



MISSISSIPPI POWER & LIGHT COMPANY

Helping Build Mississippi

P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

August 23, 1983

NUCLEAR PRODUCTION DEPARTMENT

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

Attention: Mr. Harold R. Denton, Director

Dear Mr. Denton:

SUBJECT: Grand Gulf Nuclear Station
Units 1 and 2
Docket Nos. 50-416 and 50-417
License No. NPF-13
Ref: AECM-82/302
AECM-83/0361
File: 0272/L-860.0
Modification to Startup Test
Program; O.L. Condition
2.C(40)
AECM-83/0483

The following information is being transmitted to support and modify the startup testing procedures revisions transmitted by AECM-83/0361, dated July 21, 1983. This transmittal is in accordance with the GGNS Operating License Condition 2.C(40) which requires NRC review and approval of major modifications to the startup testing program discussed in FSAR Chapter 14.

Attachment 1 provides a revision to GGNS Special Test Procedure Number 04, "BOP System Piping Vibration Monitoring Program." The attached acceptance criteria (FSAR Section 14.2.12.4.4/page 14.2-189) and justification is based on plant specific vibration limits developed for GGNS and replaces that transmitted in AECM-83/0361.

As requested by your Mr. Bill Long (PTRB) in support of his review, attachment 2 provides the GE approval on the acceptance criteria modification for Startup Test Procedure Number 05, "Control Rod Drive System" transmitted by AECM-83/0361.

These attachments were discussed with Mr. Bill Long on August 18, 1983, and were considered to be procedurally acceptable and complies with the O.L. Condition 2.C(40) requirements. Based on this discussion, MP&L will include the startup test procedure modifications of this transmittal and of AECM-83/0361 into the GGNS startup test program. Due to the expected implementation of these procedures upon

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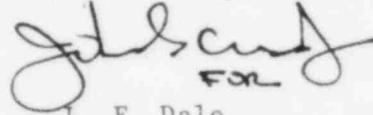
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GGNS's next criticality, your approval is requested by August 29, 1983, to support the GGNS startup testing program schedule. Please advise if further information is required.

Yours truly,



L. F. Dale

Manager of Nuclear Services

SAB/JGC:rg

Attachments

cc: Mr. J. B. Richard (w/a)
Mr. R. B. McGehee (w/o)
Mr. T. B. Conner (w/o)
Mr. G. B. Taylor (w/o)

Mr. Richard C. DeYoung, Director (w/a)
Office of Inspection & Enforcement
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Mr. J. P. O'Reilly, Regional Administrator (w/a)
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Region II
101 Marietta St., N.W., Suite 2900
Atlanta, Georgia 30303

c. Test Procedure

This test is performed by monitoring and recording piping peak-to-peak displacements at selected points as the system undergoes steady-state vibration, and during transient loadings such as fast valve closure or sudden relief valve opening.

d. Acceptance Criteria

"Steady State Vibration"

The measured deflections shall not exceed the expected limits provided by the GGNS Steady State Vibration Limits in the Special Test Procedure. If the measured deflection is greater than the expected limit but is less than or equal to the acceptable deflection limit given in the Special Test Procedure, the testing may continue and results evaluated for acceptance.

The measured deflections shall not exceed the acceptable limits provided in the Special Test Procedure. If the test measurements exceed the acceptable deflection, testing may continue, pending engineering evaluation. If the evaluation determines that the measured deflection is unacceptable, the system or the affected portion shall be isolated and secured. Testing shall be continued or repeated after corrective actions have been implemented.

"Transient Vibration"

The measured deflections shall not exceed the expected limits provided by the GGNS Dynamic Vibration Limits in the Special Test Procedure. If the measured deflections exceed the expected limits but are less than the acceptable limits the testing may continue, provided the measured deflections are evaluated.

The dynamic movements measured during transient loading shall not exceed the acceptable limits provided by the Special Test Procedure. If the measured deflections exceed the acceptable deflection limits the plant shall be placed into a mode of operation that would minimize the potential of repeating the transient until such time as an engineering evaluation has been completed.

(The total stress due to dynamic loading, plus all other combined stresses, shall not exceed ASME Section III or ANSI B31.1 allowable stresses.)

FSAR Paragraph 14.2.12.4.4(d) Acceptance Criteria

Change From: Previous wording provided in AECM-83/0361 dated July 21, 1983

To: Revised wording as shown on attached FSAR page 14.2-189

JUSTIFICATION (Special Test Procedure No. 04)

For clarification purposes the criteria are now put into "acceptable" limits and "expected" limits which are based on GGNS specific vibration calculations. Previous wording did not provide sufficient guidance as to when to apply the criteria.

"Steady State"

The acceptance criterion is that the measured amplitude in each direction shall not induce a stress in the pipe more than one-half the endurance limit of the pipe material. Material endurance limits have been obtained from the ASME Code, Section III, Appendix I. A stress level corresponding to 10^6 cycles has been used as the endurance limit.

The stress level has been converted into equivalent displacement values using the beam flexure formula and will be compared to the actual measured displacement. These values are given as expected deflection limits on a table of "Steady State Vibration Limits" in the Special Test Procedure.

The acceptable deflection limits are based on 140 percent of the expected deflection limits or 0.020 inch (peak to peak), whichever is greater.

"Transient Vibration"

The acceptance criterion for dynamic (transient) loading is that the total stress due to dynamic loading, plus all other combined stresses, shall not exceed ASME Section III or ANSI B31.1 allowable stress.

The acceptable deflection limits are determined as follows:

1. For those cases where transient events have been analyzed, the expected deflection limits are based on the analysis and the acceptable deflections are based on the existing stress margins.
2. For those cases where transient events have not been analyzed, only the acceptable deflection limits were provided based on the existing stress margin.
3. For pump start/stop events, the measured deflection will be evaluated based on the stress margin. If 0.125 inch (peak to peak) deflection limit is exceeded, the pump should not be restarted until the evaluation is complete.

The acceptable and the expected (if determined) deflection limits are given on a table of "Dynamic Vibration Limits" in the Special Test Procedure.



NUCLEAR ENERGY
DIVISION

GENERAL ELECTRIC COMPANY..... GRAND GULF SITE, P.O. BOX 646
PORT GIBSON, MS. 39150. Phone (601) 437-5260 Dial Comm 8*353-5158

August 18, 1983

Mr. J. C. Roberts
Startup Supervisor
Mississippi Power & Light Co.
Port Gibson, MS 39150

Dear Jerry,


Concerning the proposed FSAR change to the CRD System Gang Mode Acceptance Criteria from Level 1 to Level 2, I have enclosed a copy of the official General Electric Field Deviation Disposition Request (FDDR) JB1-1818.

This FDDR was prepared by one of the GE site engineers and has been formally approved by GE San Jose Engineering and Projects. General Electric is currently planning on making this a generic change to future Startup Test Specifications (e.g. River Bend).

As a point of information, the FDDR approval was a prerequisite to submittal of the proposed FSAR change, and the justification provided in the submittal was based upon a memo from General Electric Engineering to GE site engineers.

If you have any further questions, please contact me at your convenience.

Very truly yours,


Tom Enright
Lead STD&A Engineer
GE-GGNS

cc: M. G. Farschon
A. R. Smith
J. E. Nichols
W. H. Brown M/C 875
G. Cesare - Jackson