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1.0 OUTFALL 003 – POINT SOURCE DISCHARGE TO MERRIMACK RIVER

1.1 TRC Monitoring

Comment VI.1.1	AR-846, PSNH, pp. 202 - 203
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Comment: Per the NELGs, EPA assigned a daily maximum limit for Free Available Chlorine (FAC) in the cooling tower blowdown (003D) of 0.5 mg/l. Additionally, EPA commented that compliance will be maintained with the Total Residual Chlorine (TRC) water quality standard if the Outfall 003D TRC is maintained below 4.6 mg/l. EPA claims that compliance with a 0.5 mg/l FAC limit does not necessarily ensure compliance with a 4.6 mg/l TRC limit, so TRC monitoring is also established at Outfall 003 along with a water quality based limit of 0.43 mg/l.

This is absurd. Under the current permit (with TRC limits of 0.2 mg/l at Outfalls 001 and 002), PSNH has never been detected TRC at the end of the canal in its 19 years of monitoring. EPA even admits in the Permit Fact Sheet that “based on the analysis and factors discussed above, there is no reasonable potential for an in-stream excursion of chlorine above the water quality standards.” There is no compelling reason for PSNH to sample the end of the canal on a weekly basis to ensure that TRC will be less than 0.43 mg/l. In fact, if there was some reason to believe that water quality was at risk—which it clearly is not—it would have at least made sense to impose the TRC monitoring at Outfall 003D alongside the FAC monitoring.

EPA Response: Outfall 003D is no longer included in the Final Permit because the facility is no longer required to install close-cycle cooling. Therefore, the FAC limit has been removed and any concerns related to such limit are no longer relevant.

With respect to the commenter’s concerns about TRC (or TRO) monitoring and limits at the end of the discharge canal (Outfall 003), in the 2011 Draft Permit, the water quality-based limit of 0.43 mg/L for total residual chlorine (TRC) was not applied to Outfall 003. TRC monitoring and reporting only was required to ensure that there was no reasonable potential to exceed the 0.43 mg/L calculated water quality-based limit for chlorine at the discharge point to the river. However, the calculations described on pages 43-46 of the 2011 Fact Sheet presume that the Station had already installed closed cycle cooling and was not discharging chlorinated once-through cooling water. In this Final Permit, the Station is no longer required to install closed cycle cooling towers for reasons discussed fully in Chapter II of this document and will be operating once-through cooling water system as it does under its 1992, existing permit. As a result, the existing 1992 Permit’s total residual oxidants (TRO) limit of 0.026 mg/L is maintained for Outfall 003 in the Final Permit based on anti-backsliding requirements found at 33 U.S.C. § 1342(o). EPA included the TRO limit in 1992, in lieu of a TRC limit, to regulate not only additions of chlorine as a biocide but also bromine. *See* AR-1570, p. 2 (1992 RTC). Both EPA and New Hampshire Department of Environmental Services- Water Division (NHDES) agree that this limit ensures that the addition of biocides at Merrimack Station do not affect downstream aquatic life and would meet the State’s water quality standard for chlorine. *Id.*

Additionally, Outfalls 001 and 002 are now added back into the Final Permit, and technology-based limits for TRO are included at these outfalls as required by the ELGs. *See* RTC Chapter III.5.3.

As with the 1992 Permit, the Final Permit sets a compliance level at the minimum level (ML) for the TRC test method, which is the same method used for TRO, because the minimum level of detection is above the criterion. TRO sampling allows the Permittee to use either chlorine or bromine as a biocide. In 1992, the compliance level was 0.05 mg/L based on EPA-approved Standard Method 4500-Cl-G (the DPD spectrophotometric method (colorimetric)). In accordance with *National Pollutant Discharge Elimination System (NPDES): Use of Sufficiently Sensitive Test Methods for Permit Applications and Reporting Rule*,¹ EPA has set a compliance level equal to the ML of 30 µg/L in the Final Permit. This ML is based on using the lowest method detection limit of the analytical methods approved under 40 CFR Part 136 (MDL of 10 µg/L for Standard Method 4500-Cl-E, low level amperometric direct method (low-level amperometric titration method), times a multiplying factor of 3, consistent with 40 CFR Part 136.

In addition, EPA does not agree that weekly sampling is not necessary to ensure that chlorine levels being discharged to the Merrimack River meet water quality-based limits. EPA has determined that weekly sampling is still appropriate *when discharging*. Given that operations at the facility have been reduced significantly since the Draft Permit was issued in 2011 and therefore the discharge through Outfall 003 may be sporadic, there may be many weeks throughout the permit term when there is no discharge and sampling is not required.

Moreover, similar to footnotes 12 and 13 in the Draft Permit for then Outfall 003D (cooling tower blowdown), new footnote 8 has been added to the Final Permit and applies to Outfalls 001, 002, and 003. This footnote explains and clarifies that TRO sampling occur only when biocides (chlorine and/or bromine) are being used and being discharged and, pursuant to 40 CFR § 423.13(b)(1), TRO “may not be discharged from any single generating unit for more than two hours per day unless the discharger demonstrates to the permitting authority that discharge for more than two hours is required for macroinvertebrate control.”

1.2 Daily pH Monitoring

Comment VI.1.2	AR-846, PSNH, p. 203
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Comment: The daily pH monitoring requirements [at Outfall 003] are unreasonable and unduly burdensome. PSNH requests a reduction in frequency and, at a minimum, that EPA clarify that pH monitoring be limited to Monday thru Friday, excluding holidays, and only when qualified personnel are readily available.

EPA Response: Monitoring requirements are included in NPDES permits for several purposes, including to ensure compliance with effluent limitations established. The frequency of such monitoring is determined on a case-by-case basis. According to the NPDES Permit Writers’ Manual, the intent is to establish a frequency of monitoring that is sufficient to characterize the effluent quality and will detect events of noncompliance, with consideration of data needs and, when appropriate, the cost to the permittee. *See* NPDES Permit Writers’ Manual, EPA-833-K-10-001, September 2010, pp. 8-5.

¹ Fed. Reg. 49,001 (Aug. 19, 2014).

In establishing monitoring frequency, the permit writer estimates the variability of the concentration of the parameter by reviewing effluent data for the facility. The higher the variability over time the greater need for more frequent sampling. In the case of the Draft Permit, EPA had reduced the pH monitoring frequency because the draft reflected the use of closed cycle cooling at the Station, which would have greatly reduced the flow from the facility. Because the Station is no longer required to install closed cycle cooling towers, for reasons discussed fully in Chapter II and III in this Response to Comments document, the pH frequency of continuous monitoring *when discharging* (including weekends and holidays) will remain in the Final Permit, consistent with the existing 1992 Permit. EPA does not believe this frequency is burdensome, not only because continuous monitoring is simple, inexpensive, and has been undertaken for the past 28 years, but also because the Station will operate sporadically going forward; its operations are greatly reduced since the Draft Permit was issued in 2011. Furthermore, the termination of the discharge of slag sluice water is a major change expected during the permit term, on December 31, 2023 (*see* Response to Comment V.1.1), that could potentially cause significant changes in the discharge pH, and continuous monitoring would allow the Region to better understand these future changes and any resulting impacts to water quality. Moreover, New Hampshire water quality-based limitations apply to all discharges, regardless of the time of day, week, or year. Continuous pH monitoring is also required because the effects of a discharge with pH outside of the permitted range could be detrimental to many of the aquatic species in the vicinity of the discharge.

