

September 2, 1983
NRC/THI-83-057

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

Bernard J. Snyder, Program Director
THI Program Office

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

SUBJECT: NRC THI PROGRAM OFFICE WEEKLY STATUS REPORT FOR
AUGUST 28 - September 2, 1983

Data from effluent and environmental monitoring systems indicated no plant releases in excess of regulatory limits. Waste shipments and water processing tasks continued on a routine basis. Plant parameters showed no significant changes. Preparations for head lift (early 1984) continued. The reactor coolant system is depressurized and RCS level remains at 321'6". Data acquired during underhead characterization activities are being analyzed and mapping of core topography is underway.

The major activity this week was the evaluation of GPU's polar crane submittals. Other activities included: underhead characterization operations, "A" spent fuel pool refurbishment and procedure review. Three reactor building entries were made in support of miscellaneous tasks. (For more details see appropriate paragraphs below.)

Significant items included in the enclosure are:

- Reactor Building Activities
- Polar Crane Status
- Spent Fuel Pool "A" Refurbishment
- Auxiliary and Fuel Handling Building Activities
- Krypton-85
- Waste Management Activities
- Public Meetings

Data summary sheets included in this report are:

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

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//signed//
Lake H. Barrett
Deputy Program Director
THI Program Office

OFFICE				
SUBJECT	Enclosure:	As stated		
DATE				

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OFFICE	TMIPD ✓	TMIPD ✓	TMIPD ✓	TMIPD ✓		
SURNAME	KBarr/imp	AFasano	PGrant	LBarrett		
DATE	9/2/83	9/2/83	9/2/83	9/2/83		

ENCLOSURE

REACTOR BUILDING ACTIVITIES:

The ongoing underhead characterization is scheduled to be completed in mid September. At the present time, the reactor coolant system water level is at one foot below the top of the plenum (321.5 ft.). The visual inspection of the plenum and the underside of the head has been completed. Underhead radiation measurements and the core topography project are in progress. Core debris grab samples are scheduled for next week in two locations. The data obtained from the underhead characterization tasks are being evaluated and will be summarized in future Weekly Status Reports. Video tapes of the underhead inspection are available for public viewing at the NRC Middletown Office.

POLAR CRANE STATUS:

The TMIPO staff is continuing the review of all licensee documents related to the reactor building polar crane. This includes approximately 40 component inspection reports and evaluations. The NRC will continue its review of all polar crane related documents. The NRC's conclusions, in a safety evaluation report, will be docketed, forwarded to the licensee and made available to the public. The TMIPO staff expects to complete this activity in September.

SPENT FUEL POOL "A" REFURBISHMENT:

The removal of concrete shield blocks from around the side of the tank farm resumed after construction and successful testing of the equipment to be used to transfer the blocks to the truck bay for removal.

Operational test of the submersible pump in the lower tank farm standpipe is planned for late September following SDS return to operation. Tank flushing and decontamination will be accomplished at that time.

AUXILIARY AND FUEL HANDLING BUILDING ACTIVITIES:

The recently decontaminated walls in the reactor coolant evaporator room were painted. The floor decontamination began this week with scabbling (abrasive removal of a thin surface layer). Three other auxiliary building cubicles on the 282 ft. elevation are scheduled for similar decontamination operations in the near future.

Scabbling activities of open areas and corridors in the fuel handling building continued this week.

Construction on the Decontamination Facility Addition (presently approximately 90% complete) will resume next week. Work had been suspended (see Weekly Status Report dated August 15, 1983) due to funding limitations. The remaining construction should be completed during the next several weeks thus permitting full operational use to start in October.

KRYPTON-85:

The Kr-85 results obtained for the August 5-19 collection period at the TMI Observation Center, Goldsboro, and York Haven (see Appendix 2) were in the 20-30 pCi/m³ range typical of current Kr-85 concentrations in the Northern Hemisphere. The sample collected on the roof of the EPA Office, 100 Brown Street, Middletown contained 40 pCi/m³ Kr-85 which is slightly higher than the results obtained here since Fall 1980 following the purge of the Unit 2 containment.

Plant records show that Kr-85 releases in this time period were no different than usual (~0.5 curies Kr-85 per day of containment ventilation). EPA's monitoring records show that finding an elevation in Kr-85 in Middletown in the absence of increased levels at the Observation Center and/or Goldsboro, would be very rare.

It is noted that the permissible concentration of Kr-85 in unrestricted areas is 300,000 pCi/m³ and that the present reading of 40 pCi/m³ is well below this.

An evaluation of this apparent increase is in progress.

WASTE MANAGEMENT ACTIVITIES:

1. SDS Liner Shipments. The last liner containing radioactive waste resulting from the processing of the original accident-generated water at TMI Unit 2 was shipped on August 30, 1983.

The solid waste was shipped to a U.S. Department of Energy laboratory in Richland, Washington where 12 similar containers already have been shipped for research and development analysis. Plans to ship the remaining lower activity SDS waste liners (used to process RCS water) are being developed.

