



Metropolitan Edison Company
Post Office Box 480
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Writer's Direct Dial Number

January 13, 1981

LL2-81-0008

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
Future EPICOR II Operation

This letter is to advise you of actions we plan to take in response to questions you have raised concerning the use of organic resins in the EPICOR II prefilters.

Until questions and concerns related to the use of organic resins are adequately resolved, inorganic ion exchange media will be used in EPICOR II prefilters. The possibility of loading above the 1300 curies, using inorganics, is being studied; however, until the details of such operation are fully developed, the 1300 curie limit based on on-site analytical results will be used as has been the practice, using 4' x 4' liners.

Inorganic ion exchange media has been selected due to their stability in a radiation field. Some of the concerns associated with organic resins such as gas production, pH reduction, and general resin break-down do not occur with chemically inert zeolite material. Experience with zeolite material for the removal and fixation of cesium and strontium has demonstrated excellent stability under radiation. This stability provides confidence that the internal environment of the zeolite containing liners will not change significantly with time. Maintaining a stable environment prevents the development of corrosive conditions and/or overpressurizing the liner which provides confidence in ensuring the longevity of the container integrity. A carbon steel liner with expected pH conditions will last beyond the projected on-site storage period.

With respect to the management of zeolite material at a future time, the fact that the material remains stable also provides confidence that it can be sluiced out of its container for additional treatment as necessary. The Pennsylvania State University Report "Radiation Effects on Ion Exchangers Used in Radioactive Waste Management," dated October, 1980, reported that inorganic zeolites did not undergo the so called agglomeration effect as might organic resins.

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Mr. Lake Barrett

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These results indicate that zeolites will be capable of sluicing after exposure to a radiation field. Additionally, zeolites do not react electrochemically with solidification media as organic resins do. The lack of chemical reaction enhances its ability for solidification as compared to organic resins.

It is planned that EPICOR II will be started up, as above, when the next batch for processing is ready. Of course, as stated in our TLL 638 of December 4, 1980, you will be notified in advance.

If you have any questions, please contact me or Mr. R. I. Newman (Ext. 8461).

Sincerely,



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

GKH:RIN:djb

cc: Bernard J. Snyder