

August 17, 1995

Mr. M. S. Tuckman  
Senior Vice President  
Nuclear Generation  
Duke Power Company  
P. O. Box 1006  
Charlotte, NC 28201

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SUBJECT: ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT,  
MCGUIRE NUCLEAR STATION, UNIT NOS. 1 AND 2 (TAC NOS. M89744 AND  
M89745)

Dear Mr. Tuckman:

Enclosed for your information is a copy of an "Environmental Assessment and Finding of No Significant Impact." This notice relates to your application dated June 13, 1994, as supplemented by letters dated August 15, 1994, March 23 and April 18, 1995. The amendments revise the Technical Specifications (TS) to (a) allow the maximum enrichment for fuel stored in the fuel pools to increase from a nominal value of 4.0 to 5.0 weight percent Uranium-235, (b) establish new loading patterns for new and irradiated fuel in the spent fuel pool to accommodate this increase, (c) add a TS to establish a limit for boron concentration for all modes of operation, (d) add BASES to correspond to the TS that were added, (e) add TS to reflect limits for fuel storage criticality analysis, and (f) reformat the TS to bring them more in line with the standard format in the NRC report NUREG-1431, "Standard Technical Specifications Westinghouse Plants."

This notice is being forwarded to the Office of the Federal Register for publication.

Sincerely,

Original signed by:  
Louis Wheeler for:

Herbert N. Berkow, Director  
Project Directorate II-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Docket Nos. 50-369 and 50-370

Enclosure: Environmental Assessment

cc w/encl: See next page

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

August 17, 1995

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Senior Vice President  
Nuclear Generation  
Duke Power Company  
P. O. Box 1006  
Charlotte, NC 28201

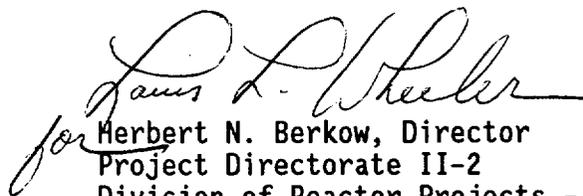
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for Herbert N. Berkow, Director  
Project Directorate II-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Docket Nos. 50-369 and 50-370

Enclosure: Environmental Assessment

cc w/encl: See next page

**Duke Power Company**

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UNITED STATES NUCLEAR REGULATORY COMMISSIONDUKE POWER COMPANY, ET AL.DOCKET NOS. 50-369 and 50-370MCGUIRE NUCLEAR STATION, UNIT NOS. 1 and 2ENVIRONMENTAL ASSESSMENT AND FINDING OFNO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of amendments to Facility Operating License Nos. NPF-9 and NPF-17, issued to Duke Power Company (the licensee), for operation of the McGuire Nuclear Station, Units 1 and 2, located in Mecklenburg County, North Carolina.

ENVIRONMENTAL ASSESSMENTIdentification of the Proposed Action:

The proposed action would change the Technical Specifications (TS) to (a) allow the maximum enrichment for fuel stored in the fuel pools to increase from a nominal value of 4.0 to 5.0 weight percent Uranium-235, (b) establish new loading patterns for new and irradiated fuel in the spent fuel pool to accommodate this increase, (c) add a TS to establish a limit for boron concentration for all modes of operation, (d) add BASES to correspond to the TS that were added, (e) add TS to reflect limits for fuel storage criticality analysis, and (f) reformat the TS to bring them more in line with the standard format in the NRC report NUREG-1431, "Standard Technical Specifications Westinghouse Plants."

The proposed action is in accordance with the licensee's application for amendment dated June 13, 1994, as supplemented by letters dated August 15, 1994, March 23 and April 18, 1995.

The Need for the Proposed Action:

The proposed action is needed so that the licensee can use higher fuel enrichment to provide additional flexibility in the licensee's reload design efforts and to increase the efficiency of fuel storage cell use in the spent fuel pools.

Environmental Impacts of the Proposed Action:

The Commission has completed its evaluation of the proposed revisions to the TS. The proposed revisions would permit storage of fuel enriched to a nominal 5.0 weight percent Uranium-235. The safety considerations associated with storing new and spent fuel of a higher enrichment have been evaluated by the NRC staff. The staff has concluded that such changes would not adversely affect plant safety. The proposed changes have no adverse effect on the probability of any accident. No changes are being made in the types or amounts of any radiological effluents that may be released offsite. There is no significant increase in the allowable individual or cumulative occupational radiation exposure.

The environmental impacts of transportation resulting from the use of higher enrichment fuel and extended irradiation were published and discussed in the staff assessment entitled, "NRC Assessment of the Environmental Effects of Transportation Resulting from Extended Fuel Enrichment and Irradiation," dated July 7, 1988, and published in the Federal Register (53 FR 30355) on August 11, 1988, as corrected on August 24, 1988 (53 FR 32322), in connection with Shearon Harris Nuclear Power Plant, Unit 1: Environmental Assessment and Finding of No Significant Impact. As indicated therein, the environmental

cost contribution of the proposed increase in the fuel enrichment and irradiation limits are either unchanged or may, in fact, be reduced from those summarized in Table S-4 as set forth in 10 CFR 51.52(c). The results of the Shearon Harris assessment are applicable to McGuire, Units 1 and 2. Accordingly, the Commission concludes that there are no significant radiological environmental impacts associated with the proposed amendment.

With regard to potential nonradiological impacts, the proposed action involves features located entirely within the restricted area as defined in 10 CFR Part 20. It does not affect nonradiological plant effluents and has no other environmental impact. Accordingly, the Commission concludes that there are no significant nonradiological environmental impacts associated with the proposed action.

Alternatives to the Proposed Action:

Since the Commission has concluded there is no measurable environmental impact associated with the proposed exemption, any alternatives with equal or greater environmental impact need not be evaluated. The principal alternative to this action would be to deny the request for exemption. Such action would not reduce the environmental impacts of plant operations.

Alternative Use of Resources:

This action does not involve the use of resources not previously considered in the "Final Environmental Statement Related to the Operation of McGuire Nuclear Station Units 1 and 2," dated April 1976 and its addendum dated January 1981.

Agencies and Persons Consulted:

In accordance with its stated policy, on August 17, 1995, the NRC staff consulted with the North Carolina State official, Mr. Dayne H. Brown, Director

Department of Environmental, Health and Natural Resources, Division of Radiation Protection, regarding the environmental impact of the proposed action. The State official had no comments.

FINDING OF NO SIGNIFICANT IMPACT

Based upon the environmental assessment, the Commission concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the Commission has determined not to prepare an environmental impact statement for the proposed exemption.

For further details with respect to this action, see the licensee's letter dated June 13, 1994, as supplemented by letters dated August 15, 1994, March 23 and April 18, 1995, which are available for public inspection at the Commission's Public Document Room, The Gelman Building, 2120 L Street, NW., Washington, DC, and at the local public document room located at the Atkins Library, University of North Carolina, Charlotte (UNCC), North Carolina.

Dated at Rockville, Maryland, this 17th day of August 1995.

FOR THE NUCLEAR REGULATORY COMMISSION

  
Louis L. Wheeler, Acting Director  
Project Directorate II-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation