Table of Contents – Chapter I

1.0 Executive Summary

In accordance with the provisions of 40 CFR § 124.17, this document presents the United States Environmental Protection Agency's (EPA or "Region 1" or "the Region") responses to comments received throughout its development of the Final 2020 NPDES Permit (the "Final Permit") for Merrimack Station ("the Facility").

The responses to comments evidence and explain EPA's consideration of significant comments submitted to EPA by the public concerning the new NPDES permit for the Facility and explain and support the EPA determinations underlying the Final Permit.

EPA invited the public to submit comments on the new Merrimack Station NPDES permit during three separate public comment periods, which will each be discussed in more detail below and are as follows:

1) Public Notice of the 2011 Draft Permit (comment period opened September 30, 2011, and closed February 28, 2012, *see* AR-1082, AR-1124 and AR-947).

2) Public Notice of the 2014 Revised Draft Permit (comment period opened April 18, 2014, and closed on October 22, 2014, *see* AR-1137 and https://www.epa.gov/npdes-permits/merrimack-station-draft-npdes-permit#tab-2); and

3) Public Notice of the 2017 Statement of Substantial New Questions for Public Comment (comment period opened August 4, 2017, and closed December 18, 2017, *see* AR-1533, AR-1692).

In addition, members of the public, including the owners of the Facility, continued to submit to EPA comments and information relevant to the permit even after the close of each comment period. While not required to consider and respond to such late-submitted material, EPA decided in this case to do so.

Merrimack Station was long owned and operated by Public Service Company of New Hampshire (PSNH or "the Permittee"). In recent years, PSNH also did business under the name of its parent company, Eversource. Even more recently, New Hampshire law, see RSA 369-B:3-a (2015), mandated that PSNH divest itself of its electrical generating facilities, including Merrimack Station. After a lengthy auction process, PSNH sold Merrimack Station and its other generating

facilities to Granite Shore Power LLC. The sale closed on January 10, 2018. Each individual facility is now owned by a separate, wholly-owned subsidiary of GSP. Thus, Merrimack Station is now owned by GSP Merrimack LLC ("GSP-Merrimack" or "GSP" or "the Permittee"). GSP-Merrimack now owns and operates Merrimack Station and is responsible for compliance with the Facility's NPDES permit. In essence, GSP-Merrimack has stepped into the shoes of PSNH with regard to both ongoing NPDES permit compliance and participation in the current NPDES permit development proceeding for Merrimack Station. As such, PSNH's comments on the Draft Permit for Merrimack Station have been adopted by, and are now attributable to, GSP-Merrimack.

In these responses to comments, EPA will at times refer to PSNH because it previously owned and operated Merrimack Station and submitted comments on the 2011 Draft Permit, the 2014 Revised Draft Permit, and the 2017 Statement of Substantial New Questions. EPA will also at times refer to GSP-Merrimack or GSP, given that it currently owns and operates the power plant, is now the named Permittee on the existing permit issued in 1992, as modified, and is responsible for compliance with the new Final Permit going forward. Finally, EPA will also sometimes use the generic terms, the "Permittee," the "Company" or the "Facility," to refer to either PSNH or GSP-Merrimack, whichever is appropriate in context.

During the public comment period, numerous parties commented on the Draft Permit, Revised Draft Permit, and Statement of Substantial New Questions:

- Appalachian Mountain Club
- Applied Science Associates (ASA)
- Campaign for Ratepayers' Rights
- Clean Water Action
- Conservation Law Foundation (CLF)
- CREDO Action
- Conservation New Hampshire
- Duke Energy
- Defenders of Wildlife
- Earthjustice
- Electric Power Research Institute (EPRI)
- Enercon Services, Inc.
- Environmental Integrity Project
- Environment New Hampshire
- Lowell Regional Wastewater Utility (LRWU)
- National Wildlife Federation
- NERA Economic Consulting, Inc.
- New Hampshire Audubon Society
- Normandeau Associates, Inc.
- Ohio Utility Group Water Task Force

- Pan Am Railways (PAR)
- Public Service Company of New Hampshire (PSNH)
- Sierra Club
- Society for the Protection of New Hampshire Forests
- Southern Company
- Stonyfield Farm
- Super Law Group LLC
- Upper Merrimack River Local Advisory Committee (UMRLAC)
- Utility Water Act Group (UWAG)
- William O'Brien, Speaker of the New Hampshire House of Representatives (along with other New Hampshire State Representatives)
- Numerous individual citizens

In addition, several commenting entities hired consultants to submit comments on their behalf. These consultant comments sometimes took the form of technical reports or studies and presentations of data. All comments presented and responded to in this document have been either summarized or reproduced verbatim from each comment letter. In some cases, EPA has combined comments addressing common issues so that they could be responded to in a reasonably efficient manner. EPA received thousands of pages of material in the various comment periods and it would neither be possible nor helpful, much less required, to present all this material verbatim in these responses to comments.

