

August 22, 1985

Docket No. 50-416

DISTRIBUTION:

Docket File

NRC PDR

Local PDR

PRC System

NSIC

LB #4 r/f

MDuncan

LKintner

MHum

OELD, Attorney

ACRS (16)

BGrimes

JPartlow

EJordan

Mr. Jackson B. Richard  
Senior Vice President, Nuclear  
Mississippi Power & Light Company  
P.O. Box 23054  
Jackson, MS 39205

Dear Mr. Richard:

Subject: Grand Gulf Nuclear Station, Unit 1 Inservice Inspection Program

By letter dated July 25, 1984, Mississippi Power and Light Company (MP&L) submitted a proposed inservice inspection (ISI) program for the first 10-year inspection interval for Grand Gulf Unit 1. Requests for relief from certain requirements in Section XI of the American Society of Mechanical Engineers (ASME) Code were submitted with the proposed ISI program and by letter dated September 20, 1984.

During its review of the proposed ISI program and associated relief requests, the NRC staff has found that the additional information described in the enclosure is needed to complete its review. In order to meet our schedule for review, you should provide responses to the enclosed requested information by September 30, 1985. If you cannot meet this date or wish to discuss the matters identified in the enclosure, please advise the Project Manager, L. L. Kintner within 7 days of receipt of this letter.

The reporting and/or recordkeeping requirements contained in this letter affect fewer than ten respondents; therefore, OMB clearance is not required under P.L. 96-511.

Sincerely,

Elinor G. Adensam, Chief  
Licensing Branch No. 4  
Division of Licensing

Enclosure:  
As stated

cc: See next page

8508300234 850822  
PDR ADOCK 05000416  
G PDR

DESIGNATED ORIGINAL

Certified By

*Angela Henry*

*ML*  
DL:LB #4  
LKintner/ah  
8/24/85

*ML*  
LA:DL:LB #4  
MDuncan  
8/27/85

*ML*  
DL:LB #4  
EAdensam  
8/24/85



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555  
August 22, 1985

Docket No. 50-416

Mr. Jackson B. Richard  
Senior Vice President, Nuclear  
Mississippi Power & Light Company  
P.O. Box 23054  
Jackson, MS 39205

Dear Mr. Richard:

Subject: Grand Gulf Nuclear Station, Unit 1 Inservice Inspection Program

By letter dated July 25, 1984, Mississippi Power and Light Company (MP&L) submitted a proposed inservice inspection (ISI) program for the first 10-year inspection interval for Grand Gulf Unit 1. Requests for relief from certain requirements in Section XI of the American Society of Mechanical Engineers (ASME) Code were submitted with the proposed ISI program and by letter dated September 20, 1984.

During its review of the proposed ISI program and associated relief requests, the NRC staff has found that the additional information described in the enclosure is needed to complete its review. In order to meet our schedule for review, you should provide responses to the enclosed requested information by September 30, 1985. If you cannot meet this date or wish to discuss the matters identified in the enclosure, please advise the Project Manager, L. L. Kintner within 7 days of receipt of this letter.

The reporting and/or recordkeeping requirements contained in this letter affect fewer than ten respondents; therefore, OMB clearance is not required under P.L. 96-511.

Sincerely,

*Elinor G. Adensam*  
for Elinor G. Adensam, Chief  
Licensing Branch No. 4  
Division of Licensing

Enclosure:  
As stated

cc: See next page

Mr. Jackson B. Richard  
Mississippi Power & Light Company

Grand Gulf Nuclear Station

cc:  
Robert B. McGehee, Esquire  
Wise, Carter, Child, Steen and Caraway  
P.O. Box 651  
Jackson, Mississippi 39205

Nicholas S. Reynolds, Esquire  
Bishop, Liberman, Cook, Purcell  
and Reynolds  
1200 17th Street, N.W.  
Washington, D. C. 20036

Mr. Ralph T. Lally  
Manager of Quality Assurance  
Middle South Services, Inc.  
P.O. Box 61000  
New Orleans, Louisiana 70161

Mr. Larry F. Dale, Director  
Nuclear Licensing and Safety  
Mississippi Power & Light Company  
P.O. Box 23054  
Jackson, Mississippi 39205

Mr. R. W. Jackson, Project Engineer  
Bechtel Power Corporation  
15740 Shady Grove Road  
Gaithersburg, Maryland 20760

Mr. Ross C. Butcher  
Senior Resident Inspector  
U.S. Nuclear Regulatory Commission  
Route 2, Box 399  
Port Gibson, Mississippi 39150

