AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

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

GSP Schiller LLC

is authorized to discharge from the facility located at

Schiller Station
400 Gosling Road
Portsmouth, NH 03801

to receiving waters named

Piscataqua River
(USGS Hydrologic Basin Code 01060003)

in accordance with effluent limitations, monitoring requirements and other conditions set forth in the permit issued on April 6, 2018 and modified on March 25, 2020, except as modified with new language, as shown in **bold**, in Part I.A.2 and Part I.A.11.

This permit modification shall become effective on June 20, 2023.

This permit and the authorization to discharge expire at midnight, June 30, 2023.

This modified permit is issued pursuant to 40 CFR § 124.5 and revises and supersedes the relevant portions of the permit issued on April 6, 2018.

This permit consists of: Part I, which includes effluent limitations, monitoring and reporting requirements and conditions; as well as 25 pages in Part II, which includes General Conditions and Definitions.

Signed this 17th day of May 2023

KENNETH MORAFF
Digitally signed by KENNETH MORAFF
Date: 2023.05.17 08:16:18 -04'00'

Ken Moraff, Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency
Region I - New England
Boston, Massachusetts

PART I.A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall number **001: non-contact cooling water** to the Piscataqua River. Such discharges shall be limited and monitored by the permittee as specified below.

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Average Monthly	Maximum Daily	Frequency[5]	Sample Type
Flow (million gallons/day [MGD])	40	40	Quarterly[6]	Recorder
Total Residual Oxidant (mg/L)[1]	--	0.2[2]	Daily – when in use	Grab
Oil & Grease (mg/L)	15	20	Quarterly[6]	Grab
Temperature (°F)	Report	95[3]	Hourly – when in use	Grab
Temperature Rise (°F)	Report	25[4]	Hourly – when in use	Calculate[7]

Samples taken in compliance with the monitoring requirements specified above shall be taken at a representative point prior to discharge into the receiving water.

1 Total residual oxidant (TRO) may not be discharged for more than two hours in any one day unless the facility can demonstrate to the Regional Administrator that the unit in this particular location cannot operate at or below this level of oxidation. The term "Regional Administrator" means the Regional Administrator of Region 1 of the U.S. Environmental Protection Agency.

2 This TRO limit shall not be exceeded at any time (instantaneous maximum); not a maximum daily limit.

3 The 95°F temperature limit shall not be exceeded at any time (instantaneous maximum). At no time shall the discharge cause the receiving water to exceed a maximum temperature of 84°F at a distance of 200 feet in any direction from the point of discharge.

4 The temperature rise limitation is increased from 25°F to 30°F for a three-hour period each day during condenser maintenance.

5 The permittee shall make note on monthly Discharge Monitoring Reports (DMRs) when monitoring is performed during periods other than “dry weather.” Dry weather is defined as at least seventy-two (72) hours following a storm event that results in an actual discharge of stormwater from the outfall (“measurable storm event”). If no sampling is required for a particular parameter and monitoring period, the permittee should enter the appropriate No Data Indicator Code (NODI) in the monthly DMR.

6 This parameter shall be monitored during each calendar quarter (January-March, April-June, July-September, and October-December) and reported on the monthly DMR following the end of each calendar quarter (i.e., April, July, October, and January).

7 Temperature rise is defined as the difference between the influent (ambient) temperature and the effluent (discharge) temperature.

2. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall numbers **002 (Unit #4), 003 (Unit # 5) and 004 (Unit #6): non-contact cooling water and condenser hotwell drains**. Such discharges shall be limited and monitored by the permittee as specified below.

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Average Monthly	Maximum Daily	Frequency[5]	Sample Type
Outfall 002 Flow (MGD)	--	52.2	Continuous	Recorder
Outfall 003 Flow (MGD)	--	50.2	Continuous	Recorder
Outfall 004 Flow (MGD)	--	50.2	Continuous	Recorder
Total Residual Oxidants (mg/L)[1]	--	0.2[2]	Daily – when in use	Grab
Temperature (°F)	Report	95[3]	Hourly – when in use	Grab
Temperature Rise (°F)	Report	25[4]	Hourly – when in use	Calculate[6]

Samples taken in compliance with the monitoring requirements specified above shall be taken at a representative point prior to discharge into the receiving water.

