



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA ST., N.W., SUITE 3100
ATLANTA, GEORGIA 30303

Report No. 50-416/81-04

Licensee: Mississippi Power and Light Company
Jackson, MS

Facility Name: Grand Gulf

Docket No. 50-416

License No. CPPR-118

Inspector: P. A. Taylor for
A. G. Wagner

3-30-81

Date Signed

Approved by: F. S. Cantrell
F. S. Cantrell, Section Chief, RPS-1B Section

3/31/81

Date Signed

SUMMARY

Inspection on February 2, thru March 12, 1981

Areas Inspected

This routine inspection involved 114.5 inspector-hours on site in the areas of preoperational test witnessing, system turnover, preoperational test review, RHR pump failure, plant tours, and emergency procedures.

Results

Of the six areas inspected, three violations were found in two areas (Failure to take adequate corrective action - paragraph 9; Failure to follow procedure - paragraph 11; Failure to specify acceptance criteria - paragraph 9).

DETAILS

1. Persons Contacted

Licensee Employees

- *G. B. Rogers, Site Manager
- *C. R. Hutchinson, Startup Manager
- *J. C. Roberts, Startup Supervisor
- *C. L. Stuart, Assistant Plant Manager
- *S. F. Tanner, Quality Assurance Engineer
- *L. F. Caughtery, Plant Quality
- *R. A. Anrosino, Nuclear Services Manager
- E. Lugo, Test Supervisor
- B. Dunlea, Test Coordinator
- L. Eichenberger, Test Supervisor
- M. Madison, Test Supervisor
- G. Pierce, Test Supervisor

Other Organizations

Betchel

- R. L. Scott, Project Quality Assurance Manager
- H. H. Weber, Project Startup Engineer

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on March 12, 1981 with those persons indicated in Paragraph 1 above. The licensee commented that additional discussion will be required for violations and Checkout and Turnover Manual change.

3. Licensee Action on Previous Inspection Findings

Not inspected.

4. Unresolved Items

Unresolved items are matters about which more information is required to determine whether they are acceptable or may involve violation or deviation. A new unresolved item identified during this inspection is discussed in paragraph 7.

5. Preoperational Test Witnessing

The inspectors witnessed the conduct of portions of the following pre-operational test procedures. The tests were witnessed for conformance with the Grand Gulf Startup Manual Chapters 5000 and 7000.

a) 1R21PT01 E.S.F. 4.16 Kv Preoperational test

No violations or deviations were identified.

b) 1P53PT01 Instrument Air Preoperational Test

No violations or deviations were identified.

6. System Turnover

The High Pressure Core Spray System walkdown and turnover package were reviewed for conformance with the requirements of Grand Gulf Startup Manual Chapter 7000, paragraph 4.1.4. and Bechtel Checkout and Turnover Organization Manual, chapter 4, section 16.

No violations or deviations were identified.

7. Test Procedure Review

The following test procedure were reviewed for conformance with Regulatory Guide 1.68, FSAR chapters 6.3., and 14, Question and Responses 211.194, 423.35, 423.12, 423.30.

1E21PT01 Rev. A, Low Pressure Core Spray Preoperational Test Procedure - Draft Copy

Unresolved Item 416/81-04-01 - The procedure does not include all FSAR commitment or requirements of the startup manual and the operational QA manual as indicated below:

- a. The procedure objectives described in paragraph 1.0 do not include all of the objectives included in the test description as required by FSAR chapter 14, paragraph 14.2.12.1.7(a).
- b. The procedure does not require the instrument air system to be operable as a prerequisite to test performance as required by FSAR chapter 14, paragraph 14.2.12.1.7 (b).4.
- c. Procedure paragraph 7.2 does not require verification that the Low Pressure Core Spray Pump is in operation prior to running the room cooler heat balance as required by FSAR chapter 14, paragraph 14.2.12.1.7(c)2.
- d. Procedure note on page 60 requires the performance of a controlling step. The note does not provide a means of verifying the action as required by S.U.M chapter 7000, paragraph 4.2.5.8.
- e. The procedural note on page 60, paragraph 7.6.9 and 7.7.3.5.5 require plant operations be performed to support the procedure conduct. They do not however provide the instruments or reference system operating instructions as required the Operational Quality Assurance Manual MPL

Topical - 1, policy 11, paragraph 11.5.7.3 and FSAR chapter 14, paragraph 14.2.9.

- f. The acceptance criteria specified in paragraph 10.6 does not agree with the valve specified in FSAR table 6.3-13.
- g. The design basis for low pressure core spray system characteristics specified in FSAR Table 6.3.8, ECCS Design Parameters erroneously reference high pressure core spray data given in FSAR Table 6.3.2.

A senior licensee management representative stated that the unresolved items identified will be reviewed and appropriate corrective action will be taken. The inspector will review the corrective actions during a subsequent inspection.

8. Emergency Procedures

The inspector participated in a meeting held in Bethesda, Maryland on February 25 and 26, 1981. The meeting discussed the proposed emergency procedures implementing Three Mile Island Task Action/Plan, Item 1.C. The proposed procedures have resolved NRC comments. The procedures were demonstrated on the General Electric Perry Simulator on March 9 and 10, 1981. The results of the demonstration and any additional NRC comments will be included in separate correspondence issued by the Office of Nuclear Reactor Regulation.

