



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
WASHINGTON, D.C. 20555-0001

June 15, 2011

Mr. Peter D. Colosi  
Assistant Regional Administrator for  
Protected Resources  
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Northeast Regional Office  
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**SUBJECT: RESPONSE TO ESSENTIAL FISH HABITAT CONSERVATION  
RECOMMENDATIONS FOR HOPE CREEK GENERATING STATION AND  
SALEM NUCLEAR GENERATING STATION, UNITS 1 AND 2, LICENSE  
RENEWAL REVIEW**

Dear Mr. Colosi:

The Nuclear Regulatory Commission (NRC) has reviewed your essential fish habitat (EFH) Conservation Recommendations dated June 3, 2011 (NMFS 2011b), regarding the proposed license renewals of Hope Creek Generating Station (Hope Creek) and Salem Nuclear Generating Stations, Units 1 and 2 (Salem). Your recommendations responded to NRC's EFH Assessment dated February 11, 2011 (NRC 2011b), which was revised on March 25, 2011 (NRC 2011c), based on a teleconference with staff from the National Marine Fisheries Service (NMFS)'s James J. Howard Marine Sciences Laboratory field office on March 17, 2011.

This letter serves several purposes. First, the NRC staff addresses what appears to be a repeated misconception on the part of NMFS that the NRC has authority to regulate water intakes and discharges at commercial nuclear power plants, despite NRC staff's previous communications and EFH response letters acknowledging limitations to NRC authority. To address this issue, the NRC staff provides NMFS an overview of its authority with regard to water quality and aquatic impacts and provides a brief history of EFH consultations for proposed reactor license renewals.

Next, the NRC staff directly responds to your June 3, 2011, EFH consultation letter for Salem and Hope Creek Stations. In this portion of this letter, the NRC staff first corrects several factual misrepresentations in your June 3 letter regarding the substance of NRC staff's findings in its supplemental environmental impact statements (SEISs) (draft, NRC 2010a; final, NRC 2011a) regarding the proposed Salem and Hope Creek license renewals and the Salem and Hope Creek EFH Assessment (NRC 2011c). Then the NRC staff addresses your comments regarding the Fish and Wildlife Coordination Act (FWCA) and species protected under the NMFS's species of concern program for Salem and Hope Creek, and clarifies the process for commenting on NRC National Environmental Policy Act (NEPA) documents. Third, this letter addresses NMFS's apparent shift from abbreviated to expanded EFH consultation, of which

NRC staff were not properly notified. Finally, the NRC staff responds to the EFH Conservation Recommendations for Salem and Hope Creek.

## **I. The NRC's Aquatic Regulatory Authority**

### **Statutory Background**

In 1972, Congress amended the Federal Water Pollution Control Act (a.k.a., the Clean Water Act; henceforth, CWA) to assign statutory authority over water quality matters to the U.S. Environmental Protection Agency (EPA). Portions of the CWA specifically removed water quality oversight authority from other Federal agencies like NRC, and, further, sought to prevent duplicative Federal oversight of CWA issues by specifically and solely vesting authority and expertise with EPA. The CWA further allowed EPA to delegate portions of its CWA authority to states. On April 13, 1982, EPA authorized New Jersey to issue National Pollution Discharge Elimination System (NPDES) permits (EPA 2003). New Jersey's program is authorized to exercise all delegated EPA authority under the CWA (EPA 2009).

New Jersey's NPDES program (referred to as the New Jersey Pollutant Discharge Elimination System [NJPDES] program) is administered by the New Jersey Department of Environmental Protection (NJDEP). The NJDEP issues and enforces NJPDES permits for both Salem and Hope Creek. Both Salem's NJPDES permit (NJDEP 2001) and Hope Creek's NJPDES permit (NJDEP 2003) contain limitations on pollutant discharges including a variety of dissolved solids, biocides, and other materials. The permits also limit total withdrawn water volume, discharged water temperature, and total discharged heat. Further, the permits contain special conditions under Part IV, "Specific Requirements," that establish performance limits, technology requirements (including best technology available [BTA] for reducing impingement and entrainment), mitigation measures, and other requirements under section 316(b) of the CWA. Under EPA's delegated authority, the NJDEP—and not NRC—issues NJPDES permits and enforces permit requirements, including those special conditions listed above.

Currently, the NJDEP is reviewing Salem's NJPDES permit renewal application (PSEG 2006). Because PSEG timely filed a renewal application in 2006, Salem's 2001 NJPDES permit has been administratively extended and remains in effect at this time. The NJDEP recently renewed Hope Creek's NJPDES permit, and the new permit becomes effective on July 1, 2011 (PSEG 2011).

