

October 10, 1983  
NRC/TMI-83-064

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

Bernard J. Snyder, Program Director  
TMI Program Office

FROM: Lake H. Barrett, Deputy Program Director  
TMI Program Office

SUBJECT: NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT FOR  
October 2 - October 8, 1983

Data from effluent and environmental monitoring systems indicated no plant releases in excess of regulatory limits. Waste shipments continued on a routine basis. Plant parameters showed no significant changes. The reactor coolant system is depressurized and RCS level remains at 321'6" as part of underhead characterization studies.

Site activities this week included: canal seal plate preparations, AFHB decontamination, "A" spent fuel pool refurbishment and procedure review. Two reactor building entries were made in support of miscellaneous tasks. (For more details see appropriate paragraphs below.)

Significant items covered in the enclosure are:

- Reactor Building Activities
- Polar Crane Status
- Spent Fuel Pool "A" Refurbishment
- Auxiliary and Fuel Handling Building Activities
- Waste Management Activities
- Purification and Demineralizer Status
- Public Meetings

Data summary sheets included in this report are:

- Liquid Effluent Data
- Environmental Data
- Radioactive Material/Radwaste Shipment Data
- Water Processing Data
- Plant Status Data

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Lake H. Barrett  
Deputy Program Director  
TMI Program Office

Enclosure: As stated

OFFICE	TMI:PO	TMI:PO	TMI:PO	TMI:PO	TMI:PO		
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DATE	10/4/83	10/7/83	10/7/83	10/7/83	10/7/83		

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## ENCLOSURE

### REACTOR BUILDING ACTIVITIES:

Two reactor building entries were completed during the week of October 2, 1983. During these entries, three core debris samples were retrieved from core location 9-E (midway between the core center and the periphery). These samples and three additional debris samples, which were retrieved from the center of the core (see Weekly Status Report September 12, 1983) will be sent to offsite laboratories for analysis.

The most manhour intensive task during the entries this week involved the modification of canal seal plates (see Weekly Status Report October 3, 1983). The existing seal plate design needed modification for long term use during defueling operations. As a prerequisite to filling the refueling canal with shield water, the seal plates are installed to seal the 2 1/2 ft. wide gap between the reactor vessel and the refueling canal floor.

Three reactor building entries are scheduled for next week.

### POLAR CRANE STATUS:

The TMIPO staff is continuing the review of all licensee documents related to the reactor building polar crane. On September 28, 1983, a letter was forwarded to GPU requesting additional refurbishment information in the area of administrative controls.

### SPENT FUEL POOL "A" REFURBISHMENT:

Removal of the concrete shield blocks is complete with the exception of those in one corner which cannot be removed until the concrete shield slab above them is removed. The shield slab lifting lug work is progressing; with a load test scheduled for the middle of the month.

The driers and charcoal filters have been removed from the truck bay. The charcoal filters were found to be uncontaminated. The driers are awaiting shipment offsite.

The two tanks of the lower tank farm have been emptied. The four tanks of the upper tank farm have been filled and drained several times leaving about eighteen inches of water in them for shielding. Flushing of the upper tanks is scheduled to begin Monday, October 10. An attempt will be made to reduce tank contact readings to less than 200 mR/hr. The licensee is preparing a contingency chemical decontamination process and plans to submit procedure to the NRC TMIPO the third week of this month. However, it now appears that water flushing will provide adequate decontamination.

Contact radiation levels at the upper tank farm have been reduced by a factor of about four, to about 300 mR/hr. General area radiation levels have been reduced by a factor of about three, to about 25 mR/hr. Lower tank farm contact readings are about 40 mR/hr and general area radiation levels are about 15 mR/hr, a reduction of a factor of about three.

### AUXILIARY AND FUEL HANDLING BUILDING ACTIVITIES:

Installation of specialized decontamination equipment in the 328 ft. elevation decontamination facility continued this week. Construction on the physical structure is complete. Plumbing and electrical work is continuing.

All but two of the supporting procedures governing operation of the decontamination facility and its equipment have been reviewed. These procedures are in effect. Operation of the new facility is scheduled to commence in October.

Tests evaluating the effectiveness of chemical solutions and foams for possible use as decontaminants are continuing. Evaluation is also underway of a corrosive solution which could be applied to remove a thin surface layer to decontaminate lead bricks.

GPU is also performing tests to evaluate solidification materials and methods. The goal is to develop a system which would allow efficient, in-house treatment of liquid radioactive waste. At present this type of service would have to be provided by contract.

### WASTE MANAGEMENT ACTIVITIES:

1. SDS Liner Shipments. No new data are available at this time pertaining to the eventual shipment and disposal of the pre and final SDS particulate filters (sand and "Cuno" filters). Preparations are being made for the shipment of the next SDS zeolite liner (D20031) which is tentatively scheduled for the week of October 10th.
2. EPICOR Demineralizer Shipments: EPICOR Demineralizer K-7 was shipped from TMI to Richland, Washington, October 6, 1983. Demineralizers F-42, F-47, and M-8 have been dewatered and are being prepared for shipment.

### PURIFICATION AND DEMINERALIZER STATUS:

Plans and preparations continue for the removal of the radioactive resins from the AFHB makeup and purification demineralizers (MU-K 1A & B).

