



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

November 13, 2017

MEMORANDUM TO: Benjamin Beasley, Chief
Environmental Review and NEPA Branch
Division of Materials and License Renewal
Office of Nuclear Reactor Regulation

FROM: Briana Grange, Aquatic Biologist */RA/*
Environmental Review and NEPA Branch
Division of Materials and License Renewal
Office of Nuclear Reactor Regulation

SUBJECT: SUMMARY OF OCTOBER 13, 2017, MEETING WITH THE
NATIONAL MARINE FISHERIES SERVICE RELATED TO
INDIAN POINT NUCLEAR GENERATING UNIT NOS. 2 AND 3
LICENSE RENEWAL

On October 13, 2017, the U.S. Nuclear Regulatory Commission (NRC, the staff) participated in a meeting with the National Marine Fisheries Service (NMFS) pursuant to Section 7 of the Endangered Species Act of 1973, as amended (ESA) and related to the NRC's ongoing license renewal review for Indian Point Nuclear Generating Unit Nos. 2 and 3 (IP2 and IP3). The meeting was hosted by the NMFS Greater Atlantic Regional Fisheries Office in Gloucester, Massachusetts, and discussion focused on whether reinitiation of ESA Section 7 consultation for Indian Point is appropriate at this time and on Entergy's implementation of sturgeon monitoring required by the Terms and Conditions of the NMFS's January 30, 2013, biological opinion and incidental take statement (ITS).¹ The meeting agenda is included as Enclosure 1.

Meeting participants included staff of the NMFS and NRC as well as Entergy Nuclear Indian Point 2, LLC, Entergy Nuclear Indian Point 3, LLC, and Entergy Nuclear Operations, Inc. (Entergy) representatives and New York State Department of Environmental Conservation (NYSDEC) staff members. A complete list of participants is included as Enclosure 2, and participants were provided the opportunity to comment on the meeting summary below.

The major areas of discussion are summarized as follows:

I. Purpose and Goals

Following introductions of all participants, the NMFS, NRC, Entergy, and NYSDEC briefly described their respective goals for the meeting.

¹ National Marine Fisheries Service. Endangered Species Act Section 7 Consultation Biological Opinion for Continued Operations of the Indian Point Nuclear Generating Station, Units 2 and 3, Pursuant to Existing and Proposed Renewed Operating Licenses. January 30, 2013. 163 p. ADAMS Accession No. [ML13032A256](#).

The NMFS staff stated that they would like to gain clarity on current IP2 and IP3 operating conditions; better understand current and future NRC and NYSDEC actions related to IP2 and IP3; and address monitoring frequency for implementation of sturgeon monitoring.

The NRC staff stated that its goals were to attain clarity on whether current information warrants reinitiation of ESA Section 7 consultation and to understand what additional information the NMFS would require for a possible reinitiated consultation.

Entergy representatives stated that its goals were to support the discussion on ESA Section 7 consultation reinitiation; to explain to meeting participants the terms of the 2017 State Pollutant Discharge Elimination System (SPDES) permit² and early closure agreement;³ and to resolve monitoring frequency questions pertaining to Entergy's and NYSDEC's joint, streamlined biological monitoring program proposal.

The NYSDEC staff stated that its staff would like to better understand what information would trigger NRC to reinitiate ESA Section 7 consultation given that the renewed 2017 SPDES permit had not necessitated any changes in IP2 and IP3 operations. The NYSDEC staff also stated that it was participating in the meeting to support questions related to the joint, streamlined biological monitoring program proposal.

II. Changes in IP2 and IP3 Operations under the Current Licenses and Proposed Renewed Licenses since the NMFS's Issuance of the 2013 Biological Opinion

The NMFS requested clarification on whether there have been any changes to IP2 and IP3 circulating water system and cooling intake structure (collectively, "CWIS") operations under the current operating licenses or proposed renewed licenses in comparison to the conditions and assumptions described in the 2013 biological opinion. Specifically, the NMFS asked whether operational changes have resulted from the renewed SPDES permit and early closure agreement.

