

January 18, 1982
NRC/TMI-82-002

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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 10, 1982 to January 16, 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
- Borated Water Storage Tank Leak
- Reactor Building Entries
- Public Meetings

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

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January 18, 1982

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GKalm/jes	RDe	MShanbaky	AFasano	RBellamy	LBarrett
1/ /82	1/ /3/82	1/ /5/82	1/ /82	1/ /82	1/ /82

NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT

January 10, 1982 - January 16, 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 15, 1982) (approximate values)

Average Incore Thermocouples: 106°F

Maximum Incore Thermocouple: 135°F

RCS Loop Temperatures:

	A	B
Hot Leg	99°F	102°F
Cold Leg (1)	81°F	83°F
(2)	90°F	90°F

RCS Pressure: 96 psig

Reactor Building: Temperature: 61°F
Water level: Elevation 285.2 ft. (2.7 ft. from floor)
Pressure: -0.2 psig
Airborne Radionuclide Concentrations:
1.6 x 10⁻⁶ uCi/cc H³
(grab sample taken 1/14/82)
4.5 x 10⁻⁶ uCi/cc Kr 85
(sample taken 1/5/82)

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 8, 1982, through January 14, 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 Middletown Office has not received the analytical results for Kr-85 measurements around the TMI site from the EPA's Counting Laboratory at Las Vegas, Nevada. When these results become available, they will be included in a subsequent report.
- No radiation above normally occurring background levels was detected in any of the samples collected from EPA's air and gamma rate networks during the period from January 6, 1982 through January 14, 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> <u>(uCi/cc)</u>	<u>Cs-137</u> <u>(uCi/cc)</u>
HP-302	January 6, 1982 - January 13, 1982	<6.2 E-14	<6.2 E-14

4. Licensee Radioactive Material Radwaste Shipments.

- No Shipments were made by the licensee during this reporting period.

Major Activities

1. Submerged Demineralizer System (SDS). Processing of batch 16 was completed on January 10, 1982. From January 10, 1982, to January 11, 1982, approximately 45,000 gallons of water (batch 17) were transferred from the reactor building sump. The total amount of water transferred from the reactor building sump as of January 15, 1982, is approximately 445,000 gallons. The SDS will commence processing batch 17 following modification of an underwater tool used to move the SDS vessels from the processing position to underwater storage. The modification is expected to be completed around January 20, 1982. SDS Performance parameters for batch 16 are enclosed.
2. EPICOR II. EPICOR II processing of SDS effluent continued this week. The latest performance parameters for EPICOR II are enclosed.

3. Borated Water Storage Tank Leak. On Wednesday, January 13, 1982, a leak was discovered from a 3/8 inch instrument line connected to the Borated Water Storage Tank (BWST). It is estimated that the leak may have caused as much as 50 gallons of radioactive water to leak onto the ground. The tank contained a mixture of pre-accident Unit 2 water, a substantial amount of water transferred from the Unit 1 BWST in March 1979, and some processed auxiliary building water from EPICOR II. The predominant radionuclides in the water include:

Cs 137	3.7×10^{-4}	uCi/ml
Cs 134	1.1×10^{-4}	uCi/ml
Co 60	1.3×10^{-5}	uCi/ml

After the leak was repaired, workers began removing the contaminated soil from under the faulty pipe. The groundwater around the BWST is monitored by several sampling stations which were installed as part of the site groundwater monitoring system. Water samples from selected groundwater monitoring points were taken on Thursday to determine the extent of the contamination. Based on the cold ambient temperatures, the small quantity of the spill and the relatively low activity, it is not expected that the activity resulting from the leak will be detectable away from the immediate vicinity of the pipe. The 3/8 inch line failure is attributed to the cold weather. The instrument line apparently froze and cracked after the electric heat tracing system which normally heats the line failed.

4. Reactor Building Entries. Reactor building (RB) entry 29 was completed on Thursday, January 14, 1982. The major tasks performed during the entry included testing of the M1-2 neutron detector cables, survey of the electric cable path for the polar crane power lift, and additional examination of clues to evaluate the nature of the hydrogen burn during the March 1979 accident.

The start of the gross decontamination experiment, which is a prerequisite activity for polar crane repair and reactor disassembly, has been delayed to February 1982. The decontamination experiment was originally scheduled to be completed in December 1981. Delays have been experienced in completing prerequisite activities to support the decontamination experiment. Specifically, two, 10 inch flanges which are to be installed at both ends of a spare RB penetration to route decontamination water into the RB have not been built due to engineering delays. It is anticipated that the flanges will be built and installed in time to support the decontamination experiment in February 1982.

The next RB entry is scheduled for the last week in January. Following the decontamination experiment, the licensee plans to reduce the frequency of RB entries because of financial limitations.

Meetings Held

1. On Monday, January 11, 1982, Lake Barrett participated in a taping of the "Controversy" television program on WPIX Channel 11, Pittsburg. The program discussed TMI and the National and Pennsylvania energy and waste disposal situation. The program will be aired on January 29, 1982 at 8:00 PM.
2. On Tuesday, January 12, 1982, Lake Barrett discussed the impact of GPU's financial difficulties on the Unit 2 cleanup and related items on WCAU's (Philadelphia radio) "Noon Report".

Future Meetings

1. On Tuesday, January 19, 1982, Lake Barrett will meet with the Lancaster County Southern End Affinity Group to discuss nuclear power regulation and issues.
2. On Friday, January 22, 1982, Lake Barrett will meet with the Middletown Mothers to discuss TMI related issues in general.
3. 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.
4. 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.
5. 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.

ATTACHMENT

SDS Performance for Batch Number 16

<u>Radionuclide</u>	<u>Average Influent (uc/ml)</u>	<u>Average Effluent (uc/ml)</u>	<u>Average DF</u>
Cesium 137	77	9.4×10^{-4}	8.1×10^4
Strontium 90	2.5	7.5×10^{-3}	3.3×10^2

EPICOR II Performance
January 6, 1982 to January 10, 1982

<u>Radionuclide</u>	<u>Average Influent (uc/ml)</u>	<u>Average Effluent (uc/ml)</u>	<u>Average DF</u>
Cesium 137	9.2×10^{-4}	$<2.6 \times 10^{-7}$	$>3.5 \times 10^3$
Strontium 90	8.6×10^{-3}	$<6.9 \times 10^{-6}$	$>1.2 \times 10^3$
Antimony 125	1.0×10^{-2}	$<4.1 \times 10^{-7}$	$>2.4 \times 10^4$