



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30323

Report No.: 50-416/85-26

Licensee: Mississippi Power and Light Company
Jackson, MS 39205

Docket No.: 50-416

License No.: NPF-29

Facility Name: Grand Gulf

Inspection Conducted: July 15-19, 1985

Inspectors: J. J. Lenahan
J. J. Lenahan

7-30-85

Date Signed

for Frank Jape
J. B. Macdonald

7/30/85

Date Signed

Approved by: Frank Jape
F. Jape, Section Chief
Engineering Branch
Division of Reactor Safety

7/30/85

Date Signed

SUMMARY

Scope: This routine, unannounced inspection involved 68 inspector-hours on site in the areas of the snubber surveillance program, thermal expansion testing, repairs to the Division III emergency diesel generator, and previously identified Inspector Followup Items.

Results: No violations or deviations were identified.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *J. D. Barley, Compliance Coordinator
- *J. F. Cross, General Manager
- *D. Cupstid, Startup Supervisor
- *C. R. Hutchinson, Manager, Plant Maintenance
- *A. J. Malone, Inservice Inspection (ISI) Coordinator
- *R. F. Rogers, Technical Assistant

Other Organizations

- M. Heib, Startup Engineer, General Electric
- D. Watlington, ISI Engineer General Electric

NRC Resident Inspectors

- *R. Butcher
- *J. Caldwell

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on July 19, 1985, with those persons indicated in paragraph 1 above. The inspector described the areas inspected and discussed in detail the inspection findings. No dissenting comments were received from the licensee.

The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspectors during this inspection.

3. Licensee Action on Previous Enforcement Matters

This subject was not addressed in the inspection.

4. Unresolved Items

Unresolved items were not identified during the inspection.

5. Independent Inspection Effort

- a. The inspectors accompanied the resident inspector on a general plant tour of portions of the control room, turbine building, secondary containment and rooms containing emergency core cooling systems. Observations included safety-related tag out verification, visual examination of maintenance operations, general plant conditions and housekeeping.

- b. The inspectors witnessed repair operations on the Division III diesel generator set. The G.E. generator is driven by two E.M.D 12-645-E4 diesel engines, which are connected by flexible couplings to each end of the generator shaft. During routine diesel generator testing, the roller bearing on the generator shaft at the "A" diesel end failed causing damage to the generator shaft. The repair involved replacing the generator unit. The inspectors reviewed maintenance work order M.W.O 54336 and observed replacement of the damaged generator and the coupling of the new generator to the diesel engines. The inspectors discussed the startup testing program for the new generator with licensee engineers. The program involved testing the generator at 25% load with ramp increases to 50%, 75% and 100% load. After testing at 100% load for four hours, the generator was run at 110% load for two hours and returned to 100% load. The testing was completed subsequent to the completion of the inspection. After successful completion of the testing, the generator was declared operable.

Within the areas inspected, no violations or deviations were identified.

6. Snubber Surveillance Program (Module 61729)

The inspectors reviewed procedures and quality records relating to the snubber surveillance program. Acceptance criteria utilized by the inspector appears in Technical Specification 3/4.7.4.

a. Review of Snubber Surveillance Procedures

The inspectors examined the following procedure which control snubber surveillance and inspection activities:

- (1) Surveillance Procedure Number 06-ME-1000-V-0001, Snubber Visual Inspection.
- (2) Mechanical Standard Procedure Number MP&L-MS-31, Functional Testing Requirements for Snubbers.

b. Review of Quality Records

The inspectors reviewed the quality records documenting the results of visual inspections performed on safety-related accessible and inaccessible snubbers in March 1985. The March 1985 inspection was the first inservice visual snubber inspection performed on the snubbers. Technical Specification 4.7.4.b requires that this inspection be performed after four months, but within ten months of commencing Power Operation. Power Operation commenced on September 21, 1984. Snubber inspections performed prior to this date were preservice inspections. Records examined were as follows:

- (1) Results of visual inspections documented on Data Sheets I and II, Procedure 06-ME-1000-V-0001. These records cover visual inspection of all safety-related hydraulic and mechanical snubbers.

