



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

Report Nos.: 50-416/84-26 and 50-417/84-05

Licensee: Mississippi Power and Light Company
Jackson, MS 39205

Docket Nos.: 50-416 and 50-417

License Nos.: NPF-13 and CPPR-119

Facility Name: Grand Gulf 1 and 2

Inspection Dates: July 24-27, 1984

Inspection at Grand Gulf site near Port Gibson, Mississippi

Inspector: *T. D. Gibbons* 8-7-84
T. D. Gibbons Date Signed

Approved by: *T. E. Conlon* 8-7-84
T. E. Conlon, Section Chief Date Signed
Engineering Branch
Division of Reactor Safety

SUMMARY

Inspection on July 24-27, 1984.

Areas Inspected

This routine, unannounced inspection involved 26 inspector-hours on site in the areas of licensee identified items, IE Bulletins, and inspector followup items.

Results

No violations or deviations were identified.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *M. Wright, Acting Project Manager, Operations
- *J. D. Bailey, Compliance Coordinator
- *L. F. Daughtery, Compliance Superintendent
- J. Yelverton, Assistant Project Manager, Administration
- B. Lee, QA Engineer

NRC Resident Inspector

J. Caldwell, RI

*Attended exit interview.

2. Exit interview

The inspection scope and findings were summarized on July 27, 1984 with those persons indicated in paragraph 1 above.

3. Licensee Action on Previous Enforcement Matters

Not inspected.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Licensee Identified Items

- a. (Closed) Item 416/CDR 83-08 and 417/CDR 83-08. "Residual Heat Removal Jockey Pump" (10 CFR 50.55(e)). The final report was submitted on March 2, 1984. The report has been reviewed and determined to be acceptable. The inspector held discussions with responsible licensee representatives and viewed supporting documentation to verify that the corrective actions identified in the report have been completed. The licensee has issued Design Change Package (DCP) 83/5006 to prevent the automatic tripping of the Jockey pump due to valve closures. The automatic containment isolation signal was removed from the valve in the mini-flow line to prevent pump dead-heading. The work was completed on Unit 1 and design drawings have been updated to allow Unit 2 to be complete under the standard construction QA program.
- b. (Closed) Item 416/CDR 83-13 and 417/CDR 83-13. "Load Shedding and Sequencing Panels" (10 CFR 50.55(e)). The final report has been reviewed and determined to be acceptable. The inspector held discussions with responsible licensee representatives and viewed

supporting documentation to verify that the corrective actions identified in the report have been completed. The licensee identified that under certain specific situations the LOCA signal could be blocked by automatic test mode. The vendor provided a Design Change Package (DCP) 83/0398. This DCP was installed by the vendor and the panels have been retested. The Unit 2 printed circuits board were returned to the vendor for rework. The Unit 2 panel will be tested within the startup testing.

- c. (Closed) Item 416/CDR 83-14 "Delaval High Pressure Fuel Injection Line" (10 CFR 50.55(e)). The final report was submitted on October 5, 1983. The report has been reviewed and determined to be acceptable. The inspector held discussions with responsible licensee representatives and viewed supporting documentation to verify that the corrective actions identified in the report have been completed. The high pressure tubing failure was caused by a draw seam which acted as a stress riser. TDI letters of July 20, 1983, indicates that failures occur at approximately 1 million operating cycles and that fuel lines with excess of 10 million operating cycles are satisfactory. The licensee identified one line on each engine that required change. The lines were changed as documented on MNCR 00873-83. The lines replaced were Diesel 1 left bank number two and diesel 2 left bank number four.
- d. (Closed) Item 416/CDR 83-17 "Diesel Generator Low Pressure Fuel Oil Line Failure" (10 CFR 50.55(e)). The final report was submitted on January 3, 1984. The report has been reviewed and determined to be acceptable. The inspector held discussions with responsible licensee representatives, reviewed supporting documentation, and observed representative samples of work to verify that the corrective actions identified in the report have been completed. The licensee identified the cause of the tube failure to be fatigue caused by an omission of a support for the tube. The tube support was installed and the tube replaced. The licensee has installed the tube support on the Division II diesel.
- e. (Closed) Item 416/CDR-84-01 "Defective Solid State Trip Unit" (10 CFR 50.55(e)). The final report was submitted on March 30, 1984. The report has been reviewed and determined to be acceptable. The inspector held discussions with responsible licensee representatives and reviewed supporting documentation to verify that the corrective actions identified in the report have been completed. The licensee found one solid state trip unit that was returned from the vendor (Brown Boveri Electric Inc.) after rework which tripped during testing. The licensee identified that a 30VDC 22 microfarad capacitor had been installed instead of a 50 or 100VDC 22 microfarad which was required. The defective trip unit was replaced and the other forty-three which had been reworked by the vendor were inspected and found to have the proper capacitor installed. The vendor has taken steps to prevent recurrence.