Entergy explained that the early closure agreement commits Entergy to a shorter license renewal term but does not require any changes in CWIS operations. The agreement memorialized various agreements between Entergy and State agencies. The renewed SPDES permit, which the NYSDEC Commissioner approved by final order dated January 27, 2017, withdrew prior NYSDEC requirements for installation of cooling towers, new screens in the IP2 and IP3 cooling water intake system, or any other station modifications. Thus, the renewed SPDES permit authorizes continued operations under the current conditions and plant configuration. The NYSDEC confirmed that the renewed SPDES permit does not require any station modifications or operational changes.

² New York State Department of Environmental Conservation. State Pollutant Discharge Elimination System (SPDES) Discharge Permit NY0004472. Issued April 24, 2017. Effective May 1, 2017. ADAMS Accession No. [ML17138A236](#).

³ New York State Governor, New York State Department of Environmental Conservation, New York State Department of Health, New York State Department of State, Office of the Attorney General of the State of New York, New York State Department of Public Service, Entergy Nuclear Indian Point 2 LLC, Entergy Nuclear Indian Point 3 LLC, Entergy Nuclear Operations Inc. 2017. Indian Point Agreement. January 8, 2017. ADAMS Accession No. [ML17039B091](#).

Entergy explained its view that the shortened license renewal time period is administrative in nature and that all impacts (safety and environmental) are bounded by Entergy's and the NRC staff's previous analyses because operating conditions would not change during the shortened renewal period. The NRC confirmed that no operational changes are required when nuclear plants enter the period of extended operation but that licensees are required to implement aging management programs during the license renewal term to monitor the aging of plant systems, structures, and components.

The NMFS asked for clarification on when Entergy would undertake outages between now and when IP2 and IP3 shut down. Entergy explained that refueling outages will continue in alternating years on a 24-month schedule and are customarily completed over a 30-day period. Entergy currently plans to undertake its next outage for IP2 in the spring of 2018; the next outage for IP3 would be in the spring of 2019. Given the IP2 and IP3 closure timeline,⁴ these are the only planned outages of which Entergy representatives are currently aware.

The NRC described the current status of its license renewal review, stating that the Final Supplemental Environmental Impact Statement supplement is expected to be issued in November 2017 and that it plans to make a license renewal decision in June 2018. The NRC explained the remaining milestones in both the safety and environmental reviews that must be completed prior to license renewal. The NRC confirmed that the renewed licenses, if issued, would limit the period of extended operation to 2024 (IP2) and 2025 (IP3).

Entergy reiterated that it has committed to closing the plant in 2020 (IP2) and 2021 (IP3) per the early closure agreement but that its amended license renewal application includes the extended timelines of 2024 and 2025 in the event that the emergency or grid-related conditions identified in the early closure agreement should arise. Entergy stated that it expects that the ITS and sturgeon monitoring plan, once finalized, would reflect Entergy's commitment to shut down in 2020 and 2021 with additional, conditional stipulations in the event that IP2 and IP3 operate beyond these dates.

III. Reinitiation of ESA Section 7 Consultation

Ms. Julie Williams, on behalf of the NMFS's general counsel, described the regulatory criteria for reinitiation of ESA Section 7 consultation under Title 50 of the *Code of Federal Regulations* (50 CFR) 402.16. Ms. Williams stated that there is a distinction between (1) required and voluntary reinitiation and (2) what product results from a reinitiated consultation (i.e., a new biological opinion or an addendum to the existing

⁴ The closure agreement commits Entergy to permanently cease operations at IP2 no later than April 30, 2020, and to permanently cease operations at IP3 no later than April 30, 2021, unless a later date is mutually agreed upon between Entergy and the State of New York. In any event, operations must cease on or before April 30, 2024, and April 30, 2025, for Units 2 and 3, respectively.

biological opinion). Ms. Williams led a discussion of the four reinitiation criteria as summarized below.