Additionally, Footnote 4 from the Draft Permit states that the pH range limitations at Outfall 003 are State certification requirements. In the Final Permit, EPA is removing footnote 4 because the pH limitations, while necessary to ensure compliance with the New Hampshire water quality standards, are no longer State certification requirements. *See* Env-Wq 1703.18; 33 U.S.C. § 1311(b)(1)(C). In the 2011 Draft Permit, the Discharge Limitations table for Outfall 003 also includes a reference to Part I.F.4 (State Permit Conditions), which provides that the Permittee may demonstrate to NHDES that the pH range should be widened due to naturally occurring conditions or because the naturally occurring receiving water pH is not significantly altered by the permittee's discharge. EPA is including this reference to Part I.F.4 in a new footnote (footnote 12). Also included in footnote 12 of the Final Permit is the requirement that the pH range limit is an instantaneous limit, not to be exceeded at any time, and the requirement that the Permittee report minimum and maximum values, which are both standard requirements for pH in EPA-issued NPDES permits in New Hampshire.

This new footnote 12 is included in the Final Permit for Outfalls 004A, 004B, 004C, 005A, and 005B in addition to Outfall 003 because these outfalls also discharge directly to the Merrimack River and must be in compliance with the State's water quality standards. Finally, footnote 19 of the Draft Permit, which allows for the pH range to be widened due to ambient conditions for these outfalls, is no longer needed because new footnote 12 of the Final Permit will apply and makes clear how the pH range can be modified due to naturally occurring conditions. Old footnote 19 would therefore be redundant and need not be included in the Final Permit.

1.3 Wet Testing

Comment VI.1.3	AR-846, PSNH, p. 203
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Comment: EPA admits that the potential toxicity of the discharges from Outfall 003 is “relatively low.” NHDES Draft Permit Fact Sheet, at 48 (“The potential toxicity of the facility’s remaining discharges cannot be known at this point, although EPA believes it is relatively low...”). Given the low threat of toxicity in the discharge as well as the time and expense involved, PSNH requests that the frequency of WET testing be reduced from a quarterly requirement (four times a year) to an annual requirement. The permit condition allowing for a reduction in frequency can be reversed to allow for increased frequency in WET testing if toxicity is detected.

EPA Response: The entire reference from the 2011 Fact Sheet cited by the Commenter above is (p. 48):

Substantial changes to Merrimack Station’s current operations are necessary in order for the station to meet the Draft Permit’s heat and flow limits. The potential toxicity of the facility’s remaining discharges cannot be known at this point, although EPA believes it is relatively low based on the re-calculated dilution factor and knowledge of other power plants using cooling towers (such as Newington Power). However, in order to properly evaluate the station’s discharge going forward, EPA has included a “report only” WET test result (quarterly).

The Whole Effluent Toxicity (WET) testing frequency discussion above identified “substantial changes” due to the use of closed cycle cooling at the Station and hence a dramatic reduction in discharge flow. While EPA expressed its belief that the potential toxicity is relatively low, the actual toxicity is still unknown. Therefore, quarterly WET testing is appropriate to gather data to adequately characterize and evaluate the Station’s discharge. If, as the commenter speculates, the discharge is demonstrated to have a low threat of toxicity or meets certain thresholds, the Final Permit maintains the option for the Permittee to request a reduction in toxicity testing frequency at such time.

Although the Station currently operates at a much lower capacity factor compared to 2011 when the Draft Permit was issued, the Final Permit no longer requires the Station to install closed cycle cooling towers for reasons discussed fully in Chapters II and III of this document.

Importantly, the existing 1992 Merrimack Station Permit does not require WET testing. Therefore, EPA has no information whether the discharge from Merrimack Station is causing or has the potential to cause aggregate and/or synergistic toxic effects to the ecology of the Merrimack River. As indicated in the Fact Sheet, EPA has embraced an integrated permitting approach involving the use of both parameter-specific effluent limitations and numeric criteria for toxicity. The main reason for requiring WET testing in the permit is that there is a lack of available data on the toxicity of the discharge from the facility. The Final Permit’s quarterly monitoring requirement, as initially described in the 2011 Fact Sheet, for WET testing is necessary to provide data to assess whether the discharge causes, has the reasonable potential to cause, or contributes to an excursion above a numeric or narrative criterion for whole effluent toxicity in future permit cycles.

However, given the Station’s sporadic and limited operations (*see* Response to Comment II.1.1 and II.3.2.2), chronic toxicity testing is no longer appropriate and has been removed from the Final Permit. The Final Permit also includes more recent updated acute WET testing protocol and the testing requirements therein because EPA no longer uses the chronic and modified acute WET

methods that were specified in the Draft Permit. In addition, the table for Outfall 003 has been updated to include a mechanism to report ambient data, which is already required by the protocol. Furthermore, footnote 5 of the Draft Permit (footnotes 13 through 16 of the Final Permit) has been updated to clarify the requirements of the Freshwater Acute Toxicity Test Procedure and Protocol, updated February 2011, which is consistent with standard language used in Region 1 NPDES permits.

1.4 Shift the Majority of All Effluent Monitoring to Outfall 003

Comment VI.1.4	AR-846, PSNH, p. 204
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Comment: EPA has historically defended the use of internal monitoring locations based on the high dilution provided by the existing open cooling water flow. With closed-cycle cooling, however, the canal flow will drop dramatically thereby eliminating EPA's concern with dilution. PSNH therefore requests that EPA—if it intends to incorporate the CCC requirement in the final permit—justify its decision to not shift the majority of all effluent monitoring to Outfall 003.

EPA Response: The Station is no longer required to install closed cycle cooling towers for reasons discussed fully in Chapters II and III of this Response to Comments document, and, therefore, this comment is not relevant.

2.0 OUTFALL 003A (TREATMENT POND WEIR)

2.1 Change in Description and Water Quality-Based Limits

Comment VI.2.1	AR-846, PSNH, pp. 204, 205
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Comment: Outfall 003A represents the discharge from Merrimack Station's Slag Settling/Wastewater Treatment Pond. As an initial matter and to avoid any confusion, PSNH first requests that the description of Outfall 003A include the discharge from the slag settling area (Waste Treatment Plant #3) as well as flows related to the FGD service water pump house, which may include, among other things, screen and filter backwash and quench pump test water.

As a result of the addition of the treated FGD purge stream and at the request of DES—who was arguably acting at the direction of EPA—PSNH and DES cooperatively conducted an antidegradation analysis to determine whether additional water quality based limits were necessary at Outfall 003A. Based upon guidance provided by EPA Region 1 (which included an explanation that there were no technology based limits available for FGD wastewater), PSNH understood that the FGD wastewater discharge would be regulated by these water quality based limits (along with the rest of the discharge into Outfall 003A) and that the FGD purge stream would be regulated as a low volume waste, such that there was little expectation that any other limitations would be applied to the FGD discharge itself. DES and PSNH discussed the fact that some monitoring might be better relocated to the actual FGD WWTS discharge due to analytical limitations related to potential permit limits far below usual and customary detection levels at Outfall 003A. In other words, it was understood that the majority of effluent monitoring would continue to be applied at Outfall 003A and not the new Outfall 003C. In fact, EPA need only include the more stringent of the technology based limit or the water quality based limit, not both.

