



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION II
101 MARIETTA ST., N.W., SUITE 3100
ATLANTA, GEORGIA 30303
November 26, 1982

Report No. 50-416/82-69

Licensee: Mississippi Power and Light Company
Jackson, MS 39205

Facility Name: Grand Gulf

Docket No. 50-416

License No. NPF-13

Inspection at Grand Gulf site near Port Gibson, MS

Inspector: W. H. Miller, Jr. 11-23-82
Date Signed

Approved by: T. E. Conlon 11-25-82
Date Signed
T. E. Conlon, Section Chief
Engineering Inspection Branch
Division of Engineering and Technical Programs

SUMMARY

Inspection on November 1-4, 1982

Areas Inspected

This routine, unannounced inspection involved 27 inspector-hours on site in the areas of fire protection/prevention.

Results

Of the areas inspected, no deviations were identified; two violations were found (Failure to implement the Technical Specification requirements for fire rated assemblies and barriers - paragraph 3.a; and Failure to establish and implement procedures for portions of the fire protection program - paragraphs 3.b, 5.b, and 5.d.).

REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *C. K. McCoy, Plant Manager
- *R. A. Ambrosino, Assistant Plant Manager
- *C. R. Hutchinson, Nuclear Support Manager
- *J. W. Yelverton, Nuclear Site QA Manager
- *S. Feith, QA Operations Supervisor
- *C. Hayes, Plant Quality Superintendent
- A. McCurdy, Technical Superintendent
- G. Zinke, Technical Support Supervisor
- R. Williams, Office Services Supervisor
- *D. L. Price, Technical Engineer/STA
- *W. M. Garner, QA Representative
- *S. Slater, Mechanical Engineer/NPE
- *V. Holmberg, Fire Protection Coordinator
- *J. H. Randolph, Technical Support Engineer
- W. Abrams, Licensing
- R. Byrd, Licensing

Other Organizations

- H. D. Castles, Risk Control Specialist/Middle South Services, Inc.
- R. Alexander, Supervisor Field Engineering/Bechtel
- C. Doggett, Field Engineer/Bechtel

NRC Resident Inspector

- A. G. Wagner
- D. E. Scott

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on November 4, 1982, with those persons indicated in paragraph 1 above. The licensee was informed of the following items and acknowledged the findings with no dissenting comment:

- a. Violation (416/82-69-01), Failure to implement the Technical Specification requirements for fire rated assemblies and barriers - paragraph 3.a.
- b. Violation (416/82-49-02), Failure to establish and implement written procedures for portions of the fire protection program - paragraphs 3.b, 5.b, and 5.d.

- c. Inspector Followup Item (416/82-69-03), Licensee to evaluate fire protection QA program commitments and revise FSAR as needed - paragraph 5.d.

3. Licensee Action on Previous Enforcement Matters

- a. (Closed) Unresolved Item (416/82-56-05), Safety related cables in a number of areas of the plant are not provided with sufficient separation between safety divisions. The licensee has initiated an hourly fire watch patrol for all areas of the plant in which the separation between divisions of safety related cables do not conform to the five feet vertical and three feet horizontal criteria of Regulatory Guide 1.75. This fire watch patrol meets the requirements of Technical Specifications (TS) Sections 3.7.7.a. However, the licensee failed to submit the Special Report to the NRC required by this section of the TS. This is identified as Violation (416/82-69-01), Failure to implement the Technical Specifications for fire rated assemblies and barriers. Issuance of this violation closes this unresolved item.
- b. (Closed) Unresolved Item (416/82-56-07), Maintenance and inspection program not provided for 8 and 1½ hour emergency battery powered lighting units. The licensee has not yet prepared and issued these procedures. TS Section 3.8.1.f requires written procedures to be established, implemented, and maintained covering the fire protection program implementation. The failure to provide the procedures for the emergency lighting units required by FSAR Section 9A Table 9A-1 Item 5.a.3 is identified as Violation (416/82-69-02), Failure to establish and implement written procedures for portions of the fire protection program.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Fire Protection Program (64704)

a. Plant Tour

A tour of the plant was made by the inspector. The following fire barrier penetrations were noted to be nonfunctional:

- (1) A total of 26 combination fire and pressure penetrations were found open or in the process of being closed in the floor of the control room. These penetrations were opened on October 27, 1982, by Maintenance Work Order F2B581, but the licensee failed to issue a Limited Condition of Operations (LCO) on these fire barrier openings as required by TS Section 3.7.7. However, fortunately the requirements of the TS were being met by other LCOs which were issued for other open penetrations and the inadequate separation

between redundant division cables. The issuance of LCOs for open fire barrier penetrations will continue to be reviewed during future NRC Inspections.

- (2) Blocked open fire doors OC 500 (between control and turbine building), OC 402 (east stair shaft of control building), and 1A320 (door between steam tunnel and auxiliary building).
- (3) Missing hatch cover (penetration No. CV-126D) between lower cable spreading room and HVAC shaft of the control building.