At present GPU is still attempting to locate the source of the gas leak in the "A" demineralizer. They will attempt a gas sample on October 12 and attempt to quantify the leakage and determine its source.

This project will continue through 1984 and will be completed with the removal of resins and related radioactive waste.

### PUBLIC MEETINGS:

#### Future Meeting:

On November 17, 1983, at 11:00 a.m., Lake Barrett will speak on NRC issues at a Lancaster County ELANCO meeting to be held at the Trinity Lutheran Church, 221 East Main Street, New Holland, Pennsylvania.

## APPENDIX 1

### LIQUID EFFLUENT DATA

#### GPU Nuclear

Based on sampling and monitoring, liquid effluents from the TMI site released to the Susquehanna River were determined to be within regulatory limits and in accordance with NRC requirements and the City of Lancaster Agreement.

During the period September 30, 1983 through October 6, 1983 the effluents contained no detectable radioactivity at the discharge points. Individual effluent sources originating within Unit 2 contained minute amounts of radioactivity. Calculations indicate that less than  $7.6 \text{ E-8}$  (0.000000076) of a curie of Cs 137 was discharged.

#### Environmental Protection Agency

Lancaster Water Samples:	7 samples
Period Covered:	September 18 - September 24, 1983
Results:	Gamma Scan Negative
TMI Water Samples:	6 samples
Period Covered:	September 19 - September 24, 1983
Results:	Gamma Scan Negative

## APPENDIX 2

### ENVIRONMENTAL DATA

#### EPA Environmental Data

- The Yorkhaven environmental monitoring station indicated 29 pCi/m<sup>3</sup> Kr-85 during the period of September 2, 1983 to September 16, 1983.
- The EPA Middletown Office has not received the environmental Kr-85 analytical results for the samples which were taken subsequent to September 16, 1983 from the EPA's Counting Laboratory at Las Vegas, Nevada. These results will be included in a subsequent report.
- No radiation above normally occurring background levels was detected in any of the sample collected from the EPA's air and gamma rate networks during the period from September 27, 1983 through October 5, 1983.

#### NRC Environmental Data

Results from the NRC continuous air sampler monitoring of the TMI site environment are as follows:

<u>Sample</u>	<u>Period</u>	<u>I-131</u> <u>(uCi/cc)</u>	<u>Cs-137</u> <u>(uCi/cc)</u>
HP-387	September 28, 1983 - October 6, 1983	<6.5 E-14	<6.5 E-14

APPENDIX 3

RADIOACTIVE MATERIALS/RADWASTE SHIPMENT DATA

- On October 4, 1983, a box containing a 500 milliliter Saxton Station reactor building sump sample was shipped to Teledyne Isotopes.
- On October 6, 1983, 62 drums of contaminated laundry from TMI-1 and TMI-2 were shipped to Interstate Uniform Service, New Kensington, Pennsylvania.
- On October 6, 1983, a NU-PAC 14/190M type A cask containing EPICOR II liner K-7 was shipped to U. S. Ecology, Hanford Burial Site, Richland, Washington.
- On October 7, 1983, one drum containing a TMI Unit 1 Kr 85 gas canister was shipped to Oak Ridge National Laboratory, Oak Ridge, Tennessee.
- On October 7, 1983, one TMI Unit 1 Hittman mixer head was shipped to Hittman, Inc., Columbia, Maryland.

## APPENDIX 4

### WATER PROCESSING DATA

#### Submerged Demineralizer System (SDS)

SDS completed processing SDS Batch 61 September 30, 1983. Batch 61 consisted of approximately 1700 gallons from the lower tank farm. This volume also includes the shutdown flush done after completion of the batch. (Because of the limited number of gallons for this batch not enough sample points were taken to develop accurate parameters for the system)

#### EPICOR II

EPICOR II processed Batch 188 (2000 gallons from the Miscellaneous Waste Hold-up Tank) on October 5, 1983. After completing the batch the system was placed in temporary shutdown for a routine vessel changeout.



APPENDIX 5

PLANT STATUS

Core Cooling Mode: Heat transfer from the reactor coolant system (RCS) to Reactor Building ambient.

Available Core Cooling Mode: Mini Decay Heat Removal (MDHR) system.

RCS Pressure Control Mode: N/A

Major Parameters (as of 5:45 AM, October 6, 1983) (approximate values)

Average Incore Thermocouples\*: 104°F

Maximum Incore Thermocouple\*: 129°F

RCS Loop Temperatures:

	A	B
Hot Leg	**	**
Cold Leg (1)	70°F	80°F
(2)	70°F	80°F

RCS Pressure: 0 psig

Reactor Building: Temperature: 76°F

Pressure: -0.25 psig

Airborne Radionuclide Concentrations:

5.3 E-7 uCi/cc H<sup>3</sup> (Tritium)  
(sample taken 10/3/83)

7.6 E-10 uCi/cc particulates  
(predominately Cs-137)  
(sample taken 10/5/83)

\*Uncertainties exist as to the exact location and accuracy of these readings.

\*\*Since the RCS draindown, hot leg temperature detectors are above water level.