



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

May 17, 1989

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

Mr. H. B. Tucker, Vice President  
Nuclear Production Department  
Duke Power Company  
422 South Church Street  
Charlotte, North Carolina 28242

Dear Mr. Tucker:

SUBJECT: COMMENTS ON EXPEDITIOUS ACTIONS AND NOTICE OF AUDIT ON OCONEE  
NUCLEAR STATION, UNITS 1, 2, AND 3 (TACS 69758, 69759, and 69760)

Generic Letter (GL) 88-17 was issued on October 17, 1988 to address the potential loss of decay heat removal (DHR) during nonpower operation. In the GL, we requested (1) a description of your efforts to implement the eight recommended expeditious actions of the GL and (2) a description of the enhancements, specific plans and a schedule for implementation of the six recommended program enhancements.

The NRC staff has reviewed your response to Generic Letter 88-17 on expeditious actions in the letter of January 3, 1989. As you are aware, the expeditious actions are an interim measure to achieve an immediate reduction in risk associated with reduced inventory operation, and these will be supplemented and in some cases replaced by programmed enhancements. We find that your response on expeditious actions appears to meet the intent of the GL but lacks some of the details requested in Enclosure 2 of GL 88-17. The brevity of the response to some items does not allow us to fully understand your actions taken in response to GL 88-17. You may wish to consider several observations in order to assure yourself that the actions are adequately addressed:

1. You mention a training package developed for all appropriate personnel including shift operators and supervisors, and licensed staff and Operations Section Heads on the Diablo Canyon event, related events, and lessons learned. It is not specifically stated that maintenance personnel are also included. The item was intended to include all personnel who can affect reduced inventory operation. The response was brief and did not provide an outline of topics covered.
2. You indicate that administrative controls have been developed and procedures are in place to reasonably assure that containment closure can be achieved within the time at which core uncovering could result from a loss of DHR coupled with an inability to initiate alternate cooling or addition of water to the RCS inventory. You have not presented any times for containment closure. Generic Letter 88-17 states that "containment penetrations including the equipment hatch, may remain open provided closure is reasonably assured within 2.5 hours of initial loss of DHR."

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3. In some plants the quick closing of the equipment hatch is achieved by the installation of a reduced number of bolts. If you plan to use less than the full complement of bolts for sealing the equipment hatch then you should first verify that you can make a proper seal of the periphery mating surfaces to meet the closure criteria.
4. You indicate that presently one permanent RCS level indication is available per unit in the control room. Also, you state that a temporary second level instrument is being evaluated for use in the next refueling outage. Other alternatives are being evaluated as programmed enhancements. You state that the RCS water level will be monitored and recorded at least once every two hours when mid-loop conditions exist and continuous monitoring and alarm capabilities are not in use. In the descriptions of the above level instrumentation you have not provided any information as to the type of level instruments, where the taps are located, and the range and accuracy of the instruments. Also, you have not stated which level systems have capability for monitoring in the control room with alarms. It is implied that at least one system has capability to be continuously monitored and alarmed. As stated in Enclosure 2, Section 2.4 of GL 88-17, if the level readings are not automatically and continuously monitored and alarmed in the control room, then the level reading observations should be recorded at an interval no greater than 15 minutes. Provision should be made for providing immediate water level values to an operator in the control room. When two or more level instruments are in place, care should be taken to resolve any discrepancy between the measurement systems. Also, the pressure of the reference leg should approximate the pressure of the void in the hot leg or be compensated to obtain the correct level value.
5. You have indicated that your backup means for adding inventory to the RCS when operating in a reduced inventory condition will include two means: (1) a gravity flow path from the borated water storage tank, and (2) a bleed transfer pump and connecting piping to the RCS. Both of these means will have procedural guidance for establishing flow in the abnormal procedures and/or controlling procedures. In addition, you have stated that to compensate for the lack of a high pressure make up source, either one high pressure injection pump will be available or both steam generator upper primary side manholes will be removed to avoid RCS pressurization before establishing a reduced inventory condition. You have made no reference to any analysis performed to demonstrate the adequacy of these systems to keep the core covered during RCS conditions arising from loss of RHR.
6. For a hot leg vent, you have indicated that both steam generator upper manholes will be removed whenever the RCS is in a reduced inventory condition. The removal of a pressurizer manway or steam generator manway is a means to provide RCS venting. However, calculations need to be performed to verify the effectiveness of RCS openings because even for relatively large hot side openings in the RCS, pressurization to several psi can still result.

Mr. H. B. Tucker

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May 17, 1989

There is no need to respond to the above observations at this time as we intend to audit both your response to the expeditious actions and your programmed enhancement program. The areas where we do not fully understand your responses as indicated above may be covered in the audit of expeditious actions. Audit details will be scheduled in the near future.

This closes out the staff review of your responses to the expeditious actions listed in the GL. The area of programmed enhancements will be addressed in a separate letter.

Sincerely,

A handwritten signature in black ink that reads "Darl S. Hood". The signature is written in a cursive style with a large, sweeping initial "D".

Darl S. Hood, Acting Project Manager  
Project Directorate II-3  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

cc: See Next Page

Mr. H. B. Tucker

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May 17, 1989

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Darl S. Hood, Acting Project Manager  
Project Directorate II-3  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

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D. Hood

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Oconee Plant File

PDII-3

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Mr. H. B. Tucker  
Duke Power Company

Oconee Nuclear Station  
Units Nos. 1, 2 and 3

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