



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

December 20, 2011

Mr. William W. Stelle, Jr.  
Regional Administrator  
National Marine Fisheries Service  
Northwest Regional Office  
1201 NE Lloyd Blvd., Suite 1100  
Portland, OR 97232-1274

SUBJECT: RESPONSE TO LETTER OF NON-CONCURRENCE ON BIOLOGICAL  
ASSESSMENT FOR PROPOSED LICENSE RENEWAL OF COLUMBIA  
GENERATING STATION (TAC NO. ME3121; NMFS CONSULTATION NO.  
F/NWR/2011/05286)

Dear Mr. Stelle:

The U.S. Nuclear Regulatory Commission (NRC; the staff) received your October 24, 2011, letter in response to the staff's draft supplemental environmental impact statement (SEIS) for the proposed license renewal of Columbia Generating Station (CGS) in Benton County, Washington. Your letter directs NRC to initiate formal consultation under section 7(a)(2) of the Endangered Species Act of 1973, as amended (ESA). Before determining whether formal section 7 consultation is the appropriate next step, the NRC staff would like to clarify a few issues raised in your letter.

The NRC staff has prepared a technical attachment to this letter that discusses three main concerns raised in your letter: (1) the potential for CGS to entrain juvenile salmonids; (2) the National Marine Fisheries Service (NMFS)'s intake screen criteria contained in *Anadromous Salmonid Passage Facility Design*, and (3) the NRC's authority related to CGS's cooling water intake system design and any modifications thereto.

In summary, the NRC believes that informal section 7 consultation is the appropriate means of fulfilling NRC's obligations under the ESA for the proposed CGS license renewal. The NRC welcomes any information that your office may have that would indicate that CGS is entraining either Upper Columbia River spring Chinook juveniles or Upper Columbia River steelhead juveniles or other available information that would justify initiation of formal section 7 consultation.

W. Stelle

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If you have any questions regarding this letter or the proposed CGS license renewal, please contact Daniel Doyle, environmental project manager, or Dennis Logan, aquatic biologist. Mr. Doyle can be reached at 301-415-3748 or by e-mail at [Daniel.Doyle@nrc.gov](mailto:Daniel.Doyle@nrc.gov). Mr. Logan can be reached at 301-415-0490 or by e-mail at [Dennis.Logan@nrc.gov](mailto:Dennis.Logan@nrc.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "David J. Wrona" with a small "for" written below it.

David J. Wrona, Chief  
Projects Branch 2  
Division of License Renewal  
Office of Nuclear Reactor Regulation

Docket No. 50-397

Enclosure:  
As stated

cc w/encl: Listserv

## **Technical Discussion of NMFS's Concerns Related to Informal Section 7 Consultation at Columbia Generating Station**

In a letter dated August 23, 2011 (NRC 2011b), the U.S. Nuclear Regulatory Commission (NRC) submitted a biological assessment (NRC 2011a) to the National Marine Fisheries Service (NMFS) as part of informal section 7 consultation under the Endangered Species Act of 1973, as amended (ESA), for the proposed license renewal of Columbia Generating Station (CGS). The biological assessment considered the potential impacts to Upper Columbia River spring Chinook (*Oncorhynchus tshawytscha*) and the Upper Columbia River steelhead (*O. mykiss*). On October 24, 2011, the NMFS responded with a letter (NMFS 2011b) that raised a number of concerns with the proposed action and its effects on listed species. This technical discussion addresses the three primary concerns identified in NMFS's letter, which are:

- the potential for CGS to entrain juvenile salmonids;
- the NMFS's intake screen criteria; and
- the NRC's authority related to CGS's cooling water intake system design.

As a result of these concerns, NMFS's October 24 letter directed NRC to initiate formal section 7 consultation. However, the NRC believes that informal section 7 consultation is the appropriate means of fulfilling NRC's obligations under the ESA for the proposed CGS license renewal. In addressing each of NMFS's concerns, the NRC staff did not identify any information or statutory requirement that would necessitate the NRC to initiate formal section 7 consultation.

