

March 5, 1984
NRC/TMI-84-017

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
February 26, 1984 - March 3, 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: polar crane load testing, other activities to prepare for head lift in late summer, reactor building cooling system work and auxiliary and fuel handling building decontamination. Four reactor building entries were made this week in support of technical specifications and polar crane refurbishment tasks. The polar crane qualification load test was performed February 29. (For more details see appropriate paragraphs below.)

Significant items covered in the enclosure are:

- Reactor Building Activities
- Auxiliary and Fuel Handling Building Activities
- Groundwater Monitoring Activities
- Waste Management Activities
- PEIS Supplement Update
- 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
- Groundwater Monitoring
- Press Release for Extension of Response Time to PEIS Supplement

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ORIGINAL SIGNED BY:
Lake H. Barrett
Deputy Program Director
TMI Program Office

OFFICE					
URNAME	Enclosure:	As stated			
DATE					

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OFFICE	TMIP0	TMIP0	TMIP0	TMIP0			
NAME	JBe11/Imp	AFasano	PG	LBarrett			
DATE	3/5/84	3/5/84	3/5/84	3/5/84			

ENCLOSURE

REACTOR BUILDING ACTIVITIES:

The polar crane load test was completed successfully on Wednesday, February 29, 1984. The crane, which was designed for a 500-ton capacity, was load tested to 214 tons in preparation for lifting the 170-ton reactor vessel head. The head lift is tentatively scheduled for August 1984.

Four reactor building entries are scheduled for the week of March 4, 1984. Mechanical cleaning of the reactor head studs will commence next week in preparation for initial head detensioning. First pass head detensioning is scheduled to begin during the week of March 19, 1984. Also, in March, additional core debris samples are scheduled to be obtained and a comprehensive video map of the damaged core will be compiled.

Major evolutions to be completed prior to August to facilitate the head lift schedule include:

1. NRC review of the head lift safety evaluation and procedures
2. Refueling canal seal plate installation (to seal the cavity between the refueling canal and reactor vessel)
3. Contingency fuel pool water cleanup system completion (recirculating system to SDS)
4. Partial disassembly and repositioning of the auxiliary and fuel handling building bridge
5. Installation of remote video and radiation monitoring system to monitor head lift
6. Installation shielding around the head storage stand
7. Establish RCS initial chemistry conditions (possibly increase boron concentration)
8. Preparation of the internals indexing fixture for installation.

AUXILIARY AND FUEL HANDLING BUILDING ACTIVITIES:

Decontamination of areas necessary to provide access for surveillance of safety related equipment continued during the week. The miscellaneous waste holdup tank, pump and valve rooms are now accessible for surveillance. Decontamination of localized areas of the neutralizer tank room should make this area accessible for equipment surveillance by next week. Scabbling and painting of floors continued.

Some system components are on site and work is progressing toward installation of a system to supply chilled water to the air coolers in the reactor building through an existing closed loop water circulating system. The system is scheduled to be operational this summer to improve the habitability of the building during warm weather.

GROUNDWATER MONITORING:

The TMI groundwater monitoring program was instituted to detect possible radioactive liquid leakage from TMI-2 into the ground. Since the monitoring program commenced in January 1980, tritium has been the only radioisotope detected consistently in the groundwater. Tritium concentrations in the groundwater have ranged from background (approximately 300 pCi/L) to 1.1 E6 pCi/l. In all cases, the tritium concentrations have been below the maximum permissible concentration for restricted areas. Periodically, trace concentrations of radioactive cesium and strontium have been detected in some of the monitoring locations. When detected, the cesium and strontium concentrations were very close to the laboratory lower limit of detection.

During the period August to September 1983 there was apparently leakage of approximately 200 gallons of water from the borated water storage tank (BWST) sample cabinet. The ground adjacent to the sample cabinet was found to be slightly contaminated. Two 55-gallon drums of contaminated dirt were removed. Tritium levels in test borings (TB) 2, 16 and 17 increasing trends during the period of September through October 1983. Tritium levels in TB 17, which showed the largest increase, were 17% of the peak levels found in March 1982. From November through February the available test results for test borings 2, 16 and 17 show levels similar to those reported in previous weekly status reports (i.e. less than 5% of the highest levels reached in 1982).