However, EPA imposed both technology based limits at Outfall 003C, as well as water quality limits at Outfall 003A for the same constituents. This makes no sense and is contrary to EPA's prior position of applying only the more stringent limit. EPA cannot argue that the limits serve different purposes as the water quality based limits proposed at Outfall 003A are directly related to the addition of the FGD WWTS, i.e., Outfall 003C. Instead, EPA should remove the less stringent limits, either the water quality based limits at Outfall 003A or the technology based limits at Outfall 003C.

EPA Response: EPA agrees that the Outfall 003A description needs to include the slag settling area discharge, as well as flows related to the FGD service water pump house, namely the screen and filter backwash and the quench pump test water. The service water pump house is operated to remove water from the slag settling pond for use in the FGD scrubber. Therefore, no additional pollutants are added.

On March 25, 2020 the current owners of Merrimack Station, Granite Shore Power, LLC submitted a letter formally withdrawing its request to discharge wastewater generated from its flue gas desulfurization (FGD) system. AR-1690. Given this retraction, Outfall 003C, which was the proposed new internal outfall for the discharge from FGD equipment in the Draft Permit, has been removed from the Final Permit. Therefore, the Final Permit does not authorize the Permittee to discharge FGD wastewater. In 2010, NHDES drafted an Antidegradation Analysis of Merrimack River in the Vicinity of Merrimack Station (October 4, 2010) based on the proposed discharge of the new FGD wastestream. Based on data collected by PSNH, the Antidegradation Analysis provided a determination of whether there was reasonable potential (RP) for the proposed discharge to violate aquatic life criteria for certain pollutants known to be in the FGD wastestream. AR-209. Based on this determination, NHDES made permitting recommendations, including water quality-based effluent limits to be applied at Outfall 003A, the outlet of the slag settling pond into the discharge canal. Consequently, the Draft Permit included water quality-based effluent limits for Outfall 003A. Although there is a limited data set for aluminum, arsenic, mercury, selenium, and chlorides at Outfall 003A. EPA recently re-analyzed for RP and found there is no RP to exceed New Hampshire water quality standards for these pollutants. *See* AR-1694 through AR-1696 and AR-1709 through AR-1712. For the Final Permit, now that FGD wastewater is not authorized for discharge and therefore is not a contributing stream to the slag settling pond, any water quality-based effluent limits based on FGD wastewater are no longer necessary. Additionally, having no RP to violate aquatic life criteria in the Merrimack River, any water quality-based effluent limits at Outfall 003A even in the absence of FGD wastewater are inappropriate. Thus, EPA has removed monitoring and water quality-based limits that were proposed in the Draft Permit for the following pollutants: aluminum, arsenic, mercury, selenium and chlorides.

2.2 Water Quality Based Limits at Outfall 003A

Comment VI.2.2	AR-846, PSNH, pp. 205, 260, 207
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Comment: The metal limits in EPA's draft permit were derived from the water quality study conducted by DES, discussed above. EPA also set technology based limits for most of these same metals at Outfall 003C, which EPA says are more stringent than the water-quality based limits at Outfall 003A. With minor revisions, PSNH supports the monitoring program proposed by DES

with water-quality based limits at Outfall 003A and no technology based limits at Outfall 003C. If EPA insists on assigning these technology based limits at 003A then, there is no need to then place water quality based limits on the same metals at Outfall 003A. EPA should therefore remove the water quality based limits at Outfall 003A, since this effort at repetitive regulation leads to unreasonable and unduly burdensome permit limits that cannot be achieved over the long-term.

Further, EPA may only require internal effluent limits “[w]hen permit effluent limitations or standards imposed at the point of discharge are impractical or infeasible.” 40 C.F.R. Part 122.45. This prohibition of internal limits was an issue in *American Iron and Steel Institute v. EPA*, 115 F.3d 979 (D.C. Cir. 1997) (“AISI”). In AISI, the court first recognized the strict limits of EPA:

The [Clean Water] Act provides that when a permitting authority determines that “discharges of a pollutant from a point source would interfere with the attainment or maintenance of [applicable] water quality standards, effluent limitations (including alternative effluent control strategies) for such point source shall be established which can reasonably be expected to contribute to the attainment or maintenance of such water quality.” The statute is clear: The EPA may regulate the pollutant levels in a waste stream that is discharged directly into the navigable waters of the United States through a “point source”; it is not authorized to regulate the pollutant levels in a facilities internal waste stream. *Id.* at 996 (internal citations omitted) (emphasis added). Then the AISI Court explained its rationale:

We are apprised of nothing in the policy underlying the CWA that undercuts the plain meaning of the statutory text. To the contrary, by authorizing the EPA to impose effluent limitations only at the point source, the Congress clearly intended to allow the permittee to choose its own control strategy. By imposing water quality based standards upon internal facility waste streams, the EPA seeks to deprive the individual permittee of the ability to choose between a control system that meets the point-source WQBEL [Water Quality-Based Effluent Limitations] by means of point source controls and a control system that meets the point source WQBEL by means of internal waste stream purification. As we have just seen, however, the statute does not permit this sort of meddling inside the facility.

Id. (emphasis added). EPA’s authority to require and set internal permit limits is very constrained.

EPA incorporated water quality based limits, which were originally calculated by NH DES, on the FGD WWTS discharge at Outfall 003A.* Because monitoring at Outfall 003 is not impractical or infeasible, EPA is not authorized to set internal monitoring for water quality based limits and its actions are clearly arbitrary and contrary to law.

* To the extent that EPA set additional water quality based limits on internal outfalls, the CWA does not permit “this sort of meddling inside the facility.” EPA must amend the draft permit to correct its overreaching effort.

EPA Response: See Response to Comment 2.1 above.

2.3 If EPA Does Not Remove All of the Water-Quality Based Limits for the Metals at Outfall 003A [Slag Settling Pond], It Should Revise the Permit Limits as Follows

2.3.1. The Water Quality Limits for Selenium and Arsenic Should Be Removed

Comment VI.2.3.1**AR-846, PSNH, pp. 207, 208**

Comment: Based on its extensive water quality study, NHDES only recommended monitoring and reporting for selenium and arsenic. Specifically, for arsenic, DES noted that it was “concerned about (1) the arsenic water quality standard being outdated and subject to revision by EPA; (2) the proposed limit possibly being unnecessarily stringent; (3) the potential for the federal antibacksliding regulations to require such a limit to be retained in the permit; (4) the excessive cost of monitoring for arsenic using clean sampling and analytical procedures, not just for PSNH but possibly for other permittees; and (5) the technical feasibility of achieving the limit. NHDES has determined that it would be inappropriate to include a numeric permit limit for arsenic in NPDES permits at this time.” See NHDES Antidegradation Analysis of Merrimack River in the Vicinity of Merrimack Station (Oct. 4, 2010) at 5-6 (AR-209). DES went on to note that PSNH should only monitor and report the concentrations of arsenic in outfalls 003A and 003C (and conduct fish tissue monitoring to develop a site specific bioaccumulation factor for arsenic for the middle Merrimack River).

