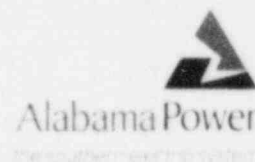


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R. P. McDonald
Senior Vice President
Flintridge Building



Docket Nos. 50-348
50-364

October 14, 1985

Director, Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Mr. S. A. Varga

Joseph M. Farley Nuclear Plant - Units 1 and 2
Inservice Inspection Program for ASME
Code Class 1, 2 and 3 Components

Gentlemen:

Alabama Power Company has reviewed the remaining inservice inspection activities requiring completion by the end of the first ten year interval for Farley Nuclear Plant Units 1 and 2. Based on this review, it has been determined that three additional reliefs are needed where the ASME Code required examinations are impractical to perform. One relief request was previously granted, however, Alabama Power Company has subsequently determined that a portion of the alternative examination is impractical. The remaining relief requests were not identified at the time of the previous submittals.

The ASME Code, Section XI requires that a volumetric examination of each reactor vessel flange ligament between the threaded stud holes (58 total) be performed during each ten year inspection interval. To facilitate safe removal and reinstallation of the reactor vessel head and positioning of the remote reactor vessel examination tool, three guide studs are installed in stud hole Numbers 26, 42 and 58. During the ultrasonic examination performed by the remote tool, the guide studs prevent the ultrasonic transducers mounted on the remote tool arm from accessing the ligaments around each guide stud as well as the ligaments between the stud holes on either side of the guide studs (Numbers 1, 25, 27, 41, 43 and 57). To date, 66% of the ligaments have been examined on both units and no recordable indications have been found. Since the ligaments are located in the flange base material and are not in the most highly stressed region of the flange, the probability of any service

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induced indications occurring in this area is minimal. Therefore, relief is requested to exempt ligament Numbers 1, 25, 26, 27, 41, 42, 43, 57 and 58 from the volumetric examination requirements of the ASME Code. The remaining 49 ligaments will be examined as required by the ASME Code. A summary of the relief request is included as Attachment 1.

For one reactor coolant pump (RCP) per unit, Section XI of the ASME Code requires that volumetric examination of the pressure retaining casing welds and visual examination of the casing interior pressure retaining surfaces be performed once each ten year interval of operation. The RCP casings for Farley Nuclear Plant Units 1 and 2 are one piece casings and therefore do not contain pressure retaining welds. Since the pump does not require disassembly for volumetric weld examination, the disassembly of a RCP solely for the purpose of visually examining the interior surface is impractical. The pump manufacturer (Westinghouse) neither recommends nor requires pump disassembly for the performance of routine maintenance or inspections. If the RCP internals are removed, they would require complete disassembly because a gasket internal to the pump would need replacement as a result of relaxing the main flange bolts. It has been estimated that complete RCP disassembly and reassembly could require up to 15 days of critical path outage time to complete since the radiation exposure, which is estimated at 50 man-rem, may limit access to and mobility in the containment for routine refueling outage activities. An activity of this complexity, performed under adverse field conditions, could potentially result in handling damage which could degrade the RCP. In the absence of the need for volumetric weld examination and considering the hardship imposed by pump disassembly and potential for RCP degradation, the visual examination of the internal pressure boundary is not justified. The exterior of the RCP casing will be visually examined during the RCS hydrostatic pressure test required by IWB-5000. A visual examination, not to exceed once per interval, will be performed on the internal pressure boundary surface of one RCP if maintenance or operational problems are encountered which require the removal and disassembly of the internals. A summary of the relief request is included in Attachment 2.