- **If the amount or extent of taking specified in the incidental take statement is exceeded (50 CFR 402.16(a))**

All participants agreed that this criterion is not currently applicable.

- **If a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR 402.16(d))**

The NRC and the NMFS engaged in communications pursuant to ESA Section 7 for proposed critical habitat of the Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*) New York Bight distinct population segment. In an August 31, 2017, letter from the NMFS to the NRC,⁵ the NMFS confirmed that the NRC had satisfied its obligation under the ESA to determine whether it must engage in a Section 7 conference in accordance with 50 CFR 402.10 for the proposed critical habitat. In that letter, the NMFS concluded that operation of IP2 and IP3 may affect proposed critical habitat but that a conference was not required because effects would not rise to the level of “likely to destroy or adversely modify” (i.e., operations may affect, but are not likely to adversely affect proposed critical habitat).

The NMFS issued a final rule, which became effective September 18, 2017, designating Atlantic sturgeon critical habitat in various locations, including the Hudson River in the vicinity of IP2 and IP3. As a result of the final designation, Ms. Williams stated that an argument can be made that reinitiation of ESA Section 7 consultation for IP2 and IP3 is appropriate under 50 CFR 402.16(d) because the NMFS determined that the action “may affect” *proposed* critical habitat. Therefore, it would follow that the action also “may affect” *designated* critical habitat.

Ms. Williams stated that the new product of such a reinitiated consultation could be a new biological opinion that incorporates the final critical habitat designation.

Ms. Williams also stated that another option would be to document the reinitiated consultation through a series of letters which would rely heavily on the analysis of potential effects of the action on critical habitat that the NMFS included in its August 31, 2017, letter to NRC.

The NMFS expressed its view that the NMFS’s final critical habitat designation necessitates that the NRC take action under 50 CFR 402.16(d).

- **If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered (50 CFR 402.16(b))**

Ms. Williams explained that case law supports that reinitiation of consultation is not required under 50 CFR 402.16(b) if new effects are identified but those newly identified

⁵ National Marine Fisheries Service. Letter from K. Damon-Randall, NMFS, to B. Beasley, NRC. Subject: Conference Report – Proposed Indian Point Relicensing. August 31, 2017. ADAMS Accession No. [ML17243A315](#).

effects are of the same type and do not exceed the intensity of those analyzed during the previous consultation.

Ms. Williams explained how this criterion could be applied to the Indian Point Nuclear Generating Unit No. 1 (IP1) trash racks, as follows. The 2013 biological opinion's ITS exempts take and requires monitoring at the IP1 trash racks because the opinion's effects analysis predicted that some take would occur at this location. However, Entergy has recently provided new information to the NMFS indicating that the IP1 trash racks have disintegrated to the point that Entergy believes that incidental take of sturgeon is not reasonably likely to occur. Entergy has requested that the NMFS relieve Entergy of the IP1 trash rack monitoring requirement, which NMFS indicated in previous correspondence with Entergy was reasonable if the trash racks were not replaced during the license renewal term.

The NMFS asked that Entergy confirm that the IP1 trash racks would not be replaced. Entergy's representative stated that they are not aware of any plan to replace the IP1 trash racks, particularly in light of the early closure.

The NMFS explained that, based on this information, it could remove this requirement in one of two ways. One option would be for NRC to reinitiate consultation and for the NMFS to produce a new biological opinion that includes a revised effects section and revised ITS in accordance with the new information. The second option would be for the NRC to request that the ITS in the 2013 biological opinion be amended because the effects would be lower than originally anticipated. The NMFS could issue the amended ITS by letter accompanied by a detailed explanation of why the new information supports the conclusion that take at the IP1 trash racks is no longer a reasonable expectation and that monitoring at this location is no longer warranted, thus supporting an "adjustment" of the ITS.

- **If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion (50 CFR 402.16(c))**

Ms. Williams explained that case law supports that reinitiation of consultation is not required under 50 CFR 402.16(c) if impacts have been previously evaluated and the effects of subsequent modifications to the action are bounded by the previous analysis. Ms. Williams stated that such circumstances existed here with regard to the early closure of IP2 and IP3.