[1] Total residual oxidants (TRO) may not be discharged for more than two hours in any one day from any one unit unless the facility can demonstrate to the Regional Administrator that the unit in this particular location cannot operate at or below this level of oxidation. The term "Regional Administrator" means the Regional Administrator of Region 1 of the U.S. Environmental Protection Agency.

[2] This TRO limit shall not be exceeded at any time (instantaneous maximum); not a maximum daily limit.

[3] The 95°F temperature limit shall not to be exceeded at any time (instantaneous maximum). At no time shall the discharge cause the receiving water to exceed a maximum temperature of 84°F at a distance of 200 feet in any direction from the point of discharge.

[4] The temperature rise limitation is increased from 25°F to 30°F for a three-hour period each day during condenser maintenance.

[5] If no sampling is required for a particular parameter and monitoring period, the permittee should enter the appropriate No Data Indicator Code (NODI) in the monthly Discharge Monitoring Report (DMR).

[6] Temperature rise is defined as the difference between the influent (ambient) temperature and the effluent (discharge) temperature.

During the period beginning on the effective date of the Modified Permit, the permittee is authorized to withdraw cooling water at the cooling water intake structures designated as SUM A. The intake shall be limited and monitored by the permittee as specified below.

Effluent Characteristic	Discharge Limitations		Monitoring Requirements	
	Average Monthly	Maximum Daily	Frequency[7]	Sample Type
Total Intake Flow April 1 – October 31 (MGD)[8]	41.8	125.8	Continuous	Calculate
Total Intake Flow (November 1 – March 31) (MGD)[8]	83.6	125.8	Continuous	Calculate
12-Month Average Total Intake Flow (MGD)[9]	30.19	---	Continuous	Calculate
12-Month Percent Screen Efficiency[9]	24	---	Daily	Calculate

[7] **Intake flows shall be monitored on a continuous basis and reported on the monthly DMR. If the intake volume is zero for a particular monitoring period, the permittee should enter the appropriate No Data Indicator Code (NODI) in the monthly Discharge Monitoring Report (DMR).**

[8] **"Sum A" is defined as the combination of intake structures for Units 4, 5, and 6. Total Intake Flow is the combined total intake of cooling water for Units 4, 5, and 6. The seasonal intake flow limitations must be met if the Permittee chooses to comply with the alternative entrainment BTA at Part I.A.11.a.1.i of this permit. The combined total intake flow shall not exceed the total discharge.**

[9] **The 12-month average for total intake flow and percent screen efficiency are rolling averages calculated using the values for the reporting month and the preceding 11 months. Screen efficiency is a calculation of impingement mortality at the traveling screens. See Part I.A.11.a.3. of the Permit.**

3. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall number **006: emergency boiler blowdowns, boiler condensate and deaerator overflows**. The outfall consists of 6 pipes; 2 for each of Units 4, 5, and 6. Such discharges shall be limited and monitored by the permittee as specified below.

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	Average Monthly	Maximum Daily	Min	Max	Frequency[3]	Sample Type
Flow[1] (Gallons)	--	Report	--	--	When in use	Estimate
pH[2] (S.U.)	--	--	6.5	8.0	When in use	Grab
Total Suspended Solids (mg/L)	30	100	--	--	When in use	Grab
Oil & Grease (mg/L)	15	20	--	--	When in use	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at a representative point prior to discharge into the receiving water. The boiler blowdown sampling station shall be at a representative point.

[1] The discharge consists only of boiler blowdowns during an emergency condition or when a boiler experiences a severe disruption. The duration and amount of flow shall be estimated when a discharge occurs. The amount (gallons) shall be reported in the monthly DMR and the duration (hours) shall be submitted as an attachment. The flow estimate shall not include the steam portion of the discharge.

[2] The permittee shall evaluate pH control methods for the emergency blowdowns to ensure permit compliance.

[3] The permittee shall make note on monthly DMRs when monitoring is performed during periods other than "dry weather." Dry weather is defined as at least seventy-two (72) hours following a storm event that results in an actual discharge of stormwater from the outfall ("measurable storm event"). If no sampling is required for a particular parameter and monitoring period, the permittee should enter the appropriate No Data Indicator Code (NODI) in the monthly DMR.

4. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall number **011: heater condensate drips**. The effluent from 3 individual pipes combine to create the culverted outfall. Such discharges shall be limited and monitored by the permittee as specified below.

