April 14, 1986 NRC/TMI-86-033

MEMORANDUM FOR:

Harold R. Denton, Director

Office of Muclear 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 APRIL 7 - April 13, 1986

1. DEFUELING

- As of April 13, 1986, a total of 42 defueling canisters have been loaded with fuel debris and transferred to the canister storage racks in the fuel building. The total weight of debris transferred out of the reactor vessel is 47,500 lbs.
- Fuel debris in the form of small loose rubble which is amenable to "pick and place" defueling using a spade-bucket tool has been substantially depleted. The remaining loose rubble consists mainly of either fine debris, or pieces that would require some sizing operation before they can be placed into defueling canisters. Both vacuum defueling of the fine debris and sizing operations (e.g., cutting, shredding or separating) would require good underwater visibility which is not available due to the biologic growth. The licensee has halted the defueling operation to implement a micro-organism treatment and control program.
- Preparations are in progress to begin a program designed to kill the biological contamination in the reactor conlant system (RCS). The program includes manual brushing and hydrolazing to remove the adherent growth from the surfaces inside the reactor vessel, circulating the RCS water through a high pressure pump, and filtering the pump effluent through a diatomaceous earth filter to remove the dead organisms. Laboratory and pilot scale testing have demonstrated that the rapid pressurization and depressurization that occurs when the water passes through a high pressure positive displacement pump is effective in destroying most of the organisms and that the remaining biological debris is readily filterable. The entire operation is expected to take about one week.

2. PLANT STATUS

 The reactor remains in long term cold shutdown, vented to atmosphere. Core cooling is by natural heat loss to ambient building atmosphere. The average of the incore thermocouple average is 79°F.

The airborne radioactivity on the defueling platform is about 1.7 E-7 uCi/cc Tritium and 3.2 E-11 uCi/cc Cesium-137. The platform is mounted above the modified internals indexing fixture which is mounted on the reactor vessel flange. These provide water coverage of 15½ feet over the core region. This water level is about 5 feet over the top of any debris canisters in the reactor vessel.

3. WASTE MANAGEMENT

 The Submerged Demineralizer System (SDS) is shutdown. SBS total processed to date is 3,885,859 gallons.

 EPICOR II was in temporary shutdown this week. EPICOR II total processed to date is 2,854,371.

4. 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 (includes TMI-1 and TMI-2) to the river consisted of 14 daily composite samples taken from March 22 - 29, 1986. A gamma scan detected no reactor related activity above the lower limit detectability. Trace indications of Iodine-131 may be present but not in sufficient quantities to be quantified or clearly identified.

 The Lancaster water sample taken at the water works intake and analyzed by EPA consisted of a seven day composited sample taken from March 22 - 29, 1986. A gamma scan detected no reactor related radioactivity.

 The NRC outdoor airborne particulate sampler at the TNI site collected a sample between April 3 - 10, 1986. No reactor related radinactivity was detected. Analysis showed Indine-131 and Cesium-137 concentrations to be less than t = lower limits of detectability.

5. AUXILIARY AND FUEL HANDLING BUILDING ACTIVITIES

- Scabbling and painting of the floors in the neutralizer tank rooms were done this week.
- Scabbling and painting of the floors in the mini-decay heat pump room area were done.

About 90% of the general area floor in the 281' elevation fuel handling building has been released for street clothing access.

RADIOACTIVE MATERIAL SHIPMENTS 6.

Laundry - Contaminated laundry was sent from TMI site to Roversford. PA on these dates:

March 4 - 92 drums and 2 boxes

March 11 - 86 drums and 5 boxes

March 18 - 78 drums and 5 boxes March 25 - 130 drums and 3 boxes

Harch 31 - 107 drums and 4 boxes

- Samples Unit 2 reactor building basement concrete core bore samples were sent to Scoville. ID for research analysis on March 14.
- Waste A combined unit shipment of 72 drums and 6 boxes of waste were sent to Richland, MA for burial on March 17, 1986.
- Samples Unit 2 samples of air inside the reactor building were sent to Pittsburgh, PA for analysis on March 13, 1986.

7. HRC EVALUATIONS IN PROGRESS

- Technical Specification Change Request number 49, and 51.
- Recovery Operations Plan Change number 31, 33, 35, and 36.
- Core Stratification Safety Evaluation.
- Solid Waste Facility Technical Evaluation Report.
- Reactor Building Sump Criticality Safety Evaluation Report.
- TMI-2 Temporary Reactor Vessel Filtration System Safety Evaluation Report, Revision 1.
- Underhead High Pressure Decen Safety Evaluation Report.
- Hydraulic Shredder Safety Evaluation Report.
- Canister Handling and Preparation for Shipment Safety Evaluation Report.
- Defueling Canister Technical Evaluation Report, Revision 2.
- Penetration 536 Modification Safety Evaluation Report

PUBLIC MEETING 8.

On the evening of April 10, 1986, the Advisory Panel for the Decontamination of Three Mile Island Unit 2 held a public meeting at the Holiday Inn, Center City, Harrisburg, PA.

At this meeting the Panel received a briefing by T. Demmitt, Deputy Director, THI-2, on the status of defueling. The Panel expressed interest on the issue of micro-biological growths in the reactor coolant system. The licensee described the extent of the problem and presented their plans for controlled growth of the micro-organisms.

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The NRC staff provided a status report on regulatory issues related to TNI-2. This included a brief summary of the MRC Advisory Committee for Reactor Safeguards conclusions on the potential for recriticality during defueling.

The Panel also received comment from members of the public. The next meeting of the Advisory Panel is scheduled for June 11, 1986 from 7:00 PM to 10:00 PM at the Holiday Inn, Center City, Harrisburg, PA.

ORIGINAL SIGNED BY: William D. Irowers

William D. Travers Director TMI-2 Cleanup Project Directorate

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