Ms. Williams separately noted, however, that the NMFS's current concern is that the administrative record needs to be clear and thorough given the new information and developments since the issuance of the 2013 biological opinion (e.g., 2017 renewed SPDES permit, early closure agreement, new information indicating IP1 trash rack disintegration, etc.). Such clarification could occur in a new biological opinion, or the agencies could document the relevant information through letter exchange.

Following the discussion of the reinitiation criteria, meeting participants discussed whether reinitiation is appropriate under the current circumstances. Entergy expressed its opinion that reinitiation is not required. Because potential impacts of IP2 and IP3 license renewal remain bounded by previous analyses, Entergy believes that issuance of a new biological opinion is not the appropriate means of addressing the issues of concern to the NMFS and would require

additional time and resources. Entergy stated its view that all of the changed circumstances could be described and addressed in a single letter. The NMFS confirmed that it could issue a single letter, which would provide an amended ITS, and that a new biological opinion would not be necessary.

The NMFS stated that if reinitiation were to occur, the NRC could request consultation under 50 CFR 402.16(d) and provide justification as to why current information does not require reinitiation under the other 50 CFR 402.16 criteria (e.g., explain that the proposed action is not likely to adversely affect the newly designated Atlantic sturgeon critical habitat; that although new information exists pertaining to the proposed action, the types of effects are the same as those previously considered and the extent of such effects are bounded by those previously considered; and mention the lack of impacts at the disintegrated IP1 trash racks). The NMFS expressed its view that it expects the NRC to request reinitiation under criterion (d). In addition, the NMFS stated that the NRC would need to show that it has fulfilled its obligations under ESA Section 7(a)(2) with respect to Atlantic sturgeon critical habitat. The NRC's request could ask for concurrence with a "not likely to adversely affect" determination for Atlantic sturgeon critical habitat and request an amended ITS to address the disintegration of the IP1 trash racks, associated removal of trash rack monitoring, shortened license renewal period, and other relevant changes.

Participants also discussed how the cumulative ITS incidental take limits could be modified to account for the shortened license renewal period (recognizing that the annual and biennial take limits would not change); whether reinitiation would be "formal" or "informal"; and whether NRC intends to reinitiate consultation. NMFS stated its view that if an action "may affect" critical habitat, then reinitiation of consultation is required, even if that action "is not likely to adversely affect" the critical habitat. NMFS stated that reinitiation of the previous consultation could be accomplished by letter (i.e., informally). The NRC stated that it was unable to take a position on reinitiation during the meeting but that NRC's primary objective is for all parties to work together to satisfy any remaining ESA concerns in a timely manner such that the NRC can make a license renewal decision according to its current schedule.

IV. Atlantic and Shortnose Sturgeon Monitoring Plan

The second half of the meeting focused on resolving remaining issues affecting Entergy's implementation of the sturgeon monitoring plan required by the 2013 biological opinion. The discussion specifically focused on monitoring at the forebays, trash racks, and traveling screens.

a. Forebay Monitoring

The NMFS indicated that it has reviewed Entergy's feasibility study and that it agrees with Entergy's conclusion that the forebays are not a source of take. As such, the NMFS is in agreement that removing forebay monitoring requirements from the ITS is reasonable.

b. Trash Racks

The NMFS indicated that it is in agreement with Entergy that the IP1 trash racks are not a source of incidental take, and the requirement for monitoring at the IP1 trash racks can be removed from the ITS.

The NMFS asked several questions pertaining to the IP2 and IP3 trash rack inspection and cleaning protocols. Entergy indicated that it typically performs sonar mapping to look at debris on a two-year schedule. If significant debris is identified, a contractor is hired to clean the trash racks. Semi-annual diver inspections are also performed in which divers assess the trash racks and physically remove debris.