Regarding the selenium monitoring and reporting requirements, DES stated that it “proposed that monitoring for selenium be included in the draft permit and that a reopener clause be added to allow the permit to be modified to include the limit of 0.058 mg/l at Outfall 003A if it is determined during the permit term that there is reasonable potential for the limit to be violated. Accordingly, the draft permit contains a reopener clause and a monitoring requirement for selenium.” AR-209 at 7. DES therefore found that there was no reasonable potential that the water quality based limit would be violated. Therefore, the very data that EPA relied on to require water-quality based limits is the very data that DES used to conclude that only monitoring and reporting—and not water quality based limits—were necessary for arsenic and selenium. EPA should remove these limits from the permit because they are unnecessary and EPA’s overreaching is in error.

EPA Response: See Response to Comment 2.1 above.

2.3.2. There Is No Reasonable Potential that Copper Will Exceed the Proposed Permit Limits, So the Water Quality Limits Should Be Deleted

Comment VI.2.3.2**AR-846, PSNH, p. 208**

Comment: The copper water quality based limit must be revised and removed because there is no reasonable potential that the proposed copper permit limits will be exceeded. Specifically, Attachment F to the Draft Permit compiles six years of actual monitoring data, which reports average and maximum concentrations of copper of 0.010 and 0.05 mg/l, respectively. PSNH has provided a larger historical data set that substantiates the respective concentrations even further. This data therefore shows that there is clearly no reasonable potential to exceed the proposed permit limits of 0.027 and 0.083 mg/l. Therefore, the copper water-quality limit must be removed from the permit.

EPA Response: During development of the 2014 Revised Draft Permit, EPA re-evaluated the basis of the water quality-based copper limits at Outfall 003A and concluded that there was no reasonable potential to violate water quality standards for copper. See AR-1086. Therefore, EPA

proposed removing the copper discharge limitations from Outfall 003A. EPA again conducted a reasonable potential analysis utilizing New Hampshire's revised copper water quality criteria. Based on this recent analysis using data from the last five years (and also evaluated using data from the last 10 years), EPA concludes that there is no reasonable potential for copper to violate water quality limits. *See* AR-1693 through AR-1696. As explained in the 2014 Fact Sheet and still relevant now,

[t]he anti-backsliding regulations at 40 C.F.R. § 122.44(l)(1) allow for this change when “circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under § 122.62.” *See* 40 CFR 122.62(a)(2). The “circumstances” that have changed include: 1) the Region has a performed a more robust statistical reasonable potential analysis (AR #1086); and 2) the 2011 Draft Permit includes technology-based copper limits for metal cleaning waste at Outfall 003B, upstream of the slag settling pond.

AR-1135 (2014 Fact Sheet), p. 53. Therefore, the Final Permit does not include water quality-based effluent limits for copper. However, due to concerns that pollutants can be released from the solids that build-up in the pond, especially during and after storm events, EPA is requiring quarterly composite monitoring and reporting only for copper at Outfall 003A.² EPA determined that quarterly monitoring is appropriate to provide a data set for evaluation that accounts for seasonal variation, if any, in the discharge. Furthermore, the termination of the discharge of bottom ash transport water is a major change expected during the permit term, December 31, 2023 (*see* Response to Comment V.1.1), that could potentially cause significant changes in the discharge from the pond. Copper data will be used to assess whether water quality requirements continue to be met and act as an indicator of whether other metals might resolubilize in the pond and require future sampling.

2.3.3. The Monitoring Requirement for Mercury is Unduly Burdensome and Must be Less Stringent in Order to be Reasonably Achieved

Comment VI.2.3.3	AR-846, PSNH, p. 209
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Comment: NHDES set a mercury limit of .00072 µg/l at Outfall 003A but, because of analytical limitations, the reporting detection limit was set at 0.2 µg/l. DES also recommended that a mercury water-quality based limit of 0.13 mg/l be required at Outfall 003C, with the assumption that the same reporting detection limit of 0.2 µg/l would be established. PSNH supports the DES proposal for mercury regulation over the conditions that EPA required in the Draft Permit, including the requirements at both Outfall 003A and Outfall 003C as they relate to mercury. EPA's expectation to consistently and accurately monitor at such low concentration is unreasonable and the monitoring requirements are unduly burdensome.

² This concern was originally expressed in the 1992 Fact Sheet and reiterated in 2011 Fact Sheet, that “there is a possibility that copper retained in the pond may be released at times other than cleaning periods. This can occur by re-suspension of copper in the sediments or through conditions of low pH (acid rain, for example) where copper in the sediment has the potential to go back into solution.” AR-112, p. 5; *see also* AR-608, p. 23; AR-1803.

EPA Response: See Response to Comment 2.1 above.

2.3.4. The Monitoring Limit for Aluminum Is Unnecessary

Comment	AR-846, PSNH, p. 209
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On the Fact Sheet, EPA states that it does not consider aluminum “a pollution [sic] of concern for the FGD WWTS effluent discharge” and, therefore, has not set a technology-based standard at Outfall 003C. Since aluminum is not a pollutant of concern in FGD effluent and since the water quality based limits at Outfall 003A were a result of the FGD addition, PSNH requests the limit for aluminum be removed.

EPA Response: See Response to Comment 2.1 above.

2.3.5. EPA Cannot Justify Increasing the Monitoring and Reporting Requirements from Monthly and Quarterly Grab Samples to Weekly Composites

Comment VI.2.3.5	AR-846, PSNH, pp. 209, 210
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Comment: Moreover, EPA’s requirement that monitoring and reporting requirements for the metals in Outfall 003A increase from monthly and quarterly grab samples to weekly composite sampling is also clearly unreasonable and must be revised. Attachment F to the Draft Permit compiles six years of actual monitoring data, and during that six years Merrimack Station had one—and only one—permit noncompliance at Outfall 003A. This compliance record hardly justifies increasing effluent monitoring from monthly and quarterly grab samples to weekly composites. This redundant and excessive monitoring is particularly burdensome given that EPA’s extremely low limits will require that most samples be collected using clean techniques and then shipped across the country for analysis. These monitoring and reporting requirements **are crippling and unachievable, and EPA cannot justify this unwarranted regulation.**

EPA Response: See Responses to Comments 2.1, 2.3.2 (for copper monitoring) and Chapter IV of this Response to Comments document above.

2.3.6. The Existing Monitoring Requirements for TSS, Oil and Grease Should Be Retained

Comment VI.2.3.6	AR-846, PSNH, p. 210
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Comment: The data in Attachment F indicates that EPA’s data for TSS shows that the maximum and average values for 72 readings conducted over a six-year period were 19.2 and 5.6 mg/l respectively, compared to permit limits of 100 and 30 mg/l respectively. At a minimum, this data supports maintaining the existing monitoring program of monthly grab samples, with no justification to increase to weekly composite samples.

Further visual monitoring has been an excellent surrogate for weekly analysis of oil and grease at several outfalls at Merrimack Station, including Outfall 003A.

EPA Response: EPA agrees that the existing monitoring frequency of monthly sampling for TSS and O&G is sufficient to determine compliance of these parameters at Outfall 003A. Past sampling data and the facility’s reduced operations (*see* Chapters II and III of this document) support this determination. Specifically, EPA anticipates that reduced operations at the plant (i.e., reduction in discharge flows) will provide more residence time in the slag settling pond for solids to settle out of the wastewater. Therefore, the Final Permit includes monthly sampling for TSS and O&G. For TSS, composite sampling is a more representative measure of the discharge and accounts for variability in pollutant concentrations and is maintained in the Final Permit.

