



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION II
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

July 1, 2011

MEMORANDUM TO: Joseph D. Austin
Senior Resident Inspector

FROM: Victor M. McCree */RA/*
Regional Administrator

SUBJECT: SPECIAL INSPECTION CHARTER TO EVALUATE OCONEE
PRESSURIZER HEATER BREAKERS

You have been selected to lead a Special Inspection (SI) to assess the circumstances concerning the capability of the currently-installed standby shutdown facility pressurizer heater breakers at Oconee Nuclear Station Units 1, 2, and 3 to perform their function. Your onsite inspection should begin on July 5, 2011. Shakur Walker, Mark Riches, Kevin Ellis, and Benjamin Parks will be assisting you in this inspection.

A. Basis

Duke was notified that environmental testing of the Oconee Nuclear Station standby shutdown facility (SSF) pressurizer heater breakers was not successful and the breakers were declared degraded but operable. The SSF is credited for mitigating fire, tornado, HELB, and internal and external flood events and the licensee may not be capable of maintaining reactor coolant system (RCS) pressure control in this condition should certain events occur. The breakers are located inside containment. As a compensatory action, the licensee modified the SSF abnormal operating procedure to establish water solid conditions in the pressurizer as a means for controlling RCS pressure. This issue meets the criteria of Management Directive (MD) 8.3 in that the method for controlling RCS parameters with the SSF may not have been capable of being implemented and may not meet the design basis of the facility.

The specific issues of concern are:

- Would the SSF perform its design basis with the loss of pressurizer heaters at lower temperatures?
- Will the SSF perform its design basis function with the licensee's compensatory measures?

CONTACT: Jonathan H. Bartley, RII/DRP
(404) 997-4607

In accordance with MD 8.3, "NRC Incident Investigation Program," deterministic and conditional risk criteria were used to evaluate the level of NRC response for this operational event. Two deterministic criteria were met. The issue involved operations that exceeded, or were not included in, the design bases of the facility and involved repetitive failures or events involving safety-related equipment or deficiencies in operations. The updated Conditional Core Damage Probability (CCDP) for the event was in the overlap region of a Special Inspection and an Augmented Inspection Team. A Special Inspection was deemed appropriate in this case.

Accordingly, the objectives of the inspection are to: (1) determine the facts surrounding the degraded condition of the Oconee SSF; (2) evaluate the licensee's response to this condition; and, (3) determine if the design basis of the facility was met.

B. Scope

To accomplish these objectives, the following will be performed:

- Assess the ability of the SSF to meet its design basis functions with the as found condition
- Assess the revised SSF abnormal operating procedure AP/1,2,3/A/1700/025 to determine the likelihood of success when using the new RCS pressure control strategy to maintain RCS subcooling following a loss of all SSF-powered pressurizer heater banks
- Assess the licensed operators' training and capability to successfully implement the revised SSF abnormal operating procedure to maintain the reactor stable in hot standby for a period of 72 hours
- Assess the thermo-hydraulic analysis performed to justify the feasibility of the revised operating methodology including the impact of temperature and pressure transients on core cooling, subcooling margin and challenges to the integrity of the RCS; i.e., the licensee's safety evaluation of the compensatory measures contained in the Operability Evaluation
- Assess the licensee's implementation of their operability determination process in the evaluation of the SSF's operability based on the identified condition including the 50.59 screening used to approve the use of water solid operations as an acceptable method of RCS pressure control during SSF-credited events
- Assess the licensee's activities related to the problem investigation performed to date (e.g., root cause analysis, extent of condition, additional equipment failure mechanisms, etc.)
- Assess the licensee's classification of the pressurizer heater breakers as being non-safety related, including the acceptability of placing the breakers into operation before completing testing.

- Document the inspection findings and conclusions in an inspection report within 45 days of the inspection
- Conduct an exit meeting

C. Guidance

Inspection Procedure (IP) 93812, "Special Inspection," provides additional guidance to be used during the conduct of the inspection. Your duties will be as described in IP 93812 and should emphasize fact-finding in its review of the circumstances surrounding the degraded condition. Safety or security concerns identified that are not directly related to the event should be reported to the Region II office for appropriate action.

You will report to the site, conduct an entrance, and begin inspection no later than July 5, 2011. It is anticipated that the on-site portion of the inspection will be completed during this week. An initial briefing of Region II management will be provided the second day on-site at approximately 4:00 p.m. In accordance with IP 93812, you should promptly recommend a change in inspection scope or escalation if information indicates that the assumptions utilized in the MD 8.3 risk analysis were not accurate. A report documenting the results of the inspection should be issued within 45 days of the completion of the inspection. The report should address all applicable areas specified in section 3.02 of IP 93812. At the completion of the inspection you should provide recommendations for improving the Reactor Oversight Process baseline inspection procedures and the Special Inspection process based on any lessons learned.

This charter may be modified should you develop significant new information that warrants review. Should you have any questions concerning this charter, contact Jonathan H. Bartley at (404) 997-4607.

Docket Nos.: 50-269, 50-270, 50-287

License Nos.: DPR-38, DPR-47, DPR-55

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 ADAMS: Yes ACCESSION NUMBER: ML111823493 SUNSI REVIEW COMPLETE

OFFICE	RII:DRP	RII:DRP	RII:ORA	RII:ORA			
SIGNATURE	JHB /RA/	RPC /RA/	LDW /RA/	VMM /RA/			
NAME	JBartley	RCroteau	LWert	VMcCree			
DATE	07/01/2011	07/01/2011	07/01/2011	07/01/2011			
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO