May 22, 2002

MEMORANDUM TO: Jack E. Rosenthal, Chief, SMSAB

FROM: Stephen M. Bajorek, SMSAB ***Original signed by S. Bajorek***

SUBJECT: DOWNCOMER BOILING TECHNICAL SUMMARY

Downcomer boiling is a thermal-hydraulic process that has been receiving increasing attention by the staff. It is an issue that is now being considered by the Office of Nuclear Reactor Regulation (NRR) because of its impact on large break loss of coolant accident (LOCA) calculations for some pressurized water reactors (PWRs), and has been identified as a potential non-conservatism in Appendix K of 10 CFR 50.46. The attachment to this memo is a summary of analytical and experimental information pertinent to downcomer boiling. It is not intended to resolve the issue. Rather, it is intended to help provide a technical basis for evaluating the effects of down comer boiling on reflood during a large break LOCA.

Attachment:

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

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