

December 5, 2006

Mr. Peter D. Colosi, Jr.
Assistant Regional Administrator for
Habitat Conservation
National Marine Fisheries Service
Northeast Regional Office
One Blackburn Drive
Gloucester, MA 09130-2298

SUBJECT: RESPONSE TO ESSENTIAL FISH HABITAT CONSERVATION
RECOMMENDATION REGARDING THE PROPOSED LICENSE RENEWAL OF
OYSTER CREEK NUCLEAR GENERATING STATION

Dear Mr. Colosi:

The U.S. Nuclear Regulatory Commission (NRC) received the letter, dated September 28, 2006, providing the National Marine Fisheries Service's (NMFS's) comments and conservation recommendation in response to the NRC's essential fish habitat (EFH) assessment for the proposed license renewal of the Oyster Creek Nuclear Generating Station (OCNGS). The EFH consultation was initiated pursuant to Section 305 of the Magnuson-Stevens Fishery Conservation and Management Act (Public Law 94-265, December 1996), and the EFH assessment was included in an appendix to our draft Supplemental Environmental Impact Statement (SEIS) regarding OCNGS, which was issued in June 2006. In addition to responding to some of your comments on the SEIS, this letter contains the NRC's written response to your conservation recommendation, as required by Section 305(b)(4)(B) of the Act. NRC staff appreciates your willingness to grant us an extension for this written response until December 15, 2006.

NRC regulations (in 10 CFR 51) define NRC's impact categories as small, moderate, and large. For fish and shellfish, such categorization is based on potential impacts to populations, not individual organisms. Thus, population-level impacts due to entrained and impinged organisms are assessed. Because the NRC and NMFS are governed primarily by different regulations, it is possible that each agency assesses environmental impacts on different trophic levels. However, we believe both agencies share the same goal of protecting and sustaining aquatic resources in Barnegat Bay.

We also share your concern regarding the dated impingement mortality studies. The NRC determined that no recent impingement data were available when we began our review, and we recognize the limitations of the currently available impingement data. However, the NRC is required to conduct environmental analyses using the best available information; therefore, our SEIS and EFH assessment relied heavily on studies conducted in the 1970s and 1980s. Accordingly, the final SEIS will reflect the uncertainties and limitations of using historical monitoring data to evaluate future adverse impacts.

The U.S. Environmental Protection Agency (EPA), or delegated State as is the case with New Jersey, has the authority to require impingement monitoring studies whereas the NRC is prohibited from imposing any such monitoring programs. The State of New Jersey did not require any additional impingement monitoring studies after the 316(b) demonstration study for OCNGS was approved in the mid 1980s. To demonstrate compliance with EPA's Clean Water Act Section 316(b) Phase II regulations, the licensee began a comprehensive demonstration study in September 2005; the results will be available in January 2008.

While the draft SEIS does not specifically refer to any impacts on "a major portion of Barnegat Bay" as stated in your letter, the NRC has revised the SEIS to clarify that only portions of central Barnegat Bay adjacent to Forked River and Oyster Creek would be impacted by license renewal of OCNGS. Additionally, because there are no recent population data for species in Barnegat Bay, impacts on the food web in central Barnegat Bay are difficult to determine, which also will be clarified in the final SEIS.

Your letter also expressed concern with the high number of fish kills related to OCNGS's thermal discharge. There have been 37 fish kills since OCNGS began operating in 1969. However, the number and frequency of fish kills have declined substantially since the 1970s, and the licensee has increased its awareness and response to such incidents over the years. There is a fish kill monitoring procedure in place at OCNGS that requires a survey of the discharge canal and parts of Oyster Creek; the survey is conducted on foot or by boat using dip nets to retrieve the stressed and dead fish. A report to the New Jersey Department of Environmental Protection (NJDEP) and the NRC includes the species and number of stressed or dead fish collected. In the past, underwater cameras and scuba divers have been used to observe the extent of fish kills; such observations have not indicated that there were many expired fish at or near the bottom of the discharge canal or Oyster Creek. Therefore, it is unlikely that the magnitude of fish kills in the discharge canal or Oyster Creek has been underestimated.

In the EFH assessment, the NRC determined that while continued operations of OCNGS may have direct adverse effects on EFH for some species and their prey species, adverse effects are unlikely to be detected in the Barnegat Bay food web. Given that the NRC will revise the SEIS to clarify near-field and far-field impacts to aquatic species, such revisions would also apply to the EFH assessment if the consultation process allowed for draft and final versions of the assessment.

We also agree with NMFS that entrainment and impingement impacts on winter flounder (*Pseudopleuronectes americanus*) are of the greatest concern of all species assessed. The staff recognizes that some adverse effect may occur in the food web; however, there is no indication that such a perturbation has affected the Barnegat Bay food web and ecosystem.

