

Sandia National Laboratories

Albuquerque, New Mexico 87185

December 4, 1984

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7915 Eastern Avenue
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Dear Tom:

This letter summarizes the Severe Accident Sequence
Analysis (SASA) Program Activities at Sandia during

NOV. 1984

Programmatic Activities

None.

Thermal-Hydraulic Analysis Activities

PWR Large Dry Containments (Bellefonte): HECTR will be used to investigate the potential for local hydrogen detonations in the Bellefonte containment during arrested sequences having up to a 75% metal-water reaction. To perform this type of analysis, a fairly detailed model of the containment is required. The initial model, which was nearly completed, has 45 compartments, 132 flow junctions, and 91 heat structure surfaces.

PWR Ice Condenser (Watts Bar/Sequoyah): The report documenting containment pressure-temperature responses to a variety of accident sequences is in the final levels of Sandia management review.

BWR Mark II (LaSalle): In support of the RMIEP program, several long duration (up to 30 hours) transients will be calculated with the LTAS computer code developed by Oakridge National Laboratory (ORNL). The input model, which is based on a RELAP5 input model developed at SNL and the LaSalle FSAR, was nearly completed. The input model should be completed in December and calculations initiated in January 1985.

Upgraded Computational Capability Activities:

MARCON 2.OP: The MARCON models, which includes CORCON MOD2, were linked to the reference version, V151, of MARCH 2. This code combination will be identified as MARCON 2.OP. Pressure/temperature dependent leakage models, that were previously developed and incorporated into MARCH by SNL, are also being incorporated into MARCON 2.OP.

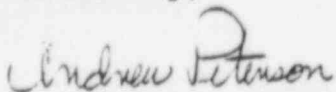
LTAS: An updated version of the LTAS computer code was received from ORNL. This version contains model improvements from the version currently operational at SNL and is more user convenient. This updated version of LTAS will be made operational on the Sandia computer system during December.

MARCON 2.OB: An interim version of MARCON 2.OB was received from ORNL this month. This version contains several model improvements that are only applicable to BWRs. ORNL will send another tape in January 1985 that will have additional ORNL BWR models. After receipt of this tape, the CORCON Mod2 associated subroutines will be upgraded to be similar to MARCON 2.OP and this upgraded version transmitted back to ORNL.

CONTAIN; The checkout of the linking of MARCON 2.OP to CONTAIN was initiated. After this checkout is complete, a TMLB' transient for Bellefonte using a single volume model will be calculated.

HECTR: The documentation and checkout of the pressure/temperature dependent leakage models incorporated into HECTR were completed. Some additional capability in HECTR was required to perform the local detonation studies for the Bellefonte containment. Therefore, the fan cooler model was enhanced so the fan coolers in Bellefonte could be more accurately modeled. A model was also developed so that the blowout of the shield blocks could be simulated. The linking of the MEDICI reactor cavity model to HECTR, which is being performed at the University of Wisconsin, was nearly completed.

Sincerely,



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