



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

February 3, 1993

Docket Nos. 50-369, 50-370
50-413, 50-414

Mr. H. B. Tucker, Vice President
Nuclear Production Department
Duke Power Company
422 South Church Street
Charlotte, North Carolina 28242-0001

Dear Mr. Tucker:

SUBJECT: MCGUIRE AND CATAWBA NUCLEAR STATIONS - CONTAINMENT HYDROGEN CONTROL
(TACS M63034, M63065, M63032, M63033)

By letter dated January 4, 1989, you submitted information regarding the accident sequences to be used in your three-part plan for resolution of hydrogen control issues. This plan, applicable to the McGuire and Catawba facilities, is described in your letter of April 25, 1986, and was endorsed by the staff in Supplement 6 of the Catawba Safety Evaluation Report (SSER-6). Staff approval of the selection of accident sequences is required by 10 CFR 50.44(c)(3)(vi)(B)(3) and is an open issue from SSER-6.

The staff has reviewed the information presented in your submittals regarding the accident sequences to be utilized. It is the position of the staff that the accident sequences, which you have selected for Part 1 of the program, encompass an appropriate range of scenarios consistent with the intent of 10 CFR 50.44(c)(3)(vi)(B)(3). These sequences include:

1. S₁D 6-inch hot leg LOCA with ECCS failure,
2. S₂D 2-inch hot leg LOCA with ECCS failure,
3. S₂H (2-inch hot leg LOCA with ECCS recirculation mode failure), and
4. TMLU (SBO - Loss of main feedwater, failure of auxiliary feedwater and ECCS).

These sequences encompass a range of low, intermediate and high pressures. According to the information you have provided, for each sequence, ECCS recovery is delayed until hydrogen production has peaked and hot leg breaks have been chosen in order to minimize hydrogen holdup time. Also, since no sequences result in clad oxidation greater than 25.2%, a non-mechanistic model has been used to extend the hydrogen source term to 75% clad oxidation. You indicated the non-mechanistic model used to extrapolate hydrogen production to 75% clad oxidation was consistent with that used by the Hydrogen Control Owner's Group.

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Mr. H. B. Tucker

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February 3, 1993

The NRC staff requests that you submit the remainder of the information you committed to provide in accordance with your three-part plan. This will enable the staff to continue its review of the remaining SER open issues (i.e., the effects of upper compartment burns on the operation and survivability of air return fans and ice condenser doors). This request has been discussed with P. M. Abraham of your staff, and it was agreed that Duke Power will submit the additional information within 45 days of receipt of this letter.

Sincerely,



David B. Matthews, Director
Project Directorate 11-3
Division of Reactor Projects - 1/11
Office of Nuclear Reactor Regulation

cc: See next page

Mr. H. B. Tucker

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February 3, 1993

The NRC staff requests that you submit the remainder of the information you committed to provide in accordance with your three-part plan. This will enable the staff to continue its review of the remaining SER open issues (i.e., the effects of upper compartment burns on the operation and survivability of air return fans and ice condenser doors). This request has been discussed with P. M. Abraham of your staff, and it was agreed that Duke Power will submit the additional information within 45 days of receipt of this letter.

Sincerely,

/s/

David B. Matthews, Director
Project Directorate 11-3
Division of Reactor Projects - 1/11
Office of Nuclear Reactor Regulation

cc: See next page

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McGuire Nuclear Station

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Catawba Nuclear Station
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