

Docket Nos.: 50-369  
and 50-370

05 AUG 1986

Mr. H. B. Tucker, Vice President  
Nuclear Production Department  
Duke Power Company  
422 South Church Street  
Charlotte, North Carolina 28242

Dear Mr. Tucker:

Enclosed for your information is a "Notice of Consideration of Issuance of Amendment to Facility Operating License and Proposed No Significant Hazards Consideration Determination and Opportunity for Hearing" related to your supplemental request on the McGuire Unit 1 Cycle 4 reload concerning substitution of solid stainless steel rods and open water channels for certain fuel rods at "baffle jetting" locations.

The notice has been forwarded to the Office of the Federal Register for publication.

Sincerely,

151

Darl Hood, Project Manager  
PWR Project Directorate #4  
Division of PWR Licensing-A

Enclosure: As stated

cc: w/enclosure  
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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

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and 50-370

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Sincerely,

A handwritten signature in dark ink, appearing to read "Darl Hood". The signature is stylized with a large "D" and "H". Below the signature, the letters "ARL" are handwritten.

Darl Hood, Project Manager  
PWR Project Directorate #4  
Division of PWR Licensing-A

Enclosure: As stated

cc: w/enclosure  
See next page

Mr. H. B. Tucker  
Duke Power Company

McGuire Nuclear Station

cc:

Mr. A. Carr  
Duke Power Company  
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422 South Church Street  
Charlotte, North Carolina 28242

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Nuclear Production Department  
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Charlotte, North Carolina 28242

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Senior Resident Inspector  
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Regional Administrator, Region II  
U.S. Nuclear Regulatory Commission,  
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Atlanta, Georgia 30323

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Operating Plants Projects  
Regional Manager  
Westinghouse Electric Corporation - R&D 701  
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Pittsburgh, Pennsylvania 15230

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Department of Environmental Health  
Mecklenburg County  
1200 Blythe Boulevard  
Charlotte, North Carolina 28203

County Manager of Mecklenburg County  
720 East Fourth Street  
Charlotte, North Carolina 28202

Chairman, North Carolina Utilities  
Commission  
Dobbs Building  
430 North Salisbury Street  
Raleigh, North Carolina 27602

Mr. Dayne H. Brown, Chief  
Radiation Protection Branch  
Division of Facility Services  
Department of Human Resources  
P.O. Box 12200  
Raleigh, North Carolina 27605

DISTRIBUTION:  
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MDuncan  
DHood

August 4, 1986

DOCKET NO. 8. 50-369  
50-370

MEMORANDUM FOR: Rules and Procedures Branch  
Division of Rules and Records  
Office of Administration

FROM: Office of Nuclear Reactor Regulation

SUBJECT: McGuire Nuclear Station, Units 1 and 2 (Duke Power Company)

One signed original of the *Federal Register* Notice identified below is enclosed for your transmittal to the Office of the Federal Register for publication. Additional conformed copies ( 5 ) of the Notice are enclosed for your use.

- ☐ Notice of Receipt of Application for Construction Permit(s) and Operating License(s).
- ☐ Notice of Receipt of Partial Application for Construction Permit(s) and Facility License(s); Time for Submission of Views on Antitrust Matters.
- ☒ Notice of Consideration of Issuance of Amendment to Facility Operating License.
- ☐ Notice of Receipt of Application for Facility License(s); Notice of Availability of Applicant's Environmental Report; and Notice of Consideration of Issuance of Facility License(s) and Notice of Opportunity for Hearing.
- ☐ Notice of Availability of NRC Draft/Final Environmental Statement.
- ☐ Notice of Limited Work Authorization.
- ☐ Notice of Availability of Safety Evaluation Report.
- ☐ Notice of Issuance of Construction Permit(s).
- ☐ Notice of Issuance of Facility Operating License(s) or Amendment(s).
- ☐ Order.
- ☐ Exemption.
- ☐ Notice of Granting Exemption.
- ☐ Environmental Assessment.
- ☐ Notice of Preparation of Environmental Assessment.
- ☐ Other: \_\_\_\_\_

Office of Nuclear Reactor Regulation

NOTE: Please insert date (15 days from publication) on page 5, 3rd paragraph.

Enclosure:  
As stated

Contact: Marilee Duncan  
Phone: 28928

OFFICE	PWR-A:PD#4						
SURNAME	MDuncan						
DATE	8/4/86						

UNITED STATES NUCLEAR REGULATORY COMMISSIONDUKE POWER COMPANYDOCKET NOS. 50-369 AND 50-370NOTICE OF CONSIDERATION OF ISSUANCE OF AMENDMENTS TO  
FACILITY OPERATING LICENSES AND PROPOSED NO SIGNIFICANT HAZARDS  
CONSIDERATION DETERMINATION

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 for operation of the McGuire Nuclear Station, Units 1 and 2, located in Mecklenburg County, North Carolina.

