February 24, 1986
NRC/TMI-86-020

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 FEBRUARY 15 - FEBRUARY 23, 1986

1. DEFUELING

- As of February 24, 1986, 16 defueling canisters have been transferred from the reactor vessel to the spent fuel pool storage racks. Total weight of fuel debris and structural material transferred out of the reactor vessel is about 12,500 lbs. The estimated total weight of fuel debris and structural materials originally in the reactor vessel after the accident was 308,000 lbs.

- Defueling continued with filling fuel canisters with the spade-bucket tool. Each of the six most recently filled defueling canisters contains a net fuel debris weight of over 1,100 lbs. The licensee's target is to fill one fuel canister each day. However, this target has been achievable only at times when visibility in the reactor was relatively good.

- The bio-organism growths in the reactor vessel is severely affecting visibility. The only reactor water cleanup system currently available to the licensee is the Temporary Reactor Coolant Filtration System (TRCFS). This system started operation on February 15, 1986. Operation of the system is limited to times when no defueling is taking place. Otherwise, the fine particles stirred up by defueling would adhere to the filter media and rapidly increase the dose rate from the filter assembly. By February 20, 1986, the system has run for over 45 hours and processed about 150,000 gallons of reactor water. Until a permanent method to respond to the bio-organism growth problem, the operation of the TRCFS is essential for defueling to continue.

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2. PLANT STATUS

- The reactor remains in long term cold shutdown, vented to atmosphere.
- The reactor vessel head is in storage on the 347' elevation. The plenum is on its storage stand in the deep end of the fuel transfer canal. A dam is installed between the deep and shallow ends of the transfer canal, permitting a 20 foot depth (about 5 feet over the top of the plenum).
- Reactor Coolant System (RCS) cooling is by natural heat loss to the reactor building atmosphere. Calculated reactor decay heat is near 10.7 kilowatts. Incore thermocouple readings range from 71°F to 96°F, averaging 81°F.
- The average reactor building temperature is 50°F. The reactor building airborne activity at the defueling platform is 6.7 E-8 uCi/cc Tritium and 5.4 E-11 UCi/cc particulates, predominately Cesium-137.
- The reactor vessel and modified internal indexing fixture are flooded to the 327'6" elevation which is 15½ feet above the core region top. The defueling platform is mounted above the internals indexing fixture.

3. WASTE MANAGEMENT

- The Submerged Demineralizer System (SDS) commenced processing batch 127, Fuel Transfer Canal Recycle through both trains.
- EPICOR II remained shutdown.
- Total volume processed through SDS to date is 3,682,029 gallons, and the total volume processed through EPICOR II is 2,822,963 gallons.

4. DOSE REDUCTION/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.

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 February 1 through February 8, 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 February 2 through February 8, 1986. A gamma scan detected no reactor related radioactivity.

- The NRC outdoor airborne particulate sampler at the TMI site collected a sample between February 12, and February 19, 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.

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.

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.

original signed by
C.J. Cowgill for

William D. Travers
Director
TMI-2 Cleanup Project Directorate

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