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	Average Monthly	Maximum Daily	Min	Max	Frequency[2]	Sample Type
Flow (GPD)	Report	Report	--	--	Quarterly[3,4]	Estimate
Total Suspended Solids (mg/L)	30	100	--	--	Quarterly[3,4]	Grab
Oil & Grease (mg/L)	15	20	--	--	Quarterly[3,4]	Grab
pH[1] (S.U.)	--	--	6.5	8.0	Quarterly[3,4]	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at a representative point prior to discharge into the receiving water. A representative sample must include the combined discharge of all discharging pipes.

[1] The pH shall not be less than 6.5 standard units (S.U.) nor greater than 8.0 S.U., unless due to naturally occurring conditions.

[2] If no sampling is required for a particular parameter and monitoring period, the permittee should enter the appropriate No Data Indicator Code (NODI) in the monthly Discharge Monitoring Report (DMR).

[3] This parameter shall be monitored during each calendar quarter (January-March, April-June, July-September, and October-December) and reported on the monthly DMR following the end of each calendar quarter (i.e., April, July, October, and January).

[4] All sampling shall be performed during dry weather. “Dry weather” is defined as at least seventy-two (72) hours following a storm event that results in an actual discharge of stormwater from the outfall (“measurable storm event”).

5. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall number **015: treated effluent from WWTP #1**. This discharge will only be used during essential maintenance of WWTP #2; i.e., sludge removal from the fireside basin. Only treated plant demineralization reagent wastes, chemical lab drains, oil separator wastes, and other routine wastes from day-to-day operation may be discharged. WWTP #1 is not allowed to treat coal pile runoff. Such discharges shall be limited and monitored by the permittee as specified below.

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	Average Monthly	Maximum Daily	Min	Max	Frequency[1]	Sample Type
Flow (GPD)	61,800	85,300	--	--	Continuous	Recorder
Total Suspended Solids (mg/L)	30	100	--	--	Daily when in use	Grab
Oil & Grease (mg/L)	15	20	--	--	Daily when in use	Grab
pH (S.U.)	--	--	6.5	8.0	Daily when in use	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at a representative point prior to discharge into the receiving water.

[1] If no sampling is required for a particular parameter and monitoring period, the permittee should enter the appropriate No Data Indicator Code (NODI) in the monthly Discharge Monitoring Report (DMR).

6. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from internal outfall number **016: treated effluent from WWTP #2**. This discharge may not include chemical metal cleaning waste; treated chemical metal cleaning waste is subject to requirements in section I.A.7 below. Such discharges shall be limited and monitored by the permittee as specified below.

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	Average Monthly	Maximum Daily	Min	Max	Frequency[1]	Sample Type
Flow (GPD)	216,000	360,000	--	--	Continuous	Recorder
Total Suspended Solids (mg/L)	30	100	--	--	Monthly	Grab
Oil & Grease (mg/L)	15	20	--	--	Monthly	Grab
pH (S.U.)	--	--	6.0	9.0	Continuous	Recorder
Total Copper (mg/L)	1.0	1.0	--	--	Monthly[3]	Grab
Total Iron (mg/L)	1.0	1.0	--	--	Monthly[3]	Grab
Total Nitrogen (mg/L)	--	Report	--	--	Quarterly[2]	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at a representative point prior to mixing with discharges from any other outfall.

[1] If no sampling is required for a particular parameter and monitoring period, the permittee should enter the appropriate No Data Indicator Code (NODI) in the monthly Discharge Monitoring Report (DMR).

[2] This parameter shall be monitored during each calendar quarter (January-March, April-June, July-September, and October-December) and reported on the monthly DMR following the end of each calendar quarter (i.e., April, July, October, and January).

[3] Copper and iron limits apply only when non-chemical metal cleaning waste (NCMCW) is present in the discharge. If non-chemical metal cleaning waste (NCMCW) is discharged from this outfall in a given month (i.e., NCMCW is not segregated and discharged via Outfall 017), the permittee shall collect the effluent sample when NCMCW is present in the discharge. If NCMCW is the only type of waste stream present in the discharge, the copper and iron limits will apply directly to the effluent data. If NCMCW is comingled with other dissimilar waste streams, the measured effluent data must be multiplied by a dilution factor based on an up-to-date combined waste stream formula (CWF) to demonstrate compliance with the 1.0 mg/L limits on the NCMCW only. In this case, the detailed calculations of the CWF (describing each parameter and assumption), as well as any future updates to the CWF, shall be submitted to EPA as a NetDMR attachment (See Section I.B.2 below) prior to implementation. If NCMCW is not present in the discharge, the Permittee may use NODI code "9" (i.e., conditional limit not required) for copper and iron reporting requirements during that monitoring period.

7. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from internal outfall number **017: treated metal cleaning waste (chemical and/or non-chemical) from WWTP #2 or an alternate holding/treatment tank prior to comingling with any other waste streams**. Such discharges shall be limited and monitored by the permittee as specified below.

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	Average Monthly	Maximum Daily	Min	Max	Frequency[1]	Sample Type
Flow (GPD)	Report	360,000	--	--	Continuous, when in use	Recorder
Total Suspended Solids (mg/L)	30	100	--	--	Daily, when in use	Grab
Oil & Grease (mg/L)	15	20	--	--	Daily, when in use	Grab
Total Copper (mg/L)	1.0	1.0	--	--	Daily, when in use	Grab
Total Iron (mg/L)	1.0	1.0	--	--	Daily, when in use	Grab
pH (S.U.)	--	--	6.0	9.0	Continuous, when in use	Recorder
Total Nitrogen (mg/L)	--	Report	--	--	Quarterly, when in use[2]	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at a representative point prior to mixing with discharges from any other outfall.

[1] If no sampling is required for a particular parameter and monitoring period, the permittee should enter the appropriate No Data Indicator Code (NODI) in the monthly Discharge Monitoring Report (DMR).

[2] This parameter shall be monitored during each calendar quarter (January-March, April-June, July-September, and October-December) and reported on the monthly DMR following the end of each calendar quarter (i.e., April, July, October, and January).

8. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall number **018: heater condensate drips**. Such discharges shall be limited and monitored by the permittee as specified below.

Effluent Characteristic	Discharge Limitations				Monitoring Requirements	
	Average Monthly	Maximum Daily	Min	Max	Frequency[2]	Sample Type
Flow (GPD)	Report	Report	--	--	Quarterly[3,4]	Estimate
Total Suspended Solids (mg/L)	30	100	--	--	Quarterly[3,4]	Grab
Oil & Grease (mg/L)	15	20	--	--	Quarterly[3,4]	Grab
pH[1] (S.U.)	--	--	6.5	8.0	Quarterly[3,4]	Grab

Samples taken in compliance with the monitoring requirements specified above shall be taken at a representative point prior to discharge into the receiving water. A representative sample must include the combined discharge of all discharging pipes.

[1] The pH shall not be less than 6.5 standard units (S.U.) nor greater than 8.0 S.U., unless due to naturally occurring conditions. The pH sampling may be reduced to a single grab sample from any of the 3 pipes.

[2] If no sampling is required for a particular parameter and monitoring period, the permittee should enter the appropriate No Data Indicator Code (NODI) in the monthly Discharge Monitoring Report (DMR).

[3] This parameter shall be monitored during each calendar quarter (January-March, April-June, July-September, and October-December) and reported on the monthly DMR following the end of each calendar quarter (i.e., April, July, October, and January).

[4] All sampling shall be done during dry weather. “Dry weather” is defined as at least seventy-two (72) hours following a storm event that results in an actual discharge of stormwater from the outfall (“measurable storm event”).

9. During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from outfall numbers **020 and 021: intake screen wash (Outfall 020 serves intake for Unit 4; Outfall 021 serves intake for Units 5 and 6)**. Such discharges shall be limited and monitored by the permittee as specified below.

Effluent Characteristic[1,2]	Discharge Limitations		Monitoring Requirements	
	Average Monthly	Maximum Daily	Frequency	Sample Type
Outfall 020 Flow (GPD)	--	108,000	Monthly	Estimate
Outfall 021 Flow (GPD)	--	108,000	Monthly	Estimate

Samples taken in compliance with the monitoring requirements specified above shall be taken at a representative point prior to discharge into the receiving water.