Section 305(b)(4)(A) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) requires NMFS to provide Federal and state agencies with EFH Conservation Recommendations for actions that would adversely affect EFH. However, the MSA's implementing regulations specifically state, "NMFS will not recommend that state or Federal agencies take actions beyond their statutory authority" (50 *Code of Federal Regulations* (CFR) Part 600.925(a)). As discussed above, the NJDEP retains the authority over Salem and Hope Creek's water withdrawal volumes, discharged water temperatures, and impingement and entrainment-reducing technology requirements through the NJPDES permitting process. Therefore, these items—which constitute the entirety of NMFS's EFH Conservation Recommendations for Salem and Hope Creek—are beyond the NRC's statutory authority.

**NRC's Historical Efforts in Water Permitting Issues**

Prior to the 1972 CWA, the staff of NRC's predecessor agency, the Atomic Energy Commission (AEC) exercised authority for water permitting. However, after the 1972 CWA amendments, the AEC (now the NRC) entered into a memorandum of understanding with EPA regarding EPA's exclusive authority for water permitting. Now, the NRC clearly defers to EPA and its state delegates for water permitting in its review processes (see reference to 10 CFR Part 51.53(c)(3)(ii)(B) below).

NRC staff have previously attempted to impose more-stringent or merely different requirements on licensees that those required by EPA. Notably, in *Tennessee Valley Authority* (Yellow Creek Nuclear Plant, Units 1 and 2), ALAB-515, 8 NRC 702 (1978), the Atomic Safety and Licensing Appeal Board (ALAB) struck down the NRC staff's attempts to require water quality monitoring as a license condition for a proposed nuclear power plant on the grounds that such license conditions challenged Congress's exclusive grant of water quality expertise and authority to EPA under the CWA. The ALAB held that NRC "may not undercut EPA by undertaking its own analyses and reaching its own conclusions on water quality issues already decided by EPA," 8 NRC at 715, and that the NRC may not include any limiting conditions of operation or monitoring requirements of its own in the license for the protection of the aquatic environment. 8 NRC at 713-714. The ALAB was aware that EPA's authority could be delegated to states, and though NRC staff argued that state-level delegation was a reason to allow staff to impose more-stringent standards, the ALAB found no evidence at that time that states would fail to set and enforce water quality standards. 8 NRC at 714-715.

The ALAB, later ruling on an appeal regarding a contention that a power plant's operation with once-through cooling would have an adverse effect upon the aquatic environment in general, held that the NRC staff must take EPA's decisions (in a state where EPA regulated water quality) about the appropriate cooling technologies at face value. *Carolina Power and Light Company* (H.B. Robinson, Unit No. 2), ALAB-569, 10 NRC 557, 561-562 (1979). NRC's lower adjudicatory board had expressed some discomfort with accepting EPA's determination that open-cycle cooling was appropriate, but the ALAB found "We are bound to take EPA's considered decisions at face value, and simply to factor them into our cost-benefit balance." 10 NRC at 561-562.

Currently, NRC's regulations for license renewal environmental reviews such as Salem and Hope Creek establish the primacy of EPA or states (when applicable) in water quality regulations as they relate to impacts on aquatic species. Specifically, the regulations establishing required contents of an applicant's license renewal environmental report defer to states' determinations of cooling system impacts at plants with once-through cooling (10 CFR Part 51.53(c)(3)(ii)(B)):

*If the applicant's plant utilizes once-through cooling or cooling pond heat dissipation systems, the applicant shall provide a copy of current Clean Water Act 316(b) determinations and, if necessary, a 316(a) variance in accordance with 40 CFR part 125, or equivalent State permits and supporting documentation. If the applicant can not provide these documents, it shall assess the impact of the proposed action on fish and shellfish resources resulting from heat shock and impingement and entrainment.*

Thus, not only does NRC *not* regulate intakes and discharges at nuclear power plants (including Salem and Hope Creek), but NRC defers the assessment of impacts from heat shock, impingement, and entrainment to the responsible agencies. Only in the absence of such determinations does NRC require an applicant to directly assess impacts.

