

February 6, 1984
NRC/TMI-84-010

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 FOR
January 29, 1984 - February 4, 1984

Data from effluent and environmental monitoring systems indicated no plant releases in excess of regulatory limits. Waste processing continued on a routine basis. Plant parameters showed no significant changes. The reactor coolant system is depressurized and RCS level remains at 321'6".

Site activities this period included: reactor building general activities, preparation for partial detensioning of reactor head studs and other activities to prepare for head lift in late summer, and auxiliary and fuel handling building decontamination. Two reactor building entries were made this week in support of technical specifications and polar crane refurbishment tasks. (For more details see appropriate paragraphs below.)

Significant items covered in the enclosure are:

- Reactor Building Activities
- Spent Fuel Pool "A" Refurbishment
- Auxiliary and Fuel Handling Building Activities
- TMI Occupational Dose Summary
- Waste Management Activities
- Public Meetings

Data summary sheets included in this report are:

- Liquid Effluent Data
- Environmental Data
- Radioactive Material/Radwaste Shipment Data
- Water Processing Data
- Plant Status Data

Original signed by
Lake H. Barrett ✓

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Lake H. Barrett
Deputy Program Director

*ID# R-5
TMI*

OFFICE		TMI:PO	TMI:PO	TMI:PO	TMI:PO
INAME	Enclosure: As stated	JBell:wa	PJGrant	ANFasano	LHBarrett
DATE		2/6/84	2/ /84	2/ /84	2/6/84

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ENCLOSURE

REACTOR BUILDING ACTIVITIES:

Two reactor building entries were conducted during the week of January 29, 1984 and two entries per week have been scheduled through mid-February. The major work effort in February is focused on preparations for missile shield movement. The polar crane will be used to move the four 40-ton missile shields from over the reactor vessel and the single 30-ton missile shield from over the pressurizer to a location on the 347' elevation in preparation for the polar crane qualification load test. Based on the work schedule, the missile shields will be stacked on the polar crane load test frame in February and the polar crane load test will be performed in April 1984.

SPENT FUEL POOL "A" REFURBISHMENT:

Due to funding constraints, the refurbishment of the "A" spent fuel pool has been put on hold until late 1984.

AUXILIARY AND FUEL HANDLING BUILDING ACTIVITIES:

The pace of decontamination activities in the auxiliary and fuel handling buildings has decreased due to limited operating funds in 1984 and major emphasis on reactor head lift and defueling activities. Personnel and material resources will be used for Auxiliary and Fuel Handling Building decontamination whenever Reactor Building decontamination activities are not on the critical path toward reactor vessel head removal. Dedicated funds have been committed for decontamination of specific areas to facilitate surveillance activities required by the technical specifications. High radiation and contamination in many areas of the auxiliary and fuel handling buildings have prohibited surveillance of safety related equipment. Decontamination of areas impeding the required surveillances is proceeding on an established schedule.

TMI OCCUPATIONAL DOSE:

Licensee TLD (thermoluminescent dosimeter) records indicate the following station occupational radiation doses for the period December 1 - December 31, 1983.

Unit 1 and Unit 2 Combined Dose Ranges

<u>Category in Rem</u>	<u>Number of Station Personnel</u>
No Measurable Dose	1,182
Dose Less Than 0.1	287
0.1 to 0.25	26
0.25 to 0.5	9
0.5 to 0.75	2
0.75 to 1	1
1 to 2	0
2 to 3	0

Total Plant (Unit 1 and Unit 2) Dose: 17.7 Man-Rem

Total Unit 2 Dose: 10.8 Man-Rem

Total Cumulative Unit 2 Dose for the 1983 Year: 362.4 Man-Rem

WASTE MANAGEMENT ACTIVITIES:

The SDS and EPICOR II waste water processing was shut down throughout this period. An operating history of the SDS and EPICOR II systems is provided in Appendix 4; this includes processing of water from the RB sump, the reactor coolant system and RB decon activities