1 The temperature of the discharge shall at no time exceed the temperature of the intake water used for this discharge.

2 All live fish, shellfish and other organisms collected or trapped on the intake screens should be returned to their habitat, sufficiently distant from the intake structures to prevent re-impingement. All other material, except natural debris (e.g., leaves), shall, to the extent practicable, not be returned to the receiving waters and, in any event, shall be disposed of in accordance with all existing federal, state, and/or local laws and regulations that apply to waste disposal.

10. Water Quality Requirements

a. Discharges and water withdrawals shall not cause a violation of the water quality standards or jeopardize any Class B use of the Piscataqua River.

b. The thermal plumes from the station shall: (a) not block zones of fish passage, (b) not interfere with spawning of indigenous populations, (c) not change the balanced indigenous population of the receiving water, and (d) have minimal contact with surrounding shorelines.

c. The effluent shall not contain metals and/or materials in concentrations or in combinations which are hazardous or toxic to aquatic life or which would impair the uses designated by the classification of the receiving water.

d. Discharges to the Piscataqua River shall be adequately treated to ensure that the surface water remains free from pollutants in concentrations or combinations that settle to form harmful deposits, float as foam, debris, scum or other visible pollutants. They shall be adequately treated to ensure that the surface waters remain free from pollutants which produce odor, color, taste, or turbidity in the receiving water which is not naturally occurring and would render it unsuitable for its designated uses.

e. Pollutants which are not limited by the permit, but have been specifically disclosed in the last permit application, may be discharged at the frequency and level disclosed in the application, provided that such discharge does not violate sections 307 and 311 of the Act or applicable water quality standards.

11. Cooling Water Intake Structure Requirements to Minimize Adverse Impacts from Impingement and Entrainment

a. 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 (*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 this facility:

1. To minimize entrainment, the permittee shall

i. Limit cooling water intake in accordance with the total flow limitations at Part I.A.2 of this permit; *or*

ii. install and operate a fine mesh wedgewire screen intake system for the CWIS's of Units 4, 5, and 6, with a pressurized air system to clear debris from the screens. For this permit, the screen must have a slot or

mesh size no greater than 0.8 mm, unless the permittee can demonstrate through a site-specific study that a larger slot size is equally or more effective for reducing entrainment mortality as a 0.8 mm slot or mesh size. The site-specific study must evaluate 0.8 mm slots concurrently with any larger slot sizes. Screens must be constructed from material or incorporate a coating designed to reduce fouling. The wedgewire screen units must be positioned as close to the west bank of the Piscataqua 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, the permittee shall

i. Operate a system of technologies, management practices, and operational measures to minimize impingement mortality of all life stages of fish and shellfish, including latent mortality (evaluated after 48 hours). The Permittee must demonstrate the system of technology has been optimized by completing an impingement technology performance optimization study as described in 40 CFR § 122.21(r)(6). The optimization study must include monitoring during every month in which at least one of the CWISs operates.[1] A summary of the study and recommendations for optimal performance must be submitted to EPA and NHDES within 3 months from completion of 24 months of impingement monitoring; *or*

ii. maintain a through-screen velocity at the wedgewire screens no greater than 0.5 fps. The permittee shall continuously monitor the through-screen velocity daily and report the average monthly and daily maximum through-screen intake velocity at the screens in the discharge monitoring report.

3. If the Permittee elects the "system of technologies" as described in Part I.A.11.a.2.i, above, the Permittee must demonstrate that the 12-month impingement mortality of all life stages of species, including latent mortality (evaluated after 48 hours) is no greater than 24 percent. The mortality percentage is calculated as:

$$\frac{\textit{number of impinged fish killed}}{\textit{number of fish impinged}}$$

The "number of impinged fish killed" is the total number of fish killed (including latent mortality) during a calendar month based on

[1] **The minimum monitoring frequency during a calendar month is one 6-hour sampling event for every 24 hours of operation. If operation continues for 7 or more consecutive days, the maximum monitoring frequency is 24 hours per 7 days. No impingement monitoring is required during calendar months in which the CWISs do not operate. The 24-month impingement monitoring period does not necessarily represent consecutive months.**

impingement monitoring at all three units combined. The "number of fish impinged" is the sum of the total number of fish impinged, or that would have been impinged if operating at design flow, at all three units combined (calculated based on the rate of impingement per million gallons, observed during impingement monitoring described in Part I.A.11.a.2.i) during the calendar month. The monthly impingement mortality percentage for any month in which the Facility does not operate is zero. The 12-month rolling average is calculated from the average monthly percent impingement mortality for the reporting month and the preceding 11 months. The Permittee must keep records of the calculation and supporting information in accordance with Part II.C.1 of this Permit.

