

NRC/TMI-86-077

MEMORANDUM FOR: Harold R. Denton, Director  
Office of Nuclear Reactor Regulation

Frank J. Miraglia, Director  
Division of PWR Licensing-B

FROM: William D. Travers, Director  
THI-2 Cleanup Project Directorate

SUBJECT: NRC TMI-2 CLEANUP PROJECT DIRECTORATE WEEKLY STATUS  
REPORT FOR JULY 28 - AUGUST 3, 1986

## 1. PROPOSAL TO DISPOSE ACCIDENT GENERATED WATER

The licensee (GPUN) has submitted its proposal for disposing of approximately 2.1 million gallons of water that has been contaminated as a result of the TMI-2 accident and the subsequent cleanup. The proposal requests HRC approval of the licensee's plan to force evaporate the water, including Tritium (approx. 1000 Ci), on the TMI site over a period of about two and one-half years. The resulting evaporator bottoms, including Cesium-137 (approx. 0.3 Ci), Strontium-90 (approx 0.9 Ci), boric acid (approx. 150 tons), and sodium hydroxide (approx. 11 tons), would be solidified and disposed of as low-level radioactive waste in accordance with applicable regulations.

In addition to requesting NRC approval of this proposal, the licensee is about to petition the Secretary of Energy to grant the additional burial ground waste volume allocation (approx. 40,000 - 80,000 cubic feet) that would be required to implement this plan. In accordance with the Low-Level Radioactive Waste Amendments Act of 1985 the Secretary has authority, in unusual circumstances, to increase the standard waste volume allocations formulated for waste generators under the Act. The licensee, in its submittal to the NRC staff, has requested the "...support of the NRC in obtaining favorable DOE consideration of the additional allocation...".

In accordance with the Commission's Statement of Policy issued April 28, 1981, which provided for Commission review and approval of this issue, the NRC staff will provide an evaluation and a recommendation on the licensee's proposal for Commission consideration.

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## 2. DEFUELING

- The licensee completed drilling, using solid faced bits, a series of holes in the hard crust layer of the damaged core. These perforations were made so that other defueling tools can be more effectively used in breaking up and removing the debris. Attempts at penetrating the crust were made at 48 locations. Of these, 28 resulted in penetrations ranging from a depth of 12 inches to 48 inches. The remaining 20 penetrations had depths less than 12 inches. The drilling rig is being disassembled and preparations are being made to commence bulk defueling.
- The major engineering, design, procurement, and installation tasks for the THI-2 defueling are essentially complete. Projects remaining are operational in nature. In response to these changes the licensee has reorganized and consolidated some departments. This plan places various sections of the Recovery Programs Department into the Defueling and Site Operations Departments and abolishes the Recovery Programs Department.

## 3. PLANT STATUS

- The reactor remains in long term cold shutdown, vented to the atmosphere. Core cooling is by natural heat loss to ambient building atmosphere. The average incore thermocouple reading is 80°F.
- The airborne radioactivity on the defueling platform is about 8.8 E-7 uCi/cc Tritium and 3.3 E-11 uCi/cc particulates, predominately Cesium-137 and Strontium-90. The platform is mounted above the modified internals indexing fixture which is mounted over the reactor vessel. These provide about 15 feet of water over the core region and 6 feet over the carousel holding the defueling canisters.

## 4. WASTE MANAGEMENT

- The Submerged Demineralizer System (SDS) and EPICOR II remained in temporary shutdown this week.
- Total volume processed through SDS to date is 4,084,856 gallons, and the total volume processed EPICOR II to date is 3,055,238 gallons.

## 5. ENVIRONMENTAL MONITORING

- US Environmental Protection Agency (EPA) sample analysis results show that THI site liquid effluents are in accordance with regulatory limits, NRC requirements, and The City of Lancaster Agreement.
- The Lancaster water sample taken at the water works river intake and analyzed by EPA consisted of a seven day composite sample taken

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July 13 - 19, 1986. A gamma scan detected no activity that could be attributed to TMI-2.

- TMI water samples taken by EPA at the plant discharge (includes Units 1 and 2) to the river consisted of seven daily composite samples taken from July 12 - 19, 1986. A gamma scan detected no activity that could be attributed to TMI-2.
- The EPA analysis of the NRC outdoor air sample for the period July 24 - August 1, 1986 showed that concentrations of Cs-137 and I-131 were below the lower limit of quantitative detectability for the system.

6. AUXILIARY AND FUEL HANDLING BUILDING ACTIVITIES

- Assembly of the desludging system continued.

7. NRC EVALUATIONS IN PROGRESS

- Technical Specification Change Request number 49, and 51.
- Recovery Operations Plan Change number 31 and 36.
- Solid Waste Facility Technical Evaluation Report.
- Reactor Building Sump Criticality Safety Evaluation Report.
- Defueling Canister Technical Evaluation Report, Revision 2.
- Heavy Load Safety Evaluation Report, Revision 3.
- Defueling Safety Evaluation Report

8. PUBLIC MEETING

The Advisory Panel for the Decontamination of Three Mile Island Unit 2 will meet on August 13, 1986 from 7:00 PM to 10:00 PM at the Lancaster Council Chambers, Public Safety Building, 201 North Duke Street, Lancaster, PA. At the meeting the panel will receive a status report on the progress of defueling from GPU Nuclear and a briefing on the licensee's plans for disposal of the processed water generated from the accident.

Persons desiring to speak before the Advisory Panel are requested to contact Mr. Thomas Smithgall at 717-291-1042, or write him at 2122 Marietta Avenue, Lancaster, PA 17603.

ORIGINAL SIGNED BY:

William D. Travers

William D. Travers  
Director

TMI-2 Cleanup Project Directorate

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Harold R. Denton  
Frank J. Miraglia

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August 4, 1986  
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TMI-2 Project Section File

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