



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5

77 WEST JACKSON BOULEVARD  
CHICAGO, IL 60604-3590

MAY 03 2006

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REPLY TO THE ATTENTION OF

B-19J

2006 MAY 16 AM 9:33

RULES AND DIRECTIVES  
BRANCH  
USNRDC

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 26: Monticello Nuclear Generating Plant (CEQ No. 20060034)**

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 26: Monticello Nuclear Generating Plant. According to this Draft Supplemental Environmental Impact Statement (SEIS), the plant's current operating license expires on September 8, 2010. The proposed Federal action would renew the current operating licenses for an additional 20 years.

The Monticello Nuclear Generating Plant is located in southeastern Minnesota on the bank of the Mississippi River, 30 miles northwest of Minneapolis. Monticello is a single-unit plant that currently generates approximately 1775 megawatts thermal, as a result of an authorized power uprate in 1998. The plant uses Mississippi River water for condenser cooling and can operate as an open-cycle plant, returning water to the river, or a closed-cycle plant, using two cooling towers. The cooling towers are normally operated May through September, when the Mississippi River is generally above 68° F, or during periods of low flow. This system is in effect to meet surface water appropriations limits and thermal discharge limits.

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. NRC develops facility-specific supplemental environmental impact statement documents as the facilities apply for license renewal. The U.S. EPA provided comments on the GEIS during its development process in 1992 and 1996. In several reviews of facility-specific documents, U.S. EPA's Region 5 office has commented that these documents do not provide site-specific information on impacts or use site-specific data for air and radiation and exposure calculations. Recently, representatives of NRC and U.S. EPA's Office of Federal Activities discussed the NRC's GEIS approach. NRC reiterated that it will continue to use the GEIS approach, except in cases where NRC is aware that site-specific data indicates an impact at an individual plant site or when specific information documenting potential impacts is provided by other Federal or State agencies or other reviewers. While we recognize the GEIS approach, we will continue to note

SEIS Review Complete

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areas where we believe site-specific analysis is warranted by changes in plant circumstances or by additions to existing facilities.

Based on the review of the Monticello Nuclear Generating 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 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, unaddressed impacts of foreseeable power uprates, and abnormal effluent releases.

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,



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

Enclosure

**U.S. Environmental Protection Agency Comments on  
Generic Environmental Impact Statement for License Renewal of Nuclear Plant,  
Supplement 26: Monticello Nuclear Generating Plant, Draft Report,  
NUREG-1437**

1. We are concerned that the Draft SEIS does not discuss potential power uprates at Monticello or estimate resulting increases in radiological emissions, spent fuel, and other emissions. We recognize that NRC's regulations (10 C.F.R Section 51.53(c)(2)) state that an applicant's environmental report need not discuss the demand for power, and we are not asking for an assessment of need. Separate from purpose and need, we consider power uprates to be reasonably foreseeable actions that contribute to a cumulative radiological impact, under 40 C.F.R Section 1508.7, and therefore should be discussed in NRC's final SEIS.
  
2. We are concerned about the abnormal releases mentioned in the Draft SEIS. The Draft SEIS references abnormal releases of fission and activation products and tritium during the period from 2001 to 2004 (page 2-9). This is the only place these releases are discussed in the document, and their mention raises questions that are not addressed. Information on the abnormal releases is unclear. For example, it is not clear whether there was one release event or more, or where the event occurred. In addition, while the concentration of the release(s) is given, readers are referred elsewhere in the document and regulations to determine for themselves whether this is within effluent limits or how this impacts the public or the environment. This section implies that occasional abnormal releases are expected during the renewal period. The Final SEIS needs to explain the past and future expected frequency of these releases. Finally, the Draft SEIS also claims that if future abnormal releases occur, they will be below design dose objectives. It is not clear how this statement could be supported for hypothetical incidents. We also note that abnormal releases are not discussed in sections on radiological impacts or water quality, presuming that these abnormal releases were issued to a water body.

With the GEIS approach, NRC generally does not include an analysis of impacts where staff reviewers have not found new or significant information. We believe that past abnormal releases, and the potential for future abnormal releases, qualify as new and significant information. We therefore recommend that the subsequent Final SEIS discuss the abnormal releases fully and in context to the environmental impacts analysis. We recommend including a discussion of past or potential future releases and steps to prevent releases. Specifically, the Final SEIS needs to explain the number of releases and where releases occurred (i.e., describe whether the release was effluent into the Mississippi River, an on-site spill, or some other release). It should clarify how abnormal releases are different from liquid effluent, if this is the case. We recommend that where concentrations are mentioned, the document place these concentrations in context by giving effluent limits, dose limits, or other relevant measurements. We also recommend that abnormal releases be discussed in *Chapter 4.0 Environmental Impacts of Operation*.