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. **Any volume withdrawn from the units' intake pumps, whether generating electricity or not, contributes to the calculation of "total flow" in Part I.A.2.**

5. **If the permittee installs wedgewire screens,** 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. The permittee shall minimize the use of the emergency intake system to the greatest extent possible. Within twenty-four (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.

6. 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.

b. Compliance Schedule. **If the Permittee elects to install wedgewire screens in order** to comply with Part I.A.11.a of this permit, the permittee will need to

install and operate new equipment.[2] This part of the permit provides a schedule by which the permittee shall attain compliance with Part I.A.11.a of the permit. Specifically, steps for the installation and operation of equipment required to comply with Part I.A.11.a 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 fourteen (14) days following each specified deadline.

1. Design

   i. The permittee shall finalize the pilot testing design and obtain and install all equipment required for pilot testing within six (6) months from the effective date of the permit.

   ii. The permittee shall complete pilot testing of wedgewire screens no later than eighteen (18) months from the effective date of this permit.

   iii. A demonstration report documenting the results of the pilot testing shall be submitted to EPA and NHDES by July 30, 2020. The demonstration report shall include a preliminary design of the wedgewire screens at Schiller Station and include justifications for 1) the proposed screen slot size based on observation of each slot size's ability to reduce entrainment mortality relative to baseline entrainment, as measured concurrently at the existing traveling screens, avoid screen clogging, fouling or other maintenance issues, and any other relevant considerations; 2) the proposed material alloy choice for the equipment in order to reduce bio-fouling; and 3) the proposed optimal screen orientation in the river (i.e., parallel or perpendicular to the flow) in order to reduce entrainment and impingement mortality. The screen slot size and orientation selected will be based upon the results of the pilot testing and demonstration report and subject to EPA review and comment within sixty (60) days from submission.

   iv. Data collection, including but not limited to topographic and bathymetric surveys, geotechnical exploration, and other design and marine construction variables that need to be evaluated shall be completed by August 29, 2020.

   v. The permittee shall submit a final design for the wedgewire screens at Schiller Station by December 30, 2020 and in accordance with EPA's review of and comments on the preliminary design.

[2] The milestones in this Compliance Schedule are based on the effective date of the 2018 Final Permit and are not being modified in this Permit Modification.

2. Permitting

i. Within eight (8) months from the submission of the final design, the permittee shall complete submission of all permit applications and notices necessary to install wedgewire screens at the Units 4, 5, and 6 CWISs, including those required by U.S. Army Corps of Engineers (ACOE), National Marine Fisheries Service (NMFS), NHDES, New Hampshire Division of Coastal Zone Management, local conservation commissions, and others as necessary.

ii. In the event that more than twelve (12) months elapses between submitting all necessary permit application and notices and the completion of the permitting process, the permittee shall submit an annual report demonstrating progress towards obtaining all necessary permit approvals. Until all necessary permits and approvals are obtained, this report shall be submitted every twelve (12) months from the deadline for completing submission of necessary applications described in (i), above.

3. Construction

i. Within three (3) months of obtaining all necessary permits and approvals, the permittee shall enter into an Engineering, Procurement and Construction agreement with the permittee's contractor or report to EPA that the permittee has made other appropriate arrangements to commence construction.

ii. No later than twelve (12) months after obtaining all permits and approvals, the permittee shall complete site preparation for the installation of wedgewire screens for the Units 4, 5 and 6 CWISs. The permittee shall minimize environmental and navigational impacts during construction and installation. In addition, EPA will work with representatives of Schiller Station and, as appropriate, the ISO to schedule any necessary downtime of the power plant that will minimize or eliminate any effects on the adequacy of the region's supply of electricity.

iii. Within twenty (20) months from obtaining all permits and approvals, the permittee shall complete installation, operational modifications, test, startup and commissioning of the wedgewire screens for the CWIS's of Units 4, 5 and 6.

