



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

*File
Solid Waste*

JUL 30 1980

50-320

MEMORANDUM FOR: John B. Martin, Director
Division of Waste Management

FROM: Robert E. Browning, Deputy Director
Division of Waste Management

SUBJECT: TRIP REPORT

Purpose

The purpose of this meeting was to obtain information on contents of EPICOR-II liners.

Attendees

J. Collins, NRC	C. Good, Met-Ed
R. Browning, NRC	F. Levandusky, EPICOR
R. Bellamy, NRC	T. Gangwer, BNL
R. McGoey, Met-Ed	

Date

July 25, 1980

Location

TMI, Middletown, PA

Discussion

Although the meeting was intended to obtain information from Met-Ed and EPICOR on the contents of the EPICOR-II liners generated to date as originally requested in NRC (Collins) letter to Met-Ed (Arnold) dated May 28, 1980, Mr. Levandusky did not provide any specific information during the meeting. Met-Ed noted that the NRC May 28, 1980 letter had been previously provided to Levandusky with a request that he respond to the questions regarding the liner contents.

The NRC representatives emphasized the importance of obtaining the information. To provide additional guidance on the specific concerns the NRC is trying to independently assess and the specific information needed, the attachment was developed and reviewed with the Met-Ed and EPICOR representatives.

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Levandusky indicated he would review the questions with his lawyer over the weekend and call Mr. Collins on July 28, 1980 regarding his response.

Levandusky stated that based on his analyses and experience:

- 1) The resin samples he provided to Met-Ed for the resin solidification qualification program were representative of those in the EPICOR-II liners. In his judgement, if the samples could be solidified, so could the resins in the EPICOR-II liners.
- 2) There will be no adverse short-term effects with respect to liner integrity or ability to remove the resins from the liners to permit solidification.

The NRC representatives urged Levandusky to have his lawyer call the NRC lawyer (Chandler) regarding NRC's protection of proprietary information.

Robert E. Browning
Robert E. Browning, Deputy Director
Division of Waste Management

Enclosure: as stated

cc: B. Snyder, NRR
J. Collins, TMI
T. Gangwer, BNL
H. Lowenberg, NMSS
F. Levandusky



Questions Related to EPICOR II First Stage Liners at TMI-2

The following specific questions are related to two general concerns. Any other specific information which would be relevant to permit independent assessment of these concerns should also be provided. The basis on which each response is made should be documented.

1. Short term (up to 5 years) integrity of liners with dewatered resin contents. (i.e. effect of time on the liner contents and any resulting effect on the liner)
2. Short term (up to 5 years) effect on liner contents with respect to ability to remove liner contents and solidify them.

I. Resin Characteristics Prior to Use

1. What are the specific resin types used?
 - a. Trade name, number and manufacturer
 - b. Type and form of resins, for example
 1. anion, cation, mixed bed
 2. bead, powdered (including mesh size)
 3. specific functional groups
 4. composition of substrate
 5. percentage of cross linking
 6. exchange capacity
 7. in what form is the resin used (e.g., H⁺ form, Na⁺ form etc.)?
2. Describe any and all specific pretreatments used for the resin beds.
 - a. In this context, what is meant by the term "depletion" as used in relation to the Hittman solidification test program?
3. Trade name, number, manufacture and/or the properties and characteristics of the specified inorganics used? Both ion exchange properties (as in I. (1b) above) and molecular seive properties are of interest.
4. What other materials both active and inert are included in each liner?

II. Resin and Resin Mixes as They are Used in the EPICOR System

1. What types and amount of the specific resins, inorganics, and other material are used in individual liners?
2. If there is more than one type of ion exchange media in each liner, what are the amount of each liner, what are the amounts of each type and how are they arranged in each liner.
3. Is there any other material included in the liner which is expected to perform a function other than ion exchange? If so, describe the material, its intended function and location in the bed.

III. Loading of EPICOR Liner Material

1. Describe any sources of nitrate present?
2. How are specific ions localized in the liners (specifically Cs and Sr)?
 - a. What are the expected (or measured) radial and axial distribution of these ions?
 - b. What is the activity density (C_i/ft^3) in these layers.
3. Describe any on-stream conditioning of the beds?
4. Describe the pH of residual liquids of each liner as a function of time in storage.
5. Describe any built-in buffering capacity of the beds?