The above blocked open fire doors and missing hatch cover between fire areas in safety related areas of the plant without the establishment of a fire watch as specified by TS Section 3.7.7 is identified as another example of Violation (416/82-69-01), Failure to implement the Technical Specification requirements for fire rated assemblies and barriers.

b. Surveillance Inspection and Tests of Fire Protection Systems

On October 27, 1982, the licensee found that a number of zones in the fire detection system had not been tested within the time required by the TS. LCO Report 82-0153 was prepared and the licensee stated that this was also to be reported to the NRC within the time limits established by the TS. The potential for this problem was identified during a previous NRC inspection, Report No. 416/82-56, when the inspector found that several fire detector zones were not included in the surveillance inspection and test procedures. At that time, this item was identified as Unresolved Item (416/82-56-02). The failure to include fire detection zones 2-15 and 2-18 in the surveillance procedures is identified as another example of Violation (416/82-69-02), Failure to establish and implement written procedures for portions of the fire protection program.

c. Fire Barrier Modifications

Many of the penetrations through fire barriers separating safety related areas are not classified as safety related on the construction drawings. Therefore, these penetrations are not being assigned any type of QA/QC surveillance when repairs or modifications are made. Appendix B of Quality Assurance Program Q List and FSAR Appendix 9A, Table 9A-1, Item C.2 in general, states that fire protection systems in safety related areas of the plant are to be included in the operational QA program. The failure to provide sufficient procedures to assure that all modifications and repair to fire barrier penetrations are conducted under a QA/QC program is identified as another example of Violation (82-69-02), Failure to establish and implement written procedures for portions of the fire protection program.

- d. Fire Protection QA Program FSAR Appendix 9A, Table 9A-1, Item C.2. Note 4 states, "In general, the fire protection systems (water systems only)...are included in the Operational Quality Assurance Program."

However, the intent as demonstrated in the Quality Assurance Program, Project Q List, Appendix B Section III.1.1, is to include all fire protection systems in the safety related areas of the plant. The licensee is to review this item for a possible FSAR revision. This item is identified as Inspector Followup Item (416/82-69-03), Licensee to evaluate fire protection QA program commitments and revise FSAR as needed.

Within the areas examined, except as noted above, no additional violations or deviations were identified.

6. Licensee Identified Items

The following licensee identified event reports (LER) and licensee's corrective action were reviewed:

- a. (Closed) LER 416/82-007, Fire detection system not installed in HVAC chase at 177' and 189' elevation of control building and rooms OC201 and OC216 of the control building. The event was discovered on July 15, 1982, and final report was issued on September 7, 1982. The installation of the additional detectors was completed on September 28, 1982.
- b. (Closed) LER 416/82-008, Ventilation dampers for divisions 1 and 2 switchgear rooms failed to close upon carbon dioxide actuation signal. The event was discovered on June 26, 1982, and final report was issued on September 7, 1982. The power supply to the dampers has been modified to assure that sufficient power is available to activate the dampers. The installation was completed on August 15, 1982.
- c. (Closed) LER 416/82-014, Fire protection system initiated with no fire due to a faulty supervisory relay. The event occurred on July 13, 1982, and final report was issued on August 4, 1982. Defective relay was replaced on July 14, 1982. Licensee is evaluating the design of the system to determine if any changes should be made. This is presently identified as Inspector Followup Item 415/82-56-09.
- d. (Open) LER 416/82-018, Fire detectors not provided in the plant design for areas identified by the FSAR. The item was not complete.
- e. (Open) LER 416/82-027, Open penetrations - fire and secondary containment. Work on this item was not complete.
- f. (Closed) LER 416/82-028), Acceptance criteria for charge pressure of the halon system was not met. This event was discovered on July 14, 1982, and final report is dated August 26, 1982. The halon cylinders were replaced and system placed in service on July 17, 1982.