EPA's decision-making process has benefited from the comments and additional information submitted by the public. In some cases, these submissions and comments contributed to EPA deciding to revise conditions proposed in the 2011 Draft Permit or the 2014 Revised Draft Permit and/or to improve and clarify the analyses supporting the Final Permit's terms. These revisions and improvements are reflected in the Final Permit and its supporting record. The analyses underlying the Final Permit, including any changes from the 2011 Draft, are discussed in the responses to comments that follow. At the same time, neither the information and arguments presented, nor the revisions to permit conditions, raise any substantial new questions concerning the permit that warranted the Region exercising its discretion under 40 CFR § 124.14 to additionally reopen the public comment period. A summary of the changes from the 2011 Draft Permit that are reflected in the Final Permit is presented in Part 2.0 of this Chapter.

1.1 History of Permit Development

The Final Permit authorizes Merrimack Station's discharges of pollutants to, and the withdrawal of water for cooling from, the Merrimack River. Merrimack Station is a coal-burning power plant located in Bow, New Hampshire. The Facility's pollutant discharges are regulated by EPA technology-based effluent limitation guidelines (ELGs) set under the Clean Water Act for the Steam Electric Power Generating Category of industrial dischargers. *See* 40 CFR § Part 423. The Facility's discharges of waste heat and withdrawals of river water for cooling are also subject to statutory and regulatory requirements under the Clean Water Act. *See* 33 U.S.C. §§ 1311(b)(2),

1326(a) and 1326(b). In addition, these discharges and withdrawal must also satisfy applicable New Hampshire water quality standards. *See* 33 U.S.C. § 1311(b)(1)(C). These three areas of regulation (*i.e.,* setting permit requirements for cooling water withdrawals, discharges of waste heat, and discharges of other types of steam electric power plant pollutant discharges) comprise the primary areas that EPA, the State of New Hampshire, the Permittee, and the public focused on throughout permit development.

In this Executive Summary, EPA provides an overview of the different stages of permit development, specifically concentrating on the three areas of regulation identified above. These different stages of permit development, which evolved over a number of years, were driven by factual and legal developments that altered development of the permit and took time to address. A more in-depth discussion of the relevant facts and law and EPA's rationale and foundation for the limits and conditions included in the Final Permit are set forth in the following Chapters of this document.

EPA last issued a new Final NPDES Permit to Merrimack Station on June 25, 1992. AR-236. The permit expired on July 31, 1997, but was administratively continued in 1997 as a result of PSNH's timely application for permit renewal. *See* 40 C.F.R. § 122.6(a).

a. The 2011 Draft Permit

EPA issued PSNH a new Draft NPDES Permit for Merrimack Station on September 30, 2011 (2011 Draft Permit). AR-609. *See also* AR-608 (Fact Sheet for the 2011 Draft Permit (2011 Fact Sheet)). As indicated above, the 2011 Draft Permit addresses the Facility's withdrawal of water from the Merrimack River for cooling uses and its discharges of a variety of pollutants to the river. Pollutants discharged, or potentially discharged, by the Facility to the River include waste heat, flue gas desulfurization (FGD) wastewater, bottom ash transport water, combustion residual leachate, non-chemical metal cleaning wastes, and many others. The comment period on the 2011 Draft Permit extended five months, from September 30, 2011, to February 28, 2012.

i. Cooling Water Intake

At the time of the 2011 Draft Permit, Region 1 conducted a Best Professional Judgment (BPJ) assessment to determine appropriate requirements for Merrimack Station's cooling water intake structures in the absence of effective CWA § 316(b) regulations setting specific standards.

The 2011 Draft Permit included a variety of requirements under CWA § 316(b), 33 U.S.C. § 1326(b), that addressed Merrimack Station's cooling water intake structures. CWA § 316(b) mandates the "best technology available" (BTA) standard for cooling water intake structures, specifying that:

> (b) **Cooling water intake structures**
>
> Any standard established pursuant to section 1311 of this title or section 1316 of this title and applicable to a point source shall require that the location, design,

construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact.

At the time of the 2011 Draft Permit, there were no national BTA standards in place for existing facilities. Therefore, in accordance with 40 CFR § 125.90(b), EPA determined the BTA for Merrimack Station's cooling water intake structure on a case-by-case, site-specific, BPJ basis. As discussed and explained in more detail in the record for the 2011 Draft Permit, and in these responses to comments, the primary adverse environmental impacts of concern from the use of cooling water intake structures are mortality or injury to aquatic life in the source water body from entrainment of relatively smaller organisms through the cooling system and impingement of relatively larger organisms against the intake screens. Ultimately, the BTA proposed by EPA for Merrimack Station's Draft Permit consisted of adding closed-cycle cooling capability at the Facility for use on a seasonal basis (from April 1 through August 31, based on when the highest densities of aquatic life are present). EPA explained and discussed its finding in detail in the 2011 Draft Permit Determinations Document, which was attached as Attachment D to the 2011 Fact Sheet. *See* AR-618, Chs. 10-12. EPA also proposed certain intake screen operations and fish return system improvements to reduce impingement mortality. *Id*., pp. 346-347. EPA also concluded that these requirements would satisfy New Hampshire water quality standards.

ii. Thermal Discharge

Under the CWA, discharges of waste heat (i.e., "thermal discharges") are subject to regulation under technology-based and water quality-based limits, like other pollutants, or they may be regulated under alternative limits based on a variance under CWA § 316(a), 33 U.S.C. § 1326(a), from the otherwise applicable requirements. The Facility's 1992 Permit set thermal discharge requirements based on a combination of a CWA § 316(a) variance and water quality-based requirements.