NRC proceedings have held that a discharge permit and related 316(a) variances and 316(b) determinations, respectively, are valid for the purposes of 10 CFR Part 51.53(c)(3)(ii)(B) even in a case when a discharge permit is under administrative extension at the time of the NRC's review. *Entergy Nuclear Operations Inc.* (Indian Point Nuclear Generating Units 2 and 3), LBP-08-13, 68 NRC 43, 155-158 (2008); wherein an Atomic Safety and Licensing Board Panel (ASLBP) rejected a contention proffered by New York State that asserted Indian Point lacked a valid 316(b) determination because the associated NPDES permit had been administratively extended while permit renewal proceedings were ongoing. The ASLBP noted:

*The Commission recently reinforced the need for Licensing Boards to defer to the State's ruling on once-through cooling as reflected in these equivalent permits. It would be futile for the Board to review any of the CWA determinations, given that it is not possible for the Commission to implement any changes that might be deemed appropriate.*

68 NRC at 156-157 (internal footnotes omitted). In CLI-07-16, the Commission noted:

*As we explain below, section 511(c)(2) of the Clean Water Act does not give us the option of looking behind the agency's permit to make an independent determination as to whether it qualifies as a bona fide section 316(a) determination. That section expressly prohibits us from "review[ing] any effluent limitation or other requirement established pursuant to" the Clean Water Act. And to state the obvious, the Agency's Section 316(a) permit establishes limitations on effluent water temperature and therefore falls within this statutory provision.*

*Entergy Nuclear Vermont Yankee, LLC.*, (Vermont Yankee Nuclear Power Station), CLI-07-16 65 NRC 371, 387 (2007).

NRC deference to EPA's statutory authority, either directly exercised by EPA or as delegated to the states, extends to operational water quality impacts and aquatic biota protection, as well. In the case of both Salem and Hope Creek, the two facilities' operating licenses include an Environmental Protection Plan (EPP) in Appendix B of their licenses. Section 4.2.1, "Aquatic Monitoring," of Hope Creek's EPP (NRC 1986) states:

*The certifications and permits required under the Clean Water Act provide mechanisms for protecting water quality and, indirectly, aquatic biota. The NRC will rely on the decisions made by the State of New Jersey under the authority of the Clean Water Act...for any requirements pertaining to aquatic monitoring.<sup>1</sup>*

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<sup>1</sup> Omitted text pertains to Salem and Hope Creek's biological opinion for sea turtles and shortnose sturgeon and is not immediately relevant to the discussion of NRC's authority to implement aquatic monitoring or license conditions related to the protection of the aquatic environment.

Section 3.2 of the EPP requires that Hope Creek's operators report any changes in the NJPDES permit to NRC within 30 days following the date of the change.

Salem's licenses (NRC 1976, 1981) contain similar provisions. Section 3.2 of Salem's EPP requires PSEG Nuclear, LLC (PSEG) to report any changes in the status of the NJPDES permit to NRC, while Section 4.2.1 states:

*The certifications and permits required under the Clean Water Act provide mechanisms for protecting water quality and, indirectly, aquatic biota. The Nuclear Regulatory Commission (NRC) will rely on the decisions made by the State of New Jersey under the authority of the Clean Water Act. . . for any requirements pertaining to aquatic monitoring.<sup>2</sup>*

### **Previous NRC EFH Consultations with NMFS Northeast Regional Staff**

Prior to the Salem and Hope Creek EFH consultation, the NRC staff has consulted or corresponded with the NMFS Northeast Regional Office staff on EFH matters in five license renewal reviews: Millstone Power Station (2006), Oyster Creek Nuclear Generating Station (2005-07), Vermont Yankee Nuclear Power Station (2006-07), Pilgrim Nuclear Power Station (2006-07), and Indian Point Nuclear Generating Station (2007-10). In NMFS's Conservation Recommendations for three of these facilities, NMFS has made recommendations beyond the NRC's statutory authority.

#### **Millstone Power Station (Connecticut)**

In 2006, the NMFS provided EFH Conservation Recommendations to NRC staff during the license renewal review of Millstone Power Station (NMFS 2006a). During that review, the NRC staff did not conduct an EFH Assessment, and NMFS staff indicated to NRC staff that an EFH assessment was required pursuant to the MSA. Nonetheless, NMFS staff provided EFH Conservation Recommendations that NRC (1) require the applicant to comprehensively assess and implement environmentally friendly alternative cooling strategies, and (2) require the applicants to submit a complete impact avoidance/minimization/mitigation plan for the project. In response, NRC staff noted (2006a) that the Connecticut Department of Environmental Protection (CTDEP) is responsible for issuing NPDES permits and implementing the CWA 316(b) in Connecticut. The NRC staff also noted that it cannot impose limitations in this area. Finally, the NRC staff noted that CTDEP and the plant operator were in the process of considering potential mitigation measures to reduce impacts to the aquatic environment.

