

December 16, 1985  
 NRC/TMI-85-099

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 FOR DECEMBER 9, 1985 - DECEMBER 15, 1985

1. DEFUELING

- On December 11, 1985, the licensee completed filling the first fuel canister. It was filled with approximately 350 lbs. of debris consisting of about 12 pieces of fuel assembly end-fittings, control rod spiders, and small pieces of partial fuel assemblies. The exact weight of the loaded debris will be measured when the canister is closed, dewatered, and readied for transfer out of the reactor vessel. Filling of the second fuel canister was completed on the morning of December 14. It contains about 9 end-fittings and pieces of partial fuel assemblies.
- Filling of the third fuel canister began on December 14. At about 7:30 PM on December 14, with the canister about half-filled, an end-fitting was inserted into the canister and appeared to jam before being fully lowered into the canister. Operators attempted unsuccessfully to tap the stuck end-fitting into the canister with a long handled tool. They then attempted to remove the end-fitting by grappling it with a J-hook attached to the one ton jib crane. When lifting with the crane, the canister positioning system (CPS) canister sleeve apparently became unlatched, the canister and sleeve lifted out of the CPS and dropped about 1½ feet to the debris pile. On December 15, after special training for the evolution, the canister and sleeve were retrieved using the 5 ton service crane and was successfully reinstalled in the CPS. Preliminary video survey showed no damage to the canister, the sleeve, or the CPS. However, load cells on the 5 ton service crane indicated a dead weight of the canister and sleeve of about 2200 lbs. Thus, the one ton rating of the jib crane may have been exceeded. The jib crane (one of two) has been removed from service. This event is under review by the licensee and the NRC staff to assess any damage to the CPS and corrective actions to prevent future recurrence.

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- A video survey of the core has determined that there are about 40 standing peripheral fuel assemblies with their end-fittings attached. About 40 to 50 single end-fittings were seen in the debris bed. The remainder of the 177 end-fittings are either fused together in aggregates of 2 to 4 or are hidden from view under other debris. The licensee does not believe that the presence of the fused end-fittings will hinder access for the vacuum defueling test.
- The licensee expects to test the vacuum defueling system in the reactor vessel in early January 1986.

## 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 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 (15½ 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 12 kilowatts.
- RCS cooling is by natural heat loss to the reactor building ambient atmosphere. Incore thermocouple readings range from 68°F to 93°F with an average of 82.5°F.
- The average reactor building temperature is 57°F. The reactor building airborne activity at the Westinghouse platform is 6.2 E-8 uCi/cc Tritium and 2.6 E-10 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 "B" train of the DNCS reactor vessel filtration system was operated at reduced flow intermittent as needed to maintain RCS clarity for defueling operations. The licensee is still studying the DNCS filter fouling problems and is planning to conduct tests to evaluate the use of filter precoat materials to alleviate the problem.
- Submerged Demineralizer System (SDS) is temporarily shutdown.
- EPICOR II is temporarily shutdown while changing out liners.
- Total volume processed through SDS to date is 3,598,397 gallons, and the total volume processed through EPICOR II is 2,700,737 gallons.

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4. DOSE REDUCTION/DECONTAMINATION ACTIVITIES

- Decontamination activities are continuing on the 281' level of the auxiliary building. Scabbling of reactor coolant bleed tank cubicles is completed.
- 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.
- Decontamination of the "A" O-ring is in progress.
- Preparations are in progress to Kelly-Vac the auxiliary building elevator pit and the underside of the elevator car.

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 November 23 through November 30, 1985. 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 November 24 through November 30, 1985. A gamma scan detected no reactor related radioactivity.
- No sample was collected by the NRC outdoor airborne particulate sampler at the TMI Site during this period due to personnel error in sampler operations. A thorough review of plant strip chart recorders by NRC personnel determined that there were no abnormal releases of radioactivity from the site.

6. REACTOR BUILDING ACTIVITIES

- The initial phase of defueling the reactor core is in progress.
- Installation of the vacuum defueling system is in progress.
- The pressurizer manway cover has been removed, the access port shielded, and TLD's and cameras lowered into the pressurizer. Preliminary video and TLD surveys indicated that there is little fuel deposition in the pressurizer. Further examination is in progress.

7. AUXILIARY AND FUEL HANDLING BUILDING ACTIVITIES

- Installation of the balance of DWCS continued.
- Spent Fuel Pool "A" has been flooded to a depth of about 20 feet (about 6 feet above the top of the fuel canister storage racks).

8. NRC EVALUATIONS IN PROGRESS

- Technical Specification Change Request number 49.
- Recovery Operations Plan Change number 31.

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- 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.

9. PUBLIC MEETINGS

The Advisory Panel for the Decontamination of Three Mile Island Unit 2 met on December 12, 1985. At the meeting the panel heard a presentation by Mr. and Mrs. Aamodt on health effects in the area surrounding the Three Mile Island (THI) facility. The Aamodts criticized the Pennsylvania State Department of Health and its recent study of cancer incidence around THI.

The panel also received briefings from GPWH on progress of the cleanup and from the NRC staff on the status of regulatory activities. Members of the public were afforded an opportunity to comment on cleanup related issues.

The next meeting of the panel is scheduled for February 12, 1986 in the Harrisburg area from 7:00 p.m. to 10:00 p.m. at a place to be determined.

**ORIGINAL SIGNED BY:**  
**William D. Travers**

William D. Travers  
Director  
THI-2 Cleanup Project Directorate

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Harold R. Denton  
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