

January 31, 1983
NRC/TMI-83-009

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 23, 1983, through January 29, 1983. Major items included in this report are:

- Liquid Effluents
- EPA and NRC Environmental Data
- Radioactive Material and Radwaste Shipments
- Submerged Demineralizer System Status
- EPICOR II Status
- Reactor Building Entries
- SDS Liner Shipment Preparations
- 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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Harold R. Denton
Bernard J. Snyder

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January 31, 1983

cc w/encl:
EDO
OJC
Office Directors
Commissioner's Technical Assistants
NRR Division Directors
NRR A/D's
Regional Administrators
IE Division Directors
TAS
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TMI Program Office Staff (15)
PHS
EPA
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State Liaison, RI

OFFICE	TMIPD	TMIPD	TMIPD	TMIPD	TMIPD	TMIPD
NAME	L. Gage:jes	J. Tebe	B. O'Neill	A. Asano	R. Bellamy	L. Barrett
DATE	1/1/83	1/31/83	1/31/83	1/31/83	1/1/83	1/1/83

NRC TMI PROGRAM OFFICE WEEKLY STATUS REPORT

January 23, 1983 - January 29, 1983

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: Standby Pressure Control System.

Major Parameters (as of 5:00 AM, January 28, 1983) (approximate values)

Average Incore Thermocouples*: 87°F

Maximum Incore Thermocouple*: 135°F

RCS Loop Temperatures:

	A	B
Hot Leg	82°F	81°F
Cold Leg (1)	70°F	79°F
(2)	72°F	79°F

RCS Pressure: 63 psig

Reactor Building: Temperature: 66°F

Pressure: -0.11 psig

Airborne Radionuclide Concentrations:

1.3 E-7 uCi/cc H³
(sample taken 1/27/83)

4.7 E-9 uCi/cc particulates
(sample taken 1/27/83)

1. Effluent and Environmental (Radiological) Information

Liquid effluents from the TMI site released to the Susquehanna River after sampling and monitoring were within the regulatory limits and in accordance with NRC requirements and City of Lancaster Agreement.

During the period January 21, 1983 through January 27, 1983, 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.

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

2. Environmental Protection Agency (EPA) Environmental Data

- The EPA Middletown Office has not received the environmental Kr-85 results from the EPA's Counting Laboratory at Las Vegas, Nevada for samples taken after January 3, 1983. 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 periods from January 20, 1983 through January 27, 1983.

3. NRC Environmental Data

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

<u>Sample</u>	<u>Period</u>	<u>I-131 (uCi/cc)</u>	<u>Cs-137 (uCi/cc)</u>
HP-354	January 19 - 26, 1983	<7.3 E-14	<7.3 E-14

4. Licensee Radioactive Material and Radwaste Shipments

- On January 21, 1983, 72 drums of contaminated laundry from Unit 1 and Unit 2 were shipped to Interstate Uniform Services, New Kensington, Pennsylvania.
- On January 26, 1983, 80 drums of contaminated laundry from Unit 1 and Unit 2 were shipped to Interstate Uniform Services, New Kensington, Pennsylvania.
- On January 28, 1983, one HN-200 shipping cask containing EPICOR Prefilter No. PF-26 was sent to EG&G, Scoville, Idaho.

Major Activities

1. Submerged Demineralizer System (SDS). SDS processing of batch 41 (approximately 48,000 gallons of reactor building sump water) was completed on January 22, 1983. On January 23, 1983, SDS began processing approximately 40,000 gallons of reactor coolant system water which had been staged in the "C" reactor coolant bleed tank. The latest SDS performance parameters are included in Attachment 1.
2. EPICOR II. EPICOR II processing of SDS effluent continued during the past week. The latest performance parameters for EPICOR II are included in Attachment 1.
3. Reactor Building Entries. Reactor building entries are continuing at the rate of five per week. Major activities this week included remote decontamination inside the D-rings (the concrete shields around each

steam generator and adjacent primary system components), continued polar crane refurbishment, and removal of the neutron shield tanks from around the reactor vessel.