#### **Oyster Creek Nuclear Generating Station (New Jersey)**

The next proposed license renewal for which the NRC and NMFS Northeast Region consulted under the MSA was Oyster Creek Nuclear Generating Station (OCNGS). The NRC sent its EFH Assessment on June 9, 2006 (NRC 2006b), and in response, NMFS provided its EFH Conservation Recommendations to the NRC on September 28, 2006 (NMFS 2006b). In that letter, NMFS recommended that NRC implement the best available technology to mitigate impingement, entrainment, and thermal impacts. The NMFS noted that cooling towers, which would enable the plant to operate with a closed cycle, were the best available technology.

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<sup>2</sup> See previous footnote.

NRC staff responded on December 5, 2006 (after requesting an extension of time to file a response). In that letter, NRC staff indicated the following (NRC 2006c):

*NRC cannot require specific mitigation measures; instead, the NJDEP has such authority, as delegated by the EPA. Such mitigation measures would be imposed under the National Pollutant Discharge Elimination System (NPDES) permit for OCNGS. OCNGS cannot operate without a valid NPDES permit. NJDEP may require additional mitigation measures, such as requiring closed-cycle cooling, modification of the cooling system, or restoration, to reduce impacts due to entrainment and impingement. New Jersey's decision regarding the NPDES permit requirements for OCNGS may constitute new information relative to effects on EFH per 50 CFR 600.920(l), which may require NRC to reinstate the EFH consultation. The NRC encourages NMFS to collaborate with NJDEP to evaluate the data currently being collected to determine the best way to minimize effects on EFH.*

#### Vermont Yankee Nuclear Generating Station (Vermont)

NRC submitted an EFH Assessment to NMFS on December 12, 2006 (NRC 2006d), for the Vermont Yankee Nuclear Generating Station license renewal. The NMFS replied to the NRC on January 4, 2007 (NMFS 2007a), and indicated that NMFS would not provide the NRC with EFH Conservation Recommendations on this EFH Assessment due to insufficient staff resources.

#### Pilgrim Nuclear Power Station (Massachusetts)

The NRC submitted an EFH Assessment to NMFS on December 8, 2006 (NRC 2006e) for the Pilgrim Nuclear Power Station license renewal. The NMFS staff reviewed this EFH Assessment and in NMFS's response to NRC on January 23, 2007 (NMFS 2007b), the NMFS staff stated the following:

*We note the NRC's position that operation activities including the intake of cooling water, the discharge of heated effluent, and/or mitigation conditions are under the sole authority of the US Environmental Protection Agency (EPA) through their National Pollutant Discharge Elimination System (NPDES) permitting process, pursuant to Section 316(a)(b) of the Federal Clean Water Act. As such, the NRC does not intend to incorporate any mitigation conditions to offset impacts to NOAA trust resources. As noted within the GEIS [Generic Environmental Impact Statement for License Renewal of Nuclear Plants], the EPA is currently in the process of developing a demonstration document for the reissuance of the NPDES permit. Based on this information, NMFS has determined that our issues of concern relative to living marine resources and EFH would be most appropriately addressed through the EPA's NPDES permit renewal process. As such, NMFS will not be providing the NRC with EFH Conservation Recommendations regarding License Renewal for the Pilgrim Nuclear Power Plant. Rather, NMFS will perform a detailed review of the proposed project within the NPDES permit renewal process and potentially provide EFH Conservation Recommendations at that time.*

NMFS concluded this EFH consultation without providing EFH Conservation Recommendations to the NRC.

Indian Point Nuclear Generating Unit Numbers 2 and 3 (New York)

The NRC submitted an EFH Assessment to NMFS on April 30, 2009 (NRC 2009c), for the Indian Point Nuclear Generating, Unit Numbers 2 and 3 (Indian Point), license renewal. NMFS provided NRC staff with EFH Conservation Recommendations on October 12, 2010 (NMFS 2010b). In a telephone call with NMFS staff prior to their presenting EFH Conservation Recommendations to NRC (NRC 2010d), NRC staff indicated that authority to require modifications to Indian Point's cooling system for the purposes of protecting aquatic life belongs to the State of New York. NRC staff further asserted that it had required cooling towers retrofits at Indian Point as a condition of the facility's initial licensing in the 1970s, though changes in CWA transferred the authority to require such mitigation measures to EPA, which EPA then delegated to the State of New York. Staff further noted that the 1980 Hudson River Settlement Agreement allowed Indian Point to operate without cooling towers. Indian Point's New York State Pollutant Discharge Elimination System (SPDES) permit renewal application is currently subject to adjudication, and the New York State Department of Environmental Conservation (NYSDEC) has administratively extended Indian Point's 1992 SPDES. NRC staff asserted that its role in modifying the cooling system for reduction of impacts to aquatic life is limited to reviewing proposed modifications for effects on power plant safety.