Regional Administrator, Region II  
U.S. Nuclear Regulatory Commission,  
101 Marietta Street, N.W., Suite 2900  
Atlanta, Georgia 30323

Mr. J. E. Cross, General Manager  
Grand Gulf Nuclear Station  
Mississippi Power & Light Company  
P.O. Box 756  
Port Gibson, Mississippi 39150

The Honorable William J. Guste, Jr.  
Attorney General  
Department of Justice  
State of Louisiana  
Baton Rouge, Louisiana 70804

Mr. Oliver D. Kingsley, Jr.  
Vice President, Nuclear Operations  
Mississippi Power & Light Company  
P.O. Box 23054  
Jackson, Mississippi 39205

Office of the Governor  
State of Mississippi  
Jackson, Mississippi 39201

Attorney General  
Gartin Building  
Jackson, Mississippi 39205

Mr. Jack McMillan, Director  
Solid Waste  
Mississippi State Board of Health  
880 Lakeland  
Jackson, Mississippi 39206

Alton B. Cobb, M.D.  
State Health Officer  
State Board of Health  
P.O. Box 1700  
Jackson, Mississippi 39205

President  
Claiborne County Board of Supervisors  
Port Gibson, Mississippi 39150

ENCLOSURE

REQUEST FOR ADDITIONAL INFORMATION  
INSERVICE INSPECTION PROGRAM

Grand Gulf Nuclear Station

By letter dated July 25, 1984,<sup>(1)</sup> from L. F. Dale (MP&L) to H. R. Denton (NRC), you submitted a proposed inservice inspection (ISI) program for the first 10-year inspection interval for Grand Gulf Nuclear Station (GGNS). We will be evaluating this program and using it along with the documents referenced in it and the other documents in the attached document review list to review your proposed examination schedule for piping, welds, and supports and your requests for relief from impractical examinations required by the 1977 Edition, Summer 1979 Addenda, of Section XI of the ASME Boiler and Pressure Vessel Code. If there are any additional relief requests or supporting information you wish to be considered, please provide us with copies. If they have been previously furnished to the NRC, please document by reference.

The following questions address the plan and the specific relief requests.

ISI PROGRAM

1. Section 1, Foreword, Page 2

Section 1 states "The Grand Gulf Nuclear Station Unit 1 has utilized a unique plan for the inservice inspection of pipe supports other than snubbers. This sampling plan was transmitted to NRC by letter AECM-84/0257 dated May 11, 1984." The proposed sampling plan for pipe supports is also described in Section 7 of the GGNS ISI plan. This plan is being reviewed by the staff as an alternative program to be used in lieu of the IWF Code requirements.

As presented in letter AECM-84/0257 and Section 7, the proposed GGNS sampling plan would provide inservice inspection of pipe supports (other than snubbers) based on a statistically selected subset of

the supports. MP&L proposes that the sampling plan will provide 95 percent confidence that a support population which contains 10 percent or more defective supports will be identified and evaluated. In addition, the Class 2 and Class 3 supports are combined in the proposed GGNS plan, and an inspection sample is selected from the combined group on the basis that the design criteria for the Class 2 and 3 supports are the same. While the ASME Code Committee is considering proposals for statistical sampling methods and the concept of combining Class 2 and 3 supports, these methods are not at present in Section XI. Statistical sampling has been used in technical specifications for the functional testing of snubbers.

The GGNS plan is based on ASME Section XI, 1977 Edition with Addenda through Summer 1979. Section IWF-2510 of this Addenda of the Code requires that

- (a) component supports selected for examination shall be the supports of those components that are required to be examined under IWB, IWC, and IWD during the first inspection interval;
- (b) for multiple components within a system of similar design, function, and service, the supports of only one of the multiple components are required to be examined.

Pressure retaining piping is included as a component in accordance with IWA-1300. Exclusions for IWF are identified in the Code as "In the course of preparation." Those exclusions applicable to components under IWB, IWC, and IWD can be included in the selection of piping supports for examination.

The staff cannot determine that the extent of examination and sample size proposed in the GGNS ISI plan is equivalent or superior to requirements of the applicable Addenda of the Code. The staff interprets the requirements of IWF to include the following:



- (a) The exclusions contained in IWB-1220, IWC-1220, and IWD-1230 may be applied in the selection of component supports for examination (Reference IWF-2510(a)).
- (b) For Class 1, 2, and 3 components, the supports in a "single loop" may be selected for examination. The supports of only one of multiple components, such as pumps and valves, within a system of similar design, function, and service are required to be examined (Reference IWF-2510(b)).
- (c) Additional exclusions from examination will be considered on a case-by-case basis (Reference IWF-1230).

