



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

August 19, 1997

MEMORANDUM FOR: Docket File

FROM: Peter S. Tam, Senior Project Manager  
Project Directorate II-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation *Peter S. Tam*

SUBJECT: CATAWBA UNIT 1 - PROPOSED AMENDMENT TO PERMIT A NATURAL  
CIRCULATION TEST (TAC M98728)

REFERENCE: Memorandum, T. E. Murley to all NRR employees, June 20, 1988  
(NRR Office Letter No. 106, Revision No. 1)

The attached message was faxed today to Robert Sharp and Mike Kitlan of Duke Power Company. The sole purpose of the message is to prepare Duke Power Company personnel for a conference call. While the staff may later formally communicate all or parts of the same message, the message in its present form does not constitute a formal request for information or represent an NRC staff position.

Docket Numbers 50-413

Distribution

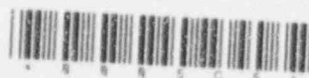
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Catawba Nuclear Station, Unit 1  
Proposed Amendment on Natural Circulation  
Issues for Telephone Discussion

1. Test procedure and the major recovery steps in the procedures that you stated would be used for recovery from the test.
2. The staff requests that should you experience problems which result in terminating the test, that you consult with us and get concurrence prior to any subsequent attempts.
3. An analysis or evaluation of the test you wish to perform. Include any evaluations that were performed during the steam generator replacement effort to justify the replacement steam generator with respect to natural circulation and Branch Technical Position RSB 5-1.
4. During the initial test you experienced a problem with the reactor coolant pump that you described as follows: "...a reactor coolant pump could not be restarted for a period of time at the completion of the test due to a high stand pipe level." Discuss how this problem will be prevented in this test. Discuss this not only from the perspective of violating technical specifications out from the perspective of being able to start the pump.
5. The initial test was required to be performed at core burnups which ensure that no significant core decay heat levels are present. In that case, a reactor trip would effectively terminate the event. In your proposed test you will use decay heat to conduct the test and therefore, will have significant decay heat. Justify conducting the test with the amount of decay heat that would be present and discuss any contingencies that you will have in place to cool the core in case of unexpected system behavior.
6. Discussion of how you will ensure that the RCS is in a loops-filled condition at the start of and throughout the test.
7. Discuss any special training (class room, briefings, simulator, etc.) that the operators were/will be provided prior to conducting this test.
8. Discuss your reasoning for not conducting the entire natural circulation test including confirmation of boron mixing, auxiliary feedwater inventory, steam generator relief valve gas supply, etc..
9. In your submittal you provided a list of example test termination criteria. Is there a complete list of the real test termination criteria and a list of expected values for the same parameters?

10. In your submittal you state that the operators will verify natural circulation by observation of the wide range loop temperatures and core exit thermocouple. Explain how this verification is accomplished and the type of training operators received in this regard (i.e., how will operators know if they have natural circulation).
11. Prerequisites for the test including those related to AFW system status, SG relief valve status, charging/high head safety injection system status, etc.