NMFS staff's EFH Conservation Recommendations for Indian Point in their October 12 letter included the following:

*Implement the best available practicable technology to mitigate impingement, entrainment, and thermal impacts. The BAT [best available technology] for Indian Point would be reconfiguring the facilities by replacing the once-through cooling system with a state-of-the-art, closed-cycle design.*

NRC staff responded by letter on December 3, 2010 (NRC 2010e) and reiterated what it had asserted in the October 1 teleconference and in previous consultations responses. The NRC staff noted:

*Regarding the identification and implementation of the best technology available (BTA), the U.S. Environmental Protection Agency and its authorized designees, such as the New York State Department of Environmental Conservation (NYSDEC), not NRC, regulate water intakes and discharges under the Clean Water Act. NYSDEC can impose mitigation measures under the New York State Pollutant Discharge Elimination System (SPDES) permit for IP2 and IP3 [Indian Point Nuclear Generating, Unit Numbers 2 and 3]. NYSDEC may require additional mitigation measures such as requiring closed-cycle cooling or other modifications of the cooling system to reduce impacts due to entrainment and impingement.*

Also in that letter, the NRC staff noted that "NYSDEC's determinations in the SPDES proceeding, including its selection of closed-cycle cooling as the BAT, are subject to state-level adjudication and so are not yet final." Because the discharge permit proceeding was (and remains) ongoing at the state-level at the time NMFS submitted its EFH Conservation

Recommendations to the NRC, the NMFS should have addressed its comments on Indian Point's cooling system to the NYSDEC and not to the NRC per Section 305(b)(4)(a) of the MSA and 50 CFR Part 600.925(c)(2) of the MSA's implementing regulations.

#### Conclusion Regarding Previous EFH Consultations

Requirements to conduct EFH Assessments and consult with NMFS are well-established at this point, and so NRC staff will not revisit them in this letter. Similarly well-established is NMFS's mandate to issue EFH Conservation Recommendations. Based on the NRC staff's history of interaction with NMFS's Northeast Regional Office on EFH matters, however, NRC staff finds it necessary to revisit the language of 50 CFR Part 600.925(a):

*Under Section 305(b)(4)(a) of the Magnuson-Stevens Act, NMFS is required to provide EFH Conservation Recommendations to Federal and state agencies for actions that would adversely affect EFH. NMFS will not recommend that state or Federal agencies take actions beyond their statutory authority.*

The MSA's implementing regulations require that NMFS make EFH Conservation Recommendations within the statutory authority of the consulting agency. NMFS's repeated calls for NRC to require closed-cycle cooling at nuclear power plant sites is outside of the NRC's statutory authority, and is, therefore, an inappropriate EFH Conservation Recommendation. NMFS has repeatedly made EFH Conservation Recommendations beyond the NRC's statutory authority despite NRC's numerous efforts to explain the limits of its authority during multiple EFH consultations with the NMFS. NMFS's practice of recommending actions beyond the NRC's statutory authority has continued in the Salem and Hope Creek EFH consultation.

## **II. Response to Salem and Hope Creek EFH Letter**

The second purpose of this letter is to specifically respond to your letter of June 3, 2011.

### **Clarification of the NRC's SEIS and EFH Assessment Conclusions**

The NRC staff first wishes to clarify several factual misrepresentations in your June 3, 2011, letter (NMFS 2011b) regarding the substance of NRC staff's findings in the staff's SEIS for Salem and Hope Creek (draft, NRC 2010a; final, NRC 2011a) and the Salem and Hope Creek EFH Assessment (NRC 2011c).

In your June 3 letter, you assert that, in the SEIS, NRC staff concluded that:

*...impacts to fish and shellfish from entrainment, impingement, and heat shock at Salem and Hope Creek would not warrant additional mitigation beyond those presently undertaken by the PSEG Estuary Enhancement Program. [p. 1]*

While the NRC credited PSEG's Estuary Enhancement Program (EEP) with reducing the adverse impacts to some EFH species and other aquatic organisms, in both SEISs the NRC also considered, at page 4-47 of the NRC staff's Final SEIS (NRC 2011a) and page 4-46 of the draft SEIS (NRC 2010a), additional mitigation measures beyond PSEG's EEP that could further reduce the adverse impacts. The NRC did not conclude that the EEP would offset all adverse



impacts that would result from the proposed license renewal, and did not reach a specific conclusion in either the draft or final SEIS regarding whether additional mitigation measures were warranted. The NRC lacks the authority to reach a conclusion regarding whether additional measures are warranted, and defers to the NJDEP on such matters.