For the 2011 Draft Permit, EPA proposed rejecting Merrimack Station's request that the new permit retain the same thermal limits as were in the 1992 Permit based on a renewal of the existing CWA § 316(a) variance. EPA concluded that renewal of the existing variance would not satisfy CWA § 316(a). The Agency, instead, decided that it should base thermal discharge limits on technology-based and water quality-based requirements. From among the available alternatives, EPA determined that converting Merrimack Station's open-cycle cooling system to a closed-cycle cooling system using wet or wet-dry hybrid mechanical draft cooling towers, and operating on a year-round basis, would be the best performing technology available for reducing the facility's discharges of its waste heat to the Merrimack River. In other words, EPA concluded on a site-specific, Best Professional Judgment (BPJ) basis, s*ee* 40 CFR § 125.3(c), that thermal discharge limits based on closed-cycle cooling would meet the applicable best available technology (BAT) standard pursuant to CWA § 301(b)(2)(a), 33 U.S.C. § 1311(b)(2)(A). *See* AR-618, Chs. 7 and 9. In addition, EPA included certain narrative requirements pertaining to thermal discharges designed to ensure satisfaction of New Hampshire water quality standards. *Id*. at Chs. 8 and 9.

iii. Wastestreams Regulated under the Steam Electric Effluent Limitations Guidelines (ELGs)

EPA, New Hampshire, the Permittee, and the public have primarily been concerned with the following distinct wastestreams subject to the Steam Electric ELGs: 1) flue gas desulfurization (FGD) wastewater; 2) bottom ash transport water (BATW); and 3) non-chemical metal cleaning wastes (NCMCWs). That said, the permit also addresses additional wastestreams subject to the ELGs. The Steam Electric ELGs in effect at the time of the 2011 Draft Permit were promulgated in 1982.

With respect to FGD wastewater, the 1982 Steam Electric ELGs did not include BAT limits to address toxic pollutants in many of the regulated wastestreams. Therefore, for the 2011 Draft Permit, Region 1 conducted a site-specific, BPJ evaluation, *see* 40 CFR §§ 125.3(a)(2)(iv) and (v), (c)(3), and determined that the BAT for the Facility would include biological treatment coupled with the Station's newly installed primary treatment system (providing physical/chemical treatment and the EMARS (mercury removal) feature). This analysis was detailed in Attachment E to the 2011 Fact Sheet. *See* AR-608, Attachment E; AR-616. Based on this proposed BAT treatment system, Region 1 included effluent limits for FGD wastewater in the 2011 Draft Permit, including specific limits for various metals (e.g., mercury, arsenic, selenium), chlorides, and total dissolved solids (TDS) applied at newly defined internal outfall (Outfall 003C). *See id*., Attachment E. In addition, as a result of this new wastestream, the New Hampshire Department of Environmental Services (NHDES), in coordination with EPA Region 1, assessed and determined that several water quality-based effluent limitations were also necessary to address several metals of concern. *See* AR-608, pp. 6-7, 22-26.

As for BATW, EPA applied limits for total suspended solids (TSS) and oil and grease ("O&G") as provided in the 1982 ELGs (40 CFR § 423.12) and conducted a site-specific determination of best conventional technology (BCT) limits equal to the existing TSS and O&G limits. AR-608 and 609.

Finally, to address NCMCWs, EPA conducted a site-specific BPJ assessment of BAT limits, and determined that the appropriate limits would be equal to the 1982 ELGs' limits applicable to chemical metal cleaning wastes. *See* AR-608, pp. 28-33. Thus, EPA required that nonchemical metal cleaning wastes at Merrimack Station should be subject to concentration-based effluent limits of 1.0 mg/L for total copper and total iron, and that all metal cleaning wastes be segregated for sampling at Outfall 003B.

b. The 2014 Revised Draft Permit

As EPA began work to consider the public comments that were submitted by the close of the comment period in February 2012 and develop the Final Permit, it learned that after the 2011 Draft Permit was issued, the Facility installed a new, highly effective treatment system for its FGD wastewater, and this new treatment system was not reflected in either the 2011 Draft Permit's proposed effluent limits or its supporting record. As a result, EPA gathered factual information and reevaluated the limits proposed in the 2011 Draft Permit for FGD wastewater.

On April 18, 2014, EPA issued for public comment a new, Revised Draft Permit proposing different effluent limits for Merrimack Station's FGD wastewater discharges based on a new BPJ determination that the Station's new FGD wastewater treatment system constituted the BAT. AR-1136. All other limits and outfalls remained essentially the same.

