Southern California Edison Company

P. O. BOX 800
2244 WALNUT GROVE AVENUE
ROSEMEAD, CALIFORNIA 91770

K. P. BASKIN
MANAGER OF NUCLEAR ENGINEERING, SAFETY, AND LICENSING

TELEPHONE
(213) 572-1401

July 14, 1981

Mr. Paul S. Check
Assistant Director for Plant Systems
Division of Systems Integration
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Planned Response to NRC TMI Action Plan Requirement II.K.3.30

Dear Mr. Check:

On January 26, 1981, representatives of the C-E Owners Group Analysis and Operations Subcommittee met with members of your staff concerning steps necessary to respond to NRC TMI Action Plan Requirement II.K.3.30. The NRC staff requested that following further consideration, the C-E Owners Group submit a letter stating their intentions to provide response to the NRC staff concerns by January 1, 1982. This letter serves that purpose.

Based on the January 26 meeting, and subsequent telephone conversations with Dr. B. Sheron of your staff, we understand that response to the concerns stated in Attachment 1 will completely satisfy the requirements of TMI Action Plan Item II.K.3.30 for C-E designed plants. We plan to conduct the activities necessary to respond to these concerns and submit the results to NRC by January 1, 1982.

If you have any questions on our intentions, please telephone me at (213) 572-1401 or Mr. J. Longo of C-E at (203) 688-1911, extension 4414.

Sincerely,

K P Baskin

Chairman
C-E Owners Group

Enclosure

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ATTACHMENT 1

NRC II.K.3.30 CONCERNS
WITH THE C-E SMALL BREAK EVALUATION MODEL

1. Demonstrate the applicability of the condensation heat transfer coefficients to U-tube steam generator geometries and to all modes of condensation that are experienced during a small break LOCA. In addition, the effects of non-condensibles on the condensation heat transfer process should be addressed.

2. Demonstrate that the C-E Small Break Evaluation Model with an equilibrium representation of ECC injection into the downcomer does not produce a non-conservative core level recovery.

3. Document the sensitivity of the height of the two-phase mixture in the reactor vessel to the pressure drop calculational model. In particular, the sensitivity of the pressure drop across the steam generator to various flow regimes must be assessed.

4. Verify the adequacy of the core heat transfer model to conditions encountered during small break transients. Of particular concern is the model used during partial core uncovery to determine the temperature of the uncovered cladding The heat transfer model must be demonstrated to be conservative compared to applicable data, i.e., the ORNL Bundle Uncovery Tests.

5. Demonstrate that the heat transferred to the fluid from RCS metal during system depressurization is conservatively accounted for.

6. Demonstrate that the effects of variable break flow multipliers are bounded by analyzing a spectrum of break sizes as is done in licensing analyses.