



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

Report No.: 50-416/84-45

Licensee: Mississippi Power and Light Company
Jackson, MS 39205

Docket No.: 50-416

License No.: NPF-29

Facility Name: Grand Gulf 1

Inspection Conducted: November 13-16, 1984

Inspector: *W. H. Miller, Jr.* 12-11-84
W. H. Miller, Jr. Date Signed

Approved by: *T. E. Conlon* 12-11-84
T. E. Conlon, Section Chief Date Signed
Engineering Branch
Division of Reactor Safety

SUMMARY

Scope: This routine, unannounced inspection entailed 28 inspector-hours at the site during normal duty hours, in the area of fire protection/prevention.

Results: One violation was identified - Inadequate fire brigade training.

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REPORT DETAILS

1. Licensee Employees Contacted

- *J. D. Bailey, Compliance Coordinator
- T. Barnett, Electrical Engineer
- *K. E. Beatty, Training Superintendent
- W. Brown, Fire Protection - Training
- *J. E. Cross, General Manager
- *L. F. Daughtery, Compliance Superintendent
- *A. V. Holmberg, Fire Protection Coordinator
- *S. R. Hutchin, Principal Electrical Engineer
- *J. L. Robertson, Operation Superintendent
- *R. F. Rogers, Technical Assistant to General Manager
- W. Russell, Operations Assistant
- D. H. Wells, Training Supervisor
- *M. C. Williams, Chemical/Radiation Superintendent

Other Organizations

- *H. D. Castles, Middle South Services

NRC Resident Inspector

- *J. L. Caldwell

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on November 16, 1984, with those persons indicated in paragraph 1 above. The licensee acknowledged the following inspection findings:

- a. Inspector followup Item (416/84-45-01), Review of Licensee Identified Appendix R Discrepancies - Paragraph 5.
- b. Violation Item (416/84-45-02), Inadequate Fire Brigade Training - Paragraph 6.a.(2).
- c. Unresolved Item (416/84-45-03), Inadequate Plant Training for Off-site Fire Department Personnel - Paragraph 6.b.
- d. Inspector Followup Item (416/84-45-04), Review of Corrective Action Taken on Triennial Fire Protection Audit Findings - paragraph 6.f.

3. Licensee Action on Previous Enforcement Matters

This subject was not addressed in the inspection.

4. Unresolved Items

Unresolved items are matters about which more information is required to determine whether they are acceptable or may involve violations or deviations. New unresolved items identified during this inspection are discussed in paragraph 6.b.

5. Potential 10 CFR Appendix R Discrepancies

On November 2, 7 and 13, 1984, MP&L reported to the NRC by telephone that several cable raceways in various areas of the plant had been identified which did not appear to meet the separation and/or fire protection requirements of Appendix R, Section III.G. MP&L is currently evaluating these raceway interactions to determine if cables for redundant shutdown components are actually involved. Pending completion of the licensee's evaluation and implementation of the necessary corrective actions, appropriate fire watches are being maintained in various areas of the plant as required by the Technical Specifications. The inspector toured the plant areas containing the identified potential discrepancies and verified that each area was provided with the appropriate fire watch. The general housekeeping with respect to flammable and combustible materials in these areas was adequately controlled.

Following the recent NRC issuance of Generic Letter 83-33 and IE Notice 84-04, and the Region II Appendix R workshop of May 4, 1984, MP&L began a reevaluation of the fire protection and safe shutdown features to verify compliance with 10 CFR 50 Appendix R. This evaluation is to revise or supplement the existing Grand Gulf Fire Protection Program Review of FSAR Appendix 9A and is to assimilate appropriate data to demonstrate that the plant meets the intent of all provisions of Appendix R. Any discrepancies identified during the reevaluation are to be properly reported to the NRC and corrected or appropriate deviations with justifications are to be developed. This reevaluation is scheduled to be completed by December 31, 1984, and the Fire Protection Program Review revised by March 1, 1985.

A detailed NRC Appendix R inspection of Grand Gulf is presently scheduled for April 15-19, 1985. The existing licensee identified potential Appendix R discrepancies and any future identified discrepancies will be reviewed during this inspection. Any required enforcement action is being deferred pending completion of MP&L's evaluation. This is identified as Inspector Followup Item (416/84-45-01), Review of Licensee Identified Appendix R Discrepancies, and will be reviewed during a subsequent NRC inspection.

