



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

January 5, 2000

LICENSEES: New York Power Authority  
Entergy Operations  
South Carolina Electric and Gas Company  
Southern Nuclear Operating Company

FACILITIES: James A. Fitzpatrick Nuclear Power Plant  
Grand Gulf Nuclear Station  
Virgil C. Summer Nuclear Station  
Joseph M. Farley Nuclear Plant, Units 1 and 2

SUBJECT: SUMMARY OF MEETING TO DISCUSS KAOWOOL AND FP-60 FIRE BARRIERS

On December 8, 1999, the Nuclear Regulatory Commission (NRC) met with the four licensees that operate nuclear power plants that use Kaowool or FP-60 fire barriers to meet regulatory requirements for protecting post-fire safe shutdown equipment. The purpose of the meeting was to discuss the possibility of resolving the issues associated with these fire barriers through a voluntary industry initiative. Enclosure 1 is a list of the meeting attendees. The slides presented by the NRC staff are available under ADAMS accession number ML993430349. There were no slides presented by the licensees.

The staff, in its presentation, stated that the length of time that Kaowool or FP-60 fire barriers could maintain the protected component free of fire damage is indeterminate. The staff also presented the results of a preliminary probabilistic risk assessment that concluded that degradation of the fire barriers could have results which are potentially significant.

Following is a summary of the licensees' discussions during the meeting:

Fitzpatrick - Fitzpatrick utilizes approximately 60 linear feet of FP-60 barrier material (six layers, each layer is one-half inch thick) on one cable. The licensee has determined the system to be operable and has not instituted any compensatory measures. They believe their use of FP-60 is not similar to the other three plants, and therefore, they will not join the other plants to resolve the issue. The licensee is continuing to evaluate the issue and will discuss the results of this evaluation with the staff when the evaluation has been completed. The licensee is expecting to complete this evaluation by the end of January 2000.

Grand Gulf - Grand Gulf uses approximately 1500 linear feet of Kaowool barrier material (two layers, each layer is 1-inch thick). The licensee considers these barriers to be "degraded" and, therefore, has instituted a 1-hour fire watch as a compensatory measure. The licensee's use of Kaowool is similar to Farley's, and they are considering joining with Farley in an effort to resolve the issue.

Summer - Summer uses approximately 1000 linear feet of Kaowool fire barrier material (three layers, each layer is 1-inch thick). The licensee has determined the system to be operable and has not instituted any compensatory measures. They believe their use of Kaowool is not similar to the other three plants, and therefore, they will not join the other plants to resolve the issue.

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However, in December 1999, the licensee will be conducting confirmatory fire endurance tests of several Summer-specific configurations. The licensee asked the staff two questions concerning the upcoming tests. They asked if the staff would require continuous meggar testing throughout the test. The staff responded that continuous meggar testing was not required during fire endurance tests, but if the licensee wants to obtain data for cable functionality evaluations, meggar tests of the cables should be performed before the fire exposure and immediately after the fire source was terminated (before the hose stream test). The licensee also asked if a hose stream test was required, since the hose stream might damage the remaining fire barrier material. The staff said that the hose stream test should be conducted. If the barrier material is damaged by the hose stream test, then the licensee should evaluate the consequences of that result. The licensee stated that after it completes and evaluates its fire tests, it would meet with the staff to discuss the results and determine whether or not it had resolved the Kaowool fire barrier issue for Summer.

Farley - Farley uses approximately 6000 linear feet of Kaowool fire barrier material. The barrier details are documented in a letter to the licensee dated August 26, 1999, "Adequacy of Kaowool Fire Barriers". Farley has instituted a 1-hour fire watch as a compensatory measure because some of the fire barrier material had degraded and has to be restored to the original configuration. The licensee's use of Kaowool is similar to Grand Gulf's, and therefore, Farley and Grand Gulf will be discussing a joint effort to resolve the issue. In the event that this effort includes testing, the staff and the licensee briefly discussed fire tests methods and acceptance criteria that would be acceptable to the staff. The staff suggested that a good starting point would be for the licensee to review the existing staff guidance on fire endurance testing (e.g., Generic Letter 86-10, Supplement 1) and the results of the staff's review of the many fire tests that had been conducted by other licensees to resolve the Thermo-Lag issue. The staff informed the licensee that the staff would review the licensee's fire test plan before the licensee conducted any fire tests. This would provide an early opportunity to resolve any issues or questions, and it would provide assurance that the tests would help resolve the Kaowool issue. Farley also requested a separate meeting with the staff to discuss the Farley licensing basis associated with these fire barrier materials. The meeting is tentatively scheduled for January 19, 2000. Prior to the meeting, the staff will be sending to the licensee a compilation of the licensing and regulatory documents that are germane to the use of Kaowool at Farley.



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Docket Nos. 50-348, 50-364, 50-333,  
50-416, and 50-395

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KAOWOOL MEETING, DECEMBER 8, 1999

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L. Olshan  
M. Rubin  
M. Salley  
P. Sekerak  
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Enclosure

Meeting Summary

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 Division of Project Licensing Management  
 Office of Nuclear Reactor Regulation

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 50-416, and 50-395

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