PUBLIC MEETINGS:Past Meetings

1. On January 30, 1984, Lake Barrett, Dr. Bernard Snyder and Dr. Ronnie Lo of the TMIPO staff met with labor union officials from the Harrisburg and Central Pennsylvania Building and Construction Trades Council to discuss the draft Supplement to the PEIS. The draft Supplement revised upward the estimated occupational radiation exposure the cleanup workers could receive in completing the cleanup. However, even with the increased estimated occupational dose, the health risk to cleanup workers due to radiation is less than the inherent hazards of many other typical heavy industries (e.g., mining and construction). The union officials acknowledged the need for more expeditious cleanup and that the TMI site is not suitable for the long-term storage of accident generated radioactive wastes. Their position remains that a good ALARA program should be in place and they look for assurances from the NRC and the licensee that radiation risks to workers will be kept to as low as is reasonably achievable. Members of the local unions have extensive hands-on experience and feel that their knowledge of the facilities and systems at TMI-2 should be considered as a vital source of information during the planning phases of the cleanup. The staff agrees that this information is important toward cleanup efficiencies and maintaining doses to workers ALARA. The effective utilization of this information will be considered by the staff during its review of the licensee's ALARA program.

2. *On February 3, 1984 the Advisory Panel for the Decontamination of Three Mile Island Unit 2 met internally for a short meeting at 10:00 a.m. and then met with the NRC Commissioners at 11:00 a.m. The meetings took place at the NRC's Washington Office at 1717 H Street, Washington, DC 20555. At the 10:00 a.m. meeting the Panel agreed to request that the licensee and the NRC conduct a tour of Unit 2 for Panel members on March 8, 1984 from 9:00 a.m. to 1:00 p.m. The Panel then discussed the items they planned to bring up at the 11:00 meeting with the NRC Commissioners.*

At the 11:00 a.m. meeting with the NRC Commissioners, the Advisory Panel first inquired about the status of the NRC staff's review and response to the NRC Office of Investigations report on the allegations made by Mr. Parks and Mr. Gischel. The NRC Chairman informed the Panel that the Commission had recently received the staff's response and it is presently under review. Dr. B. Snyder provided a short summary of the staff's findings.

The Panel reiterated its recommendation to the Commission that the NRC not consider the restart of Unit 1 until total funds are committed to the cleanup of Unit 2.

The Panel informed the Commission of the upcoming Panel meeting to be held in Harrisburg, PA on February 9, 1984 to discuss the staff's recent increase in the estimates of worker radiation exposure. The Commission requested that the

Panel provide written comments on the staff's draft PEIS Supplement dealing with worker radiation exposure.

The Commission and the Panel discussed the issue of alternate disposal of the processed accident water presently stored on the island. The Panel was informed that the water is presently being used and recycled in the licensee's decontamination efforts, and will continue to be used throughout defueling and decontamination of the damaged reactor. The Panel was informed by the Commission that it is the NRC staff's feeling that a decision on the disposal of this water is several years away and that no decision is needed at this time. The Chairman of the Commission assured the Panel that when the time came to make the decision on the method of disposal, the public's concerns would be factored into the NRC's decision.

The Panel indicated to the Commission the need for an updated cleanup schedule from the licensee. The Commission requested Dr. Snyder to respond to this issue and Dr. Snyder informed the Advisory Panel that the licensee had committed to providing the NRC with an updated schedule by the beginning of March 1984. The staff will make the updated schedule available to the Panel.

The Chairman requested that the Panel, after each Panel meeting, provide the Commission with a short written summary of the Panel's concerns and any recommendations arising from the discussions.

