



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

Report No.: 50-416/85-36

Licensee: Mississippi Power and Light Company
Jackson, MS 39205

Docket No.: 50-416

License No.: NPF-29

Facility Name: Grand Gulf 1

Inspection Conducted: September 17 - October 10, 1985

Inspectors: Robert E. Caldwell
R. C. Butcher, Senior Resident Inspector

10/30/85
Date Signed

Robert E. Caldwell
J. C. Caldwell, Resident Inspector

10/30/85
Date Signed

Approved by: V. W. Parclera
V. W. Parclera, Chief, Project Section 2B
Division of Reactor Projects

10/30/85
Date Signed

SUMMARY

Scope: This routine inspection entailed 116 resident inspector-hours at the site in the areas of Operational Safety Verification, Maintenance Observation, Surveillance Observation, ESF System Walkdown, Reportable Occurrences, Operating Reactor Events, Inspector Followup and Unresolved Items, and TMI Action Items.

Results: Of the eight areas inspected, no apparent violations or deviations were identified in seven areas; one apparent violation was identified in one area and is considered a second example of a previously identified violation (50-416/85-33-04).

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REPORT DETAILS

1. Persons Contacted

Licensee Employees

- J. E. Cross, General Manager
- C. R. Hutchinson, Manager, Plant Maintenance
- *R. F. Rogers, Technical Assistant
- *J. D. Bailey, Compliance Coordinator
- M. J. Wright, Manager, Plant Operations
- *L. F. Daughtery, Compliance Superintendent
- D. Cupstid, Start-up Supervisor
- R. H. McNulty, Electrical Superintendent
- R. V. Moomaw, I&C Superintendent
- B. Harris, Compliance Coordinator
- J. L. Robertson, Operations Superintendent
- *S. F. Tanner, Manager, Nuclear Site QA

Other licensee employees contacted included technicians, operators, security force members, and office personnel.

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on October 10, 1985, with those persons indicated in paragraph 1 above. The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspectors during this inspection. The licensee had no comment on the following inspection findings:

- a. Inspector Followup Item 50-416/85-36-01; Discrepancies in Standby Gas Treatment System Procedures and Drawings. (paragraph 8)
- b. Second Example of previous Violation 50-416/85-33-04; Failure to submit a Licensee Event Report (LER) within 30 days (LER 85-034). (Paragraph 9)

3. Licensee Action on Previous Enforcement Matters (92702)

- a. (Closed) Violation 50-416/85-09-01: The inspector reviewed revised Procedures 06-EL-1L11-R-003, ESF 125 Volt Battery Bank Service Discharge Test, and 06-EL-1L21-0-001, Battery Capacity Discharge Test. The actions taken are adequate. Violation 50-416/85-09-1 is closed.
- b. (Closed) Violation 50-416/85-20-01: Temporary change to perform startup test was inadequate. The inspector has reviewed the licensee's corrective actions and considers the action taken adequate. Violation 50-416/85-20-01 is closed.

- c. (Closed) Violation 50-416/85-20-02: Licensee failed to follow procedure for valve lineup. The inspector has reviewed the licensee's corrective actions and considers the action taken adequate. Violation 50-416/85-20-02 is closed.
- d. (Closed) Violation 50-416/85-06-01: Inadequate procedure resulting in an ESF actuation. The inspector has reviewed the licensee's corrective actions and considers the action taken adequate. Violation 50-416/85-06-01 is closed.
- e. (Closed) Violation 50-416/85-02-01: Incorrect test equipment hookup resulting in Reactor scram. The inspector has reviewed the licensee's corrective actions, including in-house memorandums, and considers the action taken adequate. Violation 50-416/85-02-01 is closed.
- f. (Closed) Violation 50-416/84-37-01: Valve lineup not proper. The inspector reviewed the licensee's corrective actions and found them adequate. A memo from the Operations Superintendent to all operations personnel was issued to explain the violation, emphasize the importance of proper communications and restate the procedural requirements for proper valve checklist performance. Also Administrative Procedure 01-S-06-14 was changed to provide instructions and examples of proper phone and radio communication procedures.
- g. (Closed) Deviation 50-416/85-06-02, Failure to submit yearly ECCS outage reports. By letter dated June 21, 1981, the licensee had committed to submit a summary of ECCS outage data annually to satisfy the reporting requirements of TMI Action Item II.K.3.17. Subsequently, by letter dated May 6, 1985, the licensee requested approval to change their commitment since they participate in the Nuclear Plant Reliability Data System (NPRDS) program in which ECCS outage information is submitted. By letter dated June 27, 1984, the NRC approved the licensee's request of May 6, 1985. This satisfies TMI Action Item II.K.3.17 and deviation 50-416/85-06-02 is closed.