6. Fire Protection/Prevention Program (64704)

The implementation of the following items of the licensee's fire protection and prevention program was reviewed:

a. Fire Brigade

(1) Organization

The fire brigade is composed of 63 operation personnel. The team leader for each shift brigade is one of the shift reactor operators and the team members are composed of at least four additional shift personnel. These personnel normally consist of two nuclear operators and two auxiliary unit operators. The shift assignments for the weeks of October 10-13, and November 3-9, 1984, were reviewed to verify that sufficient manpower was available to meet the minimum operational and fire brigade manning requirements of the Technical Specifications.

(2) Training

A review was made of the training and drill records of four brigade leaders and ten members from July 1983 to the present, in order to assure compliance with site procedure 01-S-04-12, Fire Protection Training Program. Of the training records reviewed, all members had received the basic fire protection training and site specific training within the past year (+ 3 months) except one member was overdue on site specific training. The leadership training for the brigade members was also up-to-date. However, of the 14 records reviewed, nine personnel were deficient in attendance of the quarterly training required by Procedure 01-S-04-12, Section 6.6, and three of the brigade members had not received an annual physical examination within the past year to determine their ability to perform strenuous fire fighting activities as required by Procedure 01-S-04-12, Section 6.8. The failure to meet these training requirements is identified as an example of Violation Item (416/84-45-02) Inadequate Fire Brigade Training.

Grand Gulf Procedure 01-S-08-4, Radiological Respiratory Protection Program, Section 6.3, requires individuals who utilize respiratory protection equipment to have an initial physical examination with annual medical review; training in respirator protective equipment; and initial fit test and a subsequent followup fit test every two years (+ 30 days). Of the 14 fire brigade members reviewed, eight were not respiratory qualified due to lack of training or their medical review was not up-to-date. This is another example of the above Violation (Item 416/84-45-02).

(3) Training Facility

A 25'x50' training facility structure has been erected on the plant site. This facility is used to simulate various types of potential plant fires, such as motor, cable tray, switchgear and flammable gas line fires. The inspector witnessed portions of the training and it appeared that this facility will significantly aid the training of the brigade.

(4) Fire Brigade Equipment

A fire department type apparatus, 1000 gpm pumper, is assigned to the site and is stored in an all-metal building within the protected area. A good supply of fire hose, nozzles and miscellaneous equipment is provided on the apparatus. Additional equipment is stored in lockers in five key locations within the turbine and auxiliary buildings. A total of 20 sets of turnout gear (coats, helmets, boots, gloves, etc.) is provided and is equally distributed to each of these lockers. An additional 22 sets are also available for training. Twenty self-contained breathing apparatus are dedicated for fire brigade use and are stored adjacent to the above lockers. Fifty spare cylinders are available and an air compressor is available to refill the self-contained breathing units. The fire brigade equipment appeared adequate, properly stored, and satisfactorily maintained.

b. Offsite Fire Fighting Organization

The Plant Emergency Plan, Section 8.2.3, states that emergency plant training will be provided to appropriate off-site support agencies. Emergency Plan Table 8-1 states that local fire departments will be offered training annually and that this training will include general orientation, interface between plant and off-site support groups during an emergency, emergency classifications and expected response. Records are not available on site to indicate when this training was last given. The licensee is investigating this apparent discrepancy. Pending completion of this investigation, this is identified as Unresolved Item (416/84-45-03), Inadequate Plant Training for Off-site Fire Department Personnel.

c. Fire Protection Staff

Coordination of the plant's fire protection program is accomplished by the site fire protection coordinator with assistance from the fire brigade training instructor. Both personnel appear to be well qualified for their assigned responsibilities.

d. Fire Protection Systems

(1) Surveillance Inspection and Test Records

The completed surveillance inspection and test records for the following systems at indicated dates were reviewed to verify that these systems were inspected and tested within the frequency established by the Technical Specifications:

