



Metropolitan Edison Company
Post Office Box 480
Middletown, Pennsylvania 17057

Writer's Direct Dial Number

August 21, 1981
LL2-81-0204

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U.S. NUCLEAR
REGULATORY COMMISSION

TMI Program Office
Attn: Mr. L. H. Barrett, Deputy Program 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
Zeolite Resin Mix for SDS Operation

The purpose of this letter is to inform you of the resin mixture we intend to use for processing Reactor Building Sump Water and our reasons for choosing it.

The Technical Advisory Group (TAG) has recommended a 3/2 LINDE IE-96/ LINDE A-51 ratio as the optimum resin mix for use in the Submerged Demineralizer System for sump water processing. This recommendation is based on the results of the tracer level test and the hot cell work with TMI-2 sump water. The 3/2 mixture minimizes the cesium and strontium breakthrough out of the first and second liners so that the curie deposition on the third and fourth liners is as low as possible. This mixture also assures the highest quality effluent from the SDS system.

Breakthrough curves for cesium and strontium from the first vessel are attached. These curves are for the first cycle of operation. Savannah River is currently running their computer model of the SDS system to generate data on cumulative and instantaneous breakthrough from all four columns for the seven cycles of vessel movement. As actual performance generates additional data, the model will be improved and updated to reflect the most current information. Breakthrough curves for the second liner are not being provided at this time because cesium and strontium breakthrough will be less than one percent from the second column during the first cycle of processing.

We are still undecided on the issue of vessel rotation. While the TAG fully understands the operational advantages of minimizing liner move-



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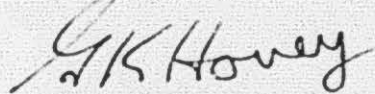
Mr. L. H. Barrett

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ments, they prefer to delay this decision until after we have actual processing experience.

Sincerely,

A handwritten signature in dark ink, appearing to read "G. K. Hovey". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

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

GKH:JJB:djb

Attachment

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

% BREAKTHROUGH (Sr^{90} , $\text{Cs}^{134} + \text{Cs}^{137}$) vs. GALLONS PROCESSED

(3:2 RATIO : 1st CYCLE OF OPERATION)