- g. (Closed) LER 416/82-041, Penetrations between rooms 1D302, 1D303, and 1D304 were not sealed. The event was discovered on August 8, 1982, and latest report is dated September 7, 1982. The penetrations were sealed on September 22, 1982. However, the work involved in closing these seals was not identified as being safety related. This item is identified as a violation. For details refer to above paragraph 5.c.
- h. (Open) LER 416/82-046, Failure to perform fire door checks. The event was discovered on August 10, 1982, and last report was issued on September 8, 1982. The LER stated that procedures were modified to ensure that personnel will conduct the required fire door inspections. However, upon examination the licensee found the procedures to be adequate. The cognizant personnel were reinstructed. The licensee is to revise this LER.
- i. (Closed) LER 416/82-048, Unsealed fire barrier between two control room cabinets (P712E and P712B). The event was discovered on August 12, 1982, and latest report was issued on September 13, 1982. The fire barriers were sealed on September 22, 1982. The licensee is scheduled to submit a final LER by November 13, 1982.
- j. (Closed) LER 416/82-049, Fire barriers in control room floor not intact. This event was discovered on August 13, 1982 and final report was issued on September 13, 1982. Installation of these 27 barriers was completed on August 19, 1982.
- k. (Closed) LER 416/82-051, Fire detection deactivation in EST switchgear room. This event occurred on August 13, 1982, and final report was issued on September 13, 1982. The fire alarm system for zones 1-4 and 1-6 in the ECS switchgear rooms was deactivated for one day for installation of additional detectors. The system was restored to service on August 14, 1982.
- l. (Closed) LER 416/82-054, Fire detection instrumentation inoperability. This event occurred on August 24, 1982, and final report was issued on September 22, 1982. The alarm system for fuel handling area went into an apparent false alarm condition and was removed from service. The system was restored to service on August 24, 1982.
- m. (Closed) LER 416/82-063, Fire barrier penetrations unsealed in control room. The event was discovered on September 2, 1982, and first report was issued on October 4, 1982. The unsealed fire barrier penetrations in the control room cabinets were sealed on October 6, 1982. A final report is scheduled to be issued by November 6, 1982.
- n. (Closed) LER 416/82-065, Smoke detectors inadvertent alarm in fuel handling area and main steam tunnel. This event occurred on September 7, 1982, and final report was issued on October , 1982. The alarm condition was apparently caused by dust accumulations on the smoke detectors. The detectors were cleaned and restored to service on September 14, 1982.

- o. (Closed) LER 416/82-066, Smoke detector inoperability. The event occurred on September 9, 1982, and final report was issued on October 5, 1982. The detector zone for the 93' elevation of the auxiliary building failed in the alarm condition, apparently due to dust accumulation on the detectors. The detectors were cleaned and systems were returned to service on September 10, 1982.
- p. (Closed) LER 416/82-067, Smoke detectors inadvertent alarm for zone covering 119' elevation for the auxiliary building. The event occurred on September 10, 1982, and final report was issued on October 8, 1982. The detectors were cleaned, sensitivity adjusted, and the system was restored to service on September 12, 1982.
- q. (Closed) LER 416/82-070, Smoke detector alarm for standby service water pump house. The event occurred on September 7, 1982, and final report was issued on October 5, 1982. The detectors in this building alarmed due to smoke from a nearby burn pit being drawn into the building. The system was returned to service on September 16, 1982.
- r. (Closed) LER 416/82-073, Smoke detector inadvertent alarm in auxiliary building. The event occurred on September 9, 1982, and final report was issued on October 8, 1982. The alarm was caused by paint fumes from painting operations in the area. The detectors were cleaned and placed back into service on September 10, 1982.
- s. (Closed) LER 416/82-075, Steam tunnel fire door open without fire watch stationed. The event occurred on September 15, 1982, and final report was issued on October 13, 1982. The fire door was required to be open to allow maintenance work in the steam tunnel. A fire watch was maintained for 14 days. The fire door was secured upon completion of the maintenance work. However, this door was found blocked open during this inspection. Refer to above paragraph 5.a.
- t. (Closed) LER 416/82-076, Smoke detectors alarmed and would not clear for portion of the auxiliary building. The event occurred on September 23, 1982, and final report was issued on October 23, 1982. The detectors apparently failed due to dust accumulation. These detectors were cleaned and system was returned to service on September 29, 1982.
- u. (Closed) LER 416/82-077, Fire barrier penetrations found unsealed between auxiliary and control building. The event was discovered on September 30, 1982, and final report was issued on October 13, 1982. The unsealed penetrations were sealed on September 30, 1982.
- v. (Closed) LER 416/82-083, Broken fire barrier penetrations in auxiliary and control buildings. This event occurred on September 18, 1982, and final report was issued on October 18, 1982. Nine fire barrier penetrations were broken for installation of additional conduits on September 18, 1982. A fire watch was maintained until the fire barriers were resealed on September 21, 1982.

- w. (Closed) LER 416/82-085, Broken fire barrier penetrations in containment. The event occurred on September 16, 1982, and final report was issued on October 18, 1982. Three fire barriers were broken for installation of additional cables. A fire watch was maintained until the fire barriers were resealed on September 18, 1982.
- x. (Closed) LER 416/82-086, Fire detection zones trouble light - improperly seated smoke detector. This event occurred on September 16, 1982, and final report was issued on October 18, 1982. The detector was resealed, tested, and system returned to service on September 27, 1982.
- y. (Closed) LER 416/82-090, Five penetration fire door alarms inoperative (special report). This event was discovered on September 20, 1982, and final report was issued on October 25, 1982. The fire door alarms were repaired, retested, and returned to service on September 29, 1982.

7. Inspector Followup Items

(Open) Inspector Followup Item (416/82-56-04), List of redundant safe shutdown circuits which are not separated by at least a 1-hour fire rated barrier is not provided onsite. This data was forwarded to the site by Design Change Notice 1 to drawing E-0731; however, this data was not available in the licensee's document control center. The licensee stated that this problem was to be evaluated as well as if any other recent DCNs were not received. This item remains open.