Future Meetings

1. On February 9, 1984, the Three Mile Island Unit 2 Advisory Panel will meet from 7:00 PM to 10:00 PM in the Holiday Inn, 23 South Second Street, Harrisburg, Pennsylvania. The meeting will be open to the public. The major topic for the meeting will be future EPA monitoring plans and the NRC PEIS supplement on occupational exposure. Persons that have questions pertaining to the TMI-2 cleanup that would like to have them considered or addressed by the Advisory Panel and persons desiring the opportunity to speak before the Advisory Panel on TMI-2 cleanup related items are asked to contact, in writing, Mr. Joel Roth, 4705 Carlisle Pike, Mechanicsburg, PA 17055.
2. On February 15, 1984, NRC staff will hold a public meeting to receive public comments on the draft Supplement 1 to the Programmatic Environmental Impact Statement (PEIS, NUREG-0683, Supplement 1). The meeting will be held at 7:00 PM at the Middletown High School auditorium, 1155 N. Union Street, Middletown, PA. Single copies of the draft Supplement may be obtained by writing to the Director, Division of Technical Information and Document Control, U.S. Nuclear Regulatory Commission, Washington, DC 20555, or the Deputy Program Director, NRC TMI Program Office, P.O. Box 311, Middletown, PA 17057. The staff welcomes comments from the public on the draft Supplement. All comments will be reviewed and taken into consideration when the NRC staff prepares the final Supplement to the PEIS. The comments should be received by February 29, 1984, and addressed to Dr. Bernard J. Snyder, Program Director, TMI Program Office, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555.
3. On February 29, 1984 Lake Barrett will speak to the Baltimore-Washington chapter of the Health Physics Society concerning TMI-2 cleanup issues.

APPENDIX 1

LIQUID EFFLUENT DATA

GPU Nuclear

Based on sampling and monitoring, liquid effluents from the TMI site released to the Susquehanna River were determined to be within regulatory limits and in accordance with NRC requirements and the City of Lancaster Agreement.

Environmental Protection Agency

Lancaster Water Samples:	7 samples
Period Covered:	January 8 - through January 14, 1984
Results:	Gamma Scan Negative
TMI Water Samples:	6 samples
Period Covered:	January 14 - January 21, 1984
Results:	Gamma Scan Negative

APPENDIX 2

ENVIRONMENTAL DATA

EPA Environmental Data

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

<u>Location</u>	<u>January 2, 1984 - January 20, 1984</u> (pCi/m ³)
Goldsboro	20
Middletown	23
Yorkhaven	22
TMI Observation Center	22

-- 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 24, 1984 through January 31, 1984.

NRC Environmental Data

Results from the NRC continuous air sampler monitoring of the TMI site environment are as follows:

<u>Sample</u>	<u>Period</u>	<u>I-131</u> (uCi/cc)	<u>Cs-137</u> (uCi/cc)
HP-404	January 25, 1984 - February 1, 1984	<8.7 E-14	<8.7 E-14

APPENDIX 3

RADIOACTIVE MATERIALS/RADWASTE SHIPMENT DATA

- January 27, 1984, 60 drums of contaminated clothing from TMI-2 were shipped to Interstate Uniform Service, New Kensington, Pennsylvania.
- On February 3, 1984, the waste evaporator concentrate storage tank monthly sample (1 liter) from TMI-1 was shipped to Teledyne Isotopes, Westwood, New Jersey.

APPENDIX 4

WATER PROCESSING DATA

SDS and EPICOR II were shutdown during this week.

SDS Processing Summary (July, 1981 to January, 1984)

<u>Water Source</u>	<u>Gallons (approximate)</u>
Reactor Building Sump	651,000
Reactor Building Sump (Decon)	367,000
Reactor Coolant System	590,000
Total Water Processed Through SDS System	2,085,000

EPICOR II Processing Summary (November, 1979 to January, 1984)

<u>Water Source</u>	<u>Gallons (approximate)</u>
Reactor Building Sump	649,000
Reactor Building Sump (Decon)	334,000
Total Water Processed Through EPICOR II System	2,033,000

APPENDIX 5

PLANT STATUS

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

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

RCS Pressure Control Mode: N/A

Major Parameters as of 6:00 AM, February 3, 1984 (approximate values):

Average Incore Thermocouples*: 83°F
Maximum Incore Thermocouple*: 145°F

RCS Loop Temperatures:

	A	B
Hot Leg**	59°F	65°F
Cold Leg (1)	56°F	60°F
(2)	56°F	61°F

Reactor Core Decay Heat: 19 Kilowatts

RCS Pressure: 0 psig

Reactor Building: Temperature: 57°F

Pressure: -0.2 psig

Airborne Radionuclide Concentrations:

4.7 E-9 uCi/cc H³ (Tritium)
(sample taken 2/1/84)

1.5 E-9 uCi/cc particulates
(predominately Cs-137)
(sample taken 2/1/84)

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

**Since the RCS draindown, hot leg temperature detectors are above water level.