

November 4, 1985  
NRC/THI-85-084

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

FROM: William D. Travers, Acting Director  
THI Program Office

SUBJECT: NRC THI PROGRAM OFFICE WEEKLY STATUS REPORT FOR  
OCTOBER 28, 1985 - NOVEMBER 3, 1985

1. DEFUELING

On Thursday, October 31, 1985, GPU Nuclear began the first phase of defueling the damaged reactor core. The operations in this limited initial phase involve the rearrangement of core debris within the reactor vessel. This will provide clearance for the installation of equipment which is needed to facilitate the removal of fuel from the reactor vessel.

Specially trained operators, under the direction of licensed Fuel Handling Senior Reactor Operators, used long-handled manual and hydraulic tools to move damaged fuel and assorted core material within the reactor vessel. In the next few weeks initial defueling activities are expected to include; loading of debris into specially designed baskets, which will later be loaded into defueling canisters and removed from the reactor vessel, and the identification and positioning of core debris samples for later removal and examination. The licensee expects to begin removing fuel from the reactor vessel sometime during November 1985. Onsite NRC personnel are monitoring activities.

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 Internal Indexing Fixture in preparation for defueling.

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- 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 70°F to 93°F with an average of 82°F.
- The average reactor building temperature is 53°F. The reactor building airborne activity is  $5.6 \times 10^{-8}$  uCi/cc Tritium and  $3.5 \times 10^{-10}$  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 fuel canister storage racks.

### 3. WASTE MANAGEMENT

- The Submerged Demineralizer System (SDS) continues processing batch 125, Fuel Transfer Canal through Train No. 1. To date a total of 186,201 gallons has been processed.
- EPICOR II is temporarily shutdown while changing out liners.
- Total volume processed through SDS to date is 3,174,794 gallons, and the total volume processed through EPICOR II is 2,700,737 gallons.
- 10 CFR 61.55 Exemption approval was given by NRC which authorized the licensee to classify EPICOR II liners containing 1 microcuries per cubic centimeter of Strontium 90 as Class A waste.

### 4. DOSE REDUCTION/DECONTAMINATION ACTIVITIES

- Decontamination activities are continuing on the 281' level of the auxiliary building.
- 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.
- Removal of insulation and decontamination of the pressurizer is in progress.

### 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 October 12 through October 19, 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 October 13 through October 19, 1985. A gamma scan detected no reactor related radioactivity.
- The NRC outdoor airborne particulate sampler at the TMI Site collected a sample between October 23 and October 30, 1985. No reactor related radioactivity was detected. Analysis showed Iodine-131 and Cesium-137 concentrations to be less than the lower limits of detectability.

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6. RADIOACTIVE MATERIAL/WASTE SHIPMENTS

During October 1985 the shipments listed below were made from the TMI site.

- October 1 - Unit 1, a new fuel assembly was returned to vendor at Lynchburg, VA.
- October 3 - Combined laundry shipment; 75 drums, 1 box of protective clothing to Royersford, PA.
- October 8 - Unit 1 liquid radioactive samples sent to Rockville, MD.
- October 9 - Combined laundry shipment; 40 drums, 2 boxes of protective clothing to Royersford, PA.
- October 11 - Unit 2 lower head debris samples were sent to Idaho National Engineering Laboratories at Scoville, ID.
- October 15 - Combined laundry shipment; 73 drums, 2 boxes of protective clothing to Royersford, PA.
- October 17 - Unit 1 uncompacted trash in a steel box and three liners containing dewatered resins to Hanford, WA.
- October 21 - Combined shipment of barrels and boxes of compacted and uncompacted waste to Hanford, WA.
- October 21 - Unit 1 solidified radioactive liquid in a steel liner sent to Barnwell, SC.
- October 24 - Combined laundry shipment; 97 drums, 2 boxes of protective clothing to Royersford, PA.
- October 29 - An EPICOR II dewatered resin liner was sent to Hanford, WA using the recently approved NRC and Washington state exemptions for shipment/disposal of Strontium 90 in wastes.
- October 30 - Combined laundry shipment; 49 drums, 1 box of protective clothing to Royersford, PA.
- October 31 - Unit 2 scrap metal was sent to Oak Ridge, TN.

7. REACTOR BUILDING ACTIVITIES

- Defueling Water Cleanup System (DWCS) preoperational testing and modification continued.
- Installation of the vacuum defueling system is in progress.
- Work is in progress on the canister positioning system.
- Canister handling bridge indexing and load testing is in progress.
- The initial phase of defueling the reactor core is in progress.

8. AUXILIARY AND FUEL HANDLING BUILDING ACTIVITIES

- Installation of the DWCS continued. Partial DWCS turnover for processing RCS during early defueling is expected to be completed in October.
- Spent Fuel Pool has been flooded to a depth of about 20 feet (about 6 feet above the top of the fuel canister storage racks).

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9. NRC EVALUATIONS IN PROGRESS

- Technical Specification Change Request number 49.
- Recovery Operations Plan Change numbers 29, 31, and 32.
- Fuel Canister Technical Evaluation, Revision 1.
- Defueling Safety Evaluation.
- SDS Technical Evaluation and System Description Update.
- Core Stratification Sample Safety Evaluation.
- Heavy Load Handling Safety Evaluation Report.
- Defueling Water Cleanup System Technical Evaluation Report, Revision 7.
- Containment Air Control Envelope Technical Evaluation Report, Revision 5.

10. PUBLIC MEETING

The next meeting of the Advisory Panel is scheduled for 11:00 AM, November 19, 1985, in Washington, DC, before the NRC Commissioners. The next meeting in the TMI area is scheduled for December 12, 1985, at the Harrisburg, PA Holiday Inn, 23 South Second Street, Harrisburg, PA, from 7:00 PM to approximately 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

William D. Travers  
Acting Director  
TMI Program Office

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Harold R. Denton  
Bernard J. Snyder

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