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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

1/26/05

70 FR 3744

APR 13 2005

REPLY TO THE ATTENTION OF:

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B-19J

Chief, Rules Review and Directives Branch
U.S. Nuclear Regulatory Commission
Mail Stop T6-D59
Washington, D.C. 20555-0001

Re: Generic Environmental Impact Statement for License Renewal of Nuclear Plant, Supplement 23: Point Beach Nuclear Plant Units 1 and 2, Draft Report (CEQ No. 050021)

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 (U.S. EPA) has reviewed the Draft Generic Environmental Impact Statement for License Renewal of Nuclear Plant, Supplement 23 (SEIS): Point Beach Nuclear Plant Units 1 and 2. According to the draft SEIS, the current operating licenses for Point Beach Units 1 and 2 will expire in October 2010 and March 2013, respectively. The proposed Federal action would renew the current operating licenses for an additional 20 years.

The Nuclear Regulatory Commission (NRC) developed the Generic Environmental Impact Statement (GEIS) to streamline the license renewal process on the premise that environmental impacts of most nuclear power plant license renewals are similar, in most cases. NRC develops facility-specific SEIS documents for individual plants as the facilities apply for license renewal. The U.S. EPA provided comments on the GEIS during its development process in 1992 and 1996.

The Point Beach Nuclear Plant is located in Manitowoc County, Wisconsin, on the shoreline of Lake Michigan. Units 1 and 2 are pressurized light-water reactors. Point Beach Units 1 and 2 each currently produce 1540 megawatts of thermal energy and generate 545 megawatts of electrical power. Each unit is refueled on a 18-month cycle. Plant cooling is provided by a once-through circulating water system that draws and discharges to Lake Michigan. The U.S. EPA participated in a site visit on June 16, 2004 and provided scoping comments dated July 1, 2004.

Based on the review of the Point Beach Nuclear Plant draft SEIS, the U.S. EPA has rated the project and document "Environmental Concerns- insufficient information" (EC-2). This means that the U.S. EPA has identified environmental impacts that should be avoided and suggests corrective measures which may require changes to the preferred alternative or

SISP Review Complete

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Add S. Imboden

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mitigation measures that can reduce impacts. The rating also means that the draft SEIS needs further information to fully assess environmental impacts of the preferred alternative or other alternatives that are reasonably available to the project. Our main concerns include: adequacy and clarity of the radiological impacts and risk estimates, entrainment of fish and shellfish at early life stages, impacts of foreseeable power uprates, and impacts to ground water.

We have enclosed our comments and the U.S. EPA rating system summary. If you have any questions or wish to discuss any aspect of the comments, please contact Anna Miller of my staff at (312) 886-7060.

Sincerely,

A handwritten signature in cursive script, appearing to read "Kenneth A. Westlake".

Kenneth A. Westlake, Chief
NEPA Implementation Section
Office of Science, Ecosystems, and Communities

Enclosures

**U.S. Environmental Protection Agency Comments on
Generic Environmental Impact Statement for License Renewal of Nuclear Plant,
Supplement 23: Point Beach Nuclear Plant Units 1 and 2, Draft Report ,
NUREG-1437**

1. Section 2.1.3, *Cooling and Auxiliary Water Systems*, page 2-4 to 2-6. There is no description of the actual intake or outflow amounts from this system. We recommend including this specific information or explaining the reasons for excluding it.
2. Section 2.2.7, *Radiological Impacts*, pages 2-32 through 2-34. The references to the specific environmental standards need to be included (i.e., complete citations including title of the rule or regulation, along with the basic standard for comparison). All environmental standards that could be used for a comparison should be used, including 40 CFR 61 Radionuclide National Emission Standards for Hazardous Air Pollutants values. This will assist the public in verifying values that are cited in the text and evaluating the radiation values.
3. Section 3.0 *Environmental Impacts of Refurbishment*, page 3-2, Table 3-1. Under the section on Human Health, specific information supporting any assertions that this area needs no further evaluation needs to be presented or more completely cited and described.
4. Section 4.3, *Radiological Impacts of Normal Operations*, pages 4-27, 4-28, Table 4-5, and following paragraphs in the section. The draft supplemental environmental impact statement (SEIS) cites the location of radiological exposure information in the GEIS, but does not include specific values. The final SEIS should provide the specific exposure values, in addition to the GEIS citation. This will be clearer and assist the public in understanding the project's impacts.
5. Section 4.8.3, *Cumulative Radiological Impacts*, page 4-49, Paragraph 1. Information or procedures used to generate values to support the assertions in this section need to be provided in a clearer manner to support the conclusions.
6. Section 5.2.2, *Estimate of Risk*, pages 5-5, 5-6. The draft SEIS states:
"The baseline core damage frequency (CDF) for the purpose of the SAMA evaluation is approximately 3.59×10^{-5} per year. This CDF is based on the risk assessment for internally initiated events. NMC did not include the contribution to risk from external events within the PBNP risk estimates; however, it did account for the potential risk reduction benefits associated with external events by increasing the estimated benefits for internal events by a factor of 2.0."

We recommend evaluating and presenting risk estimates from both internal and external events. In addition, given the draft SEIS statements referenced above, effects of external events should be included in the risk decision considerations, as necessary, to get an accurate portrayal of the risk of the licensing renewal. If the final SEIS does not incorporate external events into risk calculations or risk decisions, it should provide a rationale for using internally-initiated events only.

