



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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Chief, Rules Review and Directives Branch
U.S. Nuclear Regulatory Commission
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RULES AND DIRECTIVES
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Dear Sir or Madam:

In accordance with Section 309 of the Clean Air Act and the National Environmental Policy Act (NEPA), the U.S. Environmental Protection Agency (EPA) has reviewed the Draft Generic Environmental Impact Statement for License Renewal of Nuclear Plant, Supplement 28 (draft SEIS): Oyster Creek Nuclear Generating Station (CEQ # 20060246). According to the draft SEIS, the current operating license for the Oyster Creek Nuclear Generating Station will expire in April 2009. The proposed Federal action would renew the current operating licenses for an additional 20 years.

This draft SEIS was prepared as a supplement to the Nuclear Regulatory Commission's (NRC) 1996 Final Generic Environmental Impact Statement (GEIS), which was prepared to streamline the license renewal process on the premise that in general, the environmental impacts from re-licensing nuclear power plants are similar. That GEIS proposed that NRC will develop facility-specific SEIS documents for individual plants as the facilities apply for license renewal. EPA provided comments on the GEIS during the development process in 1992 and 1996.

The Oyster Creek Nuclear Generating Station (OCNGS) is located in Ocean County, New Jersey, on the confluence of the South Branch of the Forked River and Oyster Creek, adjacent to Barnegat Bay. The facility has one unit that is a single boiling water reactor with a power rating of 1930 megawatts of thermal energy and 640 megawatts of electrical power. Plant cooling is provided by a once-through circulating water system that draws water from the Barnegat Bay via the South Branch of the Forked River and discharges to Oyster Creek.

Based on the review of the Oyster Creek Nuclear Generating Station draft SEIS, the EPA has rated the project and document "Environmental Concerns- insufficient information" (EC-2). Our most serious concern is how the OCNGS will comply with Section 316 of the Clean Water Act and the how OCNGS will minimize the impacts due to entrainment and impingement of fish and shellfish. We are also concerned with the impacts to the Oyster Creek and Forked River aquatic systems from heat shock and the lack of a consistency determination with New Jersey's Coastal Zone Management Plan. Also, we recommend that the final SEIS address opportunities for pollution prevention and waste recycling.

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Aquatic resources:

Our first and foremost concern is with the draft SEIS's use of outdated data and the lack of a complete evaluation of the environmental effects from the continued operation of the facility. While other regulations may not require the regular collection of data and information, these in no way influence the NEPA requirement to collect data to accurately and appropriately analyze, evaluate, and disclose the impacts from a proposed action. For example, a serious shortcoming of the document is that it relies upon 20 to 30 year old aquatic resource data to inform the public and decision makers regarding the facility's impacts for the next 20 years to come. Rather than relying on nearly 20 year old data from other studies, the draft SEIS should have evaluated the present and continued effects from altered water quality, temperatures, currents, as well as entrainment and impingement, and put that evaluation in the context of the effects not only on Oyster Creek and the South Branch of the Forked River, but on the larger Forked River and the Barnegat Bay ecosystem. The draft SEIS also did not have a sufficient or current evaluation of the facility's effects on species that are residents of the area (i.e., the discharge canal and Oyster creek) around the facility, such as hard clam, blue crab, American eel, and herring and the important aquatic habitat.

Nonetheless, this facility's impacts to aquatic ecosystems over the course of its operation have been significant, contrary to the statements in the draft EIS. Start-up and operation of OCNCS reversed the flow of the South Branch of the Forked River away from Barnegat Bay, changed the salinity of the water and destroyed all of the brackish and fresh water habitat in the lower reach of the Forked River and Oyster Creek. Given these and other significant changes to the aquatic environment and the representative species, the facility's impacts cannot be appropriately described as small. Also, since there has not been any recent data collected to support the claims of small or minimal impact, we find these conclusions to be unsupported and incorrect. However, we understand that NRC and AmerGen are currently conducting studies, at the request of the New Jersey Department of Environmental Protection (NJDEP) that are intended to support the New Jersey Pollution Discharge Elimination System (NJPDES) permit application. We wholly support that effort as well as the U.S. Fish and Wildlife Service's recommendation that at least 3 years of biological sampling studies should be performed. We expect that since this information will be new and potentially significant and will be used to inform the decisions on operations and mitigation measures, it will be included in the final SEIS.

Entrainment and impingement:

The EPA's new rules under Section 316(b) of the Clean Water Act (in 40 C.F.R. § 125) require OCNCS to reduce its entrainment of fish and shellfish in early life stages. The draft SEIS discusses the new rules that are in effect, and states that there is an application for renewal of the NJPDES permit. To be in accord with the new 316(b) regulations, the facility has proposed mitigation measures to minimize these impacts and NJDEP has discussed these measures in the draft NJPDES permit and summarized those provisions and findings in the Fact Sheet for the permit.

In the draft NJPDES permit, the NJDEP identified that the preferred alternative for compliance with the 316 (b) rules is a cooling tower. Several cooling tower designs were discussed in the draft SEIS with a linear hybrid mechanical draft design selected as the optimal one for OCNGS. The draft SEIS states that there would be impacts to air quality, predominantly particulate matter in the form of salt, from the operation of a cooling tower. We agree with the draft SEIS that the appropriate control of the PM₁₀ emissions would be a drift eliminator which is considered the Best Available Control Technology (BACT). However, we are very concerned that the draft SEIS states that even with the optimal drift eliminator efficiency the predicted downwind PM₁₀ concentrations would still exceed the ambient air quality standard and the Prevention of Significant Deterioration (PSD) class II increment. With the exception of indicating which model was used, the draft SEIS did not discuss how this conclusion was reached and therefore, we ask that NRC provide to us the information and assumptions that were used for the model, before the release of the final SEIS. We can offer technical assistance to NRC and the applicant to evaluate and further reduce these effects. Nonetheless, we believe that these impacts can be managed.

