

January 27, 1986
NRC/TMI-85-009

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

Frank J. Miraglia, Director
Division of PHR Licensing-8

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

SUBJECT: NRC TMI-2 CLEANUP PROJECT DIRECTORATE WEEKLY STATUS
REPORT FOR JANUARY 18 - 26, 1986

1. DEFUELING

- Defueling during the week consisted of pick-and-place loading of fuel canisters. By January 23, 1986, all five fuel canisters in the Canister Positioning System were filled. Since last week, the number of single end-fittings that can be easily loaded into fuel canisters has been depleted. There was some success in separating fused end-fittings with a slide-hammer tool. On January 25, 1986, four of the five filled canisters were transferred from the Reactor Building to the storage racks in the Spent Fuel Pool (SFP). One of those four canisters had not been dewatered prior to the transfer and the total net weight of fuel debris transferred is not yet available. On January 26, 1986, two empty fuel canisters and an end fitting temporary storage container (EFTSC) were loaded into the Canister Positioning System in the reactor vessel. The function of the EFTSC is to provide storage for the fused end-fittings which cannot be easily loaded into the fuel canisters. Loading of the EFTSC is procedurally limited to end-fittings or other structural material with minimal amounts of attached fuel pins. The staff has reviewed the safety evaluation, as well as the procedure for loading the EFTSC to ensure the safety of temporary storage of the loaded EFTSC in the storage racks in the SFP.
- On January 23, 1986, a filter canister from the Defueling Water Cleanup System (DWCS) was transferred from the Fuel Transfer Canal to the canister storage racks in the "A" Spent Fuel Pool. This canister has experienced plugging problems after only a short operating time in the DWCS. The licensee will attempt to clean this filter with boric acid solution. A boroscopic examination of

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another fouled filter canister revealed extensive plugging by an algae growth. This is being studied by the licensee with assistance by Oak Ridge National Laboratory.

- On January 20, 1986, a fuel assembly at the core periphery (assembly P-4) was toppled with a hook tool. The broken-off portion of the assembly weighs about 800 pounds underwater and is about 8 feet in length. A video inspection of this assembly was performed on January 21, 1986 and by January 23, 1986, the broken-off portion of the assembly had been sectioned with a shear tool and loaded into a fuel canister. The void remaining after removal of this assembly will be examined to collect information on the core conditions below the loose rubble.

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 (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 12 kilowatts.
- RCS cooling is by natural heat loss to the reactor building ambient atmosphere. Incore thermocouple readings range from 67°F to 95°F with an average of 82°F.
- The average reactor building temperature is 56°F. The reactor building airborne activity at the Westinghouse platform is 6.2 E-8 uCi/cc Tritium and 6.7 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) remained shutdown this week.
- EPICOR II completed processing of Batch 275, which consisted of about 45,000 gallons of water recycled through the system.
- Total volume processed through SDS to date is 3,598,397 gallons, and the total volume processed through EPICOR II is 2,822,953 gallons.

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4. DOSE REDUCTION/DECONTAMINATION

- Decontamination activities are continuing on the 281' level of the auxiliary building. Kelly-vac cleaning of the decay heat vaults is in progress.
- A temporary ventilation system has been installed in the annulus area between the reactor building and fuel handling building. This was done in preparation for water spray decontamination of the 281' level of the annulus and will prevent spread of contamination during the evolution.
- 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.

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 4 through January 11, 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 5 through January 11, 1986. A gamma scan detected no reactor related radioactivity.
- The NRC outdoor airborne particulate sampler at the TMI site collected a sample between January 15, and January 22, 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 vacuum defueling of the reactor core is in progress.

7. AUXILIARY AND FUEL HANDLING BUILDING ACTIVITIES

- Installation of the balance of DNCS continued.
- One auxiliary building sump pump has been removed as part of the preparations for sump desludging.
- 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.
- Reactor Building Sump Criticality Safety Evaluation Report.

9. PUBLIC MEETINGS

The next meeting of the Advisory Panel is scheduled for February 12, 1986 at the Holiday Inn, 23 South Second Street, Harrisburg, PA from 7:00 PM to 10:00 PM.

Persons desiring the opportunity to speak before the panel are asked to contact Mr. Thomas Smithgall at 717-291-1042 or write to him at 2122 Marietta Avenue, Lancaster, Pennsylvania 17603.

ORIGINAL SIGNED BY:
William D. Travers

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Harold R. Denton
Frank J. Miraglia

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