The public comment period was extended based on public requests and ended on October 22, 2014. *See* AR-1137 (2014 Revised Draft Permit Public Notice).

c. The 2017 Statement of Substantial New Questions

As Region 1 continued to review public comments on the 2011 Draft Permit and the 2014 Revised Draft Permit, several additional new legal and factual developments occurred that directly affected development of the permit. Ultimately, these developments led the EPA to exercise its discretion under 40 CFR § 124.14(b) to issue a new public notice and reopen the comment period for the draft permit for the Merrimack Station. Specifically, on August 2, 2017, EPA issued public notice to inform the public of the reopening of the comment period and the availability of EPA's 2017 "Statement of Substantial New Questions for Public Comment" (the 2017 Statement). AR-1533. While the public comment period was initial scheduled to end on October 4, 2017, *id.*, it was later extended to December 18, 2017. *See* AR-1691, AR-1692. The 2017 Statement discussed, and invited comment on, a variety of issues, including the following:

a) how to properly set requirements for cooling water intake structures under EPA's complex new regulations promulgated under CWA § 316(b) in August 2014, 79 Fed. Reg. 48,300 (Aug. 15, 2014) ("2014 CWA § 316(b) Rule"), and in light of new information regarding the feasibility and effectiveness of certain CWIS technologies;
b) how to properly set requirements for pollutant discharges covered by EPA's complex new regulations promulgated in November 2015 to modify the Steam Electric ELGs, 80 Fed. Reg. 67838 (November 3, 2015) (2015 ELGs);
c) how to properly set thermal discharge limits in light of (i) EPA's revised understanding of thermal data evaluated for the 2011 Draft Permit, (ii) new thermal data submitted since the 2011 Draft Permit, and (iii) new data on the presence of the Asian clam (*Corbicula fluminea*,) an invasive species, in the Hooksett Pool section of the Merrimack River;
d) how, if at all, should final permit limits be affected by Merrimack Station's evolution from a "baseload" facility that operated most of the time, to a facility that operates much less and more like a seasonal "peaking" type of facility that typically generates electricity only sometimes in the winter and summer;
e) how, if at all, should final permit limits be affected by Merrimack Station's evolution from a "baseload" facility that operated most of the time, to a facility that operates much less and more like a seasonal "peaking" type of facility that typically generates electricity only sometimes in the winter and summer; and
f) how does PSNH's then imminent sale of Merrimack Station to GSP affect the permit.

See AR-1534.

i. Cooling Water Intake

After issuing a Proposed Rule in 2011, and two Notices of Data Availability in 2012, EPA promulgated the new 2014 CWA § 316(b) Rule for existing facilities with cooling water intake structures, such as Merrimack Station, in August 2014. *See* 79 Fed. Reg. 48,300 (codified at 40 CFR § 122.21(r) and Part 125, Subpart J). These regulations are now in effect and govern the Final Permit for Merrimack Station. *See* 40 CFR §§ 122.43(b)(1), 125.91(a) and 125.94(a)(1).

EPA requested comment on the application of the new regulations at Merrimack Station and on new information related to wedgewire screen technology, among other things. Specifically, new information suggested that an effective screen array (using wedgewire half-screens) could potentially be implemented in the Hooksett Pool section of the Merrimack River, and that this technology could possibly be more effective at reducing the Facility's entrainment and impingement than previously thought.

ii. Thermal Discharge

Unlike the situation for CWA § 316(b) requirements and Steam Electric ELGs, since issuance of the 2011 Draft Permit, the legal regime governing thermal discharges under the CWA and New Hampshire water quality standards had not changed, but new information had come to light during the permit development process which raised substantial new questions pertaining to the application of CWA § 316(a) and New Hampshire water quality standards to the development of thermal discharge limits for the Merrimack Station permit. In its 2017 Statement, EPA discussed the new information and questions and invited public comment on these issues. Specifically, EPA identified clarifying information that it had received from PSNH concerning older temperature data, new temperature data, new scientific reports pertaining to the effects of Merrimack Station's thermal discharges on aquatic life in the Merrimack River submitted by PSNH, and new data and analysis relating to the presence and possible significance of the recently discovered Asian clam, an invasive freshwater mollusk, in the Hooksett Pool.

iii. Wastestreams Regulated under the ELGs

On November 3, 2015, EPA promulgated the 2015 Steam Electric ELGs, new national guidelines, after an extensive rulemaking process. 80 Fed. Reg. 67838 (Nov. 3, 2015). A number of the provisions of the 2015 Steam Electric ELGs apply to Merrimack Station, namely, those BAT limits applicable to FGD wastewater, BATW, combustion residual leachate, and NCMCWs. Therefore, as part of EPA's public notice, EPA explained that it planned to apply all effective limits from the new rules, including discussing PSNH's decision to "opt into the Voluntary Incentives Program" for FGD wastewater management under the 2015 ELGs, and requested comment on how and whether these new regulatory provisions would require changes to the effluent limits included in the previous 2011 and 2014 Draft Permits. AR-1534. EPA also requested comment on what the appropriate compliance or "as soon as possible" date for achieving zero-discharge for BATW was, in light of the new regulations and information received from PSNH. *See* AR-1534, pp. 59-61.

d. The 2020 Final Permit

Having received three rounds of public comments, the Region continued its review of the comments and its development of the Final Permit. During this time, however, several additional events occurred that have affected finalizing permit limits and conditions for Merrimack Station.

First, as mentioned above, ownership of Merrimack Station was transferred from PSNH to GSP on January 10, 2018. Moreover, GSP indicated to EPA that it was willing to consider permit limits reflecting the Facility's reduced operations.