### **I. Entrainment of Juvenile Salmonids**

In its October 24 letter, the NMFS states that the CGS cooling system has the potential to entrain juvenile salmonids during the proposed relicensing period. However, juvenile Upper Columbia River spring Chinook are too large to be entrained into the cooling system at the time they migrate through the Hanford Reach (as adults migrating upstream or, more typically, as one- to two-year-old smolts descending the river from the upper tributaries of the Columbia River). The second salmonid species listed under the ESA is the Upper Columbia River steelhead. Upper Columbia River steelhead historically spawned in the Hanford Reach. Since 2006, no evidence of steelhead spawning has been observed in the Hanford Reach in the vicinity of the CGS intake. Steelhead fry in the Hanford Reach have been well studied, and they do not emerge from the river substrate until they are about 2.5 cm (~1 in.) long and even then, they will tend to seek cover. Further, CGS collected no life stage of Upper Columbia River steelhead in entrainment studies conducted in 1979–1980 and 1985.

If the NMFS has any contradictory information that would indicate that the CGS cooling system is entraining or has the potential to entrain protected juvenile salmonids, NRC would welcome that information for its staff's consideration. Absent of any such additional information, the NRC believes that, consistent with 50 CFR 402.12(k), the staff's conclusion of "may affect, but is not likely to adversely affect" for both the Upper Columbia River spring Chinook salmon and the Upper Columbia River steelhead in NRC's biological assessment does not warrant initiation of formal section 7 consultation.

ENCLOSURE

## **II. NMFS's Anadromous Salmonid Passage Facility Design**

NMFS's October 24 letter states that NMFS does not concur with the NRC's biological assessment effect determinations because CGS's intake screen design is not consistent with NMFS's screen criteria in Anadromous Salmonid Passage Facility Design (NMFS 2011a). The introduction to this document states, however, that:

*Existing facilities may not adhere to the criteria and guidelines listed in this document. However, that does not mean these facilities must be modified specifically for compliance with this document. The intention of these criteria and guidelines is to ensure future compliance in the context of major upgrades and new designs of fish passage facilities.*

CGS is an existing facility, and the proposed license renewal would not involve any "major upgrades" or "new designs of fish passage facilities." The NMFS letter seems to indicate that compliance with NMFS's screen criteria is required, but the document containing the criteria makes no such claim. Therefore, the NRC staff does not believe that non-compliance with this criterion alone necessitates initiation of formal section 7 consultation.

## **III. CGS's Cooling Water Intake System**

NMFS's October 24 letter directs the NRC to develop a cooling water intake system design that meets NMFS's screen criteria and to create a schedule for implementing such a design. The identification and implementation of best technology available (BTA) for cooling water intake systems is, however, under the authority of the U.S. Environmental Protection Agency (EPA) under the Federal Water Pollution Control Act of 1972 (the Clean Water Act; henceforth, CWA). The EPA delegated its authority under the CWA to issue and oversee National Pollutant Discharge Elimination System (NPDES) permits to the State of Washington in 1973.

The State of Washington authorizes discharge of treated wastewater via three outfalls at CGS, in accordance with special and general conditions of NPDES Permit No. WA-002515-1. Under this permit, the State of Washington can require mitigation measures, such as requiring that a cooling system meet NMFS's screen criteria, BTA, or other modifications of the cooling system to reduce entrainment and impingement impacts to aquatic life.

The evaluation or implementation of NMFS's screen criteria is beyond the NRC's regulatory authority. When Congress amended the CWA in 1972, it assigned statutory authority over water quality matters to the EPA. Portions of the CWA specifically removed water quality oversight authority from other Federal agencies such as the NRC, and, further, sought to prevent duplicative Federal oversight of CWA issues by specifically and solely vesting authority and expertise with the EPA. Section IV of this technical discussion provides more details on the history of NRC's authority in water permitting matters.