3. We are aware that there was a proposal before the Minnesota Environmental Quality Board for dry cask storage facility for spent nuclear fuel at Monticello. We note that the Environmental Impacts section of the Draft SEIS does not discuss the potential impacts associated with adding this type of spent fuel storage facility to the existing operation. We

suggest that a new dry cask storage facility constitutes a new set of circumstances for this site and should be evaluated in greater detail for additional impacts to the environment.

4. *Section 2.1.4.2, Gaseous Waste Processing Systems and Effluent Controls*, Page 2-10, first paragraph. Citations of dose values should also include the dose value, in addition to just the citation, to make the values clearer.
5. *Section 2.1.4.2, Gaseous Waste Processing Systems and Effluent Controls*, Page 2-10, third paragraph. The total curie values provided do not add up to the total curie emissions stated. Please correct or clarify this discrepancy.
6. *Section 2.2.7, Radiological Impacts*, pages 2-29, 2-30, last paragraph. The references to the environmental standards need to be complete citations including title of the rule or regulation, along with the basic standard for comparison provided consistently. All of the environmental standard 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 reduce the time needed to look up these citations and verify values that are cited in the text.
7. *Section 4.3, Radiological Impacts of Normal Operations*, page 4-27, 4-28, Table 4-7, and paragraph 1 On 4-28. The specific values for exposure need to be provided in addition to the complete citation of the location of this information. This will help to provide the information better and be less confusing that a citation only, that then must be referred to allow verification of the standard being cited.
8. *Section 5.2.2, Estimate of Risk*, page 5-6. The Draft SEIS states that the baseline core damage frequency (CDF) for the purpose of the severe accident mitigation alternatives (SAMA) is approximately  $4.5 \times 10^{-5}$  per year. This CDF is based on the risk assessment for internally-initiated events. The Draft SEIS does not include the contribution to risk from external events within the Monticello risk estimates; however it does account for the potential risk reduction benefits associated with external events by increasing the estimated benefits for internal events by a factor of two. The estimates for risks from both areas should be evaluated and presented along with a rationale for not basing risk decisions on the external events or including them in the considerations as necessary to get an accurate portrayal of the risk of the licensing renewal.
9. *Section 6.1, The Uranium Fuel Cycle*, page 6-3. Under the bullet point for Off-site radiological impacts (individual effects from other than disposal of spent fuel and high level waste disposal), no consideration appears to be given to the potential long term storage of the spent fuel and high level waste materials on site until such time as a permanent facility is finally licensed and begins to accept these materials for disposal. A reference to other sections that this evaluation may have been included in should be provided here as well as in other sections, or if this evaluation has not been adequately conducted, the issue needs to be considered and an appropriate evaluation conducted.
10. *Section 6.1, The Uranium Fuel Cycle*, page 6-8, under the bullet point for On-Site Spent Fuel. A more thorough evaluation for the volume of spent fuel expected to be generated during the additional licensed time needs to be provided along with more specific

information as to site specific circumstances that may impair or improve the risk values for potential exposures to this spent fuel storage.

11. *Section 7.1, Decommissioning*, page 7-2, under bullet point Radiation Doses. As the GEIS is based on a forty-year licensing period, an extension of this period would have an impact that we suggest needs to be quantified and reported. We recommend including this information in the Final SEIS as part of the risk that would be associated with the license extension and providing the specific methodology used to estimate risk.
12. *Section 8.1, No-Action Alternative*, page 8-4, 8-5, under the bullet point Human Health. The actual value representing the cited percent value should be specifically provided in addition to the citation. This will help to reduce unnecessary additional research, except for value verifications, and avoid potential misunderstandings or confusion about the actual value(s).
13. *Section 8.2.1, Coal-Fired Generation*, page 8-16, under bullet point Human Health. Any dose estimate that would have the potential to fall is the risk range of  $10^{-6}$  to  $10^{-4}$  or greater needs to be specifically evaluated for potential regulatory requirements or risk impacts to the public health. This should be estimated conservatively using the data that is currently available or that can be logically extrapolated from currently available information.
14. *Section 8.2.3, Coal Gasification*, page 8-32, under bullet point Waste. We recommend specifically describing waste impacts, rather than making reference to them, to provide a clearer understanding of the risk determination made in this section of the document.
15. *Section 8.2.3, Coal Gasification*, page 8-32, 8-33, under bullet point Human Health. We recommend specifically describing human-health impacts, rather than making reference to them, to provide a clearer understanding of the risk determination made in this section of the document.
16. *Section 8.2.4, Nuclear Power Generation*, page 8-36. We recommend specifically describing the differences in potential risk associated with changes in power production, rather than making reference to them, to provide a clearer understanding of the risk determination made in this section of the document.
17. *Section 8.2.4.1, Closed -Cycle Cooling System*, page 8-40, under bullet point Waste. We recommend specifically describing waste impacts, rather than making reference to them, to provide a clearer understanding of the risk determination made in this section of the document.
18. *Section 8.2.4.1, Closed -Cycle Cooling System*, page 8-40, under bullet point 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.