12. Water Treatment Chemicals

a. The Regional Administrator or the Director shall be notified in advance of any addition and/or change of chemicals containing pollutants not approved for water discharge and may require additional feasibility studies.

b. The permittee may add and/or change maintenance chemicals containing pollutants not currently approved for water discharge only if the permittee can demonstrate through testing that each of the 126 priority pollutants in 40 CFR Part 423.15(j)(1) is not detectable in the final discharge.

13. Maintenance, Diagnostic and Repair Materials

The use of Rhodamine WT dye and fine wood sawdust is allowed when the need arises, provided that the permittee: 1) notify EPA and NHDES at least thirty (30) days prior to the addition of these materials to any water stream that will ultimately be discharged to the Piscataqua River and 2) meets the requirements in Part I.A.1 of this permit. The initial notification shall include the following projections:

Rhodamine WT Dye

a. The expected maximum concentration of Rhodamine WT dye that will be discharged to the receiving water before dilution and the projected duration of the maximum concentration;

b. The total volume of Rhodamine WT dye to be introduced and the resulting average concentration expected at the outfall before dilution; and

c. The beginning time and duration the material is expected to be discharged to the receiving water at detectable levels, before dilution.

Fine Wood Sawdust

d. The total amount in pounds of sawdust introduced and the expected maximum total suspended solids (TSS) concentration of the effluent before dilution and the projected duration of the maximum concentration; and

e. The beginning time and duration the material is expected to be discharged to the receiving water at detectable levels, before dilution.

14. Thermal Mixing Zone Requirements

a. The thermal mixing zone is defined as 200 feet upstream (flood tide) and 200 feet downstream (ebb tide) of the discharge from outfalls 001, 002, 003 and 004, with a width of 200 feet from the shoreline.

b. The mixing zone criteria for the thermal plume are such that at no time shall the temperature of the receiving water outside the mixing zone exceed a maximum temperature of 84°F at any point beyond a distance of 200 feet in any direction from the point of discharge. Brief excursions are allowed only during tidal reversal periods (i.e., the period lasting 15 minutes before and 15 minutes after slack tide).

c. Outside the thermal mixing zone, the natural seasonal temperature cycle of the receiving water shall remain unchanged by the discharge, the annual spring and fall temperature and salinity changes shall be gradual, and large day to day

temperature and salinity fluctuations shall be avoided.

15. Other Requirements

a. There shall be no discharge of polychlorinated biphenyl (PCB) compounds such as those commonly used for transformer fluid. The permittee shall dispose of all known PCB equipment, articles, and wastes in accordance with 40 CFR 761.

b. Water drawn from fuel oil tanks shall not be discharged into the Piscataqua River.

c. Chlorine only may be used as a biocide. No other biocide shall be used without explicit approval from EPA.

d. The permittee shall comply with all existing federal, state, and local laws and regulations that apply to the reuse or disposal of solids, such as those which may be removed from water and waste treatment operations and equipment cleaning. At no time shall these solids be discharged to the Piscataqua River.

e. All existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Regional Administrator as soon as they know or have reason to believe (40 CFR §122.42):

1. 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:"

i. One hundred micrograms per liter (100 ug/l);

ii. Two hundred micrograms per liter (200 ug/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/L) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;

iii. Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR §122.21(g)(7); or

iv. Any other notification level established by the Regional Administrator in accordance with 40 CFR §122.44(f).

2. 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:"

i. Five hundred micrograms per liter (500 ug/l);

ii. One milligram per liter (1 mg/l) for antimony;

iii. Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR §122.21(g)(7); or

iv. Any other notification level established by the Regional Administrator in accordance with 40 CFR §122.44(f).

3. 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.

B. MONITORING AND REPORTING

The monitoring program in the permit specifies sampling and analysis, which will provide continuous information on compliance and the reliability and effectiveness of the installed pollution abatement equipment. The approved analytical procedures found in 40 CFR Part 136 are required unless other procedures are explicitly required in the permit. The permittee is obligated to monitor and report sampling results to EPA and the NHDES within the time specified within the permit.