Regarding the NRC's EFH Assessment, your June 3 letter also states:

*Further, NRC asserts that any impacts incurred would be offset by ecological gains within the ecosystem through a series of facility and site-specific conservation measures including best management practices that would reduce potential adverse environmental impacts to EFH associated with impingement and entrainment. [p. 5]*

In the NRC's EFH assessment for Salem and Hope Creek, the NRC concluded that increased secondary production associated with the EEP would replace some, but not all, EFH losses. The NRC concluded that the EEP would offset the loss of the majority of windowpane eggs, windowpane larvae, and winter flounder (all life stages); would offset the loss of some juvenile and adult windowpane; and would not offset the loss of juvenile butterfish. In the NRC's assessment of indirect impacts to EFH species, the NRC staff concluded that the EEP would replace prey losses only for those EFH species whose primary prey populations would directly benefit from the EEP. Nowhere did NRC staff make the sweeping—and inaccurate—conclusion that all impacts would be offset by “site-specific conservation measures.”

### **Comments Pertaining to the FWCA and NMFS Species of Concern and the NRC's NEPA Commenting Process**

In addition to addressing agency consultation under the MSA, your June 3 letter contained general comments on the proposed license renewals for Salem and Hope Creek, comments pursuant to the FWCA, and comments on species listed in NMFS's species of concern program. NMFS had previously submitted comments that the NRC staff has previously considered regarding the proposed license renewals of Salem and Hope Creek that addressed NMFS's concerns pursuant to the FWCA and NMFS species of concern as part of the NEPA process.

NMFS sent NRC letters on February 23, 2010 (NMFS 2010a), and January 10, 2011 (NMFS 2011a), during the 45-day public scoping comment period (74 FR 54859) and 45-day draft SEIS (NRC 2010a) comment period (75 FR 66398), respectively. The NRC's responses to these NMFS comments can be found in the NRC's Scoping Summary Report (NRC 2010b) and Appendix A of the final SEIS (NRC 2011a).

Despite NMFS's prior comments, NMFS incorporated additional comments on the same topics into its June 3 EFH consultation letter. NRC staff considers that NMFS, by submitting FWCA and species of concern comments during NRC's NEPA comment periods, provided its comments on those issues, and that additional comments on these matters are non-timely.

### **Abbreviated Versus Expanded EFH Consultations**

The first time NRC staff learned that NMFS considered the Salem and Hope Creek EFH consultation to be an expanded consultation was in your June 3 letter.

The NRC initiated EFH consultation with the NMFS with the submittal of its EFH Assessment for Salem and Hope Creek (NRC 2011b) on February 11, 2011. After receiving the EFH Assessment, NMFS and NRC held a teleconference on March 17, 2011, to discuss the contents of the assessment. During the conversation, NRC agreed to submit a revised EFH Assessment to capture indirect impacts to prey species of EFH species that do not occur in the immediate vicinity of Salem and Hope Creek.

The NRC issued its revised EFH Assessment on March 25, 2011 (NRC 2011c), and in its cover letter, the NRC specifically requested abbreviated consultation with your office. Consistent with the abbreviated consultation timeline specified at 50 CFR 600.920(h)(4), the NRC requested that the NMFS provide the NRC with their EFH Conservation Recommendations within 30 days.

MSA's implementing regulations describe the procedures for abbreviated and expanded EFH consultations. Abbreviated consultation is defined at 50 CFR 600.920(h) as being appropriate for actions that "do not have the potential to cause substantial adverse effects on EFH," and 50 CFR 600.920(h)(2) states:

*Abbreviated consultation begins when NMFS receives from the Federal agency an EFH Assessment in accordance with paragraph (e) of this section and a written request for consultation.*

The regulations implementing MSA allow NMFS to request expanded consultation after an agency requests abbreviated consultation:

*If NMFS believes that the action may result in substantial adverse effects on EFH, or that additional analysis is needed to assess the effects of the action, NMFS will request in writing that the Federal agency initiate expanded consultation. Such request will explain why NMFS believes expanded consultation is needed and will specify any new information needed. [50 CFR 600.92(h)(3)]*

The NRC received no such written request from NMFS.

As noted above, regulations at 50 CFR 600.920(i) state that expanded consultation is warranted for "Federal actions that would result in substantial adverse effects to EFH." NMFS's June 3 letter states:

*The potential adverse individual and cumulative effects that operations of Hope Creek and Salem plants could impose on NOAA trust resources warranted an expanded consultation...[p. 1]*

NRC staff interprets this to mean that potential impacts could be substantial and also notes that NMFS bases expanded consultation on effects on "NOAA trust resources."

