

**ATTACHMENT 21**

**Letter, New York State Department of Environmental  
Conservation to NRC re NMFS's January 30, 2013 Biological  
Opinion (March 25, 2013)**

# New York State Department of Environmental Conservation

Assistant Commissioner

Office of Natural Resources, 14<sup>th</sup> Floor

625 Broadway, Albany, New York 12233-1010

Phone: (518) 402-8533 • Fax: (518) 402-9016

Website: [www.dec.ny.gov](http://www.dec.ny.gov)



Joe Martens  
Commissioner

March 25, 2013

Dr. Amy Hull, Branch Chief  
Projects Branch 2  
Division of License Renewal  
Office of Nuclear Reactor Program  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

**Re: NMFS's January 30, 2013 Biological Opinion for Continued Operation of Indian Point Nuclear Generating Unit Nos. 2 and 3**

Dear Dr. Hull:

On January 30, 2013, the National Marine Fisheries Service (NMFS) provided the Nuclear Regulatory Commission (NRC) with a written Biological Opinion (BiOp) and Incidental Take Statement (ITS) for the continued operation of Indian Point Nuclear Generating Station Units 2 and 3 (IP2 and IP3) "pursuant to existing operating licenses and proposed renewed operating licenses to be issued to Entergy Nuclear Operations, Inc. (Entergy)" after consultation under Section 7 of the federal Endangered Species Act (ESA). While the letter accompanying the January 30, 2013 BiOp and ITS stated that NMFS had "concerns regarding the *significant uncertainty* regarding the proposed action" (*i.e.*, citing New York's draft SPDES permit and 2010 denial of Entergy's CWA §401 Water Quality Certificate for IP2 and IP3), NMFS nevertheless exempted the mortality of two different endangered fish species from the date the BiOp and ITS was issued until 2035.

As the agency responsible for administering provisions of the ESA in New York pursuant to an agreement with NMFS under Section 6(c)(1) of the ESA, the Department of Environmental Conservation (DEC) submits its concerns and hereby requests that the January 30, 2013 BiOp and ITS for IP2 and IP3 be rescinded, reconsidered, and modified for the following reasons:

- (1) The continued operation of IP2 and IP3 in once-through cooling mode for an additional 20 years does not meet New York State's water quality regulations (Title 6 of NYCRR, Chapter X, Parts 701-704);
- (2) NMFS did not consult with DEC prior to issuing the January 30, 2013 BiOp and ITS even though NMFS recognized DEC's regulatory authority over the cooling water intake structures (CWISs) for IP2 and IP3;
- (3) NMFS's exemption from Section 9 of the ESA for the total "take" of 564 shortnose sturgeon and 416 Atlantic sturgeon from future operations at Indian Point<sup>1</sup> was largely inflated by an unsupported assumption;
- (4) NMFS previously determined that the continued operation of Indian Point's once-through cooling water system would have significant impacts on

<sup>1</sup> These totals consist of the "take" of sturgeon by Indian Point Units 1, 2, and 3.

Essential Fish Habitat and recommended that NRC require closed-cycle cooling at IP2 and IP3 for future operations;

- (5) NMFS's January 30, 2013 BiOp and ITS neither required nor recommended that any effort be made to reduce the amount of fish mortality at IP2 and IP3 by the impingement of endangered sturgeon species but merely exempted the mortality as if this was an unavoidable loss; and
- (6) The "take" of 416 New York Bight Distinct Population Segment (NYS-DPS) Atlantic sturgeon was exempted even though NMFS lacked both empirical abundance estimates of the number of fish comprising the NYS-DPS and current sturgeon impingement data from IP2 and IP3.

**I. The continued operation of IP2 and IP3 in once-through cooling mode for an additional 20 years does not meet New York State's water quality regulations (Title 6 of NYCRR, Chapter X, Parts 701-704).**

On April 6, 2009, DEC received a Joint Application for a federal Clean Water Act (CWA) §401 Water Quality Certificate (WQC) on behalf of Entergy Indian Point Unit 2 LLC, Entergy Indian Point Unit 3, LLC, and Entergy Nuclear Northeast (collectively IP2 and IP3). This application was submitted to DEC as part of Entergy's request to renew the NRC operating licenses for IP2 and IP3 for an additional 20 year period. In accordance with CWA §401, DEC was required to determine whether to issue a certificate verifying that an activity which may result in a discharge into navigable waters – such as operation of IP2 and IP3 – meets State water quality standards *before* a federal license or permit for such activity can be issued.