- (a) 06-EL-SP65-SA-1001, Fire Detection System (Items EL 3624, 3625, 3628 and 3630), September 2, 1983 through August 27, 1984
- (b) 06-ME-SP64-0002, PGCC Halon System Bottle Weight Check (Cabinet Nos. 1H13P901, 1H13P902 and 1H13P930), May 9, 1983 through May 29, 1984
- (c) 06-ME-SP64-A-1001, Halon Nozzle Flow Test (Cabinet Nos. 1H13P912, 1H13P936 and 1H13P938), January 11, 1983 through April 19, 1984
- (d) 06-IC-SP64-SA-1001, Halon System Functional Test (Panel Nos. 1H13P900, 1H13P901 and 1H13P930), July 28, 1983 through September 10, 1984
- (e) 06-ME-SP64-0015, Fire Hose Stations, November 14, 1983 through September 15, 1984
- (f) 06-OP-SP64-0014, Yard Hydrant Check, June 12, 1983 through March 27, 1984. Surveillance for fall of 1984 was in-process.
- (g) 06-OP-SP64-0043, Fire Door Alarm Check, November 10, 1983 through September 15, 1984.
- (h) 06-ME-SP64-R-0047, Fire Barrier Penetrations, December 28-29, 1983. Next surveillance is due June 1985.

(2) Calibration of Fire Protection System Instrumentation.

A review was made of Maintenance Planning Scheduling System Report 9 to verify that the fire protection system instrumentation devices were under a calibration schedule. The following instruments with most recent calibration data were reviewed:

<u>Device No.</u>	<u>Function</u>	<u>Date of Calibration</u>
N1P64R016	CO ₂ Pressure	9/11/83
N1P64R017	CO ₂ Level	9/12/83
N5P64N001	Water Tank A Level	2/14/84
N5P64R005	Fire Pump Flow Indicator	2/27/84

Note: These instruments are on an 18-month recalibration schedule which is considered adequate.

e. Plant Tour

A plant tour was made by the inspector to review the licensee's implementation of the plant's fire protection program. The general housekeeping as a whole was good. The control of combustible and flammable materials, liquids and gases was satisfactory. One welding operation in the radwaste area was observed. An approved "hot work" permit had been used and appropriate safety precautions were being observed. The fire protection systems within the areas toured were found to be in service and appeared to be satisfactorily maintained.

f. Fire Protection Triennial Audit

The September 14, 1984, Triennial Audit Report of Grand Gulf Nuclear Station, conducted by Professional Loss Control, Inc. (PLC), was reviewed. This report stated that overall the Grand Gulf Fire Protection Program is well conceived, administered and documented. However, five findings were identified. The licensee had taken prompt action to review and initiate appropriate corrective action on these findings as follows:

(1) Class "B" Actuation System for Computer Room Halon System

This halon system per the FSAR does not protect any shutdown components. Therefore, the detection system does not need to be upgraded to a Class "A" system since it complies with the commitments made to the NRC. No further NRC action is required at this time.

(2) Automatic Sprinkler System Discrepancy

There is a discrepancy between the SER and FSAR as to the area of coverage for the sprinkler system in the auxiliary building at elevation 139' between columns 11.0 - 15.1 and G-R. The protection provided covers the area identified in the FSAR. The licensee is to correct the SER discrepancy.

(3) Pre-Fire Plans for Standby Service Water (SSW), Turbine and Radwaste Buildings

Pre-Fire drawings were available at the time of the PLC audit. Following the audit, written procedures to supplement the drawings were prepared.

(4) Fire Detector Analysis

A number of detectors were identified by PLC which did not fully comply with the NFPA Code requirements. The entire plant fire detection system is being reevaluated by Middle South Services, Inc., Loss Prevention Group, to determine if the existing system is adequate or should require modifications. The site review is scheduled to be completed by November 26, 1984, with final review completed by early 1985. Site corrective action has been deferred pending completion of this evaluation.

(5) Plant Modifications

Procedures have been issued to require a fire protection review for all design change packages.

(6) Surveillance of Electrical Valve Supervision

Procedures have been revised to require a semi-annual test of all control valve electrical supervision features, except the normally closed valves to the charcoal filter units are to be tested annually.

(7) Water System Loop Flow Test

Procedures have been revised to address the audit findings and to meet the intent of the NFPA Handbook.

(8) Control Room Procedures

Procedures are not presently available for actions required in the event of a control room fire when off-site power is not available. This procedure will be prepared as part of the Appendix R reevaluation and is to be completed by February 28, 1985.

Review of licensee's final corrective action on the Triennial Audit findings will be reviewed during a subsequent NRC inspection. This is identified as Inspector Followup Item (416/84-45-04), Review of Corrective Action Taken on Triennial Fire Protection Audit Findings.

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