According to NOAA's National Ocean Service, NOAA trust resources include a variety of aquatic organisms and habitats beyond EFH including commercial and recreational fisheries, marine mammals, species listed under the Endangered Species Act, and others (NOAA 2006). Yet MSA's implementing regulations appear to indicate that the basis for NMFS to request an expanded consultation is EFH alone (see 10 CFR 600.920 (h)(3), *supra*).

In summary, NRC staff were surprised that NMFS staff cast this consultation as an expanded consultation in the June 3 letter (1) after NRC staff requested an abbreviated consultation, (2) when NMFS hadn't requested an expanded consultation in writing, and (3) on the basis of impacts to "NOAA trust resources" rather than to EFH.

### **NRC's Responses to Salem and Hope Creek EFH Conservation Recommendations**

The remainder of this letter responds to NMFS's EFH Conservation Recommendations to avoid, minimize, or reduce the potential impacts to EFH as a result of the proposed license renewal of Hope Creek and Salem. The recommendations, followed by NRC's responses to those recommendations, are as follows.

#### **Salem Generating Station**

In general, NMFS's recommendations for Salem would require NRC to establish separate and more-stringent requirements for Salem than what NJDEP has established in the NJPDES program through the authority granted it by EPA. NRC staff lacks the authority to impose different requirements than those established within the NJPDES program. Each of these recommendations would, therefore, properly be addressed to NJDEP rather than to NRC.

*NMFS Recommendation:* "Implement closed-cycle cooling featuring cooling towers that employ sufficient safeguards to ensure against release of blow down pollutants into the aquatic environment."

*NRC Response:* Subpart G of Part IV of Salem's NJPDES permit includes Section 316 Special Conditions that address CWA 316(a) and 316(b) issues. This subpart would include cooling towers, if the NJPDES permit required them. Instead, this section addresses, *inter alia*, intake screens and fish return systems (Section 2), wetland restoration and enhancement efforts (Section 3), fish ladders (Section 4), further study of intake protection technologies (Section 5), biological monitoring (Section 6), entrainment and impingement abundance monitoring (Section 7), expanded analyses (Section 8), special studies (Section 9), the ability for NJDEP to implement additional intake protection technologies (Section 10), the ability to terminate 316(a) variances (Section 11), and requirements for permit renewal applications as they relate to 316, including the ability to renew or modify 316(a) variances and methodology for developing 316(b) determinations at the time of permit renewal (Section 12). The NJPDES permit does not contain a requirement that Salem Generating Station implement closed-cycle cooling featuring cooling towers.

Regarding discharge of pollutants into the aquatic environment, Part III of the NJPDES permit sets specific limits and monitoring requirements for all plant outfalls. NRC does not monitor or regulate these outfalls for pollutant discharges. NRC's authority in these matters is limited to radiological effluents.

*NMFS Recommendation:* "Minimize water intake flow and associated entrainment and impingement by not locating intake systems in areas where fishery organisms are concentrated."

*NRC Response:* Decisions regarding intake system locations are not part of the license renewal review process. Salem's intakes were constructed prior to their applying for license renewal.

Further, the NJPDES permit contains limits on water intake at Salem under Section L of Part III of the permit. NJDEP sets and enforces these limits.

*NMFS Recommendation:* "Reduce withdrawal and discharge of large volumes of water by lowering intake rate and instituting recycling of present quantities within the system. Discharge points should be located in areas that have low concentrations of living marine resources."

*NRC Response:* Salem's NJPDES permit includes limits on water intake at Salem under Section L of Part III of the permit. NJDEP, and not NRC, has authority over water intake at Salem. The permit does not set a specific limit on discharge volume. In addition, the proposed license renewal does not include any proposed additional discharge outfalls or relocation of existing discharge points.

*NMFS Recommendation:* "Intakes should be designed to minimize impingement. Velocity caps that produce horizontal intake/discharge currents should be employed and intake velocities across the intake screen should be determined that cause the least acceptable amount of mortality to marine organisms."

*NRC Response:* The proposed license renewal does not include any new intakes. Further, the 316 Special Provisions of Salem's NJPDES permit address intake technologies and provide, in Section 10 of Subpart G of Part IV, that NJDEP may require implementation of additional intake protection technologies at Salem. NRC does not have authority over these matters.

