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August 16, 1982
NRC/TMI-82-050

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 8 - 14, 1982. Major items included in this report are:

- Liquid Effluents
- EPA and NRC Environmental Data
- TMI Occupational Exposure
- Radioactive Material and Radwaste Shipments
- Submerged Demineralizer System Status
- EPICOR II
- Reactor Building Entries/Core Inspection
- EPICOR II Prefilter Shipment
- Public Meetings

*Original signed by
Lake H. Barrett*

Lake H. Barrett
Deputy Program Director
TMI Program Office

Enclosure: As stated

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DATE ▶	8/16/82	8/16/82	8/16/82	8/16/82	8/16/82	8/16/82	

NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT

August 8, 1982 - August 14, 1982

Plant Status

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

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

RCS Pressure Control Mode: RCS is vented to the reactor building.

Major Parameters (as of 0600, August 13, 1982) (approximate values)

Average Incore Thermocouples: 125°F

Maximum Incore Thermocouple: 142°F

RCS Loop Temperatures:

	A	B
Hot Leg	106°F	105°F
Cold Leg (1)	84°F	84°F
(2)	86°F	85°F

Pressure: The reactor coolant system is vented to the reactor building.

Reactor Building: Temperature: 84°F
Pressure: -0.17 psig
Airborne Radionuclide Concentrations:

4.7 E-8 uCi/cc H³
(sample taken 8/10/82)

6.2 E-6 uCi/cc Kr⁸⁵
(sample taken 8/10/82)

7.9 E-9 uCi/cc particulates
(sample taken 8/13/82)

1. Effluent and Environmental (Radiological) Information

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 6, 1982, through August 12, 1982, the effluents contained no detectable radioactivity at the discharge point and individual effluent sources, which originated within Unit 2, contained no detectable radioactivity.

2. Environmental Protection Agency (EPA) Environmental Data

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

<u>Location</u>	<u>July 9, 1982 through July 30, 1982</u> (pCi/m ³)
Goldsboro	33
Middletown	22
Yorkhaven	22

- The EPA Middletown Office has not received the environmental Kr-85 analytical results for the samples which were taken July 31, 1982, through August 13, 1982, 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 4, 1982, through August 12, 1982.

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-331	August 4, 1982 - August 11, 1982	<6.3 E-14	<6.3 E-14

NRC environmental TLD measurements were last reported in the TMI Program Office Weekly Status Report for the period September 27 through October 3, 1981. In that report, it was announced that effective July 1, 1981, the TLD station change frequency would be quarterly instead of monthly. The NRC TLD Direct Radiation Monitoring Network (environmental) results have since been reported in NUREG-0837, Volume 1, Nos. 1, 2; Volume 1, No. 3 (July-September 1981); and Volume 1, No. 4 (October-December 1981).

During July through September 1981, 100 TLD's around TMI indicated gamma radiation to be at the natural background levels, i.e., 0.15-0.29 mR/day.

During October through December 1981, 85 TLD's around TMI indicated gamma radiation to be between 0.14-0.25 mR/day. These dose rates are consistent with natural background radiation in the TMI area.

TMI Program Office will continue to report quarterly TLD environmental data as results are published in future NUREG-0837 issues.

4. TMI Occupational Exposure

Licensee TLD (Thermoluminescent Dosimeter) records indicate the following Unit 2 occupational radiation exposures for 1982:

July 1982	30 man-rem
Total 1982 (January-July)	189 man-rem

Man-rem is an expression for the summation of whole body doses to individuals in a group. Thus, if each member of a population group of 1,000 people were to receive a dose of 0.001 rem (1 millirem), or if two people were to receive a dose of 0.5 rem (500 millirem) each, the total man-rem dose in each case would be one man-rem.

5. Licensee Radioactive Material and Radwaste Shipments

On August 12, 1982, 80 drums of Unit 1 and Unit 2 contaminated laundry were shipped to Interstate Uniform Services, Inc., New Kensington, Pennsylvania.

Major Activities

1. Submerged Demineralizer System (SDS). SDS is in a shutdown condition. Jobs having a higher priority have delayed the installation of the new feed pump. The anticipated date for completion of the feed pump work has now been set for Wednesday, August 18, 1982.
2. EPICOR II. The EPICOR II system is currently shutdown in a standby status.
3. Reactor Building Entries/Core Inspection. Reactor building entries were conducted on Thursday and Friday, August 12 and 13, 1982. The third closed circuit television inspection of the core was conducted during the Thursday entry. The camera was inserted into the core through the leadscrew opening in control rod 9E (the same opening which was used for the core inspection on August 4, 1982). A metal rod for probing the rubble was inserted into the core through the same opening as the camera. The results of the probe inspection are not certain because the camera operator was unable to locate the probing rod with the camera. The probe operator felt the probe contact the rubble pile and observed the probe extension rods go into the reactor vessel another 14 inches while twisting the last extension rod. Based on perception, while handling the probe extension rods, the probe operator concluded that the top 14 inches of the rubble was relatively soft. Both the probe and camera operators were manipulating their equipment from the control rod drive platform, 40 feet above the rubble bed.

In addition to the core inspection, entry personnel continued work on the polar crane to assess the extent of damage. Long range plans include the use of the polar crane for reactor head removal in 1983. Other activities conducted during the entries this week included post decontamination data acquisition below the 305 ft. elevation, component removal for accident effects studies, and general housekeeping.

Three entries are scheduled for next week. The primary task during these entries will be the uncoupling of the remaining control rod drive leadscrews. The proposed uncoupling will disconnect the leadscrews from the control rod spider assemblies (prerequisite for head removal). The leadscrews will be left in position inside the control rod guide tubes.

5. EPICOR II Prefilter Shipment. The scheduled shipment of the first EPICOR II prefilter was delayed by at least one week. The delay occurred after the PF-3 prefilter was placed in the shipping cask. The shipping procedure included steps to inert the shipping cask with nitrogen. During the inerting, leakage was detected at the cask cover seals. The prefilter was removed from the shipping cask and licensee personnel commenced inspection of the sealing surfaces to determine the cause of the leakage. Cover misalignment appeared to be the primary cause of the leakage. The cask is a CNS 8-120 type B shipping cask.

The PF-3 prefilter is the first of 49 EPICOR II prefilters scheduled for shipment off-site. The nitrogen inerting of the liners and shipping casks was established as a required safety precaution prior to handling and shipping the prefilters off-site.

Future Meetings

Lake H. Barrett will be meeting with Concerned Mothers of Middletown on Thursday, August 19, 1982, to discuss recent TMI-2 events.