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August 31, 1981
 NRC/TMI-81-050



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

Enclosed is the status report for the period of August 23 - 29, 1981.
 Major items included in this report are:

1. Liquid Effluent Releases.
2. NRC and EPA Environmental Data.
3. Radioactive Material and Radwaste Shipments.
4. Submerged Demineralizer System Status.
5. Reactor Building Entry Number 15.
6. Occupational Exposure Data.
7. DOE to take EPICOR II Prefilter for Research and Development.

This is the first report to include occupational exposure data. Hereafter, this data will be reported monthly.

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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	TMI:PO
NAME	Wifebe	RConte	MShanbake	AFasano	RBertamy	LBarrett
DATE	8/21/81	8/27/81	8/28/81	8/31/81	8/31/81	8/31/81

cc w/encl:
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OGC
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Commissioner's Technical Assistants
NRR Division Directors
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NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT

Week of August 23 - 29, 1981

Plant Status

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

Available Core Cooling Modes: Decay heat removal systems. Long term cooling "B" (once through steam generator-B).

RCS Pressure Control Mode: Standby pressure control (SPC) system.

Backup Pressure Control Modes: Mini decay heat removal (MDHR) system.
Decay heat removal (DHR) system.

Major Parameters (as of 0400, August 28, 1981) (approximate values)

Average Incore Thermocouples: 117°F

Maximum Incore Thermocouple: 138°F

RCS Loop Temperatures:

	A	B
Hot Leg	116°F	119°F
Cold Leg (1)	72°F	73°F
(2)	73°F	74°F

RCS Pressure: 94 psig

Reactor Building: Temperature: 74°F
Water level: Elevation 290.9 ft. (8.4 ft. from floor)
via penetration 401 manometer
Pressure: -.3 psig
Concentration: 6.7×10^{-5} uCi/ml Kr-85
(Sample taken 8/21/81)

Effluent and Environmental (Radiological) Information

1. Liquid effluents from the TMI site released to the Susquehanna River after processing, were made within the regulatory limits and in accordance with NRC requirements and City of Lancaster Agreement dated February 27, 1980.

During the period August 21, 1981 through August 27, 1981, the effluents contained no detectable radioactivity at the discharge point although individual effluent sources which originated within Unit 2 contained minute amounts of radioactivity. Calculations indicate that less than one ten thousandths (0.0001) of a curie of tritium was discharged.

2. Environmental Protection Agency (EPA) Environmental Data. Results from EPA monitoring of the environment around the TMI site were as follows:

- The EPA measured Kr-85 concentrations (pCi/m^3) at several environmental monitoring stations and reported the following results:

<u>Location</u>	<u>July 31 - August 14, 1981</u> (pCi/m^3)
Goldsboro	32
Observation Center	27
Middletown	28
Yorkhaven	27

All of the above levels of Kr-85 are considered to be background levels.

- 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 19, 1981, through August 27, 1981.

3. 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-282	August 19, 1981 - August 26, 1981	<9.2 E-14	<9.2 E-14

4. Licensee Radioactive Material and Radwaste Shipments.

- On Monday, August 24, 1981, a 40 ml Unit 2 reactor coolant sample was sent to Babcock and Wilcox (B&W), Lynchburg, Virginia.
- On Monday, August 24, 1981, one 6' x 6' EPICOR I dewatered resin liner (liner P-7) from Unit 1 was shipped to Chem-Nuclear Systems, Incorporated, Barnwell, South Carolina.
- On Tuesday, August 25, 1981, 107 drums containing Unit 1 and Unit 2 contaminated laundry were shipped to Tri-State Industrial Laundries, Utica, New York.