Second, in 2017, EPA took a number of regulatory actions related to implementation of the 2015 Steam Electric ELGs. Ultimately, EPA conducted a rulemaking postponing the relevant compliance dates for a number of wastestreams regulated under the 2015 national guidelines (82 Fed. Reg. 43494 (Sept. 18, 2017)).

Third, and also related to the 2015 Steam Electric ELGs, as EPA worked to finalize the Merrimack Station permit, litigation resulting from numerous challenges to the 2015 national rulemaking was proceeding in the Fifth Circuit Court of Appeals. On April 12, 2019, the Fifth Circuit vacated and remanded several provisions from the 2015 ELGs. *See Southwestern Electric Power Co., et al. v. EPA*, 920 F.3d 999 (5th Cir. 2019) ("*SWEPCO*"). This court decision affected certain effluent limits that EPA had expected to apply from the 2015 ELGs.

Fourth, on March 25, 2020, the current owner of Merrimack Station, GSP, submitted a letter to EPA Region 1, wherein the company stated that it was "withdrawing the pending request for authorization in the new permit to directly discharge FGD wastewater to the Merrimack River." AR-1690, p. 2. The Facility indicated that it intended for the immediate future to continue to operate without discharging FGD wastewater to the Merrimack River, but that it might renew its request for authorization for such discharges in the future. This decision was based on the forthcoming "revisions to the ELGs and the VIP for FGD wastewater" and significant reductions in the Station's capacity utilization. *Id.*

i. Cooling Water Intake

As will be discussed in detail in Chapter III of this Response to Comments document, EPA determined that, based on the information and data in the record, the BTA is for the seasonal use (April 1 to August 15) of fine-mesh wedgewire screens with a maximum through-screen velocity of 0.5 ft/sec., use of a traveling screen system with low pressure spray wash systems to remove fish, and installation and use of a new fish return sluice to return to the river any fish and other aquatic organisms that have been collected or trapped on the intake screens. In addition, the Final Permit establishes a best management practice to schedule the Unit 2 maintenance outage to take place during the peak entrainment period (May 15 to June 15) whenever practicable.

ii. Thermal Discharge

As outlined and explained in full detail in Chapter II of this document, EPA ultimately decided, based on new data and the Facility's much reduced operations since the 2011 Draft Permit, to set

thermal and operational limits based on a CWA § 316(a) variance (from technology-based and water quality-based requirements) that sets instream thermal limits for the Hooksett Pool that will assure the protection and propagation of the balanced indigenous population of the shellfish, fish, and wildlife in the Merrimack River and that reflect Merrimack Station's current mode of operation similar to a peaking facility. The approach of setting instream water quality-based temperature limits was discussed in detail in the record for the 2011 Draft Permit, *see, e.g.,* AR-618, pp. 214-17, and the issue of the Facility's reduced operations was discussed in the 2017 Statement.

iii. Wastestreams Regulated under the ELGs

While the legal landscape has shifted due to regulatory changes and the recent Fifth Circuit decision, EPA continues to apply the existing, effective ELGs to Merrimack Station's discharges of BATW, NCMCW, combustion residual leachate, and other wastestreams covered by Part 423 of EPA's regulations. 40 CFR Part 423. Specifically, for BATW, EPA is applying zero-discharge limits beginning on December 31, 2023, and limits for TSS and O&G prior to that date, based on the ELGs currently in effect. *See* Chapter V of this document. In addition, with respect to NCMCWs, EPA maintains the iron and copper limits and the requirements to segregate metal cleaning waste from other wastestreams prior to sampling, as set forth in its previous draft Permits. *See* Chapter IV. As for combustion residual leachate, EPA continues to apply TSS and O&G limits based on the effective ELGs, and consistent with those limits imposed in the 2011 Draft Permit. Finally, due to GSP's recent withdrawal of its request to authorization to discharge FGD wastewater, the Final Permit no longer authorizes such discharges. *See* Chapter VIII.

Chapters IV, V, and VIII of this document present a comprehensive discussion of the history of the Steam Electric ELGs, their application at Merrimack Station, and a thorough explanation of EPA's rationale for all of the Final Permit conditions. *See* Response to Comment V.1.1; Response to Comment IV.1.2; and Chapter VIII.1.

2.0 List of Permit Changes

The changes from the Draft Permit to the Final Permit are summarized immediately below and are explained in the responses to the comments that follow:

1. The Permittee's name has been changed to Granite Shore Power Merrimack LLC, and address has been updated as shown on the cover page of the Final Permit. See Chapter I – Introduction of this Responses to Comments (RTC) document.

2. The effective date of the Final Permit has been changed from "the first day of the calendar month immediately following 60 days after signature" to September 1, 2020, which is the first day of the calendar month immediately following 90 days after signature. See RTC II.1.1.

3. Given that the Final Permit is signed by the Director of the Water Division at EPA, Region 1, all instances in the Draft Permit referring to the Regional Administrator have been changed to Director.

4. Attachment A of the Draft Permit, *Freshwater Chronic and Modified Acute Toxicity Test Procedure and Protocol* has been replaced with *Freshwater Acute Toxicity Test Procedure and Protocol*, updated February 2011. See RTC VI.1.3

5. Attachment B of the Draft Permit, *Monitoring Location Map*, has been eliminated and each monitoring location in the Final Permit is designated with coordinates. See RTC II.1.1.