NMFS's concerns and modification suggestions regarding CGS's cooling water intake system design would be most appropriately considered as part of the CGS NPDES permit renewal process. Energy Northwest submitted an application to the Washington State Energy Facility Site Evaluation Council (EFSEC) to renew its NPDES permit on November 19, 2010. The EFSEC has administratively extended CGS's previous NPDES permit, which was issued on May 25, 2006, and expired on May 25, 2011, until the EFSEC makes a decision on whether to grant a renewed NPDES permit. Because EFSEC has not yet issued a renewed NPDES permit,

NRC encourages NMFS to collaborate with EFSEC to recommend cooling water intake system modifications that would be more protective of aquatic life and, specifically, listed salmon species.

#### **IV. 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 memoranda 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 the currently ongoing review of CGS's license renewal application, 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 CGS), 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 both operational water quality impacts and aquatic biota protection.

## **V. Conclusion**

The NRC believes that informal section 7 consultation is the appropriate means of fulfilling NRC's obligations under the ESA for the proposed CGS license renewal. The *Endangered Species Consultation Handbook* (FWS and NMFS 1998) also indicates that informal section 7 consultation is sufficient in an instance such as this:

*When action agencies request formal consultation on actions not likely to adversely affect listed species or designated critical habitat, the Services should explain that informal consultation/concurrence letters are adequate to complete section 7 compliance...*

In conclusion, absent any new and significant information from NMFS indicating that CGS is entraining either Upper Columbia River spring Chinook juveniles or Upper Columbia River steelhead juveniles, the NRC staff has determined that formal section 7 consultation is not warranted at this time.

**References:**

[FWS and NMFS] U.S. Fish and Wildlife Service and National Marine Fisheries Service. 1998. *Endangered Species Consultation Handbook: Procedures for Conducting Consultation and Conference Activities Under Section 7 of the Endangered Species Act*. Washington, DC: FWS and NMFS. Available at <<http://www.fws.gov/caribbean/es/PDF/Sec%207%20Handbook.pdf>> (accessed 29 November 2011).

[NMFS] National Marine Fisheries Service. 2011a. *Anadromous Salmonid Passage Facility Design*. July 2011. Available at <<http://www.nwr.noaa.gov/Salmon-Hydropower/FERC/upload/Fish-Passage-Design.pdf>> (accessed 29 November 2011).

[NMFS] National Marine Fisheries Service. 2011b. Letter from W. Stelle, Northwest Regional Administrator, to D. Wrona, Branch Chief, NRC. Subject: Non-concurrence on NRC's proposed license renewal for Energy Northwest's Columbia Generating Station. October 24, 2011. ADAMS No. ML11307A393.

[NRC] U.S. Nuclear Regulatory Commission. 2011a. *Generic Environmental Impact Statement for License Renewal of Nuclear Plants Regarding Columbia Generating Station; Draft Report for Comment*. Washington, DC: NRC. NUREG-1437, Supplement 47. August 2011. ADAMS No. ML11227A007.

[NRC] U.S. Nuclear Regulatory Commission. 2011b. Letter from D. Wrona, Branch Chief, to R. Domingue, NMFS. Subject: Biological assessment for informal section 7 consultation and request to initiate abbreviated EFH Consultation for license renewal of Columbia Generating Station. August 23, 2011. ADAMS No. ML11165A030.

W. Stelle

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If you have any questions regarding this letter or the proposed CGS license renewal, please contact Daniel Doyle, environmental project manager, or Dennis Logan, aquatic biologist. Mr. Doyle can be reached at 301-415-3748 or by e-mail at [Daniel.Doyle@nrc.gov](mailto:Daniel.Doyle@nrc.gov). Mr. Logan can be reached at 301-415-0490 or by e-mail at [Dennis.Logan@nrc.gov](mailto:Dennis.Logan@nrc.gov).

Sincerely,

***/RA/ A. Imboden for***

David J. Wrona, Chief  
Projects Branch 2  
Division of License Renewal  
Office of Nuclear Reactor Regulation

Docket No. 50-397

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Letter to William W. Stelle from David J. Wrona dated December 20, 2011

SUBJECT: RESPONSE TO LETTER OF NON-CONCURRENCE ON BIOLOGICAL  
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