



Metropolitan Edison Company
Post Office Box 480
Middletown, Pennsylvania 17057
717 944-4041

Writer's Direct Dial Number

July 2, 1980
TLL 316

TMI Program Office
Attn: Mr. J. T. Collins, 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 II (TMI-2)
Operating License No. DPR-73
Docket No. 50-320
Evaluation of EPICOR II Wastes

The EPICOR II Radwaste System continues to process TMI-II Auxiliary and Fuel Handling Buildings contaminated water. The System has performed extremely well decontaminating water well below cleanliness criteria. This performance has allowed using this processed water for decontamination purposes, and other transfer operations, with minimal ALARA concerns. As of July 1, 1980, 365,055 gallons have been processed with 109,492 gallons remaining. A summary report is included as Attachment No. 1. A detailed evaluation of System performance is the subject of another report being assembled. This letter is forwarded in response to NRC letter NRC/TMI-80-87, dated May 15, 1980.

Water cleanup has resulted in the generation of sixty-four (64) spent resin liners as of July 1, 1980. These wastes contain contaminants, including fission products and chemicals removed from the water. This letter forwards information related to, and a discussion of, evaluations conducted to determine the condition of these wastes.

Spent resin liners removed from the EPICOR II Radwaste System are placed in Waste Staging Facilities until final disposition. These facilities are massive concrete structures all but precluding access to the liners. A sealed fifteen (15) ton concrete cap over each liner staging cell provide liners protection from environmental conditions and essentially eliminates access by unauthorized personnel. The facility provides shielding allowing personnel to work alongside and on top of the cells containing liners without radiation problems. This facility has well demonstrated the ability to satisfy stringent ALARA requirements. Attachment No. 2 provides a layout of the protective barriers associated with liner retention at Three Mile Island (TMI). This is a general layout presentation; should details be necessary, they can be provided upon request.

A001
s
1/0

8007110 422

The retention of spent resin liners at TMI requires all necessary precautions to be taken to insure the fission products are contained until final disposition. The Commission's Memorandum and Order dated October 16, 1979, directed Metropolitan Edison to expeditiously solidify EPICOR II wastes. Extensive efforts are in progress to comply with this Order. This letter does not address the status of this solidification effort. Solidification will be the subject of separate correspondence as the results of conclusive studies and tests are obtained. This letter addresses the liners as they presently exist, in a dewatered state. Attachment No. 3 provides a tabulated summary of pertinent data for all liners.

Evaluating EPICOR II liners and resins for long term stability was conducted prior to placing the System in service. A more exhaustive study is in progress to document the projected longevity of these containers without detrimentally altering the safe containment of fission products. Attachment No. 4 documents the background of this evaluation and provides a detailed discussion of items included. Preliminary analysis indicates, under postulated worst case conditions, the resin and liner package provides safe retention of fission products for several years. A more precise definition of this condition is in progress which includes radiolytical as well as chemical/metallurgical effects. When available, the details of this evaluation will be made available.

The NRC letter of May 15th requested information relative to the liners and resins in use. Attachment No. 4 contains much of this information. Attachments 5, 6, and 7 provide drawings of both the 4x4 and 6x6 liners, and the painting specification used on the liner interior. Please note the liners have recently undergone a minor modification to allow installation of an air bubbler for redundant level indication. The drawings are being updated to include these changes. These will be forwarded as available; however, this alteration has little to no impact on the long term integrity of the liners.

Should additional information not forwarded or highlighted in this letter be required, please contact me or my staff.

Sincerely,

/s/ G. K. Hovey

G. K. Hovey
Director, TMI-II

GKH:RJM:dad

Attachments (7)

cc: T. Cintula
D. DiIanni
B. H. Grier
R. W. Reid
H. Silver
B. J. Snyder
V. Stello