As for the commenter’s suggestion that visual monitoring may serve as a surrogate for O&G grab sampling, EPA disagrees. As mentioned, O&G sampling and limitations are required by the Steam Electric ELGs; visual monitoring is not acceptable to ensure compliance with these limits.

2.3.7. The Flow (MGD) Permits Limits at Outfall 003A Are Unnecessary Given EPA’s Decision to Impose Technology-Based Limits at Outfall 003C

Comment VI.2.3.7	AR-846, PSNH, p. 210
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Comment: If EPA intends to regulate the FGD effluent with technology-based standards, PSNH requests that the flow limits be eliminated or, at a minimum, the average monthly flow be increased to 6.5 mgd. EPA recognized a similar oversight at Outfall 003C when they removed the permit limits in their correction letter, issued December 16, 2011.

EPA Response: First, EPA notes that FGD wastewater is no longer authorized to discharge to the slag settling pond. Therefore, to the extent that the commenter cites technology-based standards for FGD as a reason for eliminating flow limits at Outfall 003A, this is no longer relevant.

EPA disagrees that the flow limit at Outfall 003A should be eliminated or increased above the limits in the Draft Permit. First, the Draft Permit limits ensure that EPA’s water-quality based assumptions continue to be protective. *See* AR-1693 (updated reasonable potential analyses were based on a maximum daily flow of 13 MGD). Additionally, the Draft Permit limits are maintained in the Final Permit because: 1) the flow data from this outfall over the past 5 years shows that the Permittee is able to meet these limits (AR-1695); 2) the reduced operations at the facility result in lower flows to the slag settling pond; and 3) the bottom ash sluice water discharge will be terminated by December 31, 2023. Collectively, these factors demonstrate that the flow limits are necessary, appropriate, and achievable.

2.3.8. There is No Basis for the Requirement to Monitor Chloride

Comment VI.2.3.8	AR-846, PSNH, pp. 210, 211
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Comment: PSNH agrees with the NHDES statement that there “is no reasonable potential for the existing discharge to cause a violation of the chronic aquatic life criteria. AR-209 at 8. Therefore, there is no reason to require a 24-hour composite sample be collected and tested for chloride every week. EPA’s concern about future effluent quality does not change the fact that there are no water quality concerns or technology standards. EPA Fact Sheet to NPDES Draft Permit at 26. Therefore, there is no basis to monitor chloride and the requirement limit must be deleted.

EPA Response: See Response to Comment 2.1 above.

3.0 OUTFALL 003D (COOLING TOWER BLOWDOWN)

Comment VI.3	AR-846, PSNH, p. 214
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Comment: PSNH respectively requests the following revisions to the permit limits at Outfall 003D, Cooling Tower Blowdown:

- PSNH requests the FAC monitoring be reduced to Monday through Friday, excluding holidays, and when qualified plant personnel are available.
- Based upon footnote 14, it appears that the discharge limit should be labeled as “Average Daily” instead of “Average Monthly.”
- PSNH requests the chromium and zinc monitoring requirements be reduced to monthly grab samples. The current monitoring requirements are unduly burdensome and unreasonable.
- PSNH requests the characteristic description be expanded to reflect the language contained at 40 C.F.R. § 423.15(j)(3) which requires no detectable amounts of the 126 priority pollutants “contained in chemicals added for cooling tower maintenance.”
- Given that EPA has reduced the allowable thermal discharge by 99.6-percent, it makes no sense to establish thermal limits and require continuous thermal monitoring at two locations with daily heat load calculations and monthly and annual reporting. PSNH therefore requests the entire thermal effluent section be removed.
- EPA should amend the draft permit to recognize that the 1.19 million gallons per day was a preliminary estimate of total flow and there is no real need to regulate the flow.

EPA Response: The Final Permit no longer requires that the Station install closed cycle cooling towers for reasons discussed fully in Chapters II and III of this Response to Comments document. Therefore, this comment is no longer relevant.

4.0 OUTFALL 004 – UNIT 1 & 2 TRAVELLING SCREEN WASHWATER, UNIT 1 & 2, CWIS OPERATIONAL SUMP PUMPS, UNIT 1 & 2 DEICING HEADERS, AND FIRE PUMP OVERFLOW & ICE DAM REMOVAL SPRAYS

4.1 Outfall 004A – Unit 1 & Unit 2 Traveling Screen Washwater

Comment VI.4.1	AR-846, PSNH, pp. 214, 215
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Comment: PSNH respectfully requests revisions to the permit limits at Outfall 004A, the Unit 1 and Unit 2 Traveling Screen Washwater. First, there is no reason to have a flow limit and PSNH requests that EPA remove this limit. Additionally, the inspections are unreasonable, unduly restrictive, and unachievable over the long-term. PSNH therefore requests that the inspections be reduced to Monday thru Friday, excluding holidays, when qualified personnel are available to conduct the inspections. PSNH further requests that EPA eliminate monitoring for oil and grease if inspections will be required on a daily basis.

EPA Response: EPA agrees that a flow limit is not necessary for this outfall location, which is consistent with the 2011 Fact Sheet and the 1992 Permit. However, EPA is not removing the inspection and monitoring requirements for oil and grease (O&G). Any sheen is considered a water quality violation. Given that the Station now operates sporadically, EPA does not consider daily inspections when there is a discharge (including weekends and holidays) to be overly burdensome. Furthermore, annual sampling is providing the Agency with the minimum amount of data to confirm that O&G are not being discharged from this outfall.

EPA is also adding to the corresponding footnote (footnote 18 in the Final Permit) that 1) if a sheen is detected, the discharge shall be terminated until the source of the oil can be identified and removed from the wastewater prior to re-initiating the discharge, and 2) the results of the analysis and cause of the excursion shall be documented and reported to EPA as an attachment to the next monthly DMR report. Also see RTC VI.1.2 above regarding pH requirements for this outfall.

4.2 Outfall 004B – Fire Main Pump Overflow and Ice Dam Removal Sprays

Comment VI.4.2	AR-846, PSNH, p. 215
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Comment: PSNH respectfully requests revisions to the permit limits at Outfall 004B, the Fire Main Pump Overflow and Ice Dam Removal Sprays. First, there is no reason to have a flow limit and PSNH requests that EPA remove this limit. Additionally, the inspections are unreasonable, unduly restrictive, and unachievable over the long-term. PSNH therefore requests that the inspections be reduced to Monday thru Friday, excluding holidays, when qualified personnel are available to conduct the inspections. PSNH further requests that EPA eliminate monitoring for oil and grease if inspections will be required on a daily basis.

EPA Response: EPA agrees that the flow limit for the Outfall 004B discharge be eliminated. The variable amount of water discharge that overflows from the fire main pump cannot be predicted. Similarly, the amount of water discharged from the spray used to remove ice dams is dependent on the amount of river ice, which is difficult to predict from year to year. Due to this unpredictability, a flow limit would be overly restrictive. EPA has removed the 0.72 MGD daily maximum discharge limit from the Final Permit for Outfall 004B. Instead, the Final Permit includes a report only yearly flow requirement.

As previously indicated in Response to Comment 4.1 above, any sheen is considered a water quality violation. Given that the Station now operates sporadically, EPA does not consider daily inspections when there is a discharge to be overly burdensome. As with Outfall 004A, EPA is also adding to the corresponding footnote (footnote 18) of the Final Permit that if a sheen is detected, the discharge shall be terminated until the source of the oil can be identified and removed from the wastewater prior to re-initiating the discharge and the results of the analysis and cause of the excursion shall be documented and reported to EPA as an attachment to the next monthly DMR report. Annual sampling is providing the Agency with the minimum amount of data to confirm that O&G are not being discharged from this outfall. Also see RTC VI.1.2 above regarding pH requirements for this outfall.