As NMFS accurately reported on page 13 of its January 30, 2013 BiOp and ITS, DEC determined in 2010 that the Indian Point "facilities, whether operated as they are currently or operated with the addition of a cylindrical wedge-wire screen system . . . do not and will not comply with existing New York State water quality standards" (at p. 1). *See also* DEC's April 2, 2010 Notice of Denial of Entergy's §401 WQC, at pp. 1-2. In the letter accompanying NMFS's January 30, 2013 BiOp and ITS, Regional Administrator Bullard noted that New York's denial of a CWA §401 WQC to IP2 and IP3 raised "significant uncertainty regarding the proposed action." Mr. Bullard's letter also made clear that NMFS issues incidental take statements *only* for "[o]therwise lawful activities . . . that meet *all* State and Federal legal requirements, including any state endangered species laws or regulations" (at p. 2). Because DEC determined in 2010 that the proposed action subject to NMFS review, namely the proposed federal re-licensing of IP2 and IP3 for an additional 20 years, did not meet New York State water quality requirements, NMFS had no option but to deny any incidental take of shortnose and Atlantic surgeon by the facilities (*see* ESA Sec. 10[a][1][B]).

Whether DEC's 2010 denial of Entergy's §401 WQC is the subject of a challenge by Entergy is not relevant to the inquiry by NMFS. DEC's April 2, 2010 §401 WQC denial was clear and unequivocal that the very action for which NMFS issued the January 2013 BiOp and ITS – continued use of once-through cooling – does not now, and will not in the future, meet New York State water quality standards.

**II. NMFS did not consult with DEC prior to issuing the January 30, 2013 BiOp and ITS even though NMFS recognized DEC's regulatory authority over the cooling water**

### **intake structures (CWISs) for IP2 and IP3.**

Pursuant to the ESA, NMFS is required to “insure that any action authorized, funded, or carried out . . . is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary, *after consultation as appropriate with affected States*” (ESA §7[a][2]) (emphasis added). NMFS’s recent issuance of a BiOp and ITS for IP2 and IP3 breached the letter and spirit of Section 7 because it was done without any consultation with DEC. Furthermore, NMFS’s action breached a longstanding cooperative agreement between NMFS and DEC for the conservation of threatened and endangered species (*see* “Full Cooperation Agreement” between NMFS and DEC, originally entered in 1992).

In pages 9 through 13 of the January 30, 2013 BiOp and ITS, NMFS reviewed the regulatory authority that DEC has over the operations of IP2 and IP3, including the cooling water intake structures (CWISs) for the facilities. NMFS accurately recounts that, since 1975, DEC has been responsible for implementing sections 316(a) and 316(b) of the CWA. Indeed, NMFS stated that DEC “has the authority, under the CWA and state law, to issue SPDES permits for the withdrawal of cooling water for operations at the Indian Point facilities and for the resulting discharge of waste heat and other pollutants into the Hudson River” (*see* BiOp and ITS, at p. 10)

Not only did NMFS fail to appropriately consult with DEC prior to issuing the 2013 BiOp and ITS, NMFS also included a requirement for impingement monitoring studies to be conducted at Indian Point. This requirements directs the NRC and Entergy to provide impingement study plans to NMFS within 60 days of the final BiOp and ITS (approximately by April 1, 2013). NMFS will then review, edit, and finalize the monitoring study plan. If the NRC and Entergy believe that State approval is also required, DEC will be given an opportunity to review the plan *after* the NRC and NMFS have already agreed on the content (*see* BiOp and ITS, at pp. 133-134). These “non-discretionary” studies could require modifications to the CWISs for IP2 and IP3 – currently regulated by DEC – and have the potential to affect the survival of other species impinged on the intake screens of those Units. Under the CWA and recognized State law, DEC *must* approve any impingement study plans proposed for or conducted on Indian Point’s CWISs, and DEC must be consulted prior to any approvals of proposed studies.