4. Unresolved Item

Unresolved items were not identified during this inspection.

5. Operational Safety Verification (71707)

The inspectors kept themselves informed on a daily basis of the overall plant status and any significant safety matters related to plant operations. Daily discussions were held with plant management and various members of the plant operating staff.

The inspectors made frequent visits to the control room such that it was visited at least daily when an inspector was on site. Observations included instrument readings, setpoints, and recordings; status of operating systems; tags and clearances on equipment controls and switches; annunciator alarms; adherence to limiting conditions for operation; temporary alterations in

effect; daily journals and data sheet entries; control room manning; and access controls. This inspection activity included numerous informal discussions with operators and their supervisors.

Weekly, when onsite, a selected Engineered Safety Feature (ESF) system is confirmed operable. The confirmation is made by verifying the following: Accessible valve flow path alignment; power supply breaker and fuse status; major component leakage lubrication, cooling and general condition; and instrumentation.

General plant tours were conducted on at least a biweekly basis. Portions of the control building, turbine building, auxiliary building, and outside areas were visited. Observations included safety related tagout verifications; shift turnover; sampling program; housekeeping and general plant conditions; fire protection equipment; control of activities in progress; radiation protection controls; physical security; problem identification systems; and containment isolation.

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

6. Maintenance Observation (62703)

During the report period, the inspector observed selected maintenance activities. The observations included a review of the work documents for adequacy, adherence to procedure, proper tagouts, adherence to Technical Specifications, radiological controls, observation of all or part of the actual work and/or retesting in progress, specified retest requirements, and adherence to the appropriate quality controls.

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

7. Surveillance Testing Observation (61726)

The inspector observed the performance of selected surveillances. The observations included a review of the procedure for technical adequacy, conformance to Technical Specifications, verification of test instrument calibration, observation of all or part of the actual surveillances, removal from service and return to service of the system or components affected, and review of the data for acceptability based upon the acceptance criteria.

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

8. ESF System Walkdown (71710)

A complete walkdown was conducted on the accessible portions of the Standby Gas Treatment System (SGTS). The walkdown consisted of an inspection and verification, where possible, of the required system valve alignment, including valve power available and valve locking, where required; instrumentation valved in and functioning; electrical and instrumentation cabinets free from debris, loose materials, jumpers and evidence of rodents; and

system free from other degrading conditions. The following observations were noted:

a. SGTS Operating Instruction (SOI) 04-1-01-T48-1,

- (1) Paragraph 4.1.2.a states to verify closed indication for all SGTS dampers and valves on panel 1H13-P870, sections 2C and 8C. The filter train exhaust fan inlet vane indication is located with a group of damper indications and it is required to be open. This could be misleading.
- (2) Paragraph 7.1 references P&ID M-1101 A, B. This should be P&ID M-1102 A, B.
- (3) Attachment III, page 1 of 4. SGTS A/B lighting is identified as located on MCC/LCC panel 16P11. This should be panel 1L107.
- (4) Attachment III, page 3 of 4. Component "F007, Damper Auxiliary Building EL 119" is identified on the name plate as "F007, Damper Auxiliary Building EL 139."
- (5) Attachment III, page 4 of 4. Breaker number 08-1Y75-24 for Fire Detection Control Cabinet TB1T38D001A-2, and TB1T48D001B-2, is identified as a spare breaker on the 1Y75 cabinet.