6. For every outfall table in the Final Permit, the row heading previously titled "Flow" has been changed to "Effluent Flow." The meaning and definition have not changed; this is simply a change consistent with the standard template used for every NPDES permit issued by EPA Region 1.

7. Internal Outfalls 001 and 002 have been added to the Final Permit to provide limitations and conditions for the once-through condenser cooling water from both generating units at the Station, because closed cycle cooling is no longer required to meet the Final Permit's thermal discharge limits and cooling water intake structure requirements, whereas it would have been required under the Draft Permit. See RTC II.1.1, Section 3, Section 4, RTC III.3.1, Section 4, and III.5.3. The applicable limits are as follows:
    - Flow limits (from 1992 Permit);
    - Temperature reporting;
    - TRO limits – 40 CFR 423.13(b)(1); and
    - Seasonal intake velocity limits.

8. Outfall 003

- Description of Outfall 003 has changed to include internal Outfalls 001 and 002, and the removal of Outfall 003D because closed cycle cooling is no longer required to meet the Final Permit's thermal discharge limits and cooling water intake structure requirements. See RTC II.1.1. Footnote 4, RTC III.5.3, and RTC VI.3.
- The total residual chlorine (TRC) requirement has been changed to total residual oxidants (TRO) to account for the possible use of bromine as a biocide in the once-through condenser cooling water. See RTC VI.1.1.
- The reporting only requirement for TRC in the Draft Permit has been changed to the existing 1992 Permit's TRO limit of 0.026 mg/L based on anti-backsliding requirements and a compliance level of 32 ug/L. See RTC VI.1.1.
- The pH monitoring frequency and sampling method has changed from daily grabs to continuous using a recorder when discharging. See RTC VI.1.2.
- Flow limits carried over from 1992 Permit and restored to continuous monitoring consistent with anti-backsliding. See RTC III.5.3, RTC II Section 1, Section 3, and Section 4.
- DO limit carried over from 1992 Permit based on anti-backsliding. See RTC II.1.1. Footnote 4, Section 3, and Section 4.
- Whole Effluent Toxicity (WET) testing requirements have changed to reflect an updated acute WET protocol and additional ambient reporting requirements that are part of the protocol but were missing from this table in the Draft Permit. Chronic WET testing is no longer required. See VI.1.3.

9. Outfall 003A
    - Description of Outfall 003A has been updated to reflect 1) that only bottom ash transport water generated before December 31, 2023, can be discharged to the slag settling pond; 2) additional wastestreams discharging to this location that were either missing from the Draft Permit or previously included in Outfall 003B; and 3) the removal of Flue Gas Desulfurization (FGD) wastewater and coal pile runoff and treated FGD, which are not authorized to be discharged by the Final Permit. See RTC VI.2.1, RTC V.1.1, RTC V.3.1, and RTC VIII.
    - Removal of flow limits that were in the Draft Permit (report only required in the Final Permit). See RTC VI.2.3.7.
    - Removal of copper limit from the Draft Permit. The weekly monitoring requirement for copper included in the Draft Permit has been changed to quarterly monitoring and reporting only (daily maximum) in the Final Permit. See RTC VI.2.3.2.
    - Removal of reporting requirements and limitations for aluminum, arsenic, mercury, selenium, and total recoverable chloride that were in the Draft Permit, consistent with the removal of authorization of FGD wastewater discharges by the Final Permit. See RTC VI.2.1, RTC VI.2.3.1, RTC VI.2.3.3, RTC VI.2.3.4, and RTC VI.2.3.8.

- TSS and Oil and Grease monitoring frequency has been changed from weekly to monthly. See RTC VI.2.3.6.

10. Outfall 003B
    - Description of Outfall 003B has been changed to reflect that this internal outfall location is dedicated to only chemical and non-chemical metal cleaning wastewater discharges. See RTC IV.1.1.
    - pH monitoring has been removed. See RTC IV.1.1. Footnote 7.

11. Outfall 003C – treated FGD wastewater -has been removed from the Final Permit because the Permittee withdrew its request for authorization to discharge FGD wastewater. See Section 1 – *Introduction and Chronology of Permit Conditions*, of RTC Chapter VIII.

12. Outfall 003D (Cooling Tower Blowdown) has been removed from the Final Permit because closed-cycle cooling will not be required to meet either the Final Permit's thermal discharge limits or cooling water intake structure requirements, whereas it would have been required under the 2011 Draft Permit. See RTC VI.3, RTC II Section 1, Section 3, Section 4, and RTC III Section 5.

13. Flow limit for Outfall 004A has been changed to report only. See RTC VI.4.1.

14. Flow limit for Outfall 004B has been changed to report only. See RTC VI.4.2.

15. Flow limit for Outfall 004C has been changed to report only. See RTC VI.4.3.

16. Outfall 004D and the corresponding requirement that the use of deicing water meet the New Hampshire Surface Water Quality Regulations mixing zone requirements has been removed from the Final Permit. See RTC VI.4.4.

17. Prohibition of the discharge of deicing water and associated conditions have been moved to Part I.H, *Unauthorized Discharges* of the Final Permit. See RTC VI.4.4 and RTC VI.6 (footnote 20).

