutes (NH RSA 485-A:13, I(a)). The Draft Permit Modification contains requirements applicable to the facility's bottom ash transport water, which are fully explained in the Fact Sheet.

In addition, EPA has requested that NHDES grant or deny certification of this Draft Permit Modification pursuant to Section 401 of the CWA and implementing regulations. Under federal regulations governing the NPDES program at 40 Code of Federal Regulations (CFR) § 124.53(e), state certification shall contain conditions that are necessary to assure compliance with the applicable provisions of CWA sections 208(e), 301, 302, 303, 306, and 307 and with appropriate requirements of State law, including any conditions more stringent than those in the Draft Permit Modification that NHDES finds necessary to meet these requirements. In addition, NHDES may provide a statement of the extent to which each condition of the Draft Permit Modification be made less stringent without violating the requirements of State law.

INFORMATION ABOUT THE DRAFT PERMIT MODIFICATION:

The Draft Permit Modification and explanatory Fact Sheet may be obtained at no cost at <https://www.epa.gov/npdes-permits/new-hampshire-draft-individual-npdes-permits> or by contacting:

Sharon DeMeo
U.S. Environmental Protection Agency – Region 1
5 Post Office Square, Suite 100 (06-1)
Boston, MA 02109-3912
Telephone: (617) 918-1995
demeo.sharon@epa.gov

The public can request to review the administrative record in person at the EPA Boston office from the EPA contact above. Electronically available documents that are part of the administrative record can be requested from the EPA contact above.

PUBLIC COMMENT AND REQUEST FOR PUBLIC HEARING:

All persons, including applicants, who believe any condition of the Draft Permit Modification is inappropriate must raise all reasonably ascertainable issues and submit all reasonably available arguments supporting their position by March 4, 2024 (corrected), which is the close of the public comment period. Comments, including those pertaining to EPA's request for CWA § 401 certification and/or NHDES proposed issuance of a State Surface Water Permit, should be submitted to the EPA contact at the address or email address listed above. Comments submitted in hard copy form must also be emailed to the EPA contact above. Upon the close of the public comment period, EPA will make all comments available to NHDES.

Any person, prior to the close of the public comment period, may submit a request in writing to EPA and NHDES for a public hearing on the Draft Permit Modification under 40 CFR § 124.10, CWA § 401 certification and/or NHDES proposed issuance of a State Surface Water Permit. Such requests shall state the nature of the issues proposed to be raised in the hearing. A public hearing may be held after at least thirty days public notice if the Regional Administrator finds that response to this notice indicates significant public interest. In reaching a final decision on

the Draft Permit Modification, the Regional Administrator will respond to all significant comments and make the responses available to the public.

FINAL PERMIT DECISION:

Following the close of the comment period, and after a public hearing, if such hearing is held, the Regional Administrator will issue a final permit decision and notify the applicant and each person who has submitted written comments or requested notice.

KEN MORAFF, DIRECTOR
WATER DIVISION
UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY – REGION I

RENE PELLETIER, DIRECTOR
WATER DIVISION
NEW HAMPSHIRE DEPARTMENT OF
ENVIRONMENTAL SERVICES