4.3 Outfall 004C – Unit 1 & Unit 2 CWIS Operational Sump Pumps

Comment VI.4.3	AR-846, PSNH, p. 215
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Comment: PSNH respectfully requests revisions of the permit limits at Outfall 004C, the Unit 1 and Unit 2 CWIS Operational Sump Pumps. First, there is no reason to have a flow limit and PSNH requests that EPA remove this limit. Additionally, the inspections are unreasonable, unduly restrictive, and unachievable over the long-term. PSNH therefore requests that the inspections be reduced to Monday thru Friday, excluding holidays, when qualified personnel are available to conduct the inspections. PSNH further requests that EPA eliminate monitoring for oil and grease if inspections will be required on a daily basis. Finally, if EPA refuses to remove the sampling requirement for oil and grease, PSNH requests the frequency be reduced to 1/year which is consistent with the other outfalls and the language in subscript 18 (NHDES Draft Permit, at 22 n.18) which states that “[i]n addition to yearly testing, testing for oil and grease shall be immediately initiated if oil sheen is observed.”

EPA Response: EPA agrees that the flow limit for Outfall 004C be eliminated. Because the amount of water accumulating in the CWIS floor sumps cannot be predicted, a flow limit would be overly restrictive. EPA will remove the 110 GPD daily maximum discharge limit from the Final Permit. Instead, the Final Permit requires a report only flow requirement.

For the same reasons previously discussed above for Outfall 004A and 004B, EPA maintains that the daily visual inspection of the floor sump prior to being discharged. This requirement ensures compliance with narrative water quality standards for O&G and is not unduly restrictive because the Station now operates only sporadically. In addition, EPA agrees that annual monitoring for O&G is appropriate as it is consistent with other outfalls and footnote 18 of the Final Permit. *See also* Responses to Comments VI.4.1, VI.4.2, and VI.5.1. EPA has modified the O&G monitoring frequency and has also modified the corresponding footnote for this outfall as described in the response above. In addition, footnote 17 of the Final Permit includes language to clarify that visual inspections of the floor sump must occur prior to discharging. Also see RTC VI.1.2 above regarding pH requirements for this outfall.

4.4 Outfall 004D – Unit 1 & Unit 2 Deicing Headers

Comment VI.4.4	AR-846, PSNH, p. 216
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Comment: PSNH respectfully requests revisions of the permit limits at Outfall 004D, the Unit 1 and Unit 2 Deicing Headers. The deicing recirculation water is not a discharge to the river since it is immediately drawn back into the station; therefore, this outfall should be eliminated from the permit. If EPA ignores PSNH’s request and refuses to remove the outfall from the permit, then there is no reason to have a flow limit and PSNH requests that this limit be removed. Additionally, the permit application reports that the estimated flow for the two units is 21 MGD, not 1.0 MGD as EPA has provided as the permit limit, and the flow cannot be estimated from a pump curve as the water is simply forced back from the condenser outlet. Moreover, if the outfall is not eliminated, then PSNH further requests that the oil and grease monitoring be removed if inspections are required on a daily basis, and that the inspections be reduced to Monday thru Friday, excluding holidays, when qualified personnel are available to conduct the inspections.

EPA Response: Since the heated, chlorinated water discharged from Unit 1 and 2's deicing headers was being discharged into the waters of the United States, EPA considered it appropriate to regulate this discharge. Accordingly, EPA designated this discharge as Outfall 004D and proposed flow, O&G and pH limits. The Draft Permit further required that Outfall 004D's discharge not violate mixing zone requirements in the New Hampshire Surface Water Regulation Env-Wq 1707.2. Finally, Merrimack Station injects a biocide (chlorine or bromine) up to two hours per day per Unit into its condensers; from which the deicing water is drawn. The biocide is used to prevent organisms from growing on the condenser tubes. Any organisms entering the screen house bay could be adversely affected by the deicing water if it contained elevated levels of chlorine. Indeed, the Draft Permit includes a requirement that during chlorination of the condensers, each screen house traveling screen would be continuously rotated to reduce the amount of time impinged organisms are subjected to high levels of chlorine.

Based on PSNH's assertion that "... deicing recirculation water is not a discharge to the river since it is immediately drawn back into the station ...," EPA agrees to remove sampling Outfall 004D from the Final Permit and the corresponding requirement that the use of deicing water meet the mixing zone requirements contained in New Hampshire Surface Water Quality Regulation Env-Wq 1707.02. However, the requirements of the corresponding footnote remain, which are to prohibit the discharge of deicing water, to visually inspect and adjust the flow rates to ensure there is no discharge of deicing water to the Merrimack River and to maintain a log of these inspections. See Part I.H.6 of the Final Permit. See also EPA's Response to Section 6, footnote 20, below.

In addition, EPA remains concerned that impinged fish and other organisms trapped on the intake screens would be subjected to high levels of chlorine. Because the need for deicing is intermittent, the Final Permit continues to require that the Permittee either employ an alternative water source that is not chlorinated for deicing water or dechlorinate the deicing water. EPA has added another option to address deicing concerns to the Final Permit which allows that deicing can be performed only at times when chlorination of the condensers is not taking place.³ Furthermore, because the deicing water used is heated condenser cooling water, the Final Permit requires that each screen house traveling screen must be continuously rotated during deicing to reduce the amount of time impinged organisms are subjected to elevated temperatures. See Part I.E.6 of the Final Permit. For more information about the Final Permit's Cooling Water Intake Structure related requirements, see Chapter III of this document.

5.0 OUTFALL 005 – UNIT 1 & 2 COOLING WATER INTAKE STRUCTURE MAINTENANCE SUMP PUMPS

5.1 Outfall 005A – Unit 1 Cooling Water Intake Structure Maintenance Sump Pumps

Comment VI.5.1	AR-846, PSNH, p. 216
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Comment: PSNH respectfully requests revisions to the permit limits at Outfall 005A, the Unit 1 Cooling Water Intake Structure Maintenance Sump Pumps. First, there is no reason to have a flow limit and PSNH requests that EPA remove this limit. Additionally, the inspections are

³ The 2011 Fact Sheet explains that "[t]hroughout the winter months, warmed water is *intermittently* pumped from the discharge of both generating units' condensers to the screen house bays to prevent ice buildup." (emphasis added)

unreasonable, unduly restrictive, and unachievable over the long-term. PSNH therefore requests that the inspections be reduced to Monday thru Friday, excluding holidays, when qualified personnel are available to conduct the inspections. PSNH further requests that EPA eliminate monitoring for oil and grease if inspections will be required on a daily basis.

EPA Response: EPA agrees that the flow limit for Unit 1's CWIS maintenance sump pump discharge be eliminated. Even though Unit 1's CWIS forebay is isolated from the Merrimack River by a head gate during maintenance outages, water still seeps in from the river. Since the Permittee cannot predict with any accuracy the volume of river water entering the CWIS during an outage, it is overly restrictive to place a discharge limit on the maintenance sump pumps discharge. Therefore, EPA has removed the 0.3 MGD daily maximum discharge flow limit from the Final Permit and replaced it with a yearly report only requirement.