18. Flow limit for Outfall 005A has been changed to report only. See RTC VI.5.1.

19. Outfall 005B has been eliminated because Outfall 005A represents the discharge of both cooling water intake sumps for Unit 1 during maintenance activities. See RTC VI.5.2.

20. Outfall 005B is re-designated as the discharge from Unit 2's cooling water intake structure sumps during maintenance (formally Outfall 005C in the Draft Permit). See RTC VI.5.2 and RTC VI.5.3.

21. Flow limit for Outfall 005B (formally Outfall 005C in the Draft Permit) has been changed to report only in the Final Permit. See RTC VI.5.3.

22. Outfalls 005C and 005D have been removed from the Final Permit because Outfall 005B (formally Outfall 005C in the Draft Permit) represents the discharge of both cooling water intake sumps for Unit 2 during maintenance activities and Outfall 005C has been re-designated at Outfall 005B. See RTC VI.5.2, RTC VI.5.3 and RTC VI.5.4.

23. Measurement frequency for flow, O&G, and pH at Outfalls 005A and 005B have been changed from once per annual outage (1/Annual Outage) to once per year (1/Year). See RTC VI.5.1.

24. Footnote Changes:
    - New footnote 1 has been added to the "Monitoring Requirements" heading of every outfall table in the Final Permit. This footnote provides administrative clarification of the monitoring requirements and consists of standard language currently added to every NPDES permit issued by EPA Region 1.
    - New footnotes 2 and 3 regarding the use of sufficiently sensitive test methods have also been added to the "Monitoring Requirements" heading of every outfall table in the Final Permit. See RTC VI.9.1.
    - New footnote 4 has been added to the "Measurement Frequency" heading of each outfall table in the Final Permit. This footnote consists of standard language currently added to every NPDES permit issued by EPA Region 1 and provides administrative clarification of the terms used for measurement frequencies.
    - New footnote 5 has been added to the "Sample Type" heading of each outfall table in the Final Permit that lists composite sampling. This footnote consists of the definition of composite sampling that was previously in Part II but is now consistently added to Part I of NPDES permits issued by EPA Region 1.
    - Footnote 6 has been changed to combine the flow-based requirements of footnotes 1 and 6 of the Draft Permit and to provide the definition of "MGD" used in every outfall table throughout the Final Permit.
    - Draft Permit footnote 2 regarding temperature monitoring at Outfall 003 has been moved to footnote 7 of the Final Permit and changed slightly to include temperature monitoring requirements for Internal Outfalls 001 and 002.
    - New footnote 8 has been added to explain and clarify that TRO sampling occurs only when biocides are being used and discharged, and that the only allowable biocides are chlorine and bromine. New footnote 8 also clarifies that TRO is not allowed to be discharged from any one generating unit for more than two hours per day. This requirement was previously included in the Draft Permit as footnote 13, for Outfall 003D. See RTC VI.1.1.
    - New footnote 9 in the Final Permit explains, pursuant to 40 CFR 423.13, that the TRO limit for Outfalls 001 and 002 is not a maximum daily limit but instead is a

"maximum concentration" or instantaneous maximum limit not to be exceeded at any time. See RTC III.5.3.

- New footnote 10 specifies that the 40 CFR §136 test method used for TRO must meet a minimum level (ML) of no greater than 30 ug/L. RTC. VI.1.1 for Outfall 003.
- New footnote 11 in the Final Permit specifies that the compliance level for TRO at Outfall 003 is 30 ug/L (0.030 mg/L). See RTC. VI.1.1.
- Footnote 3 of the Draft Permit regarding in-river thermal sampling requirements has been removed and replaced with "See Part 1.A.11" within the table for Outfall 003. See RTC II Section 3 and Section 4.
- Footnote 4 of the Draft Permit, expressing that the pH range limitations at Outfall 003 is a State certification requirement, has been removed from the Final Permit. See RTC VI.1.2.
- Part I.F.4 under Discharge Limitations in the table for Outfall 003 and footnote 19 for Outfalls 004A, 004B, 004C, 005A, and 005B in the Draft Permit, which point to or describe the State conditions that allow the Permittee to demonstrate that the pH range should be widened due to naturally occurring conditions, have been replaced with footnote 12 in the Final Permit. This footnote also provides that the pH range limit is an instantaneous limit, not to be exceeded at any time and that the Permittee shall report minimum and maximum values. See RTC VI.1.2.
- Footnote 5 of the Draft Permit has been moved to footnotes 13 – 16 of the Final Permit and updated to reflect changes in the standard protocol language relating to acute WET testing and ambient testing, as well as removal of chronic WET testing. See RTC VI.1.3.
- Footnote 5.e of the Draft Permit has been removed from Part I of the Final Permit because Part II includes similar language for reopening the permit to make appropriate revisions.
- Footnote 5.f of the Draft Permit has been moved to Part I.G, *Special Conditions* of the Final Permit and updated slightly to provide administrative clarification.
- Footnote 7 of the Draft Permit has been removed from the Final Permit because the requirements of Outfall 003B for metal cleaning wastewater have been clarified in the Final Permit. See RTC IV.1.1.
- Footnote 8 of the Draft Permit has been removed from the Final Permit. See RTC VI.6(8).
- Footnote 9 of the Draft Permit has been removed from the Final Permit because pH monitoring is no longer required at Outfall 003B. See RTC IV.1.1, Footnote 7.
- Footnotes 10 and 11 of the Draft Permit have been removed from the Final Permit because discharge of FGD wastewater is not authorized under this permit. See RTC VI.6 and RTC - Chapter VIII.
- Footnotes 12-16 of the Draft Permit have been removed from the Final Permit because these footnotes pertained to Outfall 003D (cooling tower blowdown),

which has been removed from the Final Permit. See RTC II Section 1, Section 3, Section 4, and III.5.3.

