

JUN 11 1979

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

Richard E. Cunningham, Director  
Division of Fuel Cycle and Material Safety

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

Charles E. MacDonald, Chief  
Transportation Branch  
Division of Fuel Cycle and Material Safety

SUBJECT: TRIP REPORT TO THREE MILE ISLAND (TMI)

Date of Trip: June 5, 1979

Place of Trip: Three Mile Island, Middletown, Pennsylvania

Purpose: To review waste disposal and transportation aspects  
at Three Mile Island

Attendees: NMSS-WM -- R. Dale Smith, Robert E. Browning, Timothy Johnson  
NMSS-FC -- Charles MacDonald, Charles Marotta

Persons Contacted: NRR - John Collins and Rick Weller

Summary: Representatives from NMSS visited TMI on June 5, 1979 to discuss with NRR representatives, Metropolitan Edison's plans for processing the TMI-2 facility wastes. Specific emphasis was placed on waste disposal and transportation. The NRR representatives noted that their on-site operation at TMI involved procedure reviews with their attention directed to health, safety and protection of the environment. These reviews are the same as what would normally be done by ETSB in Bethesda. 511 323

Seven (7) liners of filter medium and resin from predominantly Unit 1 processing and 40U steel 55 gallon drums of compacted low-level waste was prepared for shipment. This waste was stated to be typical of any other utility waste and would be shipped accordingly.

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DATE	ALL shipments leaving the site are inspected by I&E. For TMI-2 wastes, State Programs is notified, who in turn notifies State representatives of pending shipments through their states.
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488

- 2 -  
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With respect to TMI-2 waste, planning is proceeding in three separate steps: a) decontamination of approximately 200,000 gallons of contaminated water from the auxiliary building which has less than 40  $\mu\text{Ci/ml}$   $\text{Cs}^{137}$  (the limiting radionuclide); b) decontamination of approximately 800,000 gallons of water in the primary containment which is contaminated to a higher but not well characterized level; and c) core removal. Only the first step is well defined at this time. Metropolitan Edison is seeking contractors for processing equipment for handling the waste in the containment. Bechtel Corp. has been selected to study core removal.

With regard to the planned first step to clean-up the 200,000 gallons of water from the auxiliary building, a system (Epicor-II) has been designed and installed in a facility originally designed for chemical cleaning of the steam generators. This system is now being checked out but will not be made operational until completion of an environmental assessment and delivery of a shield bell for handling of the processing units when they are depleted. The shield bell will be delivered in approximately five weeks. The system for processing the contaminated water involves three processing units in series. The processing units are:

1) an initial prefilter using silver impregnated charcoal; 2) a demineralizer; and 3) a polisher. The prefilter is a 4' diameter by 4' high carbon steel cylinder. The demineralizer is also 4' by 4'. The polisher is 6' diameter by 6' high. These units will be operated until activity on contact reaches 2,500 r/h, 400 r/h and from 20 to 30 r/h, respectively, or until the medium loses its capability. These units when depleted and when dewatered will be removed and replaced with identical new units. The units will be stored temporarily on site in an interim earthen embankment and subsequently in an engineered storage facility. All units are planned to be shipped to Richland for burial. Present plans call for the 4' by 4' units to be shipped in accident resistant packaging (Type B) and the 6' by 6' units to be shipped as LSA material in Type A packaging. Type B package designs are not available for shipment of the Type B wastes. The NRR representatives requested prompt NMSS action on any requests for NRC certification for Type B packaging for TMI wastes.

511 324

It was noted that Metropolitan Edison's plans for processing the waste are consistent with present practice followed in older plants but are not consistent with the Effluent Treatment Systems Branch (NRR) Technical Position ETSB 11-3 which has resulted in new LWR plants installing capability to place all wastes in a solid immobile form prior to shipment off-site. NRR has requested the utility to prepare a value impact assessment of the requirement to solidify resins as opposed to dewatering resins. The feasibility and merits of putting these wastes in a solid immobile form as required by ETSB 11-3 were discussed. NRR indicated that if solidification

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is to be required, a decision should be made within one month to avoid delays in processing the 200,000 gallons of contaminated water from the auxiliary building.

The NRR representatives agreed to keep NMS informed of progress and future plans as well as the specific results of Metropolitan Edison's assessment of putting the wastes into a solid immobile form as required by ETSB 11-3 and the result of a meeting to be held between the burial site operator (ECO) and Metropolitan Edison.

151

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151

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