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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

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AUG - 5 2008

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Ms. Louise Lund
Nuclear Regulatory Commission
Washington, DC 20555-0001

4/05/08
73 FR 22448 (4)

Re: Vogtle Electric Generating Plant, Units 1 and 2, License Renewal Application Review

Dear Ms. Lund:

This responds to your letter dated April 9, 2008, generic environmental impact statement, and biological assessment (BA) requesting National Marine Fisheries Service's (NMFS) concurrence with your determinations pursuant to section 7 of the Endangered Species Act (ESA) for the Nuclear Regulatory Commission's license renewal application for the Vogtle Electric Generating Plant (VEGP), Units 1 and 2. You determined the project will not likely adversely affect shortnose sturgeon. NMFS' determinations regarding the effects of the proposed action are based on the description of the action in this informal consultation. You are reminded that any changes to the proposed action may negate the findings of the present consultation and may require reinitiation of consultation with NMFS.

The project is located in Burke County, Georgia, adjacent to the Savannah River between river mile (RM) 150 and 152, approximately 15 miles east-northeast of Waynesboro, Georgia, and 26 miles southeast of Augusta, Georgia. The applicant proposes to renew the operating licenses NPF-68 and NPF-81 for Vogtle Electric Generating Plant Units 1 and 2 for 20 years beyond the current operating license expiration dates of January 16, 2027, for Unit 1 and February 9, 2029, for Unit 2.

VEGP consists of two Westinghouse pressurized water reactors. The circulating water system at VEGP uses two natural-draft cooling towers as part of a closed-cycle heat dissipation system, which withdraws water from the Savannah River and discharges blowdown back to the river. The Savannah River adjacent to the VEGP site is relatively straight with very few bends and the average water temperature is 17.4°C (63.4°F). The substrate in the deep areas is mostly gravel with some sand. The intake system consists of a 365-foot-long intake canal located on the western bank of the Savannah River. A skimmer weir is located at the canal entrance, and a canal weir is located within the canal 100 feet from the entrance. The intake structure head of the canal contains four bays (two for each unit), each with a stop log, trash rack, traveling screens, and a single pump. The trash racks consist of a series of vertical flat bars, and the traveling screens are annealed type 304 stainless steel 3/8-inch mesh. As the system operates, wash water is used to rinse the traveling screens and drive debris into a debris basket, which is emptied periodically. Daily inspections are performed, and according to facility personnel, fish or other aquatic organisms are rarely observed.

The circulating water is removed from the intake by vertical pumps, each with a capacity of 22,000 gallons per minute. The circulating water is directed into the natural draft cooling towers, which use natural convection to remove heat from water that has been used to cool the condensers. Because the

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cooling towers operate as a closed system, the only water loss is through evaporation, drift, and blowdown. Makeup water is withdrawn from the river to replace these losses. The cooling water is treated with several chemicals to control biofouling, corrosion, and scaling. The cooling tower blowdown and other liquid wastestreams are discharged back to the Savannah River through a discharge structure located 500 feet downstream of the intake structure.

Shortnose sturgeon, protected by the ESA, can be found in or near the action area and may be affected by the project. There is no designated critical habitat in or near the project area.

NMFS has identified the following potential effects to shortnose sturgeon and concluded that they are not likely to be adversely affected by the proposed action. Possible effects include impacts to spawning habitat, sturgeon entrainment/impingement, thermal effects, and chemical toxicity effects. No formal studies have been conducted regarding the presence of sturgeon in the areas surrounding Units 1 and 2; also, staff for the VEGP has never filed an "Unusual or Important Environmental Event" which deals with fish kills and impingement. Effects on this species caused by impacts to spawning habitat due to plant operations are discountable; neither the water depths, substrate bottom type, nor the shape of the river at this location are conducive to shortnose sturgeon spawning. In the Savannah River, probable spawning sites were identified in two principal reaches where there are sharp curves of the channel and substrates of logs, rocks, gravel, and sand: from RM 111 to 118 and from RM 170 to 172 (Draft Environmental Impact Statement [DEIS]). The VEGP site is between RM 150 and 152; thus, it is between the two identified spawning reaches. The upstream spawning reach is approximately 18 RM above the site, and the downstream reach is approximately 32 RM below the site. Both spawning sites are far enough away from the VEGP that the risk they will be affected by the activities of the operating units are discountable.

The BA states that the plant will use a closed-cycle wet cooling tower system, which reduces water use by 96 to 98 percent, and thereby reduces the likelihood of sturgeon impingement. Units 1 and 2 have a design through-screen velocity of less than 0.7 ft/sec at a minimum water level of 23.8 m (78 ft) above MSL; the units would withdraw 2.7 percent of the river flow during normal conditions and between 1.4 and 3.4 percent of the total flow at maximum withdrawal. The intake canal has both a skimmer weir and a canal weir to reduce entrainment mortality. The weir wall also reduces the potential of sturgeon larvae entrainment, since their larvae are demersal and tend to stay near the river bottom. These measures will reduce the likelihood of sturgeon impingement within the intake structures. In the operating history of Units 1 and 2, there have been no reported instances of sturgeon impingement. Due to the very small chance of sturgeon being trapped, the risk of potential impingement of the species is considered discountable.