The neutron shield tank removal is one of several operations which must be performed prior to reactor vessel head removal. (These shield tanks are not necessary for present conditions; they were only functional when the reactor was operating.) Additional prerequisite operations include the removal of thermal insulation that surrounds the vessel, and the installation of the seal plate to seal the cavity between the vessel and the refueling canal. As a radiation-dose-reduction measure, the cooling fans on the reactor vessel head service structure will be removed. (The cooling fans, located immediately above the vessel head studs, were initially identified as high sources of localized radiation: >10 R/hr. Following decontamination flushes, these point sources were reduced to <5 R/hr, and preliminary measurements indicate that the dose rates in the working areas around the reactor vessel flange have been reduced to 100 - 300 mr/hr.)

Radiation shielding materials have been procured for use in the reactor building. Shielding will be constructed around the high-radiation sources on the 305-foot elevation. Additionally, in order to reduce reactor building airborne radiation and to reduce redeposition of contaminated particulates on decontaminated surfaces, it is planned to secure the reactor-building air-cooler fans. The air-cooler fans (which have been operating continuously since March 1979) recirculate approximately 150,000 cubic feet per minute of reactor building air.

4. SDS Liner Shipments. The spent SDS liner D10016, which was shipped from TMI on January 21, 1983, arrived safely at the Department of Energy (DOE) facility in Richland, Washington on January 25, 1983. The vitrification (glass encapsulation) of the contents of SDS liner D10012, which was shipped from TMI on December 31, 1982, was successfully completed by the DOE's Pacific Northwest Laboratory (PNL) last week. The contents of liner D10016 are also scheduled to be vitrified. Three glass logs (7 feet long and 8 inches in diameter) will be formed from the contents of these two SDS 10 ft³ liners. The glass specimens will be tested to determine their resistance to leachability. DOE is considering further analysis of these test specimens in their basalt geologic test and evaluation facility in Richland.
5. EPICOR II Prefilter Shipments. One EPICOR II prefilter (PF-26) was shipped from TMI to Idaho National Engineering Laboratory (INEL) on January 28, 1983. This EPICOR shipment brings to a total of 21 (in a group of 49) prefilters that were shipped to INEL. Three prefilters are scheduled for shipment next week.

Past Meetings

On January 24, 1983, Lake H. Barrett addressed the Harrisburg Rotary Club on various TMI and general energy issues.

Future Meetings

1. On February 2, 1983, the Advisory Panel for the decontamination of TMI Unit 2 will hold a meeting from 7:00 to 10:00 p.m. at the Holiday Inn, 23 South Second Street, Harrisburg, Pennsylvania.
2. On February 7, 1983, Lake H. Barrett will meet with Friends and Family of TMI to discuss various TMI related issues.
3. On February 8, 1983, Lake H. Barrett will meet with the Concerned Mothers of Middletown to discuss TMI related issues.

ATTACHMENT I

SDS PERFORMANCE FOR RCS BATCH 6
January 4, 1983 to January 26, 1983

<u>Radionuclide</u>	<u>Average Influent</u> (uc/ml)	<u>Average Effluent</u> (uc/ml)	<u>Average DF</u>
Cesium 137	8.72	4.10×10^{-5}	2.13×10^5
Strontium 90	3.43	2.69×10^{-1}	1.28×10^1

EPICOR II PERFORMANCE PARAMETERS
January 20, 1983 to January 26, 1983

<u>Radionuclide</u>	<u>Average Influent</u> (uc/ml)	<u>Average Effluent</u> (uc/ml)	<u>Average DF</u>
Cesium 137	2.6×10^{-5}	$<1.5 \times 10^{-7}$	$>1.8 \times 10^2$
Strontium 90	1.1×10^{-2}	$<1.2 \times 10^{-5}$	$>9.2 \times 10^2$
Antimony 125	1.7×10^{-3}	$<3.3 \times 10^{-7}$	$>5.2 \times 10^3$