- Footnote 17 has been changed to include clarifying language for the visual inspections and maintaining a log of the inspections for Outfalls 004A, 004B, 004C, 005A, and 005B. See RTC VI.4.1-VI.4.3 and VI.5.1-VI.5.2.
- Footnote 18 has been changed to provide appropriate instructions for when a visible sheen is observed. See RTC VI.4.1-VI.4.3 and VI.5.1-VI.5.2.
- Footnote 19 of the Draft Permit - instructions that allow the Permittee to demonstrate that the pH range should be widened due to naturally occurring conditions for Outfalls 004A, 004B, 004C, 005A, and 005B - has been updated and moved to Part I.F – State Permit Conditions in the Final Permit. See RTC VI.1.2.
- Footnote 20 of the Draft Permit has been moved to Part I.H, *Unauthorized Discharges* of the Final Permit. See RTC VI.6(20).
- Footnote 19 of the Final Permit is being added to specify that intake velocity limits apply after wedgewire screens have been installed and operating. See RTC III.3.1.

25. Part I.A.11 (In-stream Monitoring 006) has been added as a supplement to Outfall 003 to include all in-river temperature monitoring requirements and limitations. See RTC II Section 1, Section 3, and Section 4.

26. Part I.A.14 – 16 of the Draft Permit is now Part I.A.12 – 17 of the Final Permit and includes updated WQ-based narrative requirements. See RTC II.2.2.

27. Part I.A.17 of the Draft Permit is now Part I.A.18 of the Final Permit.

28. Part I.A.18 of the Draft Permit, regarding feasibility studies for new chemicals proposed for discharge has been moved to be included in Part I.G, *Special Conditions* and expanded to provide clarifying language and more specific instructions common to all NPDES permits issued by EPA Region 1.

29. Part I.A.19 and Part I.A.21 of the Draft Permit, regarding the disposal of solids and water drawn from fuel oil tanks, respectively, has been moved to new Part I.H, *Unauthorized Discharges.*

30. Part I.A.20 of the Draft Permit is now Part I.A19 of the Final Permit.

31. Part I.A.23 of the Draft Permit regarding certain narrative water quality requirements pertaining to thermal discharges has been removed consistent with EPA setting thermal discharge limits for the final permit based on a CWA § 316(a) variance. See RTC II.6.3.3.

32. Part I.B contains updated *Reporting Requirements* instructions to be consistent with standard regional boilerplate language common to all NPDES Permits issued by EPA Region 1.

33. Part I.E, *Cooling Water Intake Structure Requirements to Minimize Adverse Impacts from Impingement and Entrainment* has been changed - removing requirements for closed-cycle cooling technology and instead including the installation and use of in-river wedgewire screen technology. See RTC III, Section 4 and RTC III, Section 5. This includes adding a compliance schedule for the installation of wedgewire screens and a new fish return system (see RTC III.3.1 and III.6.2), a requirement to complete an impingement technology performance optimization study (see RTC III.3.1), and authorization to divert withdrawals from the wedgewire screens to emergency intake under limited conditions (see RTC III.4.3). This also includes the addition of an option that ensures impinged fish and other organisms trapped on the intake screens are not subjected to high levels of chlorine from deicing water and that screens are continuously rotated to reduce the amount of time impinged organisms are subjected to elevated temperatures. See RTC VI.4.4.

34. Part I.F, *State Permit Conditions* has been changed slightly to be consistent with standard language currently added to every NPDES permit issued by EPA Region 1 and to provide administrative clarification of State permit conditions. In addition, Part I.F.5 of the Draft Permit regarding coal pile runoff has been removed from the Final Permit because coal pile runoff does not, and therefore is no longer authorized to, discharge to the on-site slag settling pond and then the river. See RTC V.3.1.

35. Part I.G, *Special Conditions* has been changed to include updated standard language clarifying when a change in the pH limits range can take effect.

36. Part I.H has been added to include *Unauthorized Discharges* common to all NPDES Permits issued by EPA Region 1 and includes: footnote 20 of the Draft Permit regarding deicing water, Part I.A.19 of the Draft Permit regarding solids disposal and Part I.A.21 regarding water drawn from fuel oil tanks. This Part also includes the added prohibitions against the discharge of 1) bottom ash transport water generated after December 30, 2023; and 2) PCBs pursuant to 40 CFR 423.13(a). See RTC V.1.1 and RTC VI.9.2.

37. Part II has been revised for clarity and to be consistent with current federal regulation and other NPDES permits issued by EPA Region I.