In accordance with 40 C.F.R. § 122.44(i)(1)(iv), the Permittee shall use sufficiently sensitive test procedures (i.e., methods) approved under 40 C.F.R. § 136 or required under 40 C.F.R. Chapter I, Subchapter N or O, for the analysis of pollutants or pollutant parameters limited in this permit (except WET). A method is considered "sufficiently sensitive" when either 1) The method minimum level is at or below the level of the applicable water quality criterion or permit effluent limitation for the measured pollutant or pollutant parameter; or 2) The method has the lowest minimum level of the analytical methods approved under 40 C.F.R. § 136 or required under 40 C.F.R. Chapter I, Subchapter N or O for the measured pollutant or pollutant parameter. The "minimum level" is the lowest level at which the test equipment produces a recognizable signal and acceptable calibration point for a pollutant or pollutant parameter, representative of the lowest concentration at which a pollutant or pollutant parameter can be measured with a known level of confidence.

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 DMRs and the Use of NetDMR

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 accessed from the internet at https://netdmr.zendesk.com/hc/en-us.

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.B.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/OEP

The following requests, reports, and information described in this permit shall be submitted to the EPA/OEP NPDES Applications Coordinator in the EPA Region 1 Water Division.

A. Transfer of permit notice
B. Request for changes in sampling location
C. Request for reduction in monitoring frequency
D. Change in location, design or capacity of cooling water intake structures
E. Wedgewire screen pilot testing demonstration report
F. Final design plans for the wedgewire screen installation

These reports, information, and requests shall be submitted to EPA/OEP electronically at R1NPDES.Notices.OEP@epa.gov or by hard copy mail to the following address:

U.S. Environmental Protection Agency
Water Division
EPA/OEP NPDES Applications Coordinator
5 Post Office Square - Suite 100 (OEP06-03)
Boston, MA 02109-3912

4. Submittal of Reports in Hard Copy Form

The following notifications and reports shall be submitted as hard copy with a cover letter describing the submission. These reports shall be signed and dated originals submitted to EPA.

A. Written notifications required under Part II
B. 316(b) compliance schedule milestone reports

This information shall be submitted to EPA/OES at the following address:

U.S. Environmental Protection Agency
Enforcement and Compliance Assurance Division
Water Technical Unit
5 Post Office Square, Suite 100 (OES04-SMR)
Boston, MA 02109-3912

5. State Reporting

Unless otherwise specified in this permit, 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 and I.B.4 also shall be submitted to the State electronically via email to the Permittee's assigned NPDES inspector, permit engineer and compliance supervisor at NHDES-WD or in hard copy to the following address:

Attn: Compliance Supervisor
New Hampshire Department of Environmental Services
Water Division
Wastewater Engineering Bureau
P.O. Box 95
Concord, New Hampshire 03302-0095

An annual report on the impinged lobsters and other biota detected from any screen wash sampling in July and August is to be sent to the NH Fish and Game Department's Marine Fisheries Division Chief at the following address:

NH Fish and Game Department
Marine Division
225 Main Street
Durham, NH 03824

6. Verbal Reports and Verbal Notifications

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 NHDES. This includes verbal reports and notifications which require reporting within 24 hours. (As examples, see Part II.B.4.c.(2), Part II.B.5.c.(3), and Part II.D.1.e.) Verbal reports and verbal notifications shall be made to EPA's Enforcement and Compliance Assurance Division at:

617-918-1510

Verbal reports and verbal notifications shall also be made to the permittee's assigned NPDES inspector at NHDES –WD.

C. STATE PERMIT CONDITIONS

This NPDES discharge permit is issued by the U.S. Environmental Protection Agency under Federal and State law. Upon final issuance by the EPA, the NHDES-WD may adopt this permit, including all terms and conditions, as a State permit pursuant to RSA 485-A:13.

Each Agency shall have the independent right to enforce the terms and conditions of this permit. 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.

A relaxation of the pH limits is allowed if the permittee performs an in-stream dilution study that demonstrates that the in-stream standards for pH would be protected. If NHDES approves results from a pH demonstration study, this permit's pH limit range may be relaxed for some or all relevant outfalls. Note that with so many outfalls it would be difficult to show how one outfall either did or did not affect the downstream pH so an aggregate pH demonstration for all of outfalls may be required. Since it may be quite difficult to do such a study during worst case tidal conditions, the permittee should coordinate closely with NHDES in the development of any such study. The notification of the relaxation must be made by certified letter to the permittee from EPA-Region 1. The pH limit range cannot, however, be made less restrictive than the 6.0 - 9.0 S.U. limitations included in the applicable Steam Electric ELGs for the facility.