The staff recognizes that the licensee has already addressed Item (a) but his interpretation of Items (b) and (c) is not clear. Therefore, the licensee should provide comparative information that will clearly establish the relationship between the requirements of the Code for Class 1, Class 2, and Class 3 piping supports and the initial sample size and expansion criteria proposed in his plan.

2. Section 1, Pages 4 and 7

As stated in Paragraph 2.2.3 of Section 1, 10 CFR 50.55a(b)(2)(iv) requires that the Class 2 welds on RHR and ECCT systems be selected for examination per ASME Section XI 1974 Edition with Addenda through and including 1975 Summer Addenda. GGNS in Paragraph 2.2.3, proposes an alternate criterion for selecting Class 2 welds on RHR and ECCT systems. A comparison of the sample size, obtained by using (1) the GGNS criteria and (2) the ASME Section XI 1974 Edition with Addenda through Summer 1975, is given in the answers to FSAR question 121.10, Reference 1. It indicates that the GGNS sample is larger by nearly a factor of two in the number of welds to be examined per interval and in the total number of welds to be examined over the life of the plant. The methodology used to select the sample should be explained in the plan to demonstrate that the minimum requirements of the Code are met or exceeded, i.e., sample

size alone does not meet the requirements of the Code. Specific types of welds must be included in the sample to meet the code requirements.

Please clarify the discrepancy in the number of Category C-F welds.

3. General

Several categories of the ASME Code require that all dissimilar metal welds and also those experiencing specified stress levels and loads be subjected to more extensive examination. The GGNS inservice inspection plan does not identify the welds that meet these criteria. Please explain the methodology that was used to determine the extent of inspection and sample size for dissimilar metal welds and welds exceeding the stress levels specified in the Code.

4. Appendixes

Isometric Drawing RH-7-21 is apparently missing from the plan. Please supply this drawing.

## RELIEF REQUESTS

1. Relief Requests I-00003, I-00011, pages 4-8 and 4-38  
ASME Section XI, Table IWC-2500-1, Examination Category C-F, Item C5.21 (I-00003) and CF.21 (I-00011) are referenced. Please clarify these references, since Category C-F is not part of Table IWB-2500-1 and Item CF.21 is an incorrect designation.
2. Relief Request I-00004, pages 4-9 through 4-11  
Relief from volumetric examination of the lower one-half of the reactor pressure vessel lower head-to-shell weld (AA) is requested. The principal reason cited for requesting relief is the unavailability of automated equipment to operate on the curved surface of the lower head. Please provide a dimensioned cross-sectional drawing of the lower head-to-shell weld that clearly shows changes in vessel wall thickness and vessel head curvature in the region adjacent to the weld.
3. Relief Requests I-00004, I-00005, I-00006, pages 4-9 through 4-20  
Relief is requested from varying percentages of volumetric examination of three circumferential shell welds (AA, AB, and AC) of the reactor pressure vessel. Please estimate the percentage of Code-required volume (CRV) that will be examined using planned volumetric methods.

Estimated personnel radiation exposures are cited in partial support of these relief requests. Have these estimated exposures been reviewed with the MP&L group responsible for establishing and implementing ALARA exposure guidelines to determine that the benefit of performing manual examination is not consistent with ALARA?



4. Relief Request I-00010, pages 4-34 to 4-37

Relief is requested from volumetric examination of inaccessible Class 1 and Class 2 welds as detailed in Table 1 of the request. The table includes three welds (Items 6, 7, and 8) designated on Isometrics FW-8-2, FW-8-4, and FW-11-7. Please confirm that relief is requested for these welds in the feedwater system and that the system should be included in paragraph I, component description.

5. Relief Request I-00012

Relief is requested for volumetric examination of 25% of the Class 1 weld, Weld 502, located on the reactor core isolation cooling system (RCIC, E51). Table 1 in the relief request references Isometric Drawing R1-11-7, which is included in Volume III of the proposed ISI program as Revision 0, dated 5/1/84. Since this drawing does not indicate Weld 502, please provide a reference to the appropriate drawing which would illustrate the location and inaccessibility of the weld portion.

References

1. L. F. Dale to H. R. Denton, AECM-84/0371 of July 25, 1984, Ten-Year Inservice Inspection Plan for Grand Gulf Nuclear Station Unit 1, Volumes I, II, and III.