

February 14, 1986
NRC/TMI-86-017

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
TMI-2 Cleanup Project Directorate

SUBJECT: NRC TMI-2 CLEANUP PROJECT DIRECTORATE WEEKLY STATUS
REPORT FEBRUARY 10 - FEBRUARY 14, 1986

1. DEFUELING

- Two filled defueling canisters were transferred from the Canister Positioning System in the reactor vessel to the canister storage racks in the "A" Spent Fuel Pool (SFP). There are 12 filled defueling canisters in the SFP containing a total net debris weight of about 8,800 lbs. The estimated total weight of damaged fuel and structural materials in the reactor vessel prior to start of defueling was 308,000 lbs.
- A Temporary Reactor Vessel Filtration System (TRVFS), a small circulating pump and diatomaceous earth filter is filtering reactor coolant water. Its purpose is to improve reactor vessel water clarity to provide sufficient visibility for defueling operations.
- The licensee announced a proposed change to the organization plan intended to improve the efficiency of defueling activities as they progress to the production phase of defueling. The change consolidates responsibility for all defueling related operations, engineering, and support functions into one defueling organization reporting directly to the Office of the Director, TMI-2. The NRC staff has reviewed and approved the change which will be implemented in the near future.

2. PLANT STATUS

- The facility remains in long term cold shutdown with the Reactor Coolant System (RCS) vented to the reactor building atmosphere and the reactor vessel head and plenum assembly removed from the reactor vessel.
- The plenum is on its storage stand in the deep end of the fuel transfer canal. A dam has been installed between the deep and

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shallow ends of the fuel transfer canal. The deep end is filled with water to a depth of about 20 feet (about 5 feet above the top of the plenum).

- The modified internals indexing fixture is installed on the reactor vessel flange and is flooded to elevation 327 feet 6 inches (15 1/2 feet above the top of the core region). The defueling platform is installed over the internals indexing fixture.
- Calculated reactor decay heat is less than 11 kilowatts.
- RCS cooling is by natural heat loss to the reactor building ambient atmosphere. Incore thermocouple readings range from 71°F to 96°F with an average of 81°F.
- The average reactor building temperature is 54°F. The reactor building airborne activity at the Westinghouse platform is 6.7 E-8 uCi/cc Tritium and 5.4 E-11 uCi/cc particulate, predominantly Cesium 137.
- Spent Fuel Pool "A" is flooded to a depth of 20 feet. About 6 feet of water is over the fuel canister storage racks.

3. WASTE MANAGEMENT

- The Submerged Demineralizer System (SDS) and EPICOR II were shutdown this week.
- Total volume processed through SDS to date is 3,598,397 gallons, and the total volume processed through EPICOR II is 2,822,963 gallons.

4. DOSE REDUCTION/DECONTAMINATION

- The 281' annulus area is being painted after decontamination.
- Average general area radiation dose rate is 40 mrem per hour on the 347' level of the reactor building and is 67 mrem per hour on the 305' level of the reactor building. The average dose rate to workers on the defueling work platform is 8 mrem per hour.
- Decontamination scabbling is being done in the 281' fuel handling building makeup valve alley.

5. ENVIRONMENTAL MONITORING

- US Environmental Protection Agency (EPA) sample analysis results show TMI site liquid effluents to be in accordance with regulatory limits, NRC requirements, and the City of Lancaster Agreement.
- TMI water samples taken by EPA at the plant discharge to the river consisted of seven daily composite samples taken from January 25 through February 1, 1986. A gamma scan detected no reactor related activity.
- The Lancaster water sample taken at the water works intake and analyzed by EPA consisted of a seven day composited sample taken from January 25 through February 1, 1986. A gamma scan detected no reactor related radioactivity.

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- The NRC outdoor airborne particulate sampler at the TMI site collected a sample between February 7, and February 12, 1986. No reactor related radioactivity was detected. Analysis showed Iodine-131 and Cesium-137 concentrations to be less than the lower limits of detectability.

6. REACTOR BUILDING ACTIVITIES

- Initial defueling of the reactor core is in progress.
- The licensee began a program to obtain core bore samples from the unpainted cement block wall beneath the enclosed stairwell in the reactor building basement. The samples will be obtained by a robot (ROVER), and will be used to assess the contamination absorbed by the material.

7. AUXILIARY AND FUEL HANDLING BUILDING ACTIVITIES

- Installation of the balance of Defueling Water Cleanup System (DWCS) and canister dewatering system continued.
- Spent Fuel Pool "A" has been flooded to a depth of about 20 feet (about 5 feet above the top of the fuel canister storage racks).
- Preparations are being made for decontamination in the Seal Injection Room, 281' auxiliary building.
- Disassembly of the makeup and purification demineralizer elution hardware is in progress.

8. NRC EVALUATIONS IN PROGRESS

- Technical Specification Change Request number 49.
- Recovery Operations Plan Change number 31.
- SDS Technical Evaluation and System Description Update.
- Core Stratification Sample Safety Evaluation.
- Defueling Water Cleanup System Technical Evaluation Report, Revision 7.
- Containment Air Control Envelope Technical Evaluation Report, Revision 5.
- Solid Waste Facility Technical Evaluation Report.
- Reactor Building Sump Criticality Safety Evaluation Report.

9. PUBLIC MEETINGS

The Advisory Panel for the Decontamination of Three Mile Island Unit 2 met on February 12, 1986, in Harrisburg, Pennsylvania. The Panel was briefed by GPUH on progress of the cleanup and on licensee actions to correct deficiencies in the radiochemistry program that caused erroneous Strontium-90 analysis. Dr. Travers of the NRC TMI-2 Cleanup Project Directorate briefed the Panel on current NRC activities. The Panel heard a presentation by the U.S. Department of Energy (DOE) on plans for the

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shipment by rail of fuel removed from the damaged reactor to a DOE interim storage facility in Idaho. They also received a presentation by Jane Lee on health effects in the area surrounding the TMI facility. She was critical of the Pennsylvania State Department of Health and its recent health effects study.

The next meeting of the Panel is tentatively scheduled for April 10, 1986 in the Harrisburg area. The exact date, location, and agenda for the meeting will be announced in the future.

signed by C. Cowgill for

William D. Travers
Director
TMI-2 Cleanup Project Directorate

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Harold R. Denton
Frank J. Miraglia

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