For the same reasons previously discussed for Outfall 004, EPA maintains that daily visual inspections (including weekends and holidays) and annual monitoring for O&G of the wet wells during maintenance are not unreasonable, unduly restrictive, or unachievable over the long-term, given that Merrimack Station now operates infrequently. *See* Response to Comment 4.1 above.

As with Outfall 004A, EPA is also adding to the corresponding footnote of the Final Permit (footnote 18) that if a sheen is detected, the discharge shall be terminated until the source of the oil can be identified and removed from the wastewater prior to re-initiating the discharge and the results of the analysis and cause of the excursion shall be documented and reported to EPA as an attachment to the next monthly DMR report.

Furthermore, based on the reduction in operations at the facility and the possibility that maintenance of the sumps may occur during times other than an "annual outage," there is no need to specify that sampling at Outfalls 005A and 005B occur during an annual outage. Measurement frequency for flow, O&G, and pH have been changed from once per annual outage (1/Annual Outage) to once per year (1/Year). Also see RTC VI.1.2 above regarding other pH requirements for this outfall.

5.2 Outfall 005B – Unit 1 Cooling Water Intake Structure Maintenance Sump Pumps

Comment VI.5.2	AR-846, PSNH, p. 217
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Comment: EPA independently authorized the discharge of Outfall 005A and 005B into the Merrimack River. However, these two outfalls are substantially identical and simply represent different locations where the pump hose may discharge. Therefore, Outfall 005B should be eliminated from the permit.

EPA Response: It was not specified in either Merrimack Station's NPDES renewal application or the email string (See AR-526) requesting further information concerning the maintenance sump pump(s) configuration on exactly how many pumps were deployed to dewater Unit 1's CWIS. In a subsequent telephone conversation between EPA and PSNH (John King, EPA and Allan Palmer, PSNH; March 18, 2013), it was clarified that one pump was employed as a sump pump for the CWIS. After installing a head gate to isolate the CWIS from the Merrimack River, the screen wells are dewatered using the screenwash pumps. Each CWIS consists of two separate screen wells.

After dewatering, a portable sump pump is placed in the screenwell in which maintenance is being conducted. Each CWIS has several holes cut through both sides of the structure. This allows flexibility for locating the sump pump in the CWIS screenwell. Outfall 005A, therefore, is defined not by a location in the CWIS structure, but by the location of the sump pump's discharge hose. Additionally, only one sump pump is used at a time, because maintenance is conducted in one screenwell at a time. Based on this clarification, EPA has eliminated Outfall 005B as described in the Draft Permit. Now, Outfall 005A represents the sump pump's discharge hose when used for either screen well of Unit 1. The Final Permit renames Outfall 005B as the discharge from Unit 2's (i.e., MK-2) cooling water intake structure sumps during maintenance activities (see below). Also see RTC VI.1.2 above regarding pH requirements for this outfall.

5.3 Outfall 005C – Unit 2 Cooling Water Intake Structure Maintenance Sump Pumps

Comment VI.5.3	AR-846, PSNH, p. 217
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Comment: PSNH respectfully requests revisions to the permit limits at Outfall 005C, the Unit 2 Cooling Water Intake Structure Maintenance Sump Pumps. First, there is no reason to have a flow limit and PSNH requests that EPA remove this limit. Additionally, the inspections are unreasonable, unduly restrictive, and unachievable over the long-term. PSNH therefore requests that the inspections be reduced to Monday thru Friday, excluding holidays, and as long as personnel are available to conduct the inspections. PSNH further requests that EPA eliminate monitoring for oil and grease if inspections will be required on a daily basis.

EPA Response: For the same reasons discussed in the Response to Comment 5.1 related to Outfall 005A, above, EPA is removing the flow limit and requiring report only for flow at this outfall. Similarly, daily visual inspections and annual monitoring for O&G of the sump pump wet wells during maintenance remains in the Final Permit.

Furthermore, given that Outfall 005B (representing maintenance discharge of Unit 1's wet wells) has been removed, what was Outfall 005C and Outfall 005D in the Draft Permit is now re-designated as Outfall 005B in the Final Permit.

5.4 Outfall 005D – Unit 2 Cooling Water Intake Structure Maintenance Sump Pumps

Comment VI.5.4	AR-846, PSNH, p. 217
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Comment: EPA independently authorized the discharge of Outfall 005C and 005D into the Merrimack River. However, these two outfalls are substantially identical and simply represent different locations where the pump hose may discharge. Therefore, Outfall 005D should be eliminated from the permit.

EPA Response: Similar to response to comment 5.2 above for Outfall 005B, EPA agrees that it is unnecessary to separately define outfalls for the discharge from the same unit's wet wells. Therefore, Outfall 005C and Outfall 005D have been combined and designated as Outfall 005B in the Final Permit. Therefore, there are no Outfalls 005C and 005D in the Final Permit.

6.0 EXPLANATION OF SUPERSCRIPTS, NHDES DRAFT PERMIT**Comment VI.6****AR-846, PSNH, pp. 217, 218**

PSNH also takes issue with several of the Superscripts accompanying the permit document. Specifically, PSNH requests the following:

- (5)d. PSNH requests that chromium be removed from the list of WET test parameters as it is not listed in Attachment A.
- (5)f. PSNH requests that WET testing be automatically suspended for the permit duration after four consecutive sampling periods, if no test shows a LC50 < 100%.
- (8) PSNH requests the weekend discharge prohibition be eliminated since EPA has never collected a sample.
- (9) PSNH requests approval to substitute 8 grab samples over the discharge period as a suitable replacement for continuous pH monitoring.
- (11) If EPA refuses to eliminate BOD5 monitoring as requested earlier, PSNH requests a reduction to annual monitoring be granted automatically after six months of reporting. Moreover, PSNH requests BOD5 monitoring be automatically eliminated after the six month period.
- (14) If the limit is supposed to be the average of analyses made over a single period and if the sampling frequency is daily, then the limit should be labeled as an “Average Daily Limit.”
- (17) PSNH requests that daily inspections are only required Monday thru Friday, excluding holidays, when qualified personnel are readily available.
- (20) PSNH requests this outfall and footnote be eliminated since there is no discharge to the river.

EPA Response:

- (5)d. Chromium has been removed from the list of WET test parameters because it is a not required parameter for either the Freshwater Acute Toxicity Test Procedure or Protocol (Attachment A) of the Final Permit.
- (5)f. As a matter of regional policy, EPA will not automatically suspend WET testing, until it has had the opportunity to review the WET results and determine whether the frequency of testing should be maintained or could be reduced (not suspended).
- (8) For the 2011 Draft Permit, EPA did not prohibit the discharge of metal cleaning wastewater during weekends; only that “provisions are made to allow the collection of a 24-hour composite sample by the EPA and NHDES.” However, given that Outfall 003B in the Final Permit is dedicated to the discharge of chemical and non-chemical metal cleaning effluent

through Waste Treatment Plant No. 1, as described in Response to Comment IV.1.1, and that sampling is required each day a discharge event occurs, regardless of which day of the week it falls on, this footnote is unnecessary and is removed from the Final Permit.

