

November 8, 1994

Mr. J. W. Hampton
Vice President, Oconee Site
Duke Power Company
P. O. Box 1439
Seneca, SC 27679

Dear Mr. Hampton:

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION ON ISI PROGRAM PLAN - OCONEE
NUCLEAR STATION, UNIT NO. 1 (TAC NO. M88484)

By letter dated December 20, 1993, Duke Power Company submitted the Oconee Unit 1 Third 10-Year Interval Inservice Inspection Program Plan and the associated requests for relief from the Section XI requirements of the ASME B&PV Code. The NRC staff, with assistance from its contractor, Idaho Engineering Laboratory, is reviewing and evaluating the Plan and associated relief requests.

Additional information is requested, as identified in the enclosure, to enable the staff to complete its review. We are requesting that a response be provided within 60 days of the date of this letter. In addition, to expedite the review process, we suggest that a copy of your response be transmitted to the NRC staff's contractor at the following address:

Mr. Boyd W. Brown
EG&G Idaho, Inc.
INEL Research Center
2151 North Boulevard
P. O. Box 1625
Idaho Falls, Idaho 83415-2209

This requirement affects fewer than ten respondents, and therefore, it is not subject to the Office of Management and Budget review under P.L. 96-511.

Sincerely,

/s/

Leonard A. Wiens, Project Manager
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

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Docket No. 50-269

Enclosure:
Request for Additional
Information

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

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Sincerely,

A handwritten signature in dark ink, appearing to read "L. A. Wiens".

Leonard A. Wiens, Project Manager
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-269

Enclosure:
Request for Additional
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cc w/enclosure: See next page

Mr. J. W. Hampton
Duke Power Company

Oconee Nuclear Station

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Request for Additional Information - Third 10-Year Interval Inservice
Inspection Program Plan

1. Scope/Status of Review

Throughout the service life of a water-cooled nuclear power facility, 10 CFR 50.55a(g)(4) requires that components (including supports) that are classified as American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code Class 1, Class 2, and Class 3 meet the requirements, except design and access provisions and preservice examination requirements, set forth in the ASME Code Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components", to the extent practical within the limitations of design, geometry, and materials of construction of the components. This section of the regulations also requires that inservice examinations of components and system pressure tests conducted during successive 120-month inspection intervals shall comply with the requirements in the latest edition and addenda of the Code incorporated by reference in 10 CFR 50.55a(b) on the date 12 months prior to the start of the successive 120-month interval, subject to the limitations and modifications listed therein. The components (including supports) may meet requirements set forth in subsequent editions and addenda of the Code that are incorporated by reference in 10 CFR 50.55a(b) subject to the limitations and modifications listed therein and subject to Nuclear Regulatory Commission (NRC) approval. The licensee, Duke Power Company, has prepared the *Oconee Nuclear Station, Unit 1, Inservice Inspection (ISI) Plan*, Rev. 0, to meet the requirements of the 1989 Edition of Section XI of the ASME Code.

As required by 10 CFR 50.55(g)(5), if the licensee determines that certain Code examination requirements are impractical and requests relief, the licensee shall submit information to the Nuclear Regulatory Commission (NRC) to support that determination.

The staff has reviewed the available information in the *Oconee Nuclear Station, Unit 1, Third 10-Year Interval ISI Plan*, Revision 0, submitted December 20, 1993, and the requests for relief from the ASME Code Section XI requirements that the licensee has determined to be impractical.

2. Additional Information Required

Based on the above review, the staff has concluded that the following information and/or clarification is required in order to complete the review of the ISI Program Plan:

- A. Provide isometric and/or component drawings showing the Code Class 1 and 2 piping welds, components, and supports that Section XI of the ASME Code requires be examined during the third 10-year inspection interval. The requested drawings, along with the "Listing and Schedule of Examinations," provided in the December 20, 1993, submittal, will permit the staff to determine if the extent of ISI examinations meets the applicable Code requirements.
- B. Paragraph 10 CFR 50.55a(b)(2)(iv) requires that appropriate ASME Code Class 2 piping welds in the Residual Heat Removal (RHR), Emergency Core Cooling (ECC), and Containment Heat Removal (CHR) systems be examined. These systems are critical to the safe shutdown of the plant and should not be completely excluded from inservice volumetric examination based on wall thickness. It was noted that the ISI Plan for the third 10-year interval contains surface examinations of 7.5% of Class 2 longitudinal welds and 5% of Class 2 circumferential welds. Additionally, it appears that portions of RHR, ECC, and CHR systems have been excluded from volumetric examination based on wall

thickness. Considering the safety significance of the RHR, ECC, and CHR systems, describe your plans for performing volumetric examination on a sample of thin-walled piping welds to assure the continued integrity of these systems.