- On Wednesday, August 26, 1981, one 6' x 6' EPICOR I dewatered resin liner (liner P-11) from Unit 1 was shipped to Chem-Nuclear Systems, Incorporated, Barnwell, South Carolina.
- On Thursday, August 27, 1981, 70 drums containing Unit 1 and Unit 2 contaminated laundry were shipped to Tri-State Industrial Laundries, Utica, New York.
- On Friday, August 28, 1981, 41 drums and 7 metal boxes of Unit 1 LSA compacted and noncompacted waste were shipped to Chem-Nuclear Systems, Incorporated, Barnwell, South Carolina.
- On Friday, August 28, 1981, one 6' x 6' EPICOR I dewatered resin liner (liner P-5) from Unit 1 was shipped to Chem-Nuclear Systems, Incorporated, Barnwell, South Carolina.

5. TMI Occupational Exposure.

Licensee records indicate that the cumulative Unit 2 occupational radiation exposure (by thermoluminescent and self-reader dosimeters) for 1981 (as of July 31, 1981) is 84 man-rem.

The station total (Unit 1 and Unit 2) for 1981, which represents that of 5,932 monitored individuals, is 180 man-rem (as of July 31, 1981).

Major Activities

1. - Submerged Demineralizer System. Start up testing is in progress following an outage to incorporate minor system modifications. Of 27 procedures to be updated, 19 have been received by the site TMI:PO. Of these, 12 have been approved, 3 have been returned to the licensee to resolve comments, and 4 are undergoing review. A trial period of processing intermediate water is expected to begin during the week of August 30, 1981, and staging and processing of a small batch (approximately 15,000 gallons) of reactor building sump water is expected to begin shortly thereafter.
2. Reactor Building Entry. Five teams, a total of eleven people, entered the Unit 2 reactor building during entry number fifteen on August 27, 1981. The first team entered the building at approximately 9:30 a.m. The last team exited the building at 4:30 p.m.

The following tasks were successfully completed.

- Measurements using a portable gamma spectrometer.
- Closed circuit television maintenance.
- Air cooler inspection and survey.
- RB tool removal, clean-up, and inspection.

The sixteenth reactor building containment entry in order to continue accident related data acquisition, is scheduled for September 24, 1981.

3. U. S. Department of Energy to take EPICOR II Wastes for Research and Development. In July, the NRC and Department of Energy (DOE) signed a Memorandum of Understanding to help ensure that TMI does not become a long-term waste disposal facility (see Weekly Status Report, August 3, 1981). Discussions between DOE, NRC and GPU have led to the DOE decision to take, for research and development (R&D) purposes, the 49 highly radioactive EPICOR II prefilter liners that are currently stored at TMI. The liners contain approximately 50,000 curies of radioactive cesium and strontium that were removed by the EPICOR II system from 500,000 gallons of radioactive water from the Unit 2 auxiliary building. DOE's R&D program will evaluate the different materials in the liners to answer various generic questions regarding treatment and disposition of ion exchange media including:
- 1) What is the appropriate method of disposal for such resins, considering both economics and safety of disposal?
 - 2) How much radioactivity is being retained in the organic portion of the liner versus the inorganic portion?
 - 3) What changes occur in physical state of these media with time?
 - 4) What is the effect of dewatering?
 - and 5) What is the extent of gas buildup in the various liners and how much is due to radiolytic decomposition of water versus breakdown of the organic resin?

GPU Nuclear will reimburse DOE for shipping and ultimate disposal costs. It is expected that the first of these liners will be shipped in early 1982.

Past Meetings

1. On Friday, August 28, 1981, Lake Barret met with the Middletown mothers to discuss the Unit 1 administrative hearing process and the Unit 2 cleanup. They expressed their opinion that Unit 1 should not start up prior to the completion of Unit 2 cleanup.

Future Meetings

1. On Tuesday, September 1, 1981, the Advisory Panel for the Decontamination of TMI Unit 2, will meet from 7:00 p.m. to 10:00 p.m. at the Holiday Inn, 23 South Second Street, Harrisburg, to discuss current activities at TMI. This meeting will be open for public observation.
2. On Wednesday, September 2, 1981, Lake Barrett will address the York Rotary Club to give an update on the decontamination and cleanup efforts at TMI.
3. On Thursday, September 3, 1981, Lake Barrett will address the Middletown Rotary Club to give an update on the decontamination and cleanup efforts at TMI.