

July 18, 1983
NRC/TMI-83-044

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
July 10 - July 16, 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. General clean-up and preparations for headlift continued.

Major activities this week were ongoing decontamination of drains and systems in the Auxiliary Building, continued decon facility construction, "A" spent fuel pool refurbishment, procedure review, continued followup of polar crane issues, and cutting and removal of lead screws. Five Reactor Building entries supported miscellaneous tasks. (For more details see appropriate paragraphs below.)

Significant items included in the enclosure are:

- Auxiliary and Fuel Handling Activities
- Reactor Building Activities
- Polar Crane Status
- 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
- Airborne Effluent Data

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Lake H. Barrett
Deputy Program Director
TMI Program Office

Enclosure: As stated

*TDH-5
TMI
07/17/83*

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DATE	7/18/83	7/18/83	7/18/83	7/18/83		

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ENCLOSURE

AUXILIARY AND FUEL HANDLING BUILDING ACTIVITIES:

The major ongoing activity in the Auxiliary and Fuel Handling Buildings (AFHB) continues to be the decontamination of the 262' elevation. No remote decontamination was performed since the robot malfunctioned during its last use. Cubicle decon work will resume once the robot is cleaned and repaired. Cleaning of the Auxiliary and Fuel Handling Building floor drains continued this week.

Routine trash compaction and tool separation/decontamination continued in support of other tasks and activities presently in progress.

Expansion of the decontamination facility continued with the installation of the stainless steel floor, service air and water. The duct work is in place for the ventilation system. Supporting procedures governing the operation and use of the newly purchased decontamination equipment remain in the licensee's review chain. Construction of the facility should be completed in mid to late August.

Refurbishment and preparation of the "A" spent fuel pool for the eventual staging and temporary storage of core fuel and debris continued this week.

REACTOR BUILDING ACTIVITIES:

Five reactor building entries were completed during the week of July 10, 1983. The remaining segments of control rod drive lead screws, which had been stored in the reactor building since the Quick Scan inspection of the core, were cut into pieces suitable for off-site shipment. Prior to packaging for shipment, a gamma scan was performed on each of the segments. On Thursday, July 14, 1983 the segments were shipped to EG&G laboratories in Idaho for additional analysis.

Two members of the NRC TMI Program Office conducted an inspection of work areas in the reactor building including the polar crane. The inspection was a follow-up of an inspection performed on May 5, 1983, when several industrial safety and housekeeping discrepancies were identified. During the inspection this week it was noted that the previous discrepancies had been corrected. No new problem areas were identified.

Five reactor building entries are scheduled for the week of July 17, 1983.

Reactor coolant system depressurization and draindown in preparation for the next phase of underhead data acquisition is scheduled to commence on July 25, 1983.

POLAR CRANE STATUS:

The TMI Program Office has resumed activities associated with the review of the Safety Evaluation for the Polar Crane Load Test and associated procedures. In the near future, the staff will forward a letter to the licensee requesting additional information that is required for the NRC to complete its review. After the review of information already received and that which is being requested, the staff will make a determination on the acceptability of the load test as proposed by GPUNC.

To date, the staff has not received a response to the letter dated July 8, 1983 requesting additional information on the head and internals handling indexing fixture (tripod). The licensee must obtain NRC approval of all corrective actions before the tripod can be used.

MANAGEMENT ACTIVITIES:

1. SDS Liner Shipments. The tenth SDS waste liner (D-10011), in a group of nineteen, was shipped from TMI to the Rockwell Hanford facility (Richland, Washington) on July 16, 1983. This 10 cubic foot, stainless steel waste liner, which contained approximately 47,000 curies of radioactivity deposited on a zeolite ion-exchange bed, was shipped in a specially designed type B shipping cask (designed to withstand transportation accidents). As with previous SDS shipments, this waste liner was loaded with catalytic recombiner pellets to maintain non-combustible gas conditions during the handling and shipment period. Because of the pellet addition problems (see previous Weekly Status Report), the licensee requested a variation on the catalyst addition criteria because approximately 1.1% (~2.5 grams) of the required catalyst charge was not added to the liner. The NRC reviewed this variation and determined that adequate gas recombiner capacity existed (i.e., safety factor >10) thereby assuring non-combustible gas conditions within liner D10011. The liner was also monitored and sampled to demonstrate the presence of non-combustible gases.

EPICOR II Prefilter (PF) Shipments. On July 12, 1983, the final two EPICOR II prefilterers (PF-24 and PF-31) waste liners were shipped from TMI to the Idaho National Engineering Laboratory (INEL). These prefilterers were the last in a group of 50 liners that have been shipped to INEL. These shipments represent a significant milestone in the removal of over 60,000 curies of radioactive waste which had been stored at TMI over the past three years. The 50 ft³ waste liners containing ion exchange resins, were used to concentrate the radioactive material resulting from the March 28, 1979 accident which had been dispersed in the waste water (~500,000 gallons) contained in the auxiliary building. The prefilterers were temporarily stored in a solid waste storage facility until a special prototype gas sampling and inerting tool was developed by the DOE to ensure each prefilter could be nitrogen purged of radiolytic gases and maintained in a non-combustible gas condition during the handling and shipping period. The DOE at INEL has performed R&D on a selected number of these PF liners and the majority of the remaining liners are planned for disposal at the Hanford, Washington facility in specially designed high integrity containers.