In regards to thermal effects, the following information comes directly from the DEIS for the Early Site Permit of Units 3 and 4 as these would produce a thermal discharge very similar to that of Units 1 and 2: 1) The discharge from the discharge structure would enter the Savannah River at 404 feet downstream through a single submerged port, 2) water quality standards for temperature are not to exceed 32.2°C (90°F), and at no time is the temperature of the receiving waters to be increased more than 2.8°C (5°F). The effluent from Units 1 and 2 would discharge directly into the Savannah River; the maximum downstream distance of the 2.8°C (5°F) above ambient isotherm was estimated to be 97 feet from the outfall pipe. It is expected that fish and other organisms would avoid the elevated temperatures, as they can move through this part of the river unencumbered by any structures or physical features that would retain them in the plume; this also reduces the likelihood of cold and

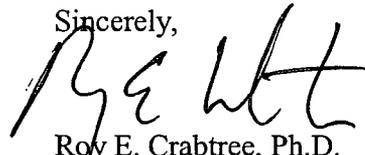
heat shock when moving outside of the plume. The effects on shortnose sturgeon from having to avoid the thermal plume and change in ambient water temperature, as well as cold and heat shock, will be insignificant.

Chemicals, including biocides, would be added to the cooling tower basins for Units 1 and 2. Biofueling would be controlled using chlorination and/or other treatment methods. Operation of the cooling towers would be based on four cycles of concentration; thus, the levels of solids and organics in the cooling tower blowdown would be approximately four times higher than the ambient or upstream concentrations. Blowdown from the cooling towers would be discharged to a common blowdown sump to provide retention time for settling of solids or to be treated, if required to remove biocide residuals before the water is discharged to the river. Calculations give an estimated in-river dilution factor of 60 to 120 during periods of average Savannah River discharge, depending on the time of year and river flow rate. The chemical concentrations at the outfall meet the NPDES limits, and no impacts to the aquatic ecology of the Savannah River from these chemicals have been observed; thus effects from chemical effluent will be insignificant.

Based on the above information, NFMS has determined that the proposed action is not likely to adversely affect shortnose sturgeon; therefore, this concludes your consultation responsibilities under the ESA for species under NMFS' purview. Consultation must be reinitiated if a take occurs or new information reveals effects of the action not previously considered, or the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat in a manner or to an extent not previously considered, or if a new species is listed or critical habitat designated that may be affected by the identified action.

We have enclosed additional information on other statutory requirements that may apply to this action, and on NMFS' Public Consultation Tracking System to allow you to track the status of ESA consultations. If you have any questions, please contact Ms. Alexis Meyer at (727) 824-5312 or by e-mail at Alex.Meyer@noaa.gov.

Sincerely,



Roy E. Crabtree, Ph.D.
Regional Administrator

Enclosure

File: 1514-22.F.1.FL
Ref: I/SER/2008/02556

**PCTS Access and Additional Considerations for ESA Section 7 Consultations
(Revised 5-13-2008)**

Public Consultation Tracking System (PCTS) Guidance: PCTS is an online query system at <https://pcts.nmfs.noaa.gov/> that allows federal agencies and U.S. Army Corps of Engineers' (COE) permit applicants and their consultants to ascertain the status of NMFS' Endangered Species Act (ESA) and Essential Fish Habitat (EFH) consultations, conducted pursuant to ESA section 7, and Magnuson-Stevens Fishery Conservation and Management Act's (MSA) sections 305(b)2 and 305(b)(4), respectively. Federal agencies are required to enter an agency-specific username and password to query the Federal Agency Site. The COE "Permit Site" (no password needed) allows COE permit applicants and consultants to check on the current status of Clean Water Act section 404 permit actions for which NMFS has conducted, or is in the process of conducting, an ESA or EFH consultation with the COE.

For COE-permitted projects, click on "Enter Corps Permit Site." From the "Choose Agency Subdivision (Required)" list, pick the appropriate COE district. At "Enter Agency Permit Number" type in the COE district identifier, hyphen, year, hyphen, number. The COE is in the processing of converting its permit application database to PCTS-compatible "ORM." An example permit number is: SAJ-2005-000001234-IPS-1. For the Jacksonville District, which has already converted to ORM, permit application numbers should be entered as SAJ (hyphen), followed by 4-digit year (hyphen), followed by permit application numeric identifier with no preceding zeros. For example: SAJ-2005-123; SAJ-2005-1234; SAJ-2005-12345.

For inquiries regarding applications processed by COE districts that have not yet made the conversion to ORM (e.g., Mobile District), enter the 9-digit numeric identifier, or convert the existing COE-assigned application number to 9 numeric digits by deleting all letters, hyphens, and commas; converting the year to 4-digit format (e.g., -04 to 2004); and adding additional zeros in front of the numeric identifier to make a total of 9 numeric digits. For example: AL05-982-F converts to 200500982; MS05-04401-A converts to 200504401. PCTS questions should be directed to Eric Hawk at Eric.Hawk@noaa.gov. Requests for username and password should be directed to PCTS.Usersupport@noaa.gov.

EFH Recommendations: In addition to its protected species/critical habitat consultation requirements with NMFS' Protected Resources Division pursuant to section 7 of the ESA, prior to proceeding with the proposed action the action agency must also consult with NMFS' Habitat Conservation Division (HCD) pursuant to the MSA requirements for EFH consultation (16 U.S.C. 1855 (b)(2) and 50 CFR 600.905-.930, subpart K). The action agency should also ensure that the applicant understands the ESA and EFH processes; that ESA and EFH consultations are separate, distinct, and guided by different statutes, goals, and time lines for responding to the action agency; and that the action agency will (and the applicant may) receive separate consultation correspondence on NMFS letterhead from HCD regarding their concerns and/or finalizing EFH consultation.

Marine Mammal Protection Act (MMPA) Recommendations: The ESA section 7 process does not authorize incidental takes of listed or non-listed marine mammals. If such takes may occur an incidental take authorization under MMPA section 101 (a)(5) is necessary. Contact Ken Hollingshead of our NMFS Headquarters' Protected Resources staff at (301) 713-2323 for more information on MMPA permitting procedures.