The NMFS proposed that during these regularly scheduled inspections/cleanings, Entergy or its contractors also perform a systematic inspection for sturgeon. A handling plan for collection and disposal of any collected sturgeon would also need to be established. Entergy committed to do so, and to sending protocol and forms for such inspections to the NMFS. These changes would be included in an amended ITS.

c. Traveling Screens

The NMFS indicated that it is in agreement with Entergy's current monitoring proposal to use holding tanks adjusted for a debris sluice escape error of 1 percent. The NMFS stated that the issue that needs to be resolved is monitoring frequency (i.e., days and months of sampling).

Entergy described the process and associated timeline that would be necessary to have the holding tanks manufactured and installed. Entergy would undertake the necessary integration into the existing fish return system for IP2 during the spring 2018 (IP2) and for IP3 during the spring 2019 (IP3) outages, with monitoring to begin on April 1, 2019. Entergy and the NYSDEC initially proposed an intensive 50-day monitoring period beginning on April 1, 2019, and ending May 30, 2019. Entergy and the NYSDEC believe this time period balances the highest prevalence of sturgeon in the river with the lowest impact to non-ESA species.

The NMFS expressed its view that the monitoring should include sufficient periodicity and duration to verify Entergy's assumptions regarding sturgeon inter-annual variation in the river. Year-round monitoring for more than a one-year period would be ideal, but the NMFS indicated that it is willing to discuss a compromise that balances its concerns with the NYSDEC's desire to minimize impacts to fragile species, such as river herring (*Alosa pseudoharengus* and *A. aestivalis*) and American shad (*A. sapidissima*).

Several options for monitoring were discussed. Entergy agreed to investigate the possibility of adding September and November monitoring to its monitoring proposal in addition to the currently proposed April 1 through May 30, 2019, timeframe and also to continue the IP3 monitoring in 2020. The NYSDEC indicated its willingness to allow some monitoring in September but expressed reservations regarding impacts to non-ESA species in late fall and early spring. Entergy also committed to addressing the NMFS's questions concerning potential thermal changes in the Hudson River ecosystem associated with climate change and concerning the use of Hudson River Biological Monitoring Program data to update historic sturgeon impingement data. Entergy agreed to discuss the new monitoring proposal with the NYSDEC during the week following the meeting and to inform the NMFS of the outcome of those discussions.⁶

⁶ Following the meeting, Entergy informed the NRC that it has fulfilled the commitments described in this paragraph.

V. Action Items, Next Steps, and Deliverables

Participants agreed to the following deliverables and associated target dates.

<u>Date</u>	<u>Deliverable</u>
10/20/17	NRC to provide draft meeting minutes to meeting participants for review and comment
10/27/17	Entergy to provide letter to NRC and the NMFS containing factual information (e.g., IP1 trash racks, no changes in operations, SPDES permit, early closure agreement, forebays, IP2/IP3 trash racks) related to need for reinitiation of ESA Section 7 consultation
12/01/17	NRC to provide letter to the NMFS requesting amended ITS and describing which 50 CFR 402.16 reinitiation criteria apply, if any, which criteria do not apply, and associated justifications
1/08/18*	NMFS to send NRC draft amended ITS for review and comment
1/15/18*	NRC to provide the NMFS with NRC's and Entergy's comments on draft amended ITS
1/15/18*	NRC, NMFS, and Entergy to hold teleconference to discuss draft ITS comments, if necessary
2/01/18	NMFS to provide response letter to NRC that addresses 50 CFR 402.16 reinitiation criteria, includes final amended ITS, and memorializes final sturgeon monitoring plan

*week of

Docket Nos.: 50-247 and 50-286

Enclosures:

1. Meeting Agenda
2. List of Participants

SUBJECT: SUMMARY OF OCTOBER 13, 2017, MEETING WITH THE NATIONAL MARINE FISHERIES SERVICE RELATED TO INDIAN POINT NUCLEAR GENERATING UNIT NOS. 2 AND 3 LICENSE RENEWAL

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Indian Point Nuclear Generating Unit Nos. 2 and 3 Meeting Between the National Marine Fisheries Service (NMFS) and U.S. Nuclear Regulatory Commission (NRC)

October 13, 2017; 9am – 1pm

Objective

To reach agreement on monitoring for sturgeon that will meet the requirements of the Incidental Take Statement, to establish a firm schedule for reinitiated formal Section 7 consultation, and to identify information needs required for reinitiated consultation.