- C. For Code Class 1 integral attachment welds to piping, pumps, and valves, the Code does not require examinations for the third and fourth interval when implementing Inspection Program B. Examination of integral attachments in Code Class 2 and 3 systems is required in third and fourth interval. ASME Code Case N-509 (approved November 25, 1992 by ASME) provides for continued examination of Class 1 integral attachments for the life of the plant as well as readjustments in the sample inspection requirements for Code Class 2 and 3. Describe your plans with respect to examination of Code Class 1 integral attachment welds during the third inspection interval or implementation of this Code Case.
- D. Address the degree of compliance with augmented examinations that have been established by the NRC when added assurance of structural reliability is deemed necessary. Examples of documents that address augmented examinations based on licensee commitments are listed below.
- (1) Branch Technical Position MEB 3-1, *High Energy Fluid Systems, Protection Against Postulated Piping Failures in Fluid Systems Outside Containment.*
 - (2) Regarding Regulatory Guide (RG) 1.150, *Ultrasonic Testing of Reactor Vessel Welds During Preservice and Inservice Examinations;*
 - (3) Regarding Regulatory Guide 1.14, *Reactor Coolant Pump Fl/wheel Integrity.*
- E. The Code of Federal Regulations, Part 10, 50.55a(g)(6)(ii)(A), requires that all licensees must augment their reactor vessel examinations by implementing once, during the inservice inspection

interval in effect on September 8, 1992, the examination requirements for reactor vessel shell welds specified in Item B1.10 of Examination Category B-A of the 1989 Code. In addition, all previously granted relief for Item B1.10, Examination Category B-A, for the interval in effect on September 8, 1992, is revoked by the new regulation. For licensees with fewer than 40 months remaining in the interval on the effective date, deferral of the augmented examination is permissible with the conditions stated in the regulations.

Provide the staff with the projected schedule for this augmented examination and a technical discussion describing how the regulation will be implemented at Oconee Nuclear Station, Unit 1, during the third interval. Include in the discussion a description of the intended approach and any specialized techniques or equipment that will be used to complete the required augmented examinations, and an estimate of the coverage that can and will be obtained.

- F. **Request for Relief No. ONS-004:** Relief is requested from disassembling control rod drive mechanism (CRDM) bolting to meet the additional examination requirements of IWB-2430(a). IWB-2430(a) applies to the examinations performed in accordance with Table IWB-2500-1, and requires additional examinations of the remaining welds, areas, or parts scheduled for this and the subsequent period. It appears that Duke Power Company is applying the additional examination requirements of IWB-2430(a) to the corrective measures of IWA-5250. Please state the applicable Examination Category and Item Number, and provide an explanation of the rationale for using the additional examinations of IWB-2430(a).
- G. **Request for Relief No. ONS-005:** Relief is requested from performing the Code-required VT-1 visual examination of the CRDM motor tube-to-nozzle pressure-retaining bolting that has been removed due to "boron deposit degradation". It is not clear why the VT-1 visual examination of the removed bolting cannot be performed. Is it because of deposits or degradation? If degradation is occurring,

provide a more detailed description of the degradation mechanism. The replacement of bolting instead of inspection is a conservative approach if the replaced bolt is considered a failed component and Code requirements related to the failed component are being followed. Are additional examinations being performed? Are adjacent bolts on the same connection being replaced or evaluated? Provide a technical discussion for the above questions and describe how the structural integrity of other CRDM bolting will be assured without performance of the visual examination.

- H. **Request for Relief No. ONS-007:** Relief is requested from performing the volumetric examination of the pump casing welds and the visual examination of the pump casing internal surfaces. Duke Power Company has proposed to perform the Code-required examinations when a pump has been disassembled for maintenance. Table IWB-2500-1, Item B12.20, requires a VT-3 visual examination only when the pump is disassembled for maintenance or other reasons. Clarify the visual examination portion of this relief request. Regarding the volumetric examination requirement of Item B12.10, the staff has determined that Code Case N-481 is an acceptable alternative to the Code requirements. Provide a detailed technical discussion justifying why the Code or the Code Case requirements cannot be met.
- I. Please verify that there are no additional relief requests, other than those submitted in the December 20, 1993, document. If additional relief requests are required, the licensee should submit them for staff review.

The schedule for timely completion of this review requires that the licensee provide, by the requested date, the above requested information and/or clarifications regarding the *Oconee Nuclear Station, Unit 1, Third 10-Year Interval ISI Plan, Revision 0*.