b. Drawing M-1102 A, Standby Gas Treatment System, sheet 1

The drawing shows the fuel handling area (elevation 208' - 10") ducting with motor operated dampers T48-F019 and T48-F020 continuing and tee'ing into ducting with motor operated dampers T48-F016 and T48-F017 respectively, which then tees into two 24 inch ducts. Actually, the fuel handling area ducting with motor operated dampers T48-F019 and T48-F020, tee into the larger 24 inch ducting on the 205' elevation. The ducts with motor operated dampers T48-F016 and T48-F017 tee into the larger 24 inch ducting on the 185' elevation.

The items noted are considered minor discrepancies and their correction will be followed as Inspector Followup item 50-416/85-36-01.

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

9. Reportable Occurrences (90712 and 92700)

The below listed Licensee Event Reports (LERs) were reviewed to determine if the information provided met NRC reporting requirements. The determination included adequacy of event description and corrective action taken or planned, existence of potential generic problems and the relative safety significance of each event. Additional inplant reviews and discussions with plant personnel as appropriate were conducted for the reports indicated by an asterisk. The LERs were reviewed using the guidance of the general

policy and procedure for NRC enforcement actions. The following LERs are closed.

LER No.	Event Date	Event
*83-073	September 7, 1982	Scram discharge volume vent and drain valves closure times not verified.
*83-107-2	July 26, 1983	Mounting bolts on division 1 diesel generator turbocharger found loose or broken.
*85-024	June 27, 1985	Reactor manually scrammed when condensate and condensate booster pumps tripped.
85-028	July 17, 1985	Diesel generator 11 inoperable due to failed component.
*85-030	August 7, 1985	Reactor scram due to main generator trip.

The subject of LER 85-024 is discussed in Inspection Report 85-28.

The subject of LER 85-020 is discussed in paragraph 10 of this report as Scram No. 30.

LER 83-073 - Amendment 10 to the operating license (NPF-13) issued license condition 2.C (48) which stated: "for the scram discharge volume operability test required in Technical Specification 4.1.3.1.4.a, the provisions of 4.0.4 are suspended provided that the surveillance requirement is performed within 72 hours after achieving a normal control rod configuration". Subsequently, on September 25, 1983, and on April 25, 1985, Surveillance Procedure 06-OP-1C11-R-0011 was accomplished, including the measurement of the time required for C11-F010A and C11-F011A to close, which satisfied Technical Specification 4.1.3.1.4.a.

LER 85-034, Standby Gas Treatment Filter Train B Efficiency Below Technical Specification Limits, was submitted on October 4, 1985. The licensee identified that no charcoal was installed in a test canister on August 19, 1985, during the performance of a surveillance test. The empty canister was apparently installed in April, 1984. The licensee conducted a test on the B filter train on September 6, 1985, to determine what effect this would have on the efficiency. The efficiency was 99.26 percent versus Technical Specification requirement of 99.95 percent. 10 CFR 50.73 requires that the licensee submit an LER for any event described in part 50.73 within 30 days after discovery of the event. Failure to submit an LER within 30 days of the discovery of the empty charcoal canister, August 19, 1985, is a violation. The licensee has not responded to a previous violation (50-416/85-33-04) regarding the failure to meet the 30 day reporting

criteria of 50.73. This will be carried as a second example of the previous violation and should be addressed in the licensee's response. LER 85-034 remains open.

10. Operating Reactor Events (93702)

The inspectors reviewed activities associated with the below listed reactor events. The review included determination of cause, safety significance, performance of personnel and systems and corrective action. The inspectors examined instrument recordings, computer printouts, operations journal entries, scram reports and had discussions with operations, maintenance and engineering support personnel as appropriate.