9. Plant Tour

The inspector toured plant areas at various times to observe construction activities, housekeeping, and equipment preservation and protection. During a tour conducted on 3/5/81 of safety-related electrical panel and breaker rooms on EL 119', the inspector observed the following discrepancies:

- a. Metal pull box cover stored in cable tray 1ABTDH39
- b. Food scrap on MCC6B-31
- c. Metal clamp, wire and weld rod in cable tray 1ABTWH41, 1ABTWH72 and 1ABTWH74, there were no metal waste disposal containers in the area
- d. Cable trays, panel tops and passageways on EL 119' areas containing safety-related load control LC15BA3 and LC16BB3 were littered with large quantities of sharp scrap metal objects. There were no metal waste disposal containers in the area.

Zone IV cleanliness violations were identified during NRC inspection 416/79-33. These examples are violations of WP/P-3 Zone IV cleanliness requirements. These violations in addition to other examples identified or discussed periodically in NRC inspection reports 416/80-15, 17, 18, 24, 26 and 29 indicate a failure to take adequate corrective actions to prevent recurrence.

10 CFR 50, Appendix B, Criterion XVI, requires that measures be established to assure that conditions adverse to quality are promptly identified and corrected. The failure to establish a measures to assure that cleanliness control problems are promptly identified and corrected is identified as violation 416/81-04-08.

It was noted during a tour conducted on 3/5/81 that the top equipment opening on safety-related panels LC16BB3, LC15BA3 and others in their areas were not capped or covered to prevent the entry of metallic screen material and fastner into panel internals. The panels were energized. Checkout and Turnover Manual, Chapter 4, Section 16 require cleanliness control in accordance with Bechtel Work plan WP/P-3 requirements. Paragraph 6.1.4 of WP/P-3 does not provide he appropriate acceptance criteria for determining when protection is required for open pipes or equipment to protect them from construction activities.

10 CFR 50, Appendix B, Criterion XIII, requires that measures be established to control the storage, cleaning and preservation of materials and equipment, and Criterion V, requires written procedures with appropriate acceptance criteria for activities affecting quality. The failure to provide criteria for determining when openings are required to be covered is identified as violation 416/81-04-09.

10. Checkout and Turnover (CTO) Manual Change

Open Item 416/81-04-10 - A review was conducted of the CTO Manual change described in Mississippi Power and Light Company letter AECM 81/67 dated February 13, 1981, as outlined in our letter of February 27, 1981. It was noted that the change was inserted verbatim as written in your letter AECM 81/67. No guidance is provided for the responsible MP&L representative on which a decision could be based.

In addition, the change made was limited to "caps", and does not include the wide variety of equipment protective devices designed for equipment protection during operations. Since the equipment will be put into operation after turnover to MP&L, suitable controls must be established at the time of system turnover to MP&L. These controls may be in addition to those measures necessary to protect equipment from nearby construction activities.

11. Residual Heat Removal (RHR) Pump B

The work plan and inspection records (WP&IR) associated with the work performed on RHR pump B were reviewed for conformance with the Bechtel Quality Control Instruction Manual and the Bechtel Construction Work Plan/Procedure Manual.

The 'B' RHR pump was disassembled and reassembled during the periods from April 22 to May 16, 1980 and December 16, 1980 to January 13, 1981 using a discipline oriented work activities plans, WP&IR QIE 12-C-08093 YOF, and

WP&IR QIE 12-C-08093 YOG Bechtel procedure WP/P-1 establishes the Bechtel Construction Departments Work Plan/Procedure Program. WP/P-1, paragraph 6.4. states that WP&IR are not procedures but are discipline-orineted work activities plans which later become permanent records.

Bechtel Quality Control Instruction 0719T, Mechanical Equipment Installation Activities, paragraph 6.3.7 requires verifying that contaminants are removed from housing/casings of rotating equipment. Construction Work Plan/Procedure, WP/P-M-1, Installation of Equipment, paragraph 5, states that work activities... as a minimum, should conform to the requirements of the standard WP&IR shown in the Appendixes, permits details to be added or delayed from the standard WP&IR for specific installations, requires a new WP&IR or special procedure, if warranted, and requires that the new WP&IR or special procedure contain sufficient detail to govern installation of the complete unit. WP/P-M-1, Appendix A, standard WP&IR for rotating equipment, step 160, requires cleaning debris from housing/casings of rotating equipment. Debris was apparently not cleaned from the internals, suction or discharge of the 'B' RHR pump nor was this requirement referenced in the two WP&IRs used to disassemble the pump. Debris was found in the pump internals and in the casing possibly contributing to the pump coastdown seizure on December 9, 1981.

Procedures developed under WP/P-1 do not meet the requirements of Criterion V as demonstrated by specific WP&IR's developed and implemented for disassembling and reassembling the B RHR pump during the periods April 22 - May 16, 1980 and December 16, 1980 to January 13, 1981 in that the specific WP&IR did not include steps for cleanliness control of safety-related equipment. This is identified as violation 416/81-04-11.