### **III. NMFS’s exemption from Section 9 of the ESA for the total “take” of 564 shortnose sturgeon and 416 Atlantic sturgeon from future operations at Indian Point was largely inflated by an unsupported assumption.**

The final estimated incidental take of both endangered species by NMFS included a correction factor of “1.6 to account for increased water usage.” However, established science does not support the application of a water use correction factor. In developing the BiOp and ITS, NMFS analyzed both water use and impingement data for Indian Point from the 1980s and did not find any such relationship (*see* BiOp and ITS, at pp. 74 and 82). The Electric Power Research Institute (EPRI 2003) also did not find a clear relationship between the number of fish impinged and the volume of water withdrawn after reviewing impingement data collected at industrial facilities across the United States. EPRI concluded that while this relationship might be conceptually clear, it was not evident through data analyses. DEC found similar results when it compared impingement with CWIS capacity usage at industrial facilities in New York (*see* Nieder 2010). While the effect of using a correction factor had on NMFS’s final exempted take

estimate is not known, it was not appropriate for NMFS to apply a correction which resulted in a greater number of sturgeon to be taken rather than protected.

**IV. NMFS previously determined that the continued operation of Indian Point's once-through cooling water system would have significant impacts on Essential Fish Habitat and recommended that NRC require closed-cycle cooling at IP2 and IP3 for future operations.**

In October 2010, NMFS completed an Essential Fish Habitat consultation with NRC for the assessment provided in the Generic Environmental Impact Statement (dGEIS) and appendices for NRC's renewal of operating licenses for IP2 and IP3 (*see* October 12, 2010 letter from NMFS Asst. Regional Administrator Peter D. Colosi, Jr. to Messrs. Brian E. Holian and David J. Wrona at NRC). Similar to the requirement for consultation under the ESA, an EFH assessment requires NMFS to recommend alternatives to the proposed action that will minimize impacts to the resources being protected by the EFH designation (50 CFR 600.920[e][3][iv]). NMFS identified eight different EFH species in the Hudson River by IP2 and IP3: Atlantic sea herring, Bluefish, Atlantic butterfish, Red hake, Black sea bass, Summer flounder, Winter flounder, and Windowpane flounder.

*“Extrapolating from the dGEIS, NMFS notes that the primary impacts of concern regarding fishery resources and their habitat generally, and for EFH in particular, that would be associated with continued operations using an open-ended cooling system would be organism loss and habitat degradation. We could not enumerate these impacts based upon the materials provided for our review, but note that at over 2 billion gallons of water consumed per day, the amount of prey available to fishes in particular would be significantly diminished through entrainment alone.”*

Oct. 12, 2010 Colosi letter to NRC, at p. 8 (*emphasis added*).

As a result of its EFH consultation, NMFS determined in 2010 that the continued use of a once-through cooling system at Indian Point for an additional 20 years would result in significant impact to the designated EFH of the Hudson River estuary. “NMFS agrees with New York that a closed-cycle cooling system would . . . reduce impacts associated with . . . impingement and entrainment” and recommended that NRC require closed-cycle cooling for the duration of the license renewal as a conservation measure to minimize the impacts of future operations of IP2 and IP3 upon EFH (*see* Oct. 12, 2010 Colosi letter, at pp. 5, 6, and 9). Because Entergy has not proposed to retrofit IP2 and IP3 with a closed-cycle cooling system as part of its NRC renewal, there is no reason to believe that the impacts to NMFS-designated EFH species or habitat would be reduced during the 20-year renewal period.