- a. Scram No. 30 occurred at 2:02 p.m. on August 7, 1985, with the reactor operating at approximately 92% power. The scram resulted from a turbine trip which was caused by a sensed loss of cooling water flow to the main generator rotor. The licensee determined that painter who was labeling flow transmitter bumped a Harbing connector to one of the transmitters, which was later determined to be bad, causing a loss of signal to one channel of the generator rotor cooling water flow instrumentation. The other channel of rotor cooling water flow was in gross failure (pegged high) due to a high flow situation in the cooling water system. The combination of the sensed loss of flow in one channel and gross failure in the other channel completed the logic in the electric generator protection logic system, causing the main turbine trip. All the reactor protection system instrumentation and safety systems required to support the scram operated properly. The licensee has replaced/reworked the faulty Harbing connection and the rotor cooling water flow was reduced to bring the flow transmitters out of the gross failure condition.
- b. At 2:15 a.m., on September 25, 1985, an inadvertent Division 1 containment isolation occurred. The operators took action to lower reactor power and unisolate certain critical systems (e.g., instrument air, etc.). Investigation by the licensee showed that a transformer in a Westinghouse static inverter (1Y87) had grounded causing an output voltage drop. The inverter was repaired and the reactor returned to power. One discrepancy was noted by the licensee. The drywell equipment drain sump inboard isolation valve, P45-F009, failed to close on the isolation signal. The licensee could not repair the P45-F009 valve while operating. Technical Specification 3.6.4 requires the containment and drywell isolation valves in Table 3.6.4-1 be operable in operational condition 1,2,3 and when associated actuation instrumentation is required to be operable per Table 3.3.2-1. Valve P45-F009 is listed in Table 3.6.4-1. Technical Specification 3.6.4 action statement states in part, that with one or more of the containment or drywell isolation valves shown in Table 3.6.4-1 inoperable, maintain at least one isolation valve operable in each affected penetration that is open and within 4 hours isolate each affected penetration by use of at least one deactivated automatic valve secured in the isolated position.

A subnote stated that isolation valves, except Main Steam Isolation Valves (MSIVs), closed to satisfy these requirements may be reopened on an intermittent basis under administrative controls. The licensee has closed the drywell equipment drain sump outboard isolation valve (P45-F010) and deactivated the control circuit. Standing order 85-0011 has been issued providing administrative controls for intermittent opening of valve P45-F010 for the purpose of pumping the drywell equipment drain sump to maintain the sump level indication on scale. This standing order will remain in effect until the repair of valve P45-F009.

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

11. Inspector Followup and Unresolved Items (92701)

- a. (Closed) IFI 50-416/85-22-02. The licensee has installed permanent information tags next to the Standby Service Water (SSW) basin level recorders as committed to in response to Violation 50-416/84-42-01. These tags ensure operators understand the requirement to fill and vent the SSW basin syphon line anytime the SSW basin level drops below the Technical Specification limit.
- b. (Closed) IFI 50-416/85-09-06, MSIV Failure to Close. The licensee submitted reportable deficiency 85-03 on March 26, 1985, regarding the noted deficiency. A followup report was submitted on April 30, 1985, and the final submittal was included in LER 85-007, Revision 1. The licensee has replaced all eight HTX832320V solenoid valves with fully qualified NP8323A20E solenoid valves. IFI 50-416/85-09-06 is closed. This also closes P21-85-07 which was used to track Reportable Deficiency 85-03.

12. NUREG-0737, Clarification of TMI Action Plan Requirements

- a. NUREG-0737, Item II.K.3.17

The licensee had committed to submit a summary of ECCS Outage Date annually to satisfy the reporting requirements. Failure to meet that commitment was the subject of Deviation 50-416/85-06-02. The licensee has requested and NRC has approved the licensee's request that their participation in the NPRDS Program satisfy this requirement. This item is closed. (See paragraph 3.g of this report).