2. EPICOR Demineralizer Shipments. EPICOR demineralizer F-32 was shipped from TMI to Hanford, Washington on August 30, 1983. Demineralizers F-37, F-22, and F-29 have all been dewatered and are being prepared for shipment.

PUBLIC MEETINGS:Future Meetings:

1. On September 6, 1983, Drs. B. Snyder and M. Masnik will meet with Maryland state officials of the Department of Natural Resources. The purpose of this meeting is to provide a brief on the status of the TMI-2 cleanup, lessons learned and application to future plants.
2. On September 7, 1983, Lake H. Barrett will meet with the Concerned Mothers of Middletown to discuss TMI related issues.
3. On September 16, 1983, the Three Mile Island Unit 2 Advisory Panel will meet with the NRC Commissioners in their Washington office at 1717 H Street, Washington, DC 20555. The public is invited to observe the meeting.

4. On September 28, 1983, the Three Mile Island Unit 2 Advisory Panel will meet from 7:00 PM to 10:00 PM in the Holiday Inn, 23 South Second Street, Harrisburg, Pennsylvania. The meeting will be open to the public. The major topic for the meeting will be polar crane issues. Persons or groups that have questions pertaining to the TMI-2 cleanup that would like to have them considered or addressed by the Advisory Panel can send these questions to Mr. John Minnich, Chairman, Dauphin County Courthouse, P.O. Box 1295, Harrisburg, PA 17108. Persons or groups desiring the opportunity to speak before the Advisory Panel on TMI-2 cleanup related items are asked to contact in writing, Mr. Joel Roth, 4705 Carlisle Pike, Mechanicsburg, PA 17055.

APPENDIX 1

LIQUID EFFLUENT DATA

GPU Nuclear

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

During the period August 26, 1983, through September 1, 1983, the effluents contained no detectable radioactivity at the discharge point. Individual effluent sources originating within Unit 2 contained minute amounts of radioactivity. No liquid releases were made during this time period.

Environmental Protection Agency

Lancaster Water Samples:	7 samples
Period Covered:	August 7 - August 13, 1983
Results:	Gamma Scan Negative
TMI Water Samples:	6 samples
Period Covered:	August 13 - August 20, 1983
Results:	Gamma Scan Negative

APPENDIX 2

ENVIRONMENTAL DATA

EPA Environmental Data

The EPA measures Kr-85 concentrations at several environmental monitoring stations and reported the following results:

<u>Location</u>	<u>August 5, 1983 - August 19, 1983</u> (pCi/m ³)
Goldsboro	26
Middletown	40*
Yorkhaven	26
TMI Observation Center	27

- The EPA Middletown Office has not received the environmental Kr-85 analytical results for the samples which were taken subsequent to August 19, 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 samples collected from the EPA's air and gamma rate networks during the period from August 23, 1983 through August 31, 1983.

*For further information see "Krypton-85" paragraph.

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> (uCi/cc)	<u>Cs-137</u> (uCi/cc)
HP-382	August 24, 1983 - August 31, 1983	<6.7 E-14	<6.7 E-14

APPENDIX 3

RADIOACTIVE MATERIALS/RADWASTE SHIPMENT DATA

- On August 29, 1983, one HN-100 cask containing solidified resins from Unit 1 was shipped to Chem Nuclear Systems, Inc., Barnwell, South Carolina.
- On August 30, 1983, a I-130-II type B cask containing SDS liner. No. D20029 was shipped to U.S. Department of Energy, Rockwell Hanford Operations, Richland, Washington.
- On August 30, 1983, one HN-100 type A cask containing EPICOR II liner F-32 was shipped to U.S. Ecology, Hanford Burial Site, Richland, Washington.
- On September 1, 1983, 90 drums of contaminated laundry from Units 1 and 2 were shipped to Interstate Uniform Service, New Kensington, Pennsylvania.
- On September 1, 1983, a box containing two 500 milliliter liquid samples from Unit 1 was shipped to NWT Corporation, San Jose, California.
- On September 1, 1983, 11 steel boxes containing LSA from Units 1 and 2 were shipped to U.S. Ecology, Hanford Burial Site, Richland, Washington.

APPENDIX 4

WATER PROCESSING DATA

Submerged Demineralizer System (SDS)

SDS was shutdown during the week for maintenance.

EPICOR II

EPICOR II was shutdown during the week.

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: II/A

Major Parameters (as of 5:30 AM, September 2, 1983) (approximate values)

Average Incore Thermocouples*: 107°F
Maximum Incore Thermocouple*: 134°F

RCS Loop Temperatures:

	A	B
Hot Leg	**	**
Cold Leg (1)	80°F	83°F
(2)	80°F	83°F

RCS Pressure: 0 psig

Reactor Building: Temperature: 80°F
Pressure: -0.17 psig
Airborne Radionuclide Concentrations:

3.2 E-7 uCi/cc H³ (Tritium)
(sample taken 8/30/83)

1.4 E-9 uCi/cc particulates
(predominately Cs-137)
(sample taken 9/2/83)

*Uncertainties exist as to the exact location and accuracy of these readings.
**Since the RCS draindown, hot leg temperature detectors are above water level.