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January 25, 1982  
NRC/TMI-82-003

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 January 17, 1982 to January 23, 1982. Major items included in this report are:

- Liquid Effluent Releases
- NRC and EPA Environmental Data
- Radioactive Material and Radwaste Shipments
- Submerged Demineralizer System Status
- EPICOR II
- Reactor Building Entries
- Public Meetings
- TMI Unit 1 Developments

Original signed by  
Lake H. Barrett

Lake H. Barrett  
Deputy Program Director  
TMI Program Office

Enclosure: As stated

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Harold R. Denton.  
Bernard J. Snyder

January 25, 1982

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# NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT

January 17, 1982 - January 23, 1982

## 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 0500, January 22, 1982) (approximate values)

Average Incore Thermocouples: 106°F

Maximum Incore Thermocouple: 134°F

RCS Loop Temperatures:

	A	B
Hot Leg	98°F	101°F
Cold Leg {1}	74°F	83°F
{2}	75°F	89°F

RCS Pressure: 96 psig

Reactor Building: Temperature: 58°F  
Water level: Elevation 285.2 ft. (2.7 ft. from floor)  
Pressure: -0.5 psig  
Airborne Radionuclide Concentrations:  
1.5 x 10<sup>-5</sup> uCi/cc Kr 85  
3.6 x 10<sup>-7</sup> uCi/cc H<sup>3</sup>  
(samples taken 1/24/82)

## 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 January 15, 1982, through January 21, 1982, 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 millionth (0.000001) of a curie of cesium 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<sup>3</sup>) at several environmental monitoring stations and reported the following results:

<u>Location</u>	<u>December 4 - December 28, 1981</u> (pCi/m <sup>3</sup> )
Goldsboro	22
Observation Center	*
Middletown	23
Yorkhaven	31

\* Results not available at time of this report.

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 January 13, 1982, through January 21, 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-303	January 13, 1982 - January 20, 1982	<6.1 E-14	<6.1 E-14

4. Licensee Radioactive Material and Radwaste Shipments.

-- On Tuesday, January 19, 1982, one drum containing radiation monitor HPR-212 (retrieved from the Unit 2 reactor building during entry no. 20) was shipped to Sandia National Laboratory, Albuquerque, New Mexico.

-- On Wednesday, January 20, 1982, one drum containing twelve, 1-foot sections of Unit 1 steam generator tubes was shipped to Babcock and Wilcox (B&W), Lynchburg, Virginia.

- On Wednesday, January 20, 1982, one drum containing eight, 1-foot sections of Unit 1 steam generator tubes was shipped to Battelle-Columbus Laboratory, Columbus, Ohio.
- On Wednesday, January 20, 1982, two, one liter samples from the Unit 2 spent fuel pool (submerged demineralizer system) were shipped to Babcock and Wilcox (B&W), Lynchburg, Virginia.
- On Thursday, January 21, 1982, 60 drums of Unit 1 and Unit 2 contaminated laundry were shipped to Tri-State Industrial Laundries, Utica, New York.

### Major Activities

1. Submerged Demineralizer System (SDS). Processing of batch 17 commenced on January 20, 1982, but processing was immediately secured when a process train leak into the spent fuel pool water was detected. The SDS process train is located underwater in the Unit 2 spent fuel pool. Plant monitors showed no increase in effluents as a result of the leak. On January 23, 1982, it was determined that the cause of the leak was a worn gasket which seals the connection between the system piping and the ion exchange vessels. The gasket was replaced and the subsequent leak check was satisfactory.

The radioactivity in the spent fuel pool water increased from approximately  $1 \times 10^{-4}$  uc/ml (gross  $\beta$ - $\gamma$  activity) to  $7 \times 10^{-3}$  uc/ml. The increase does not affect the health and safety of workers in the vicinity of the spent fuel pool and therefore will not interrupt processing of water through the SDS. Processing of batch 17 recommenced on January 23, 1982.

The licensee plans to install a supplemental cleanup system to improve the rate of radionuclide removal from the spent fuel pool.

2. EPICOR II. The EPICOR II system was shutdown during the week because the SDS has not been operating.
3. Reactor Building Entries. There was no work performed inside the reactor building (RB) this week. Two RB entries have been scheduled for the last week in January. The tasks scheduled for the next two entries include video taping of certain areas of the RB, additional work on the NI-2 neutron monitor, and load testing of crane mounted supports for the power lift.

Supporting activities for the gross decontamination experiment have not been completed and the commencement date of the decontamination is not certain. The two major activities which need to be completed prior to the decontamination include the fabrication and installation of two modified flanges on a spare RB penetration and the installation of a power lift device which will be used between the refueling floor (347 ft. elevation) and the polar crane during the decontamination experiment.

Meetings Held

On Tuesday, January 20, 1982, Lake Barrett met with the Lancaster County Southern End Affinity Group in the NRC Middletown office to discuss the status of Unit 1, the Unit 2 cleanup, and general nuclear topics. In addition to extensive discussions on the above topics, the group verbally emphasized their previous written requests to the NRC for local public hearings or meetings with the NRC Commissioners to present their opposition to the restart of Unit 1.

Future Meetings

1. The NRC's Advisory Panel for the Decontamination of TMI Unit 2 will meet on January 28, 1982 from 7:00 PM to 10:00 PM at the Holiday Inn, 23 South Second Street in Harrisburg. The meeting will be open for public observation. The Panel plans to discuss alternative strategies for assuring financial resources to complete the TMI-2 cleanup.
2. On Friday, January 29, 1982, Lake Barrett will meet with the Middletown Mothers to discuss TMI related issues in general.
3. On Friday, February 26, 1982, Lake Barrett will be speaking for the dinner meeting being held by the Engineers Week Joint Planning Council to honor Lehigh Valley's Engineer of the Year and Young Engineer of the Year.
4. On Saturday, March 13, 1982, Lake Barrett will address the Society of Manufacturing Engineers in Williamsport, PA, on the cleanup of TMI and general aspects of nuclear power.

TMI Unit 1 Developments

1. On January 7, 1982, the US Court of Appeals for the District of Columbia ruled that the NRC should consider psychological stress as a TMI Unit 1 restart issue. The court ruling is attached. The NRC has not received the written opinion of the two judges that ruled that the NRC must consider psychological stress as a restart issue. Consequently, the NRC has made no decision regarding possible legal appeals.
2. On February 4 and 5, 1982, the NRC staff will sponsor a meeting in the Mitre Corporation offices in McLean, Virginia, of approximately 13 professional psychiatrists, psychologists, and research experts to obtain their advise on how to access the psychological stress that may be caused by the restart of Unit 1. The upcoming meeting was announced in a meeting held on January 22, 1982, in Bethesda, Maryland, between the NRC staff, People Against Nuclear Energy (PANE) and General Public Utilities (GPU).