



Metropolitan Edison Company
Post Office Box 480
Middletown, Pennsylvania 17057

Writer's Direct Dial Number

June 15, 1981
LL2-81-0163

U.S. NUCLEAR
REGULATORY COMMISSION
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TMI Program Office
Attn: Mr. Lake Barrett, Deputy Director
U. S. Nuclear Regulatory Commission
c/o Three Mile Island Nuclear Station
Middletown, Pennsylvania 17057

Dear Sir:

Three Mile Island Nuclear Station, Unit 2 (TMI-2)
Operating License No. DPR-73
Docket No. 50-320
Submerged Demineralizer System

Our letter LL2-81-0152 dated June 1, 1981 stated we would provide you with the results of our criticality analysis on the SDS Demineralizer by June 15, 1981. The analysis we performed takes into consideration the physical properties of the mixture of water, fuel (2.85 w/o U-235 in UO_2) and zeolite in the SDS Demineralizer and concludes that it will not become critical.

The key assumptions used in this analysis include:

- 30% void volume in the zeolite
- infinite height of the mixture
- infinite reflector
- demineralizer liner modeled as built (24"00) and no credit taken for absorption of steel
- void volume filled with 2.85 w/o (U-235 in UO_2) and most reactive combination of fuel and water.



Sincerely,

G. K. Rovey
Vice-President and
Director, TMI-2

GKH:JJB:vjf

cc: Dr. B. J. Snyder, Program Director - TMI Program Office

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