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Mr. Bernard F. Saffell, Jr.
Program Manager
Battelle Columbus Laboratories
505 King Avenue
Columbus, OH 43201

Dear Mr. Saffell:

This letter is to confirm our verbal request of July 31, 1985 for a change to the control-rod vaporization model in the Source Term Code Package. The specific changes in the CORSOR code are accomplished by multiplying the release fraction FREL (see p.8 of the CORSOR User's Manual, NUREG/CR-4173) by 0.1 for silver and indium and by 0.7 for cadmium. This results in a ten-fold reduction in the amount of silver and indium aerosolized and a modest reduction in the cadmium release.

The basis for the original control-rod aerosol model was given in an ORNL letter report by Lorenz, Beahm, and Wichner dated February 28, 1983 (see R. P. Wichner, ORNL, letter to M. Jankowski, NRC, February 28, 1983). The above modification was recommended by Lorenz based on more recent data, and the basis for this modification is described in the enclosed letter (R. A. Lorenz, ORNL, letter to R. O. Meyer, NRC, October 22, 1985). Additional justification for a large reduction in control-rod silver releases is given in an enclosed memorandum entitled "Vaporization and Aerosol Generation from Silver Alloy Control Rods" (R. O. Meyer, NRC, memorandum to M. Silberberg, March 30, 1984).

Sincerely,

Original Signed By

M. Silberberg, Branch Chief
Fuel Systems Research Branch
Division of Accident Evaluation
Office of Nuclear Regulatory Research

Enclosures: As stated

cc: D. Ross, NRC	R. Bari, BNL
O. E. Bassett, NRC	T. Pratt, BNL
M. Ernst, NRC	A. Benjamin, SNL
T. Margulies, NRC	D. Powers, SNL
L. Chan, NRC	T. Kress, ORNL
J. Mitchell, NRC	R. Lorenz, ORNL
R. Denning, BCL	R. Wichner, ORNL
J. Gieseke, BCL	D. Osetek, INEL
P. Cybulskis, BCL	

Stephen Webb 10/31/85
Chris Allison 11/5/85
Rij Selgal 11/5/85
Vern Denny 11/5/85

DAE:FSRB
Meyer:md
10/25/85

DAE:FSRB
Silberberg
10/25/85

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PDR FOIA
SHOLLY85-772 PDR

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