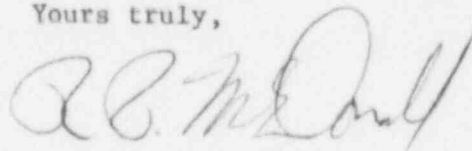
Previous NRC Safety Evaluations for each unit granted relief to perform the ASME Code required volumetric and surface examinations of the RCP main flange bolts, studs, nuts, bushings, threads and ligaments when the bolting is removed for RCP maintenance or when the pump is disassembled for the visual examination of the casing interior pressure retaining surfaces. Alabama Power Company is requesting relief from the visual examination of the RCP casing interior as stated previously, and pending granting of this relief, does not intend to disassemble a RCP. The main flange bolting for all three Unit 1 RCPs and two Unit 2 RCPs has been

volumetrically and visually examined in place as required by the ASME Code and no recordable indications have been found. If maintenance or operational problems are encountered which require the removal of the main flange bolts and disassembly of the RCP internals, the bolts, nuts, bushings, threads and ligaments between the bolts for one pump (per inspection interval) will receive the volumetric and surface examinations in accordance with the ASME Code while the bolts are removed. The revised relief request incorporating the proposed change is included as Attachment 3.

Pursuant to the requirements of 10CFR50.55a(g)(6)(i), Alabama Power Company herewith requests that relief be granted from certain requirements of the ASME Code, Section XI, 1974 Edition through the Summer 1975 Addenda. It is respectfully requested that these relief requests be granted by December 31, 1985. The ISI activities required to be performed at the Unit 1 seventh refueling outage include these impractical inspections. The planning for this outage is expected to be completed by late 1985, and the granting of these reliefs will influence the development of the critical path schedule.

This relief request is designated as a required approval in accordance with 10CFR170.21 requirements. Enclosed is the required application fee of \$150.00.

Yours truly,



R. P. McDonald

RPM/STB:drs/D-363

Attachments

cc/Att: Mr. L. B. Long
Mr. S. A. Varga
Mr. E. A. Reeves
Mr. W. H. Bradford

bc: Mr. W. O. Whitt
Mr. W. G. Hairston, III
Mr. J. D. Woodard
Mr. J. W. McGowan
Mr. C. D. Nesbitt
Mr. R. G. Berryhill
Mr. D. E. Mansfield
Mr. J. E. Garlington
Mr. J. A. Ripple
Mr. E. L. Stephenson
Ms. G. S. Waymire
Mr. W. G. Ware
Mr. J. R. Crane
Mr. T. N. Epps
Mr. K. C. Gandhi

ATTACHMENT 1

RELIEF REQUEST - RELIEF IS REQUESTED FROM THE VOLUMETRIC EXAMINATION OF REACTOR VESSEL FLANGE LIGAMENT NUMBERS 1, 25, 26, 27, 41, 42 43, 57 AND 58 (ITEM B1.9, CATEGORY B-G-1)

EXAMINATION REQUIREMENT:

Table IWB-2600, Item B1.9 and Table IWB-2500, Category B-G-1 require volumetric examination of 100% of the ligaments between the threaded stud holes of the reactor vessel flange during each inspection interval.

BASIS FOR RELIEF:

To reduce the critical path outage time required to perform reactor vessel examinations and reduce the exposure of examination personnel, reactor vessel volumetric examinations, including examination of the ligaments between the threaded stud holes, are performed utilizing a remote ultrasonic examination tool. For the purpose of safely removing and reinstalling the reactor vessel head, and positioning the remote examination tool, three guide studs are placed in the reactor vessel flange at stud hole Numbers 26, 42, and 58. During the examination, these guide studs prevent the ultrasonic transducers mounted on the remote tool arm from accessing the ligaments around each guide stud as well as the ligaments between the stud holes on either side of the guide studs (Numbers 1, 25, 27, 41, 43 and 57).

ALTERNATIVE EXAMINATION:

The remaining 49 ligaments will be ultrasonically examined as required by the ASME Code, Section XI.

