

GENERAL ELECTRIC

NUCLEAR POWER

SYSTEMS DIVISION
MFN-168-82

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MC 682, (408) 925-1822

November 9, 1982

U.S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Washington, DC 20555

Attention: D. G. Eisenhut, Director
Division of Licensing

Gentlemen:

SUBJECT: IN THE MATTER OF THE 238 NUCLEAR ISLAND GENERAL ELECTRIC
STANDARD SAFETY ANALYSIS REPORT (GESSAR II): DOCKET NO.
STN 50-447

- References:
- 1) Suppression Pool Scrubbing Factors for Postulated Boiling Water Reactor Accident Conditions (NEDO-25420), D. M. Rastler, June 1981
 - 2) Letter from G. G. Sherwood (GE) to H. R. Denton (NRC), "Confirmation of Suppression Pool Scrubbing Efficiency," 4/19/82

Enclosed are three copies of Reference 1 in response to a request made by Mr. L. G. Hulman to Mr. S. J. Stark of my staff during their meeting on September 24, 1982. This report documents the results of a literature survey of the retention in pools of water of particulates and various chemical forms of iodine that may be released from the reactor fuel following a severe accident. The literature survey was performed by General Electric to review and summarize all publically available literature to establish a conservative technical basis for the scrubbing efficiency of suppression pools in Boiling Water Reactors. This report has been referenced in the GESSAR II probabilistic risk assessment (Appendix 15D, Section 3) and in Reference 2, also enclosed.

General Electric's literature survey included a review of reports on reactor accidents and destructive tests, normal BWR operating experience and small and large scale scrubbing tests in water pools. About one hundred technical papers were reviewed and eleven applicable experiments identified. The results of these experiments were used to establish lower bound decontamination factors for suppression pools which would conservatively bound BWR transport and retention conditions existing as a consequence of severe accidents. The conservative nature of the values reported in Reference 1 has since been confirmed by the results of GE's recent suppression pool scrubbing test results. (See GESSAR II Appendix 15D, Section 2).


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GE is currently reviewing the radiological dose calculations presented in Chapter 15 of GESSAR II and is considering a revision to those calculations. Revised calculations would be expected to significantly decrease the reported radiological dose in light of the extensive data which demonstrates the highly efficient scrubbing capability of the suppression pool. Reference 1 and GESSAR II, Appendix 15D, Section 2, contain especially applicable input for a revision of calculated doses since they report extensive data on the retention of fission products, including various forms of iodine.

Your staff will be contacted during November concerning our review of the conservatism in GESSAR II's radiological dose calculations and GE's intention to revise the reported doses. Should the NRC staff have any questions concerning Reference 1 or the above information, please contact Mr. Steven Stark of my staff on (408) 925-1822.

Very truly yours,

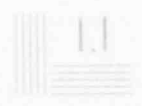

Glenn G. Sherwood, Manager
Nuclear Safety and Licensing Operation

SJS:lm:pab/E10273

Enclosure

cc: J. F. Quirk
R. Villa
M. Silberberg (NRC)
M. D. Lynch (NRC)
L. G. Hulman (NRC)
S. J. Stark

IMAGE EVALUATION
TEST TARGET (MT-3)



150mm

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IMAGE EVALUATION
TEST TARGET (MT-3)