**V. NMFS's January 30, 2013 BiOp and ITS neither required nor recommended that any effort be made to reduce the amount of fish mortality at IP2 and IP3 by the impingement of endangered sturgeon species but merely exempted the mortality as if this was an unavoidable loss.**

Section 7 of the ESA requires that NMFS “specifies those reasonable and prudent measures that the Secretary considers necessary or appropriate to minimize such impact” (*see*

ESA Section 7[b][4][C][ii]). In the January 30, 2013 BiOp and ITS, NMFS found that the continued use of a once-through cooling system at IP2 and IP3 for an additional 20 years was likely to adversely affect the continued existence of shortnose sturgeon and the NYB-DPS of Atlantic sturgeon. Furthermore, NMFS identified the primary cause of take to be the impingement mortality of both sturgeon species on either the bar racks or traveling screens of the CWISs for Units 1, 2 and 3. However, nowhere in the recent BiOp and ITS did NMFS require any action be taken to actually minimize such impact from continued operation of the facilities. Indeed, the reasonable and prudent measures, as well as the terms and conditions to implement such measures, established by NMFS in its BiOp and ITS consist only of monitoring “the intakes to document the amount of incidental take . . . and to examine the shortnose and Atlantic sturgeon that are impinged at the facility” (see BiOp and ITS, at p. 132).

The absence of any requirement in the BiOp and ITS for IP2 and IP3 to genuinely reduce or minimize incidental take of sturgeon from the continued operation of the facilities was surprising given the fact that NMFS had previously determined in its 2010 EFH Consultation that a closed-cycle cooling system was an appropriate, available technology to reduce impingement of all fish species at IP2 and IP3.

**VI. The “take” of 416 NYS-DPS Atlantic sturgeon was exempted even though NMFS lacked both empirical abundance estimates of the number of fish comprising the NYS-DPS and current sturgeon impingement data from IP2 and IP3.**

NMFS determined that the NYB-DPS of Atlantic sturgeon, the majority of which spawns in the Hudson River “*is currently at risk of extinction due to: (1) precipitous declines in population sizes and the protracted period in which sturgeon populations have been depressed; (2) the limited amount of current spawning; and (3) the impacts and threats that have and will continue to affect population recovery*” (see BiOp and ITS, at pp. 36-37).

NMFS identified many stressors that continue to kill or injure sturgeon (e.g., commercial fishing by-catch, dredging, vessel strikes, water quality and contaminants) but concluded without any “. . . empirical estimates of the number of Atlantic sturgeon in the New York Bight DPS...” that the death of 416 Atlantic sturgeon by impingement on Indian Point’s CWISs would nevertheless have little to no effect on the recovery of this federally listed endangered species (see BiOp and ITS, at p. 36). It is well known in the scientific community that these stressors do not work in isolation to cause mortality but add cumulatively to the overall impact upon species. Since NMFS did not have any empirical estimates of the number of Atlantic sturgeon in the NYB-DPS, it is far from clear how NMFS determined that the unnatural mortality of 416 Atlantic sturgeon, in addition to all the other stressors NMFS identified, would not, in a cumulative manner, jeopardize the recovery of this endangered species.

Furthermore, NMFS did not possess any recent or current data on the number of either species of sturgeon impinged at IP2 and IP3 when it rendered the BiOp and ITS. The data provided to NMFS for the purpose of preparing its BiOp and ITS, and to determine the manner and number of sturgeon “taken” by the facilities, were decades old and there was no assurance that the modeling undertaken by NMFS, Entergy, or the NRC accurately predicted the number of sturgeon which would be impinged at the facilities over the next 20 years.

In sum, either the NYB-DPS of Atlantic sturgeon is at risk of extinction or it is not. If the

species is at risk, then it is neither prudent nor responsible for NMFS to determine a level of incidental take based on both a lack of population data and decades old impingement data from the facilities subject to re-licensing.

**Conclusion**

NMFS's January 30, 2013 BiOp and ITS issued to NRC for IP2 and IP3 must be remanded to NMFS for further analysis and evaluation because it was issued for an activity that was already determined to violate New York State water quality requirements, was issued in the absence of any consultation with DEC, and was based upon inappropriate data necessary to make a reasonably accurate estimate of both the level of incidental take (for either sturgeon species) and the impact the exempted take may have on the recovery of the NYB-DPS of Atlantic sturgeon. We look forward to being actively involved in the process going forward. Thank you.

Sincerely,



Kathleen M. Moser  
Assistant Commissioner  
Natural Resources

c: National Marine Fisheries Service  
Northeast Region  
55 Great Republic Drive  
Gloucester, Massachusetts 01930-2276  
Attn: John K. Bullard, Regional Administrator

EDMS#465274v1