

February 3, 1986
NRC/TMI-86-011

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 JANUARY 27 - FEBRUARY 2, 1986

1. DEFUELING

- The licensee had intended to perform a video inspection of the void remaining after removing an 8 foot long section of fuel assembly P-4 (refer to Weekly Status Report dated January 27, 1986). This will not be feasible, as adjacent rubble has fallen into and nearly filled the void. A future attempt will be made to dislodge an intact peripheral assembly, access the void with a camera, and assess the core conditions beneath the rubble pile.
- The licensee has increased the actual defueling time from 10 hours per day to 12 hours by using three defueling teams instead of two teams per day. It is expected that next week, the licensee will increase to four teams per day.
- A debris bucket hanger has been installed on the shielded work platform that allows an attached debris bucket to follow the platform's rotation. This alleviates the need to reposition the in-use debris bucket each time the platform is rotated.
- Four side-loading debris buckets were filled this week. Three of them were filled to an average underwater weight of about 70 lbs with sections of fuel pins. A fourth weighed 500 lbs.
- The two new filters installed in the "B" train of the Defueling Water Cleanup Systems (DWCS) have become plugged after a throughput of only 45,000 gallons. The licensee is still studying the problems of biological growth in the reactor coolant system which is believed to be causing the filter plugging.

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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 (151 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 73°F to 95°F with an average of 82°F.
- The average reactor building temperature is 58°F. The reactor building airborne activity at the Westinghouse platform is 1.5 E-7 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.
- The "A" train of the DWCS was started up to filter the RCS at about 6:15 PM, February 1, 1986. About 90 minutes later, the operating pump shutdown automatically due to low water level in the pump well. The operators noted a slight decrease in RCS level and manually secured the system. Investigation determined that a hose supplying water from the pump discharge manifold to the filters had ruptured, causing leakage of about 600 gallons of water from the RCS to the fuel transfer canal. The ruptured hose was replaced and the system restarted. The system response to the hose rupture was as designed, and the casualty caused no radiological hazards or uncontained spills. The cause of the hose rupture is under investigation.

4. RADIOACTIVE MATERIAL/WASTE SHIPMENTS

- Contaminated laundry was sent to Royersford, PA in these quantities in January 1986:

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- January 2, 44 drums and 1 box
- January 7, 42 drums and 5 boxes
- January 15, 69 drums
- January 22, 69 drums and 2 boxes
- January 28, 67 drums and 4 boxes
- Combined unit non-compacted waste in 16 steel boxes was sent to disposal at Richland, WA on January 3.
- A Unit 2 shipment of fuel rod segments was sent in a shielded cask to Scoville, ID on January 10.
- A Unit 1 monthly liquid sample was sent to Rockville, MD for analysis on January 13.
- A Unit 2 shipment of a whole body counter radioactive calibration source was sent to Susquehanna Steam Electric Station on January 14.
- A Unit 2 reactor coolant waste sample was sent to Pittsburgh, PA on January 16.
- A combined unit shipment of radioactive waste in 107 drums was sent to disposal at Richland, WA on January 24.

5. DOSE REDUCTION/DECONTAMINATION

- Decontamination flusing of the 281' annulus area is in progress.
- 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.

6. 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 11 through January 18, 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 12 through January 18, 1986. A gamma scan detected no reactor related radioactivity.
- The NRC outdoor airborne particulate sampler at the TMI site collected a sample between January 22, and January 29, 1986. No reactor related radioactivity was detected. Analysis showed Iodine-131 and Cesium-137 concentrations to be less than the lower limits of detectability.

7. REACTOR BUILDING ACTIVITIES

- Initial defueling of the reactor core is in progress.

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8. AUXILIARY AND FUEL HANDLING BUILDING ACTIVITIES

- Installation of the balance of DWCS and canister dewatering system 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).

9. 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.

10. 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.

At this meeting the Panel will receive a presentation by the US Department of Energy (DOE) on plans for the shipment of fuel removed from the damaged TMI-2 reactor to a DOE facility for interim storage. The Panel will also receive a status report on the progress of defueling from GPU Nuclear Corporation. Members of the public will be given the opportunity to address the Panel.

On January 29, 1986 in Washington, D.C., representatives from GPU and the NRC staff, in separate presentations, provided a briefing on TMI-2 recriticality issues to the Advisory Committee on Reactor Safeguards (ACRS) Subcommittee on Core Performance. The ACRS full committee will be briefed on February 13, 1986 (3:15 PM - 5:15 PM) at NRC offices at 1717 H Street, Washington, D.C.

Persons desiring the opportunity to speak before the Advisory 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
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