Appendix 6 is a sketch of six of the groundwater sampling locations in the immediate area of the BWST. The most recently recorded tritium concentrations, the maximum concentration measured during September and October 1983, and the highest recorded tritium concentration are noted in each location. Pre-accident TMI monitoring data indicate that surface water, drinking water and rain precipitation in the TMI area will contain an average of 300 pCi/L of tritium with values as high as 600 pCi/L. The monitoring locations are in an area considered "restricted" and the maximum permissible concentration (MPC) for tritium in restricted areas is 1 E8 pCi/L.

WASTE MANAGEMENT ACTIVITIES:

The SDS and EPICOR II waste water processing systems have been shutdown since February 17, 1984 and February 19, 1984, respectively (See Appendix 4).

PEIS SUPPLEMENT UPDATE:

The NRC has extended the due date of comments of the draft Supplement to the Programmatic Environmental Impact Statement (NUREG-0683, Supplement 1) to April 2, 1984. A copy of the NRC press release announcing the extension is attached as Appendix 7.

PUBLIC MEETINGS:

Past Meeting

On February 29, 1984 Lake Barrett addressed the Baltimore-Washington chapter of the Health Physics Society concerning TMI-2 cleanup issues.

Future Meeting

On March 8, 1984 the Advisory Panel for the Decontamination of Three Mile Island, Unit 2 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 the PEIS Supplement. 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, R.D. 1, Box 441, Halifax, PA 17032.

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.

During the period February 24, 1984 through March 1, 1984 no liquid effluent releases were made from Unit 2.

Environmental Protection Agency

Lancaster Water Samples:	6 samples
Period Covered:	February 12 - February 17, 1984
Results:	Gamma Scan Negative
TMI Water Samples:	8 samples
Period Covered:	February 10 - February 18, 1984
Results:	Gamma Scan Negative

APPENDIX 2

ENVIRONMENTAL DATA

EPA Environmental Data

- The EPA Middletown Office has not received the environmental Kr-85 analytical results for the samples which were taken subsequent to February 3, 1984 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 February 21, 1984 through February 28, 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> <u>(uCi/cc)</u>	<u>Cs-137</u> <u>(uCi/cc)</u>
HP-408	February 23, 1984 - March 1, 1984	<9.5 E-14	<9.5 E-14

APPENDIX 3

RADIOACTIVE MATERIALS/RADWASTE SHIPMENT DATA

- March 1, 1984, six samples from the 'A' decay heat removal system (250 ml each), one sample from the borated water storage tank (250 ml) and one sample from the spent fuel pool (250 ml), all from TMI-1, were shipped to NWT Corporation, San Jose, California.
- March 1, 1984, 112 drums of contaminated clothing from TMI-2 were shipped to Interstate Uniform Service, New Kensington, Pennsylvania.
- March 1, 1984, a 125 ml sample of the TMI-2 'A' makeup and purification demineralizer was shipped to the Oak Ridge National Laboratory in Oak Ridge, Tennessee.

APPENDIX 4

WATER PROCESSING DATA

Submerged Demineralizer System (SDS)

The SDS was shutdown during this period.

EPICOR II

The EPICOR II system was shutdown during this period.

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 5:00 AM, March 5, 1984 (approximate values):

Average Incore Thermocouples*: 84°F
Maximum Incore Thermocouple*: 146°F

RCS Loop Temperatures:

	A	B
Hot Leg**	60°F	66°F
Cold Leg (1)	78°F	65°F
(2)	78°F	64°F

Reactor Core Decay Heat: 18.5 Kilowatts

RCS Pressure: 0 psig

Reactor Building: Temperature: 60°F
Pressure: -0.10 psig
Airborne Radionuclide Concentrations:

7.0 E-8 uCi/cc H³ (Tritium)
(sample taken 2/29/84)

1.5 E-8 uCi/cc particulates
(predominately Cs-137)
(sample taken 3/2/84)

*Uncertainties exist as to the exact location and accuracy of these readings.
Maximum incore thermocouple reading taken February 22.

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

NORTH 

- TB-2 6,300 PC/L 2/6/84
- 15,800 PC/L 7/13/83
- 929,000 PC/L 2/10/82
- TB-3 1,730 PC/L 12/5/83
- 14,900 PC/L 10/11/83
- 78,000 PC/L 7/20/82
- TB-10 9,000 PC/L 1/9/84
- 96,000 PC/L 6/22/82
- TB-16 12,900 PC/L 12/5/83
- 108,000 PC/L 10/3/83
- 890,000 PC/L 6/15/82
- TB-17 24,000 PC/L 2/6/84
- 188,000 PC/L 10/17/83
- 1,100,000 PC/L 3/23/82