PUBLIC MEETINGS:

The Advisory Panel for the Decontamination of Three Mile Island Unit 2 will meet on July 28, 1983 from 7:00 p.m. to 10:00 p.m. in the Holiday Inn, 23 South Second Street, Harrisburg, Pennsylvania. The meeting will be open to the public. The Panel will discuss TMI-2 cleanup activities. The TMI Unit 2 licensee and Federal agencies involved in the cleanup will provide a status report. The Advisory Panel will also entertain public comment regarding the cleanup of TMI-2. Persons or organizations desiring to comment during the Advisory Panel Meeting are asked to write to Mr. Joel Roth, 4705 Carlisle Pike, Mechanicsburg, PA 17055.

A meeting between the NRC/TMI:PO and the licensee on Dose Reduction Programs associated with TMI-2 facility cleanup is being planned for late July or early August.

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 July 8, 1983, through July 14, 1983, the effluents contained no detectable radioactivity at the discharge point. Individual effluent sources originating within Unit 2 contained minute amounts of radioactivity. Calculations indicate that less than $5.0 \text{ E-}8$ (0.00000005) of a curie of Cs-137 was discharged.

Environmental Protection Agency

Lancaster Water Samples:	10 samples
Period Covered:	June 16 - June 25, 1983
Results:	Gamma Scan Negative
TMI Water Samples:	5 samples
Period Covered:	June 25 - July 1, 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>June 10, 1983 - June 24, 1983</u> (pCi/m ³)
Goldsboro	25
Middletown	28
Yorkhaven	29
TMI Observation Center	29

- The EPA Middletown Office has not received the environmental Kr-85 analytical results for the samples which were taken subsequent to June 24, 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 July 5, 1983, through July 13, 1983.

NRC Environmental Data

Results from NRC monitoring of the environment around the TMI site were as follows:

- The following are the NRC air sample analytical results for the onsite continuous air sampler:

<u>Sample</u>	<u>Period</u>	<u>I-131</u> (uCi/cc)	<u>Cs-137</u> (uCi/cc)
HP-375	July 6, 1983 - July 13, 1983	<5.7 E-14	<5.7 E-14

APPENDIX 3

SHIPMENTS

RADIOACTIVE MATERIALS/RADIOACTIVE WASTE

- On July 12, 1983, two 8-120 shipping casks containing EPICOR II prefilters numbers 24 and 31 were shipped to EG&G, Scoville, Idaho.
- On July 14, 1983, one box containing a 1000 ml RCS letdown sample from Unit 1 was mailed to Teledyne Isotopes, Westwood, New Jersey.
- On July 14, 1983, 121 drums of contaminated laundry from Units 1 and 2 were shipped to Interstate Uniform Service, New Kensington, PA.
- On July 14, 1983, one SN-1 shipping cask containing five drums of lead screw segments from Unit 2 was shipped to EG&G, Scoville, Idaho.
- On July 15, 1983, one drum containing one pressure and two level transducers was shipped to Idaho National Engineering Laboratory, Scoville, Idaho.
- On July 16, 1983, one CNSI 1-13C-II (type B) shipping cask containing Unit 2 SDS liner No. D10011 was shipped to Rockwell Hanford Operations, Richland, Washington.

APPENDIX 4

WATER PROCESSING DATA

Submerged Demineralizer System (SDS)

SDS completed processing of approximately 29,100 gallons of reactor building sump water on July 12, 1983. This water had been processed in a previous batch and was used for flushing in the ongoing decontamination of the reactor building. The performance parameters are given below.

SDS Performance Parameters

July 8, 1983 to July 12, 1983

<u>Radionuclide</u>	<u>Average Influent (uc/ml)</u>	<u>Average Effluent (uc/ml)</u>	<u>Percent Removed</u>
Cesium 137	2.2	2.1×10^{-5}	> 99.9
Strontium 90	1.9	3.5×10^{-3}	99.8

EPICOR II

EPICOR II Processed approximately 20,500 gallons of SDS effluents during the week; the performance parameters are included in the table below.

EPICOR Performance Parameters July 11, 1983 to July 13, 1983

<u>Radionuclide</u>	<u>Average Influent (uc/ml)</u>	<u>Average Effluent (uc/ml)</u>	<u>Percent Removed</u>
Cesium 137	7.1×10^{-6}	1.3×10^{-7}	98.2
Strontium 90	2.6×10^{-3}	2.9×10^{-5}	98.9
Antimony 125	1.7×10^{-3}	2.8×10^{-7}	>99.9

APPENDIX 5

PLANT PARAMETERS

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: Standby Pressure Control System.

Major Parameters (as of 5:40 AM, July 15, 1983) (approximate values)

Average Incore Thermocouples*: 96°F**

Maximum Incore Thermocouple*: 120°F

RCS Loop Temperatures:

	A	B
Hot Leg	94°F	92°F
Cold Leg (1)	80°F	78°F
(2)	80°F	79°F

RCS Pressure: 64 psig

Reactor Building: Temperature: 81°F

Pressure: -0.3 psig

Airborne Radionuclide Concentrations:

8.8 E-9 uCi/cc H³ (Tritium)
(sample taken 7/13/83)

6.6 E-9 uCi/cc particulates
(predominately Cs-137)
(sample taken 7/13/83)

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

APPENDIX 6

AIRBORNE EFFLUENT DATA

Airborne releases to the environment as measured by licensee installed monitors at discharge stacks are listed below. These releases were well within regulatory limits.

MAY, 1983

	<u>Unit 11</u>	<u>EPICOR 11</u>
Noble gases (Ci)	10.0	2.5
Particulates (Ci)	3.6 E-6	2.1 E-7
Tritium (Ci)	1.6	3.7 E-3