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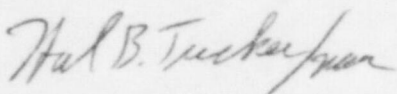
Dr. J. Nelson Grace, Regional Administrator
U.S. Nuclear Regulatory Commission - Region II
101 Marietta Street NW, Suite 2900
Atlanta, Georgia 30323

Reference: Oconee Nuclear Station
Docket No. 50-270

Dear Dr. Grace:

Please find attached a special report on non-functional fire barriers. This report is submitted pursuant to Oconee Nuclear Station Technical Specification 3.17.6 which concerns fire barrier penetrations that cannot be restored to functional status within seven days, and describes an incident which is considered to be of no significance with respect to public health and safety.

Very truly yours,



Hal B. Tucker

PJN/jgm

Attachment

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DUKE POWER COMPANY

OCONEE NUCLEAR STATION

SPECIAL REPORT ON NON-FUNCTIONAL FIRE BARRIERS

Introduction:

On January 16, 1986 a small section of pyrocrete was removed from the fire wall which divides the Unit 2 East and West Penetration Rooms. The pyrocrete was removed to identify a hanger that was to be modified. On February 6, 1986, at 0900 hours, with Unit 2 at 97% full power, this fire wall was determined to be degraded. The degraded condition had existed for 49 days, thus violating Technical Specification 3.17.6 requirements for repair of the fire barrier in 7 days.

The cause of the incident was determined to be personnel error, because the fire wall was degraded, without taking the required compensatory action.

The immediate corrective action was to verify the operability of the fire protection systems and establish an hourly fire watch.

Smoke detector systems located in the East and West Penetration Rooms function as automatic monitoring devices. The rooms are also toured at least twice each shift. Based on the above, the possibility of a fire occurring and spreading and going undetected are very low. Therefore, the health and safety of the public were not affected by this incident.

Description of Occurrence:

On February 6, 1986, with Unit 2 at 97% full power, the fire wall located in the Unit 2 West Penetration Room was inspected and determined to be degraded.

Upon investigation of the incident, it was learned that Nuclear Station Modification (NSM) 1714 was issued on June 28, 1985 to modify a hanger. The NSM package was returned on July 16, 1985 without any work being performed because the hanger was located in a fire wall.

On September 26, 1985, NSM 1714 was reissued. The package was returned on October 8, 1985 for a similar reason.

On January 16, 1986, NSM 1714 was again reissued. When the hanger could not be identified, a small section of pyrocrete (about 6"x8"x2") was removed, exposing a section of steel. The removal of the pyrocrete was not documented. A procedure is not required to remove or install pyrocrete.

The exposed steel was inspected, and NSM 1714 was returned on January 17, 1986, because hanger drawings did not correctly show the steel that was located.

On March 5, 1986, NSM 1714 was again reissued. Upon inspection of the job, pyrocrete removal was reported to Maintenance Services and Project Services on March 6, 1986 at 0800 hours. Shortly after this time, the fire wall was declared degraded. At 0945 hours a work request was initiated to repair Penetration 2PE6. The work request should have read, repair fire wall near

Penetration 2PE6. The 7 day Technical Specification 3.17.6 requirement was noted on the work request. The fire detection system for the East and West Penetration Rooms was verified operable at this time.

The required hourly fire watch was started at 1345 hours.

Due to a misunderstanding between personnel, no work began.

On March 7, 1986, another inspection of the fire wall was made and discovered a small section had also been removed from the East side. The investigation could not determine when it was removed or by whom. It is believed that it was removed some time after January 16, 1986, because this was the date that the actual work began on the NSM package.

On March 12, 1986, conversation between Construction and Maintenance Supervisors concluded that pyrocrete work had not yet begun. Three days were then spent attempting to receive issue of the material, without success.

On March 18, 1986, pyrocrete material was transferred from Catawba Nuclear Station and work on the fire wall was completed on March 19, 1986, at 1000 hours.

Cause of Occurrence:

The root cause of the degraded fire wall and failure to comply with Technical Specification 3.17.6 was that a Construction and Maintenance Supervisor failed to recognize that removing a small amount of pyrocrete would degrade the fire wall and did not initiate the proper action needed to ensure compliance with Technical Specifications.

A contributing cause to this incident is management deficiency, because management issued the NSM hanger package to a number of Craft Supervisors after it was known that a fire wall would interfere with the hanger modification, without giving any guidance to the Craft Supervisors or contacting the Fire Barrier Accountable Engineer. However, this hanger is the first to require modification that involved a fire wall. It is concluded that lack of experience and inattention to the planning phase of the work was the cause of the management deficiency.

The fire wall in Unit 2 West Penetration was qualified as a 3 hour barrier by model testing. When any portion of the wall is removed, it is concluded that the fire wall is degraded. Two small sections of pyrocrete were removed, one section from the West side and one section from the East side. The two sections that were removed were in different areas of the wall, several feet apart. There was never a complete through hole in the wall. The wall was not declared non-functional, but degraded. It is difficult to know to what degree the wall was degraded, but a non-conservative estimate is less than 2 hours but greater than 1 hour.

The Construction and Maintenance Supervisor did not know that the removal of a small section of pyrocrete from the fire wall would degrade the barrier. He is qualified to install pyrocrete under Coating Specifications 0-155-LI, but not qualified to determine what constitutes fire wall degradation.

Corrective Action:

The immediate corrective action was to initiate a work request to repair the fire wall, start hourly fire watch tours, and verify operability of the fire detection system.

Supplemental corrective actions included:

- Fire wall repaired and declared fully functional on March 21, 1986, at 1000 hours.
- A memo has been written by Maintenance Services to instruct all Station Personnel to contact Maintenance Services before any work is performed on fire barriers.
- Appropriate personnel have been counseled regarding proper documentation, and the necessity to ensure that appropriate action is taken to correct deficiencies.

Planned corrective actions are to change procedure MP/0/A/3019/04 to include in prerequisites a requirement for the Penetration, Fire Barrier Accountable Engineer to be notified of all work on any penetration, fire wall (i.e., repair, modification, removal, or installation) prior to work. Also a sign off step for the accountable Engineer and documentation for penetration fire barrier work request numbers. This change will be completed by 5-7-86. All appropriate Construction and Maintenance Supervisors will review the incident report to benefit from lessons learned.

Analysis of Occurrence:

No equipment or systems were affected by this incident. The possibility of a fire occurring in the Penetration Rooms is remote. The use of high heat, such as welding or burning on a job in these areas, is restricted and requires a burning permit and fire watch.

Smoke detector systems are located in the East and West Penetration Rooms that function as automatic monitoring devices. Fire fighting equipment is located outside the Penetration Room's door. The Penetration Rooms are toured at least twice each shift. An hourly fire watch patrol was established when the fire wall was identified as degraded. Based on the above, the possibility of a fire occurring and spreading and going undetected are very low. Therefore, the health and safety of the public were not affected by this incident.