By previous notice 51 FR 23484 on June 27, 1986, the Commission discussed proposed amendments which would revise the Technical Specifications (TS) to reflect the third of several refueling stages involved in the continuing transition to the use of optimized fuel assemblies in McGuire Unit 1. The TS changes would provide for plant operation consistent with the design and safety evaluation conclusions in the licensee's McGuire Unit 1 Cycle 4 Reload Safety Evaluation (RSE) which accompanied the licensee's amendment request of May 15, 1986. The notice also described (1) changes in axial flux difference limits as a function of rated thermal power which are proposed for McGuire Unit 1, and (2) changes associated with a more positive moderator temperature coefficient proposed for both McGuire Unit 1 and Unit 2. Additional information in support of the May 15, 1986, request has subsequently been provided by the licensee by letters dated May 26, June 6 and June 30, 1986. These supplemental letters do not alter the proposed changes as originally requested. However, by letter dated August 4, 1986, the licensee requested additional TS changes for TS 5.3.1, "Fuel Assemblies", which were not included in previous notice

51 FR 23484. These additional proposed changes are the subject of this current notice.

The additional changes would allow use of solid stainless steel (SS) or Zircaloy rods (i.e., fillers) and the use of open water channels (i.e., vacancies) within a fuel assembly. Specifically, the existing requirement of TS 5.3.1 that the fuel assemblies contain "264 fuel rods clad with Zircaloy-4" would be changed to "264 fuel rod locations. Fuel rod locations may at any time during plant life have, as determined by cycle-specific reload analyses, any combination of (1) fuel rods clad with Zircaloy-4, (2) filler rods fabricated from Zircaloy-4 or stainless steel, or (3) vacancies." The additional changes would also delete an obsolete sentence from TS 5.3.1 which states that "The initial core loading shall have a maximum enrichment of 3.15 weight percent U-235."

Before issuance of the proposed license amendments, the Commission will have made findings required by the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations.

Use of solid SS or Zircaloy-4 fillers and vacancies is proposed in place of fuel rods in fuel assemblies that are susceptible to problems such as "baffle jetting." For Unit 1 Cycle 4, the licensee's submittal of August 4, 1986 provided a revised Reload Safety Evaluation (RSE) to reflect core changes in which one fuel assembly will have eight fuel rods replaced by eight solid SS fillers, and a second fuel assembly will have eight fuel rods replaced by six solid SS fillers and two vacancies. The SS fillers and vacancies will be located at the periphery of the core (so that any water jetting across the core baffle would impinge on the SS rods and not lead to fuel rod damage) and, therefore, would have little or no effect on core performance. The two fuel

assemblies will meet essentially the same design requirements, satisfy the same design criteria as the original fuel assemblies, and the use of such assemblies will not result in a change to existing safety criteria and design limits. The revised RSE continues to use analytical methods previously approved by the Commission. For subsequent Unit 1 or Unit 2 cycles, cycle-specific reload analyses will continue to be performed in accordance with the Commission's regulations, as reflected in the proposed change.

The Commission has made a proposed determination that the amendment request involves no significant hazards consideration. Under the Commission's regulations in 10 CFR 50.92, this means that operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety.

The Commission has provided guidance for the application of these criteria by providing examples of amendments that are considered not likely to involve significant hazards considerations (51 FR 7744). One of these, example (iii), involving no significant hazards considerations is "...a change resulting from a nuclear reactor core reloading, if no fuel assemblies significantly different from those found previously acceptable to the NRC for a previous core at the facility in question are involved. This assumes that no significant changes are made to the acceptance criteria for the technical specifications, that the analytical methods used to demonstrate conformance with the technical specifications and regulations are not significantly changed, and the NRC has

previously found such methods acceptable." Based upon our review of the licensee's August 1986 letter and its revised RSE as discussed above, we find that the proposed changes to TS 5.3.1 allowing use of solid SS and Zircaloy-4 rods and vacancies in place of fuel rods match the quoted example.

Another example of actions not likely to involve significant hazards considerations is (i), "a purely administrative change to technical specifications." The proposed change to delete the obsolete sentence in existing TS 5.3.1, which applied only to the initial fuel cycles, matches this example.

Therefore, based on these considerations and the examples given above, the Commission has made a proposed determination that the amendment request involves no significant hazards consideration.

The Commission has determined that failure to act in a timely way would result in extending the current refueling shutdown for McGuire Unit 1. The licensee's scheduled date for completing the current refueling outage and achieving criticality is August 26, 1986. Therefore, the Commission has insufficient time to issue its usual 30-day notice of the proposed action for public comment.

Normally, the Commission will not issue the amendment until the expiration of the notice period. However, should circumstances change during the notice period, the Commission may issue the license amendments before the expiration of the notice period, provided that its final determination is that the amendments involve no significant hazards consideration. The final determination will consider all public and State comments received. Should the Commission take this action, it will publish a notice of issuance and provide the opportunity for a hearing after issuance. The Commission expects that the need to take this action will occur very infrequently.



If the proposed determination becomes final, an opportunity for a hearing will be published in the Federal Register at a later date and any hearing request will not delay the effective date of the amendments.

If the Commission decides in its final determination that the amendments do involve a significant hazards consideration, a notice of opportunity for a prior hearing will be published in the Federal Register and, if a hearing is granted, it will be held before any amendment is issued.

The Commission is seeking public comments on this proposed determination of no significant hazards consideration. Comments on the proposed determination may be telephoned to B.J. Youngblood, Director of PWR Project Directorate No. 4, by collect call to 301-492-8060 or submitted in writing to the Rules and Procedures Branch, Division of Rules and Records, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555 and should cite the publication date and page number of this Federal Register notice. All comments received by \_\_\_\_\_ will be considered in reaching a final determination. A copy of the application may be examined at the Commission's Public Document Room, 1717 H. Street, N.W., Washington, D.C. and at the Atkins Library, University of North Carolina, Charlotte (UNCC Section) North Carolina 28233.

Dated at Bethesda, Maryland this 4th day of August 1986.

FOR THE NUCLEAR REGULATORY COMMISSION



Dave Wigginton, Acting Director  
PWR Project Directorate #4  
Division of PWR Licensing-A

05 AUG 1986

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Dated at Bethesda, Maryland this 4th day of August 1986.

FOR THE NUCLEAR REGULATORY COMMISSION

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Dave Wigginton, Acting Director  
PWR Project Directorate #4  
Division of PWR Licensing-A

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