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February 12, 1985

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Ms. E. G. Adensam, Chief
Licensing Branch No. 4

Re: Catawba Nuclear Station
Docket Nos. 50-413 adn 50-414

Dear Mr. Denton:

License Condition 17(b) of Facility Operating License NPF-35 requires the submittal of bimonthly reports on the status of the confirmatory research program of tests and analyses regarding containment response for main steamline break accidents. Attached is the first bimonthly report.

Very truly yours,

H.B. Tucker 1/30

Hal B. Tucker

ROS:slb

Attachment

cc: Dr. J. Nelson Grace, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

NRC Resident Inspector
Catawba Nuclear Station

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Catawba Nuclear Station
Main Steamline Break Inside Containment
Bimonthly Status Report
February, 1985

A. Drain Test

The data reduction of the high speed movies to obtain sizes, distributions and mean sizes is complete and is being evaluated. The data reduction to obtain the droplet velocities for different size drops is continuing and should be complete shortly. The photographs and movies are being evaluated to develop a drain flow split for each node in the multinode COBRA/NC calculation. A data file is being developed which will have the drain flow percentage, drop size, drop velocity, and film flow area per cell from the test data analysis.

B. Multinode COBRA/NC Calculation

The plant data for volumes, surface areas, and heat sinks taken at Catawba has been reduced and incorporated into the multir e containment model. An ice condenser drain mass flow calcula. that will predict the ice melt and drain flow for each drain has been developed for COBRA/NC using the condensation heat transfer data from the Westinghouse ice condenser tests. This model is currently used in the LOTIC - III code. All dead ended component volumes used communication areas with the lower compartment have been claculated. The COBRA/NC code have been converted to cylindrical coordinates such that a more accurate calculation of the lower compartment can be made.