7. Section 6.1, *The Uranium Fuel Cycle*, page 6-8, under On-Site Spent Fuel. We recommend providing a site-specific evaluation of the volume of spent fuel expected to be generated during the additional period of operation, along with more specific information on site-specific circumstances that may impair or improve the risk values for potential exposures to this spent fuel. In addition, the final SEIS should state whether additional spent fuel storage capacity is already available or will need to be built in the future. If new capacity will be constructed, we recommend the final SEIS discuss what type of storage units are proposed, noting any differences from current operations.
8. Section 7.1, *Decommissioning*, pages 7-2, 7-3, under Radiation Doses. Since the Generic Environmental Impact Statement (GEIS) is based on a forty-year licensing period, an extension of another twenty years would have an impact that needs to be quantified and reported. This information should be included specifically in the final SEIS as part of the risk that would be associated with the license extension. The specific methodology needs to be provided and fully explained.
9. Section 8.1, *No-Action Alternative*, page 8-5, under Human Health. This section refers in general terms to reductions in the amount of radioactive material; we recommend including actual values, which will assist the public in comparing alternatives.
10. Section 8.2.1.1, *Closed-Cycle Cooling System*, page 8-17, under the bullet Uranium and thorium. A better comparison or quantification of the relative concentrations of the uranium and thorium to the background levels need to be provided. As is, this presentation is confusing.
11. Section 8.2.1.1, *Closed-Cycle Cooling System*, page 8-19, under Human Health. We recommend the draft SEIS either cite specific dose estimates for this alternative or provide estimates that use currently available data or that can be logically extrapolated from currently available information. We further recommend evaluating any dose estimates that fall in the risk range of 10^{-6} to 10^{-4} or greater for potential public health risk impacts and noting specific doses that are subject to regulatory requirements. This information would be useful to the public in comparing alternatives.
12. Section 8.2.3.1, *Closed -Cycle Cooling System*, page 8-40, under Waste. Waste impacts need to be specified rather than merely referenced to provide a clearer understanding of the risk determination made in this section of the document.
13. Section 8.2.3.1, *Closed -Cycle Cooling System*, page 8-40, under Human Health. Human-health impacts need to be specified rather than merely referenced to provide a clearer understanding of the risk determination in this section of the document.
14. The U.S. EPA's new rules under Section 316(b) of the Clean Water Act (in 40 C.F.R. § 125) require Point Beach Nuclear Plant to reduce its entrainment of fish and shellfish in early life stages. Although the draft SEIS identifies current measures already in place to

mitigate for entrainment (such as intake location and a high-frequency fish deterrent system), it is not clear that these measures will satisfy the rule's requirements. We recommend the final SEIS not include the following statement: "The staff concludes that the potential impacts of entrainment of fish and shellfish in the early life stages into the cooling water intake system are SMALL, and further mitigation measures are not warranted." This conclusion is premature pending the results of the study required by the Wisconsin Department of Natural Resources (WDNR) to comply with the new regulations. The WDNR will use the results of the study to determine whether other measures are necessary and need to be reflected in the plant's next discharge permit. Instead, the final SEIS could discuss how the current entrainment mitigation measures may function as a compliance alternative under the rule and achieve the targeted performance standard for the facility.

15. The final SEIS should discuss planned or potential power uprates at the Point Beach Nuclear Plant and estimate resulting increases in radiological emissions, spent fuel, and other emissions. Although U.S. NRC's regulations (10 C.F.R §. 51.53(c)(2)) state that an applicant's environmental report need not discuss the demand for power, we consider power uprates to be reasonably foreseeable actions that contribute to a cumulative radiological impact, under 40 C.F.R § 1508.7, and therefore should be discussed in U.S. NRC's final SEIS.
16. As part of its July 1, 2004 scoping comments, the U.S. EPA recommended the draft SEIS describe site hydrogeology, on-site drinking water wells, drinking water quality, and treatment of the drinking water. The U.S. EPA also recommended that NRC evaluate the potential for ground water contamination under the license renewal period, especially with regard to the abandoned settling pond. The draft SEIS responded to these comments by stating that the water issues were found to be Category 1 issues (no additional site-specific analysis required) during development of the Generic Environmental Impact Statement (GEIS). It is not clear how this issue can be a Category 1 issue, because it is site-specific; that is, it does not seem likely that other plants have the same groundwater regime and configuration of drinking water wells and an abandoned retention pond on site (see the first criteria for Category 1 determination). Chapter 4.5 Groundwater Use and Quality states that no new and significant information is found; however, the section does not provide information about groundwater at the site. Without hydrological information or ground water quality information, the SEIS does not successfully describe the impact of extended plant operation, including management of the abandoned settling pond, on groundwater and drinking water. Therefore, we recommend that the SEIS include an evaluation of ground water conditions and potential impacts of extended plant operation as part of the license renewal SEIS for this site.

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 impacts. 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 in order 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 public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS state, this proposal will be recommended for referral to the CEQ.

Adequacy of the Impact Statement

Category 1-Adequate

The 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 collecting 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 the EPA to fully assess the 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 analyses, 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 the Federal Actions Impacting the Environment