- f. (Closed) Item 416/CDR 84-03 "Cracked Push Rod Balls on Transamerical Delaval Diesel Generators" (10 CFR 50.55(e)). The final report was submitted on February 17, 1984. The report has been reviewed and determined to be acceptable. The inspector held discussions with responsible licensee representatives and reviewed supporting documentation to verify that the corrective actions identified in the report have been completed. The licensee found two push rod balls cracked. The metallurgical examination indicate the crack was induced by welding which caused fatigue stress cracks. The licensee has replaced all existing push rods with a new type rod using different materials and manufacturing process.
- g. (Closed) Item 416/CDR 84-06 "Potential Defects in Spare Piston Skirt Castings" (10 CFR 50.55(e)). The final report was submitted on April 6, 1984. The report has been reviewed and determined to be acceptable. The inspector held discussions with responsible licensee representatives and reviewed supporting documentation to verify that corrective action identified in the report have been completed. The licensee identified that a spare piston skirt, heat number w93-566C, has a potential for possible residual stress cracks caused by improper heat treatment during manufacture. The licensee has issued MNCR 1029-83. The piston skirt is stored in the warehouse pending direction from the vendor. The piston skirt is tagged with a plant quality hold tag.
- h. (Closed) Item 416/CDR 84-07 "Defect in Positive Positioning Actions of GE Type SBM Switch" (10 CFR 50.55(e)). The final report was submitted on April 20, 1984. The report has been reviewed and determined to be acceptable. The inspector held discussions with responsible licensee representatives and reviewed supporting documentation to verify that the corrective action identified in the report has been completed. The High Pressure Core Spray Diesel Generator Mode Select Switch was found to have the positive position detent 45 degrees out of position. The switch, type SBM Model 10BP429, is designed to have a 90 degree rotation between stops. The licensee has determined that this was the only use of this switch at the site. The switch for the Unit 2 diesel was removed inspected and installed in Unit 1. The defective switch was returned to the vendor.
- i. (Closed) Item 416/CDR 81-42 "NUREG 0588, Environmental Qualification of Electrical Equipment" (10 CFR 50.55(e)). The final report was submitted on June 4, 1982. The report has been reviewed and determined to be acceptable. As stated in the final report, the licensee is committed to the qualification of electrical equipment per NUREG 0588 and that this would be on a continuing basis. This environmental qualification subject was handled as part of the licensing action and is also discussed in the Grand Gulf Safety Evaluation Report, NUREG-0831, and its various supplements.

6. IE Bulletin (IEB)

- a. (Closed) IEB 83-08 "Electrical Circuit Breaker with an Undervoltage Trip Feature in Use in Safety Related Applications Other Than the Reactor Trip System" (Unit 1 only). The inspector has reviewed the licensee's letters of June 8, 1984, and determined that the requested actions of the bulletin have been acceptably addressed. The inspector held discussions with responsible licensee representatives and reviewed supporting documentation to verify that the actions identified in the letter of response have been completed.
- b. (Closed) IEB 84-02 "Failures of General Electric Type HFA Relays in Use in Class IE Safety Systems (Unit 1 only). The inspector has reviewed the licensee's letter of July 27, 1984, and determined that the requested actions of the bulletin have been acceptably addressed. The inspector held discussions with responsible licensee representatives and reviewed supporting documentation to verify that the actions identified in the letter of response have been completed.

7. Inspector Followup Items

- a. (Closed) 416/84-06-06 Surveillance Procedure 06-EL-1L51-R-001 Appears To Be Inadequate. The procedure did not specify testing the chargers capability to provide an equalizing charge at 140 volts. Also, it failed to incorporate a requirement on the required recharge period for batteries. The licensee has revised the procedure to require that the 140 volt charging capability be verified and to document that the chargers will recharge Division I and II batteries in 12 hours and Division III in eight hours. The procedure now requires that the Division I and II chargers be tested at 400 amperes at 125 volts minimum and Division III tested at 50 amperes at 125 volts minimum as required in the Technical Specification.
- b. (Closed) 416/84-06-07 Surveillance Procedure 06-1C-1C71-SA-1001 Appears Inadequate. The procedure was not clear that all Electrical Protection Assemblies (EPA) be tested every six months. The procedure was revised to clearly specify that each of the eight EPA's be tested each six months. The revised procedure specifically details the prerequisites for labeling each EPA.
- c. (Closed) 416/84-10-01 Review Procedural Controls for Breaker 152-1901 in Emergency Situations. The licensee has included a caution step in Procedure 10-5-03-2, Response to Fires, Revision 5, which states the necessary actions to be taken if a fire is reported in or near the Gas Turbine Generator (GTG) system. The operator is required to take all ESF busses off of Transformer 11 and open breaker 152-1901. This item is closed.

- d. (Closed) 416/84-10-02 Review the Off Normal Event Procedures to Incorporate The GTG System Operation. The licensee has revised Procedures 05-1-02-I-4, Off Normal Event Procedure Loss of Offsite Power, and 05-1-02-I-6, Off Normal Event Procedure Station Blackout, to incorporate the necessary step to operate the GTG system. The inspector reviewed the procedures and has no further comments.
- e. (Closed) 416/84-10-03 Review the Method for Finding and Controlling the FGP Series Relay. The licensee has verified the location of each FGP Series AGASTAT Relay installed during the outage. The listing of relay location, manufacturer's date code, model and part numbers in a computer listing. This listing will be maintained by Electrical Nuclear Plant Engineering for future replacement schedules.