- (9) EPA disagrees that eight grab samples over the discharge period is a suitable replacement for continuous pH monitoring (see response to comment 1.2 above for pH) and therefore has not changed this footnote.
- (11) Outfall 003C (FGD effluent) and the corresponding footnotes 10 and 11 of the Draft Permit have been removed from the Final Permit because the discharge of FGD wastewater is not authorized under this permit. *See* Chapter VIII of this Response to Comments document.
- (14) The Final Permit does not require the installation or use of closed cycle cooling for the reasons described in Chapters II and III of this Response to Comments document. Therefore, Outfall 003D has been removed, as well as this corresponding footnote.
- (17) Daily inspections are required only when discharging as discussed above in responses to comments in Sections 4 and 5 above.
- (20) Although Outfall 004D has been removed from the Final Permit as described in Response to Comment VI.4.4 above, EPA has determined that it is appropriate to maintain the following requirements: 1) that no recirculation water used for deicing shall be discharged from the intake forebays to the Merrimack River, 2) to visually inspect and adjust the flow rates to ensure there is no discharge of deicing water to the Merrimack River and 3) to maintain a log of these inspections. Therefore, although the footnote has been removed, these requirements remain in the Final Permit under Part I.H – Unauthorized Discharges.

In addition, as also explained above, EPA remains concerned that impinged fish and other organisms trapped on the intake screens would be subjected to high levels of chlorine and also heat during deicing. The Final Permit continues to require that the Permittee either employ an alternative water source that is not chlorinated for deicing water or dechlorinate the deicing water. Another option added to the Final Permit, requires that deicing be performed only at times when chlorination of the condensers is not taking place. See Part I.E.6 of the Final Permit. Furthermore, the Final Permit, also at Part I.E.6 requires that each screen house traveling screen must be continuously rotated during deicing to reduce the amount of time impinged organisms are subjected to elevated temperatures.

Also note: Footnote numbering has changed for the Final Permit - see List of Permit Changes located at the beginning of this Response to Comments document.

7.0 Daylight Savings Time Adjustment

Comment VI.7	AR-846, PSNH, p. 219
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Comment: PSNH respectfully requests that all flow limits in the Draft Permit be increased accordingly to account for the 25-hour operation for daylight savings time adjustment.

EPA Response: EPA realizes that there are two days per year that contain 25 hours as a result of daylight savings time. If the Permittee discharges above flow limits on those days, EPA will take this special circumstance into consideration when evaluating the exceedance. However, at no time shall the increase in flow be greater than 4% of the flow limit on those days.

8.0 Compliance Schedule

Comment VI.8	AR-846, PSNH, p. 219
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Comment: PSNH requests that EPA revise the Draft Permit to recognize that PSNH need not immediately comply with the requirements to install a cooling tower and biological treatment system. Instead, an interim period is necessary to allow for construction of these facilities and integration of these facilities into the existing operation of Merrimack Station. A “compliance schedule” is authorized under CWA § 309, as recognized by EPA in its Draft Permit Fact Sheet. NHDES Draft Permit Fact Sheet, at 9 (“When appropriate, however, schedules by which a permittee will attain compliance with new permit limits may be developed and issued in an administrative compliance order under CWA § 309(a) or some other mechanism.”). EPA should therefore recognize the high probability that PSNH will be issued an administrative compliance order such that immediate compliance will not be required and the existing facilities will be allowed to operate without interruption.

EPA Response: The Permittee is no longer required to install either closed cycle cooling towers or biological treatment as discussed fully in Chapters II, III and VIII of this Response to Comments document. Therefore, this comment is no longer relevant.

9.0 ALL OUTFALLS, MISCELLANEOUS

9.1 Sensitive Test Methods Rule

Comment VI.9.1	AR-1548, PSNH, p. 217
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Comment: PSNH has no issue with the requirements of 40 C.F.R. § 122.44(i)(1)(iv) being explicitly referenced in the Final Permit for the facility. To the extent EPA is able to do so, the phrases “known level of confidence” and “reliably measured within specified limits of precision and accuracy” should be better defined or explained in the proposed permit language to eliminate any ambiguities regarding when a particular procedure or method is satisfactory.

EPA’s Response: As described in EPA’s 2017 Statement of Substantial New Questions for Public Comment (2017 Statement), EPA anticipated including the following language in the Merrimack Station Permit:

In accordance with 40 CFR § 122.44(i)(1)(iv), the Permittee shall use sufficiently sensitive test procedures (i.e., methods) approved under 40 CFR Part 136 or required under 40 CFR Chapter I, Subchapter N or O, for the analysis of pollutants or pollutant parameters limited in this permit (except WET limits). A method is considered “sufficiently sensitive” when either: (1) The method minimum level (ML) is at or below the level of the effluent limit established in this permit for the measured pollutant or pollutant parameter; or (2) The method has the lowest ML of the analytical methods approved under 40 CFR Part 136 or required under 40 CFR Chapter I, Subchapter N or O for the measured pollutant or pollutant parameter. The ML is not the minimum level of detection, but rather the lowest level at which the test equipment produces a recognizable signal and acceptable calibration point for a pollutant or pollutant parameter, which is representative of the lowest concentration at which a pollutant or pollutant parameter can be measured with a known level of confidence. For the purposes of this permit, the detection limit is the lowest concentration that can be reliably measured within specified limits of precision and accuracy for a specific laboratory analytical method during routine laboratory operating conditions (i.e., the level above which an actual value is reported for an analyte, and the level below which an analyte is reported as non-detect).

Since the 2017 Statement was issued, EPA refined the standard Sufficiently Sensitive Test Method language for use in all NPDES permits issued by the Region. The language used in the Final Permit for Merrimack Station is not substantially different than the language above. However, the language used to describe “detection limit” which includes the phrase “reliably measured within specified limits of precision and accuracy” has been removed from the standard language for NPDES permits because “minimum level (ML)” is the metric used in the Rule, not detection limit. Therefore, the “reliably measured . . .” language is not included in the Final Permit for Merrimack Station. Similarly, the phrase “known level of confidence” was proposed by EPA to describe quantitation limits, such as minimum levels. *See* <https://www.federalregister.gov/documents/2003/03/12/03-5712/guidelines-establishing-test-procedures-for-the-analysis-of-pollutants-procedures-for-detection-and>. However, this proposed definition was not adopted in the Final Rule. Consequently, this phrase has also been removed from the Final Permit for Merrimack Station. Appendix B of 40 CFR part 136 states that “[t]he Minimum Level (ML) for each analyte is defined as the level at which the entire analytical system must give a recognizable signal and acceptable calibration point. It is equivalent to the concentration of the lowest calibration standard, assuming that all method-specified sample weights, volumes, and cleanup procedures have been employed.” *See* footnote #2 of the Final Permit.

Footnote 2 containing the revised Sufficiently Sensitive Test Method Rule language is included in the Monitoring Requirements heading of every outfall table in the Final Permit and consists of standard language currently added to every Region 1 NPDES permit issued by EPA. Footnote 3

is also included in the Monitoring Requirements heading for each outfall in the Final Permit and provides standard clarifying language of the reporting requirements for this Rule.

9.2 PCB Discharges

Comment VI.9.2	AR-1548, PSNH, p. 218
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Comment: PSNH has no issue with EPA’s proposed general prohibition against discharges of polychlorinated biphenyl compounds in the Final Permit for the facility. As the agency correctly points out, such a provision is included in the existing NPDES permit for the facility.⁸¹⁷

⁸¹⁷ See AR-236 at 3.

EPA’s Response: Comment noted; no response necessary.