- (2) Materials Nonconformance Reports (MNCR) Numbers 118-85, 120-85, 124-85, 128-85, 129-85, 148-85, and 160-85. These MNCRs documented and dispositioned discrepancies noted during the March 1985 visual inspections.
- (3) Pacific Scientific Report dated March 26, 1985, Results of Functional Tests on PSA Mechanical Shock Arrestors for MP&L. This report documents the results of testing performed on snubbers with discrepancies identified during the visual inspections; or during maintenance operations.

As a result of the visual inspections and subsequent functional testing, the licensee identified one inaccessible mechanical snubber as being visually inoperable. None of the hydraulic snubbers, all of which are inaccessible or accessible mechanical snubbers, were found to be visually inoperable. Thus, in accordance with Technical Specification 4.7.4.b, the interval for performing the next visual inspections is as follows:

Inaccessible Mechanical Snubbers - 12 months
Inaccessible Hydraulic and Accessible Mechanical Snubbers - 18 months

Within the areas inspected, no violations or deviations were identified.

7. Thermal Expansion Test (Module 70370)

During this inspection, the inspector continued the review of the licensee's thermal expansion test program. This review involved examination of test procedures and test results for thermal expansion during initial heatup, and test conditions (TC) one and three. The thermal expansion program was previously reviewed during inspections documented in NRC Report Nos. 50-416/83-46 and 50-416/83-49. Acceptance criteria utilized by the inspector appear in Final Safety Analysis (FSAR) Report Sections 3.9 and 14.2.12.4 and Regulatory Guide 1.68.

a. Review of Thermal Expansion Test Procedure

The inspector examined the test procedures listed below and verified that test prerequisites were specified, test instructions and objectives were clearly stated, and acceptance criteria were specified. Procedures examined were as follows:

- (1) Procedure No. 1-000-SU-17-H, System Expansion, Heatup
- (2) Procedure No. 1-000-SU-17-1, System Expansion - T.C.1
- (3) Procedure No. 1-000-SU-17-3, System Expansion - T.C.3
- (4) Procedure 1-C88-ST-05, BOP System Piping Thermal Expansion Monitoring Program

- (5) Bechtel Drawing Numbers M-1661, M-1675, M-1689, M-1690 and M-1692, Pre-op. Piping Drawings

b. Review of Thermal Expansion Test Results

The inspector reviewed data documenting the results of thermal expansion testing conducted in accordance with the procedures listed above. Test data reviewed were as follows:

- (1) Results of thermal expansion testing performed on NSSS piping (Main Steam and RCIC piping) during heatup and TC1 and 3.
- (2) Results of thermal expansion testing performed on BOP piping systems including RHR, RWCU, SLC, and FW piping.
- (3) Calculation No. MC-Q1111-830027, dated December 20, 1983, Evaluation of Thermal Movements.
- (4) Evaluation of thermal expansion test exceptions for NSSS piping noted during Heatup and TC-1 and 3.

Within the areas inspected, no violations or deviations were identified.

8. Previously Identified Inspector Followup Items (IFI)

- a. (Closed) IFI 416/83-49-01: For all cases where Level I trend plot acceptance boundaries were exceeded, the type of analysis or evaluation performed and the conclusions based on these analyses and evaluations will be documented in the test record. During review of the test data listed in paragraph 7.b above, the inspector verified that cases where thermal movements exceeded Level I values were documented and evaluated. Resolution of all problems noted to date during heatup, TC1 and TC3 have been completed by the licensee's nuclear plant engineering department or by GE, with the exception of test exceptions FP-01 and FP-24, which are presently being evaluated. IFI 416/85-49-01 is closed.
- b. (Closed) IFI 416/83-49-02: On the first plant cooldown, confirm actual pipe movement for the points which were rebased at 260°F. Resolution of this problem is documented in calculation number MC-Q1-111-830027. The inspector reviewed the calculation and determined that the licensee verified actual pipe movement by observation of scribe marks on the piping. IFI 416/83-49-02 is closed.
- c. (Closed) IFI 416/83-49-03: Repair Lanyard Pots and on the next plant heatup perform trend plot measurements to confirm initial heatup data. Resolution of this problem is documented in calculation MC-Q1-111-830027. The inspector reviewed the calculation and also reviewed a G.E. memo dated September 27, 1984, Subject: Instrument failures during TC1. Review of these documents disclosed that the instrumentation (Lanyard Pots) were repaired as required and confirmed initial heatup data was valid. IFI 416/83-49-03 is closed.

Within the areas inspected no violations or deviations were identified.