Location

NMFS Greater Atlantic Regional Fisheries Office
55 Great Republic Drive
Gloucester, MA 01930

Teleconference Information

Call-in number: 888-989-7596
Passcode: 29806

Participants

NRC: Briana Grange
Ben Beasley
Sherwin Turk
Joseph Donoghue*
Butch Burton*
Albert Wong*

NMFS: Julie Crocker
Julie Williams (GCNE)
Gene Martin (GCNE)

Entergy: Rich Burrioni (Entergy)
Dara Gray (Entergy)
Susan Floyd (Entergy)
Elise Zoli (Goodwin Procter)
Paul Bessette (Morgan Lewis Attorney)
Dr. John Young (ASA Analysis & Communication)
Dr. Mark Mattson (Normandeau)
Dr. Douglas Heimbuch (AKRF)
Kelli Dowell* (Entergy)

NYSDEC: Chuck Nieder*
Mark Sanza

*participation via phone

Agenda

- I. Introductions (all)
- II. Purpose/Goals of the meeting (NMFS, NRC, NYSDEC, Entergy)
- III. Action Considered in the 2013 Opinion vs. Current Proposed License
 - a. Timeline and process for NRC action related to relicensing (NRC)
 - b. Overview of the new SPDES permit (NYSDEC)
 - c. Explanation of any operational changes since issuance of 2013 biological opinion and/or differences in how they anticipate operating over the remainder of the license compared to how operations were assessed in the 2013 Opinion (Entergy)
- IV. Reinitiation
 - a. Explanation of the Reinitiation Standard (NMFS)
 - b. Discussion (All)
 - c. Information needed to support a reinitiation request (NMFS)
 - d. Timeline for reinitiation request
 - e. Timeline for the consultation (reinitiation to BiOp)
- V. Atlantic Sturgeon Critical Habitat
 - a. How the conference report is converted to a consultation (NMFS)
- VI. Atlantic and Shortnose Sturgeon Monitoring Plan
 - a. Requirements for NMFS approval (NMFS)
 - b. Identification of areas that need resolution (All)
 - i. Forebay monitoring
 - ii. Trash rack monitoring
 - iii. Traveling screens (note: use of a tank-based method to collect fish from the fish-return sluice, with a 1% "scale-up" to account for fish in the debris sluice was agreed to in August 2017)
 - c. Implementation schedule
 - Review Action Items, Next Steps, Deliverables (with due dates)

**Meeting with the National Marine Fisheries Service related to Indian Point Nuclear
Generating Unit Nos. 2 and 3 License Renewal**

October 13, 2017

LIST OF PARTICIPANTS

<u>Participant</u>	<u>Affiliation</u>
Benjamin Beasley	U.S. Nuclear Regulatory Commission (NRC)
Paul Bessette	Morgan, Lewis & Bockius LLP
Rich Burroni	Entergy Nuclear Operations, Inc. (Entergy)
William Burton*	NRC
Julie Crocker	National Marine Fisheries Service (NMFS)
Joseph Donoghue*	NRC
Kelli Dowell*	Entergy
Bob Fitzgerald*	Entergy
Susan Floyd	Entergy
Briana Grange	NRC
Dara Gray*	Entergy
Doug Heimbuch	AKRF, Inc.
Gene Martin	NMFS
Mark Mattson*	Normandeau Associates, Inc.
Chuck Nieder*	NYSDEC
Mark Sanza*	NYSDEC
Sherwin Turk	NRC
Julie Williams	NMFS
Albert Wong*	NRC
John Young	ASA Analysis & Communication, Inc.
Elise Zoli	Goodwin Procter LLP

* Participation by teleconference