Regarding the EFH conservation recommendation for OCNGS, NRC agrees with NMFS that the best available technology for reducing entrainment, impingement, and thermal effects is closed-cycle cooling. However, the installation of cooling towers has impacts beyond those affecting fish and shellfish, and other considerations have to be taken into account before a decision is made. Additionally, there may be other alternatives to closed-cycle cooling that may adequately protect Federally managed fish and shellfish populations despite the fact that such alternatives would adversely affect EFH. Cooling towers and other alternatives, which may also adversely affect EFH, are discussed in Chapter 8 of the SEIS. 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(I), which may require NRC to reinitiate 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.

The NRC recommends that additional environmental monitoring be conducted in the bay to establish a baseline and determine if detectable changes have occurred in species composition and abundance over the past three decades. Such studies should be comprehensive, involve all stakeholders including resource agencies and the licensee, and incorporate designs to evaluate anthropogenic and natural environmental stressors on Barnegat Bay at spatial and temporal scales sufficient to address the inherent variability within the ecosystem. The NRC believes that integrated monitoring studies will enable resource managers to understand better the relative contributions of individual and collective environmental stressors on Barnegat Bay and facilitate prioritization of management actions to reduce adverse impacts on the ecosystem.

Based on our understanding of the EFH consultation requirements, this response letter concludes the NRC's EFH consultation with NMFS regarding the OCNGS license renewal project. Also, regarding the Section 7 consultation for continued operations at OCNGS, your Protected Resources Division concluded the consultation with the issuance of an updated Biological Opinion on November 21, 2006. If you have any questions concerning the NRC's response to NMFS's conservation recommendation or other aspects of the OCNGS license renewal project, please contact Harriet Nash of my staff at 301-415-4100 or HLN@nrc.gov.

Sincerely,

/RA/

Pao-Tsin Kuo, Acting Director
Division of License Renewal
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission

Docket No. 050-219

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Division of License Renewal
Office of Nuclear Reactor Regulation
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DISTRIBUTION:

P.T. Kuo	R. Franovich	E. Keto	M. Young (OGC)
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D. Ashley	K. LaGory (ANL)	J. Ward (PNNL)	

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OFFICE	LA:DLR	ES:REBA	PM:REBB	BC:REBB	(A)D:DLR
NAME	I. King	HNash	Mmasnik /RA HN for/	RFranovich	PTKuo
DATE	12/4/06	12/4/06	12/4/06	12/4/06	12/5/06

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Oyster Creek Nuclear Generating Station

cc:

Site Vice President - Oyster Creek
Nuclear Generating Station
AmerGen Energy Company, LLC
P.O. Box 388
Forked River, NJ 08731

Senior Vice President of
Operations
AmerGen Energy Company, LLC
200 Exelon Way, KSA 3-N
Kennett Square, PA 19348

Kathryn M. Sutton, Esquire
Morgan, Lewis, & Bockius LLP
1111 Pennsylvania Avenue, NW
Washington, DC 20004

Kent Tosch, Chief
New Jersey Department of
Environmental Protection
Bureau of Nuclear Engineering
CN 415
Trenton, NJ 08625

Vice President - Licensing and
Regulatory Affairs
AmerGen Energy Company, LLC
4300 Winfield Road
Warrenville, IL 60555

Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406-1415

Mayor of Lacey Township
818 West Lacey Road
Forked River, NJ 08731

Senior Resident Inspector
U.S. Nuclear Regulatory Commission
P.O. Box 445
Forked River, NJ 08731

Director - Licensing and Regulatory Affairs
AmerGen Energy Company, LLC
Correspondence Control
P.O. Box 160
Kennett Square, PA 19348

Manager Licensing - Oyster Creek
Exelon Generation Company, LLC
Correspondence Control
P.O. Box 160
Kennett Square, PA 19348

Regulatory Assurance Manager
Oyster Creek
AmerGen Energy Company, LLC
P.O. Box 388
Forked River, NJ 08731

Assistant General Counsel
AmerGen Energy Company, LLC
200 Exelon Way
Kennett Square, PA 19348

Ron Bellamy, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406-1415

Correspondence Control Desk
AmerGen Energy Company, LLC
200 Exelon Way, KSA 1—1
Kennett Square, PA 19348

Oyster Creek Nuclear Generating Station
Plant Manager
AmerGen Energy Company, LLC
P.O. Box 388
Forked River, NJ 08731

License Renewal Manager
Exelon Generation Company, LLC
200 Exelon Way, Suite 210
Kennett Square, PA 19348

Oyster Creek Nuclear Generating Station

cc:

Mr. James Ross
Nuclear Energy Institute
1776 I Street, NW, Suite 400
Washington, DC 20006-3708

Mr. Michael P. Gallagher
Vice President License Renewal
Exelon Generation Company, LLC
200 Exelon Way, Suite 230
Kennett Square, PA 19348

Mr. Christopher M. Crane
President and Chief Nuclear Officer
AmerGen Energy Company, LLC
4300 Winfield Road
Warrenville, IL 60555