*NMFS Recommendation:* "Discharge temperatures (both heated and cooled effluent) should not exceed the thermal tolerance of the majority of the plant and animal species in the receiving body of water; and"

*NRC Response:* Salem's NJPDES permit contains express provisions for thermal discharges. These provisions address discharge temperature monitoring and temperature limits (Sections J and K of Part III) as well as gross thermal discharge monitoring and limits (Section L of Part III). NJDEP sets these limits according to its methodologies. NRC does not set or enforce these limits.

*NMFS Recommendation:* "Employ additional mitigation measures (e.g., Ristroph traveling screens) intended to minimize entrainment. Intake screen mesh should be sized to avoid entrainment of most larval and postlarval marine fishery organisms. Acceptable mesh size is generally in the range of 0.5 to 0.7 mm and rarely exceeds 1.0 mm in estuarine waters or waters that support anadromous fish eggs and larvae."

*NRC Response:* Salem's NJPDES permit includes authority for NJDEP to require additional intake protection technologies at Salem in Section 10 of Subpart G of Part IV. The existing Section 316 Special Condition addressing intake screens and the fish return system (Section 2 of Subpart G to Part IV) does not mandate a specific mesh size. NRC does not determine or mandate intake mesh sizes at nuclear facilities as it lacks authority to do so.

Hope Creek Generating Station

*NMFS Recommendation:* "Carry on the continuous operation of the Ristroph traveling screens; Evaluate opportunity for further mitigation effectiveness such as altering and lowering discharge rates, and relocating discharge pipes to areas of least impact to resources."

*NRC Response:* NJDEP is responsible for enforcing the requirements of Hope Creek's NJPDES permit. Section 8 of Subpart G of Part IV of the NJPDES permit indicates that NJDEP will reevaluate in NJPDES permit renewal proceedings whether, with respect to 316(b), the potential of technologies, their costs, and their benefits with respect to Hope Creek Station have changed at the time of a proposed NJPDES permit renewal. Other requirements related to discharges are addressed in Part III of the Hope Creek NJPDES permit, including discharge rate monitoring requirements. The permit does not contain a specific requirement to consider relocation of the discharge pipes, and NRC does not control any requirements that NJDEP may place on the facility's discharges in the future.

*NMFS Recommendation:* "Continue to implement provisions in the general discharge permit."

*NRC Response:* Authority to implement the provisions of Hope Creek's discharge permit belongs to the NJDEP. NRC does not implement the NJPDES program, nor does NRC enforce or implement the permit requirements at any given facility.

**III. Conclusion**

The NRC staff hopes that future EFH consultations with your office will include EFH Conservation Recommendations that fall within NRC's statutory authority.

I regret that our response to your letter must take such a stern tone, but the history of your office's engagement with the NRC is such that it appears to disregard NRC staff responses regarding our agency's authority. I assume that your staff's misunderstanding is not intentional, and I hope that we can engage in more-satisfactory consultations in the future. Further, in the interest of providing meaningful input into EFH conservation, I hope that your staff will provide comments to the appropriate regulatory authorities on these matters in future proceedings.

P. Colosi

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If you have any questions regarding the Hope Creek and Salem license renewal review, please contact Ms. Leslie Perkins, Project Manager, at 301-415-2375, or by e-mail at [leslie.perkins@nrc.gov](mailto:leslie.perkins@nrc.gov). If you have any questions about the EFH consultation, specifically, please contact Ms. Briana Balsam, Biologist, at 301-415-1042, or by e-mail at [briana.balsam@nrc.gov](mailto:briana.balsam@nrc.gov)

Sincerely,

A handwritten signature in black ink, appearing to read "Andrew S. Imboden". The signature is fluid and cursive, with the first name "Andrew" being more prominent.

Andrew S. Imboden, Chief  
Environmental Review and Guidance Update Branch  
Division of License Renewal  
Office of Nuclear Reactor Regulation

Docket Nos. 50-354, 50-272, and 50-311

cc: Listserv

## References

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P. Colosi

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If you have any questions regarding the Hope Creek and Salem license renewal review, please contact Ms. Leslie Perkins, Project Manager, at 301-415-2375, or by e-mail at [leslie.perkins@nrc.gov](mailto:leslie.perkins@nrc.gov). If you have any questions about the EFH consultation, specifically, please contact Ms. Briana Balsam, Biologist, at 301-415-1042, or by e-mail at [briana.balsam@nrc.gov](mailto:briana.balsam@nrc.gov)

Sincerely,

/RA/

Andrew S. Imboden, Chief  
Environmental Review and Guidance Update Branch  
Division of License Renewal  
Office of Nuclear Reactor Regulation

Docket Nos. 50-354, 50-272, and 50-311

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