With this in mind, we support and strongly recommend the selection of a cooling tower as the mitigation measure used to comply with Section 316(b). Such a system would reduce the water use from the Forked River by 70 percent and have a corresponding reduction of entrainment and impingement of aquatic life thereby achieving the 80-95% reduction goals of the regulation. The impacts from thermal discharges and heat shock would also be substantially reduced. Given these benefits to the aquatic ecosystem and the limited effects to air quality, a cooling tower with appropriate air pollution control would be environmentally preferable.

We also recommend that the final SEIS not view entrainment and impingement as mutually exclusive impacts, but instead assess the combined effects of entrainment and impingement, particularly since both impacts substantially affect a discrete number of species.

Heat shock:

Since OCNGS began operation there have been a number of significant fish kills in Oyster Creek and Barnegat Bay due to heat shock. Unfortunately, with the exception of the fish kill documentation and the subsequent monitoring that was required by NJDEP, there have been no recent studies that examine the long-term effects of heated water entering a small, confined system such as the discharge canal and Oyster creek. Also, there is a question as to whether the thermal plume has a greater effect on Barnegat Bay than has been suspected. We strongly recommend that new and current studies should be done for representative species and those results be presented in the final SEIS. The studies should address the less conspicuous ability of heat to preclude the use of affected areas by temperature sensitive species, attract and expose organisms to areas of elevated temperature during spawning periods, and expose eggs and larvae to water temperatures far exceeding naturally ambient levels.

The draft SEIS also contains the conclusion that the potential impacts to fish and shellfish due to heat shock are small. As we have stated before, we believe that these kinds of conclusions are premature, particularly in this instance where current studies to determine the significance of the impact need to be done. The final SEIS should refrain from that terminology until that has been proven to be the case.

Coastal Zone Management:

We are concerned that OCNGS does not have a federal consistency determination demonstrating compliance with New Jersey's Coastal Zone Management Plan. The draft SEIS did not discuss the contents of the consistency determination or the reasons for its rejection by NJDEP other than to say that the application was found to be incomplete. Oyster Creek should have a federal coastal zone management plan consistency determination for inclusion in the final SEIS or at the least in the Record of Decision.

Waste recycling:

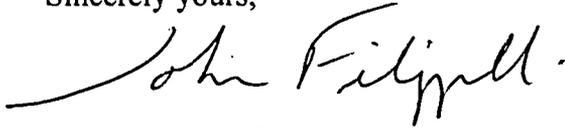
One of the Department of Energy's (DOE) goals in its 2005 budget is to identify opportunities for recycling spent fuel, and a DOE lab is testing a process to make reprocessing spent fuel more viable. However, the draft SEIS did not address the issue of spent uranium fuel recycling in its discussion of the Uranium Fuel Cycle. Recycling spent fuel reduces the need to mine more uranium, which has significantly damaging effects to the environment, and reduces the security risk to the facility. Since there has been significant progress in the area of recycling spent uranium fuel from commercial nuclear power plants, we believe that the final SEIS should address the issue of recycling and the likelihood that Oyster Creek may employ some recycling technology in the future.

The draft SEIS was also silent on the issue and options for pollution prevention (P2). The final SEIS should discuss the internal and external processes and the waste streams that would be candidates for pollution prevention technologies. Some P2 opportunities can range from actions as simple as specific landscaping and reduction of herbicides within OCNGS grounds to the reduction of sanitary or hazardous (non-radioactive) waste generation rates. We encourage consultation with the DOE's Pollution Prevention office to obtain recommendations that would fit with the processes at Oyster Creek.

We appreciate the opportunity to comment on the draft SEIS. We look forward to receiving the information regarding the cooling tower PM₁₀ emissions modeling and discussing those results with you. Upon completion of the final SEIS please send three

copies to this office. My staff is available to discuss these comments and provide assistance in responding to these issues. Please feel free to contact David Carlson, at (212) 637-3502 if you have any questions.

Sincerely yours,

A handwritten signature in cursive script that reads "John Filippelli". The signature is written in black ink and is positioned above the printed name.

John Filippelli, Chief
Strategic Planning and Multi-Media Programs Branch

Attachment (Rating Sheet)

SUMMARY OF RATING DEFINITIONS AND FOLLOW-UP ACTION
Environmental Impact of the Action

LO-Lack of Objections

The EPA review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC-Environmental Concerns

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce the environmental impact. EPA would like to work with the lead agency to reduce these impacts.

EO-Environmental Objections

The EPA review has identified significant environmental impacts that must be avoided to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU-Environmentally Unsatisfactory

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of environmental quality, public health or welfare. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommend for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1-Adequate

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis or data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2-Insufficient Information

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses, or discussion should be included in the final EIS.

Category 3-Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analysis, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the NEPA and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

*From: EPA Manual 1640, "Policy and Procedures for the Review of Federal Actions Impacting the Environment."