ATTACHMENT 2

RELIEF REQUEST - RELIEF IS REQUESTED FROM THE VISUAL EXAMINATION OF THE REACTOR COOLANT PUMP CASING INTERNAL PRESSURE BOUNDARY SURFACES (ITEM B5.7, CATEGORY B-L-2)

EXAMINATION REQUIREMENT:

Table IWB-2600, Item B5.7 and Table IWB-2500, Category B-L-2 require visual examination of the internal pressure boundary surfaces of one reactor coolant pump during each inspection interval.

BASIS FOR RELIEF:

The ASME Code, Section XI permits the visual inspection of the reactor coolant pump (RCP) internal pressure boundary surfaces to be performed on the same pump disassembled for the purpose of performing the required volumetric examination of the pressure retaining casing welds. The RCP casings for Farley Nuclear Plant are one piece casings and therefore do not contain pressure retaining welds. Since the pump does not require disassembly for volumetric weld examination, the disassembly of a RCP solely for the purpose of visually examining the interior surface is impractical. The pump manufacturer (Westinghouse) neither recommends nor requires pump disassembly for the performance of routine maintenance or inspections. If the RCP internals are removed, they would require complete disassembly because a gasket internal to the pump would need replacement as a result of relaxing the main flange bolts. It has been estimated that complete RCP disassembly and reassembly could require up to 15 days of critical path outage time to complete since the radiation exposure, which is estimated at 50 man-rem, may limit access to and mobility in the containment for routine refueling outage activities. An activity of this complexity, performed under adverse field conditions, could potentially result in handling damage which could degrade the RCP. In the absence of the need for volumetric weld examination and considering the hardship imposed by pump disassembly and potential for RCP degradation, the visual examination of the internal pressure boundary surface is not justified.

ALTERNATIVE EXAMINATION:

The exterior of the RCP casing will be visually examined during the RCS hydrostatic pressure test required by IWB-5000. A visual examination, not to exceed once per interval, will be performed on the internal pressure boundary surface of one RCP as required by Item B5.7, Category B-L-2 if maintenance or operational problems are encountered which require the removal and disassembly of the internals.

ATTACHMENT 3

RELIEF REQUEST - RELIEF IS REQUESTED FROM REMOVAL OF THE REACTOR COOLANT PUMP MAIN FLANGE BOLTS FOR VOLUMETRIC AND SURFACE EXAMINATIONS (ITEM B5.2, CATEGORY B-G-1)

EXAMINATION REQUIREMENT:

During each inspection interval, Table IWB-2600, Item B5.2 and Table IWB-2500, Category B-G-1 require the performance of volumetric and surface examinations on 100% of the reactor coolant pump (RCP) main flange bolts, studs, nuts, threads, bushings and ligaments, when the bolting is removed.

BASIS FOR RELIEF:

Removal of the main flange bolts for examination would require the removal and complete disassembly of the RCP internals, because a gasket internal to the pump would need replacement as a result of relaxing the main flange bolts. The pump manufacturer (Westinghouse) neither recommends nor requires pump disassembly for the performance of routine maintenance or inspections. The RCP casings for Farley Nuclear Plant are one piece casings and therefore do not contain pressure retaining welds which require volumetric examination in accordance with the ASME Code, Section XI. Relief has been requested from the ASME Code required visual examination of the RCP internal pressure boundary surfaces, to eliminate the need for RCP disassembly. The basis for this relief, which is also applicable to the removal of the main flange bolts, is that the high level of radiation exposure, additional critical path outage time required to disassemble the pump and potential damage and degradation to the RCP, solely for the purpose of performing ISI, is not justified.

ALTERNATIVE EXAMINATION:

The RCP main flange bolting will be volumetrically and visually examined in place in accordance with the ASME Code, Section XI, Items B5.1 and B5.3, Category B-G-1. Not to exceed once per interval, the main flange bolts, nuts, bushings, threads and ligaments of each pump will be examined when the bolting is removed as required by Item B5.2, Category B-G-1, if maintenance or operational problems are encountered which require the removal and disassembly of the RCP internals.